

There are no changes needed when hooking up the VFO-621 to a transmitter that uses 8 Mhz crystals. It is not even necessary to have a CRYSTAL-VFO switch, nor is it important to put the switch in the correct position when using the VFO-621 with 8 Mhz crystal transmitters that have this switch.

The above information applies to 8 Mhz crystal transmitters and also applies to transmitters using 12 to 13 Mhz and 24 to 26 Mhz crystals. Be sure that one side of the crystal socket is grounded, especially with transmitters that call for 24 to 26 Mhz crystals.

Some transmitters use 8 Mhz crystals and multiply by two instead of three in the first stage. In this type of transmitter, it will be necessary to modify the 16 Mhz coil in the plate of the first tube to make it tune to 24 to 26 Mhz. This can be done by removing a few turns. Approximately 1/3 of the turns must be removed. Start off by removing about 1/4 of the turns. Then check the tuning and remove additional turns, one or two at a time until the coil tunes satisfactorily. The tuning can be checked best with a grid dip oscillator. An all-band, general coverage receiver can also be used. This will not change the operation of the transmitter when the same crystals are used. It merely changes the multiplication in the first stage from 2 to 3 times. The next stage tuning remains unchanged.

If you have any question on modifying your transmitter, send in the operating instructions and schematic of your transmitter for further information. Include a self-addressed, stamped envelope for return mailing of your instruction book.

## INSTALLATION

1. The VFO must be connected to the common ground on the operating table or desk. Use a #14 or heavier wire for this purpose and connect it to any of the ground terminals at the rear of the VFO. The grounds of all the equipment in the operating room should be connected together and then brought to a cold water pipe. This is an important safety measure and should be completed before any power switches are turned on.
2. When the station is in RECEIVE position, the transmitter is turned off. Since the VFO is a part of the transmitting system, it must be disabled in the RECEIVE position. Connect the KEY terminals on the back of the VFO to the key line or a relay contact on the transmitter. The word KEY does not refer to CW Keying, but designates an "ON-OFF" or a "make-break" contact used to turn the transmitter circuits on and put a signal in to the antenna when the contact is closed.

### Cathode Keying

If your transmitter is a CATHODE KEYED type (such as the Ameco TX-62) remove the jumper from the "CATHODE-KEY" terminals on the lower terminal strip at the rear of the VFO. (See Figure 2.) Leave the jumper on the "BIAS-KEY" terminals of this strip. Then connect the lead from the end "CATHODE-KEY" terminal to the transmitter key line or relay contact that is meant to be connected to the VFO. The transmitter instructions generally designate the point to which the VFO key line should be connected. This point may be at the microphone plug, at a connector at the rear of the transmitter, or a terminal strip or relay inside of the transmitter.

### Grid Bias Keying

If your transmitter is a BIAS-KEY type, then remove the jumper from the "BIAS-KEY" terminals on the lower terminal strip at the rear of the VFO. (See Figure 2.) Leave the jumper on the "CATHODE-KEY" terminals of this strip. Connect a lead from the end "BIAS-KEY" terminal