Step by step for the installation of software "md380tool"
(Modified Firmware for TYT MD-380 and Retrevis Radio)
(OS Raspbian / UBUNTU / DEBIAN)

1-. Update all SO: (Check date and time is correct in your PC or Laptop)
- sudo apt-get update
- sudo apt-get dist-upgrade
- sudo rpi-update

2-. Install pre-requisites :
- sudo apt-get install build-essential
- download from link PyUSB
  1.0 -> http://sourceforge.net/apps/mediawiki/pyusb/ (Follow step)
    - move to tmp directory -> cd /tmp/
    - download zip -> wget http://iweb.dl.sourceforge.net/project/pyusb/PyUSB%201.0/1.0.0/pyusb-1.0.0.zip
    - unzip pyusb-1.0.0.zip
    - cd pyusb-1.0.0
    - sudo python setup.py install
- sudo apt-get install libusb-1.0-0
- sudo apt-get install gcc-arm-none-eabi binutils-arm-none-eabi libusb-1.0 python-usb python-pip

If all up here is to installed without problem, we can continue ....

Download – Install - Compile md380tool :
- cd /home/pi/
- sudo git clone https://github.com/travisgoodspeed/md380tools.git
- cd md380tools
- sudo make

If all up here is to installed without problem, we can continue ....

Create - Compile and Upload DB DMR ID to Radio :
- Connect the cable to radio programming raspberry – PC or Laptop, and then the other end to the radio. (The radio must be off)
- cd /home/pi/md380tools/
- sudo make flashdb (When you start this step, wait 2 or 3 seconds, and turn on the radio. At this time the radio must pass USB Programing mode, and thus begin the process of loading the BD DMR ID to the radio. This process may take some time.)

If you could do all these steps, your radio and is ready and modified.

Create your new modified firmware :

- cd /home/pi/md380tools/
- sudo make clean dist

This process may take a while, and to compile and build your new FW with all available functions. At the end but there are problems or errors, this creates a directory under /home/pi/md380tools/ called -> md380tools-yyyy-mm-dd

For example: md380tools-2016-05-10

Within this directory you will have the BIN file to load to your md-380 as you have always done, with the upgrade.exe under Windows. This Firmware is first must load it the radio, before loading the BD user DMR

If you could do all these steps, your radio and is ready and modified.

Repository upgrade md380tools :

Sometimes developers and partners, raise new changes, correct errors, etc.. And should be performed upgrade repository to your installation (raspberry, PC or Laptop.)

You should go to the directory where the installation has md380tools, and run the **git pull** command.

For example:
cd /home/pi/md380tools/
git pull

This process applies all changes that apply to the repository in the cloud. Then you can generate a new firmware for Radio, which will include all the new changes that will be generated.

Please let me know if you have any errors, and you send me to continue to help.

Note :

You can install any of these patched firmware files into your MD380 by using the respective .bin file with the Tytera Windows firmware upgrade tool, "upgrade.exe", available inside their firmware upgrade downloads. Here are the steps:

- Turn off your MD380 using the volume knob.
- Attach the Tytera USB cable to the SP and MIC ports of your MD380.
- Attach the Tytera USB cable to your host computer.
- Hold down the PTT and the button above the PTT button (*not* the button with the "M" on it).
- Turn on your MD380 using the volume knob.
- Release the buttons on the radio.
- The status LED should be on and alternating between red and green, indicating you're in flash upgrade mode.
- Start the Tytera "Upgrade.exe" program.
- Click "Open Update File" and choose one of the .bin files produced from the process above.
- Click "Download Update File" and wait for the flash update process to finish. It takes less than a minute.
- Turn off your MD380 using the volume knob.
- Disconnect the USB cable from your MD380 and host computer.
- Turn the MD380 back on, and you should see the "PoC||GTFO" welcome screen. You're running patched firmware!