to the transmitter key line. Transmitter instructions generally designate this VFO connecting point. This point may be at the microphone plug, at a connector on the rear or a relay contact inside the transmitter. Any transmitter using "BIAS KEYING" will have sufficient bias voltage to key the VFO-621. The VFO-621 will not affect the operation of the transmitter.

The VFO can be used without connecting the key terminals mentioned above. In this case, the jumpers across the four terminals of the lower terminal strip are left in place. However, with this arrangement, the output of the VFO may be sufficient at the signal frequency to interfere with reception on the same frequency.

3. The RF output of the VFO is fed to the transmitter at the transmitter's crystal socket. Remove the transmitter crystal and insert the plug at the end of the VFO output cable into the crystal socket. The grounded side of the plug MUST be put into the grounded crystal socket contact. Check for ground with an ohmmeter if it is not marked clearly on the transmitter panel. Note that one side of the crystal socket MUST be grounded. Some transmitters have a separate connector for the VFO. The VFO-621 can either be plugged into the crystal socket in such a transmitter, or the dummy crystal at the end of the VFO-621 output cable can be removed and the special plug substituted. NOTE CAREFULLY that in this case, a 100 ohm resistor must be connected across the terminals the the new plug. Out of band operation is likely if this resistor is omitted.

Check the schematic of the transmitter for the hot side of the crystal socket; it must have a capacitor (the .001 uF disc supplied can be used) between this terminal and the grid of the tube. This part is in the AMECO TX-62 Transmitter.

OPERATION

After all connections have been made, turn the power switch ON. Turn the BAND switch to the band desired. The warmup time is so short that within a minute it is satisfactory for phone operation. Tune the VFO to the approximate frequency by the VFO dial. Tune to the exact frequency by putting the transmitter on SPOT and tune to the receiver frequency. Do not depend on the VFO calibrations when working near the band edge. After the VFO has been tuned as above, tune and operate the transmitter as usual. It is not necessary for the transmitter to be switched to VFO or even for the transmitter to have a CRYSTAL-VFO switch. The switch can be in either position.

Mobile Operation

The VFO-621 is readily adaptable for mobile operation by using the auto battery and the transmitter plate power supply. For AC operation, the four terminals of the upper terminal strip on the rear of the VFO-621 are all shorted to chassis. For DC operation all the jumpers from the four upper terminals are removed and 6 or 12 volts DC can be fed to the filaments, and up to 150 volts DC MAXIMUM are fed to the plates. If the voltage exceeds 150, the filter capacitor will be damaged and some other components may also be overloaded.

For 6 volt operation, connect the terminal marked 6V to the transmitter filament line. The VFO filaments will be controlled by transmitter filament switch. When using these terminals, the VFO power switch is disconnected.

For 12 volt operation, connect the terminal marked 12V to the transmitter filament line. Also, add a 5 ohm, 20 watt wire wound resistor between the 6V and 12V terminals. Be sure that a #55 pilot lamp is in the VFO and working. Do not operate if the light is burned out or the tubes will be damaged.