F8101ALE with Elecraft Power Option

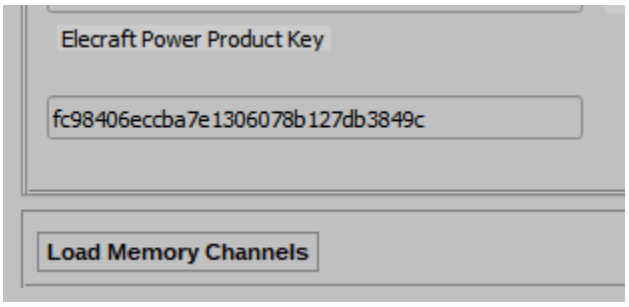
User's Guide

Introduction

The Elecraft Power Option along with the F8101ALE Version 4 software allows the combination of the ICOM IC-F8101E (firmware 4.08) and the Elecraft KPA-500 and KAT-500 pair to be used for 2G ALE operations. The software integrates control of all three devices so that, when scanning, the KAT-500 ATU is bypassed. The software also manages the status of BYPASS and MAN for the ATU in multiple scenarios detailed below. When the KPA-500 is placed into OPERATE mode, the software ensures that the radio power settings are kept in sync. This software also allows remoting the ATU and Amplifier away from the computing position since all three units are connected to a computer via serial cables.

Installation

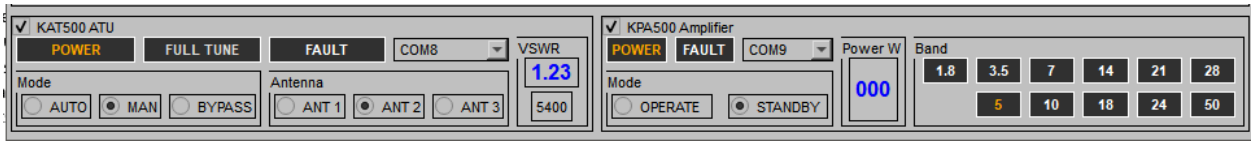
The F8101ALE_v4 software includes the Elecraft Power Option (EPO) program. EPO is activated with a product key that is radio serial number dependent. Thus the software may be used ONLY with one ICOM IC-F8101E and Elecraft KAT/KPA trio at a time. ***Thus it is crucial to decide which ICOM radio that the Elecraft units will be "tied to" before purchasing a product key.*** To activate EPO, the user is supplied with a text product key and this is input into the configuration dialog in the identified field. Once the configuration is saved, the product key is evaluated against the radio serial number and the EPO controls are shown and activated. If no product key is provided, the controls are NOT shown to the user.



MY EPO KEY _____

Configuration

There are two major components to the EPO software. The left section is for the KAT-500 and the right section is for the KPA-500. Each unit can be enabled or disabled individually. If the user does not own the KPA-500 amplifier, the software may still be used with the KAT-500 ATU in order to bypass the tuner on ALE scanning.



The user will note that the controls in the software are laid out similarly to the actual hardware unit for quick recognition, particularly for the KAT-500 ATU.

To enable each device, enable the checkbox for it and then set the serial port name for the device. The user is referred to Elecraft documentation for each device for set up and configuration and proper usage.

A separate serial control cable for both devices is required for full operation. The user is required to ensure full operation of the control serial lines using the Elecraft supplied software for control and configuration. Once this Is accomplished, the Elecraft software is no longer used, and EPO may be used.

The Elecraft control software may NOT be used concurrently with the EPO software.

MY KAT SERIAL PORT _____
MY KPA SERIAL PORT _____

Usage

ATU/Amp/Radio Interlocks

The KAT/KPA control software uses several ALE-enabling interlocks with the ICOM IC-F8101E radio controller.

The following actions are valid ONLY WHEN USING THE REMOTE CONTROL SOFTWARE.

1. When the F8101ALEv4 controller is put into A-SCAN mode, the KAT-500 is automatically put into BYPASS mode.
2. When the F8101ALEv4 controller's A-SCAN mode is stopped, the KAT-500 is automatically put into MAN mode so that the ATU is active on the current channel.
3. When an incoming link is made, or an outgoing link is requested, as reported by the ICOM F8101E, the ATU is put into MAN mode to ensure that the antenna is matched, regardless of the amplifier setting.
4. When the F8101ALEv4 controller changes it's power level to HIGH, the KPA-500 is automatically put into STANDBY mode to avoid over-driving the amplifier.
5. If the KPA-500 controller checkbox is cleared, the serial port to the amplifier is closed and the amplifier is powered down.
6. If the KAT-500 controller checkbox is cleared, the serial port to the ATU is closed and the ATU is powered off, and the serial port to the amplifier is closed and the amplifier is powered down.

7. If the KPA-500 is put into OPERATE mode, the IC-F8101E power level is dropped to LOW. If the user has set the MED power level for operation with the Amplifier, the user is required to change to the MED power level.
8. If the KPA-500 is put into STANDBY mode from OPERATE mode, the IC-F8101E power level is returned to HIGH. If a different power level is required, the user is required to set the power level manually.