

# WK3 Serial QUICK START GUIDE

## November 17, 2016

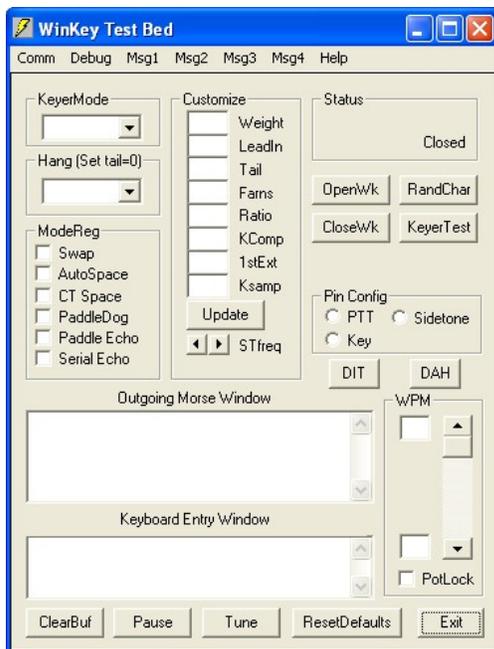
### Revision 1.0

Thank you for purchasing a WK3 Serial kit from K1EL. The first thing to do is to assemble your WK3 Serial kit. To do this you will need to download and print out the assembly document from the k1el website:

[http://www.k1el.com/files/WK3serial\\_assy.pdf](http://www.k1el.com/files/WK3serial_assy.pdf)

The assembly document will guide you through assembly and check out of your WK3 Serial Kit. Please read it all the way through BEFORE you start. The assembly guide will instruct you how to do basic checks to make sure it is working properly. Once that is complete the next step is to connect it to your rig and start using it.

Since WK3 Serial connects to a standard RS232 serial port on your PC, no special driver is required.

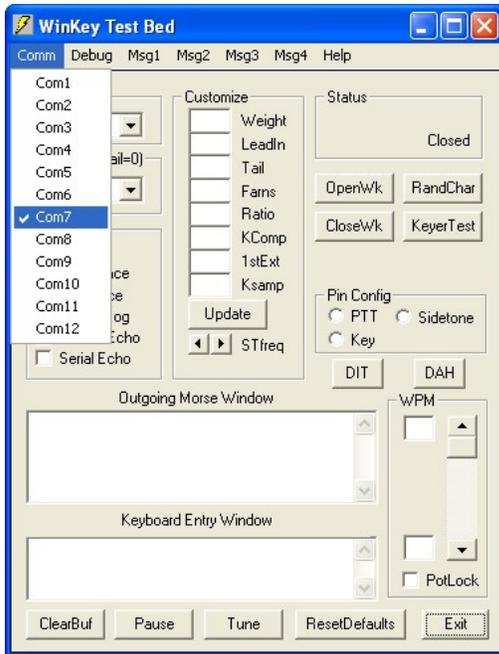


K1EL provides several applications on the k1el website that you can use to quickly test out WK3 Serial. The first one to try is WKTEST:

<http://www.k1el.com/WKTESTX.html>

Once the application is installed, start it up and you will see the dialog box show at left. All sorts of features can be tested with this application. But we have to do a little setup first.

All you need to do is to configure the serial communications port. Click Comm on the menu bar and the com port selection list is shown. Select the com port that you attached WK3 Serial to.

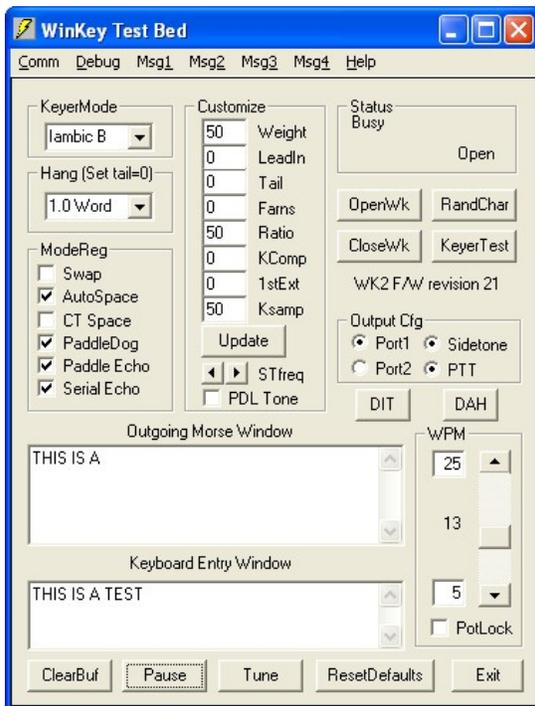


Here is a help file that goes with WKtest:

[http://www.k1el.com/files/WKtest\\_Help.pdf](http://www.k1el.com/files/WKtest_Help.pdf)

It provides enough info to get you going.

Now click on the OpenWK pushbutton and a message will display just below the CloseWK and KeyerTest pushbuttons. This message will tell you if WK3 Serial was found and give connection status. If all is well the version of the WK3 IC on the board will be displayed.



You can type into the Keyboard Entry Window and you should see the Busy status indicator turn on and off. WK3 Serial does not have an audio sidetone output but it does have an LED keying indicator. If serial echo is on then what you type will be echoed in the Outgoing Morse Window.

Now hook up some paddles and test paddle entry. If PdlEcho is on, letters entered on the paddles will be echoed in the Outgoing Morse window.

You can use the Customize controls to try different keying options. Remember to click on update to transfer the setting changes to WKUSB.

When PotLock is checked the speed pot controls the WPM rate. The upper and lower limits can be specified. When PotLock is unchecked the scroll bar just above PotLock controls the speed.

Another app to experiment with is WKdemo:

<http://www.k1el.com/WK3demo.html>

This is a more polished application that can be used with WK3 Serial. It has some nice message handling features.

For those who are interested in the inner workings of the WK3 IC, read through the WK3 Manual:

<http://www.k1elcom/WK3IC.html>

It is aimed mostly at software developers and discusses register settings and serial commands. There is also a brief Theory of Operations that is interesting to read. There are some references to the WKUSB kit and also coverage of standalone mode which do not apply to the serial kit.

### **WKUSB vs. WK3 Serial**

One obvious question is what are the differences between the WKUSB and WK3 Serial kits ? WKUSB is a set up to be both a standalone keyer and a PC controlled keyer. Since it is self contained with batteries and push button controls, WKUSB is ready to be used with any transceiver. WK3 Serial is intended to be used in conjunction with a PC only. Since WK3 Serial needs to get its power from the PC serial port, it can't be used in standalone mode. Also it does not have a sidetone speaker or pushbuttons so there is no way to control it except by PC control.

### **Connecting WK3 Serial to your station**

First, connect a serial cable from WK3 Serial to the Serial COM port on your PC. Next, connect the key output to the keying input on your rig. Since WK3 Serial performs the keying function, it drives your rig in the same manner as a straight key. In other words there are only two leads, ground and key control.

It is a fairly easy task to make up a keying cable. You could connect one end of the cable directly to the WK3 Serial PC board or you may want to use some sort of intermediate connector. The other end will mate to your rig's key input. Usually this is a ¼ inch phone plug. A two wire cable is all that is required to key a typical transceiver. Make sure you disable the internal keyer in your rig (if it has one) and set it up for straight key mode. WK3 Serial is not capable of directly keying an older tube based transmitter, you will have to use a high voltage keying adapter.

If you decide to use keying paddles with WK3 Serial, they will connect to the L, R, and G pads on the PCB. You will most likely want to use a mating connector to match whatever is on your set of paddles.

You can use WKTEST to make sure that WK3 Serial is keying your rig properly. If you run into problems, make sure you have selected the correct key output port. This is done in Output Config area of WKTEST the dialog box.

95% of all installations will use the KEY output only. The PTT output is intended for installations that require control of antenna relays or linear amplifiers. PTT is asserted before KEY and is held asserted for the entire transmit interval. The delays are adjustable, look at the lead in and tail delays settings.

There are several other small applications on the K1EL Website that you might find useful. Most likely you already have a Windows based logging or station control program ready to go. Each application handles WinKeyers in a different way but in general there will be a dialog box (or boxes) where you set up the WK3 serial com port and then the operating configuration that suits

your needs. The application will store this configuration so that you only have to enter it once. The next time you run WK3 Serial with that application the configuration will be preloaded.

### **Contact Information**

Please post questions on the K1EL Message Board:

[http://groups.yahoo.com/group/k1el\\_keyers/](http://groups.yahoo.com/group/k1el_keyers/)

You can contact K1EL directly at:

Steven T. Elliott K1EL  
43 Meadowcrest Drive  
Bedford, NH 03110 USA

e-mail: [k1elsystems@gmail.com](mailto:k1elsystems@gmail.com)

website: [www.k1el.com](http://www.k1el.com)