DMR

MD380 Toolz Made Easy

John 'Miklor'   K3NXU

Let's start at the beginning.

What the heck is this '380 Toolz'
I keep hearing about?

MD380 Tools is an experimental firmware for the TYT MD380/390 series DMR transceiver for the purpose of adding enhanced features. It was originally developed by Travis Goodspeed KK4VCZ with ongoing contributions from fellow hams.

The update adds over 16 features not found in the original radio, including the ability to load the DMR User Database.

Due to the memory limitations of the MD380 VHF model, not all features including the database are available.

What options are in MD380Toolz

For complete documentation with graphics of the added features,
        follow this link.

Loading the Firmware and Database

Originally, the firmware modification required the use of Linux. This procedure, developed by Ty KG5RKI, requires nothing more than a Windows based PC, a programming cable, and about 5 minutes.

This software works perfectly on both my Win7 and Win10 PC and the firmware loaded into my UHF MD380 on the first try, but I cannot be responsible for your results if select the wrong options.

Here is a link to the software required. *Flash Tool v1.05*
It is a zipped file. Load it to a temporary work area, unzip it, and let's get started.

Your opening screen will appear as shown.
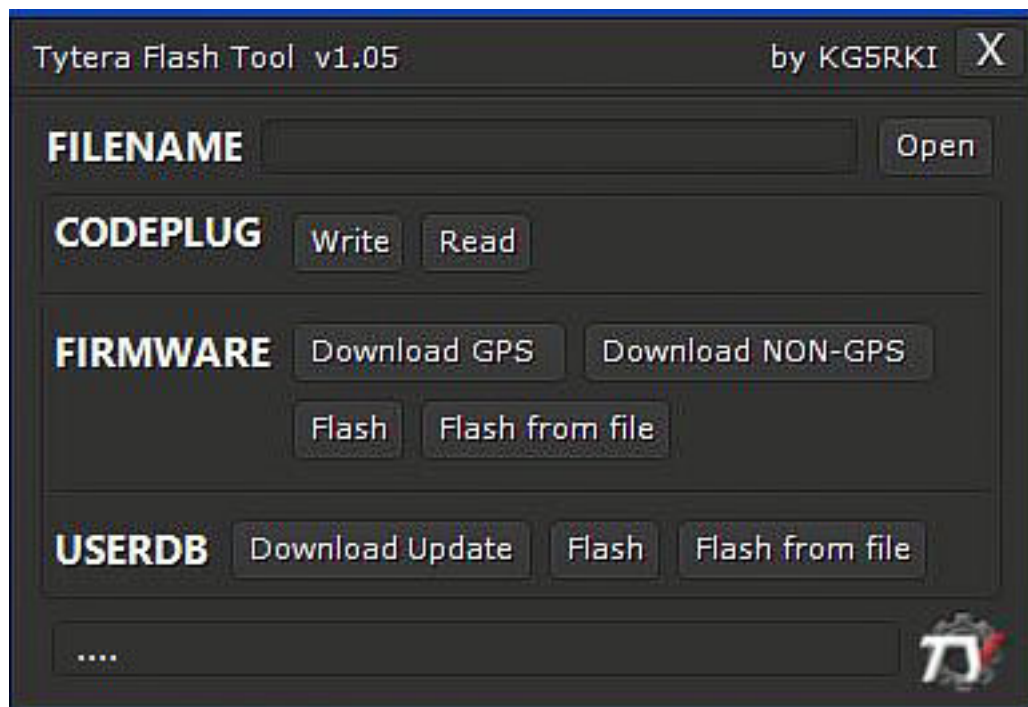
You <u>must</u> determine which version of the radio you are using.
Note: Do Not select the GPS firmware unless you have the GPS version radio. This software will Not add the GPS feature to your radio.

Only download the appropriate firmware version that matches your radio.
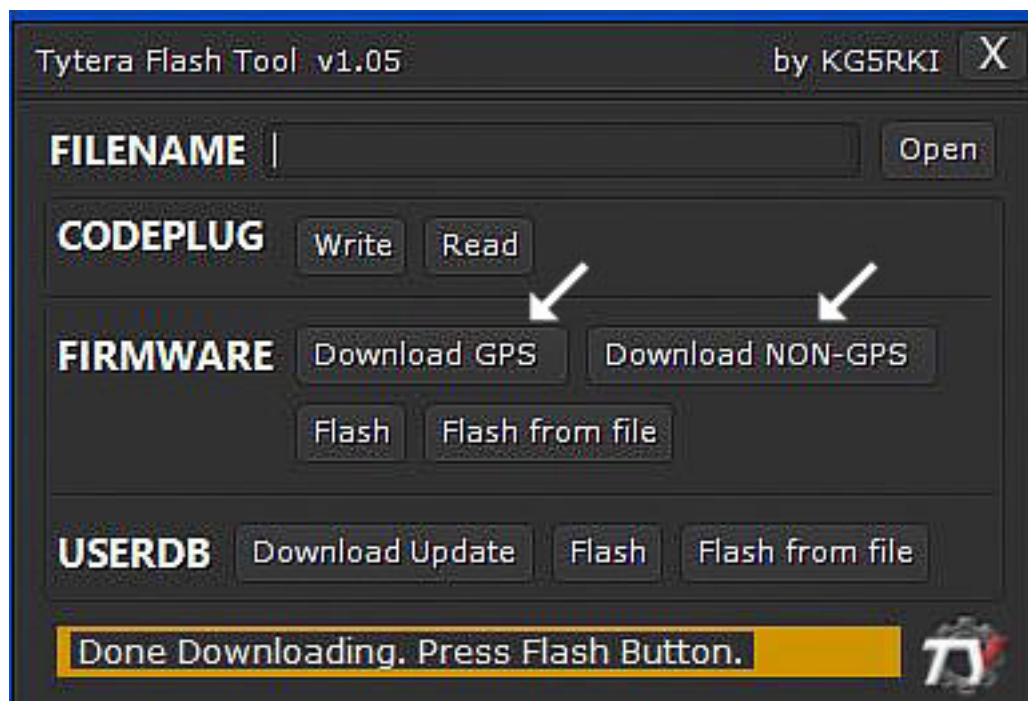
(1) Power OFF your radio.

(2) Press and hold both the <u>Upper Side Key</u> and <u>PTT button</u> while powering the radio ON. The top LED will begin flashing Red and Green.

(3) Connect the programming cable to the radio and select FLASH as shown below. When complete, the progress bar will display DONE.
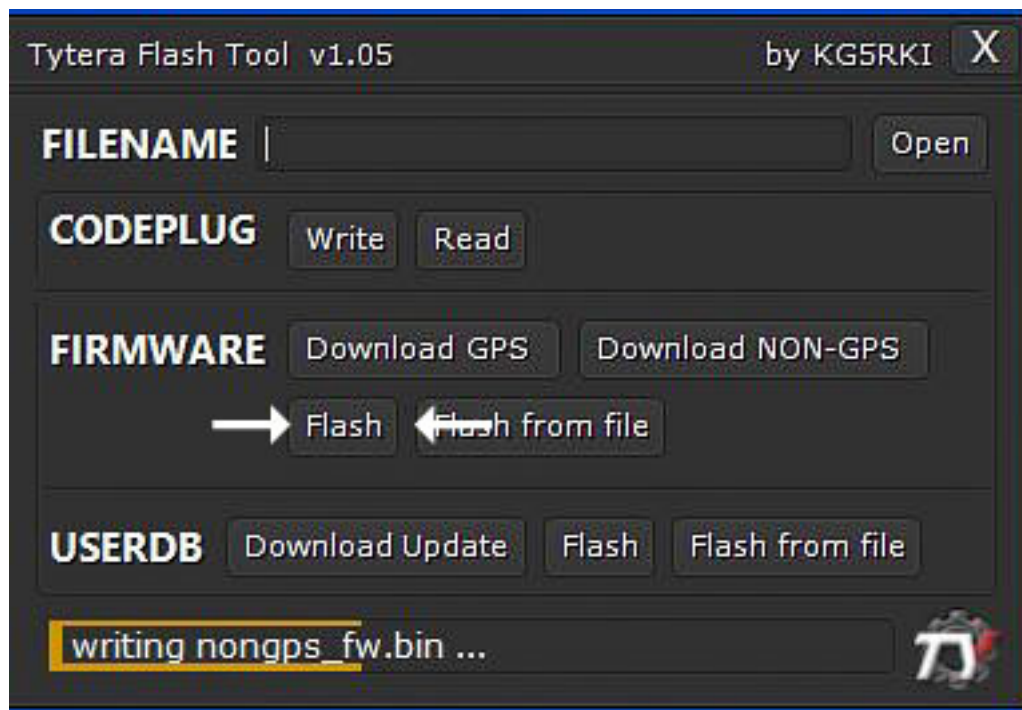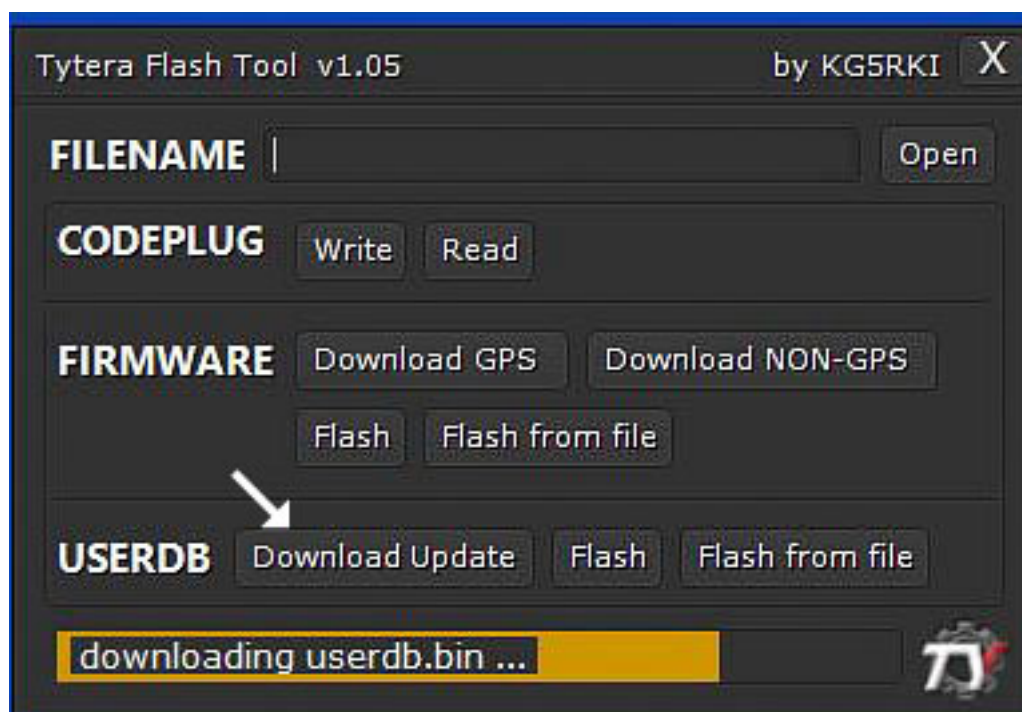

Power OFF your radio. This will exit the firmware update (DFU) mode, then Power ON your radio normally.

NOTE: If your display is blank after the opening screen, you more than likely selected the wrong firmware for your radio. GPS vs. non-GPS.
Don't Panic... Just start at the top and select the proper firmware.
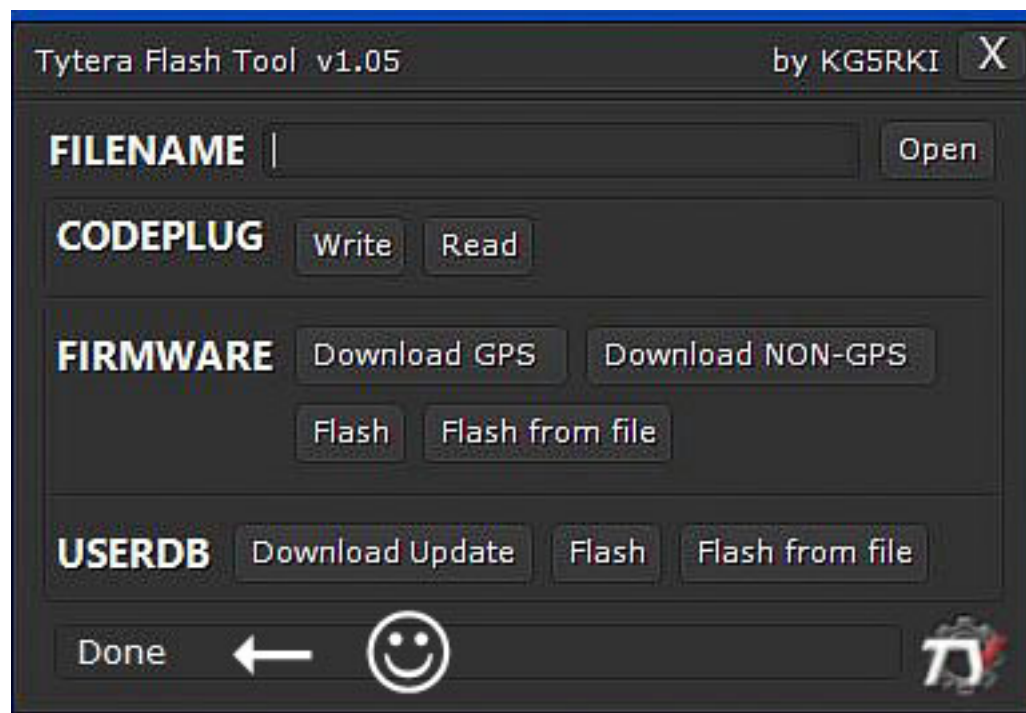
DMR User database

To update your radio with the DMR User Database, select Download Update. The status bar will indicate when the download to your computer is complete.

Now, select FLASH and the DMR User database will load into the radio.

Tytera Flash Tool v1.05   by KG5RKI   X

FILENAME | Open

CODEPLUG   Write   Read

FIRMWARE   Download GPS   Download NON-GPS

           Flash   Flash from file

USERDB   Download Update   Flash   Flash from file

writing userdb.bin ...
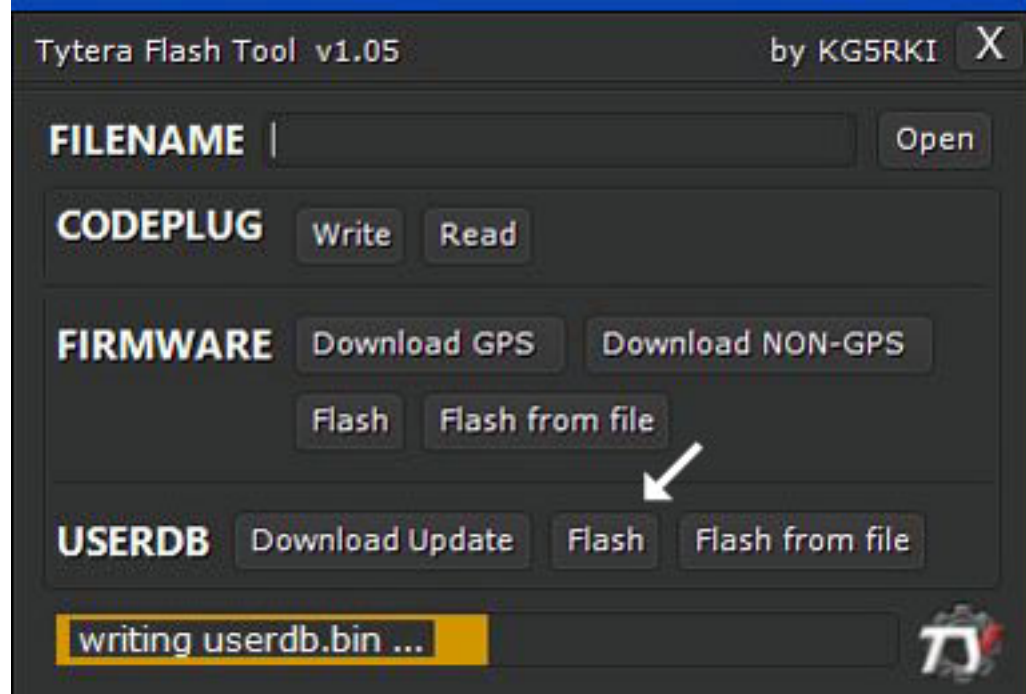
When DONE appears, you are now ready to enjoy the new functions of MD380Toolz.

Tytera Flash Tool v1.05   by KG5RKI   X

FILENAME | Open

CODEPLUG   Write   Read

FIRMWARE   Download GPS   Download NON-GPS

           Flash   Flash from file

USERDB   Download Update   Flash   Flash from file

Done   ←   ☺

Show Database on LCD

Now that the DMR User database is loaded, here's the menu selection to have it appear on your LCD.

Menu
Utilities
(6) 380Toolz
(4) Show Calls
TA & UserDB

Menu
Utilities
(6) 380Toolz
(14) CoPI Override
Callsign+Name

The Call Sign, Name and Location of incoming stations will now appear on your LCD.

Here's another bonus with 380Toolz. "Last Heard". You now have the ability to display the Call Sign of the last person to use a Talk Group. This replaces the Date showing in the lower left corner.

Menu
Utilities
(6) 380Toolz
(3) Date format
Last Heard

A word of Caution

One of the new menu items controls the **Backlight Level.** One of the options is Backlight Level Low. The range is 0 > 10. If set to zero, the backlight is now OFF. The issue is that now you can't see the screen to restore it back.
To restore to original settings, try this:

Menu   Up Arrow   (Utilities)
Menu   Up Arrow   (MD380Toolz)
Menu   Down Arrow 10 times   (Config Reset)
Confirm

I'll bet you won't do That again.

My Results

My personal results have been excellent using this software.

I've used both Win7 and Win 10 on both VHF and UHF MD380.

The UHF radios loaded the Toolz and Database perfectly.
The VHF radios loaded the Toolz, but not the database due to the limited memory of the VHF model.

Disclaimer: This firmware has been tested with both 380 and 390, GPS and non-GPS. There's always a remote chance that it might not work with your radio as this is experimental firmware This is the rare exception rather than the rule.

If this occurs, nothing has been damaged. Reload a copy of the original firmware and all will return to normal.

Reference

Here's a reference to *Ty's website* for more information regarding Toolz.
Ty's MD380 site (Video)

Note: *Ty does this as a Labor of Love for the hobby. On the left side of his page there's a donate link. Consider buying him a* [cup of coffee](#) *to show your appreciation.*

TOP of PAGE

Miklor Home

Miklor DMR

Back