

**Installation** – The download package consists of these notes and a setup file (SetupK3SPanVer110.exe). Once the download is complete extract the two files to a directory of your choosing and run the setup file. This will install the K3 Soft Panel Version 1.1.0 application in the K3-SoftPanel directory as a subdirectory under the CWSoft directory on the C drive. When the setup is complete you should find a K3-SPan icon on your desktop. If no icon is found, set up a short cut to the K3SPan.exe file located in the K3-SoftPanel directory.

**Setting the Com Port on First Use of the Interface** – Once the application has been installed double-click on the K3-SPan icon to start the program for the first time. On initial startup a main menu and logging grid will appear along with an image of the K3 front panel. The K3 front panel is disabled at this point since no port has been selected for communicating with the radio. To define a com port click on the panel image or use the Connections menu. This will call up a small dialog for selecting the com port and baud rate. Once those have been selected clicking on the Connect button in that dialog will begin the connection process, close the dialog, and bring up a live K3 front panel. On this initial use the front panel display may obscure the logging grid and may need repositioning. At this point you can explore the other menu items to configure the application or follow on with the description below.

**Subsequent Use of the Application** – Following the first session when you start up the application to begin a new session a Resume dialog will display a check list of features which you have used on the previous session and can elect to resume or you can cancel. If you wish to continue with the same features merely click on the Resume button and the application will pick up where you left off. If you wish to disable/enable a certain feature uncheck/check the corresponding check box. This dialog applies only to the major entries from the main menu. Other entries such as those contained in the Message Template, Radio Parameters, and Band Limits will be automatically retained.

Since use of the front panel display is very similar to the actual K3 panel, these notes will focus first on the supporting functionality of the application and following that a discussion of the few non-standard features of the front panel display.

**Logging Grid** – This grid is laid out similar to an ARRL log book and is used to record contacts. The **FREQ**, **MODE**, and **POWER** entries are filled in by data received from the radio and the other entries are the result of operator entry. To begin a QSO click on or tab to the **UTC-ON** column which will set the **DATE** and **UTC-ON** time. Type in the call of the station being worked in the **STN.WRKD** column. If the station is listed in the **OperatorNames.csv** file in the Documents subdirectory the name will be inserted and if a member of **FOC** and/or **CW Ops** that information will appear in the **ORGS** column if the logging menu items **Show FOC (CWO) Members** have been checked. Once the QSO is over click on the **UTC-OFF** column to record the ending time of the QSO. Click on the **Log** button or use the **F7** key to log the QSO and clear the logging grid.

**Display Menu** – This menu is mainly self-explanatory and includes the following items

- **Center Forms in Main** – check this item if it is desired that forms initiated by the program are centered in the main form.
- **Disable Screen Saver** – click this item if it is desired to disable the screen saver
- **Disable Alt + F4** – click this item to enable/disable the **Alt + F4** which, when enabled, will automatically shut down the application.
- **Show Title Bars on K3 Panels** – in order to conserve screen real estate you can turn off the presentation of the title bars.

**Connections Menu** – Use the menu item **Connections | Connect Radio** to access a dialog for selecting the com port and baud rate for communicating with the K3. Clicking the **Connect** button will replace the panel image with a live K3 panel and initiate communications with the radio. Certain menu items under the **Radio** and **Messaging** menus will be enabled only after connection with the radio has been established.

**Radio Menu** – Use this menu to configure various parameters associated with the radio that are not part of the **K3 Config** and **Main** menus. This includes the following items:

- **Enable Control Subset** – check this item to enable access to a smaller dialog for controlling the K3. Once this item is checked a "Small" panel will appear under the **RIT** knob on the front panel image. Clicking on this panel will replace the "Full" panel with a smaller version which can be useful in conserving screen real estate.

- **Set Parameters** – clicking on this item will call up a dialog for setting the following parameters associated with the radio: Hold time for use with the left mouse button to activate the HOLD functions, Frequency increments associated with the page up/down keys, RIT Increments, some miscellaneous settings including power and time for checking SWR, Preferred Power Settings associated with modes and antennas, Quick Memories to be used with the M->V button, and definition of front panel controls that you want to include in the tab key sequencing. Once these parameters have been set and applied they will be retained across a restart of the program so there will be no need to revisit this dialog unless changes are desired.
- **Set Band Limits** – use this item to call up a dialog for setting the max/min frequency range to be used for the different modes with the values for the current mode highlighted. Right click on the "Band Limits" panel at the top of the table to load sets of limits that are either pre-defined based on operator class or limits that you have setup and saved. The main use of these limits is in setting the upper and lower limits for the frequency control when using the K3 Control Subset dialog.
- **Check SWR** – use this item to check the SWR as seen by the K3 when the antenna tuner is bypassed. When this menu is activated the SWR will be checked at the power level and period of time set in the Set Parameters dialog.
- **Turn OFF** – use this item to turn off the radio. This can also be accomplished by clicking on the Power button of the front panel if that panel is visible.

**Messaging Menu** – For operating CW you can use this menu item to setup six messages for use in keying the K3 via its internal keyer. These messages, which are defined in a template, can be linked to entries in the logging grid. The Messaging menu includes the following items:

- **Edit Current Template** – Clicking on this item will call up a dialog for defining the six messages and for specifying the delay between Auto CQ messages. Type the desired message in each of the message edit windows. To include a link to an item in the logging grid right click on the position in the message edit box and select an item for insertion in the message. A symbol will be inserted in the message and during operation the inserted symbol will be replaced by the item entered in the logging grid or a space if no item is entered. After applying any changes use the Update Template button to save the modified template. These messages will remain in effect until it is desired to change them. If desired, the messages can also be saved to a file for later use.
- **Load Template from File** – If you have saved templates for later use you can make them the current template using this menu item.
- **Show Keyboard** – If you want to use the Keyboard feature click on this menu item to open up the keyboard window. This menu item also has the Ctrl+K hot key.
- **Show Message Buttons** – If you want to use the message buttons from the front panel click on this menu item to extend the front panel display. You can also use the buttons just below the logging grid to initiate the messages. This menu item also has the Ctrl+B hot key.
- **Set Auto CQ Delay** – use this menu item to set the number of seconds between auto CQ messages
- **Enable Auto CQ** – if this menu item is checked CQ messages will be repeated with the Auto CQ Delay between each
- **Stop Messages** – this menu item, which also has the Ctrl + S hot key, can be used to stop an in progress message. Note that the same can be accomplished using the Escape key as long as no dialog is open. If a dialog is open two presses of the Escape will be required, one to exit the dialog and a second one to stop the message.

**Logging Menu** – Use this menu item to control the following small set of logging features provided by the program.

- **Clear Log Line** – Use this item to clear all entries on the logging grid except FREQ, MODE, POWER which are provided by the radio. This item may also be performed using the Ctrl+W hot key.
- **Show FOC Members** – Use this item to show whether the STN.WRKD entry is a member of FOC.
- **Show CWO Members** - Use this item to show whether the STN.WRKD entry is a member of CW Ops.
- **Setup Local Log File** – All contacts logged using either of the logging buttons or the F7 key are captured in a default log file K3RCat\_DEFAULTLOG.txt which resides in the Logs subdirectory. If desired, you can use the Setup Local Log menu item to define your own file in either a CSV or ADIF format. If this is done the default log, which is in CSV format will continue to be used.
- **Perform Serial I/O Logging** – Use this menu item if you wish to log contacts to another application that can

accept logging information over a real or virtual serial connection. A logging application (SioDemoLog.exe) of this type is included for demonstration purposes and may be found in the Logs subdirectory. If you want to use it just setup a short cut to that exe.

**Help Menu** – This menu item provides access to the following information.

- **User Notes** – accesses a version of these user notes in pdf format
- **Check Updates** – provides access to the web page where information on K3-Soft Panel can be found.
- **K3 Manual** – provides access to a recent copy of the K3 Owner's Manual
- **Elecraft Site** – provides access to the Elecraft web site (<http://www.elecraft.com>)
- **US Frequency Allocations** – provides access to a pdf version of a chart showing frequency allocations
- **About** – provides information about the installed version including build date/time of the SioElecraft DLL.

**Using the K3 Soft Panel** – For the most part the panel works the same way as the real one except of course that the buttons are activated using mouse clicks. Hovering over a given button image will highlight the button indicating it has been selected for use and the region which will be responsive to the mouse clicks.

**Rotary Controls** - The rotary controls are changed using the Up/Down cursor keys. As they are adjusted a small panel inside the image of the associated knob will indicate the value as a percentage of the total range.

**Button Controls** - For a given button the TAP function of the K3 is activated by clicking on the button image using the left mouse button and the right mouse button is used to activate the associated HOLD function. You can also set up hold times wherein the left mouse button can be used to activate both the TAP and HOLD functions. This is done using the menu item Radio | Set Parameters.

**Frequency Entry** – To enter a frequency left click on the FREQ ENT button to activate the VFO-A area and then type in the desired frequency in the "dot format" followed by the Enter key. You can also change frequency by clicking within the frequency readout area inside the main tuning knob and then using the cursor up/down keys to change the frequency by the increment (1, 10, 100, 1000 Hz) selected just below the main tuning knob. **Note that manual frequency entry should be performed using the FREQ ENT button rather than the entry area within the main tuning knob. Use the area within the main tuning knob only for incremental changes performed with the up/down cursor keys.**

**Quick Memories** – If you have setup Quick Memories using the Radio | Set Parameters menu the M>V button can be used to change VFO A/B frequencies, mode, and antenna selection. Clicking on the M>V button will call up a small image of the number pad area of the front panel with highlighting of those Quick Memory buttons that have been defined. Hovering over a highlighted button will show information about the corresponding Quick Memory and clicking on the button will command the radio to implement the changes defined by the Quick Memory.

**Additions to the Front Panel** – The following additions have been made to the front panel to augment it's use as a software application.

- **Test Mode Warning** – When the radio is in Test mode the TX area within the LCD readout area will blink as it does in the real radio and a small red panel immediately above the LCD area will provide another visual indicator that the radio is in test mode and while you merrily CQ away do not expect any replies to those CQs!
- **Separate S-Meter Readout** – Click on the small yellow circle just to the upper left of the LCD area to access a separate S-meter display.
- **Menu** – Clicking on the Menu button will replace the LCD area with three selection boxes the first of which displays the types (Accessory, CW, Digital, etc) of menu items. Selecting a type will fill a second selection box with menu items of that type and as a menu item is selected the values available for that item will fill a third selection box. Descriptive information, extracted from the K3 manual, about each menu item in the second selection box is available by clicking on the small question mark to the right of that selection box.
- **SWR Button** – clicking on the small SWR panel to the upper left of the RIT knob will request that the radio determine the SWR seen with the antenna tuner bypassed. When this button is activated the antenna tuner will be put in bypass mode, the power output of the radio will be set to the value configured using the Radio | Set Parameters menu and the radio will be keyed for the number of seconds defined in the Radio | Set Parameters

dialog, the SWR read by the radio will be displayed on the SWR button. After the elapsed time the radio will be unkeyed and reset to the values existing prior to the SWR test.

- **Info Button** – The Info button just to the lower left of the RIT knob can be used to obtain information about the radio including firm ware installed, accessories, etc.
- **Small Button** – The button labeled Small and located just to the lower right of the RIT knob provides access to a small(er) interface for controlling a subset of the radio's features including: VFO-A/B, Band Up/Down, RIT, AFG, RFG, CW Speed, XFIL, ATT, NM, NR, M1-M4, and a button for activating an SWR check as described above under SWR Button with the SWR value being readout in the clock window. There is also a "Full" button to return to the main Front Panel interface.

**Using the Small Control Subset Dialog** – On this dialog all of the controls requiring continuous adjustment use a single slider whose limits are dependent on the parameter being adjusted. For example when operating CW on the 40m band, clicking on the A> button will highlight the VFO-A frequency window and set the slider limits to those values setup for 40m CW using the Radio | Set Band Limits menu item. Since a shared slider is in use, when you are finished with the adjustment of a given parameter you must release the slider prior to using it to adjust another parameter. When using the mouse click on the Release button to release the slider.

As noted at the bottom of the dialog you can also use the function keys to adjust many of the parameters. To do this press the function key once, adjust the slider to give the desired value, and then press the function key again to release the slider for use in adjusting another parameter.

**Using a Multi-Function Control Knob** – When using the Control Subset Dialog you can also make use of a Multi-Function control knob such as the Shuttle Pro II by Contour. This is described in some detail on [this page](#) of my website.

**Known Issues and Limitations** – Now for the apologies section. The DLL (SioElecraft.DLL) on which this application depends for monitoring and control of the K3 has been in use in my CQ/X application (GPS-Enabled Software for Mobile Contesting) for a number of years so that functionality is quite stable. However, a few of the features that were added to create the K3-Soft Panel application still require some work. Here are a few that I know of – if you find others let me know.

**Keyboard Messaging** - This is a work in progress and currently has some rough edges in the initial release.

**ADIF Log Format** - Two of the logging features indicate that there are options for using the ADIF format. These options have not been implemented for the initial release.

**Info Button** – The Info Button on the front panel display is not returning useful info.

Although the application implements a significant portion of the K3 functionality I am sure there are a number of features that remain to be added. If you have suggestions along these lines please let me know.

Enjoy,

73/Chuck/NO5W