



MOTOROLA

FLASHport™ Software User Guide

for

*ASTRO APX™ 7000 Portable
Radios*

and

*ASTRO APX™ 7500 Mobile
Radios*

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Introduction to FLASHport™

Congratulations! You have just purchased a software upgrade that uses FLASHport technology from Motorola! FLASHport is a revolutionary new method that makes it possible to add software capabilities to your radios both at the time of purchase and later on. Previously, changing radio features and capabilities meant costly hardware modifications or buying a new radio. But now, similar to how a computer can be loaded with different software, your radio's features and capabilities can be upgraded with FLASHport software. This gives your Motorola radio the ability to meet your needs both today and in the future.

- System software packages provide basic radio control operations
- Enhancement packages build on systems packages and permit specific features to be installed in your radio



How to Use This Manual

This manual is designed to help you upgrade your radios with your new FLASHport software package.

The radio software included in the upgrade package must be installed with the help of the Customer Programming Software (CPS). This is provided as a separate application, and must be purchased and installed on your computer prior to beginning the radio upgrade.

The following sections of this guide apply to all upgrades:

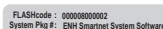
- Getting Started
- Equipment Setup

Be sure to read through these sections before installing the radio upgrade software. Then, when you are ready to install the new radio upgrade software into the radio, proceed to *"Upgrading Your Radio Using CPS"* on page 7.

FLASHport Upgrade Package

Your FLASHport upgrade package contains the following major items:

- FLASHport User Guide (this guide).
- CD-ROM disk(s) containing the FLASHport software CVN files.
- New iButton® FLASHkey™ which has been programmed with the aftermarket order information.
- “I’ve Been FLASHED” stickers which allow you to mark each radio that has been upgraded.
- New radio labels to add and/or replace the existing labels on the back of the radios. These labels identify the system package purchased and the radios’ new FLASHcode.





Items You Need to Get Started

Most of the items needed to perform a FLASHport upgrade are standard items required for any radio programming using Customer Programming Software (CPS).

- **Minimum Recommended Computer Configuration**

Processor: 2 GHz dual core or higher Pentium grade processor.

Memory: 1 GB RAM.

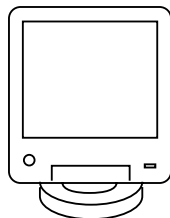
“Aero capable” graphics card with 128 MB graphics memory.

Hard Disk Space: 250 MB minimum free hard disk space.

USB Port or parallel port for iButton dongle.

USB Port for radio communication.

CD-ROM for software installation.



- **FLASHkey**

Included with the upgrade package. Connects to either the parallel port or the USB port on the computer, depending on the iButton adapter.



- **FLASHport Software Disk(s)**

Included with the upgrade package.



- **USB Programming and Test Cable**

- Mobile HKN6184_
- Portable PMKN4012_ or
Portable PMKN4013_



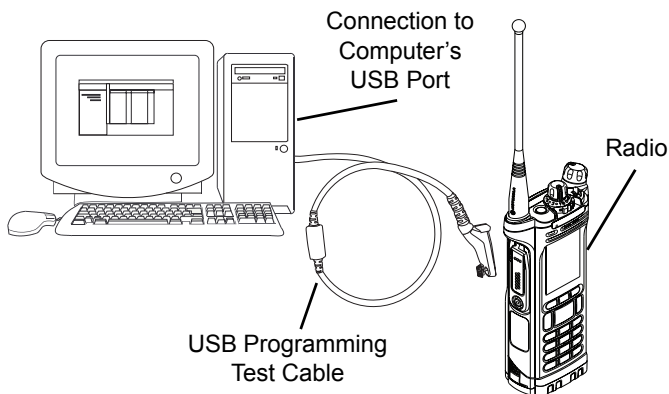
- **APX™ 7000 or APX™ 7500 Customer Programming Software (CPS)**

- CPS/Tuner — RVN5224_



Equipment Setup

To begin your FLASHport upgrade, connect the equipment as shown below.



Note: The FLASHkey is connected to the computer's parallel port or USB port.

A complete description of the equipment is provided in "*Items You Need to Get Started*" on page 4.

Upgrading Your Radio Using CPS

This section provides instructions on how to upgrade or “FLASH” your radio with new features using the Customer Programming Software (CPS).

“FLASHing” Procedure (CPS)

“FLASHing” or upgrading your radio requires the Customer Programming Software (CPS) which is used during normal radio programming and servicing procedures. Refer to “*APX™ 7000 or APX™ 7500 Customer Programming Software (CPS)*” on page 5 for your radio’s specific CPS part number. The following steps describe the best method to upgrade your radio.

Note: Do not disconnect your radio until the FLASHport upgrade process is completely finished.



Section A: Preparing for an Upgrade of the Same Model Type

1. Your FLASHport software upgrade package includes one piece of software (FLASHport upgrade software) on CD-ROM. Before starting the upgrade procedure, copy the software to your PC hard drive.
2. Connect the equipment as shown in “*Equipment Setup*” on page 6 of this guide. Make sure the radio is equipped with a charged battery (portables) or an external power supply (mobiles).
3. Apply power to the radio. The radio should turn ON and go through its power-up sequence.
Continue with steps detailed in Section B.

Section B: Performing the Upgrade

1. Launch the CPS program by selecting:
Start → **Programs** → **Motorola** → **<APXFamilyCPS Rxx>**
→ **<APXFamily CPS Rxx.xx.xx>**

Note: The items listed in italics between < > varies depending on the type of radio you are upgrading. Make the selections appropriate to the radio type.

2. The CPS appears as in Figure 1 below. Select the *Device* tab on the toolbar:

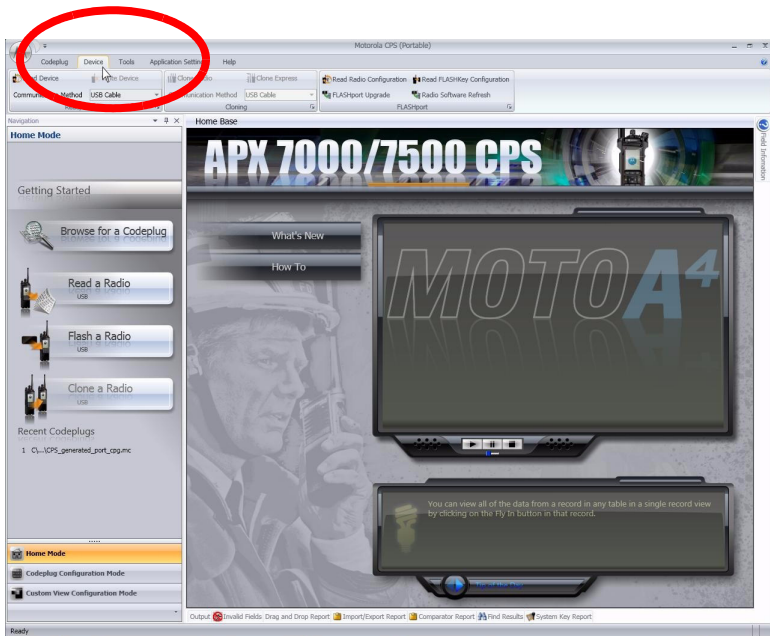


Figure 1: Select the Device Tab



Upgrading Your Radio

3. The CPS now appears as Figure 2 below. Select *FLASHport Upgrade* tab in the FLASHport Group Box.

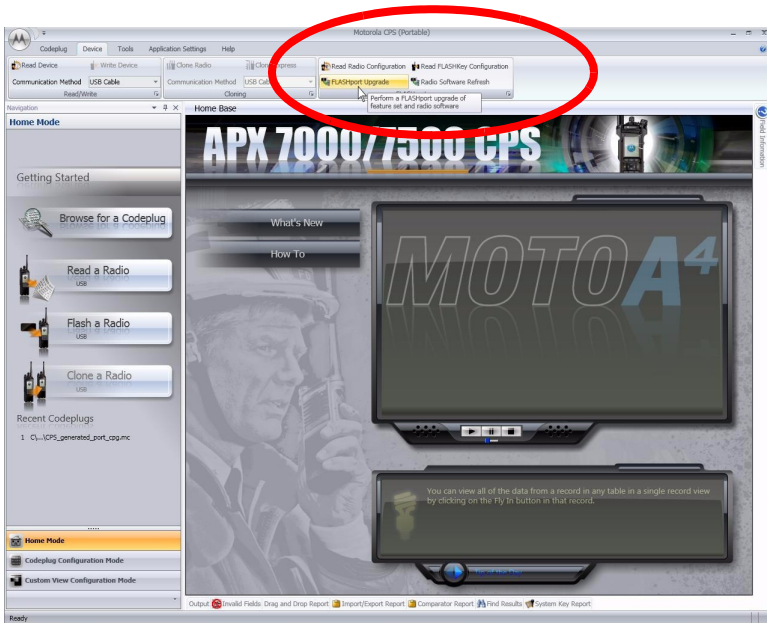


Figure 2: Select FLASHport Upgrade

4. Enter the path where the CVN file is located as in Figure 3 below. The path can be entered manually or by browsing the directories via the *Browse* button.

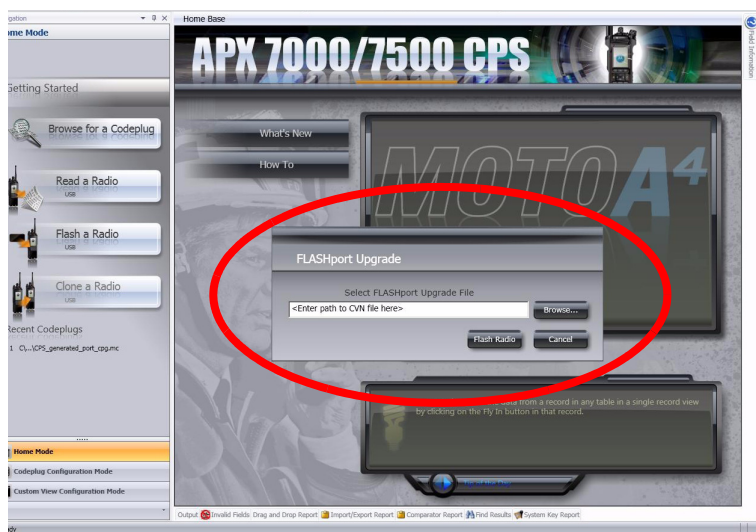


Figure 3: Enter or Browse CVN file



Upgrading Your Radio

5. Select *FLASH Radio* to begin upgrading the radio.

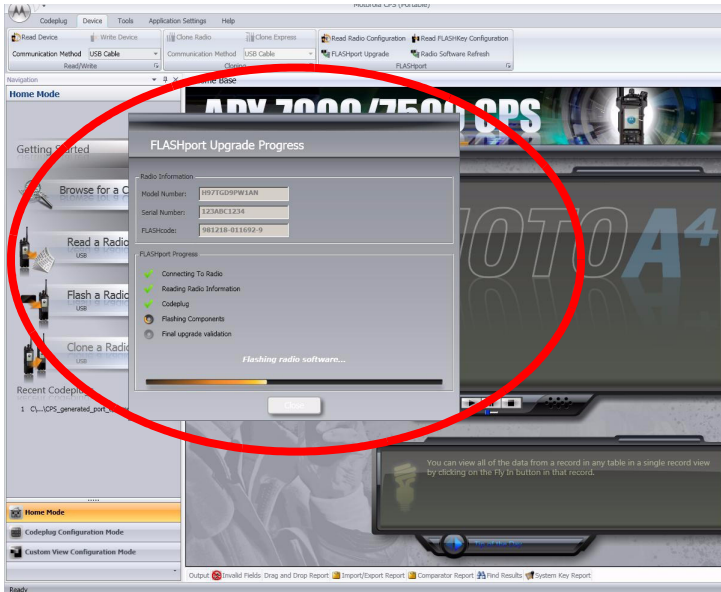


Figure 4: Upgrade in progress

6. The CPS shows the upgrade progress as seen in Figure 4 above. The upgrade process takes several minutes.

- When the upgrade is complete, the CPS appears as in Figure 5 below. Select *Close* and disconnect the radio from the PC.

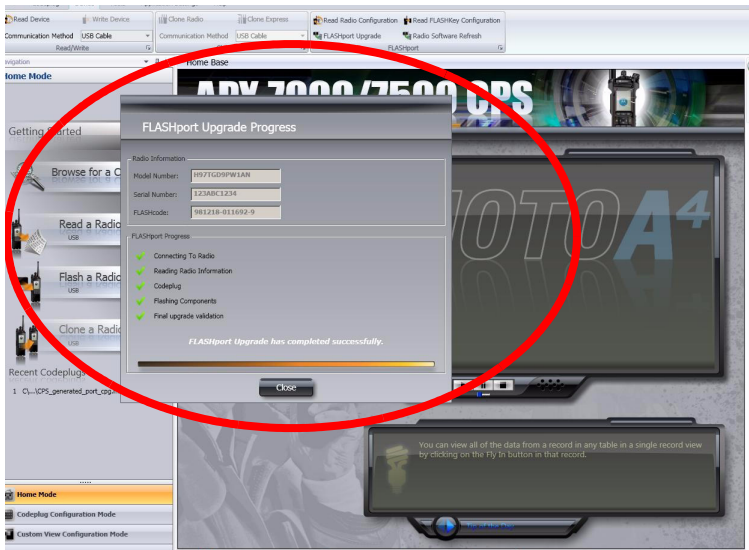


Figure 5: Upgrade Completed



After Completing the Upgrade

After completing the upgrade, disconnect the radio. Replace and/or add the radio label with the new radio label provided.

Note: It is very important that the new labels are placed on each “FLASHed” radio so that the radio can be identified for future service and programming. To help identify the radios that have been upgraded, place an “I’ve been FLASHED” sticker on the outside of the radio. These stickers can be easily removed by the end-user.

Troubleshooting Hints

Errors	Possible Corrective Actions
Firmware validation failed	Power cycle the radio. Verify all cable connections to the PC and radio are secure and retry. If the problem persists, try a different cable or computer.
No valid radio was found	Power cycle the radio. Verify all cable connections to PC and radio are secure and retry. If the problem persists, try a different cable or computer.
Unable to find a valid FLASHkey for this radio	Verify that the FLASHkey is connected to the PC. Verify that the iButton is inserted into the dongle properly.
Flashing process failed	Power cycle the radio. Verify all cable connections to PC and radio are secure and retry. If the problem persists, try a different cable or computer.
Unable to start flash sequence	CPS is unable to launch the upgrade application. Close and restart the CPS or reboot the PC.



Troubleshooting Hints

Errors	Possible Corrective Actions
Unable to flash radio. Requires CPS version Rxx.xx.xx.xx or later	The installed CPS is not compatible with CVN file. Upgrade the CPS to a later compatible version.
Communication with radio failed. Please cycle radio power and check connections	Power cycle the radio and check connections. Verify all cable connections to PC and radio are secure and retry. If the problem persists, try a different cable or computer.
Unable to send data to connection	Verify all cable connections to PC and radio are secure and retry. If the problem persists, try a different cable or computer.
Codeplug Validation failed	Power cycle the radio. Verify all cable connections to PC and radio are secure and retry. If the problem persists, try a different cable or computer.
Upgrade file contents are not valid	New CVN file is provided.

Errors	Possible Corrective Actions
Failed to read the radio codeplug	Power cycle the radio. Verify all cable connections to PC and radio are secure and retry. If the problem persists, try a different cable or computer.
Failed to unpack the radio codeplug	The codeplug of the radio has an invalid or corrupted codeplug. Reprogram the radio with a valid codeplug prior to starting FLASHport upgrade.
Failed to program the radio codeplug	Power cycle the radio. Verify all cable connections to PC and radio are secure and retry. If the problem persists, try a different cable or computer.
Invalid Radio Codeplug Data, Unable to get FLASHcode from radio	Power cycle the radio. Verify all cable connections to PC and radio are secure and retry. If the problem persists, try a different cable or computer.
Unable to validate upgrade file without a valid model number value	The model number of the radio is not valid. Verify the CPS supports the specified model.



Troubleshooting Hints

Errors	Possible Corrective Actions
Upgrade file is not valid for this product	Verify that the CVN file selected is for the product. For example, a mobile radio CVN file is selected when upgrading a portable radio.
Upgrade file does not exist. Invalid file name	Verify that the CVN file is located in the directory selected.
Failed to open xxxxxCVN file	Verify that the CVN file is located in the directory selected or that correct file name is specified.
Radio has CBI serial number. Unable to upgrade radio until programmed with a valid serial number.	The radio was not properly initialized with a serial number after board replacement. The radio serial number must be fixed with Control Board Initialization (CBI) function in the CPS.

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