

PH-4B

FOUR CHANNEL AC POWERED 48V PHANTOM POWER SUPPLY



The Crown PH-4B is a 48-volt phantom power supply for condenser and electret-condenser microphones. It has four channels for powering up to four microphones.

As shown in Fig. 1, it supplies 48V DC on mic-connector pins 2 and 3 with respect to pin 1 (complies with DIN standard 45 596). The phantom supply is highly filtered to minimize hum.

The PH-4B itself is powered by 120V AC. It is also available powered by 220V and 240V as the PH-4BE4.

Operation

1. Plug the AC cord into a wall outlet. The LED pilot light will show that the line voltage is applied.
2. Please refer to Fig. 2. You will connect the PH-4B between your mic and your system mic input.
3. Plug the cable from your microphone into one of the mic inputs on the PH-4B.
4. Obtain another mic cable and plug it into the adjacent output on the PH-4B.
5. Plug the other end of that cable into the mic input on your mixer or recorder.

The total current drain of all channels of the PH-4B should not exceed 100 mA. To determine how much current your microphones draw, check their data sheets and look for the current-drain specification.

CAUTION: Inside the mic-cable male XLR connector (the one that plugs into a PH-4B input), do NOT tie pin 1 to the shell ground lug. If pin 1 is tied to the shell and you connect an output of the PH-4B into an unbalanced mic input, this connection might cause hum.

Specifications

Type: Four-channel, AC powered.

Supply voltage: +48V DC on pins 2 and 3 with respect to pin 1 of microphone input connector.

Total output current: 100 mA continuous.

Line voltage (PH-4B): 120 VAC.

Line voltage (PH-4BE4): 220 - 240 VAC.

Connectors: 3-pin pro audio (XLR-type) input and output connectors.

Construction: Steel for strength and magnetic shielding.

Dimensions: 7 1/16" L x 12" W x 1 3/4" H
(17.93cm x 30.48cm x 4.45cm).

Finish: Black.

Weight: 4 lb. 12 oz. (2.15 kg).

Accessory: RMPB kit.

Fig. 1

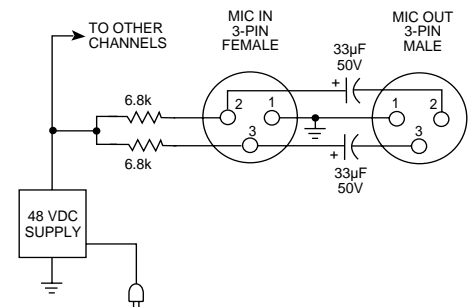
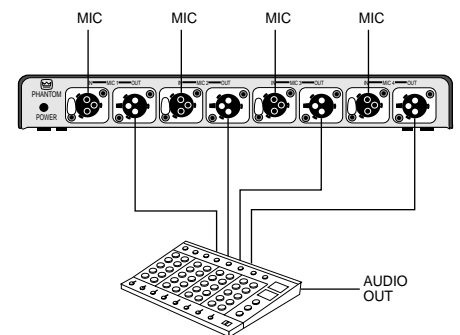


Fig. 2



PH-4B

Hum might also occur if the PH-4B is rack-mounted and connected to an unbalanced mic input. If this happens, electrically isolate the PH-4B from the rack (say, by using nylon bolts and washers).

How to Prevent Switching Clicks

In rare instances, you may need to use the PH-4B with a mic-level switcher. This may result in switching clicks as each PH-4B output connector is fed by two large coupling capacitors. These capacitors block the DC voltage from the phantom power.

Since these capacitors are charged by phantom voltage, some DC appears at the PH-4B outputs. This DC goes away when the PH-4B is plugged into a mixer microphone input because the mixer input impedance drains off the charge.

However, if you feed the PH-4B outputs to a mic-level switcher, you will hear clicks or

pops when the outputs are switched, due to the capacitor charge.

To prevent these clicks: **In the switcher**, solder a 47K, 1/8 watt resistor between input pins 1 and 2, and another 47K resistor between input pins 1 and 3. Do this for each PH-4B output connector. Those bleeder resistors will drain off the capacitor charge.

Architects' and Engineers' Specifications

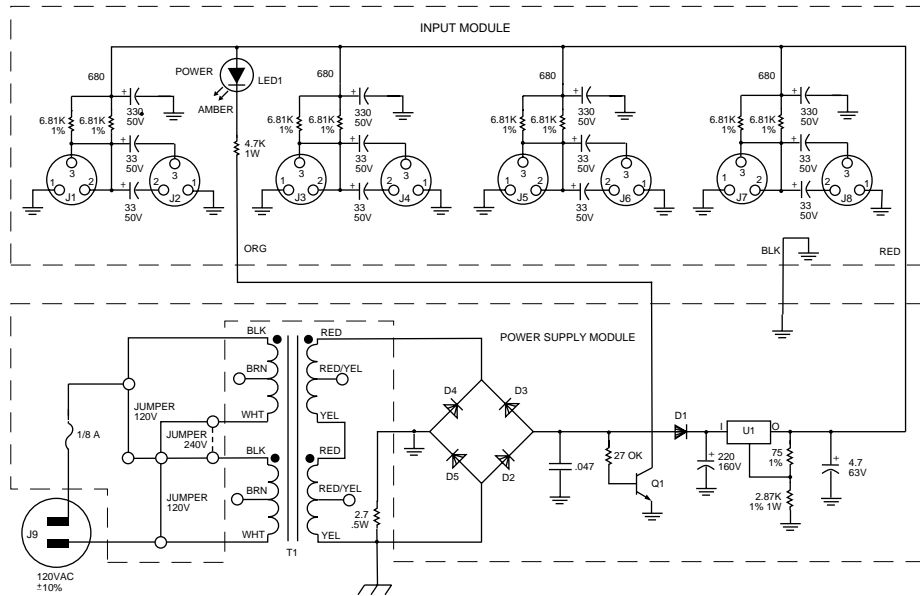
The unit shall be the Crown PH-4B phantom power supply or equivalent. It shall supply 48V DC on pins 2 and 3 with respect to pin 1 of the mic input connector, according to DIN standard 45 596. It shall provide four channels for powering up to four condenser or electret condenser microphones. The PH-4B shall be powered by 120V AC. The PH-4BE4 shall be powered by 220V or 240V AC. The Crown PH-4B is specified.

Warranty

The PH-4B has a three-year warranty.

Service

If the PH-4B does not function properly, verify that you measure approximately 48V DC on pins 2 and 3 with respect to pin 1 in each mic input connector (the female connector in each channel). Also repair or replace any defective cables. If the PH-4B requires service, return it in the original packaging to: **Crown Service Department, Plant 2 SW, 1718 West Mishawaka Road, Elkhart, IN 46517.** For further assistance or technical support call **(800) 342-6939.**



PH-4B Schematic



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