

G1CIK

Yaesu FT-857 / FT-897D / FT-817ND programmer

SCOPE

This document covers the configuration and operation of the programmer software. Please read this document before using the application as it does contain some important information which, if not understood, may corrupt you radio.



PURPOSE

The purpose of this document is to enable the user to understand the options and operation of the programme.

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1.1 REFERENCES

Yaesu / Vertex Standard <http://www.yaesu.co.uk>

The javax.comm package from <http://java.sun.com/products/javacomm/>

The swingx package from <http://swinglabs.org/>

The F-817ND Operating manual <http://www.yaesu.com/indexVS.cfm?cmd=DisplayProducts&ProdCatID=102&encProdID=06014CD0AFA0702B25B12AB4DC9CoD27&DivisionID=65&isArchived=0>

The FT-857D Operating manual <http://www.yaesu.com/indexVS.cfm?cmd=DisplayProducts&ProdCatID=102&encProdID=8CBB7C4BDBAF40129AD4253A4987523C&DivisionID=65&isArchived=0>

FT-897D Operating manual <http://www.yaesu.com/indexVS.cfm?cmd=DisplayProducts&ProdCatID=102&encProdID=0372FA803B7BBADB3076C94ACA7A8C5&DivisionID=65&isArchived=0>

2 SYSTEM INTRODUCTION

2.1 SYSTEM OVERVIEW

This programme is used to set the operational parameters of the Yaesu FT-897D, FT-857D and FT-817ND radios. These include the Engineering parameters, the Menu settings, the Multifunction Keys, the Home, VFO's and Memories. Configuration files can be saved and reloaded and the import and export of the Memory settings into a comma separated values files is also provided.

No warranty or responsibility is expressed or implied for this software.

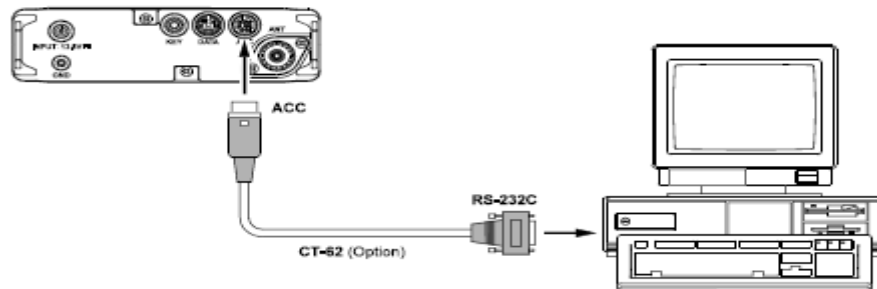
The interface is via a computers RS232 serial port to the radios accessory port. The programme may work via USB to RS232 converters but at this time this has not been attempted. Where this document mentions the FT-857D the notes also apply to the FT-897D.

It is recommend that a careful note is made of your radios engineering configuration parameters before using this software, and to this end a page is available in appendix 6.5 and 6.6 for you to fill in with the appropriate values.

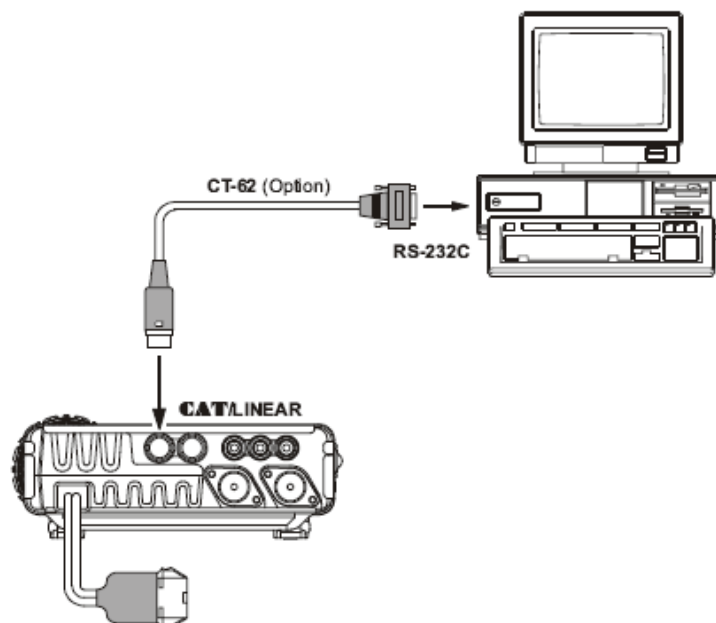
2.2 SYSTEM DIAGRAM/SCHEMATIC

The radios need to be connected to the computer via their ACC port using Yaesu's accessory cable CT-62 or an equivalent. This provides a level conversion from RS232C to TTL.

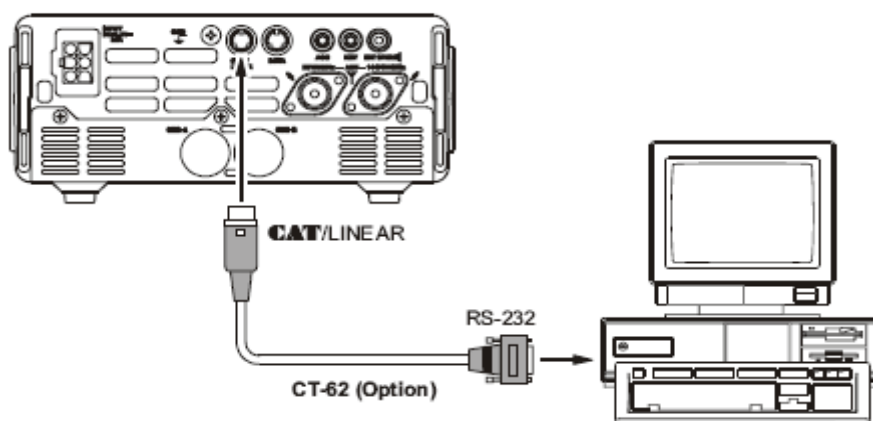
FT-817



FT-857



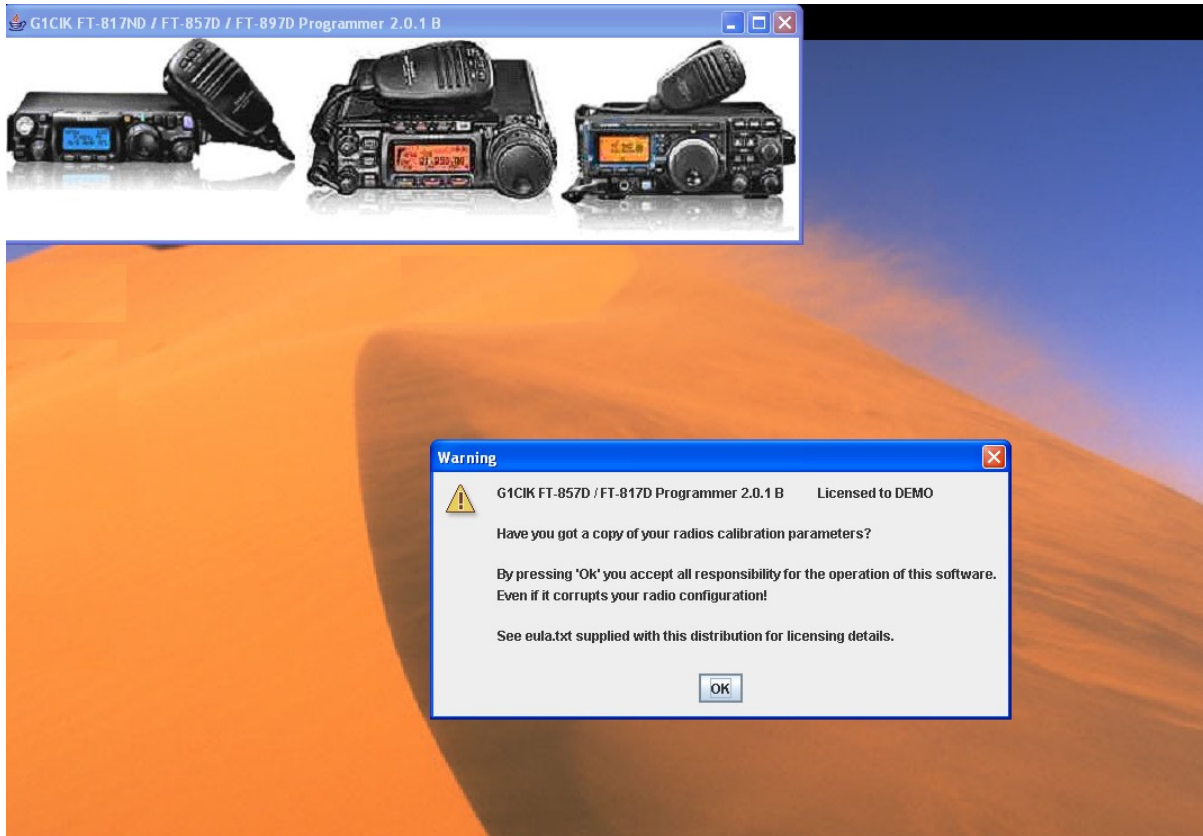
FT-897



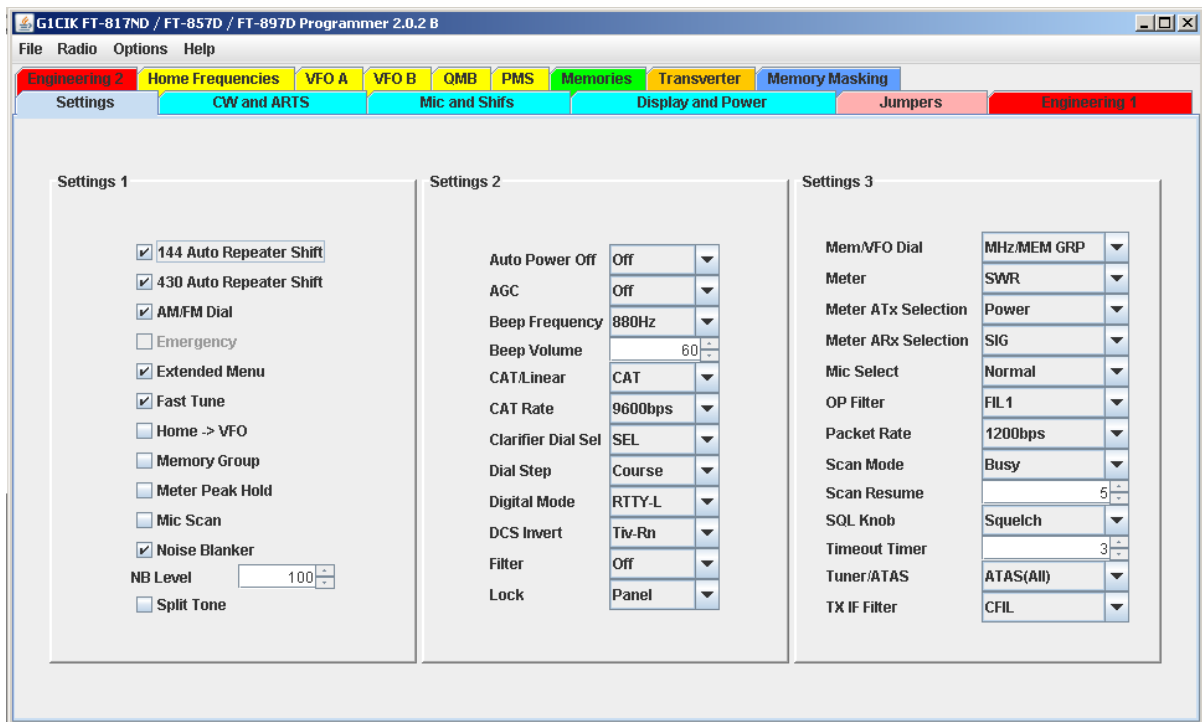
Do not be tempted to connect your computers RS232 port directly to the radios accessory socket. **The voltage levels are different and you will damage the radio.** RS232 +/- 12v TTL 0-5V.

2.3 PROCESS OPERATION

After connecting the radio and starting the software, the user is presented with the acknowledgement and splash windows.

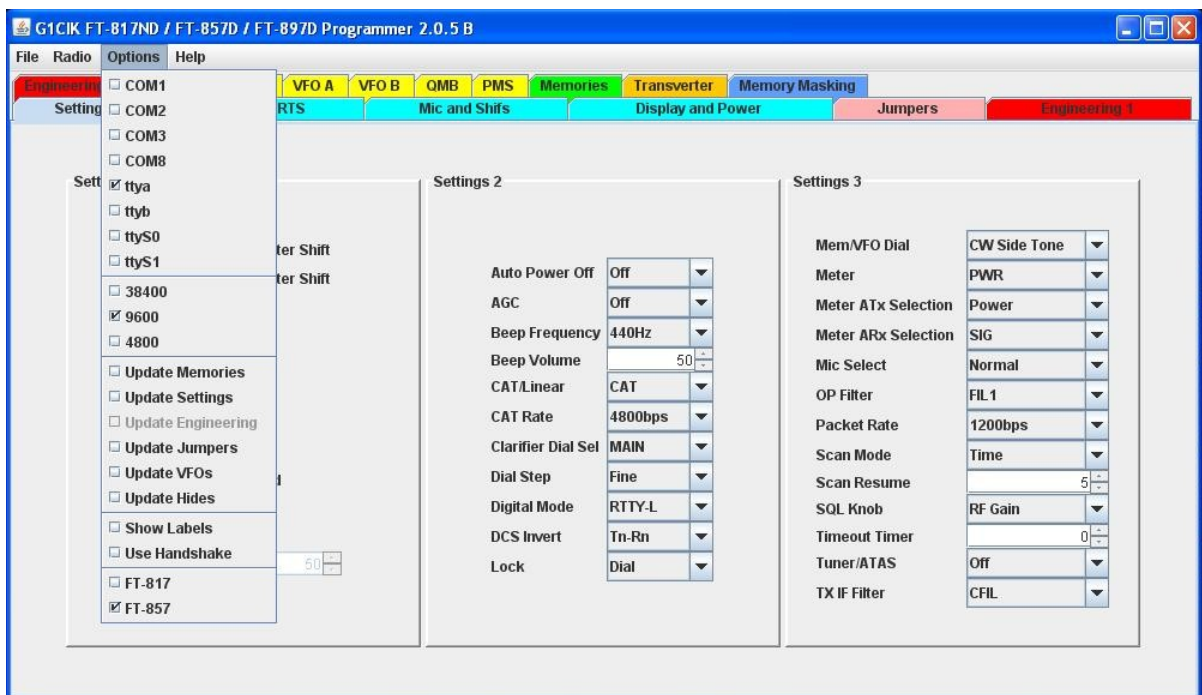


After accepting the agreement the user is then presented with the main screen.



The first thing to do is to set the serial port configuration parameters.

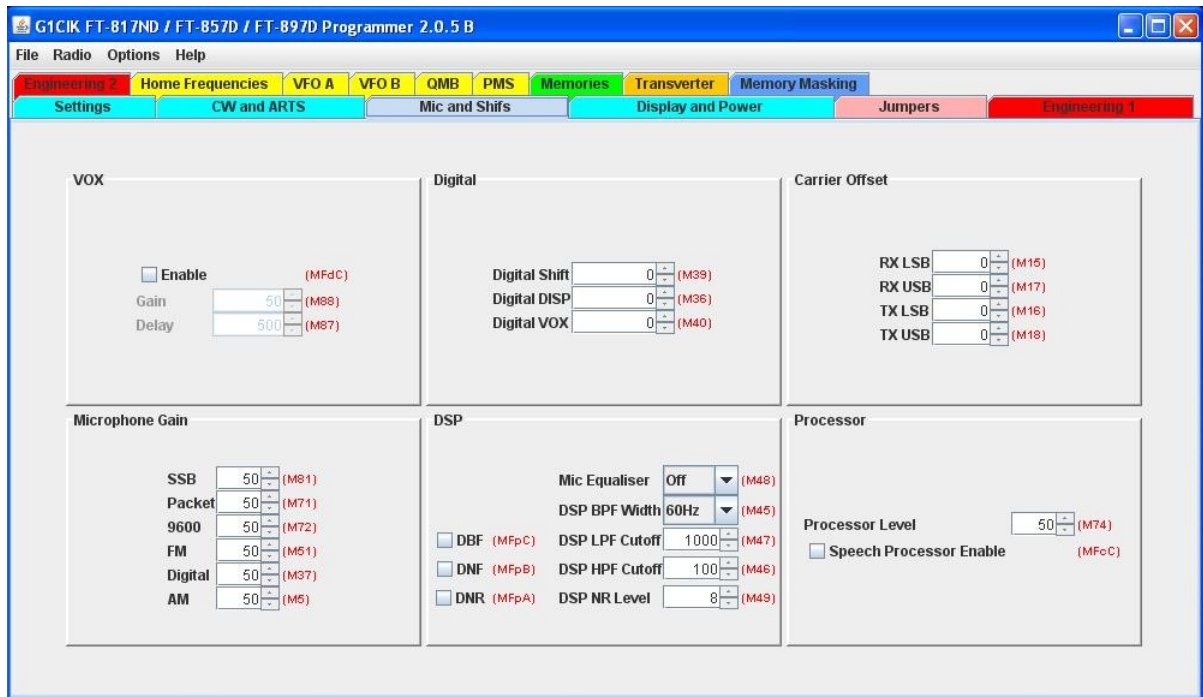
Click on the **Options** menu and then select the required serial communications port and speed. Only one option can be selected at a time so select the required com port and then click on Options again and set the port speed.



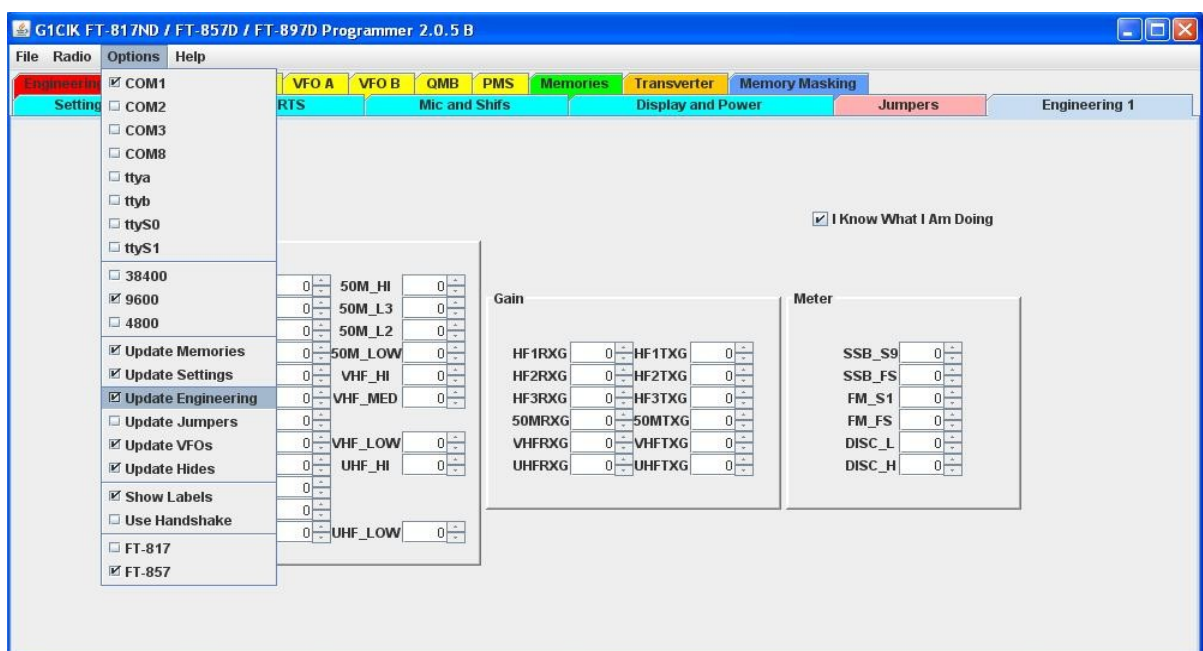
By default the software assumes it is to run with an FT-857 radio, so if you need to change this click on the **Options** menu and then the **FT-817** tick box. After doing this you must exit

the application and restart it for this change to take effect. Failure to do this may cause corruption of the radio configuration. I have not attempted to update the radio with this option incorrectly set and I am reluctant to do so!

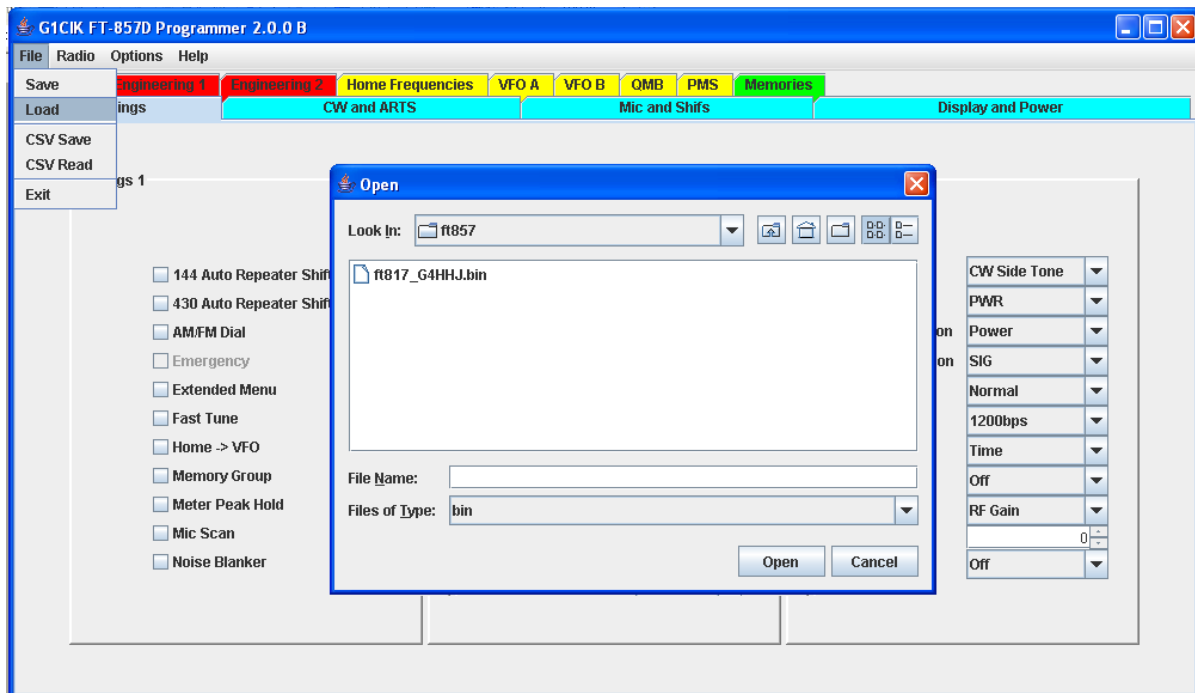
The radio parameters have been grouped together into similar functions, so hopefully the user can find them fairly quickly. To aid in the location of the radios operating parameters, the cyan and orange tabs, there is an option called "Show Labels" which, when selected, adds a small label to each of the parameters that ties up with the menu or function item number.



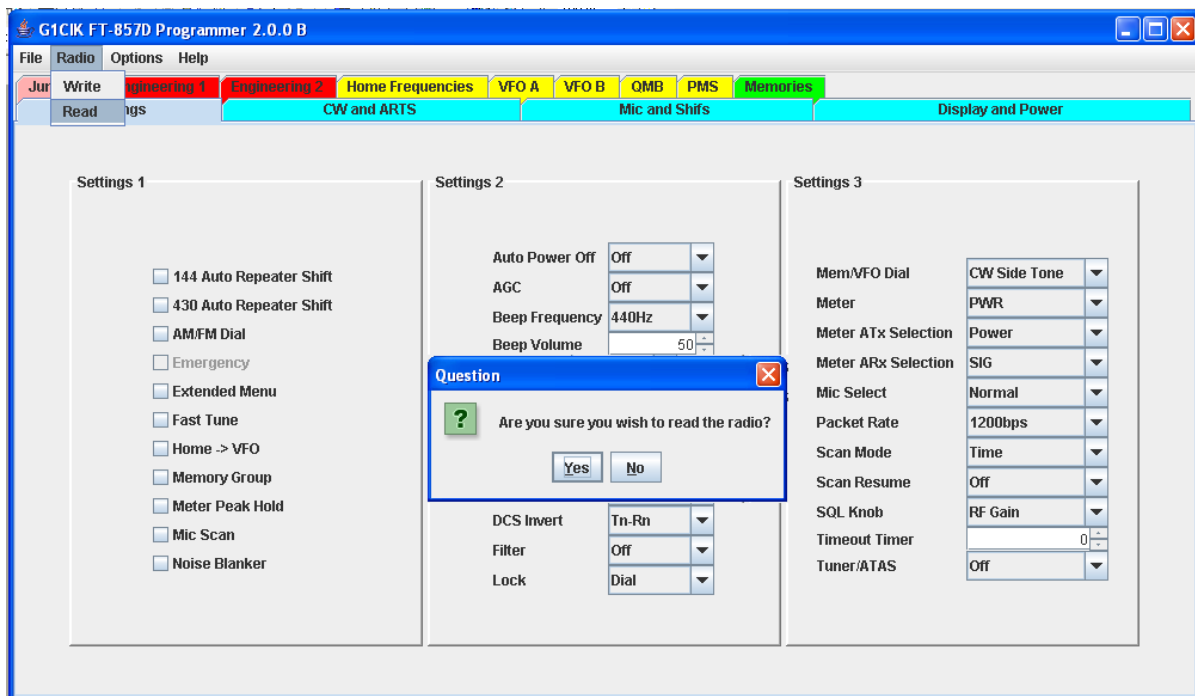
Clicking on the required tab will change the display. The tabs are grouped together and colour coded. The **Cyan** tabs contain the configuration parameters. The **Orange** tab manages the transverter settings (not available when configured for a FT-817). The **Yellow** tabs hold the VFO related options. The **Green** tab is the memories and the **Red** tabs hold the engineering parameters. In order to edit the engineering parameters you have to select the 'I Know What I Am Doing' box. This will also allow the selection of the 'Update Engineering' option.



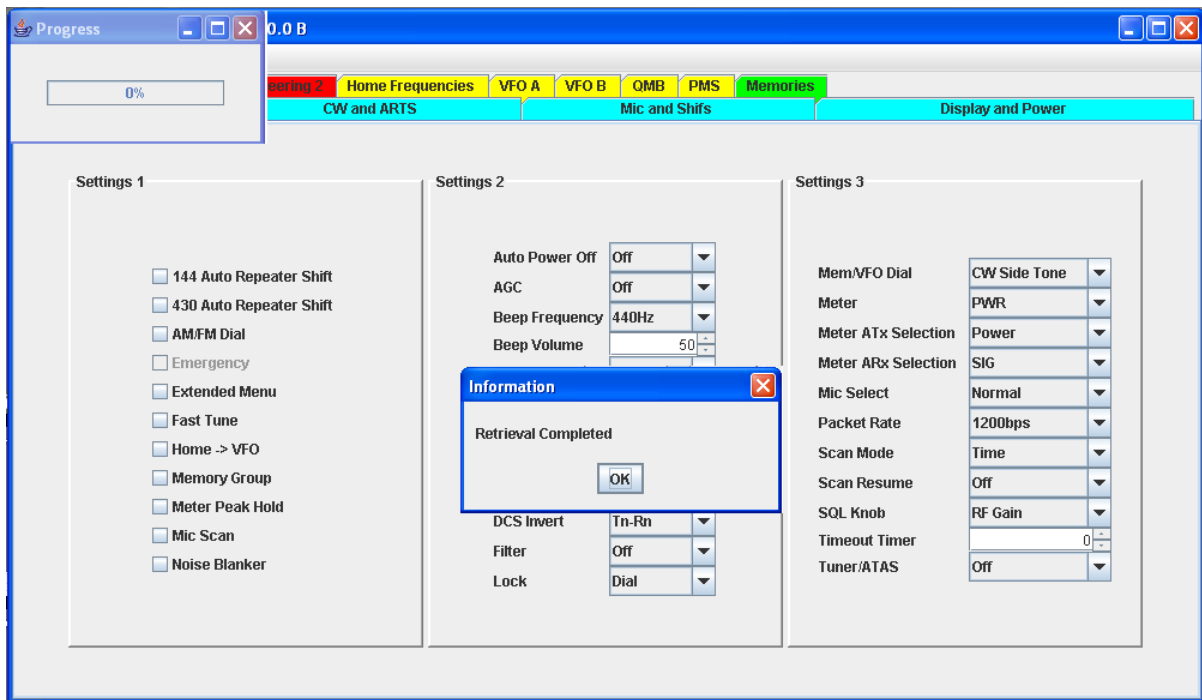
Next you will need to either, load a previously stored data file or, read the configuration from the radio. Select **File** and then **Load** from the top menu. This will open up the file selection window. Select the required BIN file and click on **Open** to load it.



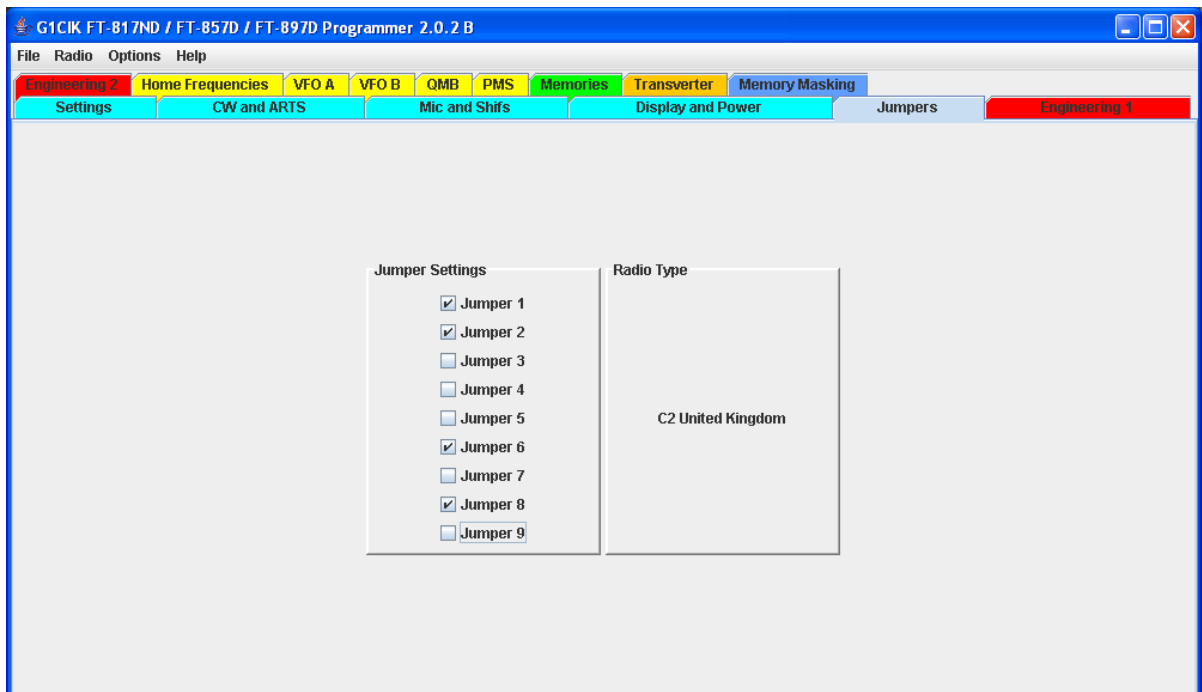
To read the parameters from the radio, first time users will have to do this, select **Radio** and then **Read** from the top menu. The user will then be asked to confirm that you wish to read the radio.



Selecting **Yes** will then display the progress bar. After the read is completed, notification will be given. Select **Ok** to continue.

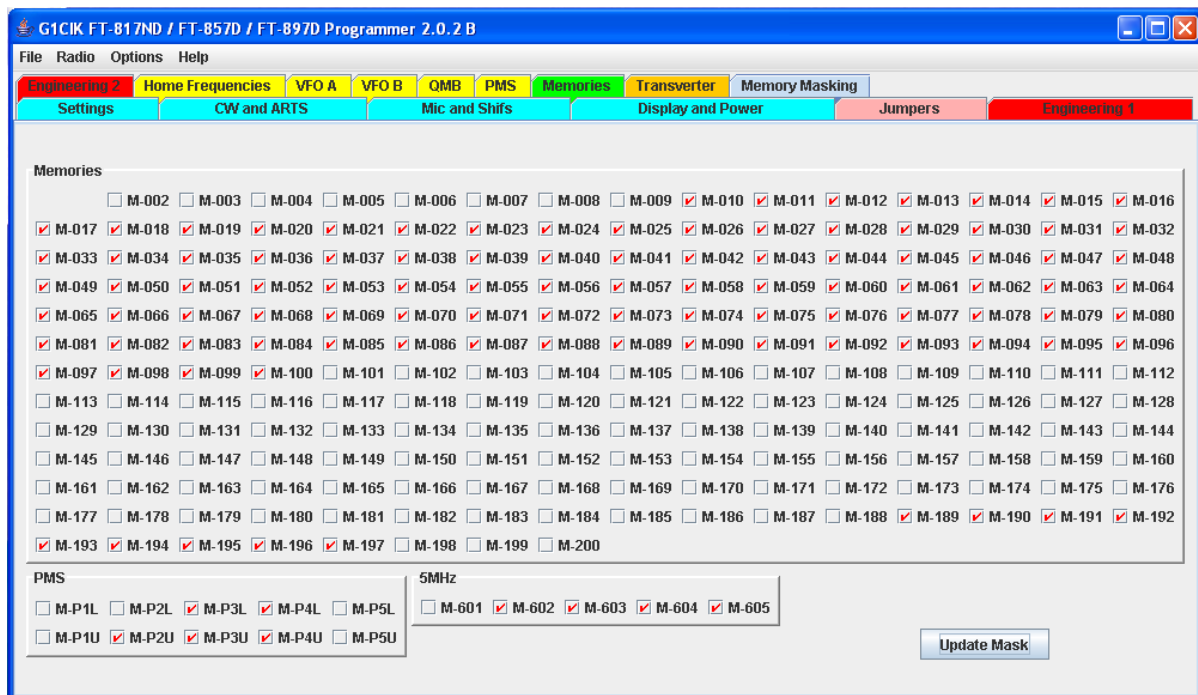


The **Pink** jumpers tab allows you to "soft change" the internal jumpers, changing the radio configuration to that preset for different countries. This allows the radio to be expanded for extra 40M coverage or to fully widen the RX or TX capabilities.



You do this at your own risk, as the software author does not condone transmitting out of band and in some counties adjusting the radio to allow this may actually be illegal. This feature, however, does not work on the 'D' models or (I understand) those produced for the Japanese market.

The **Blue** tab provides a quick method of masking each of the 200 memories and the PMS memories. On the FT-857D you can also enable or disable the 5MHz preset memory entries.



A red tick signifies that the entry is to be hidden. M-001 is not 'maskable' as this is required by the radio for priority watch. The "Update Mask" button is used to read the "Active" fields from the Memory and PMS tables and to set the mask accordingly. Please note that the FT-817 only has 1 pair of PMS memories and does not have the 5MHz option.

The VFO and memory pages are presented as a grid.

Memory	Mode	Shift	FM Narrow	CW Narr...	Tone	IPO	ATT	FM Step	AM Step	SSB Step	CTCSS TX	DCS TX	RIT	RX Freq	TX Freq
160M	CW	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	1.8	0.1
80M	LSB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	3.5	0.1
60M			☐	☐		☐	☐								
40M	LSB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	7.0	0.1
30M	CW	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	10.0	0.1
20M	USB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	14.0	0.1
17M	USB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	18.0	0.1
15M	USB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	21.0	0.1
12M	USB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	24.5	0.1
10M	USB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	28.0	0.1
6M	USB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	50.0	0.5
FM	FM	Simplex	☐	☐	Off	☐	☐	50kHz	5kHz	2.5kHz	E 88.5	023	0	88.0	0.0
Air	AM	Simplex	☐	☐	Off	☐	☐	12.5kHz	5kHz	2.5kHz	E 88.5	023	0	108.0	0.0
2M	USB	Simplex	☐	☐	Off	☐	☐	12.5kHz	5kHz	2.5kHz	E 88.5	023	0	144.0	0.6
UHF	USB	Simplex	☐	☐	Off	☐	☐	25kHz	5kHz	2.5kHz	E 88.5	023	0	430.0	1.6
PHANTOM	AM	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	15.0	0.1

Clicking on the small box in the top right corner above the vertical scroll bar allows the user to select which columns to hide or view and to enable a horizontal scroll bar.

Memory	Mode	Shift	FM Narrow	CW Narr...	Tone	IPO	ATT	FM Step	AM Step	SSB Step	CTCSS TX	DCS TX	RIT	RX Freq	TX Freq
160M	CW	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	1.8	0.1
80M	LSB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	3.5	0.1
60M			☐	☐		☐	☐								
40M	LSB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	7.0	0.1
30M	CW	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	10.0	0.1
20M	USB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	14.0	0.1
17M	USB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	18.0	0.1
15M	USB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	21.0	0.1
12M	USB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	24.5	0.1
10M	USB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	28.0	0.1
6M	USB	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	50.0	0.5
FM	FM	Simplex	☐	☐	Off	☐	☐	50kHz	5kHz	2.5kHz	E 88.5	023	0	88.0	0.0
Air	AM	Simplex	☐	☐	Off	☐	☐	12.5kHz	5kHz	2.5kHz	E 88.5	023	0	108.0	0.0
2M	USB	Simplex	☐	☐	Off	☐	☐	12.5kHz	5kHz	2.5kHz	E 88.5	023	0	144.0	0.6
UHF	USB	Simplex	☐	☐	Off	☐	☐	25kHz	5kHz	2.5kHz	E 88.5	023	0	430.0	1.6
PHANTOM	AM	Simplex	☐	☐	Off	☐	☐	5kHz	5kHz	2.5kHz	E 88.5	023	0	15.0	0.1

When using the software with an FT-817 the CTCSS RX and DCS RX columns are hidden by default as these are not supported by this radio. The order of the columns can be changed by dragging them into the position that you require them and their width may be changed by dragging the columns edge. The column order, width and the hidden options are not remembered by the software and will need to be re-selected when the programme is next run.

After selecting the required options the user can then either save the configuration to a data file by selecting **File** and then **Save** or, write the configuration to the radio by selecting **Radio** and then **Write**.

There is also an option to import or export the 200 memories to and from a CSV file. This can be found on the **File** menu. This CSV file may be amended using your favourite editor or shared between different radios. Even between the FT-897 FT-857 and FT-817 models.

The same can be done with the data files as long as they are between radios of the same type. I.E all 897's, 857's or all 817's. However, do not try and update the engineering parameters from a data file taken from a different radio. They are most certainly different and in doing so may render your radio un-operational. **You have been warned.**

3 SYSTEM SETUP

3.1 SUGGESTED DIRECTORY LAYOUT

		Comments
~ └─ ft857	G1CIKpublic.key	My public key file
	License.key	Your license key file
	eula.txt	End user license agreement
	ft-857.ico	Windows programme icon
	ft-897.ico	Windows programme icon
	ft-817.ico	Windows programme icon
	ft-857.xpm	Unix programme icon
	ft-897.xpm	Unix programme icon
	ft-817.xpm	Unix programme icon
	splash.jpg	Splash screen image
	ft857.bat	Windows start up script
	ft857.vbs	Windows start up script
	ft857.sh	Unix start up script
	ft857prog.jar	The programme library
	options.ini	Configuration parameters
	ft857_dump.bin	Working data store
	ft817_dump.bin	Working data store

3.2 MODULE NAMING CONVENTIONS

File Type	Suffix	Description
binary	..sh .bat	Shell script
	.ico	Image file
	.jpg	Image file
	.xpm	Image file
Config	.ini	Configuration file
	.key	License file
Library	.jar	Java archive
	.dll	Windows library
	.so	Unix shared library
Data	.csv	Comma separated values
	.bin	Binary data file

3.3 MODULE DESCRIPTIONS

3.3.1 G1CIKpublic.key

This file contains my public key and is used to decode the license file.

3.3.2 License.key

This is license file. This file needs to be updated if you purchase a full license.

3.3.3 eula.txt

This is the end user license agreement that you agree to abide by in order to use this software. See 6.4 Appendix IV - EULA

3.3.4 ft-8n7.ico and ft-8n7.xpm

These are icon files that you may use to identify the application on the desk top. The .ico file is for Windows and the .xpm file is for Unix type systems.

3.3.5 splash.jpg

This is the splash screen image file. It was cobbled together from images taken from the Yaesu web site. As the majority of images available on the web site appear to be the same so I guess there is no problem in using them☺.

3.3.6 ft857.vbs

This Visual Basic script can be used on Microsoft Windows platforms. When run it calls the ft857.bat batch file without spawning a command window.

3.3.7 ft857.bat

This is the Microsoft Windows start up script. It contains a number of parameters that you may need to change in order for the programme to run on your system. See the integration guidelines for more details.

3.3.8 ft857.sh

This is the Unix / Linux / AIX start up script. It also contains a number of parameters that you may need to change in order for the programme to run on your system. See the integration guidelines for more details.

3.3.9 ft857prog.jar

This is the main Java archive containing the classes that make up the programme. These classes rely on other classes contained in the javax.comm and swingx.jar files in order to function.

3.3.10 options.ini

This is the configuration file for the programme. All the options, except one, are set using the programme's options menu. The one that is not is where you set the user call sign. It needs to be set using an editor, E.G. Wordpad or vi. An example options file is shown in Appendix I - options.ini

3.4 DATABASE SPECIFICATIONS

3.4.1 ft817_dump.bin and ft857_dump.bin

These are a working store. They are used by the programme during its I/O operation with the radio.

3.4.2 Required disk space

This is dependant upon the number of bin files you keep on your system.

Table Name	Disk Space Requirements per bin file
ft817_<name>.bin	6440 Bytes
ft857_<name>.bin	7410 Bytes

3.5 PLATFORM SPECIFICATIONS

Development and testing has been done under Windows XP, Solaris 10 and Ubuntu 10 all using Java V6.

3.6 DEVELOPMENT ASSUMPTIONS

All FT-817ND's, all FT-857D's and all FT-89D7's are created equal, but some may be more equal then others!

3.7 FUTURE DEVELOPMENT OPPORTUNITIES

- Automatic detection of available serial ports.
- Addition of the Yaesu character set for the 200 memory names.
- Open to suggestions.

4 SYSTEM SUPPORT

4.1 SYSTEM SUPPORT REQUIREMENTS

Via the Yahoo groups web site and on a best endeavours basis.

4.2 KNOWN OPERATIONAL ISSUES

- The CWID field on the FT-817 is the last entry in the memory map, and for some reason only 6 bytes can be read or written back. If you need to use all 8 you will have to use the radios menu option and enter them manually.
- The memory name fields are limited to the standard ASCII 0-9 A-Z a-z character set and therefore does not include the Yaesu graphic characters.
- The progress bar is not always accurate.
- The 5MHz memory options, on the Blue tab, do not work on radios that have had the wideband (MARS) modification applied as this modification resets the internal workings of the radio.
- The update of the memories is quite slow due to the synchronous protocol that is required to ensure that there are no corruptions to the data uploaded to the radio.
- Typing in an invalid value into any of the 'Spinner' type fields i.e. CW Delay, will cause that field to lock up, the spinner function won't work. To free it, type in a valid value or click on another field when the original value will be restored.
- The programme needs to be restarted for the FT-817 / FT-857 switch to take effect.

4.3 CONFIGURATION QUIRKS

- The CAT rate on the radio (menu item 19 on the FT-857, 14 on the FT-817) has to be set to the same value as the programme. The default is 4800 baud. The accessory port must also be set to CAT (menu item 20 on the 857 only). Is this really a quirk?
- The error "Couldn't open serial port <port name>-javax.comm.NoSuchPortException" is normally caused by incorrect implementation of the javax.comm library, assuming that the port really does exist on your computer. Check that you are using correct version of the javax.comm library. The Windows, Linux and Solaris comm.jar files do contain different code. Also check that the following files are in these specified places and that the COMM_PATH entries in the ft857.bat or ft857.sh scripts are correct:-

Windows:

java/jre6/lib/ext/comm.jar
java/jre6/lib/javax.comm.properties
java/jre6/lib/ext/win32com.dll

Linux:

jvm/java-6-sun/jre/lib/ext/comm.jar
jvm/java-6-sun/jre/lib/ext/libLinuxSerialParallel.so
jvm/java-6-sun/jre/lib/ext/libLinuxSerialParallel_g.so

Solaris:

java/lib/comm.jar
java/lib/libSolarisSerialParallel.so
java/lib/libSolarisSerialParallel_g.so

- Paths in the windows .bat file must be of the 8.3 variety. Because, it appears, that batch files don't support the long file name designations.
- The memory masking's take precedence over the "Active" flag on both the PMS memories and the main memory tables.
- The protocol required to ensure correct update of the radio is quite slow, requiring just 2 bytes to be written back at one time, and then waiting for the acknowledgement before sending the next 2. To speed this up, there is a setting available on the Options menu, Hand Shaking, which, when un-ticked, turns off the wait for the acknowledgment and replaces it with a wait for 40 milliseconds. In the majority of cases this is acceptable and reduces the time it takes to update all 200 memories from 9 $\frac{1}{2}$ minutes to 2 $\frac{1}{2}$ minutes.

4.4 HOUSEKEEPING PRACTISES

Other than keeping your saved data files and CSV files under control, none.

4.5 PERFORMANCE GUIDELINES

The required protocol causes the I/O to be fairly slow. Having written the required sequence to the radio, we need to then read the response back. Failure to wait for this response before writing the next sequence causes the radio to drop bits which causes 'odd' effects.

Time to read entire EPROM from radio: 65 seconds

Time to write memories back to the radio: $9\frac{1}{2}$ minutes. Ouch! ($2\frac{1}{2}$ minutes is about acceptable) See 4.3 Configuration quirks.

4.6 USER GROUPS AND ROLES

Any amateur radio enthusiast with a Yaesu FT-817ND, FT-857D or an FT-857D

5 SYSTEM INTEGRATION/RELEASE NOTES

5.1 RELEASE NOTES

Programme	Version	Date	Comments
ft857mm	1.0.0		Development version
ft857mm	1.1.0		Beta test version
ft857mm	1.1.1	20-11-08	Memory default values set by clicking on memory and pressing return.
ft857mm	1.1.2	25-22-08	Incorrect read of comm ports from ini file fixed
ft857mm	1.2.0	03-12-08	Licensing and ini file updated
ft857mm	1.2.1	17-02-09	Missing CTCSS and DCS values added
ft857prog	2.0.0 B	16-09-10	Total rewrite to include user parameters and engineering settings. FT-817 radios also catered for.
	2.0.1 B	01-10-10	Transverter updates fixed. Field label option added. TX IF Filter added. OP Filter moved. Reading CSV reset tick boxes. Tick boxes not reset when reading radio a second time. COM8 added
	2.0.2 B	12-10-10	Memory Masking tab added handShaking option added
	2.0.3 B	20-10-10	Label errors corrected. F-817 meter field corrected. ttyS0 and ttyS1 added
	2.0.4 B	10-11-10	CW delay now stores correctly above 2560
	2.0.5. B	15-11-10	FT857/FT817 switch added to options menu

5.2 INTEGRATION GUIDELINES

These are guidelines only and as such some initiative is required by the person performing the installation.

Implementation of the software is dependant upon your system configuration, where you have installed the Java runtime, where you have installed the Javax Communications API (javax.comm) and where you have installed the ft857prog application. Not to mention the operating system you are running.

Download and install the javax.comm package from <http://java.sun.com/products/javacomm/> and the Swingx package from <http://swinglabs.org/>. Copies are also available from the ft857mm yahoo group website. Details of these packages are beyond the scope of this document but the respective sites give ample information on their installation procedures. See REFERENCES.

Unpack the ft857prog.rar file into a suitable directory. If you are using Linux or Solaris you will have to add the execute permission to the ft857.sh script file. Use the command: `chmod 0755 ft857.sh`

This application expects that all of the supplied files extracted from the archive will remain in this one directory.

Again depending on your installation you may well have to edit the start up script. Both the Unix and Windows batch files contain the same parameters although the syntax is of cause different.

The Unix and Linux start up file (ft857.sh) is a Bourne shell script. By default, it assumes that the Java runtime is on the default Java install path, the required library jar files are in their specified places and that all the application files are in the current directory. If this is not the case then there are 4 parameters that can be adjusted to fit your installation.

JAVA_PATH can be set to point to the directory that the Java runtime binary is located. The path must include a terminating slash. E.G /usr/bin/

COMM_PATH can be set to where you have placed the comm.jar file. Again a terminating slash on the path is required.

FT857_PATH can be set to the installation directory. Again a terminating slash on the path is required.

SWINGX_PATH can be set to where you have placed the l2fprod-swingx.jar file. Again a terminating slash on the path is required.

On MS Windows systems, yes some people still use it, the application is started using the ft857.bat batch file or via the ft857.vbs script. The same rules as above apply. However, remember the path designator is a back slash \.

If you do decide to purchase a full license, then the supplied license file needs to replace the default License.key file. Once this has been done, edit the options.ini file and place your call sign, the one supplied when you requested a full license file (case sensitive), into the "User" field, See 6.1Appendix I - options.ini. Don't forget to save the file. This will open up the software to read the full 200 memories and enable the write to radio.

COM ports. I have designed the options to be able to configure the application to use COM1, COM2 and COM3 as standard default DOS / Windows type serial ports, and /dev/ttya, /dev/ttyb and /dev/ttyS0, /dev/ttyS1 for Unix / Linux type serial ports. If the serial devices do not exist in your Unix environment, then simply create symbolic links to your require port I.E. In /dev/cua1 /dev/ttya. COM8 is sometimes used as a designator for USB to RS232 converters. There are a number of these on the market, none of which I have tried with the software. I can't think of any reason why the application should not work with any one of them.

Windows Icon. To install an icon on a MS-Windows desktop, right click on desk top and select New and then Shortcut. Click on the Browse button and then browse to the directory in which you installed the system. Click on the ft857.vbs file, select 'OK' and then 'Next'. Enter the name "FT857 Programmer" and then click on Finish. Right click on the new Icon and select Properties. Click on 'Change Icon' and then click on the 'Browse' button. Browse to the directory in which you loaded this system and then select one of the .ico files depending on your radio. Click 'Open' and then 'OK' and then 'OK' again.

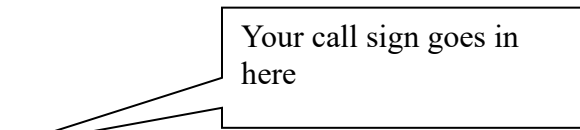
Unix Icon. Installation of a desk top icon varies between desktop management systems and OS versions so, as such, is beyond the scope of this document. A choice of icons for use are provided in the .xpm files.

It is recommend that a careful note is made of your radios engineering configuration parameters before using this software, and to this end a page is available in appendix 6.5 and 6.6 for you to fill in with the appropriate values.

6 **SUPPORTING APPENDICES**

6.1 **APPENDIX I – OPTIONS.INI**

```
#[G1CIK FT-857D Programme Manager]
#Thu Sep 16 09:28:13 BST 2010
9600=true
doSet=true
doMem=true
doVFO=true
38400=false
doEng=false
ttyb=false
ttyp=false
doJmp=true
COM3=false
COM2=false
User=G1CIK
FT817=false
FT857=true
COM1=true
4800=false
showLabels=false
COM8=false
doHIDES=true
handShake=false
ttyS0=false
ttyS1=false
```



Your call sign goes in
here

6.2 APPENDIX II – CSV FILE FORMAT

The format of the CSV file is the same for both the FT-817 and the FT-857 radios. A header record is not written to the file.

```
M-001,LSB,Simplex,HF,false,false,Off,false,false,5kHz,5kHz,2.5kHz,false,false,false,false,E 88.5,A 67.0,023,023,7.0,0.1,,No,Yes
M-002,, ,false,false, ,false,false, , ,false,false,false,false,false, , , , , ,No
M-003,FM,Minus,2M,false,false,Off,false,false,12.5kHz,5kHz,2.5kHz,false,false,false,false,G 103.5,A
67.0,023,023,145.75,0.6,GB3FK ,Yes,Yes
M-004,FM,Simplex,2M,false,false,Off,false,false,12.5kHz,5kHz,2.5kHz,false,false,false,false,A 67.0,A
67.0,023,023,145.5,0.0,2MtrCllg,No,Yes
M-005,AM,Simplex,HF,false,false,Off,false,false,5kHz,2.5kHz,1kHz,false,false,false,false,E 88.5,A 67.0,023,023,12.095,0.1,CH-005
,No,Yes
M-006,FM,Simplex,2M,false,false,Off,false,false,12.5kHz,5kHz,2.5kHz,false,false,false,false,A 67.0,A 67.0,023,023,145.55,0.0,S22
,No,Yes
M-007,FM,Simplex,2M,false,false,Off,false,false,12.5kHz,5kHz,2.5kHz,false,false,false,false,A 67.0,A
67.0,023,023,145.57499,0.0,S23 ,No,Yes
M-008,, ,false,false, ,false,false, , ,false,false,false,false,false, , , , , ,No
```

The format is as follows:-

Memory
Mode
Shift
Band
FM Narrow
CW Narrow
Tone / DCS
IPO
ATT
FM Step
AM Step
SSB Step
Tone Split
DEN (DCS Encode)
TEN (CTCSS Encode)
DCS(DCS Decode)
TQS(CTCSS Decode)
CTCSS TX
CTCSS RX
DCS TX
DCS RX
RX Frequency in MHz
Shift / TX Frequency MHz
Name
Active

Not used in the FT-817 but
must be present

Not used in the FT-817
but must be present

6.3 APPENDIX III – ACKNOWLEDGMENTS

Thanks must go to (in no particular order):

Yaesu, Vertex Standard, for three excellent radios and for some of the images used in this document and in the splash window. I hope they don't mind ☺ as they do seem to be available on many different web sites.

Sun, Oracle for the Java language and the javax.comm API.

Swing labs for the SwingX package.

David G4HHJ for the loan of his FT-817ND and some testing of the software.

6.4 APPENDIX IV – EULA

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6.5 FT-857 / FT-897 ENGINEERING PARAMETERS

Make a note of your current settings here

HF1-RXG	
HF2-RXG	
HF3-RXG	
50M-RXG	
VHF-RXG	
UHF-RXG	
SSB-S9	
SSB-FS	
FM-S1	
FM-FS	
DISC-L	
DISC-H	
FM-TH1	
FM-TH2	
FM-TI1	
FM-TI2	
VCC	
HF1-IC	
HF2-IC	
HF3-IC	
50M-IC	
VHF-IC	
UHF-IC	
HF1-PO-MAX	
HF1-PO-MID2	
HF1-PO-MID1	
HF1-PO-MIN	
HF2-PO-MAX	
HF2-PO-MID2	
HF2-PO-MID1	
HF2-PO-MIN	
HF3-PO-MAX	
HF3-PO-MID2	
HF3-PO-MID1	
HF3-PO-MIN	

50M-PO-MAX	
50M-PO-MID2	
50M-PO-MID1	
50M-PO-MIN	
VHF-PO-MAX	
VHF-PO-MID	
VHF-PO-Min	
UHF-PO-MAX	
UHF-PO-MIN	
HF1-TXG	
HF2-TXG	
HF3-TXG	
50M-TXG	
VHF-TXG	
UHF-TXG	
ALC1-M	
ALC-M	
HF1-REV-ALC	
HF2-REV-ALC	
HF3-REV-ALC	
50M-REV-ALC	
VHF-REV-ALC	
UHF-REV-ALC	
CW-CAR-LEVEL	
AM-CAR-LEVEL	
DEV-W	
DEV-N	
MOD-MTR	
DTMF-DEV	
CTCSS-DEV	
DCS-DEV	
LSB-CAR-POINT	
USB-CAR-POINT	
VSWR2 AT 10W	
VSWR3 AT 10W	
ATAS-TEST	
AMTR-TEST	
HTEMP-THRESHOLD	
FTEMP-THRESHOLD	

6.6 FT-817 ENGINEERING PARAMETERS

Make a note of your current settings here

HF1-RXG	
HF2-RXG	
HF3-RXG	
50M-RXG	
VHF-RXG	
UHF-RXG	
SSB-S9	
SSB-FS	
FM-S1	
FM-FS	
DISC-L	
DISC-H	
FM-TH1	
FM-TH2	
FM-TI1	
FM-TI2	
VCC	
HF1-IC	
HF2-IC	
HF3-IC	
50M-IC	
VHF-IC	
UHF-IC	
HF1-PO-MAX	
HF1-PO-MID2	
HF1-PO-MID1	
HF1-PO-MIN	
HF2-PO-MAX	
HF2-PO-MID2	
HF2-PO-MID1	
HF2-PO-MIN	
HF3-PO-MAX	
HF3-PO-MID2	
HF3-PO-MID1	
HF3-PO-MIN	
50M-PO-MAX	
50M-PO-MID2	
50M-PO-MID1	
50M-PO-MIN	

VHF-PO-MAX	
VHF-PO-MID2	
VHF-PO-MID1	
VHF-PO-Min	
UHF-PO-MAX	
UHF-PO-MID2	
UHF-PO-MID1	
UHF-PO-MIN	
HF1-TXG	
HF2-TXG	
HF3-TXG	
50M-TXG	
VHF-TXG	
UHF-TXG	
HF1POM	
HF2POM	
HF3POM	
50MPOM	
VHFPOM	
UHFPOM	
ALC1-M	
ALC-M	
HF1-REV-ALC	
HF2-REV-ALC	
HF3-REV-ALC	
50M-REV-ALC	
VHF-REV-ALC	
UHF-REV-ALC	
CW-CAR-LEVEL	
AM-CAR-LEVEL	
DEV-W	
DEV-N	
MOD-MTR	
CTCSS-DEV	
DCS-DEV	
LSB-CAR-POINT	
USB-CAR-POINT	

7 **DOCUMENT HISTORY**

Issue	Date	Details
0.1	16-09-10	Initial Draft copy
0.2	21-09-10	Amendments and additions
0.3	01-10-10	Amendments and additions for version 2.0.1 B
0.4	07-10-10	Grammatical errors corrected
0.5	12-10-10	Blue tab for memory masking added (version 2.0.2 B)
0.6	20-10-10	Additions for version 2.0.3 B
0.7	04-11-10	Amendments and corrections
0.8	16-11-10	Updates and corrections
0.9	08-12-10	Engineering notes appendix pages added.
0.10	03-02-11	Grammatical corrections