



***DMR Radio  
Upgrade Guide***



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# Documentation Information

This section describes the conventions and revision history of this document.

## Documentation Conventions

### Icons

Icon	Description
 <b>Tip</b>	Indicates information that can help you make better use of your product.
 <b>Note</b>	Indicates references that can further describe the related topics.
 <b>Caution</b>	Indicates situations that could cause data loss or equipment damage.
 <b>Warning</b>	Indicates situations that could cause minor personal injury.
 <b>Danger</b>	Indicates situations that could cause major personal injury or even death.

### Notations

Item	Description
“ ”	The quotation marks enclose the name of a software interface element. For example, click “OK”.
<b>Bold</b>	The text in boldface denotes the name of a hardware button. For example, press the <b>PTT</b> key.
->	The symbol directs you to access a multi-level menu. For example, to select “New” from the “File” menu, we will describe it as follows: File -> New.

## Revision History

Version	Date	Description
V1.0	2018-09	Instructing you to upgrade radio firmware to R7.6 (A7.06.03.400.iM/S7.06.03.400.iM/N7.06.03.400.iM/C7.06.03.400.iM).

# 1. Important Tips before Upgrade

Please carefully read the instructions below before operation:

- This document instructs you to upgrade the firmware in radios to **A7.06.03.400.iM**, **S7.06.03.400.iM**, **N7.06.03.400.iM** or **C7.06.03.400.iM**.
- Do not disconnect the radio and the PC during upgrade; otherwise, data loss or radio damage may occur.
- Do not run other Hytera applications during upgrade. If the upgrade is interrupted by another application, please try the upgrade again.
- The RCDB data may be abnormal during upgrade due to unexpected reasons such as power-cut. Before upgrade, you can read the radio through CPS and choose “File -> Save As” on CPS menu bar to back up the RCBD data. For RCBD data restore, see [Step 3 of 3.2 Starting Upgrade](#).
- Do not disconnect the power of the radio during upgrade. However, if the power is disconnected or error occurs during upgrade, restart the radio for another try.
- After upgrade, if the LED flashes upon power-on, please try the upgrade again.
- After successful upgrade, re-program the radio with a CPS of **V9.00.07.712.iM** or above.

## 2. Before you Start

### 2.1 Preparations

Please prepare the following items before you start.

- PC with operating system Win 7, Win 8, Win 8.1 or Win 10 of 32/64-bit.  
Win7 is taken as the example hereinafter.
- DMR Upgrade Kit: The upgrade software has been successfully installed on PC.
- Ensure the USB driver has been successfully installed on PC; otherwise, the PC will not be able to recognize the radio. If not installed yet, please refer to *Digital USB Driver Installation Guide R5.0* for the installation.
- Radio to be upgraded.
- Programming Cable: PC63.

### 2.2 Firmware Version Check

#### Caution

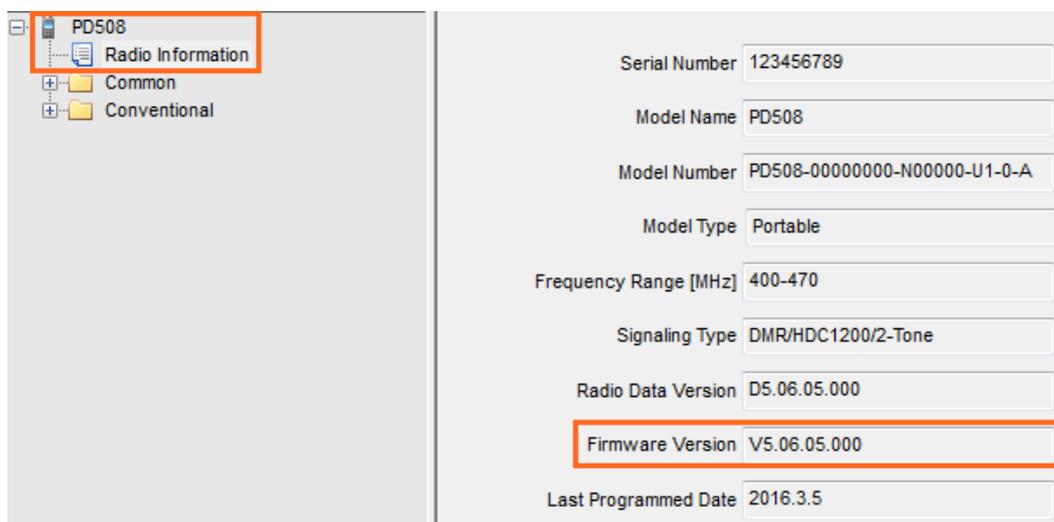
Please check whether the firmware version of the radio satisfies the requirements before upgrade. If not, please do not upgrade; otherwise the radio may get damaged.

**Step 1** Connect the radio with the PC.

**Step 2** Run the CPS to read data from the target radio.

**Step 3** Click **Radio Information** on the left of the CPS to check whether Firmware Version satisfies the requirements specified in [Appendix: Applicable Model and Version](#).

PD508 is taken as the example.



Serial Number	123456789
Model Name	PD508
Model Number	PD508-00000000-N00000-U1-0-A
Model Type	Portable
Frequency Range [MHz]	400-470
Signaling Type	DMR/HDC1200/2-Tone
Radio Data Version	D5.06.05.000
Firmware Version	V5.06.05.000
Last Programmed Date	2016.3.5

**Step 4** Disconnect the CPS and radio.

## 3. Upgrade and Check

Before upgrade, please make the radio enter the download mode first.

### 3.1 Entering the Download Mode

#### 3.1.1 PD50X/PD56X

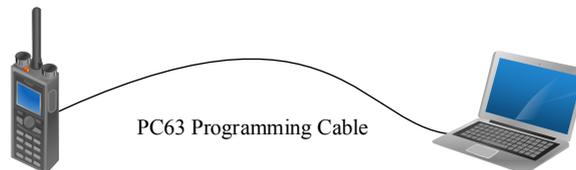
**Step 1** Power off the radio.

**Step 2** Toggle the switch on PC47 to the **DL** end.



Do not toggle to the **DL** end during programming.

**Step 3** Connect the radio (e.g. PD56X) with the PC via PC63.

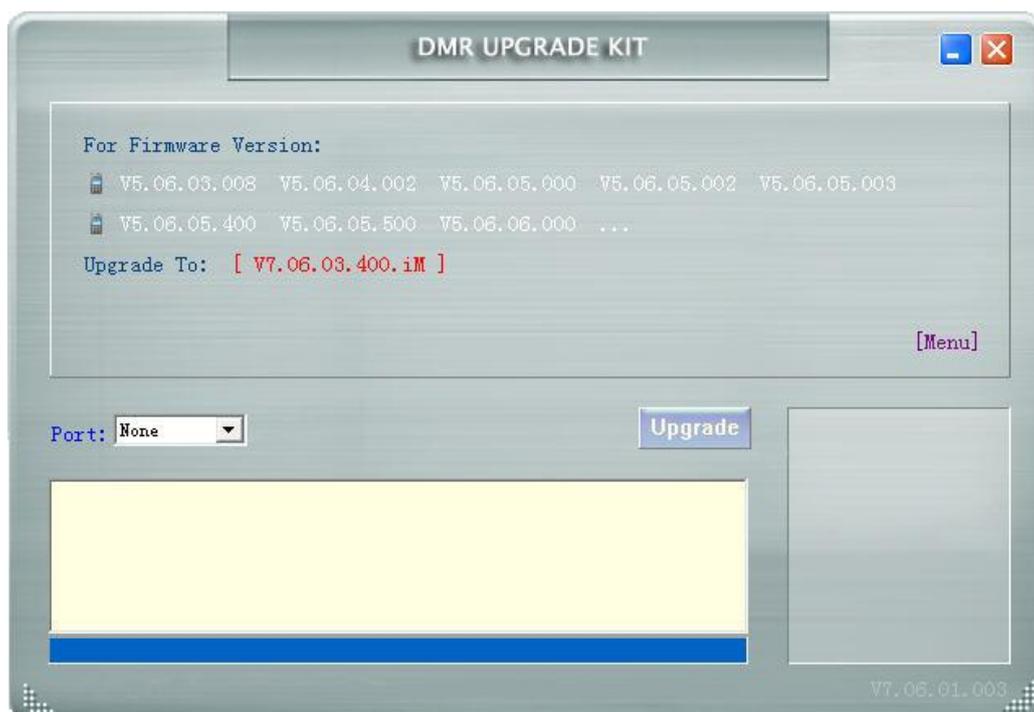


**Step 4** Hold **SK1** key and power on the radio.

The radio enters the download mode successfully when the LED flashes red for seconds and then glows red solidly. Otherwise, power off the radio and try the above operations again.

### 3.2 Starting Upgrade

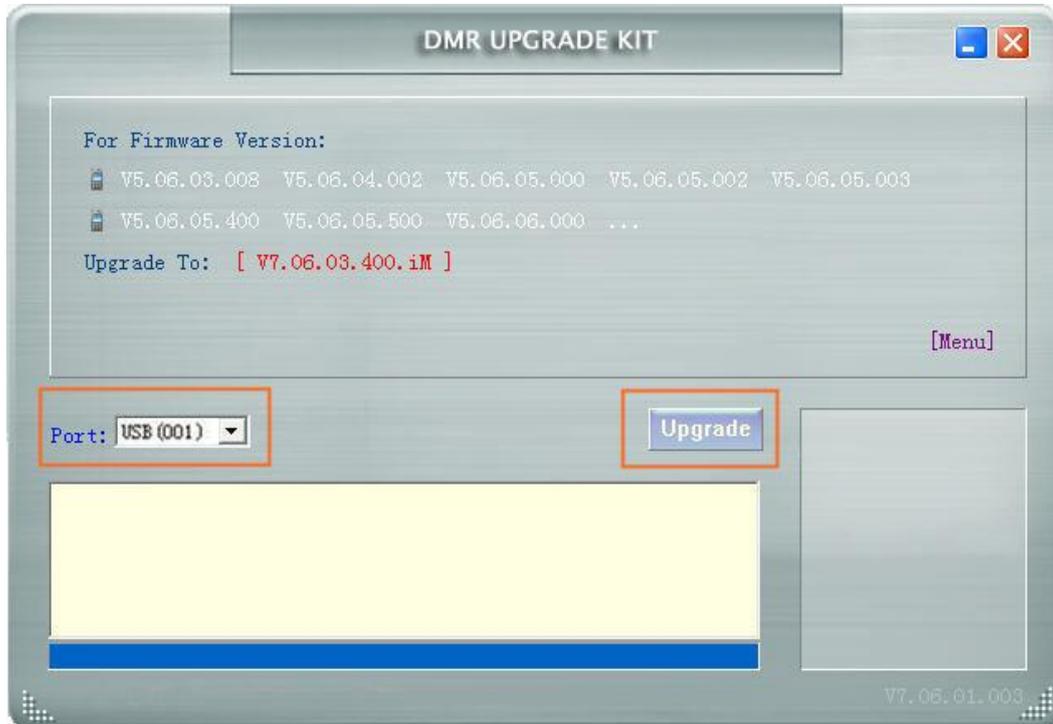
**Step 1** Run the Upgrade Kit.



**Note**

If a “Restore” button is displayed in the main interface, it indicates an abnormality of RCDB data during the previous upgrade. In this case, please restore the radio with reference to [Step 3](#) below. Otherwise, the upgrade will fail.

**Step 2** In main interface of the upgrade tool, select USB port of the radio and click **Upgrade**.

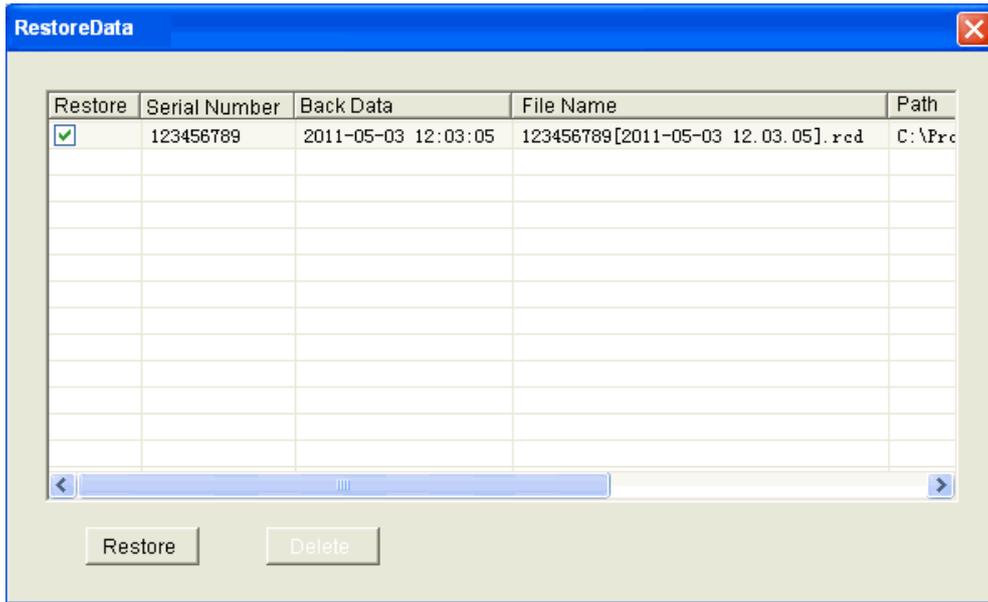


During the upgrade process,

- If the prompt “Open USB failed” appears, check whether the cable is properly connected to the radio, and whether the USB interface is busy with other software.
- The prompt “The firmware version [xx.x.xx.xxx] is beyond the upgrade software!” indicates the upgrade package is not compatible with the current firmware. Please stop upgrading right away.
- “Reading data error!” or “Writing data error!” or alerts alike indicates the USB connection has timed out. Click **OK**, and try the upgrade again.
- The prompt “Writing data error! RCDB data is already saved to file, from which you can restore your data when necessary.” indicates an abnormality of the RCDB data during upgrade. Click **OK** and then you can see a **Restore** button in the main interface.

**Step 3** (Optional) Restore the radio in case of the RCDB data abnormality, in this way:

1. Click **Restore** to proceed to the corresponding interface.



- 2. Select the serial number of the radio to be restored, and click “Restore” again.  
If the serial number is not available, do not click “Restore”.
- 3. A prompt box as shown below appears upon successful upgrade.  
If no prompt appears, please try the upgrade again.



**Step 4** Click **OK**.

### 3.3 After-upgrade Check

After upgrade, you can check the radio firmware in “Radio Information” via CPS **V9.00.07.712.iM** or above. For the radio with display, you can also go to “Menu -> Settings -> Device Info” on radio menu to check it.

The upgrade is successful if the firmware version is **A7.06.03.400.iM**, **S7.06.03.400.iM**, **N7.06.03.400.iM** or **C7.06.03.400.iM**.

## Appendix A: Applicable Model and Version

Model	Firmware Version
PD50X	A7.06.02.000, C7.06.02.000, N7.06.02.000, S7.06.02.000 A7.06.01.007, C7.06.01.007, N7.06.01.007, S7.06.01.007 A7.06.01.006, C7.06.01.006, N7.06.01.006, S7.06.01.006
	A5.06.05.002, S5.06.05.002 A5.06.05.000, S5.06.05.000 A5.06.04.002, S5.06.04.002 A5.06.03.008, S5.06.03.008 A5.06.03.007, S5.06.03.007 A5.06.03.006, S5.06.03.006 A5.06.02.010
PD50X (UL913)	A7.06.02.000, C7.06.02.000, N7.06.02.000, S7.06.02.000
PD56X	A7.06.02.000, C7.06.02.000, N7.06.02.000, S7.06.02.000 A7.06.01.007, C7.06.01.007, N7.06.01.007, S7.06.01.007 A7.06.01.006, C7.06.01.006, N7.06.01.006, S7.06.01.006
	A5.06.05.002, S5.06.05.002 A5.06.05.000, S5.06.05.000 A5.06.04.002, S5.06.04.002 A5.06.03.008, S5.06.03.008 A5.06.03.007, S5.06.03.007 A5.06.03.006, S5.06.03.006
PD56X (UL913)	A7.06.02.000, C7.06.02.000, N7.06.02.000, S7.06.02.000



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