

**MYJG-50W**  
**Laser Power Supply**  
**Instruction Manual**



With its high efficiency, frequency, and speed, this power supply is an essential part of your laser engraver, converting standard power into the high-voltage power needed for your laser tube. The lightweight, compact MYJG-50W laser power supply is easy to operate and highly compatible with a variety of 50W CO<sub>2</sub> lasers. It connects directly to your system and works without similar devices' usual heat-generating heavy ballast resistance. Using this power supply ensures quick operation and maximizes the performance of your laser device, extending its service life.

## Specifications

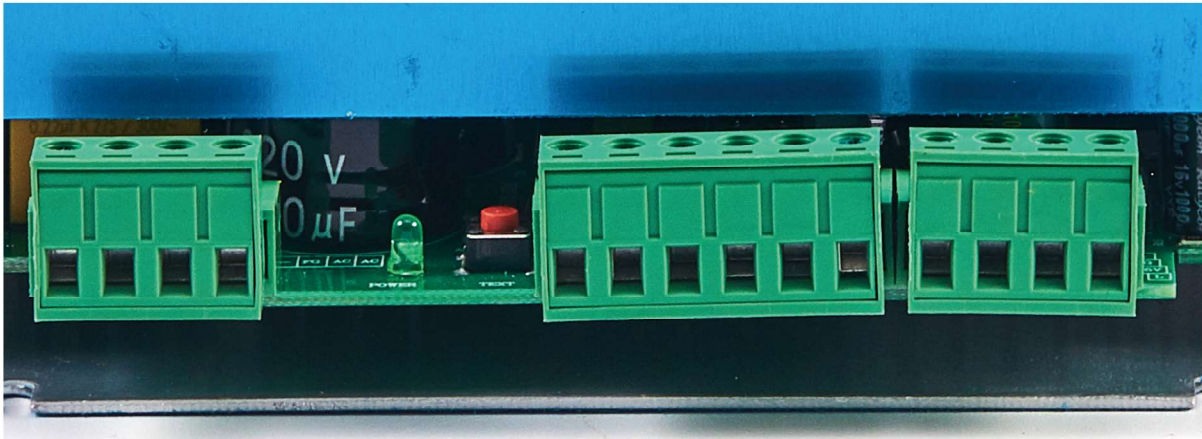
Input Power: 110V/220V AC  
Output Power: 20 kW DC  
Maximum Current: 20 mA  
Response Speed: ≤1 millisecond

Dimensions: 6.5" × 5.6" × 3.1" (165×142×78 mm)  
Net Weight: 2.4 lb. (1.1 kg)

## Warnings

- The input voltage for this device is controlled by a switch on the right side. Make sure that the selected voltage matches your country's power supply prior to use.
- **Only** install/remove this device when all power to your engraver is turned off & cut.
- Similarly, make sure that your engraver is properly grounded prior to use. Use only with engraving machines that employ a three-prong plug with a ground terminal. Use with an EMI filter is recommended.
- Be careful that the positive and negative output terminals are properly connected to the proper poles of your laser device prior to use.
- Be extremely careful around the high-voltage anode wire and its connections. The bare-wire connection with the laser tube should be sealed to prevent sparking.
- Ensure that your CO<sub>2</sub> laser's water cooling system is operating properly during use. In systems equipped with a protective sensor in their water system, this power supply will automatically cut off power to the laser if a malfunction is detected by the circuit. In systems without such a circuit, however, the water cooling system is no less important and its proper operation should be manually ensured prior to each use.
- There is a bleeder resistor inside your power supply. It generally discharges harmlessly into the ground connection, but do not open this device without specialized training.
- Just like your CO<sub>2</sub> laser, this power supply should be kept in an environmentally-controlled room to ensure proper operation. The acceptable temperature range for this device is 14–104°F (–10 to 40°C). The acceptable humidity is ≤85%.

## Terminals



L- FG AC<sub>1</sub> AC<sub>2</sub>

G<sub>1</sub> P L<sub>1</sub> G<sub>2</sub> IN 5V<sub>1</sub>

24V G<sub>3</sub> 5V<sub>2</sub> L<sub>2</sub>

The first bank is a screw terminal block that connects your laser power supply to the laser tube's cathode and the power input from your home or business's main power. If you are assembling your laser, you will need to install the wiring correctly yourself. Place the wires into the proper slot & tighten them into place with the block's built-in screws. If this is a compatible replacement part, you can simply plug in your current block.

L-: Laser Return: Connection to the Laser Tube Cathode (and usually Ammeter)

FG: Ground Wire for the Mains & Case

AC<sub>1</sub>: Neutral Wire to 110/220V Power

AC<sub>2</sub>: Live Input from 110/220V Power

The second & third bank connect your laser power supply to the engraver's control system. Just like the first bank, if you have one already set up, you can simply plug in your old screw terminal block directly. Otherwise, take care to install the wiring correctly. Use of separately colored wiring is recommended.

G<sub>1</sub>: Ground Wire for the Laser Trigger & Water System

P: Line to the Laser Trigger, Water, & Other Systems (such as a door switch)

L<sub>1</sub>: Active Low Pin<sub>1</sub>: Line to the Engraver's Test Switch for Alignment and Checking

G<sub>2</sub>: Ground Wire for the Engraver Laser Trigger & Test Switch Circuit

IN: Input Power for PWM Level Shifters or Potentiometers

5V<sub>1</sub>: 5V Connection for PWM Level Shifters or Potentiometers

24V: 24V Connection to the Motherboard

G<sub>3</sub>: Ground Wire for the Motherboard

5V<sub>2</sub>: 5V Connection for Digital Signals

L<sub>2</sub>: Active Low Pin<sub>2</sub>: L<sub>0</sub> Control Line to Motherboard

**In the event** that your laser is powered but fails to fire, the Test Button (possibly mislabeled TEXT) can be used to see if the problem lies with the display panel, controller, or their wiring (if it successfully fires a test beam) or if the problem lies with the power supply or its connection to the laser (if the laser fails to fire). In the event of a problem with the power supply or connection, contact customer service.

## CONTACT US

Thank you for choosing our products! If you have any questions or comments, contact us at [help@cs-supportpro.com](mailto:help@cs-supportpro.com) and we'll resolve your issue ASAP!

For a .pdf copy of the latest version of these instructions, use the appropriate app on your smartphone to scan the QR code to the right.

