

RUMtrol7K – Memory Manager program for ICOM IC-7000

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RUMtrol7K is an advanced piece of software to maintain the memories stored in the ICOM IC-7000 transceiver. In addition to the memories, the IC-7000 has numerous user-preference settings, which the transceiver stores for the owner's use, and most of these settings are configurable via RUMtrol7K. The program, RUMtrol7K is available at: <http://www.dl2rum.de/rumsoft/RUMtrol7000.html>.

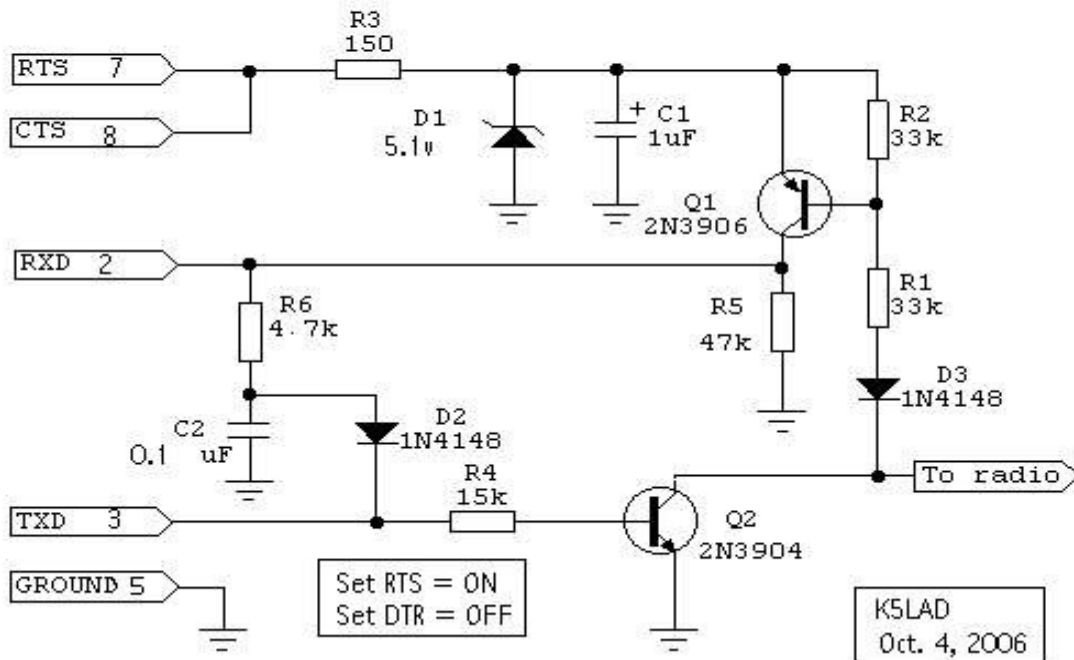
In addition, the memory files created by RUMtrol7K are interchangeable with another program, written by the same author, for the ICOM IC-746PRO/IC-7400 transceiver. This program, called RUMtrol746PRO, is available from the author Tom Lindner – DL2RUM at his website at:

<http://www.dl2rum.de/rumsoft/RUMtrol746PRO.html>.

To interchange the memory file you should use Menu → Memory → Load Bank from or Save Bank to Only the 99 memories are transferable and not the C channels or the Scan Edges.

The program communicates with the transceiver through a CI-V interface. This accomplishes the same thing as the interface sold commercially by Icom as their CT-17 but is easily constructed by the user. The CT-17 uses a MAX-232 IC whereas this one uses discrete transistors. There are numerous circuits available out on the web and the one below is only one example but has been very successful (it is not an original design):

Icom interface OPC-478
can be used for programming radios
or PC control of HF transceivers



Initial program setup

When the program loads the first time, you'll want to set up the COM port. Click on File and choose Preferences. The Port box allows setting to any designated COM port from COM1 to COM12. Set the Baud drop-down box so that it agrees with the setting you have used with your transceiver. It can be any setting between 300 and 57600 baud but the default setting for the IC-7000 is 9600 baud. The software automatically defaults to the values of 8 data bits, 1 stop bit, and no parity and provides no way to differentiate from those values.

The setup (Preferences) window also provides ways to power your interface from voltages available through the serial port. You may need to experiment with the various boxes but the first ones to try are: "Set RTS Line:" then "Set DTR Line:" Try one, then the other, and if that fails, then try both together. Additionally, you can experiment with the boxes on the left but generally it is best to do this one box at a time. When you find one or several that work for your interface, those will be the ones to stick with. Some might prefer to make a note to themselves to show which values are used and which boxes are checked when their interface is working.

At the bottom of that window you will see a slider marked “Delay:” This allows you to set the delay between characters read via the serial port. The slider defaults to the left side for minimum delay but some experimentation may be required by moving the slider knob further to the right for the best performance.

Starting the program

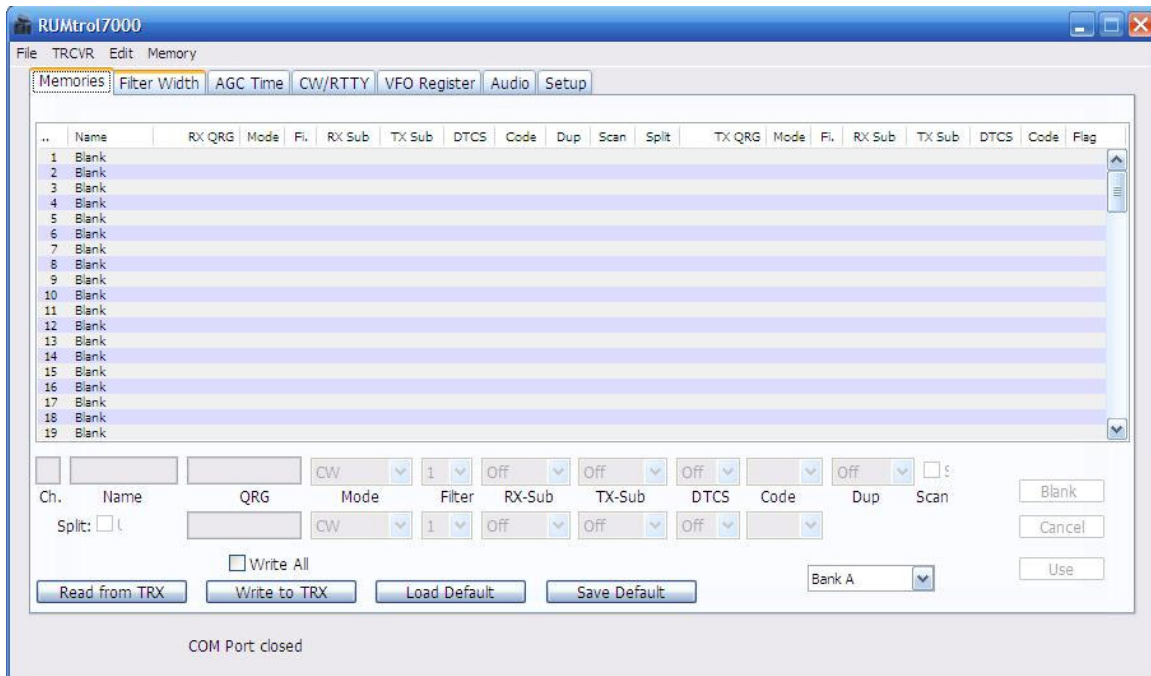
Once set up initially, the values will be stored for the next time you load the program. When you click on “Okay” these values will be saved for your next use. You will not need to acknowledge the values each time you start but that is easily done, if changes need to be made, by choosing File | Preferences and click on the “Okay” box. Initially you may see the message near the bottom, “COM Port closed.” It is not necessary to see that message show open each time you begin if you have done the initial COM Port setup” When you issue a request to read or write data via the menus, the COM port will open automatically and display an open status. Only when the program is unable to locate a valid COM port will it remain closed.

Testing the interface communications

When you download the default frequencies you will also capture the frequencies that were stored in the transceiver’s stacking band memories. Each band stores three memories and are on the last 3 frequencies the display showed before you changed to a different band or a different stored frequency. You can also get the frequencies stored by default in the Scan Edge positions

Preparing to load the transceiver with your data

Assuming that your IC-7000 is as it came from the manufacturer, with nothing stored in the memories except the default scan frequencies; you will want to load in some favorites. Click on the first tab labeled “Memories.” Your screen should show the following window:



As an example, let's say you want to place the WWV frequencies in the first lines of Bank C. In the lower-right area click on the arrow on the drop-down box showing "Bank A" and choose "Bank C." Click on line #1 and you should see a figure 1 in the box labeled "Ch." Click in the box labeled "Name" and type "WWV/2.5" <Tab>. Your cursor will move to the QRG box so type 2500 <Tab>. Click the down arrow in the Mode box and choose "AM" All of the other boxes are not necessary for the reception of WWV so click on the box labeled "Use" and that information will be stored in the program. Note that this does not store the data in the computer or the transceiver, but only temporarily stores it within the program.

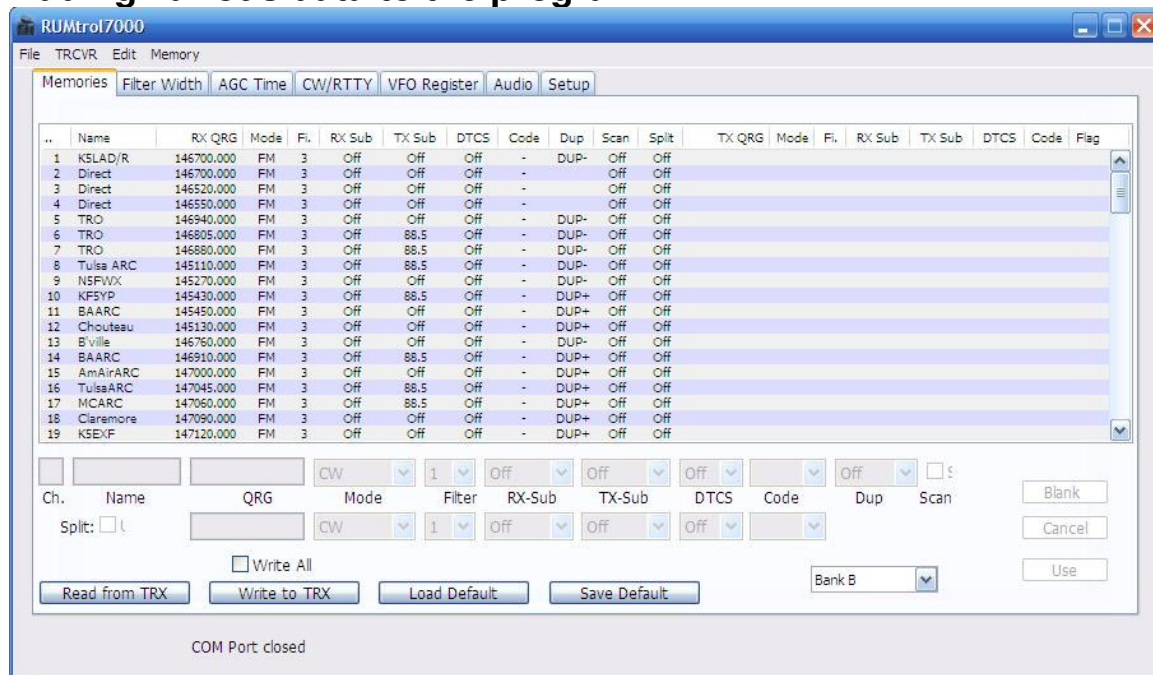
Now continue to click on line #2 and add the name – "WWV/5" <Tab>, then in the QRG box type 5000 <Tab>, then click on "Use." You can add the WWV frequencies of 10, 15, and 20 MHz the same way as above, but always remember to end the entries for a line by clicking on the box labeled "Use."

Re-arranging the order of entries in the program

If you determine that the entries are not in the order you want them, i.e., one was left out accidentally and you wish to add it in between two existing entries. For example, after entering the WWV frequencies in lines 1-4 with 2.5MHz, 5MHz, 10MHz, and 20 MHz, and several more frequencies down to line 21, you notice that the 15 MHz frequency was omitted and should be in line 4. All is not lost as an extra blank line can be opened within the already entered list. Since you want to open a blank line at line 4, click on and highlight the entries on line 5. Go up to the word “Memory” on the Menu bar and you will see an entry labeled “Insert Blank.” When you click on “Insert Blank” all of the entries below line 5 will be moved down one position and line 4 will display as “Blank” allowing you the space to enter the accidentally forgotten frequency. Every time you click on “Insert Blank” on the Memory Menu bar, all entries below the highlighted line will increment (down) one line. Obviously, if the entire list of frequencies is already filled in a Bank and you attempt to insert a blank line, the bottommost frequency entry will be lost as it scrolls off the list. When all of the desired frequencies are entered in a Bank, the list can be re-ordered by using the “Drag and Drop” feature of the operating system.

One particular note: The label “Insert Blank” is sometimes grayed out and it does not allow clicking on it. It will ONLY be available when a data line in a Bank is highlighted. This is also true of the “Cut”, “Copy”, “Paste”, and “Insert from Clipboard” labels in the Memory Menu bar. The program requires that you have selected an activity (or line) before it can act upon it.

Adding various data to the program



Save the data you have entered to your computer

The last part of this activity should be to save the data entered to the computer for storage. There are several ways to save data, some are saved by a single Bank of memories and some are by saving all Banks plus the other setup data for the transceiver.

Save one memory bank

To save only one Bank in a file by itself, first be very sure the Bank you want to save is currently being displayed. The box near the lower right will tell you Bank C, Bank E, or whatever Bank you wish to save. Click on the Memory label on the Menu bar and choose "Save bank as...." You will be presented with a Windows file box showing the directory where the file will be saved if a different choice is not made. Since you are only saving one Bank's information, the filename chosen should reflect that Bank, i.e., "DataBankB" both as a reminder of Bank and to let you know later that this file does not contain all data saved.

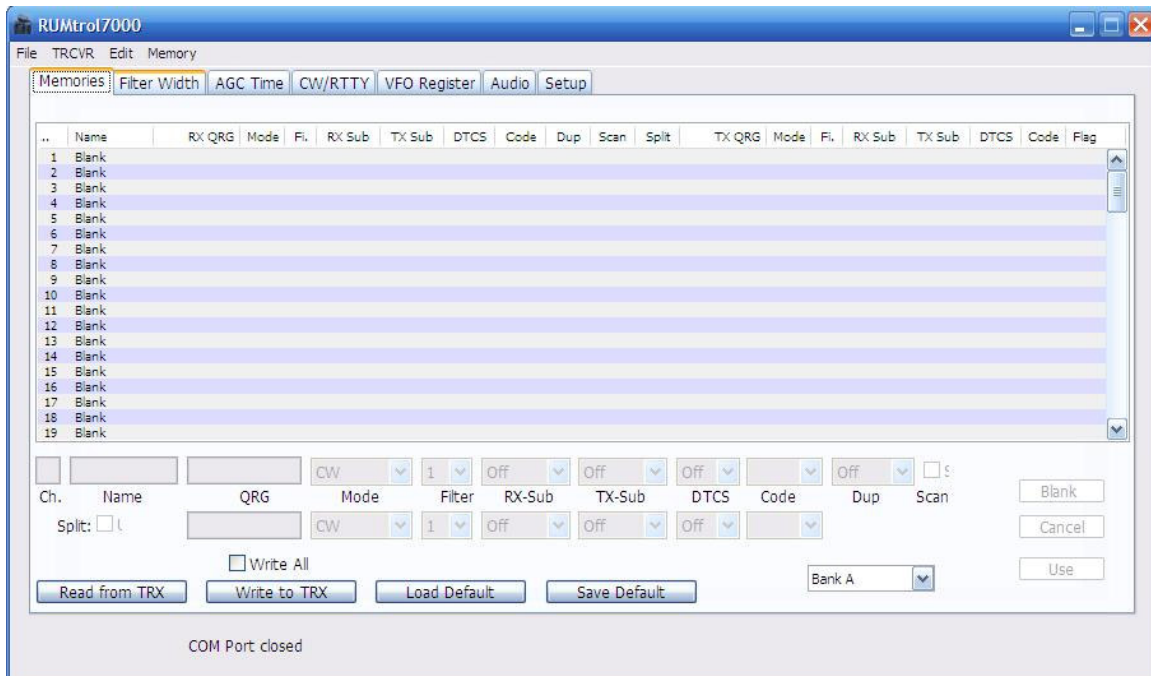
Save all information

To save all data from the program to the computer, and this includes all memory Banks, all frequency Scan Edges, all stacked memory banks (3 for each band), and all the large and small settings. These include: Filter widths, AGC settings, CW memories, CW keyers and RTTY setups, audio setups, and all the other options available to the user. Click on File and choose "Save all as" You will be presented with a Windows file box showing the directory where the file will be saved if a different choice is not made. Since you are saving all of the information, the filename chosen should reflect this, i.e., "DataAll022007" both as a reminder of all info plus it is often helpful to let the date be part of the filename. If several DataAll files display, that added date makes it much easier to find the most recent version of the data saved.

Note: The filenames shown are simply suggestions. The filename/s you use are your choice and are governed only by the rules of the operating system in use. Use whatever filename is comfortable to your operation.

Load the setup data to the program

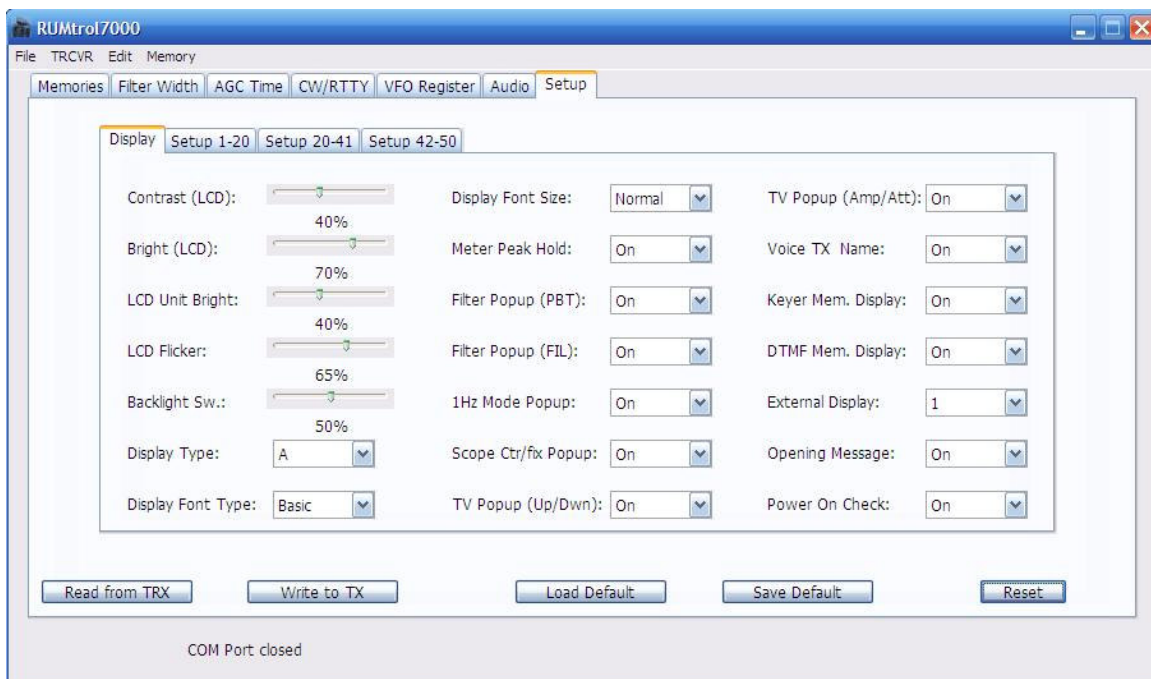
The Icom IC-7000 transceiver gives the user the option of setting many parameters via both hardware and by software. This software entry is accomplished by using the several other pages, each of which is headed with a clickable tab: Memories, Filter Width, AGC Time, CW/RTTY, VFO Register, Audio, and Setup (see picture below)



Let's start with the Setup tab by clicking on the tab labeled "Setup." You are faced with four additional tabs labeled: Display, Setup 1-20, Setup 21-41, and Setup 42-47. Under the Display tab you'll see sliders for controlling things like the Brightness and Contrast for the LCD display plus drop-down windows to choose options such as: Font type and size and the choice of several color combinations for the display. In addition to these, there are numerous other setup choices and the user may want to make their choices with their transceiver's Instruction Manual in hand. These are some of the same choices you have by choosing the many different menus available from the front panel or from the HM-151 microphone. If you have a question about what one of the choices does, refer to the Manual.

The next tab, labeled "Setup 1-20" also has many more of these same menu choices. The most obvious box to be filled is for the user's call. This call will be displayed on the LCD screen when the IC-7000 is first turned on. The other choices are found on this tabbed page plus the other two tabbed pages. All boxes do NOT need to be changed at this time but most of the boxes will have a default value. When these pages are saved to the computer file and/or saved to the transceiver, the values saved will be the ones where are displayed in

the boxes, whether you have made that choice or whether you left the initial default value in the box.



Notice that each of the Setup tabbed pages has a button labeled “Reset” in the lower right-hand corner. Clicking this Reset button will return ALL values shown on that Setup page to the initial default values.

The setting up of the values on the pages associated with other tabs can be done on a time-available basis, whenever it is convenient for you. Remember, however that any time ANY value is changed, the entire group of values must be re-saved to the computer file. Also the new value/s cannot be used by the transceiver until they are uploaded to the transceiver.

Uploading program data to the transceiver

Any time you have setup or frequency information displayed on the program's pages you can upload that data to the transceiver. Note that the data must be currently showing on the display or can be brought up to display before it can be added to the IC-7000, i.e., the information cannot be transferred from the computer's storage files directly to the transceiver. It is assumed that any stored data has

been either loaded from the computer to the program or added to the program manually. See ***Loading data from the computer to the RUMtrol7K program*** for instructions on transferring saved data from the computer back to the program.

We're assuming that you now have data loaded into RUMtrol7K. It can be either loaded from the computer to the program or entered into the program from the keyboard. The data can be uploaded to the transceiver either by uploading just a single page or Bank or uploading all of the data at once.

Save one tab to the transceiver

To upload one tab to the transceiver, click on the word TRCVR on the Menu Line and choose "Write to TRX." This choice will only write settings in the actual tab displayed (Filter, AGC, Setup, etc.) Note that when you are on Setup, you will upload all four tabs under Setup.

Save all data to the transceiver

When you click on "Write all to TRX" you should be presented with a Windows Save As window with a place to enter the file name. It is recommended that you use a descriptive name such as: "IC7K_All-info" without the quotation marks.

Loading data from the computer to the RUMtrol7K program

Before you work with the RUMtrol7K program, particularly if you plan to modify something, you should have the most current data. This can be via a download from the transceiver or if nothing has been changed from the last time, it can be loaded from the computer.

Load one memory Bank of frequencies

To load only one memory Bank, click on the tab labeled "Memories" and choose the desired Bank in the lower right-hand corner. When the proper Bank is showing (the lines will be blank when you first start up the program) click on "Memory" on the Menu line, and choose "Load Bank from..."

The file you want should be displayed. If you're loading a particular file and you saved them as previously suggested, the file for, say, Bank C should be displayed in the group under the name: "IC7K_memories-BankC"

Load all settings and frequencies at once

To load all of the data, which includes all memory Banks and all menu items saved, click on the tab labeled File in the Menu Bar. Choose the option "Load all from...." and you should be presented with a Windows File/Save As window with a place to enter the file name you wish to load.

This is done by clicking on the word "File" in the Menu Bar. Choose the option "Load all from...." It was recommended that you use a descriptive name such as: "IC7K_Settings" without the quotation marks. You will see the progression of the loading process as it displays what is being loaded at each point: "Loading Bank B, Loading Setup, etc."

When the proper bank is showing (the lines will be blank when you first start up the program) click on "Memory" on the Menu line, and choose "Load Bank from..."

If you're loading a particular file and you saved it as previously suggested, the file for all of the data (setup and all frequencies) should be displayed in the group under the name "IC7K_All-info" Click on that filename to highlight it, then click on "Open" All the data saved to that program will be ported into the program and can then be added to, altered, or even deleted as desired.

Remember, always, that any time you make ANY change in the program, data loaded from the computer must be saved back to the computer (see **Load all settings and frequencies at once** above) or the computer file will not be current. Also, remember that any time you make ANY change in the program data downloaded from the transceiver, the modified program must be saved back to the transceiver (see **Uploading program data to the transceiver** above) or the transceiver's stored data will not be current.

Editing the program

As noted previously, the features in the Edit Menu may appear to be unavailable but they will remain grayed out until you have chosen some data upon which it can react. To choose data, click and highlight the line you wish to edit.

Printing the data

Often it is very helpful to have a copy of the frequencies you have added to your transceiver. Under File there is an option called "Save all as text file" which saves all of the data currently in the program to a text file. This file can be saved and also loaded with a file like Notepad to print out complete copy. Remember if you are just opening the program, you will need to load it with data, either from the transceiver or from a disk file, before you will have data under this option to save to the text file.

Installation information

RUMtrol7K has several versions for installations on Macintosh, Windows, or Linux machines. The operation instructions above should be about the same for all versions but the installation should be different and are differentiated here. All of the versions are installed from a single file, which is unzipped from a file named RUMtrol7000Mac.zip, RUMtrol7000Win.zip, or RUMtrol7000Lin.zip. Obviously the three letters following the characters - RUMtrol7000, define the correct version for the operating system you have chosen.

The files for RUMtrol7K can be placed in whatever folder or partition you choose so you can put them on your computer wherever you want. When running the program the following files will be created and used by its own internal workings:

- RUMtrol7000.plist - COM settings and all other settings, except memories
- RUMtrol70000.plist - Bank A
- RUMtrol70001.plist - Bank B
- RUMtrol70002.plist - Bank C
- RUMtrol70003.plist - Bank D
- RUMtrol70004.plist - Bank E
- RUMtrol70006.plist - Band stacking register

The files are split into different files for performance reasons only. These files are used when using Save and/or Load default files, etc.

The computer locations for the files are for the following operating systems:

The files on a **Mac** are located in: */Users/username/Library/Preferences*

Under **Windows**, the files are located in: *C:\Documents and Settings\username\Application Data*, if available.

On **Windows 98** it is in the Windows directory.

Under **Linux**, you will find the files in the current user's Home directory:
/Home/username

NOTE: Under Windows, these .plist files may be hidden or invisible.

If you run into some trouble when starting the program, it is a good practice to delete the file: *RUMtrol7000.plist*. The default data stored in this file will be lost but will allow the program to create a new copy upon starting the next time.

Triangles in the heading columns

This is only mentioned for those who accidentally click on a heading column and suddenly come across a small triangle next to the heading title. This is a feature of the program used to write RUMtrol7K and was actually used to sort a column of data. Under the circumstances of this program it is unnecessary to sort the data within a column so this feature is not implemented, however the triangle may show up and make you wonder why it is there. Suffice it to say, the triangle means nothing in this program.
