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Section 1: About This Manual

The Stereo 400 Relay Kit is a PC Board and mechanical assembly designed to replace the speaker relay on a Dynaco Stereo 400 Power Amplifier. This manual shows where to connect the wires from your Stereo 400 on the Stereo 400 Relay kit. Unlike many other Updatemydynaco manuals, it doesn't give step-by-step instructions.

The Stereo 400 is a large, heavy amplifier, with relatively high voltages inside, and a rather complex and cumbersome mechanical assembly. Changing the relay is only recommended for those who are careful, methodical, and brave (but not foolhardy). You have been warned!

Who Should Attempt these Projects?

As we said previously, this kit is not for the faint of heart. Installing the kit is fairly simple. The thing that makes it difficult is the amount of disassembly required to access and remove the old relay. Reassembling the amp must be done carefully to assure that no wires are pinched.

Important Safety Notes

By purchasing, using, or assembling this kit, you have agreed to hold AkitikA, LLC harmless for any injuries you may receive in its assembly and/or use. To prevent injuries:

- Wear safety glasses when soldering to prevent eye injuries.
- Always unplug the power before working on the amplifier.
- Large capacitors hold lots of energy for a long time. Before you put your hands into the amplifier:
 - Pull the AC plug!
 - Wait 1 full minute for the capacitors to discharge!
- Remove jewelry and rings from your hands and wrists, or anything that might dangle into the amplifier.
- If working in the amplifier, keep one hand in your pocket, especially if you're near the power supply or power supply wires. This can prevent serious shocks.
- Build with a buddy nearby. If you've ignored all the previous advice, they can dial 911 or get you to the hospital.



Figure 1-Stereo 400 Wiring Diagram Excerpt

Removing the old relay

Make sure the AC plug is out! Don't touch the amp until you've waited 2 full minutes for the capacitors to discharge!

- 1. Remove C1 screw 2.
- 2. Remove C2 screw 3.
- 3. Carefully lift the steel plate to expose the old relay.
- 4. Make masking tape tags numbered 1 thru 6 and place them over the wires that attach to relay terminals 1-6 as shown in Figure 1.

- 5. Cut wires 1-6 close to their attachment terminals on the relay.
- 6. The two relay retaining screws are hidden under the two 0.1 μ F capacitors shown in Figure 1. Carefully lift them up.
- 7. Remove the two nuts and bolts that retained the old relay on the board.

Installing the New Relay Board

1. Transfer the wires from the old relay board to the new relay board. Observe the numbers carefully in Figure 1 and Figure 2. Match the numbers on the masking tape labels to the numbers shown in Figure 2.



Figure 2-Component side of the relay board

- 2. Solder the wires on the solder side (this is most important).
- 3. Soldering the wires in addition on the component side makes for super low resistance connections.
- 4. Take care that no solder blobs bridge to the mounting stand-offs or across the copper foil lands.
- 5. Double check that wires 5 and 6 are in the correct places on the PC board. The red wire should go to the small plus sign. That same copper land attaches to the cathode of the suppressor diode.

Mounting the Relay Board



Figure 3-Mounting Arrangement

The new relay PCB mounts as shown in Figure 3. Note that there are two $6-32 \times 1/2$ " standoffs, each held in place by $6-32 \times 1/4$ " sems screws. Sems screws have built-in lockwashers.

Reassembly

Carefully re-assemble the amplifier. Make sure that you don't break or pinch wires as you complete the re-assembly.

References

Visit the Updatemydynaco website, <u>www.updatemydynaco.com</u>, to download the latest version of this manual.

Better Sound Because You Build It! GT-101 Stereo Power Amplifier Kit



The GT-101 features the parts quality found in high-end equipment, yet costs just \$299+\$26 shipping in kit form You can buy it assembled for \$449+\$26 shipping (lower 48 states).

About the GT-101 Stereo Power Amplifier Kit

Have you ever built a Heathkit, Eico, or Dynaco kit? Did you build your own computer from components? Was it for the fun? Was it for the feeling of accomplishment? A project to share with the kids or grandkids? Was it to get high-end performance at low cost? If you answered "yes" to any of those questions, the GT-101 kit might be just what you want.

Akitika's GT-101 is a complete stereo power amplifier kit that delivers more than 50 Watts per channel of clean, low noise power into 8 Ohm loads. Nearly double that into 4 Ohms! More measurements can be found at www.akitika.com. The kit supplies everything but the solder. Add a few hours of rewarding assembly time and the result is Better Sound, because you build it.

The kit includes a toroidal power transformer, film and COG capacitors, metal film resistors, heavy-duty extruded aluminum heat sinks, isolated input jacks, double-sided PC boards, and a fully regulated power supply, all elegantly fitted into a black custom chassis. It may well be *the sweetest sound you'll ever build*!



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