

Troubleshooting Information

Wybron Goboram II Gobo Changer PC Board Level

Wybron does its best to keep circuit board repair costs low. Often, you may be better off sending the board in for repair if you have time. If it is stone dead, charred, had 110V run through it, etc., we will not charge for repairs but advise you to buy a new one. Typical repair time on a board is 30 minutes or less. If it looks like we can repair it reliably, we will spend up to two hours on a board, but that's rare and most often happens when 24 volts has gotten into the data lines.

Although there are significant, complicated electronics in a Goboram II board, possible failure modes are few. To fix most potential problems, you will need only the information on this sheet.

Please keep in mind, however, that boards have various modes, versions and software. Make sure we know exactly what you need when you order.

CAUTIONS:

- 1. Keep fingers out of the aperture loading area when working on Goboram II. Gobos can be sharp and may move unexpectedly.**

FIRST STEPS:

- 1. Check the inductors for signs of overheating.**

The board may continue to work with a damaged inductor, but it should still be replaced. (Inductor: RL1950)

- 2. Conduct a visual inspection of the board.**

Look at the board, looking for chips in backwards, signs of charring, bare copper traces due to high currents, ICs partially out of sockets, in backwards, or with pins over the side of sockets or bent underneath.

Check for opened traces, lifted pads or poorly made solder joints.

Check for corrosion due to exposure to moisture. A badly corroded board should be replaced if it is used where its proper operation is vital.

3. Check the 5 volt supplies.

The voltage Regulator: LM2575T-5.0. (That is a dash and not a minus sign on the regulator labels. There are no negative voltages on the board.)

The regulators may fail when the COM chips (LTC485) or driver chips are damaged. If they are standing up, check for broken legs.

TROUBLESHOOTING

1. Symptom: The Goboram II shows power but does not respond to commands.

- a. Problem: The communication IC (LTC485) is bad.

Remedy: Replace it. Ohm out the traces between the chip and the connector to make sure they are okay. These traces are very small and open easily when power is accidentally connected to the signal lines.

Other chips seldom fail unless the board has had 24 volts or 110 volts run into the data input.

2. Symptom: The Goboram II is behaving erratically.

- a. Problem: You likely have either a damaged processor or one or more of the data or address lines are open or shorted.

Remedy: Check that IC's are well seated in their sockets. Replace the microprocessor.

NONE OF THIS SEEMS TO BE WORKING.

When things aren't going right and nothing makes sense, check your power supply voltages, returns and grounds. It's simple to do and often solves baffling problems. Check power for each chip at the chip, not from the bottom of the board. OHM them out first to either power or ground, then power the board up and check for the proper voltage.

GOBORAM II FAQ

1. How many Goboram IIs can I run off a power supply?

As each Goboram II uses three control channels, the limits are:

PS #19000 - 16 - uses 48 DMX addresses*

PS #19012 - 8 - uses 24 DMX addresses*

PS #19060 - 4 - uses 12 DMX addresses*

*Requires PS ver 2.1 or greater software

2. What is the cable “head-feet” limit for Goboram IIs?

It is 1500 head-feet.

3. Can I mix Goboram IIs with Coloram IIs?

Yes.

4. What light fixtures can I use with Goboram IIs?

ETC Source 4 ellipsoidals and Altman Shakespeare ellipsoidals. Note that the barrels must be modified – Wybron offers modified barrels at no charge when trading in your non-modified barrels.

5. What are the 3 DMX addresses used for in a Goboram II?

<u>Address</u>	<u>Function</u>
1	Select Gobo
2	Spin or Coarse Index
3	Select Spin Mode or Fine Index

See the Goboram II User Manual for details.

6. What fuse is used in Goboram II?

The unit requires a 2 amp Slo-Blo.