NEOX 500
USER'S MANUAL

Please read all of the following instructions and save them or later reference before attempting to connect this unit to the Power DC Supply.
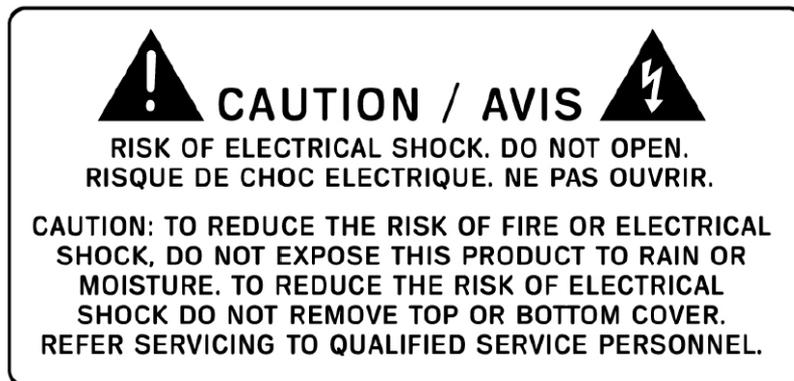
COVERS
DO NOT remove the covers or try to repair the module on your own. Refer servicing to qualified personnel only.

MOISTURE
DO NOT expose the unit to rain or moisture. If the unit should become so exposed TURN OFF the device immediately.

HEAT
ALWAYS site the unit away from sources of heat including direct sunlight and ensure adequate ventilation around the unit.

Manual revision: 1.0 (september 2014)

Thank you for buying this IGS Audio product.

Please read the information provided below very carefully before using your IGS unit.

Unpacking

Your NEOX 500 has been carefully and meticulously tested and inspected before dispatch. Please check for any signs of transit damage. If any signs of mishandling are found please notify the carrier and your dealer immediately.

Your NEOX 500 packing should contain an NEOX 500 with IGS Audio tag (packed in ESD bag) and this manual with the Warranty and RoHS/CE/WEEE Declaration attached.

Compatibility and Power

The NEOX 500 module is designed to be installed into an API™ 500 Series compatible rack and cannot function stand alone, requiring the power source supplied by the rack system.
The current consumption of the NEOX 500 is rated at 180 miliamperes per slot. Please check with the rack manufacturer that the design can meet this rating.

Mounting

WARNING! Never plug or unplug any 500 series module with the power supply switched on. You may destroy your unit permanently!

The dimensions of all IGS Audio 500 series modules are compatible with API standard. When plugging your new unit to the 500-series rack, no unnecessary force is needed. However, please be careful and do not rush while pushing the unit into the rack sockets, to avoid damaging of the connectors and/or the PCBs of either the unit or the rack.

After the unit is placed in the rack, use the screws provided with your 500-series rack unit to make sure that the unit is safely placed.

When removing the unit from the rack, unscrew the front panel from the rack, and use your fingers to pull it out gently. Do not use any sharp objects (i.e. knives or screwdrivers) to prize it.
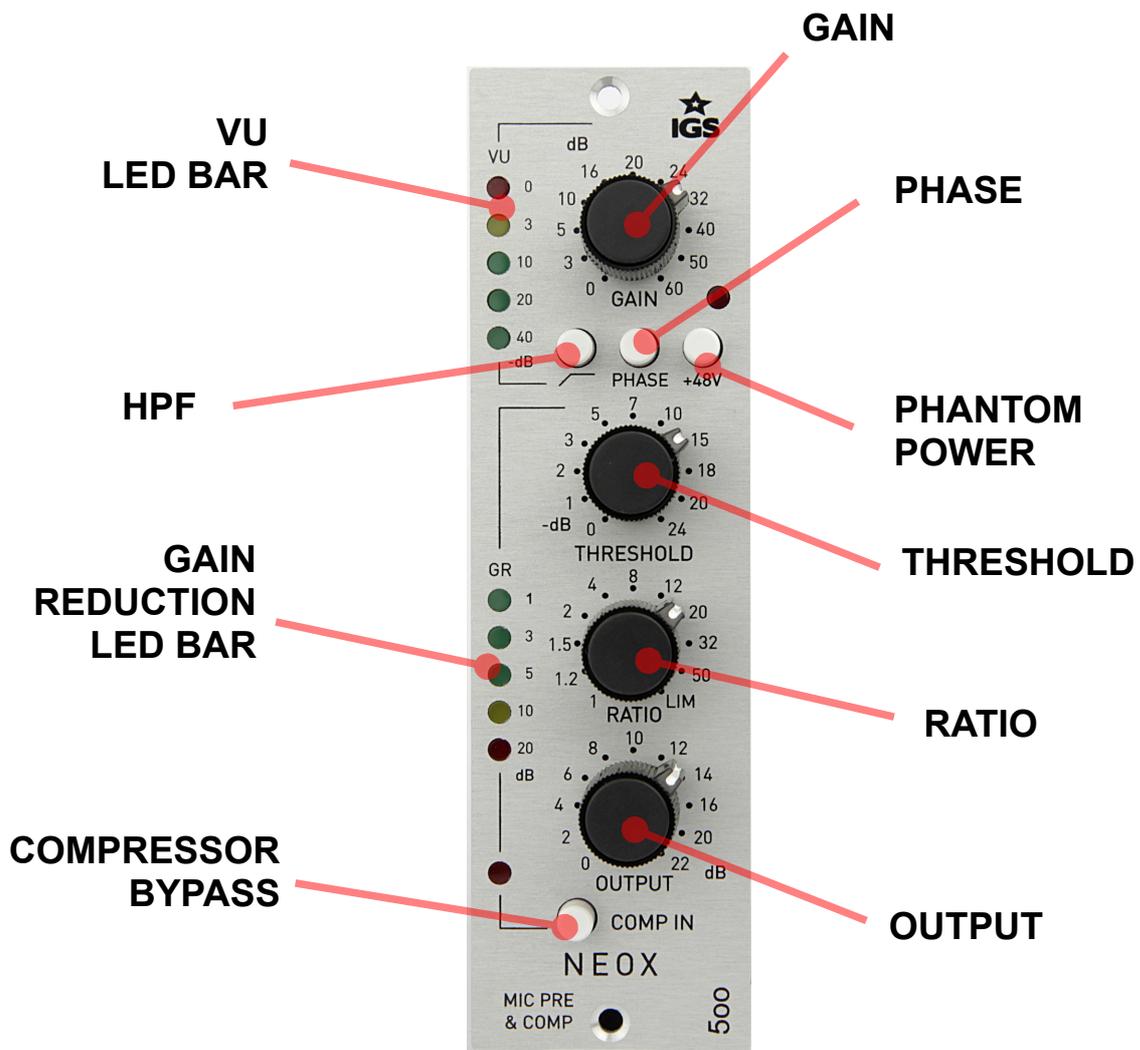
IGS AUDIO NEOX 500 – Optical Compressor

IGS Audio NEOX 500 is a microphone preamplifier and compressor combo fitted into a single 500-series module, that can work with any API 500 Series compatible rack. It was created using advanced transformerless design, providing low noise signal path, excellent dynamic response, and maintenance free usage for years. Despite the extended functionality (for a single 500-series unit) it still offers the ease of use, through the well laid out front panel.

The preamp section features 60dB of adjustable gain boost, phantom power, phase flip and 70 Hz high pass filter. The compressor section is based on the VCA principle, using highly specialized IC, supported by an external circuity, that controls the attack and release times. The envelope of the release time consist of two stages – the amount of gain reduction lowers by 80% within the first 150ms and by further 20% within the next 450ms. This unique feature helps the NEOX 500 to behave like an optical compressor. User has an access to the THRESHOLD level knob, RATIO (1:1 to 100:1 – soft compression to hard limiting), OUTPUT level and the bypass switch.

Comprehensive metering is also available on the front panel. 5-Led VU meter showing the module output level and 5-Led Gain Reduction meter displaying the amount of signal reduction achieved by the VCA compressor.

GAIN	Microphone preamplifier gain level
PHASE	Phase reverse switch
PHANTOM POWER	phantom power: ON/OFF
COMPRESSOR BYPASS	Compressor ON/OFF (if ON then the LED will light)
HPF	6dB/Oct high pass filter
GR/VU LED BAR	Indicates the output level and gain reduction (when the compressor is enabled)
THRESHOLD	Above this level of the input signal the compression will occur. Use it to control the amount of compression.
RATIO	Allows to adjust the compressor ratio.
OUTPUT	Output signal level

NEOX 500 main functions and technical specification:

- ✔ 500-series mono module
- ✔ Microphone amplifier and VCA compressor in one box
- ✔ Smooth control over the settings
- ✔ Precise LED bar scales
- ✔ HPF
- ✔ Phantom power +48V
- ✔ Phase reverse
- ✔ 3 year warranty

Some of the technical details:

- API 500 standard module,
- Input impedance: 10k Ohm,
- Output impedance: 50 Ohm,
- Maximum input level: +4 dBu,
- Maximum output level: +20 dBu (into 600 ohm load),
- Total Harmonic Distortion: 0,009% (1 kHz),
- Frequency response: 20 Hz to 20 kHz (±0,1 dB),
- Preamplifier gain: 16 to 60 dB (44 dB of smooth adjustment range),
- Maximum gain reduction: 24 dB,
- Ratio range: 1:1 to 100:1,
- Make-up gain range: 22 dB,
- Attack time: 5 ms,
- Release time: 150 ms (80%) + 450 ms (20%),
- HPF: 70 Hz (-3dB, 6dB/oct),
- Signal to noise ratio: >93 dBA,
- Dynamic range: >93 dBA,
- Power consumption: 2,9 W (180 mA per slot),
- Dimensions: 132x37x158mm,
- Shipping weight: 550g.

Troubleshooting

My unit doesn't light up (LED bars are dark):

 – Please check if the rack power supply is on (check the LEDs at the front plate of the rack).

 – Make sure that the signal source (i.e. the microphone) is properly connected to the module

 – Adjust the gain level (using the Gain knob); insufficient gain level might cause that the signal level is below the LED bar threshold

 – if you are using a condenser microphone, make sure that the phantom power is turned on (use 48V switch at the front of the unit; the red LED will glow)

No signal plays thru the unit, regardless the settings at the front panel:

 – Please check the cables connecting the rack.

 – if you are using a condenser microphone, make sure that the phantom power is turned on (use 48V switch at the front of the unit; the red LED will glow)

 – Please, make sure that you are NOT using front and rear XLR inputs simultaneously. Only one of them can be occupied at the time.

 – Make sure the compressor is on (COMP IN pushed in and red LED lit) – if the compressor is bypassed, only the GAIN knob works.

Warranty:

This device is declared to be free from defects in material and workmanship for a period of three years. Any device found defective within three years from the delivery date and returned to the factory, will be repaired, adjusted, or replaced and sent to the customer with no charge. The customer always pays the shipping cost to us. This warranty does not cover expendable items such as tubes or fuses. If the defect has been caused by a misuse or abnormal operation conditions, the repair will be billed at a nominal cost. The product should be returned in its original package, if this is possible, or packed in such a way that it is not damaged during the shipment. We are not to be held responsible for any damages during the shipment. 19" units shall always be packed in a box with support for the rack ears. All 500 series modules need to be secured in ESD bag and protected with foam. We will charge the customer €20 + VAT if the packing material needs to be replaced. If we find that the product works perfectly, the customer will be invoiced €50 + VAT to cover our costs of examination and handling plus the cost for returning the product to the customer.

www.igsaudio.com