

Instruction Manual

IN-SHACK GaAsFET PRE-AMPLIFIER

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

Version A

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Before operating this unit, please read these instructions completely.

MIRAGE
COMMUNICATIONS EQUIPMENT
300 Industrial Park Road
Starkville, MS 39759

MIRAGE KP-1 Pre-Amplifier

MIRAGE KP-1 In-Shack Pre-Amplifier

General Information

This in-line GaAs-FET receive pre-amp provides high gain and low noise amplification for weak receive signals. The pre-amp has an attenuator built into the circuit which can be selected by changing the position of a jumper on the internal circuit board. This switch is set in the **HIGH** level gain position at the factory. The pre-amp also has automatic RF-switching, which disengages the pre-amp any time it detects a transmission signal being emitted by the transceiver.

Specifications

- **NOTE:** Unless otherwise indicated, specifications apply to all models of the KP-1 Series.

Frequency Coverage:

<u>MIRAGE Model #</u>	<u>Range</u>
KP-1 / 10 Meter:	28.000 - 28.500 MHz
KP-1 / 6 Meter:	50 - 54 MHz
KP-1 / 2 Meter:	144 - 148 MHz
KP-1 / 1-1/4 Meter:	222 - 225 MHz
KP-1 / 70 Centimeter:	430 - 450 MHz
Gain:	20 dB (HIGH gain setting) 10 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:	
Antenna:	S0-239, (KP-1/2M, KP-1/6M, KP-2/10M) UG-58N,(KP-1/220, KP-1/440)
Radio:	S0-239, (KP-1/2M, KP-1/6M, KP-2/10M) UG-58N,(KP-1/220, KP-1/440)
Remote:	RCA Phono jack
Power:	3.5mm DC Coaxial jack

Installation

The Mirage KP-1 connects in-line between your radio and your antenna. The KP-1 requires a positive 13.6 - 15 Vdc power source. The center pin of the 3.5mm coaxial power jack, located next to the RCA phono plug labeled **REMOTE**, is positive. Plug your antenna into the SO-239 or 'N' type antenna connector labeled **ANTENNA**, and your radio into the connector labeled **RADIO**. Use good quality 50 Ohm coax between your radio and the pre-amp, and RG-8U or equivalent between the pre-amp

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and your antenna. If your radio provides remote keying, connect to the RCA phono plug labeled **REMOTE**. Apply power to the KP-1 by toggling the **POWER** button to the inward position. Remember that in FM mode the amplifier does not increase the audio signal from the station you are attempting to amplify. If the station is weak, you will notice a decrease in white noise when the amplifier is turned on. If the station is strong and does not contain white noise in its audio, then there will not be any difference in the reception of the station when the unit is turned on. In cases of very high signal reception, you may want to change the factory preset gain level to the **LOW** position. To do so, follow these steps:

1. Remove the two screws in the cover.
2. Carefully remove the cover.
3. Move the jumper from the front position to the rearmost position.
4. Replace the cover.

Tuning

This preamp has been tuned to amplify loads at 50 ohms within the specified frequency range of its band of operation. These units will tune out of the range of the factory specifications. If you wish to retune this unit for best reception at another frequency you may do so with the basic equipment you have. Install the unit as specified in the manual. Tune your radio to the signal that you wish to amplify with the unit off. Remove the cover of the unit. Turn the unit on and note the change in the s-meter on the radio. Turn the trimmer capacitor located in front of the antenna connector and to the left of the two large relays. The trimmer will be red or blue with a small screwdriver slot on top. You must use a non-metallic tool to adjust the trimmer. Adjust the capacitor for best reception of the signal. The 440 unit will have two trimmer capacitors. Adjust both for best reception. Replace the cover. If you tune the unit too far out of the original band, no amplification will be achieved.

Technical Assistance

If you have any problem with this unit, first check the appropriate section of this manual. If the manual does not reference your problem or your problem is not solved by reading the manual you may call *MIRAGE* at 662-323-8287. You will be best helped if you have your unit, manual and all information on your station handy so you can answer any questions the technicians may ask.

You can also send questions by FAX to 662-323-6551. Send a complete description of your problem, an explanation of exactly how you are using your unit, and a complete description of your station.

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ONE YEAR LIMITED WARRANTY

Any Mirage Communications product found to be defective in materials or workmanship will be repaired or replaced (at Mirage's option) for a period of one year from the date of original purchase.

During the warranty period Mirage Communications will provide, free of charge, both parts and labor necessary to correct defects in material or workmanship.

To obtain such warranty service, the original purchaser must:

- (1) Provide "proof of purchase".
- (2) Ship the product in its original container or equivalent, fully insured and shipping charges prepaid, to Mirage, as addressed below.

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

Improper maintenance or repair may also void this one year warranty. We recommend that units requiring repair during the warranty period be returned to the factory.

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

Mirage assumes no responsibility for any item connected to or used in conjunction with this product.

The foregoing constitutes Mirage's entire obligation with respect to this product and the original purchaser and any user or owner shall have no remedy and no claim for incidental or consequential damages.

All Mirage products to be serviced, in-warranty or out-of-warranty, should be shipped, freight paid, to: **Mirage, 116 Willow Road, Starkville, MS 39759, USA.** Product must be accompanied by a letter describing the problem in detail.

Be sure to include YOUR NAME, ADDRESS, AND TELEPHONE NUMBER!

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This warranty gives specific legal rights and you may also have other rights which vary from state to state.