# KXTALK v2.9

This program was written by me DJ0HF and is designed to allow simple operation of the KX3 for the blind, using single key presses to select most options and doesn't need any libraries etc. just one single exe file to run. It also works with the KX2 and K3 transceivers from Elecraft.

The program is free to download along with this documentation and other files but of course although the program has been extensively tested you use it at your own risk.

 And although I have made this program/package free for all to use none of the files in this package may be modified in any way without my written permission.

If you have a question which is not answered by the documentation, or a problem then I can be contacted via the E-Mail address :-
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Unzip the KXTalk folder onto your computer.
Use a text editor to change the first line in kxtalk.cfg to match your comport between 1 and 99 and the second line Serial speed for the KX3 normally 38400 or 9600 (I recommend using 38400). If you are not sure how to find the com port or speed, or simply want to do it the easy way then you can, connect your radio to your computer, turn it on and run the program find my radio in this package which will search all the com ports and tell you the com port number and speed and will also automatically put that information into the configuration file.

 The third line of the configuration file power should be set to the power level you want to use when you first connect the program to the radio between 0 and 15. Initially this value is set to 10 watts. The fourth line is swr and if set to 0, in tune mode you have to press the S key to hear the SWR but if you set it to 1 then when in tune mode the SWR is repeated continually until you exit tune mode. The fifth line is S-meter which if set to 1 corrects the S-Meter reading by 12db (2S points) if the preamp is off, but doesn't make a correction if set to 0. I think the K3 has this S-Meter correction built in to it's firmware, so you can probably set it to 0 but the

KX3 doesn't. Default is 1. The sixth line is the 6 Metre repeater offset and can be set between 0000 and 1999 in Khz with the standards normally being plus or minus 500, 600 or 1000Khz, the default set in the config file is +500Khz. The 10 metre offset is always -100Khz.

Start the program kxtalkv29.exe, you can exit the program at any time by hitting the Q key.

The program will announce the version and connect with your radio and say connected if it is successful in communicating with the radio and whether the connected radio is a K3, KX2 or KX3. If it doesn't say connected then probably the comm port or the speed is wrong.

You can voice the help file at any time by hitting the H key.

You put the program into various modes by a single key press and when you first start the program it will initialize on 40 metres, 7.1Mhz LSB unless you have used this program before in which case it will return to the last frequency and mode you were using on 40 Metres.

In this **Frequency mode** which you can re-enter at any time by hitting the F key the left and right Cursor/Arrow keys change the frequency by plus or minus 100Hz except in FM mode where the left and right cursor keys control the squelch. The up and down Cursor/Arrow keys change the frequency by 1Khz, the Page up and Page down keys by 10Khz and if not in CW mode then the plus and minus keys change the frequency in 1Mhz steps, in CW mode these keys are used for fine tuning, 10Hz steps. Pressing F at any time will voice the mode and frequency and if VFO B or Split is being used this will be announced, as is repeater mode. IF you are on 10 metre FM repeater mode then you can use the up and down page keys to step through the 10 metre repeaters in 10Khz steps. Note : As mentioned in CW mode you can use the plus and minus keys to adjust the frequency in 10Hz steps which can be especially useful if the APF function is in use.

If you tune the radio using the main tuning knob the program will follow the frequency changes and if you stop tuning on a station and want to know the frequency just hit the F Key. You can get the **S meter** reading at any time by hitting the S key and as the KX3 reads 12db (2 S points) low

if the preamp is off this will be automatically corrected if the S-meter parameter in the config file is set to 1 but no correction is applied if this parameter is set to 0 (I think the K3 automatically corrects the S-Meter reading so you can probably set it to 0).

**Frequency Entry Mode**, hitting E will put you in frequency entry mode where you can enter a frequency between 1 and 30Mhz. The Mhz and Khz values must be separated by a full stop/point but for example to go to exactly 15Mhz you only need to enter 15 and then hit the carriage return to move to that frequency. Entering an invalid frequency the word invalid will be voiced and the entry will be ignored. Pressing F will confirm that the frequency change has taken place if you want to check. You can input frequencies with the top row of keys on the keyboard or the numeric key pad.

**Zero Frequency**, Most stations tend to transmit on exact Khz frequencies and when you tune your receiver with the tuning knob you may not be exactly on the Khz but if you tune the receiver so the audio frequencies sound a bit high then hitting Z will put you exactly on the Khz frequency in use by the station you are listening too.

**CW Spot**, hitting Z in CW mode will either zero the frequency or give you a tone so you can tune the CW signal to that audio frequency depending on the spot mode selected. You are then transmitting on exactly the same frequency as the station you are hearing.

You can change **Modulation mode** at any time by hitting the M key and it will cycle through LSB/USB/CW/AM and back to LSB. Except on 10 and 6 metres where FM follows AM and then back to LSB. FM can be used on any frequency greater than 27Mhz.

In the following modes the up and down arrow keys work to increase or decrease the parameter chosen.

**Band change** mode by hitting the B Key. In Band change mode each tap on the up arrow will go up one band or cursor down to go down one band, but pause between cursor key presses to give the radio time to change band. Or in band change mode you can go directly to any band by hitting one of the number keys 1 is 160Metres, 2 is 80Metres and so on with 0

being 10 metres or the - Key (to the right of the 0 key on an English keyboard) to go to 6 Metres. After selecting a band using the number keys the radio automatically returns to frequency mode.

If you are not sure which band you are on just hit the B key again to voice the band and then F will put you back in frequency mode.

The program automatically puts the radio into LSB on 160/80 and 40Metres and USB for 60Metres and from 20Metres all bands up to 6Metres, unless you have been using a different mode on that band, in which case the mode you were last using will be restored. Also the pre-amp is automatically turned off on bands 160 to 30 Metres and on for bands 20 metres and up.

**Bandwidth mode** by hitting the W key. In Bandwidth mode the up and down cursor keys increase or decrease the filter bandwidth in 100Hz steps using the up and down cursor keys. The maximum for SSB is 4Khz and the minimum 1Khz.

For CW the maximum is 1Khz and the minimum 200Hz. You can use the left and right cursor keys to correct the frequency in 100hz steps while in Bandwidth mode, to get the station you are listening too into the passband if necessary.

**VFO Change/Split Mode** normally VFO A is used for receive and transmit but if you hit the V key then VFO B will be selected and used for transmit (split mode). Hitting the V key again turns off the split putting you back to VFO A for both transmit and receive.

For reasons best known to the Elecraft developers split mode only works in LSB, USB and CW but not in AM or FM so you can't use it to work FM repeaters for example on 10 Metres, so if you are on 10 or 6 metre FM then when you hit v then repeater mode will be enabled with a -100Khz split on 10 metres and on 6 metres the offset value from the config file will be used. Hitting v again will turn off repeater mode.

So to work split you are hearing probably a DX station who says something like up 5 or up 10. So you hit the V key to select VFO B and this copies VFO A into VFO B and if he has said up 5 you hit the up arrow key 5 times to move up 5Khz or if he said up 10 you could hit page up to move the VFO B up 10Khz. You will be receiving on VFO A but if you transmit then the radio will transmit on the VFO B frequency, you are in split mode. You can check at any time which mode you are in by hitting F

of course, which will announce VFO B if you are in split mode. Hit V again to return to normal VFO A operation.

**Power mode** by hitting the P key. In Power mode the up and down cursor keys increase or decrease the power in 1W steps between 0 and 15 watts.

**RF Gain mode** by hitting the R Key. In RF Gain mode the up and down cursor keys increase or decrease the RF gain.

**AF GAIN mode** by hitting the A key. In AF Gain mode the up and down cursor keys increase or decrease the AF gain.

**Tune Mode,** Hitting the T key will turn on the KX3 transmitter in Tune mode so that the ATU can be used to adjust the antenna matching. Hitting T again will put the KX3 back into receive mode.
While in tune mode, the program first does an auto tune if the auto atu is turned on, then switches to manual tune automatically so you can hear the swr. If swr in the config file is set to zero then hitting S will give you the SWR of your antenna. If swr in the config file is set to 1 then the SWR will be automatically and continually repeated until you leave tune mode which is useful if you want to use a manual ATU.

**Memories**
The program offers 10 memories and you can store either a single frequency or if you have split setup then the split will be stored.
To store a channel in a memory you hit C for Channel save and then a number key 0 to 9.
To recall the memory hit G for go to channel and then a number key 0 to 9.

Trying to recall a memory which hasn't been used results in an invalid message.

Hitting U after you have chosen a memory channel with G will move up to the next memory channel so you cycle through the memory channels.

F1 switches the **Preamp** on or off
F2 switches the **attenuator** on or off
F3 switches the **Noise Blanker** on or off

F4 switches the **Noise Reduction** on or off
F5 switches the **Notch Filter** on or off
F6 switches the APF function on and off in CW mode.
   Fine tuning in CW mode can be done in 10hz steps using the plus
   and minus keys. This is especially useful when the
   APF function is on Which peaks a CW signal at one frequency.

F12 Switch **Autoatu** between on and Bypass.

**Level mode**, hitting L after turning on the Noise blanker allows you to increase or decrease the NB level using the up and down cursor keys. Hit any other key to leave the NB Level mode.

Unfortunately Elecraft did not implement any way to vary the Noise reduction from a program so if you want to change it then the only way is to hit F4 to turn it on and immediately begin turning the AF gain control (left most knob of the horizontal group of 3 on the front panel on the KX3)

**Keyer Speed mode**, hitting K puts the program in keyer speed mode and the program will voice the current keyer speed in wpm. The radio is put into CW mode and you can test the morse key without transmitting. Use the up and down cursor keys to increase or decrease the speed. The minimum is 8 word/minute and the maximum 50 Words/minute. Hit K again if you want to confirm the keyer speed and hit any other key to put the radio back into it's previous mode with the keyer off.

**Reading and changing Menu Values**
You can read and change many of the menu items from within the program. First you must find the menu item you want to read or change in the file Menu Commands text file. Then note the menu number.

To read the value of this menu number hit the N key for Menu Number and then enter the 3 digit menu number and hit Enter.
When asked for the Menu Value just hit Enter and the contents of this menu item will be read and can be interpreted using the values in the Menu Commands text file.

To change a menu item hit the N key for Menu Number and then enter the 3 digit menu number and hit Enter.

When asked for the Menu Value enter the 3 digit value you want to use and then hit Enter and the program will respond with okay.

Note ; not all menu items can be changed and the Menu Commands file may not contain all of the possible menu items.