Instruction Manual

MAST-MOUNT GaAsFET PRE-AMPLIFIER

KP-2 Series

10M, 6M, 2M, 1-1/4M, 70 CM

Version A

Before operating this unit, please read these instructions completely.

MIRAGE
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MIRAGE KP-2 Mast-Mount Pre-Amplifier

General Information

This in-line GaAs-FET receive pre-amp provides high gain and low noise amplification for weak receive signals. The KP-2 also has automatic RF-switching, which disengages the pre-amp any time it detects a transmission signal being emitted by the transceiver.

The KP-2 pre-amp has an attenuator built into the circuit which can be selected by changing the position of a switch on the internal circuit board. This switch is set in the HIGH level gain position at the factory.

The following is a list of associated parts shipped with the unit:

1	KP2RC Control Unit
1	1-3/4" U-Bolt
1	1-3/4" Cradle
2	5/16" Nuts with lock washers

KP2RC RF Line Voltage Control Unit

The RF line voltage control unit designated KP2RC requires that you apply a positive 13.6 - 15 Vdc to the power jack positioned on the end of the control box. The center pin is positive. When the KP2RC is turned on, it places the DC voltage onto the RF signal line running up to the antenna. The DC voltage is blocked at your radio by a coupling capacitor. The mast-mounted KP-2 pre-amp is designed to pick this DC voltage off the RF line and use it to power the pre-amp.

The RCA phono jack located on the side next to the **RADIO** connector allows you to connect **ON/OFF** switching devices (such as an external switch option on an SSB/CW radio) to the KP2RC. This option allows you to automatically remove the DC voltage (by grounding the center pin of the RCA phono jack) from the RF signal line any time your radio is in the **transmit** mode.

Specifications

NOTE: Unless otherwise indicated, specifications apply to all models of the KP-2 Series.

Frequency Coverage:

***MIRAGE* Model #**	**Range**
KP-2 / 10 Meter:	28.000 - 28.500 MHz
KP-2 / 6 Meter:	50 - 54 MHz
KP-2 / 2 Meter:	144 - 148 MHz
KP-2 / 220 MHz:	222 - 225 MHz
KP-2 / 440 MHz:	430 - 450 MHz

Gain:	15-20 dB (HIGH gain setting) 10-15 dB (LOW gain setting)
Noise Figure:	0.6 dB, independent of gain setting
Power Requirements:	Positive 13.6 - 15 Vdc
Power Capability:	300 Watts, maximum
Connectors:	
KP-2 Pre-Amplifier:	2 UG-58N VHF connectors
KP2RC Control Unit:	2 UG-58N VHF connectors 1 3.5mm Coax plug 1 RCA Phono plug

KP-2 Pre-Amplifier Installation

The *MIRAGE* KP-2 is designed to be easily mounted on your 1-3/4" diameter antenna mast:

1. Place the supplied 1-3/4" U-bolt around your antenna mast and slip the supplied 1-34" cradle onto it.
2. Slip the base plate of the KP-2 (with the **CONTROL BOX** 'N'-connector pointing *down*) onto the U-bolt.
3. Secure the KP-2 using the provided 5/16" nuts and lock washers.
4. Connect the **ANTENNA** 'N'-connector of the KP-2 to your antenna using RG-8U (or equivalent) cable.
5. Connect the coax from the **PRE AMP** output of the KP2RC control unit to the **CONTROL BOX** 'N'-connector of the KP-2.
6. Ensure that **ALL** connections are tight!

KP2RC Control Unit Installation

This unit has been designed to allow operators to control the operation of the mast-mounted KP-2 pre-amplifier by using the existing RF signal line between the Ham Shack and the antenna to power the pre-amp. Locate the Control Unit for ease of access to the **ON/OFF** switch.

1. From the ANTENNA side of the KP2RC Control Unit, run a length of good quality 50 Ohm coax cable from the 'N'-Connector to the Antenna Mast. Allow enough length to reach the KP-2 Pre-Amplifier which will be mounted on your antenna mast.
2. Connect a positive 13.6 - 15 Vdc power supply to the 3.5mm DC coaxial power jack located on the end of the Control Unit. The center should be positive with the sleeve ground.

   + CAUTION: ***Before connecting the control unit to your radio, ensure that there is no voltage on the center-pin of the RADIO connector of the KP2RC!***

3. Connect a short length of good quality 50 Ohm coax cable from the ANTENNA output of your Radio to the 'N'-Connector on the right side of the KP2RC Control Unit (the side with the RCA phono connector).