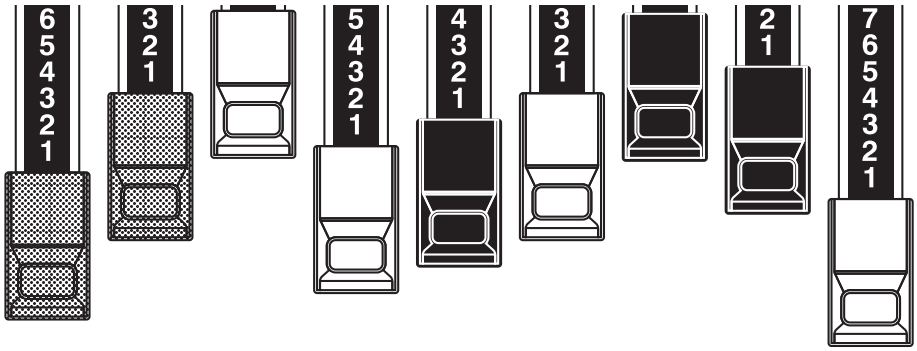


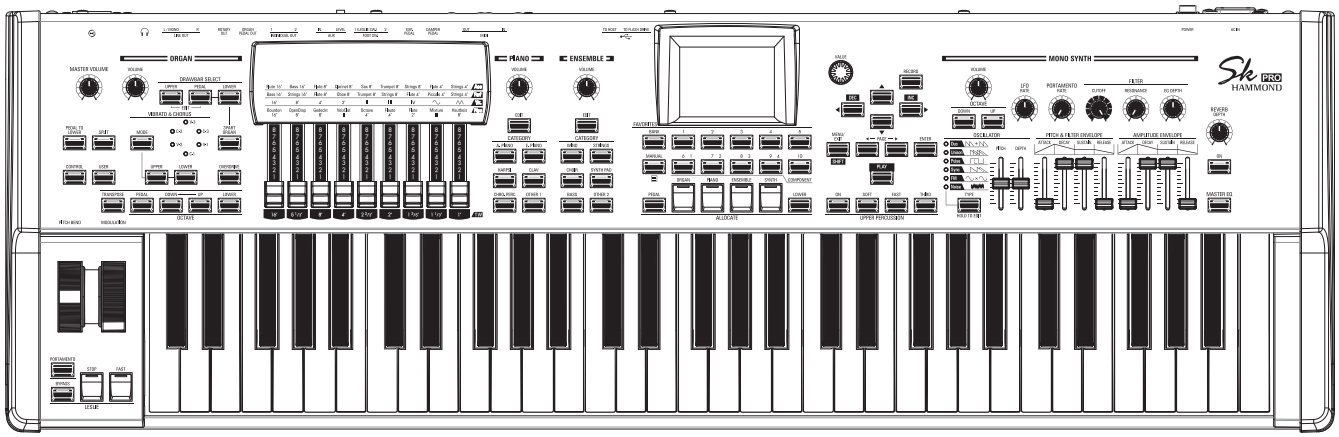

Sk PRO
HAMMOND
STAGE KEYBOARD

## Model: SK PRO/SK PRO-73

Thank you, and congratulations on your choice of the Hammond SK PRO/SK PRO-73 Stage Keyboard.

The Hammond SK PRO/SK PRO-73 features authentic Hammond Organ Sound along with high-quality Piano, Ensemble and Mono Synth sections to make it the perfect instrument for all musical occasions. The SK PRO has 61 keys and the SK PRO-73 has 73 keys.

Please take the time to read this Manual completely in order to take full advantage of the many features of your SK PRO/SK PRO-73, and please retain it for future reference.




# Owner's Manual

# IMPORTANT SAFETY INSTRUCTIONS

Read these instructions.

Keep these instructions.

Heed all warnings.

Follow all instructions.

Do not use this apparatus near water.

Clean only with dry cloth.

Do not block any ventilation openings.
Install in accordance with the manufacturer's instructions.

Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Only use attachments/accessories specified by the manufacturer.

Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When cart is used: use caution when moving the cart/apparatus combination to avoid injury from tip-over.


Unplug this apparatus during lightning storms, or when unused for long periods of time.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

**WARNING**: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
**ATTENTION**: Pour réduire les risques de choc électrique ou d'incendie, ne pas exposer cet appareil à la pluie ou à l'humidité.

-THIS APPARATUS MUST BE EARTHED.

-The socket-outlet shall be installed near the apparatus and shall be easily accessible.


The lightning flash with arrowhead symbol within an equilateral triangle, indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

The exclamation point within equilateral triangle, indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

## FOR THE USA

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital unit, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## FOR CANADA

This class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

## FOR EU COUNTRIES

In case in the future your instrument gets too old to play/use or malfunctions beyond repair, please observe the instructions of this mark, or, if any question, be sure to contact your dealer or your nearest town or municipal office for its proper disposal.

## FOR UNITED KINGDOM

FOR YOUR SAFETY, PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a molded 3-pin mains plug for your safety and convenience.

The plug contains a 13 amp fuse.

Should the fuse need to be replaced, please ensure that the replacement fuse has a rating of 13 amps and that it is approved by ASTA or BSI to BSI1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover, you must ensure that it is refitted when the fuse is replaced.

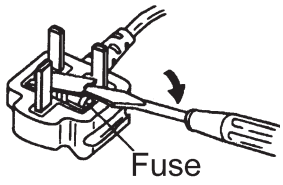
If the fuse cover is lost, the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be obtained from your local Hammond Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME, THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT-OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

To replace the fuse, open the fuse compartment with a screwdriver and replace the fuse and fuse cover.



# IMPORTANT - PLEASE READ

## POWER SUPPLY

1. Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
2. Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.
3. This unit features an Auto Power Off function that automatically turns the power off if the unit is not operated for a specified period of time. The setting will revert to its default value if not backed up before the power is turned off.

## PLACEMENT

1. Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
2. This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
3. Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.
4. Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Also, do not allow lighting devices that normally are used while their light source is very close to the unit (such as a piano light), or powerful spotlights to shine upon the same area of the unit for extended periods of time. Excessive heat can deform or discolor the unit.
5. When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.
6. Do not allow rubber, vinyl, or similar materials to remain on the unit for long periods of time. Such objects can discolor or otherwise harmfully affect the finish.
7. Do not paste stickers, decals, or the like to this instrument. Peeling such matter off the instrument may damage the exterior finish.

## MAINTENANCE

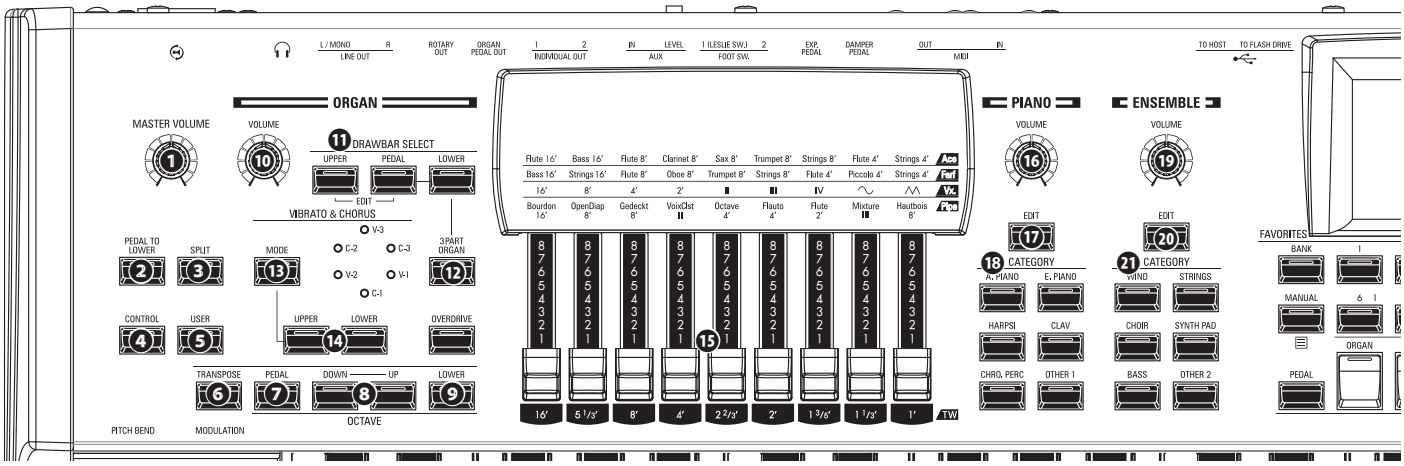
8. To clean the unit, use a dry, soft cloth; or one that is slightly dampened.
9. To remove stubborn dirt off plastic parts, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth. Try to wipe the entire surface using an equal amount of strength, moving the cloth along with the grain of the wood. Rubbing too hard in the same area can damage the finish.
10. Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

## ADDITIONAL PRECAUTIONS

1. Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of losing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory in USB Flash Drive.
2. Unfortunately, it may be impossible to restore the contents of data that was stored in another MIDI device (e.g., a sequencer) once it has been lost. Hammond assumes no liability concerning such loss of data.
3. Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
4. When connecting / disconnecting all cables, grasp the connector itself - never pull on the cable. This will avoid causing short circuits, or damage to the cable's internal elements.
5. To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
6. When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.

# INTRODUCTION

# Table Of Contents




# TOP PANEL

## LEFT SIDE

### ❶ MASTER VOLUME knob

Controls the volume of the entire instrument.

### ❷ PEDAL TO LOWER button

Couples the entire Pedal registration, including Parameters, to the Lower Manual (P. 55).

### ❸ SPLIT button

Divides the keyboard into Upper (right) and Lower (left) keyboards (P. 54).

### ❹ CONTROL button

Accesses a feature from the CONTROL Menu.

### ❺ USER button

Displays a user-assignable Menu Page.

### ❻ TRANSPOSE button

Transposes the musical pitch of the entire keyboard when used in conjunction with ❽ (P. 58).

### ❼ OCTAVE PEDAL button

Moves the pitch of the Pedal tones "UP" or "DOWN" by octaves when used in conjunction with the [UP] or [DOWN] buttons ❽.

### ❽ OCTAVE DOWN/UP buttons

Moves the UPPER Keyboard pitch "UP" or "DOWN" +/- 2 octaves (P. 55).

### ❾ OCTAVE LOWER button

Moves the LOWER Keyboard pitch "UP" or "DOWN" +/- 2 octaves when used in conjunction with the [UP]or [DOWN] buttons ❽.

## ORGAN SECTION

### ❿ ORGAN VOLUME knob

Controls the entire volume of the ORGAN Section (P. 31).

### ⓫ DRAWBAR SELECT buttons

1. Select which ORGAN Part the Harmonic Drawbars ⓯ will affect (P. **33).**
2. Match the Drawbar Registration contained in a Patch with the physical Drawbar setting (P. 45).
3. Opens the editing page of the ORGAN Section ([UPPER] and [PEDAL] buttons pressed together).

### ⓬ 3 PART ORGAN button

Converts the ORGAN Section to a two-manuals-and-pedals Hammond Organ (P. 36).

### ⓭ VIBRATO & CHORUS MODE button

Selects the depth of either the Vibrato or Chorus (P. 34).

### ⓮ VIBRATO UPPER, LOWER button

Turns the Vibrato/Chorus "ON" or "OFF" for the Upper or Lower ORGAN Part (P. 34).

### ⓯ HARMONIC DRAWBARS

Registers the ORGAN Section (P. 38).

### ㉕ UPPER PERCUSSION buttons

Adds Harmonic Percussion (decay) to the UPPER Part of the ORGAN Section (P. 34).

## PIANO / ENSEMBLE SECTION

### ⓰⓳ VOLUME knob

Controls the volume of the Section (P. 47).

### ⓱⓴ EDIT button

Opens the Function Mode for the Section.

### ⓲㉑ CATEGORY button

Selects the Voice Category of the Section (P. 46).

## ALLOCATE

### ㉒ PEDAL button

Allocates a Voice Section to the Pedalboard when used in conjunction with the PEDAL button ㉓ (P. 54).

### ㉓ SECTION buttons

Allocates each Voice Section to the UPPER Keyboard (P. 54).

### ㉔ LOWER button

Allocates a Voice Section to the LOWER Keyboard when used in conjunction with the LOWER button ㉓ (P. 54).

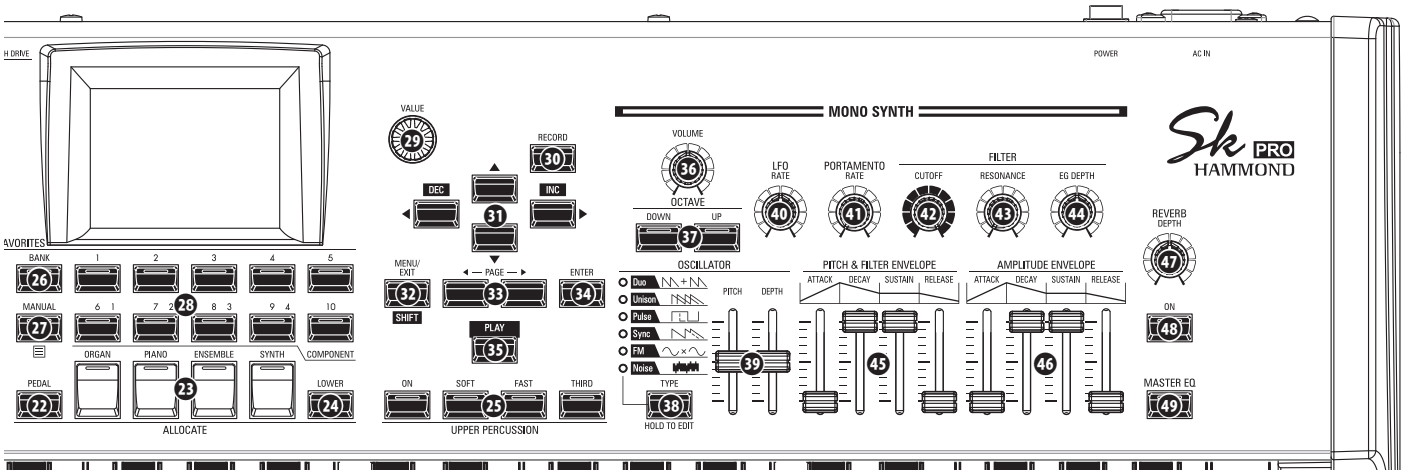
## FAVORITES

### ㉖ BANK button

Selects Favorite Banks by pressing and holding this button with one of the Favorite Number buttons.

### ㉗ MANUAL/APP button

1. Overrides the current Combination setting in favor of the current Panel settings (P. 29).
2. Opens the APP (Application) Menu.




**㉘ NUMBER buttons**

Recalls a Favorite related to the numbered button.

## CONTROL PANEL

**㉙ VALUE knob**

Increases or decreases Combination/Patch numbers while performing, or adjusts values during editing.

**㉚ RECORD button**

Use this button to Record user-definable features such as Combinations, Patches, Custom Parameters etc (P. 60).

**㉛ DIRECTION / DEC / INC buttons**

1. Moves the cursor in the display.
2. Increments or decrements a value while pressing and holding the [SHIFT] button ㉜.

**㉜ MENU / EXIT / SHIFT button**

1. Opens the MENU Edit page (P. 66).
2. Exit or back one level from the current Menu Page.
3. Allows alternate functions for designated buttons.

**㉝ PAGE buttons**

Use these buttons to navigate the EDIT and FUNCTION Mode Pages.

**㉞ ENTER button**

Use this button to confirm the current entry or procedure when editing sounds or features.

**㉟ PLAY button**

Returns to the PLAY Mode.

## MONO SYNTH SECTION

**㊱ VOLUME knob**

Controls the volume of the MONO SYNTH Section (P. 49).

**㊲ SYNTH OCTAVE DOWN/UP buttons**

Moves the musical pitch of the MONO SYNTH Section “UP” or “DOWN” by one octave (P. 49).

**㊳ OSCILLATOR TYPE button**

1. Selects the Oscillator Type (P. 51).
2. Opens the MONO SYNTH Function Mode when pressed and held.

**㊴ OSCILLATOR PITCH, DEPTH knob**

Modifies the selected Oscillator waveform (P. 51).

**㊵ LFO RATE knob**

Adjusts the rate of the Low Frequency Oscillator (P. 51).

**㊶ PORTAMENTO RATE knob**

Adjusts the rate of the Portamento feature (P. 51).

**㊷ FILTER CUTOFF knob**

Selects the frequency at which the filter begins to have an effect on the waveform’s frequency components (P. 51).

**㊸ FILTER RESONANCE knob**

Emphasizes the portion of the sound in the region of the cutoff frequency.(P. 51).

**㊹ FILTER EG DEPTH knob**

Adjusts the depth of the filter envelope ㊺ (P. 51).

**㊺ PITCH & FILTER ENVELOPE sliders**

Adjusts the changing over time of the pitch and filter (P. 51).

**㊻ AMPLITUDE ENVELOPE sliders**

Adjusts the changing over time of the amplitude or volume (P. 51).

## RIGHT SIDE

**㊼ REVERB DEPTH knob**

Adjusts the depth of the Reverb effect (P. 56).

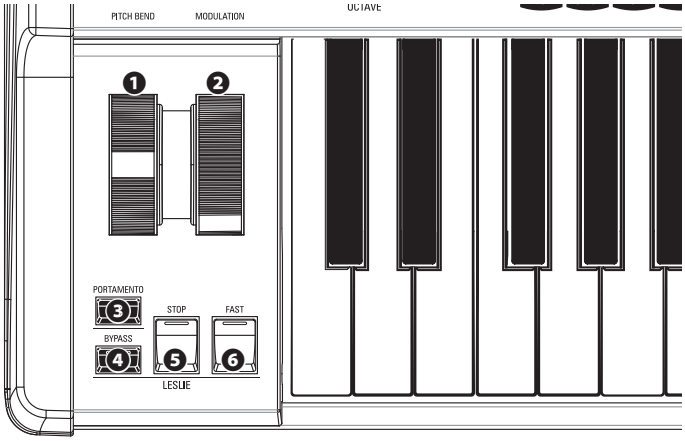
**㊽ REVERB ON button**

Turns the Reverb “ON” or “OFF” (P. 56).

**㊾ MASTER EQ button**

Turns the Master Equalizer. “ON” or “OFF” (P. 56).

# LEFT SIDE OF THE KEYBOARD




## WHEELS

**❶ PITCH BEND wheel**

Bends the pitch of played notes "UP" or "DOWN" (P. 28).

**❷ MODULATION wheel**

Applies modulation to played notes (except ORGAN Section) (P. 28).

## PORTAMENTO

**❸ PORTAMENTO button**

Turns the PORTAMENTO "ON" or "OFF" (P. 28).

## LESLIE

**㉓ LESLIE BYPASS button**

Channels the sounds produced by the ORGAN Section from the Rotary channel to the Stationary channel (P. 35).

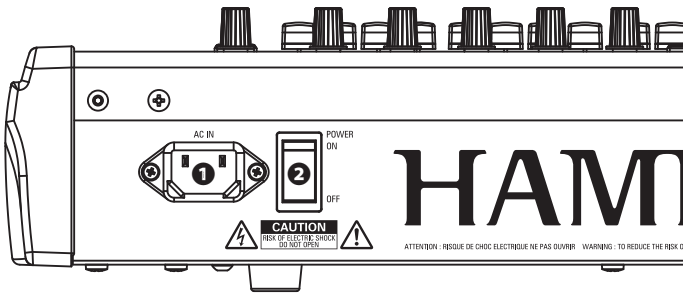
**㉔ LESLIE STOP button**

Stops the Leslie Rotors from turning when the [FAST] button is OFF" (P. 35).

**㉕ LESLIE FAST button**

Selects "FAST" Leslie Rotor speed (P. 35).

# REAR PANEL




## POWER

**❶ AC POWER RECEPTACLE**

Connect the female end of a grounded AC Power Cord here, and the male end into a grounded AC power outlet.

**❷ POWER switch**

Turns the AC power to the instrument "ON" or "OFF."

## AUDIO OUTPUT JACKS

**❸ PHONES jack**

Use this jack to connect a set of stereo headphones.

**NOTE: Connecting Headphones does NOT mute the LINE OUT or LESLIE audio outputs. If you wish the sound to go through the Headphones only, disconnect all other audio outputs.**

**❹ LINE OUT L/MONO jack**

**LINE OUT R jack**

Use these jacks to connect external audio equipment.

If the connected mixer or monitor speaker is stereophonic, connect both the L and R jacks. If it is monaural, connect only to the L/MONO jack.

**❺ LESLIE 11 -PIN socket**

Use to connect a Leslie Speaker Cabinet having an 11-pin interface.

When a Leslie Speaker Cabinet is detected at via the 11-pin socket, the inbuilt digital Leslie is disabled at the PHONES jack and the LINE OUT jacks (P. 17).

**❻ ROTARY OUT jack**

Outputs the Rotary Channel of the ORGAN Section. Use this jack to bypass the inbuilt digital Leslie if you want a "dry" audio output from the ORGAN Section.

**NOTE: Set the "ROTARY OUT" switch in the AUDIO portion of the FUNCTION Mode "Used" if you use this jack (P. 18).**

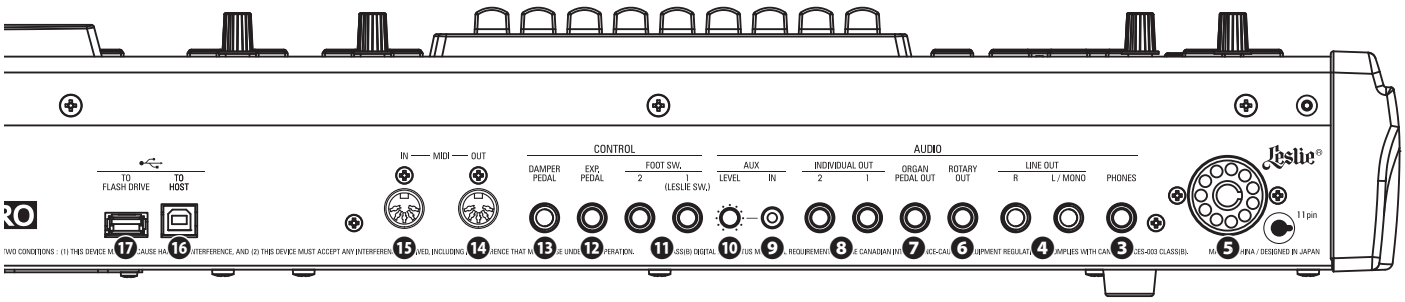
**❼ ORGAN PEDAL OUT jack**

Outputs the PEDAL Part of the ORGAN Section. Use this jack to connect a powered sub-woofer to increase the bass, or to bypass the Leslie to the PEDAL Part (P. 18).

**❽ INDIVIDUAL OUT 1 jack**

**INDIVIDUAL OUT 2 jack**

Outputs the specified Section independently (P. 19).




## AUDIO INPUT JACK

### ❾ AUX IN jack

Use this jack to connect an external audio source. When connected, the sound will be mixed with the internal keyboard sounds and sent out to the LINE OUT jacks and the Stationary channel of a multi-channel Leslie Speaker via the 11-pin socket (P. 19).

### ❿ AUX LEVEL knob

Adjusts the volume of the sound coming in from the AUX IN jack.

## CONTROLLER JACKS

### ⓫ FOOT SWITCH 1 jack
### FOOT SWITCH 2 jack

Use these jacks to connect Foot Switches to switch the Leslie or change Combinations.

The recommended Foot Switches are listed below;
**HAMMOND** ... FS-9H, VFP1
**BOSS** ..... FS-5U
**YAMAHA**..... FC4A, FC5

In addition, the FS-10TL Leslie Switch (not available in Europe) can be connected to the FOOT SWITCH 1 jack.

### ⓬ EXP PEDAL jack

Use this jack to connect an Expression Pedal to control volume while playing.

The recommended Expression Pedals are listed below:
**HAMMOND** ... EXP-50J, EXP-20, V-20H, V-20R; NORM
**KORG**..... XVP-10, XVP-20; REV
**ROLAND** ..... EV-5; NORM
**YAMAHA**..... FC7; REV

### ⓭ DAMPER PEDAL jack

Use this jack to connect a Damper Pedal (Sustain Pedal) for holding notes when keys are played and released.

The recommended Damper Pedals are listed below:
**HAMMOND** ... FS-9H, VFP1
**ROLAND** ..... DP-10
**YAMAHA**..... FC3A, FC4A, FC5

## MIDI PORTS

### ⓮ MIDI OUT Port

Transmits MIDI data to a connected MIDI device.

### ⓯ MIDI IN Port

Receives MIDI date from a connected MIDI device. This port can be programmed for a LOWER Keyboard or a Pedalboard.

## USB PORTS

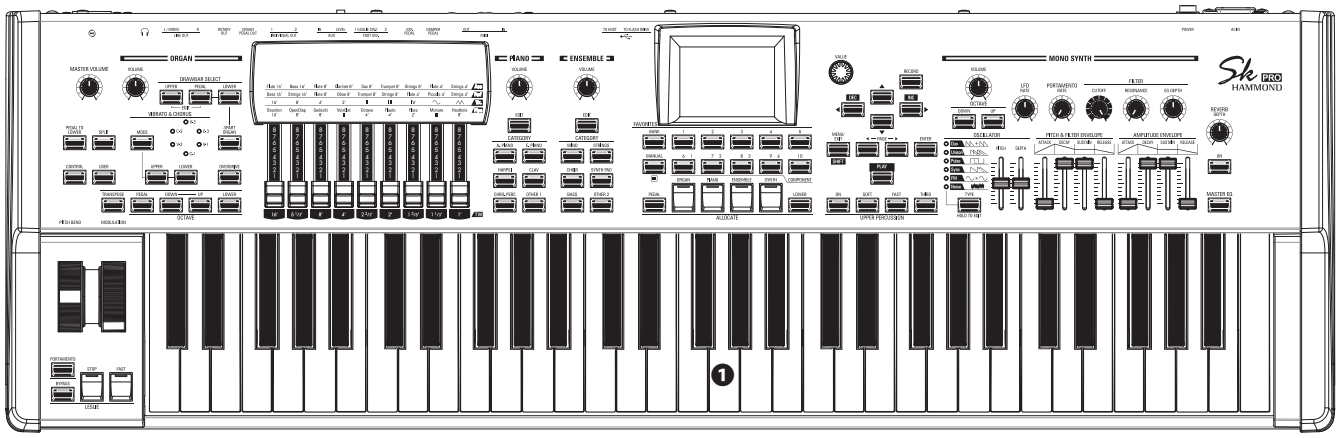
### ⓰ USB TO HOST Port

Use to connect to a computer to transmit MIDI messages or Load and Save files such as Setups or Update files.

### ⓱ USB FLASH DRIVE Port

Use to connect a USB Flash Drive to Load or Save files such as Setup or Update files.

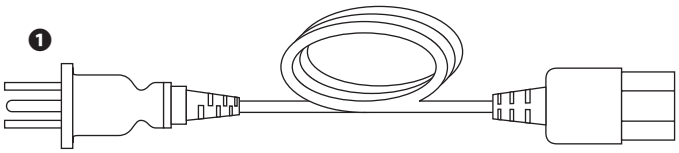
# KEYBOARD




**❶ Keyboard**

61 notes (SK PRO) / 73 notes(SK PRO-73), square-front ("waterfall" type), semi-weighted, velocity-sensitive keyboard.

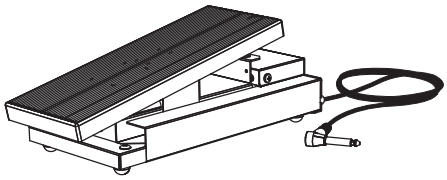
# ACCESSORY




**❶ AC Power Cord**

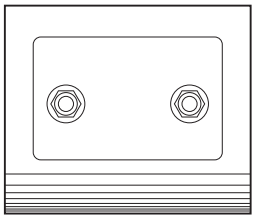
Connects to the AC Power Receptacle of the SK PRO/SK PRO-73.

# ACCESSORIES (SOLD SEPARATELY)



**Expression Pedal EXP-50J**

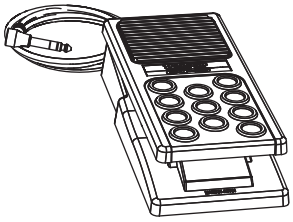
Heavyweight pedal for durability, and detachable cable to avoid breaking or fraying.



**Leslie Switch FS-10TL**

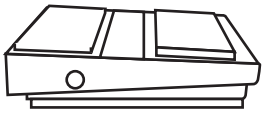
**(not available in Europe)**

Controls both the [ON/OFF] and [SLOW/FAST] of the Leslie Rotors.



**Expression Pedal EXP-20**

Light weight for touring usage.



**Foot Switch FS-9H**

Multi-purpose foot switch with Momentary action.

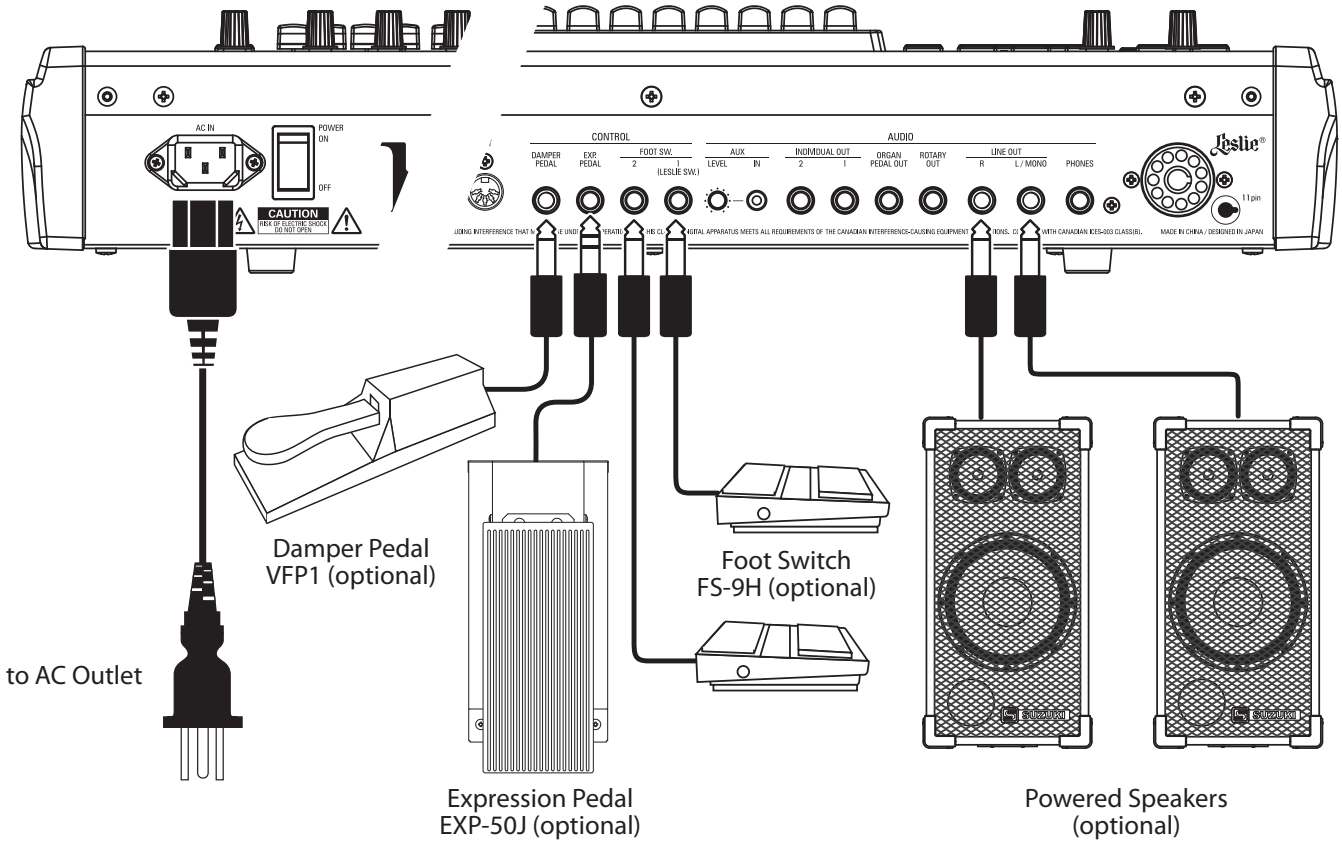
# MAKING THE CONNECTIONS

# BASIC CONNECTIONS

Connect audio cables and accessories as shown below.

The SK PRO/SK PRO-73 is not self-contained - an external amplifier/speaker system is required in order to hear the sound. However, if you connect a set of stereo headphones to the PHONES jack, you can hear the sound through the headphones even if an external amplifier is not connected.

**NOTE: Be sure that both the instrument and amplifier are "OFF" before connecting amplifiers or headphones.**




**NOTE: The Expression Pedal, Foot Switch and Damper Pedal Parameters must be set properly. This is explained in more detail starting on page 132.**

**⚠ CAUTION**

This instrument draws a slight amount of power even if the [POWER] switch is "OFF." Therefore, if the instrument will not be used for a long period of time, disconnect the AC plug from the outlet.

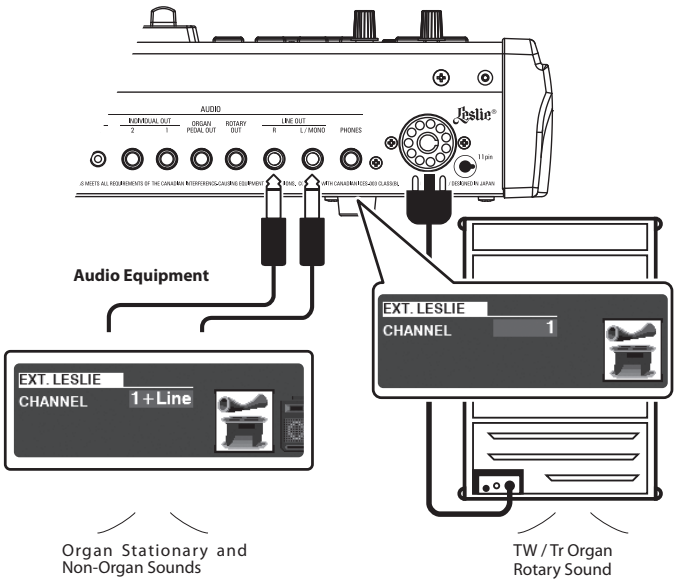
Do not place this instrument in direct sun light, near heat sources, or in a hot location.

# CONNECTING A LESLIE SPEAKER

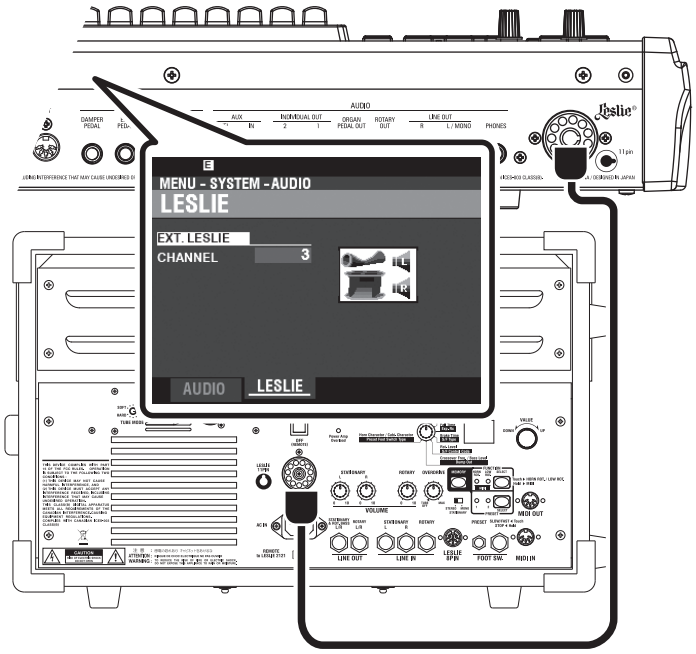
A Leslie Speaker Cabinet with an 11-pin interface can be directly connected to the SK PRO/SK PRO-73.

**NOTE: Be sure the power to the SK PRO is "OFF" before connecting the Leslie Speaker.**

**Connecting a single-channel Leslie Speaker**




**Connecting a 3-channel Leslie Speaker**




## BASIC CONNECTION

### 3-CHANNEL TYPE (2101/mk2)

1. Connect the SK PRO to the Leslie Speaker via an 11-pin Leslie cable (optional LC-11-7M, not included).
2. Turn the power to the SK PRO "ON" and set the EXT. LESLIE CH Parameter to "3."
3. Make sure a Hammond Tone Wheel Organ (**A-100**, **B-3**, **C-3**, or **Mellow**) is selected.
4. Press the [BYPASS] button "ON" and set the [STATIONARY VOLUME] of the Leslie Speaker at a desired level.
5. Press the [BYPASS] button "OFF" while playing, and set the [ROTARY VOLUME] of the Leslie Speaker at the same audible level as the [STATIONARY] Channel.

### SINGLE-CHANNEL TYPE (122XB, 981, 3300/W)

1. Connect the SK PRO to the Leslie Speaker via an 11-pin Leslie cable (optional LC-11-7M, not included). This will allow you to hear the Drawbar ORGAN sounds.
2. Connect the SK PRO to a keyboard amp or powered speakers via 1/4" audio cables from the LINE OUT jacks of the SK PRO.
3. Turn the power to the SK PRO "ON" and set the EXT. LESLIE CH Parameter at "1+LINE."
4. Make sure a Tone Wheel Organ (**A-100**, **B-3**, **C-3**, or **Mellow**) is selected.
5. Press the [BYPASS] button "ON" and set the audio equipment at a desired level.
6. Press the [BYPASS] button "OFF" and set the Volume of the connected Leslie Speaker at the same audible level as when the [BYPASS] button is "OFF."

**tips** **LESLIE SPEAKERS TO CONNECT**

The SK PRO/SK PRO-73 is designed to connect with 3-channel Leslie Speakers such as the 2101/mk2. It is also possible to connect a single-channel Leslie Speaker such as a 122XB, 981 or 3300/W; however, a single-channel Leslie will reproduce the Drawbar ORGAN sounds only. To hear the PIANO/ENSEMBLE/SYNTH voices, connect an additional sound source such as a keyboard amp or powered speakers via the LINE OUT jacks.

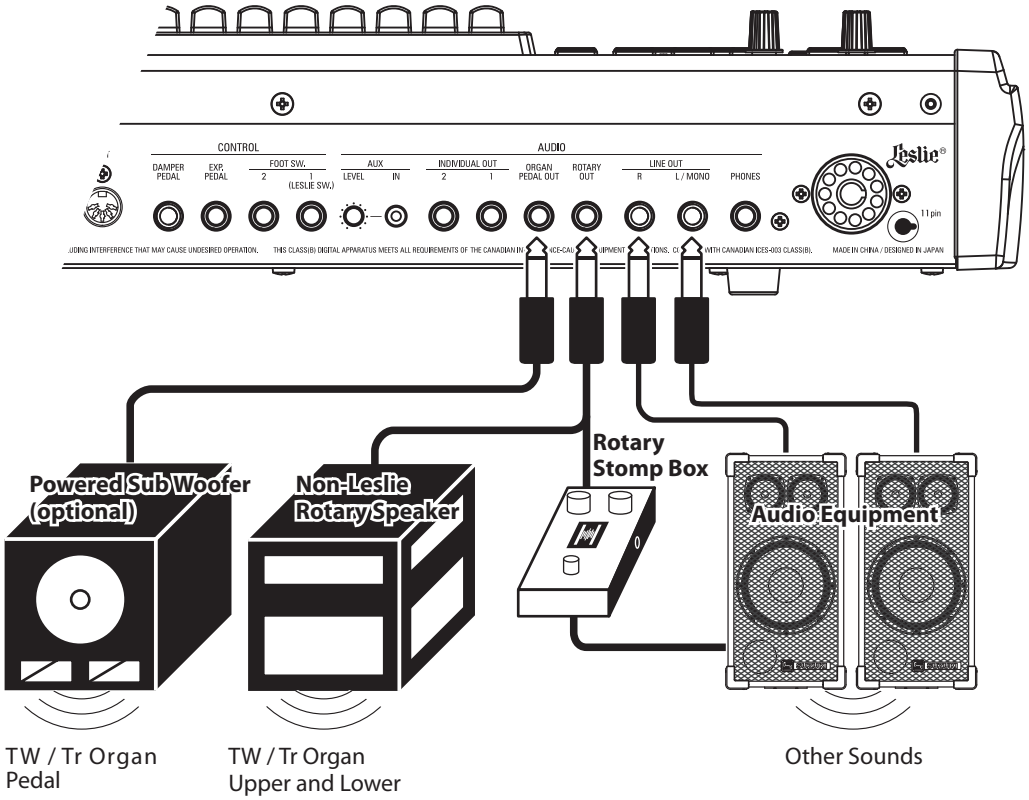
**tips** **LESLIE CHANNEL**

3-channel type Leslie Speakers are equipped with a stereo speaker system, independent of the Rotary channel, to provide stereo sound for the Rotary (ORGAN) channel and the Stationary (PIANO, ENSEMBLE and MONO SYNTH) channel.

A traditional single-channel Leslie Speaker, such as a 122, 981 or 3300/W has no stationary speaker system, thus requiring a separate amplifier/speaker for other sounds such as PIANO, ENSEMBLE and MONO SYNTH.

# OTHER AUDIO CONNECTIONS

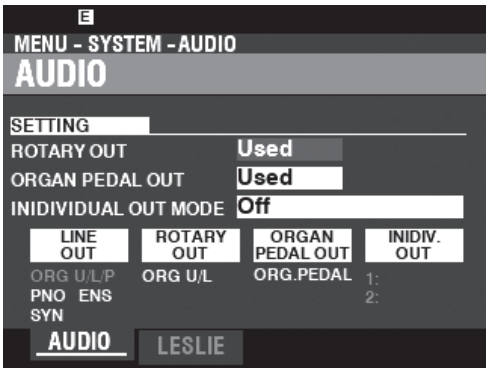
## OUTPUT DRY ORGAN SOUNDS




### ROTARY OUT jack

Use the [ROTARY OUT] jack if you want to output a "dry" organ signal without the inbuilt digital Leslie.

**NOTE: Set the "ROTARY OUT" switch in the AUDIO FUNCTION Mode at "Used" when using this jack to mute the ORGAN Section from the [LINE OUT] jacks. This is explained in more detail on page 131.**



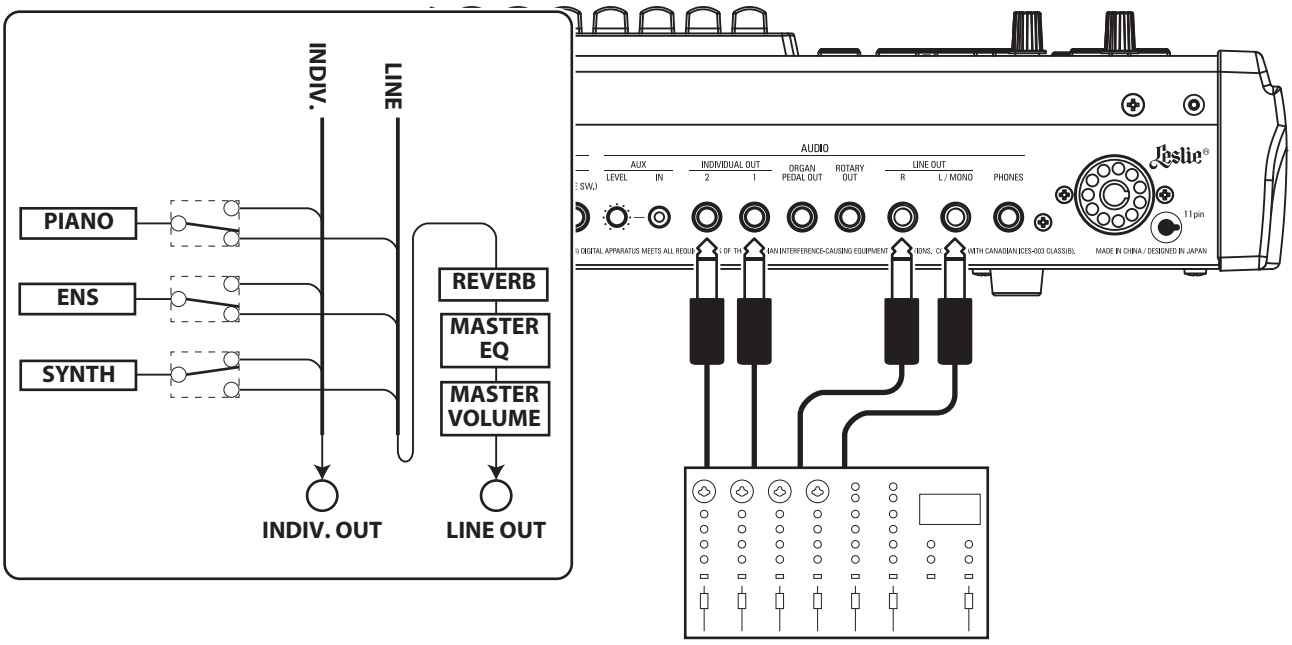

### ORGAN PEDAL OUT jack

This jack outputs the PEDAL Part of the ORGAN Section.

Connect the [ORGAN PEDAL OUT] jack to a powered sub-woofer if you want to reinforce the bass or bypass the Leslie to the PEDAL Part.

**NOTE: Set the "USE PEDAL OUT" switch in the AUDIO FUNCTION Mode at "Used" when using this jack to mute the PEDAL Part from the [LINE OUT] jacks.**

# USING AN EXTERNAL MIXER




## INDIVIDUAL OUT jacks

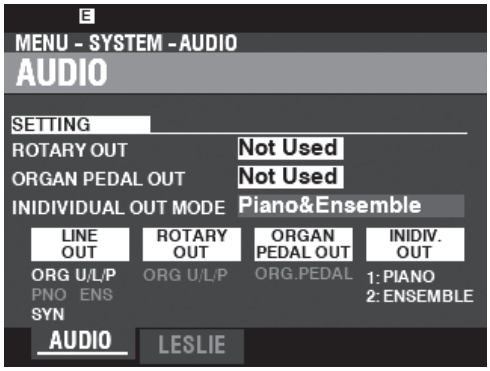
Use the [INDIVIDUAL OUT] jacks to connect an external mixer or add effects from external effects devices. You can choose the Voice Section which will be present at each of these jacks.

**NOTE: Use the INDIVIDUAL OUT switch in the AUDIO FUNCTION Mode to select the Sections to assign to the [INDIVIDUAL OUT] jacks. This is explained in more detail on page 131.**

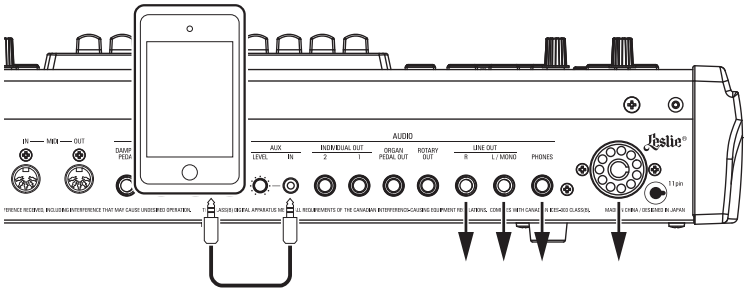
**NOTE: If a Voice Section is assigned to an [INDIVIDUAL OUT] jack, it will be muted from the [LINE OUT] jacks.**

**NOTE: The sound from the [INDIVIDUAL OUT] jacks is not affected by Reverb, the Master Equalizer, or the [MASTER VOLUME] knob.**

**NOTE: The ORGAN Section cannot be assigned to the INDIVIDUAL OUT jacks.**




# USING A MUSIC PLAYER



## AUX IN jack

Use the [AUX IN] jack to connect a music player or phone.

Use the [AUX LEVEL] knob on the Rear Panel to control the volume of a device connected via the [AUX IN] jack.

The audio signal via the [AUX IN] jack will combine with the output from the [LINE OUT]jacks, [PHONES] jack and the Stationary Channel of the 11-pin Leslie socket.

**NOTE: The [MASTER VOLUME] knob does not affect the audio signal coming into the [AUX IN] jack.**

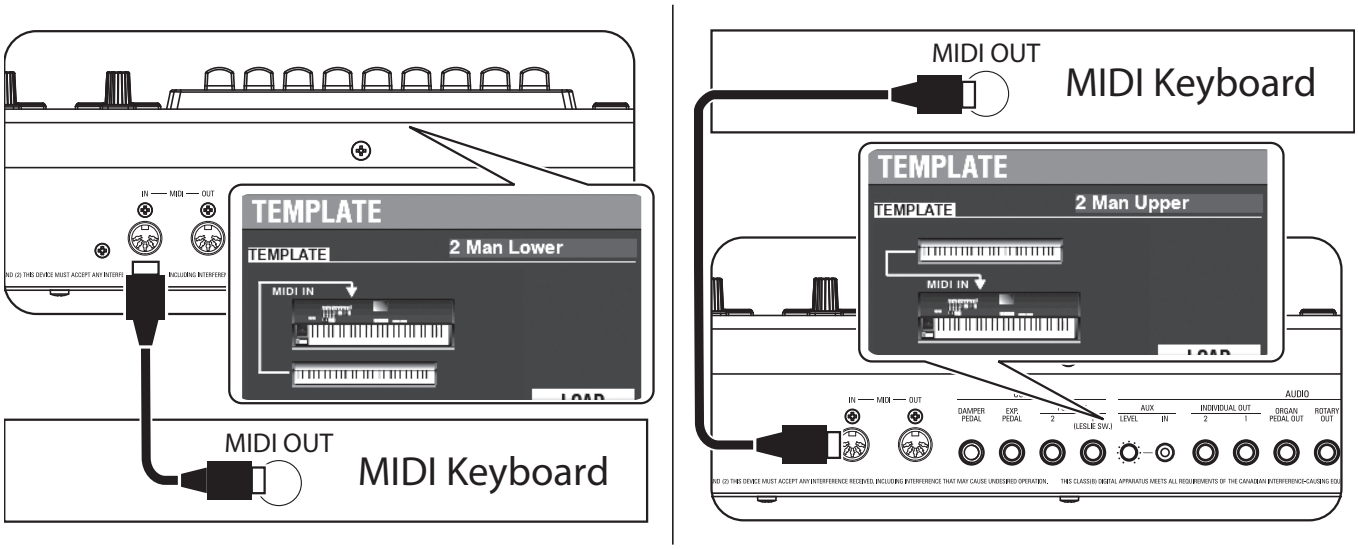
# EXPANDING THE SK PRO

The SK PRO/SK PRO-73 can be expanded by connecting an external keyboard and/or a pedalboard.

## DUAL MANUAL OPERATION

You can use an external MIDI keyboard with the SK PRO in two ways (shown below):

- Use the SK PRO and an external MIDI keyboard for UPPER and LOWER Keyboards without using SPLIT.
- Play a specified Section, such as PIANO, via external MIDI keyboard while retaining a SPLIT on the SK PRO.




In order to use an external MIDI keyboard, you will have to connect it via MIDI. You will also have to select a **MIDI Template**, which is a preselected set of MIDI Parameters designed for specific MIDI applications.

To use an external MIDI keyboard with the SK PRO, do the following:

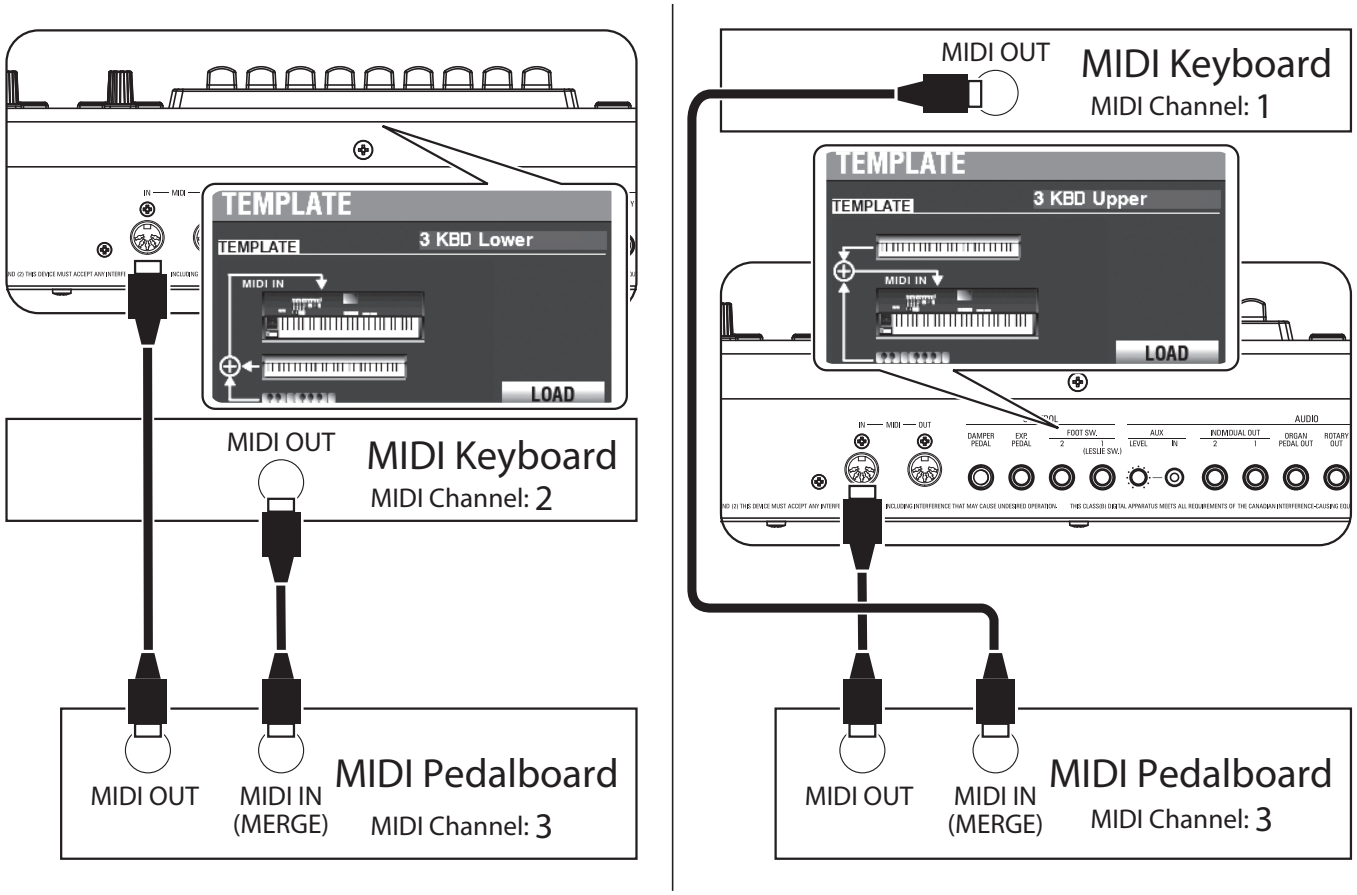
1. Connect an external MIDI keyboard as shown above.
2. Turn the power to the SK PRO "ON" and press the MENU\EXIT button to enter MENU Mode.
3. Press the [PAGE ▶] button two times to display the SYSTEM Menu.
4. Press the [DIRECTION ▶] button once to select MIDI.
5. Press the [ENTER] button. You will see the MIDI TEMPLATE Menu.
6. Use the [VALUE] knob to select the MIDI Template for the type of playing you want to do.

**2 Man Lower** ..... The internal keyboard works as Upper, and the MIDI keyboard works as Lower.

**Piano** ..... The internal keyboard works as Upper and Lower, the MIDI keyboard sounds PIANO Section only.

For more specific information about the connected MIDI keyboard, please refer to the Owner's Manual for the specific keyboard you are using.

# TWO MANUALS + PEDALBOARD




1. Connect as illustrated above. The SK PRO has one MIDI IN Port; therefore a MIDI keyboard with a merge function or a MIDI Merge-box is necessary for a dual keyboard configuration.
2. Turn the power to the SK PRO/SK PRO-73 "ON."
3. Select MIDI Template "3KBD Upper" or "3KBD Lower."
4. Set the Transmit channel of the added MIDI keyboard at "2" if you are using it as a Lower Keyboard, or "1" if you are using it as a UPPER Keyboard. If you are using a MIDI Pedalboard, set its Transmit Channel at "3."

**NOTE: Hammond MIDI Pedalboards are automatically set to transmit on MIDI Channel 3.**

## RECOMMENDED MIDI PEDALBOARDS

The following HAMMOND MIDI Pedalboards are recommended for use with the SK PRO/SK PRO-73:

- MIDI Sound Pedalboard XPK-130G (13 notes)
- MIDI Sound Pedalboard XPK-200G (20 notes)
- MIDI Sound Pedalboard XPK-200GL (long 20 notes)

**NOTE: The SK PRO/SK PRO-73 can also be used with the following Hammond MIDI Pedalboard models:**

**XPK-100, XPK-200, XPK-200L.**

**tips** **HOW A MIDI KEYBOARD WORKS**

On the SK PRO, a connected MIDI keyboard functions as a "LOWER" Keyboard when the MIDI Template is set for "3KBD" or "Two Manual."
On the SK PRO-73, a connected MIDI keyboard functions as an "UPPER" keyboard when the MIDI Template is set for "3KBD" or "Two Manual."

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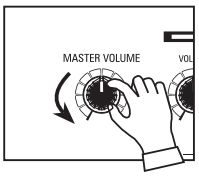
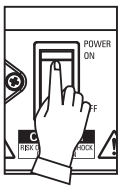
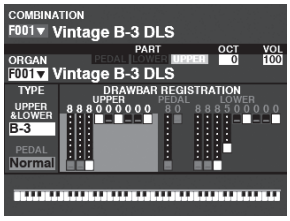
# TURN ON AND PLAY

# POWERING ON

After making the connections described on the previous pages, you are ready to turn the SK PRO power "ON." Follow the procedure below to prevent malfunction or damage.




## TURNING THE POWER "ON"

1. Before turning the power to the SK PRO "ON," make sure you have connected all peripherals (Expression Pedal, Foot Switch(es), etc.) properly. Also be sure to set the [MASTER VOLUME] knob to its minimum setting.

**NOTE: The polarity of each Foot Controller will be detected automatically.**

2. The Power Switch is located on the left side of the Accessory Panel (right side facing the keyboard). Turn the power to the instrument "ON." The display will show, "Loading..." below the opening screen for approximately 25 seconds while the system software loads, then the PLAY Mode screen will display.

**NOTE: If you have a Leslie Speaker connected to the instrument, the Leslie will turn "ON" automatically.**

**NOTE: In order to protect the circuits, the SK PRO will be ready to play approximately 6 seconds after the power is turned "ON."**

3. Turn the power to the connected amplifier "ON."
4. Hold down a playing key and urn the [MASTER VOLUME] to the right a little and play some notes on the keyboard. Adjust the [MASTER VOLUME as needed.

**NOTE: If the [MANUAL] button is pressed in the Default setting and the [ALLOCATE] buttons are all "OFF," no sound will be heard. You can touch any of the [ALLOCATE] buttons or select any of the [FAVORITE] ([1] to [10]) buttons to hear sounds.**

5. Adjust the volume of the amplifier.

**NOTE: To turn the SK PRO power "OFF," reverse the above procedure. Also, be sure to turn the power to a connected amplifier "OFF" before turning the keyboard "OFF." This will prevent a loud "pop" from the amplifier.**

# BACKING UP THE INITIAL SETTINGS

The SK PRO does not remember the status of the playing controls before the power is turned "OFF." The status of the default settings are the same as when the [FAVORITE] [1] button is depressed.

# AUTO POWER OFF

The SK PRO has an "AUTO POWER OFF" feature which will automatically turn the power to the instrument "OFF" if no keys or buttons are pressed for 30 minutes.

**NOTE: Depending on the status of the instrument - while editing, for example - the power may not turn "OFF" even if AUTO POWER OFF in enabled. Therefore, it is best to turn the SK PRO power "OFF" via the Power Switch after every use.**

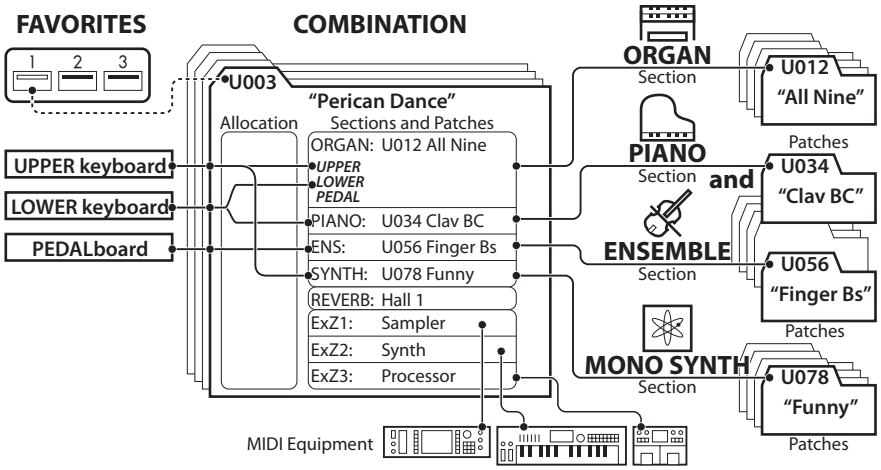
# RESTORING THE FACTORY SETTINGS

To reset all Parameters of the SK PRO to their default settings, do the following:

1. Turn the power to the SK PRO "OFF."
2. Press and Hold the red [RECORD] button.
3, While holding the red [RECORD] button, turn the [POWER] "ON."
3. Continue to hold down the red [RECORD] button. When "Loading Default" is displayed, release the red [RECORD] button.
4. When the PLAY Mode is displayed, the factory settings have been restored.

# STRUCTURE OF THE SK PRO

The illustration below show the structure of the sound engine and memory.

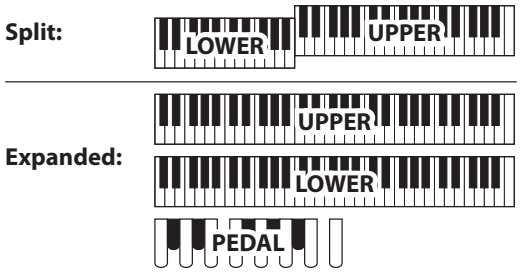



The SK PRO has four sound-producing divisions or **Sections**. Each Section has sounds and Parameters which can be Recorded as a Patch. In addition, Patches from the different Sections can be combined to produce a Combination. This is explained in more detail starting below.

## SECTIONS

There are four (4) sound Sections - ORGAN, PIANO, ENSEMBLE and MONO SYNTH. These can be used individually or together, as shown on the right side of the above illustration.

## KEYBOARDS AND PARTS




The SK PRO Voice Sections can be allocated either by using the SPLIT feature to divide the keyboard or by expanding the instrument via MIDI (see the figure above). When the [SPLIT] feature is enabled, the portion of the keyboard to the right of the SPLIT Point is called UPPER and the left portion of the keyboard is called LOWER. PEDAL refers to the bass tones which can be played from a connected MIDI Pedalboard.

### PARTS

The ORGAN Section has 3 Parts - UPPER, LOWER and PEDAL. These can be assigned either by using the [ALLOCATE] buttons or, when using the [3 PART ORGAN] function, allocated to replicate the performance of a classic Hammond Organ with two manuals and pedals.

# MEMORY

## PATCHES

A **Patch** is an individual unit of each Voice Section. For example, the PIANO Section contains Grand Pianos, Electric Pianos, etc., the ENSEMBLE Section contains Strings, Choir, and so on.

## FACTORY, USER and BUNDLE


The Patches are grouped in three ways. "F" (Factory) Patches are set at the factory and cannot be changed. "U" (User) Patches can be changed by the player. "B" (Bundles) consist of COMBINATION Parameters plus ORGAN and MONO SYNTH Sections grouped together for inclusion into new Patches.

There are 100 Factory and 100 User Patches for the ORGAN and MONO SYNTH Sections. The PIANO and ENSEMBLE Sections share a common library of Factory and User Patches.

## COMBINATIONS

A "Combination" is a unit which contains Patches as well as other Parameters such as the Patch number of each Section, keyboard allocations of each Section, etc. (upper center illustration on this page).

The SK PRO contains a total of 100 Factory ("F") Combinations which can be used "as is" or changed to suit the player.

For example, "ORGAN Section Patch #10, allocated to LOWER Keyboard, soft Volume, Octave +1, PIANO Section Patch #3, allocated to UPPER Keyboard at high Volume."

## FAVORITES

The [FAVORITE] buttons allows you to store and recall frequently-used Combinations (upper figure of this page, upper-left side).

There are 10 [FAVORITE] buttons. In addition, there are 10 Banks of Favorites, bring the total number of Favorites to 100. Use the [BANK] button to access the Favorite Banks.

# USING COMBINATIONS

**Combinations** are the basic memory units of the SK PRO. This is explained in more detail starting below.

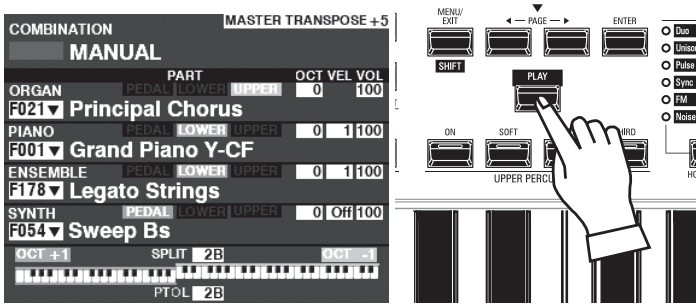
## WHAT IS A "COMBINATION?"

As explained previously, the SK PRO has four sound-producing sections - ORGAN, PIANO, ENSEMBLE, and MONO SYNTH. These, along with other Parameters such as Control Panel settings, etc., can be combined into a single unit called a **Combination**.

The SK PRO/SK PRO-73 comes with 100 pre-programmed Combinations. Starting below is an example of how to use Combinations.

## SELECT A COMBINATION

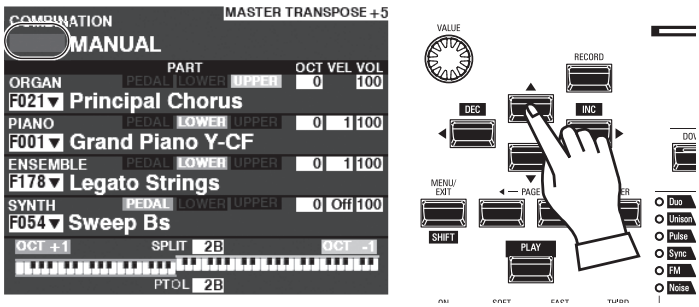
### ① LOCATE THE PLAY MODE




If the PLAY Mode is not displaying, press the [PLAY] button to display it.

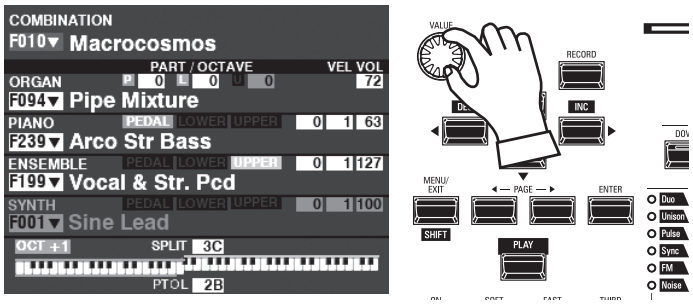
**NOTE: The word "MANUAL" is explained in more detail on page 29.**

### ② MOVE THE CURSOR TO THE COMBINATION NUMBER




If the cursor is not at the Combination Number (very top of the screen), move the cursor to it using the [DIRECTION] buttons.

### ③ SELECT A COMBINATION

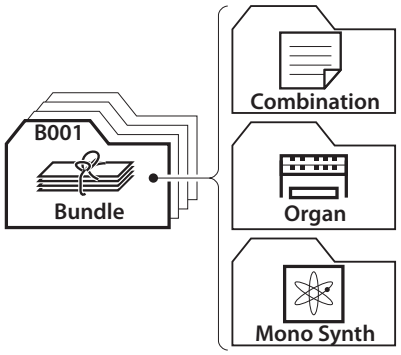



Use the [VALUE] knob to select a Combination.

**NOTE: You can also select a Combination Number by direct numerical key input. This is explained in more detail on page 139.**

**tips** **WHAT IS A "BUNDLE?"**

In order to decrease the number of steps necessary to create a Combination, you can save Combination Parameters, ORGAN Patches and MONO SYNTH Patches to a **Bundle**. You can then save the Bundle along with PIANO and/or ENSEMBLE Patches to a Combination.

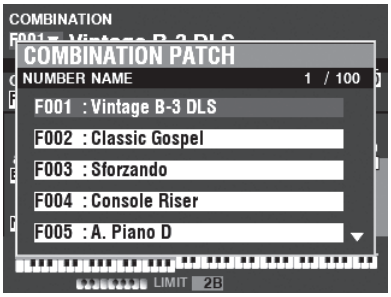



**tips** **"▼" INDICATES A LIST**

The "▼" shown to the right side of the Combination Number indicates a list of available choices for that selected Voice Category. Use the "▲" and "▼" buttons to highlight the available Voices.

When you have selected the Voice you want, press the [ENTER] button to select it.

Use the [VALUE] knob to select a Combination Number and press the [ENTER] button. The Voice has now been Recorded to the Combination and the list will close.



To recall Combinations that are frequently used, follow the instructions below.

## WHAT IS A "FAVORITE?"

A **Favorite** is simply a Combination which is stored to one of the 10 numbered buttons in the [FAVORITE]S section, allowing you to recall frequently used Combinations more quickly than using the [VALUE] knob.

## BANK AND NUMBER

| Bank \ Number | 1 | 2 | 3 |
|---|---|---|---|
| 1 | U011 Born Verse | U012 Born Solo | U011 Born Verse |
| 2 | U024 MyLife Pf | U045 Lucy Org | U023 GetBack EP |
| 3 | P061 Classic | P062 Slow | P063 Contemp. |

There are 10 available Banks of Favorites, each of which contains 10 Favorites. This allows you to have 100 Combinations readily available to quick access. The chart above shows an example of compiling a **Set List** using different Favorite Banks.

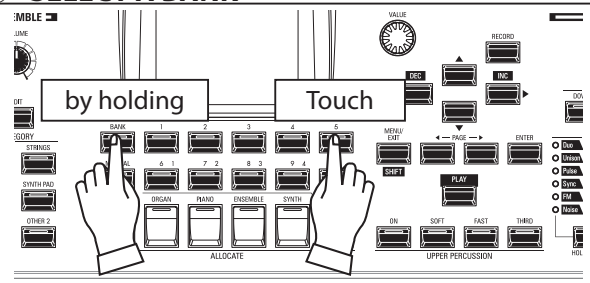
## LINKING A COMBINATION TO A FAVORITE

### ① SELECT A COMBINATION

Select a Combination you want to link to a Favorite.

For this example, link Combination F002 to Favorite #2, Bank #5.

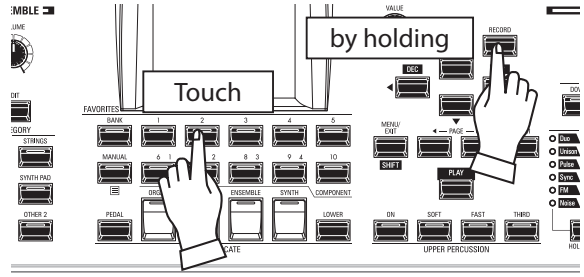
### ② SELECT A BANK




Select the Bank. For this example, select Bank 5.

Press and Hold the [BANK] button and press the [5] [FAVORITE] button. The LED of the selected number will flash several times.

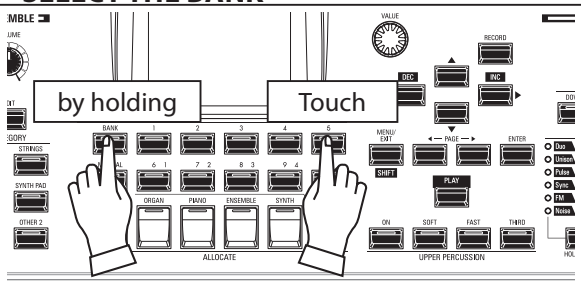
### ③ SELECT A NUMBERED [FAVORITE] BUTTON




Select a Favorite Number. For this example, Press and Hold the red [RECORD] button and press the [FAVORITE] [2] button. The LED of the numbered button will flash several times. When the LED stops flashing the procedure is complete and your Bank is selected.

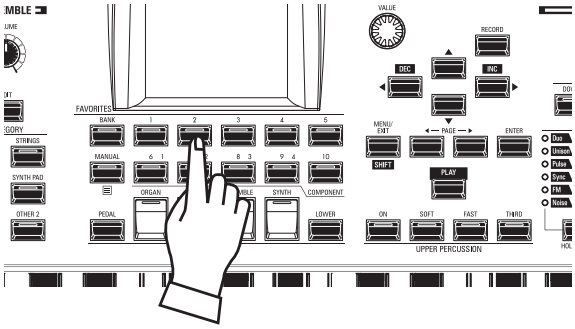
## RECALLING A COMBINATION USING A [FAVORITE] BUTTON

### ① SELECT THE BANK




Press and Hold the [BANK] button and press the numbered [FAVORITE] button representing the Bank where the Combination you want to stored. The LED of the [FAVORITE] button will flash several times.

### ② SELECT THE [FAVORITE] BUTTON



Press the numbered [FAVORITE] button where the Combination you want is stored. The LED of the numbered button will light and your Combination is selected.

**NOTE: You can view a list of Favorites. This is explained in more detail on page 139.**

**tips CONFIRM THE CURRENT BANK**

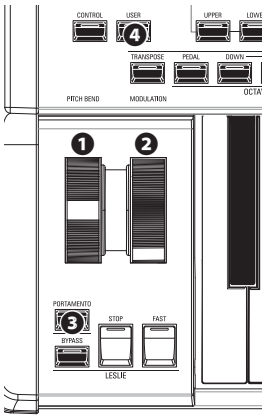
Press and Hold the [BANK] button to determine which Bank is selected. One of the numbered [FAVORITE] buttons will light indicating which Bank is currently active.

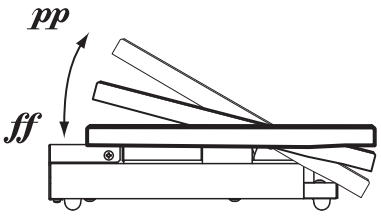
**tips OMITTING BANK STEP**

If the current Bank already contains the [FAVORITE] you want, you can omit Step 1 above.

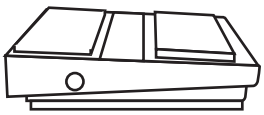
# USING CONTROLLERS

The various Controllers of the SK PRO are explained in detail starting below.

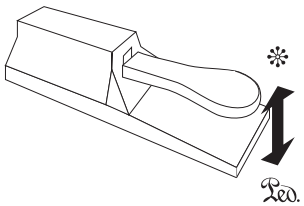



EXP-50J (optional)



FS-9H (optional)



VFP1 (optional)

## INTERNAL CONTROLLERS

### ❶ PITCH BEND wheel

This allows you to bend the pitch "UP" or "DOWN" smoothly. Push the wheel away from you to bend the pitch "UP," and pull it toward you to bend the pitch "DOWN." When the wheel is released, it will automatically return to its center position.

### ❷ MODULATION wheel

This allows you to add Vibrato or Modulation to the sound. Push the wheel away from you to increase the effect, and away from you to decrease the effect.

**NOTE: The effects controlled by the wheels may be somewhat different for each Combination or Patch.**

### ❸ PORTAMENTO button

This allows you to turn the Portamento effect "ON" or "OFF." When this button is "ON" and Portamento is enabled for a particular Patch, the pitch will glide smoothly from the last note played to the current note being played and held.

**NOTE: The status of the PORTAMENTO button can be Recorded to a Combination.**

**NOTE: PORTAMENTO can be applied to the PIANO, ENSEMBLE or MONO SYNTH Voices. This is explained in more detail on page 91 and 101.**

### ❹ USER button

This allows you to assign a function for instant access.

## EXPRESSION PEDAL

You can use an Expression Pedal to control the overall volume of the SK PRO.

Press forward with the front of your foot to increase the volume and back with your heel to decrease the volume.

**NOTE: You can adjust the minimum volume of the Expression Pedal. This is explained in more detail on page 76.**

**NOTE: You can select whether or not the Expression Pedal will affect a particular Voice Section. This is explained in more detail in later sections of this Manual.**

## FOOT SWITCH

You can use a Foot Switch to control various functions - for example, switching Leslie rotor speeds.

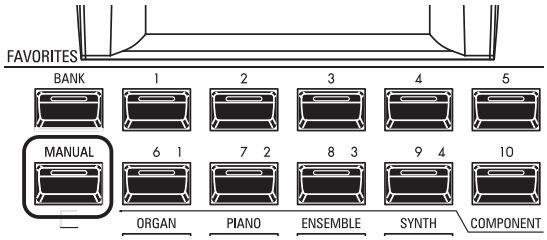
**NOTE: You can assign a Foot Switch to control various functions. This is explained in more detail on page 132.**

## DAMPER PEDAL

You can use a Damper Pedal to hold or "damp" notes while it is pressed and held, similar to the damper pedal on an acoustic piano.

**NOTE: You can assign the Damper effect to the Voice Section or Sections you wish. This is explained in more detail on page 134.**

The SK PRO incorporates an exclusive Hammond feature called **MANUAL**, which is explained starting below.



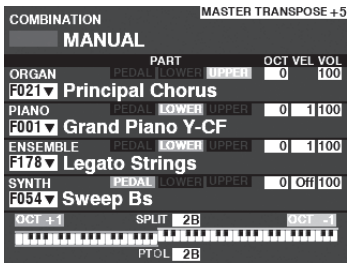

# WHAT IS "MANUAL"?

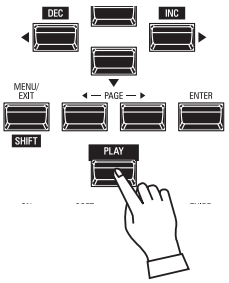
Normally, one of the [FAVORITE] buttons is "ON" (LED lit), indicating that a Combination is selected. However, if you want to de-select Combinations and use the front panel controls entirely to control the sound, turn the [MANUAL] button "ON." The [FAVORITE] buttons will all turn "OFF" and all sounds and features of the SK PRO will be controlled by the front panel controls as well as by the settings from the Menus.

# INITIALIZE "MANUAL"

Some Menu Parameters may not be set the way you wish even if [MANUAL] is selected. If you encounter this, you can initialize all the MANUAL Parameters using the following procedure.

## ① LOCATE THE PLAY MODE



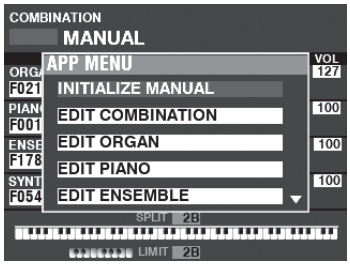



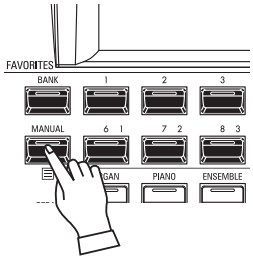

If the PLAY Mode is not displaying, press the [PLAY] button to display it.

## ② SELECT MANUAL

Press the [MANUAL] button "ON" (LED lit).

## ③ OPEN THE APP (APPLICATION) MENU



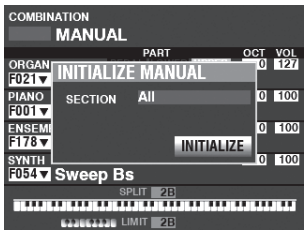



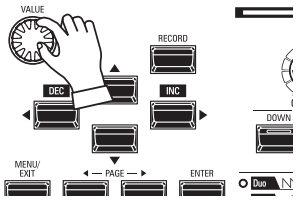

Press and Release the [≡] button to open the APP Menu.

## ④ SELECT "INITIALIZE MANUAL"

If "INITIALIZE [MANUAL]" is not already highlighted, use the [▲][▼] buttons to select it, and press the [ENTER] button. The screen shown below will display.

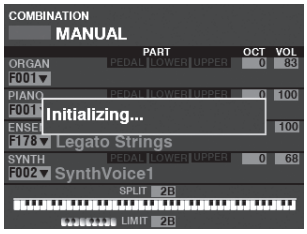
## ⑤ CHOOSE THE SECTION TO INITIALIZE

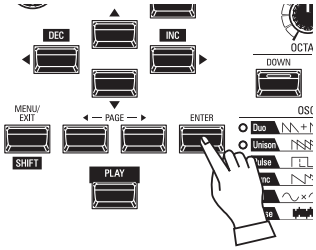



Use the [VALUE] knob to select which Section to Initialize - ALL, ORGAN or SYNTH.

## ⑥ COMPLETE THE PROCEDURE




Use the [DIRECTION] [▼] button to move the cursor to the [INITIALIZE] icon, and press the [ENTER] button. The screen will display "Initializing..." for approximately 1 second.

**NOTE: If you DO NOT wish to Initialize, press the [MENU/EXIT] or [PLAY] button instead of the [ENTER] button.**

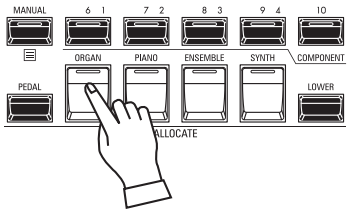
**tips** **"MANUAL"**

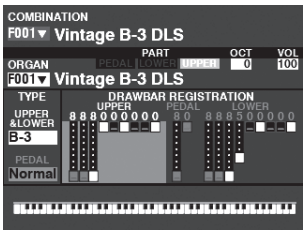
The "Manual" feature cancels all Combinations, Patches, internal Parameters, etc. It works much the same way as the "Adjust Presets" on Hammond Organs with Preset Keys or the "Cancel" piston on many classic organs or on electronic home organs such as the Hammond XT/XH-series. The Hammond 935 Church Organ has a feature called "Panel Memory" which performs much the same function.

# USING ORGAN PATCHES

ORGAN Patches are explained in detail starting below.

## ALLOCATING THE SECTION TO THE KEYBOARD




PLAY Mode (Organ)

To play an ORGAN Patch on the keyboard, simply press the [ORGAN] button in the [ALLOCATE] button group. The LED will light red.

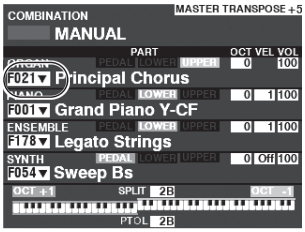
**NOTE: If only the ORGAN Section is active (no other [ALLOCATE] buttons lit), the PLAY Mode will display only the ORGAN Parameters.**

**NOTE: The ORGAN Section has a special mode called "3 PART ORGAN" which allows the SK PRO to replicate the performance of a vintage Hammond Organ with 2 manuals and Pedals.**

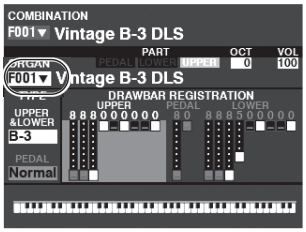
## RECALLING A PATCH

For this example, recall "F011 Classic Gospel."

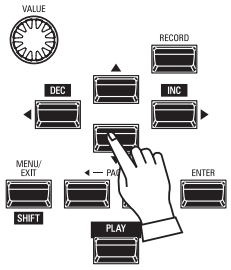
### ① MOVE THE CURSOR TO THE PATCH NUMBER




PLAY Mode (General)



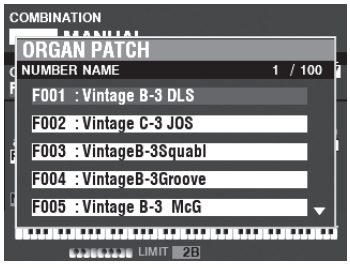

PLAY Mode (Organ)

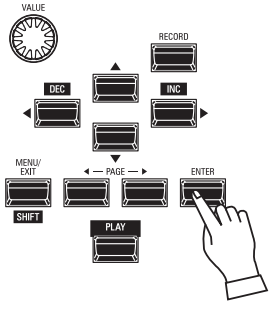



Use the [DIRECTION] buttons to move the cursor to the Patch Number in the ORGAN Section.

**NOTE: The word "MANUAL" is explained in more detail on page 29.**

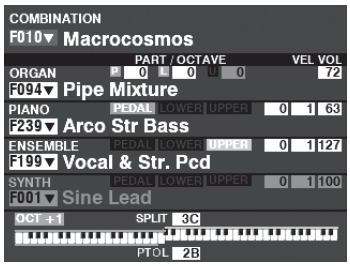
### ② OPEN THE PATCH LIST

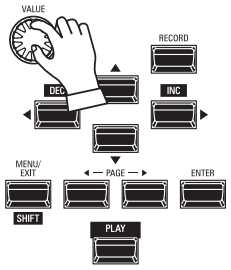



You can use the Patch List to display available Patches quickly. To open the Patch List, press the [ENTER] button when the Patch Number is highlighted in the display.

### ③ SELECT THE PATCH

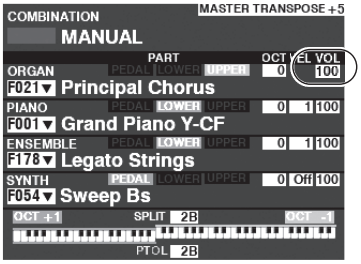


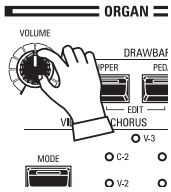




Use the [VALUE] knob to select the desired Patch. For this example, select."F011 Classic Gospel."

Press the [PLAY] or [ENTER] button to return from Patch List to PLAY Mode.

# ADJUSTING THE VOLUME



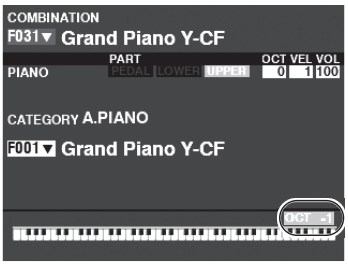



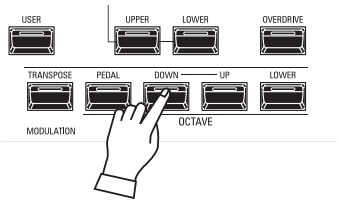

Use the [VOLUME] knob in the ORGAN Section to adjust the volume.

**NOTE: You can also adjust the volume of the ORGAN Section in the PLAY screen by moving the cursor to "VOL" (right side of screen) and turning the [VALUE] knob.**

**NOTE: The word "MANUAL" is explained in more detail on page 29.**

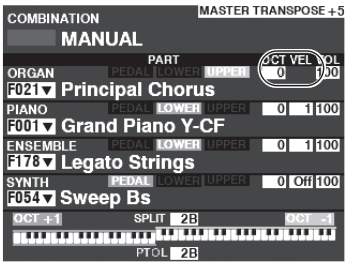
# CHANGING THE OCTAVE

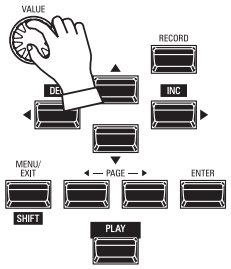



To change the Octave of the entire Keyboard (all Sections), press the OCTAVE [UP] or [DOWN] button. The display will show the current Octave setting.

**NOTE: You can select "-2" (up to two octaves down) through +2" (up to two octaves up).**



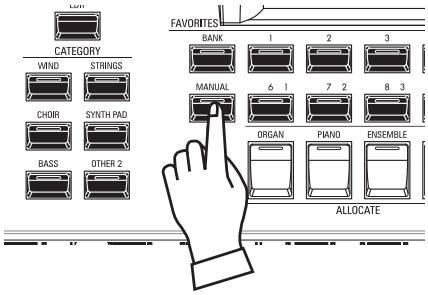

To change the Octave for the ORGAN Section only, use the [DIRECTION] buttons to move the cursor to "PLAY Mode - ORGAN Section - OCTAVE" and use the [VALUE] knob to change the Octave. The display will show the current Octave setting.

**NOTE: You can select "-2" (up to two octaves down) through +2" (up to two octaves up).**

# CREATING AN ORGAN PATCH

The ORGAN Section can be registered for vintage Hammond Organ sounds, Combo Organs, and Pipe Organs. This is explained in more detail starting below.

## SELECT [MANUAL]

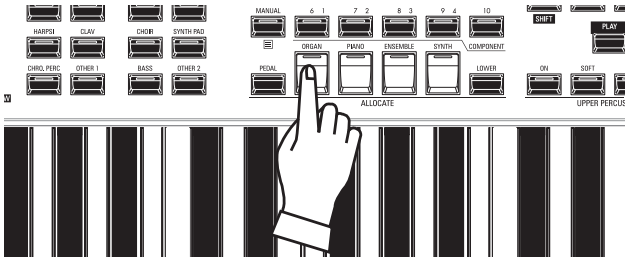



Normally, one of the [FAVORITE] buttons is "ON" (LED lit), indicating that a Combination is selected. However, if you want to de-select Combinations and use the front panel controls entirely to control the sound, turn the [MANUAL] button "ON." The [FAVORITE] buttons will all turn "OFF" and all sounds and features of the SK PRO will be controlled by the front panel controls as well as by the settings from the Menus.

### INITIALIZE "MANUAL"

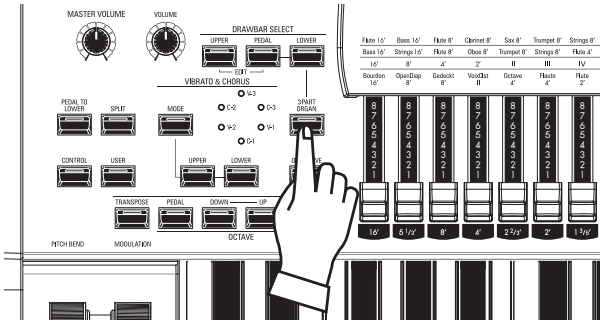
Some Menu Parameters may not be set the way you wish even if [MANUAL] is selected. If you encounter this, you can initialize the MANUAL Parameters (P. 29).

## ALLOCATE THE SECTION TO THE KEYBOARD



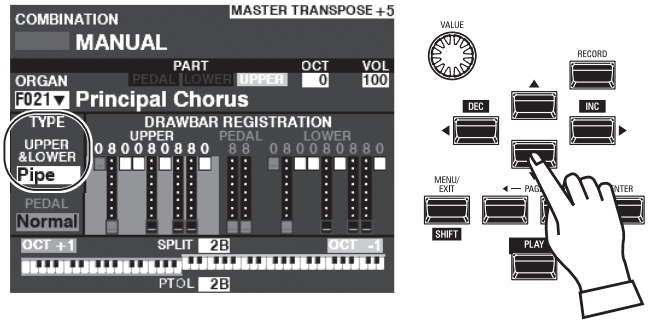

Press the [ORGAN] button in the [ALLOCATE] button group "ON." The LED will light and the ORGAN Section will play from the keyboard.

## SELECT 3 PART ORGAN




The ORGAN Section has 3 Parts - UPPER, LOWER and PEDAL. The [3 PART ORGAN] button selects how the 3 Parts are allocated. When "ON" (LED lit) the Upper, Lower and PEDAL Parts are allocated automatically. When "OFF" (LED not lit) the UPPER Part will play on the entire keyboard but the LOWER and PEDAL [ALLOCATE] button group buttons can still be used to allocate the entire ORGAN Section to the Lower or PEDAL Parts.

## SELECT THE ORGAN TYPE



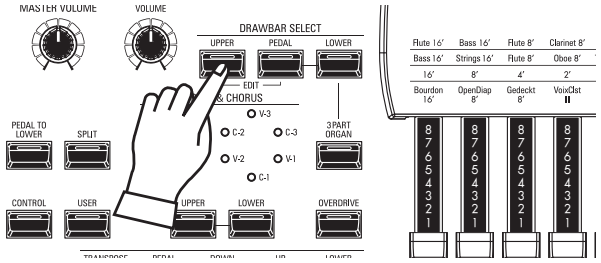

Select the ORGAN Type most appropriate to the musical style you wish to play.

Use the [DIRECTION] buttons to move the cursor to "ORGAN TYPE - UPPER&LOWER."

Use the [VALUE] knob to select the ORGAN Type.

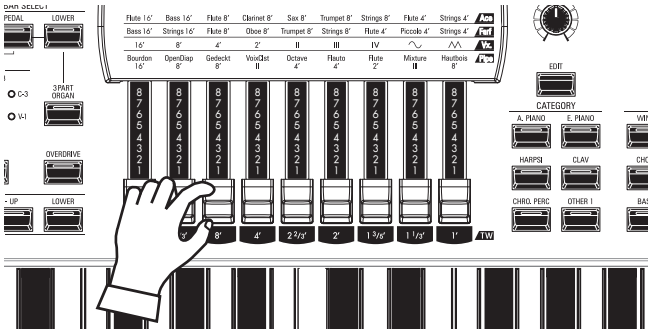
**NOTE: The word "MANUAL" is explained in more detail on page 29.**

# SELECT THE PART TO ADJUST



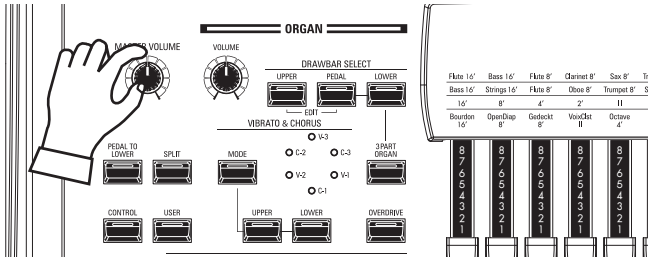

Use the [DRAWBAR SELECT] buttons to select which Part the Drawbars will adjust. For this example, press the [UPPER] button "ON" (LED lit).

# ADD DRAWBARS




The Drawbars control the basic organ sounds. You can hear the effect each Drawbar has on the sound by pulling out or pushing in Drawbars while holding keys.

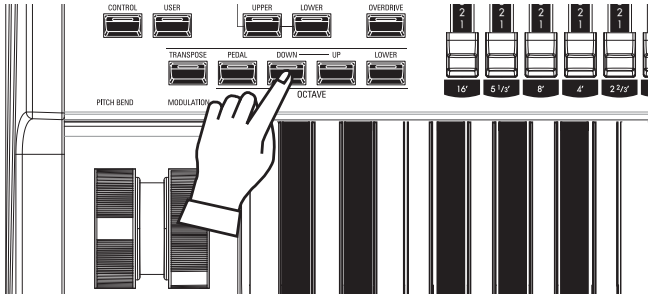
# ADJUST THE VOLUME




Use the [VOLUME] knob in the ORGAN Section to adjust the volume.

**NOTE: You can also adjust the volume of the ORGAN Section in the PLAY screen by moving the cursor to "VOL" (right side of screen) and turning the [VALUE] knob.**

# CHANGING THE OCTAVE

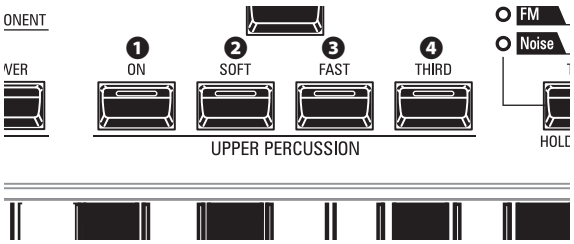



To change the Octave of the entire Keyboard (all Sections), press the OCTAVE [UP] or [DOWN] button. The display will show the current Octave setting.

To change the Octave for the ORGAN Section only, use the [DIRECTION] buttons to move the cursor to "PLAY Mode - ORGAN Section - OCTAVE" and use the [VALUE] knob to change the Octave. The display will show the current Octave setting.

**NOTE: You can select "-2" (up to two octaves down) through +2" (up to two octaves up).**

# ADDING PERCUSSION




An important component of the Hammond Sound is "Touch-Response Percussion Control™." The Percussion controls on the SK PRO consist of four separate buttons (shown at left) which control harmonic Percussion tones. These four buttons control all the same functions as the tilt tablets on a tone-wheel Hammond.

**❶ [ON] button**

This tab, when "ON" (LED lit), turns the Percussion effect "ON." The Percussion tone will sound in accordance with the settings for the other three Percussion controls.

**NOTE: In the "ON" position, all of the Upper Manual Drawbars will be effective except the 1' (fourth white) Drawbar. This duplicates the performance of a vintage tone-wheel organ such as a B-3/C-3/A-100. In the "OFF" position, the 1' Drawbar is effective as usual. However, you can change this Parameter if you wish.**

**❷ [SOFT] button**

This tab regulates the volume of the Percussion tone. When it is "OFF" (LED not lit), the Percussion effect will be very prominent. The Drawbar tones will also be reduced in volume to compensate for the addition of the Percussion tones. When this tab is "ON" (LED lit), the Percussion effect is much less prominent. The volume of the Drawbar tones remains unaffected by the addition of the Soft Percussion effect.

**❸ [FAST] button**

When this tab is "OFF" (LED not lit) the Percussion tone will decay slowly like a bell. When it is "ON" (LED is lit) the Percussion tone will decay rapidly like a xylophone.

**❹ [THIRD] button**

This tab determines the pitch at which the Percussion tone sounds. When set at "SECOND" (LED not lit), the pitch is up one octave with respect to the Fundamental (8') Drawbar; when set at "THIRD" the Percussion pitch is up an octave and a fifth with respect to the Fundamental Drawbar.

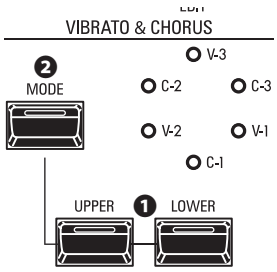
**NOTE: The Percussion features works with the " A-100," "B-3," "C-3" and "Mellow" Organ types only, and on the UPPER Part only.**

**NOTE: You can adjust the Parameters of the Percussion to your liking. This is explained in more detail on page 126.**

# ADDING EFFECTS TO THE ORGAN SECTION

## VIBRATO & CHORUS

"Vibrato & Chorus" allows you to add "Vibrato" (a periodic raising and lowering of pitch) or "Chorus" (a "shimmering" effect having the periodicity of Vibrato) to your Drawbar registrations.




**❶ [UPPER], [LOWER] buttons**

These allow you to turn Vibrato & Chorus "ON" or "OFF" for each Part. When "ON" the red LEDs will light.

**❷ [MODE] button**

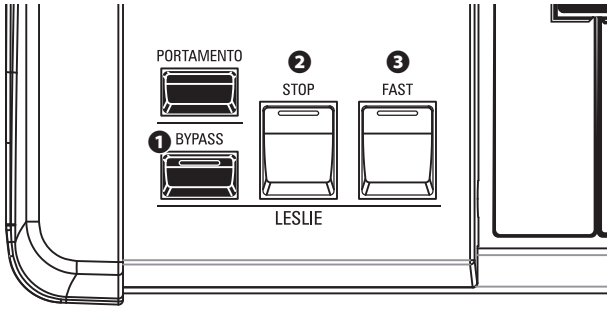
This allows you to select from three degrees of Vibrato and three degrees of Chorus. Each successive press of this button selects a different amount of Vibrato or Chorus.

**NOTE: When the ORGAN Mode is set to "Pipe," the Vibrato & Chorus works as a pipe organ Tremulant. You can select from six degrees of Tremulant. This is explained in more detail on page 126.**

**NOTE: You can adjust the Vibrato & Chorus effect to your liking. This is explained in more detail on page 86.**

## LESLIE

The SK PRO has an inbuilt digital Leslie that replicates the sound of a twin-rotor Leslie Speaker Cabinet. In addition, the instrument can also be used with a variety of different Leslie Speaker Cabinets.




### ❶ [BYPASS] button

Disables the digital Leslie, producing a "dry" organ sound.

### ❷ [STOP] button

To toggle between "FAST" and "SLOW" when the [FAST] button is pressed, turn this button "OFF" (LED not lit).

To toggle between "FAST" and "STOP" when the [FAST] button is pressed, turn this button "ON" (LED lit).

### ❸ [FAST] button

Toggles between "FAST" (LED lit) and "SLOW" (LED not lit).

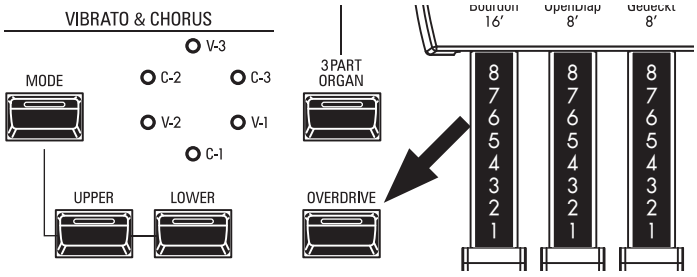
**NOTE: The digital Leslie is <u>not</u> available for the Pipe Organ.**

**NOTE: These controls perform the same functions when a Leslie Speaker Cabinet is connected via the 11-pin socket.**

**NOTE: You can fine-tune the Parameters of the inbuilt digital Leslie. This is explained in more detail starting on pages 88 and 191.**

## OTHER EFFECTS

- **OVERDRIVE**




"Overdrive" adds distortion to the sound by increasing the pre-amplifier input gain. Press the OVERDRIVE button to turn the Overdrive effect "ON" (LED lit) or "OFF" (LED not lit).

- **MULTI-EFFECTS**

There are several **<u>Multi Effects</u>** which you can use to enhance the sound.

- **REVERB**

The SK PRO has built-in Reverb (reverberation) which allows you to simulate several different acoustic profiles.

**tips** **LESLIE BUTTONS AND MODES**

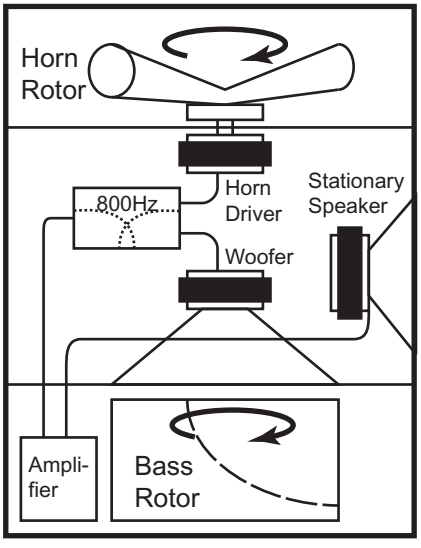
| BUTTON | | | MODE | |
|---|---|---|---|---|
| **BYPASS** | **STOP** | **FAST** | **CH=1** | **CH=3 or digital Leslie** |
| Off | Off | On | Fast | |
| Off | Off | Off | Slow | |
| Off | On | On | Fast | |
| Off | On | Off | Stop | |
| On | On | On | Fast | Bypass |
| On | On | Off | Stop | |
| On | Off | On | Fast | |
| On | Off | Off | Slow | |

**tips** **WHAT IS THE LESLIE EFFECT?**

When the Hammond Organ was first introduced in the mid 30's, the sound-producing apparatus was not contained within the console. A separate "tone cabinet" had to be connected to the organ console via a special cable. For many years, Hammond manufactured tone cabinets specifically for use with Hammond Organs. The best known of these is probably the PR-40 model.

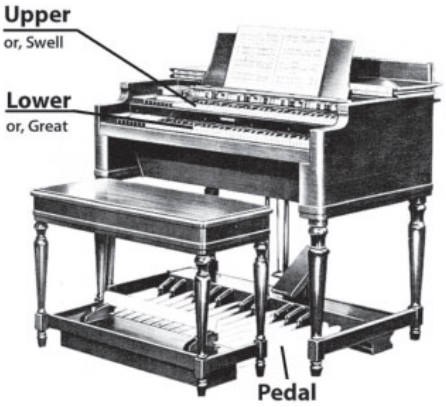
In the late 30's, an independent engineer and organ enthusiast named Donald J. Leslie found that rotating a baffle in front of a stationary speaker created the effect of a tremulant (the well-known "Doppler effect) and called the subsequent speaker the "Vibratone." (The "Vibratone" designation was eventually dropped and subsequent models would be known simply as Leslie Speakers.) Many models of Leslie Speakers have been made over the years; probably the best known being the models 122, 142, 145 and 147. The figure below shows the configuration of a typical twin-rotor Leslie Speaker Cabinet.

The inbuilt digital Leslie on the SK PRO reproduces all three modes - Fast, Slow and Off. In addition, all three modes are available when the SK PRO is connected to an 11-pin Leslie Speaker Cabinet.



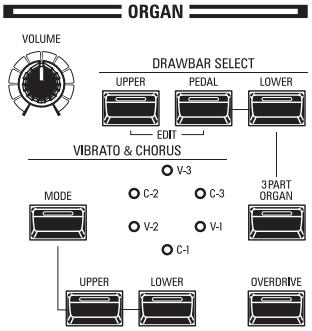
# KEYBOARDS AND PARTS

The classic Hammond Organ has two manuals or keyboards and a pedal keyboard (or pedal clavier). Commonly, the two keyboards will be registered differently - for example, the Upper Keyboard will have a registration appropriate for Melody while the Lower Keyboard will have an Accompaniment registration to provide harmonic backing for the Melody. In addition, the Pedals will have a setting appropriate for bass notes.



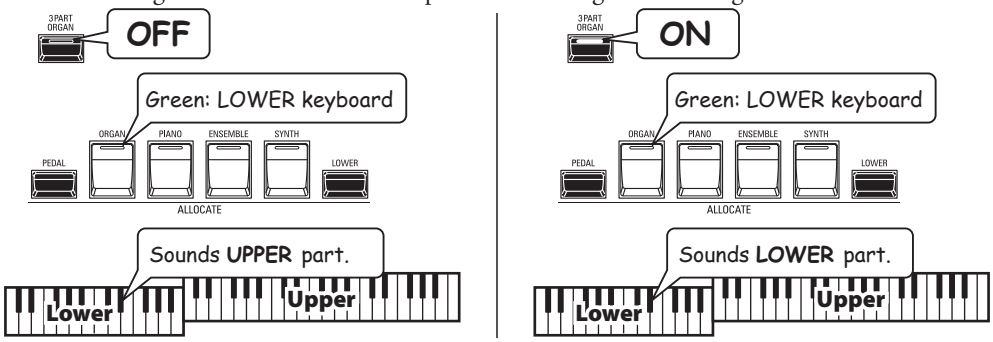

The ORGAN Section of the SK PRO can function as a classic Hammond Organ by dividing or "Splitting" the keyboard into two Parts. When SPLIT is active, "UPPER" is the portion of the keyboard to the right of the SPLIT Point and "LOWER" is to the left of the SPLIT Point.

In addition, the PEDAL Part can be played either from a connected MIDI pedalboard, or from the keyboard by using the PEDAL TO LOWER feature when SPLIT is active.




### ❶ [3 PART ORGAN] button

This allows you to select whether the ORGAN Section will function as a classic Hammond Organ with two manuals and pedals or as a single-manual organ.




**ON** .....The ORGAN Section will function as a classic two-manuals-and-pedals Hammond Organ.

**OFF** .....The ORGAN Section can either sound on the entire keyboard, or be dynamically assigned to UPPER, LOWER or PEDAL.

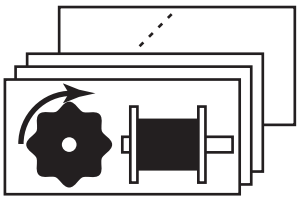
### ❷ [DRAWBAR SELECT] buttons

Allow you to use the Drawbars to control the sounds for each ORGAN Part. If the LED of one of these buttons is lit, the Drawbars will control the sounds represented by that button.

# ORGAN TYPES

The Drawbars on your SK PRO can be made to control organ sounds other than traditional Hammond Drawbars. Several makes of combo organs, for example, also used Drawbar-type controls to register the sounds, which were actual organ voices rather than individual harmonics as with Hammond Drawbars.

## TONE WHEEL (A-100, B-3, C-3)



The Hammond Organ's original purpose was to duplicate the pipe organ, however, they became famous for producing a unique sound of their own.

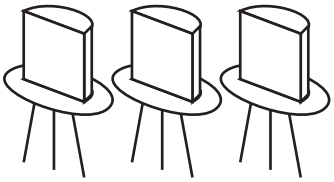
Tone Wheels are the method by which tone-wheel Hammond Organs generate sound. Each frequency is generated by a steel disk 1 7/8" in diameter and containing a number of high spots on its outer edge. (See the illustration above.) These disks are the Tone Wheels. The most common tone-wheel generator has a total of 96 tone wheels, all with different numbers of teeth - some wheels have 2 teeth, others have 4, 8, 16, 32, 64, 128, up to 192 teeth. The classic Tone Wheel design uses 91 tone wheels to generate the musical tones.

**A-100**, **B-3** and **C-3** are traditional Tone Wheel sounds.

## MELLOW

The **Mellow** setting replicates the non-mechanical electronic Hammond tone generators such as the Concorde, the X-5 combo organ and the later "multiplex" organs such as the B-3000 and 340 series Elegante.

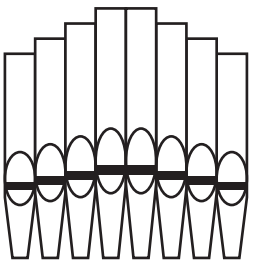
## TRANSISTOR (Vx, Farf, Ace)



As transistors gradually replaced vacuum tubes in electronic circuits it became possible to produce light-weight combo organs. These have been used extensively in rock and popular music since the early 60's. The type of circuitry is different from maker to maker or model by model. We have replicated 3 representative types here.

**Vx** replicates a British combo organ which combines triangle waves and square waves using several footages. "Farf" and "Ace" both replicate combo organs (Italian and Japanese) which use tablets to combine sound waves which are filtered to produce different tones.

## PIPE



A pipe organ produces sounds by pushing pressurized air through sets of wood or metal pipe called Ranks or Stops. There are many different types of Pipe Stops which produce sounds of different pitches, timbres and levels of volume. Each Stop is identified by a unique Name indicating what type of sound it will produce when selected.

The **Pipe** Organ replicates several different types of pipe organs by using the Drawbars as drawstops or stop tablets to create pipe organ registrations.

**tips** **PEDAL ORGAN TYPES**

When using the Tone Wheel Organs (**A-100**, **B-3**, **C-3** or **Mellow**) for the UPPER & LOWER Parts, you can select two different PEDAL Voicings - **Normal** and **Muted**. **Normal** replicates the Pedal Drawbars of a vintage Hammond Organ while **Muted** more nearly duplicates the mellow Pedal Drawbar tones of an electronic Hammond.

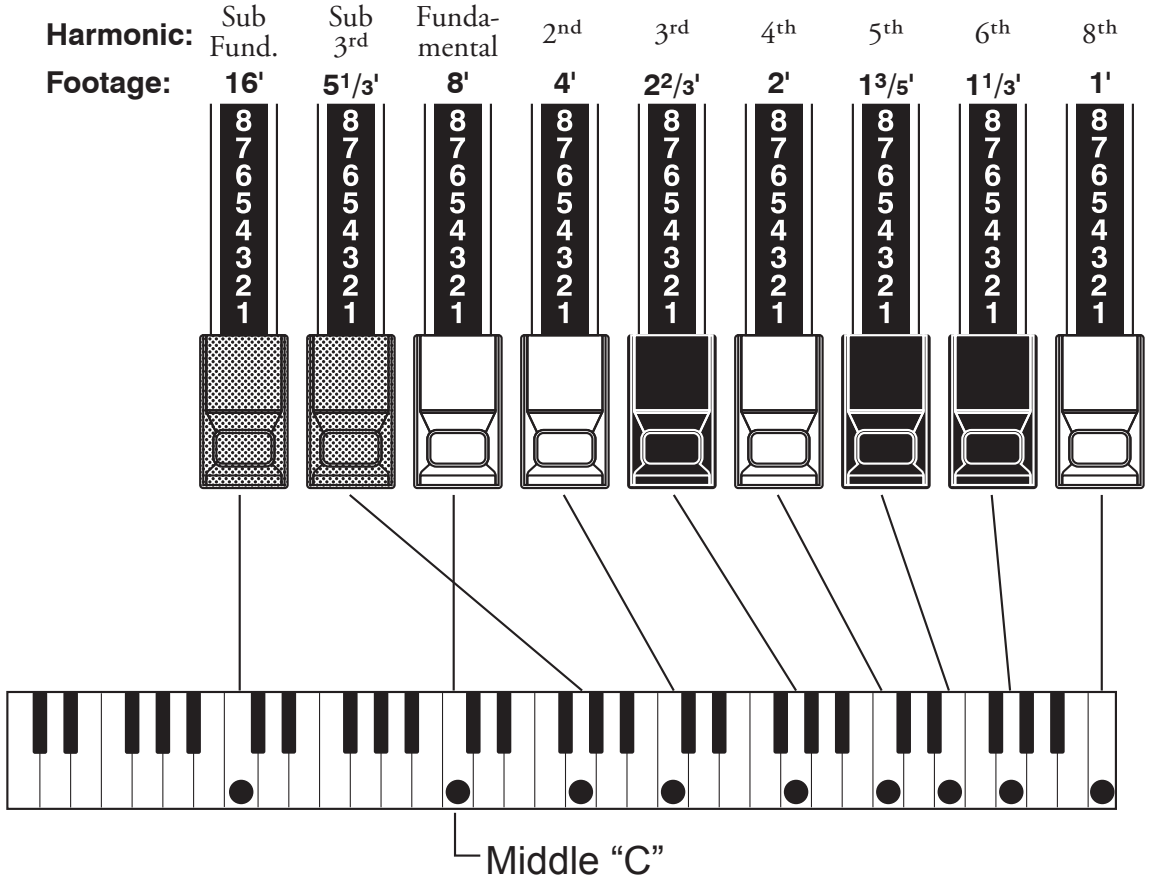
On the Transistor Organs (**Vx.**, **Farf.**, and **Ace.**), the PEDAL Voicing is automatically set to **Muted**. For **Pipe**, the Pedal Drawbars register Pipe organ voices to complement the UPPER and LOWER Pipe Voices.

# HARMONIC DRAWBARS™

The Harmonic Drawbars are the heart of the renowned Hammond Sound and have been used since the first Hammond Organ Model A was introduced in 1935. There are approximately 253,000,000 possible sound combinations that can be produced by these Drawbars. The illustration below shows how each Drawbar relates to the keyboard when middle "C" is pressed.

**NOTE: When recalling Combinations or ORGAN Patches, the positions of the Drawbars will change internally, but not physically. When a Drawbar is moved, the Patch setting will update to that Drawbar's current position. You can also match the entire Drawbar registration to the physical Drawbar setting. See page 45 for more information.**

## DRAWBARS (A-100, B-3, C-3, Mellow)




Each Drawbar may be set in eight different positions in addition to the silent or "0" position. Each position, as marked on the Drawbars, represents a different degree of intensity of the harmonic it controls. When drawn out to position "1," the harmonic it represents will be present with minimum intensity, when drawn out to position 2 with greater intensity, and so on up to position "8."

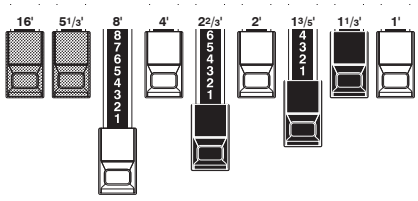
If you pull the fundamental (8′), the third harmonic (2⅔′) plus the fifth harmonic (1⅗′) Drawbars out completely and play the keyboard you will notice the sound resembles a clarinet.

If you push the 8′ Drawbar half-way, you'll notice the sound becomes more high-pitched and a bit "harder." Now pull the 8′ Drawbar back out fully and push the 2⅔′ and 1⅗′ in halfway. Notice how the sound becomes mellower.

Experiment with the Drawbars to obtain your own favorite registrations.

**tips** **DRAWBAR REGISTRATION**

Below is an example of using Drawbars to create different sounds.



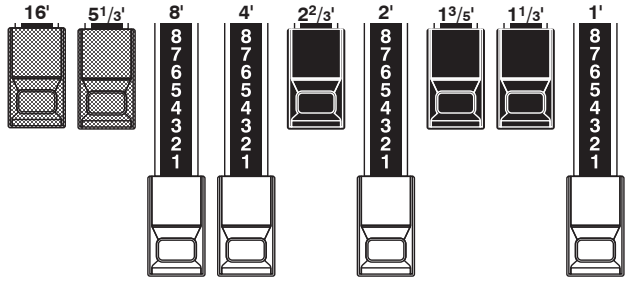

Example of "Clarinet"


For "Tone Wheel" Organs, the relationship between each Drawbar and its footage is shown on the "TW" legends directly in front of the Drawbars.

# DRAWBARS FOR THE UPPER AND LOWER PARTS

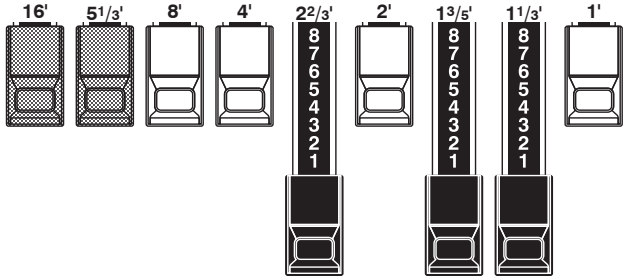
The Colors of the Drawbars are traditional to Hammond, and were established to provide a quick visual guide to the harmonics generated by the Drawbars.

## WHITE DRAWBARS



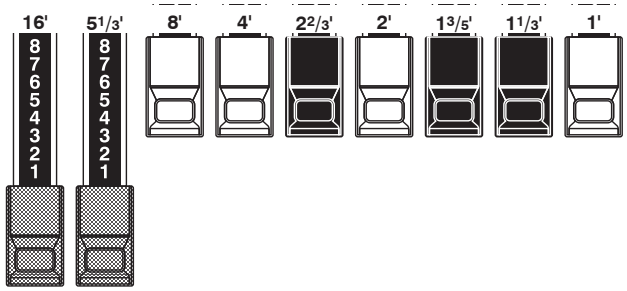

The first white Drawbar represents the "fundamental" or "8′ base" tone. All of the other white Drawbars are octave intervals or harmonics of the fundamental tone. The tonal brilliance is greatly increased by adding white Drawbars, but the harmonics added are always in "consonance" or harmony.

## BLACK DRAWBARS



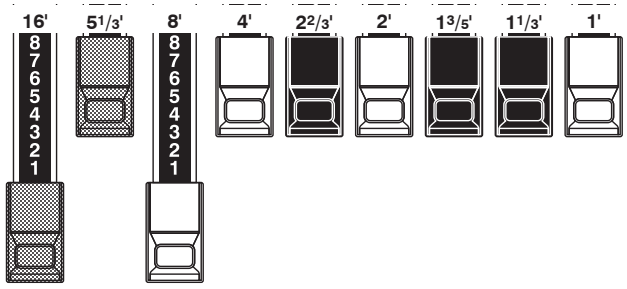

The black Drawbars represent the "dissonant" harmonics which are also necessary in building rich tone colors. The mellowness of a horn, the pungency of strings, and the brilliance of reed voices owe much of their character to the presence of these harmonics in different degrees.

## BROWN DRAWBARS




The two brown Drawbars on the far left give depth and richness to the sound. The left 16′ is one octave lower than the 8′, and 5⅓′ is the third harmonic of the 16′ fundamental. Normally, the tones are built on the 8' fundamental, but, if you want to add depth to the tone or to expand the playing range by one octave lower, build your tones on the 16′ fundamental.

# PEDAL DRAWBARS

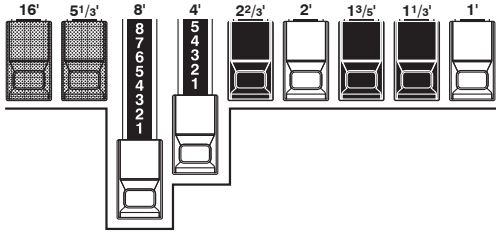



The 16′ and 8′ Drawbars control the sounds produced by the Pedal part. The first brown Drawbar produces a composite tone at 16′ pitch for a deep foundation bass, while the first white Drawbar produces a composite tone at 8′ pitch, or one octave higher.

# DRAWBAR REGISTRATION PATTERNS

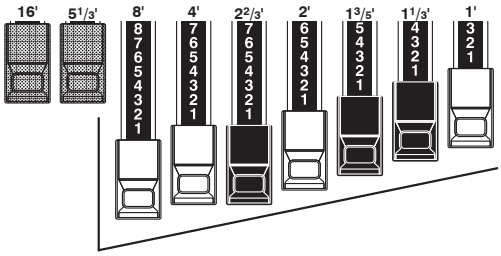
Regardless of the size of a pipe organ or its number of stops, all of its voices are related to four basic families of tone. The four basic families - Flute, Reed, String and Diapason - can be quickly set up on the Drawbars by relating a pattern or shape to each family.

## FLUTE FAMILY (2 STEP PATTERN)



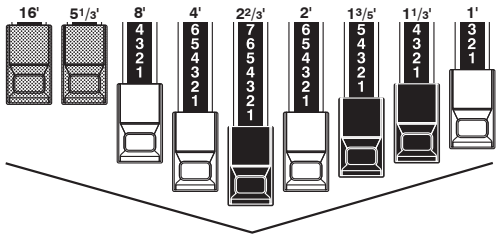

Accompaniment Flute 8′ I ..... 00 8460 000
Accompaniment Flute 8′ II ..... 00 3220 000
Accompaniment Flute 8′ III ..... 00 8600 000
Chorus of Flutes 16′ ..... 80 8605 002
Orchestral Flute 8′ ..... 00 3831 000
Piccolo 2′ ..... 00 0006 003
Stopped Flute 8′ ..... 00 5020 000
Tibia 8′ ..... 00 7030 000
Tibia 4′ ..... 00 0700 030
Tibia (Theater) 16′ ..... 80 8605 004
Wooden Open Flute 8′ ..... 00 8840 000

## DIAPASON FAMILY (CHECK MARK PATTERN)



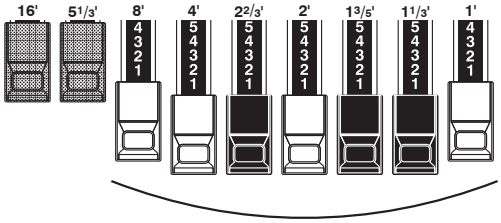

Accomp. Diapason 8′ ..... 00 8874 210
Chorus Diapason 8′ ..... 00 8686 310
Diapason 8′ ..... 00 7785 321
Echo Diapason 8′ ..... 00 4434 210
Harmonic Diapason 16′ ..... 85 8524 100
Harmonic Diapason 8′ ..... 00 8877 760
Harmonic Diapason 4′ ..... 00 0606 045
Horn Diapason 8′ ..... 00 8887 480
Open Diapason 8′ ..... 01 8866 430
Solo Diapason ..... 01 8855 331
Wood Diapason 8′ ..... 00 7754 321

## REED FAMILY (TRIANGLE PATTERN)




Bassoon 16′ ..... 44 7000 000
Clarinet 8′ ..... 00 6070 540
English Horn 8′ ..... 00 3682 210
Flugel Horn 8′ ..... 00 5777 530
French Horn ..... 00 7654 321
Kinura 8′ ..... 00 0172 786
Oboe 8′ ..... 00 4764 210
Trombone 8′ ..... 01 8777 530
Trumpet 8′ ..... 00 6788 650
Tuba Sonora 8′ ..... 02 7788 640
Vox Humana 8′ ..... 00 4720 123

## STRING FAMILY (BOW PATTERN)



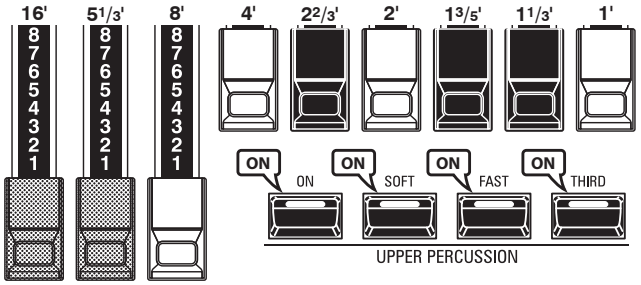

Cello 8′ ..... 00 3564 534
Dulciana 8′ ..... 00 7770 000
Gamba 8′ I ..... 00 3484 443
Gemshorn 8′ ..... 00 4741 321
Orchestral String 8′ ..... 00 1464 321
Salicional 8′ ..... 00 2453 321
Solo Viola 8′ ..... 00 2474 341
Solo Violin 8′ ..... 00 3654 324
Viola da Gamba 8′ ..... 00 2465 432
Violina 4′ ..... 00 0103 064
Violone 16′ ..... 26 3431 000

Notice that Drawbar registrations are expressed in number groups of 2, 4 and 3. This “2-4-3” number formula for Drawbar Registration has been a Hammond convention since the beginning. It has been found to be the easiest way to convey a specific setting. The first two numbers correspond to the two brown Drawbars of either manual. The middle four numbers designate the 8′, 4′, 2⅔′, 2′ Drawbars, and the remaining three numbers refer to the last three Drawbars.

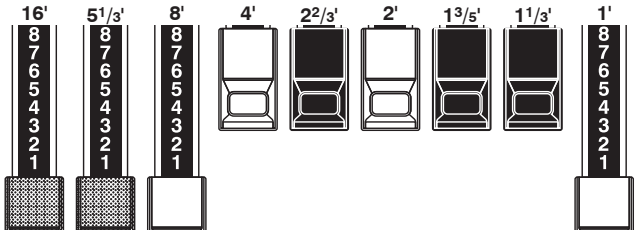
# MODERN DRAWBAR REGISTRATIONS

The Drawbar registration patterns shown on the previous page are intended to simulate the four basic families of tone found on a classical pipe organ, since this was the original intention of the Hammond Organ. Later on, as the Hammond Organ began to be used in Jazz, Pop and Rock music, other sounds became identified with the "Hammond Sound. The figures below illustrate some of these modern registrations.

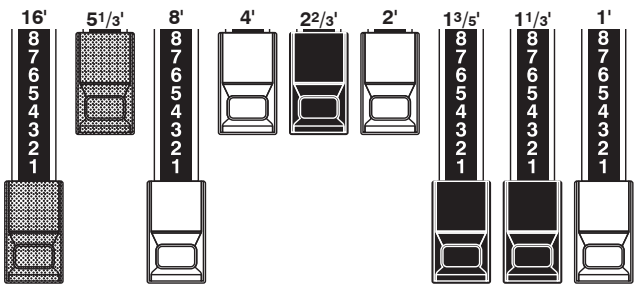
## JAZZ

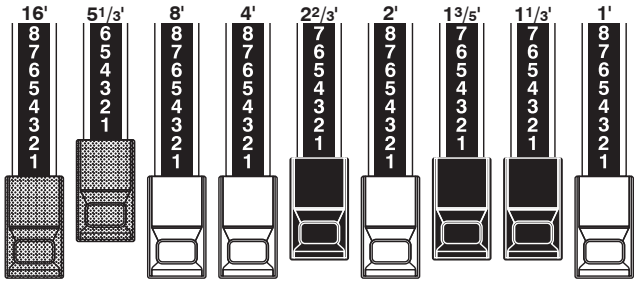



## BLUESY

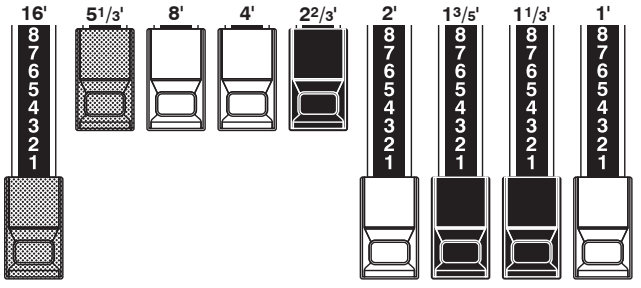



## GROOVY & FUNKY



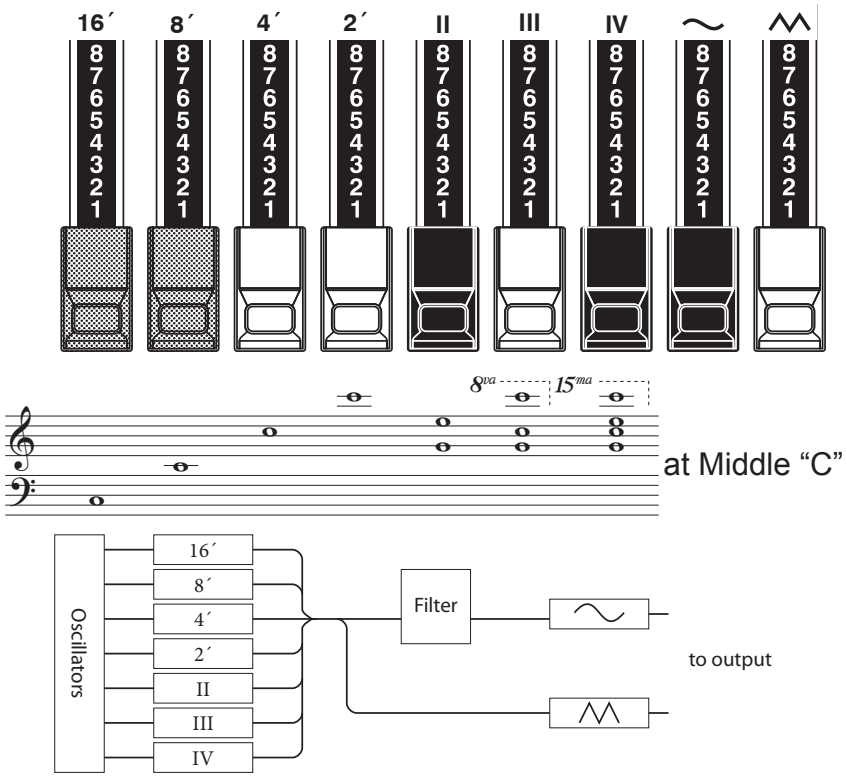

## SQUABBLE ("Erroll Garner" Registration)




**tips** **APPLICATION OF PERCUSSION**

When Percussion is used, the sound of the 1′ Drawbar is cancelled just as it is on vintage organs (B-3, C-3, A-100, M-3, etc.). Some jazz organists have taken advantage of this idiosyncrasy by keeping the 1′ Drawbar pulled out and turning Percussion "ON" and "OFF" while playing. The result is an instantaneous registration change with a single motion.

# DRAWBARS (Vx)




The type of British combo organ replicated by the "Vx" ORGAN Type had Drawbar-type controls, but they functioned differently from Hammond Harmonic Drawbars. The first four Drawbars control individual pitches, while the next three are "Mixture" Drawbars which cause multiple pitches to sound. "II," "III" and "IV" refer to the number of pitches represented by that Drawbar.

The last two Drawbars control the type of tone produced by the first seven Drawbars.

The "~" Drawbar causes mellow tones to sound while the "⋀⋀" Drawbar causes brighter and more harmonically complex tones to sound.

**NOTE: The first seven Drawbars WILL NOT sound unless one or both of the right two Drawbars are also "out." These two Drawbars regulate the overall volume as well as timbre of the total Drawbar registration, and can be used separately or together.**

**tips** **FOOTAGE**

"Footage" is a term inherited from the pipe organ. It is used to designate the pitch at which a particular organ stop will sound. The number refers to the length of pipe necessary to produce the lowest note of that particular stop.

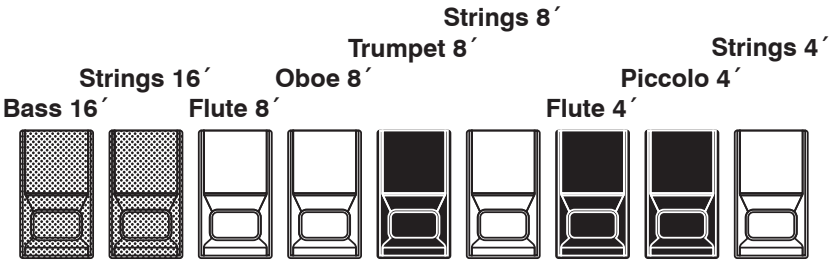
For example, if a stop is marked "8'" it means that the lowest note on a standard 5-octave organ keyboard "C" will require a pipe 8 feet long.

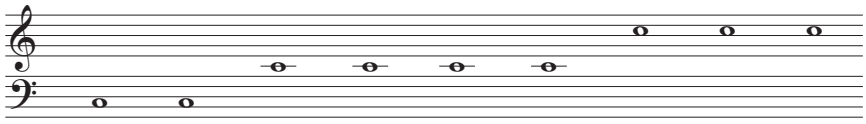
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Flute 16′ | Bass 16′ | Flute 8′ | Clarinet 8′ | Sax 8′ | Trumpet 8′ | Strings 8′ | Flute 4′ | Strings 4′ | Ace |
| Bass 16′ | Strings 16′ | Flute 8′ | Oboe 8′ | Trumpet 8′ | Strings 8′ | Flute 4′ | Piccolo 4′ | Strings 4′ | Farf |
| 16′ | 8′ | 4′ | 2′ | II | III | IV | ~ | ⋀⋀ | Vx. |
| Bourdon 16′ | OpenDiap 8′ | Gedeckt 8′ | VoixCl̈st II | Octave 4′ | Flauto 4′ | Flute 2′ | Mixture III | Hautbois 8′ | Pipe |

When using the "Vx" ORGAN Type, refer to the "Vx" row above the Drawbars for the correspondence between each Drawbar and the voice, footage and timbre.

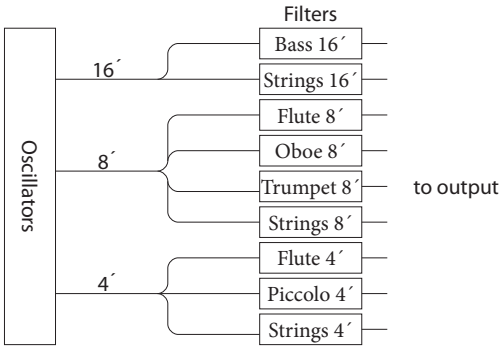
# DRAWBARS (Farf, Ace)

## Farf

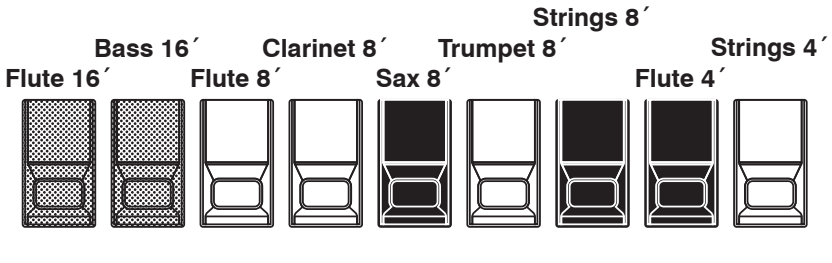


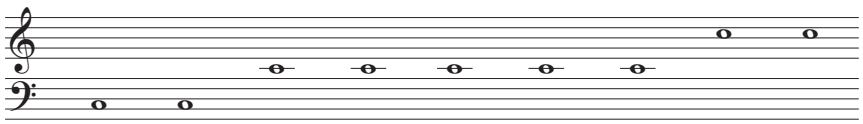



at Middle "C"

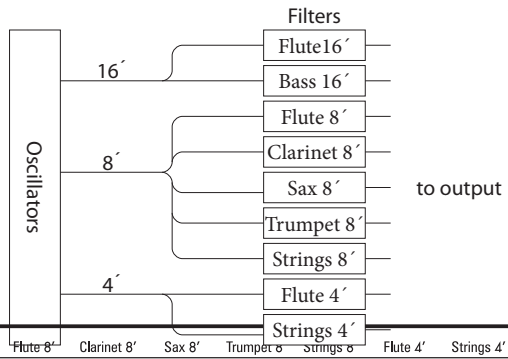


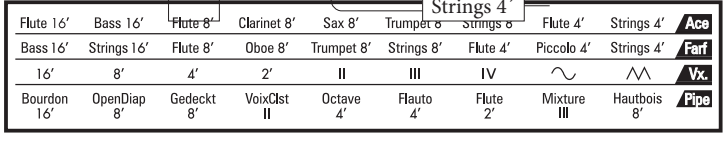

## Ace



at Middle "C"



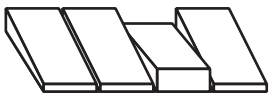




The figures to the left follow the layout of the Italian "Combo Compact" and the "TOP 7" combo organs, which used rocker-type tilt tablets rather than Drawbars to turn voices "ON" and "OFF." On the SK PRO, the Drawbars are used to control the same sounds.

To replicate the effect of tablets, simply pull the Drawbar(s) representing the tone(s) you want "out" all the way. Or, you can create shadings of tones by using the Drawbars in the more traditional fashion.

**tips** **TABLET**

The word "tablet" refers to a tilting or "rocker"-type control used on many analog organs to turn voices "ON" and "OFF" as well as to add effects (see figure below).



When using the "Farf" or "Ace" ORGAN Types, refer to the "Farf" or "Ace" row above the Drawbars for the correspondence between each Drawbar and the voice and footage.

# DRAWBARS (Pipe)

## F1: Classic

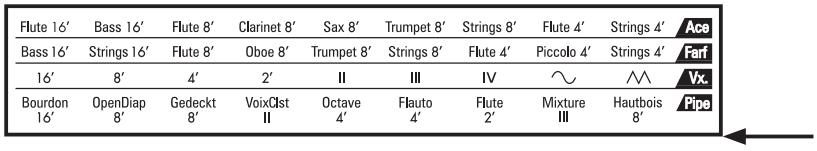
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| UPPER: | Bourdon 16′ | Open Diapason 8′ | Gedeckt 8′ | Viole Celeste II | Octave 4′ | Flauto Dolce 4′ | Flute 2′ | Mixture III | Hautbois 8′ |
| LOWER: | Principal 16′ | Principal 8′ | Melodia 8′ | Rohr Flute 8′ | Prestant 4′ | Flute 4′ | Super Octave 2′ | Mixture IV | Trom-pette 8′ |
| PEDAL: | Sub Bass 16′ + Gedeckt 8′ | | Diapason 8′ + Flute 4′ | | | | | | |

## F2: Theatre 1

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| UPPER: | Tibia Clausa 16′ | Vox Humana 8′ | Style "D" Trumpet 8′ | Tibia Clausa 8′ | Clarinet 8′ | Viol d'Orch 8′ | Vox Humana 8′ | Tibia Clausa 4′ | Tibia Clausa 2′ |
| LOWER: | Style "D" Trumpet 8′ | Open Diapason 8′ | Clarinet 8′ | Viol d'Orch 8′ | Flute 8′ | Vox Humana 8′ | Open Diapason 4′ | Tibia Clausa 4′ | Vox Humana 4′ |
| PEDAL: | Tibia 16′ + Flute 8′ | | Diapason 8′ + Flute 4′ | | | | | | |

## F3: Theatre 2

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| UPPER: | Tibia Clausa 16′ | English Post Horn 16′ | Brass Trumpet 8′ | Tibia Clausa 8′ | Clarinet 8′ | Vox Humana 8′ | Tibia Clausa 4′ | Tibia Clausa 2⅔′ | Tibia Clausa 2′ |
| LOWER: | Brass Trumpet 8′ | Diapason 8′ | Clarinet 8′ | Viol Celeste 8′ | Oboe 8′ | Flute 8′ | Vox Humana 8′ | Viol Celeste 4′ | Flute 4′ |
| PEDAL: | Tibia 16′ + Flute 8′ | | Diapason 8′ + Flute 4′ | | | | | | |




If the ORGAN Type is "Pipe," refer to the "Pipe" row on the other side of the Drawbars for the correspondence between each Drawbar and the footage.

When using the Pipe Organ, the stops are registered through the Drawbars. The Classic type follows the classic organ layout left to right as follows: Flue, Mixture and Reed.

On the UPPER and LOWER Parts, each Drawbar corresponds with a pipe organ rank or stop.

On the PEDAL part, two stops sound with one Drawbar (Complex Stop).

**NOTE: When "Classic" is activated, the Drawbars will function in a manner similar to drawstops on a traditional pipe organ - pulling a Drawbar "out" will turn the associated Pipe Voice "ON" while pushing the Drawbar "in" will turn the Pipe Voice "OFF." The Pipe Voices do not have gradations of volume - they are either "ON" or "OFF."**

**NOTE: The labels "F1," "F2" etc., refer to Custom Pipes.**

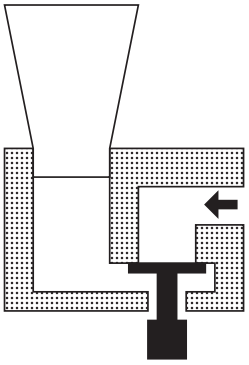
**NOTE: The digital Leslie is not available on the Pipe Voices. However, the Vibrato/ Chorus feature becomes a pipe organ Tremulant when the PIPE Organ Type is selected.**

The Theatre 1 and Theatre 2 PIPE settings provide a complement of organ stops characteristic of a theatre or "cinema" organ. "Theatre 1" is a stop complement similar to a Wurlitzer "Style 210" while "Theatre 2" is derived from the stops from a Wurlitzer "Style 260 Special," including English Post Horn. The figures on the left show the stop complements for the Theatre 1 and Theatre 2 Custom Pipe sets.

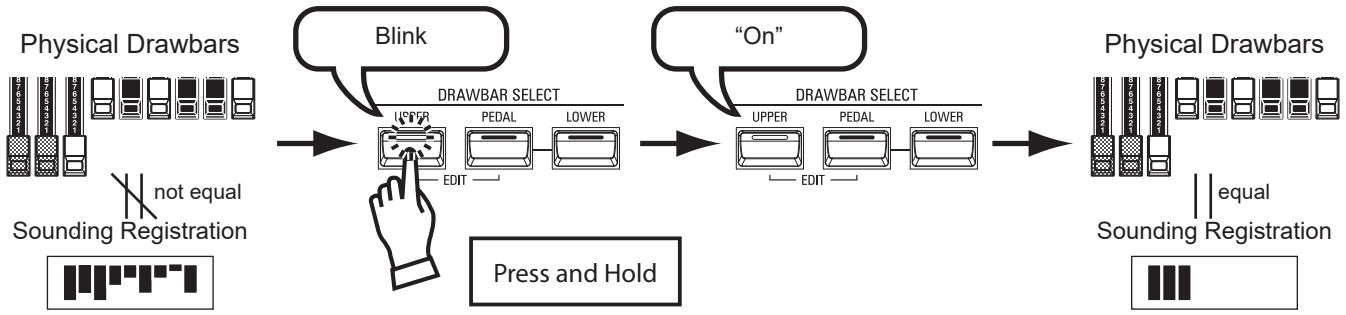
**NOTE: When "Theatre 1" or "Theatre 2"is activated, the Drawbars will function similar to tablets on a theatre organ console.**

**tips** **STOP**

A single voice or sound on a pipe organ is referred to as a "Stop" due to the fact that air flow is "stopped" (or started) by manipulating the individual controls which turn sounds "ON" or "OFF."



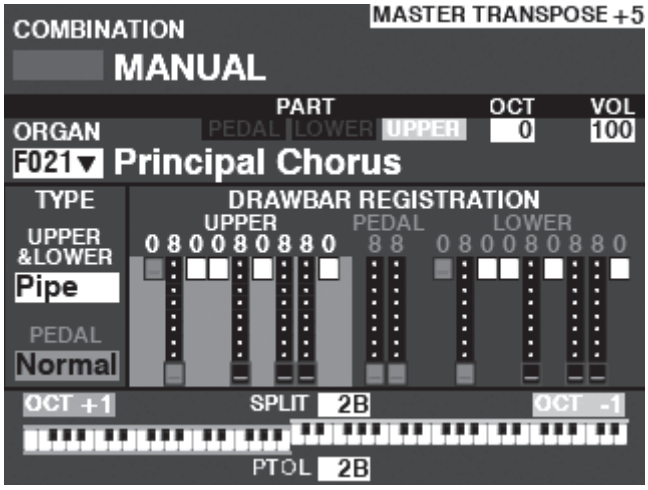
## MATCHING THE REGISTRATION TO THE DRAWBAR SETTING




When you recall an ORGAN Patch, the Drawbar registration of the Recorded Patch is heard, instead of the physical Drawbar setting. If you move any Drawbar, its position takes precedence over the Recorded registration, although the Patch is not changed.

If you want to switch to the physical Drawbar setting immediately, Press and Hold any of the three DRAWBAR SELECT buttons ([UPPER] [PEDAL] or [LOWER]) until the button LED blinks then release it. The physical registration now becomes "current" for the selected Part.

## SHOWING CURRENT SETTINGS



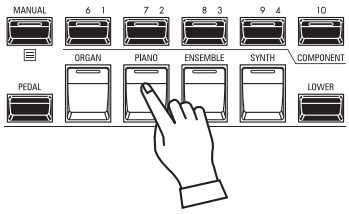

When you are in PLAY Mode, a page similar to the one shown at left will display if the ORGAN Section only is selected via the [ALLOCATE] button or by repeatedly touching the [PLAY] button.

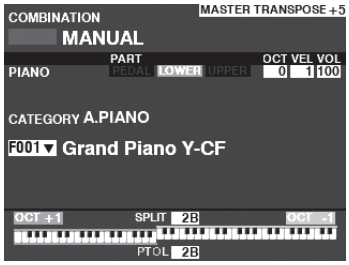
**NOTE: The word "MANUAL" is explained in more detail on page 29.**

# USING PIANO AND ENSEMBLE PATCHES

The PIANO and ENSEMBLE Voice Sections allow you to play various instrumental and vocal sounds such as Piano, Strings, Trumpet, Choir, etc. This is explained in more detail starting below.

## ALLOCATING THE SECTION TO THE KEYBOARD




PLAY Mode (Piano)

To play a PIANO or ENSEMBLE Patch on the keyboard, simply press the [PIANO] or [ENSEMBLE] button in the [ALLOCATE] button group. The LED will light red.

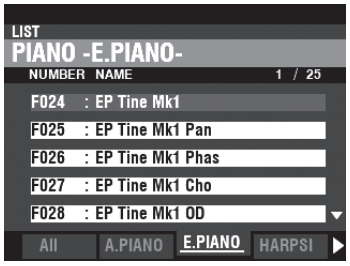
**NOTE: If only the PIANO or ENSEMBLE Section is active (no other [ALLOCATE] buttons lit), the PLAY Mode will display only the PIANO / ENSEMBLE Parameters.**

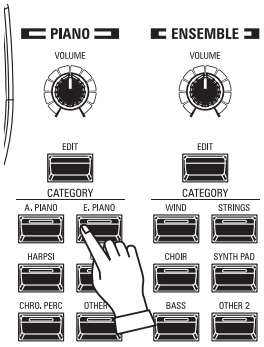
**NOTE: If the SPLIT button is "ON" (LED lit), the PIANO / ENSEMBLE will play to the right of the SPLIT Point only.**

## RECALLING A PATCH

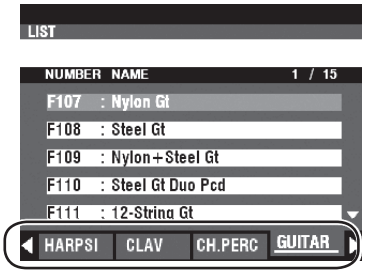
For this example, recall "EP Tine Mk2"

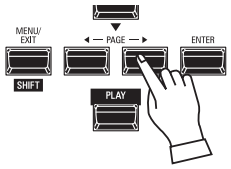
### ① SELECT A CATEGORY




Select a Voice Category from the PIANO or ENSEMBLE Section. For this example, press the [E. PIANO] button in the PIANO Category. The display will show the Patch List for the selected category.



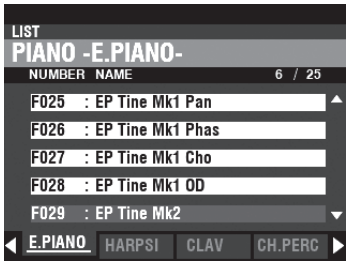

### USING THE "OTHER" VOICE CATEGORY

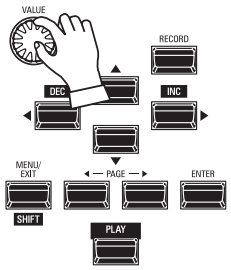
Both the PIANO and ENSEMBLE Voice Sections have a category called [OTHER]. These include various groups of Voices not represented by buttons on the Control Panel.

To select a Voice in the [OTHER] Category:

1. Press the [OTHER] button to display the Patch List.
2. Use the [PAGE] [◀]/[▶] buttons to select among the available Voice Categories.
3. Use the [DIRECTION] [▲]/[▼] buttons to select a Voice from the selected Category. Press [ENTER] to select the Voice you wish.

### ② SELECT THE PATCH

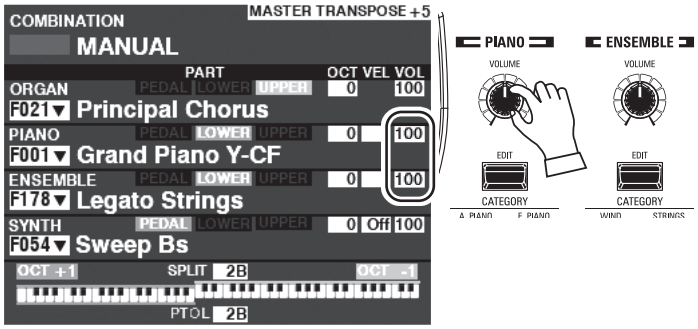



Use the [VALUE] knob to scroll through the Patch List.

**NOTE: You can also use the PAGE [◀]/[▶] buttons to scroll through the Patch List.**

# ADJUSTING THE VOLUME

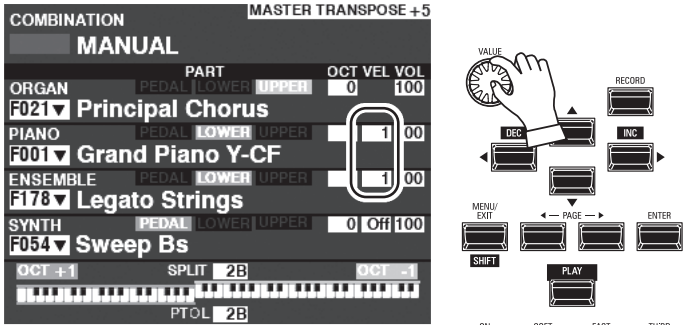



Use the [VOLUME] knob in the PIANO or ENSEMBLE Section to adjust the volume of the selected Section. For this example, use the [VOLUME] knob in the PIANO Section.

**NOTE: You can also adjust the volume of the PIANO and ENSEMBLE Sections in the PLAY screen by moving the cursor to "VOL" (right side of screen) and using the [VALUE] knob.**

**NOTE: The word "MANUAL" is explained in more detail on page 29.**

# ADJUST THE VELOCITY SENSITIVITY

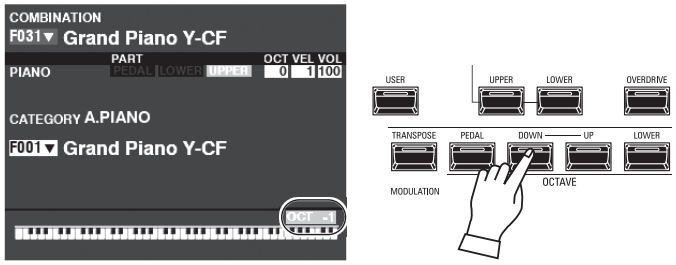



Use the [DIRECTION] buttons to move the cursor to "VEL," and use the [VALUE] knob to select the Velocity Curve. The setting range is "Off" and "1" to "4."

"Off" is standard organ touch - the notes sound at the same volume regardless of a light or heavy key pressure. "1" is the most exaggerated velocity curve while "4" is a gentler curve. "2" and "3" are curves in between.

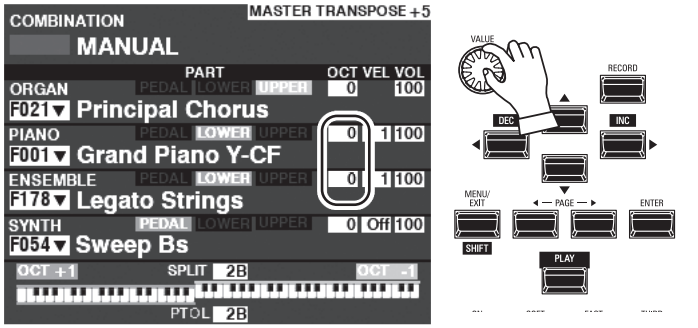
**NOTE: The Velocity setting will vary from Patch to Patch.**

# CHANGING THE OCTAVE




To change the Octave of the entire UPPER Keyboard (all Sections), press the OCTAVE [UP] or [DOWN] button. The display will show the current Octave setting.

**NOTE: You can select "-2" (up to two octaves down) through +2" (up to two octaves up).**




To change the Octave for the PIANO Section only, use the [DIRECTION] buttons to move the cursor to "PLAY Mode - PIANO Section - OCTAVE" and use the [VALUE] knob to change the Octave. The display will show the current Octave setting.

**NOTE: You can select "-2" (up to two octaves down) through +2" (up to two octaves up).**

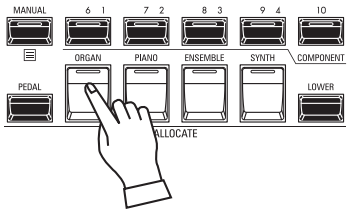
**tips DIFFERENCE BETWEEN PIANO AND ENSEMBLE**

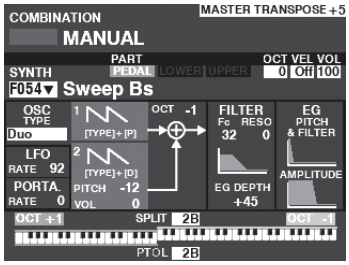
The PIANO and ENSEMBLE Sections contain the same voices; however, to make registration of certain types of sounds easier, the inbuilt voices are separated into PIANO and ENSEMBLE Sections. The PIANO Section consists of Category buttons appropriate for keyboard and other Percussion voices, while the ENSEMBLE Section consists of voices such as Strings, Choir, Wind instruments, Synth voices and other primarily instrumental and vocal sounds. However, all inbuilt voices can be played from either the PIANO or ENSEMBLE Categories - if desired, the PIANO Section can play Strings, the ENSEMBLE Category can play Electric Piano, and so on.

# USING MONO SYNTH PATCHES

MONO SYNTH Patches are explained in detail starting below.

## ALLOCATING THE SECTION TO THE KEYBOARD




PLAY Mode (Mono Synth)

To play the MONO SYNTH on the keyboard, simply press the [MONO SYNTH] button in the [ALLOCATE] button group. The LED will light red.

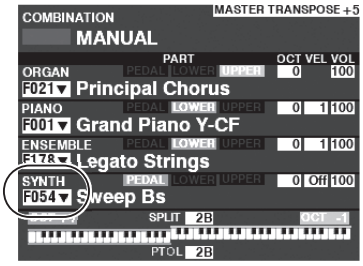
**NOTE: If only the MONO SYNTH Section is active (no other [ALLOCATE] buttons lit), the PLAY Mode will display only the MONO SYNTH Parameters.**

**NOTE: If the SPLIT button is "ON" (LED lit), the MONO SYNTH will play to the right of the SPLIT Point only.**

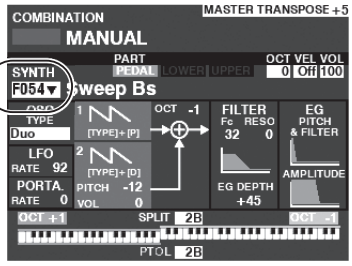
## RECALLING A PATCH

For this example, recall MONO SYNTH Patch F048 ("4th Saw Ld").

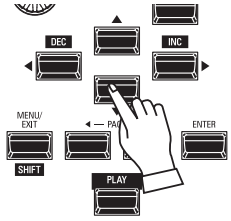
### ① MOVE THE CURSOR TO THE MONO SYNTH PATCH NUMBER




PLAY Mode (Combination)

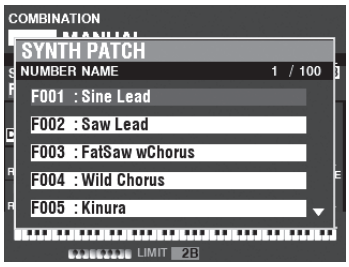


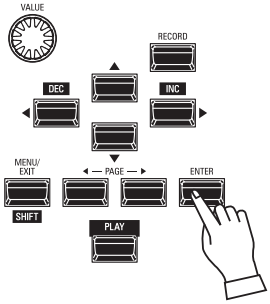

PLAY Mode (Mono Synth)




Use the [DIRECTION] buttons to move the cursor to the MONO SYNTH Patch Number.

### ② OPEN THE PATCH LIST

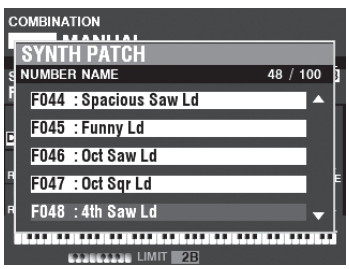


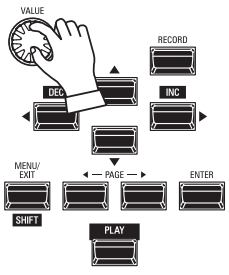




The Patch List allows you to scroll through the Patches quickly to find the Patch you want.

With the cursor highlighting the Patch Number, press [ENTER] to open the Patch List. You will see a screen similar to the one shown at the left.

### 3 SELECT THE PATCH



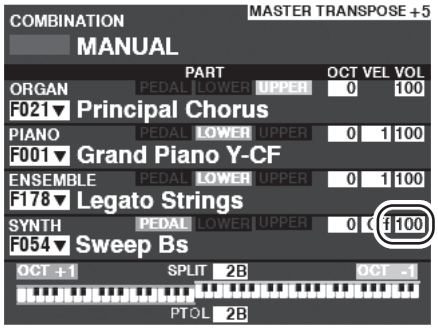



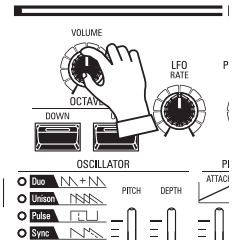

Use the [VALUE] knob to scroll through the Patch List.

For this example, when you have located Patch F048 ("4th Saw Ld"), press either the [PLAY] or [ENTER] button to return from Patch List to PLAY Mode.

**NOTE: You can also use the PAGE [◀]/[▶] buttons to scroll through the Patch List.**

# ADJUSTING THE VOLUME



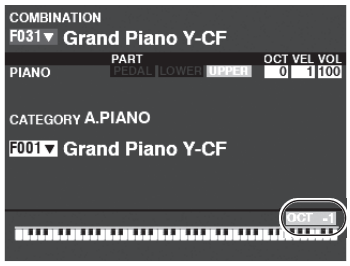



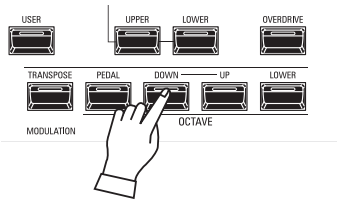

Use the [VOLUME] knob in the MONO SYNTH Section to adjust the volume.

**NOTE: You can also adjust the volume of the MONO SYNTH Section in the PLAY screen by moving the cursor to "VOL" (right side of screen) and turning the [VALUE] knob.**

**NOTE: The word "MANUAL" is explained in more detail on page 29.**

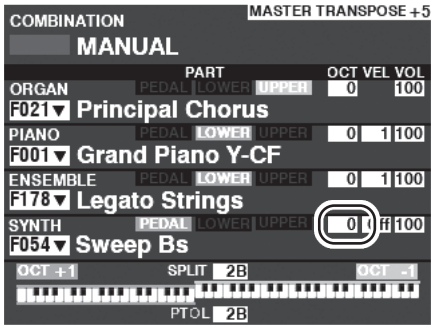
# CHANGING THE OCTAVE

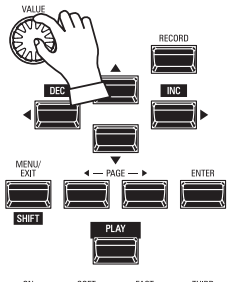



To change the Octave of the entire UPPER Keyboard (all Sections), press the OCTAVE [UP] or [DOWN] button. The display will show the current Octave setting.

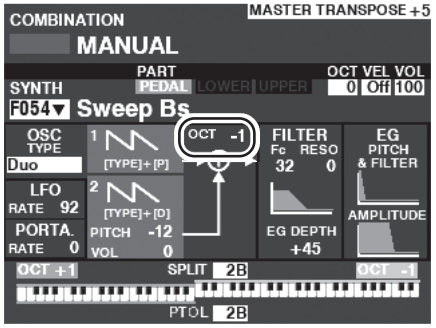
**NOTE: You can select "-2" (up to two octaves down) through +2" (up to two octaves up).**

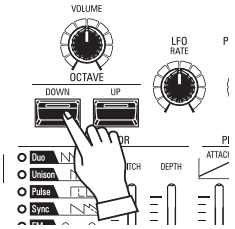



To change the Octave for the MONO SYNTH Section only, use the [DIRECTION] buttons to move the cursor to "PLAY Mode - MONO SYNTH Section - OCTAVE" and use the [VALUE] knob to change the Octave. The display will show the current Octave setting.

**NOTE: You can select "-2" (up to two octaves down) through +2" (up to two octaves up).**



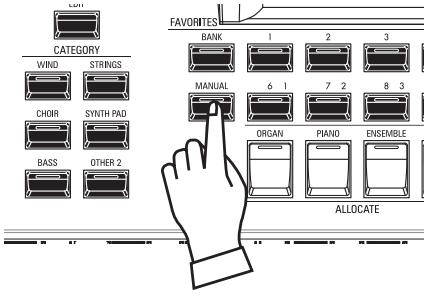

To change the Octave of the Oscillator, press the OCTAVE [UP] or [DOWN] buttons in the MONO SYNTH Section. The display will show the current Octave setting.

**NOTE: You can select "-2" (up to two octaves down) through +2" (up to two octaves up).**

# CREATING A MONO SYNTH PATCH

These pages show an example of how to create a MONO SYNTH Patch.

## SELECT [MANUAL]

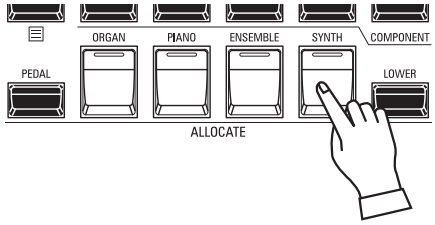



Normally, one of the [FAVORITE] buttons is "ON" (LED lit), indicating that a Combination has been selected. However, if you want to deselect Combinations and use the front panel controls entirely to control the sound, turn the [MANUAL] button "ON." The [FAVORITE] buttons will all turn "OFF" and all sounds and features of the SK PRO will be controlled by the front panel controls as well as by the Advanced Feature settings from the Menus.

### INITIALIZE "MANUAL"

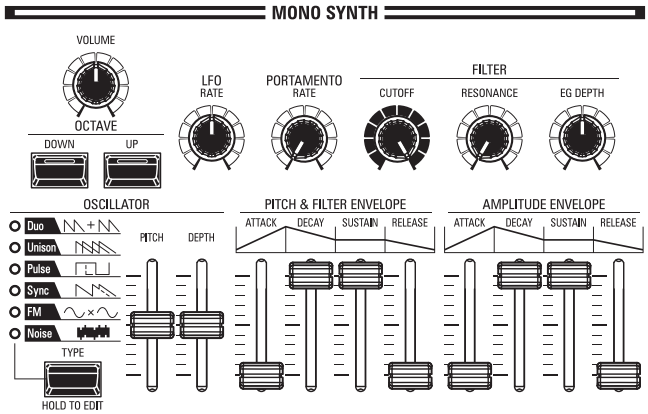
Some Menu Parameters may not be set the way you wish even if [MANUAL] is selected. If you encounter this, you can initialize the MANUAL Parameters (P. 29).

## ALLOCATE THE SECTION TO THE KEYBOARD




Press the [SYNTH] button in the [ALLOCATE] button group "ON." The LED will light and the SYNTH Section will play from the keyboard.

## LOCATE THE MONO SYNTH CONTROLS

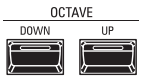



Use the controls in the MONO SYNTH portion of the Control Panel to create a MONO SYNTH Patch.

## ADJUST THE VOLUME


Use the [VOLUME] knob in the MONO SYNTH Section to adjust the volume of the MONO SYNTH. Turn to the right to increase the volume and to the left to decrease the volume.

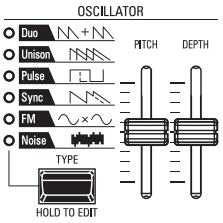
## CHANGING THE OCTAVE




To change the Octave for the MONO SYNTH Section only, use the [DIRECTION] buttons to move the cursor to "PLAY Mode - MONO SYNTH Section - OCTAVE" and use the [VALUE] knob to change the Octave. The display will show the current Octave setting.

To change the Octave of the Oscillator, press the OCTAVE [UP] or [DOWN] buttons in the MONO SYNTH Section. The display will show the current Octave setting.

# SELECT AN OSCILLATOR




## SELECT THE WAVEFORM (OSCILLATOR TYPE)

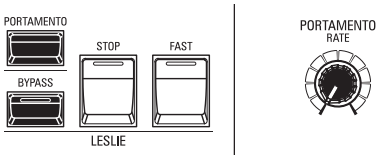
Use the [OSC TYPE] button to select the basic waveform.

## ADJUST THE WAVEFORM (MODIFY)

Use the [PITCH] and [DEPTH] sliders to modify the Pitch and Depth of the waveform you have selected.

**NOTE: The Oscillator Types are explained in more detail on page 53.**

# SLIDE THE PITCH (PORTAMENTO)




Use the PORTAMENTO [RATE] knob to adjust the rate of the Portamento.

**NOTE: In order to hear the PORTAMENTO effect, both the [PORTAMENTO] button and the Portamento Patch Parameter must be "ON."**

**tips PORTAMENTO**

"Portamento" allows you to slide smoothly from one note to another. It is often used in vocal performances or on instruments such as violin or trombone.

# ADJUST THE BRIGHTNESS (FILTER)


**1 [CUTOFF] knob**

This allows you to adjust the Cutoff Frequency of the filter, making the sound either brighter or more mellow.

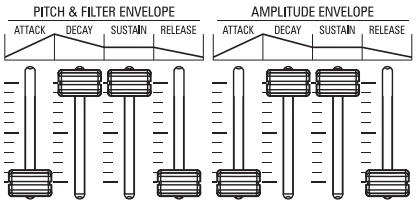
**2 [RESONANCE] knob**

This allows you to add coloration to the sound by emphasizing the Cutoff Frequency.

**3 [EG DEPTH] knob**

This allows you to adjust the absolute level of the Cutoff Frequency of the filter.

# CHANGING THE SOUND OVER TIME (ENVELOPE)




The Envelope Generator allow you to change the sound over time.

**Amplitude**..... Allows you to adjust the [AMPLITUDE] Envelope.
**Filter**..... Allows you to adjust the [PITCH&FILTER] Envelope, and set the changing depth ([EG DEPTH]) in the FILTER group.
**Pitch**..... Allows you to adjust the [PITCH&FILTER] Envelope, and set the changing depth ([PITCH EG DEPTH]) in the Patch Parameters.

**1 [ATTACK] slider**

This allows you to adjust the rate at which the value rises from zero to maximum, beginning when a key is first pressed.

**2 [DECAY] slider**

This allows you to adjust the rate at which the value changes from the Attack level to the Sustain level.

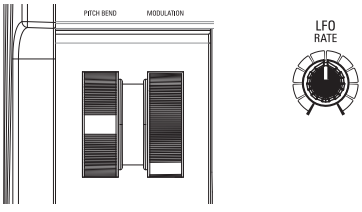
**3 [SUSTAIN] slider**

This allows you to adjust the final level when a key is depressed and held.

**4 [RELEASE] slider**

This allows you to adjust the rate at which the value decays to zero when a key is released.

# ADDING PERIODIC CHANGING (LFO)



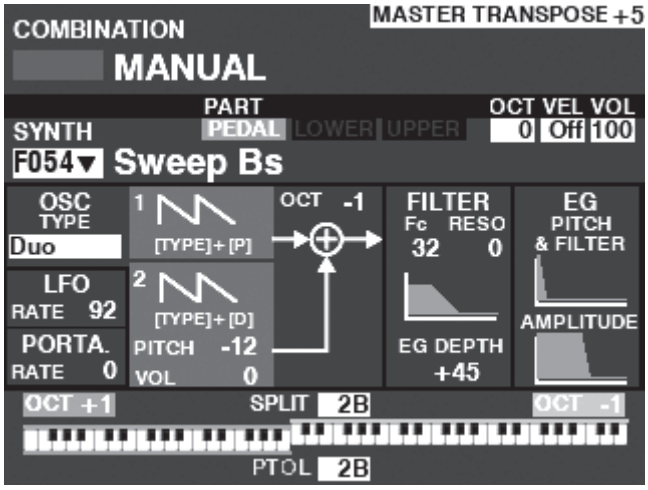

Use the LFO (Low Frequency Oscillator) to add periodic audio effects such as Vibrato or Tremolo.

**NOTE: In the default state, you can use the [MODULATION] wheel to control the LFO. Also, you can change various characteristics of the LFO such as Waveform, etc.**

# ADDING EFFECTS

You can add Multi Effects such as Chorus, Delay, Overdrive, etc., to the MONO SYNTH sound. This is explained in more detail under "Setting the Parameters" - "Mono Synth."

# SHOWING CURRENT SETTINGS




When you are in PLAY Mode, a page similar to the one shown at left will display if the MONO SYNTH Section only is selected via the [ALLOCATE] button or by repeatedly touching the [PLAY] button.

**NOTE: The word "MANUAL" is explained in more detail on page 29.**

# WHAT IS AN "OSCILLATOR?"

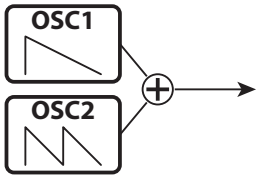
An **Oscillator** is the basic sound-producing unit of a synthesizer. There are several different types which produce different waveforms having different harmonic structures. These in turn can be manipulated in various ways to produce a wide variety of different musical effects.

The MONO SYNTH on the SK PRO follows the pattern of classic analog synthesizers. "Mono" is an abbreviation for "Monophonic," meaning that this Voice Section plays one note at a time. If multiple notes are played on the keyboard, only one note will sound. The Oscillator types available on the SK PRO are explained starting on the next page.

# OSCILLATOR TYPES AND CHARACTERISTICS

The SK PRO has 6 audio oscillator settings which can be manipulated to produce a wide variety of tones. These are explained starting below.

## DUO




This setting utilizes two different pitched Oscillators. OSC1 sounds at "true pitch," while OSC2 can be transposed up or down by one (1) octave in half-step increments. If the OSC2 LEVEL is set to "0," only OSC1 will sound.

This Oscillator type is useful for Bass, Lead and "chord" effects.

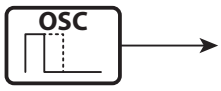
| Parameter | Control | Description |
|---|---|---|
| **PITCH** | PITCH | Shift the OSC2 pitch (-12 ~ 0 ~ +12 by semitones) |
| **VOLUME** | DEPTH | Volume of the OSC2 (0 ~ 127) |
| **OSC1** | [TYPE] + PITCH | Waveform of the OSC1 (Sawtooth, Square, Saw+Sqr) |
| **OSC2** | [TYPE] + DEPTH | Waveform of the OSC2 (same as above) |

## UNISON


This setting utilizes from one to seven Oscillators, one of which can be detuned against the other. It can be used for celeste, chorus, or other purposely "out-of-tune" effects.

| Parameter | Control | Description |
|---|---|---|
| **DETUNE** | PITCH | Detune depth (0 ~ 127) |
| **LAYERS** | DEPTH | Numbers of Oscillators (1 ~ 7) |
| **OSC1** | [TYPE] + PITCH | Waveform of the OSC1 (Sawtooth, Square, Saw+Sqr) |
| **OSC2** | [TYPE] + DEPTH | Waveform of the OSC2 (same as above) |

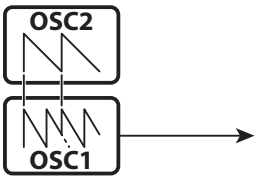
## PULSE




A Pulse (or rectangular) waveform has a variable width known as the "duty cycle." The sound can be modified by changing the pulse width or duty cycle. For example, a duty cycle of 50% will produce a clarinet-like sound while a duty cycle of 6% will yield a bright, brass-like tone quality.

| Parameter | Control | Description |
|---|---|---|
| **PW** | PITCH | Pulse Width (0 ~ 127 as 50 ~ 90 [%]) |
| **MOD DEPTH** | DEPTH | Depth of the Pulse Width Modulation (0 ~ 127) |
| **MOD SOURCE** | [TYPE] + DEPTH | Modulating source (Pitch EG, LFO, Note) |

## SYNC




This setting utilizes two Oscillators which synchronize against each other to produce overtone effects.

| Parameter | Control | Description |
|---|---|---|
| **DETUNE** | PITCH | Detune depth of the OSC1 (0 ~ 127) |
| **MOD DEPTH** | DEPTH | Modulation depth of the OSC1 (0 ~ 127) |
| **MOD SOURCE** | [TYPE] + DEPTH | Modulating source (Pitch EG, LFO, Note) |

## FM


This setting utilizes two Oscillators or "operators." OSC1 is is the "carrier tone" and OSC2 is the "modulating tone. You can use this to create both "harmonic" and "inharmonic" tonal effects.

Adjusting the OSC2 pitch **down** ctreates wind-instrument sounds such as flute, brass,etc., while adjust the OSC2 pitch **up** is suitable for bell-like or "metallic" tones.

Setting the FB (feedback) at "Half" allows you to create string-type tones while "Full" is useful for unpitched or "noisy" tones.

| Parameter | Control | Description |
|---|---|---|
| **RATIO** | PITCH | Multiply of the OSC2 (0.5, 1 ~ 16) |
| **MOD DEPTH** | DEPTH | Modulation depth OSC2 to OSC1 (0 ~ 127) |
| **FEEDBACK** | [TYPE] + DEPTH | Feedback Level (Off, Half, Full) |

## NOISE


This setting creates unpitched sounds or "noise." The sound changes from "noise" to "random pitched tones" by controlling the sampling rate.

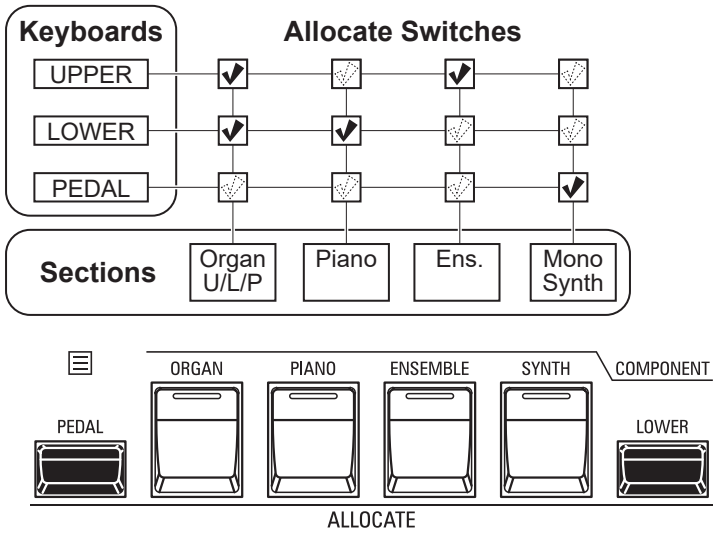
A high sampling rate creates "seashore" type effects, a slightly lower rate yields a "noisy percussion," and a still lower rate creates effcts suggestive of a "retro sience fiction movie."

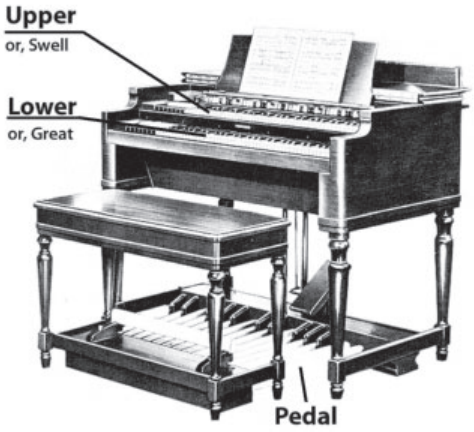
| Parameter | Control | Description |
|---|---|---|
| **RATE** | PITCH | Sampling Rate (0 ~ 127) |
| **MOD DEPTH** | DEPTH | Modulation depth to the sampling rate (0 ~ 127) |
| **COLOR** | [TYPE] + PITCH | Noise color (Red, Pink, White) |
| **MOD SOURCE** | [TYPE] + DEPTH | Modulating source (Pitch EG, LFO, Note) |

# COMBINING THE SECTIONS AND PARTS

You can play in a variety of different styles by allocating the 4 Voice Sections as well as the "3 PART ORGAN" feature of the ORGAN Section to each keyboard. This is explained in more detail starting below.

## SECTIONS AND KEYBOARDS




The SK PRO/SK PRO-73 contains 4 Voice Sections - ORGAN, PIANO, ENSEMBLE and MONO SYNTH. These can be played by turning the [ALLOCATE] button for each Section "ON." In addition, the ORGAN Section has 3 Parts - UPPER, LOWER and PEDAL to replicate the performance of a classic Hammond Organ with two manuals and pedals.

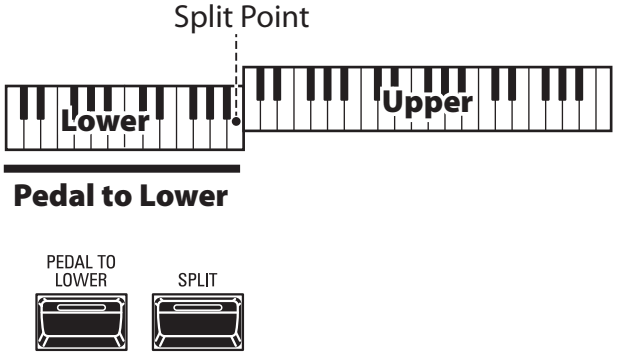
### ALLOCATING THE SECTIONS

**UPPER**..... Press the [ALLOCATE] button for the desired Section "ON." The LED will light red.
**LOWER**..... Press and Hold the [LOWER] button and turn the [ALLOCATE] button for the desired Section "ON." The LED will light green.
**PEDAL**..... Press and Hold the [LOWER] button and turn the [ALLOCATE] button for the desired Section "ON." The LED will light green while the [PEDAL] button is pressed.
**ALLOCATING TWO OR MORE SECTIONS TO THE SAME KEYBOARD**...Press the desired Section buttons simultaneously. The figure below shows switching on both PIANO and ENSEMBLE Sections.

**tips** **[ORGAN] BUTTON LIGHTS ORANGE**

When the 3 PART ORGAN feature is used, the ORGAN Section is allocated to multiple keyboards. In this case, the LED in the [ALLOCATE] button in the ORGAN Section will light orange.

## KEYBOARD SPLIT




The SK PRO is a single-keyboard instrument, but by using the SPLIT feature it can be made to perform as if it were a two-manual instrument.

**tips** **DIFFERENCE BETWEEN "ALLOCATE" AND "PEDAL TO LOWER"**

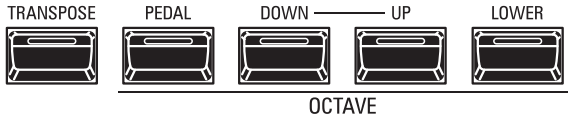
When you allocate a Section to Lower, it works as typically keyboard instrument as same as Upper.
The PEDAL TO LOWER features for "sounding bass note with chord playing."
You can sounding the Pedal part for lowest note or root note of the chord, and ranging the Pedal part for playing by both hands on the keyboard.

## USING THE SPLIT FEATURE

To enable the SPLIT feature, press the [SPLIT] button "ON." The LED will light. When SPLIT is active the left portion of the keyboard is referred to as LOWER while the right portion of the keyboard is UPPER.

**NOTE: You can change the SPLIT Point. This is explained in more detail on page 78.**

## CHANGING THE OCTAVE




To change the Octave for each keyboard,

**UPPER**.....Press the OCTAVE [DOWN] or [UP] button.

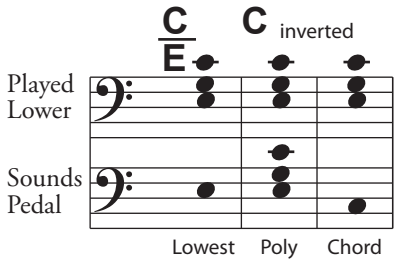
**LOWER** .....Press and Hold the [LOWER] button and press the OCTAVE [DOWN] or [UP] button.

**PEDAL**.....Press and Hold the [PEDAL] button and press the OCTAVE [DOWN] or [UP] button.

The current Octave setting is shown in the display. The button LEDs on the buttons will light if the Octave setting is not "0."

**NOTE: You can set the Octave for each section. This is explained in more detail on page 78.**

# PEDAL TO LOWER

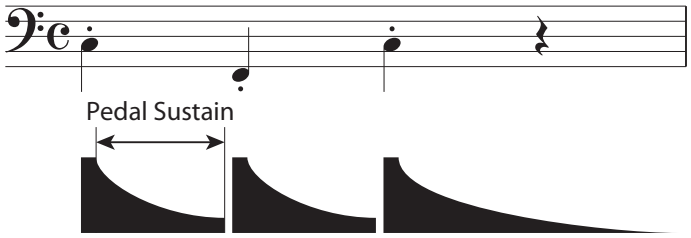



The **PEDAL TO LOWER** feature allows you to play the PEDAL Part from the LOWER Keyboard (left portion of the keyboard when [SPLIT] is active, or expanded MIDI keyboard).

To engage PEDAL TO LOWER, press the [PEDAL TO LOWER] button and lights ON.

**NOTE: You can adjust the sounding range or condition of the PEDAL TO LOWER feature. This is explained in more detail on page 78.**

# PEDAL SUSTAIN



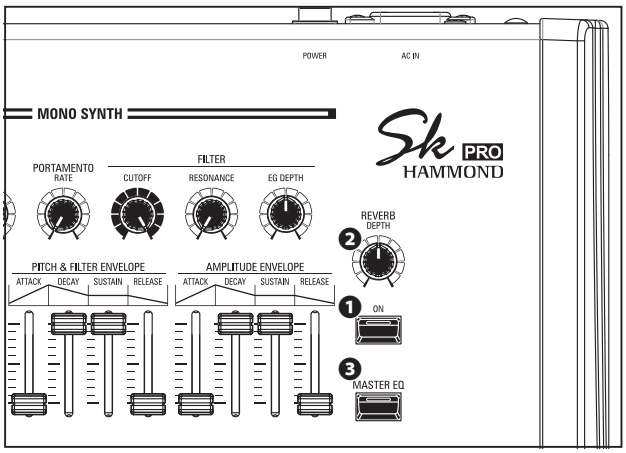

The SK PRO incorporates a feature called **Pedal Sustain**. When this feature is active, the Pedal tones will smoothly decay upon release, much in the manner of a string bass.

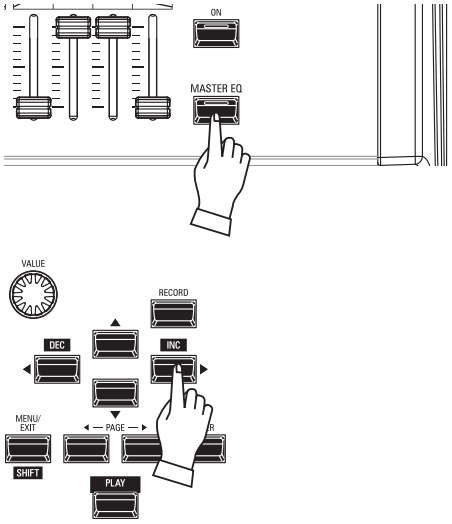
The Pedal Sustain is controlled from the INTERNAL ZONE FUNCTION Mode.

**NOTE: The Parameters described on this page are Combination Parameters, meaning that different settings can be Recorded to different Combinations.**

# ADJUSTING THE SOUND DURING PERFORMANCE

There are a number of adjustments you can make to the sound during performance.
This is explained in more detail starting below.




## REVERB

REVERB (or Reverberation) is the prolongation or persistence of sound caused by sound bouncing or reflecting off of hard surfaces such as floors, walls or ceilings. It is measurable by the interval of time required for the sound to decay to inaudibility after the source of the sound has been stopped.

The SK PRO has built-in Digital Reverb which allows you to simulate several different acoustic profiles representing different sizes and types of enclosures.

**❶ [REVERB ON] button (Co)**

This allows you to turn Reverb "ON"(LED lit) and "OFF."

**❷ [REVERB DEPTH] knob (Co)**

This allows you to adjust the overall depth of the entire Reverb effect.

**NOTE: You can adjust the Reverb Level for the ORGAN, PIANO, ENSEMBLE and MONO SYNTH Sections separately. This is explained in more detail on page 77.**

**NOTE: You can adjust the Reverb Type for the ORGAN and PIANO/ ENSEMBLE/MONO SYNTH Sections separately. This is explained in more detail on page 77.**

**NOTE: These Parameters are marked "Co," meaning they are Combination Parameters.**

## MASTER EQUALIZER

The Master Equalizer allows you to adjust the overall tonal quality for all Voice Sections of the entire instrument.

**❸ [MASTER EQ ON] button (Sys)**

To enable the Master Equalizer, press the [MASTER EQ] button "ON." The LED will light.

The Master Equalizer Parameters can be adjusted in the MASTER EQUALIZER Menu.

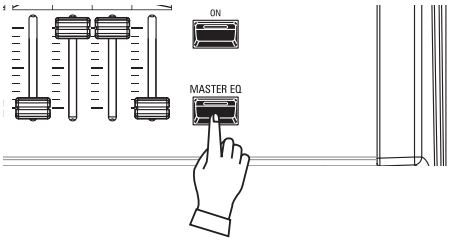
In addition, each Voice Section has an EQUALIZER Page in its FUNCTION Mode if you wish to adjust the tone quality of an individual Voice Section.

**NOTE: This Parameter is marked "Sys, " meaning it is a System Parameter common to all Combinations and Patches.**

# ADJUSTING THE MASTER EQUALIZER

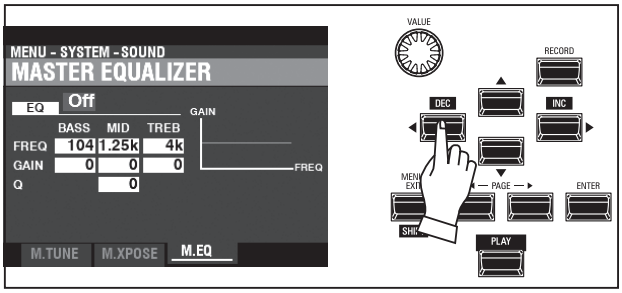
The MASTER EQUALIZER Menu allows you to adjust the overall frequency response of the entire instrument.

## ① LOCATE THE MASTER EQUALIZER MENU



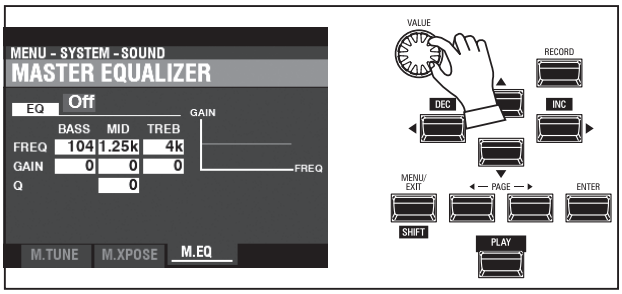

Press and Hold the [MASTER EQ] button. The display will show the "MASTER EQUALIZER" Menu Page.

## ② SELECT THE BAND



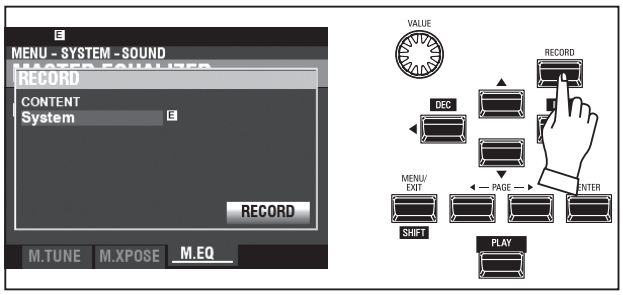

Use the [DIRECTION] buttons to move the cursor to the band you wish to adjust (BASS, MID, or TREBLE).

## ③ SELECT THE VALUE



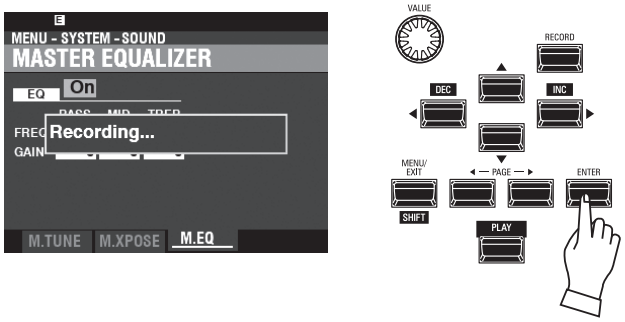

Use the [VALUE] knob to select the desired setting for the selected frequency band.

## ④ RECORD THE SETTING



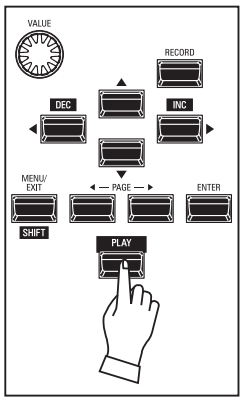

After you have made your adjustments to the Master Equalizer, you can Record your settings to be remembered the next time you turn the SK PRO Power "ON." To do this: press the red [RECORD] button from the previous Menu Page to enter RECORD mode.

**NOTE: These are System Parameters. If edits have been made to a System Parameter, an "E" will appear to the right of the CONTENTS icon.**




Use the [DIRECTION] [▼] button to move the cursor to the [RECORD] icon and press the [ENTER] button. The display will show "Recording... for approximately 1 second.

## ⑤ RETURN TO PLAY MODE




After doing the above, press the [PLAY] button to return to the PLAY Mode.

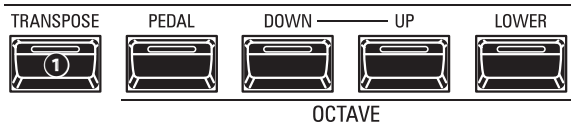
**NOTE: The MASTER EQUALIZER Parameters are System Parameters. You must Record these Parameters if you want their settings to be remembered the next time the instrument is turned "ON." See page141 for instructions on how to do this.**

# TRANSPOSE, TUNE

These Parameters allows you to shift the musical key and the overall tuning of the entire instrument.

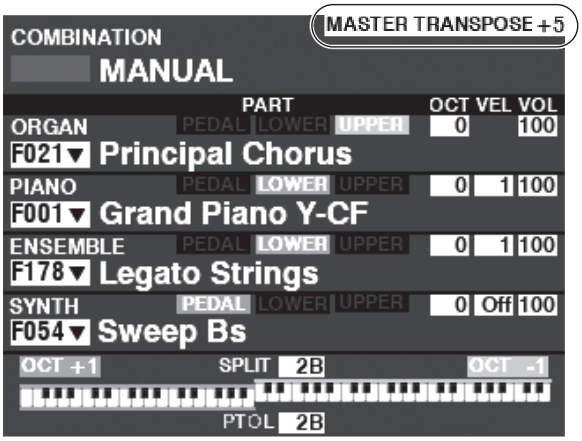
## TRANSPOSING THE ENTIRE KEYBOARD

TRANSPOSE will step either up or down six (6) semitones or half-steps from the center position. This is useful if you have a piece of music written in one key but which needs to sound in another key. The TRANSPOSE feature consists of the [TRANSPOSE] Touch Button, plus the [DOWN] and [UP] Touch Buttons to the right of the [TRANSPOSE] Touch Button. The [DOWN] Touch Button allows you to transpose lower and the [UP] Touch Button allows you to transpose higher.




**❶ [TRANSPOSE] button**

- To raise the pitch, press the [UP] button, while holding down the [TRANSPOSE] button.
- To lower the pitch, press the [DOWN] button, while holding down the [TRANSPOSE] button.




In the above example, the TRANSPOSE value is set at "+5" - if a "C" key is depressed, a note five (5) half-steps higher will sound ("F").

When performing this operation, the status of the transposition is shown in the display. The [TRANSPOSE] LED will light "ON" if the value is not "0."

**NOTE: The word "MANUAL" is explained in more detail on page 29.**

## WHAT IS AFFECTED BY THE TRANSPOSE FUNCTION?

TRANSPOSE will affect:

1. The internal sounds of the instrument.
2. MIDI IN Note Data.
3. MIDI Note Data sent OUT to the External Zones.

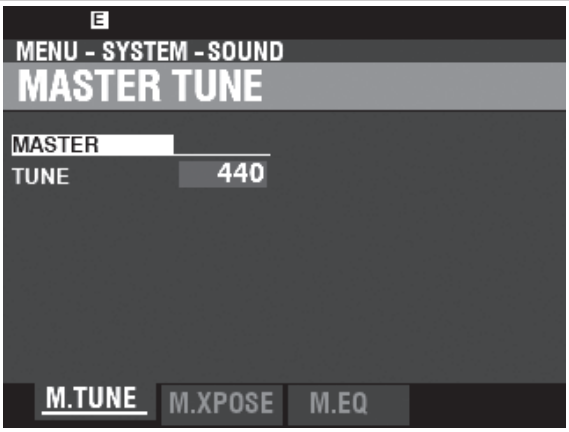
**NOTE: TRANSPOSE is a temporary Parameter, and is not Recorded to any Patch or Combination. When the power to the instrument is turned "OFF," it resets to 0.**

**NOTE: You can select whether Transpose changes while notes are being held or when the next note is pressed after releasing the notes being held.**

# MASTER TUNE

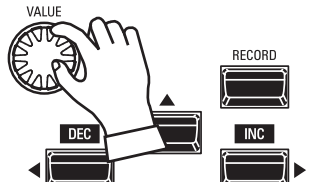
This Parameter changes the overall tuning pitch of the entire instrument. The reference pitch is "A-440." The selectable range is from "A-430" through "A-450."

## ① LOCATE "MASTER TUNE"




1. From the PLAY Mode, press the [MENU/EXIT button to enter MENU Mode.
2. Press the [▶] button two times to locate the SYSTEM Menu. "SOUND" should be highlighted.
3. Press the [ENTER] button to see the MASTER TUNE Menu.

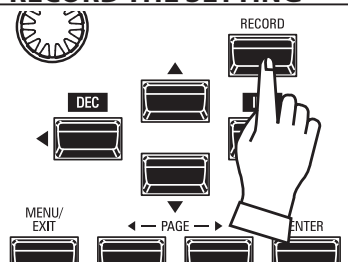
## ② SELECT THE VALUE




Use the VALUE Rotary Control to the right to raise the pitch.

Use the VALUE Rotary Control to the left to lower the pitch.

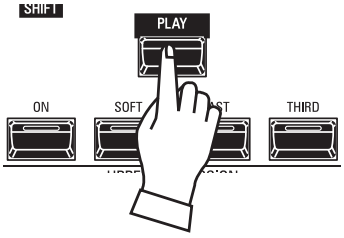
## ③ RECORD THE SETTING




You can Record this setting to be remembered the next time the power is turned "ON." To do this:

1. Press the red [RECORD] button from the MASTER TUNE page. You will see 'System" highlighted.
2. Press the [ENTER] button. The MASTER TUNE Parameter has been Recorded.

## ④ RETURN TO PLAY MODE

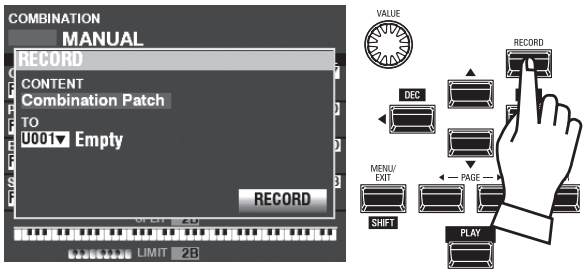



Press the [PLAY] button to return to the PLAY Mode.

# RECORDING SETTINGS

To Record the current settings to a Combination or Patch, do the following:

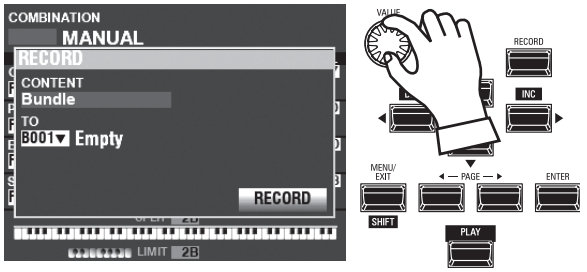
## ① PRESS [RECORD]




Press the red [RECORD] button at each Section or Combination page. The screen shown above will appear.

**NOTE: The word "MANUAL" is explained in more detail on page 29.**

## ② SELECT THE CONTENT



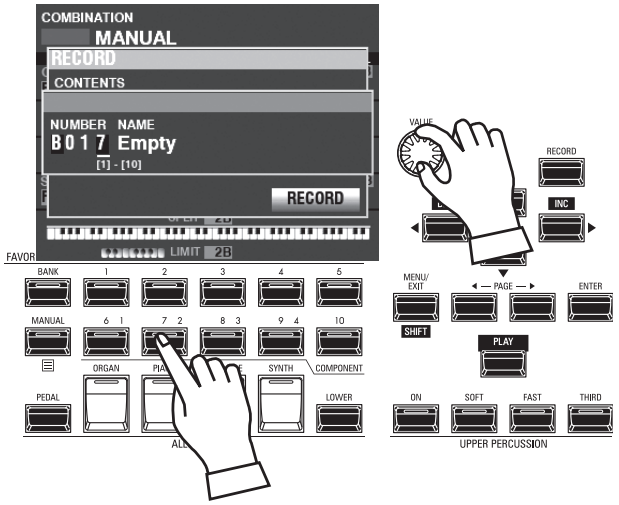

Use the [VALUE] knob to select the content to Record.

For this example, select **Bundle**, which Records multiple contents simultaneously.

**NOTE: Combinations, Patches and Voice Sections are explained starting on pages 73 and 129 .**

**NOTE: If edits have been made to a Combination or Patch, an "E" will appear to the right of the CONTENTS icon.**

## ③ SELECT THE NUMBER TO RECORD

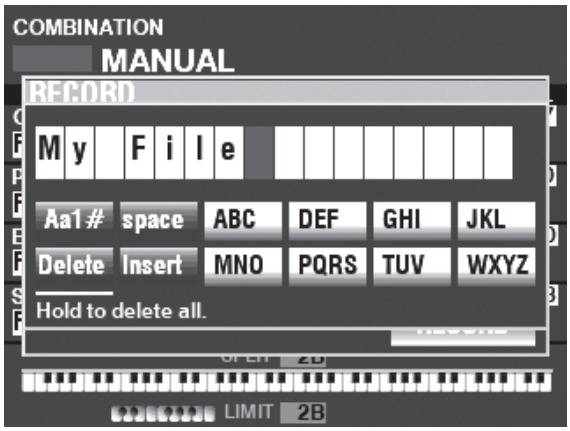



Use the [DIRECTION] [▼] button to move the cursor to "TO."

Use the [VALUE] knob to select the number to Record, or use the numbered [FAVORITE] buttons to type in the number as shown above and press the [ENTER] button.

Use the [DIRECTION] [▼] button to move the cursor to the [RECORD] icon, and press the [ENTER] button. The Naming screen will display.

## ④ NAME THE CUSTOM SETTING




Enter the Name.

**[Aa1]**.....Changes the character type.
**[1] - [10]**.....Selects the highlighted character.
**[Insert]**.....Inserts a space at the cursor.
**[Delete]**.....Deletes a letter at the cursor.
**[VALUE]**.....Changes the letter at the cursor.

After you are finished Naming, press the [ENTER] button. The message shown below will display for approximately 1 second:


**NOTE: Do not turn the power "OFF" while the above message is displaying.**

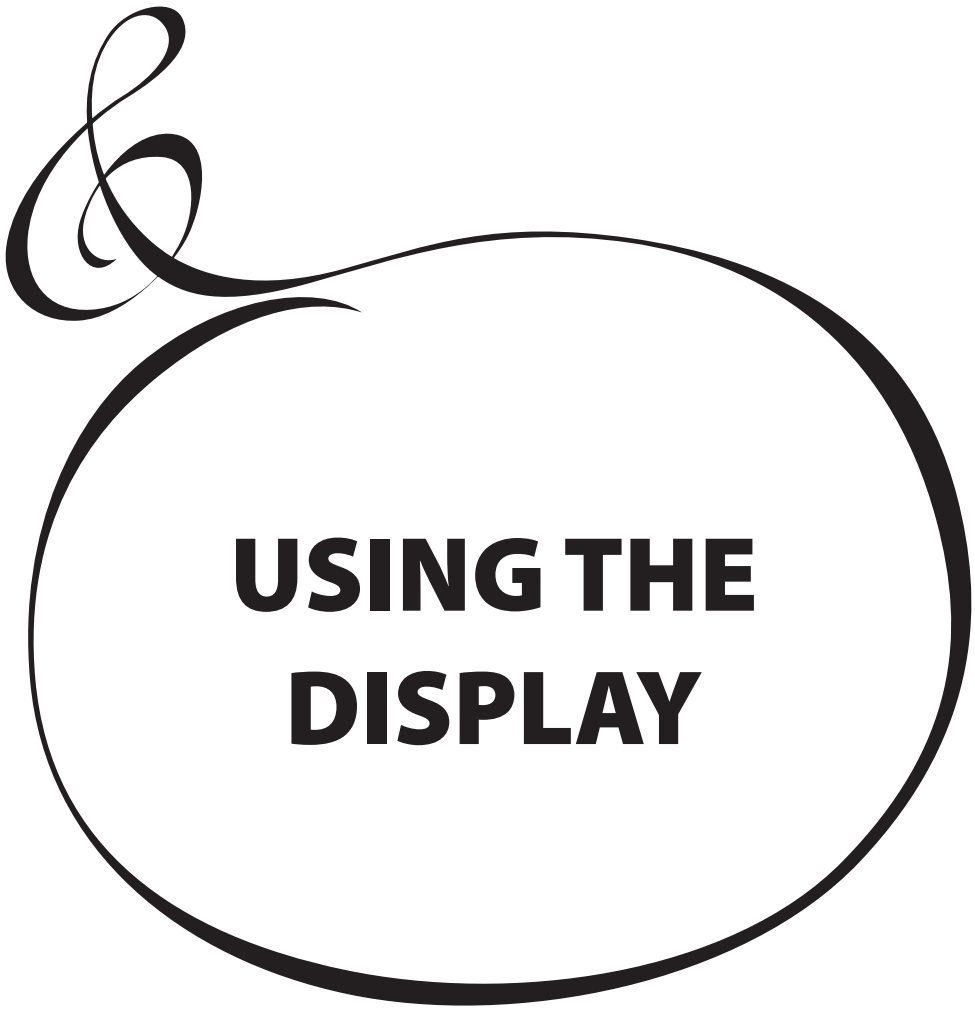
**NOTE: If you DO NOT wish to Record, press the [MENU/EXIT] or [PLAY] button instead of the [ENTER] button.**

## ⑤ RETURN TO PLAY MODE

Press the [PLAY] button to return to the PLAY Mode.

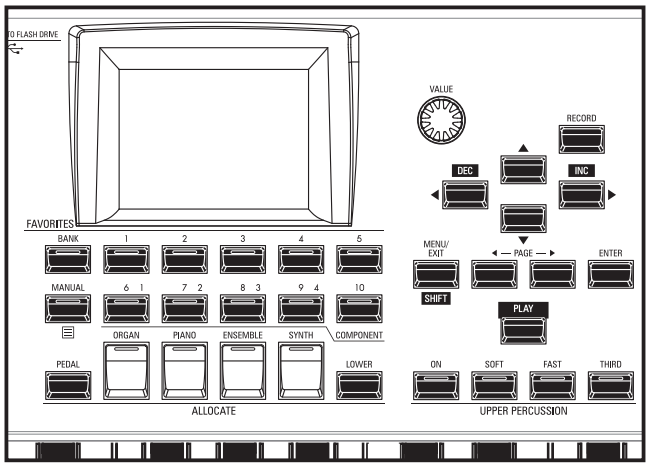
**tips** **RECORDING METHOD**

Each portion of the SK PRO is Recorded separately. **Combination** Records Combination Parameters and Voices. **Bundle** Records Combination Parameters as well as ORGAN and MONO SYNTH Patches simultaneously. **Patch** Records changes to individual Patches and **Custom** Records Tone Wheel Organs, Leslie Cabinets, Pedal Registrations and Pipe Organs. If you wish to Record the entire contents of the instrument, you can save them as a Setup.



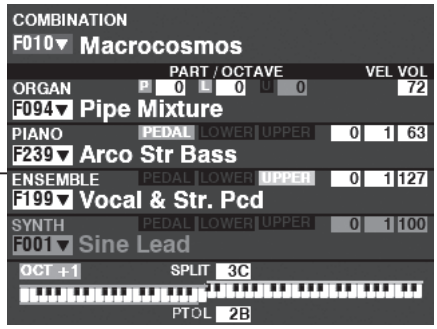
# USING THE DISPLAY

# USING THE DISPLAY



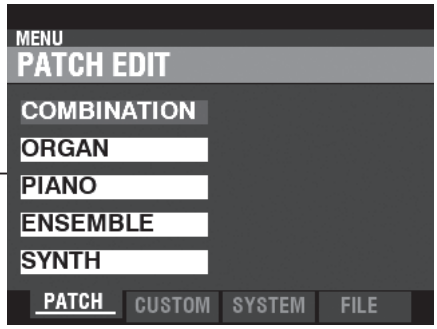

The display has three (3) Modes - PLAY Mode, MENU Mode and FUNCTION Mode. The next pages explain how to read the display in each Mode.

## PLAY MODE



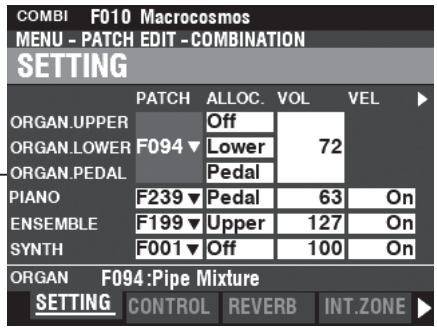

The PLAY Mode allows you to see or modify the current basic settings such as Drawbar settings, Combination Numbers, Patch Numbers and other information.

## MENU MODE




The MENU Mode allows you to see the different FUNCTION Modes where you can customize the instrument.

## FUNCTION MODE




The FUNCTION Mode allows you to change specific Parameters within each MENU Mode.

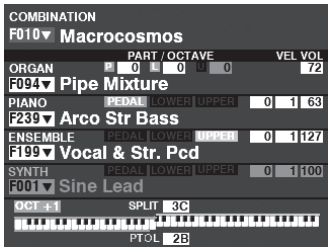
# PLAY MODE

The PLAY Mode is the normal performance mode. The information necessary for ordinary performance will be displayed.

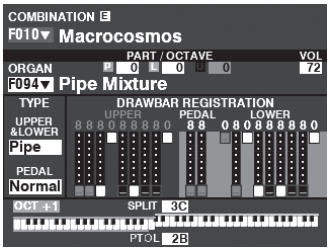
## TO LOCATE THIS MODE:

The PLAY Mode is automatically displayed when the instrument is first powered "ON" and the opening screen disappears. Press the [PLAY] button if another mode is displayed.

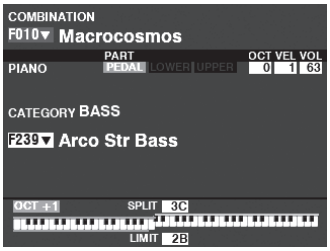
## PLAY MODES



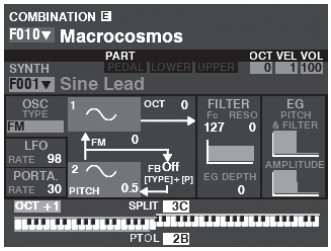

General



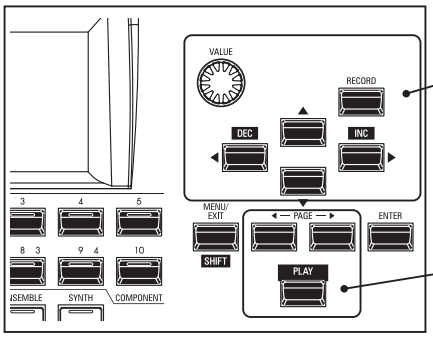

ORGAN Section




PIANO Section /
ENSEMBLE Section




MONO SYNTH Section

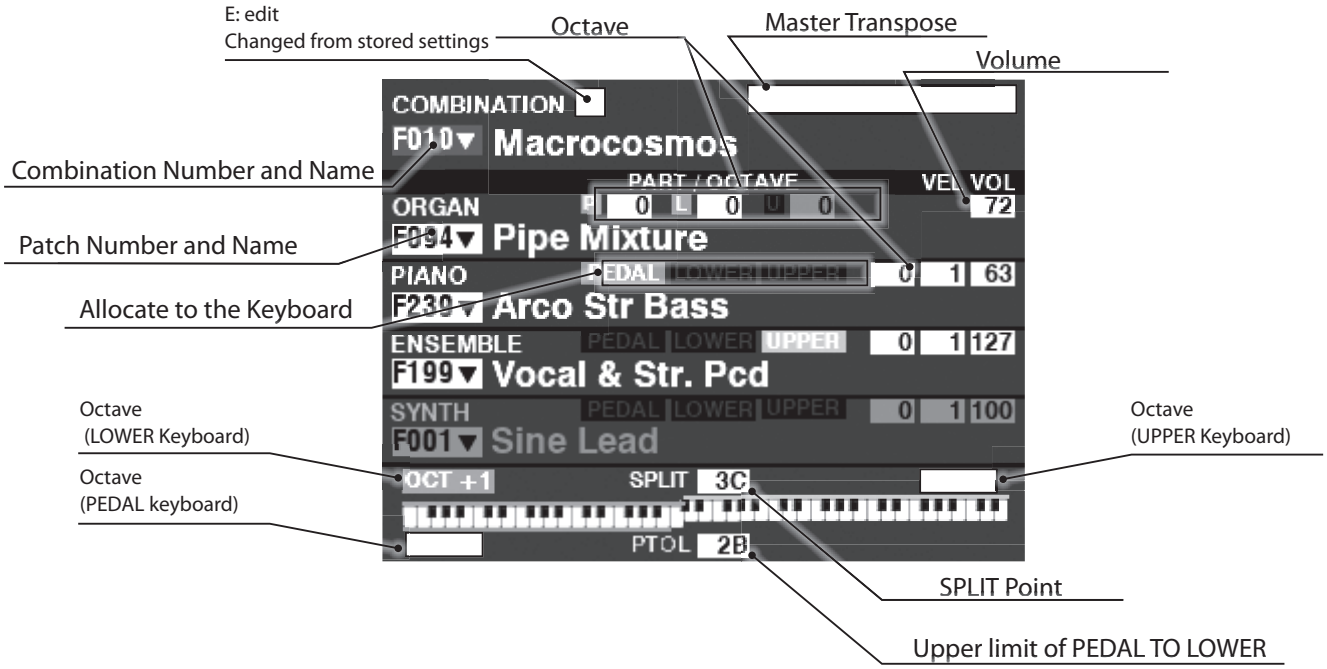



Each PLAY Mode allows you to select the Combinations or Patches and adjust the Parameters most frequently used.

The PLAY Modes are selected by the [PLAY] or [PAGE] [◀]/[▶] buttons.

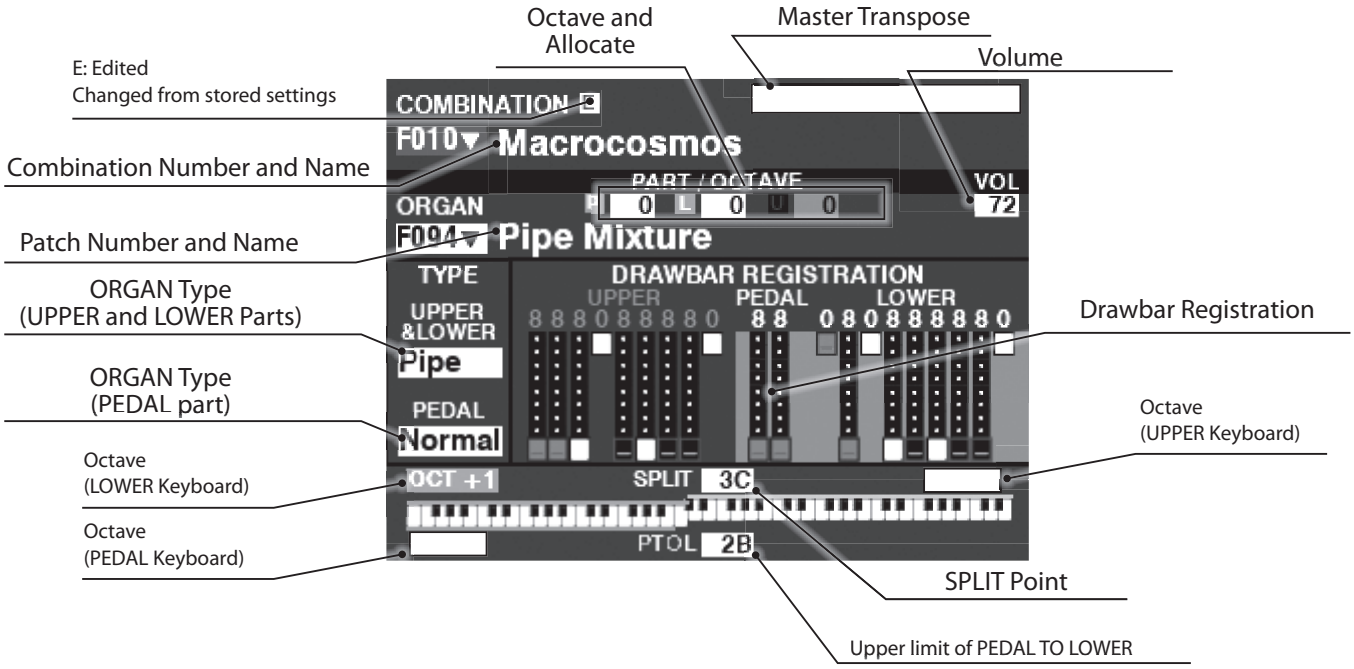
## HOW TO READ THE DISPLAY (COMBINATION)

When two or more Voice Sections are "ON," the Names will be highlighted in the display. If a Voice Section is "OFF" ([ALLOCATE] button LED not lit), the Voice Name will still display but will be "greyed out." In addition, Parameters such as Octave, etc., will only display if their values are different from their default settings.



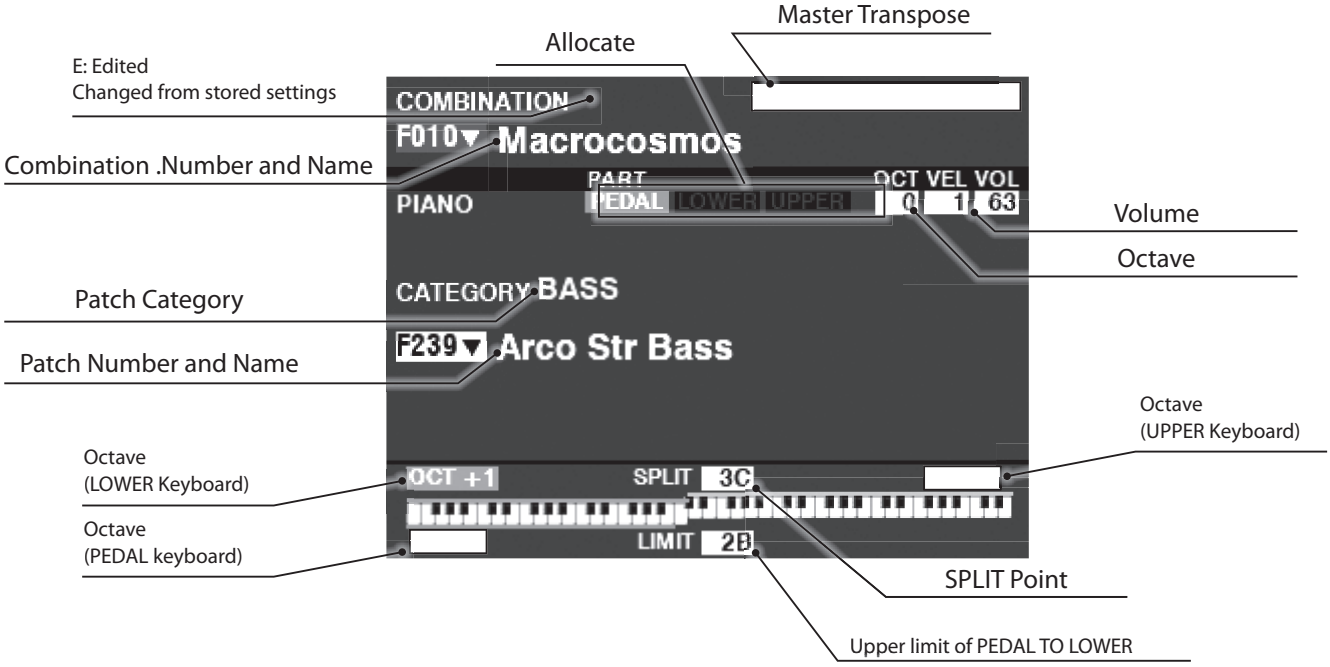
# HOW TO READ THE DISPLAY (ORGAN SECTION)

If only the ORGAN Section is used (ORGAN [ALLOCATE] button "ON"), a screen similar to the one below will display.



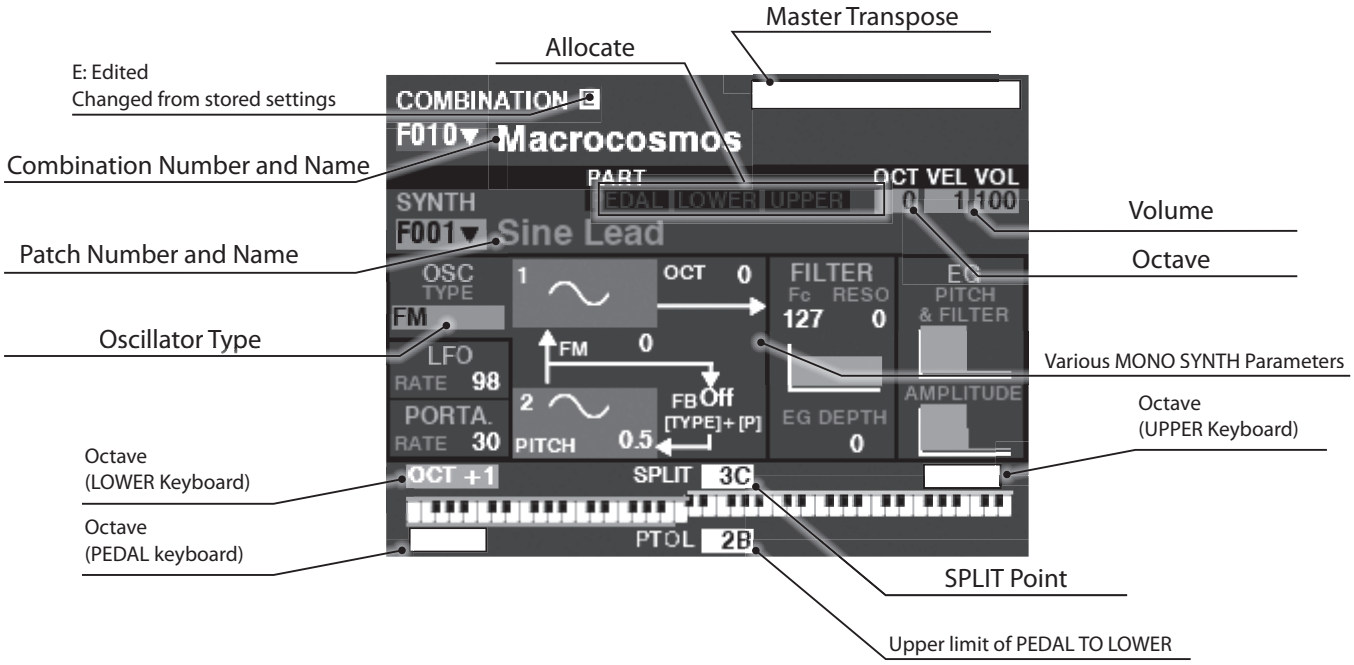

# HOW TO READ THE DISPLAY (PIANO/ENSEMBLE SECTION)

If either the PIANO or ENSEMBLE Section only is used (PIANO or ENSEMBLE [ALLOCATE] button "ON"), a screen similar to the one below will display.

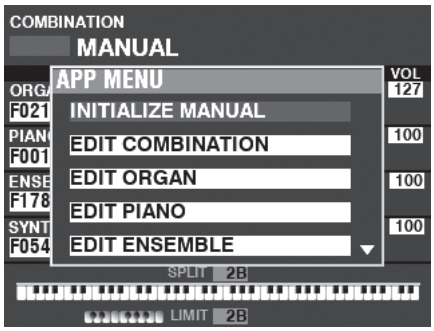


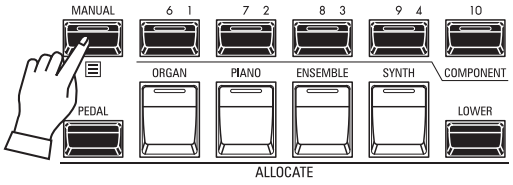
# HOW TO READ THE DISPLAY (MONO SYNTH SECTION)

If only the MONO SYNTH Section is used (SYNTH [ALLOCATE] button "ON"), a screen similar to the one below will display.




# APP (APPLICATION) MENU




The APP (Application) Menu allows you to select various Menu Pages quickly. To display the APP Menu:

1. Select a FUNCTION Mode.
2. Press and Release the [≡] button. The following Menu options will display:

**INITIALIZE [MANUAL]** .....Initialize the MANUAL Parameters.
**EDIT COMBINATION**.....Enter the Combination edit page.
**EDIT ORGAN** .....Enter the Organ edit page.
**EDIT PIANO** .....Enter the Piano edit page.
**EDIT ENSEMBLE** .....Enter the Ensemble edit page.
**EDIT SYNTH**.....Enter the Mono Synth edit page.
**DELETE COMBINATION**.....Delete selected Combination.

To select an option:

1. Use the [DIRECTION] [▲]/[▼] buttons to highlight the option you want.
2. Press the [ENTER] button to select the desired option.

**NOTE: The word "MANUAL" is explained in more detail on page 29.**

**tips** **APP MENU**

The number of options displayed by the APP Menu depends on how many Voice Sections are active. For example, if only the ORGAN Section is active (ORGAN [ALLOCATE] button "ON"), the other Voice Menus will not display. To see the APP Menu as it appears at the left, turn all four Voice Sections "ON" ([ALLOCATE] LED's lit).

# MENU MODE

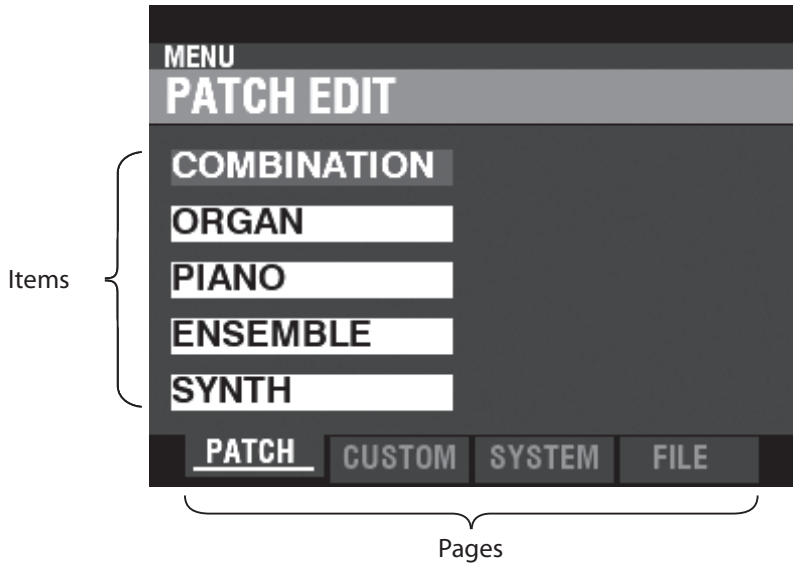
As explained earlier, the MENU Mode allows you to see the different FUNCTION Modes where you can customize the instrument.

## TO LOCATE THIS MODE:

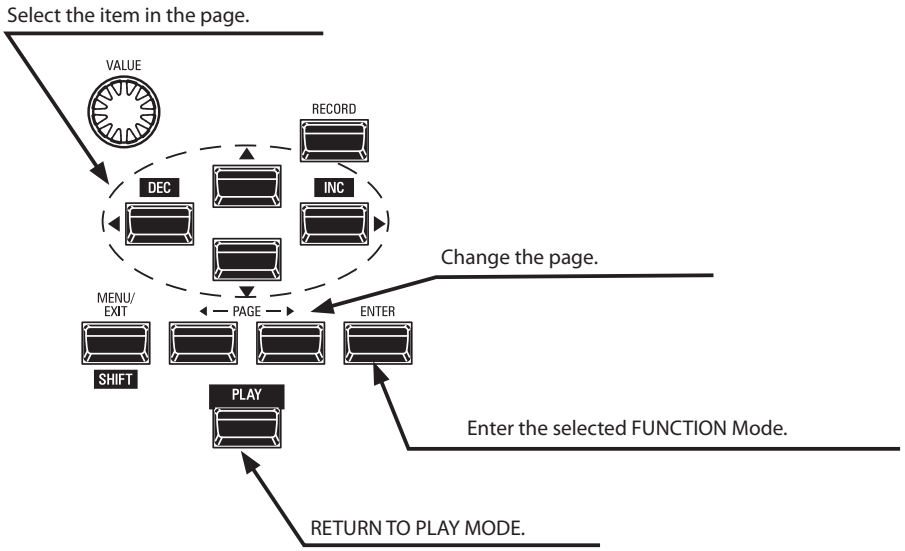
Press the [MENU/EXIT] button.

The MENU Mode has four Pages. Use the PAGE [◀]/[▶] buttons to scroll through the Pages, select the item using the [DIRECTION] buttons, and [ENTER] button to enter the desired FUNCTION Mode.

## HOW TO READ THE DISPLAY




## OPERATION IN THIS MODE



# MENU MODE CONTENTS

## PATCH

1. **COMBINATION (P. 74)**
   This allows you to edit the current Combination.
2. **ORGAN (P. 80)**
   This allows you to edit the current registration in the ORGAN Section.
3. **PIANO (P. 90)**
   This allows you to edit the currently selected voice in the PIANO Section.
4. **ENSEMBLE (P. 90)**
   This allows you to edit the currently selected voice in the ENSEMBLE Section.
5. **SYNTH (P. 100)**
   This allows you to edit the current MONO SYNTH Parameters.

## CUSTOM

1. **TONE WHEEL (P. 120)**
   This allows you to edit the characteristics of the Tone Wheel Organ.
2. **PEDAL REG. (P. 123)**
   This allows you to edit the harmonics used by the Pedal Drawbars of the Tone Wheel Organ.
3. **LESLIE (P. 124)**
   This allows you to edit the inbuilt digital Leslie.
4. **PIPE (P. 126)**
   This allows you to select and edit each Pipe Organ Stop.

## SYSTEM

1. **SOUND (P. 130)**
   This allows you to adjust Master Tune, Transpose, and Master Equalizer.
2. **AUDIO (P. 131)**
   This allows you to adjust the audio configuration between Voice Sections and output jacks.
3. **CONTROL (P. 132)**
   This allows you to adjust the Parameters for the various controllers such as Foot Switch, Expression Pedal, Display and Keyboard.
4. **PATCH LOAD (P. 138)**
   This allows you to select which contents are loaded when a Combination is selected.
5. **FAVORITE (P. 139)**
   Allows you select and edit Favorites.
6. **MIDI (P. 156)**
   This allows you to adjust MIDI Channels, and various messages for the MIDI port and the USB MIDI.
7. **GLOBAL (P. 140)**
   This allows you to adjust the Auto Power Off time and select USB Mass Storage.
8. **DELETE (P. 142)**
   This allows you to delete “U” (User) contents.
9. **DEFAULT (P. 143)**
   This allows you to initialize all or part of the SK PRO to factory settings.
10. **INFORMATION (P. 144)**
    This allows you to see which jacks on the Rear Panel are currently active and which version of software is currently installed. Also allows you to update the software.

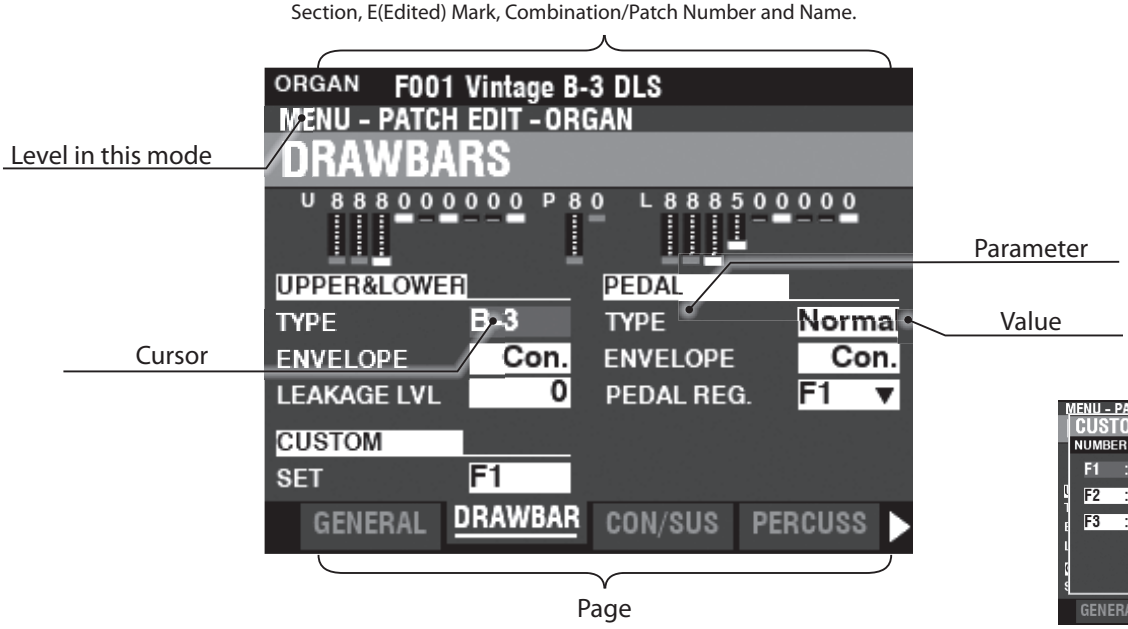
## FILE

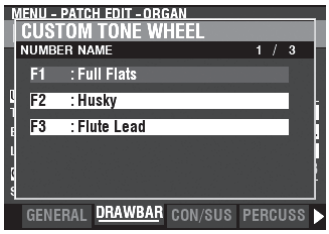
1. **LOAD (P. 165)**
   This allows you to Load Setups, Patches or Custom File from either an external device such as a USB Flash drive or the Internal Memory into the instrument.
2. **SAVE (P. 164)**
   This allows you to Save Setups, Patches, Custom Files, etc., either to an external device such as a USB Flash drive or the Internal Memory into the instrument.
3. **DELETE (P. 166)**
   This allows you to Delete Setups, Patches or Custom Files, either from an external device such as a USB Flash drive or from the Internal Memory of the instrument.
4. **FORMAT (P. 161)**
   This allows you to initialize either an external device such as a USB Flash drive or the Internal Memory of the instrument.

# FUNCTION MODE

The FUNCTION Mode allows you to see and adjust the various Parameters.
This is explained in more detail starting below.

## HOW TO READ THE DISPLAY

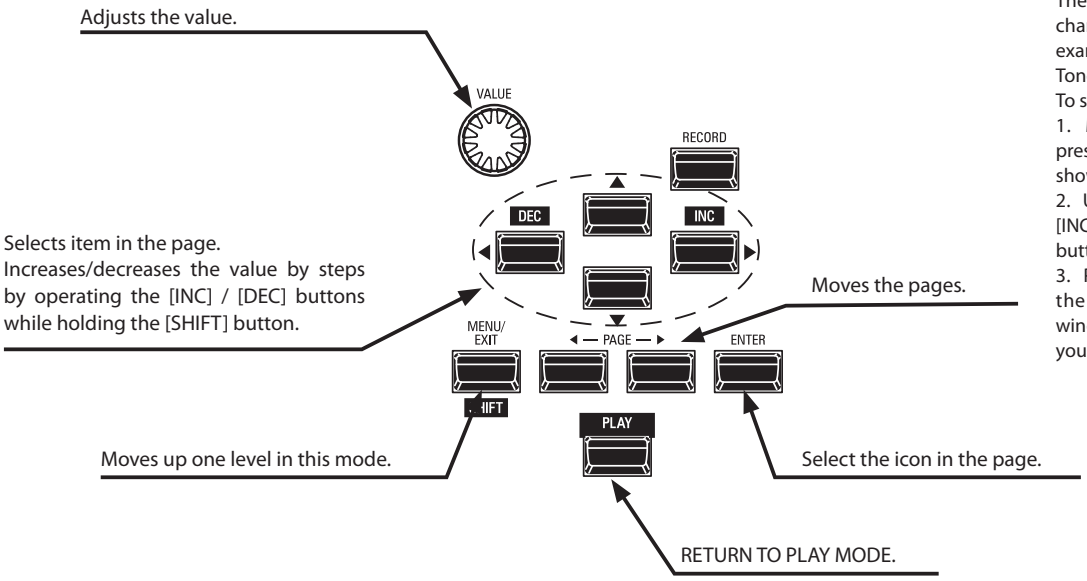


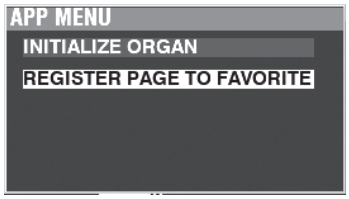

**tips** **CHANGING PARAMETERS**

The "▼" to the right indicates more than one choice is available.
The following is an example of how to change Parameters to your liking. This example shows how to select a Custom Tone Wheel Set.
To select a Custom Set:
1. Move the cursor to CUSTOM and press [ENTER]. You will see the window shown above.
2. Use the VALUE] knob or the [DEC]/[INC] buttons while holding the [SHIFT] button to select the desired Custom Set.
3. Press the [ENTER] button to select the desired Custom Set. The above window will close after you have made your selection.

## OPERATION IN THIS MODE




## APP (APPLICATION) MENU




The PLAY Mode and several of the FUNCTION Mode Pages contain an additional APP Menu which you can use to access various functions quickly.

Press the [≡] button to see the APP Menu for the FUNCTION Modes.

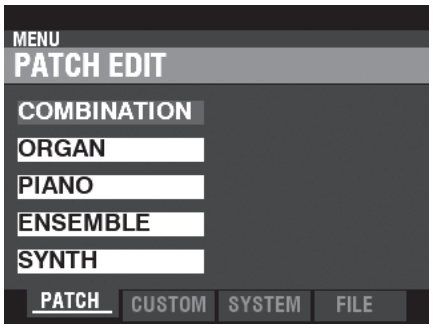
Press and Release the [≡] button to see the APP Menu in PLAY or MANUAL Mode.

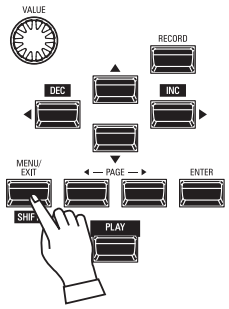
To select an item in an APP Menu:

1. Use the [▲]/[▼] buttons to highlight the option you want.
2. Press and Release the [ENTER] button to select the desired option.

# EXAMPLE OF OPERATION

## ① GO TO THE MENU MODE

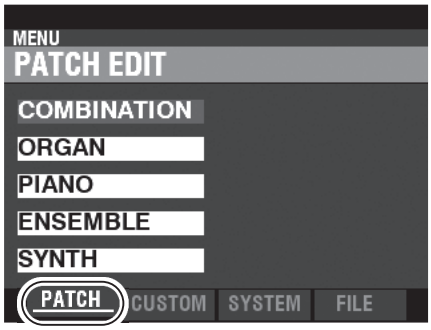


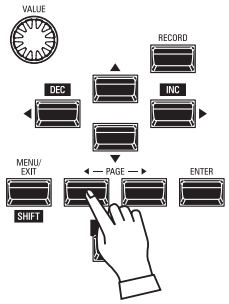




This example will show you how to adjust the Percussion Decay Time when the [FAST] button is selected.

Press the [MENU/EXIT] button. The MENU Mode will appear.

## ② MOVE THE PAGE IN THE MENU MODE

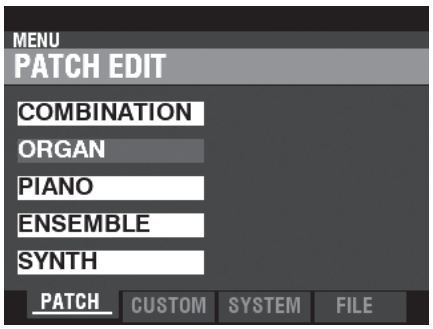


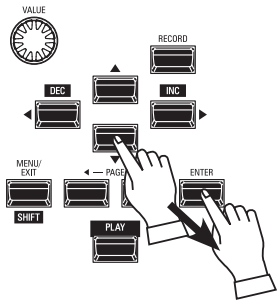




Use the [PAGE] [◀]/[▶] buttons to select the different Pages in each Menu.

For this example, the PATCH Edit Menu is already displayed so it is not necessary to touch either of the [PAGE] [◀]/[▶] buttons.

## ③ SELECT THE ITEM IN THE PAGE



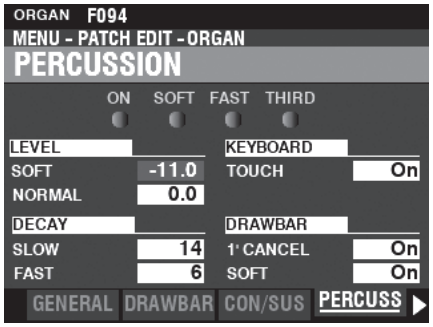



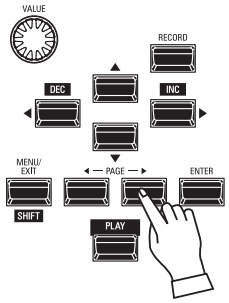

Use the [DIRECTION] buttons to select the item to edit.

For this example, press the [▼] button to select "ORGAN."

Press the [ENTER] button to select each FUNCTION Mode. For this example, touch [ENTER] after selecting "ORGAN" above.

## ④ MOVE THE PAGE IN THE FUNCTION MODE

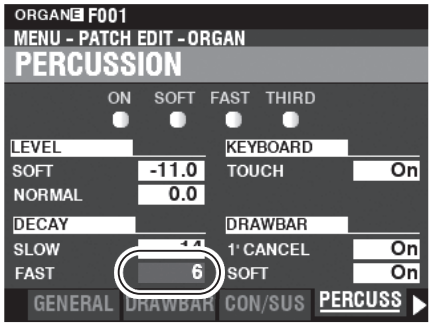


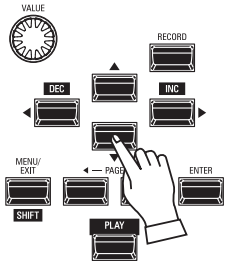




Use the [PAGE] [◀]/[▶] buttons to select the individual FUNCTION Mode Page you want to edit.

For this example, press the [▶] button three times to select the PERCUSS (Percussion) Menu Page.

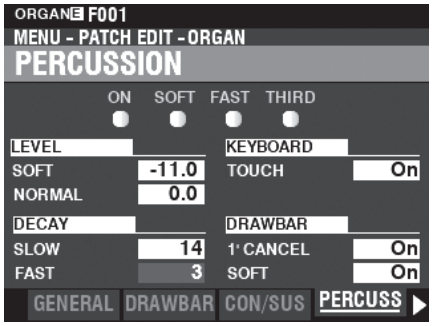
## ⑤ MOVE THE CURSOR TO THE PARAMETER

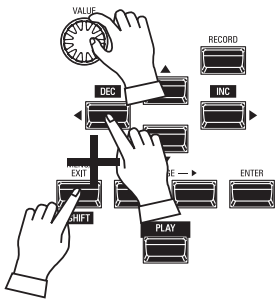



Use the [DIRECTION] buttons to move the cursor to the Parameter you wish to adjust. For this example, select "DECAY FAST."

## ⑥ CHANGE THE VALUE



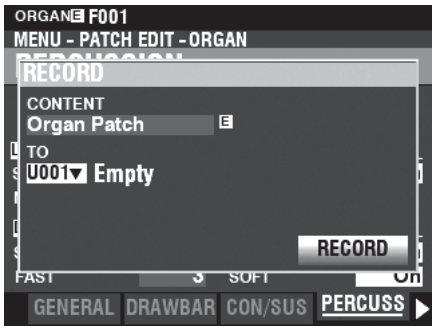



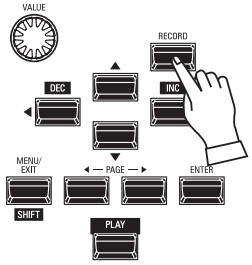

Use the [VALUE] knob to change the selected value. For this example, decrease the value by turning the [VALUE] knob to the left.

**NOTE: You can also change values by using the [DEC] / [INC] buttons while pressing and holding the [SHIFT] button.**

**NOTE: To change other Parameters, repeat steps 1 through 6 above.**

## ⑦ RECORD THE PATCH



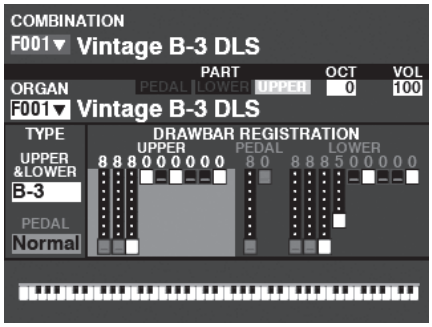

These settings are "temporary," and will not be remembered if another Patch or Combination is selected, or if the instrument is turned "OFF."

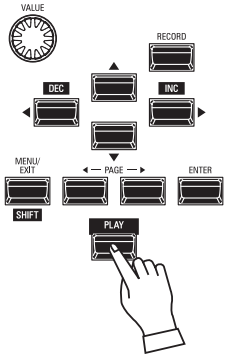
To Record your settings:

1. Press the red [RECORD] button. You will see the selected item appear in the display ("Organ Patch" in this example").

2. Press the "▼" button two times to select RECORD and press the [ENTER] button. Your settings have been Recorded.

## ⑧ RETURN TO PLAY MODE



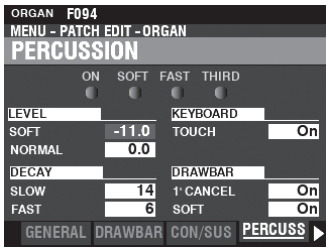

Press the [PLAY] button to return to the PLAY Mode.

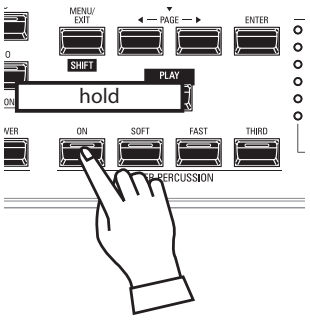
# "SHORTCUTS"

To make programming quicker and easier, many of the button on the Control Panel can be used to access the FUNCTION Mode associated with that button instantaneously. Pressing and holding any of the buttons on the Control Panel automatically "shortcuts" the display to the related FUNCTION Mode.

## SHORTCUT EXAMPLE:

LOCATE THE PERCUSSION FUNCTION MODE




If you wish to edit the Percussion settings, Press and Hold any of the four Percussion buttons ([ON], [SOFT], [FAST], or [THIRD]) and the display will immediately show the Percussion FUNCTION Mode.

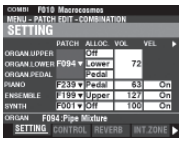
**NOTE: You can change the Display Shortcut time. This is explained in more detail on page 139.**

# IF YOU FREQUENTLY USE A CERTAIN PAGE...

You can assign a frequently-used FUNCTION Mode to one of the [FAVORITE] buttons for immediate access, even if that particular FUNCTION Mode is not normally accessible via a Shortcut.

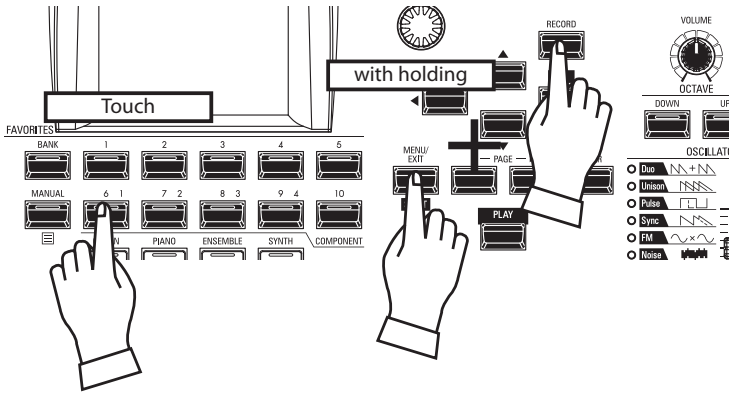
## REGISTER

### ① LOCATE THE PAGE




Press the [MENU\EXIT] button to enter MENU Mode and use the [DIRECTION] and [PAGE] buttons to locate the specific FUNCTION Mode you want.

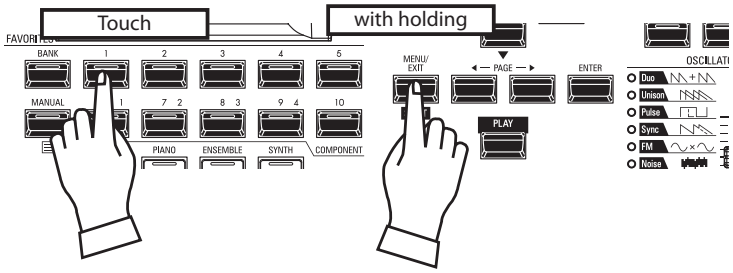
### ② SET THE FAVORITE NUMBER TO LOAD THE PAGE




1. Touch and Hold the [SHIFT] and [RECORD] buttons together.

2. While holding the two buttons, touch any of the numbered [FAVORITE] buttons. The display will show, "Recording Assign" for approximately 1 second.

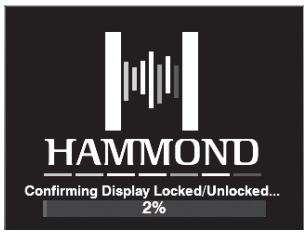
## DISPLAY THE RECORDED PAGE

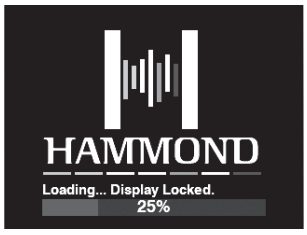


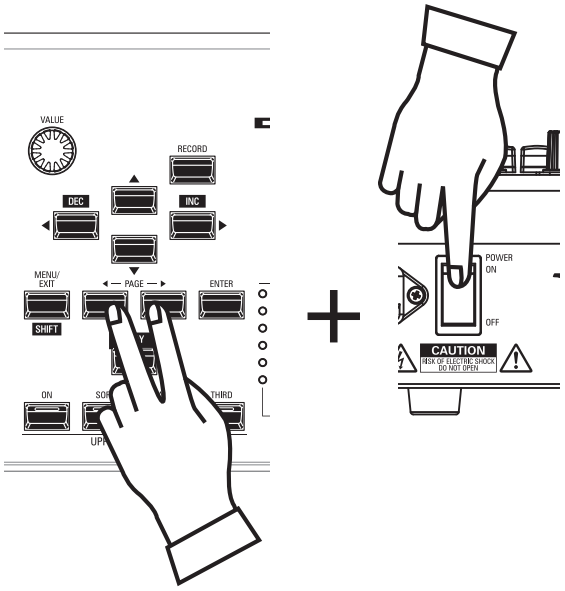

To display the Recorded Page, Press and Hold the [SHIFT] button and press the numbered [FAVORITE] button.

# LOCKING THE DISPLAY

You can Lock the display in order to prevent accidental changes during live performance, or when more than one musician will be using the same instrument.




To Lock the display, do the following:

1. With the SK PRO power "OFF," Press and Hold the two PAGE [◀][▶] buttons.

2. While holding the PAGE buttons, turn the SK PRO power "ON." Continue to hold the PAGE buttons until "Confirming Display Locked/Unlocked" is shown in the display.

After approximately 5 seconds, "Display Locked" will show at the bottom of the display. You can then release the PAGE buttons.

To Unlock the display, follow the above two steps. You will see "Display Unlocked" in the display.

When the display is Locked:

1. [MENU/EXIT] is disabled.
2. [RECORD] is disabled.
3. The "Shortcut" feature is disabled.
4. Combinations and Patches can still be recalled.

**NOTE: If the display is Locked, you will see a message in the display when the instrument is first turned "ON:" "Loading...Display Locked."**

**NOTE: If the display is Locked, holding the red [RECORD] button and applying power will not Unlock it. Follow the procedure described above to Unlock the display.**

# EDITING PARAMETERS

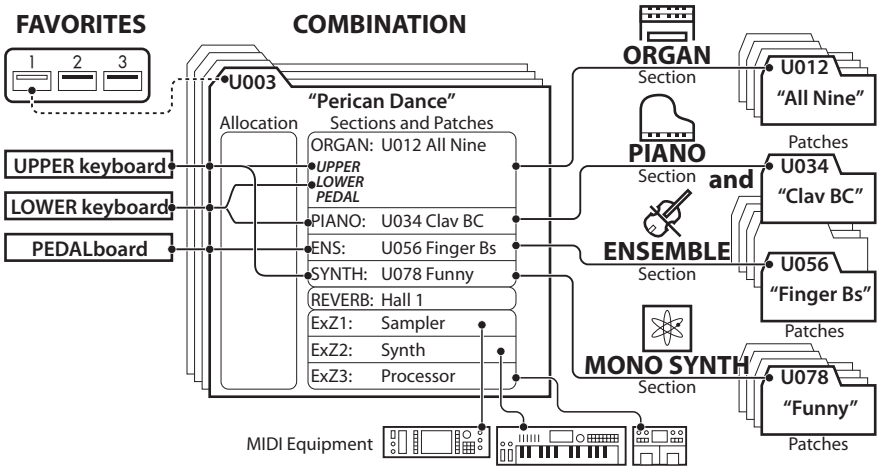
 As explained previously, the display on the SK PRO has three (3) Modes - PLAY Mode, MENU Mode and FUNCTION Mode. This chapter explains how to use FUNCTION Mode to adjust Parameters to customize the instrument.

# COMBINATION

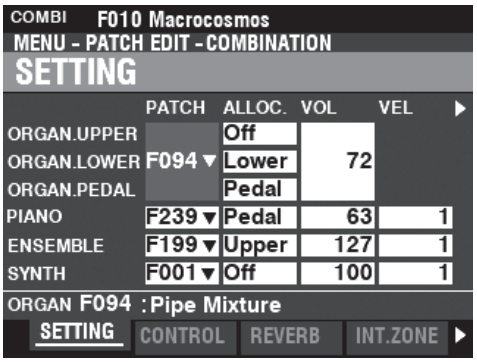
As explained previously, the four sound-producing Sections of the SK PRO - ORGAN, PIANO, ENSEMBLE and MONO SYNTH - along with other Parameters such as Control Panel settings, etc., can be combined into a single unit called a **Combination**. This FUNCTION Mode allows you to adjust Combination Parameters which are included in a Combination.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **PATCH** - **COMBI** - [ENTER]




# EDITING PAGES AND PARAMETERS




## SETTING

This allows you to adjust the basic Parameters such as Patch or Volume for each Section.

## CONTROL

This allows you to select whether a Combination receives a Controller value.

## REVERB

This allows you to adjust the Parameters for the Reverb.

## INTERNAL ZONES

This allows you to adjust the Parameters for the Keyboard Channels for each Section.

## EXTERNAL ZONES

This allows you to adjust the Parameters for controlling external MIDI equipment.

# APP (APPLICATION) MENU


The APP (Application) Menu allows you to select various Menu Pages quickly. To display the APP Menu:

1. Select the COMBINATION FUNCTION Mode.
2. Press and Release the [≡] button. The Menu option shown to the right will display:

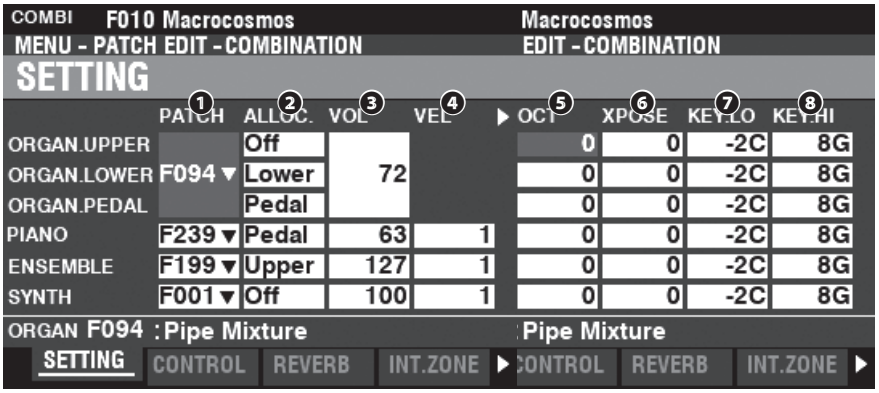
**INITIALIZE COMBINATION** ..Initialize all the Combination Parameters in the present editing Combination.

**REGISTER PAGE TO FAV** .....Register present displayed page to the Favorites.

To select an option:

1. Use the [▲]/[▼] buttons to highlight the option you want.
2. Press the [ENTER] button to select the desired option.

# SETTING




These Pages allow you to adjust the basic Parameters such as Patch or Volume for each Section.

**❶ PATCH**

**Setting Range: B001 ~ B100 (Bundle)**
**F001 ~ F100, U001 ~ U100 (Organ / Mono Synth)**
**F001 ~ F300, U001 ~ U400 (Piano / Ensemble)**

This allows you to select Patch Numbers for the currently selected Combination.

**❷ ALLOC (Allocate)**

**Settings: Off, Upper, Lower, Pedal**

This allows you to assign the Sections to each Keyboard.

**NOTE: This Parameter is linked to the [ALLOCATE] buttons on the Control Panel.**

**❸ VOL (Volume)**

**Setting Range: 0 ~ 127**

This allows you to adjust the Volume of the selected Section.

**❹ VEL (Velocity Curve)**

**Setting Range: Off, 1 ~ 4**

This allows you to select how the selected Voice Section will respond to key velocity.

"Off" is standard organ touch - the notes play at a fixed velocity ("100") regardless of a light or heavy key pressure. "1" is the most exaggerated velocity curve while "4" is a gentler curve. "2" and "3" are curves in between.

**❺ OCT (Octave)**

**Setting Range: -2 ~ ±0 ~ +2**

This allows you to select the Octave or pitch at which the selected Section will sound.

At "0" the selected Section will sound at unison or actual pitch. "-2" will sound two octaves lower and "+2" will sound two octaves higher.

**NOTE: The actual sounding octave will be the sum of this Parameter plus the "Octave" setting in the Internal Zones (Keyboards). See page 78 for more details.**

**❻ XPOSE (Transpose)**

**Setting Range: -6 ~ ±0 ~ +6**

This allows you to shift the musical key of the selected Section.

**NOTE: This Parameter can be Saved as part of a Combination (the [TRANSPOSE] function controlled by the buttons on the Control Panel transposes the entire instrument and its setting is not Saved).**

**❼ KEY LO (Key Range Low)**

**❽ KEY HI (Key Range High)**

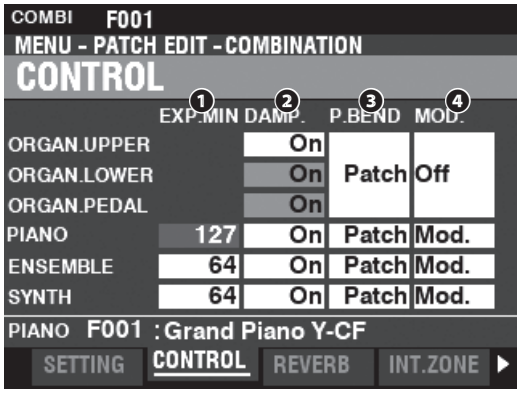
**Setting Range: -2C ~ 8G**

These two Parameters allow you to set the Low and High note ranges for the selected Section.

**tips** **3 PART ORGAN AND ALLOCATE**

The Allocating method for the ORGAN Section is affected by the status of the [3 PART ORGAN]. See "3 PART ORGAN ALLOCATE" on page 137 for more information.

# CONTROL




This Page allows you to select which Parameters of each Voice Section will be Recorded as part of a Combination.

### ❶ EXPRESSION MINIMUM LEVEL

**Setting Range: 0 ~ 127**

This allows you to adjust the Minimum volume when the Expression Pedal is "closed" or set at its minimum position. At "0" no sound will be heard.

### ❷ DAMPER

This allows you to adjust whether or not a Section will receive Damper information.

**Off** ..... A connected Damper Pedal will not affect the selected Section.
**On** ..... A connected Damper Pedal will sustain or "damp" the selected Section.

### ❸ PITCH BEND

This allows you to adjust the range of the [PITCH BEND] wheel.

**Patch** ..... A separate Pitch Bend Range is set for each Voice Section.
**0 ~ 12** ..... A Pitch Bend Range setting is applied to all Voice Sections universally.

### ❹ MODULATION

This allows you to select the function for the [MODULATION] wheel for each Section.

**Off** ..... No function.
**Mod** ..... (ORGAN Section excluded) Adds Modulation to the selected Section.
**Les** ..... (ORGAN Section only) Controls the speed of the Leslie.
**OD** ..... Controls the amount of Overdrive.
**MFX1** ..... Controls the amount of the **Multi Effects 1** setting.
**MFX2** ..... Controls the amount of the **Multi Effects 2** setting.

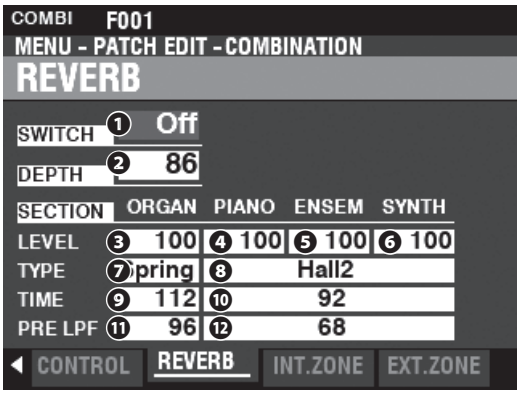
**NOTE: The "Les" option does not affect the rotors of a connected Leslie Speaker Cabinet.**

**tips** **LESLIE SPEED**

When "Les" is selected as a function for the Modulation Wheel, the speed of the digital Leslie rotors can be varied continuously. This means that when the Wheel is all the way forward the digital Leslie will be in Fast Mode and Slow Mode will result when the Wheel is all the way back; but if the Wheel is in an intermediate position the digital Leslie rotors will be at an intermediate speed in accordance with the position of the Wheel. The speed will gradually increase when the Wheel is pushed forward and decrease when the Wheel is moved back. This greatly increases the versatility of the in-built digital Leslie.

# REVERB

**SHORTCUT: Press and Hold the [REVERB] button.**




This Page allows you to select the REVERB effect for each Section.

### ❶ SWITCH

**Settings: Off, On**

This allows you to turn REVERB "ON" or "OFF."

**NOTE: This Parameter is linked to the [REVERB ON] button on the Control Panel.**

### ❷ DEPTH

**Setting Range: 0 ~ 127**

This allows you to set the overall depth of the entire Reverb effect.

**NOTE: This Parameter is linked to the [REVERB DEPTH] knob on the Control Panel.**

### ❸❹❺❻ LEVEL (ORGAN, PIANO, ENSEMBLE, SYNTH)

**Setting Range: 0 ~ 127**

This allows you to select the depth of the Reverb (= send level) for each Section.

### ❼ TYPE (ORGAN)

### ❽ TYPE (PIANO/ENSEMBLE/SYNTH)

This allows you to select Reverb Types. You can select different Reverb Types for the ORGAN and PIANO/ENSEMBLE/MONO SYNTH Voice Sections.

**Room 1**.....Large room.
**Room 2**.....Small room.
**Live**.....Ambient room.
**Hall 1**.....Dark Hall, similar to a theatre.
**Hall 2**.....Bright Hall, similar to an auditorium.
**Church**.....Church.
**Plate**.....Iron-plate Reverb.
**Spring**.....Spring Reverb.

### ❾ TIME (ORGAN)

### ❿ TIME (PIANO/ENSEMBLE/SYNTH)

**Setting Range: 0 ~ 127**

This allows you to adjust the decay of the Reverb.

A higher value results in a longer decay.

**NOTE: You can select different Reverb Times for the ORGAN and PIANO/ENSEMBLE/MONO SYNTH Voice Sections.**

### ⓫ PRE-LPF (ORGAN)

### ⓬ PRE-LPF (PIANO/ENSEMBLE/SYNTH)

**Setting Range: 0 ~ 127**

This allows you to adjust the tone quality of the Reverb.

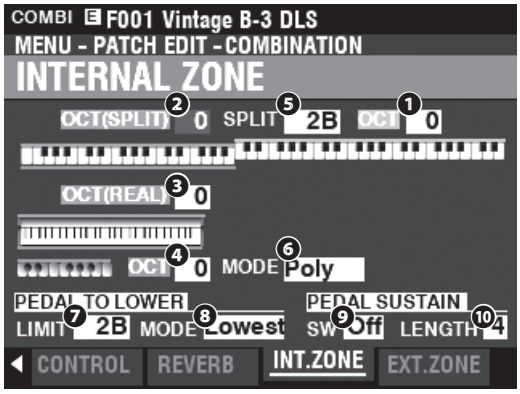
Higher values simulate a harder floor/wall/ceiling material.

**NOTE: You can select different settings for the ORGAN and PIANO/ENSEMBLE/MONO SYNTH Voice Sections.**

**NOTE: The Parameters described on this page are Combination Parameters and can be Recorded to individual Combinations. For a complete listing of all Combination Parameters, please consult "COMBINATION PARAMETERS" starting on page 182.**

# INTERNAL ZONE

**SHORTCUT: Press and Hold the [PEDAL TO LOWER] or [SPLIT] button.**




This Page allows you to adjust the Parameters for each Internal Zone.

## KEYBOARDS

**❶ OCTAVE (UPPER)**

**❷ OCTAVE (LOWER SPLIT)**

**❸ OCTAVE (LOWER REAL)**

**❹ OCTAVE (PEDAL)**

**Setting Range: -2 ~ ±0 ~ +2**

This allows you to select the Octave or pitch at which the selected Keyboard will sound.

**NOTE: These Parameters are linked with the [OCTAVE] buttons on the Control Panel.**

There are two LOWER Octave Parameters. OCTAVE SPLIT controls the LOWER Octave setting when the [SPLIT] button is "ON." OCTAVE REAL controls the Lower Octave setting when using an expanded keyboard as the Lower Keyboard.

**❺ SPLIT POINT**

**Setting Range: C-2 ~ G8**

This allows you to adjust the dividing point between the LOWER Keyboard and UPPER Keyboard.

**NOTE: The SPLIT must be active (LED "ON")**

**❻ PEDAL KEY MONO/POLY**

This allows you to adjust whether the Pedals play single notes ("Mono") or multiple notes ("Poly").

**Mono** ..... If more than one note is played, the lowest note will sound

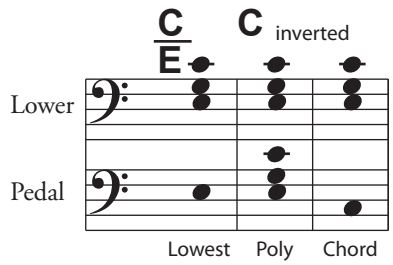
**Poly**..... If more than one note is played, all notes will sound

**❼ PEDAL TO LOWER LIMIT**

**Setting Range: -2C ~ 8G**

This allows you to adjust the highest note of the LOWER Keyboard if the [PEDAL TO LOWER] feature is "ON."

**❽ PEDAL TO LOWER MODE**




This allows you to select how the PEDAL TO LOWER responds to notes played (see the illustration above).

**Lowest**..... Sounds lowest note.

**Poly**..... Sounds polyphonic notes.

**Chord**..... Sounds the root of the chord.

**❾ PEDAL SUSTAIN SW**

**Settings: Off, On**

This allows you to turn Pedal Sustain "ON" or "OFF."

**❿ PEDAL SUSTAIN LENGTH**

**Setting Range: 1 ~ 5**

This allows you to adjust the decay length of the Pedal Sustain.

**NOTE: For more information about Pedal Sustain, see page 55.**

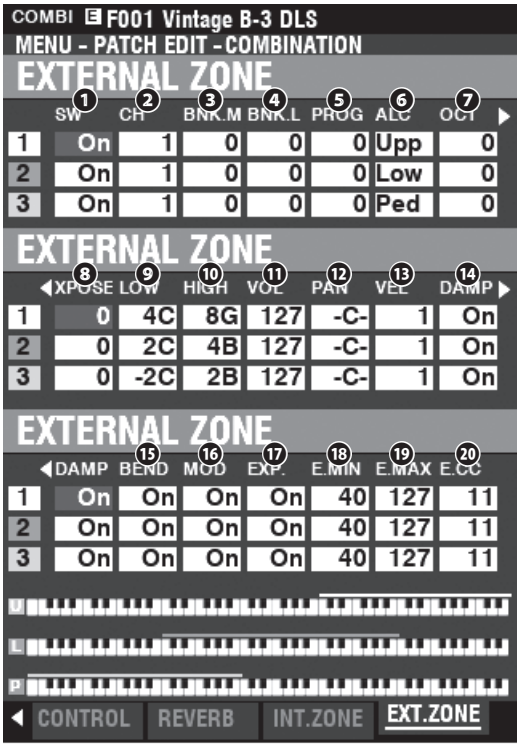
# EXTERNAL ZONE

External Zones allow you to control external MIDI equipment either from the SK PRO keyboard or expanded keyboards.

There are three External Zones in the SK PRO, each of which can be allocated to UPPER, LOWER or PEDAL Keyboards.

**NOTE: External Zones are explained more fully starting on page 150.**

**NOTE: Using External Zones requires setting the MIDI Parameters correctly. This can be done easily using a MIDI Template provided for that purpose. See page 156 for more information about MIDI Templates.**




**❶ SW (Switch)**

**Settings: Off, On**

This allows you to turn the selected Zone "ON" or "OFF."

**❷ CH (MIDI Channel)**

**Setting Range: 1 ~ 16**

This allows you to select the MIDI Channel on which the selected Zone will transmit.

**❸ BNK.M (Bank MSB)**

**❹ BNK.L (Bank LSB)**

**Setting Range: 0 ~ 127**

**❺ PROG (Program Change)**

**Setting Range: 1 ~ 128**

This allows you to select the Bank Select and Program Change messages transmitted by the selected Zone.

**NOTE: For more specific information about the connected MIDI keyboard, please refer to the Owner's Manual for the specific MIDI equipment you are using.**

❻ **ALC (Allocate)**

**Setting Range: Off, Upper, Lower, Pedal**

This allows you to select which Keyboard will control the selected External Zone.

"Keyboard" refers to an actual physical keyboard (UPPER, LOWER and PEDAL), not to a SPLIT applied to the Internal Zones.

❼ **OCT (Octave)**

**Setting Range: -2 ~ ±0 ~ +2**

This allows you to select the Octave or pitch at which the selected External Zone will sound. Adjust this Parameter if an external sound plays in an octave other than the one you need for a particular application.

❽ **XPOSE (Transpose)**

**Setting Range: -6 ~ ±0 ~ +6**

This allows you to shift the musical key of the selected Zone.

❾ **LOW (Key Range Low)**

❿ **HIGH (Key Range High)**

**Setting Range: -2C ~ 8G**

This allows you to adjust the Upper and Lower note limits for the selected Zone.

⓫ **VOL (Volume)**

**Setting Range: 0 ~ 127**

This allows you to control the Volume (Controller #7) of the sound controlled by the selected Zone.

⓬ **PAN**

**Setting Range: L64 ~ C ~ R63**

This allows you to adjust the directionality or Pan setting (Controller #10) for the selected Zone.

⓭ **VEL (Velocity Curve)**

**Setting Range: Off, 1 ~ 4**

This allows you to select how the selected External Zone will respond to key velocity.

"Off" is standard organ touch - the notes play at a fixed velocity ("100") regardless of a light or heavy key pressure. "1" is the most exaggerated velocity curve while "4" is a gentler curve. "2" and "3" are curves in between.

⓮ **DAMP (Damper)**

**Settings: On, Off**

This allows you to select whether a Damper pedal will affect the selected Zone.

⓯ **BEND (Pitch Bend)**

**Settings: On, Off**

This allows you to select whether the [PITCH BEND] wheel will affect the selected Zone.

⓰ **MOD (Modulation)**

**Settings: On, Off**

This allows you to select whether the [MODULATION] wheel will affect the selected Zone.

⓱ **EXP (Expression)**

**Settings: On, Off**

This allows you to select whether a connected Expression Pedal will affect the selected Zone.

⓲ **E.MIN (Expression Minimum)**

**Setting Range: 0 ~ 63**

This allows you to adjust the volume level when the Expression Pedal is "closed" or set at its minimum position. At "0" no sound will be heard.

⓳ **E.MAX (Expression Maximum)**

**Setting Range: 64 ~ 127**

This allows you to adjust the volume level when the Expression Pedal is all the way "open," or set at maximum.

⓴ **E.CC (Expression Control Change)**

**Setting Range: Off, 7, 11**

This allows you to select how you want to control the level of the selected External Zone. You can select either "VOL" (Volume or Controller #7) or "EXP" (Expression or Controller #11).

## DIFFERENCE BETWEEN "VOLUME" AND "EXPRESSION"

In purely technical terms, Volume and Expression are identical - both control loudness or sound level. The difference lies with how they are customarily used in MIDI applications, particularly in creating and playing back MIDI sequences.

The generally accepted protocol is to use Controller #7 (Volume) to set the overall or absolute level of a voice or sound, and use Controller #11 (Expression) to make variations (such as crescendi or diminuendi) against the overall level set by Controller #7. This is recommended particularly if you want to use your SK PRO as a MIDI input device to record a sequence.

**NOTE: In order for the External Zone Volume feature to work, the Expression Control Number must be set to "7:VOL." If this Parameter is set to "11:EXP," changing the External Zone Volume setting will have no effect.**

## MESSAGE ON/OFF

Sometimes when transmitting MIDI messages, undesired information or not enough information may be sent. This can be prevented by switching the appropriate MIDI message "OFF."

**MIDI messages which can be switched "OFF" by Combinations:**

.....Note, Expression, Damper (in This Page).

**System Parameters which can be switched "OFF" individually:**

.....Bank Select, Program Change, External Zone Parameters (see page 156).

## PANIC FUNCTION / PARAMETER RELOAD

MIDI plays notes from an external instrument by sending two commands - "Note On" which starts the note playing, and "Note Off" which releases the note and stops it from playing. These two commands are always sent in pairs.

Once in a while, a Note Off command may not follow a Note On command, causing a note or notes to cipher, or sound continuously (the phenomenon popularly referred to a "stuck notes"). In this case, you need to send a MIDI command to the receiving instrument to clear the ciphering notes.

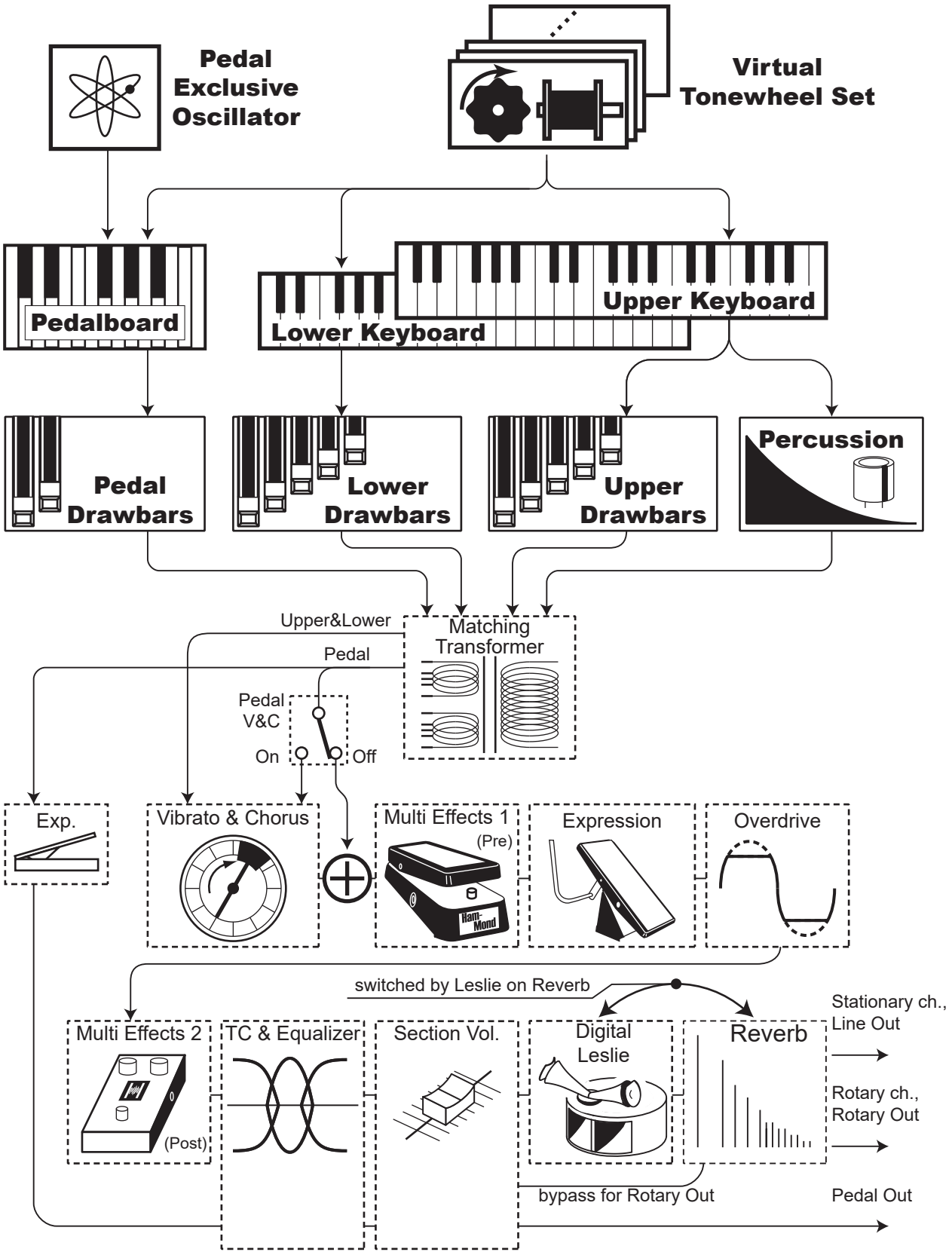
To do this, press the [DIRECTION] [▲][▼] buttons simultaneously. Doing this will send a "MIDI All Notes Off" as well as a "MIDI Reset All Controllers" command to the receiving instruments. The stuck notes will be turned off and the settings for the External Zones will be reset, then the External Zone settings will be re-sent. Normal playing can then be resumed.

# ORGAN

This FUNCTION Mode allows you to see or change Patch Parameters of the ORGAN Section.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **PATCH** - **ORGAN** - [ENTER]
or press the [UPPER] and [LOWER] [DRAWBAR SELECT] buttons simultaneously.

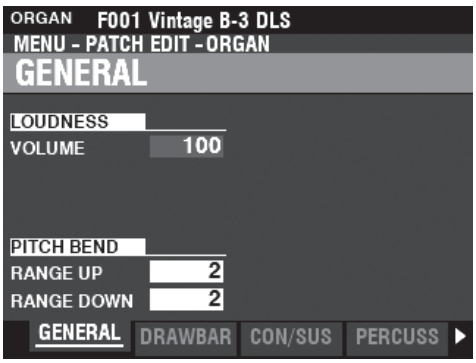


# EDITING THE ORGAN SECTION

The ORGAN Section can produce several different types of Organ tones - four Tone Wheel Organs, three Transistor Organs, and Pipe Organ. The Pipe Organ contains both Classical and Theatre pipe ranks.

You can set basic registrations using the Drawbars and make fine adjustments using the Parameters which are explained starting below.

# PAGES AND PARAMETERS




## GENERAL

This allows you to adjust the overall Parameters for each ORGAN Patch.

## DRAWBARS

This allows you to adjust the Parameters affecting the Drawbars for each Part.

## CONTACT / SUSTAIN

This allows you to adjust the Parameters affecting the Virtual Multi-Contacts and the Sustain effect for the UPPER and LOWER Parts.

## PERCUSSION

This allows you to adjust the Parameters affecting the Percussion section of the Tone Wheel Organs.

## VIBRATO&CHORUS

This allows you to adjust the Parameters affecting the Vibrato and Chorus for the Tone Wheel Organs, Vibrato for the Transistor Organs, and Tremulant for the Pipe Organ.

## MATCHING TRANSFORMER

This allows you to adjust the Parameters affecting the Matching Transformer for the Tone Wheel and Transistor Organs.

## LESLIE

This allows you to adjust the Parameters affecting the inbuilt digital Leslie for the Tone Wheel and Transistor Organs.

## MULTI EFFECT 1

This allows you to adjust the **Multi Effects 1** (Tremolo, Wah-Wah, Ring Modulator, Compressor) for the Tone Wheel and Transistor Organs.

## OVERDRIVE

This allows you to adjust the Overdrive settings for each ORGAN Patch.

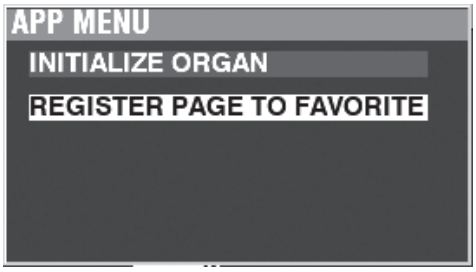
## MULTI EFFECT 2

This allows you to adjust the **Multi Effects 2** (AutoPan, Phaser, Flanger, Chorus, Delay) for each ORGAN Patch.

## EQUALIZER

This allows you to adjust the Equalizer and Tone Control settings for each ORGAN Patch.

# APP (APPLICATION) MENU




The APP (Application) Menu allows you to select various Menu Pages quickly.

To display the APP Menu:

1. Select ORGAN FUNCTION Mode.
2. Press and Release the [≡] button. The following Menu options will display:

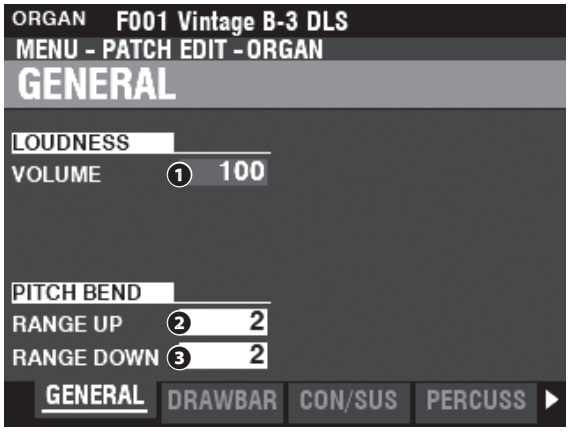
**INITIALIZE PATCH**.....Initialize all the Patch Parameters in the present editing Patch.
**REGISTER PAGE TO FAV**.....Register present displayed page to the Favorites.

To select an option:

1. Use the [DIRECTION] [▲]/[▼] buttons to select the option you want.
2. Press the [ENTER] button to select the desired option.

# GENERAL

**SHORTCUT: Press the [UPPER] and [PEDAL] [DRAWBAR SELECT] buttons simultaneously.**




This Page allows you to adjust Parameters common to the ORGAN Patches.

## LOUDNESS

**❶ VOLUME**

**Setting Range: 0 - 127**

This allows you to adjust the maximum volume of the selected Patch.

## PITCH BEND

**❷ RANGE UP**

**Setting Range: 0 - 12 [semitones]**

**❸ RANGE DOWN**

**Setting Range: 0 - 24 [semitones]**

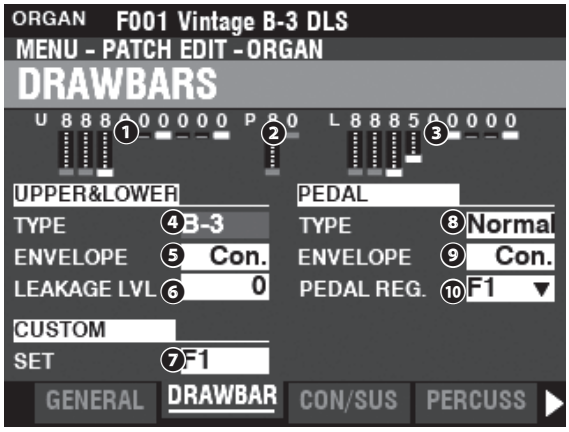
These allow you to adjust the number of semitones the pitch of the selected ORGAN Patch will bend "Up" or"Down" using the [PITCH BEND] wheel.

**tips LOUDNESS - VOLUME**

The **Loudness** Parameter is independent of Expression control. The volume of the ORGAN Section can be raised or lowered independently with respect to the other Voice Sections by using this Parameter. A connected Expression Pedal will still control the volume of the entire instrument.

# DRAWBARS

This allows you to adjust the Drawbars Parameters for each Part.




**❶ UPPER Registration**

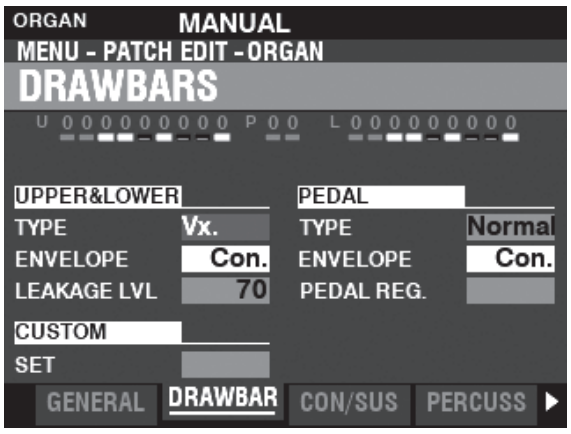
**❷ PEDAL Registration**

**❷ LOWER Registration**

This allows you to see the Drawbar Registrations for each Part.

**tips DISABLED PARAMETERS**

All of the ORGAN Parameters affect the Tone Wheel Organs; however, some of the ORGAN Parameters do not affect the Transistor or Pipe Organs - for example, Leakage Level, Pedal Type and Custom Tone Wheels. If a particular Parameter does not affect the selected Organ Type, it will be "greyed out" or darkened in the display (see the example below). However, the value of a disabled Parameter can still be adjusted using the [VALUE] knob.



## UPPER & LOWER DRAWBARS

### ❹ TYPE

This allows you to select the ORGAN Type.

**A-100** ..... Tone Wheel Organ, A-102 No. 35564.
**B-3** ..... Tone Wheel Organ, B-3 No. A27563.
**C-3** ..... Tone Wheel Organ, C-3 No. C155596.
**Mellow** ..... Pure sine waves with no harmonic development.
**Vx** ..... Reproduces the sound of a vintage British combo organ.
**Farf** ..... Reproduces the sound of a vintage Italian combo organ.
**Ace** ..... Reproduces the sound of a vintage Japanese combo organ.
**Pipe** ..... Pipe Organ.

### ❺ ENVELOPE

**Settings: Con, R1 ~ R15, AR1 ~ AR15**

This allows you to adjust the rate of Attack (when a key is depressed) and Release (when the key is released).

"Con" is the envelope of the key-click(s) generated with the Virtual Multi-Contacts.

"1 -- 15" is the rate of Attack without the Virtual Multi-Contacts. The greater the value, the slower the Attack (the speed at the which the Drawbar registration sounds when a key is depressed).

The "R" Parameter changes the Release rate. The Attack rate is that provided by the Virtual Multi-Contacts. This means that the onset of the tone will be instantaneous while the Release rate is regulated by the numerical setting.

The "AR" Parameter disables the Virtual Multi-Contacts and allows you to change both the Attack and Release rate. At higher numerical settings the Attack and Release will be slow, similar to that of a pipe organ.

### ❻ LEAKAGE LEVEL

**Setting Range: 0 (no Leakage tone) ~ 127 (maximum Leakage tone)**

This allows you to adjust the total volume of the leakage tone.

### ❼ CUSTOM SET

**Setting Range: F1 ~ F3, U1 ~ U3**

This allows you to select a customized set for each Tone Wheel Organ and Pipe Organ.

**NOTE: See page 120 "Custom Tone Wheel" or page 126 "Custom Pipe" for more details.**

**NOTE: This Parameter is not available for the Transistor Organs.**

## PEDAL

### ❽ TYPE

**Settings: Normal, Muted**

This allows you to select the ORGAN Type for the PEDAL Part.

**Normal**.....Traditional tone-wheel registration of the B-3/C-3/A-100.
**Muted**.....Analog pedal tones as on the classic X-5.

**NOTE: When one of the Transistor Organs (Vx., Farf. or Ace.) is selected for the UPPER & LOWER, Muted is automatically selected for the PEDAL Part.**

**NOTE: When the Pipe Organ Type is selected for the UPPER & LOWER Parts, Pipe is automatically selected for the PEDAL Part and the other PEDAL Parameters are unavailable.**

### ❾ ENVELOPE

**Setting Range: Con, R1 ~ R15, AR1 ~ AR15**

This allows you to set the Attack and Release characteristics of the PEDAL tones.

**NOTE: See paragraph ❺ on this page for more information.**

**NOTE: This Parameter is available on Tone Wheel Organs A-100, B-3, C-3 and Mellow.**

### ❿ SUB DRAWBARS

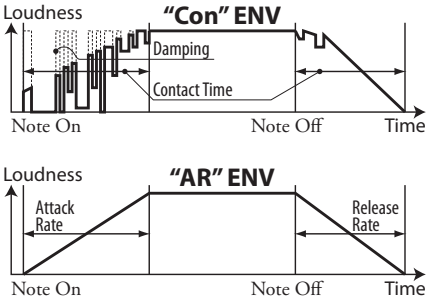
**Setting Range: F1 ~ F3, U1 ~ U3**

This allows you to select the harmonic settings for the PEDAL or Sub Drawbars when the "Normal" Type is selected.

**NOTE: This Parameter is available on Tone Wheel Organs "A-100," "B-3," " C-3" and "Mellow."**

**tips** **ENVELOPE**

The variation of a sound over time, as is used in sound synthesis.



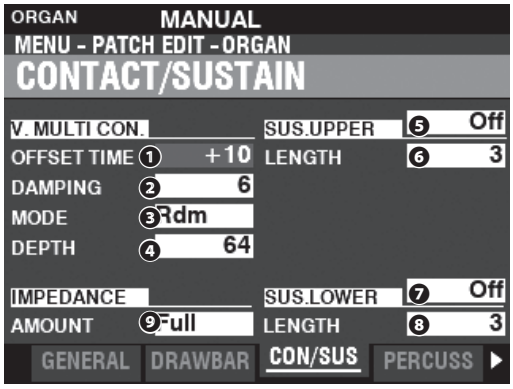

**tips** **KEY CLICK**

On tone-wheel organs such as the B-3/C-3/A-100, each time a key is depressed 9 electrical switch contacts are closed by means of 9 horizontal flat springs which touch 9 busbars. Each time a contact is closed or released, a "key click" was produced. This characteristic is replicated on the SK PRO.

**tips** **EXAMPLES OF KEY-CLICK SETTINGS**

Simulation of a classic multi-contact Hammond Organ such as B-3/C-3/A-100:
**ENV=CON**
Simulation of a PCM synthesizer to produce the "key click" only at the attack:
**ENV=R1**
Slow envelope similar to that of a pipe organ:
**ENV=AR15**

# CONTACT / SUSTAIN




This Page allows you to adjust the Parameters which affect the Virtual Multi-Contacts, Sustain effect and Impedance effect for the UPPER and LOWER Parts.

## VIRTUAL MULTI-CONTACT

### ❶ OFFSET TIME

**Setting Range: -64 ~ ±0 ~ +63**

This allows you to set the time when a note is "ON"until complete contact is made.

A higher value causes a longer Attack time and a shorter Release time.

### ❷ DAMPING

**Setting Range: 0 ~ 31**

This allows you to control the damping rate of the Virtual Multi-Contacts.

The higher the value, the more pronounced the Key Click.

### ❸ MODE

This allows you to select how the Virtual Multi-Contacts ("VMC's") will sound when keys are depressed.

**Random**.....When a key is depressed, each contact of the VMC's will connect in a random order at the shallow point, and all the contacts are fully made when the key reaches its deep point.

**Velocity**.....When a key is depressed to its deep point, each contact of the VMC's is made by a time difference depending on the velocity.

### ❹ DEPTH

**Setting Range: 0 ~ 127**

This allows you to adjust the amount of time for each VMC to sound when a key is depressed.

At "0" all the VMC's sound simultaneously. The higher the value, the longer the time interval between contacts.

## UPPER & LOWER SUSTAIN

This allows you to add a smooth decay to the UPPER & LOWER Drawbars tones.

### ❺❼ SWITCH

**Settings: Off, On**

This allows you to turn Sustain "ON" or "OFF" on the selected Part.

### ❻❽ LENGTH

**Setting Range: 1 ~ 5**

This allows you to adjust the length of the Sustain effect for the selected Part.

## IMPEDANCE

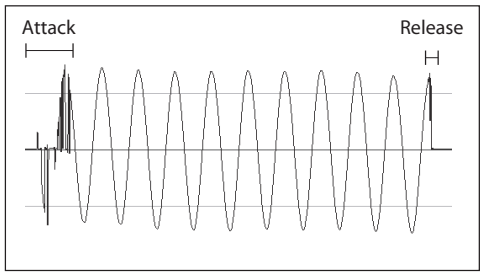
### ❾ AMOUNT

This allows you to adjust the amount of volume reduction when keys are depressed and held and other keys are depressed on a Tone Wheel organ.

**Off**.....No volume reduction.

**Half**.....The volume will be reduced by a small amount.

**Full**.....The volume will be reduced by the full amount.




**tips** **WHAT ARE "CONTACTS?"**

When a key is depressed on a tone-wheel Hammond Organ, it closes 9 small electrical switch contacts. These 9 contacts represent the 9 pitches provided by the Drawbars. The contacts are closed and opened by means of 9 horizontal flat springs which touch 9 busbars. When a flat spring touches a busbar, electrical contact is made and the harmonic is permitted to sound. Since the 9 busbars are physically separated, the harmonics do not all sound simultaneously, but in succession. This can be heard most clearly by selecting one of the four Manual Drawbar sets of a tone-wheel organ, pulling all of the Drawbars out to their maximum volume setting and slowly pressing a playing key. Each of the harmonics will add in a sequence from highest to lowest until all 9 frequencies will be heard when the key is at the bottom of its travel. The "Key-Click" on tone-wheel Hammond Organs is due to these physical characteristics. Also, if a key is released quickly it will bounce at the time of contact, creating an effect known as "Key Bounce" or "Chattering."

**tips** **WHY LESS RELEASE KEY CLICK?**

One of the characteristics of the key contacts on a tone-wheel organ is, the Release "click" is somewhat softer and less intense than the Attack "click." This characteristic is replicated on the SK PRO.

**tips** **SUSTAIN**

The word "Sustain" has a different meaning for an electronic organ than for a synthesizer. On an electronic organ, "Sustain" refers to a note or notes continuing to sound and smoothly decaying after the key is released. This is called "Release" on a synthesizer.

**tips** **WHERE IS THE PEDAL SUSTAIN?**

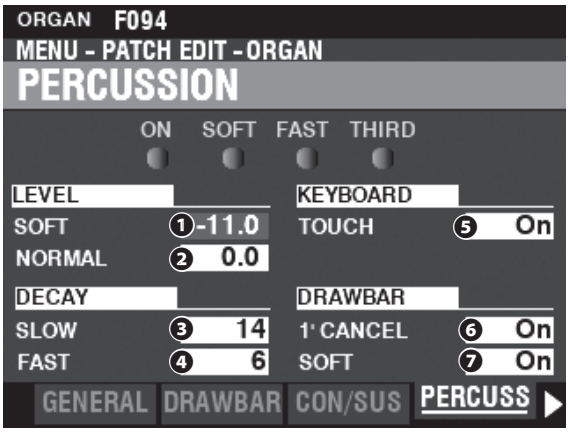
The Pedal Sustain is controlled from the INTERNAL ZONE FUNCTION Mode in the COMBINATION Edit Mode due to the fact that Pedal Sustain affects any Voice Section allocated to the PEDAL Part and not only the ORGAN Voice Section. See page 78 for more details.

**tips** **IMPEDANCE**

"Impedance" here refers to,the AC load on a Tone Wheel generator. When a note is played, it is "loaded down" by the circuits related to the contacts under the key being depressed. When more keys calling for the same Tone Wheels are pressed and held, the tone-wheel is loaded down further, causing a slight volume drop on those related notes. This characteristic can be highly variable from one vintage Hammond Organ to another, and the effect can be different on different organs built during different time periods and using components of slightly different values. These Parameter settings allow you to replicate the idiosyncrasies of different instruments.

# PERCUSSION

**SHORTCUT: Press and Hold any of the four [UPPER PERCUSSION] buttons.**




This Page allows you to make changes to the Percussion tones.

## LEVEL

**❶ SOFT**

**❷ NORMAL**

**Setting Range: -22.0 ~ +10.5 dB**

This allows you to adjust the Percussion Volume levels.

**NORMAL.....**Level when the [SOFT] button is "OFF."
**SOFT.....**Level when the [SOFT] button is "ON."

## DECAY

**❸ SLOW**

**❹ FAST**

**Setting Range: 1 ~ 24, Cont**

This allows you to adjust the Percussion Decay time.

A higher value will result in a slower Decay.

**SLOW.....**Decay rate when the [FAST] button is "OFF."
**FAST.....**Decay rate when the [FAST] button is "ON."
**C (continuous).....**No decay, The Percussion tone is sustained while keys are depressed.

## KEYBOARD

**❺ TOUCH**

**Settings: Off, On**

This allows you to set the Touch Response of the Percussion.

**Off**.....Percussion will sound only if you play the keys in a detached manner (non-legato). Any degree of detachment is sufficient.
**On**.....Each key will sound when played regardless of whether other keys are being held.

## DRAWBARS

**❻ 1´ CANCEL**

**Settings: On, Off**

This allows you to cancel the Upper 1´ Drawbar while using Percussion.

**On**.....The 1' Drawbar will be canceled when Percussion is "ON."
**Off**.....The 1' Drawbar will continue to sound when Percussion is "ON."

**❼ DRAWBAR - SOFT**

**Settings: On, Off**

This allows you to reduce the Upper Drawbar volume while using the Percussion if the [SOFT] button is "OFF" (LED not lit).

**On**.....The volume level of the Drawbars will be reduced by a small amount when Percussion is "ON" at Normal volume.
**Off**.....The volume of the Drawbars will remain at the same level when Percussion is "ON" at Normal volume.

**tips TOUCH**

The percussion generator on the B-3/C-3 had a single envelope, which would not recycle until all keys were raised. Originally thought to be a defect, the resulting response became a desired trait.

**tips 1´ CANCEL**

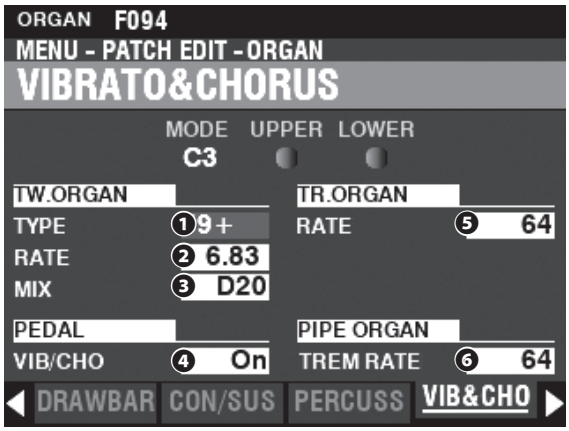
The B-3/C-3 had no exclusive key contact for the Percussion, but, used the 1´ contact. The SK PRO replicates this feature.

**tips SOFT**

On a vintage B-3/C-3, when Percussion was turned "ON" and the Volume setting was "NORMAL," the Upper Manual Drawbars were slightly reduced in volume. The SK PRO replicates this feature.

# VIBRATO & CHORUS

**SHORTCUT: Press and Hold the VIBRATO and CHORUS [MODE], [UPPER] or [LOWER] buttons.**




This Page allows you to adjust the Vibrato & Chorus of the Tone Wheel Organs, Vibrato for the Transistor Organs, and Tremulant for the Pipe Organ.

## TONE WHEEL ORGAN

**❶ TYPE**

**Settings: See below**

This allows you to select the Vibrato Delay Line type.

**'55-57** .....Metal Box (1955 - 1957).
**'57-59** .....Big Silver Box (1957 - 1959).
**'59+** .....Small Silver Box (1959 or later).

**❷ RATE**

**Setting Range: 5.78 ~ 7.90 Hz (349 ~ 475 rpm)**

This allows you to adjust the rate of the Vibrato & Chorus.

**❸ MIX**

**Setting Range: D64 ~ Even ~ 63V**

This allows you to adjust the intensity of the Chorus (C1 to C3).

"D" = direct or dry sound. "V" = Vibrato sound.

## PEDAL

**❹ PEDAL**

**Settings: Off, On**

This allows you to select whether the Vibrato & Chorus affects the PEDAL Part when the Vibrato & Chorus [LOWER] button is "ON."

## TRANSISTOR ORGAN

**❺ RATE**

**Setting Range: 0 ~ 127**

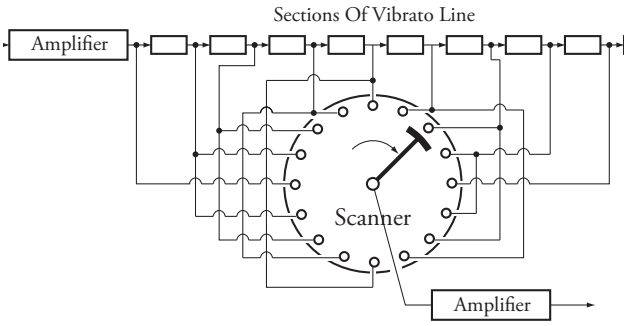
This allows you to adjust the rate of the Vibrato.

## PIPE ORGAN

**❻ TREMULANT RATE**

**Setting Range: 0 ~ 127**

This allows you to adjust the rate of the Tremulant.




**tips VIBRATO & CHORUS**

The illustration above shows the vibrato equipment of a tone-wheel Hammond Organ such as a B-3/C-3/A-100.

On a tone-wheel Hammond Organ equipped with Vibrato & Chorus, the vibrato circuitry consists of a series of plural coils or low-pass filter sections called a "delay line" or "line box" and a motor-driven "scanner" which scans the delay line and progressively retards the phase, creating the Vibrato effect.

**tips VIBRATO TYPE**

Hammond tone-wheel organs with Vibrato & Chorus were manufactured from 1949 through 1975. During that time, several different types of vibrato circuits were employed, particularly line boxes of different constructions. The Vibrato TYPE feature replicates the effect of different types of Vibrato delay lines.

**tips MIX**

"Vibrato Chorus," is obtained when the vibrato output signal is mixed with a portion of signal without vibrato. This creates a "shimmering" effect much used by jazz, blues and rock organists. This Parameter allows you to adjust the balance between the Vibrato and non-Vibrato signals to create the type of Chorus effect you want.

**tips PEDAL**

On the B-3/C-3/A-100, the Vibrato and Chorus affects the Pedal tones in addition to the Lower Manual Drawbar tones. Also, starting with the B-2/C-2, vintage Hammonds had **Selective Vibrato**, meaning that Vibrato could be had on Upper and Lower Manuals/Pedal independently (on previous models the Vibrato and Chorus affected the entire organ). These are replicated on the SK PRO.

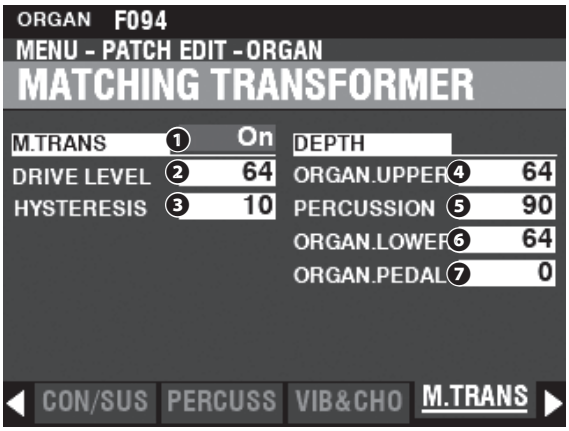
**tips VIBRATO (TRANSISTOR ORGAN)**

On an electronic organ, Vibrato is accomplished by modulating the frequency of the master oscillator(s.) This effect is replicated on the SK PRO.

**tips TREMULANT**

On a pipe organ, a **Tremulant** varies the air pressure the air pressure to the pipes periodically, producing a vibrato or tremolo effect. On the SK PRO, Tremulant can be applied to the Pipe Voices.

# MATCHING TRANSFORMER




This Page allows you to adjust the Parameters affecting the Matching Transformer for the Tone Wheel and Transistor Organs.

## MATCHING TRANSFORMER

**❶ SWITCH**

**Settings: Off, On**

This allows you to turn the Matching Transformer effect "ON" or "OFF."

**❷ DRIVE**

**Setting Range: 0 ~ 127**

This allows you to set the saturation level of the Matching Transformer.

A higher value will result in more saturation at low volume levels.

**❸ HYSTERESIS**

**Setting Range: 0 ~ 127**

This allows you to set the strength of the hysteresis characteristics.

The higher the value, the more "asymmetrical" the sound.

## DEPTH

**❹ UPPER DRAWBARS**

**❺ PERCUSSION**

**❻ LOWER DRAWBARS**

**❼ PEDAL DRAWBARS**

**Setting Range: 0 ~ 127**

This allows you to set the amount of the Matching Transformer modeling for each Part and for the Percussion.

The higher the value, the deeper the effect.

**tips**

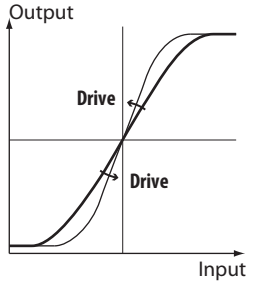
### WHAT IS A "MATCHING TRANSFORMER?"

The purpose of the Matching Transformer in a Hammond tone-wheel organ is to "match" the low Impedance of the generator and key circuits to the high impedance amplifier input.

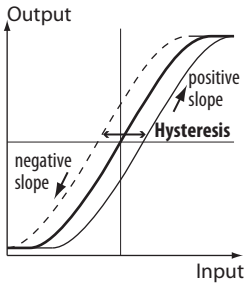
It combines the individual tones from each Drawbar into one complex musical tone.

Doing this imparts some unique characteristics to the sound (see the illustrations below), which are part of the tonal characteristics of a Hammond tone-wheel organ such as the B-3.

Even though transistor organs do not have a Matching Transformer, these Parameters can also be used for the Transistor Organs.



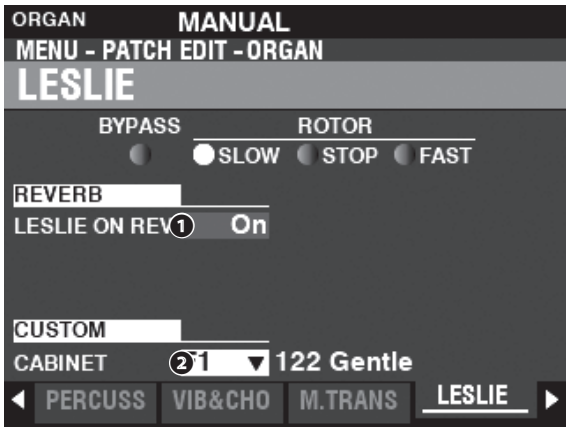

How the Trans - Drive works




How the Trans - Hysteresis works

# LESLIE

**SHORTCUT: Press and Hold the LESLIE [BYPASS], [STOP] or [FAST] buttons.**




This Page allows you to adjust the Parameters affecting the inbuilt digital Leslie for the Tone Wheel and Transistor Organs.

## REVERB

### ❶ LESLIE ON REVERB

**Settings: Off, On**

This allows you to adjust the routing of the Reverb.

**Off** ..... The digital Leslie modulates the ORGAN sounds only.

**On**..... The digital Leslie modulates both the ORGAN sounds and the Reverb.

**NOTE: This Parameter does NOT affect a connected Leslie Speaker Cabinet.**

## CABINET

### ❷ CUSTOM CABINET

**Setting Range: F1 ~ F8, U1 ~ U8**

This allows you to select a Custom Leslie Cabinet.

**NOTE: See page 124 for more information about Custom Leslie Cabinets.**

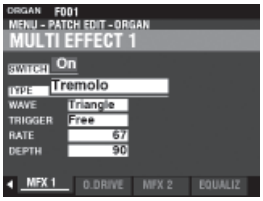
**tips** **LESLIE ON REVERB**

When an audio signal containing Reverb is sent to a Leslie Cabinet, the Reverb is modulated along with the main signal. This characteristic can be replicated using this Parameter.

When this Parameter is "OFF," the effect is that of a Leslie Cabinet speaking into an auditorium or a large live room, or a Leslie Cabinet having a separate Reverb amplifier and speakers such as a vintage 122RV - the Organ tones are affected by the Leslie rotors but not the Reverb.

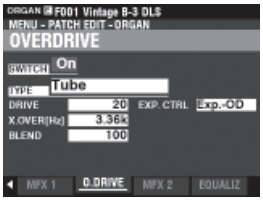
When this Parameter is "ON," the effect is that of an audio signal containing both Organ tones and Reverb being fed into a single-channel Leslie - the rotors will modulate the Reverb as well as the basic Organ tones.

# MULTI EFFECT 1



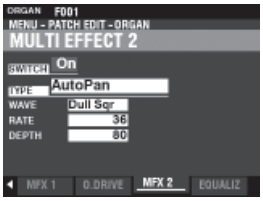

See “Multi Effects 1” (P. 106).

# OVERDRIVE



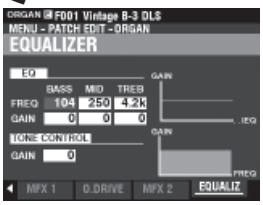

See “Overdrive.” (P. 111)

# MULTI EFFECT 2




See “Multi Effects 2.” (P. 112)

# EQUALIZER




See “Equalizer.” (P. 116)

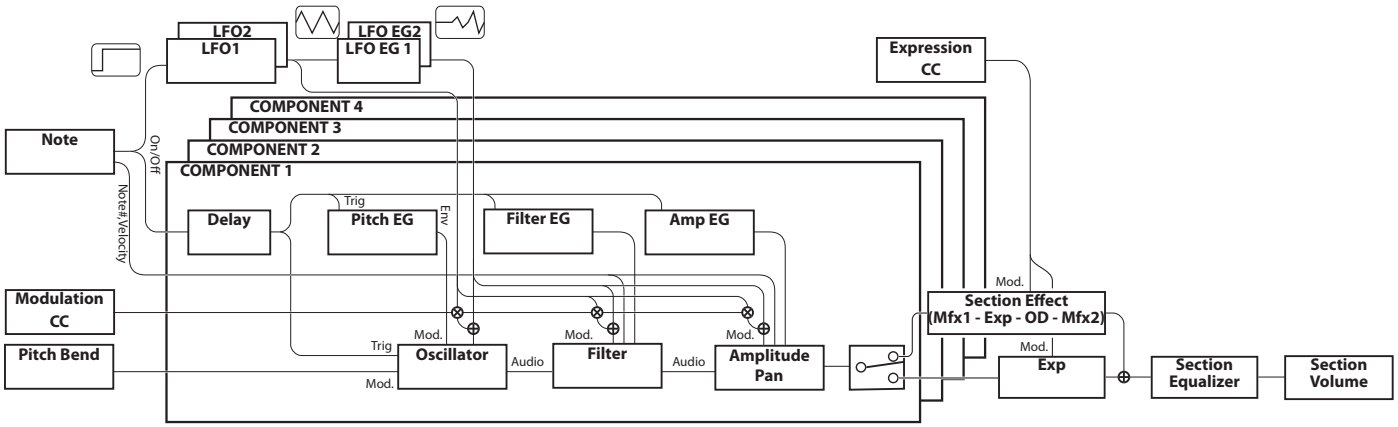
# PIANO/ENSEMBLE

These FUNCTION Modes allow you to edit the PIANO and ENSEMBLE Patches.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **PATCH** - **PIANO/ENSEMBLE** - [ENTER]

or press the [EDIT] button in each Section.




# EDITING THE PIANO/ENSEMBLE SECTIONS

Both the PIANO and ENSEMBLE Sections contain 4 sounding units called **Components**.

The waveform generated by the oscillator in each Component can be modified by the Filter (timber), Amplitude (volume), Section Effects (Multi Effects and Overdrive) and the Equalizer.

Timed characteristics such as LFO and Envelope Generators for Pitch, Filter and Amplitude are also provided.

# PAGES AND CONTENTS

## GENERAL

This allows you to adjust the common Parameters in a PIANO or ENSEMBLE Patch.

1. **VOLUME**

   This allows you to adjust the volume.

2. **PORTAMENTO**

   This allows you to slide the pitch between last and current notes smoothly.

3. **MONO/POLY**

   This allows you to adjust the monophonic or polyphonic, and sounding priority.

4. **PITCH BEND**

   This allows you to adjust the length of the Pitch Bend.

## ProChord™

This allows you to play complex harmonic patterns which regarding played chord by the four Components as the players.

## LFO

This allows you to adjust the LFO - Low Frequency Oscillators which makes vibrato or tremolo effect, and their depth.

## COMPONENT

This allows you to adjust the Parameters with regarding each Component.

1. **BASIC**

   This allows you to adjust the basic Parameters such as sounding, volume, "ON" or "OFF" the Section Effects, sounding note range, and sounding velocity range.

2. **OSCILLATOR**

   This allows you to adjust the Waveform and the pitch.

3. **PITCH EG**

   This allows you to adjust the Pitch Envelope.

4. **DELAY**

   This allows you to adjust the Delay for sounding "ON" or "OFF" by playing or other Component.

5. **FILTER**

   This allows you to adjust the Filter.

6. **FILTER EG**

   This allows you to adjust the Filter Envelope.

7. **AMPLITUDE**

   This allows you to adjust the Amplitude and the Panning.

8. **AMPLITUDE EG**

   This allows you to set the Amplitude Envelope.

## MULTI EFFECT 1

This allows you to adjust the **Multi Effects 1** (Tremolo, Wah-Wah, Ring Modulator, Compressor) for each PIANO/ENSEMBLE Patch.

## OVERDRIVE

This allows you to adjust the Overdrive effect in this Section.

## MULTI EFFECT 2

This allows you to adjust the **Multi Effects 2** (AutoPan, Phaser, Flanger, Chorus, Delay) for each PIANO/ENSEMBLE Patch.

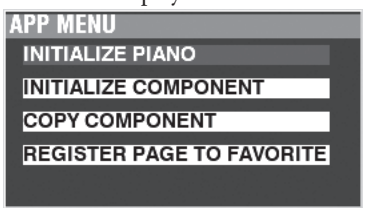
## EQUALIZER

This allows you to adjust the Equalizer in this Section.

# APP (APPLICATION) MENU

The APP (Application) Menu allows you to select various Menu Pages quickly. To display the APP Menu:

1. Select the PIANO or ENSEMBLE FUNCTION Mode.
2. Press and Release the [≡] button. The Menu options shown below will display:



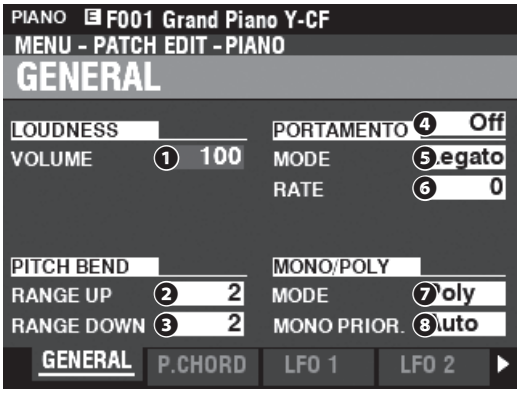

**INITIALIZE PIANO/ENS**.....Initializes the Patch Parameters in the currently selected Patch.
**INITIALIZE COMPONENT**....Initializes the Component Parameters in the currently selected Patch.
**COPY COMPONENT**.....Copies the Parameters in one Component to another Component.
**REGISTER PAGE TO FAV**.....Registers the currently selected Page to the Favorites.

To select an option:

1. Use the [DIRECTION] [▲]/[▼] buttons to select the option you want.
2. Press the [ENTER] button to select the desired option.

# GENERAL

**SHORTCUT: Press the [EDIT] button in the PIANO or ENSEMBLE Voice Section.**




## LOUDNESS

### ❶ VOLUME

**Setting Range: 0 ~ 127**

This allows you to adjust the overall volume of the selected Patch.

**NOTE: The "Loudness" Parameter is independent of Expression control. The volume of the PIANO or ENSEMBLE Section can be raised or lowered independently with respect to the other Voice Sections by using this Parameter. A connected Expression Pedal will still control the volume of the entire instrument.**

## PITCH BEND

### ❷ RANGE UP

**Setting Range: 0 - 12 [semitones]**

### ❸ RANGE DOWN

**Setting Range: 0 - 24 [semitones]**

These allow you to adjust the number of semitones the pitch of the selected Patch will bend "Up" or"Down" using the [PITCH BEND] wheel.

## PORTAMENTO

### ❹ SWITCH

**Settings: Off, On**

This allows you to turn the Portamento effect "ON" or "OFF."

### ❺ MODE

This allows you to adjust how to control the Portamento effect from the keyboard

**Every**.....The Portamento will be heard with every keypress.
**Legato**.....The Portamento will be heard only when keys are played 'legato" (a key is depressed while another key is held).

### ❻ RATE

**Setting Range: 0 ~ 127**

This allows you to adjust the rate at which the pitch changes using Portamento. The higher the value, the more slowly the pitch rises or falls.

## MONO/POLY

### ❼ MONO/POLY

This allows you to adjust whether the selected Patch will play single notes ("Mono") or multiple notes ("Poly").

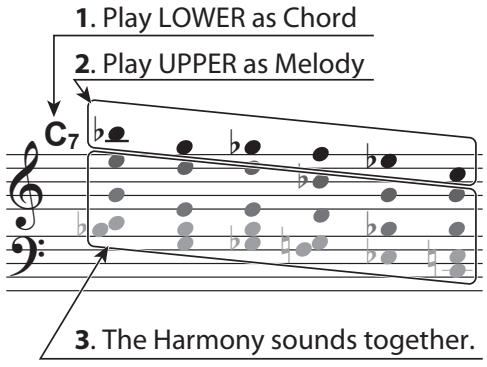
**Poly**.....If more than one note is played, all notes will sound.
**Mono**.....If more than one note is played, only one note will sound.
**M/P**.....More than one note can be played; however, the last note released will be erased by the next note played.

### ❽ MONO PRIORITY

This allows you to adjust which note will sound on the selected Patch if more than one note is played in MONO Mode.

**Auto**.....The highest note played will sound when this Section is used with other Sections. The last played note will sound when this Section is used alone.
**Last**.....The last played note will sound.
**Lowest**.....The lowest note played will sound.
**Highest**.....The highest note played will sound.
**First**.....The first played note will sound.

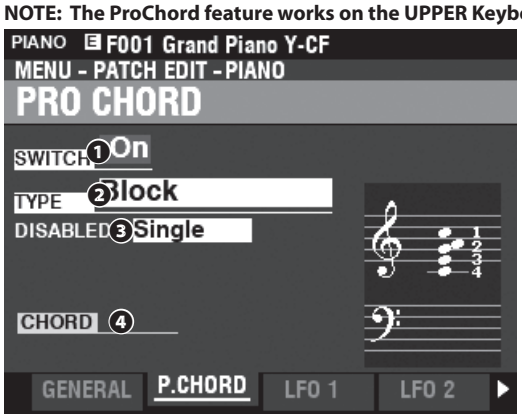
# ProChord™




This allows you to reproduce complex harmonies by playing a single-note melody with the right hand and chords with the

left hand. The four Components provide both the Melody and Harmony notes in different configurations depending on the specific ProChord Type or harmony pattern selected.

**NOTE: The ProChord feature works on the UPPER Keyboard only.**




### ❶ SWITCH

**Settings: Off, On**

This allows you to turn ProChord "ON" or "OFF."

### ❷ MODE

**Settings: Closed, Open, Duet, Block, Big Band Sax, Big Band, Small Combo, Theatre, Hymn, Quartet 1, Quartet 2, Jazz Brass, Strings, Harmonic Chime, Old Time, 4 Part Closed, 5 Part Open**

This allows you to select the ProChord Type or harmony pattern.

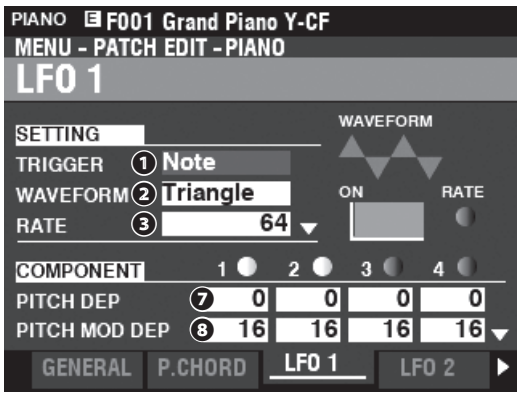
### ❸ DISABLED

**Settings: Single, Unison**

This allows you to select how ProChord works when it is disabled (no chord outlined by the left hand or disabled by the Foot Switch.)

**Single**..... Sounds Component 1.
**Unison**..... Sounds all selected Components.

# LFO




Both the PIANO and ENSEMBLE Voices Sections have two LFOs (Low Frequency Oscillators). These can be used to modulate various Components or Parameters.

### ❶ TRIGGER MODE

**Settings: Note, Free**

This allows you to adjust whether the phase of the LFO will reset each time a key is depressed.

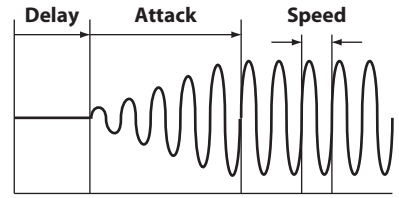
**Note**..... The LFO of each note oscillates individually. Each LFO will start its cycle when a key is depressed.
**Free**..... Pressing a key will intercept the LFO at whatever point it happens to be in its cycle.

### ❷ WAVEFORM

**Settings: See below**

This allows you to select the waveform of the LFO.

**Triangle** ..... Triangle wave.
**Square**..... Square wave Positive and Negative.
**Rectangle** ..... Square wave Positive and Zero.
**Saw Up**..... Sawtooth Upward wave.
**Saw Down**..... Sawtooth Downward wave.
**S/H** ..... Sample and Hold.
**Fluctuation** ... Random.




On

### ❸ RATE

**Setting Range: 0 ~ 127**

This allows you to adjust the Oscillation Rate of the LFO.

### ❹ DELAY TIME

**Setting Range: 0 ~ 127**

This allows you to adjust the amount of time after the initial keypress before the LFO begins oscillating.

### ❺ ATTACK RATE

**Setting Range: 0 ~ 127**

This allows you to adjust the amount of time for the LFO to build to its full amount when using Delay Time.

### ❻ ATTACK KEY TRACK

**Setting Range: 0 ~ 127**

This allows you to adjust how the Attack Rate is modulated by the note or pitch.

### ❼ PITCH DEPTH

### ❽ PITCH MOD DEPTH

### ❾ FILTER DEPTH

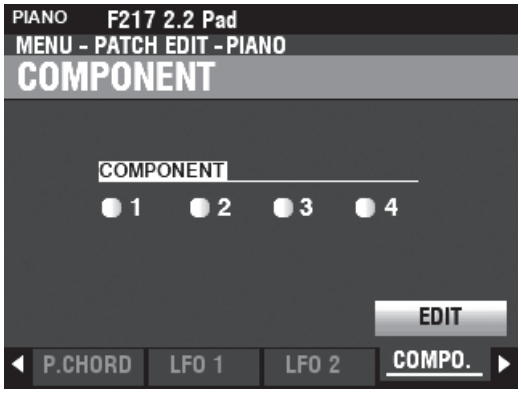
### ❿ FILTER MOD DEPTH

### ⓫ AMPLITUDE DEPTH

### ⓬ AMPLITUDE MOD DEPTH

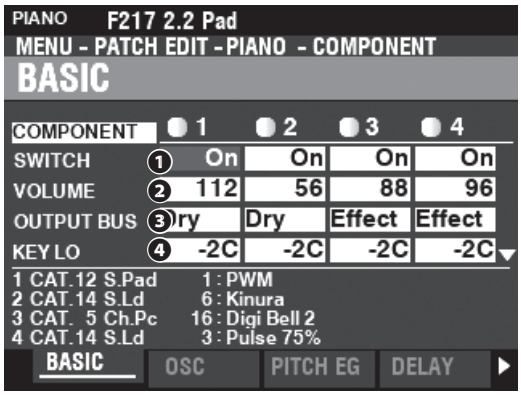
These Parameters allow you to adjust the LFO depth for each Component. "MOD DEPTH" sets the maximum LFO depth using the [MODULATION] wheel.

# COMPONENT




To edit a Component, select the **COMPONENT** - **EDIT** icon and press the [ENTER] button.

## COMPONENT - BASIC

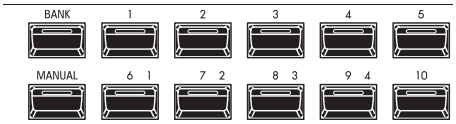



### ❶ SWITCH

**Settings: Off, On**

This allows you to turn the selected Component "ON" or "OFF."

**Off**.....No Sound.
**On**.....Sound.




Use the [[1] [2] [3] and [4] [NUMBER] buttons to turn each individual Component "ON" or "OFF" while editing.

### ❷ VOLUME

**Setting Range: 0 ~ 127**

This allows you to adjust the Volume of the selected Component.

### ❸ OUTPUT BUS

**Settings: Dry, Effect**

This allows you to select whether Section Effects are enabled or disabled for this Component.

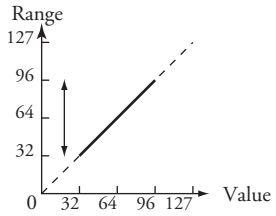
**Dry**.....Disabled
**Effect**.....Enabled

### ❹❺ KEY RANGE LOW, HIGH

**Setting Range: -2C ~ 8G**

This allows you to adjust the sounding range of the selected Component by note number.

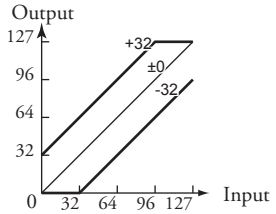
### ❻❼ VELOCITY RANGE LOW, HIGH




**Setting Range: 1 ~ 127**

This allows you to adjust the sounding range of the selected Component.

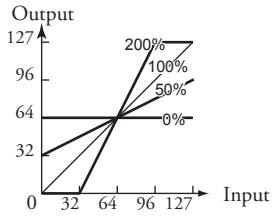
### ❽ VELOCITY OFFSET




**Setting Range: -64 ~ ±0 ~ +63**

This allows you to adjust the relative loudness of notes played using the selected Component.

### ❾ VELOCITY DEPTH




**Setting Range: 0 ~ 200 [%]**

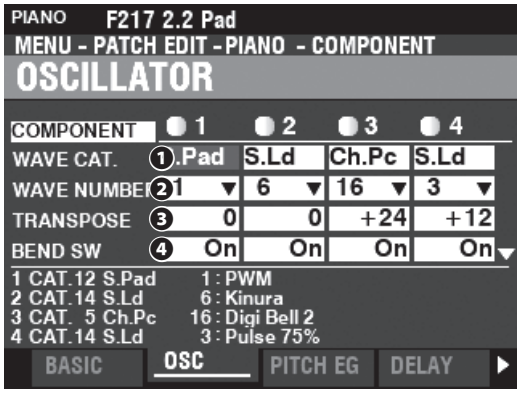
This allows you to adjust the response of the selected Component to key velocity.

At "0" there is no change in velocity. At "127," the volume is changed by the maximum amount in proportion to the velocity.

**tips** **WHAT IS A "COMPONENT?"**

There are 300 pre-programmed Patches for the PIANO and ENSEMBLE Voices Sections. Several of these contain multiple waveforms, such as "Nylon&Steel Gtrs" and "Section Str. Oct." This is possible because each individual Patch can contain up to four (4) sounding Components. Each Component can contain a Waveform and can be edited separately, though it is not necessary for each Component to be active as part of a Patch. The Component Parameters are explained starting on this page.

## COMPONENT - OSCILLATOR




### ❶ WAVEFORM CATEGORY

This allows you to select the Waveform Category.

**1** ..... A. Piano
**2** ..... E. Piano
**3** ..... Harpsichord
**4** ..... Clav.
**5** ..... Chromatic Percussion
**6** ..... Guitar
**7** ..... Ethnic
**8** ..... SFX
**9** ..... Wind
**10** ..... Strings
**11** ..... Choir
**12** ..... Synth Pad
**13** ..... Bass
**14** ..... Synth Lead
**15** ..... Free Reed
**16** ..... Percussion

### ❷ WAVEFORM NUMBER

This allows you to select a specific Waveform Number.

**NOTE: See page 176 for a list of Waveform Numbers.**

### ❸ TRANSPOSE

**Setting Range: -63 ~ ±0 ~ +63 [semitones]**

This allows you to adjust the sounding pitch of the selected Component by half-steps or semitones.

### ❹ PITCH BEND SWITCH

**Settings: Off, On**

This allows you to select whether the selected Component will receive Pitch Bend.

**Off** ..... Does not receive.
**On** ..... Receives.

### ❺ PITCH KEY TRACK

**Setting Range: -100 ~ ±0 ~ +100 [%]**

This allows you to adjust the amount of pitch change between keys on the keyboard for the selected Component.

At "+100" the musical distance between any two adjacent notes will be 100 cents or one half-step. This is the normal setting. At "+50," the notes will be one quarter-step apart.

At "0" every note on the keyboard will sound the same pitch.

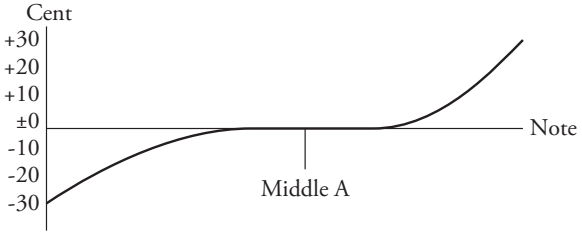
### ❻ FINE TUNE

**Setting Range: -100 ~ ±0 ~ +100 [cents]**

This allows you to adjust the sounding pitch of the selected Component by cents.

At "-100" the pitch will be one half-step flat. At "+100" the pitch will be one half-step sharp.

### ❼ STRETCH TUNE DEPTH




**Setting Range: 0 ~ 127**

This allows you to adjust the depth of the Stretch Tuning for the selected Component.

"0" is an Equal Temperament. If the value is increased, the bass will sound lower and the treble will sound higher.

**NOTE: "Stretch tuning" is a method of tuning stringed instruments (notably piano) to compensate for their inherent inharmonicity. This characteristic can differ from instrument to instrument.**

### ❽ PITCH EG DEPTH

**Setting Range: -64 ~ ±0 ~ +63**

This allows you to adjust the depth of the pitch changing of the Pitch EG (Envelope Generator for the selected Component.

At "0" there is no pitch change. At "-64" or "+63," the pitch will change down or up by one octave.

**NOTE: A large amount of pitch change may produce artifacts such as "step noise."**

### ❾ PITCH EG VEL TRACK

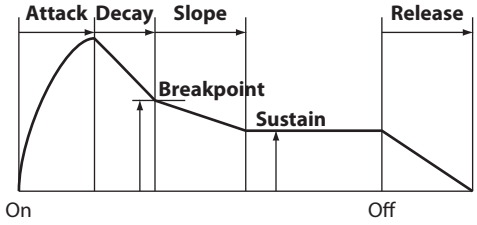
**Setting Range: 0 ~ 100(%)**

This allows you to adjust the depth of the pitch changing of the Pitch EG for the selected Component by keyboard velocity.

At "0" there is no change by key velocity. At "100" the pitch will change by a wide amount.

**NOTE: The Pitch EG is explained in more detail on the next page.**

## COMPONENT - PITCH EG



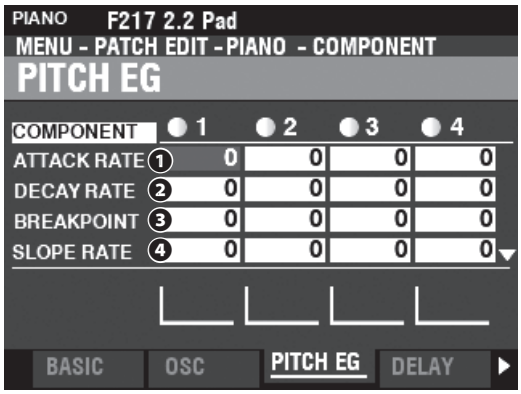

The EG (Envelope Generator) allows you to control how the sound changes over time by playing notes on the keyboard.

The illustration above illustrates the structure of the Envelope Generators for the PIANO/ENSEMBLE Section.

There are three (3) EG's: **Pitch**, **Filter** and **Amplitude**.

**NOTE: The PITCH EG DEPTH Parameter must be set to some value other than "0" to hear the effect produced by the PITCH EG.**

**NOTE: Use the [DIRECTION] [▼] button to move the screen down to see the additional Parameters.**




**❶ ATTACK RATE**

**Setting Range: 0 ~ 127**

This allows you to adjust the time for the pitch to increase to its peak value beginning when a key is depressed.

**❷ DECAY RATE**

**Setting Range: 0 ~ 127**

This allows you to adjust the time from the peak amount to the Breakpoint Level (explained below).

**❸ BREAKPOINT LEVEL**

**Setting Range: 0 ~ 127**

This allows you to adjust the level of the point immediately following the Attack.

A higher value will set a higher pitch as the Breakpoint.

**❹ SLOPE RATE**

**Setting Range: 0 ~ 127**

This allows you to adjust the time from the Breakpoint Level to the Sustain Level (explained below).

A higher value decreases the time required for the sound to return to the base frequency. A lower value increases the time.

**❺ SUSTAIN LEVEL**

**Setting Range: 0 ~ 127**

This allows you to adjust the main level which will remain until the key is released.

A higher value will set a higher pitch as the Breakpoint.

**❻ RELEASE RATE**

**Setting Range: 0 ~ 127**

This allows you to adjust the time for the level to fade from the Sustain Level to zero after the key is released.

A higher value will result in a longer Release time.

**❼ KEY TRACK ATTACK**

**❽ KEY TRACK DECAY**

**❾ KEY TRACK SLOPE**

**❿ KEY TRACK RELEASE**

**Setting Range: 0 ~ 127**

This allows you to adjust the rate and amount of the Pitch EG by note.

At "0" each note will sound the same Pitch EG. At "1 ~ 127" the rate and amount of Pitch EQ will be determined by the note being played. "127" will cause the envelope to respond by the maximum amount.

**⓫ VEL TRACK ATTACK**

**⓬ VEL TRACK RELEASE**

**Setting Range: 0 ~ 127**

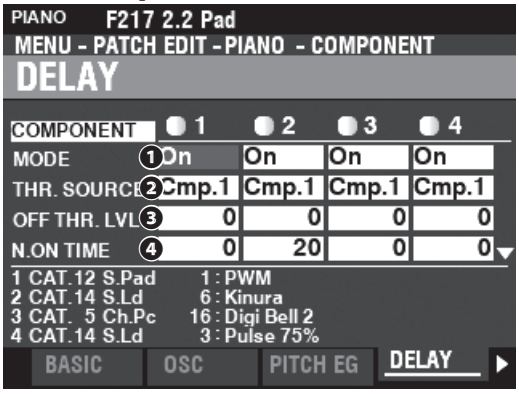
This allows you to adjust the rate and amount of the Pitch EG by key velocity.

A higher velocity will result in a more pronounced EQ.

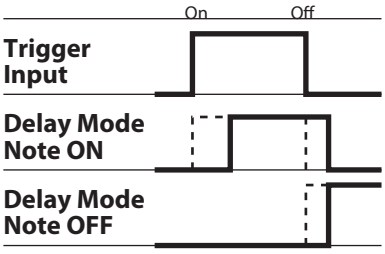
**NOTE: The Velocity Parameter in the COMBINATION Function Mode must be "ON" (values 1 ~ 4) in order to hear the effect of Velocity Tracking.**

## COMPONENT - DELAY

This allows you to adjust the note delay characteristics of the selected Component.




**❶ MODE**




This allows you to select how the notes will sound.

**Note On** ..... When the note is "ON," the selected Component sounds at the Note On Delay Time. When the note is "OFF" the sound will stop after the Note Off Delay Time.

**Note Off Vel** .. The selected Component does not sound even if the note is "ON." If the note is "OFF," it will sounds if the Amplitude EG level of the referenced Component is above the Note Off Threshold Level. The velocity of the note will be determined by the velocity with which the key is depressed.

**Note Off EG** ... Similar to Note Off Vel, except that the velocity of the note will be determined by the level of the Amplitude EG of the referenced Component.

**NOTE: Using one of the "Note Off" settings may cause played notes to cipher or "stick on" To avoid this, set the Sustain Level of the Amplitude EG at "0" if you are using one of the "Note Off" settings.**

**❷ SOURCE**

**Settings: Cmp1, Cmp2, Cmp3, Cmp4**

This allows you to select the reference Component for the Delay settings.

The "Normal" setting is, the same Component selected as the one currently sounding.

**❸ NOTE OFF THRESHOLD LEVEL**

**Setting Range: 0 ~ 127 : -∞ ~ 0 [dB]**

This allows you to adjust the Note Off level of the Amplitude EG of the reference Component.

**❹ NOTE ON DELAY TIME**

**Setting Range: 0 ~ 127 : 0 ~ 5 [s]**

This allows you to adjust the time to sound the note after a key is depressed.

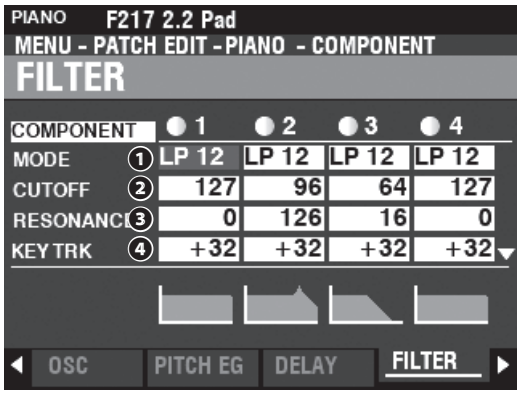
**❺ NOTE OFF DELAY TIME**

**Setting Range: 0 ~ 127 : 0 ~ 5 [s]**

This allows you to adjust the time to hold the note before it stops sounding after the key is released.

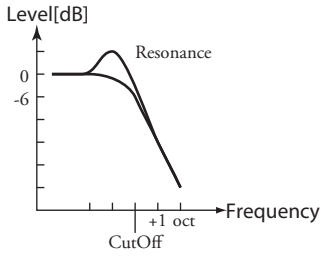
## COMPONENT - FILTER

The Filter allows you to control the basic timbre of the sound by selectively blocking some frequencies while allowing others to sound.

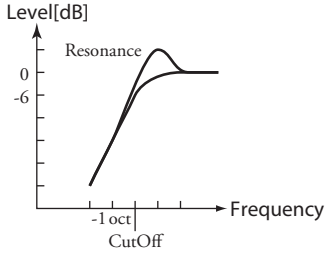



**❶ MODE**

This allows you to select filter method.




**LP12**..... Low-Pass 12dB; It reduces above Cutoff Frequency at 12dB/octave.




**HP12**..... High-Pass 12dB; It reduces under Cutoff Frequency at 12dB/octave.

**❷ CUTOFF FREQUENCY**

**Setting Range: 0 ~ 127**

This allows you to adjust the Cutoff Frequency of the Filter.

**❸ RESONANCE**

**Setting Range: 0 ~ 127**

This allows you to add a controlled amplification to the Cutoff Frequency, coloring the original pitch.

**❹ CUTOFF KEY TRACK**

**Setting Range: -100 ~ ±0 ~ +100 %**

This allows you to adjust the amount the Cutoff Frequency will change by note.

**❺ EG DEPTH**

**Setting Range: -100 ~ ±0 ~ +100 %**

This allows you to adjust the amount the Cutoff Frequency will change by the Filter EG. At "0" the Cutoff Frequency does not change. At 100%, the Cutoff Frequency changes by a wide amount.

**❻ EG VEL KEY TRACK**

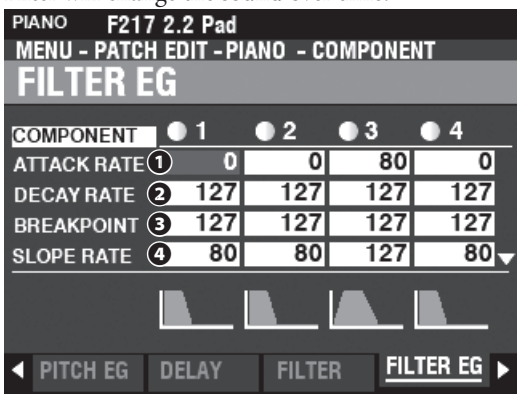
**Setting Range: 0 ~ +100 %**

This allows you to adjust the amount of the Filter EG by Note "ON" or "OFF" velocities.

A lower key velocity will produce less of a Filter EQ. A higher velocity will produce a more pronounced EQ.

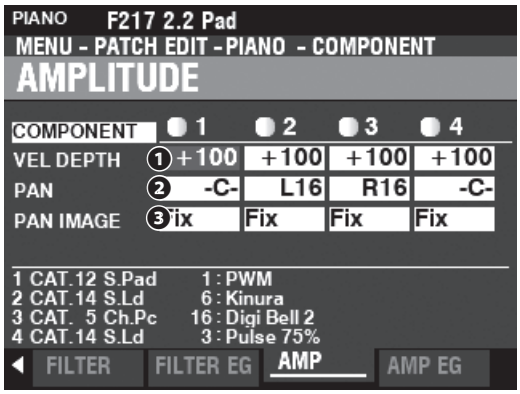
## COMPONENT - FILTER EG

The Filter Envelope Generator allows you to control how the Filter will change the sound over time.




The Filter EG works in a manner similar to the Pitch EG (see page 95).

## COMPONENT - AMPLITUDE



**❶ VEL DEPTH**

**Setting Range: -100 ~ +100 %**

This allows you to adjust the amount of volume in response to key velocity.

At "0" there is no change in volume. At "+100%", the volume is changed by the maximum amount corresponding to velocity.

**❷ PAN**

**Setting Range: L64 ~ C ~ R63**

This allows you to adjust the directionality or Pan setting for the selected Component.

At "-C-" the sound is located in the center. At "L64" the sound will be in the Left channel only. At "R63" the sound will be in the Right channel only.

**❸ PAN IMAGE**

This allows you to adjust the panning by the note.

**Fixed** ..... No panning - all notes come from the center.

**L-R** ..... Playing notes chromatically going up on the keyboard will cause the notes on the left to sound first.

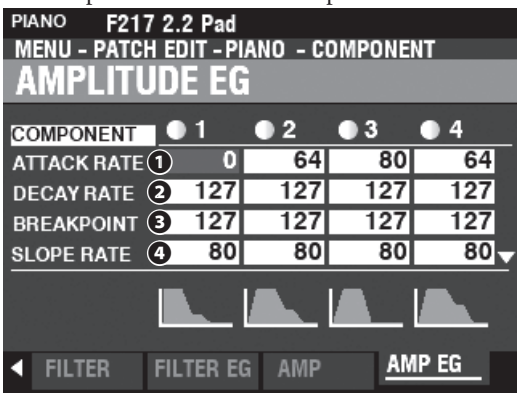
**R-L** ..... Playing notes chromatically going up on the keyboard will cause the notes on the right to sound first.

**Pyramid** ..... Notes played chromatically going up on the keyboard will start in the center and alternate between left and right.

**Inverted** ..... Notes played chromatically going up on the keyboard will start at one end and alternate between left and right until they meet in the center.

## COMPONENT - AMPLITUDE EG

The Amplitude EG is an Envelope Generator affecting Volume.




The Amplitude EG works similarly to the Pitch EG; however it has some additional Parameters which are explained below.

**NOTE: Use the [DIRECTION] [▼] button to move the screen down to see the additional Parameters.**

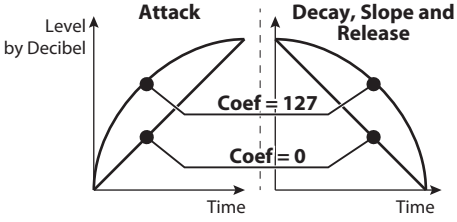
**⓭ ATTACK COEFFICIENT**

**⓮ DECAY COEFFICIENT**

**⓯ RELEASE COEFFICIENT**

**Setting Range: 0 ~ 127**

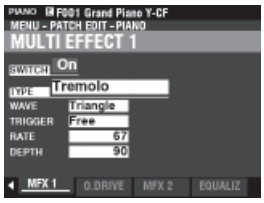
This allows you to adjust the contour for each envelope zone.




A higher value creates a linear taper suitable for an "upward" level. A lower value creates an exponential taper suitable for a "downward" level.

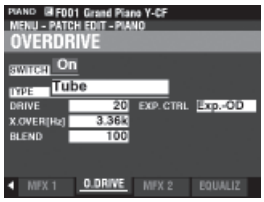
**NOTE: The Decay Coefficient controls both Decay and Slope zones.**

# MULTI EFFECT 1



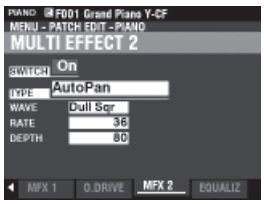

See "Multi Effects 1" (P. 106).

# OVERDRIVE



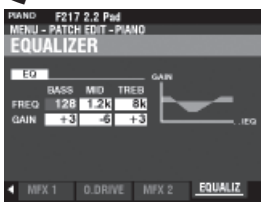

See "Overdrive." (P. 111)

# MULTI EFFECT 2




See "Multi Effects 2." (P. 112)

# EQUALIZER

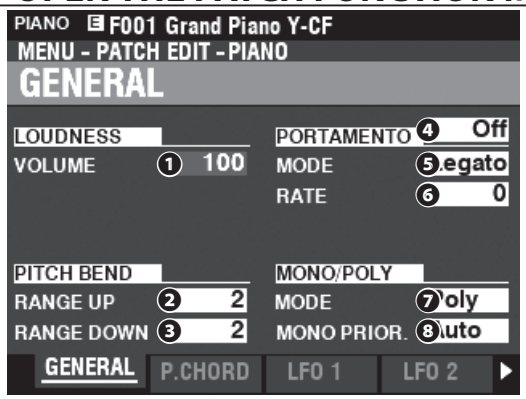



See "Equalizer." (P. 116)

# COPYING A COMPONENT

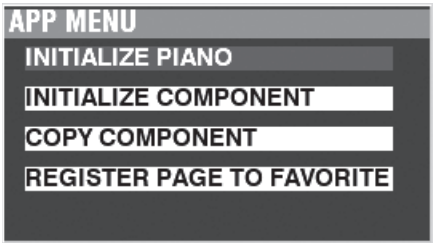
To Copy all the Parameters from one Component to another, do the following.

## 1. OPEN THE PATCH FUNCTION MODE



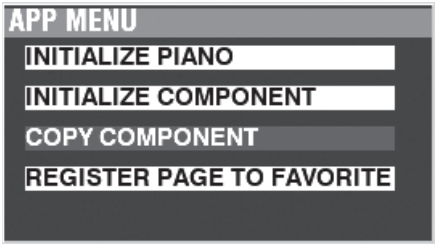

Press the [EDIT] button to open the FUNCTION Mode for the Voice Section you want.

## 2. OPEN THE APP (APPLICATION) MENU



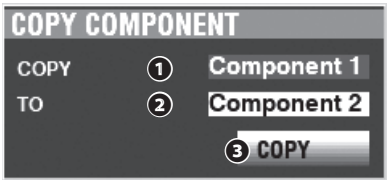

Press and Release the [≡] button to open the Application Menu.

## 2. SELECT "COPY COMPONENT"




Use the [DIRECTION] [▼] button to move the cursor to "COPY COMPONENT" and press the [ENTER] button.

## 3. SELECT SOURCE AND DESTINATION




Select the Source and Destination to copy and press the [ENTER] button.

**❶ COPY**

Use the [VALUE] knob to select the Source (the Component to Copy from).

**❷ TO**

Use the [VALUE] knob to select the Destination (the Component to Copy to).

**❸ COPY**

After doing the above, use the [DIRECTION] [▼] button to move the cursor to the COPY icon and press the [ENTER] button.

# INITIALIZING A PATCH OR COMPONENT

Usually, the best way to create a custom Patch is to find a Patch which already contains most of what you want and edit only the Parameters necessary to create your custom Patch.

However, in some cases you may find it useful to clear the contents of a Patch or Component within a Patch completely and start with a "blank slate." In this case you can **Initialize** either a complete Patch or one of the four Components within a Patch. This is explained starting on the next page.

# COMPONENTS & POLYPHONY

**Polyphony** refers to the number of notes that can be played simultaneously. The PIANO and ENSEMBLE Voice Sections combined have a total polyphony of 128 notes. Also, the number of Components utilized in a Patch will affect the number of keys that can be played at one time before the 128-note limit is reached.

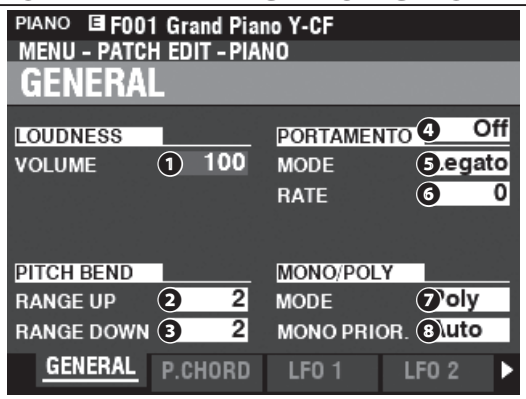
For example, Patches using a single Component can play 128 notes in response to 128 keypresses. However, some Patches utilize more than one Component. Patch #F209 "Soundtrack," for example, utilizes three (3) Components, meaning that pressing one key will cause 3 notes to play. Therefore, if 42 keys are pressed simultaneously the note limit will be reached. If the 128-note limit is exceeded, previously played notes will cancel or "drop out" so that the additional notes can be heard.

Even though some very dramatic effects can be created using more than one Component to create a custom Patch, it is recommended to be aware that using multiple Components will result in fewer keys that can be pressed simultaneously before the 128-note limit is reached.

# INITIALIZING A PATCH

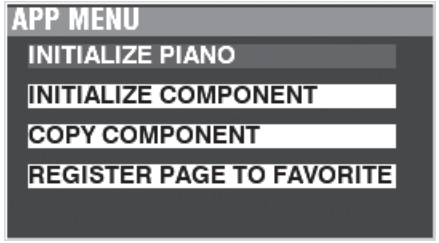
To Initialize an entire Patch prior to editing, do the following:

## 1. OPEN THE PATCH FUNCTION MODE




Press the [EDIT] button to open the FUNCTION Mode for the Voice Section you want.

## 2. OPEN THE APP (APPLICATION) MENU




Press and Release the [≡] button to open the Application Menu.

## 3. SELECT "INITIALIZE (PIANO OR ENSEMBLE)"

Press the [ENTER] button.

## 4. SELECT PARAMETERS TO INITIALIZE

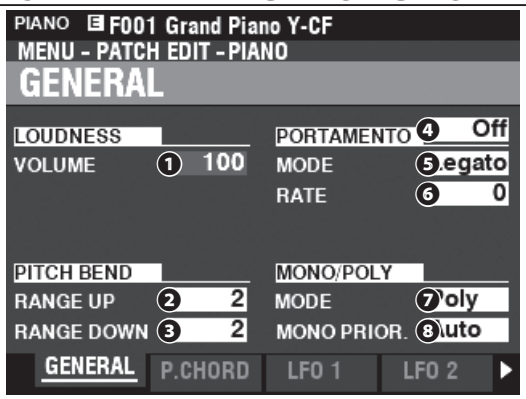

Use the [VALUE] knob to select the Parameters to initialize. Use the [DIRECTION] [▼] button to move the cursor to the [INITIALIZE] icon and press the [ENTER] button.

**Common**.....Parameters such as General, LFO, etc., excluding Components.
**All**.....All Parameters including Components.

# INITIALIZING A COMPONENT

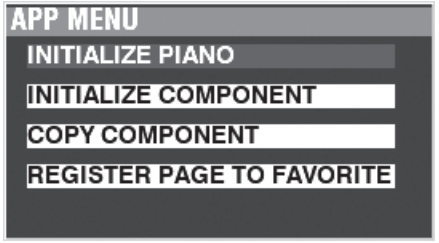
To Initialize an individual Component, do the following:

## 1. OPEN THE PATCH FUNCTION MODE



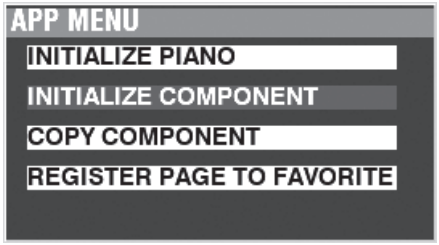

Press the [EDIT] button to open the FUNCTION Mode for the Voice Section you want.

## 2. OPEN THE APP (APPLICATION) MENU




Press and Release the [≡] button to open the Application Menu.

## 3. SELECT "INITIALIZE COMPONENT"




Use the [DIRECTION] [▼] button to move the cursor to [INITIALIZE COMPONENT] and press the [ENTER] button.

## 4. SELECT THE COMPONENT TO INITIALIZE


Use the [VALUE] knob to select the Component to initialize and press the [ENTER] button.

**1 to 4**.....Each Component.
**All**.....All the Components.

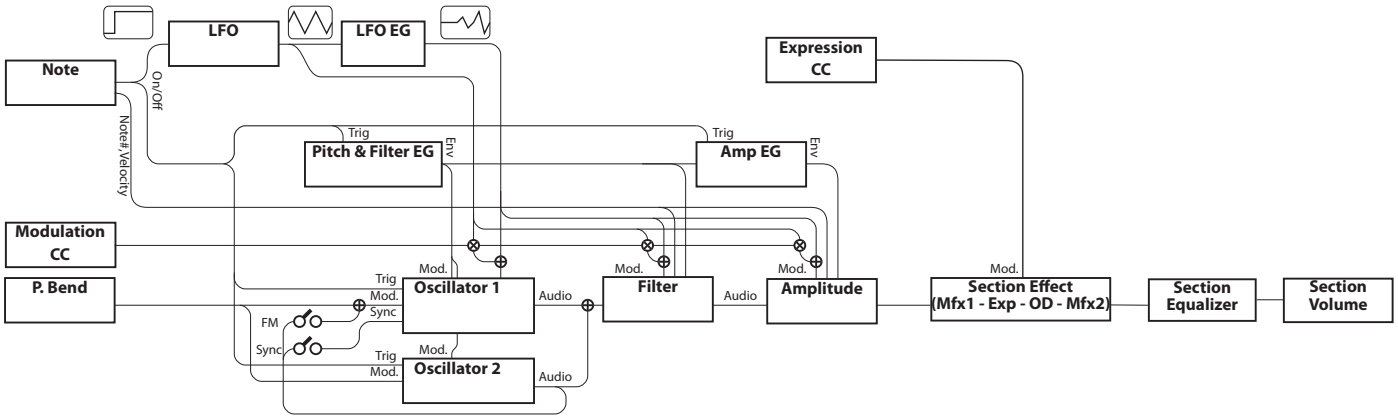
# MONO SYNTH

This FUNCTION Mode allows you to edit and create Patches in the MONO SYNTH Voice Section.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **PATCH** - **SYNTH** - [ENTER]

or press and hold the [OSC TYPE] button.




# EDITING THE MONO SYNTH SECTION

The MONO SYNTH Voice Section, as the name implies, is a monophonic synthesizer utilizing physical modeling. There are several individual "Oscillator Types" which can be selected.

The selected Oscillator Type can be modified by the Filter (timber), Amplitude (volume), Section Effects (Multi Effects and Overdrive) and the Equalizer.

Timed characteristics such as LFO and Envelope Generators for Pitch&Filter and Amplitude are also provided.

# PAGES AND PARAMETERS

## GENERAL

This Page allows you to adjust the common Parameters in this Patch.

1. **VOLUME**

This allows you to adjust the volume.

2. **PORTAMENTO**

This allows you to adjust Parameters for sliding the pitch between last note and present note.

3. **PITCH BEND**

This allows you to adjust the range of the Pitch Bend.

## LFO

This Page allows you to adjust the LFO (Low Frequency Oscillator) which creates Vibrato or Tremolo effects, and their depth.

## OSCILLATOR

This allows you to adjust the oscillation method and pitch.

## FILTER

This allows you to adjust the filter Parameters.

## PITCH&FILTER EG

This allows you to adjust the Pitch&Filter envelope.

## AMPLITUDE

This allows you to adjust the Amplitude (volume) Parameters.

## AMP EG

This allows you to adjust the Amplitude Envelope.

## MULTI EFFECT 1

This allows you to adjust the **Multi Effects 1** (Tremolo, Wah-Wah, Ring Modulator, Compressor) for each MONO SYNTH Patch

## OVERDRIVE

This allows you to adjust the Overdrive settings for each Patch.

## MULTI EFFECT 2

This allows you to adjust the **Multi Effects 2** (AutoPan, Phaser, Flanger, Chorus, Delay) for each MONO SYNTH Patch.

## EQUALIZER

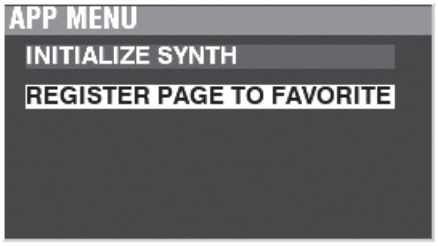
This allows you to adjust the Equalizer.

# APP (APPLICATION) MENU

The APP (Application) Menu allows you to select various Menu Pages quickly. To display the APP Menu:

1. Select SYNTH FUNCTION Mode.

2. Press and Release the [≡] button. The Menu options shown below will display:




**INITIALIZE SYNTH**.....Initialize all the Patch Parameters in the present editing Patch.

**REGISTER PAGE TO FAV**.....Register present displayed page to the Favorites.

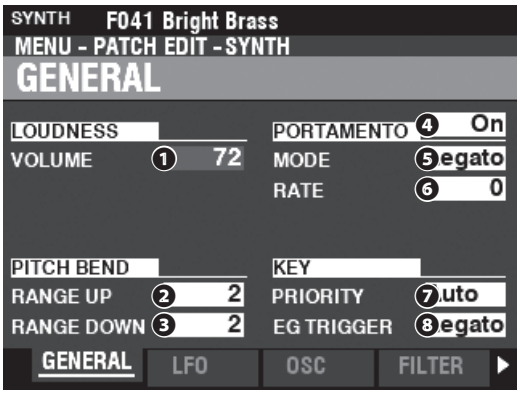
To select an option:

1. Use the [DIRECTION] [▲]/[▼] buttons to highlight the option you want.

2. Press the [ENTER] button to select the desired option.

# GENERAL

**SHORTCUT: Press and Hold the OSCILLATOR [TYPE] button**




This Page allows you to adjust the common Parameters of a MONO SYNTH Patch.

**NOTE: To see the MENU shown above after using the Shortcut, press the PAGE LEFT button two times.**

## LOUDNESS

### ❶ VOLUME

**Setting Range: 0 ~ 127**

This allows you to adjust the overall volume of the selected Patch.

## PITCH BEND

### ❷ RANGE UP

**Setting Range: 0 - 12 [semitones]**

### ❸ RANGE DOWN

**Setting Range: 0 - 24 [semitones]**

These allow you to adjust the number of semitones the pitch of the selected Patch will bend "Up" or"Down" using the [PITCH BEND] wheel.

## PORTAMENTO

### ❹ SWITCH

**Settings: Off, On**

This allows you to turn the Portamento "ON" or "OFF.".

### ❺ MODE

This allows you to adjust how to control the Portamento effect.

**Every**.....The Portamento will be heard with every keypress.

**Legato**.....The Portamento will be heard only when keys are played 'legato" (a key is depressed while another key is held).

### ❻ RATE

**Setting Range: 0 ~ 127**

This allows you to adjust the rate of the Portamento. A higher value will result in a slower Portamento.

## KEY

### ❼ PRIORITY

This allows you to adjust which note will sound if more than one note is played.

**Auto**.....Sounds highest note played when used with other Sections. Sounds last played note when used alone.

**Last**.....The last played note will sound.

**Lowest**.....The lowest note played will sound.

**Highest**.....The highest note played will sound.

### ❽ EG TRIGGER

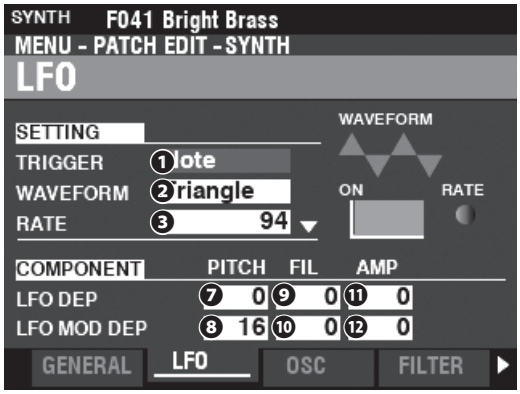
This allows you to adjust whether the Envelope will reset each time a key is depressed.

**Note**.....The Envelope will start its cycle when a key is depressed.

**Free**.....Pressing a key will intercept the Envelope at whatever point it happens to be in its cycle.

# LFO

**SHORTCUT: Press and Hold the [SHIFT] button and move the [LFO RATE] knob.**




This Page allows you to adjust the "Low Frequency Oscillator" (LFO, which creates Vibrato or Tremolo effects) and its depth.

### ❶ TRIGGER MODE

**Settings: Note, Free**

This allows you to adjust whether the phase of the LFO will reset each time a key is depressed.

**Note**..... The LFO of each note oscillates individually. Each LFO will start its cycle when a key is depressed.

**Free**..... Pressing a key will intercept the LFO at whatever point it happens to be in its cycle.

### ❷ WAVEFORM

**Settings: See below**

This allows you to adjust the waveform of the LFO.

**Triangle** ..... Triangle wave.

**Square**..... Square wave Positive and Negative.

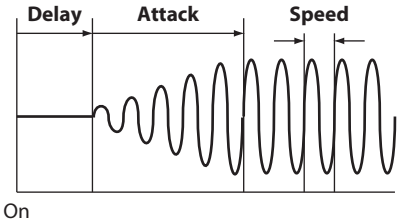
**Rectangle** ..... Square wave Positive and Zero.

**Saw Up** ..... Sawtooth Upward wave.

**Saw Down**..... Sawtooth Downward wave

**S/H** ..... Sample and Hold.

**Fluctuation** ... Random.




On

### ❸ RATE

**Setting Range: 0 ~ 127**

This allows you to adjust the rate of the oscillation of the LFO.

### ❹ DELAY TIME

**Setting Range: 0 ~ 127**

This allows you to adjust the amount of time before the LFO takes effect after a key is depressed.

### ❺ ATTACK RATE

**Setting Range: 0 ~ 127**

This allows you to adjust the amount of time for the LFO to reach its full amount after a key is depressed.

### ❻ ATTACK KEY TRACK

**Setting Range: -64 ~ 0 ~ +63**

This allows you to adjust how the Attack Rate is modulated by the note or pitch.

### ❼ PITCH DEPTH

### ❽ PITCH MOD DEPTH

### ❾ FILTER DEPTH

### ❿ FILTER MOD DEPTH

### ⓫ AMPLITUDE DEPTH

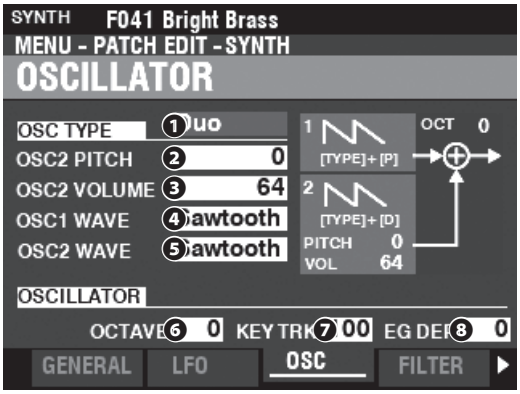
### ⓬ AMPLITUDE MOD DEPTH

These allow you to adjust the LFO depth by individual Parameters.

"MOD DEPTH " sets the maximum LFO depth using the [MODULATION] wheel.

# OSCILLATOR

**SHORTCUT: Press and Hold the [SHIFT] button and move the OSCILLATOR [PITCH] or [DEPTH] sliders.**




This Page allows you to adjust the oscillating method or pitch.

### ❶ TYPE

This allows you to adjust the basic oscillating method.

**NOTE: See page 53 "Oscillator Types And Characteristics" for details.**

**Duo**.....Two oscillators at different frequencies.
**Unison**.....Several oscillators sounding in unison.
**Sync**.....A single oscillator sounds synchronized with "out-of-tune" frequency.
**Pulse**.....A single oscillator sound as a pulse wave.
**FM**.....Frequency modulation between two (2) operators.
**Noise**.....A single oscillator sounds various types of noise.

### ❷❸❹❺ MODIFIERS

These Parameters allow you to modify various characteristics of the Oscillators.

**NOTE: See page 53 "Oscillator Types And Characteristics" for details.**

### ❻ OCTAVE

**Setting Range: -2 ~ ±0 ~ +2**

This allows you to select the Octave or pitch at which the selected Oscillator will sound.

At "0" the selected Oscillator will sound at unison or actual pitch. "-2" will sound two octaves lower and "+2" will sound two octaves higher.

**NOTE: This Parameter is linked to the [OCTAVE] buttons on the Control Panel.**

### ❼ KEY TRACK

**Setting Range: ±0 ~ +100 [cents]**

This allows you to adjust the amount of pitch change between keys on the keyboard.

At "+100" the musical distance between any two adjacent notes will be 100 cents or one half-step. This is the normal setting. At "+50," the notes will be one quarter-step apart. At "0" every note on the keyboard will sound the same pitch.

### ❽ EG DEPTH

**Setting Range: -64 ~ ±0 ~ +63**

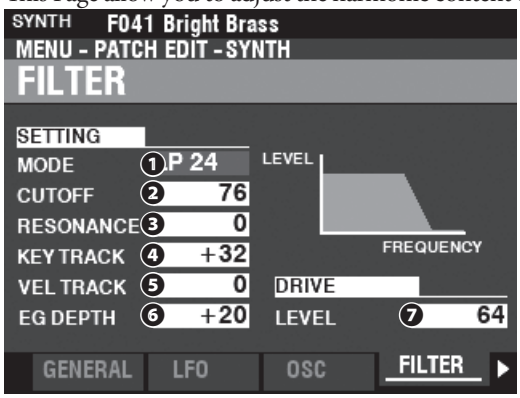
This allows you to adjust the depth of the pitch change by the Pitch Envelope.

At "0" there is no pitch change. At "-64." the pitch will change down one octave. At "+63," the pitch will change up one octave.

# FILTER

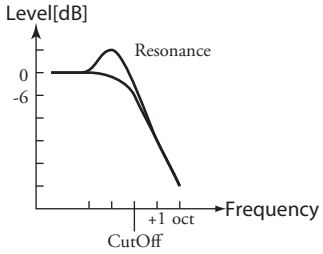
**SHORTCUT: Press and Hold the [SHIFT] button and move the FILTER [CUT OFF], [RESONANCE] or [EG DEPTH] knobs.**

This Page allow you to adjust the harmonic content of the sound.

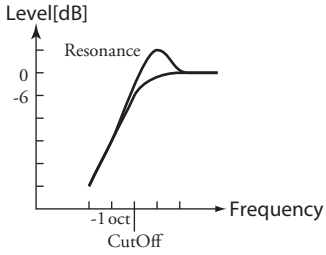



### ❶ MODE

This allows you to select the filtering method.




LP12/LP24.....Low-Pass 12(24)dB; reduces above the Cutoff Frequency at 12(24)dB/octave.




HP12/HP24.....High-Pass 12(24)dB; reduces below the Cutoff Frequency at 12(24)dB/octave.

### ❷ CUTOFF FREQUENCY

**Setting Range: 0 ~ 127**

This allows you to adjust the Cutoff Frequency of the Filter.

### ❸ RESONANCE

**Setting Range: 0 ~ 127**

This allows you to add a controlled amplification to the Cutoff Frequency, coloring the original pitch.

### ❹ KEY TRACK

**Setting Range: -64 ~ ±0 ~ +63**

### ❺ VEL TRACK

**Setting Range: 0 ~ 127**

These allow you to adjust the amount the Cutoff Frequency will change by note velocity.

**NOTE: The Velocity Parameter in the COMBINATION Function Mode must be "ON" (values 1 ~ 4) in order to hear the effect of Velocity Key Tracking.**

**❻ EG DEPTH**

**Setting Range: -64 ~ ±0 ~ +63**

This allows you to adjust the amount of the changing Cutoff Frequency by the Filter EG.

At "0" the Cutoff Frequency does not change. At "-64" or "+63," the Cutoff Frequency changes by a wide amount.

**❼ DRIVE LEVEL**

**Setting Range: 0 ~ 127**

This allows you to adjust the signal level going into the Filter.

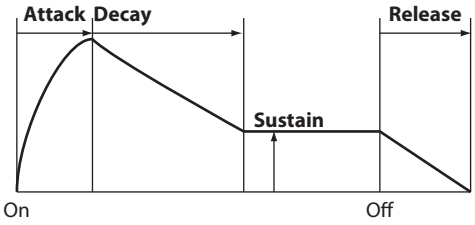
"64" is a "clean" signal with no distortion. A higher value adds distortion.

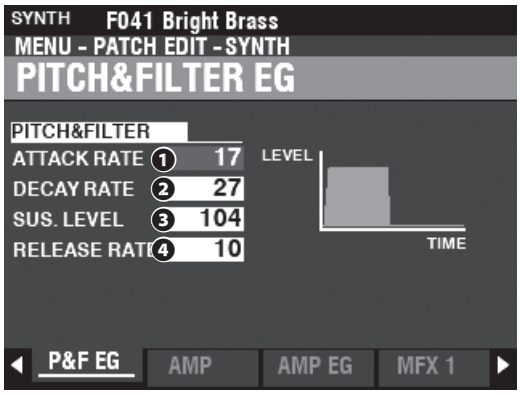
# PITCH & FILTER EG

**SHORTCUT: Press and Hold the [SHIFT] button and move the PITCH & FILTER ENVELOPE [ATTACK], [DECAY], [SUSTAIN] or [RELEASE] sliders.**

The EG (Envelope Generator) allows you to control how the sound changes over time.

This EG affects both the Pitch and the Cutoff Frequency of the Filter.




**❶ ATTACK RATE**

**Setting Range: 0 ~ 127**

This allows you to adjust the time for the sound to increase to its peak value beginning when a key is depressed. A higher value will result in a slower Attack Rate.

**❷ DECAY RATE**

**Setting Range: 0 ~ 127**

This allows you to adjust the time from the peak amount to the Sustain Level (explained below). A higher value will result in a longer Decay Rate.

**❸ SUSTAIN LEVEL**

**Setting Range: 0 ~ 127**

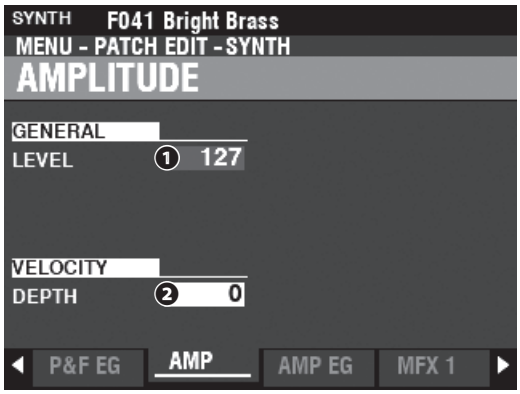
This allows you to adjust the main level which will remain until the key is released. A higher value will result in a higher Sustain Level.

**❹ RELEASE RATE**

**Setting Range: 0 ~ 127**

This allows you to adjust the time for the level to fade from the Sustain Level to zero after the key is released. A higher value will result in a longer Release time.

# AMPLITUDE




This Page allows you to adjust the Parameters controlling loudness.

**❶ OUTPUT LEVEL**

**Setting Range: 0 ~ 127**

This allows you to adjust the overall volume.

**❷ VELOCITY DEPTH**

**Setting Range: 0 ~ 127**

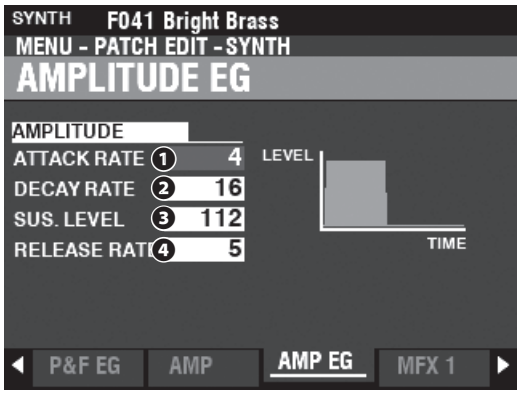
This allows you to adjust how the volume changes by keyboard velocity.

At "0" there is no change in velocity. At "127," the volume is changed by the maximum amount in proportion to the velocity.

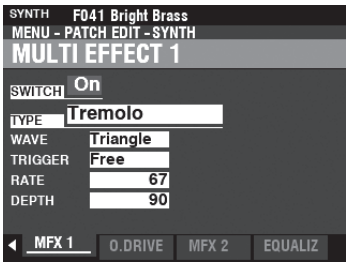
# AMPLITUDE EG

**SHORTCUT: Press and Hold the [SHIFT] button and move the AMPLITUDE ENVELOPE [ATTACK], [DECAY], [SUSTAIN] or [RELEASE] sliders.**

The Amplitude EG is an Envelope Generator which affects Volume. It works in a manner similar to the Pitch&Filter EG's.

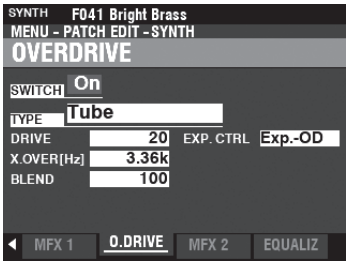


# MULTI EFFECT 1



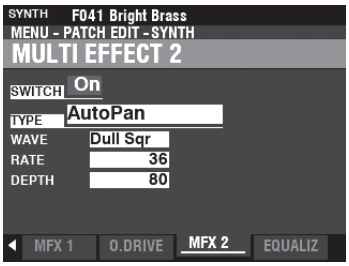

See “Multi Effects 1.” (P. 106)

# OVERDRIVE



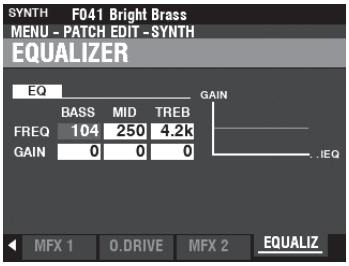

See “Overdrive.” (P. 111)

# MULTI EFFECT 2




See “Multi Effects 2.” (P. 112)

# EQUALIZER



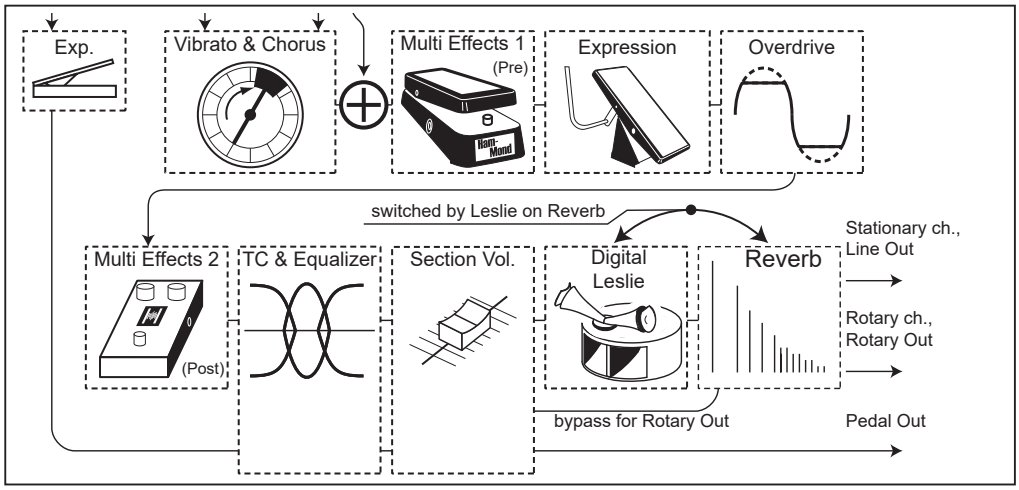

See “Equalizer.” (P. 116)

# SECTION EFFECTS

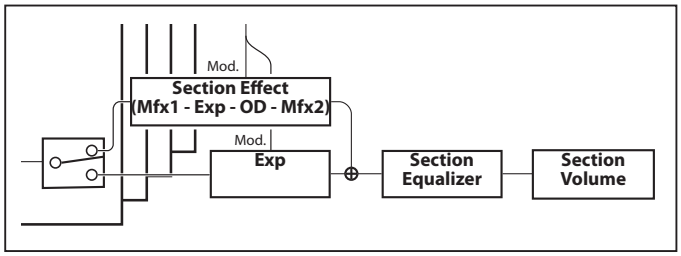
The following pages will explain the Effects for each Voice Section, which are **Multi Effects 1**, **Overdrive**, **Multi Effects 2** and **Equalizer**. Each Section has its own adjustments for these Effects.

## TO LOCATE THIS MODE:

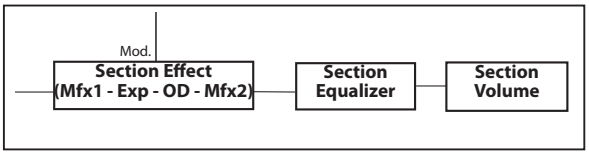
[MENU/EXIT] - **PATCH** - each Section - [ENTER] - **MFX1** / **O. DRIVE** / **MFX2**




ORGAN Section




PIANO/ENSEMBLE Section




MONO SYNTH Section

## MULTI EFFECT 1

**Multi Effect 1** contains effects which are inserted at pre-Overdrive or Expression.

See page 107 for more information about Multi Effects 1.

## OVERDRIVE

**Overdrive** adds distortion to the sound by increasing the pre-amplifier input gain.

See page 111 for more information about Overdrive.

## MULTI EFFECT 2

**Multi Effect 2** contains the effects which are placed after the Expression or Overdrive effect.

See page 112 for more information about Multi Effects 2.

## EQUALIZER

An **Equalizer** is used to adjust the tonal quality. Each of the four Voice Sections has its own Equalizer.

See page 116 for more information about the Equalizer.

# MULTI EFFECT 1

**Multi Effect 1** contains the effects listed below which are inserted at pre-Overdrive or Expression.

## TREMOLO

**Tremolo** is a periodic raising and lowering of the amplitude or volume at a determined rate.

## WAH-WAH

**Wah-Wah** is a periodic emphasis and de-emphasis of upper frequencies by means of a frequency filter to impart a speech-like quality to the sound.

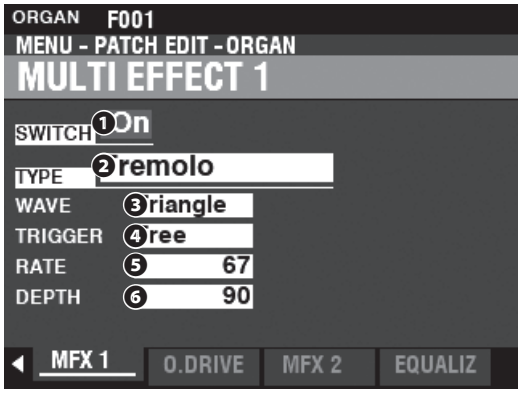
## RING MODULATOR

**Ring Modulation** is a signal-processing effect whereby two different frequencies are mixed together in such a way as to reduce or eliminate the individual frequencies themselves, leaving only the sum and the difference of the two frequencies.

## COMPRESSOR

**Compressor** detects the volume of the source, and reduces or emphasizes the amount of volume change.

## MULTI EFFECT 1




### ❶ SWITCH

**Settings: Off, On**

This allows you to turn a Multi Effect "ON" or "OFF."

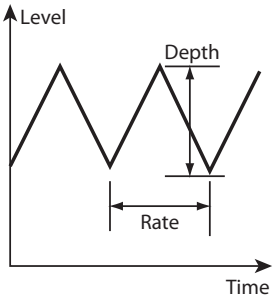
### ❷ TYPE

**Settings: Tremolo, Wah-Wah, Ring Mod., Compressor**

This allows you to select a Multi Effect.

Each Multi Effect has different Parameters. This is explained starting at the right column.

## Tremolo




### ❸ WAVEFORM

This allows you to set which waveform is used to modulate the volume.

**Triangle** ..... Triangle wave.
**Square**..... Square wave.
**Saw Down**..... Sawtooth Downward wave.
**S & H**..... Sample and Hold.
**Dull Sqr**..... Dull Square wave.

### ❹ TRIGGER

This allows you to adjust whether the phase of the modulating waveform will reset each time a key is depressed.

**Free**..... Pressing a key will intercept the LFO at whatever point it happens to be in its cycle.
**Single**..... The LFO of each note oscillates individually. Each LFO will start its cycle when a key is depressed.

### ❺ RATE

**Setting Range: 0 ~ 127**

This allows you to adjust the modulation rate.

A higher value results in a faster rate.

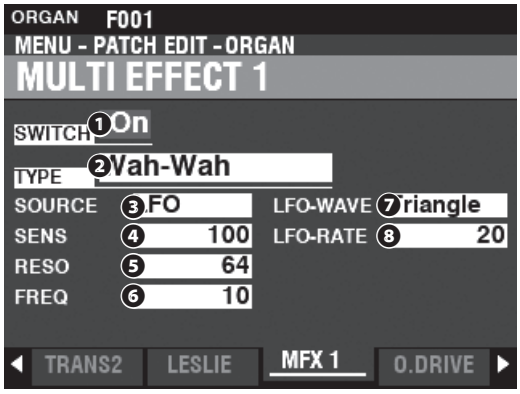
### ❻ DEPTH

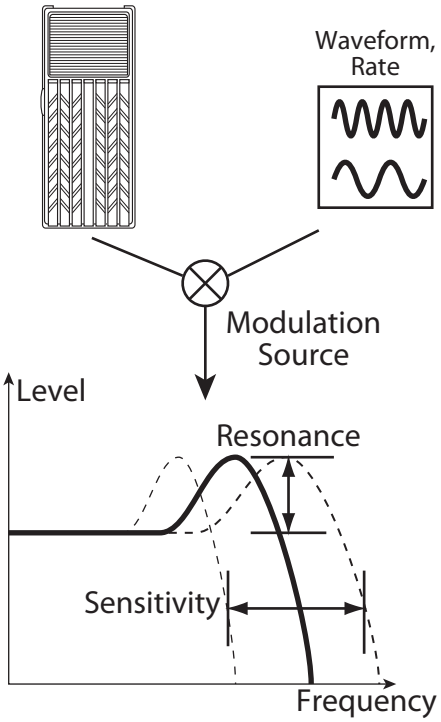
**Setting Range: 0 ~ 127**

This allows you to adjust the depth of the modulation.

At "0" there is no change in volume. The depth increases as the value increases. At "127" the Tremolo alternates between no sound and maximum volume.

## Wah-Wah




### ❸ SOURCE

**Settings: Mod, Exp, LFO, Input**

This allows you to select how to modulate the Wah-Wah effect.

**Mod**.....Allows you to use the [MODULATION] wheel.
**Exp**.....Allows you to use the Expression Pedal.
**LFO**.....Allows a cyclical modulation using a dedicated LFO-Low Frequency Oscillator.
**Input**.....Allows you to use the input audio envelope of the sound engine.

### ❹ SENSITIVITY

**Setting Range: 0 ~ 127**

This allows you to adjust the sensitivity or width of the effect.

A higher value results in a wider dynamic response.

### ❺ RESONANCE

**Setting Range: 0 ~ 127**

This allows you to boost the cut-off frequency of the Low-Pass Filter and create a more pronounced "Wah" effect.

A higher value results in a greater resonance.

### ❻ FREQUENCY

**Setting Range: 0 ~ 127**

This allows you to adjust the central frequency.

A higher value increases the frequency.

### ❼ LFO WAVEFORM

**Settings: Triangle, Square, Saw Down, S & H**

This allows you to select the waveform of the LFO.

**Triangle**.....Triangle wave.
**Square**.....Square wave.
**Saw Down**.....Sawtooth Downward wave.
**S & H**.....Sample and Hold.

**NOTE: The SOURCE must be set to "LFO" to use this Parameter.**

### ❽ LFO RATE

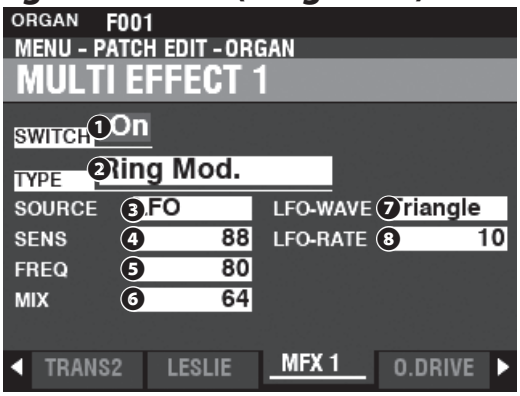
**Setting Range: 0 ~ 127**

This allows you to adjust the rate of the LFO.

A higher value results in a faster rate.

**NOTE: The SOURCE must be set to "LFO" to use this Parameter.**

## Ring Modulator (Ring Mod.)




**❸ SOURCE**

**Settings: Mod, Exp, LFO, Note**

This allows you to select how to modulate the ring frequency.

**Mod** .....Allows you to use the [MODULATION] wheel.
**Exp**.....Allows you to use the Expression Pedal.
**LFO** .....Allows a cyclical modulation effect using a dedicated LFO-Low Frequency Oscillator.
**Note** .....Allows you to use a note on the UPPER Keyboard.

**❹ SENSITIVITY**

**Setting Range: 0 ~ 127**

This allows you to adjust the sensitivity or width of the LFO.

A higher value results in a wider excursion of the LFO.

**NOTE: The SOURCE must be set to "LFO" to hear this effect.**

**❺ FREQUENCY**

**Setting Range: 0 ~ 127**

This allows you to adjust the central ring frequency.

A higher value results in a higher central frequency.

**❻ MIX**

**Setting Range: 0 ~ 127**

This allows you to adjust the volume balance between the "dry" and the effect sounds.

At "0" only the "dry" sound is heard. The effect level becomes greater as the value increases. At "64" the ratio between the "dry" and the effect sounds becomes 1:1. At "127," only the effect sound is heard.

**❼ LFO WAVEFORM**

**Settings: Triangle, Square, Saw Up, S & H**

This allows you to select the waveform of the LFO.

**Triangle** .....Triangle wave.
**Square**.....Square wave.
**Saw Up**.....Sawtooth Upward wave.
**S & H**.....Sample and Hold.

**NOTE: The SOURCE must be set to "LFO" to use this Parameter.**

**❽ LFO RATE**

**Setting Range: 0 ~ 127**

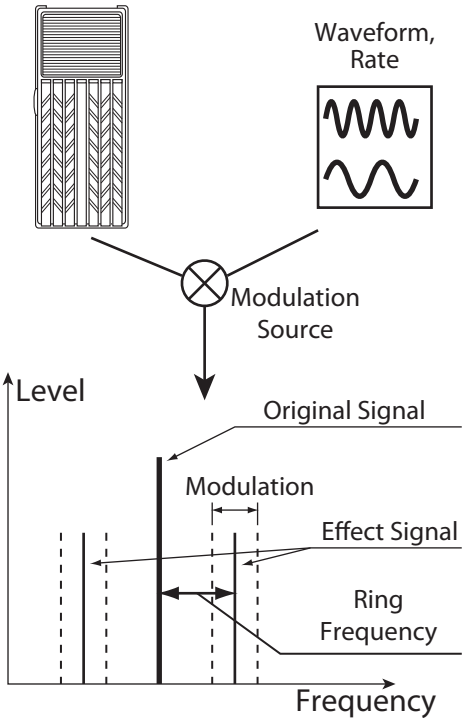
This allows you to adjust the rate of the LFO.

A higher value results in a faster rate.

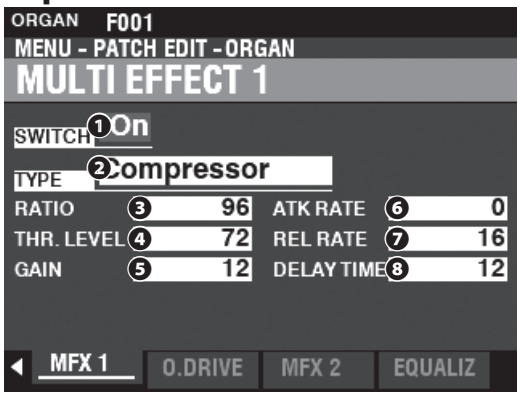
**NOTE: The SOURCE must be set to "LFO" to hear this effect.**

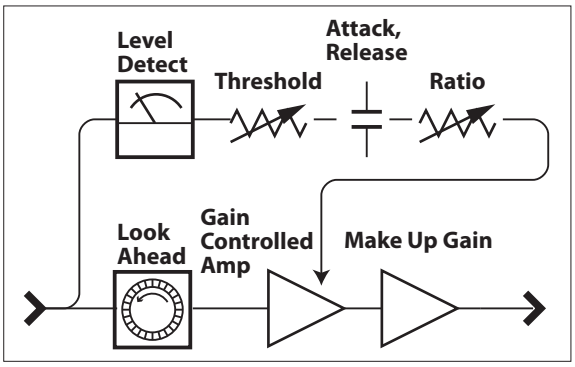
**tips** **RING MODULATION**

"Ring modulation" in analog circuits is accomplished by arranging diodes in a circle or ring, giving rise to the term, "ring modulator." The result is a sound rich in overtones and typically having somewhat of a bell-like or metallic quality. Because of this, the sound is sometimes called a "Klang tone."



## Compressor




**❸ RATIO RATE**

**Setting Range: 0 ~ 127 (1:1 ~ ∞:1)**

This allows you to adjust the rate at which the volume changes between input and output.

A higher value results in a lesser change of volume.

**❹ THRESHOLD LEVEL**

**Setting Range: 0 ~ 127 (-24 ~ ±0 [dB])**

This allows you to adjust the value of the input level at which reduction begins.

A lower value results in compression beginning at a lower input level.

**❺ OUTPUT GAIN**

**Setting Range: 0 ~ 127 (0 ~ +24 [dB])**

This allows you to increase the volume to a level to be reduced by the compression process.

A higher value results in a higher volume.

**❻ ATTACK RATE**

**Setting Range: 0 ~ 127**

This allows you to adjust the rate at which the volume is reduced when the input sound exceeds the threshold level.

A higher value results in a slower reduction rate and the Attack of the sound is emphasized.

**❼ RELEASE RATE**

**Setting Range: 0 ~ 127**

This allows you to adjust the rate at which the volume is reduced when the input sound is lower than the threshold level.

A higher value results in a slower release time and the Return gain is delayed.

**❽ DELAY TIME**

**Setting Range: 0 ~ 127**

This allows you to adjust the amount of time before compression takes effect after a key is depressed.

A higher value results in a longer delay.

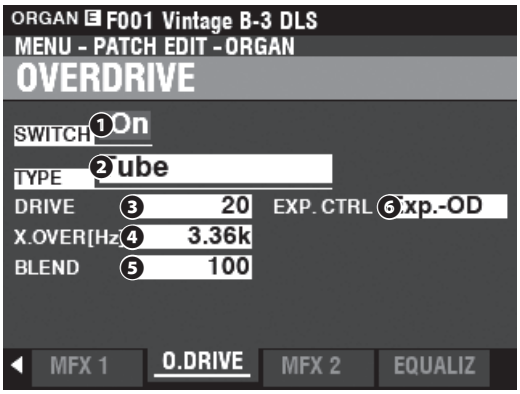
**NOTE: This Parameter also results in faster Attack and Release times.**

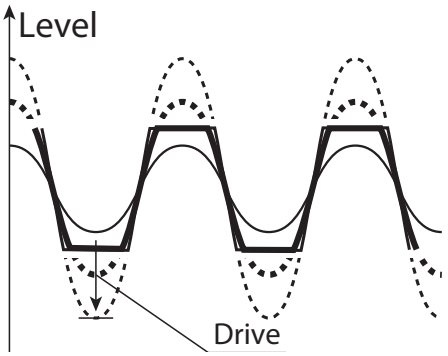
# OVERDRIVE

On the SK PRO, the Overdrive feature is turned "ON and OFF" by the [OVERDRIVE] button. Both the type and amount of Overdrive are controlled by Parameters.

**NOTE: The [OVERDRIVE] Touch Button must be "ON" in order to hear the Overdrive effect.**

**NOTE: The Overdrive is placed between Multi Effect "1" and Multi Effect "2."**




### ❶ SWITCH

**Settings: Off, On**

This allows you to turn Overdrive "ON" or "OFF."

### ❷ TYPE

**Settings: Tube, Solid, Clip**

This allows you to adjust the character of the Overdrive.

**Tube** ..... Soft clipped sound similar to a vacuum tube (valve) amplifier.
**Solid** ..... Hard clipped sound similar to a solid state amplifier.
**Clip** ..... Precision hard-clipped sound.
**EP Amp** ..... Soft clipped sound similar to the amplifier of an Electric Piano.

### ❸ DRIVE

**Setting Range: 0 ~ 127**

This allows you to adjust the amount of the distortion.

A higher value results in more distortion.

### ❹ CROSSOVER FREQUENCY

**Setting Range: 400 ~ 14.7k [Hz]**

This allows you to adjust the upper limit of the frequency range receiving Overdrive.

### ❺ BLEND

**Setting Range: 0 ~ 127**

This allows you to adjust the balance between dry and Overdriven sounds.

At "0" the sound is "dry." At "127," only the Overdriven sound is heard. The numbers in between allow mixing of dry and Overdriven sounds.

**NOTE: The mixing rate may not always be "1:1" if the value is set at 64 due to different envelopes between dry and Overdriven sounds.**

### ❻ EXPRESSION CONTROL

This allows you to adjust the relation between Expression and the Overdrive effect.

**EX-OD** ..... Both volume and distortion will changed by the Expression.
**OD-EX** ..... Only volume will be changed by the Expression.
**OD Only** ..... Only distortion will be changed by the Expression.
**Input** ..... Similar to OD ONLY, but with a smaller amount of change.

**tips** **CROSSOVER FREQUENCY**

In addition to distortion, the Overdrive effect also introduces harmonics (overtones) into the sound. Some of these harmonics may be undesirable and create harmonic interference between dry and overdriven sounds.

By using the Crossover Frequency Parameter to limit the amount of upper frequencies receiving Overdrive, you can minimize or eliminate harmonic interference and create a more pleasing sound.

# MULTI EFFECT 2

**Multi Effect 2** contains the effects listed below and are placed after the Expression or Overdrive effect.

## AUTO PAN

**Auto Pan** smoothly shifts the sound back and forth between Left and Right channels.

## PHASER

**Phaser** will create the effect of splitting an audio signal into two paths and varying their phase relationship to each other, resulting in an alternately hollow and full-bodied sound. It can be described as a "swooshing" or "twisting" effect.

## FLANGER

**Flanging** occurs when two identical signals are mixed together, and one of the signals is time-delayed by a very small amount.

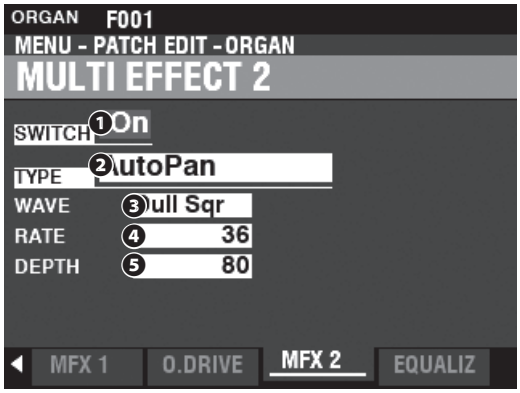
## CHORUS

**Chorus** refers to a shimmering, non-periodic enhancement of the sound. It is intended to be similar to several instruments sounding in unison, and is helpful when a thicker tonal texture is desired.

## DELAY

**Delay** adds echo effects.

## MULTI EFFECT 2




### ❶ SWITCH

**Settings: Off, On**

This allows you to turn a Multi Effect "ON" or "OFF."

### ❷ TYPE

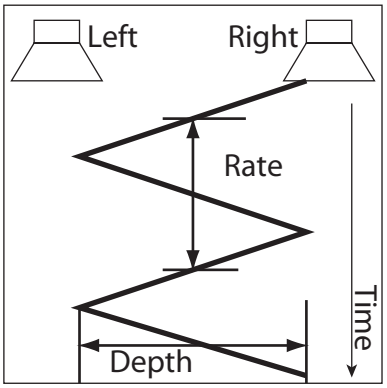
**Setting Range: Auto Pan, Phaser, Flanger, Chorus, Delay**

This allows you to select a Multi Effect.

Each Multi Effect has different Parameters. This is explained starting at the right column.

## Auto Pan

**NOTE: This Parameter is not applicable if a monophonic (single channel) sound system is used or a Leslie Speaker Cabinet is connected.**




### ❸ WAVEFORM

**Settings: Triangle, Square, L to R, S & H, Dull Sqr**

This allows you to select the waveform which will modulate the selected sound.

**Triangle** ..... Triangle wave.
**Square**..... Square wave.
**L to R**..... Left to Right.
**S & H**..... Sample and Hold.
**Dull Sqr**..... Dull Square wave.

### ❹ RATE

**Setting Range: 0 ~ 127**

This allows you to adjust the rate of the modulation.

A higher value results in a faster rate.

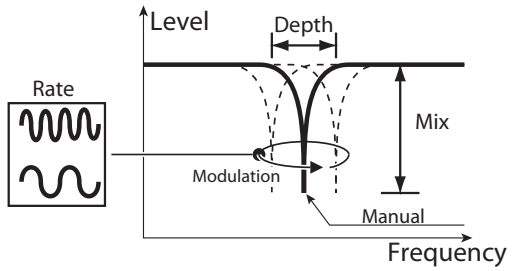
### ❺ DEPTH

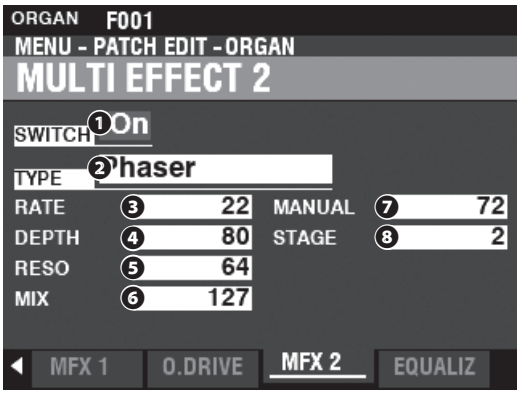
**Setting Range: 0 ~ 127**

This allows you to adjust the depth of the modulation.

At "0" there is zero panning. A higher value results in wider panning.

## Phaser




**❸ RATE**

**Setting Range: 0 ~ 127**

This allows you to adjust the frequency rate.

A higher value results in a faster rate.

**❹ DEPTH**

**Setting Range: 0 ~ 127**

This allows you to adjust the depth of the modulation.

A higher value results in a deeper modulation.

**❺ RESONANCE**

**Setting Range: 0 ~ 127**

This allows you to adjust the resonance (feed-back) amount.

A higher value results in a greater resonance.

**NOTE: At higher values, the sound may be modulated to the point the base frequency is no longer audible.**

**❻ MIX**

**Setting Range: 0 ~ 127**

This allows you to adjust the volume balance between the "dry" and the effect sounds.

At "0" only the "dry" sound is heard. The effect level becomes greater as the value increases. At "64" the ratio between the "dry" and the effect sounds becomes 1:1. At "127," only the effect sound is heard.

**❼ MANUAL**

**Setting Range: 0 ~ 127**

This allows you to set the middle frequency of the phase effect.

A higher value results in a higher frequency.

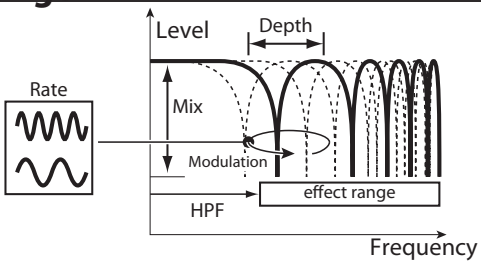
**❽ STAGE**

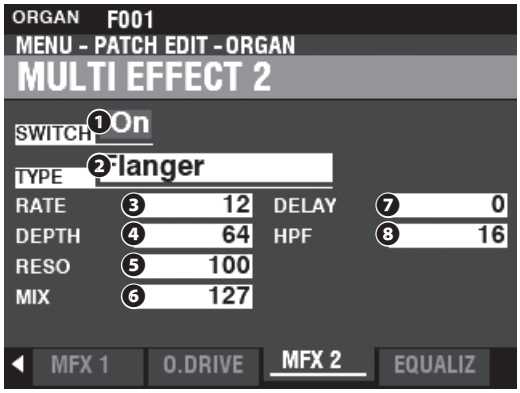
**Setting Range: 2, 4, 6, 8, 10**

This allows you to adjust the complexity or "stage" of the phasing.

A higher value creates more complex effects.

## Flanger




**❸ RATE**

**Setting Range: 0 ~ 127**

This allows you to adjust the modulation rate.

A higher value results in a faster rate.

**❹ DEPTH**

**Setting Range: 0 ~ 127**

This allows you to adjust the depth of the modulation.

A higher value results in a deeper modulation.

**❺ RESONANCE**

**Setting Range: 0 ~ 127**

This allows you to adjust the resonance (feed-back) amount.

A higher value results in a greater resonance.

**❼ MIX**

**Setting Range: 0 ~ 127**

This allows you to adjust the volume balance between the "dry" and the effect sounds.

At "0" only the "dry" sound is heard. The effect level becomes greater as the value increases. At "64" the ratio between the "dry" and the effect sounds becomes 1:1. At "127," only the effect sound is heard.

**❻ DELAY**

**Setting Range: 0 ~ 127**

This allows you to control the delay of the effect sound.

A higher value results in a longer delay.

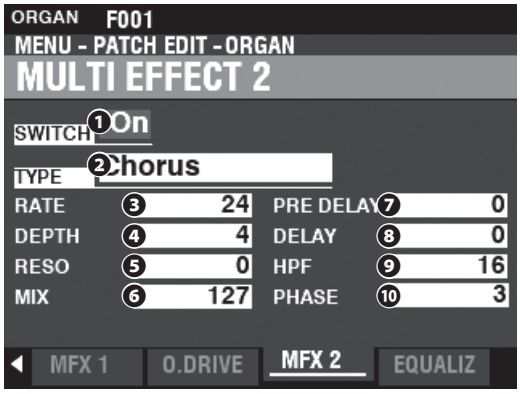
**❽ HPF (High Pass Filter)**

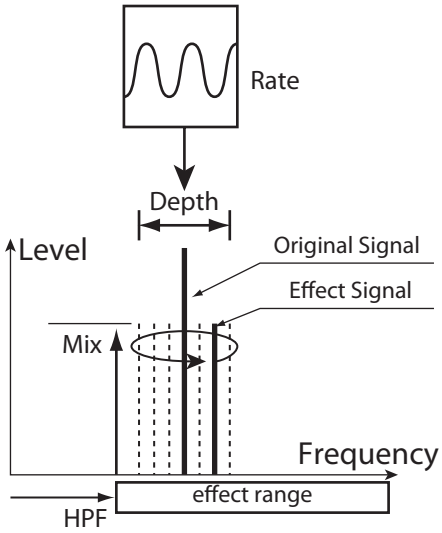
**Setting Range: 0 ~ 127**

This allows you to control the frequency range of the effect.

At "0" the effect is added to all frequencies. The effect is added to the higher frequencies as the value increases.

## Chorus




**❸ RATE**

**Setting Range: 0 ~ 127**

This allows you to adjust the rate of the rising and falling effect.

A higher value results in a faster rate.

**❹ DEPTH**

**Setting Range: 0 ~ 127**

This allows you to adjust the modulation depth.

A higher value results in a deeper modulation.

**❺ RESONANCE**

**Setting Range: 0 ~ 127**

This allows you to adjust the resonance (feed-back) amount.

A higher value results in a greater resonance.

**❻ MIX**

**Setting Range: 0 ~ 127**

This allows you to adjust the volume balance between the "dry" and the effect sounds.

At "0" only the "dry" sound is heard. The effect level becomes greater as the value increases. At "64" the ratio between the "dry" and the effect sounds becomes 1:1. At "127," only the effect sound is heard.

**❼ PRE-DELAY**

**Setting Range: 0 ~ 127**

This allows you to delay the signal for a channel even if the source is Monaural. A higher value creates a time difference between Left and Right to the effect sound.

**❽ DELAY**

**Setting Range: 0 ~ 127**

This allows you to control the delay of the effect sound.

A higher value results in a greater delay.

**❾ HPF (High Pass Filter)**

**Setting Range: 0 ~ 127**

This allows you to control the frequency range of the effect.

At "0" the effect is added to all frequencies. The effect is added to the higher frequencies as the value increases.

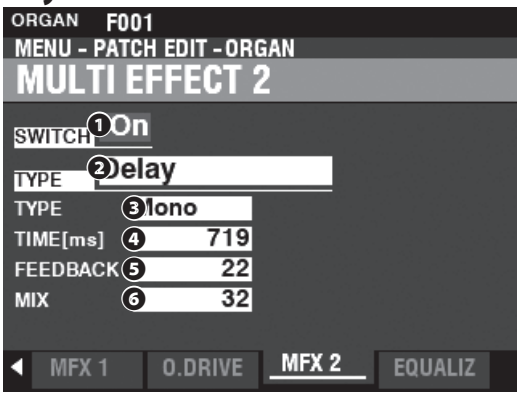
**❿ PHASE**

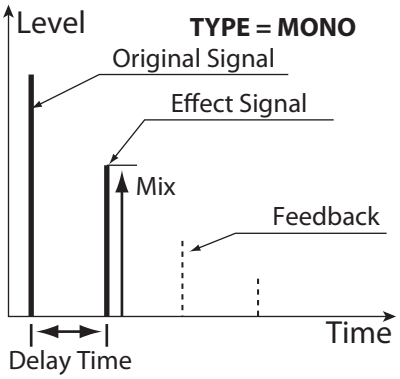
**Settings: 2, 3**

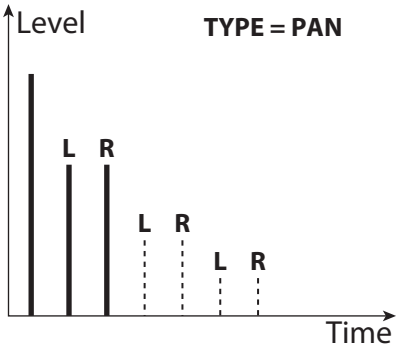
This allows you to select the algorithm of the Chorus effect.

**2** ..... two-phase.
**3** ..... three-phase.

## Delay




### ❸ TYPE

**Settings: Mono, RtoL, LtoR**

This allows you to select how sounds are reflected.

**Mono** ..... A simple monophonic "echo."

**RtoL, LtoR** ..... The delay is alternated in the stereo field. At "RtoL" the delayed sound comes from the right. At "LtoR" the delayed sound comes from the left.

**NOTE: This is not applicable if a monophonic (single channel) sound system is used or a Leslie Speaker Cabinet is connected.**

### ❹ TIME

**Setting Range: 10 ~ 1000 [ms]**

This allows you to adjust the delay time.

A higher value results in a longer delay time

### ❺ FEEDBACK

**Setting Range: 0 ~ 127**

This allows you to adjust the number of repetitions of the effect sound.

A higher value results in a greater number of repetitions.

### ❻ MIX

**Setting Range: 0 ~ 127**

This allows you to adjust the volume balance between the "dry" and the effect sounds.

At "0" only the "dry" sound is heard. The effect level becomes greater as the value increases. At "64" the ratio between the "dry" and the effect sounds becomes 1:1. At "127," only the effect sound is heard.

# EQUALIZER

An Equalizer is used to adjust the tonal quality. The built-in Equalizer on the SK PRO consists of 3 bands. The Bass and Treble bands are handled by "shelf" equalizers, and the Mid band is handled by parametric control.

Each of the four Voice Sections has its own Equalizer, and there is also a Master Equalizer which adjusts the tonal quality for the entire instrument.

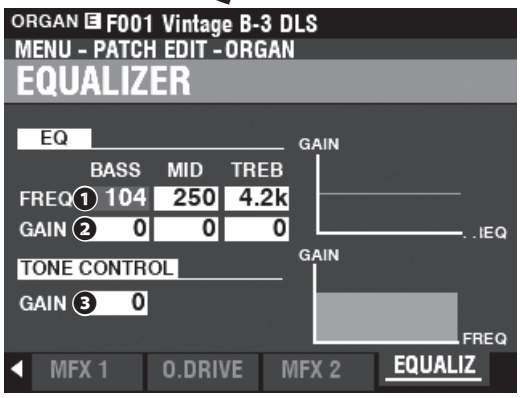
## TO LOCATE THE EQUALIZER FOR EACH VOICE SECTION:

[MENU/EXIT] - **PATCH** - each Section - [ENTER] - **EQUALIZER**

## TO LOCATE THE MASTER EQUALIZER:

[MENU/EXIT] - **SYSTEM** - **SOUND** - [ENTER] - **MASTER EQUALIZER**

# SECTION EQUALIZER

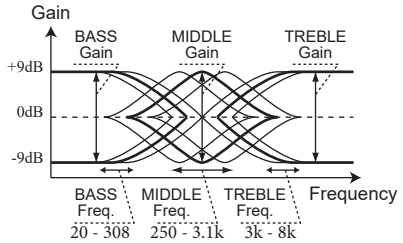



This Page allows you to adjust the settings for the Equalizer in each Voice Section (ORGAN Section shown).

**❶ FREQUENCY**

**Setting Range: 20 ~ 308 [Hz] (BASS)**
**250 ~ 3.1k [Hz] (MID)**
**3k ~ 8k [Hz] (TREB)**

These allow you to adjust the center or "turnover" frequency to be attenuated for BASS, MID and TREBLE respectively.




**❷ GAIN**

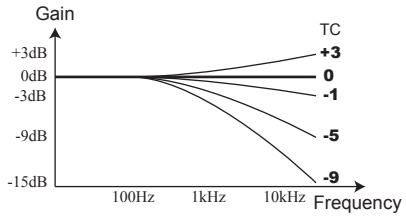
**Setting Range: -9 ~ ±0 ~ +9 [dB]**

These allow you to adjust the Boost/Cut of BASS, MID and TREBLE respectively.

**NOTE: At "0" the frequency response is "flat."**

**❸ TONE CONTROL (ORGAN Voice Section only)**

**Setting Range: -9 ~ ±0 ~ +9 [dB]**




This Parameter duplicates the performance of the tone control on the AO-28 preamp of a B-3 or C-3. Its response is unique, to cut the overall treble above 200Hz gently.

The setting range is -9 to +3, and it becomes neutral when set at "0." "-1" corresponds to the maximum of the B-3/C-3 tone control, "-5," the middle, "-9," the minimum. The tone control found on the B-3/C-3, was only available at "minus" settings, but here you are able to "plus" the settings as well.

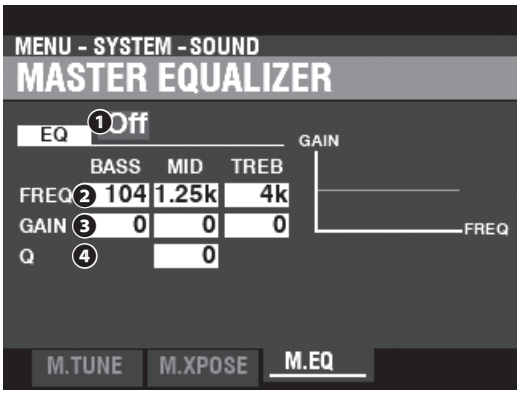
**NOTE: The sound may distort if gains are raised too high. Adjust accordingly.**

**NOTE: This Parameter does NOT affect the PIPE Organ Stops.**

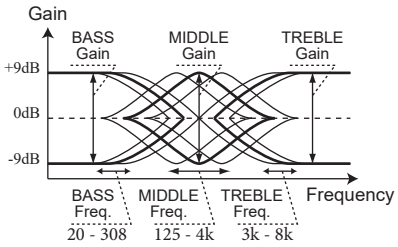
**NOTE: The Parameters described on this page are Patch Parameters, and can be Recorded to a Patch. For a complete list of all Patch Parameters, please see the APPENDIX starting on page 184.**

# MASTER EQUALIZER

**SHORTCUT: Press and Hold the [MASTER EQ] button.**




This Page allows you to adjust the overall tonal quality of the instrument.





### ❶ EQ ON/OFF

This allows you to turn the Master Equalizer "ON" or "OFF."

**NOTE: This Parameter is linked to the [MASTER EQ] button on the Control Panel.**

### ❷ FREQUENCY

**Setting Range: 20 ~ 308 [Hz] (BASS)**
**125 ~ 4k [Hz] (MID)**
**3k ~ 8k [Hz] (TREB)**

These allow you to adjust the center or "turnover" frequency to be attenuated for BASS, MID and TREBLE respectively.

### ❸ GAIN

**Setting Range: -9 ~ ±0 ~ +9 [dB]**

These allow you to adjust the Boost/Cut of BASS, MID and TREBLE respectively.

**NOTE: At "0" the frequency response is "flat."**

### ❹ Q

**Setting Range: 0 ~ 63**

This allows you to adjust the "Q" (Quality Factor) or Resonance of the MID Frequency Band. A higher value results in a greater emphasis of the cutoff frequency, causing a "ringing" effect.

**NOTE: Use this Parameter along with the GAIN Parameter for the maximum effect.**

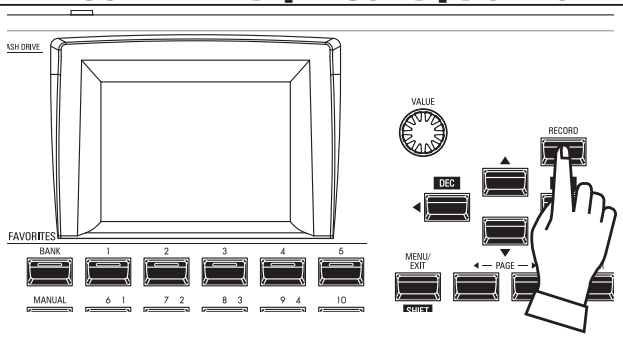
**NOTE: Setting both the GAIN and the Q at maximum will result in the maximum coloration of the sound.**

**NOTE: The Master Equalizer is among the System Parameters. You must Record these Parameters if you want their settings to be remembered the next time the instrument is turned "ON." See page 141 for instructions on how to do this.**

# RECORDING A COMBINATION OR PATCH

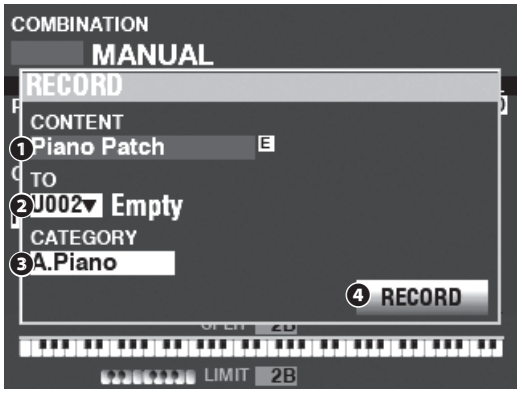
After you have made changes to a Combination or Patch, you will most likely want to Record them for future use. To do this, follow the instructions on this page.

## ① PRESS THE RED [RECORD] BUTTON




After you have made your changes to a Combination or Patch, press the red [RECORD] button. The RECORD Page will display.

## ② SELECT THE ITEM TO RECORD




### ❶ CONTENT

Use the [VALUE] knob to select the Bundle, Combination or Patch you wish to Record. The choices are shown below.

**Bundle**
**Combination Patch**
**Organ Patch**
**Piano Patch**
**Ensemble Patch**
**Synth Patch**

**NOTE: A Bundle allows you to Record COMBINATION, ORGAN and MONO SYNTH Parameters in one group so that Patches can be created in fewer steps. See page 26 for more information about Bundles.**

### ❷ TO

Use the [DIRECTION] [▼] button to move the cursor to "TO."

Use the [VALUE] knob to select the User Number to Record.

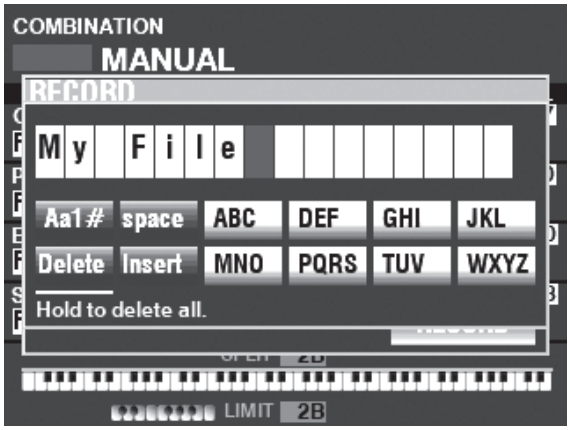
### ❸ CATEGORY

If the Patch to be Recorded is a PIANO or ENSEMBLE Patch, use the [DIRECTION] [▼] button to move the cursor to "CATEGORY" and use the [VALUE] knob to select the Category.

### ❹ RECORD

After you have done Steps 1 through 3 above, use the [DIRECTION] [▼] button to move the cursor to the [RECORD] icon and press the [ENTER] button. The Naming screen will display.

## ③ NAME THE ITEM




Enter the Name.

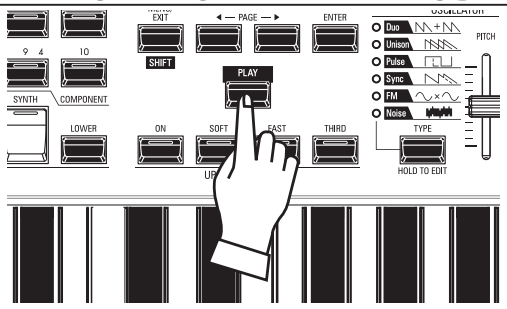
**[Aa1]**.....Changes the character type.
**[1] - [10]**.....Selects the highlighted character.
**[Insert]**.....Inserts a space at the cursor.
**[Delete]**.....Deletes a letter at the cursor.
**[VALUE]**.....Changes the letter at the cursor.

After you are finished Naming, press the [ENTER] button. The message shown below will display for approximately 1 second:


**NOTE: Do not turn the power "OFF" while the above message is displaying.**

**NOTE: If you DO NOT wish to Record, press the [MENU/EXIT] button instead of the [ENTER] button.**

## ④ RETURN TO THE PLAY MODE




Press the [PLAY] button to return to the PLAY mode.

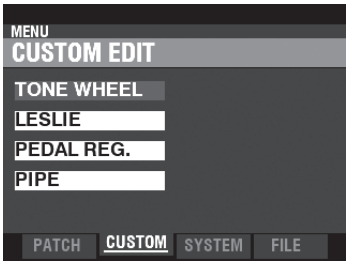
The SK PRO allows you to Record certain Parameters into macro-settings called **Custom Tone Wheels**, **Custom Pipes**, **Custom Pedal Registrations** and **Custom Leslie Cabinets**. In this way you can include multiple Parameter settings as part of a Combination, Patch or Bundle, and include the same settings in multiple Patches.

## TO LOCATE THE CUSTOM EDIT MENU:

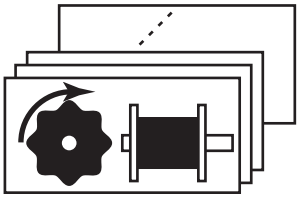
[MENU/EXIT] - **PAGE** [▶]

Use the [DIRECTION] [▼] ]/[▲] buttons to select the CUSTOM EDIT Page you want.

# CUSTOM CONTENTS

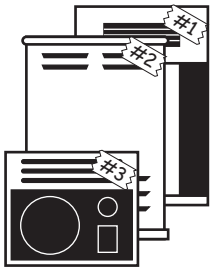



## CUSTOM TONE WHEEL (P. 120)



This allows you to select or create Custom Tone Wheels. A Custom Tone Wheel includes profiles of specific organs, Drawbar Foldback points, levels of each individual Tone Wheel, etc.

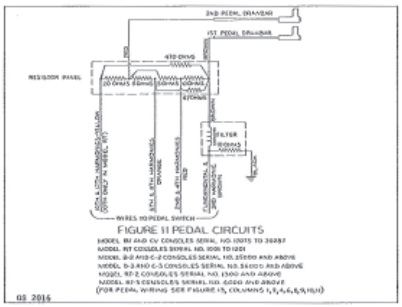
## CUSTOM LESLIE (P. 124)




This allows you to select or create Custom Leslie Cabinets.

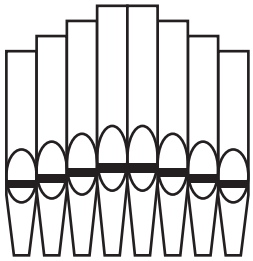
**NOTE: None of the Custom Parameter settings will be remembered unless they are Recorded in one of the Custom units.**

## CUSTOM PEDAL REGISTRATION (P. 123)



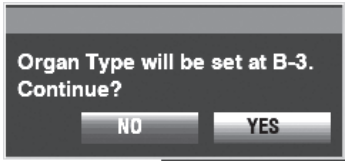

This allows you to select and create Custom Pedal Registrations (registrations for the Pedal Drawbars).

## CUSTOM PIPE (P. 126)



This allows you to select or create Custom Pipes. A Custom Pipe includes assignment of Pipe Voices to the Drawbars as well as Volume settings, Chiff settings, etc.

If you select an ORGAN Type other than the one currently selected, a dialog box similar to the one shown below will display.




If you want to change the ORGAN Type, use the [DIRECTION] [▶] button to move the cursor to the [YES] icon, and press the [ENTER] button. If you select [NO] the previous screen will appear.

# APP (APPLICATION) MENU

The APP (Application) Menu allows you to select various Menu Pages quickly. To display the APP Menu:

1. Select one of the Custom Settings to edit.
2. Press and Release the [≡] button. The Menu option shown below will display:


**REGISTER PAGE TO FAV**.....Registers the currently selected Page to the Favorites.

Press the [ENTER] button to select the displayed option.

# CUSTOM TONE WHEELS

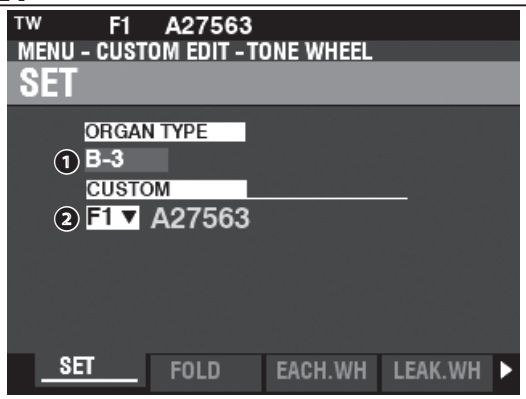
This FUNCTION Mode you allows you select or edit the characteristics of the Tone Wheel Organ.

The Parameters described on these pages are grouped in macro-settings called **Custom Tone Wheels.** These Parameters cannot be Recorded as individual Patch Parameters; however, a Custom Tone Wheel can be Recorded as part of an ORGAN Patch.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **CUSTOM** - **TONE WHEELS** - [ENTER]

## SET




**❶ ORGAN TYPE (P)**

**Setting Range: A-100, B-3, C-3, Mellow**

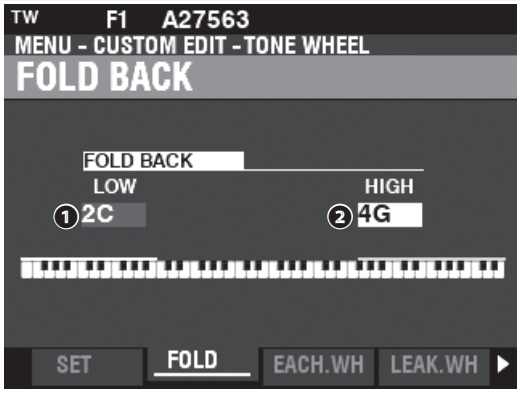
This allows you to select the ORGAN Type to edit.

**❷ CUSTOM SET (P)**

**Setting Range: F1 ~ F3, U1 ~ U3**

This allows you to select the Custom Number to edit. "F" refers to Factory settings which are permanently stored in memory and cannot be overwritten. "U" or User settings can be modified or even overwritten entirely in order to create your own Custom Tone Wheels.

## FOLD BACK




**❶ LOW (TW)**

**Setting Range: 1C ~ 2C**

This allows you to adjust the key-point from which the Drawbar pitches for the Sub-Fundamental (16′) Drawbar "Fold Back" (repeat the pitches played by other notes) on the lower octave of the keyboard.

The bottom key on the keyboard is displayed as "1C."

**❷ HIGH (TW)**

**Setting Range: 4G ~ 5C**

This allows you to adjust the key-point at which the Drawbar pitches "Fold Back" (repeat the pitches played by other notes) in the higher octaves of the keyboard.

**NOTE: The FOLD BACK effect will be heard starting with the 2⅔′ Drawbar (first black Drawbar) and all the other Drawbars which introduce high harmonics.**

**tips** **WHAT ARE "CUSTOM TONE WHEELS?"**

When the tone-wheel Hammonds - B-models, C-models, A-100, etc. - were being manufactured, each individual organ was subjected to a rigorous series of checks and tests to insure the quality of each unit, and to insure that all the units representing a particular model series all sounded alike. However, since the very newest B-3-type organ is at least 45 years old, vintage organs are dependent for their sound on analog components. Several factors may affect the sound of a particular unit. Thus, a B-3 manufactured in 1959 may well have a slightly different tone than one made in 1969, not necessarily because of the year but because of slight differences in component values among other factors. Also, many characteristics of the Hammond Organ, especially as heard in much jazz and rock music, have to do with the overall condition of the instrument. The Custom Tone Wheel feature is included to allow you to find, or create the nearest approximation of what you want your "Hammond Sound" to be.

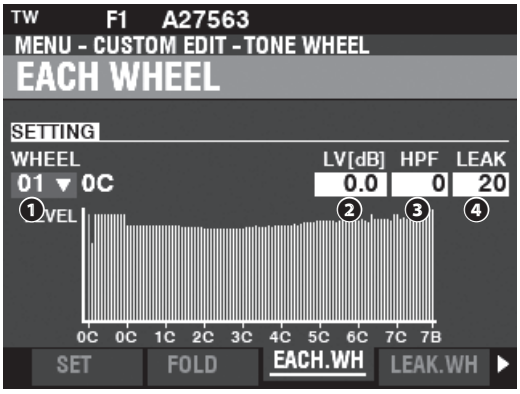
All of the Parameters described on this page and on the following pages comprise a Custom Tone Wheel. These Parameters cannot be Recorded as individual Patch Parameters; however, a Custom Tone Wheel can be Recorded as part of an ORGAN Patch.

**tips** **FOLD BACK**

On the earliest model Hammond Organs, the Sub-Fundamental Drawbar (the one marked, "16‴) would continue to play all the way down to the lowest "C" ("1C"). Newer models such as the Hammond Models X-66, X-77 and Concorde do the same, however, the 8th harmonic Drawbar (the one marked "1‴) continues to play up the keyboard to the next to highest "C" ("5C") on the Keyboard.

On a vintage B-3, C-3, A-100, etc., the lowest note produced by the Sub-Fundamental Drawbar is the 2nd "C" ("2C") from the left end of the Keyboard, while the highest note that can be played by the 8th harmonic Drawbar is the 4th "F#" from the left end of the Keyboard. The lower and higher keys on the keyboard **Fold Back**, in that they repeat the pitches played by other notes.

# EDITING EACH TONE WHEEL




## ❶ WHEEL

This allows you to select the Tone Wheel you want to edit.

The setting range is displayed by "wheel# : note" style,

01: 0C to 12: 0B,
F01: 0C to F12: 0B,
13: 1C to 91: 7F# and
F92: 7G to F96: 7B.

"F" means the wheel used for extended "Fold Back." The non-marked Wheel Numbers indicate original wheels from the B-3/C-3/A-100.

There are two ways to select the Wheel Number:

1. Use the [VALUE] knob, or,
2. If you want to locate a certain Tone Wheel quickly, move the Drawbar slightly while depressing the key you want to regulate (see the illustration on the right).

When the Wheel Number is selected, each Parameter for the wheel (❷ to ❹) is updated.

**NOTE: Make sure [TRANSPOSE] and [OCTAVE] are set at "0" to ensure that the correct Wheel is selected.**

## ❷ LEVEL (TW)

**Setting Range: -Inf, -92.0 ~ +4.0 [dB]**

This allows you to adjust the volume of the selected Wheel.

## ❸ HPF (TW)

**Setting Range: 0 ~ 127**

This allows you to adjust the "HPF" (**High-Pass Filter**), which will remove the higher frequencies of the selected Wheel.

A lower value will introduce a "motor hum" or noise) which will be heard in addition to the Tone Wheel sound.

## ❹ LEAK (TW)

**Setting Range: 0 ~ 127**

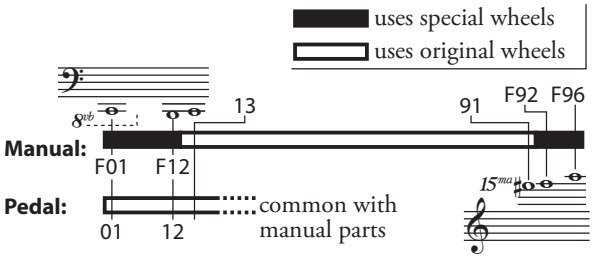
This allows you to adjust the amount of Leakage sound added to the Fundamental sound.

A higher value will result in more Leakage.

**NOTE: See page 122 for more information about Leakage.**

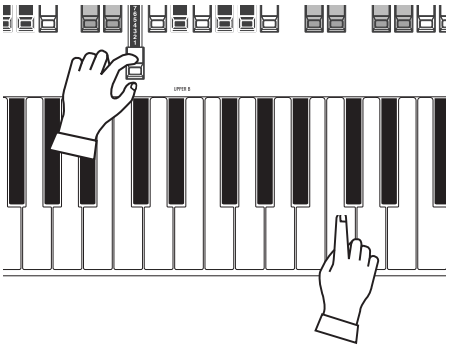
**tips** **"F" WHEELS AND PEDAL WHEELS**

On the B-3/C-3/A-100, there are 91 sounding tone wheels. Wheels #1 through #12 are special wheels called **Complex Wheels** used exclusively for the Pedal tones. Later Hammond models had 96 sounding tone wheels, with the Sub-Fundamental Drawbar (the one marked, "16'") continuing to play all the way down to the lowest "C" ("1C") and 5 additional pitches at the top. On the SK PRO, the extended pitches are designated as "F" (Fold Back) pitches (see the illustration below).

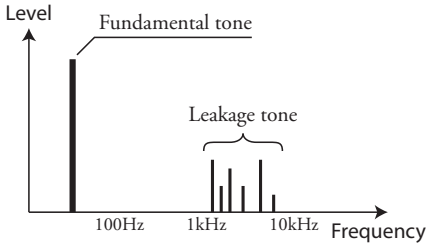



**tips** **DECIBEL (dB)**

A decibel (dB) is a unit for measuring the intensity of a sound. For example, "0dB" is a reference level, "+6dB" doubles the sound intensity and "-6db" decreases the sound intensity by about 50%.



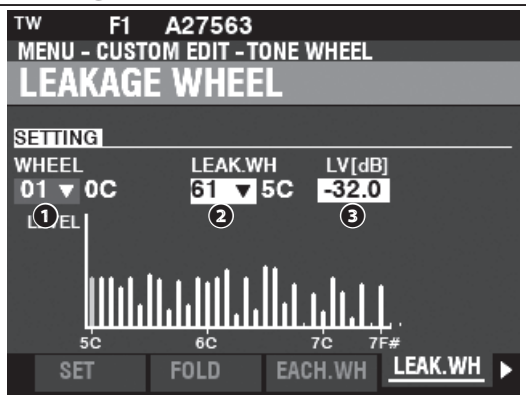
**Selecting a WHEEL NUMBER to edit**




Leakage Tone

**NOTE: The Parameters labeled (TW) are Tone Wheel Parameters. You must Record these Parameters to a Custom Tone Wheel if you want their settings to be remembered the next time the instrument is turned "ON." See page 128 for instructions on how to do this.**

## LEAKAGE WHEEL




**❷ LEAK WH (TW)**

This allows you to add a Leakage Tone to any of the Wheels from "01:0C" to "72:6B" ("Fundamental Wheels") by using the "Leakage Wheels" ("61:6C" through "91:8F - see the illustration on the right).

The Leakage Wheel will sound along with the Fundamental Wheel ❶.

There are two ways to select a Leakage Wheel:

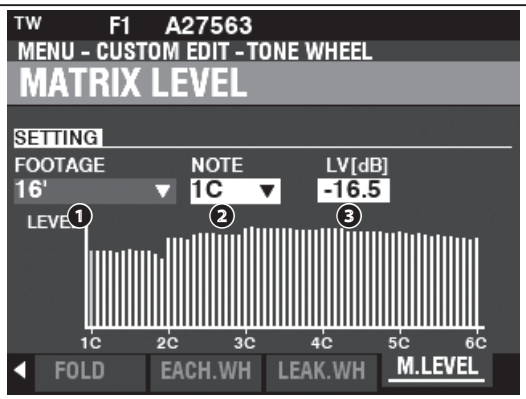
**❸ LEVEL (TW)**

**Setting Range:** -Inf (OFF), -92.0 ~ +4.0 [dB]

This allows you to adjust the Volume of the selected Leakage Wheel.

**NOTE: The overall volume of the selected Wheel may decrease as the Leakage Volume is increased.**

## MATRIX LEVEL




**❶ FOOTAGE (TW)**

**Setting Range:** 16, 5-1/3, 8, 4, 2-2/3, 2, 1-3/5, 1-1/3, 1, Perc 2nd, Perc 3rd

**❷ NOTE (TW)**

**Setting Range:** 1C ~ 6C

This allows you to select **Matrix** to adjust the level of each Drawbar and each note.

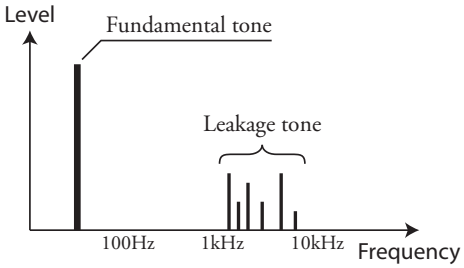
**❸ LEVEL (TW)**

**Setting Range:** -Inf, -92.0 ~ +4.0 [dB]

This allows you to adjust the level of the Matrix selected above.

**tips** **WHAT IS "LEAKAGE?"**

On a tone-wheel Hammond Organ, each tone wheel rotates next to a magnet, making a total of 91 or 96 magnets. The tone wheels are mounted in separate bins to isolate them from each other and prevent the magnets from intercepting frequencies from neighboring wheels; however, a small amount of current may still "leak" through, producing a phenomenon called Leakage. Leakage is usually heard as a "hash" type sound consisting of many frequencies sounding at once. The phenomenon can be thought of as similar to white noise but with somewhat more definition, with individual pitches more discernable. A properly calibrated B-3 will have a minimum of this effect; however, an instrument which has been subjected to hard use over a period of time may exhibit more leakage noise.




**NOTE: The Parameters labeled (TW) are Tone Wheel Parameters. You must Record these Parameters to a Custom Tone Wheel if you want their settings to be remembered the next time the instrument is turned "ON." See page 128 for instructions on how to do this.**

# CUSTOM PEDAL REG.

This FUNCTION Mode allows you to select or edit the registrations for the PEDAL or **Sub-Drawbars**.

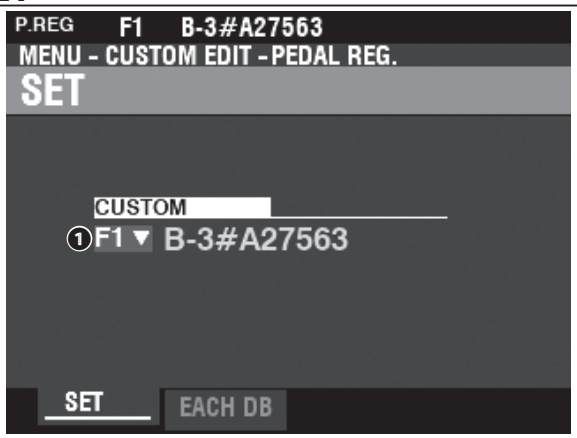
The Parameters described on this page are grouped in macro-settings called **Custom Pedal Registrations**. These Parameters cannot be Recorded as individual Patch Parameters; however, a Custom Pedal Registration (**PEDAL REG.**) can be Recorded as part of an ORGAN Patch.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **CUSTOM** - **PEDAL REG.** - [ENTER]

The Tone Wheel Organs **A-100**, **B-3**, **C-3** and **Mellow** contain the "Sub-Drawbar" registrations. If these ORGAN Types are selected, the Sub-Drawbars will be selected.

## SET



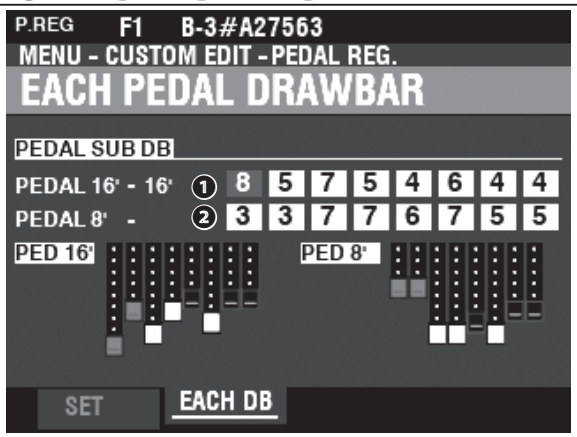

**❶ CUSTOM SET**

**Setting Range: F1 ~ F3, U1 ~ U3**

This allows you to select the Custom Number to edit.

"F" refers to Factory settings which are permanently stored in memory and cannot be overwritten. "U" or User settings can be modified or even overwritten entirely in order to create your own Custom Pedal Registration.

## EACH PEDAL DRAWBAR




**❶ SUB DRAWBAR - 16′ (PR)**

**❷ SUB DRAWBAR - 8′ (PR)**

**Setting Range: 0 ~ 8**

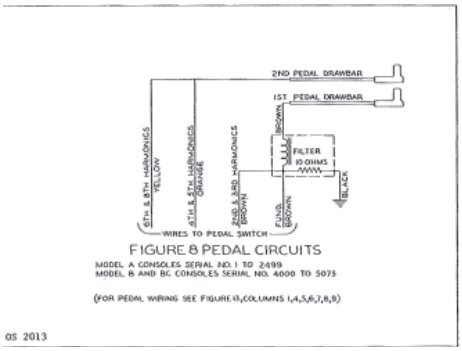
These allow you to adjust the harmonics of each Pedal Drawbar. Adjustable footages are 16′, 5⅓′, 8′, 4′, 2⅔′, 2′, 1⅗′, and 1⅓′.

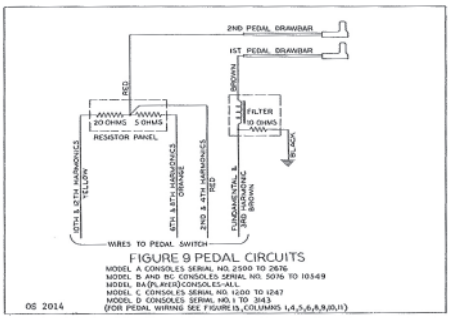
**NOTE: The footages 2⅔′, 2′, 1⅗′ and 1⅓′ in the Sub Drawbar 16′ have softer maximum volumes than the other footages for fine-adjustment.**

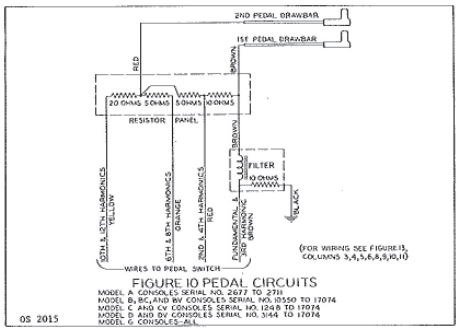
**NOTE: The Parameter labelled (PR) are Pedal Registration Parameters. You must Record these Parameters to a Custom Pedal Registration if you want their settings to be remembered the next time the instrument is turned "ON." See page 128 for instructions on how to do this.**

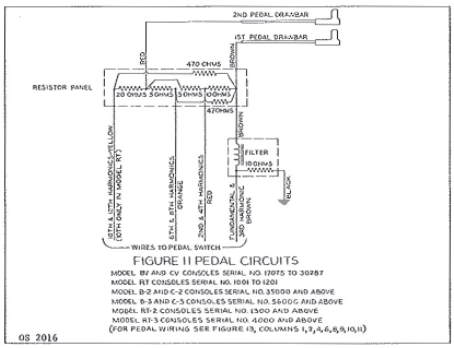
**tips** **WHAT ARE "SUB-DRAWBARS?"**

On a tone-wheel Hammond Organ, the harmonic resources for Pedal tones are combined into two Drawbars each of which draws a combination of harmonics instead of individual harmonics as with the other Drawbars. Over the years, several different schemes were used to voice the Pedal Drawbars. These are shown below.



# CUSTOM LESLIE

This FUNCTION Mode allows you to select or edit the Parameters for the inbuilt digital Leslie.

The Parameters described on these pages are grouped in macro-settings called **Custom Leslie Cabinets.** These Parameters cannot be Recorded as individual Patch Parameters; however, a Custom Leslie Cabinet can be Recorded as part of an ORGAN Patch.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **CUSTOM** - **LESLIE** - [ENTER]

## CABINET NUMBER


**❶ CUSTOM CABINET**

**Setting Range: F1 ~ F8**

This allows you to select the Cabinet Number to edit.

"F" refers to Factory settings which are permanently stored in memory and cannot be overwritten. "U" or User settings can be modified or even overwritten entirely in order to create your own Custom Leslie Cabinets.

## SPEAKER

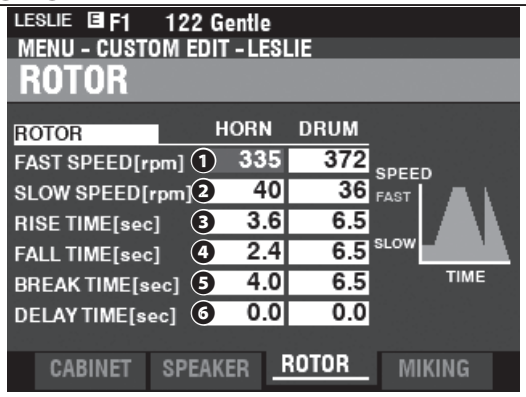
**❶ SPEAKER (L)**

**Settings: L145 Front, L145 Rear, L147 Front, L147 Rear, L122 Front, L122 Rear, Cone Type, PR-40 Type**

This allows you to select the Custom Leslie Cabinet.

**NOTE: See the APPENDIX on page 191 for more information about Custom Leslie Cabinets.**

## ROTOR




**❶ SLOW SPEED - HORN / DRUM (L)**

**Setting Range: 0, 20 ~ 120 [rpm]**

These allow you to set the rotor speed for the "SLOW" or Chorale Mode.

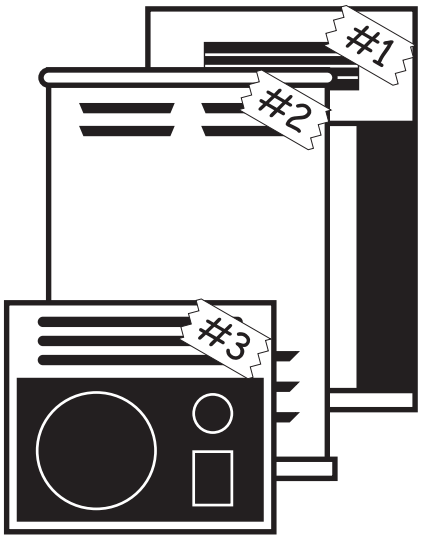
**tips** **WHAT ARE "CUSTOM LESLIE CABINETS?"**

All of the Parameters described on this page and on the following page comprise a Custom Leslie Cabinet. These Parameters cannot be Recorded as individual Patch Parameters; however, a Custom Cabinet can be Recorded as part of a Patch.

The SK PRO has 8 different Custom Leslie Cabinets. These are Factory Cabinets (indicated by an "F") which are permanently written in memory. However, you can create and Record up to 8 User Cabinets (which will be indicated by a "U."

To create and Record a Leslie Cabinet, use the LESLIE FUNCTION Mode to modify the sonic characteristics of one of the "F" Cabinets. After you have made all of your changes, you can Record them as a "U" Leslie Cabinet.

For a list of the Factory Leslie Cabinets consult the APPENDIX at the back of this Manual starting on page 191. For a complete list of Leslie Parameters consult the APPENDIX on page 193.



**❷ FAST SPEED - HORN / DRUM (L)**

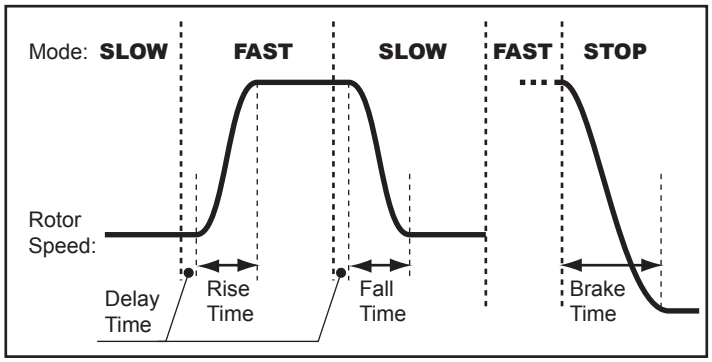
**Setting Range: 0, 200 ~ 500 [rpm]**

These allow you to set the rotor speed for the "FAST" or Tremolo Mode.

**❸ RISE TIME - HORN / DRUM (L)**

**Setting Range: 0.8 ~ 12.5 [sec] (Horn)**
**1.0 ~ 12.5 [sec] (Drum)**

These allow you to adjust the time for the rotors to "ramp up" to "FAST" Mode when switching from 'SLOW' or 'STOP" to 'FAST' Mode.




**❹ FALL TIME - HORN / DRUM (L)**

**Setting Range: 0.8 ~ 12.5 [sec] (Horn)**
**1.0 ~ 12.5 [sec] (Drum)**

These allows you to adjust the time for the rotor to reach the 'SLOW" rotor speed when switching from "FAST" to "SLOW" Mode.

**❺ BRAKE TIME - HORN / DRUM (L)**

**Setting Range: 0.8 ~ 12.5 [sec] (Horn)**
**1.0 ~ 12.5 [sec] (Drum)**

This allows you to adjust the time for the rotor to Stop when switching from "FAST to "SLOW" Mode.

**❻ DELAY TIME - HORN / DRUM (L)**

**Setting Range: 0.0 ~ 1.0 [sec]**

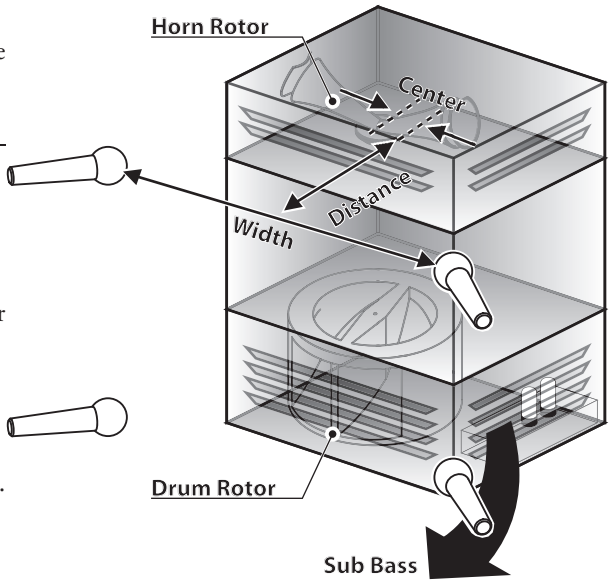
These allow you to adjust the time to start changing the speed, when the Mode is switched.

**tips** **SETTING SLOW AND FAST SPEEDS**

The Leslie Fast and Slow Speed settings are widely variable. However, it is recommended to set the Leslie Speeds at ranges of between 40 and 400 (rpm). This will result in the most pleasing overall sound for most applications.

## MICROPHONE SETTINGS

These Parameters allow you to replicate various Microphone placements of a Leslie Speaker Cabinet.




**❶ LEVEL - HORN / DRUM / SUB BASS (L)**

**Setting Range: -INF, -76 ~ 0 [dB]**

These allow you to adjust the volume levels of the Horn Rotor, Drum Rotor and Sub Bass

**NOTE: The Sub Bass sound is "dry" - not modulated.**

**❷ WIDTH - HORN / DRUM (L)**

**Setting Range: 0 ~ 40 [cm]**

These allow you to adjust the distance between Left and Right Microphones. At "0" there is no separation.

A higher value will increase the stereo separation.

**❸ CENTER - HORN / DRUM (L)**

**Setting Range: -50 ~ +50 [cm]**

This allows you to adjust the offset between the center of two microphones and the pivot of the rotor.

On a Leslie Speaker Cabinet the Horn Rotor rotates counter-clockwise and the Drum Rotor rotates clockwise. The digital Leslie replicates this feature. To emphasize the 'upcoming', set a '+' value for the Horn rotor, and a '-' value for the Drum rotor.

**❹ DISTANCE - HORN / DRUM (L)**

**Setting Range: 30 ~ 200 [cm]**

These are for replicating distance settings between a Leslie Speaker and the microphones. A lower value results in a deeper effect.

**NOTE: The Parameters labeled "L" are Leslie Parameters. You must Record these Parameters to a Custom Leslie Cabinet if you want their settings to be remembered the next time the instrument is turned "ON." See page 128 for instructions on how to do this.**

# CUSTOM PIPE

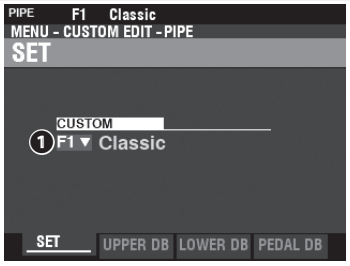
This FUNCTION Mode allows you to select or edit the characteristics of the Pipe Voices.

The Parameters described on these pages are grouped in macro-settings called **Custom PIPES.** These Parameters cannot be Recorded as individual Patch Parameters; however, a Custom Pipe can be Recorded as part of an ORGAN Patch.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **CUSTOM** - **PIPE** - [ENTER]

## SET




**❶ CUSTOM SET**

**Setting Range: F1 ~ F3, U1 ~ U3**

This allows you to select the Custom Pipe Number to edit.

The letter "F" means factory (not re-writable) and "U" means user (re-writable).

**tips** **WHAT ARE "CUSTOM PIPES?"**

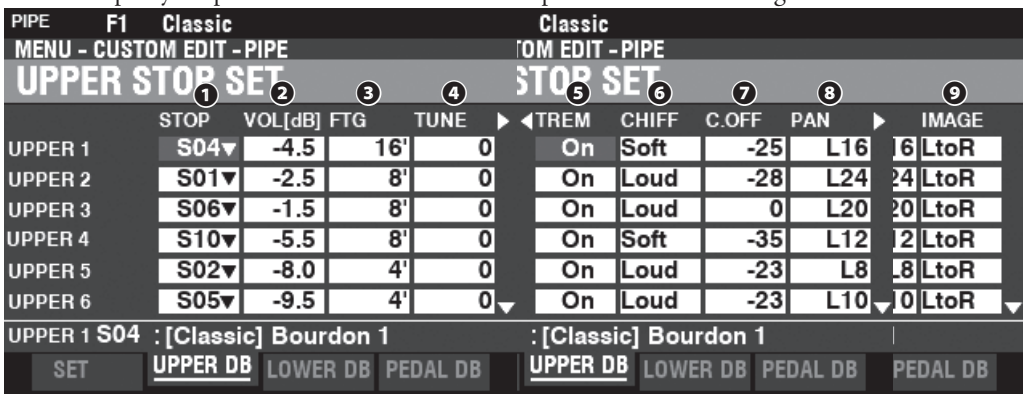
All of the Parameters described on this page and on the following page comprise a Custom Pipe. These Parameters cannot be Recorded as individual Patch Parameters; however, a Custom Pipe can be Recorded as part of a Patch.

The SK PRO has 3 different Factory Custom Pipes, indicated by an "F," which are permanently written in memory. You can create and Record up to 3 User Custom Pipes which will be indicated by a "U."

To create and Record a Custom Pipe, use the PIPE FUNCTION Mode to edit the Parameters of one of the "F" Custom Pipes. After you have made all of your changes, you can Save them as a "U" Custom Pipe.

## UPPER / LOWER / PEDAL STOP SET

This allows you to assign Pipe Voices to the Drawbars and to adjust the Parameters of each Stop to your preference. Each Parameter is explained in detail starting below.




**❶ STOP (Pi)**

This allows you to assign a Pipe Stop to each of the Drawbars.

**NOTE: See page 177 for a list of the available Pipe Stops.**

**❷ VOLUME (Pi)**

**Setting Range: -Inf, -92.0 ~ +4.0 [dB]**

This allows you to adjust the Volume of each Pipe Stop.

**❸ FOOTAGE (Pi)**

**Setting Range: 32, 16, 5 1/3, 8, 4, 2 2/3, 2, 1 3/5, 1 1/3, 1**

This allows you to adjust the Pitch of each Pipe Stop. The pitches are expressed in Footages.

**NOTE: See page 38 for more information about Drawbars and their Footage designations.**

**❹ TUNE (Pi)**

**Setting Range: -50 ~ ±0 ~ +50 [cent]**

This allows you to detune the pitch of the selected Pipe Voice Up or Down by cents (50 cents = one quarter-step).

**❺ TREMULANT (Pi)**

**Settings: Off, On**

This allows you to add Tremulant to the Pipe Voices using the [VIBRATO] controls.

**tips** **TREMULANT**

Pipe organs typically have one or more "tremulants" which vary the air pressure to the pipes periodically, producing a vibrato or tremolo effect.

### ❻ CHIFF (Pi)

**Settings: Off, Soft, Mid, Loud**

This allows you to adjust the amount of Chiff or attack for the selected Pipe Voice.

**Off**.....No Chiff.
**Soft**.....A small amount of chiff.
**Mid**.....A moderate amount of chiff.
**Loud**.....The maximum amount of chiff.

**NOTE: Reed stops such as "Hautbois," "Trompette" and "Cornopean" do not receive Chiff.**

### ❼ CUTOFF (Pi)

**Setting Range: -127 ~ 0**

This allows you to adjust the Cutoff Frequency (brightness).

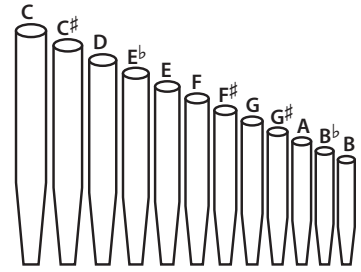
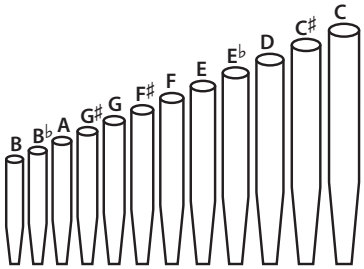
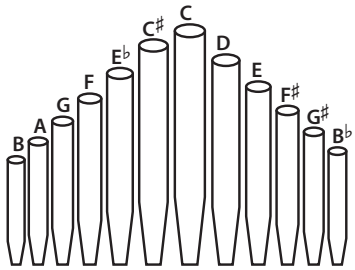
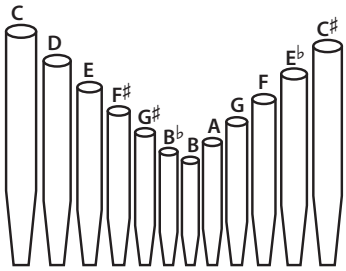
### ❽ PAN (Pi)

**Setting Range: L64 ~ C ~ R63**

This allows you to adjust the basic direction of the pipe.

### ❾ IMAGE (Pi)

This allows you to adjust the arrangement of the pipe.

| | | |
|---|---|---|
| FIX | No image | No imaging - all the notes sound from the center). |
| L-R |  | Pipes producing lower pitches are on the left. Playing notes chromatically going up on the keyboard will cause the pipes on the left to sound first |
| R-L |  | Pipes producing higher pitches are on the right. Playing notes chromatically going up on the keyboard will cause the pipes on the right to sound first |
| PYR |  | When notes are played chromatically going from left to right on the keyboard, the notes start in the center and alternate between left and right |
| INV |  | When notes are played chromatically going up on the keyboard, the notes start at one end and alternate between left and right until they meet in the center. |

**tips** **WHAT IS "CHIFF?"**

On a pipe organ, when a flue stop such as a Diapason, String or Flute is drawn and a key is depressed, a valve opens, and air escapes through the hole in which the pipe sits, allowing the pipe to sound. When the air first enters the pipe, there is a small, short burst of upper harmonics before the tone develops fully. The term "Chiff" was coined by pipe organ makers to describe this sound.

**tips** **WHAT IS "PIPE VOICE IMAGING?"**

The pipes of a pipe organ are arranged into sets called ranks. Each ranks consists of pipes representing a specific sound on the organ - Open Diapason, Trompette, etc. (In keeping with the different philosophies of organ sound, many organ stop names are of European origin; hence the use of French, German, Dutch, etc.)

The pipes of each rank are supported by an assembly called a chest. The pipes can be arranged in many different ways on the chest. The pipe arrangement chosen by the maker depends on several things - aesthetics, musical, etc. - but the four most common ones are shown on the left.

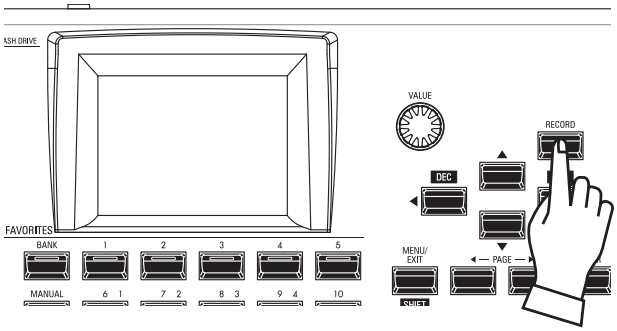
The two pipe placement schemes on the immediate left are sometimes referred to as "C-C#" placement due to chromatic notes being separated.

**NOTE: The Parameters labeled (Pi) are Pipe Parameters. You must Record these Parameters to a Custom Pipe if you want their settings to be remembered the next time the instrument is turned "ON." See page 128 for instructions on how to do this.**

# RECORDING A CUSTOM SETTING

To Record a Custom Setting, do the following:

## ① PRESS THE RED [RECORD] BUTTON




After you have made your changes to a Custom Setting, press the red [RECORD] button. The RECORD Page will display.

## ② SELECT THE ITEM TO RECORD


**❶ TO**

Use the [VALUE] knob to select the User Number to Record.

**NOTE: You can also select a User Number by using the numbered [FAVORITE] buttons to type in the number and pressing the [ENTER] button.**

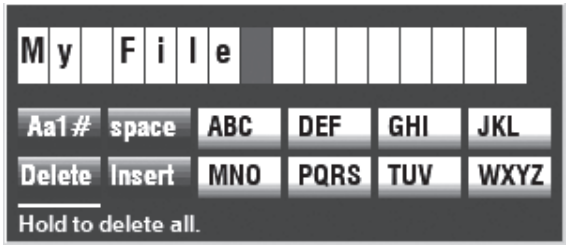
**NOTE: If edits have been made to a Custom Setting, an "E" will appear to the right of the CONTENT icon.**

**NOTE: You CANNOT Record to an "F" setting.**

**❷ RECORD**

After you have selected the User Number, press the red [RECORD] button. The Naming screen will display.

## ③ NAME THE CUSTOM SETTING




Enter the Name.

**[Aa1]**.....Changes the character type.
**[1] - [10]**.....Selects the highlighted character.
**[Insert]**.....Inserts a space at the cursor.
**[Delete]**.....Deletes a letter at the cursor.
**[VALUE]**.....Changes the letter at the cursor.

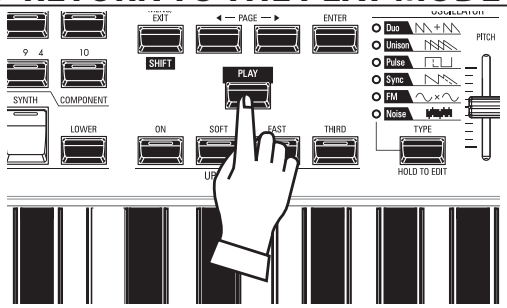
## ④ RECORD THE SETTING

After Naming your Custom Setting, press the [ENTER] button. The message shown below will display for approximately 1 second:


**NOTE: Do not turn the power "OFF" while the above message is displaying.**

**NOTE: If you DO NOT wish to Record, press the [MENU/EXIT] button instead of the [ENTER] button.**

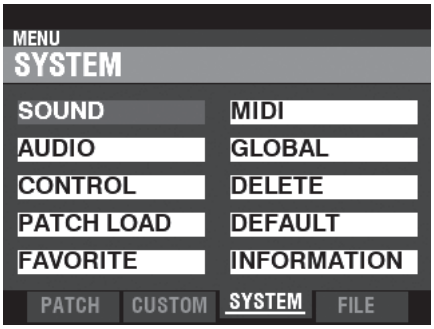
## ⑤ RETURN TO THE PLAY MODE




Press the [PLAY] button to return to the PLAY mode.

**System Parameters** allow you to adjust functions such as the Parameters for the AUDIO jacks, the MIDI Ports, various Controllers, loading and saving Patches, etc. A complete list is shown on this page.

# SYSTEM PARAMETERS AND CONTENTS




## SOUND (P. 130)

- Master Tune
- Transpose
- Master Equalizer

## AUDIO (P. 131)

- [ROTARY OUT] jack
- [PEDAL OUT] jack
- [INDIVIDUAL OUT] jacks
- Audio channels of the Leslie Speaker system

## CONTROL (P. 132)

- Foot Switch
- Expression Pedal
- Damper Pedal
- [USER] button
- [PITCH BEND] wheel
- Tone Wheel Brake
- Display
- Action of the knobs and buttons
- Keyboard

## PATCH LOAD (P. 138)

Parameter range to load when a Combination is selected.

## FAVORITES (P. 139)

- Action of the Favorites feature
- Edit the Favorites for Combinations
- Edit the Favorites for Display pages

## MIDI (P. 156)

- Purpose of the MIDI Ports
- Send/Receive a Memory Dump
- MIDI Channels

## GLOBAL (P. 140)

- Auto Power Off
- USB Mass Storage

## DELETE (P. 142)

Delete user content(s)

## DEFAULT (P. 143)

Initialize each content to factory-default settings

## INFORMATION (P. 144)

- Display Software Versions
- Update Software

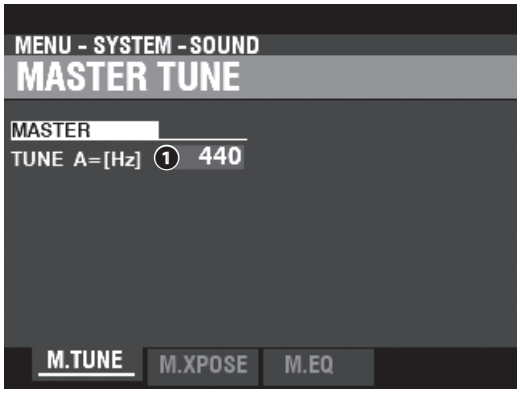
**NOTE: The Parameters in this Mode are System Parameters. You must Record these Parameters if you want their settings to be remembered the next time the instrument is turned "ON." See page141 for instructions on how to do this.**

This FUNCTION Mode allows you to adjust the MASTER TUNE, MASTER TRANSPOSE and MASTER EQUALIZER Parameters which affect the entire instrument.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **SYSTEM** - **SOUND** - [ENTER]

## MASTER TUNE

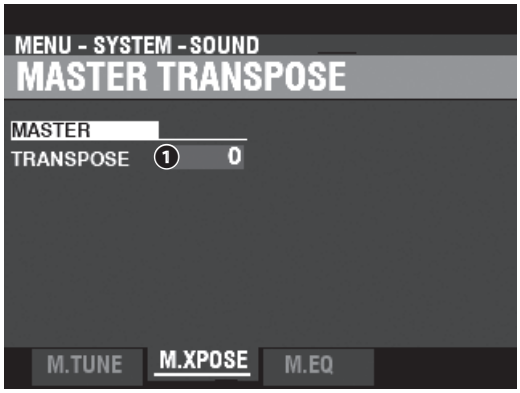



**❶ MASTER TUNE**

**Setting Range: A=430 ~ 450 [Hz]**

This allows you to adjust the pitch of the entire instrument Up or Down 10 cents (100 cents = one semitone or half-step).

## MASTER TRANSPOSE




**❶ MASTER TRANSPOSE**

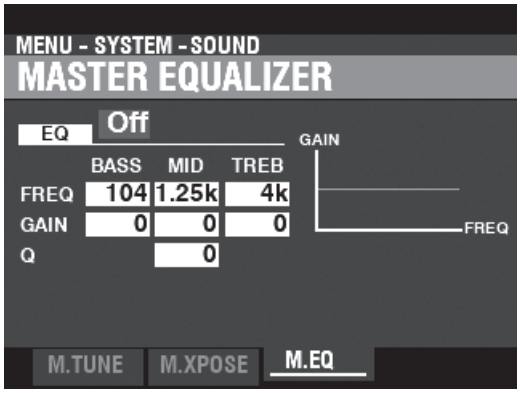
**Setting Range: -6 ~ ±0 ~ +6 [semitones]**

This allows you to Transpose the entire instrument Up or Down 6 semitones.

**NOTE: This Parameter is linked to the [TRANSPOSE] button on the Control Panel.**

**NOTE: When the power to the SK PRO is turned "OFF," this Transpose setting is not retained. It will be set to "0" when the power is next turned "ON."**

## MASTER EQUALIZER




This allows you to adjust the timbre or tone quality of the entire instrument (P. 117).

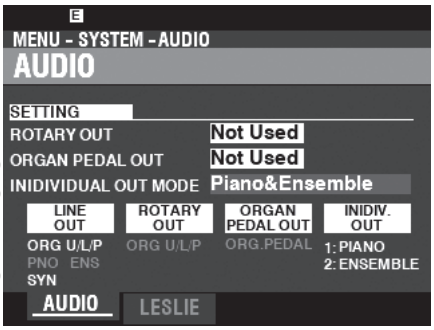
**NOTE: The Parameters in this Mode are System Parameters. You must Record these Parameters if you want their settings to be remembered the next time the instrument is turned "ON." See page141 for instructions on how to do this.**

This FUNCTION Mode allows you to select how to route the audio signals from the instrument.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **SYSTEM** - **AUDIO** - [ENTER]

## OUTPUT




### ❶ ROTARY OUT

**Settings: Not Used, Used**

This allows you to select whether to route an audio signal to the [ROTARY OUT] jack.

**Not Used** ..... The audio from the Tone Wheel and Transistor Organs will be present at the [LINE OUT] jacks.

**Used** ..... The audio from the Tone Wheel and Transistor ORGAN types will be routed to the [ROTARY OUT] jack instead of the [LINE OUT] jacks.

### ❷ PEDAL OUT

**Settings: Not Used, Used**

This allows you to select whether to route an audio signal to the [PEDAL OUT] jack.

**Not Used** ..... The audio from the PEDAL Part of the ORGAN Section will be present at the [LINE OUT] jacks.

**Used** ..... The audio from the PEDAL Part of the ORGAN Section will be routed to the [PEDAL OUT] jack instead of the [LINE OUT] jacks.

### ❸ INDIVIDUAL OUT MODE

**Setting Range: See below**

This allows you to adjust the assignment of audio signals between Sections and [INDIVIDUAL OUT] jacks.

**Off** ..... All audio from the PIANO, ENSEMBLE and MONO SYNTH Sections will be present at the [LINE OUT] jacks.

**Piano Stereo**. The audio from the PIANO Section will be routed to both [INDIVIDUAL OUT] jacks.

**Ensemble Stereo** ..... The audio from the ENSEMBLE Section will be present at both [LINE OUT] jacks.

**Synth Stereo** The audio from the MONO SYNTH Section will be present at both [LINE OUT] jacks.

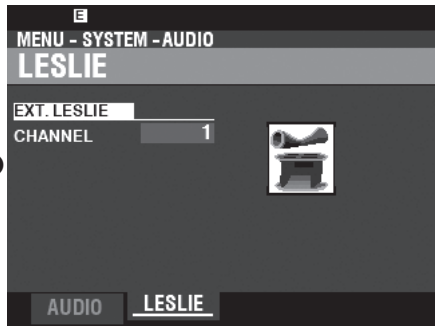
**Piano/ Ensemble** ..... The PIANO Section will be routed to the Left [INDIVIDUAL OUT] jack and the ENSEMBLE Section will be routed to the Right [INDIVIDUAL OUT] jack.

**Piano/Synth**.. The PIANO Section will be routed to the Left [INDIVIDUAL OUT] jack and the MONO SYNTH Section will be routed to the Right [INDIVIDUAL OUT] jack.

**Ensemble/ Synth** ..... The ENSEMBLE Section will be routed to the Left [INDIVIDUAL OUT] jack and the ENSEMBLE Section will be routed to the Right [INDIVIDUAL OUT] jack.

**NOTE: IF the [INDIVIDUAL OUT] jacks are used, the selected Section(s) will not sound through the [LINE OUT jacks.**

## LESLIE




### ❶ EXTERNAL LESLIE CHANNEL

This allows you to adjust the correct routing of the audio signals depending on the Leslie Speaker connected to the instrument via the [LESLIE 11-pin] socket.

| Channel Options | Leslie Rotary channel | LINE OUT and Leslie Stationary channels |
|---|---|---|
| 1 | Tone Wheel and Transistor Organ [BYPASS] not affected | PIANO/ ENSEMBLE/ MONO SYNTH |
| 3 | [BYPASS] affected | |
| 1+LINE | Rotary | Stationary |

**1** ..... If a single channel Leslie Speaker is connected, the audio from the Tone Wheel / Transistor Organs is sent to the Rotary Channel regardless of the status of the [BYPASS] button.

**3** ..... If a multi-channel Leslie Speaker is connected, the audio from the Tone Wheel / Transistor Organs is sent to the Rotary Channel only if the [BYPASS] button is "ON." If the [BYPASS] button is "OFF," the audio from the Tone Wheel / Transistor Organs is sent to the Stationary Channel(s).

**1+LINE**..... If a single channel Leslie Speaker is connected, the audio from the Tone Wheel / Transistor Organs is sent to the Rotary Channel and the audio from the other Voice Sections will be sent to the [LINE OUT] jacks and can be heard through a connected amplifier or speaker system.

**NOTE: The Parameters in this Mode are System Parameters. You must Record these Parameters if you want their settings to be remembered the next time the instrument is turned "ON." See page141 for instructions on how to do this.**

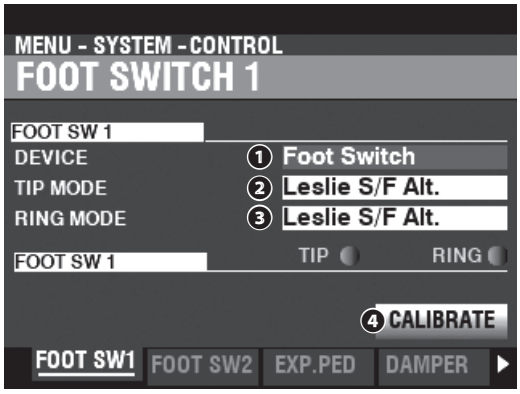
This FUNCTION Mode allows you to select the Parameters for the various Controls, including Foot Switches, Expression Pedals, controls on the Control Panel and the display.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **SYSTEM** - **CONTROL** - [ENTER]

or, Press the [CONTROL] button.

## FOOT SWITCH 1/2




This Page allows you to select the Function of devices connected to the Foot Switch [FOOT SWITCH 1/2] jacks.

### ❶ DEVICE

This allows you to select the device to be connected to the [FOOT SWITCH 1] jack.

**Foot Switch** ..... Foot Switch.
**Leslie Switch** ..... Leslie Switch (such as FS-10TL).

**NOTE: The FOOT SWITCH 2 jack will not accept a Leslie Switch.**

### ❷ MODE - TIP

This allows you to select the function of the "Tip Mode" of a connected Foot Switch.

**Off** ..... No function.
**Expression** ..... Select this option if you wish to connect an Expression Pedal.
**Leslie S/F Alt, Mom, Tri** ..... Allows you to switch the Leslie Rotors among "Slow/Fast/Stop."
**Alt** ..... Alternates between "Fast/Slow" or "Fast/Stop" depending on the position of the [STOP] button.
**TRI** ..... Switches to Stop when the foot switch is pressed and held down for approximately 1 second.
**MOM** ..... Switches to Fast while the foot switch is held down. When released, it switches to either Slow or Stop depending on the position of the [STOP] button.
**Tone Wheel Brake** ..... Allows you to bend the pitch, with the amount being determined by a Parameter setting.
**Favorite Fwd, Rev** ..... Allows you to move Forward or Backward through the Favorites.
**Spring Shock** ..... Allows you to produce the effect of a Spring Reverb unit being jostled.
**Delay Time** ..... Allows you to adjust the Delay Time of the Effects, at the interval of pressing the Foot Switch. The delay is heard while the Foot Switch is held down (see page 77).
**Organ U&L Sustain** ..... Allows you to add Sustain to the UPPER/LOWER Part(s) of the ORGAN Section.
**Pedal To Lower** ..... Allows you to turn the [PEDAL TO LOWER] button "ON."
**Bass 1C - Bass 3C** ..... Allows you to trigger the specified note of the PEDAL Part.
**ProChord** ..... Allows you to add ProChord harmony.

**NOTE: All of the above functions can be set for either Tip or Ring Mode. However, Ring Mode will have no effect if only one Foot Switch is connected to the FOOT SW jack.**

### ❸ MODE - RING

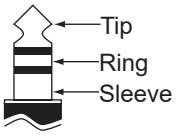
This allows you to select the function of the "Ring Mode" of a connected Foot Switch.

### ❹ CALIBRATE

This allows you to configure a Foot Switch to work properly with the SK PRO. To set this Parameter, move the cursor to this icon and press the [ENTER] button without pressing the Foot Switch.

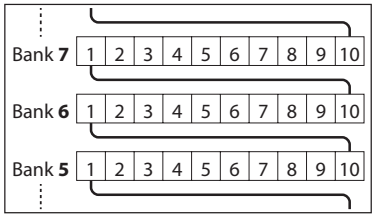
**tips** **WHAT IS "TRS?"**

TRS is an acronym for "Tip-Ring-Sleeve," and refers to the fact that a connecting plug can have more than one connector. Using a Stereo Adapter, more than one Foot Switch can be connected to the SK PRO, thereby allowing you to control more than one function using the same Foot Switch. jack.




**tips** **FAVORITE FORWARD/REVERSE**

By selecting "Favorite Fwd, Rev," Favorites can be selected sequentially by using the Foot Switch to advance either forward or backward. Also, if either "1" or "10" are selected, the sequence will "roll over" to the next numbered Bank (see the illustration below).




**tips** **SPRING SHOCK**

"Spring Shock" occurs when the springs in a spring reverb unit move around and strike the reverb tank, resulting in a loud "bang." This has usually been regarded as a negative effect; however, some modern and progressive music uses this as a musical effect. This Parameter allows you to introduce the effect of a spring reverb being jostled.

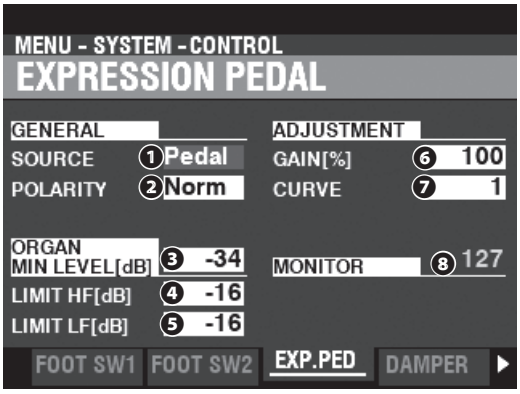
**tips** **BASS 1C - BASS 3C**

Many jazz and blues organists provide a bass line with the left hand on the Lower Manual and strike one Pedal note at the onset of each bass note to give the effect of a plucked string bass (called a "thump"). The BASS 1C - BASS 3C Parameter allows the SK PRO to replicate this effect.

**tips** **CALIBRATE**

Some Foot Switches, such as Hammond, are "+" or "positive" (make contact when pressed) while others are "-" or "negative" (break contact when pressed). The CALIBRATE Parameter allows you to configure a Foot Switch so that it will function correctly with the SK PRO.

## EXPRESSION PEDAL



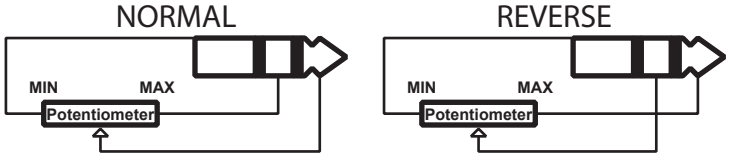

This Page allows you to control how a connected Expression Pedal will function.

### ❶ SOURCE

This allows you to select the source of expression control.

**Exp. Pedal**..... Instrument volume is controlled by a connected Expression Pedal.
**MIDI**..... MIDI Expression Data (CC#11) will be received at the UPPER Keyboard Channel.
**Both**..... A connected Expression Pedal will control both instrument volume and MIDI Expression data.

### ❷ POLARITY




This allows you to set the polarity type of a connected Expression Pedal.

**Normal**..... Hammond EXP-50J pedal etc.
**Reverse**..... Expression Pedal with reverse polarity.

### ❸ ORGAN MINIMUM LEVEL

**Setting Range: Off, -40 ~ 0 [dB]**

This allows you to set the amount of volume when the Expression Pedal is "closed" or set at its minimum position. At "0" no sound will be heard.

### ❹ LIMIT HF

**Setting Range: Off, -40 ~ 0 [dB]**

This allows you to adjust the amount of High Frequencies (above 800Hz) that will be heard when the Expression Pedal is set at minimum.

### ❺ LIMIT LF

**Setting Range: Off, -40 ~ 0 [dB]**

This allows you to adjust the amount of Low Frequencies (below 800Hz) that will be heard when the Expression Pedal is set at minimum.

### ❻ GAIN

**Setting Range: 70 ~ 130 [%]**

This allows you to adjust the range of a connected Expression Pedal. You can select from "70%" through "130%;" however, the amount of audible change may differ depending on the specific Expression Pedal used. Use this Parameter to obtain the desired response from your particular pedal.

### ❼ CURVE

**Setting Range: 1 ~ 3**

This allows you to set the "curve," or change of expression value corresponding to the angle of the Expression Pedal when depressed (see the illustration on the right).

### ❽ MONITOR

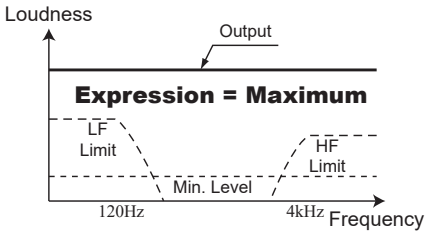
**Setting Range: 0 ~ 127**

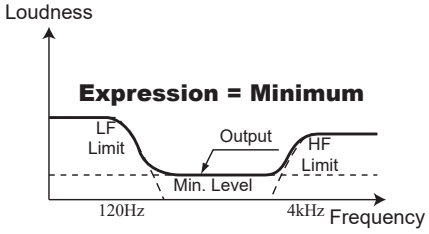
This allows you to display the current Expression Value, with "0" being minimum Expression (no audible sound) and "127" being maximum Expression. The Expression Monitor can be useful as a troubleshooting aid if you either don't hear any sound or can't change the volume using a connected Expression Pedal.

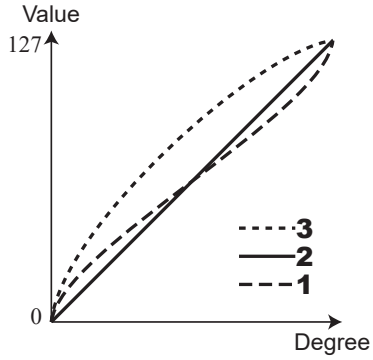
**tips** **EXPRESSION LIMIT**

On many home audio components, there is a control called "Loudness." This is intended to correct an anomaly of the human ear whereby high and low frequencies appear to be lacking at low volume levels.

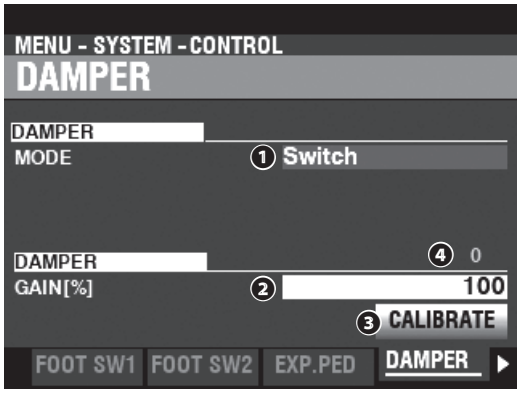
The SK PRO incorporates a "Loudness" algorithm similar to the one found on home audio. At lower volume levels, both high and low frequencies are boosted so that a flatter frequency response will be perceived by the ear.



## DAMPER




This Page allows you to adjust Parameters for the Damper Pedal.

**❶ TYPE**

This allows you to adjust the type of the Damper Pedal to connect.

**SWITCH**..... Use "switch" type pedal such as VFP1
**HALF-Y**..... Use "potentiometer" type Y
**HALF-R**..... Use "potentiometer" type R
**HALF-K**..... Use "potentiometer" type K

**❷ GAIN**

**Setting Range: 70 ~ 130 [%]**

This allows you to adjust the range of a connected Damper Pedal. You can select from "70%" through "130%;" however, the amount of audible change may differ depending on the specific Damper Pedal used. Use this Parameter to obtain the desired response from your particular pedal.

**❸ CALIBRATE**

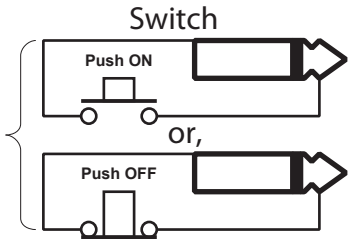
This allows you to configure a Damper Pedal to work properly with the SK PRO. To set this Parameter, move the cursor to this icon and press the [ENTER] button without pressing the Damper Pedal.

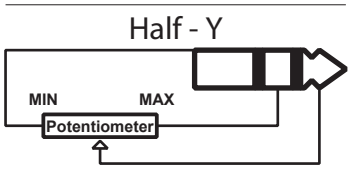
**❹ MONITOR**

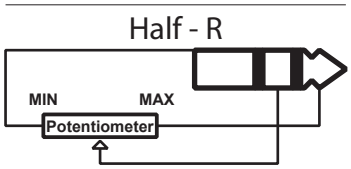
This allows you to see the current Damper value.

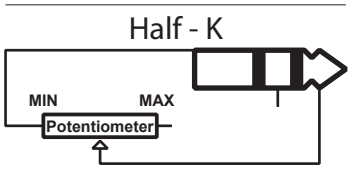
**tips** **DAMPER TYPES**

There are various types of Damper or Sustain Pedals. The SK PRO supports the types shown below.

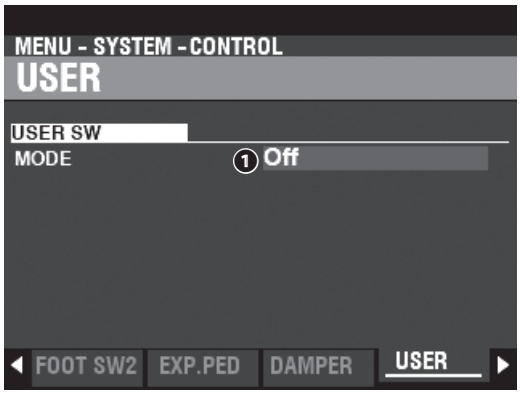



## USER

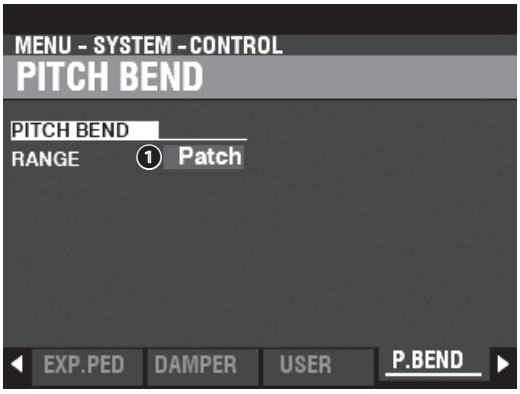



**❶ MODE**

This allows you to assign a function to the [USER] button.

**Off**..... No function.
**Pedal Sustain** ..... Allows you to turn Pedal Sustain "ON" or "OFF."
**Organ Upper Sustain** ..... Allows you to turn Organ Upper Sustain "ON" or "OFF."
**Organ Lower Sustain**..... Allows you to turn Organ Lower Sustain "ON" or "OFF."
**Tone Wheel Brake**..... Allows you to bend the pitch, with the amount being determined by a Parameter setting.
**Spring Shock**..... Allows you to produce the effect of a Spring Reverb unit being jostled.
**MFX2 Delay Time** ..... Allows you to adjust the Delay Time of the Effects, at the interval of pressing the [USER] button. The delay is heard while the [USER] button is held down (see page 77).
**MFX1/2**..... Allows you to turn each Section Effect "ON" or "OFF."

## PITCH BEND




This allows you to adjust the Pitch Bend functions.

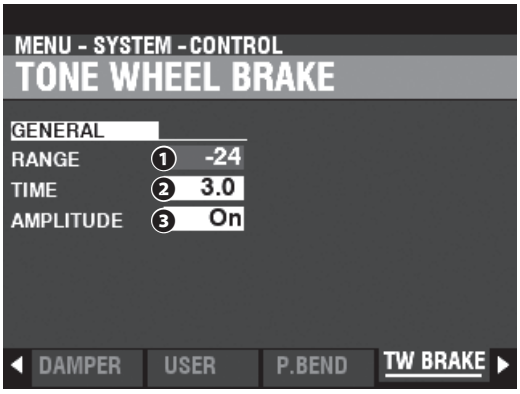
**❶ RANGE**

**Settings: Patch, 0 ~ 12 [semitones]**

This allows you to adjust how the [PITCH BEND] wheel will respond when a Combination or Patch is selected.

**Patch**..... Uses the value specified for the Combination or Patch.
**0 ~ 12**..... Sets the Pitch Bend range by semitones priority over the Combination or Patch.

## TONE WHEEL BRAKE




This allows you to adjust the Tone Wheel Brake effect.

**❶ RANGE**

**Setting Range: -24 ~ +12 [semitones]**

This allows you to adjust the range of the pitch change.

**❷ TIME**

**Setting Range: 0.1 ~ 5.0 [seconds]**

This allows you to adjust the rate at which the pitch changes.

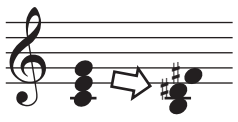
**❸ AMPLITUDE**

**Settings: Off, On**

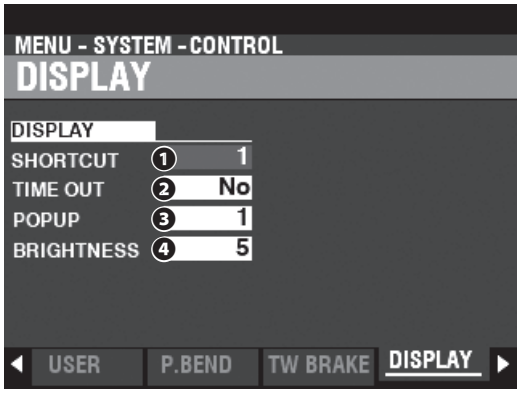
This allows you to adjust whether the Volume changes or not along with the pitch.

**tips** **TONE WHEEL BRAKE**

On a vintage B-3/C-3/A-100, the synchronous motor running the tone generator turns at a constant speed; therefore "pitch bending" is not possible. However, some jazz players discovered that by turning the RUN switch "OFF" then quickly back "ON" again, a pseudo "pitch-bend" effect could be created. You can replicate this effect using this function.



## DISPLAY




This Page allows you to adjust the performance of the display.

❶ **SHORTCUT**

**Setting Range:** 0 ~ 2 [sec], No

This allows you to select how long a button must be held before the Menu Page controlled by that button appears.

**NOTE: If you select "No" (the Shortcut feature is disabled.**

❷ **TIME OUT**

**Setting Range:** 4 ~ 16 [sec], No

This allows you to select how long the display will continue to show a Menu Page before reverting to PLAY Mode.

**NOTE: If you select "No," the current Menu Page will continue to display until another page is selected.**

❸ **POP UP**

**Setting Range:** No, 0.5 ~ 2.0 [sec]

This allows you to select the interval at which a "Pop Up" is displayed when you move a knob such as [REVERB} or one of the Voice Section [VOLUME] controls.

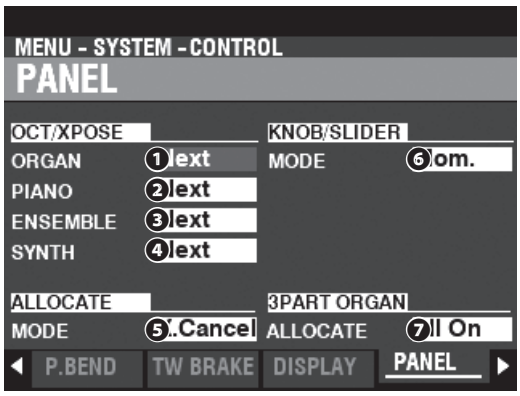
**NOTE: If you select "No," the current Pop Up will continue to display until another page is selected.**

❹ **BRIGHTNESS**

**Setting Range:** 1 ~ 10

This allows you to adjust the brightness of the backlight of the display.

## PANEL




This Page allows you to adjust the performance of the various controls on the Control Panel.

❶ **OCT / XPOSE - ORGAN**

❷ **OCT / XPOSE - PIANO**

❸ **OCT / XPOSE - ENSEMBLE**

❹ **OCT / XPOSE - SYNTH**

**Setting Range:** Every, Next

These allow you to adjust how the OCTAVE [DOWN] [UP] buttons control Octave selection or Transposition.

**Every**..... The Octave or Transposition will change while keys are pressed and held.

**Next**..... If a key or keys are pressed and held and the Octave or Transposition is changed, the

key(s) must be released and pressed again before the Octave or Transposition takes effect.

### ❺ ALLOCATE MODE

**Settings: Additive, X-Cancel**

This allows you to select the performance of the [ALLOCATE] buttons.

**Additive**.....The [ALLOCATE] buttons will turn "ON" and "OFF" individually.

**X-Cancel**......"Cross-Canceling" - When one [ALLOCATE} button is turned "ON," any other [ALLOCATE] buttons that are "ON" will turn "OFF." If an [ALLOCATE] button is already "ON," pressing and holding it while turning another [ALLOCATE] button "ON" will light both buttons.

### ❻ KNOB / SLIDER MODE

**Settings: Mom, Access**

This allows you to adjust how a value is affected when a knob or slider is moved.

**Mom**.....When a knob or slider is moved, the value will change immediately.

**Across**.....When a knob or slider is moved the value will not change until the current value is arrived at by the movement of the knob or slider, at which point the value will change.

### ❼ 3 PART ORGAN ALLOCATE

**Settings: No, All On**

This allows you to select how the [3 PART ORGAN] button interacts with the [ALLOCATE] [ORGAN] button.

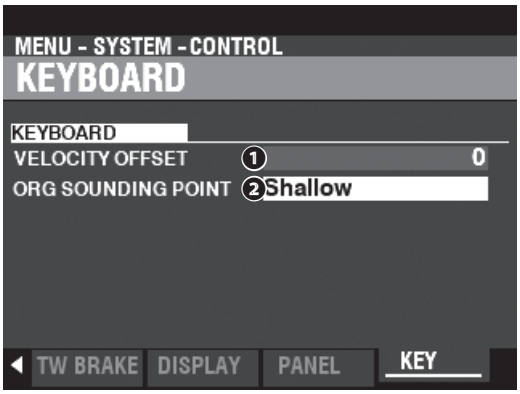
**No**.....The [3 PART ORGAN] button has no effect to the [ALLOCATE] [ORGAN] button.

**All On**.....When the [3 PART ORGAN] button is turned "ON,", all ORGAN Parts turn "ON," the [SPLIT] button turns "ON" and other Voice Sections are turned "OFF."

**tips** **USING "MOM" AND "ACROSS"**

When "Mom" is selected and a knob or slider is moved, the value changes instantly. However, there may be occasions when you want a value to change gradually instead of suddenly. Select "Across" to change values gradually. This is especially helpful when selecting Patches since you can use "Across" to "morph" one Patch into another.

## KEYBOARD




This Page allows you to adjust the performance of the keyboard of the SK PRO.

### ❶ VELOCITY OFFSET

**Setting Range: -32 ~ ±0 ~ +32**

This allows you to adjust the relative loudness of notes played on the keyboard.

**NOTE: The note velocity of the SK PRO is from "0" to "127." These are the upper and lower limits.**

### ❷ ORGAN SOUNDING POINT

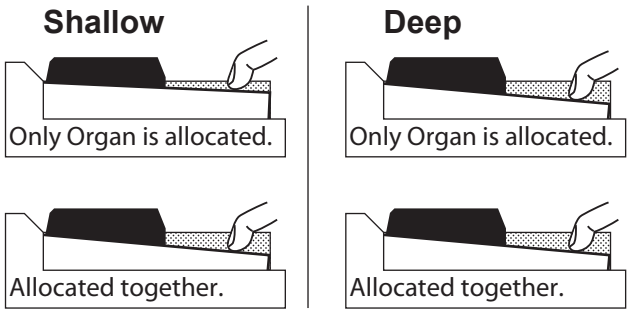
**Setting Range: Shallow, Deep**

This allows you to select the sounding point of the ORGAN Section.

**Shallow**.....The ORGAN Section sounds at a shallower key depth than the other Voice Sections.

**Deep**.....The ORGAN Section sounds at the same key depth as the other Voice Sections.

**NOTE: If other Voice Sections are allocated along with the ORGAN Section ([ALLOCATE] buttons "ON"), the sounding point of the ORGAN Section will automatically be set at "Deep."**




**NOTE: The Parameters in this Mode are System Parameters. You must Record these Parameters if you want their settings to be remembered the next time the instrument is turned "ON." See page141 for instructions on how to do this.**

# PATCH LOAD

This FUNCTION Mode allows you to select which Parameters of the instrument will be Recorded as part of a Patch.

## TO LOCATE THIS MODE:

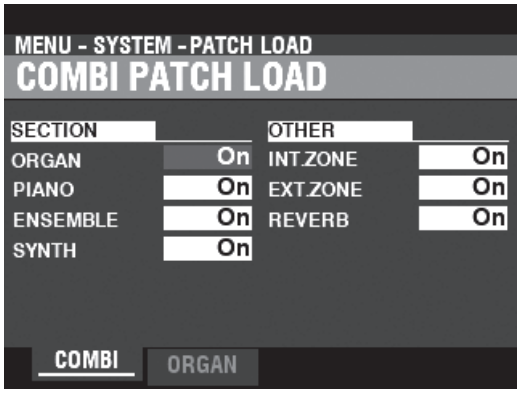
[MENU/EXIT] - **SYSTEM** - **PATCH LOAD** - [ENTER]

All the Parameters described here have "ON" and "OFF" settings.

**On**..... The Parameter setting will be remembered as part of a Patch

**Off** ..... The Parameter setting will not be re,membered as part of a Patch.

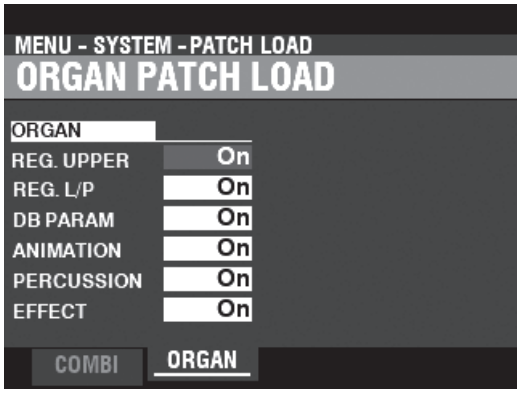
## COMBI PATCH LOAD




This Page allows you to select which Parameters to include as part of a Combination.

**ORGAN** ..... ORGAN Section.
**PIANO** ..... PIANO Section.
**ENSEMBLE** ..... ENSEMBLE Section.
**SYNTH**..... MONO SYNTH Section.
**INT. ZONE** ..... Internal Zones.
**EXT. ZONE** ..... External Zones.
**REVERB**..... Reverb effect.

## ORGAN PATCH LOAD




This Page allows you to select which Parameters to include as part of an ORGAN Patch.

**REG. UPPER** ..... UPPER Drawbar Registration.
**REG. L/P**..... LOWER and PEDAL Drawbar Registrations.
**DB PARAM** ..... General ORGAN Section Parameters such as Drawbar (except Drawbar Registration), Contact & Sustain.
**ANIMATION**..... Vibrato and Chorus, Leslie.
**PERCUSSION**..... Percussion Parameters.
**EFFECT**..... Matching Transformer, Overdrive, Multi Effects 1&2, Equalizer.

**tips** **PATCH LOAD EXAMPLE**

When a Combination is selected,

**Example 1:** On a vintage B-3/C-3/A-100, changing an Upper Preset will change only the Drawbar registration for the Upper Manual. To replicate this on the SK PRO, turn the ORGAN and REG. UPPER Parameters "ON" and turn all the other Parameters "OFF."

**Example 2:** To change the other Voice Sections except ORGAN, turn the ORGAN Parameter "OFF" and turn the other Voice Section Parameters "ON."

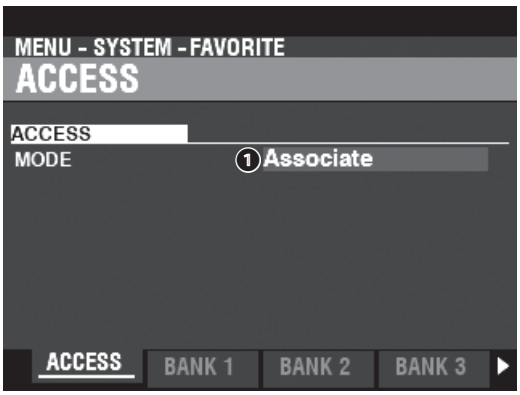
**NOTE: The Parameters in this Mode are System Parameters. You must Record these Parameters if you want their settings to be remembered the next time the instrument is turned "ON." See page141 for instructions on how to do this.**

This FUNCTION Mode allows you to control how FAVORITES are recalled using the numbered [FAVORITE] buttons.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **SYSTEM** - **FAVORITES** - [ENTER]

## ACCESS




### ❶ ACCESS MODE

This Page allows you to select how the numbered [FAVORITE] buttons recall Combinations.

**Associate:**

This allows you to touch a numbered [FAVORITE] button to recall the Combination associated with that button.

To associate a Combination with a numbered button, Touch and Hold the red [RECORD] button and touch one of the numbered [FAVORITE] buttons.

**Bundle:**

This allows you to recall Bundles (Combination Parameters, ORGAN and MONO SYNTH Patches).

**Direct:**

This allows you to recall Combinations and Bundles by direct numerical input.

To recall a Combination or Bundle in this Mode, use the numbered [FAVORITE] buttons to enter a 3-digit number representing the Combination you want and press the [ENTER] button.

B001 ... [BANK]B, [1], [ENTER]

B010 ... [BANK]B, [1], [10], [ENTER]

U001 ... [BANK]U, [1], [ENTER]

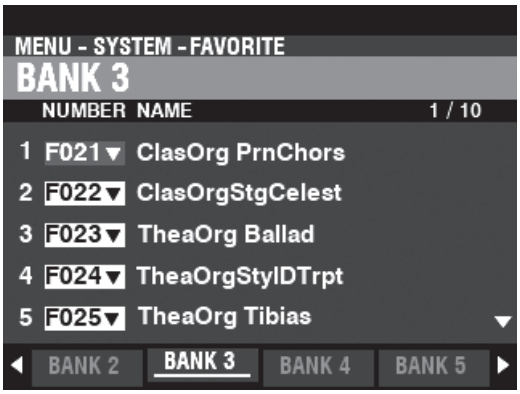
U010 ... [BANK]U, [1], [10], [ENTER]

F001 ... [BANK]F, [1], [ENTER]

F010 ... [BANK]F, [1], [10], [ENTER]

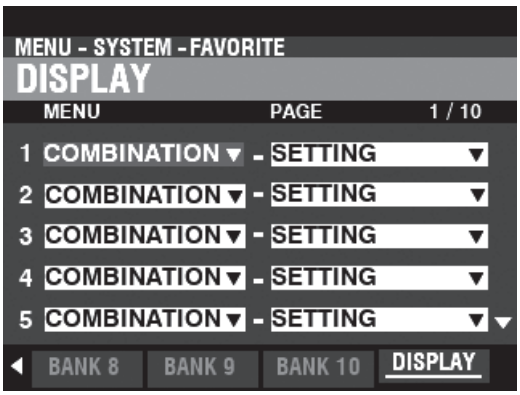
**NOTE: This mode cannot associate a numbered [FAVORITE] button to a Combination.**

## BANK 1 - 10



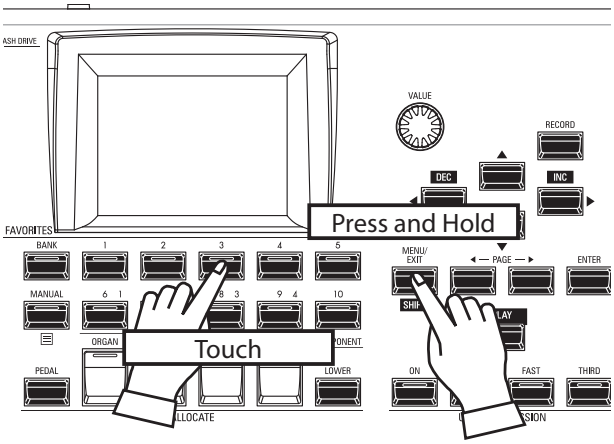

This allows you to associate and confirm the assignment of Combinations to numbered [FAVORITE] buttons.

## DISPLAY




This allows you to associate and confirm the assignment of display pages to numbered buttons.

**NOTE: You can also associate a numbered button and a display page by pressing a numbered button while holding the [SHIFT] and [RECORD] buttons together.**




To locate an associated display page, press and hold the [SHIFT] button and press a numbered [FAVORITE] button.

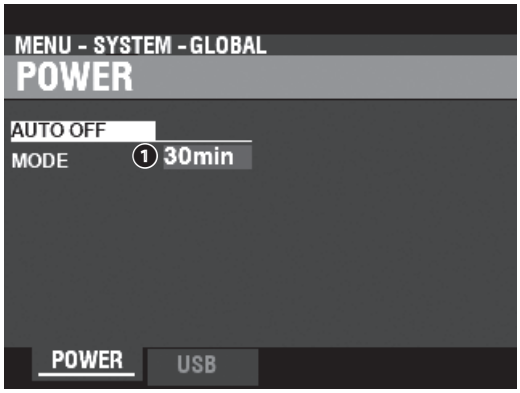
**NOTE: The Parameters in this Mode are System Parameters. You must Record these Parameters if you want their settings to be remembered the next time the instrument is turned "ON." See page 141 for instructions on how to do this.**

This FUNCTION Mode allows you to adjust the AUTO POWER OFF and USB Parameters.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **SYSTEM** - **GLOBAL** - [ENTER]

# POWER




## AUTO OFF

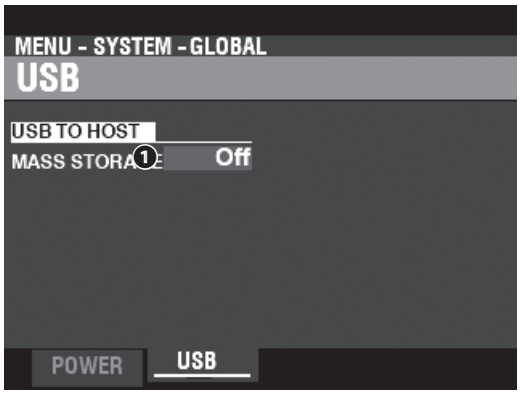
### ❶ MODE

This allows you to select whether the power to the instrument is automatically turned "OFF" after a certain time period.

**30min** ..... The AC power to the instrument will turn "OFF" after 30 minutes have elapsed with no keys or buttons being pressed.

**Disable**..... The instrument will turn "ON" or "OFF" with the AC Power Switch, but not turn "OFF" automatically.

# USB

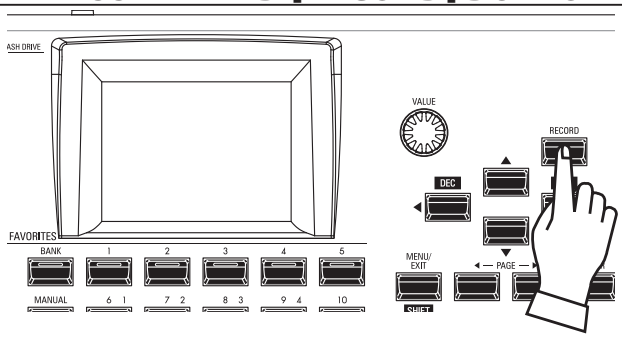



This allows you to Load and Save files from the instrument's Internal Memory and access files to or from a host computer via a USB cable.

**NOTE: See page 162 "USB Mass Storage" for more details.**

To Record the System Parameters of the SK PRO, do the following:

## ① PRESS THE RED [RECORD] BUTTON




After you have made your changes to SYSTEM Parameters, press the red [RECORD] button. The RECORD Page will display.

## ② SELECT THE ITEM TO RECORD


**❶ CONTENT**

The content to Record will be highlighted.

**System** ..... System Parameters.

**NOTE: If edits have been made to a System Setting, an "E" will appear to the right of the CONTENT icon.**

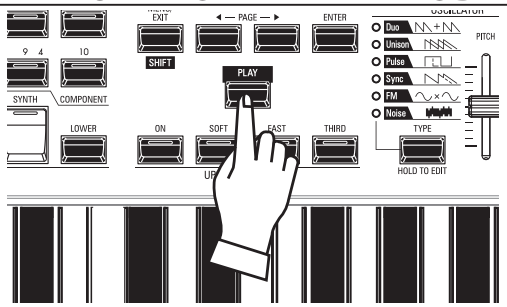
## ③ RECORD THE SETTING

Press the [ENTER] button. The message shown below will display for approximately 1 second:


**NOTE: Do not turn the power "OFF" while the above message is displaying.**

**NOTE: If you DO NOT wish to Record, press the [MENU/EXIT] or [PLAY] button instead of the [ENTER] button.**

## ④ RETURN TO THE PLAY MODE



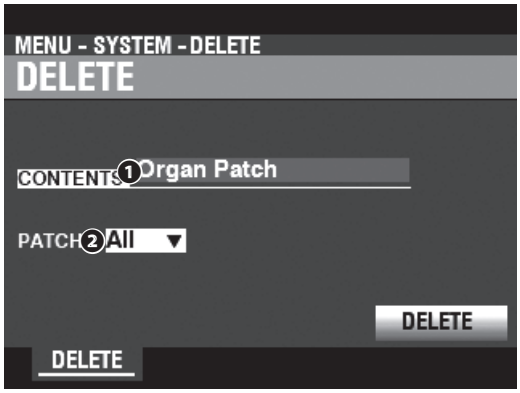

Press the [PLAY] button to return to the PLAY mode.

# DELETE

This FUNCTION Mode allows you to delete "U" (User) contents from the instrument.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **SYSTEM** - **DELETE** - [ENTER]




To delete User content(s), do the following:

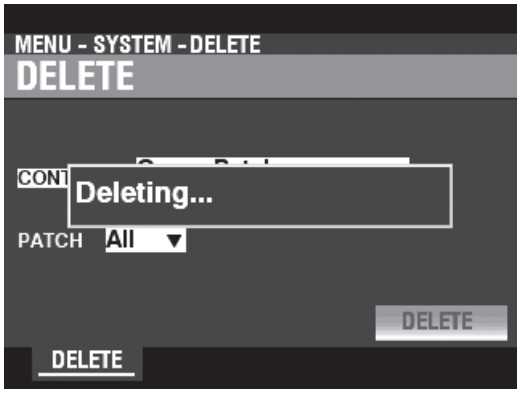
### ❶ CONTENT

From the above screen, use the [VALUE] knob to select the content to delete.

**Bundle**
**Combination**
**Organ Patch**
**Piano/Ens Patch**
**Synth Patch**
**Custom Tone Wheel**
**Custom Pedal Registration**
**Custom Leslie Cabinet**
**Custom Pipe**

### ❷ NUMBER

Use the [DIRECTION] [▼} button to move the cursor down and select the item to Delete. You can select each individual User or Bundle Number as well as "ALL" (all the User or Bundle Numbers).




### ❸ DELETE

Use the [DIRECTION] [▼} button to move the cursor down to the DELETE icon and press the [ENTER] button. The display will show "Deleting..." for approximately 1 second (see the illustration above). When the message "Deleting..." disappears, the procedure is complete and the DELETE Page will reappear.

**NOTE: If you DO NOT wish to Delete, press the [MENU/EXIT] or [PLAY] button instead of the [ENTER] button.**

**⚠CAUTION**

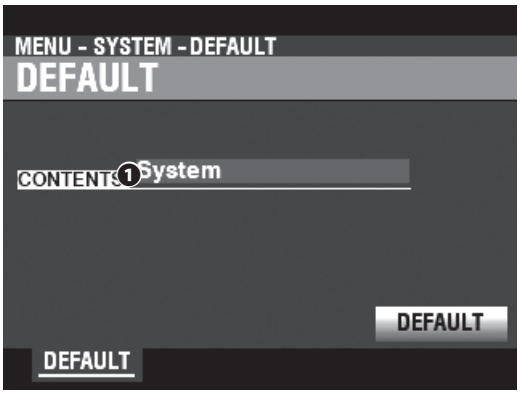
Do not turn the power "OFF" while the above message is displaying. Doing so may cause a malfunction.

# DEFAULT

This FUNCTION Mode allows you to reset the SK PRO to factory-default settings.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **SYSTEM** - **DEFAULT** - [ENTER]

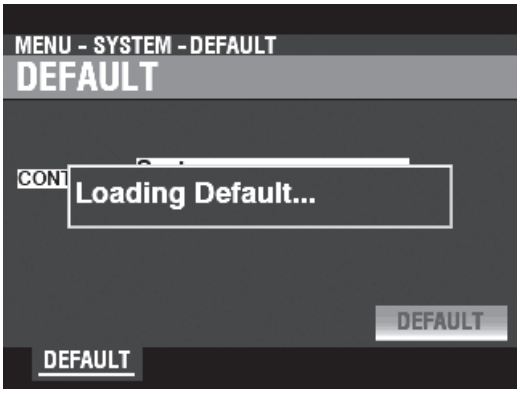



To reset the instrument to the factory-default settings, do the following:

### ❶ CONTENT

From the above screen, use the [VALUE] knob to select the content to be initialized.

**System**.....System Parameters.
**All** .....All the contents.




### ❷ DEFAULT

Use the [DIRECTION] [▼] button to move the cursor to the [DEFAULT] icon and press the [ENTER] button. The display will show "Loading Default..." for approximately 1 second. When the message "Loading Default..." disappears, the Default procedure is complete and the DEFAULT Page will reappear.

**NOTE: If you DO NOT wish to Default the instrument,, press the [MENU/EXIT] or [PLAY] button instead of the [ENTER] button.**

.

**⚠CAUTION**

Do not turn the power "OFF" while the above message is displaying. Doing so may cause a malfunction.

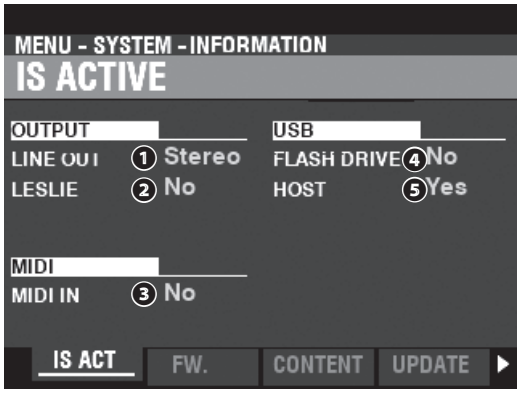
# INFORMATION

This FUNCTION Mode allows you to see the status of connected devices as well as the status of the currently installed software. It also allows you to update the system software.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **SYSTEM** - **INFORMATION** - [ENTER]

# STATUS DISPLAY




## IS ACTIVE

This allows you to see which peripheral devices are connected.

**❶ LINE OUT**

**Settings: Mono, Stereo**

This allows you to adjust how the sounds from the SK PRO are routed to the [LINE OUT] jacks.

**NOTE: The full effect of the sounds produced by the SK PRO is best heard in Stereo (both LINE OUT jacks connected to two sound sources physically separated). If only the L/MONO jack is connected, the "Pan" function will not be heard.**

**❷ LESLIE**

**Settings: No, Yes**

This allows you to see the connecting status of the SK PRO to a Leslie Speaker Cabinet via the 11-pin [LESLIE] socket.

**❸ MIDI IN**

**Settings: No, Yes**

This allows you to see the connecting status of the SK PRO to a MIDI device via the [MIDI IN] Port.

**NOTE: This shows the receiving condition of the "Active Sense" message. It may display "No" even if correctly hooked-up if the connected device cannot send it (such as the XPK-100 Pedalboard).**

**❹ FLASH DRIVE**

**Settings: No, Yes**

This allows you to see the connecting status of a USB Flash Drive. Use this Parameter to determine if a USB Flash Drive is compatible with the SK PRO.

**❺ HOST**

**Settings: No, Yes**

This allows you to see the connecting status between the SK PRO and a computer via a USB cable.

## VERSION - FIRMWARE

This allows you to see the versions of the main system software.

**RELEASE**..... Release Number.
**MAIN**..... Main Processor.
**SUB**..... Sub Processor.
**KEY SCAN**..... Keyscan Processor.
**PANEL**..... Control Processor.

## VERSION - CONTENTS

This allows you to see the versions of the Voice Cells.

**F. CONTENT**..... Factory Contents. This is integrated pre-loaded data. The details are listed below.
**TW.ORGAN**..... Tone Wheel Organ.
**TR.ORGAN 1**..... Transistor Organ 1.
**TR.ORGAN 2**..... Transistor Organ 2.
**PIPE**..... Pipe Organ.
**PEDAL DB**..... Pedal Drawbars.
**A.PIANO**..... Acoustic Piano.
**HARPSI**..... Harpsichord.
**CHRO PERC**..... Chromatic Percussion.
**ETHNIC**..... Ethnic.
**WIND**..... Wind.
**CHOIR**..... Choir.
**BASS**..... Bass.
**FREE REED**..... Free Reed.
**E.PIANO**..... Electric Piano.
**CLAV**..... Clav.
**GUITAR**..... Guitar.
**SFX**..... Sound Effects.
**STRINGS**..... Strings.
**SYNTH PAD**..... Synth Pad.
**SYNTH LEAD**..... Synth Lead.
**PERCUSSION**..... Percussion.

## UPDATE

See "Updating the Software" on page 145 for more information.

This FUNCTION Mode allows you to update the internal software of the SK PRO from the USB Flash Drive or Internal Memory.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **SYSTEM** - **INFORMATION** - [ENTER] - **UPDATE**

# PREPARING OPERATING TIME

The update process may take several minutes depending on the extent of the update. Therefore, if you are updating the System Software, be sure you set aside enough time in an environment with a continuous AC power supply.

# OPERATION PROCEDURE

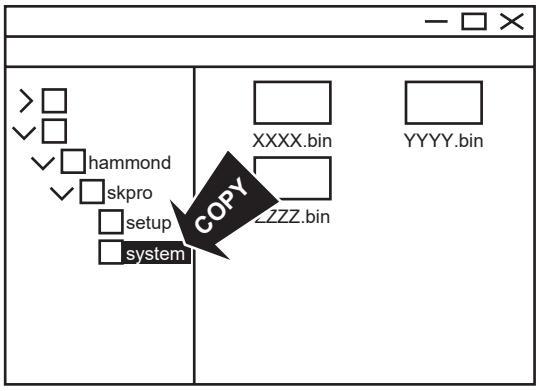
## ① DOWNLOAD THE UPDATE

Go to the Hammond website for your region and download the software update to the desktop of your computer. It will be a compressed file containing several files called a ".ZIP" file

## ② UNZIP THE FILE

Find the .ZIP file on your Desktop and un-ZIP it. A folder will be created on your desktop having the same name as the .ZIP file which will contain the software update files, called ".bin" files.

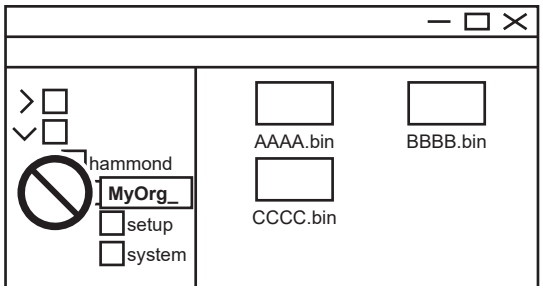
## ③ COPY THE "BIN" FILE(S)




Insert a USB Flash Drive you have previously formatted in the SK PRO into your computer and copy the ".bin" files into the sub-folder shown above.

**NOTE: Please see page 161 for instructions on how to Format a USB Flash Drive.**

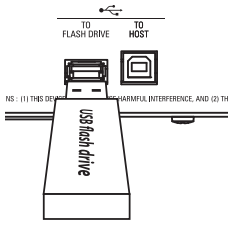
You can also use the Internal Memory instead of a USB Flash Drive to access the ".bin" update files, as shown above.




**⚠CAUTION**

Do not re-name or delete the folders or format the Internal Memory from the computer. Doing so may cause a malfunction.

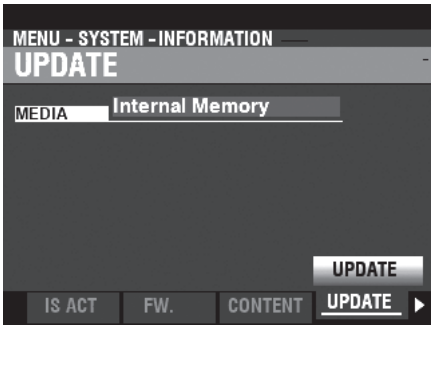
## ④ INSERT THE USB FLASH DRIVE




Turn the power to the SK PRO "ON."

Remove the USB Flash Drive from your computer and insert it into the [TO FLASH DRIVE] Port of the SK PRO. The message, "Confirming USB..." will display for approximately 1 second. Please wait for this message to disappear.

## ⑤ SELECT THE MEDIA TO READ




Use the [VALUE] knob to select the Media containing the ".bin" update files. Select the "USB Flash" or "Internal Memory."

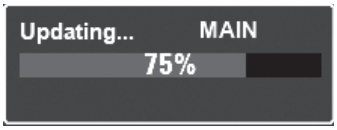
**NOTE: "USB Flash" cannot be selected if no USB Drive is present at the [TO FLASH DRIVE] USB Port.**

The following messages will show if there are no Update files on the USB Flash Drive:

**No Update File** ..... No .BIN files in the \system\ Folder.

**No New Update File**..... The .BIN files are either identical to or older than the ones already installed.

## ⑥ START THE UPDATE




Use the [DIRECTION] [▼] button to move the cursor to the [UPDATE] icon and press the [ENTER] button. You will see a status bar similar to the one shown above during the Update procedure. Each file being installed will display a separate status bar.

When the update is finished, the message "Please power off!!" will display. When the power to the SK PRO is next turned "ON," the updated software will take effect.

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# MIDI

# WHAT IS "MIDI"?

"MIDI" (**M**usical **I**nstrument **D**igital **I**nterface) is the musical instrument industry standard for exchanging performance information between electronic musical instruments as well as sequencers, effects, lighting and sound reinforcement gear, etc.

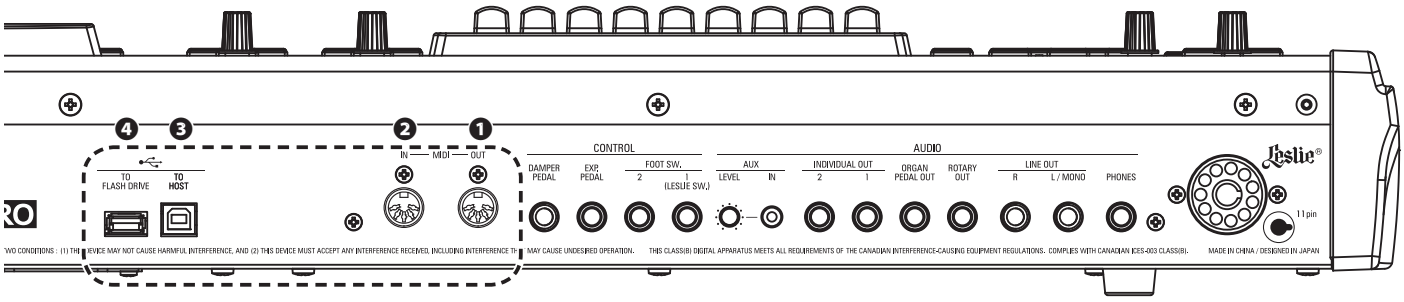
The MIDI standard allows instruments made by different manufacturers to communicate with each other.

Many types of data can be transmitted and received, including performance information, Parameter settings, and global commands.

# WHAT IS "USB"?

USB (**U**niversal **S**erial **B**us) is an industry standard for connection, communication and interfacing between computers, peripherals and other electronic devices. The are many different types of USB connectors; however the SK PRO implements Type "A" and Type "B" connectors, which are the most common types for electronic musical instruments.

# MIDI/USB JACKS ON THE SK PRO




**❶ MIDI OUT Port**

This Port transmits performance information to an external MIDI device such as a sound module, sequencer or Digital Audio Workstation (DAW).

**❷ MIDI IN Port**

This Port receives MIDI information from an external MIDI device such as a sequencer or DAW.

**❸ USB TO HOST Port**

This Port will connect to a computer.

**❹ USB FLASH DRIVE Port**

This Port will accept a USB Flash Drive.

# WHAT MIDI CAN DO ON THE SK PRO

The MIDI implementation of the SK PRO allows you to:

- Use a MIDI keyboard/pedalboard to expand the playing versatility.
- Control an external sound generator such as a synthesizer or sampler.
- Record/playback performances to an external sequencer or computer.

For easier access to those settings, the SK PRO is equipped with **MIDI Templates**.

For a fuller explanation of MIDI Templates, see page 156.

# USB TO HOST

The USB TO HOST Port will do the following:

- Send / receive the MIDI data (Keyboard channel Upper, Lower, Pedal and system exclusive messages).*1
- Send and Receive Setup and System files.
- Compliant with USB AUDIO Class 1.0.

**tips** **USB AUDIO CLASS**

The SK PRO is compliant with USB AUDIO Class 1, the generic device driver which comes pre-installed on both Windows or Mac OS. This means you can use the USB TO HOST Port to connect the SK PRO to a computer and transmit and receive a MIDI data stream without an exclusive device driver.

## MIDI CHANNEL

MIDI information travels along **MIDI Channels**. These channels are similar to television channels, in that they provide a way to transmit and receive MIDI information as well as to differentiate among MIDI information sent to different devices. The current MIDI specification provides for 16 Channels, all of which travel along a single cable.

**NOTE: In order for MIDI devices properly to communicate, both the sending and receiving devices must be set to the same MIDI Channel.**

# MAIN MIDI MESSAGE

MIDI information is grouped into Channel Messages for each of the 16 MIDI Channels and a System Message which applies to all Channels.

**NOTE: See the MIDI IMPLEMENTATION CHART on page 196 for more details.**

## CHANNEL MESSAGES

## NOTE ON/NOTE OFF/VELOCITY DATA

This data tells: which key (Note Number) is played, at what speed (Velocity) and when and for how long the note is to sound (Note On/Off).

## PROGRAM CHANGES

**UPPER Keyboard Channel**

.....Changes the Combinations of the SK PRO.

**External Zone Channels**

.....Sends Program Change data to external MIDI equipment.

## CONTROL CHANGES

Control Changes are transmitted and received in response to manipulations of controls on the Control Panel, connected peripheral devices such as Foot Switches or an Expression Pedal, or other MIDI controller information.

## SYSTEM MESSAGES / SYSTEM EXCLUSIVE MESSAGES

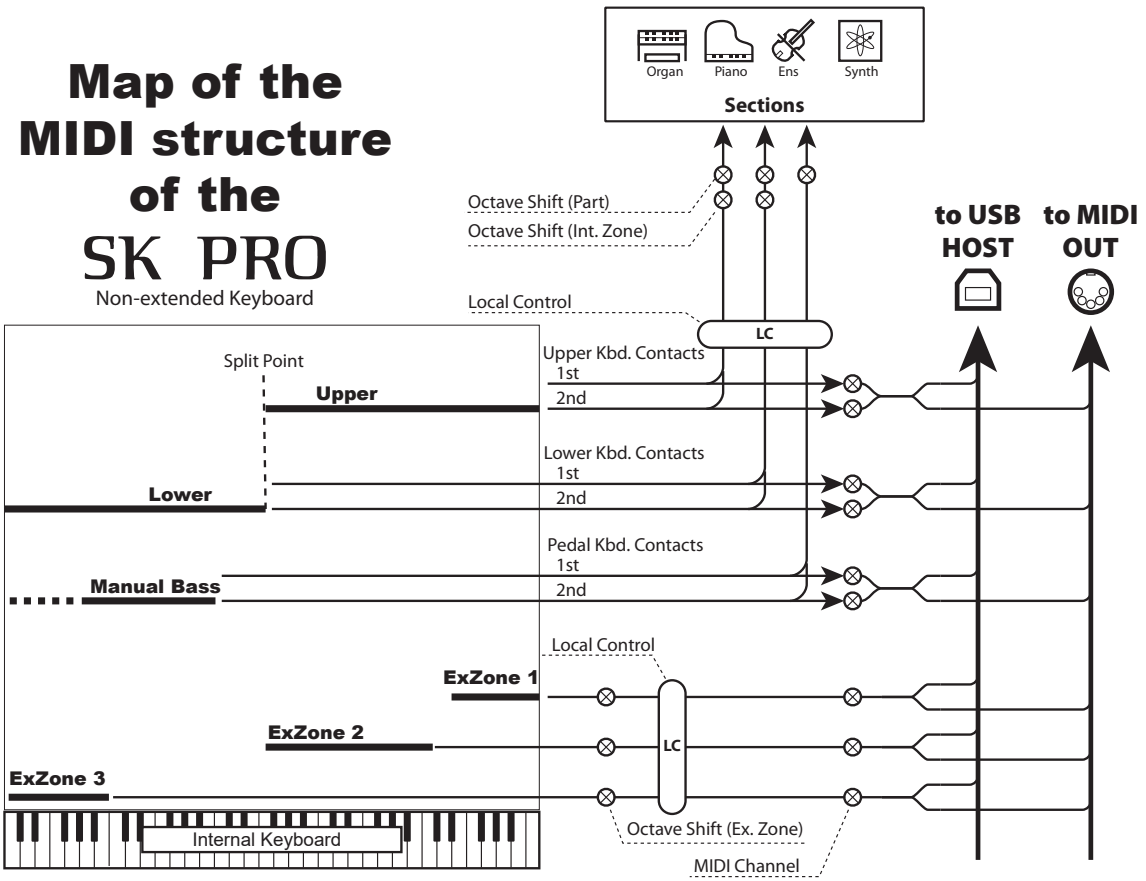
These are messages which are unique to a particular manufacturer or between instruments of the same model from the same manufacturer.

## MEMORY DUMP

The SK PRO can transmit the settings in the instrument's memory in the form of a series of System Exclusive (SysEx) messages. This is referred to as a Memory Dump. Doing this allows you to make a backup copy of your settings. If you want to restore previous settings saved to an external MIDI device, the SK PRO can also receive a Memory Dump.

# MIDI STRUCTURE OF THE SK PRO

The SK PRO can transmit and receive MIDI data on **Keyboard Channels** as well as transmit MIDI data on **External Zones**. The following illustrations and paragraphs below explain this in more detail.




## KEYBOARD (INTERNAL) CHANNELS

The internal sounds of the instrument will play on what are called the **Keyboard** or **Internal Channels**.

The Keyboard Channels transmit Note On/Note Off and Velocity data from the Upper, Lower and Pedal Keyboards. These channels will both send (MIDI OUT) and receive (MIDI IN) data, and are therefore used when recording and playing back sequences.

**NOTE: The Upper Keyboard Channel, in addition to Note On/Note Off and Velocity data, also is used for transmitting Controller data.**

## EXTERNAL ZONES

The External Zone Channels allow you to use the SK PRO as a MIDI Master Keyboard. These allow you to play additional sounds from another MIDI instrument such as a sound module. The External Zones transmit but do not receive MIDI data - in other words, they are MIDI OUT only.

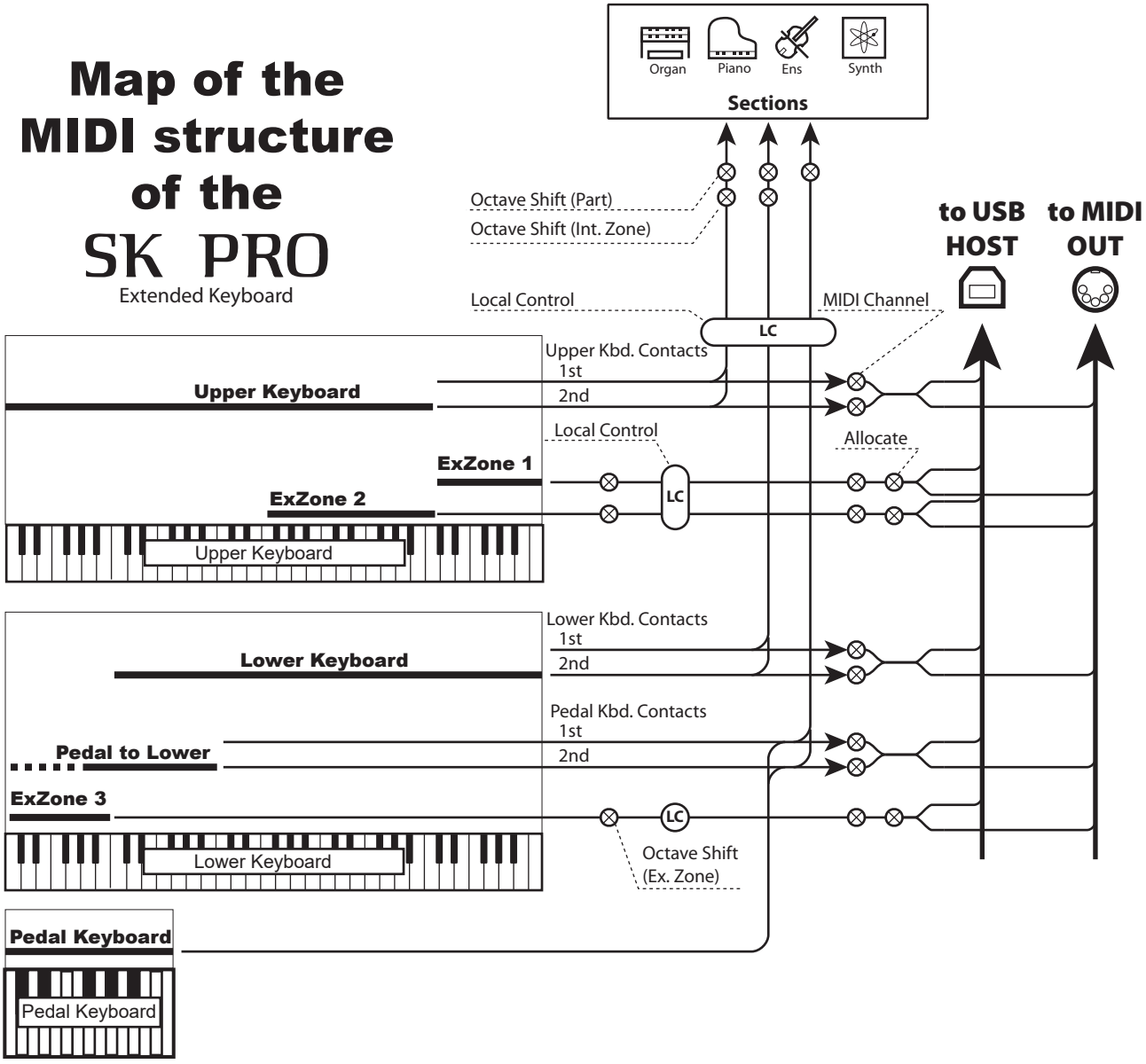
There are three (3) External Zone Channels which can be assigned to the Upper Manual, Lower Manual or Pedals. In addition, different configurations can be Recorded to different Patches - for example, one Patch can have all three External Zones assigned to the Upper Manual, another Patch can have one External Zone each for Upper, Lower and Pedals, etc.

## EXPANDED KEYBOARDS

When MIDI keyboards are used to expand the LOWER and/or PEDAL Parts, they will not only play the internal voices of the SK PRO, but also transmit MIDI data to other MIDI devices via the MIDI OUT port. Thus, both the Keyboard Channels and the External Zones will respond from connected MIDI keyboards, as if the Expanded Keyboards were "built-in" as an integral part of the SK PRO.

# Map of the MIDI structure of the SK PRO

Extended Keyboard

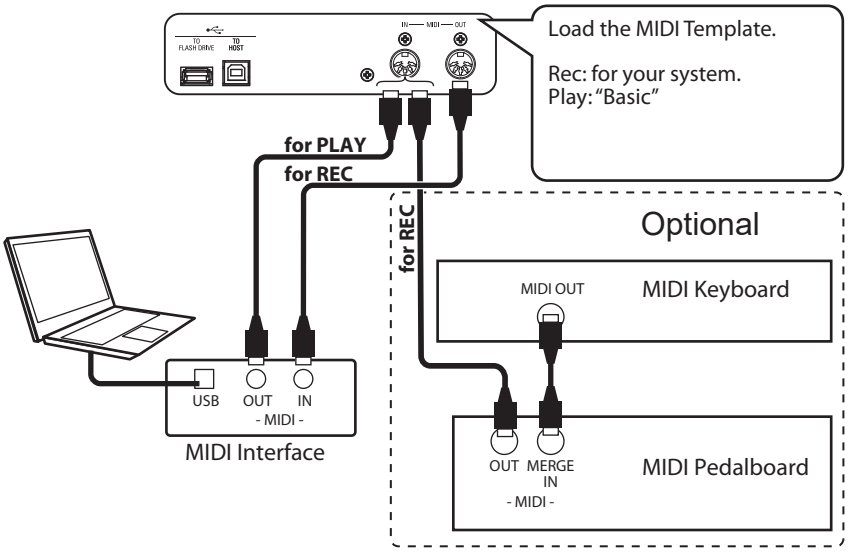


# USING AN EXTERNAL SEQUENCER

This section explains how to record and play back a performance on the SK PRO using either an external MIDI sequencer or a computer on which is installed a Digital Audio Workstation, or DAW.

## RECORDING AND PLAYING BACK A PERFORMANCE

In order to Record and Play a MIDI performance, connect the MIDI cables as shown in the illustration on the right.




### RECORD

1. Connect MIDI cables as shown on the right.
2. Go to the MIDI FUNCTION Mode and select the MIDI Template appropriate for your system. You can select "Sequence," "Upper," "Lower," "Pedal," "Upper+Pedal" or "Lower+Pedal."

**NOTE: This connection cannot record MIDI data sent via External Zones.**

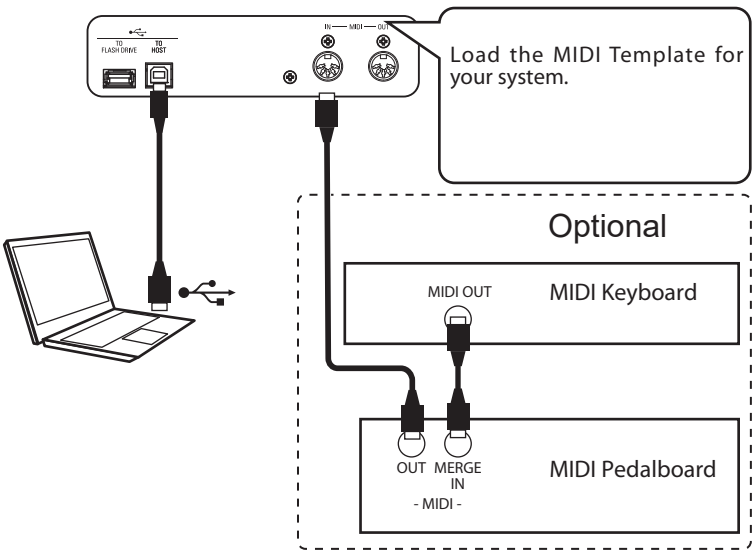
3. Configure the MIDI Channel on your sequencer or DAW. If you are recording the UPPER Keyboard only, set the MIDI Channel on your sequencer to record Channel "1." To record all keyboards, set your sequencer to record Channels "1," "2" and "3."(UPPER=1, LOWER=2 and PEDAL=3).
4. Start recording on your sequencer or DAW.
5. If you need to send System Exclusive data, etc., transmit a MIDI Memory Dump.
6. Start your performance.

### PLAYBACK

1. Make the connections as shown in the figure above for Playback.
2. Select and Load the "Basic" MIDI Template.(see page 156).
3. Start playback of the sequence.

## RECORDING A PERFORMANCE VIA USB CABLE

The USB MIDI connection will allow you to Record and Play sequences with only one cable connection and no MIDI interface between the computer and the SK PRO as shown on the right.



# USING A MIDI SOUND MODULE

To control a MIDI sound module from the SK PRO using both a single keyboard and Expanded Keyboards, do the following:

## BASIC CONNECTIONS

### 1. CONNECT THE MIDI MODULE

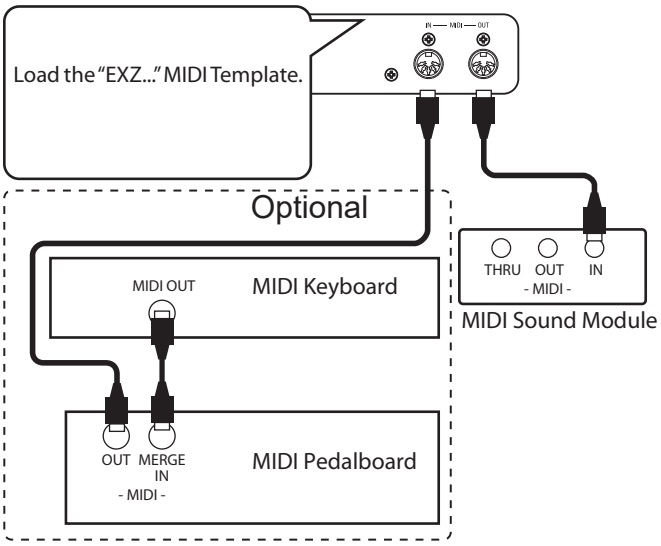
Connect the MIDI OUT of the SK PRO to the MIDI IN of the MIDI Sound Module.

### 2. LOAD THE "EXZ..." MIDI TEMPLATE (P. 156)

This MIDI Template mutes the Keyboard Channels. If you want also to transmit MIDI data on the Keyboard Channels, you must turn them "ON" manually. See page 157 "MIDI Channels" for instructions on how to do this.

### 3. SET THE ZONES AND RECORD THE SETTINGS TO THE COMBINATION.

Please refer to page 78 "COMBINATION-EXTERNAL ZONES for instructions on how to set Zones.




## SIMPLIFIED SETUP MODE

The setup mode described below allows you to transmit MIDI data without using the External Zones.

### 1. CONNECT A MIDI MODULE

Connect the MIDI OUT of the SK PRO to the MIDI IN of the MIDI sound module.

### 2. LOAD THE MIDI TEMPLATE FOR YOUR SYSTEM (P. 156).

Select the MIDI Template to Load (Sequence, Lower, Lower+Pedal, etc.) depending upon whether you are using Expanded Keyboards.

### 3. TURN OFF UNUSED MIDI MESSAGES (P. 156).

Turn MIDI messages for controlling Program Change, Drawbar Registration and NRPN "OFF." These messages are not used in this setup.

### 4. MATCH THE MIDI CHANNELS (P. 157).

Match the MIDI Channels between the Keyboard Channels of the SK PRO and the MIDI sound module.

**NOTE: Sounding Range and Program Change cannot be changed by a Combination in this simplified set up.**

**NOTE: If you are using only the ORGAN Voice Section in this mode, the MIDI velocity will be fixed at "100."**

**tips** **SOUNDING POINT OF THE EXTERNAL ZONES**

When keys are depressed, the sounding point of the External Zones is deeper than that of the ORGAN Section.

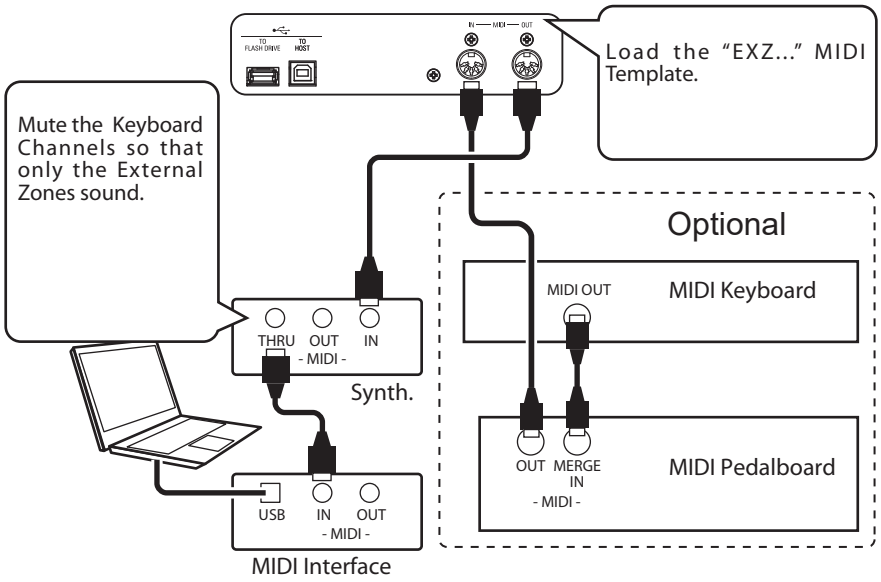
# RECORDING TO A SEQUENCER OR DAW

## USING THE MIDI PORTS

Load the "EXZ..." MIDI Template.

This MIDI Template mutes the Keyboard Channels. If you want also to transmit MIDI data on the Keyboard Channels, you must turn them "ON" manually. See page 157 "MIDI Channels" for instructions on how to do this.

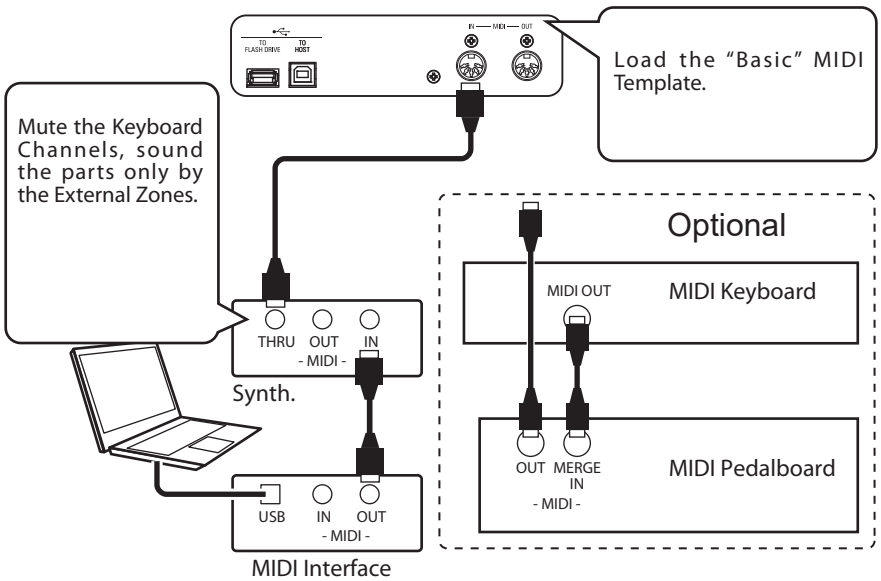
Record both Keyboard Channels and External Zone Channels to the sequencer or DAW.




Set the Local Control of the SK PRO at "ON," and Echo of the DAW at "OFF."

## PLAY BACK THE PERFORMANCE

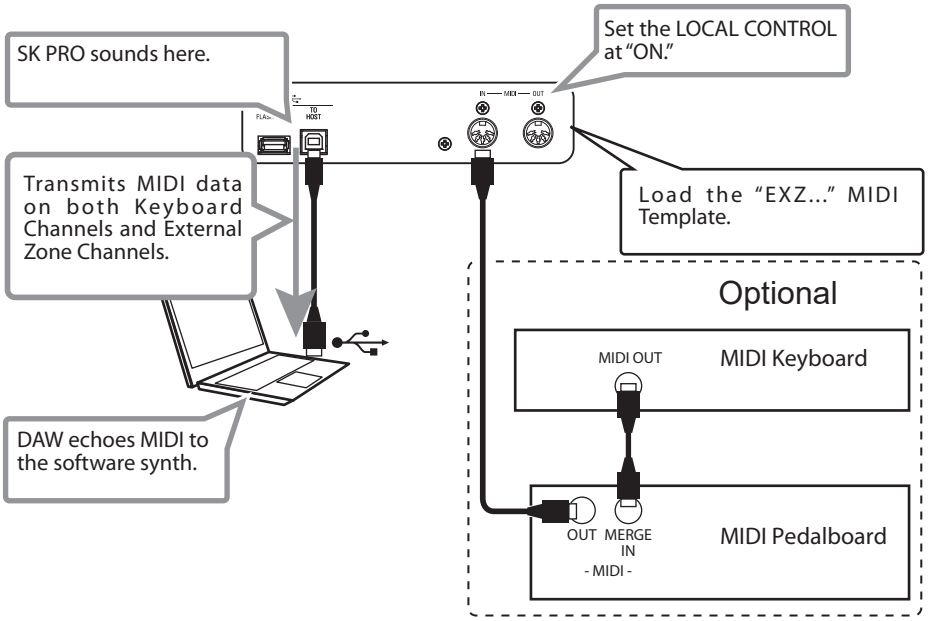
You can play back both Keyboard Channels and External Zone Channels from your sequencer or DAW.



## USING USB MIDI

If you want to play the software synthesizer in a PC using both Keyboard Channels and External Zones, do the following:

1. Load the "EXZ..." MIDI Template.
2. Configure the Keyboard Channels for recording performance, transmit/receive, for UPPER, LOWER and PEDAL. This is necessary because the "EXZ.." MIDI Template turns the Keyboard Channels "OFF" automatically.
3. Set the Local Control at "ON."
4. Set the MIDI Echo of the sequencer or DAW at "ON" to sound the software synthesizer.
5. Record both Keyboard Channels and External Zone Channels to the sequencer or DAW.



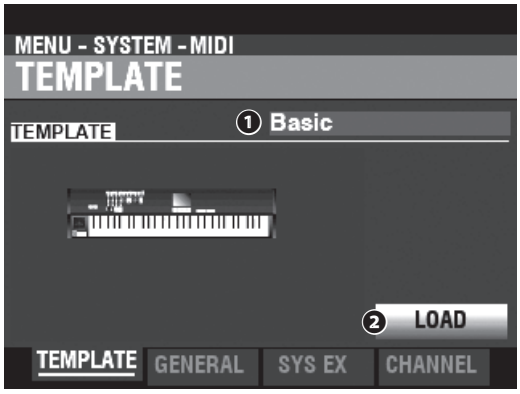
# MIDI FUNCTION MODE

This FUNCTION Mode allows you to adjust the basic MIDI Parameters as well as Send and Receive a MIDI Memory Dump.

## TO LOCATE THIS MODE:

[MENU/EXIT] - **SYSTEM** - **MIDI** - [ENTER]

## MIDI TEMPLATE




### ❶ MIDI TEMPLATE

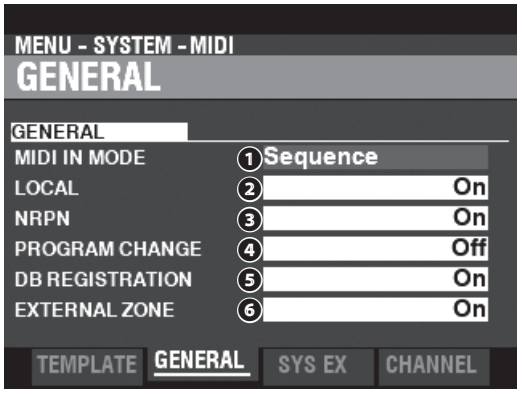
This allows you to Load various pre-programmed MIDI settings.

To Load a MIDI Template, select TEMPLATE, move the cursor to the ❷[LOAD] icon and press the [ENTER] button.

**NOTE: For a detailed listing of MIDI Templates, see "MIDI TEMPLATES" starting on page 178.**

**NOTE: If any following parameters are changed from recalled MIDI Template, it displays "User Edited".**

## GENERAL




### ❶ MIDI IN

This allows you to select the function of the [MIDI IN] Port.

**Sequence**

Receives MIDI messages on UPPER, LOWER and PEDAL Parts on their MIDI Channels. It does not re-send.

**Upper / Lower / Pedal**

Use this Template to connect a MIDI keyboard as an (UPPER / LOWER / PEDAL) keyboard.

Received MIDI messages will sound the Sections allocated to the (UPPER / LOWER / PEDAL) keyboard ignoring the MIDI Channel, and will re-send to MIDI OUT and USB-MIDI.

**Upper + Pedal / Lower + Pedal**

Use this Template to connect two MIDI keyboards as (UPPER + PEDAL / LOWER + PEDAL) keyboards.

Received MIDI messages will sound the Sections allocated to (UPPER, PEDAL / LOWER, PEDAL) keyboards on the assigned MIDI Channels, and re-send to MIDI OUT and USB MIDI.

**Organ Upper / Piano / Ensemble / Synth**

A connected MIDI keyboard will play the ORGAN/PIANO/ENSEMBLE/MONO SYNTH) Sections. It does not re-send.

**NOTE: The ORGAN Section will play from an UPPER Keyboard only.**

**NOTE: The SPLIT does not function when the MIDI IN mode is set at "Upper / Lower ," "Lower + Pedal" or "Upper + Pedal."**

### ❷ LOCAL CONTROL

**Settings: Off, On**

This allows you to turn Local Control "ON" or "OFF."

**On**..... The keyboard plays the internal sounds of the instrument.

**Off**..... The internal sounds of the SK PRO will not play from the keyboard. Use this setting for recording performance to an external sequencer with a MIDI Echo feature.

### ❸ NRPN

**Settings: Off, On**

This allows you to select whether **Non-Registered Parameter Numbers** (NRPN) will be sent or received.

**NOTE: Please consult the Appendix for more information on NRPN codes used on the SK PRO.**

### ❹ PROGRAM CHANGE

**Settings: Off, On**

This allows you to select whether to transmit and receive Program Change messages for Combination and External Zones.

### ❺ DRAWBAR REGISTRATION

**Settings: Off, On**

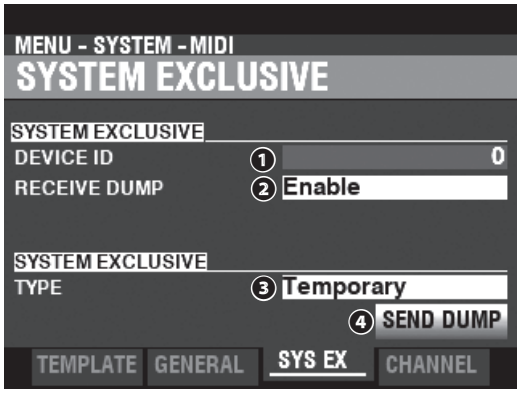
This allows you to select whether to transmit and receive Drawbar Registration.

### ❻ EXTERNAL ZONES

**Settings: Off, On**

This is a Master On/Off Parameter which allows you to enable or disable MIDI transmission of all External Zones in one operation.

## SYSTEM EXCLUSIVE MESSAGES




**❶ DEVICE ID**

**Setting Range: 0 ~ 127**

This allows you to set the Device ID which is used for System Exclusive Messages such as Memory Dump.

**❷ RECEIVE DUMP**

**Settings: Disable, Enable**

This allows you to Enable/Disable receiving of a Memory Dump.

The SK PRO can transmit several settings as a Memory Dump in a single group. Select "Disable" if you want to prevent internal settings from being changed - for example, if you are playing back songs from an external sequencer or DAW.

**❸ SEND DUMP TYPE**

**Settings: Temporary, System**

This allows you to adjust which contents will be transmitted by a Memory Dump.

**Temporary**

Transmits the current status of the Combination, ORGAN Section, MONO SYNTH Section.

IMPORTANT: If you are recording and playing back Sequences, transmit this data before touching any notes or controls so that the registrations for each Section will "match up."

**System**

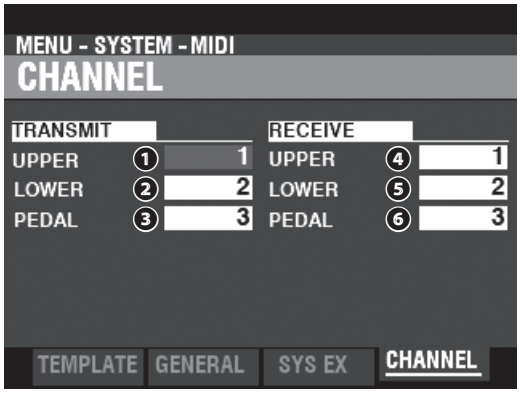
Transmits the status of the System Parameters such as controller modes, MIDI Channels.

To send a Memory Dump, do the following:

1. Use the [DIRECTION] [▼] button to move the cursor to the ❹[SEND DUMP] icon.
2. Press the [ENTER] button.

**NOTE: If you want to Save the entire contents of the SK PRO save them as a Setup file instead of using a Memory Dump.**

## MIDI CHANNELS




This allows you to adjust MIDI Channels for transmitting and receiving performance information for each Keyboard.

**❶ TRANSMIT UPPER, LOWER, PEDAL**

**Setting Range: 1 ~ 16, Off**

This allows you to select the transmitting (Sending) channels for the UPPER, LOWER and PEDAL.

**NOTE: The UPPER Channel sends Controller information such as Pitch Bend, Expression Pedal or NRPN in addition to Note On/ Note Off data.**

**NOTE: To avoid conflicting MIDI messages, set each TRANSMIT Channel and External Zone Channel at different values.**

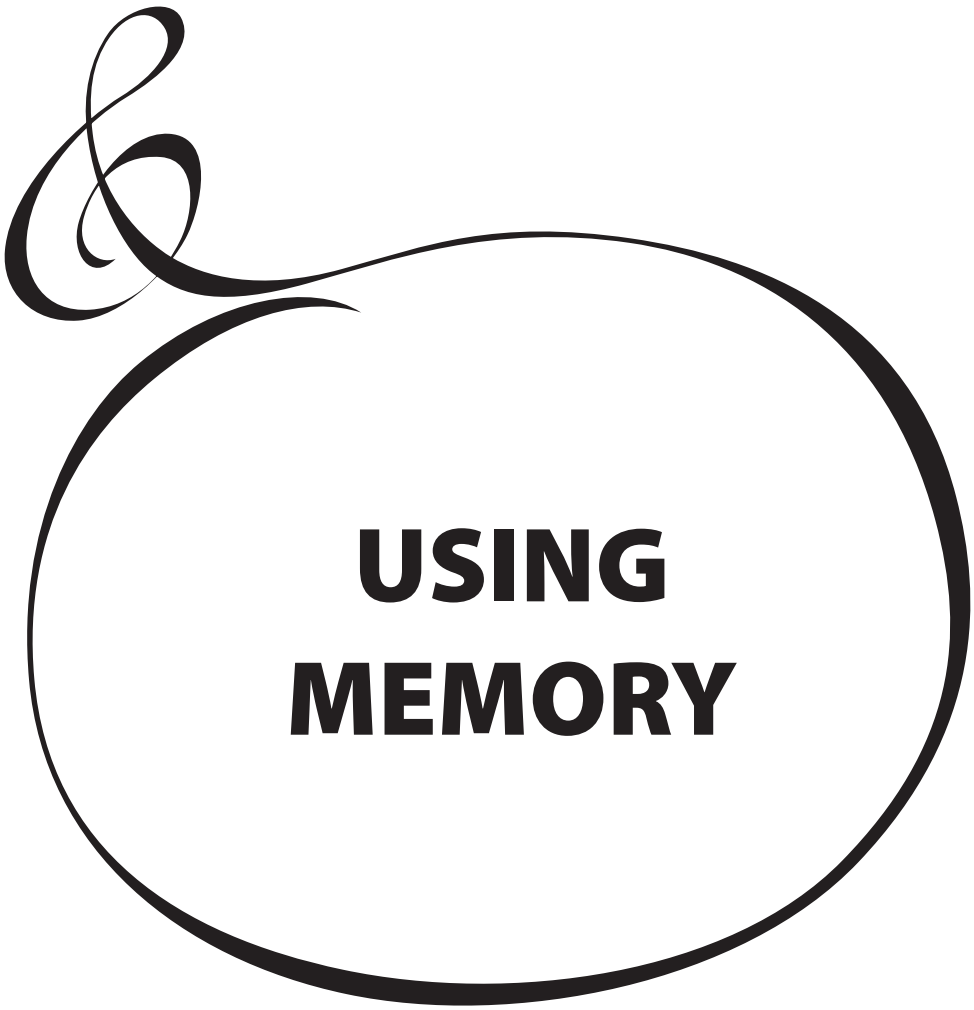
**❷ RECEIVE UPPER, LOWER, PEDAL**

**Setting Range: 1 ~ 16, Off**

This allows you to adjust the Receive channels for the UPPER, LOWER and PEDAL.

**NOTE: The Parameters in this Mode are System Parameters. You must Record these Parameters if you want their settings to be remembered the next time the instrument is turned "ON." See page 141 for instructions on how to do this.**

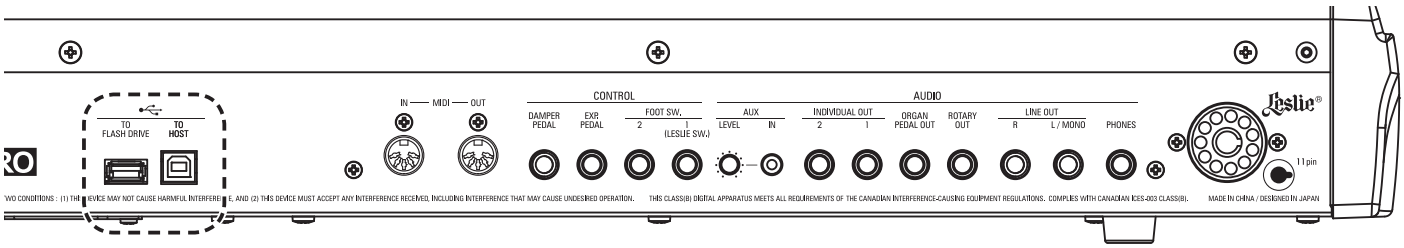
***THIS PAGE INTENTIONALLY LEFT BLANK TO PRESERVE PAGE FORMATTING ***



# USING MEMORY

# USING MEMORY

You can Save various contents such as Patches, Custom Settings, etc., as files either to a USB Flash Drive or the Internal Memory of the SK PRO.




## WHAT YOU CAN DO WITH A USB FLASH DRIVE

- Save and Load Setups (see page 163).
- Save or Load a Patch or Custom Setting.
- Update the system software.

## ABOUT USB FLASH DRIVES

### COMPATIBLE USB FLASH DRIVES

There are various types of USB Flash Drives. Some require AC power at one of the pins on the USB interface. Because the SK PRO does not provide AC power at the USB Ports, these Drives are not compatible with the SK PRO. Generally, a Flash Drive formatted with MS-DOS FAT32 will work.

Consult our web site for more information about compatible USB Flash Drives.

**In Europe: http://www.hammond.eu**

**In the US: .http://www.hammondorganco.com**

**NOTE: To confirm whether a USB Flash Drive is compatible, see MENU - SYSTEM - INFORMATION - IS ACTIVE - USB FLASH DRIVE (page 144).**

### USB CONNECTOR

1. Be sure to insert the USB Flash Drive correctly.
2. Do not remove the Flash Drive or turn the power "OFF" while accessing data to or from a USB Flash Drive.

### FOLDER STRUCTURE

When the USB Flash Drive is inserted, the following folders are automatically created on the drive.

The folder structure is same manner in the Internal Memory, too.

```
\hammond
    \skpro
        \custom
            \pipe
            \twheel
        \patch
            \organ
            \synth
            \voice
        \setup
            *.set
        \system
            *.bin
```

**setup**

Setup files are saved to this Folder

**system**

Copy software update files to this Folder.

**NOTE: There is an "affinity" between USB Flash Drives and the SK PRO, and not all Flash Drives are compatible. To confirm whether the SK PRO will read a particular Flash Drive, see MENU - SYSTEM - INFORMATION - IS ACTIVE - USB FLASH DRIVE.**

**tips** **FILE NUMBER LIMIT**

A Folder can contain up to 256 files.

**tips** **FILE NAME EXTENSION**

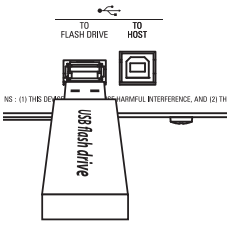
| | |
|---|---|
| set | Setup File |
| opt | Organ Patch |
| vpt | Piano/Ensemble Patch |
| spt | Mono Synth Patch |
| ctw | Custom Tone Wheels |
| cpi | Custom Pipes |

# FORMAT

This FUNCTION Mode allows you to format a USB Flash Drive for use with the SK PRO.

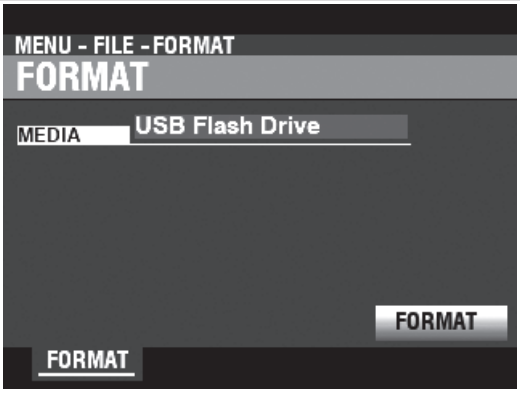
**NOTE: Formatting a USB Flash Drive erases all data on the drive. Therefore, be sure to use either a new Drive or one which does not already have data you want to keep.**

## ① INSERT A USB FLASH DRIVE




Turn the power to the SK PRO "ON" and insert a USB Flash Drive to the [TO FLASH DRIVE] Port. The message, "Confirming USB..." will display for approximately 1 second. Please wait for this message to disappear.

## ② LOCATE THE FORMAT PAGE




[MENU/EXIT] - **FILE** - **FORMAT** - [ENTER].

## ③ SELECT THE MEDIA

Use the [VALUE] knob to select "USB Flash Drive."

## ④ FORMAT THE USB FLASH DRIVE

Use the [DIRECTION] [▼]button to move the cursor to the [FORMAT] icon and press the [ENTER] button. The message, "Formatting" will display and the formatting process begins. The time necessary to Format a USB Flash Drive may differ depending on the capacity of the Drive, but typically it will be approximately 1 or 2 seconds.

When the Format has finished, "Completed" will show in the display.

**NOTE: Do not turn the power "OFF" or remove the USB Flash Drive during the Formatting procedure.**

**NOTE: If you DO NOT wish to Format, press the [MENU/EXIT] or [PLAY] button instead of the [ENTER] button.**

**tips** **FORMATTING MEDIA**

Under Step 3, you can select either "USB Flash Drive" or "Internal Memory" (explained later) as the media you wish to use.

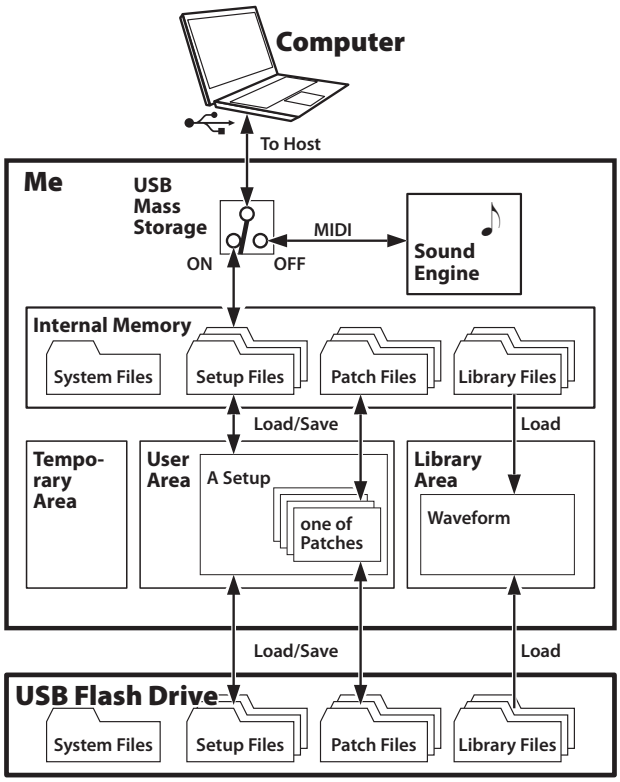
The Format procedures between "USB Flash Drive" and "Internal Memory." are different. For "USB Flash Drive," all data is deleted from the Drive and a File Structure is created. For "Internal Memory," all files are deleted but no File Structure is generated.

# USB MASS STORAGE

## WHAT IS "USB MASS STORAGE?"

On the SK PRO, Setups can be saved to the **Internal Memory** of the instrument as well as to a USB Flash Drive.

Both the Internal Memory and a USB Flash Drive can Load and Save files; however, the Internal Memory can also access files from/to the host computer via USB cable. This is called "USB Mass Storage."

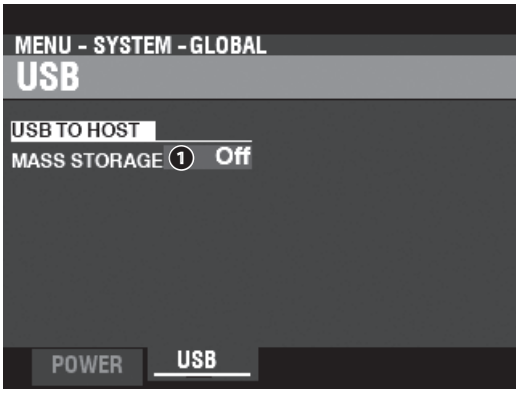



## SETTING USB MODE TO "HOST PORT"

Normally, the USB TO HOST Port sends and receives MIDI messages to or from a connected host computer. **USB Mass Storage** allows you to access files in the Internal Memory from a host computer (upper part of left figure).

**NOTE: The USB TO HOST Port cannot communicate via MIDI while USB Mass Storage is in use.**

### 1 LOCATE THE USB PAGE




[MENU/EXIT] - **SYSTEM** - **GLOBAL** - [ENTER] - **USB**

### 2 SELECT THE FUNCTION

**❶ MASS STORAGE**

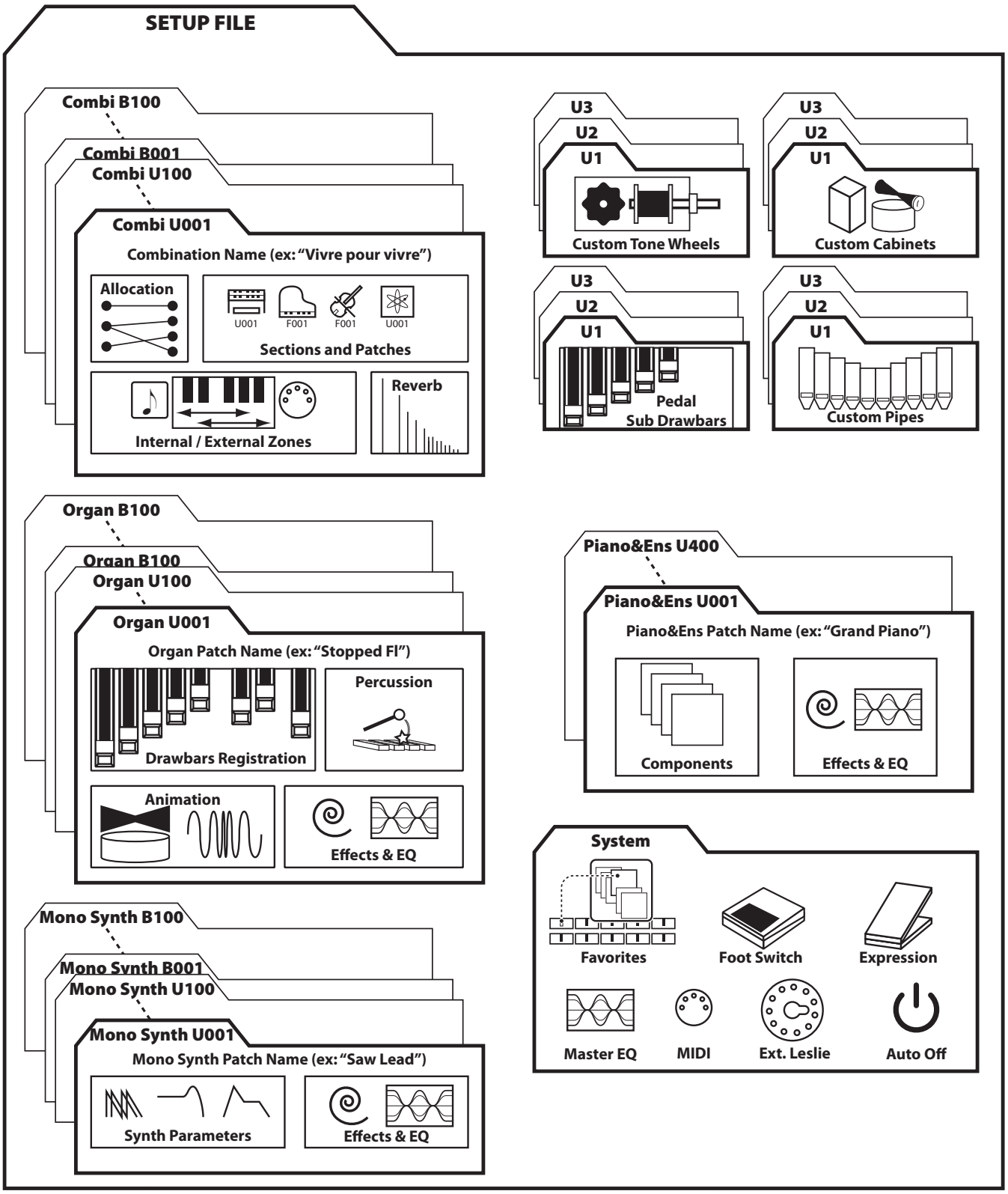
Use the [VALUE] knob to select the function of the USB TO HOST Port.

**Off**.....Sends/Receives MIDI.
**On**.....Connects the Internal Memory.

# USING SETUP FILES

As explained elsewhere in this Manual, the SK PRO can be customized in a number of different ways - you can create Custom Settings, create your own Combinations and Patches, etc. After you have made your changes, you can save your edits as a Setup. In this way you can customize the instrument in several different ways and save each series of edits as a separate Setup.

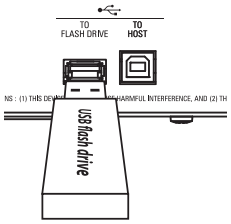
The illustration below shows the data which can be contained in a Setup file.



# SAVE

This FUNCTION Mode allows you to save contents in the SK PRO to a USB Flash Drive or Internal Memory.

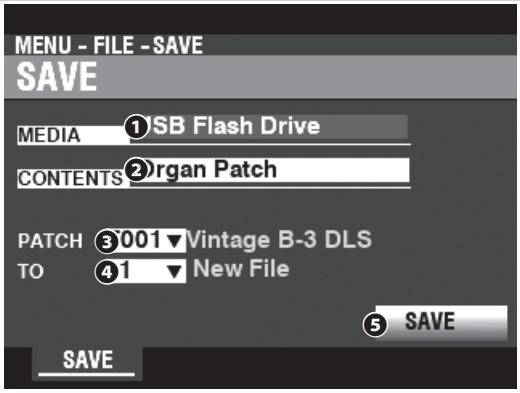
## ① INSERT A USB FLASH DRIVE




Insert a formatted USB Flash Drive into the [TO FLASH DRIVE] Port.

**NOTE: If you are saving an item to the Internal Memory you may skip this step. "USB Flash Drive" will display to the right of "MEDIA" only if a USB Flash Drive has been inserted into the [TO FLASH DRIVE] Port.**

## ② LOCATE THE "SAVE" PAGE




[MENU/EXIT] - **FILE** - **SAVE** - [ENTER].

## ③ SELECT THE ITEM TO SAVE

### ❶ MEDIA

Use the [VALUE] knob to select the media to which to Save.

**Internal Memory** ..... Internal Memory.
**USB Flash Drive** ..... USB Flash Drive.

### ❷ CONTENT

Use the [DIRECTION] [▼] button to move the cursor to [CONTENT] and use the [VALUE] knob to select the type of content to Save.

**Setup** ..... Setup file.
**Organ Patch** ..... Patch in the ORGAN Section.
**Piano/Ens Patch** ..... Patch in the PIANO/ENSEMBLE Section.
**Synth Patch** ..... Patch in the MONO SYNTH Section.
**Tone Wheel** ..... Custom Tone Wheel.
**Pipe** ..... Custom Pipe.

### ❸ FILE

Use the [DIRECTION] [▼] button to move the cursor to [FILE] and use the [VALUE] knob to select the file to Save.

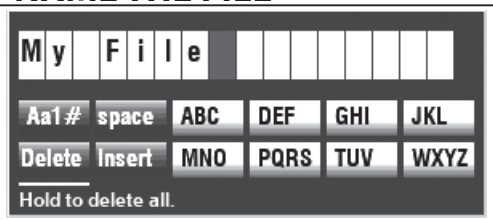
### ❹ TO

Use the [DIRECTION] [▼] button to move the cursor to [TO] and use the [VALUE] knob to select the location to which to Save the selected file. Choose its number if you wish to overwritten the file, and choose "New File" for save as a new file.

### ❹ SAVE

Use the [DIRECTION] [▼] button to move the cursor to [LOAD and press the [ENTER] button.

## ④ NAME THE FILE




Enter the Name.

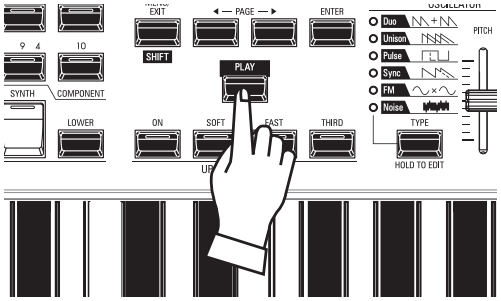
**[Aa1]**..... Changes the character type.
**[1] - [10]** ..... Selects the highlighted character.
**[Insert]** ..... Inserts a space at the cursor.
**[Delete]**..... Deletes a letter at the cursor.
**[VALUE]**..... Changes the letter at the cursor.

After you have finished Naming your file, press the [ENTER] button. The message below will display for approximately 1 second:


**NOTE: Do not turn the power "OFF" while the above message is displaying.**

**NOTE: If you DO NOT wish to Save, press the [MENU/EXIT] button instead of the [ENTER] button.**

## ⑤ RETURN TO THE PLAY MODE



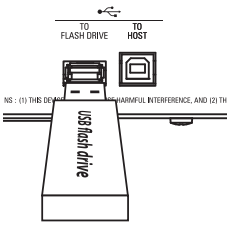

Press the [PLAY] button to return to the PLAY mode.

**tips** **SETUP NAMES**

A Setup Name will appear on both Internal Memory and a USB Flash Drive. This is useful for ease of identification from an external computer. However, the SK PRO display will not show Setup Names. If a Setup is loaded, the Combinations and Patches contained in the Setup will show in the SK PRO display.

This FUNCTION Mode allows you to Load files saved to a USB Flash Drive or Internal Memory into the instrument.

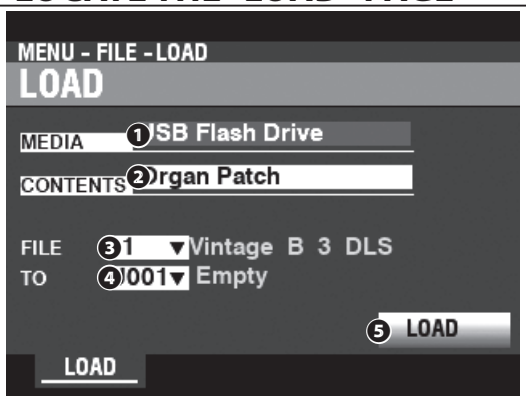
## ① INSERT A USB FLASH DRIVE




Insert a formatted USB Flash Drive into the [TO FLASH DRIVE] Port.

**NOTE: If you are deleting an item from Internal Memory you may skip this step. "USB Flash Drive" will display to the right of "MEDIA" only if a USB Flash Drive has been inserted into the [TO FLASH DRIVE] Port.**

## ② LOCATE THE "LOAD" PAGE




[MENU/EXIT] - **FILE** - **LOAD** - [ENTER]

## ③ SELECT THE ITEM TO LOAD

### ❶ MEDIA

Use the [VALUE] knob to select the media from which to Load.

**Internal Memory** ..... Internal Memory.
**USB Flash Drive**..... USB Flash Drive.

### ❷ CONTENT

Use the [DIRECTION] [▼] button to move the cursor to [CONTENT] and use the [VALUE] knob to select the type of content to Load.

**Setup**..... Setup file.
**Organ Patch**..... Patch in the ORGAN Section.
**Piano/Ens Patch**..... Patch in the PIANO/ENSEMBLE Section.
**Synth Patch**..... Patch in the MONO SYNTH Section.
**Tone Wheel**..... Custom Tone Wheel.
**Pipe**..... Custom Pipe.

### ❸ FILE

Use the [DIRECTION] [▼] button to move the cursor to [FILE] and use the [VALUE] knob to select the file to Load.

### ❹ TO

Use the [DIRECTION] [▼] button to move the cursor to [TO] and use the [VALUE] knob to select where to Load the file.

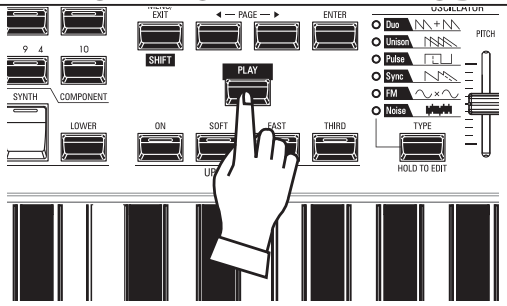
### ❹ LOAD

Use the [DIRECTION] [▼] button to move the cursor to [LOAD and press the [ENTER] button. The message below will display for approximately 1 second:


**NOTE: Do not turn the power "OFF" while the above message is displaying.**

**NOTE: If you DO NOT wish to Load, press the [MENU/EXIT] or [PLAY] button instead of the [ENTER] button.**

## ④ RETURN TO THE PLAY MODE

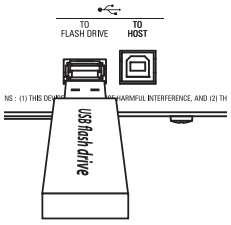



Press the [PLAY] button to return to the PLAY mode.

# DELETE

This FUNCTION Mode allows you to delete content previously saved either to a USB Flash memory or to Internal Memory.

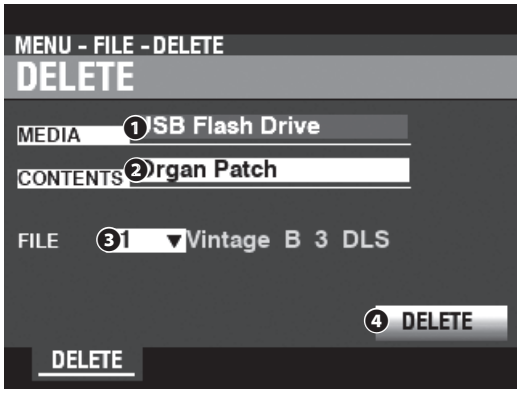
## ① INSERT A USB FLASH DRIVE




Insert a formatted USB Flash Drive into the [TO FLASH DRIVE] Port.

**NOTE: If you are deleting an item from Internal Memory you may skip this step. "USB Flash Drive" will display to the right of "MEDIA" only if a USB Flash Drive has been inserted into the [TO FLASH DRIVE] Port.**

## ② LOCATE THE "DELETE" PAGE




[MENU/EXIT] - **FILE** - **DELETE** - [ENTER]

## ③ SELECT THE ITEM TO DELETE

### ❶ MEDIA

Use the [VALUE] knob to select the media from which to Delete.

**Internal Memory** ..... Internal Memory.
**USB Flash Drive**..... USB Flash Drive.

### ❷ CONTENT

Use the [DIRECTION] [▼] button to move the cursor to [CONTENTS] and use the [VALUE] knob to select the type of content to Delete.

**Setup**..... Setup file.
**Organ Patch**..... Patch in the ORGAN Section.
**Piano/Ens Patch**..... Patch in the PIANO/ENSEMBLE Section.
**Synth Patch**..... Patch in the MONO SYNTH Section.
**Tone Wheel**..... Custom Tone Wheel.
**Pipe**..... Custom Pipe.

### ❸ FILE

Use the [DIRECTION] [▼] button to move the cursor to [FILE] and use the [VALUE] knob to select the file to Delete.

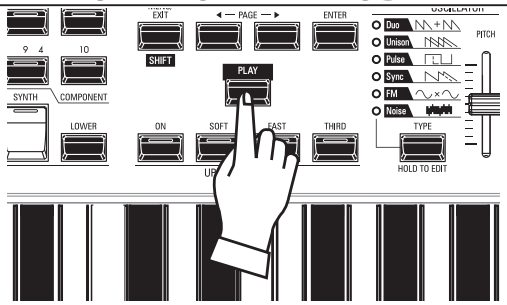
### ❹ DELETE

Use the [DIRECTION [▼] button to move the cursor to the DELETE icon and press the [ENTER] button. The message below will display for approximately 1 second:


**NOTE: Do not turn the power "OFF" while the above message is displaying.**

**NOTE: If you DO NOT wish to Delete, press the [MENU/EXIT] or [PLAY] button instead of the [ENTER] button.**

## ④ RETURN TO PLAY MODE




Press the [PLAY] button to return to the PLAY mode.

# TROUBLESHOOTING

# TROUBLESHOOTING

The SK PRO appears complicated; however, most troubles generally can be isolated by observing the operation of the various controls. This is illustrated by the following list of possible troubles, arranged according to their symptoms.

**NOTE: It is assumed that the entire instrument plays correctly with the exception of the symptoms mentioned.**

## TROUBLES

- Entire instrument fails to play.
  - The [MASTER VOLUME] or [VOLUME] controls for each Voice Section are set at minimum. Adjust the [VOLUME] knob(s).
  - The [ALLOCATE] buttons are "OFF" (LEDs not lit). Touch one of the [ALLOCATE buttons "ON."
  - MIDI Local Control is set to "OFF." Turn the Local Control "ON." See page 156 for instructions.
  - A Leslie Speaker Cabinet is connected. The sound of the Rotary Channel (Tone Wheel and Transistor Organs) does not appear at the [LINE OUT] or [PHONES] jacks when a Leslie Speaker is connected via the Leslie 11-pin socket. See page 131 for more information.
- One or more Voice Sections fail to play.
  - One or more of the [INDIVIDUAL OUT] jacks are in use. Set the AUDIO MODE at the desired usage. See page 131 for more information.
- Malfunction of buttons, keys, etc.
  - Turn the power to the instrument "OFF," then turn it "ON" again. If this procedure is not successful,
    1. Turn the power to the instrument "OFF."
    2. Press and Hold the [RECORD] Touch Button.
    3. While holding the [RECORD] Touch Button, turn the power to the instrument "ON." All Parameters will return to their factory settings.
- Expression Pedal does not work.
  - The EXPRESSION - SOURCE Parameter is not set correctly. Set the Parameter for the function you desire. See page 133 for instructions.
  - The Expression Control in the Overdrive is set at "OD Only" or "Input." Set the Parameter at "Exp.OD." See page 111 for instructions.
  - The Source of the Multi Effects is set at "Exp." Set the Parameter at one of the other settings. See page 108 for instructions.
  - The Expression for a Voice Section in a Combination is set at "OFF" Set the value at "ON." See page 76 for instructions.
- Foot Switch does not work.
  - The Parameters for the Foot Switch are not set correctly. Check the Parameter settings for Foot Switch. See page 132 for instructions.
- Foot Switch effect works when the Foot Switch is released instead of depressed.
  - The Foot Switch Polarity was not detected. Connect the Foot Switch with the power to the SK PRO "OFF" and turn the power "ON" without depressing the Foot Switch (P. 132).
- [MENU/EXIT] and/or [RECORD] buttons do not work.
  - The display is Locked. Unlock the display (P. 72).
- File access stops between PC and USB Mass Storage.
  - Please wait for 2 minutes. The file access may restart.

## ERROR MESSAGES


If the above message displays, please consult your authorized Hammond Dealer.


If the above message displays, one or more files necessary for operation of the instrument is missing. You can identify the missing file(s) with MENU - SYSTEM - INFORMATION. The missing file(s) will display "---" instead of a version number.

Prepare a USB Flash Drive with the missing update files and complete the system update. Press the [ENTER] button with the [UPDATE] icon highlighted start the Update procedure.

**NOTE: You can ensure the installation of system files by pressing and holding the red [RECORD] button and pressing the [ENTER] button.**

# APPENDIX

# FACTORY COMBINATIONS

| Category | # | Name |
|---|---|---|
| Main Features | F001 | Vintage B-3 DLS |
| | F002 | Classic Gospel |
| | F003 | ClasOrg Tutti |
| | F004 | Console Riser |
| | F005 | A. Piano D |
| | F006 | Piano & Strings |
| | F007 | A.Bass / A.Piano |
| | F008 | Soul Line |
| | F009 | Symphonic Ens |
| | F010 | Macrocosmos |
| Tone Wheel Organ | F011 | Vintage C-3 JOS |
| | F012 | VintageB-3Squabl |
| | F013 | Vintage B-3 McGr |
| | F014 | VintageB-3Groove |
| | F015 | X-66 Ballad |
| | F016 | Edelweiss |
| | F017 | Spanish |
| | F018 | Old Days |
| | F019 | Euro Bigband |
| | F020 | Swedish Love |
| Transistor/Pipe Organ | F021 | ClasOrg PrnChors |
| | F022 | ClasOrg StgCelest |
| | F023 | TheaOrg Ballad |
| | F024 | TheaOrg StylDTrpt |
| | F025 | TheaOrg Tibias |
| | F026 | Purple |
| | F027 | Emerson |
| | F028 | Some Lovin' |
| | F029 | Booker |
| | F030 | Rock 1 |
| Piano / Chro Perc / Keys | F031 | Grand Piano Y-CF |
| | F032 | Pop Piano CF |
| | F033 | Upright Piano |
| | F034 | Honky-Tonk Piano |
| | F035 | Electric Grand |
| | F036 | HP Old Time Prchd |
| | F037 | EP Tine Mk1 |
| | F038 | Harpsichord Back |
| | F039 | Clav.AC |
| | F040 | Accordion LMMH |
| Strings / Choir | F041 | Legato Strings |
| | F042 | Section Strings |
| | F043 | Synth Str.Bright |
| | F044 | Synth Str.Mellow |
| | F045 | Chamber Ensemble |
| | F046 | Choir Aah |
| | F047 | Violin |
| | F048 | Sol. Strings |
| | F049 | Taped Strings |
| | F050 | Vocal & Str. Prchd |

| Category | # | Name |
|---|---|---|
| Wind | F051 | Horn Rock Band |
| | F052 | Trumpet Vib |
| | F053 | Alto Sax Vib |
| | F054 | Jazz Brass Prchd |
| | F055 | Harm Chro Vib |
| | F056 | Flute Vib |
| | F057 | Pan Pipes |
| | F058 | M12 Brazz |
| | F059 | M12 Horn Ens |
| | F060 | M12 Box Brass |
| Synth / Bass | F061 | Fantasia Pad |
| | F062 | Warm Pad |
| | F063 | Phasing Pad |
| | F064 | Oct Saw Ld |
| | F065 | Sync Up&Down Ld |
| | F066 | Trancy Ld |
| | F067 | Acoustic Bass |
| | F068 | Finger Bass Jz |
| | F069 | Big Funk |
| | F070 | Timpani Roll/Hit |
| Famous Tunes | F071 | Lady Green Eyes |
| | F072 | Do You Know |
| | F073 | Vibrating Good |
| | F074 | Satin White |
| | F075 | Craft Work |
| | F076 | Jan's Hammer |
| | F077 | Wonder 4 Th City |
| | F078 | Woven Dream |
| | F079 | Your Rhythm Mix |
| | F080 | Jumped! |
| Famous Tunes | F081 | Vienna |
| | F082 | Vienna Bridge |
| | F083 | 99 Nena |
| | F084 | Pop Muzik |
| | F085 | Electric Friends |
| | F086 | Don't You Go |
| | F087 | Follow Your & Me |
| | F088 | Manfred's Light |
| | F089 | Green Monday |
| | F090 | Ph. D I won't |
| Famous Tunes | F091 | I'm Ready |
| | F092 | Won't Get Fooled |
| | F093 | Blinding Lights |
| | F094 | Lovefool |
| | F095 | California Girl |
| | F096 | Hot Stuff |
| | F097 | Galway Girl |
| | F098 | Last Christmas |
| | F099 | Treasure |
| | F100 | Zankoku Tenshi |

# ORGAN PATCHES

| Patch # | Category | Name |
|---|---|---|
| F001 | Jazz | Vintage B-3 DLS |
| F002 | Jazz | Vintage C-3 JOS |
| F003 | Jazz | VintageB-3Squabl |
| F004 | Jazz | VintageB-3Groove |
| F005 | Jazz | Vintage B-3 McG |
| F006 | Jazz | Vintage B-3+Echo |
| F007 | Jazz | Organ Ballad |
| F008 | Jazz | Jerry C |
| F009 | Jazz | Lee Bee |
| F010 | Jazz | Full Spin |
| F011 | Gospel | Classic Gospel |
| F012 | Gospel | Slow Gospel |
| F013 | Gospel | ContmpraryGospel |
| F014 | Gospel | Shout Gospel |
| F015 | Gospel | Quiet Praise |
| F016 | Gospel | Reflective Praise |
| F017 | Gospel | Dramatic Praise |
| F018 | Gospel | Total Praise |
| F019 | Gospel | Meditasion |
| F020 | Gospel | Full Gospel |
| F021 | Classic Pipe | Principal Chorus |
| F022 | Classic Pipe | Flute Chorus |
| F023 | Classic Pipe | Gamba Celeste |
| F024 | Classic Pipe | Baroque |
| F025 | Classic Pipe | Stopped Flutes |
| F026 | Classic Pipe | Diapasons 8′&4′ |
| F027 | Classic Pipe | Bourdon 16′&Prin2′ |
| F028 | Classic Pipe | Flutes w/Trem |
| F029 | Classic Pipe | Oboe Solo |
| F030 | Classic Pipe | Sforzando |
| F031 | Theatre Pipe | Tibias & Vox |
| F032 | Theatre Pipe | Tibia 8′&4′ |
| F033 | Theatre Pipe | StylDTrumptSolo |
| F034 | Theatre Pipe | Oboe 8′&Tibia 4′ |
| F035 | Theatre Pipe | Tibias 16′&4′ |
| F036 | Theatre Pipe | BrassTrumpetSolo |
| F037 | Theatre Pipe | Strings&Voxes |
| F038 | Theatre Pipe | Tibia 16′8′2′&Vox |
| F039 | Theatre Pipe | FullTibias&Voxes |
| F040 | Theatre Pipe | FullComb+Posthrn |
| F041 | Rock | Purple |
| F042 | Rock | Emerson |
| F043 | Rock | Some Lovin’ |
| F044 | Rock | Booker |
| F045 | Rock | Rock 1 |
| F046 | Rock | Rock 2 |
| F047 | Rock | Rock 3 |
| F048 | Rock | Full 1 |
| F049 | Rock | Full 2 |
| F050 | Rock | Full Overdrive |

| Patch # | Category | Name |
|---|---|---|
| F051 | Tibia | DB Tibia 8’&4’ |
| F052 | Tibia | DB Tibia 8’&2’ |
| F053 | Tibia | DB Tibia & Vox |
| F054 | Tibia | DB Tibia 8’4’& 2’ |
| F055 | Tibia | DB Tibia 16’&8’ |
| F056 | Tibia | DB Tibia 16 &4’ |
| F057 | Tibia | DB Tibia 16’8’4’ |
| F058 | Tibia | DB Tibia 1684&2’ |
| F059 | Tibia | DB Tibia 168421’ |
| F060 | Tibia | DB Full Tibia |
| F061 | Lo & Hi | Lo & Hi 1 |
| F062 | Lo & Hi | Lo & Hi 2 |
| F063 | Lo & Hi | Lo & Hi 3 |
| F064 | Lo & Hi | Odd Harmonic |
| F065 | Lo & Hi | Pop Solo |
| F066 | Lo & Hi | Perc 16’&4’ |
| F067 | Lo & Hi | Solo 16’&2’ |
| F068 | Lo & Hi | Cute Solo |
| F069 | Lo & Hi | Eddie’s Wind |
| F070 | Lo & Hi | Full Hammond |
| F071 | Pop | Sylvia |
| F072 | Pop | Lady |
| F073 | Pop | Yeh Yeh |
| F074 | Pop | Season Time |
| F075 | Pop | On a Clear Day |
| F076 | Pop | Twee motten |
| F077 | Pop | Toccata Live |
| F078 | Pop | Je t’aime moi |
| F079 | Pop | Early Bird |
| F080 | Pop | Bluesette |
| F081 | Vx | Vx Mellow |
| F082 | Vx | Vx Bright |
| F083 | Vx | Vx Mixture |
| F084 | Farf | Farf Flute |
| F085 | Farf | Farf Brass |
| F086 | Farf | Farf Reeds |
| F087 | Farf | Farf Strings |
| F088 | Farf | Farf Full |
| F089 | Ace | Ace Flute |
| F090 | Ace | Ace Reeds |
| F091 | Ace | Ace Strings |
| F092 | Contemp | Summer Samba |
| F093 | Contemp | Dancing Days |
| F094 | Contemp | Pipe Mixture |
| F095 | Contemp | California Girl |
| F096 | Contemp | Won’t Get Fooled |
| F097 | TW Basic | Master Comp |
| F098 | TW Basic | Sweet Carpet |
| F099 | TW Basic | DB Reed |
| F100 | TW Basic | DB Diapason |

# PIANO/ENSEMBLE PATCHES

| Patch # | Category | Name |
|---|---|---|
| F001 | A. Piano | Grand Piano Y-CF |
| F002 | A. Piano | Grand Piano StwD |
| F003 | A. Piano | GP Y & LegatoStr |
| F004 | A. Piano | GP S & LegatoStr |
| F005 | A. Piano | GP Y & Warm Pad |
| F006 | A. Piano | GP S & Warm Pad |
| F007 | A. Piano | Upright Piano |
| F008 | A. Piano | Honky-Tonk PIano |
| F009 | A. Piano | Pop Piano CF |
| F010 | A. Piano | HP OldTime PrChd |
| F011 | A. Piano | Electric Grand |
| F012 | A. Piano | Electric Grand Comp |
| F013 | A. Piano | ElecGrand & Pad |
| F014 | A. Piano | Toy PIano Kw1 |
| F015 | A. Piano | Toy Piano Kwi Pan |
| F016 | A. Piano | Toy Piano Sch |
| F017 | A. Piano | Toy Piano Sch MoDly |
| F018 | A. Piano | Toy Piano S&K |
| F019 | A. Piano | Slow Atk Y-CF |
| F020 | A. Piano | Slow Atk StwD |
| F021 | A. Piano | Stadium Grand |
| F022 | A. Piano | Rehearsal Room |
| F023 | A. Piano | Compressed Grand |
| F024 | E. Piano | EP Tine MkI |
| F025 | E. Piano | EP Tine MkI Pan |
| F026 | E. Piano | EP Tine MkI Phase |
| F027 | E. Piano | EP Tine MkI Chorus |
| F028 | E. Piano | EP Tine MkI OD |
| F029 | E. Piano | EP Tine MkII |
| F030 | E. Piano | EP Tine MkII Pan |
| F031 | E. Piano | EP Tine MkII Phase |
| F032 | E. Piano | EP Tine MkII Chorus |
| F033 | E. Piano | Tine MkII OD |
| F034 | E. Piano | EP Reed 200A |
| F035 | E. Piano | EP Reed 200A Trem |
| F036 | E. Piano | EP Reed 200A Phase |
| F037 | E. Piano | EP Reed 200A OD |
| F038 | E. Piano | EP FM |
| F039 | E. Piano | EP FM Pan |
| F040 | E. Piano | EP FM Phase |
| F041 | E. Piano | EP FM Chorus |
| F042 | E. Piano | EP FM + GrandPno |
| F043 | E. Piano | 80's Layer Piano |
| F044 | E. Piano | Reed Pno+FM Pno |
| F045 | E. Piano | Space Mk II + FM |
| F046 | E. Piano | Mk I&LegatoStrings |
| F047 | E. Piano | Compressed Mk1 |
| F048 | E. Piano | GW Tine Mk2 |
| F049 | Harpsichord | Harpsi Back |
| F050 | Harpsichord | Harpsi Back Cpl |
| F051 | Harpsichord | Harpsi Front |
| F052 | Harpsichord | Harpsi Buff |
| F053 | Harpsichord | Harpsi PCD |

| Patch # | Category | Name |
|---|---|---|
| F054 | Harpsichord | Harpsi & Recorder |
| F055 | Harpsichord | Harpsi OD |
| F056 | Clav. | Clav. AC |
| F057 | Clav. | Clav. AD |
| F058 | Clav. | Clav. BC |
| F059 | Clav. | Clav. BD |
| F060 | Clav. | Clav. AC Wah |
| F061 | Clav. | Clav. AD Wah |
| F062 | Clav. | Clav. BC Wah |
| F063 | Clav. | Clav. BD Wah |
| F064 | Clav. | Clav. AC PdWah |
| F065 | Clav. | Clav. AD PdWah |
| F066 | Clav. | Clav. BC PdWah |
| F067 | Clav. | Clav. BD PdWah |
| F068 | Clav. | Clav. RealLove |
| F069 | Clav. | Pulse Clav. |
| F070 | Clav. | Clav Hard OD |
| F071 | Clav. | Clav Bass |
| F072 | Clav. | Clav&Reed 200 |
| F073 | ChroPerc | Xylophone |
| F074 | ChroPerc | Mixing Bowl |
| F075 | ChroPerc | Xylo Duo Prchd |
| F076 | ChroPerc | Xylo 4tet Prchd |
| F077 | ChroPerc | Marimba Normal |
| F078 | ChroPerc | Marimba Trem |
| F079 | ChroPerc | Marimba Sustain |
| F080 | ChroPerc | MarimbaDuo Prchd |
| F081 | ChroPerc | Marimba4tet Prchd |
| F082 | ChroPerc | Xylo + Marimba |
| F083 | ChroPerc | Glockenspiel |
| F084 | ChroPerc | GlockenspielX-66 |
| F085 | ChroPerc | Vibraphone |
| F086 | ChroPerc | Tubular Bells |
| F087 | ChroPerc | Tubular Bells FM |
| F088 | ChroPerc | Tubular Bells TW |
| F089 | ChroPerc | Church Bells |
| F090 | ChroPerc | Music Box |
| F091 | ChroPerc | Tonechimes |
| F092 | ChroPerc | TonechimesDamped |
| F093 | ChroPerc | Hand Bells |
| F094 | ChroPerc | HandBells Damped |
| F095 | ChroPerc | TnchmsHymn Prchd |
| F096 | ChroPerc | TchmHrmChm Prchd |
| F097 | ChroPerc | HnBl&Tchm4tet Prchd |
| F098 | ChroPerc | Wine Glass |
| F099 | ChroPerc | WG Lawrence |
| F100 | ChroPerc | Digi Bell 1 |
| F101 | ChroPerc | Digi Bell 2 |
| F102 | ChroPerc | Rather Be Prchd |
| F103 | ChroPerc | Cathedral Chimes |
| F104 | ChroPerc | Marimba + Glock |
| F105 | ChroPerc | Organ Harp |
| F106 | ChroPerc | Vibraharp |

| Patch # | Category | Name |
|---|---|---|
| F107 | Guitar | Nylon Guitar |
| F108 | Guitar | Steel Guitar |
| F109 | Guitar | Nylon&Steel Gtrs |
| F110 | Guitar | StelGtDuo Prchd |
| F111 | Guitar | 12-String Guitar |
| F112 | Guitar | Jazz Guitar |
| F113 | Guitar | Jazz Guitar Oct |
| F114 | Guitar | PedalSteelGuitar |
| F115 | Guitar | Orchestral Harp |
| F116 | Guitar | OH WholeTone C |
| F117 | Guitar | OH WholeTone F |
| F118 | Guitar | PizzicatoStrings |
| F119 | Guitar | PizzStr + Glock |
| F120 | Guitar | NylonGtr+Tine EP |
| F121 | Guitar | SteelGtr+Tine EP |
| F122 | Ethnic | Dulcimer |
| F123 | Ethnic | Sitar |
| F124 | Ethnic | Banjo |
| F125 | Ethnic | Koto |
| F126 | Ethnic | Pan Pipes |
| F127 | Ethnic | SteelGtr&Dulcimer |
| F128 | Ethnic | PanPipe&Recorder |
| F129 | Ethnic | Koto & Pan Pipes |
| F130 | SFX | Zap |
| F131 | SFX | Rain |
| F132 | SFX | Telephone |
| F133 | SFX | Flanging Noise |
| F134 | SFX | Burst Noise |
| F135 | SFX | Sine Prchd |
| F136 | SFX | WhiteNoisePedWah |
| F137 | SFX | Sine RingMod |
| F138 | Wind | Horn Rock Band |
| F139 | Wind | Unison Sax |
| F140 | Wind | Ceddin Deden |
| F141 | Wind | M12 Box Brass |
| F142 | Wind | M12 Brazz |
| F143 | Wind | M12 Horn Ens |
| F144 | Wind | SynBrs Bird Low |
| F145 | Wind | SynBrs Bird Oct |
| F146 | Wind | SynBrs GX |
| F147 | Wind | Flute Prchd |
| F148 | Wind | BigBandSax Prchd |
| F149 | Wind | BigBand Prchd |
| F150 | Wind | Unison Brs FD |
| F151 | Wind | Unison Brs GUp |
| F152 | Wind | Quartet 1 Prchd |
| F153 | Wind | Quartet 2 Prchd |
| F154 | Wind | Jazz Brass Prchd |
| F155 | Wind | MutedCombo1Prchd |
| F156 | Wind | Muted Combo2Prchd |
| F157 | Wind | Trumpet Str |
| F158 | Wind | Trumpet Vib |
| F159 | Wind | Trumpet Section |

| Patch # | Category | Name |
|---|---|---|
| F160 | Wind | Trumpet Muted |
| F161 | Wind | Trombone Str |
| F162 | Wind | Trombone Muted |
| F163 | Wind | Flute Vib |
| F164 | Wind | Taped Flute |
| F165 | Wind | Recorder |
| F166 | Wind | Synth Whistle |
| F167 | Wind | Alto Sax Str |
| F168 | Wind | Alto Sax Vib |
| F169 | Wind | Tenor Sax Str |
| F170 | Wind | Tenor Sax Vib |
| F171 | Wind | Bari Sax Str |
| F172 | Wind | Tp & Tb Str |
| F173 | Wind | Tp & Tb Vib |
| F174 | Wind | Tp & Tb Mute |
| F175 | Wind | Ed's OB Brazz |
| F176 | Wind | Ray's Flute |
| F177 | Wind | SaxQuartet Prchd |
| F178 | Strings | Legato Strings |
| F179 | Strings | Legato Strgs Oct |
| F180 | Strings | LgatoSt Op Prchd |
| F181 | Strings | Section Strings |
| F182 | Strings | Section Str Oct |
| F183 | Strings | SectStr Op Prchd |
| F184 | Strings | Synth Str.Bright |
| F185 | Strings | Synth Str.Mellow |
| F186 | Strings | Sol. Strings |
| F187 | Strings | Sol. Strings Oct |
| F188 | Strings | Taped Strings |
| F189 | Strings | Glass Harp |
| F190 | Strings | Violin |
| F191 | Strings | TapedChoir&Strings |
| F192 | Strings | Synth Stringz |
| F193 | Strings | TapedStrg&SynStr |
| F194 | Strings | TapedStrg&SecStr |
| F195 | Strings | SectStrings&Violin |
| F196 | Choir | Choir Aah |
| F197 | Choir | Choir Doo |
| F198 | Choir | Vocal |
| F199 | Choir | Vocal&Strg Prchd |
| F200 | Choir | Vcal&Choir Prchd |
| F201 | Choir | Taped Choir |
| F202 | Choir | TapedChoir Prchd |
| F203 | Choir | TapedChoir&Flute |
| F204 | Choir | Space Choir |
| F205 | Synth Pad | Fantasia Pad |
| F206 | Synth Pad | Harp Pad |
| F207 | Synth Pad | Warm Pad |
| F208 | Synth Pad | Choir Pad |
| F209 | Synth Pad | Soundtrack |
| F210 | Synth Pad | Wind Bell |
| F211 | Synth Pad | PWM Pad |

| Patch # | Category | Name |
|---|---|---|
| F212 | Synth Pad | Sweep Pad |
| F213 | Synth Pad | Sample&Hold Pad |
| F214 | Synth Pad | Phasing Pad |
| F215 | Synth Pad | Chime Pad |
| F216 | Synth Pad | Rattle Pad |
| F217 | Synth Pad | 2.2 Pad |
| F218 | Synth Pad | Shimmer Pad |
| F219 | Synth Pad | It's A Miracle |
| F220 | Synth Pad | Zan-Te Pong |
| F221 | Synth Pad | Fantasia&Strings |
| F222 | Synth Pad | SynthPad&M12Brss |
| F223 | Synth Pad | SynthPad&TapedSt |
| F224 | Bass | Acoustic Bass |
| F225 | Bass | AcouBass&RideCym |
| F226 | Bass | AcouBass & Brush |
| F227 | Bass | AcouBass & Drums |
| F228 | Bass | Finger Bass Jz |
| F229 | Bass | Finger Bass Pr |
| F230 | Bass | Pick Bass Jz |
| F231 | Bass | Pick Bass Jz OD |
| F232 | Bass | Pick Bass Pr |
| F233 | Bass | Pick Bass Pr OD |
| F234 | Bass | Slap Bass |
| F235 | Bass | Slap Bass Delay |
| F236 | Bass | FM Bass |
| F237 | Bass | Timpani Normal |
| F238 | Bass | Timpani Roll |
| F239 | Bass | Legato Strg Bass |
| F240 | Bass | Symphonic Bass |
| F241 | Bass | ElecPiano Bass |
| F242 | Bass | FingBas+HarmStacc |
| F243 | Bass | AcouBass & Trbn |
| F244 | Bass | Pick Bass Sp1 |
| F245 | Bass | Pick Bass&Pulse66 |
| F246 | Bass | ElecPiano Bass Vel |
| F247 | Bass | AcousticBass+FM |
| F248 | Synth Lead | Square Ld Bright |
| F249 | Synth Lead | Square Ld Mellow |
| F250 | Synth Lead | Saw Ld |
| F251 | Synth Lead | Fifth Ld |
| F252 | Synth Lead | Sync Ld U&D |
| F253 | Synth Lead | Sync Ld D |
| F254 | Synth Lead | Noise Ld |
| F255 | Synth Lead | OPZ LFO Ld |
| F256 | Synth Lead | Lucy Arp |
| F257 | Synth Lead | Gimme^3 Ld |
| F258 | Synth Lead | Tel Line Ld |
| F259 | Synth Lead | Hot Stuff Ld |
| F260 | Synth Lead | Take On Ld |
| F261 | Synth Lead | B.Light Ld |
| F262 | Synth Lead | Unison Ld |
| F263 | Synth Lead | UnisonNoise Ld |

| Patch # | Category | Name |
|---|---|---|
| F264 | Synth Lead | Chocolate Seq |
| F265 | Synth Lead | Puttin'RitzPrchd |
| F266 | Synth Lead | Synth Ralf |
| F267 | Synth Lead | Pulse75&Alto Sax |
| F268 | Synth Lead | Saw & M12 Brass |
| F269 | Synth Lead | Pulse80+Violin |
| F270 | Synth Lead | SquareDuet Prchd |
| F271 | Free Reed | Accordion M |
| F272 | Free Reed | Accordion LM |
| F273 | Free Reed | Accordion LMH |
| F274 | Free Reed | Accordion LMMH |
| F275 | Free Reed | Accordion MMM |
| F276 | Free Reed | Reed Organ |
| F277 | Free Reed | Reed Organ Oct |
| F278 | Free Reed | Harm Single |
| F279 | Free Reed | Harm Chro Norm |
| F280 | Free Reed | Harm Chro Vib |
| F281 | Free Reed | Harm Chro OD |
| F282 | Free Reed | Harm FM |
| F283 | Free Reed | Melodion S-32 |
| F284 | Free Reed | Melodion PRO-44 |
| F285 | Free Reed | Melodion M-37 |
| F286 | Free Reed | Melodion M-37Twin |
| F287 | Free Reed | MelodionM37ODWah |
| F288 | Free Reed | Melodion B-24 |
| F289 | Free Reed | Melodion 2 Prchd |
| F290 | Free Reed | Melodion 3 Prchd |
| F291 | Free Reed | Melodion 4 Prchd |
| F292 | Free Reed | MelodnP44+HarChr |
| F293 | Free Reed | MelodnB24+Marimba |
| F294 | Free Reed | HarChrVb+AltoSax |
| F295 | Percussion | Ride Cymbal |
| F296 | Percussion | Brush Snare Drum |
| F297 | Percussion | Wind Chime |
| F298 | Percussion | Tone Tang |
| F299 | Percussion | OH WlTnC&WindChm |
| F300 | Percussion | OH WlTnF&WindChm |

**tips** **WHAT IS "ProChord?"**

**ProChord**™is a unique feature of certain Hammond instruments, including the SK PRO, which allows you to play professional right-hand harmony while playing a single-note melody. The harmonization applied to the melody is determined by which chord is played by the left hand.

# MONO SYNTH PATCHES

| Patch # | Name |
|---|---|
| F001 | Sine Lead |
| F002 | Saw Lead |
| F003 | Fat Saw w/Chorus |
| F004 | Wild Chorus |
| F005 | SW Synth #1 |
| F006 | Staircase 4dg |
| F007 | FM Flute |
| F008 | LeadSqu w/Chor |
| F009 | Synth Trombone |
| F010 | Quartersteps |
| F011 | B-3 Perc Synth |
| F012 | Tuned White Noise |
| F013 | Basic Syn Bass |
| F014 | PHAT Bass |
| F015 | Ed's OB Bass |
| F016 | Chirp Bass |
| F017 | Melodic Solo 1 |
| F018 | Perc. Bass |
| F019 | Florian Bass |
| F020 | Hard Solo |
| F021 | Autobahn |
| F022 | Oxygene |
| F023 | Magnetic |
| F024 | Electric Friends |
| F025 | Don't You Go |
| F026 | Blue Monday |
| F027 | Get Enough |
| F028 | Tainted Love |
| F029 | Sweet Dreams |
| F030 | West End Girls |
| F031 | 99 Luftballons |
| F032 | You Want Me |
| F033 | Vienna |
| F034 | Pop Muzik Perc |
| F035 | Don't Go Bass |
| F036 | Noise 1 |
| F037 | Noise 2 |
| F038 | Special PF |
| F039 | Special VG |
| F040 | Aliens |
| F041 | Bright Brass |
| F042 | MG Lead |
| F043 | F. P. Cress. |
| F044 | Spacious Saw Ld |
| F045 | Funny Ld |
| F046 | Oct Saw Ld |
| F047 | Oct Sqr Ld |
| F048 | 4th Saw Ld |
| F049 | 4th Sqr Ld |
| F050 | I'm Ready |

| Patch # | Name |
|---|---|
| F051 | Lucky Man |
| F052 | Takarajima |
| F053 | Gut Daze |
| F054 | Sweep Bass |
| F055 | Reso  Sweep Bass |
| F056 | Oct.  Sweep Bass |
| F057 | Arpie Bass |
| F058 | Chameleon Bass |
| F059 | Rock With You Ld |
| F060 | Beep Ld |
| F061 | Belly Ld |
| F062 | Over Mod Ld |
| F063 | Material Ld |
| F064 | Cool Bass |
| F065 | Metallic Bass |
| F066 | FM Horn |
| F067 | FM Reed |
| F068 | Square Ld |
| F069 | Sqr Alt Oct Ld |
| F070 | Popcorn Ld |
| F071 | Pulse Ld |
| F072 | PWM Tri Ld |
| F073 | PWM S/H Ld |
| F074 | PWM Frac Ld |
| F075 | Square Bass |
| F076 | Sync Up Ld |
| F077 | Sync Down Ld |
| F078 | Sync Up&Down Ld |
| F079 | Sync S/H Ld |
| F080 | Sync Frac Ld |
| F081 | Trancy Ld |
| F082 | Out Of Tune Ld |
| F083 | Sweep Trancy Ld |
| F084 | Sqr With Saw Ld |
| F085 | Saw With Sqr Ld |
| F086 | Noise Ld |
| F087 | Chip Perc. |
| F088 | Falling Noise |
| F089 | Upward Noise |
| F090 | Wind |
| F091 | Seashore |
| F092 | Pitch S/H |
| F093 | Glass Crash |
| F094 | Launch |
| F095 | Percussive Saw |
| F096 | Oct&Vibrato Ld |
| F097 | Glass Crash |
| F098 | Unison Bass |
| F099 | Sqr+Saw Oct Bass |
| F100 | Big Drift |

# WAVEFORM LIST

## PIANO/ENSEMBLE

| | Category | | Name |
|---|---|---|---|
| 1 | A. Piano | 1 | GrandPf Yam CF3 |
| | | 2 | GrandPf Stw D St |
| | | 3 | GndPf StwDSt Rel |
| | | 4 | UpUf Regular |
| | | 5 | UpUf Honky |
| | | 6 | Electric Grand |
| | | 7 | Toy Pf Kaw |
| | | 8 | Toy Pf Kaw Rel |
| | | 9 | Toy Pf Sch |
| | | 10 | Toy Pf Sch Rel |
| | | 11 | Pop Piano CF |
| 2 | E. Piano | 1 | EP Tine Mk1 On |
| | | 2 | EP Tine Mk1 Off |
| | | 3 | EP Tine Mk2 On |
| | | 4 | EP Reed 200A |
| | | 5 | E.Piano FM |
| | | 6 | E.Piano FM Cho |
| | | 7 | EP Tine Mk1 Soft |
| | | 8 | EP Reed Soft |
| 3 | Harpsichord | 1 | Hpsichrd Back |
| | | 2 | Hpsichrd Front |
| | | 3 | Hpsichrd Buff |
| | | 4 | Hpsi Off |
| 4 | Clav | 1 | Clav AC |
| | | 2 | Clav AD |
| | | 3 | Clav BC |
| | | 4 | Clav BD |
| | | 5 | Clav Off |
| 5 | Chro. Perc. | 1 | Xylophone YX Norm |
| | | 2 | Marimba YM Norm |
| | | 3 | Marimba YM Trem |
| | | 4 | Glockenspiel |
| | | 5 | Glock. X-66 |
| | | 6 | Vibraphone YV |
| | | 7 | Tublar Bells |
| | | 8 | Tub Bells FM |
| | | 9 | Tub Bells TW |
| | | 10 | Church Bell |
| | | 11 | Wine Glass |
| | | 12 | Tonechimes |
| | | 13 | Hand Bells |
| | | 14 | Syn. Celesta |
| | | 15 | Digi Bell 1 |
| | | 16 | Digi Bell 2 |
| | | 17 | Crystal |
| | | 18 | Music Box |
| 6 | Guitar | 1 | Nylon-Str Gt. |
| | | 2 | Steel-Str Gt. |
| | | 3 | 12Str Gt. A |
| | | 4 | 12Str Gt. B |
| | | 5 | Jazz Gt. |
| | | 6 | Pedal Steel Gt |
| | | 7 | Orch Harp |
| | | 8 | OH Whole Tone C |
| | | 9 | OH Whole Tone F |
| | | 10 | Pizzicato Str. |
| 7 | Ethnic | 1 | Dulcimer |
| | | 2 | Sitar |
| | | 3 | Tanpura |
| | | 4 | Banjo |
| | | 5 | Soh |
| | | 6 | Pan Pipes |
| 8 | SFX | 1 | Sine |
| | | 2 | White Noise |
| | | 3 | Rain |
| | | 4 | TelephoneRingSus |
| | | 5 | TelephoneRingRel |
| | | 6 | E. Driver Sus |

| | Category | | Name |
|---|---|---|---|
| | | 7 | E. Driver Rel |
| 9 | Wind | 1 | Trumpet Str |
| | | 2 | Trumpet Vib |
| | | 3 | Trumpet Muted |
| | | 4 | Tp. Fall Sus |
| | | 5 | Tp. Fall Atk |
| | | 6 | Tp. Grs Up Sus |
| | | 7 | Trumpet Sect. |
| | | 8 | Trombone Str |
| | | 9 | Trombone Muted |
| | | 10 | Tb. Fall Sus |
| | | 11 | Tb. Fall Atk |
| | | 12 | Flute Str |
| | | 13 | Flute Vib |
| | | 14 | Flute Atk |
| | | 15 | Alto Sax Str |
| | | 16 | Alto Sax Vib |
| | | 17 | Tenor Sax Str |
| | | 18 | Tenor Sax Vib |
| | | 19 | Bari Sax Str |
| | | 20 | Recorder |
| | | 21 | Flute Taped |
| | | 22 | M12 Box Brass 1 |
| | | 23 | M12 Box Brass 2 |
| | | 24 | M12 Brazz 1 |
| | | 25 | M12 Brazz 2 |
| | | 26 | M12 Horn Ens 1 |
| | | 27 | M12 Horn Ens 2 |
| 10 | Strings | 1 | Str. Legato |
| | | 2 | Str. Section |
| | | 3 | Synth Str. Mlw |
| | | 4 | Synth Str. Bri |
| | | 5 | Sol. Str. |
| | | 6 | Violins Taped |
| | | 7 | Violin |
| | | 8 | Glass Harp St |
| | | 9 | Glass Harp Mono |
| 11 | Choir | 1 | Choir Aah CM |
| | | 2 | Choir Doo CM |
| | | 3 | Vocal CM Tn/S |
| | | 4 | Choir Taped |
| 12 | Synth Pad | 1 | PWM |
| | | 2 | EPFM Pad |
| | | 3 | WG Pad Bright |
| | | 4 | WG Pad Mellow |
| | | 5 | Noise Choir |
| 13 | Bass | 1 | Acoustic Bs On |
| | | 2 | Acoustic Bs Off |
| | | 3 | Finger Bs Jz |
| | | 4 | Finger Bs Pr |
| | | 5 | Pick Bs Jz |
| | | 6 | Pick Bs Pr |
| | | 7 | Slap Bs Jz |
| | | 8 | FM Bass |
| | | 9 | Timpani Single |
| | | 10 | Timpani Roll |
| | | 11 | Timpani Griss |
| 14 | Synth Lead | 1 | Square |
| | | 2 | Pulse 66% |
| | | 3 | Pulse 75% |
| | | 4 | Pulse 80% |
| | | 5 | Sawtooth |
| | | 6 | Kinura |
| | | 7 | Lucy |
| | | 8 | Even Bars |
| | | 9 | OPZ LFO |
| | | 10 | Osc. Sync U/D |

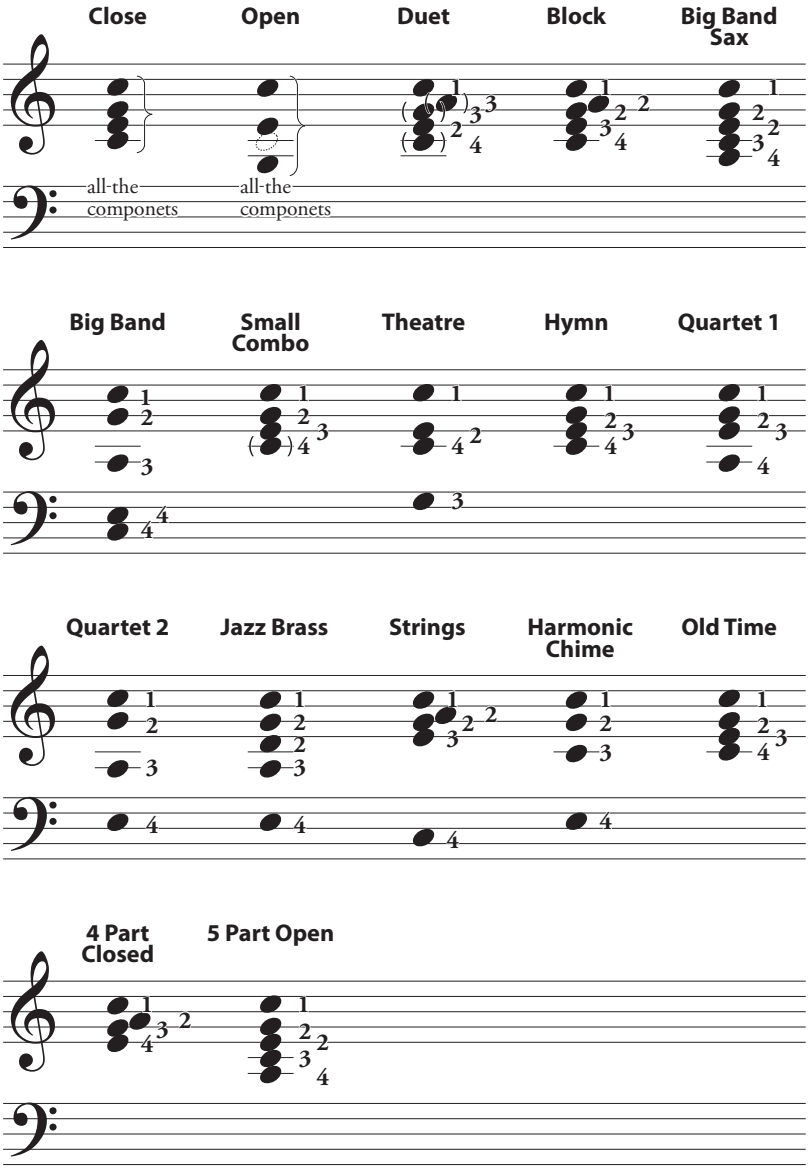
| | Category | | Name |
|---|---|---|---|
| | | 11 | Osc. Sync D |
| 15 | Free Reed | 1 | Accordion |
| | | 2 | Acdn SubOct |
| | | 3 | Reed Organ |
| | | 4 | Melodion B-24 |
| | | 5 | Melodion M-37 |
| | | 6 | Melodion M-37Oct |
| | | 7 | Melodion PRO-44 |
| | | 8 | Melodion S-32 |
| | | 9 | Harm Single |
| | | 10 | Harm Chro Norm |
| | | 11 | Harm Chro Vib |
| | | 12 | Harm BsChro |
| | | 13 | Harm Bass Stacc |
| | | 14 | Harm FM |
| 16 | Percussion | 1 | Ride Cymbal |
| | | 2 | Crash Cymbal |
| | | 3 | Crash Cymbal Lp |
| | | 4 | Wind Chime |
| | | 5 | Wind Chime Lp |
| | | 6 | Tone Tang |
| | | 7 | Jazz BD |
| | | 8 | Jazz SD |
| | | 9 | Jazz SD&BD Rnd |
| | | 10 | Brush SD Swl On |
| | | 11 | Brush SD Swl Off |
| | | 12 | Brsh SD Tap/Slap |
| | | 13 | Brush SD&BD Rnd |

## PIPE ORGAN STOPS

| # | Pipe Voice |
|---|---|
| 1 | C-Open Diapason |
| 2 | C-Principal |
| 3 | C-Diapason |
| 4 | C-Bourdon 1 |
| 5 | C-Bourdon 2 |
| 6 | C-Gedeckt |
| 7 | C-Rohr Flute |
| 8 | C-Flute Hamonic |
| 9 | C-Flautino |
| 10 | C-Voix Cele II |
| 11 | C-Clarinet |
| 12 | C-Hautbois |
| 13 | C-Oboe |
| 14 | C-Vox Humana |
| 15 | C-Trompette |
| 16 | C-Cornet V |
| 17 | C-Mixture III |
| 18 | C-Mixture IV |
| 19 | C-Reserve |
| 20 | C-Reserve |
| 21 | C-Reserve |
| 22 | T-Tibia Clausa |
| 23 | T-Brass Saxophone |
| 24 | T-Brass Trumpet |
| 25 | T-Clarinet |
| 26 | T-Brs E.PostHorn |
| 27 | T-Orchestral Oboe |
| 28 | T-Style D Trumpet |
| 29 | T-Viol d'Orchestle |
| 30 | T-Vox Humana |
| 31 | T-Viol Celeste |
| 32 | T-Reserved |
| 33 | T-Reserved |
| 34 | P-CotVln 32' & Brdn 16' |
| 35 | P-CtlBmb 32' & Prn 16' |
| 36 | P-CntBrdn 32' & Flte 16' |
| 37 | P-Trompette 16' |
| 38 | P-Fagott 16' |
| 39 | P-SubBs 16' & Gedeckt 8' |
| 40 | P-Diapason 8' & Flute 4' |
| 41 | P-PrnChors 8' & Mixt IV |
| 42 | P-Tibia 16' & Flute 8' |
| 43 | P-Diap 16' & PostHorns |
| 44 | P-Cornopean |
| 45 | P-Reserved |
| 46 | P-Reserved |

**C** Classical
**T** Theatre
**P** Pedal

## ProChord VOICING




The chord voicings for the **Small Combo**, **Hymn**, and **Old Time** patterns are somewhat similar; however, the passing chords are different corresponding to the harmonic style for each pattern.

# MIDI TEMPLATES

| Template | | Basic | 2 Man Lower | 2 Man Upper |
|---|---|---|---|---|
| Messages | MIDI IN | Sequence | Lower | Upper |
| | Local Control | On | On | On |
| | NRPN | On | On | On |
| | Program Change | On | On | On |
| | Drawbar Registration | On | On | On |
| | External Zone | Off | Off | Off |
| Transmit Channel | Tx. Upper | 1 | 1 | 1 |
| | Tx. Lower | 2 | 2 | 2 |
| | Tx. Pedal | 3 | 3 | 3 |
| | Rx. Upper | 1 | 1 (disregarded, off) | 1 (disregarded, off) |
| | Rx. Lower | 2 | 2 (disregarded, off) | 2 (disregarded, off) |
| | Rx. Pedal | 3 | 3 (disregarded, omni) | 3 (disregarded, omni) |
| Comments | | Record and Playback between the SK PRO (stand alone) and external sequencer. | Play with expanded LOWER Keyboard into the MIDI IN Port.<br>(*1) Your performance will be transmitted from the MIDI OUT Port and recorded by an external sequencer. | Play with expanded UPPER Keyboard into the MIDI IN Port.<br>Same as (*1). |

| Template | | Pedal KBD | 3 KBD Lower | 3 KBD Upper |
|---|---|---|---|---|
| Messages | MIDI IN | Pedal | Low + Ped | Up + Ped |
| | Local Control | On | On | On |
| | NRPN | On | On | On |
| | Program Change | On | On | On |
| | Drawbar Registration | On | On | On |
| | External Zone | Off | Off | Off |
| Transmit Channel | Tx. Upper | 1 | 1 | 1 |
| | Tx. Lower | 2 | 2 | 2 |
| | Tx. Pedal | 3 | 3 | 3 |
| | Rx. Upper | 1 (disregarded, off) | 1 | 1 |
| | Rx. Lower | 2 (disregarded, off) | 2 | 2 |
| | Rx. Pedal | 3 (disregarded, omni) | 3 | 3 |
| Comments | | Play with expanded Pedalboard into the MIDI IN Port.<br>Same as (*1). | Play with both expanded LOWER Keyboard (Ch. 2) and Pedalboard (Ch. 3) into the MIDI IN Port.<br>Same as (*1). | Play with both expanded UPPER Keyboard (Ch. 1) and Pedalboard (Ch. 3) into the MIDI IN Port.<br>Same as (*1). |

| Template | | Organ Upper | Piano | Ensemble |
|---|---|---|---|---|
| Messages | MIDI IN | Organ Upper | Piano | Ensemble |
| | Local Control | On | On | On |
| | NRPN | On | On | On |
| | Program Change | On | On | On |
| | Drawbar Registration | On | On | On |
| | External Zone | Off | Off | Off |
| Transmit Channel | Tx. Upper | 1 | 1 | 1 |
| | Tx. Lower | 2 | 2 | 2 |
| | Tx. Pedal | 3 | 3 | 3 |
| | Rx. Upper | 1 (disregarded, off) | 1 (disregarded, off) | 1 (disregarded, off) |
| | Rx. Lower | 2 (disregarded, off) | 2 (disregarded, off) | 2 (disregarded, off) |
| | Rx. Pedal | 3 (disregarded, off) | 3 (disregarded, off) | 3 (disregarded, off) |
| Comments | | Play the ORGAN Section Upper directly by expanded MIDI keyboard into the MIDI IN Port. | Play the PIANO Section directly by expanded MIDI keyboard into the MIDI IN Port. | Play the ENSEMBLE Section directly by expanded MIDI keyboard into the MIDI IN Port. |

| Template | | Synth | EXZ | EXZ 2 Man Lower |
|---|---|---|---|---|
| Messages | MIDI IN | Synth | Sequence | Lower |
| | Local Control | On | On | On |
| | NRPN | On | On | On |
| | Program Change | On | On | On |
| | Drawbar Registration | On | On | On |
| | External Zone | Off | On | On |
| Transmit Channel | Tx. Upper | 1 | Off | Off |
| | Tx. Lower | 2 | Off | Off |
| | Tx. Pedal | 3 | Off | Off |
| | Rx. Upper | 1 (disregarded, off) | Off | Off |
| | Rx. Lower | 2 (disregarded, off) | Off | Off |
| | Rx. Pedal | 3 (disregarded, off) | Off | Off |
| Comments | | Play the MONO SYNTH Section directly by expanded MIDI keyboard into the MIDI IN Port. | (*2) Control the MIDI equipment by using External Zones and MIDI OUT Port. | Play with expanded LOWER Keyboard into the MIDI IN Port.<br>Same as (*2). |

| Template | | ExZ 2 Man Upper | EXZ Pedal KBD | EXZ 3 KBD Lower |
|---|---|---|---|---|
| Messages | MIDI IN | Upper | Pedal | Low + Ped |
| | Local Control | On | On | On |
| | NRPN | On | On | On |
| | Program Change | On | On | On |
| | Drawbar Registration | On | On | On |
| | External Zone | On | On | On |
| Transmit Channel | Tx. Upper | Off | Off | Off |
| | Tx. Lower | Off | Off | Off |
| | Tx. Pedal | Off | Off | Off |
| | Rx. Upper | Off | 1 (disregarded, off) | 1 |
| | Rx. Lower | Off | 2 (disregarded, off) | 2 |
| | Rx. Pedal | Off | 3 (disregarded, omni) | 3 |
| Comments | | Play with expanded UPPER Keyboard into the MIDI IN Port.<br>Same as (*2). | Play with expanded Pedalboard into the MIDI IN Port.<br>Same as (*2). | Play with both expanded LOWER Keyboard (Ch. 2) and Pedalboard (Ch. 3) into the MIDI IN Port.<br>Same as (*2). |

| Template | | EXZ 3 KBD Upper |
|---|---|---|
| Messages | MIDI IN | Up + Ped |
| | Local Control | On |
| | NRPN | On |
| | Program Change | On |
| | Drawbar Registration | On |
| | External Zone | On |
| Transmit Channel | Tx. Upper | Off |
| | Tx. Lower | Off |
| | Tx. Pedal | Off |
| | Rx. Upper | 1 |
| | Rx. Lower | 2 |
| | Rx. Pedal | 3 |
| Comments | | Play with both expanded UPPER Keyboard (Ch. 1) and Pedalboard (Ch. 3) into the MIDI IN Port.<br>Same as (*2). |

# MIDI IMPLEMENTATION

## CHANNEL VOICE MESSAGES

### Note Off

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| 8nH | kkH | vvH, or |
| 9nH | kkH | 00H |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
kk=Note Number: 00H - 7FH (0 - 127)
vv=Velocity(disregard): 00H - 7FH (0 - 127)

### Note On

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| 9nH | kkH | vvH |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
kk=Note Number: 00H - 7FH (0 - 127)
vv=Velocity: 00H - 7FH (0 - 127)

### Control Change

**Bank Select (CC#0, 32)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 00H | mmH |
| BnH | 20H | llH |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
mm,ll=Bank Number: 00H 00H = Bundle
01H 00H = User
02H 00H = Factory
64H 00H - 6DH 00H= Bank [1] to [10]

*Disregards if the received number is empty.*

**Expression (CC#11)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 0BH | vvH |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Expression: 00H - 7FH (0 - 127)

**Spring Shock (CC#48)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 30H | vvH |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Velocity: 00H - 7FH (0 - 127)

**TW Brake (CC#49)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 31H | vvH |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Control Value: 00H - 7FH (0 - 127)
0 - 63=Off, 64 - 127=On

**Damper (CC#64)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 40H | vvH |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Control Value: 00H - 7FH (0 - 127)
0 - 63=Off, 64 - 127=On

**Portamento Switch (CC#65)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 41H | vvH |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Control Value: 00H - 7FH (0 - 127)
0 - 63=Off, 64 - 127=On

**Sustain (CC#69-adds Sustain to Upper and Lower ORGAN Parts)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 45H | vvH |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Control Value: 00H - 7FH (0 - 127)
0 - 63=Off, 64 - 127=On

**ProChord Active (CC#84)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 54H | vvH |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Control Value: 00H - 7FH (0 - 127)
0 - 63=Off, 64 - 127=On

*Activates "Harmony" parts for ORGAN Section when this Parameter is "On."*

**Leslie Fast (CC#92)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 5CH | vvH |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
vv=Control Value: 00H - 7FH (0 - 127)
0 - 63=Off, 64 - 127=On

*This control change is only for receive.*

**NRPN MSB/LSB (CC#98, 99)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 63H | mmH |
| BnH | 62H | llH |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
mm=upper byte of the Parameter number specified by NRPN
ll=lower byte of the Parameter number specified by NRPN

**Data Entry (CC#6, 38)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 06H | mmH |
| BnH | 26H | llH |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
mm,ll=the value of the Parameter specified by NRPN

### Program Change

| Status | 2nd Byte |
|---|---|
| CnH | ppH |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)
pp=Program Number: 00H - 63H = Patch #0 to 99
64H - 6DH = Favo. Number [1] to [10]
7FH = [Manual]

### Example of operation

**ex: select Combi F016**

Bx 00 02 Bx 20 00 Cx 0F (x=Upper Channel)

**ex: select Favorite Bank[2], Number[6]**

Bx 00 65 Bx 20 00 Cx 69 (x=Upper Channel)

**ex: select Manual**

Cx 7F (x=Upper Channel)

## CHANNEL MODE MESSAGES

**All Sounds Off (CC#120)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 78H | 00H |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)

*When this message is received, all currently-sounding notes on the corresponding channel will be turned off immediately.*

**Reset All Controllers (CC#121)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 79H | 00H |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)

*When this message is received, the following controllers will be set to their reset values.*

Expression: 127, TW Brake: 0, Damper: 0
NRPN: unset; previously set data will not change

**All Notes Off (CC#123)**

| Status | 2nd Byte | 3rd Byte |
|---|---|---|
| BnH | 7BH | 00H |

n=MIDI Channel Number: 0H - FH (Ch. 1 - 16)

*When All Notes Off is received, all notes on the corresponding channel will be turned off. However if Hold 1 or Sostenuto is ON, the sound will be continued until these are turned off.*

# DRAWBAR DATA LIST

| Part | Control Number | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 16′ | 5 1⁄3′ | 8′ | 4′ | 2 2⁄3′ | 2′ | 1 3⁄5′ | 1 1⁄3′ | 1′ |
| Upper | 0CH(12) | 0DH(13) | 0EH(14) | 0FH(15) | 10H(16) | 11H(17) | 12H(18) | 13H(19) | 14H(20) |
| Lower | 15H(21) | 16H(22) | 17H(23) | 18H(24) | 19H(25) | 1AH(26) | 1BH(27) | 1CH(28) | 1DH(29) |
| Pedal | 21H(33) | - | 23H(35) | - | - | - | - | - | - |

| | Level | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Value | 00 - 0FH (0 - 15) | 10 - 1FH (16 - 31) | 20 - 2FH (32 - 47) | 30 - 3FH (48 - 63) | 40 - 4FH (64 - 79) | 50 - 5FH (80 - 95) | 60 - 6FH (96 - 111) | 70 - 7EH (112-126) | 7FH (127) |

ex: Set Lower 8′ to level 7 via MIDI. Bx 17 70 (x=Upper Channel)

# SYSTEM EXCLUSIVE MESSAGE

## MEMORY DUMP

1. Each Packet (139 Bytes)

| | |
|---|---|
| F0 | System Exclusive |
| 55 | SUZUKI ID |
| dd | Device ID (refer to page 157) |
| 10 | Model ID MSB |
| 24 | Model ID LSB |
| 11 | Command: Data Packet |
| [TYPE] | Data Type<br>07H, 08H = Temp. Dump<br>0AH = System Dump |
| [PNH] | Packet Number MSB |
| [PNL] | Packet Number LSB |
| [DATA] | 64 Bytes Data<br>128 Bytes nibblized ASCII<br>ex: 7EH = 37H, 45H |
| [CHD] | Check Digit<br>Lower 7 bits of XOR [DATA] |
| F7 | End Of Exclusive |

2. Acknowledge

| | |
|---|---|
| F0 | System Exclusive |
| 55 | SUZUKI ID |
| dd | Device ID |
| 10 | Model ID MSB |
| 24 | Model ID LSB |
| 14 | Command: Acknowledge |
| [TYPE] | Data Type |
| [AK] | Result<br>00H = OK<br>05H = Check Digit Error<br>06H = Receive Protected |
| [PNH] | Packet Number MSB |
| [PNL] | Packet Number LSB |
| F7 | End Of Exclusive |

3. # of Packets

Temp. Dump: 46
System Dump: 11

## DUMP REQUEST (RX. ONLY)

| | |
|---|---|
| F0 | System Exclusive |
| 55 | SUZUKI ID |
| dd | Device ID |
| 10 | Model ID MSB |
| 24 | Model ID LSB |
| 12 | Command: Dump Request |
| [TYPE] | Data Type<br>07H = Temp. Dump<br>0AH = System Dump |
| F7 | End Of Exclusive |

## NRPN SWITCH

| | |
|---|---|
| F0 | Suzuki Exclusive |
| 55 | SUZUKI ID |
| dd | Device ID |
| 10 | Model ID MSB |
| 24 | Model ID LSB |
| 02 | Command: NRPN Sw. |
| [DATA] | 00H = Off, 7FH = On |
| F7 | End Of Exclusive |

*When this device receives this message, Tx & Rx NRPN is switched in the Control channel.*

## DATA SET (RX. ONLY)

| | |
|---|---|
| F0 | System Exclusive |
| 55 | SUZUKI ID |
| dd | Device ID |
| 10 | Model ID MSB |
| 24 | Model ID LSB |
| 13 | Command: Data Set |
| aa | Address MSB |
| bb | Address |
| cc | Address LSB |
| [DATA] | Data (Flexible bytes) |
| F7 | End Of Exclusive |

## IDENTITY REQUEST (RX. ONLY)

| | |
|---|---|
| F0 | System Exclusive |
| 7E | Universal non real-time |
| dd | Device ID |
| 06 | Sub ID #1 |
| 01 | Sub ID #2 |
| F7 | End Of Exclusive |

## IDENTITY REPLY (TX. ONLY)

| | |
|---|---|
| F0 | System Exclusive |
| 7E | Universal non real-time |
| dd | Device ID |
| 06 | Sub ID #1 |
| 02 | Sub ID #2 |
| 55 | SUZUKI ID |
| 00 10 | Device Family code |
| 00 24 | Device Family number |
| 00 00 | |
| 00 00 | |
| F7 | End Of Exclusive |

*When Identity Request is received, Identity Reply will be transmitted.*

# COMBINATION PARAMETERS

| Category | Parameter | NRPN | | SysEx Address | | | SysEx Length | Data |
|---|---|---|---|---|---|---|---|---|
| | | MSB (63) | LSB (62) | MSB to LSB | | | | Data length 01 uses MSB only, length 02 uses MSB and LSB. |
| Name | | -- | -- | -- | -- | -- | -- | 16 letters |
| Portamento | On | -- | -- | -- | -- | -- | 01 | 00, 01 (Off, On) |
| Reverb | On | 10 | 00 | 00 | 10 | 00 | 01 | 00, 01 (Off, On) |
| | Type (P/E/S) | 10 | 01 | 00 | 10 | 01 | 01 | 00 - 07<br>00: Room 1 05: Church<br>01: Room 2 06: Plate<br>02: Ballroom 07: Spring<br>03: Hall 1<br>04: Hall 2 |
| | Depth | 10 | 02 | 00 | 10 | 02 | 01 | 00 - 7F (0 - 127) |
| | Time (P/E/S) | 10 | 03 | 00 | 10 | 03 | 01 | 00 - 7F (0 - 127) |
| | Pre-LPF (P/E/S) | 10 | 04 | 00 | 10 | 04 | 01 | 00 - 7F (0 - 127) |
| | Type (Organ) | 10 | 06 | 00 | 10 | 06 | 01 | Same as P/E/S |
| | Time (Organ) | 10 | 07 | 00 | 10 | 07 | 01 | 00 - 7F (0 - 127) |
| | Pre-LPF (Organ) | 10 | 08 | 00 | 10 | 08 | 01 | 00 - 7F (0 - 127) |
| Organ Upper | Patch | 11 | 00 | 00 | 11 | 00 | 02 | 00 00 - 00 63, 00 64 - 01 47, 01 48 - 02 2B<br>(B001 - B100, U001 - U100, F001 - F100) |
| | Octave | 11 | 01 | 00 | 11 | 01 | 02 | 3F 7E - 40 00 - 40 02 (-2 - ±0 - +2) |
| | Transpose | 11 | 02 | 00 | 11 | 02 | 02 | 3F 7A - 40 00 - 40 06 (-6 - ±0 - +6) |
| | Allocate | 11 | 03 | 00 | 11 | 03 | 01 | 00 - 03 (Off, Upper, Lower, Pedal) |
| | Key Range Low | 11 | 04 | 00 | 11 | 04 | 01 | 00 - 7F: note number |
| | Key Range High | 11 | 05 | 00 | 11 | 05 | 01 | 00 - 7F: note number |
| | Volume | 11 | 06 | 00 | 11 | 06 | 01 | 00 - 7F (0 - 127) |
| | Expression Minimum | 11 | 07 | 00 | 11 | 07 | 01 | 00 - 7F (0 - 127) |
| | P. Bend Range | 11 | 08 | 00 | 11 | 08 | 01 | 00 - 0E (Patch, 0 - 12) |
| | Mod. Mode | 11 | 09 | 00 | 11 | 09 | 01 | 00 - 04 (Off, OD, MFx1, MFx2, Leslie) |
| | Damper Enable | 11 | 0A | 00 | 11 | 0A | 01 | 00, 01 (Off, On) |
| | Reverb Send Level | 11 | 0B | 00 | 11 | 0B | 01 | 00 - 7F (0 - 127) |
| | 3 Part Organ | 11 | 0C | 00 | 11 | 0C | 01 | 00, 01 (Off, On) |
| Organ Lower | Octave | 12 | 01 | 00 | 12 | 01 | 02 | 3F 7E - 40 00 - 40 02 (-2 - ±0 - +2) |
| | Transpose | 12 | 02 | 00 | 12 | 02 | 02 | 3F 7A - 40 00 - 40 06 (-6 - ±0 - +6) |
| | Allocate | 12 | 03 | 00 | 12 | 03 | 01 | 00 - 03 (Off, Upper, Lower, Pedal) |
| | Key Range Low | 12 | 04 | 00 | 12 | 04 | 01 | 00 - 7F: note number |
| | Key Range High | 12 | 05 | 00 | 12 | 05 | 01 | 00 - 7F: note number |
| | Damper Enable | 12 | 0A | 00 | 12 | 0A | 01 | 00, 01 (Off, On) |
| Organ Pedal | Octave | 13 | 01 | 00 | 13 | 01 | 02 | 3F 7E - 40 00 - 40 02 (-2 - ±0 - +2) |
| | Transpose | 13 | 02 | 00 | 13 | 02 | 02 | 3F 7A - 40 00 - 40 06 (-6 - ±0 - +6) |
| | Allocate | 13 | 03 | 00 | 13 | 03 | 01 | 00 - 03 (Off, Upper, Lower, Pedal) |
| | Key Range Low | 13 | 04 | 00 | 13 | 04 | 01 | 00 - 7F: note number |
| | Key Range High | 13 | 05 | 00 | 13 | 05 | 01 | 00 - 7F: note number |
| | Damper Enable | 13 | 0A | 00 | 13 | 0A | 01 | 00, 01 (Off, On) |
| Piano, Ensemble, Synth<br><br>"s" means;<br>4: Piano<br>5: Ensemble<br>6: Synth | Patch | 1s | 00 | 00 | 1s | 00 | 02 | Piano / Ensemble:<br>00 00 - 03 0F, 03 10 - 06 1F<br>(U001 - U400, F001 - F400)<br>Mono Synth:<br>00 00 - 00 63, 00 64 - 01 47, 01 48 - 02 2B<br>(B001 - B100, U001 - U400, F001 - F100) |
| | Octave | 1s | 01 | 00 | 1s | 01 | 02 | 3F 7E - 40 00 - 40 02 (-2 - ±0 - +2) |
| | Transpose | 1s | 02 | 00 | 1s | 02 | 02 | 3F 7A - 40 00 - 40 06 (-6 - ±0 - +6) |
| | Allocate | 1s | 03 | 00 | 1s | 03 | 01 | 00 - 03 (Off, Upper, Lower, Pedal) |
| | Key Range Low | 1s | 04 | 00 | 1s | 04 | 01 | 00 - 7F: note number |
| | Key Range High | 1s | 05 | 00 | 1s | 05 | 01 | 00 - 7F: note number |
| | Volume | 1s | 06 | 00 | 1s | 06 | 01 | 00 - 7F (0 - 127) |
| | Expression Minimum | 1s | 07 | 00 | 1s | 07 | 01 | 00 - 7F (0 - 127) |
| | P. Bend Range | 1s | 08 | 00 | 1s | 08 | 01 | 00 - 0E (Patch, 0 - 12) |
| | Mod. Mode | 1s | 09 | 00 | 1s | 09 | 01 | 00 - 03 (Off, Mod, OD, MFx1, MFx2) |
| | Damper Enable | 1s | 0A | 00 | 1s | 0A | 01 | 00, 01 (Off, On) |
| | Reverb Send Level | 1s | 0B | 00 | 1s | 0B | 01 | 00 - 7F (0 - 127) |
| | Velocity Curve | 1s | 0D | 00 | 1s | 0D | 01 | 00 - 04 (Off, 1 - 4) |
| Internal Zones | Octave Upper | 17 | 00 | 00 | 17 | 00 | 02 | 3F 7E - 40 00 - 40 02 (-2 - ±0 - +2) |
| | Octave Lower | 17 | 01 | 00 | 17 | 01 | 02 | 3F 7E - 40 00 - 40 02 (-2 - ±0 - +2) |
| | Octave Pedal | 17 | 02 | 00 | 17 | 02 | 02 | 3F 7E - 40 00 - 40 02 (-2 - ±0 - +2) |
| | Octave Real Lower | 17 | 03 | 00 | 17 | 03 | 02 | 3F 7E - 40 00 - 40 02 (-2 - ±0 - +2) |
| | Split On | 17 | 04 | 00 | 17 | 04 | 01 | 00, 01 (Off, On) |
| | SPLIT Point | 17 | 05 | 00 | 17 | 05 | 01 | 00 - 7F: note number |
| | Pedal to Lower On | 17 | 06 | 00 | 17 | 06 | 01 | 00, 01 (Off, On) |
| | Pedal to Lower Upper Limit | 17 | 07 | 00 | 17 | 07 | 01 | 00 - 7F: note number |
| | Pedal to Lower Mode | 17 | 08 | 00 | 17 | 08 | 01 | 00 - 02 (Lowest, Chord, Poly) |
| | Pedal Sustain On | 17 | 09 | 00 | 17 | 09 | 01 | 00, 01 (Off, On) |
| | Pedal Sustain Length | 17 | 0A | 00 | 17 | 0A | 01 | 00 - 04 (1 - 5) |
| | Pedal Key Mono/Poly | 17 | 0B | 00 | 17 | 0B | 01 | 00, 01 (Mono, Poly) |

| Category | Parameter | NRPN | | SysEx Address | | | SysEx Length | Data |
|---|---|---|---|---|---|---|---|---|
| | | MSB (63) | LSB (62) | MSB to LSB | | | | Data length 01 uses MSB only, length 02 uses MSB and LSB. |
| | On | 1n | 00 | 00 | 1n | 00 | 01 | 00, 01 (Off, On) |
| | MIDI Channel | 1n | 01 | 00 | 1n | 01 | 01 | 00 - 0F (1 - 16) |
| External Zones | Octave | 1n | 02 | 00 | 1n | 02 | 02 | 3F 7E - 40 00 - 40 02 (-2 - ±0 - +2) |
| | Transpose | 1n | 03 | 00 | 1n | 03 | 02 | 3F 7A - 40 00 - 40 06 (-6 - ±0 - +6) |
| "n" means; | Bank Select MSB | 1n | 04 | 00 | 1n | 04 | 01 | 00 - 7F (0 - 127) |
| 8: Ex Zone 1 | Bank Select LSB | 1n | 05 | 00 | 1n | 05 | 01 | 00 - 7F (0 - 127) |
| 9: Ex Zone 2 | Program Change | 1n | 06 | 00 | 1n | 06 | 01 | 00 - 7F (0 - 127) |
| A: Ex Zone 3 | Allocate | 1n | 07 | 00 | 1n | 07 | 01 | 00 - 03 (Off, Upper, Lower, Pedal) |
| | Key Range Low | 1n | 08 | 00 | 1n | 08 | 01 | 00 - 7F: note number |
| | Key Range High | 1n | 09 | 00 | 1n | 09 | 01 | 00 - 7F: note number |
| | Volume | 1n | 0A | 00 | 1n | 0A | 01 | 00 - 7F (0 - 127) |
| | Expression Enable | 1n | 0B | 00 | 1n | 0B | 01 | 00, 01 (Off, On) |
| | P. Bend Enable | 1n | 0C | 00 | 1n | 0C | 01 | 00, 01 (Off, On) |
| | Mod. Enable | 1n | 0D | 00 | 1n | 0D | 01 | 00, 01 (Off, On) |
| | Damper Enable | 1n | 0E | 00 | 1n | 0E | 01 | 00, 01 (Off, On) |
| | Pan | 1n | 0F | 00 | 1n | 0F | 01 | 00 - 40 - 7F (Left - Center - Right) |
| | Velocity Curve | 1n | 10 | 00 | 1n | 10 | 01 | 00 - 04 (Off, Hard - Easy) |
| | Expression Minimum | 1n | 11 | 00 | 1n | 11 | 01 | 00 - 3F (0 - 63) |
| | Expression Maximum | 1n | 12 | 00 | 1n | 12 | 01 | 40 - 7F (64 - 127) |
| | Expression CC | 1n | 13 | 00 | 1n | 13 | 01 | 00, 01, 02 (Off, 7, 11) |

# ORGAN PATCH PARAMETERS

| Category | Parameter | NRPN | | SysEx Address | | | SysEx Length | Data |
|---|---|---|---|---|---|---|---|---|
| | | MSB (63) | LSB (62) | MSB to LSB | | | | |
| Name | Patch Name | -- | -- | -- | -- | -- | -- | 16 letters |
| Volume | Patch Volume | 24 | 14 | 00 | 24 | 14 | 01 | 00 - 7F (0 - 127) |
| Upper Registration | 16′ | -- | -- | 00 | 21 | 00 | 01 | 00 - 08 (0 - 8) |
| | 5 1/3′ | -- | -- | 00 | 21 | 01 | 01 | 00 - 08 (0 - 8) |
| | 8′ | -- | -- | 00 | 21 | 02 | 01 | 00 - 08 (0 - 8) |
| | 4′ | -- | -- | 00 | 21 | 03 | 01 | 00 - 08 (0 - 8) |
| | 2 2/3′ | -- | -- | 00 | 21 | 04 | 01 | 00 - 08 (0 - 8) |
| | 2′ | -- | -- | 00 | 21 | 05 | 01 | 00 - 08 (0 - 8) |
| | 1 3/5′ | -- | -- | 00 | 21 | 06 | 01 | 00 - 08 (0 - 8) |
| | 1 1/3′ | -- | -- | 00 | 21 | 07 | 01 | 00 - 08 (0 - 8) |
| | 1′ | -- | -- | 00 | 21 | 08 | 01 | 00 - 08 (0 - 8) |
| Lower Registration | 16′ | -- | -- | 00 | 22 | 00 | 01 | 00 - 08 (0 - 8) |
| | 5 1/3′ | -- | -- | 00 | 22 | 01 | 01 | 00 - 08 (0 - 8) |
| | 8′ | -- | -- | 00 | 22 | 02 | 01 | 00 - 08 (0 - 8) |
| | 4′ | -- | -- | 00 | 22 | 03 | 01 | 00 - 08 (0 - 8) |
| | 2 2/3′ | -- | -- | 00 | 22 | 04 | 01 | 00 - 08 (0 - 8) |
| | 2′ | -- | -- | 00 | 22 | 05 | 01 | 00 - 08 (0 - 8) |
| | 1 3/5′ | -- | -- | 00 | 22 | 06 | 01 | 00 - 08 (0 - 8) |
| | 1 1/3′ | -- | -- | 00 | 22 | 07 | 01 | 00 - 08 (0 - 8) |
| | 1′ | -- | -- | 00 | 22 | 08 | 01 | 00 - 08 (0 - 8) |
| Pedal Registration | 16′ | -- | -- | 00 | 23 | 00 | 01 | 00 - 08 (0 - 8) |
| | 8′ | -- | -- | 00 | 23 | 01 | 01 | 00 - 08 (0 - 8) |
| Lower and Upper | ORGAN Type | 24 | 00 | 00 | 24 | 00 | 01 | 00 - 07<br>00: A-100 04: Vx<br>01: B-3 05: Farf<br>02: C-3 06: Ace<br>03: Mellow 07: Pipe |
| | Envelope | 24 | 01 | 00 | 24 | 01 | 01 | 00 - 20<br>00: Contact<br>01 - 0F: Release 1 - 15<br>10 - 1E: Attack and Release 1 - 15 |
| | Contact Offset Time | 24 | 02 | 00 | 24 | 02 | 01 | 00 - 40 - 7F (-64 - 0 - +63) |
| | Contact Damping | 24 | 03 | 00 | 24 | 03 | 01 | 00 - 1F (0 - 31) |
| | Leakage Level | 24 | 04 | 00 | 24 | 04 | 01 | 00 - 7F (0 - 127) |
| | Custom TW A-100 | 24 | 05 | 00 | 24 | 05 | 01 | 00 - 05 (U1 - F3) |
| | Custom TW B-3 | 24 | 06 | 00 | 24 | 06 | 01 | 00 - 05 (U1 - F3) |
| | Custom TW C-3 | 24 | 07 | 00 | 24 | 07 | 01 | 00 - 05 (U1 - F3) |
| | Custom TW Mellow | 24 | 08 | 00 | 24 | 08 | 01 | 00 - 05 (U1 - F3) |
| | Custom Pipe | 24 | 0A | 00 | 24 | 0A | 01 | 00 - 05 (U1 - F3) |
| | Tone Control | 24 | 0B | 00 | 24 | 0B | 01 | 00 - 09 - 12 (-9 - ±0 +9) |
| | Contact Delay Velocity On | 24 | 0C | 00 | 24 | 0C | 01 | 00, 01 (Off, On) |
| | Contact Delay Velocity Depth | 24 | 0D | 00 | 24 | 0D | 01 | 00 - 7F (0 - 127) |
| | Pitch Bend Depth Plus | 24 | 0E | 00 | 24 | 0E | 01 | 00 - 0C (0 - 12) |
| | Pitch Bend Depth Minus | 24 | 0F | 00 | 24 | 0F | 01 | 00 - 18 (0 - 24) |
| | Sustain Upper On | 24 | 10 | 00 | 24 | 10 | 01 | 00, 01 (Off, On) |
| | Sustain Upper Length | 24 | 11 | 00 | 24 | 11 | 01 | 00 - 04 (1 - 5) |
| | Sustain Lower On | 24 | 12 | 00 | 24 | 12 | 01 | 00, 01 (Off, On) |
| | Sustain Lower Length | 24 | 13 | 00 | 24 | 13 | 01 | 00 - 04 (1 - 5) |
| | Impedance Amount | 24 | 15 | 00 | 24 | 15 | 01 | 00 - 02 (Off, Half, Full) |
| Pedal | Type | 25 | 00 | 00 | 25 | 00 | 01 | 00, 01 (Normal, Muted) |
| | Envelope | 25 | 01 | 00 | 25 | 01 | 01 | 00 - 20<br>00: Contact<br>01 - 0F: Release 1 - 15<br>10 - 1E: Attack and Release 1 - 15 |
| | Custom Sub Drawbars | 25 | 02 | 00 | 25 | 02 | 01 | 00 - 05 (U1 - P3) |
| Percussion | On | 26 | 00 | 00 | 26 | 00 | 01 | 00, 01 (Off, On) |
| | Harmonic | 26 | 01 | 00 | 26 | 01 | 01 | 00, 01 (Second, Third) |
| | Fast Decay | 26 | 02 | 00 | 26 | 02 | 01 | 00, 01 (Slow, Fast) |
| | Volume Soft | 26 | 03 | 00 | 26 | 03 | 01 | 00, 01 (Normal, Soft) |
| | Level at Soft | 26 | 04 | 00 | 26 | 04 | 01 | 00 - 63 (0 - 127) |
| | Level at Normal | 26 | 05 | 00 | 26 | 05 | 01 | 00 - 63 (0 - 127) |
| | Decay at Fast | 26 | 06 | 00 | 26 | 06 | 01 | 00 - 18 (0 - 24) |
| | Decay at Normal | 26 | 07 | 00 | 26 | 07 | 01 | 00 - 18 (0 - 24) |
| | Touch | 26 | 08 | 00 | 26 | 08 | 01 | 00, 01 (Off, On) |
| | 1’ Cancel | 26 | 09 | 00 | 26 | 09 | 01 | 00, 01 (Off, On) |
| | Drawbar Level | 26 | 0A | 00 | 26 | 0A | 01 | 00, 01 (0, Soft) |

| Category | Parameter | NRPN | | SysEx Address | | | SysEx | Data |
|---|---|---|---|---|---|---|---|---|
| | | MSB (63) | LSB (62) | MSB to LSB | | | Length | |
| Animation | Leslie Bypass | 27 | 00 | 00 | 27 | 00 | 01 | 00, 01 (Off, On) |
| | Leslie Stop | 27 | 01 | 00 | 27 | 01 | 01 | 00, 01 (Off, On) |
| | Leslie Fast | 27 | 02 | 00 | 27 | 02 | 01 | 00, 01 (Off, On) |
| | Custom Cabinet | 27 | 03 | 00 | 27 | 03 | 01 | 00 - 0F (U1 - P8) |
| | Vibrato Upper | 27 | 04 | 00 | 27 | 04 | 01 | 00, 01 (Off, On) |
| | Vibrato Lower | 27 | 05 | 00 | 27 | 05 | 01 | 00, 01 (Off, On) |
| | Vibrato Mode | 27 | 06 | 00 | 27 | 06 | 01 | 00 - 05 (V1 - C3) |
| | Vibrato Pedal On | 27 | 07 | 00 | 27 | 07 | 01 | 00, 01 (Off, On) |
| | Vibrato Model | 27 | 08 | 00 | 27 | 08 | 01 | 00 - 02 (Big Box, Small Box, Metal Box) |
| | Vibrato Rate | 27 | 09 | 00 | 27 | 09 | 01 | 00 - 99 (5.78 - 7.90 Hz) |
| | Vibrato Chorus Mix | 27 | 0A | 00 | 27 | 0A | 01 | 00 - 7F (0 - 127) |
| | Vibrato Rate | 27 | 0E | 00 | 27 | 0E | 01 | 00 - 7F (0 - 127) |
| | Vibrato Tremulant | 27 | 0F | 00 | 27 | 0F | 01 | 00 - 7F (0 - 127) |
| | Leslie On Reverb | 27 | 10 | 00 | 27 | 10 | 01 | 00, 01 (Off, On) |
| Transformer | Drive Level | 28 | 00 | 00 | 28 | 00 | 01 | 00 - 7F (0 - 127) |
| | Hysteresis | 28 | 01 | 00 | 28 | 01 | 01 | 00 - 7F (0 - 127) |
| | Depth Upper | 28 | 02 | 00 | 28 | 02 | 01 | 00 - 7F (0 - 127) |
| | Depth Percussion | 28 | 03 | 00 | 28 | 03 | 01 | 00 - 7F (0 - 127) |
| | Depth Lower | 28 | 04 | 00 | 28 | 04 | 01 | 00 - 7F (0 - 127) |
| | Depth Pedal | 28 | 05 | 00 | 28 | 05 | 01 | 00 - 7F (0 - 127) |
| | On | 28 | 06 | 00 | 28 | 06 | 01 | 00, 01 (Off, On) |
| Overdrive | On | 29 | 00 | 00 | 29 | 00 | 01 | 00, 01 (Off, On) |
| | Type | 29 | 01 | 00 | 29 | 01 | 01 | 00 - 03 (Tube Amp, Stomp Box, Clip, EP Amp) |
| | Drive Level | 29 | 02 | 00 | 29 | 02 | 01 | 00 - 7F (0 - 127) |
| | Exp. Control On | 29 | 03 | 00 | 29 | 03 | 01 | 00, 01 (Off, On) |
| | Crossover Freq | 29 | 04 | 00 | 29 | 04 | 01 | 00 - 7F (400Hz - 14.7kHz) |
| | Blend | 29 | 05 | 00 | 29 | 05 | 01 | 00 - 7F (0 - 127) |
| Effect 1, Effect 2<br><br>"x" means;<br>A: Effect 1<br>B: Effect 2 | On | 2x | 00 | 00 | 2x | 00 | 01 | 00, 01 (Off, On) |
| | Type | 2x | 01 | 00 | 2x | 01 | 01 | 00 - 03 for Effect1, 00 - 04 for Effect 2<br>00: Tremolo 00: Auto Pan<br>01: Wah-Wah 01: Phaser<br>02: Ring Mod 02: Flanger<br>03: Compressor 03: Chorus<br>04: Delay |
| | Param 1 | 2x | 02 | 00 | 2x | 02 | 01 | 00 - 7F (0 - 127) |
| | Param 2 | 2x | 03 | 00 | 2x | 03 | 01 | 00 - 7F (0 - 127) |
| | Param 3 | 2x | 04 | 00 | 2x | 04 | 01 | 00 - 7F (0 - 127) |
| | Param 4 | 2x | 05 | 00 | 2x | 05 | 01 | 00 - 7F (0 - 127) |
| | Param 5 | 2x | 06 | 00 | 2x | 06 | 01 | 00 - 7F (0 - 127) |
| | Param 6 | 2x | 07 | 00 | 2x | 07 | 01 | 00 - 7F (0 - 127) |
| | Param 7 | 2x | 08 | 00 | 2x | 08 | 01 | 00 - 7F (0 - 127) |
| | Param 8 | 2x | 09 | 00 | 2x | 09 | 01 | 00 - 7F (0 - 127) |
| Equalizer | Bass Gain | 2C | 00 | 00 | 2C | 00 | 01 | 00 - 09 - 12 (-9 - ±0 +9) |
| | Mid Gain | 2C | 01 | 00 | 2C | 01 | 01 | 00 - 09 - 12 (-9 - ±0 +9) |
| | Treble Gain | 2C | 02 | 00 | 2C | 02 | 01 | 00 - 09 - 12 (-9 - ±0 +9) |
| | Bass Freq | 2C | 03 | 00 | 2C | 03 | 01 | 00 - 18 (20 - 308Hz) |
| | Mid Freq | 2C | 04 | 00 | 2C | 04 | 01 | 00 - 0F (250 - 3.1kHz) |
| | Treble Freq | 2C | 05 | 00 | 2C | 05 | 01 | 00 - 13 (3.0k - 8.0kHz) |

# PIANO/ENSEMBLE PATCH PARAMETERS

| Category | Parameter | NRPN | | SysEx Address | | | SysEx Length | Data |
|---|---|---|---|---|---|---|---|---|
| | | MSB (63) | LSB (62) | MSB to LSB | | | | Data length 01 uses MSB only, length 02 uses MSB and LSB. |
| Name | Patch Name | -- | -- | -- | -- | -- | -- | 16 letters |
| Volume<br>"s" means;<br>3: Piano<br>4: Ensemble | Patch Volume | s1 | 07 | 00 | s1 | 07 | 01 | 00 - 7F (0 - 127) |
| Category | Category | -- | -- | -- | -- | -- | 01 | 00 - 0F<br>00: A. Piano 08: Wind<br>01: E. Piano 09: Strings<br>02: Harpsi 0A: Choir<br>03: Clav. 0B: Syn. Pad<br>04: Chro. Perc. 0C: Bass<br>05: Guitar. 0D: Syn. Lead<br>06: Ethnic 0E: Free Reed<br>07: SFX 0F: Percussion |
| Portamento | On | s1 | 00 | 00 | s1 | 00 | 01 | 00, 01 (Off, On) |
| | Mode | s1 | 01 | 00 | s1 | 01 | 01 | 00, 01 (Every, Legato) |
| | Rate | s1 | 02 | 00 | s1 | 02 | 01 | 00 - 7F (0 - 127) |
| | Mono/Poly | s1 | 03 | 00 | s1 | 03 | 01 | 00 - 02 (Mono, Poly, PolySus) |
| | Mono Priority | s1 | 04 | 00 | s1 | 04 | 01 | 00 - 04 (Auto, Last, High, Low, First) |
| | Pitch Bend Range Up | s1 | 05 | 00 | s1 | 05 | 01 | 00 - 0C (0 - 12) |
| | Pitch Bend Range Down | s1 | 06 | 00 | s1 | 06 | 01 | 00 - 18 (0 - 24) |
| ProChord | On | s2 | 00 | 00 | s2 | 00 | 01 | 00, 01 (Off, On) |
| | Mode | s2 | 01 | 00 | s2 | 01 | 01 | 00 - 10<br>00: Closed 09: Quartet 1<br>01: Open 0A: Quartet 2<br>02: Duet 0B Jazz Brass<br>03: Block 0C: Strings<br>04: Big Band Saxes 0D: Harmonic Chimes<br>05: Big Band 0E: Old Time<br>06: Small Combo 0F: Part 4 Closed<br>07: Theatre 10: Part 5 Open<br>08: Hymn |
| | Disabled | s2 | 02 | 00 | s2 | 02 | 01 | 00, 01 (Single, Unison) |
| LFO1, LFO2<br><br>"x" means;<br>3: LFO1<br>4: LFO2 | Trigger Mode | sx | 00 | 00 | sx | 00 | 01 | 00, 01 (Note, Free) |
| | Waveform | sx | 01 | 00 | sx | 01 | 01 | 00 - 06 (Triangle, Square, Rectangle, Saw Down, Saw Up, S&H, Fluctuation) |
| | Rate | sx | 03 | 00 | sx | 03 | 01 | 00 - 7F (0 - 127) |
| | Delay Time | sx | 05 | 00 | sx | 05 | 01 | 00 - 7F (0 - 127) |
| | Attack Rate | sx | 06 | 00 | sx | 06 | 01 | 00 - 7F (0 - 127) |
| | Attack Rate Key Track | sx | 07 | 00 | sx | 07 | 01 | 00 - 7F (0 - 127) |
| Overdrive | On | s5 | 00 | 00 | s5 | 00 | 01 | 00, 01 (Off, On) |
| | Type | s5 | 01 | 00 | s5 | 01 | 01 | 00 - 03 (Tube Amp, Stomp Box, Clip, EP Amp) |
| | Drive Level | s5 | 02 | 00 | s5 | 02 | 01 | 00 - 7F (0 - 127) |
| | Exp. Control On | s5 | 03 | 00 | s5 | 03 | 01 | 00, 01 (Off, On) |
| | Crossover Freq | s5 | 04 | 00 | s5 | 04 | 01 | 00 - 7F (400Hz - 14.7kHz) |
| | Blend | s5 | 05 | 00 | s5 | 05 | 01 | 00 - 7F (0 - 127) |
| Effect 1, Effect 2<br><br>"x" means;<br>6: Effect 1<br>7: Effect 2 | On | sx | 00 | 00 | sx | 00 | 01 | 00, 01 (Off, On) |
| | Type | sx | 01 | 00 | sx | 01 | 01 | 00 - 03 for Effect1, 00 - 04 for Effect 2<br>00: Tremolo 00: Auto Pan<br>01: Wah-Wah 01: Phaser<br>02: Ring Mod 02: Flanger<br>03: Compressor 03: Chorus<br>04: Delay |
| | Param 1 | sx | 02 | 00 | sx | 02 | 01 | 00 - 7F (0 - 127) |
| | Param 2 | sx | 03 | 00 | sx | 03 | 01 | 00 - 7F (0 - 127) |
| | Param 3 | sx | 04 | 00 | sx | 04 | 01 | 00 - 7F (0 - 127) |
| | Param 4 | sx | 05 | 00 | sx | 05 | 01 | 00 - 7F (0 - 127) |
| | Param 5 | sx | 06 | 00 | sx | 06 | 01 | 00 - 7F (0 - 127) |
| | Param 6 | sx | 07 | 00 | sx | 07 | 01 | 00 - 7F (0 - 127) |
| | Param 7 | sx | 08 | 00 | sx | 08 | 01 | 00 - 7F (0 - 127) |
| | Param 8 | sx | 09 | 00 | sx | 09 | 01 | 00 - 7F (0 - 127) |
| Equalizer | Bass Gain | s8 | 00 | 00 | s8 | 00 | 01 | 00 - 09 - 12 (-9 - ±0 +9) |
| | Mid Gain | s8 | 01 | 00 | s8 | 01 | 01 | 00 - 09 - 12 (-9 - ±0 +9) |
| | Treble Gain | s8 | 02 | 00 | s8 | 02 | 01 | 00 - 09 - 12 (-9 - ±0 +9) |
| | Bass Freq | s8 | 03 | 00 | s8 | 03 | 01 | 00 - 18 (20 - 308Hz) |
| | Mid Freq | s8 | 04 | 00 | s8 | 04 | 01 | 00 - 0F (250Hz - 3.1kHz) |
| | Treble Freq | s8 | 05 | 00 | s8 | 05 | 01 | 00 - 13 (3.0k - 8.0kHz) |

| Category | Parameter | NRPN | | SysEx Address | | | SysEx | Data |
|---|---|---|---|---|---|---|---|---|
| | | MSB (63) | LSB (62) | MSB to LSB | | | Length | Data length 01 uses MSB only, length 02 uses MSB and LSB. |
| Component 1 - 4<br><br>"x" means;<br>9: Component 1<br>A: Component 2<br>B: Component 3<br>C: Component 4 | On | sx | 00 | 00 | sx | 00 | 01 | 00, 01 (Off, On) |
| | Key Range Low | sx | 01 | 00 | sx | 01 | 01 | 00 - 7F: note number |
| | Key Range High | sx | 02 | 00 | sx | 02 | 01 | 00 - 7F: note number |
| | Velocity Range Low | sx | 03 | 00 | sx | 03 | 01 | 01 - 7F (1 - 127) |
| | Velocity Range High | sx | 04 | 00 | sx | 04 | 01 | 01 - 7F (1 - 127) |
| | Velocity Depth | sx | 05 | 00 | sx | 05 | 01 | 00 - 7F (0 - 200 %) |
| | Velocity Offset | sx | 06 | 00 | sx | 06 | 01 | 00 - 40 - 7F (-64 - ±0 - +63) |
| | Note Delay Source | sx | 07 | 00 | sx | 07 | 01 | 00 - 03 (Component 1 - 4) |
| | Note Delay Mode | sx | 08 | 00 | sx | 08 | 01 | 00 - 02 (Note On, Off Vel, Off Env) |
| | Note Off Threshold | sx | 09 | 00 | sx | 09 | 01 | 00 - 7F (0 - 127) |
| | Note On Delay Time | sx | 0A | 00 | sx | 0A | 01 | 00 - 7F (0 - 127) |
| | Note Off Delay Time | sx | 0B | 00 | sx | 0B | 01 | 00 - 7F (0 - 127) |
| | Pitch EG Key Track Attack | sx | 0C | 00 | sx | 0C | 01 | 00 - 7F (0 - 127) |
| | Pitch EG Key Track Decay | sx | 0D | 00 | sx | 0D | 01 | 00 - 7F (0 - 127) |
| | Pitch EG Key Track Slope | sx | 0E | 00 | sx | 0E | 01 | 00 - 7F (0 - 127) |
| | Pitch EG Key Track Release | sx | 0F | 00 | sx | 0F | 01 | 00 - 7F (0 - 127) |
| | Pitch EG Vel Track Attack | sx | 10 | 00 | sx | 10 | 01 | 00 - 7F (0 - 127) |
| | Pitch EG Vel Track Release | sx | 11 | 00 | sx | 11 | 01 | 00 - 7F (0 - 127) |
| | Pitch EG Attack Rate | sx | 12 | 00 | sx | 12 | 01 | 00 - 7F (0 - 127) |
| | Pitch EG Decay Rate | sx | 13 | 00 | sx | 13 | 01 | 00 - 7F (0 - 127) |
| | Pitch EG Breakpoint Level | sx | 14 | 00 | sx | 14 | 01 | 00 - 7F (0 - 127) |
| | Pitch EG Slope Rate | sx | 15 | 00 | sx | 15 | 01 | 00 - 7F (0 - 127) |
| | Pitch EG Sustain Level | sx | 16 | 00 | sx | 16 | 01 | 00 - 7F (0 - 127) |
| | Pitch EG Release Rate | sx | 17 | 00 | sx | 17 | 01 | 00 - 7F (0 - 127) |
| | Filter EG Key Track Attack | sx | 18 | 00 | sx | 18 | 01 | 00 - 7F (0 - 127) |
| | Filter EG Key Track Decay | sx | 19 | 00 | sx | 19 | 01 | 00 - 7F (0 - 127) |
| | Filter EG Key Track Slope | sx | 1A | 00 | sx | 1A | 01 | 00 - 7F (0 - 127) |
| | Filter EG Key Track Release | sx | 1B | 00 | sx | 1B | 01 | 00 - 7F (0 - 127) |
| | Filter EG Vel Track Attack | sx | 1C | 00 | sx | 1C | 01 | 00 - 7F (0 - 127) |
| | Filter EG Vel Track Release | sx | 1D | 00 | sx | 1D | 01 | 00 - 7F (0 - 127) |
| | Filter EG Attack Rate | sx | 1E | 00 | sx | 1E | 01 | 00 - 7F (0 - 127) |
| | Filter EG Decay Rate | sx | 1F | 00 | sx | 1F | 01 | 00 - 7F (0 - 127) |
| | Filter EG Breakpoint Level | sx | 20 | 00 | sx | 20 | 01 | 00 - 7F (0 - 127) |
| | Filter EG Slope Rate | sx | 21 | 00 | sx | 21 | 01 | 00 - 7F (0 - 127) |
| | Filter EG Sustain Level | sx | 22 | 00 | sx | 22 | 01 | 00 - 7F (0 - 127) |
| | Filter EG Release Rate | sx | 23 | 00 | sx | 23 | 01 | 00 - 7F (0 - 127) |
| | Amp EG Key Track Attack | sx | 24 | 00 | sx | 24 | 01 | 00 - 7F (0 - 127) |
| | Amp EG Key Track Decay | sx | 25 | 00 | sx | 25 | 01 | 00 - 7F (0 - 127) |
| | Amp EG Key Track Slope | sx | 26 | 00 | sx | 26 | 01 | 00 - 7F (0 - 127) |
| | Amp EG Key Track Release | sx | 27 | 00 | sx | 27 | 01 | 00 - 7F (0 - 127) |
| | Amp EG Vel Track Attack | sx | 28 | 00 | sx | 28 | 01 | 00 - 7F (0 - 127) |
| | Amp EG Vel Track Release | sx | 29 | 00 | sx | 29 | 01 | 00 - 7F (0 - 127) |
| | Amp EG Attack Rate | sx | 2A | 00 | sx | 2A | 01 | 00 - 7F (0 - 127) |
| | Amp EG Decay Rate | sx | 2B | 00 | sx | 2B | 01 | 00 - 7F (0 - 127) |
| | Amp EG Breakpoint Level | sx | 2C | 00 | sx | 2C | 01 | 00 - 7F (0 - 127) |
| | Amp EG Slope Rate | sx | 2D | 00 | sx | 2D | 01 | 00 - 7F (0 - 127) |
| | Amp EG Sustain Level | sx | 2E | 00 | sx | 2E | 01 | 00 - 7F (0 - 127) |
| | Amp EG Release Rate | sx | 2F | 00 | sx | 2F | 01 | 00 - 7F (0 - 127) |
| | Amp EG Coef Attack | sx | 30 | 00 | sx | 30 | 01 | 00 - 7F (0 - 127; Exponential - Linear) |
| | Amp EG Coef Decay&Slope | sx | 31 | 00 | sx | 31 | 01 | 00 - 7F (0 - 127; Exponential - Linear) |
| | Amp EG Coef Release | sx | 32 | 00 | sx | 32 | 01 | 00 - 7F (0 - 127; Exponential - Linear) |
| | Osc Waveform Category | sx | 34 | 00 | sx | 34 | 01 | 00 - 0F (1 - 16) |
| | Osc Waveform Number | sx | 35 | 00 | sx | 35 | 02 | 00 00 - 01 7F (1 - 256) |
| | Osc Transpose | sx | 36 | 00 | sx | 36 | 02 | 3F 41 - 40 00 - 40 3F (-63 - ±0 - +63 semitones) |
| | Osc Fine Tune | sx | 37 | 00 | sx | 37 | 02 | 3F 1C - 40 00 - 40 64 (-100 - ±0 - +100 cents) |
| | Osc Pitch Key Track | sx | 38 | 00 | sx | 38 | 02 | 3F 1C - 40 00 - 40 64 (-100 - ±0 - +100 %) |
| | Osc Stretch Tune Depth | sx | 39 | 00 | sx | 39 | 01 | 00 - 7F (0 - 127 ) |
| | Osc Pitch Bend On | sx | 3A | 00 | sx | 3A | 01 | 00, 01 (Off, On) |
| | Osc LFO1 Depth | sx | 3C | 00 | sx | 3C | 01 | 00 - 7F (0 - 127) |
| | Osc LFO1 Mod Depth | sx | 3D | 00 | sx | 3D | 01 | 00 - 7F (0 - 127) |
| | Osc LFO2 Depth | sx | 3E | 00 | sx | 3E | 01 | 00 - 7F (0 - 127) |
| | Osc LFO2 Mod Depth | sx | 3F | 00 | sx | 3F | 01 | 00 - 7F (0 - 127) |
| | Osc Pitch EG Depth | sx | 40 | 00 | sx | 40 | 02 | 3F 40 - 40 00 - 40 3F (-64 - ±0 - +63) |
| | Osc Pitch EG Vel Track | sx | 41 | 00 | sx | 41 | 01 | 00 - 64 (0 - 100 %) |
| | Filter Mode | sx | 44 | 00 | sx | 44 | 01 | 00, 01 (LP12, HP12) |
| | Filter Cutoff Freq | sx | 45 | 00 | sx | 45 | 01 | 00 - 7F (0 - 127) |
| | Filter Resonance | sx | 46 | 00 | sx | 46 | 01 | 00 - 7F (0 - 127) |
| | Filter Cutoff Key Track | sx | 47 | 00 | sx | 47 | 02 | 3F 1C - 40 00 - 40 64 (-100 - ±0 - +100 %) |
| | Filter EG Vel Track | sx | 48 | 00 | sx | 48 | 01 | 00 - 7F (0 - 100 %) |
| | Filter LFO1 Depth | sx | 49 | 00 | sx | 49 | 01 | 00 - 7F (0 - 127) |
| | Filter LFO1 Mod Depth | sx | 4A | 00 | sx | 4A | 01 | 00 - 7F (0 - 127) |
| | Filter LFO2 Depth | sx | 4B | 00 | sx | 4B | 01 | 00 - 7F (0 - 127) |
| | Filter LFO2 Mod Depth | sx | 4C | 00 | sx | 4C | 01 | 00 - 7F (0 - 127) |
| | Filter Cutoff EG Depth | sx | 4E | 00 | sx | 4E | 02 | 3F 1C - 40 00 - 40 64 (-100 - ±0 - +100 %) |

| Category | Parameter | NRPN | | SysEx Address | | | SysEx Length | Data |
|---|---|---|---|---|---|---|---|---|
| | | MSB (63) | LSB (62) | MSB to LSB | | | | Data length 01 uses MSB only, length 02 uses MSB and LSB. |
| | Amp Level Vel Depth | sx | 4F | 00 | sx | 4F | 02 | 3F 1C - 40 00 - 40 64 (-100 - ±0 - +100 %) |
| | Amp Level | sx | 51 | 00 | sx | 51 | 01 | 00 - 7F (0 - 127) |
| | Amp Pan | sx | 52 | 00 | sx | 52 | 01 | 00 - 40 - 7F (Left - Center - Right) |
| | Amp Pan Image | sx | 53 | 00 | sx | 53 | 01 | 00 - 04 (Fixed, L-R, R-L, Pyramid, Inverted) |
| | Amp LFO1 Depth | sx | 54 | 00 | sx | 54 | 01 | 00 - 7F (0 - 127) |
| | Amp LFO1 Mod Depth | sx | 55 | 00 | sx | 55 | 01 | 00 - 7F (0 - 127) |
| | Amp LFO2 Depth | sx | 56 | 00 | sx | 56 | 01 | 00 - 7F (0 - 127) |
| | Amp LFO2 Mod Depth | sx | 57 | 00 | sx | 57 | 01 | 00 - 7F (0 - 127) |
| | Output Bus | sx | 58 | 00 | sx | 58 | 01 | 00, 01 (Effect, Dry) |

# MONO SYNTH PATCH PARAMETERS

| Category | Parameter | NRPN | | SysEx Address | | | SysEx Length | Data |
|---|---|---|---|---|---|---|---|---|
| | | MSB (63) | LSB (62) | MSB to LSB | | | | Data length 01 uses MSB only, length 02 uses MSB and LSB. |
| Common | Patch Name | -- | -- | -- | -- | -- | 10 | 16 letters |
| | Volume | 51 | 00 | 00 | 51 | 00 | 01 | 00 - 7F (0 - 127) |
| | Portamento On | 51 | 01 | 00 | 51 | 01 | 01 | 00, 01 (Off, On) |
| | Portamento Mode | 51 | 02 | 00 | 51 | 02 | 01 | 00, 01 (Every, Legato) |
| | Portamento Rate | 51 | 03 | 00 | 51 | 03 | 01 | 00 - 7F (0 - 127) |
| | LFO Trigger Mode | 51 | 04 | 00 | 51 | 04 | 01 | 00, 01 (Note, Free) |
| | LFO Waveform | 51 | 05 | 00 | 51 | 05 | 01 | 00 - 05 (Tri, Sqr, Rect, Saw, S/H, Fluc) |
| | LFO Rate | 51 | 06 | 00 | 51 | 06 | 01 | 00 - 7F (0 - 127) |
| | LFO Delay Time | 51 | 07 | 00 | 51 | 07 | 01 | 00 - 7F (0 - 127) |
| | LFO Attack Rate | 51 | 08 | 00 | 51 | 08 | 01 | 00 - 7F (0 - 127) |
| | LFO Rate Key Track | 51 | 09 | 00 | 51 | 09 | 01 | 00 - 7F (0 - 127) |
| Oscillator | Osc Note Priority | 51 | 0A | 00 | 51 | 0A | 01 | 00 - 03 (Auto, Last, High, Low) |
| | Osc Octave | 51 | 0E | 00 | 51 | 0E | 02 | 3F 7E - 40 00 - 40 02 (-2 - ±0 - +2) |
| | Osc Type | 51 | 10 | 00 | 51 | 10 | 01 | 00 - 05<br>00: Duo 03: Sync<br>01: Unison 04: FM<br>02: Pulse 05: Noise |
| | Osc Modifier 1 | 51 | 11 | 00 | 51 | 11 | 01 | 00 - 7F (0 - 127) |
| | Osc Modifier 2 | 51 | 12 | 00 | 51 | 12 | 01 | 00 - 7F (0 - 127) |
| | Osc Modifier 3 | 51 | 13 | 00 | 51 | 13 | 01 | 00 - 02 (0 - 2) |
| | Osc Modifier 4 | 51 | 14 | 00 | 51 | 14 | 01 | 00 - 02 (0 - 2) |
| | Osc Pitch Key Track | 51 | 15 | 00 | 51 | 15 | 01 | 00 - 40 - 7F (-100 - ±0 - +100 cent/note) |
| | Osc Pitch Bend Range Up | 51 | 16 | 00 | 51 | 16 | 01 | 00 - 0C (0 - 12) |
| | Osc Pitch Bend Range Down | 51 | 17 | 00 | 51 | 17 | 01 | 00 - 18 (0 - 24) |
| | Osc Pitch LFO Depth | 51 | 18 | 00 | 51 | 18 | 01 | 00 - 7F (0 - 127) |
| | Osc Pitch LFO Mod Depth | 51 | 19 | 00 | 51 | 19 | 01 | 00 - 7F (0 - 127) |
| | Osc Pitch EG Depth | 51 | 1A | 00 | 51 | 1A | 01 | 00 - 40 - 7F (-64 - ±0 - +63) |
| Filter | Filter Mode | 51 | 1B | 00 | 51 | 1B | 01 | 00 - 03 (LP12, LP24, HP12, HP24) |
| | Filter Drive | 51 | 1C | 00 | 51 | 1C | 01 | |
| | Filter Cutoff Freq | 51 | 1D | 00 | 51 | 1D | 01 | 00 - 7F (0 - 127) |
| | Filter Resonance | 51 | 1E | 00 | 51 | 1E | 01 | 00 - 7F (0 - 127) |
| | Filter Key Track | 51 | 1F | 00 | 51 | 1F | 01 | 00 - 40 - 7F (-100 - ±0 - +100 cent/note) |
| | Filter EG Depth | 51 | 20 | 00 | 51 | 20 | 01 | 00 - 40 - 7F (-64 - ±0 - +63) |
| | Filter Levl Vel Track | 51 | 21 | 00 | 51 | 21 | 01 | 00 - 7F (0 - 127) |
| | Filter LFO Depth | 51 | 22 | 00 | 51 | 22 | 01 | 00 - 7F (0 - 127) |
| | Filter LFO Mod Depth | 51 | 23 | 00 | 51 | 23 | 01 | 00 - 7F (0 - 127) |
| Amplifier | Amp Level | 51 | 24 | 00 | 51 | 24 | 01 | 00 - 7F (0 - 127) |
| | Amp Level Vel Depth | 51 | 25 | 00 | 51 | 25 | 01 | 00 - 7F (0 - 127) |
| | Amp LFO Depth | 51 | 27 | 00 | 51 | 27 | 01 | 00 - 7F (0 - 127) |
| | Amp LFO Mod Depth | 51 | 28 | 00 | 51 | 28 | 01 | 00 - 7F (0 - 127) |
| Envelope Generator | EG Trigger Mode | 51 | 29 | 00 | 51 | 29 | 01 | 00, 01 (Every, Legato) |
| | Env Filter Attack | 51 | 2A | 00 | 51 | 2A | 01 | 00 - 7F (0 - 127) |
| | Env Filter Decay | 51 | 2B | 00 | 51 | 2B | 01 | 00 - 7F (0 - 127) |
| | Env Filter Sustain | 51 | 2C | 00 | 51 | 2C | 01 | 00 - 7F (0 - 127) |
| | Env Filter Release | 51 | 2D | 00 | 51 | 2D | 01 | 00 - 7F (0 - 127) |
| | Env Amp Attack | 51 | 2E | 00 | 51 | 2E | 01 | 00 - 7F (0 - 127) |
| | Env Amp Decay | 51 | 2F | 00 | 51 | 2F | 01 | 00 - 7F (0 - 127) |
| | Env Amp Sustain | 51 | 30 | 00 | 51 | 30 | 01 | 00 - 7F (0 - 127) |
| | Env Amp Release | 51 | 31 | 00 | 51 | 31 | 01 | 00 - 7F (0 - 127) |
| Overdrive | On | 52 | 00 | 00 | 52 | 00 | 01 | 00, 01 (Off, On) |
| | Type | 52 | 01 | 00 | 52 | 01 | 01 | 00 - 03 (Tube Amp, Stomp Box, Clip, EP Amp) |
| | Drive Level | 52 | 02 | 00 | 52 | 02 | 01 | 00 - 7F (0 - 127) |
| | Exp. Control On | 52 | 03 | 00 | 52 | 03 | 01 | 00, 01 (Off, On) |
| | Crossover Freq | 52 | 04 | 00 | 52 | 04 | 01 | 00 - 7F (400Hz - 14.7kHz) |
| | Blend | 52 | 05 | 00 | 52 | 05 | 01 | 00 - 7F (0 - 127) |
| Effect 1, Effect 2<br><br>"x" means;<br>3: Effect 1<br>4: Effect 2 | On | 5x | 00 | 00 | 5x | 00 | 01 | 00, 01 (Off, On) |
| | Type | 5x | 01 | 00 | 5x | 01 | 01 | 00 - 03 for Effect1, 00 - 04 for Effect 2<br>00: Tremolo 00: Auto Pan<br>01: Wah-Wah 01: Phaser<br>02: Ring Mod 02: Flanger<br>03: Compressor 03: Chorus<br>04: Delay |
| | Param 1 | 5x | 02 | 00 | 5x | 02 | 01 | 00 - 7F (0 - 127) |
| | Param 2 | 5x | 03 | 00 | 5x | 03 | 01 | 00 - 7F (0 - 127) |
| | Param 3 | 5x | 04 | 00 | 5x | 04 | 01 | 00 - 7F (0 - 127) |
| | Param 4 | 5x | 05 | 00 | 5x | 05 | 01 | 00 - 7F (0 - 127) |
| | Param 5 | 5x | 06 | 00 | 5x | 06 | 01 | 00 - 7F (0 - 127) |
| | Param 6 | 5x | 07 | 00 | 5x | 07 | 01 | 00 - 7F (0 - 127) |
| | Param 7 | 5x | 08 | 00 | 5x | 08 | 01 | 00 - 7F (0 - 127) |
| | Param 8 | 5x | 09 | 00 | 5x | 09 | 01 | 00 - 7F (0 - 127) |

| Category | Parameter | NRPN | | SysEx Address | | | SysEx Length | Data |
|---|---|---|---|---|---|---|---|---|
| | | MSB (63) | LSB (62) | MSB to LSB | | | | Data length 01 uses MSB only, length 02 uses MSB and LSB. |
| Equalizer | Bass Gain | 55 | 00 | 00 | 55 | 00 | 01 | 00 - 09 - 12 (-9 - ±0 +9) |
| | Mid Gain | 55 | 01 | 00 | 55 | 01 | 01 | 00 - 09 - 12 (-9 - ±0 +9) |
| | Treble Gain | 55 | 02 | 00 | 55 | 02 | 01 | 00 - 09 - 12 (-9 - ±0 +9) |
| | Bass Freq | 55 | 03 | 00 | 55 | 03 | 01 | 00 - 18 (20 - 308Hz) |
| | Mid Freq | 55 | 04 | 00 | 55 | 04 | 01 | 00 - 0F (250 - 3.1kHz) |
| | Treble Freq | 55 | 05 | 00 | 55 | 05 | 01 | 00 - 13 (3.0k - 8.0kHz) |

# CUSTOM TONE WHEELS

## A-100

**F1: #35564**
A-102, serial number #35564.

**F2: Shiny**
Leakage tones with even overtones.

**F3: Mixture**
Harmonized leakage tones.

## B-3

**F1: A27563**
B-3, serial number #A27563.

**F2: #364839**
B-3, serial number #364839.

**F3: Mixture**
Harmonized leakage tones.

## C-3

**F1: C155596**
C-3, serial number #C155596.

**F2: Shiny**
Leakage tones with even overtones.

**F3: Mixture**
Harmonized leakage tones.

## Mellow

**F1: Full Flats**
"Flat" frequency response.

**F2: Husky**
Emphasizes upper and lower frequencies.

**F3: Flute Lead**
Boosts middle frequencies.

# CUSTOM SUB DRAWBARS

**F1: B-3 A27563**

**F2: B-3 #364839**

**F3: A-100 #33339**

Each Custom setting replicates the organ shown above.

# CUSTOM LESLIE CABINETS

**122 Gentle**
Replicates 122 cabinet (Large body, peaking horn driver) heard from a distance, rear.

**122 Wild**
Replicates 122 cabinet heard from a closer distance, front.

**31H-Type**
Replicates 31H cabinet heard from a distance, rear.

**147 Gentle**
Replicates 147 cabinet (Large body, wide range) heard from a distance.

**147 Wild**
Replicates 147 cabinet heard from a closer distance, front.

**145 Gentle**
Replicates 145 cabinet (Middle body, slightly narrow range) heard from a distance, rear.

**145 Wild**
Replicates 145 cabinet heard from a closer distance, front.

**PR-40**
Replicates a Hammond tone cabinet.

# CUSTOM PIPES

**Classic**
Classical or Liturgical stops.

**Theatre 1**
Theatre stops based on Wurlitzer Style 210.

**Theatre 2**
Theater stops based on Wurlitzer Style 260 Special.

# CUSTOM TONE WHEEL PARAMETERS

| Category | Parameter | SysEx Address MSB to LSB | | | SysEx Length | Data | Description |
|---|---|---|---|---|---|---|---|
| Temporary Tone Wheels | Name | -- | -- | -- | -- | (10 characters) | |
| | Foldback Low | 10 | 00 | 01 | 01 | 00 - 0C (TW#01 - #12) | |
| | Foldback High | 10 | 00 | 02 | 01 | 00 - 05 (TW#91 - #96) | |
| | Wheel Level | 10 | 01 | tt | 02 | 00 00 - 01 41<br>(0 - 193: -inf, -92.0 - +4.0[dB]) | tt: Tone Wheel number;<br>00 - 0B (#01 - #12),<br>0C - 17 (#F01 - F12),<br>18 - 66 (#13 - #91),<br>67 - 6B (#F92 - #F96) |
| | Wheel HPF | 10 | 02 | tt | 01 | 00 - 7F (0 - 127) | |
| | Leak Trim | 10 | 03 | tt | 01 | 00 - 7F (0 - 127) | tt: Fundamental TW #; 00 - 54 (#01 - #73) |
| | Matrix Level | 20 | nn | 0g | 02 | 00 00 - 01 41<br>(0 - 193: -inf, -92.0 - +4.0[dB]) | nn: Note number<br>g: Footage(0 = 16', 1 = 5 1/3'... 8 = 1') |
| | Leak Level | 30 | tt | ll | 02 | 00 00 - 01 41<br>(0 - 193: -inf, -92.0 - +4.0[dB]) | tt: Fundamental TW #; 00 - 54 (#01 - #73)<br>ll: Leaking TW #; 48 - 66 (#61 - #91) |

# CUSTOM PEDAL REG. PARAMETERS

| Category | Parameter | SysEx Address MSB to LSB | | | SysEx Length | Data | Description |
|---|---|---|---|---|---|---|---|
| Temporary Pedal Sub Drawbars | Name | -- | -- | -- | -- | (10 characters) | |
| | Normal 16' - 16' | 50 | 00 | 01 | 01 | 00 - 08 (0 - 8) | |
| | Normal 16' - 5 1/3' | 50 | 00 | 02 | 01 | 00 - 08 (0 - 8) | |
| | Normal 16' - 8' | 50 | 00 | 03 | 01 | 00 - 08 (0 - 8) | |
| | Normal 16' - 4' | 50 | 00 | 04 | 01 | 00 - 08 (0 - 8) | |
| | Normal 16' - 2 2/3' | 50 | 00 | 05 | 01 | 00 - 08 (0 - 8) | |
| | Normal 16' - 2' | 50 | 00 | 06 | 01 | 00 - 08 (0 - 8) | |
| | Normal 16' - 1 3/5' | 50 | 00 | 07 | 01 | 00 - 08 (0 - 8) | |
| | Normal 16' - 1 1/3' | 50 | 00 | 08 | 01 | 00 - 08 (0 - 8) | |
| | Normal 8' - 16' | 50 | 00 | 09 | 01 | 00 - 08 (0 - 8) | |
| | Normal 8' - 5 1/3' | 50 | 00 | 0A | 01 | 00 - 08 (0 - 8) | |
| | Normal 8' - 8' | 50 | 00 | 0B | 01 | 00 - 08 (0 - 8) | |
| | Normal 8' - 4' | 50 | 00 | 0C | 01 | 00 - 08 (0 - 8) | |
| | Normal 8' - 2 2/3' | 50 | 00 | 0D | 01 | 00 - 08 (0 - 8) | |
| | Normal 8' - 2' | 50 | 00 | 0E | 01 | 00 - 08 (0 - 8) | |
| | Normal 8' - 1 3/5' | 50 | 00 | 0F | 01 | 00 - 08 (0 - 8) | |
| | Normal 8' - 1 1/3' | 50 | 00 | 10 | 01 | 00 - 08 (0 - 8) | |

# PIPE PARAMETERS

| Category | Parameter | SysEx Address MSB to LSB | | | SysEx Length | Data | Description |
|---|---|---|---|---|---|---|---|
| Pipes | Name | -- | -- | -- | -- | (10 characters) | |
| | Assign | 40 | 01 | pp | 02 | 00 00 - 00 2D<br>(C-Open Diapason - P-Cornopean) | pp: Pipe Stop number<br>00 - 13 (#01 - #20) |
| | Tremulant | 40 | 02 | pp | 01 | 00, 01 (Off, On) | |
| | Footage | 40 | 03 | pp | 01 | 00 - 09<br>(32′ - 1′) | |
| | Volume | 40 | 04 | pp | 02 | 00 00 - 01 41<br>(0 - 193: -inf, -92.0 - +4.0[dB]) | |
| | Detune | 40 | 05 | pp | 02 | 3F 4E - 40 00 - 40 32<br>(-50 - ±0 - +50[cent]) | |
| | Chiff | 40 | 06 | pp | 01 | 00 - 03<br>(Off, Soft, Normal, Loud) | |
| | Cut Off Frequency | 40 | 07 | pp | 02 | 3F 01 - 40 00<br>(-127 - 0) | |
| | Pan - Direction | 40 | 08 | pp | 01 | 00 - 40 - 7F<br>(L64 - Center - R63) | |
| | Pan - Imaging | 40 | 09 | pp | 01 | 00 - 04<br>(Fixed, L-R, R-L, Pyramid,<br>Inverted Pyramid) | |

# CUSTOM LESLIE PARAMETERS

| Category | Parameter | NRPN | | SysEx Address | | | SysEx Length | Data |
|---|---|---|---|---|---|---|---|---|
| | | MSB (63) | LSB (62) | MSB to LSB | | | | Data length 01 uses MSB only, length 02 uses MSB and LSB. |
| Cabinet | Name | -- | -- | -- | -- | -- | -- | (10 Characters) |
| | Speaker | 06 | 17 | 00 | 06 | 17 | 01 | 00 - 07<br>00: 145 Front 04: 122 Front<br>01: 145 Rear 05: 122 Rear<br>02: 147 Front 06: Cone Type<br>03: 147 Rear 07: PR-40 |
| | Slow Speed Horn | 06 | 01 | 00 | 06 | 01 | 02 | 00 00, 00 01 - 00 65 (0, 20 - 120 rpm) |
| | Slow Speed Drum | 06 | 02 | 00 | 06 | 02 | 02 | 00 00, 00 01 - 00 65 (0, 20 - 120 rpm) |
| | Fast Speed Horn | 06 | 03 | 00 | 06 | 03 | 02 | 00 00, 00 01 - 02 2D (0, 200 - 500 rpm) |
| | Fast Speed Drum | 06 | 04 | 00 | 06 | 04 | 02 | 00 00, 00 01 - 02 2D (0, 200 - 500 rpm) |
| | Rise Time Horn | 06 | 09 | 00 | 06 | 09 | 01 | 00 - 24 (0.8 - 12.5 sec) |
| | Rise Time Drum | 06 | 0A | 00 | 06 | 0A | 01 | 00 - 23 (1.0 - 12.5 sec) |
| | Fall Time Horn | 06 | 0B | 00 | 06 | 0B | 01 | 00 - 24 (0.8 - 12.5 sec) |
| | Fall Time Drum | 06 | 0C | 00 | 06 | 0C | 01 | 00 - 23 (1.0 - 12.5 sec) |
| | Brake Time Horn | 06 | 0D | 00 | 06 | 0D | 01 | 00 - 24 (0.8 - 12.5 sec) |
| | Brake Time Drum | 06 | 0E | 00 | 06 | 0E | 01 | 00 - 23 (1.0 - 12.5 sec) |
| | Delay Time Horn | 06 | 0F | 00 | 06 | 0F | 01 | 00 - 05 (0.0 - 1.0 sec) |
| | Delay Time Drum | 06 | 10 | 00 | 06 | 10 | 01 | 00 - 05 (0.0 - 1.0 sec) |
| | Mic. Width Horn | 06 | 11 | 00 | 06 | 11 | 01 | 00 - 64 (0 - 100 cm) |
| | Mic. Width Drum | 06 | 12 | 00 | 06 | 12 | 01 | 00 - 64 (0 - 100 cm) |
| | Mic. Center Horn | 06 | 05 | 00 | 06 | 05 | 01 | 0E - 40 - 72 (-50 - ±0 - +50 cm) |
| | Mic. Center Drum | 06 | 06 | 00 | 06 | 06 | 01 | 0E - 40 - 72 (-50 - ±0 - +50 cm) |
| | Mic. Distance Horn | 06 | 07 | 00 | 06 | 07 | 02 | 00 1E - 01 48 (30 - 200 cm) |
| | Mic. Distance Drum | 06 | 08 | 00 | 06 | 08 | 02 | 00 1E - 01 48 (30 - 200 cm) |
| | Level Horn | 06 | 13 | 00 | 06 | 13 | 01 | 00, 01 - 4D (-Inf, -76 - 0 dB) |
| | Level Drum | 06 | 14 | 00 | 06 | 14 | 01 | 00, 01 - 4D (-Inf, -76 - 0 dB) |
| | Level Sub Bass | 06 | 15 | 00 | 06 | 15 | 01 | 00, 01 - 4D (-Inf, -76 - 0 dB) |

# SYSTEM PARAMETERS

| Category | Parameter | NRPN | | SysEx Address | | | SysEx | Data |
|---|---|---|---|---|---|---|---|---|
| | | MSB (63) | LSB (62) | MSB to LSB | | | Length | |
| Tune | Master Tune | 01 | 00 | 00 | 01 | 00 | 02 | 032E - 0338 - 0342 (A= 430 - 440 - 450 Hz) |
| | Transpose | 01 | 01 | 00 | 01 | 01 | 02 | 3F 7A - 40 00 - 40 06 (-6 - ±0 - +6 semitones) |
| | Velocity Offset | 01 | 02 | 00 | 01 | 02 | 02 | 3F 60 - 40 00 - 40 20 (-32 ±0 - +32) |
| | Pitch Bend Depth | 01 | 03 | 00 | 01 | 03 | 01 | 00 - 0D (Patch, ±0 - ±12 semitones) |
| | Organ Sounding Point | 01 | 04 | 00 | 01 | 04 | 01 | 00, 01 (Shallow, Deep) |
| | TW Brake Range | 01 | 05 | 00 | 01 | 05 | 02 | 3F 68 - 40 00 - 40 0C (-24 - ±0 - +12 semitones) |
| | TW Brake Time | 01 | 06 | 00 | 01 | 06 | 01 | 00 - 31 (0.1 - 5.0 sec) |
| | TW Brake Amp | 01 | 07 | 00 | 01 | 07 | 01 | 00, 01 (Off, On) |
| | Transpose Act Organ | 01 | 08 | 00 | 01 | 08 | 01 | 00, 01 (Every, Next) |
| | Transpose Act Pinao | 01 | 09 | 00 | 01 | 09 | 01 | 00, 01 (Every, Next) |
| | Transpose Act Ensemble | 01 | 0A | 00 | 01 | 0A | 01 | 00, 01 (Every, Next) |
| | Transpose Act Synth | 01 | 0B | 00 | 01 | 0B | 01 | 00, 01 (Every, Next) |
| Expression | Source | 02 | 00 | 00 | 02 | 00 | 01 | 00 - 02 (Pedal, MIDI, Both) |
| | Min. Level | 02 | 01 | 00 | 02 | 01 | 01 | 00 - 29 (Off, -40 - ±0dB) |
| | Min. Limit LF | 02 | 02 | 00 | 02 | 02 | 01 | 00 - 29 (Off, -40 - ±0dB) |
| | Min. Limit HF | 02 | 03 | 00 | 02 | 03 | 01 | 00 - 29 (Off, -40 - ±0dB) |
| | Pedal Type | 02 | 06 | 00 | 02 | 06 | 01 | 00, 01 (H or R, Y or K) |
| | Gain | 02 | 07 | 00 | 02 | 07 | 01 | 00 - 3C (70 - 130 %) |
| | Curve | 02 | 08 | 00 | 02 | 08 | 01 | 00 - 02 (Audio, Linear, Capacitor) |
| Damper | Pedal Type | 03 | 03 | 00 | 03 | 03 | 01 | 00 - 03 (Switch, HalfY, HalfR, HalfK) |
| | Gain | 03 | 04 | 00 | 03 | 04 | 01 | 00 - 3C (70 - 130 %) |
| Foot Switch | Mode Foot Tip | 07 | 00 | 00 | 07 | 00 | 01 | 00 - 24 |
| | Mode Foot Ring | 07 | 01 | 00 | 07 | 01 | 01 | 00: Off<br>01: Leslie S/F Alt<br>02: Leslie S/F Mom<br>03: Leslie S/F Tri<br>04: TW Brake<br>05: Favorite Fwd<br>06: Favorite Rev<br>07: Spring Shock<br>08: MFX2 Delay Time<br>09: Org U&L Sustain<br>0A: Pedal To Lower<br>0B-23: Bass 1C - 3C<br>24: ProChord |
| | Mode Leslie Tip | 07 | 02 | 00 | 07 | 02 | 01 | |
| | Mode Leslie Ring | 07 | 03 | 00 | 07 | 03 | 01 | |
| | Leslie Switch Device | 07 | 04 | 00 | 07 | 04 | 01 | 00, 01 (Foot Switch, Leslie Switch) |
| User Button | Mode | 08 | 00 | 00 | 08 | 00 | 01 | 00 - 0E<br>00: Off<br>01: Pedal Sustain<br>02: Org U Sustain<br>03: Org L Sustain<br>04: TW Brake<br>05: Spring Shock<br>06: MFX2 Delay Time<br>07: Organ MFX1<br>08: Organ MFX2<br>09: Piano MFX1<br>0A: Piano MFX2<br>0B: Ens MFX1<br>0C: Ens MFX2<br>0D: Synth MFX1<br>0E: Synth MFX2 |
| Display | Short Cut | -- | -- | -- | -- | -- | -- | 00 - 03 (0, 1, 2 sec, No) |
| | Time Out | -- | -- | -- | -- | -- | -- | 00 - 03 (4, 8, 16 sec, No) |
| | Pop Up | -- | -- | -- | -- | -- | -- | 00 - 03 (No, 5, 10, 20 sec) |
| | Auto Power Off | -- | -- | -- | -- | -- | -- | 00, 01 (Disable, 30min) |
| | Knobs | -- | -- | -- | -- | -- | -- | 00, 01 (Every, Across) |
| | USB Mass Storage | -- | -- | -- | -- | -- | -- | 00, 01 (Off, On) |
| Audio | Individual Out | 04 | 00 | 00 | 04 | 00 | 01 | 00 - 06<br>00: Off<br>01: Piano Stereo<br>02: Ensemble Stereo<br>03: Synth Stereo<br>04: Piano / Ensemble<br>05: Piano / Synth<br>06: Ensemble / Synth |
| | Ext. Leslie Ch. | 04 | 01 | 00 | 04 | 01 | 01 | 00 - 02 (1, 3, 1+Line) |
| | Use Rotary Out | 04 | 02 | 00 | 04 | 02 | 01 | 00, 01 (Off, On) |
| | Use Pedal Out | 04 | 03 | 00 | 04 | 03 | 01 | 00, 01 (Off, On) |
| Master Equalizer | On | 05 | 00 | 00 | 05 | 00 | 01 | 00, 01 (Off, On) |
| | Bass Gain | 05 | 01 | 00 | 05 | 01 | 01 | 00 - 09 - 12 (-9 - ±0 +9) |
| | Mid Gain | 05 | 02 | 00 | 05 | 02 | 01 | 00 - 09 - 12 (-9 - ±0 +9) |
| | Treble Gain | 05 | 03 | 00 | 05 | 03 | 01 | 00 - 09 - 12 (-9 - ±0 +9) |
| | Bass Freq | 05 | 04 | 00 | 05 | 04 | 01 | 00 - 18 (20 - 308Hz) |
| | Mid Freq | 05 | 05 | 00 | 05 | 05 | 01 | 00 - 0F (125 - 4kHz) |
| | Treble Freq | 05 | 06 | 00 | 05 | 06 | 01 | 00 - 13 (3.0k - 8.0kHz) |
| | Mid Q | 05 | 07 | 00 | 05 | 07 | 01 | 00 - 3F (0 - 63) |

| Category | Parameter | NRPN | | SysEx Address | | | SysEx Length | Data |
|---|---|---|---|---|---|---|---|---|
| | | MSB (63) | LSB (62) | MSB to LSB | | | | |
| MIDI Common | MIDI In Mode | -- | -- | -- | -- | -- | -- | 00 - 09<br>00: Upper 05: Organ Upper<br>01: Lower 06: Piano<br>02: Pedal 07: Ensemble<br>03: Lower+Pedal 08: Synth<br>04: Upper+Pedal 09: Sequencer |
| | Local Control | -- | -- | -- | -- | -- | -- | 00, 01 (Off, On) |
| | TRx NRPN | -- | -- | -- | -- | -- | -- | 00, 01 (Off, On) |
| | TRx Program Change | -- | -- | -- | -- | -- | -- | 00, 01 (Off, On) |
| | TRx Drawbar Regi | -- | -- | -- | -- | -- | -- | 00, 01 (Off, On) |
| | Tx Multi Contact | -- | -- | -- | -- | -- | -- | 00, 01 (Off, On) |
| | Rx Multi Contact | -- | -- | -- | -- | -- | -- | 00, 01 (Off, On) |
| | Tx External Zone | -- | -- | -- | -- | -- | -- | 00, 01 (Off, On) |
| | Device ID | -- | -- | -- | -- | -- | -- | 00 - 7F (0 - 127) |
| | Rx Dump | -- | -- | -- | -- | -- | -- | 00, 01 (Off, On) |
| MIDI Channel | Tx Upper | -- | -- | -- | -- | -- | -- | 00 - 0F (1 - 16) |
| | Tx Lower | -- | -- | -- | -- | -- | -- | 00 - 0F (1 - 16) |
| | Tx Pedal | -- | -- | -- | -- | -- | -- | 00 - 0F (1 - 16) |
| | Rx Upper | -- | -- | -- | -- | -- | -- | 00 - 0F (1 - 16) |
| | Rx Lower | -- | -- | -- | -- | -- | -- | 00 - 0F (1 - 16) |
| | Rx Pedal | -- | -- | -- | -- | -- | -- | 00 - 0F (1 - 16) |
| Patch Load | Organ - Link L/P | 60 | 01 | 00 | 60 | 01 | 01 | 00, 01 (Off, On) |
| | Combi - Int Zone | 60 | 02 | 00 | 60 | 02 | 01 | 00, 01 (Off, On) |
| | Combi - Ext Zone | 60 | 03 | 00 | 60 | 03 | 01 | 00, 01 (Off, On) |
| | Organ - Organ Effect | 60 | 04 | 00 | 60 | 04 | 01 | 00, 01 (Off, On) |
| | Organ - Animation | 60 | 05 | 00 | 60 | 05 | 01 | 00, 01 (Off, On) |
| | Combi - Reverb | 60 | 06 | 00 | 60 | 06 | 01 | 00, 01 (Off, On) |
| | Organ - Drawbar | 60 | 07 | 00 | 60 | 07 | 01 | 00, 01 (Off, On) |
| | Organ - Percussion | 60 | 08 | 00 | 60 | 08 | 01 | 00, 01 (Off, On) |
| | Organ - Registration | 60 | 09 | 00 | 60 | 09 | 01 | 00, 01 (Off, On) |
| | Combi - Piano | 60 | 0A | 00 | 60 | 0A | 01 | 00, 01 (Off, On) |
| | Combi - Ensemble | 60 | 0B | 00 | 60 | 0B | 01 | 00, 01 (Off, On) |
| | Combi - Synth | 60 | 0C | 00 | 60 | 0C | 01 | 00, 01 (Off, On) |
| | Combi - Organ | 60 | 0D | 00 | 60 | 0D | 01 | 00, 01 (Off, On) |

# FAVORITES

| Category | Parameter | SysEx Address MSB to LSB | | | SysEx Length | Data | Default | Description |
|---|---|---|---|---|---|---|---|---|
| Favorites | Assign | 73 | 0b | 0n | 02 | 00 00 - 00 63 (B001 - B100),<br>00 64 - 01 47 (U001 - U100),<br>01 48 - 02 2B (F001 - F100) | same as Combination# | b: Bank 0 - 9 (1 - 10)<br>n: Number 0 - 9 (1 - 10) |

Example Set 5-2 at U005 via System Exclusive.....F0 55 dd 10 24 13 73 04 01 00 68 F7 (dd = Device ID)

# MIDI IMPLEMENTATION CHART

Stage Keyboard
Model: SK PRO

MIDI Implementation Chart

Date: 12-Nov-2020
Version: 1.0

| Function | | Transmitted | Recognized | Remarks |
|---|---|---|---|---|
| Basic Channel | Default | *1 | *1 | *1: Upper = 1, Lower = 2, Pedal = 3 when MIDI "Basic" Template is loaded. |
| | Changed | 1 - 16 | 1 - 16 | |
| Mode | Default | 3 | 3 | |
| | Messages | X | X | |
| | Altered | ***** | 1 | Switched by MIDI In Mode. |
| Note Number | | 12 - 120 (61 key)*2<br>4 - 124 (73 key) | 0 - 127 | *2: with oct. shift |
| | : True Voice | ***** | 0 - 127 | |
| Velocity | Note ON | O | O | |
| | Note OFF | O | O | |
| After Touch | Key's | X | X | |
| | Ch's | X | X | |
| Pitch Bend | | O | O | |
| Control Change | 0, 32 | O | O | Bank Select MSB, LSB |
| | 1 | O | O | Modulation |
| | 6, 38 | O | O | Data Entry MSB, LSB |
| | 7 | O | X | Volume |
| | 10 | O | X | Pan |
| | 11 | O | O | Expression |
| | 12 - 20 | O | O | Drawbar Reg. Upper |
| | 21 - 29 | O | O | Drawbar Reg. Lower |
| | 33, 35 | O | O | Drawbar Reg. Pedal |
| | 48 | O | O | Spring Shock |
| | 49 | O | O | TW Brake |
| | 64 | O | O | Damper |
| | 65 | O | O | Portamento Sw |
| | 69 | O | O | Sustain |
| | 84 | O | O | ProChord Active |
| | 92 | X | O | Leslie Fast |
| | 98, 99 | O | O | NRPN LSB, MSB |
| Program Change | | O | O | |
| | : True # | 0 - 127 | 0 - 99, 127 | |
| System Exclusive | | O | O | |
| System Common | : Song Position | X | X | |
| | : Song Select | X | X | |
| | : Tune | X | X | |
| System Real Time | : Clock | X | X | |
| | : Commands | X | X | |
| Aux Messages | : All Sounds Off | X | O | (120) |
| | : Reset All Controllers | O | O | (121) |
| | : Local On/Off | X | X | |
| | : All Notes Off | O | O | |
| | : Active Sense | O | O | |
| | : Reset | X | X | |

Mode 1: OMNI ON, POLY  Mode 2: OMNI ON, MONO  O: Yes
Mode 3: OMNI OFF, POLY  Mode 4: OMNI OFF, MONO  X: No

# MIDI CHANNELS AND MESSAGES

| | | External Zone (Tx. only) | Upper Keyboard | Lower Keyboard | Pedal Keyboard | Sections (Rx. only) |
|---|---|---|---|---|---|---|
| Note | | O | O | O | O | O |
| Pitch Bend | | O | O | X | X | O |
| Modulation | | O | O | X | X | O |
| Volume, Pan | (7, 10) | O | X | X | X | X |
| Expression | (11) | O | O *1 | X | X | X |
| Damper | (64) | O | O | O | O | O |
| Portamento | (65) | X | O | X | X | X |
| Sustain | (69) | X | O | X | X | X |
| Drawbar Reg. | | X | 12 - 20 (Upper)<br>21 - 29 (Lower)<br>33, 35 (Pedal) | X | X | X |
| Spring Shock | (48) | X | O | X | X | X |
| TW Brake | (49) | X | O | X | X | X |
| ProChord Active | (84) | X | O | X | X | X |
| Leslie Fast | (92) | X | O *2 | X | X | X |
| RPN | (100, 101) | X | X | X | X | X |
| NRPN | (98, 99) | X | O | X | X | X |
| All Notes Off | (123) | O | O | X | X | X |
| All Sounds Off | (120) | X | O *2 | X | X | X |
| Reset All Ctrl. | (121) | O | O | X | X | X |
| After Touch | | X | X | X | X | X |
| Bank Select | (0, 32) | Change the voice for each zone. | Combination# | X | X | X |
| Program Change | | | | X | X | X |

*1: For all Sections/Parts (audio controlled)

*2: For Rx. only.

O: Yes

X: No

# SPECIFICATIONS

## Sound Engine

### ORGAN Section

MTWI (Modelled Tone Wheel I), Polyphony: 61 (Tone Wheel Organ)

### PIANO/ENSEMBLE Section

Sampling Sound Engine, Polyphony: 128

### MONO SYNTH Section

Analog Modeling Synthesizer, Monophonic

## Keyboard

61/73 note, with velocity, semi-weighted, square-front (“waterfall” type)

## ORGAN Section

### Parts

3 (Upper, Lower, Pedal)

### Drawbars

1 set, 9 pitches

### Voicing

Upper & Lower: 8(A-100, B-3, C-3, Mellow, Vx, Farf, Ace, Pipe)

Pedal: 3 (Normal, Muted, Pipe)

### Percussion

Buttons: On, Volume Soft, Fast Decay, Third Harmonic

## PIANO/ENSEMBLE Section

Component: 4, LFO: 2

## MONO SYNTH Section

### Oscillator

6 types (Duo, Unison, Pulse, Sync, FM, Noise)

### Filter

4 types (LP12, LP24, HP12, HP24), Resonance, Drive

### Modulator

LFO: 1, EG: 2 (Pitch &Filter, Amplitude)

## Effects

### ORGAN Section

Vibrato & Chorus, Multi Effect 1, Overdrive, Multi Effect 2, Matching Transformer, Leslie, Equalizer & Tone Control

### PIANO / ENSEMBLE Section

For each section: Multi Effect 1, Overdrive, Multi Effect 2, Equalizer

### MONO SYNTH Section

Multi Effect 1, Overdrive, Multi Effect 2, Equalizer

### Master

Equalizer, Reverb

## Key Map

### Internal Zone

Transpose, Octave, Split, Pedal To Lower, Allocate, Pedal Sustain

### External Zones

3 Zones (assignable to each keyboard)

## Controllers

Pitch Bend wheel, Modulation wheel, Portamento, Leslie (Bypass, Stop, Fast)

## Memory

### Favorites

10 banks x 10 numbers (Combinations), 10 numbers (Pages)

### Combination

Factory: 100, User: 100, Bundle: 100, Manual

### Organ Patch

Factory: 100, User: 100, Bundle: 100

### Piano / Ensemble Patch

Factory: 300, User: 400, Bundle: 100

### Mono Synth Patch

Factory: 100, User: 100, Bundle: 100

### Custom Tone Wheel

Factory: 4 x 3, User: 4 x 3

### Custom Pedal Registration

Factory: 3, User: 3

### Custom Pipe

Factory: 3, User: 3

### Custom Cabinet

Factory: 8, User: 8

## Storage

Internal Memory, USB Flash Drive

## Display

320 x 240 pixel

## Connections

### MIDI

IN, OUT

### USB

To Host

### Audio

Line Out L, R, Headphones, Individual 1, 2, Rotary Out, Organ Pedal Out, Aux In (with Volume control)

### Leslie

11 - pin, 1 and 3 channels available

### Others

Foot Switch 1/Leslie Switch, Foot Switch 2, Damper Pedal, Expression Pedal

## Dimensions

### SK PRO

1004(W), 322(D), 109(H) mm

39.5″(W), 12.7″(D), 4.3″(H)

### SK PRO-73

1170(W), 322(D), 109(H) mm

46.1″(W), 12.7″(D), 4.3″(H)

## Weight

### SK PRO

9.4 kg

20.7 lbs

### SK PRO-73

11 kg

24.3 lbs

## Accessory

AC Power Cord

# Index

## U



## V

# SERVICE

Hammond maintains a policy of continuously improving and upgrading its instruments and therefore reserves the right to change specifications without notice. Although every attempt has been made to insure the accuracy of the descriptive contents of this Manual, total accuracy cannot be guaranteed.

Should the owner require further assistance, inquiries should first be made to your Authorized Hammond Dealer.

If you still need further assistance, contact Hammond at the following addresses:

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Product Registration
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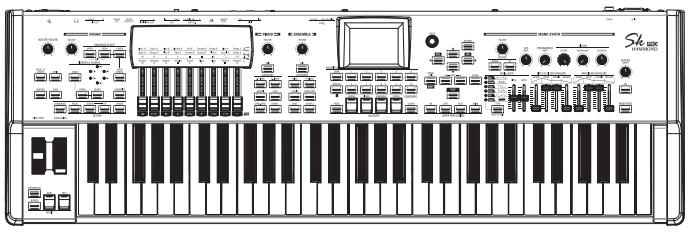

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00457-40208 V1.60-20210427