

WinPSK Setup and Operation for Elecraft K3

This software, designed by Moe Wheatley, AE4JY, allows you to send and receive PSK signals using your computer.

Download the WinPSK software from:

<http://www.moetronix.com/ae4jy/files/winpsk213.zip>

The software runs on Windows.

My equipment consists of:

Elecraft K3 Radio:
Dell Computer

Elecraft K3 Radio Setup and Connections for PSK:

1. Turn the Elecraft K3 transceiver "Off".
2. Connect "Line In" port on rear of transceiver to computer "Line Out" using a monaural cable.
3. Connect "Line Out" port on rear of transceiver to computer "Line In" using a stereo cable.
4. Turn the Elecraft K3 transceiver "On".
5. Press the "MENU" button briefly and "MAIN" will display on K3
Turn the "VFO B" dial until "MIC SEL" is displayed
Turn the "VFO A" dial until "LnE In" is displayed
Press the "MENU" button briefly and the "MENU" will close

6. Press and hold "MENU" button until "CONFIG" is displayed on K3
 Turn the "VFO B" dial until the "RS232" item is displayed
 Turn the "VFO A" dial until the baud rate is 38400 b

7. Set transceiver to $\frac{1}{2}$ maximum transmit power level
 Press the "VOX" button to
 Set "VOX" to On
 Press the "MODE" button repeatedly to
 Set "MODE" to Data
 Press and hold the "DATA MD" button until "31 bPS" is shown on K3
 Turn "VFO B" dial until "DATA A" is displayed
 Press and release the "DATA MD" button
 The transceiver is now set for "DATA A" operation on USB as long as
 the "MODE" remains set to "TX DATA"

8. Is CWT on? It needs to be on and the threshold set so that you see
 the marker centered in the tuning area. If you have Decode and CWT
 on maybe you have the alternate DISP on (current, voltage,
 temp...etc). Try tapping DISP to go back to the normal VFO B display.

9. You also need to sharpen the WIDTH so that you are only hearing
 one PSK signal, and it needs to be centered on the CWT -- a couple
 of taps of SPOT will usually do this once you have it in the CWT range.
 On a busy band, I often use WIDTH of 50 Hz.

If you have a 700hz and 200 hz filter, you may want to use them for PSK31.
 If you try to use just the DSP to narrow down the bandwidth, it does not
 work as well. Using the narrow filters can improve your reception of weak
 signals.

It is suggested that you use Data A mode and not SSB. If using SSB, be
 sure to turn off much of the noise reduction to make PSK work.

It is suggested that you use between 30 and 40 watts to make contacts.

It is suggested that you use the 2700 Hz bandwidth in order to see the
 waterfall at a glance.

Attenuator "on" works if your sound card can live with the signal strength it produces.

If there is a track that you want insulate from the rest of the world (for example because it's a weak trace or there's a very close strong track), you move the filter center to the frequency of the track you want to follow (inside the 50 Hz granularity of course) and then reduce the filter bandwidth to 100-150 Hz (the K3 automatically switches to my 400 Hz 8 pole filter). Sometimes at that point you may wish to switch on the "PRE/4" button.

Computer Software Setup:

Click on "Settings"

Click on "General Setup"

Enter Call Sign:	N3ME
Check	Echo TX Text in RX
Check	Use Slash Zero

Squelch Speed	75
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AFC Limit	100
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Sound Card Clock	0
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Frequency Display Setup

Start Frequency	200
End Frequency	3500

PTT Control Setup	COM-7	using virtual port on my computer
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Sound Card	Use Primary(0)
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Click on "OK" to save the settings and close the "General Setup" window.

Click on "Settings"

Click on "RX Level Adjust..."

The "Recording Control" window will open

Click on "Select" in the "Line In" column

Click on the "X" in the top right corner of the "Recording Control" window

The settings will be saved and the window will close.

Click on "Settings"

Click on "TX Level Adjust..."

The "Volume Control" window will open

Set all to mid-point

Click on the "X" in the top right corner of the "Volume Control" window

The settings will be saved and the window will close.

On the bottom of the main screen you have a window with a number of settings.

RX Frequency	1176	can be another value
Check	AFC	
TX Frequency	1395	can be another value
Check	Net	
Check	BPSK	

In the screen area noted "(Rt-Click on Macros to Edit)", select Macro Set=1 and create macros similar to those on the next page of this document.

Macro Commands

F1	CQ	'start' CQ CQ CQ de 'mycall' 'mycall' (in Delaware) CQ CQ CQ de 'mycall' 'mycall' k 'stop'
F2	Reply	'start' 'theircall' de 'mycall' 'mycall' kn 'stop'
F3	RST	'start' 'theircall' Ur RST is 599 599 de 'mycall' k 'stop'
F4	Callsign	'start' 'mycall' 'mycall' 'stop'
F5	Name	'start' My name is Tony - Tony 'stop'
F6	BTU	'start' %c btu de %m kn 'stop'
F7	Final	'start' %c tu de %m qrz 'stop'
F8	Self	'start' I am 65 years old, the mayor of our small, Oceanside town and licensed since 1976. I have 345 confirmed countries.'stop'
F9	QTH	'start' Town: Bethany Beach County: Sussex State: Delaware Grid: FM28lm 'stop'
F10	Equip	'start' Equipment here is: Elecraft K3 Transceiver Ant 1: Force 12 C-4/D for 10 - 40 meters Ant 2: Dipole for 30 & 80 meters Ant 3: M2 6M5X for 6 meters Amp: Ten-Tec Titan (when used) 'stop'

Frequencies:	160	1.838.15	usb
	80	3.580.15	usb
	40	7.035.15	usb
		7,080.15	usb
	30	10.140.15	usb
		10.142.15	usb
	20	14.070.15	usb
	17	18.100.15	usb
	15	21.080.15	usb
	12	24.920.15	usb
	10	28.120.15	usb