

Mapletree Audio Design SR70A “Special Red”

Driver Module for Dynaco ST-70

Installation instructions

Rev. Jan. 9/13



The “Special Red” SR70A driver module is a drop in replacement for the original driver board of the *Dynaco ST-70* power amplifier. Unlike the original, all wiring on the SR70A is point-to-point with connections to the amplifier made to turret terminals. The schematic diagram of the SR70A module identifies the turret connections to the ST-70 circuitry. The instructions identify which of the original wires and components are to be removed and discarded and the new wiring that is required using the silver-plated Teflon wire supplied. When making a new connection from one of the SR70A turrets to a point in the amplifier, first route the wire as shown in the diagram in order to obtain the correct length. Then strip $\frac{1}{4}$ inch of insulation from each end and melt a small amount of solder on the exposed wire by heating it with your soldering iron and melting the solder on to the wire (pre-tinning). The best connection to a turret is made by inserting the pre-tinned end of the wire into the hole in the top of the turret, leaving a bit of wire exposed, then heating the turret with your soldering iron while adding solder so it runs down the wire inside the turret.

Note: It may be necessary to remove the power take-off sockets on the front apron of the ST-70 to allow room for the SR70A board. If this has not already been done in previous modifications to your amplifier, the following instructions should be followed.

1. Unsolder both ends of all wires connected to the lugs of the two power take-off sockets on the front apron of the ST-70.
2. Remove the sockets.
3. The stainless steel filler plates supplied can be attached to the inside of the chassis using the original socket machine screws or the #6 sheet metal screws supplied.
4. If it is desired to provide external access to the bias test voltage for the EL34s, you can mount suitable test jacks in the filler plates, making sure you maintain clearance for the SR70A board. These jacks should be wired to lug 1 of V3 (L) and V6 (R). The bias test voltage (1.56 V) is then measured from each jack to the chassis (ground).

Refer to Figure 1 showing the original wiring to the printed circuit board, with the power take-off sockets removed.

1. Unsolder all wires and resistors from the input RCA jacks and stereo-mono switch on the front panel. This assumes that the stereo-mono switch will not be used.
2. Unsolder both ends of all wires connected to the eyelets on the original board that are marked with an "X". The two wires connected to the 16 Ohm taps of the output transformer should only be unsoldered from the eyelets on the circuit board.
3. Remove the original board from the chassis.
4. Install the *SR70A* board using the original screws/nuts or the 4-40 screws and hex nuts supplied.
5. Unsolder the 22K resistor between lugs 3 and 4 of the original 4-section filter capacitor and discard.

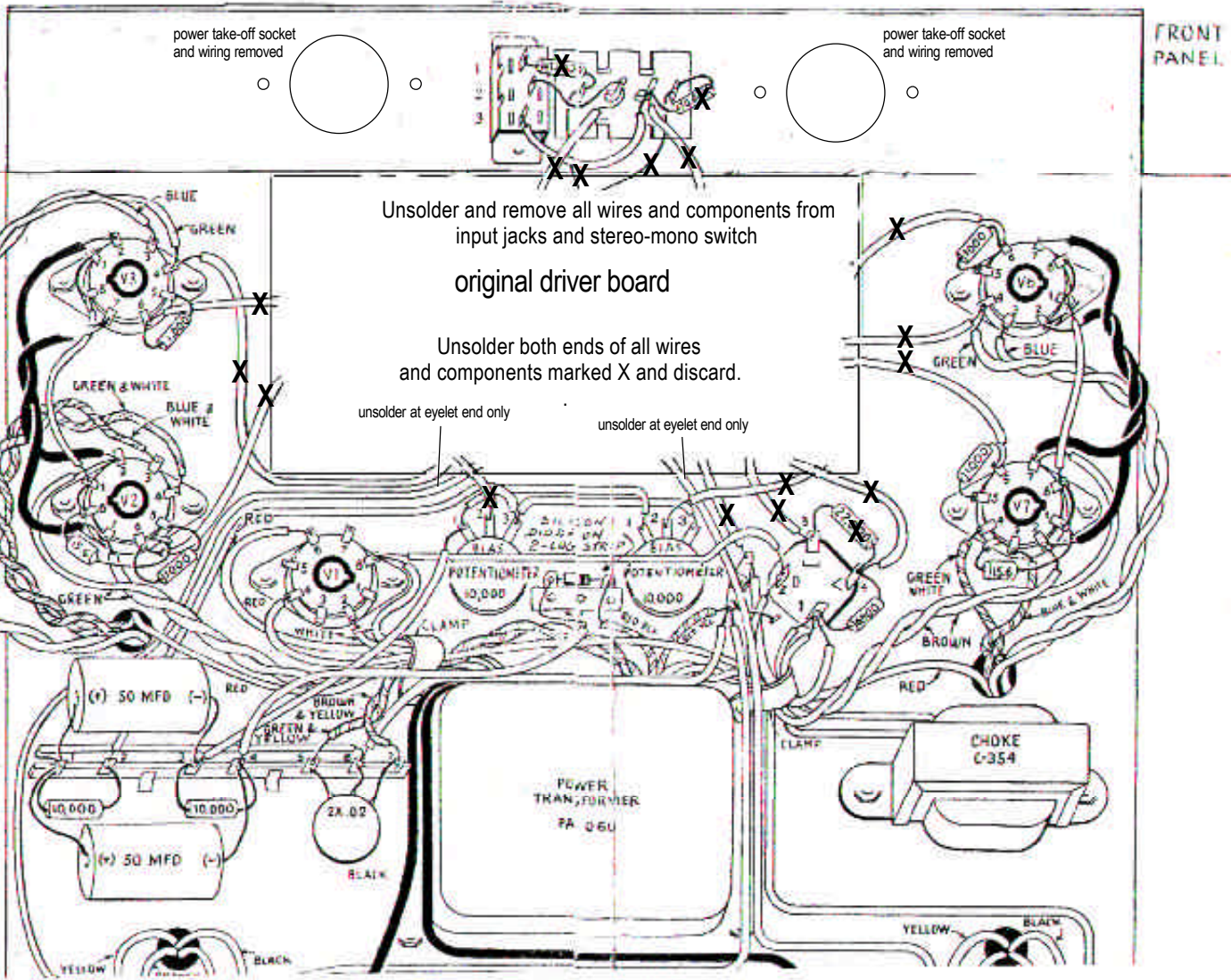
Refer to the wiring diagram for the *SR70A* board connections (Figure 2).

1. Solder the twisted pairs of wires pre-soldered to lugs 7 and 8 of the 6SL7 tubes V4 (left) and V5 (right) on the *SR70A* board to lugs 2 and 7 of V3 (L) and 2 and 7 of V6 (R).
2. Solder the wires coming from the 16 Ohm speaker terminals on the rear panel to the FBL and FBR turrets on the *SR70A* board.
3. Measure, cut, and strip silver-plated Teflon wire lengths and make the following connections:
 - i. RCA left input jack ground lug to RCA right input jack ground lug
 - ii. RCA left input jack ground lug to the *SR 70A* ground (GND) bus
 - iii. RCA left input signal lug to INL turret
 - iv. RCA right input signal lug to INR turret
 - v. Filter capacitor lug 4 to turret B1
 - vi. Filter capacitor lug 3 to turret B2
 - vii. Chassis ground lug (next to filter capacitor) to the *SR70A* ground bus
 - viii. Center lug (2) of the right bias potentiometer to the BiasR turret
 - ix. Center lug (2) of the left bias potentiometer to the BiasL turret
 - x. Lug 6 of V6 (EL34) to turret G6
 - xi. Lug 6 of V7 (EL34) to turret G7
 - xii. Lug 6 of V2 (EL34) to turret G2
 - xiii. Lug 6 of V3 (EL34) to turret G3

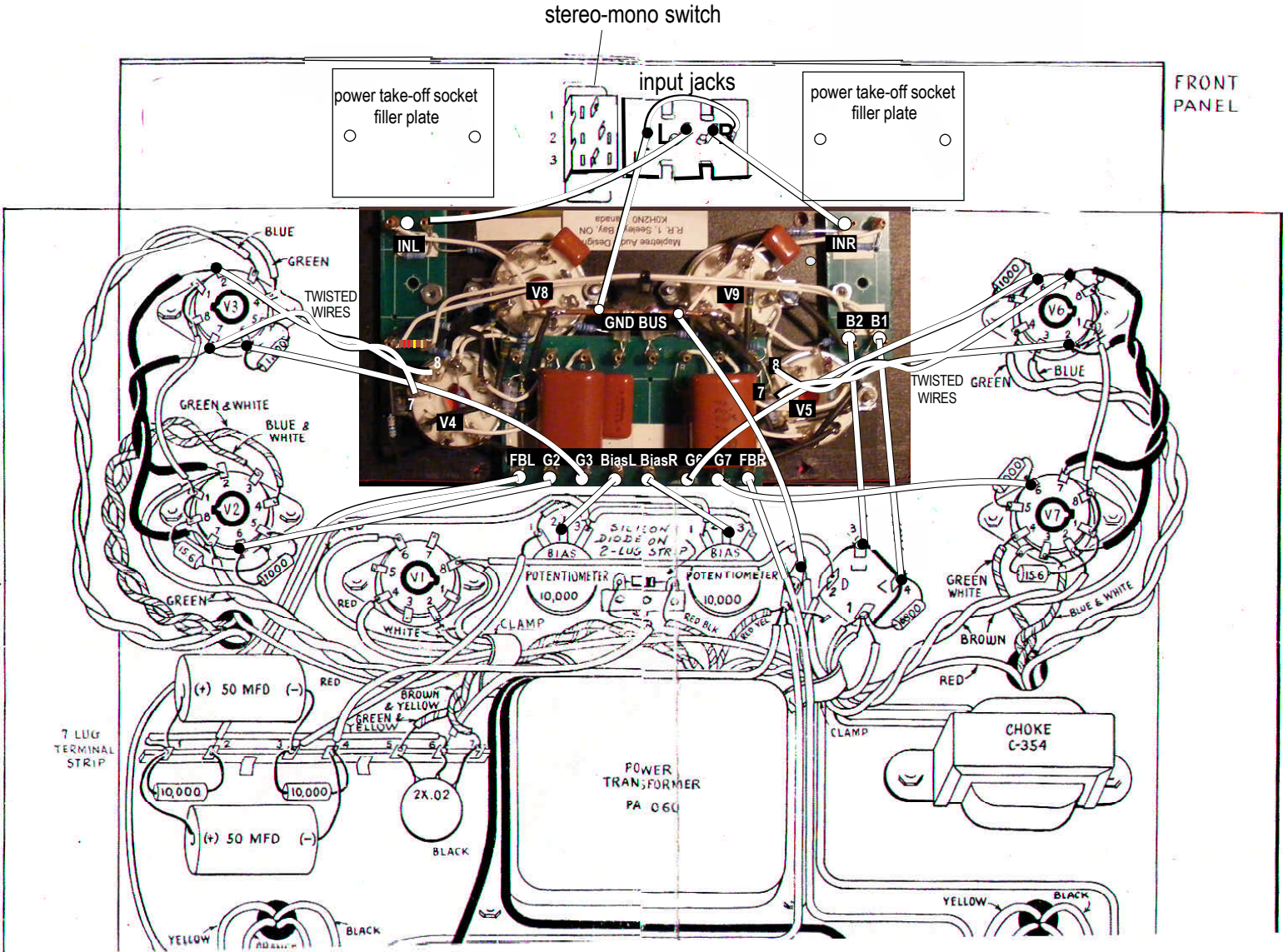
This completes the installation of the *SR70A* module. Re-check all connections using the wiring diagram as a guide. Install the four tubes with the 6SJ7s toward the front of the chassis. It is recommended that you re-adjust the bias for the output tubes in the usual manner.

Notes:

1. The *SR70A* can be supplied with a heater voltage of 6 VDC, 0.6 A for each channel if desired.
2. If non-stock Dynaco output transformers are installed, it may be necessary to adjust the value of C1 (270 pF) in each channel for optimum transient response (as evidenced by the best square wave reproduction and/or the flattest high frequency response).



SR Board Installation Figure 1



SR Board Installation Figure 2

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SR70A "Special Red" driver module for Dynaco ST-70

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rev. Jan. 8/13

