

MFJ

Plug-In Autotuner Board for K3 Transceiver

Model MFJ-950K3

INSTRUCTION MANUAL

CAUTION: Read All Instructions Before Operating Equipment

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Introduction

The MFJ-950K3 Tuner board is a board specifically designed to be installed in the Elecraft K3 Radio. The tuner board plugs in place of the KANT3 board and allows the radio to quickly tune antenna loads up to a 10:1 SWR. The relays used are fast switching sensitive relays designed for RF and Telecom use. The toroid cores are chosen for their low loss and high Q to reduce tuner losses to a minimum. The board is also set up to give a second antenna port and a receive antenna port.

Installation of the board will require some care in the disassembly and reassembly of the K3 Radio. Read over this manual and review the K3 users manual to familiarize yourself with the procedure before starting. Do not lose any screws, nuts, or washers in the radio during this process. When reassembling the radio, make sure you replace all of the screws, nuts, and washers from where they came and make sure they are all tight. There is no soldering required to install the tuner board.

Electrostatic Discharge

The K3 tuner and the MFJ-950K3 have many parts that are static sensitive and can be damaged by static discharges. When working in the K3 tuner it is strongly suggested that an antistatic work mat and grounded wrist strap be used to reduce the chances of static electricity damage. Static discharges too faint to feel can damage the components.

Tools Required:

- #0 Phillips screwdriver
- #1 Phillips screwdriver
- Small pliers
- ¼" nut driver
- Soft cloth or static dissipating pad to lay cabinet parts on to avoid scratching.

Strongly Recommended:

- ESD wrist strap
- Static dissipating work mat

Parts Included:

- 1 MFJ-950K3 tuner board
- 1 SO-239 connector with cable
- 2 4-40x1/4 black screws
- 2 4-40 KEP nuts

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The MFJ-950K3 is NOT a product of Elecraft and has no relationship to this product.

Installation

1. Disconnect all power and cables from the K3
2. Remove the 9 screws holding the top cover. The screws to remove are marked with arrows in the diagram. Do not remove the unmarked screws.

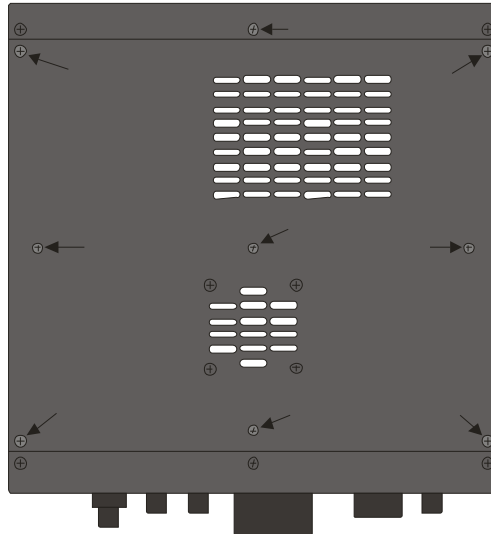


Figure 1

3. Open the cover and carefully unplug the speaker wire.
4. Remove the hardware securing U12 and U13 to the side panel. Do not lose the lock washers and nuts inside the K3.

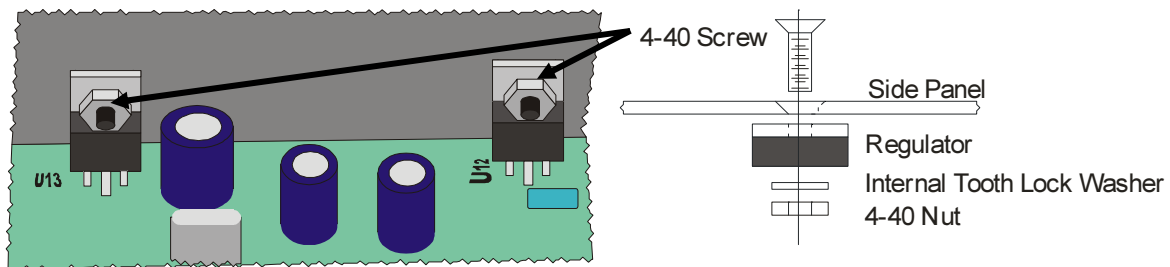


Figure 2

5. Remove the screw and lock washer holding the KANT3 board to the spacer and the screw holding the rear panel (marked with arrows).

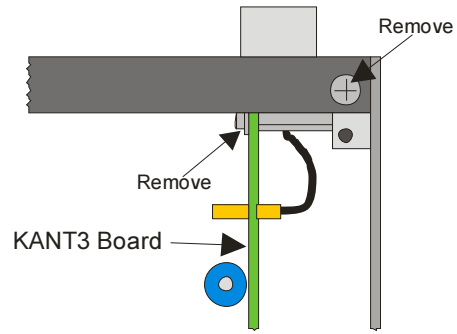


Figure 3

- Remove the screws holding the side panel. Do not remove the screw holding the spacer that the KANT3 board was attached to.

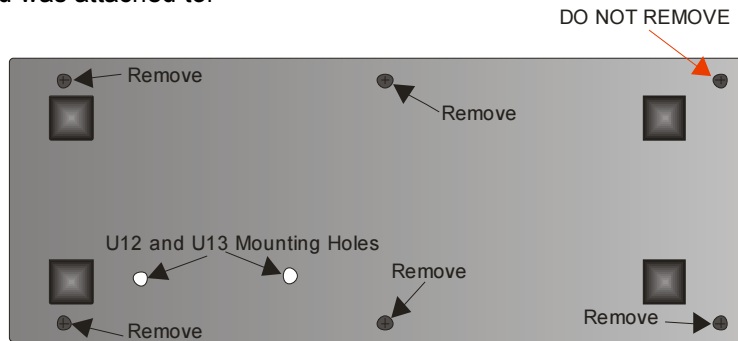


Figure 4

- Unplug the antenna connector from the KANT3 board.

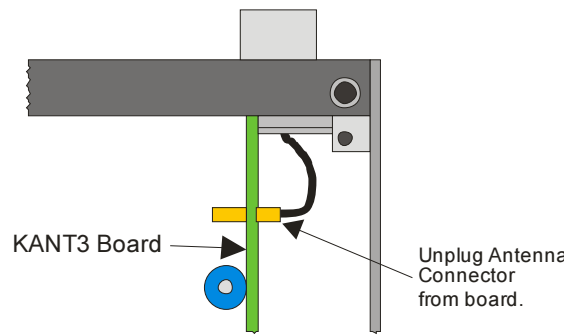
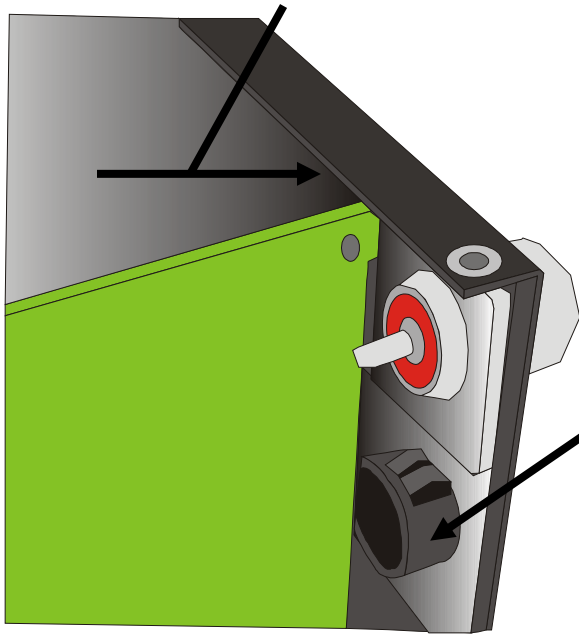


Figure 5

Flex the back a little to allow the board to clear.

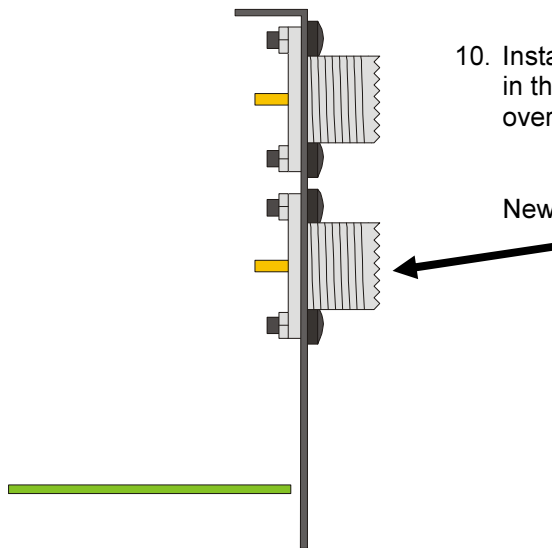


8. Rock the KANT3 board and pull up to remove it from the connector. Flex the back a little to help the board clear the back panel.

Hole Plug and tabs to squeeze to release the plug.

9. Remove the plug in the hole for the ANT2 connector. Squeeze the tabs in to release the connector from the back panel.

Figure 6



10. Install the new SO-239 connector using the included hardware in the hole where the plug was. Tighten the screws tight but not over tight. Loose screws can cause noise problems.

New RF Connector

Figure 7

11. Install the MFJ-950K3 tuner board into the P3 socket that the KANT3 board was plugged into. Support the tuner board while plugging in the antenna connections.

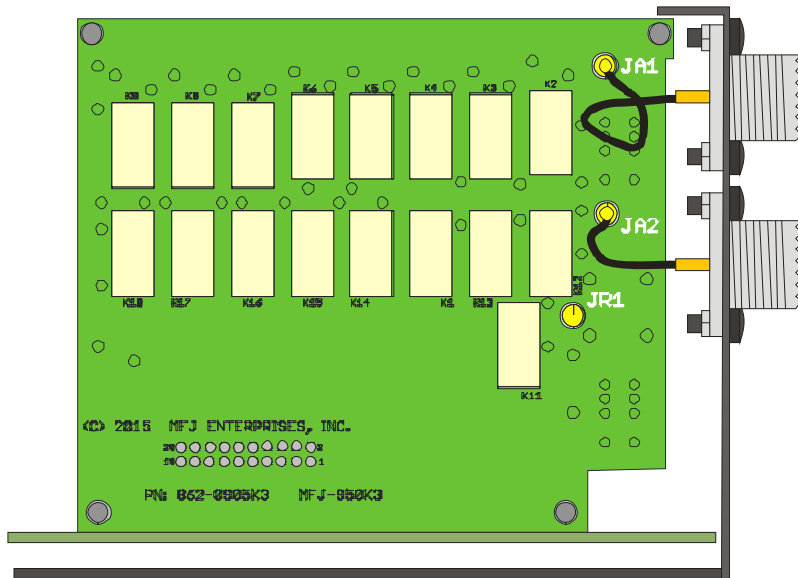


Figure 8

12. Start reassembly of the K3 by reinstalling the right side panel by installing the 4-40x3/16 screws removed in step 6 (see Figure 4).
13. Reinstall the 4-40x1/4 Zinc pan head screw and lock washer holding the tuner board to the spacer attached to the right side panel and the black 4-40x3/16 flat head screw that holds the side to the back panel. (See Figure 3).
14. Reinstall the black 4-40x3/8 flathead screw, lock washer, and nut removed from U12 and U13. (See Figure 2.)

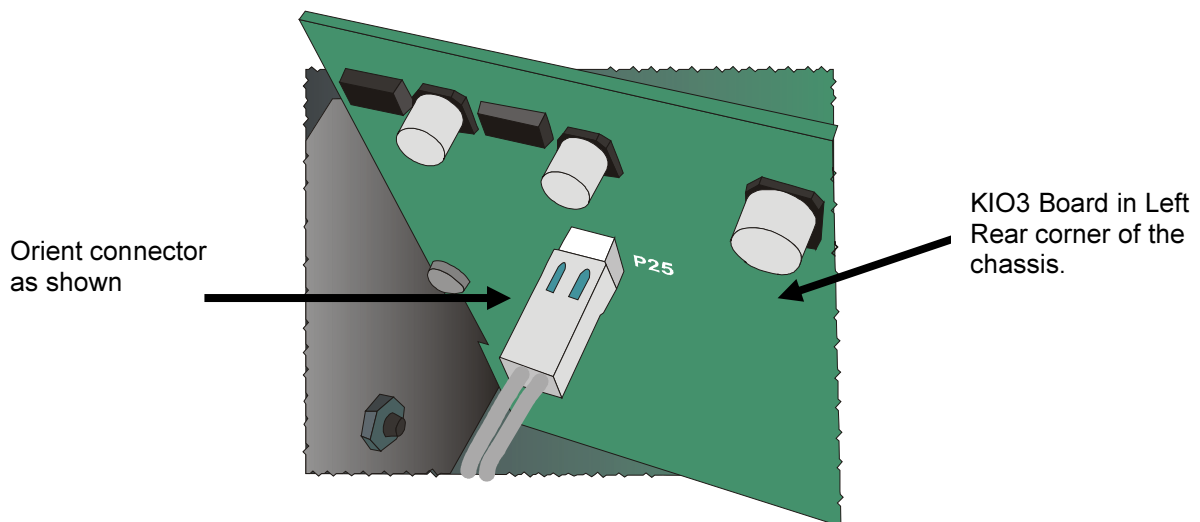
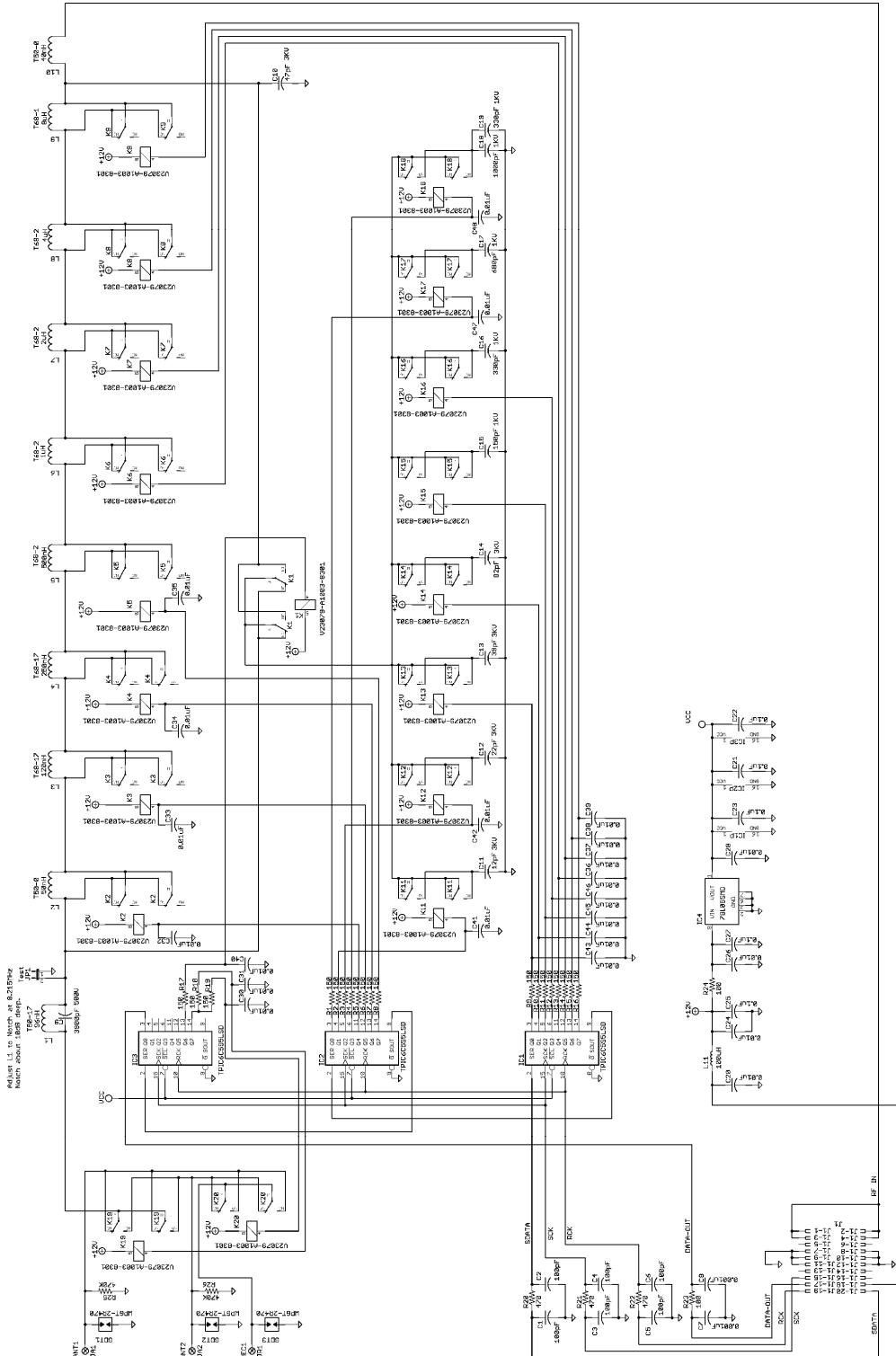


Figure 9

15. Bring the cover to the radio and hold over the radio, carefully plug in the speaker connection into P25 on the KIO3 board oriented in the way that the diagram shows in Figure 9.
16. Position the top cover on the K3 with the tabs on the cover going under the rear lip. Secure the cover with the nine black flathead 4-40 screws that were removed earlier.
17. Verify all screws have been reinstalled and are tight.

- Connect the power and antenna to the K3 and turn it on. Enable the MFJ-950K3 using the CONFIG command as described in the Owners manual.

Schematic Diagram



FULL 12-MONTH WARRANTY

MFJ Enterprises, Inc. warrants to the original owner of this product, if manufactured by MFJ Enterprises, Inc. and purchased from an authorized dealer or directly from MFJ Enterprises, Inc. to be free from defects in material and workmanship for a period of 12 months from date of purchase provided the following terms of this warranty are satisfied.

1. The purchaser must retain the dated proof-of-purchase (bill of sale, canceled check, credit card or money order receipt, etc.) describing the product to establish the validity of the warranty claim and submit the original or machine reproduction of such proof of purchase to MFJ Enterprises, Inc. at the time of warranty service. MFJ Enterprises, Inc. shall have the discretion to deny warranty without dated proof-of-purchase. Any evidence of alteration, erasure, or forgery shall be cause to void any and all warranty terms immediately.
2. MFJ Enterprises, Inc. agrees to repair or replace at MFJ's option without charge to the original owner any defective product provided the product is returned postage prepaid to MFJ Enterprises, Inc. with a personal check, cashiers check, or money order for **\$12.00** covering postage and handling.
3. MFJ Enterprises, Inc. will supply replacement parts free of charge for any MFJ product under warranty upon request. A dated proof of purchase and a **\$8.00** personal check, cashiers check, or money order must be provided to cover postage and handling.
4. This warranty is **NOT** void for owners who attempt to repair defective units. Technical consultation is available by calling (662) 323-5869.
5. This warranty does not apply to kits sold by or manufactured by MFJ Enterprises, Inc.
6. Wired and tested PC board products are covered by this warranty provided **only the wired and tested PC board product is returned**. Wired and tested PC boards installed in the owner's cabinet or connected to switches, jacks, or cables, etc. sent to MFJ Enterprises, Inc. will be returned at the owner's expense un-repaired.
7. Under no circumstances is MFJ Enterprises, Inc. liable for consequential damages to person or property by the use of any MFJ products.
8. **Out-of-Warranty Service:** MFJ Enterprises, Inc. will repair any out-of-warranty product provided the unit is shipped prepaid. All repaired units will be shipped COD to the owner. Repair charges will be added to the COD fee unless other arrangements are made.
9. This warranty is given in lieu of any other warranty expressed or implied.
10. MFJ Enterprises, Inc. reserves the right to make changes or improvements in design or manufacture without incurring any obligation to install such changes upon any of the products previously manufactured.
11. All MFJ products to be serviced in-warranty or out-of-warranty should be addressed to **MFJ Enterprises, Inc., 300 Industrial Park Rd, Starkville, Mississippi 39759, USA** and must be accompanied by a letter describing the problem in detail along with a copy of your dated proof-of-purchase and a telephone number.
12. This warranty gives you specific rights, and you may also have other rights, which vary from state to state.