

## AT-D868UV & AT-D878UV Firmware Update Procedure

Installation of a Windows driver is required to perform any programming or firmware updates to this radio. This driver is named *PC\_cable\_GD\_VirtualComDriver 1.0.1.2118* and is part of the down-loadable file containing the firmware updates. This file only needs to be installed once.

Firmware updates do not need to be installed in order, you can skip right to the most recent update available. Usually each firmware update file will also include an updated version of the computer programming software (CPS). After a radio's firmware is updated, older versions of the CPS should not be used. If a new version of firmware causes any kind of problems, you can simply revert back to a previous version by reinstalling an older version.

All versions of firmware updates can be found here:

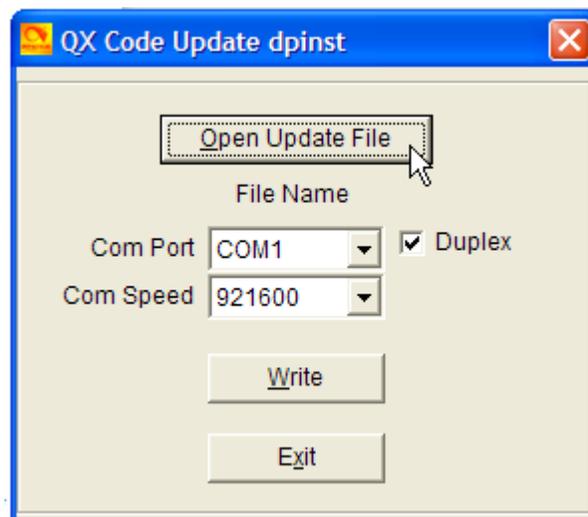
[http://www.wouxun.us/category.php?category\\_id=93](http://www.wouxun.us/category.php?category_id=93)

After writing firmware to the radio, the update will not take affect until the radio is re-booted. This is a key pad procedure, not just a simple power-on/power-off.

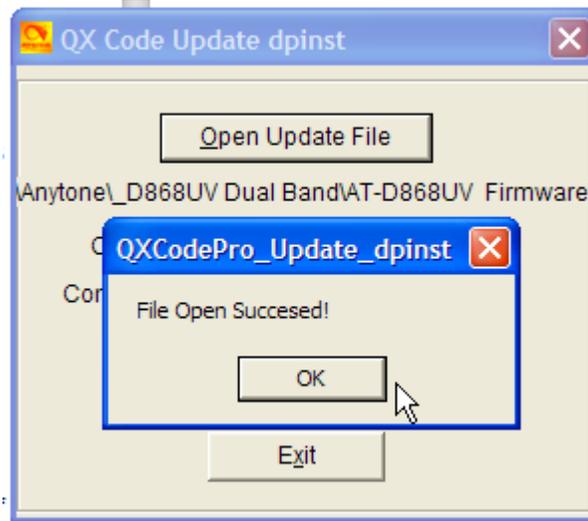
Download the most recent firmware. This file will be a .zip file. Create a folder on your desktop and extract the contents of this file into it. If you need a program to extract either a .zip or .rar file, 7-Zip is a free one available from: <https://sourceforge.net/projects/sevenzip/files/latest/download>

### Installing Firmware

Firmware can be installed using the stand-alone program QXCodePro. You can also use the channel programming software (CPS) by clicking Tool / Firmware Upgrade. Start the program QXCodePro..... You will see this screen.

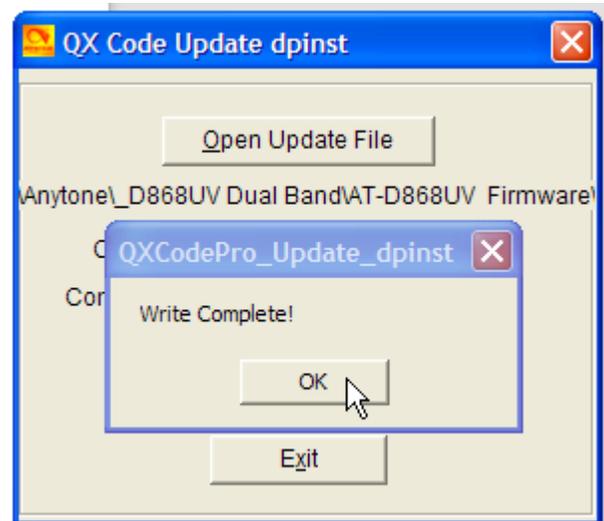
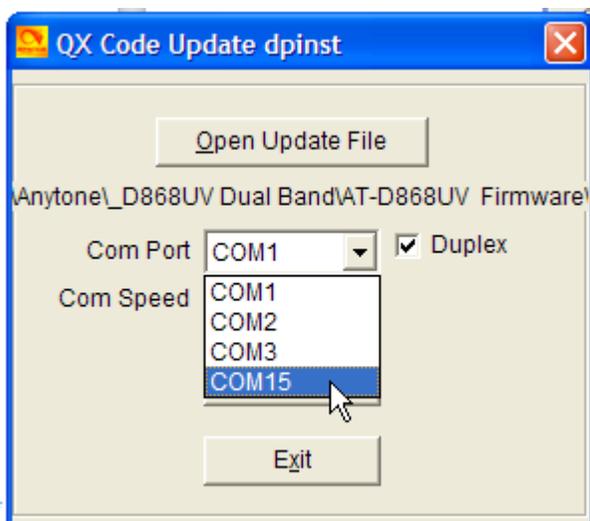


Click **Open Update File** and find the update file you saved in the folder you created. You will get a prompt that the file successfully opened. Click **OK**. Make sure to put a check mark in the **Duplex** box.



Turn your radio off. Attach the programming cable to both the radio and the computer. Press and hold both the PTT button and the PF3 button and turn on the radio. The LED light near the on/off switch will blink slowly. The radio is now ready to accept the firmware.

You will need to choose the correct **Com Port** using the drop-down menu. The number required is usually the one at the bottom of the list. Choose this number and click **Write**. Follow all the prompts until you see that the firmware was successfully installed.



**PLEASE NOTE:** After a successful firmware update, the radio will return to its normal display screen. If the radio returns to a screen requiring the time to be set, then the update did not work. In this case, press the green button to accept the displayed time and try updating the firmware again.

After the firmware installs, the radio will proceed to its welcome screen and then to its normal screen showing frequencies and etc. **You must now re-boot the CPU for the update to take place.**

Turn the radio off. Press and hold both the PTT button and the PF1 button (located just below the PTT button), while powering on the radio. The screen will ask for you to **Confirm**. After the CPU re-boot, the screen will return to the setting of the time zone, date and local time. These are set via the keypad as described in the owner's manual.

It is now time to re-install your saved code plug using the **newest** version of the Computer Programming Software (CPS).



## AT-D868UV Code Plug Installation Procedure

The term “*code plug*” originated long ago when certain parameters were actually selected by inserting a factory-coded plug into a socket in the radio. Motorola has used the term ever since, even though a lot more information is now included in a computer-generated code plug. Sometimes you will see the spelling as one word, “codeplug”.

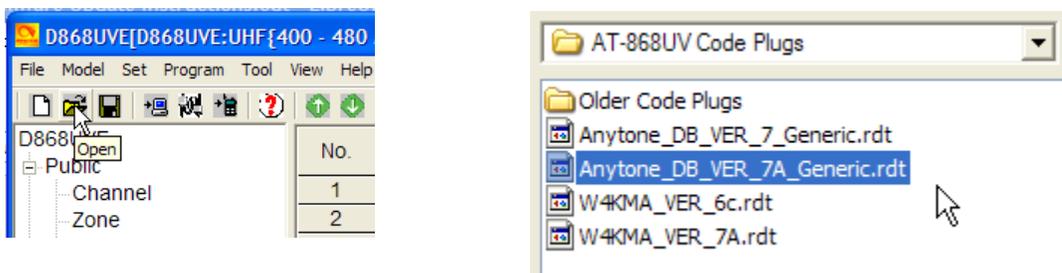
As mentioned earlier, there is usually a new version of Computer Programming Software (CPS) issued with each firmware update. Make sure you use the CPS version that was released with your version of firmware.

If you have obtained your code plug from some generous soul (they require a lot of work and expertise to create) you may need to make modifications to the “plug” before you use it. When using a borrowed code plug in the AT-D868UV, you **MUST** make sure to update the **Radio ID List** to show **your** DMR-MARC ID number and name. Two other options that should be checked are the information on the start-up screen and the assignment of functions to various radio buttons.

The procedure for loading one of **your** older code plugs is the same as loading a **borrowed** code plug. To kill two birds with one stone, the following will demonstrate how to personalize a borrowed code plug and load it into your radio.

Code plugs for many brands of DMR radios are saved as a **.rdt** file. Files from different brands of radios are not interchangeable, so make sure your borrowed file was written for an Anytone AT-D868UV. (there is software available now that will convert from one manufacturer to another)

Open your latest version of CPS, computer programming software. Sometimes it will automatically open the last file you were looking at. It is best to load (or re-load) the file you are interested in. Click the “open file” icon and choose your “borrowed” file and open it in the software program.



The frequency list will fill in, but notice the information in the **Radio ID** column. This information could even be the call sign and name of the person that loaned you the file. You will need to change this information.

No.	Receive Frequency	Transmit Frequency	Channel Type	Power	Band Width	TCSS/DC Decode	TCSS/DC Encode	Channel Name	Contact	Radio ID	Optional Signal
1	440.56250	445.56250	D-Digital	High	12.5K	Off	Off	Stanly_BM_Echo	BM_Echotest	call - name	
2	440.56250	445.56250	D-Digital	High	12.5K	Off	Off	Stanly_BM_Local	Local_TG1	call - name	
3	440.56250	445.56250	D-Digital	High	12.5K	Off	Off	Stanly_BM_C_Link	Carolina_Link	call - name	
4	440.56250	445.56250	D-Digital	High	12.5K	Off	Off	ST_Hytera_US	Hytera_US_31089	call - name	
5	440.56250	445.56250	D-Digital	High	12.5K	Off	Off	Stanly_BM_Reg_4	Southeast	call - name	

Under the **Digital** drop-down, choose **Radio ID List** and fill in your specific information as shown in the example below.

No.	Radio ID	Name
1	11111111	call - name
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		

No.	Radio ID	Name
1	3137409	W4KMA - Ed
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		

Another option to check is the Welcome Screen or **Power-on** screen. This is an option that shows custom information when the radio is turned on, other than the factory's logo. If you don't check this setting, you may find your radio greeting you with a different person's name. Make your changes under **Optional Setting / Power-on** as in this example.

Optional Setting

Work Mode | Vox | STE | FM | Power Save | Key Function | Other | Digital Fun | Power-on

Power-on

Power-on Interface: Custom Char

Power-on Display: W E L C O M E R A Y

Power-on Password: Off

Power-on Password Char: 12345678

Optional Setting

Work Mode | Vox | STE | FM | Power Save | Key Function | Other | Digital Fun | Power-on

Power-on

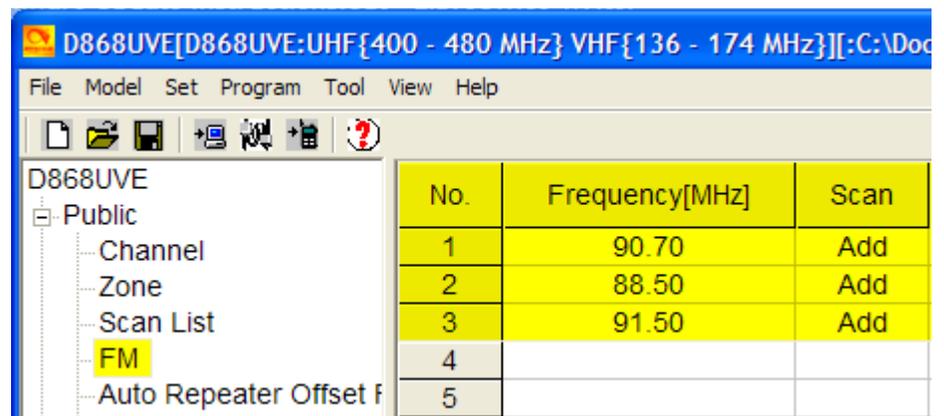
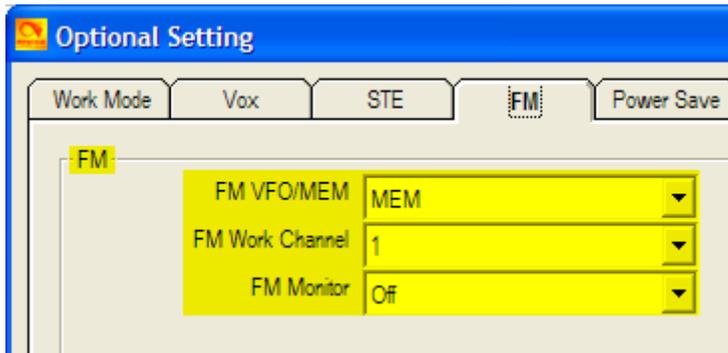
Power-on Interface: Custom Char

Power-on Display: W E L C O M E E D

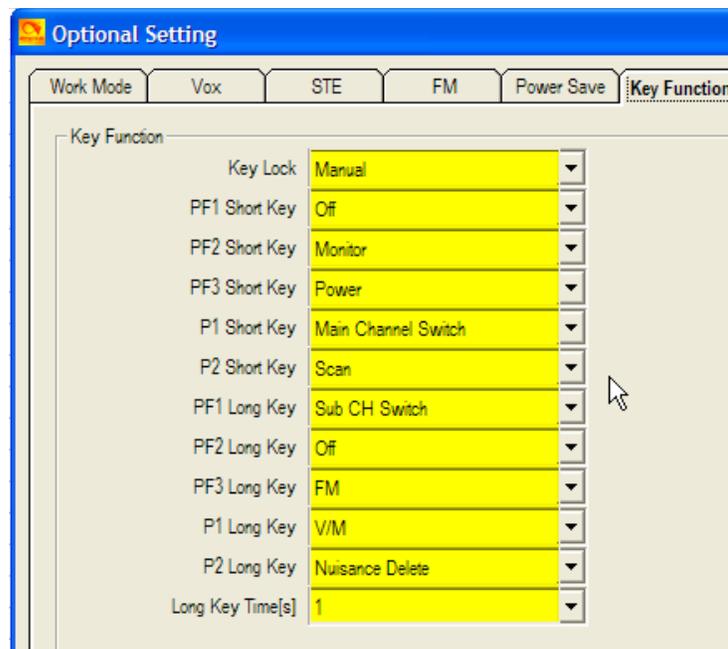
Power-on Password: Off

Power-on Password Char: 12345678

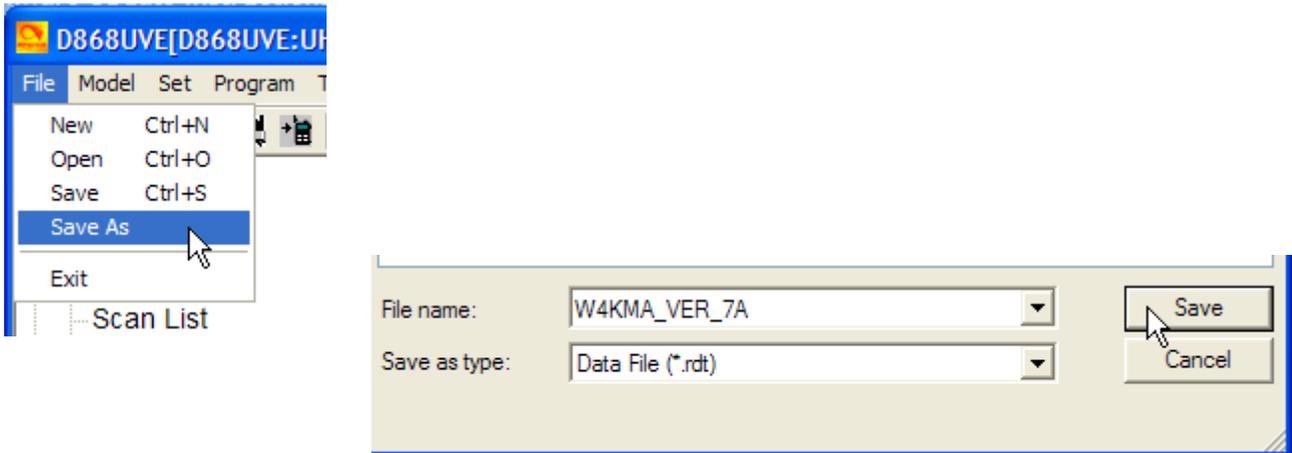
If you typically save FM broadcast stations in your radio, you will want to turn that option on under the **Optional Settings / FM** tab and enter your personal choices in the **FM** frequency list.



The last option that I personally check, is the assignment of button functions. I have my own preference for this assignment and I can check the borrowed file and quickly make changes if needed. Hint: I keep a printed screen-shot of my personal settings, which makes changing quick and less confusing. These changes are made under **Optional Settings / Key Functions** as in this example:

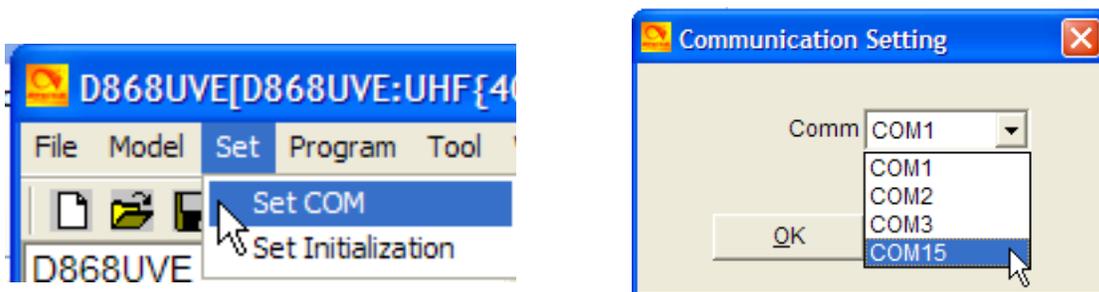


After making these changes, you are now ready to write this personalized code plug to your radio. The first thing you should do is **SAVE** the modified file with a unique name. Some people like to use a file name that included the date the file was modified. To save your file with a unique name, click **File** and **Save As**. Then type in a unique name, choose a location to save to and click **Save**, as seen below.



Now that your file is saved, you can write it to your radio. Before you can read from or write to the radio, you **must** install the Windows driver. This driver is included with other files, each time a firmware update is released. This driver is required for updating firmware, so if you have already done that, you've already installed the driver. On the off chance you're only reading this section on installing a code plug, **install the driver**. It's file name is *PC\_cable\_GD\_VirtualComDriver 1.0.1.2118*.

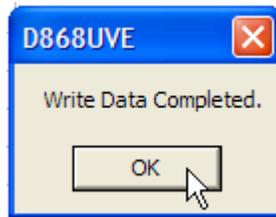
With the radio turned off (always have the radio off when connecting the USB cable), attach the cable to both the radio and the computer. Turn the radio **ON** and allow it to cycle through the Power-on Screen. Choose **Set** and **Set Com**. From the drop down box that opens, choose the required Com Port (this is usually the last one in the list). Then click **OK**.



Click the **Write to Radio** icon and click **OK** to confirm. Check **both** boxes in the next window and click **OK**.



You will see the writing progression on your screen. With a large **Digital Contact List**, the process will not be quick. After a successful write you will see this screen



and your radio will cycle through Power-on and return to its main screen.