

Model M15 Remote Interface

For this option, an integrated circuit power amplifier (type LM383) is added inside the M15, connections are made to appropriate internal points and necessary external connections are brought out to the 9-pin main power connector. The following connections are standard to all M15's:

Pin 1:	+13 volts dc (11.5 minimum, 15.5 maximum) (red)
Pin 2:	Speaker (4 ohms preferred) (green)
Pin 3:	Power ground (black)
Pin 4:	Speaker ground (blue)

Pins 3 and 4 are connected together inside the M15 and also connect to the M15's chassis. Colors in parentheses are harness wire colors.

When the remote interface option is chosen, the following additional connections are supplied:

Pin 6:	Remote receiver audio output (white-green)
Pin 7:	Remote microphone audio input (violet)
Pin 8:	Remote microphone push-to-talk (gray)
Pin 9:	Squelch break (COS) (white-blue)

Ground returns are required for the signals on pins 6-9 inc. If Mentor Radio supplies an Astron RS-7S with the M15, these grounds may be made at the negative terminal (black) on the rear of the RS-7S or by splicing into either ground wire, close to the connector at pins 3 or 4.

The microphone audio level should be approx. -10 to -20 dBm (80 to 200 mv rms). The remote receiver audio output (500 ohms) is unaffected by the M15's volume control; its audio level is internally adjustable for -20 to +14 dBm—the default factory setting is 0 dBm (0.77 vrms). It will contain the transmitter modulation ("sidetone") as well as the receiver audio. That is, at a tape recorder or remote speaker, both sides of communications with an aircraft or another ground station will be heard. The COS output is 0.1 vdc when the M15 receiver is squelched or 12.5 vdc when the squelch is broken.

The M15 is in the receive mode when the push-to-talk wire is "open" (resistance to ground exceeds 1 Megohm). Connecting this wire to ground (maximum series resistance 1000 ohms) cause the M15 to transmit.

