



PRO-96/2096 DSP APP U1.4 Upgrade February 18, 2007

RadioShack is pleased to offer this free upgrade to enhance the functionality and performance of your PRO-96/2096 Digital Trunking Scanner. Please take a moment to review these instructions before proceeding with the upgrade.

New in this version

DSP APP Firmware Version U1.4 provides the following enhancement to your PRO-96/2096 Digital Trunking Scanner:

► Improved digital decoding

After upgrading to DSP Application firmware version 1.3 (DSP-APP 1.3), some users reported increased instances of the scanner failing to decode the beginning of digital transmissions on certain systems. DSP-APP 1.4 improves the performance of initial digital voice decoding and should result in fewer instances of undecoded digital noise at the beginning of transmissions.

Under certain circumstances, such as when weak or distorted signals are present, the scanner may occasionally fail to decode the beginning of a digital transmission even after upgrading to DSP-APP 1.4. If a radio consistently fails to reliably decode digital transmissions, users are advised to reposition the radio, utilize antennas designed for the specific band being monitored, such as the RadioShack 20-283 800 MHz BNC antenna, or take other steps to improve the quality of the received signals.

What you will need to upgrade your radio

You will need the following items to perform the DSP firmware upgrade:

- The 2000526_UPG_14.EXE upgrade application file. To download the file, visit the PRO-96 Software Downloads page at

<http://www.radioshack.com/search/softwareResults.jsp?kw=pro-96>

and click on the Product Support tab, then locate the downloadable upgrade file for DSP APP 1.4. Click the file to download it to your computer. The same file can also be found on the PRO-2096 software page at

<http://www.radioshack.com/search/softwareResults.jsp?kw=pro-2096>

The files are identical, and either one may be used to upgrade either scanner.

- A RadioShack RS-232 PC/IF cable, part number 20-289, or a RadioShack USB PC/IF cable, part number 20-047.
- A personal computer running Windows 95 or greater (note that Windows 98SE or greater is required if using the 20-047 USB cable)
- A PRO-96 or PRO-2096 in need of a DSP upgrade.

Upgrading your PRO-96 or PRO-2096

Upgrading your digital scanner is a quick, simple and safe process. There is no way you can accidentally render your scanner inoperable by performing the upgrade. Your scanner always retains the original factory version (F1.1 or F1.2, depending on the age of your scanner) of DSP firmware. In the unlikely event that the upgrade does not succeed, the scanner will automatically revert to the original permanent factory version. If for some reason you want to manually revert back to the factory version, you can do so easily. In fact, you can reload the upgrade using your personal computer as many times as you wish.

The 2000526_UPG_14.EXE upgrade utility starts a self-guided process when it is executed. Double click the 2000526_UPG_14.EXE icon to begin this process. If you are the kind of person who already knows how to transfer data to and from your digital scanner, you may want to stop here and simply follow the on-screen instructions to complete the upgrade process.

On the other hand, if you prefer to have a nice set of printed step-by-step instructions to guide you through the process, you can refer to the following procedure.

Step by step upgrade procedure

This step by step procedure assumes that you have downloaded the upgrade package, that you have connected the RadioShack RS-232 PC/IF cable (20-289) or USB PC/IF cable (20-047) to an available RS-232 or USB port on your personal computer, and that you know the COM port number of the RS-232 or USB port that the scanner is connected to. If this is not the case, please take a moment now to prepare for the upgrade by completing the above steps before proceeding.

1. Double click the 2000526_UPG_14.EXE icon. Read the important notice, then click “Yes” to proceed with the upgrade.
2. Follow the steps listed on the 2000526_UPG_14.EXE main screen.
 - a. Connect your radio’s PC/IF jack to an available COM port on your personal computer, using the RS-232 or USB PC/IF serial cable. Turn the scanner ON.
 - b. Select the COM port number that corresponds with the RS-232 or USB port that the scanner is connected to.
 - c. Click the TEST button to test the communications between the personal computer and the scanner, and retrieve the DSP firmware version currently active in the scanner. The upgrade utility will display a dialog box showing the current firmware version, the upgrade firmware version, and ask you if you want to proceed with the upgrade. Click YES to continue.
 - d. Turn the scanner OFF and disconnect the programming cable.
 - e. Turn the scanner back ON. While the “Welcome” message is displayed, press 0, then PGM, then ENTER to place the scanner in DSP firmware update mode. The scanner should display “DSP LOAD, PC/IF Port, Flash Memory”.
 - f. Reconnect the programming cable to the scanner.

- g. Click the UPDATE button to upgrade the PRO-96 DSP firmware. The upgrade process takes approximately 45 seconds. The scanner will reset once the upgrade is complete. Disconnect the programming cable when prompted by the scanner.

Verifying the firmware version

You can verify the version of DSP firmware currently active in the PRO-96 by pressing the 3 key during the “Welcome” screen. The scanner will display firmware versions for three separate firmware elements. The second version, “DSP APP”, is the only element that is upgraded in this update file. After the upgrade is complete this should display DSP-App:U1.4.

Reverting to the factory DSP firmware version

If for any reason you decide that you would like to revert to the original factory DSP version (F1.1 or F1.2, depending on the age of your scanner), you may do so by pressing 0, then PGM, then CLEAR, then ENTER during the “Welcome” screen. Note that this will permanently remove the upgrade from the DSP flash memory. You can reload the upgrade as many times as you like using the upgrade utility.

Troubleshooting

Most users should experience no trouble whatsoever upgrading their PRO-96 scanning receivers. However, if you find that the upgrade process is not working for you, here are a few things you can check:

- Ensure that the correct serial port is specified in Step 2 of the on-screen self-guided upgrade process. For the 20-289 RS-232 cable, this will typically be either COM1 or COM2. In some cases COM3, COM4 or greater are used. The 20-047 USB cable may use higher COM port numbers, as will external USB RS-232 serial adapters or converters. The upgrade utility should support any valid serial port that Windows can recognize.
- Ensure that no other applications are using the serial port. PDA cradle synchronization utilities are notorious for stealing serial ports so that other applications cannot use them. Disabling all other programs prior to running the upgrade utility can help minimize the chances of a conflict.
- Make sure the scanner is placed in DSP upgrade mode before proceeding with Step 7 of the upgrade process. Press 0, PGM, then ENTER in sequence while the “Welcome” screen is displayed.
- If none of the above suggestions work, try running the upgrade utility on a different computer. In some cases hidden applications can cause port conflicts. It is not always possible to see these hidden applications and disable them to eliminate the conflict.

**Thank you for
choosing the
RadioShack
PRO-96 and
PRO-2096! :-)**

