

through receive-transmit bandpass coil L2 to receiver mixer stage V8B. In V8B, the incoming signal is mixed with the VFO signal from V14 to produce the IF signal. The IF signal from V8B passes through the crystal filter, receive-transmit IF amplifier V3, and then to receiver IF amplifier V9. The crystal filter passes only the IF signal and rejects all others.

Amplified signal from V9 is fed through IF transformer T3 to product detector V11A. In the product detector, the incoming signal is mixed with a signal from the carrier oscillator to produce an output signal that contains only the received voice frequencies.

The voice frequency signal is amplified by AF amplifier V12B. A portion of this amplified signal is used to obtain a control voltage which is

fed back to some of the preceding stages to maintain the volume at a constant level over a wide range of received signal strength. This is called AVC (automatic volume control). Finally, the voice signal is amplified by AF output amplifier V12A and is then applied to the speaker output of the Transceiver.

To keep the speaker output from tripping the transmitter VOX stages, a portion of the receiver output signal is fed to an anti-trip circuit to keep the relay from switching to transmit operation.

POWER SUPPLY

Operating voltages for the Transceiver are obtained from a separate power supply. The voltage and current values required are listed in the Specifications section of the manual.

CONSTRUCTION NOTES

This manual is supplied to assist you in every way to complete your kit with the least possible chance for error. The arrangement shown is the result of extensive experimentation and trial. If followed carefully, the result will be highly stable and dependable performance. We suggest that you retain the manual in your files for future reference, both in the use of the equipment and for its maintenance.

UNPACK THE KIT CAREFULLY AND CHECK EACH PART AGAINST THE PARTS LIST. In so doing, you will become acquainted with the parts. Refer to the information on the inside covers of the manual to help you identify the components. If some shortage or parts damage is found in checking the Parts List, please read the Replacements section and supply the information called for therein. Include all inspection slips in your letter to us.

Resistors generally have a tolerance rating of 10% unless otherwise stated in the Parts List. Tolerances on capacitors are generally even greater. Limits of +100% and -20% are common for electrolytic capacitors.

We suggest that you do the following before work is started:

1. Lay out all parts so that they are readily available.
2. Provide yourself with good quality tools. Basic tool requirements consist of a screwdriver with a 1/4" blade; a small screwdriver with a 1/8" blade; long-nose pliers; wire cutters, preferably separate diagonal cutters; wire strippers or a penknife for stripping insulation from wires; a soldering iron and rosin core solder. A set of nut drivers and a nut starter, while not necessary, will aid extensively in construction of the kit.