

# Md380tools on Pi-Star

From PiStar Wiki

Jump to: [navigation](#), [search](#)

- PLEASE CONSIDER THIS GUIDE IN BETA UNTIL IT HAS BEEN TESTED BY A FEW MEMBERS.\*\*

1. Confirm that you have a large enough SD card in your Pi-Star, we need at least a 4G card. The base image will work on a 2G card, but for md380tools we need a LOT more space!

2. Confirm that you are running Pi-Star 3.3.9 or newer (you need this version for a patched version of 'raspi-config')

- If you have a version of Pi-Star prior to 3.3.9 - Please scroll to the bottom for an alternative to Step 3.

3. Expand your filesystem to fill your card.

```
pi-star@pi-star(ro):~$ sudo pistar-expand
```

Once this step is complete, your Pi will reboot and expand the disk, this WILL take some time, be patient.

4. Login to your Pi-Star over SSH.

5. Unlock the disk

```
pi-star@pi-star(ro):~$ rpi-rw  
or mount -o remount,rw /
```

6. Install the supporting tools;

```
pi-star@pi-star(rw):~$ sudo apt-get install gcc-arm-none-eabi binutils-arm-  
none-eabi libusb-1.0 libnewlib-arm-none-eabi make curl python-pip
```

7. Install pyusb to support the USB connection to the radio (Note: Thanks to Bob Finch for this update, it appears we no longer need the old pyusb library.)

```
pi-star@pi-star(rw):~$ sudo pip install pyusb
```

8. Download the md380tools from GitHub

```
pi-star@pi-star(rw):~$ git clone  
https://github.com/travisgoodspeed/md380tools.git
```

9. Boot your radio in DFU mode (with the top two buttons on the left held while turning on) Radio should now have the busy light flashing red/green.

10. Make the firmware; For NON GPS radios (MD380)

```
pi-star@pi-star(rw):~$ cd md380tools  
pi-star@pi-star(rw):md380tools$ sudo make flash
```

For GPS models (MD390G)

```
pi-star@pi-star(rw):~$ cd md380tools  
pi-star@pi-star(rw):md380tools$ sudo make flash_S13
```

11. Reboot the radio.

12. With the radio booted normally - you can now update the user database.

```
pi-star@pi-star(rw):md380tools$ sudo make flashdb
```

This does take a LONG time to erase and re-write the flash area containing the user database, wait it out...

13. Process completed - your MD380/390 radio is fully updated, including the user database.

If you want to later update your version of the md380tools;

```
pi-star@pi-star(rw):~$ cd md380tools
pi-star@pi-star(rw):md380tools$ git pull
```

If you want to re-flash your radio after a tools update: Boot your radio in DFU mode (with the top two buttons on the left held while turning on) Radio should now have the busy light flashing red/green.

For NON GPS radios (MD380);

```
pi-star@pi-star(rw):~$ cd md380tools
pi-star@pi-star(rw):md380tools$ sudo make flash
```

For GPS models (MD390G);

```
pi-star@pi-star(rw):~$ cd md380tools
pi-star@pi-star(rw):md380tools$ sudo make flash_S13
```

Finally for updating the userdb and re-flashing to the radio;

```
pi-star@pi-star(rw):md380tools$ make updatedb flashdb
```

- Alternative Step 3 for Pi-Star versions before 3.3.9

```
pi-star@pi-star(ro):~$ rpi-rw
pi-star@pi-star(rw):~$ sudo raspi-config
```

Choose option 7 "Advanced Options"

Choose option A1 "Expand Filesystem"

When prompted choose reboot.

Once the Pi reboots and you can login again

```
pi-star@pi-star(ro):~$ rpi-rw
pi-star@pi-star(rw):~$ sudo e2fsck -f /dev/mmcblk0p2
pi-star@pi-star(rw):~$ sudo resize2fs /dev/mmcblk0p2
```

Once those complete you can continue with Step 4 and onwards from above.

## Pi Star Mobile

Pi-Star mobile Installation

Open SSH Access in your pi-star dashboard:

[http://pi-star.local/admin/expert/ssh\\_access.php](http://pi-star.local/admin/expert/ssh_access.php)

Once logged in, copy & paste and execute the following 4 lines (one by one)

```
rpi-rw
```

```
sudo wget -O /tmp/pi-star.mobile.install.sh http://www.w0otm.com/pistar/pi-star.mobile.install.sh
sudo chmod 555 /tmp/pi-star.mobile.install.sh
sudo /tmp/pi-star.mobile.install.sh
```

Once completed, using your mobile device, goto:  
<http://pi-star.local/mobile> or <http://<IP ADDRESS>/mobile>

## MMDVMCal

Login to Pi-Star over SSH.

Enter: `sudo pistar-mmdvmcal`

Pi-Star BrandMeister API Keys:

<https://news.brandmeister.network/introducing-user-api-keys/>

## Firmware upgrade(the new is v1.3.6\_20180522)

### Full Duplex Hat procedure:

Instructions for FW Ver1.3.6:

- 1) More space for ring buffers
- 2) Pseudo random fill instead of 1.2 kHz fill for DMR DMO

\*update script ,bin, and source code from  
[https://github.com/juribeparada/MMDVM\\_HS/releases](https://github.com/juribeparada/MMDVM_HS/releases)

There are 2 ways to upgrade,

1st , from pi-star ver3.4.11, run upgrade command  
`sudo pistar-mmdvmhshatflash hs_dual_hat`

2nd, use upgrade script

1) login ssh mode:

[http://pi-star/admin/expert/ssh\\_access.php](http://pi-star/admin/expert/ssh_access.php)

default

usr: pi-star

pas: raspberry

Copy all follow text ,then Ctrl+V, and press ENTER

#2) Change system to Read and Write

`rpi-rw`

cd ~

#3) Download flash script

curl -

OL [https://raw.githubusercontent.com/VR2VYE/MMDVM\\_HS\\_firmware/master/install\\_fw\\_duplex.sh](https://raw.githubusercontent.com/VR2VYE/MMDVM_HS_firmware/master/install_fw_duplex.sh)

#4) make runnable

sudo chmod +x install\_fw\_hsdualhat.sh

#5) Stop MMDVMHost service

sudo pistar-watchdog.service stop; sudo systemctl stop mmdvmhost.timer; sudo systemctl stop mmdvmhost.service

#6) Flash to latest version

./install\_fw\_hsdualhat.sh

#7) Startup MMDVMHost service

sudo pistar-watchdog.service start; sudo systemctl start mmdvmhost.timer; sudo systemctl start mmdvmhost.service

## ZumSpot Hat Update Procedure

Pi-Star Firmware upgrade mmdvm hs hat flash the command has change in new versions of pi-star.

Download the script (\*.sh) that matches with your ZUMspot/MMDVM\_HS board:

- install\_fw\_rpi.sh: only for ZUMspot RPi board (KI6ZUM & VE2GZI)
- install\_fw\_hshat.sh: only for MMDVM\_HS\_Hat board (DB9MAT & DF2ET)
- install\_fw\_hshat-12mhz.sh: only for MMDVM\_HS\_Hat board with 12.288 MHz TCXO (DB9MAT & DF2ET)
- install\_fw\_nanohs.sh: only for Nano hotSPOT board (BI7JTA)
- install\_fw\_nanodv.sh: only for Nano DV board (BG4TGO & BG5HHP)
- install\_fw\_hsdualhat.sh: only for MMDVM\_HS\_Dual\_Hat board (DB9MAT & DF2ET & DO7EN)
- install\_fw\_librekit.sh: only for ZUMspot Libre Kit board (KI6ZUM & VE2GZI) or generic MMDVM\_HS board with USB interface
- install\_fw\_usb.sh: only for ZUMspot USB dongle (KI6ZUM & VE2GZI)
- install\_fw\_duplex.sh: only for MMDVM\_HS with dual ADF7021 (EA7GIB) or generic dual ADF7021 board with USB interface
- install\_fw\_gen\_gpio.sh: only for generic MMDVM\_HS board (EA7GIB) with GPIO serial interface
- install\_fw\_duplex\_gpio.sh: only for MMDVM\_HS with dual ADF7021 (EA7GIB) or generic dual ADF7021 board with GPIO serial interface

so steps are:

1) - open your pi-star dashboard in a web browser

- 2) - go to configuration
- 3) - go to expert
- 4) - go to SSH-Access
- 5) - log on (user pi-star + your password)
- 6) - type "sudo pistar-zumspotfash rpi"
- 7) - confirm by pressing any key (last chance to back out by pressing CTRL-C here)
- 8) - wait till you get the message that flashing is complete, then press any key to reboot
- 9) - done