

INSTRUCTIONS FOR THE LETTINE 240

1. Turn 115 volt AC switch to ON, leaving phone switch to OFF.
2. Before tuning, set both oscillator and amplifier tuning knobs to 10 on tuning dial of panel, when operating on 10, 20 or 40 meters. When operating on 80 or 160 meters, set tuning knobs to 0, before tuning.
3. Turn phone switch ON with audio gain off.
4. Tune oscillator for greatest drive on amplifier plate current meter. This completes oscillator tuning. Don't retune from this setting.
5. Tune amplifier for minimum plate current.
6. Load antenna to 100 mills.
7. retune amplifier for minimum plate current again.
8. Load antenna to 100 mills again.
9. Retune amplifier for minimum plate current again. When amplifier retuning does not bring meter reading to less than 100 mills, the transmitter is loaded to 40 watts.

NOTE

1. When operating on 10 meters, retune the oscillator for a slight dip on the meter which will be about one or two mills, then reload antenna to 100 mills, as described in tuning steps.
2. For phone, turn up audio gain, and turn phone switch to ON. When standing by, turn phone switch to OFF. Use crystal mike or high impedance dynamic mike with shielded plug.
3. For CW leave phone switch to OFF and use key in key jack.
4. A VFO, having at least two watts output, can be plugged into the crystal socket, using the oscillator as a doubler. Place a .01 condenser in series with each lead coming from the VFO.
5. Below is a table showing some combinations of crystals and coils which may be used to obtain output in the desired band.

BAND	XTAL	OSC	AMP
160	160	160	160
80	80	80	80
40	40	40	40
20	40	20	20
10	40	20	10

INSTRUCTIONS FOR MOBILE OPERATION

The black and red wires coming out at the rear of the transmitter chassis are for connection to a mobile power supply.

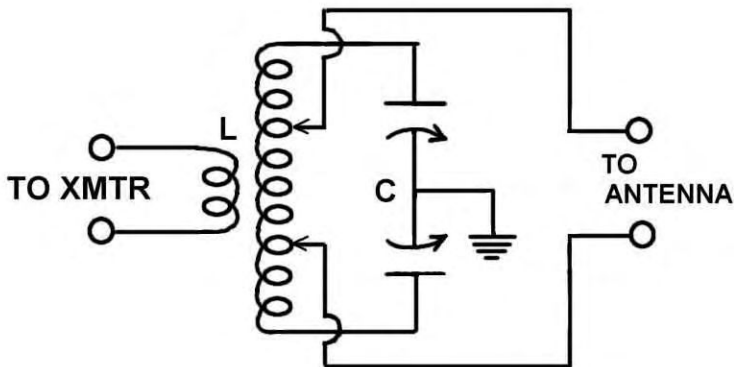
For mobile operation the black wire is unsoldered from the chassis and connected to the hot filament lead from the six volt battery. The red wire is connected to the B_f on the dynamotor or vibrator power pack. The ground returns for the filament and plate supplies are made to the ground post at the rear of the chassis.

For phone operation the transmitter Phone switch is left at the "ON" position. Switches or relays are used, in the filament lead to turn the filaments on and off, and on the low voltage side of the dynamotor to turn the carrier on and off.

Whenever the transmitter is disconnected from the mobile power supply and used on 115 volt A.C., the black wire should be resoldered to the chassis, and the red wire should be taped to keep it from shorting to the chassis.

Filament requirements for the 240 are 6.3 volts at 4.3 amp. Plate requirements for 40 watts input are 430 volts at 200 to 225 mills. Lower plate voltages can be used with a corresponding decrease in output. When run at full input, the 240 makes a very powerful mobile transmitter.

ANTENNA TUNER

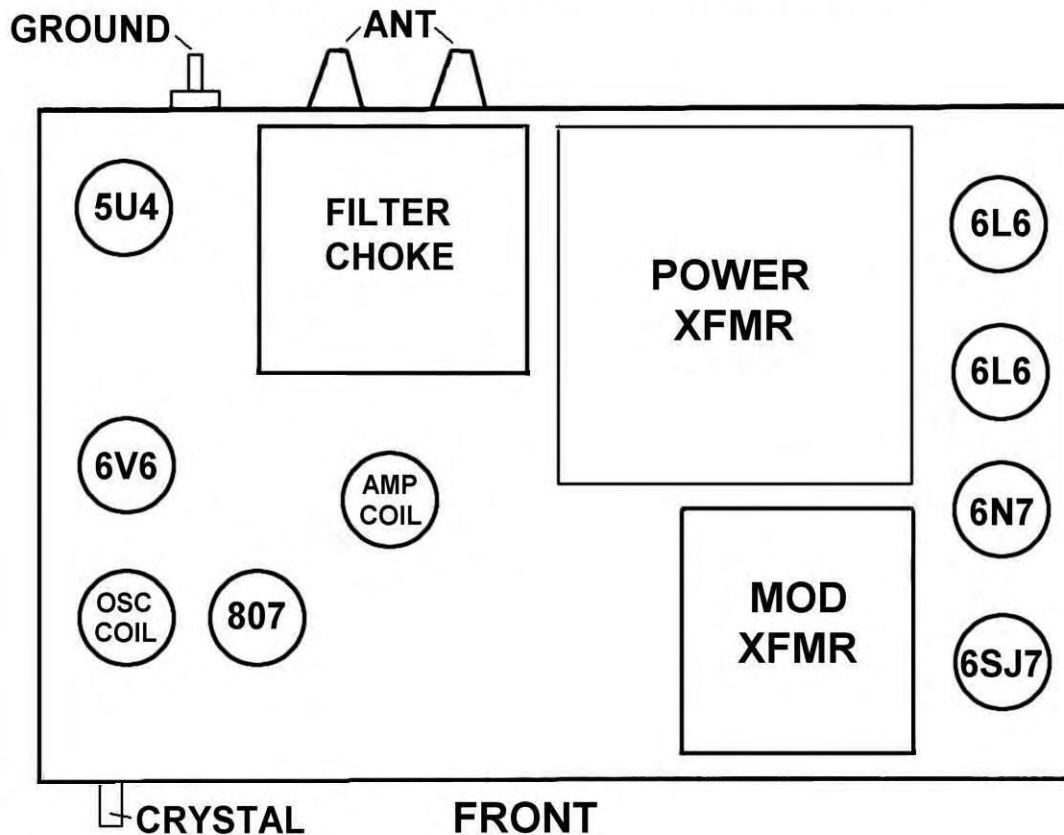


**C = 2 gang 100 mmf
variable condenser**

L = B&W JVL or BVL
The BVL is larger
& easier to tap

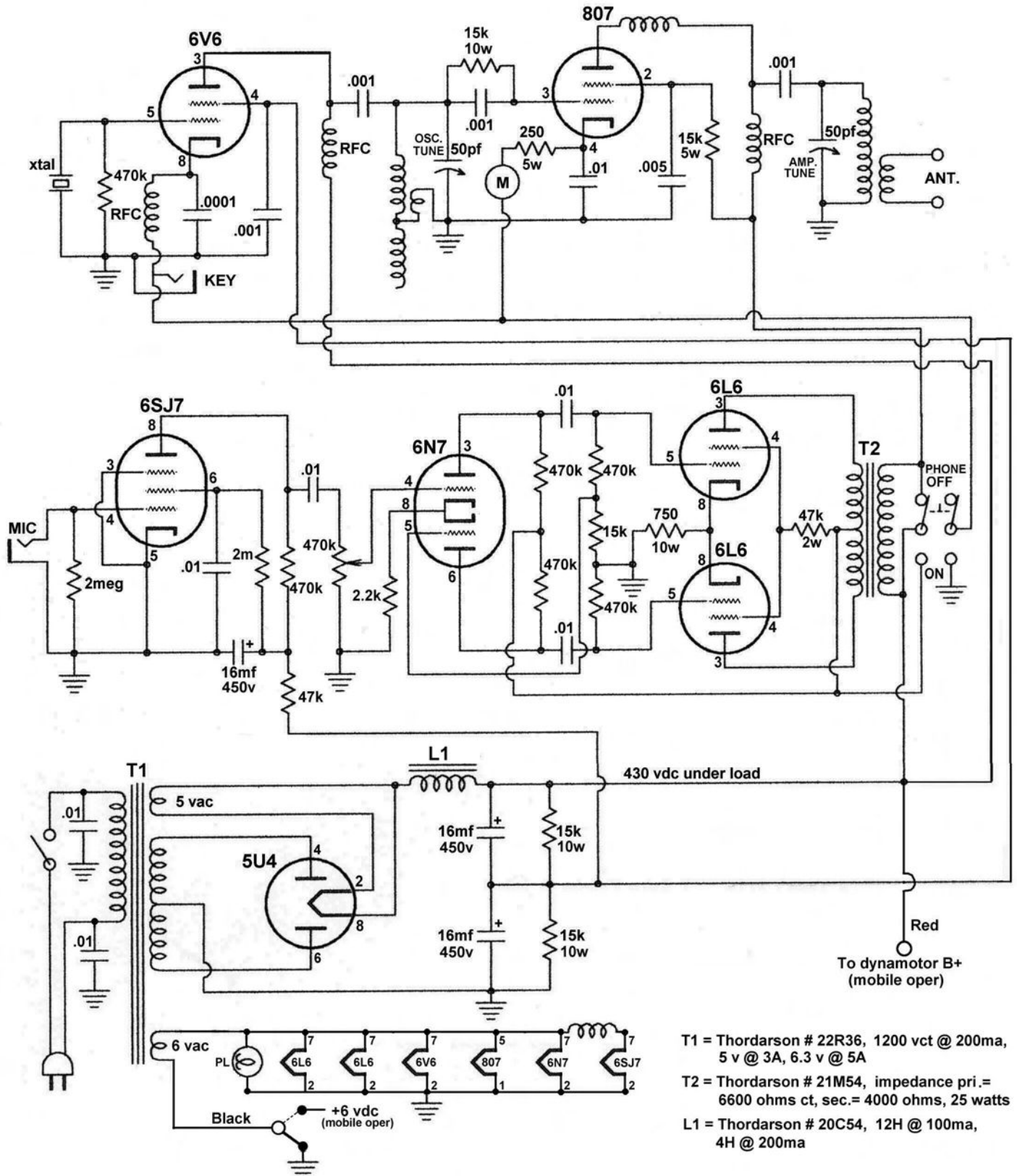
In many cases antennas, such as the folded dipole and open dipole can be connected directly to the transmitter antenna terminals. If they do not load the final plate current to the full 100 ma., additional turns can be added to the link winding on the amplifier coil, to increase the loading. When adding turns, wind with hook-up wire and keep winding on cold end of coil. The antenna tuner shown will match almost any antenna. The folded dipole antenna is tapped down on the coil for proper loading. Single wire antennas of almost any length can be matched by tapping on the coil. Only one tap is needed for the single wire antenna, the other tap being left unused.

LAYOUT DIAGRAM OF MODEL 240



WIRING DIAGRAM OF MODEL 240

(Redrawn from original for clarity 10-03-03)



- T1 = Thordarson # 22R36, 1200 vct @ 200ma, 5 v @ 3A, 6.3 v @ 5A
- T2 = Thordarson # 21M54, impedance pri.= 6600 ohms ct, sec.= 4000 ohms, 25 watts
- L1 = Thordarson # 20C54, 12H @ 100ma, 4H @ 200ma