Consolidated Release of K-Line firmware

Applies to:

K3 firmware version: 4.83

KAT500 firmware version: 1.63

KPA500 firmware version: 1.38

A note from Wayne Burdick

The K3, KPA500, and KAT500 all have new beta firmware releases available. All three must be updated to take advantage of these major improvements to the KAT500 and KPA500. All known problems with unwanted re-tuning and faults have been fixed.

We've also added a new feature that allows the KAT500's network settings to automatically track the K3's VFO frequency. The K3 will send frequency information over the K3's AUXBUS line, and the KAT500 will select previously memorized tuner settings as you move across the band, or when you "point and shoot" to work a packet spot.

If you have any difficulty with the instructions below, please post a question to the Elecraft list, or contact customer support.

Wayne Burdick, 2/21/14

Installation Instructions

With the next steps, you will be downloading the new firmware for each device from the applicable software pages on our web site.   If you are new to firmware updates, please see the Help facility in each Utility for details on how to download firmware.

NOTE: You must use the latest version of the Utilities to obtain use of the new firmware features

1. Download the **latest** version of the K3 Utility, install it and use it to save your K3's configuration. Then install the latest K3 Production firmware with the new Utility.

2. Download, install and use the **latest** version of the KPA Utility. Then install the latest KPA500 Production firmware with the new Utility.

3. Using the **latest** version of the KAT500 Utility, save the KAT500's configuration. Then install the latest K3 Production firmware with the new Utility.

If you do not have the full K-Line of products, please update the applicable ones for your shack.

Here's how to use the new features of the K3 and KAT500

Set up the K3 to send VFO information to the KAT500

(a) Verify that your AUX cables are in place

Make sure the K3 and KAT500 (and KPA500, if applicable) are connected via the accessory cable. If you are using the Elecraft cables, E850463 or those that came with the KPAK3AUX Cable Kit, you already have the necessary signals for the new features.

If you've built your own cable and omitted the AUXBUS or BAND lines, you may need more wires for this to work. The AUXBUS line must be connected, as well as the four BAND lines, which we use to "qualify" the AUXBUS frequency data.

(b) Prepare your K3 Configuration

At the K3, locate the CONFIG: KAT3 menu entry. Tap the numeric keypad '1' button (also labeled "A/B"). You should see "KAT500Y" or "KAT500N" with successive taps. Leave it on "KAT500Y" (the Y means "Yes, send VFO info to the KAT500"). Exit the menu.

(c) Confirm that the KAT500 responds as expected

Verify that as you tune the K3's VFO, the KAT500 selects the appropriate LC settings. This occurs after you *stop* moving the K3's VFO for about 1/2 second. You should hear one or more relays clicking at the KAT500 when entering segments that have different LC settings.

Prepare the KAT500

In conjunction with the new VFO tracking feature, you may find it a good idea to "retrain" your ATU on 8 or 10 kHz boundaries on 160 meters, and every 20 kHz on 80 meters, particularly if the antennas have sharp SWR curves.

(a) Use the KAT500 Utility, Configuration tab, Edit Configuration, Erase Memories to erase memories on bands that have sharp SWR curves (e.g. 160 and 80 m).

(b) While you're in the Edit Configuration dialog, make sure the Amplifier Key Interrupt power setting is 1500 for a KPA500. If not, click "Optimize for KPA500", then "Apply".

(c) Change the tuner's mode to MAN. In mode AUTO, the KAT500 will start a "full search tune" whenever the SWR reaches a threshold. If you're pretuned, that should be unnecessary and is probably

undesirable. Mode AUTO is useful for remote tuners where it is inconvenient to press the ATU TUNE button when you need to.

(d) Using exciter power only, perform a full search tune at 10 kHz increments on 160 and 20 kHz increments on 80 meters. Do this for frequencies where you don't want the ATU to enter "full search tune" when you next QSY there. This is best done by setting the K3's TUN POWER to about 20 watts, HOLD the K3 TUNE button to generate carrier, then tap the KAT500 TUNE button. It may take a while for a few settings, but often it will start "close" and won't take long at all. It depends on the SWR curve of the antenna on that band.

(e) IMPORTANT: When you first visit a new frequency, the ATU will first "snap in" a setting from a nearby memory. It may be a memory you've used before with a different antenna. If the setting is inappropriate for the current antenna, the SWR will be high, and in mode AUTO, the tuner will need to retune, which requires more or less constant carrier, not SSB speech, not high speed CW.

This completes the set up procedures.