

MIRAGE
COMMUNICATIONS EQUIPMENT

C106-G
R.F. AMPLIFIER

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The Mirage C106-G is the next generation of Power Amplifiers for 220-225 MHz. New features make it the most useful and versatile circuitry for protection against high antenna VSWR, excessive R.F. power input. A newly designed GaAsFET receive preamp provides high gain and low-noise amplification for weak signal applications. The pre-amp includes a switchable attenuator to reduce signal output level. This is useful in preventing Receiver Overload and subsequent Intermodulation Distortion caused by strong signals. Provision is made for automatic or remote (external) keying, and for remote control of all front panel functions using the Mirage/KLM RC-1 Remote Control Unit. The Mirage C106-G is capable of FM, SSB, and CW operational modes.

IMPEDANCE.....50 Ohm input and output

SIZE.....8" X 3" X 5-1/2"

WEIGHT.....3 LBS

USE WITH HTs:

The C106-G may be "keyed" with as little as 200mw. It makes an excellent amplifier to be used with HT's, as 2 Watts of drive will produce 30 to 35 Watts of output.

INSTALLATION:

The C106-G must have adequate ventilation around the heat sink. Use of #8 or larger wire to connect the C106-G to the battery is recommended. Use good quality 50 Ohm coax, between the radio and the C106-G. Rg-8U or the equivalent should be used between the C106-G and the antenna. The antenna should be matched, to better than 1.5:1 for best performance. Higher SWR will not damage the amplifier but it will degrade the system performance.

FRONT PANEL FUNCTIONS:

POWER-ON/OFF....This switch turns the power amplifier ON and OFF.

FAULT LIGHT...This light will activate if unit is over powered by excessive RF input or high excessive output SWR. Power to the unit must be turned OFF and then back ON to reset protection circuit before amplifier will operate normally.

SSB/FM.....Selects the relay time delay for the mode of operation. In either the SSB or FM position, the amplifier is still biased for linear operation.

PREAMP-ON/OFF....TURN ON or OFF the receive preamp. This works independent from the Power ON/OFF switch. When either the Preamp or Power Amp is turned on the Amplifier automatically switches the antenna using its internal circuitry. If it is desired to key the antenna relay externally a connection is provided on the rear panel (see Rear Panel Functions).

REAR PANEL FUNCTIONS:

"RADIO".....This connects to the transmitter or transceiver.

"ANT".....This connects to the antenna.

3 PIN POWER CONNECTOR-Pin 1 is for remote keying-connect to ground to key antenna relay. Pin 2 is + 13.6 VDC. Pin 3 is ground.

6 PIN REMOTE

CONNECTOR.....The RC-1 Remote Control Head connects here.

FUSE HOLDER.....Input power should not exceed 15 Watts. Higher power than this may cause failure of the input transistor. This will VOID ANY WARRANTY.

INTERNAL ADJUSTMENTS:

"SSB DELAY".....This allows the relay delay to be adjusted to any desired delay. Access to this adjustment is through the left side of the cover, behind the front panel. Use a small screwdriver to adjust the control.

PREAMP TUNING.....These trimmers are factory set for the best gain and noise figure. They should not be readjusted unless connected to the proper equipment to set the figure.

IN CASE OF DIFFICULTY:

1. Check for loose antenna or B+ connections.
2. Check S.W.R. of antenna.
3. Look for bad or lossy co-ax.

ONE YEAR LIMITED WARRANTY:

Any MIRAGE COMMUNICATIONS product found defective in materials or workmanship (except R.F. Power Transistors) will be repaired or replaced at no charge within ONE years from date of purchase. The product must be returned to the factory, freight prepaid. R.F. Power transistors are warranted one year from date of purchase.

All internal adjustments are factory set for best performance consistent with reliable operation. Changing internal adjustments will void the warranty.

Unauthorized repairs or modifications will also void the warranty. We recommend that units requiring repair be retuned to the factory.

R.F. power transistor replacement after the initial One year warranty period, but within the One year warranty period must be accomplished at the factory in order to maintain the original Five year product warranty.

This unit was not designed for repeater operation, and its use in such service is at your own risk. Consult the factory for recommendations regarding repeater service.

The WARRANTY REGISTRATION CARD must be submitted within ten days to obtain warranty service.

MIRAGE COMMUNICATIONS assumes no responsibility for any antenna or other accessories connected to this product.

This warranty does not apply to units that have been misused, accidentally damaged, subjected to unusual environmental conditions, or have had unauthorized modifications of repair.