

C-211-R

REPEATER AMPLIFIER

For 50, 144, and 220 MHz Models

Your Mirage repeater amplifier has several improvements over our standard model amplifier.

RACK-MOUNT HEATSINK

The large rack-mount heatsink with horizontal fins keeps the transistor temperature low for longer life in high duty cycle applications. All of the transistors are mounted on 1/4" copper plates which have been milled into the aluminum heatsink. This provides considerably faster transmittal of heat from the devices

AIR-FLOW CHASSIS

The perforated chassis cover allows heat that builds up on the printed circuit board and components to escape outside the amplifier. This, of course, will increase components and PC board life in high duty cycle.

DUAL OVER-TEMP PROTECTION

The amplifier has two temperature protection sensors; one on the heatsink and one on the circuit board. If the amplifier is used under conditions that cause it to overheat, the relay will drop into the bypassed condition. Your repeater will then operate at the power level normally going into the amp.

REDUCED RELAY WEAR

Repeater operation greatly increases the number of times the relays must change over. We have modified the relay drop-out time to hold the relay in for up to 5 seconds when in the "SSB" position. This allows one station to stop transmitting, allows the repeater to stop transmitting, and allows the next station to transmit with no relay action in the power amplifier. This should greatly increase relay life for repeaters that reset when the transmitter output drops. For repeaters that reset on the input or receive squelch, use the "FM" position of the switch.

ON-SITE CONTROL

The amplifier has built in switches that control DC voltage to the transmit power amp and relay delay time circuits. If a more convenient switching panel is desired, the MIRAGE RC-1 plugs directly into the repeater amplifier and duplicates the switching function in a compact box at the end of an 18 foot cable.

REMOTE TTL CONTROL

If you have a TTL logic "high" available during the transmit time of your repeater, you can use the circuits shown in Figure 1.

2N2222 OR GENERIC NPN TRANSISTOR

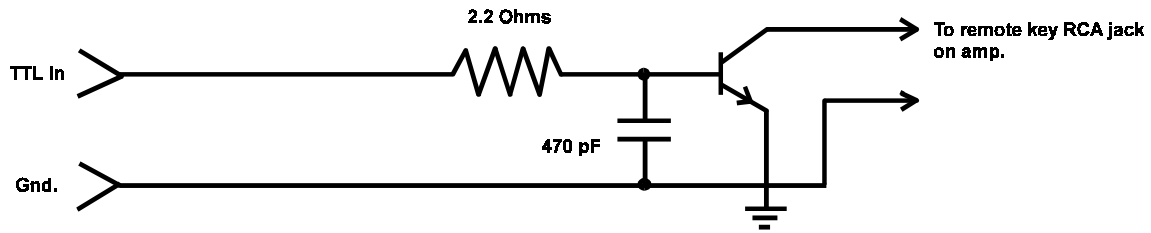


Figure 1

Note: This circuit will key the amplifier when a positive voltage between 2 and 15 volts is applied to the TTL input terminal.

If you have a logic line which is controllable remotely, you can remotely activate the MIRAGE amp. A NAND gate tied both to your repeater COR and the remote control line would engage the amp on transmit when your remote control line was at the correct level.

RF DRIVE LEVELS MIRAGE REPEATER AMPLIFIER MODELS

| MHz Freq. Range | Model Number | Watts Power | Watts Max. Cont. Input | Amps Nominal Output | Power Supply Current | RF Connect (VDC) |
|--------------------|-----------------|----------------|---------------------------|---------------------------|----------------------------|----------------------|
| 50-54 | A1015R | 3-4 | 110 | 16-18 | 13.8 | TEFLON SO-239 |
| 144-148 | B215R | 1 | 110 | 16-18 | 13.8 | TEFLON SO-239 |
| 145-148 | B1016R | 3-4 | 120 | 16-18 | 13.8 | TEFLON SO-239 |
| 145-148 | B2516R | 10-12 | 120 | 14-15 | 13.8 | TEFLON SO-239 |
| 223-225 | C211R | .3-.6 | 80 | 15-16 | 13.8 | TEFLON SO-239 |
| 222-225 | C1012R | 5 | 90 | 16-18 | 13.8 | TEFLON SO-239 |
| 223-225 | C2512R | 13-15 | 90 | 13-14 | 13.8 | TEFLON SO-239 |
| 440-450 | D1010RN | 2-4 | 80 | 14-15 | 13.8 | TEFLON "N" UG58AU |
| 440-450 | D3010RN | 10-12 | 80 | 11-13 | 13.8 | TEFLON "N" UG58AU |
| 420-450 ATV | D100- ATVRN | .5-1 | 40 | 12-14 | 13.8 | TEFLON "N" UG58AU |
| 420-450 ATV | D1010- ATVRN | 2-4 | 80 | 15-16 | 13.8 | TEFLON "N" UG58AU |