

PHOTON 500

USER'S MANUAL

IGS Audio Igor Sobczyk
3 Maja 76d, 41-400 Mysłowice, Poland
e-mail: igs@o2.pl ph: +48 601 597 592

www.igsaudio.com

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

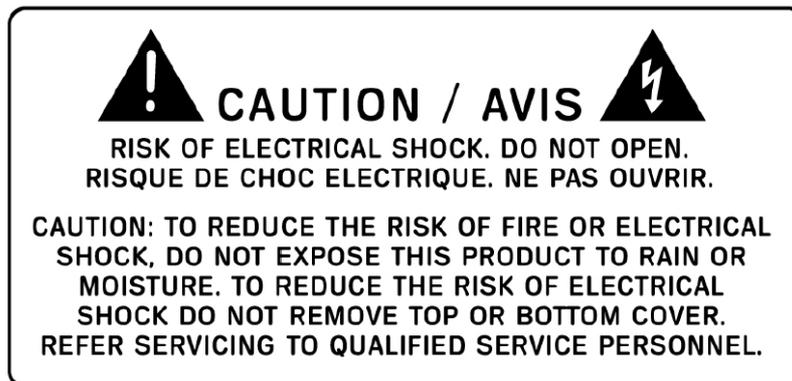
DO NOT remove the covers or try to repair the module on your own. Refer servicing to qualified personnel only.

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.



Copyright 2014. All rights reserved.

The information in this document is subject to change without notice.

IGS Audio makes no warranty of any kind with respect to the material in this document and shall not be liable for errors contained herein or for incidental or consequential damages related to the use of the material.

Manual revision: 1.0 (may 2014)



Thank you for buying this IGS Audio product.

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

Unpacking

Your PHOTON 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 PHOTON 500 packing should contain an PHOTON 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 PHOTON 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 PHOTON 500 is rated at 120 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 PHOTON 500 – Optical Compressor

The PHOTON 500 is an optical compressor, based on technology from the 60's, first used in the UREI LA-2A limiter and later in the LA4. As an homage to these legendary products, we packed this technology in a 500-series module.

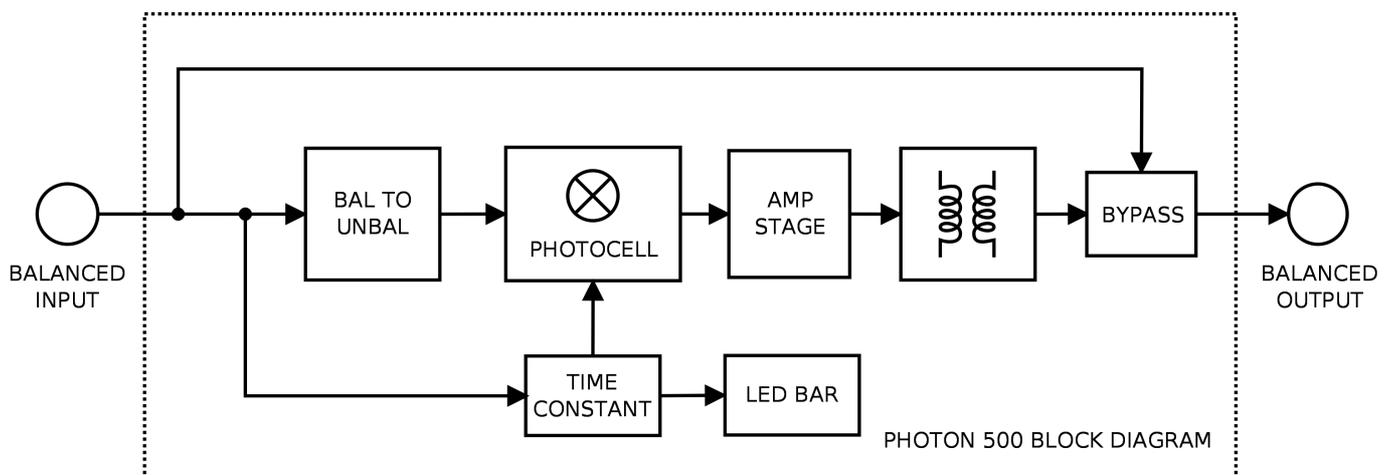
The PHOTON 500 uses an opto-coupler, which introduces negative feedback in the audio path, taking care of gain reduction, being the basics of all compression.

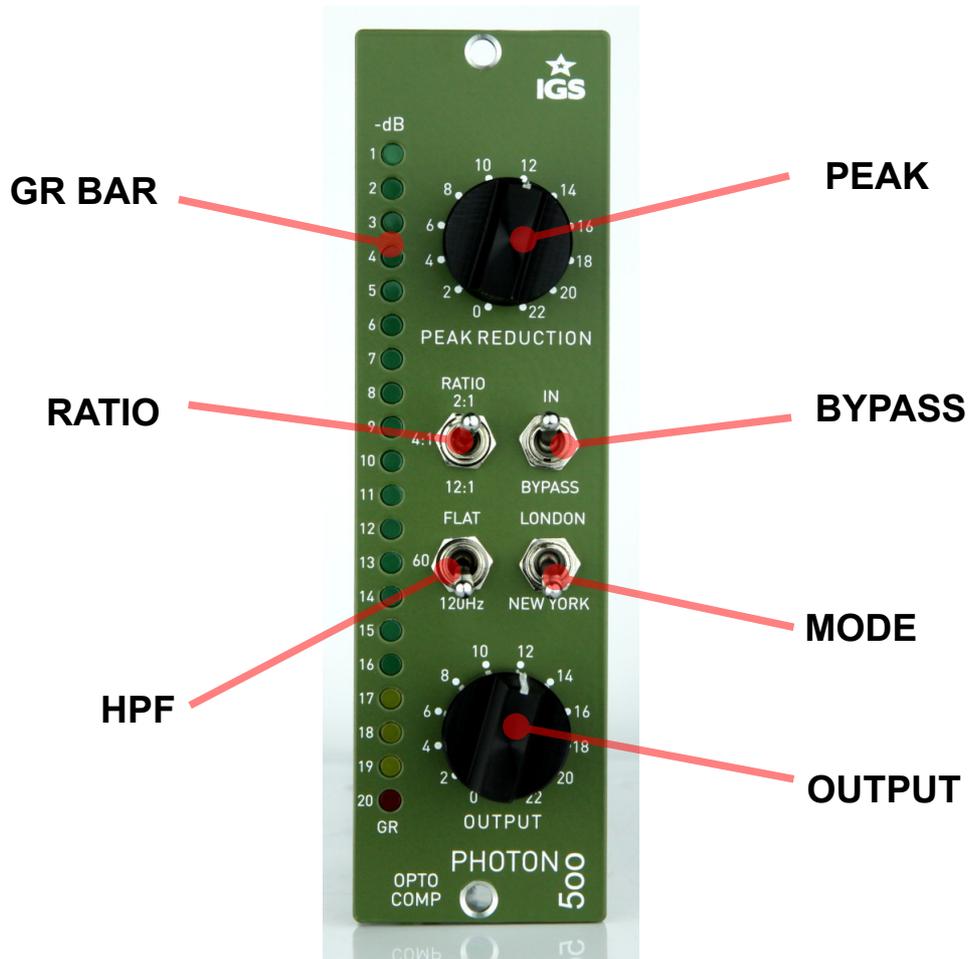
The PHOTON 500 has an electronically balanced input with 2520 compatible op-amp in the gain stage. The output is balanced by a Carnhill transformer.

Typical usage:

- Good for compressing instruments (guitar, bass, mono synth)
- Great vocal compressor
- Work well with single drum tracks and samples
- Great all-around compressor

Block diagram





GR BAR Very fast LED indicator showing the compression level in the range from 0 to 20dB.

PEAK Controls the gain of the side-chain circuit

OUTPUT 12-pole stepped makeup gain

RATIO Allows to adjust the compressor ratio. 2:1, 4:1 or 12:1

HPF Sidechain Hi-Pass filter: Flat, 60, 120Hz

MODE Advanced compression curve modeling, like SLAM.

BYPASS Hard wired bypass

PHOTON 500 main functions and technical specification:

- ✓ 500-series mono module
- ✓ All stepped manipulators
- ✓ Precise LED bar scale
- ✓ Carnhill output transformer
- ✓ 3 year warranty

Operating Level	+4dBu
Maximum Input	+20 dBu
Maximum Output	+22 dBu
Max Gain Reduction	20 dB
Maximum Gain	30 dB
HPF:	OFF, 60, 120 Hz
Input impedance	10 kOhm
Output Impedance	600 Ohm
Frequency response	8Hz to 20kHz; +/- 0.1dB
Noise level dBA	-99dB
THD+N @0dBu	0.5%
Power consumption	2.5 Watts
Shipping weight	0.7kg
Dimensions	H 13,3cm x W 3,8 cm x D 15,8cm

Troubleshooting

My unit doesn't light up (LED bar is dark):

- Make sure that the signal source is properly connected to the module
- Adjust the input level (using the Peak Reduction knob); insufficient input level might cause that the signal level is below the compressor threshold level
- Make sure that the IN/BYPASS switch is in IN position

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

- Please check the IN/BYPASS – it should be set to “In”.

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

- Please check the cables connecting the rack and or the Power Supply

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. All units shall always be packed in a box with foam support. 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.

