

OpenMD9600 Instructions by Ian Spencer DJ0HF v3.3J 20.09.2023

Uploading the OpenMD9600 Firmware and Voice Prompts

These instructions are for the TYT MD9600 and the Retevis RT90.

But first of all you are going to need the official firmware from TYT which will be merged with the OpenMD9600 firmware by the Loader program and which for licence reasons I am not able to include in the package.

If you don't need detailed instructions then use the link below to download this firmware and save it on your computer and then open the zip file and extract the file you need as explained in 'continue downloading' further down this page and put that file in your OpenMD9600 folder on your Desktop.

https://www.passion-radio.com/index.php?controller=attachment&id_attachment=760

If you have any problems you can go to my website www.spencerweb.net which is where you downloaded this package, go to Downloads, then OpenMD9600 and then Updates and choose the button which links to the TYT MD9600 Firmware.

If you need more detailed instructions for downloading the firmware from the site then here they are for Edge/Chrome and Firefox.

First Edge/Chrome

When you select the link above Edge or Chrome begins running and automatically downloads the zip file which may take a little time depending on the speed of your internet connection. Once the download is complete you just need to hit Enter to start 'Windows Explorer' then you can go down these instructions to 'continue downloading'.

Firefox

If you are using Firefox then when you select the link above Firefox will start and a window will open with two radio buttons if you are on the save radio button then you need to cursor up once to get to the Open with radio button

and the default program in the combo box should be Windows Explorer, so just hit Enter.

Wait for the download to finish and for windows Explorer to open and then go to 'Continue Downloading' which is the next paragraph.

Continue downloading

Cursor down the contents of the zip file until you get to

MD9600-csv(2571v5)-v26.45, this is a .bin file, if the files are listed by name it is probably the second file down but make sure you are on the correct file and then hit Enter, as I say be careful to choose the correct file as the file names are all very similar and you need this exact file it doesn't matter what version of hardware your radio has or whether your radio has GPS fitted or not.

Then hold the Ctrl key and hit C to copy the file.

Then hit F4 to close windows explorer and then F4 again to close Edge/Chrome/Firefox as you are finished with the internet.

Go to your Desktop and hit m until you locate your MD9600BH folder and then hit Enter to open it followed by holding the Ctrl key and hitting v to copy the file into the folder.

Now you are completely ready to upload the firmware to your MD9600/RT90.

Plug the mini USB connector of the programming cable into the mini USB socket on the back of the radio if you haven't already done it. See tutorial 5 for a walk around of the front and rear panels if you don't know where the mini USB socket is located. Then plug the USB A end of the cable into a USB port on your computer.

If this is the first time you have installed OpenMD9600 on your radio and it is running the standard manufacturers firmware then you need to hold the orange button and P1 depressed at the same time as you switch on the power supply for your radio, you do not use the power button on the front of the radio. However once you have OpenMD9600 installed it gets easier as

you only have to hold the hold the orange button and P1 depressed at the same time as you turn on the radio by pressing the Power button on the front panel. Your radio is now in the firmware upload mode.

You should hear a burble from windows as it recognizes the device and the screen on the MD9600/RT90 will begin to flash.

Now on your computer move the focus to your desktop and hit 0 until find the OpenGD77 CPS program and then hit enter to start it. The MD9600 *RT90 use the same CPS as the GD77 and MDUV380/RT3S.*

Unless you are sure that the MD9600 is selected in the OpenGD77 CPS it is best to type ALT+R to go to the radio option and cursor down to MD9600/MDUV380 and select it.

Now type ALT+E to open the Extras menu and cursor down 2 times to get to the Firmware Loader option and hit Enter.

A window opens allowing you to choose which model of DMR handy you want to upload too. If necessary cursor up or down to select MD9600 and if you have uploaded firmware before with this CPS then you can skip the next step and simply tab twice and then go to Continue uploading firmware further down this page. If this is the first time you have uploaded firmware with this CPS then the tab three times and then hit Enter to select the standard TYT firmware file which we want to integrate into OpenMD9600. Which is the one you saved earlier in your OpenMD9600BH folder.

You should be focused on the Select Official Firmware (donor) file and if this is first time you have installed OpenMD9600 then continue with these instructions, if you have already verified the original MD9600 firmware then skip down these instructions called continue uploading firmware.

You just need to hit enter to start windows explorer.

A standard windows explorer window will open with the focus on the filename edit field. However if this is the first time you have uploaded firmware with the program then windows explorer may be sitting on your PC Documents folder or somewhere else which is not where your firmware file

is located, it is in the Desktop folder so type Alt+Cursor Up until you reach desktop

and then shift+tab followed by hitting the letter m until you find your MD9600BH folder, when you have found it then hit Enter

if you are not on the file list you may need to hold the shift key and tab 2 or 3 times to get to it and then

cursor up or down if necessary to get to the MD9600 dot bin file.

and then hit Enter The complete file name is MD9600-CSV(2571V5)-V2645.bin if you are not sure which file to choose.

A window will appear saying that the official firmware has been verified and you are on the OK button so just hit Enter.

Continue Uploading Firmware :-

Tab until you find the Select Open Firmwmare & Update field and select it with the space bar. A standard windows explorer window will open and now cursor down once to the Firmware files drop down menu and cursor down once to find Legacy files, and then hit Enter to select it.

Now cursor down 8 times and you should be on the file list. You need to find the file mdvxfw where x is the number 1 to 5 depending on the version of the MD9600/RT90 you own.

So try cursor up and down to find the file mdv that you need, if you don't find it then you are probably not on the MD9600BH folder and need to repeat the procedure of going to your desktop and finding the folder again.

When you have found the mdvxfw (x is 1 to 5) file then hit Enter, Don't worry if you upload the wrong version it just means your radio won't transmit or receive and you will need to come back to the part of the tutorial and try again with a different version of the firmware. The only way I know of finding the version is to take off the cover and look for the version number on the board but if your radio is fairly new it will almost certainly be version 5. You should now be on the edit field of windows explorer.

When you hit Enter the uploading of the firmware will start automatically and takes less than a minute.

However if you get a window with the message Radio Not connected or not in DFU mode then one of 3 things is probably wrong. You are using the wrong cable, you have not turned on the radio in firmware load mode or more likely your computer has chosen the wrong driver for your radio. To install the correct driver go to the same update page on my web-site where you downloaded the donar file and find the link to the driver, download and install it again and then begin the firmware upload again.

Once the upload is finished there will be a tone from the Loader program and a new window saying Firmware Update Complete will open and you are focused on the OK button. Just hit enter and a new window will open and you are focused on the Close button so just hit enter.

After the upload is complete the MD9600/RT90 will come back on in normal user mode.

You may not want to but if you ever want to go back to the original TYT or Retevis firmware then you should now use the OpenGD77 CPS to save the flash memory data from your MD9600/RT90. If you don't do this then you will not be able to re-install the original TYT or Retevis firmware if you want too. You can save the flash memory data by doing the following.

Make sure the mini USB plug on the programming cable to the mini USB socket on the rear of the radio (a description of the front and back panel layouts of the MD9600/RT90 is in tutorial 5) and the USB A plug to a USB socket on your computer and the radio is turned on

Go to your desktop and hit o until you find OpenGD77CPS and then hit enter, you must use the OpenGD77 CPS and not the one used by Joe for his versions of OpenGD77 as his version does not support the MD9600/RT90.

The CPS program will start so now type Alt+r to open the radio menu and if MD9600 is not selected use cursor down and then enter to select it.

Now type Alt+e to open the extras menu and cursor down to Open GD77 support and hit enter and the window will open with the focus on the backup flash option.

Hit Enter and the reading of the flash will immediately begin, with nvda you hear progression beeps but other screen readers may not do this and it takes quite a long time to read the flash probably several minutes so wait until you hear the save message meaning the read has finished and you can choose where you want to store the backup of the Flash and now save it.

Now Type ALT+F4 to get back to the main menu of the CPS program.

We are now going to select and upload an audio package of voice prompts.

If you have just restarted the OpenGD77 CPS program then type ALT+r to open the radio button and if the MD9600 is not selected cursor down to it and hit enter to select it. If you didn't close the CPS program then the MD9600 should still be selected.

Type ALT+e

and then hit o and you have a new window OpenGD77 Support and you are focused on the Backup Flash button.

Hit the cursor down 4 times and you should be focused on Write Voice Prompts, make sure you are really focused on Write Voice Prompts as there are other options in this window that you don't want to carry out. So you are on Write Voice prompts and you just need to hit Enter.

A standard Windows Explorer window will open and the focus is on the File Name edit field so now you have to choose a voice for your radio voicem.vpr for a male voice or voicef.vpr for a female voice.

then hit Enter and the writing of the Voice Prompts to the MD9600/RT90 will automatically begin. This voice prompt package is the same as the one used by OpenGD77.

Remember that these instructions try to keep everything as straightforward as possible so if you want to load a different voice prompt file for maybe a different language you will have to navigate to it on your computer and select it before hitting Enter.

When the upload is finished the computer will give a tone and you will be on a new window focused on the Close button so just hit Enter.

We are now finished with the CPS program for now so type ALT+F4 a new window will open asking if you want to save the code plug and you are focused on the yes button, hit tab to move to the No button and hit enter.

Turn off your MD9600/RT90

Unplug the programming cable from the MD9600/RT90 and the computer.

Turn on your MD9600/RT90 and you're ready to go provided you have a code plug installed if not then go to 3 - Creating a code plug PDF or 3 – Creating a code plug MP3 the instructions for creating and uploading a code plug. The OpenMD9600 uses the same code plug as OpenGD77.