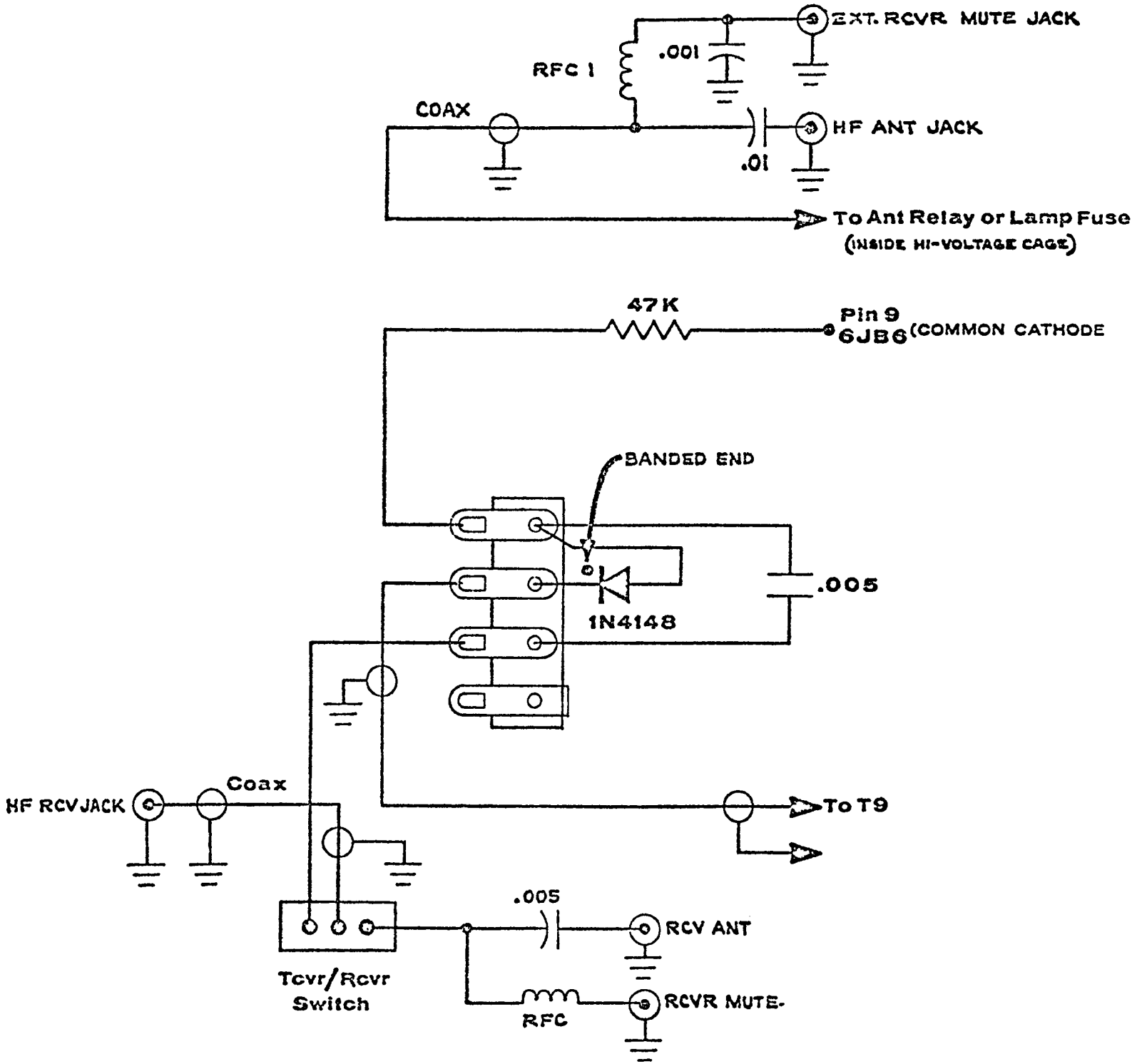
TR-3/4 VHF MOD KIT INSTRUCTIONS

PARTS LIST

1	Mounting Plate
6	Phono Connectors with Nuts, Washers, & Lugs
4 pcs.	RG-196/U Coax (1 - 20", 1 - 18", 1 - 8", 1 - 4")
3 pcs.	#22 Hookup Wire (1 red - 18", 1 orange - 18", 1 white -4")
1	4 Lug Terminal Strip
3	2 Lug Terminal Strips
3	2 - 56 Screws
3	2 - 56 Nuts
3	#4 Lockwashers
1	47 K 1/2 W Resistor
1	47 ohm 1/2 W Resistor
1	2.0 pF Capacitor
3	.001 microfarad Disc Capacitors
1	.005 microfarad Disc Capacitor
1	.01 microfarad Disc Capacitor
1	1N4148 Diode
2	12-1/2" Patch Cables
1 pc.	Sleeving (1")
1	48" Patch Cable
1	RF Choke


EXT. RCVR MUTE JACK
.001
RFC 1
COAX
HF ANT JACK
.01
To Ant Relay or Lamp Fuse
(INSIDE HI-VOLTAGE CAGE)
47K
Pin 9
6JB6 (COMMON CATHODE
BANDED END
.005
1N4148
HF RCV JACK
Coax
To T9
.005
RCV ANT
Tcvr/Rcvr
Switch
RFC
RCVR MUTE

Install the six phono connectors, with the lugs, lockwashers, and nuts on the back of the mounting plate with the lockwashers next to the plate. Bend lugs about 45 degrees from mounting plate, Install a two lug terminal strip as shown in Fig. 3. Install the mounting plate on the rear of the TR-3/4 chassis near the carrier balance control by using existing screws and the ground lug. The exact method will vary. It may be necessary to drill an additional hole in the chassis. See Fig. 3.

Install the diode and the .005 microfarad capacitor on the four lug terminal strip as shown in Fig. 1. Install the four lug terminal strip with a 2-56 screw, nut and lockwasher on inside the rear apron of chassis, close to left side of set. The foot on the terminal strip should be mounted in one of the perforated holes as close to the bottom of the chassis as possible with the foot pointing toward the power plug as shown in Fig. 3.

Locate the feed-through capacitor that supplies screen voltage to the power amplifier. On the side of the shield by the cable harness, remove the wire from the feed-through capacitor terminal and place the foot of a two lug terminal strip over this terminal of the feed-through capacitor and solder in place. Connect the wire which previously connected to the remaining lug of the terminal strip. Also, connect one end of the orange wire (furnished) to the same lug and solder both wires. Connect the red wire (furnished) to the lug which is soldered to the feed-through capacitor and solder. Route both wires through a convenient ventilation hole in the chassis to the PA DIS jacks. Connect the red wire to PA DIS A and the orange wire to PA DIS B. Connect a .001 microfarad capacitor from each jack to ground and solder.

Drill an .086 hole behind the 12BA6 (RF amplifier) tube near T-10 as shown in Fig. 4. Install the 47 ohm resistor on the two lug terminal strip, but do not solder. With a 2-56 screw, nut, and lockwasher, mount the two lug terminal strip under the chassis with the foot pointing to the two vent holes. In TR-3's it will be necessary to drill a 1/4" hole as shown in Fig. 4. Connect the 2.0 pF capacitor from the junction of T-9 and the 20 meter terminal of the band switch wafer (number 5 wafer from the front) to the ungrounded lug of the terminal strip. Use sleeving. Route the 18" length of coax through the vent hole and connect the center conductor at one end to the terminal strip and at the other to the EXC. OUT jack. Ground the coax braid at both ends. Solder all connections.

Connect the RF choke, which is supplied. between the ungrounded lug of the two lug terminal strip and EXT. RCVR. jack on the mounting plate. Also connect a .001 disc capacitor from the EXT. RCVR. must jack to the ground lug on that jack.

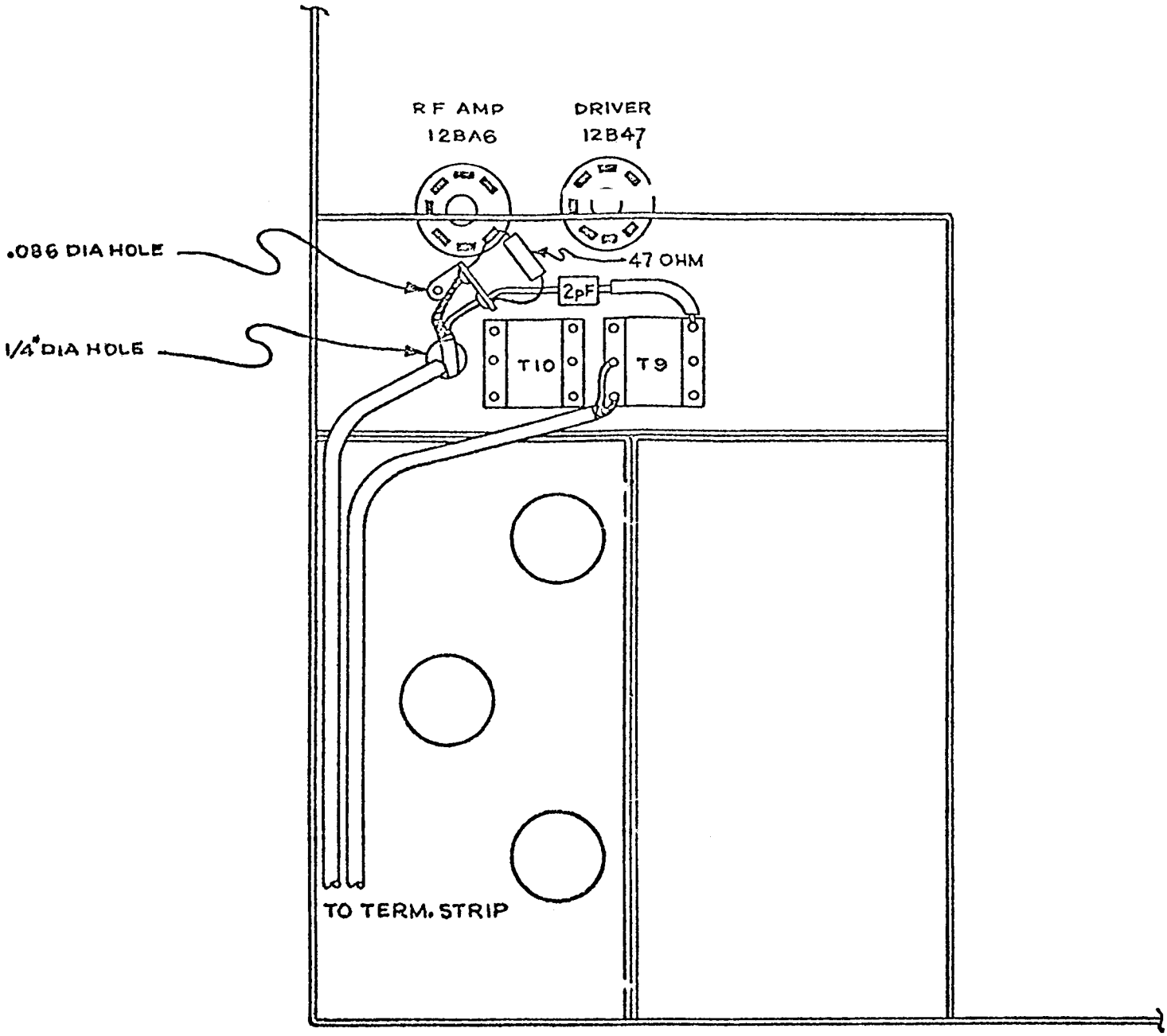
Remove the high voltage cage. Locate the gray or black cable which is connected between the antenna relay and T-9 in TR-3's, or between the fuse TCVR/RCVR lamp and the center terminal of the XCV/RCV slide switch in TR-4's. Disconnect this cable at both ends and discard. Connect the 4" length of coax be between the relay or fuse lamp and the ungrounded lug of the terminal strip. Connect a .01 capacitor from this terminal to the HF ANT jack.

Route the cable near the chassis. Connect the coax braid at the HF ANT jack ground lug. Solder all connections. Do not connect the other end of the braid. Notch the bottom edge of the high voltage cage so that the coax will not be pinched. Replace the high voltage cage.

Disconnect the gray cable from T-9 and the front terminal of the slide switch on TR-4's and discard. Connect the center conductor at one end of the 20" length of coax to the HF RCVR jack and at the other end to the middle terminal of the slide switch. Connect a short length of white wire between the front terminal of the slide switch and the lug on the four lug terminal strip nearest the ground lug. On TR-3's, connect the end of the 20" length of coax directly to the lug on the terminal strip. Connect the 47 K resistor as shown in Fig. 2. Connect the 8" length of coax from the terminal strip to T-9 as shown in Fig. 1 and Fig. 4. The shields of all coax cable ends near the terminal strip should be connected to ground at a common point.

To restore normal HF operation when the TC-6 and/or TC-2 are not connected to the TR-3/4, connect a patch cable between the PA DIS jacks and a patch cable between the HF ANT jack and the HF RCV jack. Since the PA DIS jacks are connected to 250 V. DC, always be sure the power supply cable is disconnected before connecting cables. Use an insulated tool when adjusting the carrier null capacitor to be sure that the PA DIS jack is not accidently shorted.

When using an external receiver (such as the R-4B, 2-C, or SPR-4) connect the mute jack of the receiver to the mute jack on the mounting plate for proper operation with a TC-6 or TC-2. Note that an external receiver will not be muted when the TCVR/RCVR switch on the TR-4 is in the TCVR position and the TR-4 is receiving.



EXCITER OUTPUT PICTORIAL DIAGRAM

FIG. 4

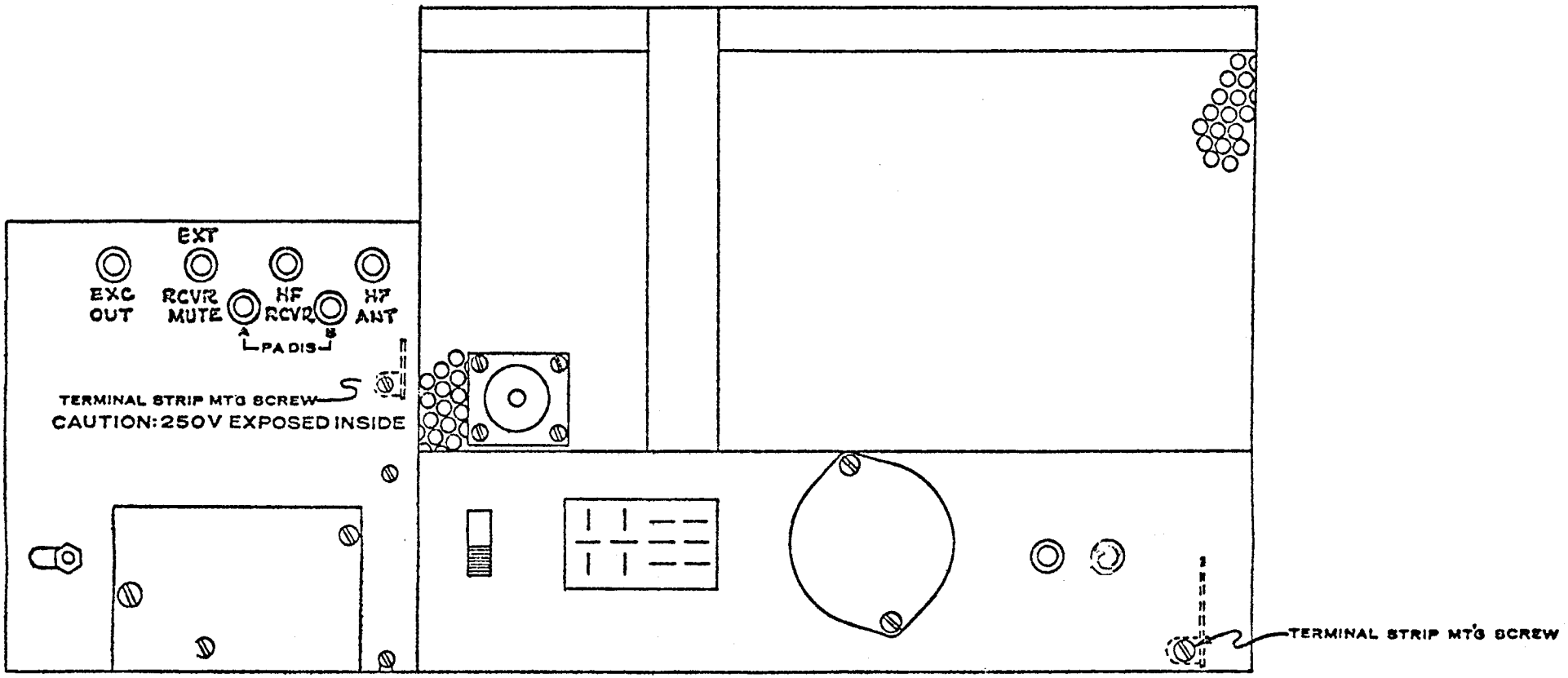

EXT
EXC OUT
RCVR MUTE
HF RCVR
HF ANT
A
B
PA DIS
TERMINAL STRIP MTG SCREW
CAUTION: 250V EXPOSED INSIDE
TERMINAL STRIP MTG SCREW

FIG. 3