



# TUBECORE 500

## USER'S MANUAL

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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**

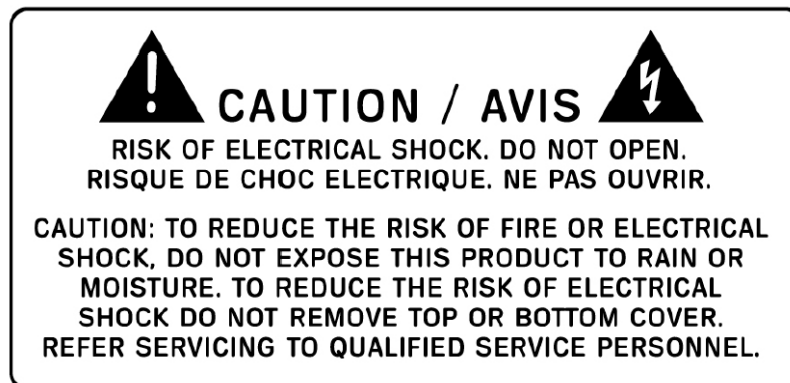
**DO NOT** remove the covers or try to repair the module on your own. Refer servicing to qualified personnel only.

### **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.



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**Thank you for buying this IGS Audio product.**

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

## **Unpacking**

Your TUBECORE 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 TUBECORE 500 packing should contain an TUBECORE 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 TUBECORE 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. It should be noted that the module consumes more power supply current than most other 500 series modules available due to the high voltage tubes used. For this reason, there may be limitations on how many IGS Audio modules can be installed into some rack systems currently available.

The current consumption of the TUBECORE 500 is rated at 400 miliamperes per slot. The unit takes up two rack spaces. Please check with the rack manufacturer that the design can meet this rating (does not apply to IGS PANZER 500). The start-up time of the unit is about 30 seconds. It is necessary to warm up the tubes and set up all voltages correctly.

## **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 TUBECORE 500 – mono vari-mu compressor

The TUBECORE 500 is a full symmetric transformer balanced 500-series compressor. The structure is based on the typical vari mu solution. The TUBECORE 500 is a true tube mono compressor where compression is achieved using the remote cut-off of tube biasing. Could be used as a mono tracking compressor or (as a matched pair) as an advanced mastering tool.

Every single TUBECORE 500 is hand made with high quality, matched components (1% metal film resistors, Wima caps). It is equipped with JJ tubes and individually calibrated to give you the unique and unspoiled experience of one of the best Vari-mu compressors in the history. We have spent hundreds of hours designing the TUBECORE, to make sure that it is as simple to use as it is versatile. Not only for harmonically rich drums and guitars, but also for huge vocals and bass instruments. It is also excellent as an mastering option if you have two units linked in stereo mode. Two audio transformers (Sowter and Carnhill) have been used to provide excellent performance.

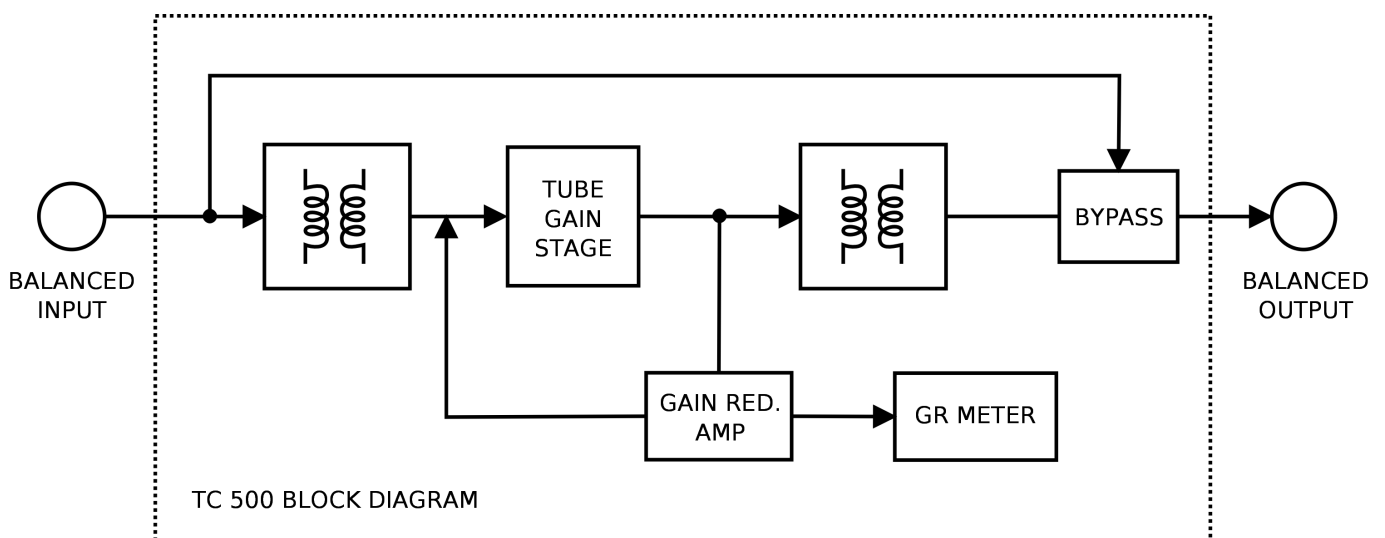
### Typical usage

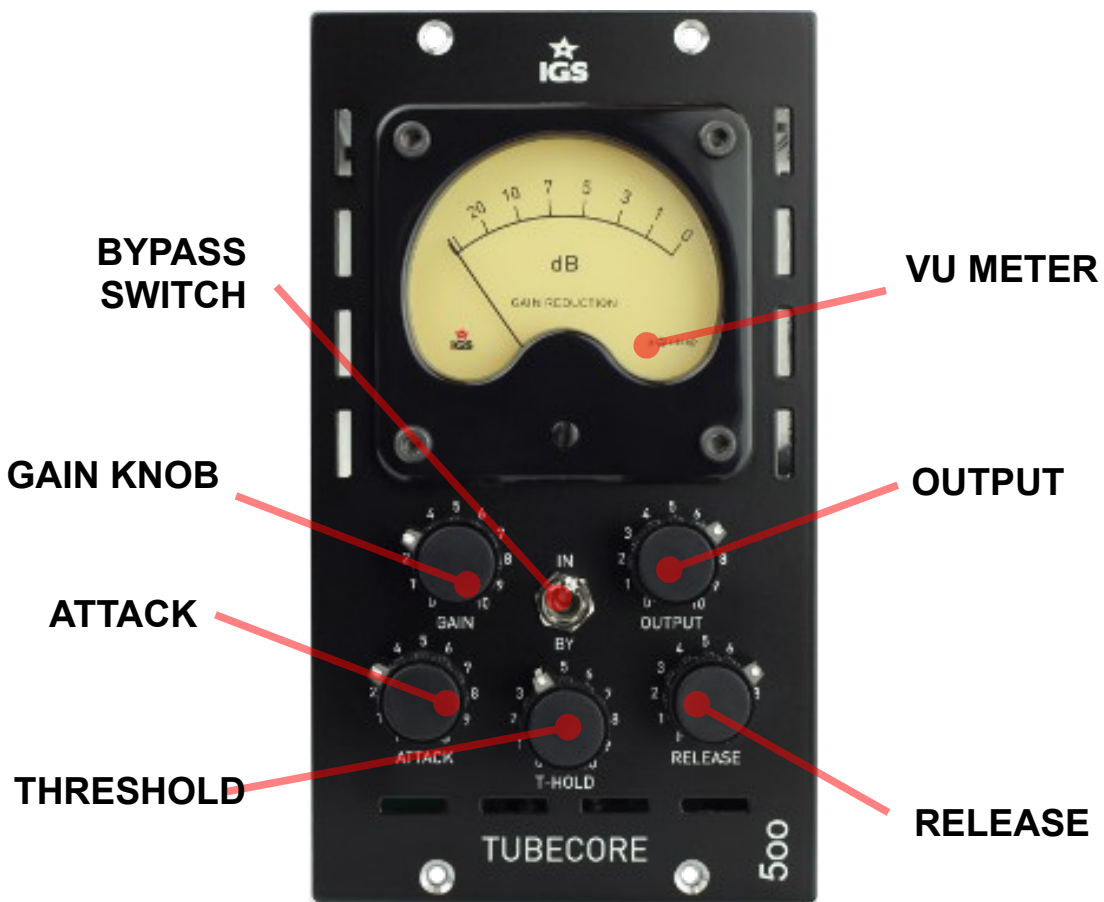
- recording vocals
- strings
- bass and guitar instruments
- drum bus compressor (stereo when two units are used)
- mastering compressor (when two units are being used)

### Calibration procedure

There is small hole in the side of the unit that can be used to calibrate the zero reading of the VU meter. As the unit warms up it might be necessary to adjust the trim under the hole with small screwdriver. If your not confident with this process, please contact with the professional technician, who will do it for you.

### Block diagram





- VU METER** Clearly visible coil meter takes almost half of the space available at the front panel, to ensure that the amount of gain reduction applied is easy to read.
- GAIN KNOB** This is the make up gain knob. You can adjust the amount of signal at the input of TUBECORE 500.
- OUTPUT** Output level control.
- THRESHOLD** Above this level of the input signal the compression will occur. Use it to control the amount of compression. The amount of reduction applied can be read on the VU meter.
- ATTACK** Time delay between the appearance of the signal and the compressor reaction.
- RELEASE** Time delay between the disappearance of the signal and the compressor reaction.
- BYPASS SWITCH** The audio signal passes thru the compressor circuit when this switch is set to „IN”. The „BYPASS” setting causes the circuit to be taken off the signal path.

## TUBECORE 500 main functions and technical specification:

- ✓ 500-series double module, mono unit,
- ✓ Fully symmetric audio path,
- ✓ tubes powered by 250V DC,
- ✓ Carnhill input transformer,
- ✓ Sowter output transformer,
- ✓ Hard wired bypass,
- ✓ Stereo linkable
- ✓ Large VU meter with LED back light
- ✓ 3 year warranty

Operating Level	+4dBu
Maximum Input	+22dBu
Maximum Output	+22 dBu
Input impedance	600 Ohm
Output Impedance	600 Ohm
Tubes used	ECC82, 6AK5, 6Z1P-EW
Max Gain Reduction	30 dB
Maximum Gain	40 dB
Attack Time	10 – 300 ms
Release Time	0.1 – 4 s
Frequency response	8Hz to 20kHz; +/- 0.1dB
THD+N @0dBu	0.002%
Noise level dBA	-110dB
Power consumption	12 Watts
Shipping weight	3kg
Dimensions	H 13,3cm x W 7,6 cm x D 15,8cm

### Troubleshooting

#### **My unit doesn't light up (the VU meter is dark):**

- Please check if the rack power supply is on (check the LEDs at the front plate of the rack)
- Check if the unit has been properly installed.

#### **The signal plays thru but there is no change in signal when i turn the knobs:**

- Please check the In/Bypass switch position – it should be set to „In”.

#### **With no signal applied, the VU meter doesn't show 0dB:**

- Please use the small screwdriver to set the zero calibration trim under the hole on the side of the unit (check chapter Calibration Procedure)

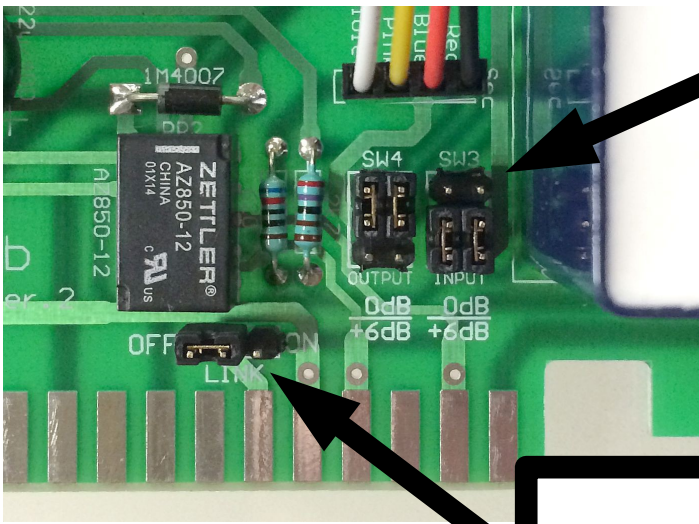
#### **No signal plays thru the unit, regardless the settings at the front panel:**

- Please check the cables connecting the rack.
- Make sure your input and output cables are plugged into the sockets on the right hand side (looking from the back of the unit)

## Jumpers settings

TUBECORE 500 has an option of linking two mono modules into the stereo pair. The module with deeper compression set (or slower attack/release settings) will become the master module, that controls the other TC500 unit. If you wish to use the link, please short the two pinheads named “Link” with provided jumper on both mono units. You will also need to set your rack to work in stereo mode (see next chapter).

You also have an option of choosing input and output levels of your Tubecore 500 unit with extra jumpers on the back of the PCB. Adjusting these levels might be handy if you would like to use extra deep compression.

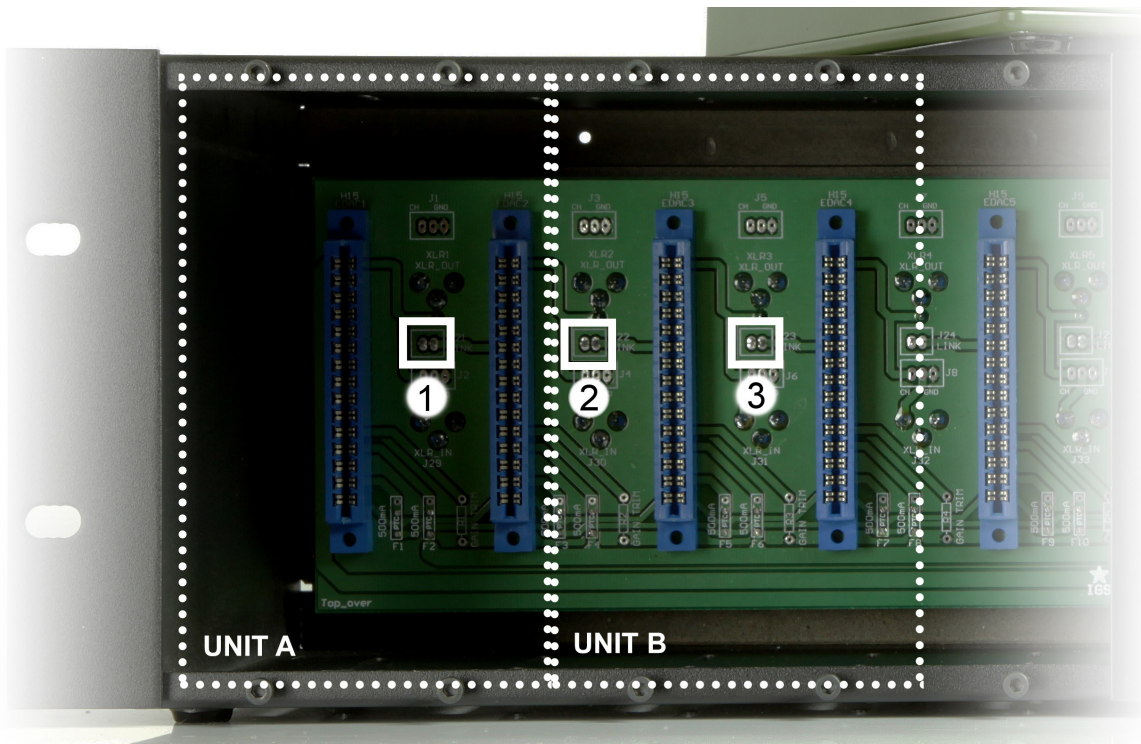


Unit I/O level selectors  
(shown in default positions):  
INPUT:  
0dB (upper position)  
+6dB (lower position)  
OUTPUT:  
0dB (upper position)  
+6dB (lower position)  
NOTE:  
Always move both jumpers at once.

Unit link option:  
ON/OFF

## Stereo linking

As the TUBECORE 500 is the mono unit, that takes up two slots of your 500-series rack (looking from the front of the unit: left slot is dedicated for I/O connectors and right one for the DC-DC converter) it is essential, while linking two TUBECORE 500 units, to short three “Link” jumpers in a row (marked 1, 2 and 3). The picture below explains that clearly.



## **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.**

