

Chameleon Labs

Model 7602 MKII

Microphone Preamplifier and Equalizer

Owner's Manual

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Your Model 7602 MKII microphone preamplifier has a transformer balanced input with a range between 20dB and 80dB of gain. The separate line input is transformer balanced and accepts input levels from -20 to +10dB. The equalizer section is a selectable 3 band design with a flexible filter section.

The Model 7602 MKII has been carefully constructed and individually tested for quality. It utilizes pure class 'A' circuitry. This unit is made with 100% discrete components, hand wound transformers and was fabricated to precisely match vintage counterparts manufactured in the early to mid 70's.

The Chameleon Labs Model 7602 MKII is based on high audio performance design techniques. By employing classic circuit design, polystyrene capacitors, a gold contact gain selector and custom wound transformers Chameleon Labs ensures that the Model 7602 MKII will exhibit classic audio sound.

Your Model 7602 MKII represents a dramatic breakthrough in delivering vintage audio performance at an affordable price.

Features of the Model 7602 MKII:

- Fully balanced transformer mic input and output;
- Balanced XLR outputs;
- Hi-Z direct inputs for instruments on the front panel;
- 48VDC phantom power selector on the front panel;
- 20 position gold contact rotary gain switch for both Mic and Line sections;
- Output level control functions as a fader when going straight to tape;
- Oversize power supply provides many times the current needed for optimum sound quality and will power two units;
- One-year warranty

Front Panel Controls: (Left to Right)

Switch general rule: When the switch is moved toward the function label, the feature is selected.

Power-

This switch applies power to the unit. (When the optional CPS-1 is used this switch is inoperative and the power is controlled by the switch on the CPS-1)

300/1.2K Ohm-

This switch selects the microphone input impedance to either 300 or 1,200 Ohms.

48V Switch-

This switch supplies 48VDC (Phantom Power) to the Microphone Input XLR jack.

DI Switch-

This switch routes the Direct Input jack into the unit.

Microphone / Line sensitivity-

This pot controls input level for the microphone and line inputs. The microphone and line inputs have their own input connectors on the rear panel and a separate input transformer. Each rear input has its own section of the control on the input gain selector switch. The microphone section provides 20 to 80dB of boost in

5dB steps, and the line section provides +10 to -20dB of adjustment.

EQ Switch-

This switch turns the equalizer section on.

Ø Switch-

This switch reverses the phase of the unit 180°.

Four position LED array-

The first LED indicates that the unit has power turned on.

The second LED indicates the presence of signal.

The third LED indicates the presence of a +4 dB signal.

The fourth LED indicates the presence of a peak amplitude signal.

Filter-

This is a high pass filter with 3dB loss at 300Hz, 160Hz, 80Hz, and 50Hz with an 18dB cut per octave slope.

Low Equalization -

This section has a shelving slope with four frequency selections: 220Hz, 110Hz, 60Hz, and 35Hz. This equalizer affects the selected frequency and all others below it.

Mid Equalization -

This section has a peaking characteristic with six frequency selections: 360Hz, 700Hz, 1.6k, 3.2k, 4.8k, and 7.2k. The gain control provides 20dB of boost or cut.

High Equalization-

This section has a shelving characteristic with five frequency selections: 16k, 12k, 7k, 4.9k and 3.4k. This section adjusts the selected frequency and all others above it. The gain control provides 20dB of boost or cut.

Output-

Acting as a console fader, this control is placed after the gain stage and before the output stage. This allows for trimming of the input signal between the 5dB steps of the input switch, as well as allowing the input to be intentionally overdriven. The normal position for this control is wide open.

Connecting the Preamplifier / Equalizer

Audio Connection

Microphone input connections are made with the female XLR connector on the rear of the unit. This connector is wired with pin 2 HOT, pin 3 common and pin 1 is ground (shield). The 48VDC power is supplied on pins 2 and 3.

The Instrument (DI) connection is made using the balanced ¼” TRS jack on the front panel. The connector is wired with the TIP being positive, The RING being negative and the SLEEVE being ground (shield).

Line input connections are made with the male XLR connector on the rear of the unit. This connector is wired with pin 2 HOT, pin 3 common and pin 1 is ground (shield).

Output connection is made using the male XLR connector on the rear of the unit. This connector is wired with pin 2 HOT, pin 3 common and pin 1 is ground (shield).

Power Supply Connection

The unit is supplied with a country - correct AC adapter. All DC conversion, regulation and filtering is done within the 7602 MKII. The output of the AC adapter is 24VAC and connects to the rear of the unit. Optionally, you may use the CPS-1 Power Supply to power this unit. The unit will auto select which power supply is connected so there is no user required action.

The CPS-1 uses a 4 pin, screw on type connector to provide power to run the Model 7602 MKII unit. A Model CPS-1 power supply is **optional** to power this unit. The CPS-1 power supply contains a toroidal transformer to reduce 60Hz hum. To insure quiet operation, mount the power supply at least one rack space away from the Model 7602 MKII main unit, and locate the AC adapter as far away as is practical. The Model 7602 MKII does not come with an interconnecting DC cable that will connect it to one of the two power outputs on the CPS-1. If you order a CPS-1 for this unit, please be sure to ask for the DC cable to be included. A CPS-1 will power two Model 7602 MKII units. Be careful when connecting the power cable to insure correct mating of the two connectors. They are keyed and should go in with very little effort and then screw down for added safety. If more than gentle pressure is required, it is

possible that the plug is misaligned and should be rotated for a correct fit. **DO NOT FORCE** the power connector. The power pin is wired as follows:

Pin 4 is Audio Ground (shield)

Pin 3 is +48 Volts D.C.

Pin 2 is +24 Volts D.C.

Pin 1 is -24 Volts D.C.

First time users
Set up of the Model 7602 MKII

1- Select 40 dB on the *Microphone / Line sensitivity* control. Turn the Output control fully counter clockwise. Make certain that the *DI*, *48V*, *EQ* and *Phase* switches are all off.

2- Connect a microphone to the Female XLR plug on the rear panel. If the microphone requires Phantom Power, switch the *48V* on. The normal position for the *300/1.2K Ohm* switch is 1.2K. This matches most professional microphones used today; if you have microphones that require a lower impedance you may toggle the switch to 300. You can toggle between the selections without damage to the microphones to determine which impedance performs better for your application.

3- Connect the male, Line Output XLR connector, located on the rear panel to the input XLR on your recorder or D.A.W.

(If you are sending to a device that does not have a gain control, use the *Output* control to adjust your signal so that your loudest signals just fail to reach the maximum input levels on your recording device.)

4- Turn the ***Output*** control clockwise until you can see level on the input of your recorder. Increase until the desired level is achieved. (*Vintage Hint*: Adjusting the Microphone / Line sensitivity control along with the Output control can provide a variety a different sounds by overdriving the amplifier circuits while lowering the final output level in order to not overdrive the recorder.)

5- If you wish to connect the equalizer section to the line output of your board or D.A.W., simply connect to the female, Line Input XLR on the rear panel.

6- When an electronic instrument such as an electric guitar is used, it may be plugged directly into the ¼” DI plug located on the front panel. Toggle the ***DI*** switch to select this input device.

7- If phase reversal is needed, toggle the ***phase*** switch (a zero symbol with a diagonal line through it).

8- To insert the equalization section into the circuit, toggle the ***EQ*** switch. Each section can be set to OFF with the ***frequency selector*** knob. As you add or subtract gain within the equalizer, be sure to adjust your overall gain with the ***output*** control. When the ***output*** control can no longer make the adjustments that you need, you may switch to a higher or lower gain setting on the ***Microphone / Line sensitivity*** control.

9- When the optional CPS-1 is used the ***POWER*** switch is inoperative and the power is controlled by the switch on the CPS-1.

Warranty and Liability

Your Chameleon Labs product is warranted to the original owner for a period of one year. Chameleon Labs guarantees this product to be free from electrical and mechanical defects and will repair or replace defective components, or replace the microphone at Chameleon Lab's option. Should service be required for your Chameleon Labs product, please contact the manufacturer. Service is provided for products beyond the warranty period. Seller warrants that the goods are described in this agreement, but no other express warranty is made in respect to the goods. The entire risk as to the quality and performance of the good is with the buyer. Seller disclaims all warranties either express or implied, including any implied warranty of merchantability or fitness for a particular purpose, and seller neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of said goods.

MODEL NUMBER _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

PURCHASED FROM _____

Specifications

Input impedance:

Microphone – 300 or 1,200 ohms

Line – 10,000 ohms

D.I. – 100,000 ohms

Sensitivity:

Microphone – -80dBm to -20 dBm in 5dB steps for 0 dBm output.

Line – -20 dBm to +10 dBm in 5 dB steps for 0 dBm output.

Noise:

Measured at 80 dB of gain with 200 ohm input termination, **without** 20Hz to 20kHz to assist in filtering out noise.

-49dBu with final output stage at 50% EIN -129 dBu;

-46dBu with final output stage at unity EIN -126 dBu;

-56dBu without final output stage EIN -136 dBu.

Controls either “flat” or switched out.

Output:

Balanced and floating to feed a 600 ohm load.

Maximum output +26 dBm into 600 ohms, or +20dBm into 150 ohms.

Output impedance:

600 ohms, balanced (source impedance 75 ohms).

Frequency Response:

11 Hz – 77.65 kHz – 3 dB.

Level variation is less than 0.2%.

Distortion:

1k Hz = 0.0245%

All tests results were measured using a Stanford Research Model SR780 signal analyzer and a Fluke 8060a.

Input signal was 1v rms input signal and 20dBu output signal.