To change link positions, remove the access cover by the two black snap fasteners. Loosen the screws holding the shorting bars, a few turns only. (Do not loosen excessively as they could drop into the Amplifier.) Draw each shorting bar upward for removal. Replace the shorting bars for the operating voltage desired as illustrated in Fig. 2-4. Tighten firmly. Also, be sure to tighten the screws from which the shorting bars were removed.

NOTE: Fuses need not be changed in current rating when the input voltage is changed.

CAUTION: Excess force may break the terminal strip.

2.6 POWER CABLE

The power cable supplied with your TL-922A has no plug at its end. Connect a plug mating with the wall outlet. The blue and brown leads are power, the green lead ground as illustrated in Figure 2-5.

2.7 EXCITER

An HF Amateur band SSB or CW transmitter or transceiver having an RF output impedance of 50Ω and output power of 80W to 120W is sufficient to drive the TL-922A. Exciter output exceeding 120W will cause overdrive, resulting in shortened power tube life and distorted output. To limit the power level above 120W, use an exciter having an external ALC input terminal.

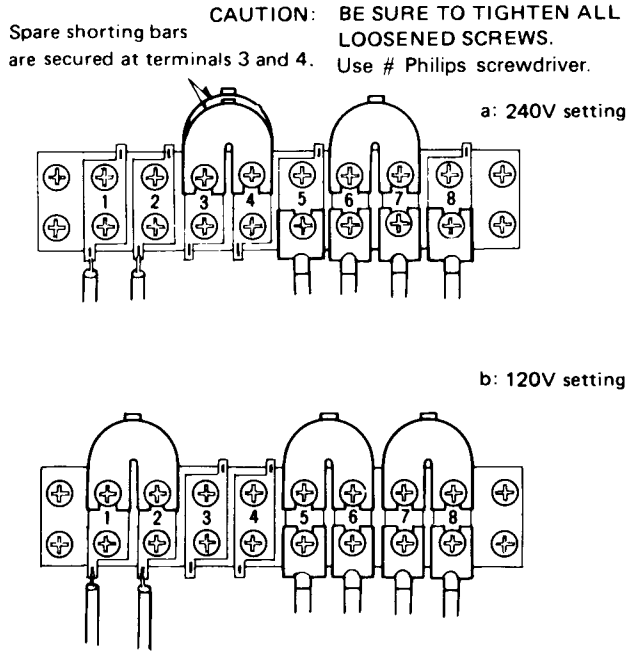

Figure 2-4 — Input Voltage Terminal Boards

Trio-Kenwood's transceivers Series TS-930, TS-940, TS-830, TS-820, TS-530, TS-520, TS-430, TS-440S, TS-180, TS-130, TS-120 and TS-900 and transmitters Series TX/T-599 are all suitable exciters and will match the TL-922A in design as well as appearance.

NOTE: When the TS-440S is used, the modification is necessary.
Refer to TS-440S instruction manual.

2.8 ANTENNA

Your TL-922A requires an antenna having a 50 to 75Ω impedance and providing it is:

(1) Rated for 2 kW P.E.P. input power

(2) and, exhibits a low standing-wave ratio (SWR)
Desired SWR is 1.5 to 1. or less. A higher SWR, 2 or 3 to 1, may cause difficult matching with your TL-922A. Excessive SWR could melt the coaxial cable and antenna. To protect your TL-922A against adverse SWR effects, use an antenna tuner. Note that feeder radiation due to mismatching will cause TVI, BCI, or similar RFI.

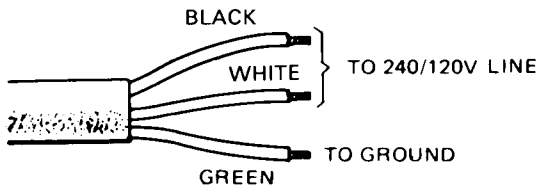

Figure 2-5 — Power Cable Color Code

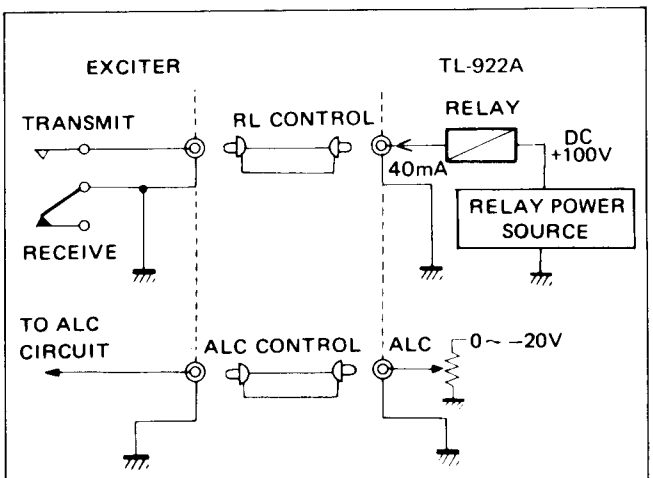

Figure 2-6
Exciter Connections for RL and ALC Controls.

2.9 INTERCONNECTION

2.9.1 GROUNDING

Connect the GND posts of the TL-922A and exciter to prevent possible electric shock and RFI. The wire used should be as thick and short as possible and run to a good earth ground.

2.9.2 CABLE CONNECTION

Interconnect your TL-922A and exciter with the supplied cables as illustrated in Figure 2-7.

NOTE: If you use an exciter of another brand, replace the supplied connector with one appropriate to your exciter. The exciter used must accept the negative-going ALC voltage from the TL-922A.

(The ALC output at no signal input is normally positive when not connected to the exciter.)

The RL, or standby control, in the exciter must be switched to ground in transmit mode, as illustrated in Figure 2-6.

NOTE: Use RG-8/U, RG-11/U or heavier as antenna cable.

NOTE: If an SWR meter is connected between the TL-922A and the exciter, total coaxial cable length must not exceed 1.7 m.

SECTION 3. CONTROLS AND THEIR FUNCTIONS

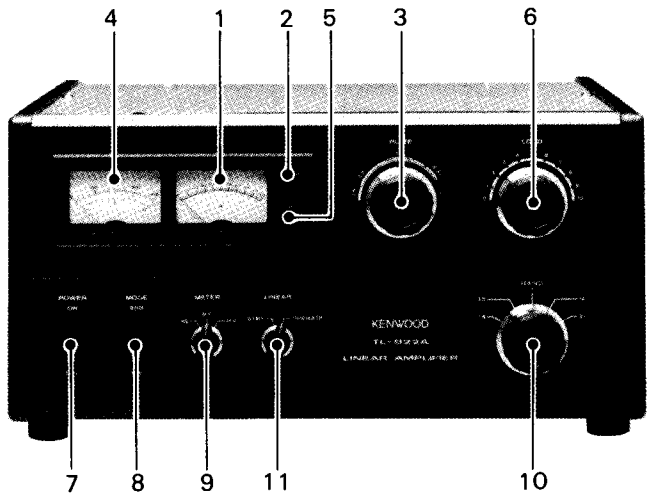

Figure 3-1 Front Panel View

3.1 FRONT PANEL

1. **IP Meter**
   The IP meter reads the plate current flowing through the power tubes.
2. **ON AIR Indicator**
   The ON AIR indicator lights up in the on-the-air, or transmit MODE.
3. **PLATE Tuning Control**
   This control permits you to tune the plate circuit to the desired transmit frequency, and is equipped with a reduction gear for easy tuning.
4. **Multimeter**
   The Multimeter can read the Ig (grid current), RF (relative power output), or HV (plate voltage) as selected by the METER switch.
5. **STBY Indicator**
   With the unit turned on, shows unkeyed or receive state.
6. **LOAD Control**
   Impedance matches the pi network to the antenna.
7. **POWER Switch**
   A double pole switch completely disconnects the AC input from the transformers.
8. **MODE Switch**
   Set for SSB or CW. For RTTY operation, set the switch to the CW position.
9. **METER Switch**
   Selects Ig (grid current), RF (relative power output), or HV (plate voltage).
10. **BAND Selector**
    Set for the Amateur band in which operation is desired.
11. **LINEAR Switch**
    In the STBY position, the exciter runs straight through. In the OPERATE position, the Amplifier automatically keys with the exciter.

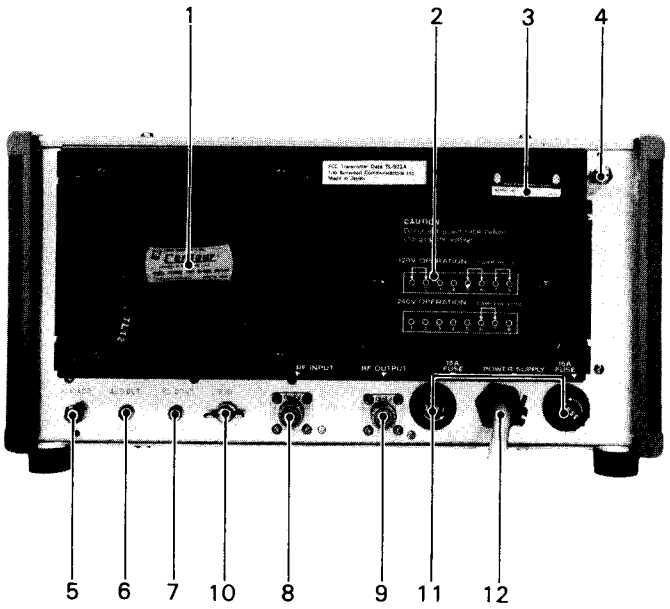

Figure 3-2 Rear Panel View

3.2 REAR PANEL

1. **Cooling Fan**
   The Cooling Fan cools the power tubes and effectively keeps the inside temperature from increasing. **Be careful of hot air (50° to 70°C) at the exhaust port.**

2. **Line Voltage Change Terminals**
   These terminals are located behind the rear cover, which is removed by pulling the two snap fasteners. For input voltage change, please refer to Section 2.5.

3. **Serial No. Plate**
   This plate is stamped with the Serial Number of your TL-922A.

4. **RF METER Control**
   This control is used to calibrate the RF output reading. For calibration, see Section 4.6.

5. **ALC ADJ Control**
   This control is used to adjust the ALC voltage. For adjustment, see Section 4.5.

6. **ALC OUT Jack**
   This jack feeds the ALC voltage out.

7. **RL CONT Jack**
   This jack inputs the transmit-receive relay switching ground from the exciter.

8. **RF INPUT Connector**
   This UHF-type connector inputs the RF signal fed from the exciter. Use the supplied cable.

9. **RF OUTPUT Connector**
   This UHF-type connector feeds the RF output to the antenna.

10. **GND Post**
    Use this post to ground the TL-922A to your exciter and station ground.

11. **FUSE Holders (2)**
    Each contains a 15 A fuse. If either or both fuses are blown, determine the cause before replacement.

12. **POWER Cable**
    AC power is supplied to the amplifier by a three-wire cable. (See section 2.6)