

FIG. 2 AC PLUG CONNECTIONS

For 117 volt operation of the Mark II, it will be necessary to change jumpers on the terminal strip in the power supply. Remove the power supply cabinet, and refer to Fig. 3 for jumper changes. Replace the two 20 amp. line fuses with 30 amps. Connect the black and white power cord wires to 117 volts, and connect the green wire to neutral ground.

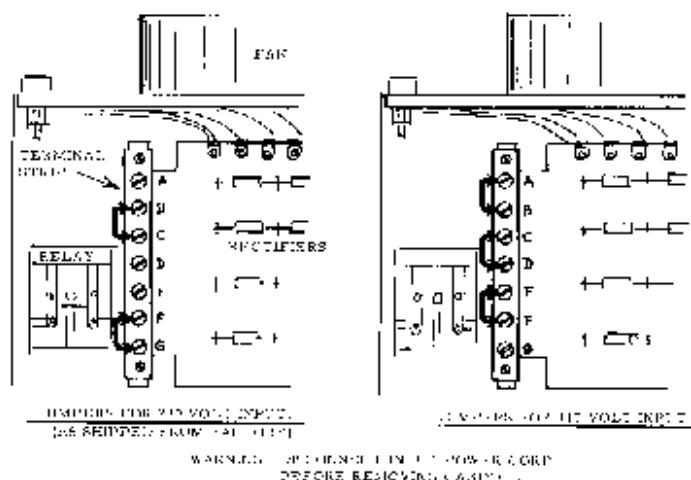


FIG. 3 MARK II POWER SUPPLY

NOTE: When the Mark II is operated with 117 volt AC input, current drain will exceed most outlet ratings, particularly in the full power "SSB" position. It may be necessary to operate only in the "TUNE-CW" position in order to reduce power drain and thus keep the house circuit breaker from kicking out. If it is necessary to operate the Mark II on 117 volts, try to run it on a separate circuit, and if possible on the opposite side of the primary house circuit from the side used for the rest of the station. Always use 230 volts for the Mark II whenever possible.

TUNING INSTRUCTIONS

1. Always tune the exciter or transceiver first, with the Mark II turned OFF. Exciter output will be shunted around the linear amplifier by the internal relay, and will go to whatever antenna or load is connected. The "Output" position of the Mark II meter circuit will indicate exciter output, and may be used conveniently as a tuning meter. Simply adjust the exciter controls for maximum output, using whatever tuning procedure is prescribed for the particular exciter. Then switch the exciter back to standby or receive position.
2. Turn the Mark II function switch to the "TUNE CW" position, and allow several seconds for filament warm-up. Leave the meter switch in "Output" position. Set the handswitch to proper band position and the P.A. Load control to 9 o'clock. Illumination of the meter indicates that power is on, and the tungsten filaments in the 3-400Z tubes will be brightly lit. As long as the exciter is in "Standby" mode, and the Relay Control circuit is open, the 3-400Z tubes are biased to cut-off. IP and IG, (plate current and grid current, respectively), should read zero when tested. EP, (plate voltage), should read approximately 1600 volts, depending on power line voltage.
3. Turn the Mic. Gain down on the exciter (transceiver), and be sure the carrier has been balanced out. Then switch the exciter to normal Voice-Transmit position. With the Swan 350 or 300 transceiver this is done by pressing the push-to-talk button. If the relay control circuitry is properly connected and functioning, the Mark II is now in Transmit mode, and the red indicator light on its panel will be on. The 3-400Z tubes will now be drawing "Idling Current," so IP will read about .1 amps. and EP will be about 1500 volts. IG should still read zero.
4. Switch the Exciter to its "TUNE" or full CW power position. Quickly adjust P.A. TUNE on the Mark II for maximum output, as indicated by the meter in Output Position. Then go back to the Exciter and adjust its P.A. TUNE for maximum output. (It may have changed slightly when switched into the amplifier cathode circuit.) Next advance the P.A. LOAD control on the Mark II for increased output, and then alternate between adjusting P.A. TUNE and P.A. LOAD until the highest possible output indication is reached. Set the Output Level Control as required to keep the meter from going off scale. The output reading is a relative indication, only, and will vary considerably with different antenna loads as well as with frequency. **CAUTION: DO NOT KEEP THE EXCITER OR TRANSCIVER IN TUNE POSITION FOR LONGER THAN 30 SECONDS AT A TIME.** This cau-