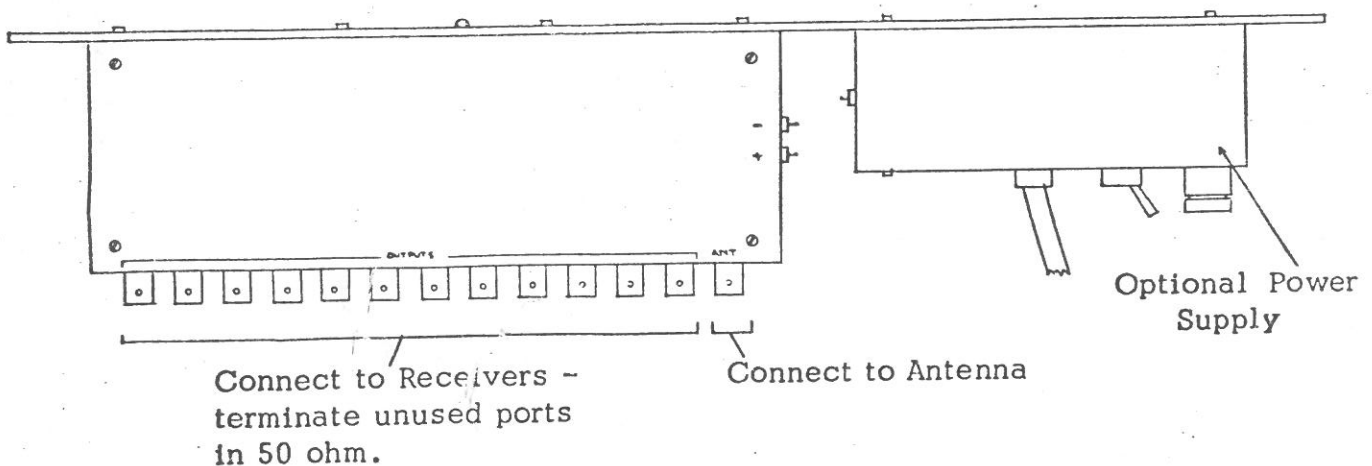


## RECEIVER COMBINER INFORMATION AND INSTRUCTIONS

This Receiver Combiner represents the latest advance in the state-of-the-art for this category of device in terms of electrical performance, stability, reliability and compactness. The circuitry consists of a thin film, solid state amplifier and flat pack power dividers mated to an etched and plated 50 ohm microstrip board. Both amplifier and dividers are hermetically sealed at the factory against moisture, dirt and other contamination, and the completed combiner is 'burned in' following electrical test for a minimum of 48 hours. The transistors used in the amplifier are bi-polar transistors and as such are not subject to static burnout as are FET transistors. RF input power to the transistor, however, must not exceed 200 mW maximum at any time. A diode limiter has been incorporated into the microstrip trace leading from the antenna port to the amplifier to help protect it from high power, such as might be generated by nearby lightning strikes. It provides progressively increasing insertion loss to incoming high level RF energy, starting with about 0.3 dB attenuation at 1 milliwatt to 20 dB attenuation at 20 watts. The limiter should not be looked upon as a cure-all for combating the effects of high level incoming signals generated by on-site transmitters. While it should protect the amplifier against burn out, the intermodulation and distortion performance of the combiner would be degraded any time the high level signals are present. Free space losses between the Receiver Combiner's antenna and nearby transmitter antennas must be considered when using this (or any) Receiver Combiner if optimum performance is to be achieved. The PLUS supply line has a diode installed to prevent damage to the amplifier in the event it is accidentally wired up backward in the field. Further, the amplifier is heat sunk to the outer surface of the box to insure continued, stable operation, even in the severest of environments. Industry-wide, the instance of failure for this type of device has shown itself to be extremely low, and, in fact, calculations for MTBF of the amplifier put the number at something in excess of a million hours. Because of this and of the care with which MICROWAVE ASSOCIATES, INC. has assembled and tested this unit, no scheduled field service is required. In the event the amplifier is burned out by high power, it is replaceable in the field. The procedure is simple and takes only a few minutes to complete right at the site. The replacement amplifier is Model No. L-1507. With it is supplied installation instructions and heat sink compound. It comes from the factory with 'burn-in' already completed.



Connect '+' to PLUS supply.  
Connect '-' to MINUS supply.  
Units coming from factory with optional power supply will already be wired.

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