

# **DORROUGH ELECTRONICS**

## POWER SUPPLY UPDATE SHEET FOR THE DISCRIMINATE AUDIO PROCESSOR

This sheet has been written for those who wish to update their DAP in order to improve the power supply stability.

Briefly the Opamp Z1 compares the inverting input to a reference voltage on the non-inverting input. This reference voltage in all systems prior to serial number 021223 was obtained using R1, R5, CR5, and CR6.

With a three pin voltage regulator this circuit was upgraded to provide a more stable voltage reference source. The new device, a National Semiconductor #LM342-10, can be easily installed and tested.

Before beginning procedure check power supply voltage to establish voltage level at which the DAP has been aligned.

### MECHANICAL INSTALLATION

Remove the old reference components by lifting the power supply and unsoldering components R1, R5, CR5, and CR6.

Drill two small holes approximately 2/16 inches in diameter in line with the old junction of R5 and CR6 (see Fig. 1) approximately 1/8 inch center to center.

Install the device with the chamfer on the face towards C1 (see Fig. 2). This is important as it orients the pins for correct assembly.

Note: The pin below the chamfer is the regulator output. It should go into the hole vacated by R5 at the R5, CR6 junction. If incorrect assembly occurs, the power supply will not be damaged.

### ELECTRICAL HOOK-UP

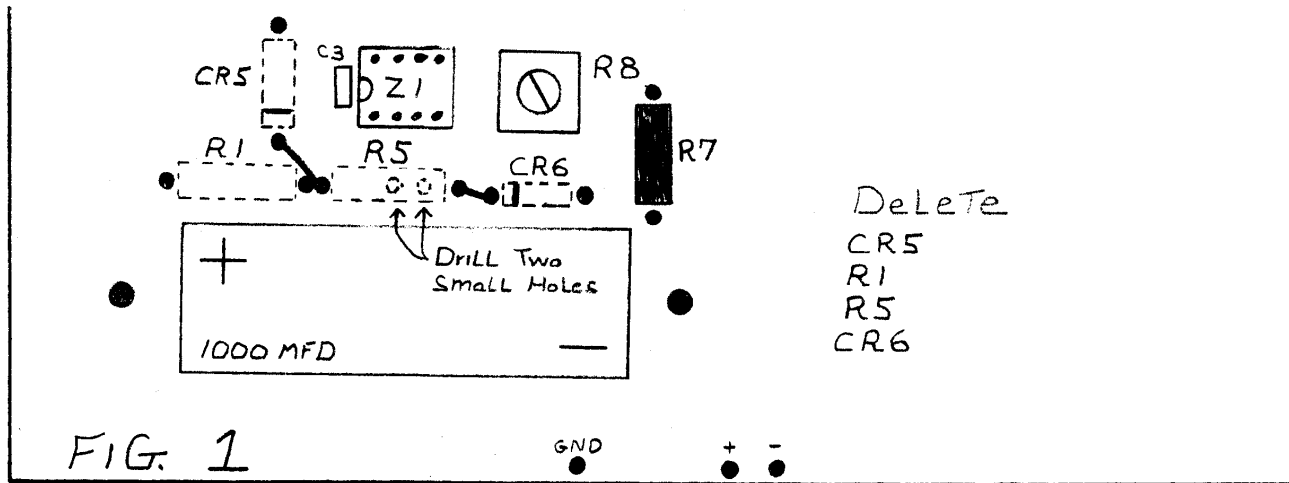
1. Using black 24 AWG insulated buss wire, jumper the center pin to the negative side of C1.

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2. Using red 24 AWG insulated buss wire, jumper the pin closest to the front of the DAP to the plus side of C1.
3. Solder the pin on the chamfered side to the old R5, CR6 pad (leading to Z1 pin 3).

TEST

1. Adjust R8 on the power supply to the established voltage reference that was determined prior to this modification. This eliminates the necessity for complete bias adjustment.
2. Turn both input and output controls full counterclockwise.



Care should be taken while soldering the red and black wires to the regulator chip as extreme heat may cause damage.

