VICTORY VC35 ‘The Copper’
All Valve 35 Watt Guitar Head

User Guide

Thank you, and congratulations on acquiring a Victory Amplification VC35 'The Copper'. This amp is proudly designed and built by our committed team of engineers and craftsmen in the UK. We value simplicity in operation, flexibility in use and absolutely no compromise in tone. Our aim is simple: to create amplifiers that inspire you ever onwards in your playing and never let you down.

SAFETY FIRST
We want you to enjoy your amplifier to the best of its potential. So please…

Before you go any further, take a moment to read these SAFETY INSTRUCTIONS
- **Read these guidelines & keep them**
- **Follow all instructions, guidelines and warnings, especially those in RED**
- **Do not use this amplifier near water or any other liquid**
- **Do not block any openings**
- **Do not attempt to clean the amplifier with any fluids: use only a dry cloth**
- **Do not attempt to modify or service this product yourself**
- **Removing covers could mean you are exposed to dangerous voltages that may result in severe injury or death**
- **Refer all servicing to qualified service personnel**
- **Damage Requiring Service: Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:**

(a) When the power-supply cord or plug is damaged;
(b) If liquid has been spilled, or objects have fallen into the product;
(c) If the product has been exposed to rain or water;
(d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation;
(e) If the product has been dropped or damaged in any way;
(f) When the product exhibits a distinct change in performance - this indicates a need for service.

- **Replacement Parts: When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.**

What's included?
Your new Victory VC35 comes with the following:
1 x Dual Latching Footswitch for FX LOOP, (TIP) & REVERB, (RING).
A mains lead for your country
A canvas gig bag.
This User Guide, (please check the website periodically as these owner's manuals are constantly being updated to give you more information about your Victory product).

FRONT PANEL

INPUT
Plug your guitar in here!

GAIN
This adjusts the input sensitivity. Use low settings for maximum clean headroom and higher settings when you want to introduce more natural valve overdrive to your tone.
Balancing your input gain level with your master volume level is crucial in delivering the tone and feel that works best for you.

BASS CUT SWITCH
This switch alters the high-pass filter from the first gain stage which will reduce the amount of bass frequencies going through the preamp. It can be useful to increase the clean headroom and reduce distortion if you have a high Gain setting and your instrument produces excessive bass.

BASS
This knob controls the low frequency content of your sound. Higher levels of bass can be good at low volumes, but take care when running the amp louder – you may find you need to reduce the bass control. As with all the EQ pots, adjust for your preferred tone and use in conjunction with the Bass Cut switch if necessary.

MID BOOST SWITCH
When activated, this will increase the range of mid frequencies going through the Treble Control. It can be very useful to add punch to the overall tone and cut-through the mix in a live situation.

MIDDLE
Controls the midrange frequencies in your sound. Run the middle control higher to help cut through a band mix, or generally fatten and 'widen' your sound. Run it lower for a lighter, less 'in-your-face' kind of sound.

TREBLE
Controls the high frequency content of your sound and is also a powerful tone shaper when it comes to overdrive character.

REVERB
The VC35 has a built-in Digital Reverb and this control varies the amount of Reverb added to the guitar signal. The Reverb comes after the Effects Return.

TONE
This control adjusts the high frequency content of the signal; and is situated after the Phase Splitter. The tone circuit affects the overdrive characteristics of the amp so high treble settings can be used and then tamed by the TONE control if desired. Please experiment to get the desired tone.

MASTER
Use this control to set the stage volume. It is also a useful control when you want to play at lower levels; in your home for example at 3 in the morning.

Power Lamp with Jewel
When lit, this indicates that mains power has been applied to the amplifier. It houses a 6.3V 10mm bayonet filament bulb which can be replaced by unscrewing the jewel from the front.

HIGH – PREHEAT – LOW Switch,
(PREHEAT was previously labelled as STANDBY)
The VC35 should always be switched on, (mains switch on rear of amplifier), with this front panel toggle switch in its centre position. The amplifier is now in 'PREHEAT' mode with just the valve heaters and low voltages on. This allows the valves to heat up before they get 100s of volts up them, (it's less of a shock). After around 45 seconds, the amp can be switch to either HIGH, (35 Watts rms) or LOW, (8 Watts rms). PREHEAT has replaced STANDBY due to new EU legislation which limits the current allowed in any Standby mode. When switching the amplifier ON or OFF please ensure the Volumes are turned down and you leave at least 30 seconds before switching from PREHEAT to OFF. This will ensure extended valve life and avoid any power-down noise. This is especially relevant if you're running through a large PA system as any small pop may become amplified to audience-damaging levels, which may limit your music career.

REAR PANEL

Voltage Selector

This slide-switch selects the correct mains voltage for your territory. Please ensure this is set to the correct position for the available mains power. If you do find yourself in a strange town where the mains voltage is different to home, (and you've got blisters on your feet), it will be necessary to switch this selector. The mains fuse must always be changed at the same time. Failure to do this will result in either the mains fuse blowing as soon as the amp is turned on or the amp running with a fuse that is of too higher value to provide adequate safety protection. Generally, the fuse value will double if the mains voltage is halved, (i.e. if it's a 1A fuse in the UK @ 230V, it will need to be a 2A fuse for the USA @ 115V). Always use the correct rating and type of fuse. Victory amplifiers exclusively use UL-approved 20x5mm glass 'T' or 'Timed' fuses. If you have difficulty acquiring the correct fuses, please contact Victory using service@victoryamps.co.uk.

Mains Inlet, (IEC Socket) & Mains Fuse

Please use the correct mains cord for the country you are in whether this is your home territory or abroad. Ensure the amp is switched to the OFF or '0' position on the rear switch and to PREHEAT using the front toggle switch before plugging the mains lead in this socket.

The mains fuse is located in a small tray between the inlet & mains switch and can be removed using a small flat blade screwdriver. Please note where this fuse is

located in the tray before replacing it with the correct type and value for your territory or temporary home, (on tour for example).

POWER ON Switch

This switches the mains power ON for the VC35. Please ensure the front toggle switch is in the 'PREHEAT' centre position before powering up.

HT FUSE

The HT or 'High Tension' fuse protects the high voltage for the valve supply. If this fuse blows, the first step is to replace it with an identical T500mA 20x5mm fuse. The HT fuse may sometimes blow due to 'flash-over' inside an output valve. This is where during the manufacturing process, not all of the gas is removed from the glass envelope and the 'getter' inside the valve, usually made from barium or magnesium oxide, will burn or evaporate these remaining gasses resulting in the common silvered internal surface of the valve. This process, which is more likely to happen with new equipment, creates a momentary short-circuit which draws high current and can blow the HT fuse. It will rarely cause any damage so just replacing the fuse is sufficient to get the amp running normally again.

However, if the HT fuse blows repeatedly, (more than 3 times for example), it may indicate a serious valve failure where internal parts of a valve are shorted and in this case the amplifier needs to be checked by a qualified engineer to assess the problem.

VERY IMPORTANT WARNINGS!!

In certain countries, (specifically, Nordic countries), is it totally forbidden to open up any electronic equipment or to work on them at all unless you are a fully qualified and approved technician. Please check the laws in your country and do not attempt to change valves/tubes or re-bias the amplifier if the law forbids this. In this case, please take you're your amplifier to a qualified and approved electronics technician.

In certain countries it is also totally forbidden to keep or place any liquids on top of the amplifier, (e.g. beer, water bottles, glass, drinks etc). This may cause serious electric shocks and/or dangerous situations.

Also, it is totally forbidden to use the amp in the event of rain splatters/water drops getting into or onto the amp.

Even if it is not a law in your country, you should never allow liquids near the amplifier or attempt to use the amplifier if it has been subjected to any moisture as this could result in a fatal electric shock.

OUTPUT STAGE

The VC35 uses a combination of 'Cathode' and 'Fixed' biasing to supply the optimum current for the output valves. In LOW power mode, which uses lower plate voltages, the amplifier is running entirely in Cathode Bias which is effectively Class A operation. This mode of output stage produces very natural and sparkly tones reminiscent of the early British guitar amplifiers. In HIGH power mode, the output stage is running partially in Cathode Bias but also in Fixed Bias where we set a maximum idle or Bias current through the use of a variable potentiometer, (Bias Adjust). This limits the maximum valve plate dissipation to ensure longevity & reliability and to avoid the thermal issues associated with Cathode Biasing at high output levels. Many early EL84 design guitar amplifiers exceeded the recommended plate dissipation and this can lead to early valve failure and the output stages running extremely hot, even when they are not being played.

BIAS ADJUSTMENT:
Biasing needs to be done each time the output valves are replaced and should be checked periodically to make sure they are working at their optimum for sound quality & valve life. The VC35 uses 4 x EL84 output valves.
To set the Bias on the VC35 you need a multimeter set to the 20V DC range. Biasing is carried out externally so no need to remove the base making the whole process very safe. Output valves can be replaced by simply removing the top cage and carefully removing the spring retainers, (lift them up and over the top nipples on the valves/tubes). We recommend the use of a soft cloth to remove valves if possible. The valves can then be pulled out using a slow rotational movement, (known as dweezling) to ease them from their sockets. This will free them with the least amount of effort and stress. Ensure that the pins on the replacement valves line up with the socket holes in the valve base before pushing them firmly home. Take care when removing any valve as the pins can easily be bent. Make sure that they are never more than a few degrees from vertical to avoid bending or breaking pins etc.
WARNING – Output valves can get extremely hot so ensure they have cooled sufficiently before removing or replacing them.

Always buy matched quartets, (set of 4) of output valves or Biasing may be difficult if not impossible. Poorly matched valves will also wear quicker as one will be drawing significantly more current than the other causing an imbalance and potential premature failure.
To Bias the new valves, make sure the amplifier is connected to a speaker cabinet, (or dummy load resistor). Turn all controls to zero and remove the guitar input as

any signals may interfere with the Bias settings. Switch the amp 'ON' using the rear illuminated mains switch and then after 60 seconds, switch the front panel toggle from PREHEAT, (centre position) to HIGH, (top position).
Now put the black meter probe, (-ve) into the Black centre GND Bias socket and the red meter probe, (+ve) into the RED (V4-V7) Bias socket. Using a small flat blade screwdriver in the Bias adjustment POT, turn this so you get 5.6Vdc on the multimeter +/-0.25V.
We are measuring this voltage across a 47 Ohm resistor so Ohm law, V=IxR (Voltage = Current x Resistance) gives us Current = 5.6V/47Ohms which = 120mA for all 4 valves. Dividing this by 4 gives us a maximum Bias current of 30mA per valve.

SPEAKER OUTPUTS
PLEASE NOTE: The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated 'dangerous voltage' within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock. Terminals labelled as "Speaker Outputs" must be connected to a speaker cabinet of the designated load rating using an un-shielded two conductor cable for speaker use at all times during operation. Never use a guitar cable to connect the amplifier to a speaker as this presents the amplifier with a 'capacitive load'. This can cause instability or oscillation which may seriously damage valves and/or the expensive output transformer.

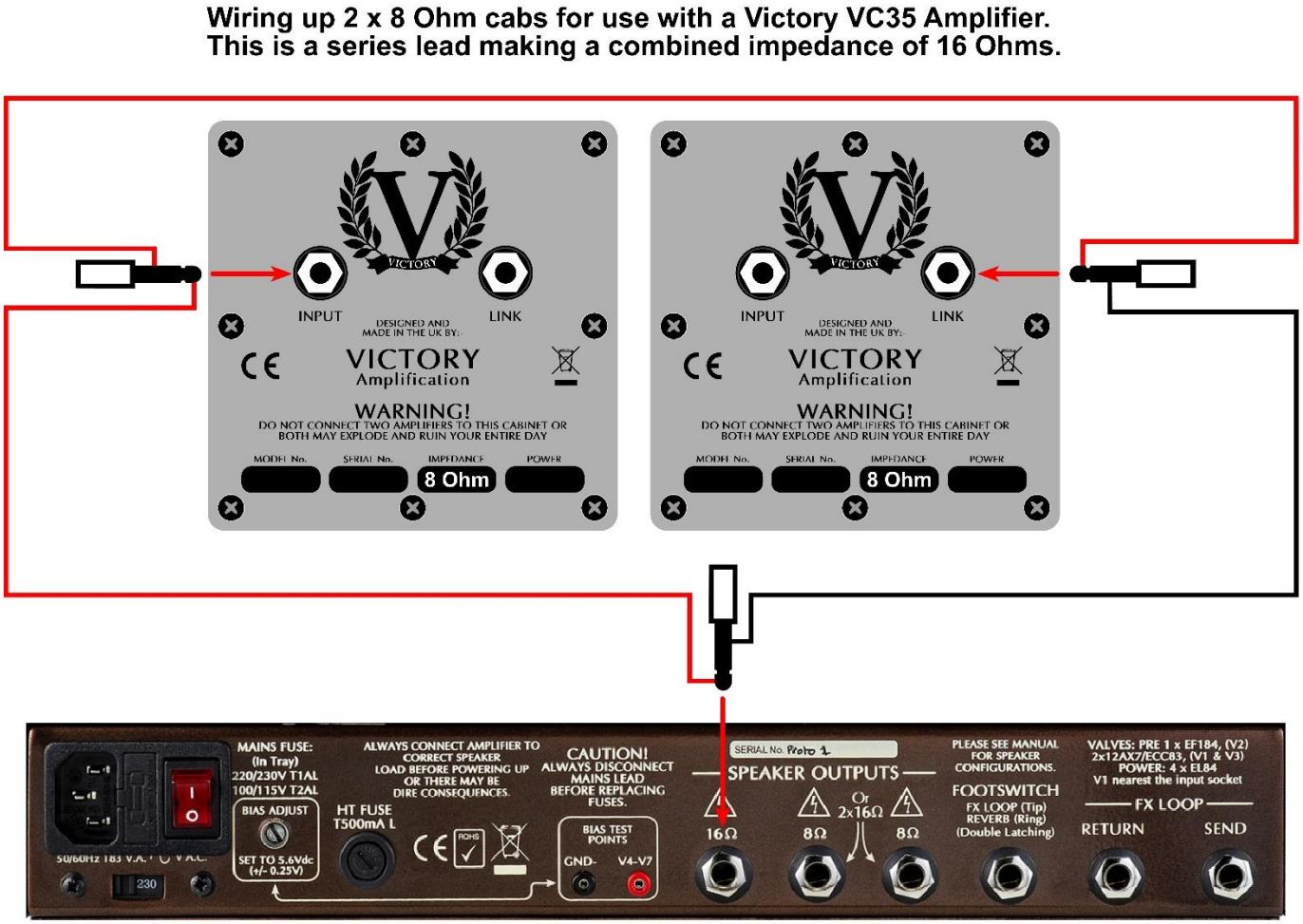
Always ensure a speaker is connected to the amplifier before powering up or damage to the output transformer may result. Never unplug a speaker when the amplifier is ON as this is even more likely to damage the transformer and the output valves.
The output transformer in the VC35 has 2 separate secondary windings; a 16 Ohm and an 8 Ohm. This makes it easy to connect different combinations of speakers. There are three speaker output jacks: 2 x 8 Ohms, (wired in parallel) and 1 x 16 ohms.

Here are the possible combinations:

1. **For a single 8 Ohm cabinet, use either of the 8 Ohm sockets.**
2. **For a single 16 Ohm cabinet, use the 16 Ohm socket.**
3. **For a pair of 16 Ohm cabinets, use both of the 8 Ohm sockets.**

It is possible to use a pair of 8 Ohm cabinets with the VC35 but a special series lead needs to be used.

Here is a diagram of how this is achieved:



The end of this lead needs to be plugged into the 16 Ohm speaker socket on the VC35. Alternatively, there are speaker matching boxes available. A low cost but reliable example is the Palmer Cabinet Merger, available from many retailers:
https://www.andertons.co.uk/p/PCABM/misc-guitar-accessories/palmer-cab-m-passive-cabinet-merger

You will need a couple of extra standard Jack to Jack speaker leads to use this box but it is a more elegant solution than a series lead.

All Victory amplifiers are constructed using Posidrive Screws & Machine Bolts. These are an improvement on the Phillips type of fixing which uses a 4-blade screwdriver. The Posidrive uses an 8-Blade screwdriver which allows for more precision and higher torque. Please try to use Posidrive Screwdrivers when working on a Victory amplifier to avoid damaging any fixings. These are readily available from all good tool suppliers. We recommend having a No.1 and a No.2-point Posidrive screwdriver. Replacement fixings are available from Victory should you require them; just contact admin@victorystore.co.uk

FOOTSWITCH
This socket is for use with the supplied dual latching footswitch to switch 2 functions remotely.
The left-hand button selects the FX LOOP (TIP of jack plug) and the right-hand button REVERB (RING of jack plug).

EFFECTS LOOP
The VC35 has an effects loop, which is a simple, low impedance, series loop which is nominally at instrument level, (not line level) so will not overdrive any effects pedals.

The SEND socket is for connection to the input of effects units. On the VC35 it is a lower impedance version of the signal that appears at the INPUT. Use the send to connect to floor pedals or rack effects such as Delay, Chorus and Reverb etc. Effects such as Overdrive, Fuzz, Wah Wah and Tuners often give better results plugged into the Instrument Input on the front panel. The Send socket can also be used on its own to send a signal to another amplifier.

The RETURN socket is for connection to the output of effects units. When not used it is internally connected to the SEND, therefore the EFFECTS LOOP can be ignored if not in use. It can also be used as a small signal 'Slave' input from another amplifier but DO NOT plug an amplifier's speaker output into the Return socket or very bad things will happen.

The RETURN socket is also very useful for fault diagnosis. If your VC35 doesn't produce any sound when played, plug the guitar directly into the RETURN socket and play. This bypasses the entire pre-amplifier section and sends the guitar signal through just the output stage. If sound is now heard then the problem is in the pre-amp section and is likely to be a faulty pre-amp valve.

If there is no sound from the amplifier when a pedal, (or rack processor is inserted), then it is almost certainly an issue with the effect, not the amplifier as no extra circuitry is engaged when using the loop. It is simply a pair of jack sockets that break into the signal path.

Amplifier Dimensions:

SIZE (mm): 342(w) x 185(h) x 185(d) Unboxed. 550(w) x 300(h) x 310(d) Boxed.

Weight: 8.42Kgs Unboxed, (no accessories). 10.2Kgs Unboxed, (all accessories) 11.36Kgs Boxed, (complete).

<u>Output Power</u>

The following measurements were taken at 240V mains input into an 8 Ohm load using a 1 KHz Sine Wave with the output waveforms set just before clipping. Bass Middle & Treble at 9 o'clock, Tone at maximum, Master at maximum

High Power: 35 Watts
Low Power: 11 Watts

Valves:
V1 (ECC83 – Dual Triode) – this is the first gain stage and closest to the guitar Input. The second half of V1 comes after the Gain control and is the second gain stage.
V2 (EF184) - this valve drives the tone-stack and is a NOS pentode. It is used as a cathode follower and has a little more current/drive capability to help the preamp signal through the tone circuit; maintaining a wider tonal spectrum. The output from tone stack then runs through the effects loop.
V3 (ECC83 – Dual Triode) – this valve is the Phase-Splitter, used to split the signal into positive & negative components to drive the push-pull power output section.
V4 – V7 (EL84 – Power Pentode) – the output valves

Notes on output volume and speaker attenuation:
Victory amplifiers are designed to be played loud with gigging and rehearsal in mind. It can be difficult to get suitable volumes and tones from the VC35 at home or 'bedroom' levels even in the lower power settings. The nature of valve amps and the POTs used to control the signal is such that they really start to work when turned up. However, many Victory users have had great success with speaker power-soaks and simulators. The simplest ones are low-cost attenuators such as the Jet City 'Jettenuator' which simply soaks up the output power of the amplifier allowing only some of the signal to reach your speaker(s). This allows you to really

crank the amplifier up into output valve distortion to get big-stage overdrive without disturbing anyone.

Victory takes no responsibility for any physical or verbal abuse that may result from your playing!

https://www.thomann.de/gb/jet_city_amplification_jettenuator.htm?glp=1&gclid=CKjxmLe-ktICFeqc7QodK6IInA

For home studio recording and speaker attenuation, at the top end of the market, we have the Two Notes Torpedo range of attenuators & simulators. These are really excellent devices and are what our colleague Rabea Massaad uses for home recording:

https://www.andertons.co.uk/search?query=torpedo

There are many others out there with Palmer being one of the first companies to offer such devices. These are tried and tested solutions and also recommended by Victory:

https://www.andertons.co.uk/b/139/palmer

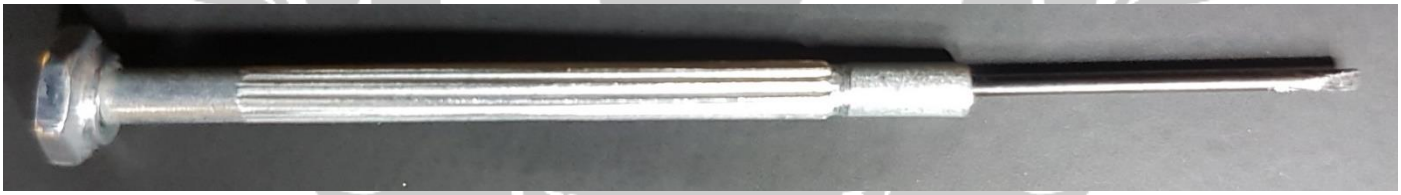
Warranty

All Victory products come with a 5-year limited warranty. This covers any defects in manufacturing or faulty components. Valves and speakers are warrantied for 90 days from the purchase date but replacement parts will be at our discretion. Please contact your local dealer if you have any issues with your Victory product. Victory are setting up Official Service Centres around the world so please check on the Victory website to see where your nearest centre is located. These will have original Victory spare parts including the recommended valves for your amplifier direct from the Victory factory. They also have all technical details for your product and have been carefully selected to ensure you get the best possible service for warranty and non-warranty work.
Footswitches are covered for 12 months from date of purchase due to the nature of their use, (getting kicked around a stage for example). Take great care not to damage the cable as this may result in an intermittent connection and erratic behavior. If you suspect that any of your Footswitches may have become faulty, please contact Victory service for advice and options.

Notes on what to do if your amplifier experiences any strange behavior:
From 7 years answering Victory service queries, by far the main issues that come up are valve-related. These are either premature valve failure, (minimal), valves that

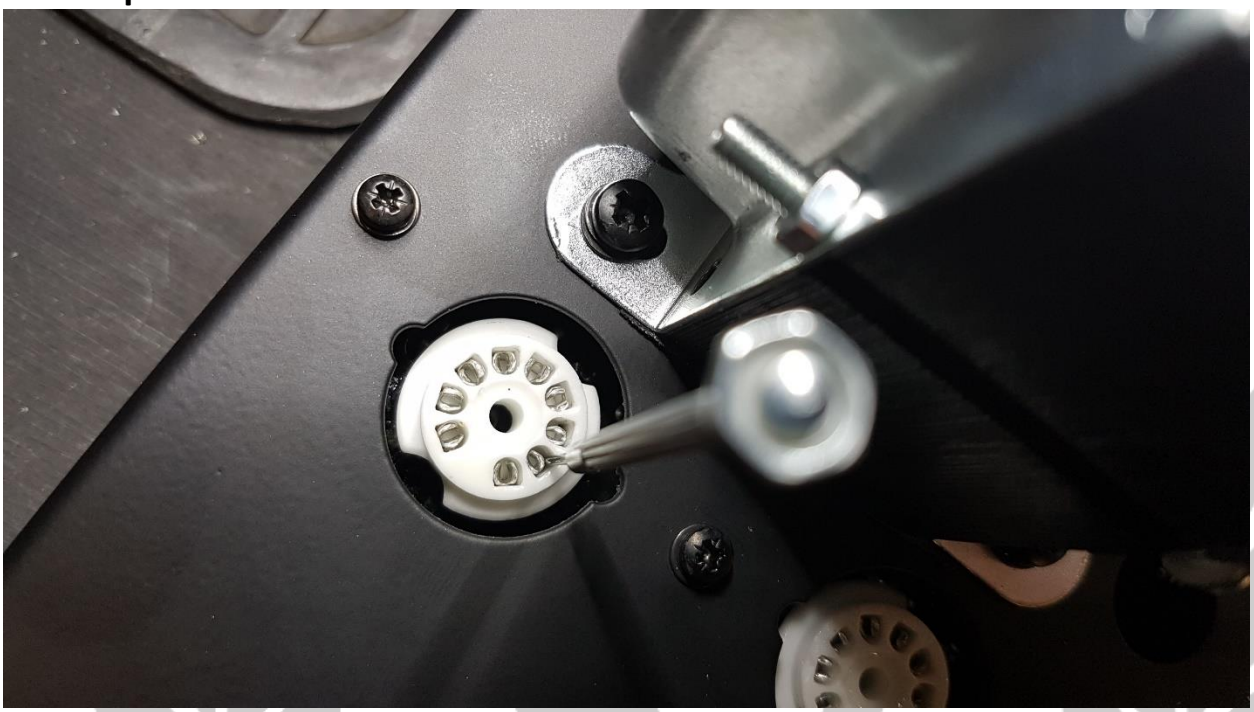
have worn out through extended use or have become microphonic or noisy over time.
Many issues relating to valves can be cured simply by re-tensioning the valve bases. Over time, the valve sockets, which are constantly heating up, cooling down, expanding and contracting may become a bit 'loose' and not hold the valve pins as tight as they should. This can lead to noise and more commonly, sudden drops in volume or complete lack of sound.
It is impossible to put a life expectancy on a valve but generally, if it lasts for the first few weeks of use, a preamp valve can still give good performance for 3-15 years. Output valves tend to wear out much faster and with regular use, rehearsing, practicing and gigging we would expect them to last between 1-2 years. We recommend changing older output valves periodically as preventative maintenance, i.e. before they fail and potentially cause more serious issues or pack-up mid-gig. Victory 'burn-in' all amplifiers for a period of 2 hours at full power into dummy loads to wheedle out any valves that are not up to the job. This is in addition to around 90 minutes of electronic and audio test & measurement including a live test at full volume in a sound-proof environment. This extensive testing catches most problematic valves but a small percentage do fail in the first few weeks of use. If you suspect a valve failure, please contact our service department who will advice on the best course of action and invariably, replace these valves under warranty.

It is an easy task to re-tension the valve sockets and this can be done with a small flat blade screwdriver such as this, (inexpensive watch-makers type):

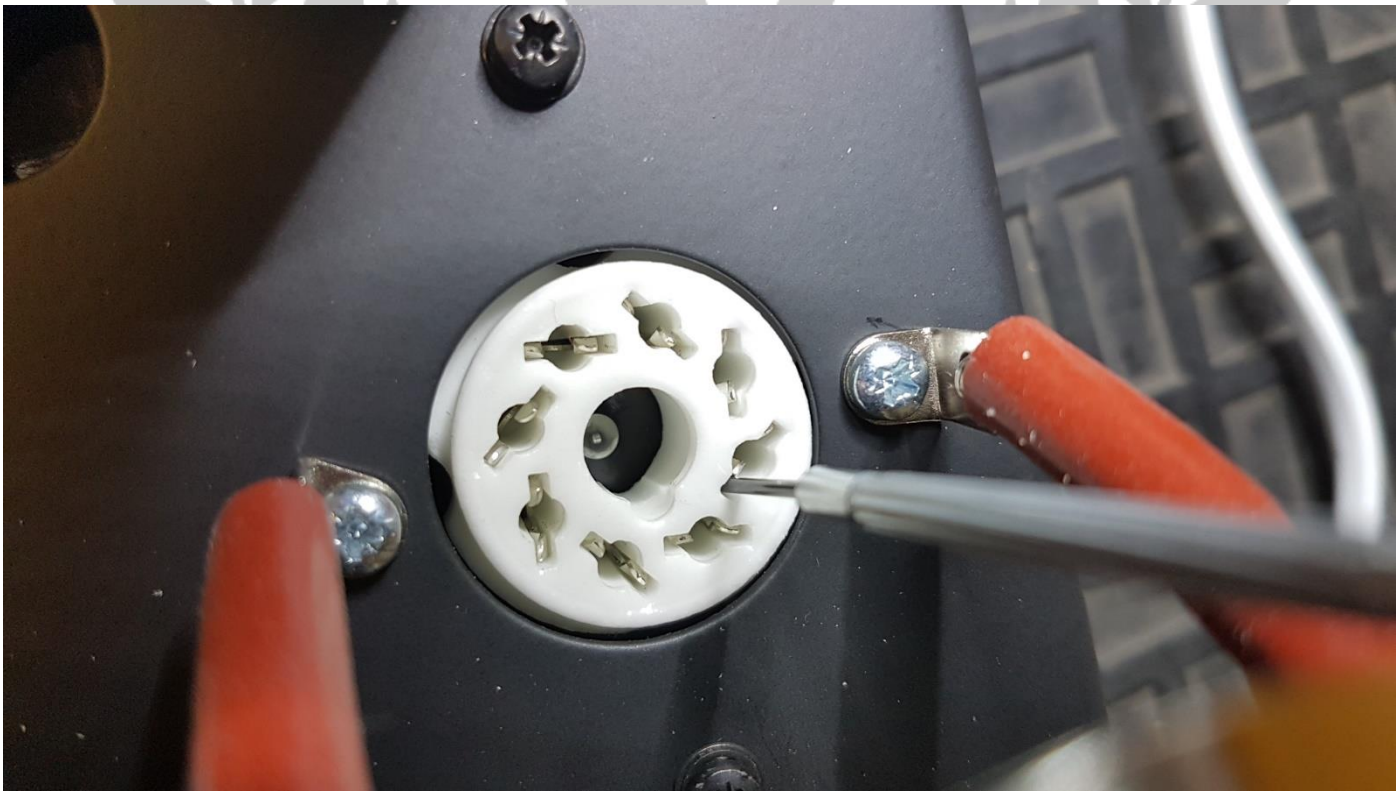


Important! Please ensure the amplifier is not plugged into the mains and has been off for at least 30 minutes before removing any valves so all of the high voltages have dissipated. Carefully remove each valve in turn. The pre-amp valves have a sprung-loaded screening can fitted over each one so twist this through 90 degrees or so until it pops off. Then using the slow circular motion, pull the valve from the socket. The output valves are retained by spring clips which need to be lifted up and over the top glass nipple on the valves to facilitate their removal.
Please ensure that the valves go back into the same sockets as they are optimized at the factory for best position relating to gain, noise, & microphony. This is easily

achieved if you just do one at a time; take it out, re-tension then re-insert and go to the next one.
You will see that the valve bases have small 2-part metal clips in each hole and these need to be pushed together to make a tight connection on the valve pins.
Pre-amp valves:



Poweramp Valves:



Please make sure you don't close these pins up fully or it will be difficult to replace the Valves.

Replacement valves and tools for biasing such as a Multimeter and Terminal Screwdrivers are available directly from Victory in the store: www.victorystore.co.uk.

A note from Team Victory
We've built your Victory Amplifier as a professional, no-compromise musical instrument, with a great deal of pride and an absolute commitment to tone. We encourage you to learn to get to know it by experimenting with all the controls, in order to discover its vast array of tonal combinations.
Thank you for making your tones with us: we wish you many years of achieving inspiring sounds to push your playing ever onwards.

That's us finished; please go play your guitar and make some beautiful music.

Contact info:

sales@victoryamps.co.uk
service@victoryamps.co.uk
admin@victorystore.co.uk

Web:

www.victoryamps.co.uk
www.youtube.com/user/VictoryAmps
www.facebook.com/VictoryAmpsUK
www.victorystore.co.uk

Handmade in England

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