

FTDX-5000 Menu & Memory Editor V2*

By K8AC

Introduction

This program provides a way for the user to display and change the contents of the transceiver's 177 menu items, 99 frequency memories, 18 scan memories and 5 CW memories on a Windows PC. It was developed and tested on a 64 bit Windows 10 system and whether it will run on any other system is unknown. If you have problems installing the program, try disabling your anti-virus or malware programs before trying the installation.

To use the program, the transceiver must be connected to the PC via a serial port that is dedicated to this program. Sharing the transceiver port with other applications via VSPE or a device like the microHam Digikeyer II is not recommended due to the unpredictable traffic from the other application(s).

Functions

The program provides these functions:

- Reading the menu from the FTDX-5000, editing of the menu items, writing back the changed menu items to the transceiver.
- Export of the menu items to a .txt file, importing of a file produced by export. These functions can be used to create a backup of the menu items and restoration of the menu items to the same or a different FTDX-5000.
- Reading the 99 “regular” memories, the 18 scan memories and the 5 CW memories from the FTDX-5000, editing the memories and writing them back to the transceiver. Only the frequency and mode information is handled by the program. Note that the FTDX-5000 CAT command set does not provide a way to erase the contents of the frequency memories via a program. You can overwrite existing memory contents, but clearing a memory can be done only from the transceiver front panel.
- Export/import of the 117 memories, 18 scan memories and CW memories to/from a .txt file.

Requirements

The user must provide a COM port for communications with the transceiver. A USB/serial converter cable can be used if it supports CAT communications with the transceiver. The program allows the user to specify the baud rate of the transceiver port. You **MUST** set the transceiver menu item #032 to the same speed you select in the program. No COM port parameters need be specified in this program. **NOTE: this must be a dedicated COM port. A virtual COM port where there is other traffic with the transceiver is a recipe for disaster.**

Main Window

The application contains two forms or windows. The first is used to establish communications with the transceiver and to read/edit/write the 177 menu items. The second form is invoked from a menu item (Memories) on the first form and it is used to read/edit/write the 99 regular memories, 18 scan memories and the five CW memories.

When the program is started, you first select the transceiver com port from the list of all serial ports on your system. To establish communications with the FTDX-5000, you can select “Connect to the transceiver” under the File menu item, or you can click on the Radio button. If the program is able to establish communications with the transceiver, the button will change from red to green. The program solicits the ID of the transceiver, identifying it as a FTDX-5000. No other transceivers are supported. Once the transceiver is identified as an FTDX-5000, the com port number is saved for future executions.

The menu item values shown on the initial screen are the default values according to the FTDX-5000 Series Operating Manual. To view the setting of menu items in your transceiver, go to the Menu item on the toolbar and select “Read menu from transceiver”. This operation will take 1-2 minutes depending upon your PC performance. **NOTE: The FTDX5000 Operating Manual description of the menu items does not match the current transceiver firmware. At some point, Yaesu inserted a new menu item (number 112) and renumbered all the items above that. This program's numbering of menu items matches the transceiver, not the manual.**

Once the menu items have all been retrieved, you can alter any of the values. Items with numeric values can be changed with the up/down arrows on the right side of the box and items with text values can be changed by mousing on the single arrow which will result in a box with all the options that you can select from. When finished making your changes, you can write the menu items back to the transceiver by selecting “Write menu to transceiver” from the Menu item on the toolbar. Only the changed items are written to the transceiver, so the write operation can be much faster than the read of all menu items.

Some menu items behave differently from what is seen on the transceiver front panel. The differences are:

Menu Item #	Description
17	In this program, the options for this item are selectable via checkboxes. To the left of the checkboxes is the 13 byte string that is sent to and from the transceiver. Page 9 of the FTDX-5000 CAT manual explains the meaning of the string.
51	From the panel, you can select MCVR to disable the front panel mic control. In the program, you set the value to 101 to disable the control
151	On the menu window, the options for this item are selectable via checkboxes. To the left of the checkboxes is the 15 byte string that is sent to and from the transceiver. Page 9 of the FTDX-5000 CAT manual explains the meaning of the string, but the manual leaves out the 5MHz byte. Including that byte, the string is 15 bytes and not 14 as the manual shows.

When you select Export to CSV file from the Menu item on the toolbar, the contents of all the menu items are written to a file (you specify the file name) in the ThisPC\documents directory of your hard drive. The user may change the directory to the path of his choice. You can use the Export/Import functions to keep a backup of one or more menu and/or memory configurations. One good use for this might be to maintain different menu configurations for CW contesting and daily SSB operation.

Memories Window

When this window appears, you may retrieve the contents of the memories by selecting “Read memories” from the File item on the toolbar. It takes about a minute to retrieve the memory data depending upon your PC performance.

The frequency and mode of each memory entry is displayed and both can be altered. The format of the frequency when sent to the transceiver is: 14.123456 . When entering a frequency, you must enter a period and at least one number. The program will expand your entry to the required format. For example, an entry of “14.” will be expanded to “14.000000”. An entry of “.88” will be expanded to “00.880000”. Valid entries are from 30 kHz to 60 MHz. Your entry format is not checked until you leave the current box by tabbing to another box or selecting a new box with the mouse.

The memory item mode is set by selecting a mode from the pull-down list. The most common modes supported by the transceiver are listed. To write the memories to the transceiver, select “Write memories to transceiver” from the File item on the toolbar. To verify the results, you can either display the memory contents on the transceiver, or press the “Read Memories” button again to read all the memories from the transceiver.

IMPORTANT NOTE: *The FTDX-5000 does not provide a means of programatically clearing existing memory contents, only replacing data that's already there. Specifying a frequency of 00.000000 will not cause a memory to be cleared.*

The five CW memories can be edited using the panel on the far right of the window. The “Read” button will retrieve the current CW memory contents. Unlike with the 99 regular memories, if you wanted to clear all the CW memories, you can press the “Clear” button followed by the “Write Memories” button. The capacity of the five memories is limited to 49 characters by the FTDX-5000 firmware.

When you select “Export memories to CSV file” from the File menu, the regular memories, scan memories and the CW memories are written to a file. Selecting “Import...” will load the form with the contents of the specified export file which may then be written to the transceiver by use of the “Write to transceiver” option of the File menu.

Debug Mode

The program includes the capability to log key program data to a disk file for debugging purposes. In the event of a program problem, you may be asked to turn on the Debug Log function to create the debugging file and forward it to the program author. Do NOT turn on Debug Logging unless instructed to as that will impact performance and can create a very large text file. The log file is written to the directory: ThisPC\documents.

Reporting Problems

When you encounter a problem with the program, please email me at: solo3@k8ac.net. Include a description of the problem and program level (see About on the Menu toolbar). Suggestions for improvement or new features will be considered.

73, Floyd Sense – K8AC

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* Changes in Version 2

- The menu item descriptions have been organized into group boxes by function. That allowed room for expanded item descriptions that are more easily understandable and may eliminate the need to reference the Operating Manual for menu changes.
- Reading/writing/editing of the transceiver scan memories has been added to the Memories form
- Usability has been improved by making it impossible to initiate a new operation while a previous request is still in progress.