

RadioShack is pleased to offer this free upgrade to enhance the functionality and performance of your PRO-163/PRO-164 (20-163/20-164) Triple Trunking Radio Scanner. Please take a moment to review these instructions before proceeding with the upgrade.

**IMPORTANT NOTICE:** You must upgrade your RadioShack scanner with a firmware upgrade obtained from RadioShack. Please note that firmware upgrades for RadioShack scanners are not compatible with scanning receivers sold by other manufacturers.

### ***New in this version***

Firmware version 1.06 provides the following enhancement to your 20-163/20-164 Triple Trunking Radio Scanner:

#### **Custom programmable trunking tables**

Add custom programmable trunking table functionality to the 20-163/20-164. This feature allows the configuration of custom trunking band plans, such as those used in rebanded 800 MHz Motorola™ trunked radio systems that utilize 3600 baud control channels.

#### **Changed 470-512 MHz step size to 6.25 kHz**

Many areas are proceeding with spectrum “refarming” which adds new channels to existing bands. Consistent with other UHF bands currently in the radio, the UHF “T” Band range is changed to use 6.25 kHz steps.

### ***What you will need to upgrade your radio scanner***

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

- The upgrade package file is available as a self-extracting ZIP file on the Product Support Page for the PRO-163 or PRO-164 at [www.RadioShack.com](http://www.RadioShack.com). The upgrade package contains two executable files:
  - 20-163\_164\_v106\_BOOT100.EXE (for use with 20-163 and 20-164 models with Boot Version 1.00)
  - 20-163\_164\_v106\_BOOT101.EXE (for use with 20-163 and 20-164 models with Boot Version 1.01)
- A RadioShack USB scanner programming cable, Catalog #20-047
- A personal computer running Windows™ 2000, XP, or Vista
- A 20-163 or 20-164 scanner in need of a CPU upgrade

## ***Upgrading your 20-163 or 20-164***

Upgrading your scanner is a quick, simple, and safe process. There is no way you can render your scanner inoperable by performing the firmware upgrade.

### **Before upgrading**

Prepare for the upgrade by completing the following:

1. Download the 20-163/20-164 firmware upgrade package.
2. Install the drivers for the RadioShack Catalog #20-047 cable on your personal computer.
3. Connect the USB cable to an available USB port on your personal computer.
4. Know the COM port number that Windows has assigned to the USB cable. You can find the COM port number from Device Manager in Control Panel.

### **Step by step upgrade procedure**

1. Upgrading your scanner will result in the loss of any programming that you have stored. We recommend that you save your work before proceeding with the upgrade using a third-party scanner programming software. For more information, see the “**Setting the custom programmable trunking tables using third-party scanner programming software**” section below.
2. There are two versions of CPU firmware:
  - 20-163\_164\_v106\_BOOT100.EXE works with earlier versions that utilize Boot Version 1.00.
  - 20-163\_164\_v106\_BOOT101.EXE works with more recent versions of that utilize Boot Version 1.01.

To determine which version you should use, turn your radio off, hold down the **PGM** key, then turn the radio on again. Refer to the “**uP Boot Ver:**” line at the top of the display to determine the boot version used in your radio.

3. Double click on the correct upgrade file to start the upgrade process. Follow the on-screen instructions exactly.
4. When the upgrade is complete, disconnect the USB cable from the scanner. Turn the scanner off, hold down the **PGM** key, then turn the scanner on again. Confirm that the radio now reports the CPU version as 1.06. Turn the radio off then on again to reset it.

## ***Setting the custom programmable trunking tables using third-party scanner programming software***

The custom programmable trunking tables are configured using third-party scanner programming software, not from the scanner's keypad. If you already use third-party software, check with your vendor for the latest version.

If you do not use third-party scanner programming software, you will need to obtain some in order to configure the custom programmable trunking tables. The following are common software applications:

**PSREdit300:** <http://psredit.com/psredit300/index.html>

**Win97:** <http://starrsoft.com/software/win97/>

**ARC300:** <http://www.butel.nl/products/arc300/arc300.html>

Note: RadioShack does not endorse or recommend any third-party products.

The method of setting custom trunking tables will vary depending on the version of software you are using. Check your software's documentation for specific instructions for adding custom trunking tables, including how to set rebanding values.

Once you have configured the custom trunking tables, they can be invoked with your third-party programming software or with your scanner.

With your scanner:

1. Press **PGM + TRUNK** and select the trunking ID list for the bank containing the affected trunking system.
2. Press **FUNC + 3**.
3. Press **▲** or **▼** and select **MULTI-TABLE**.

## ***Troubleshooting***

- Ensure that the USB cable drivers are installed and that Windows recognizes the cable and has assigned a COM port number.
- Ensure that the correct COM port is set in the upgrader.
- Ensure that no other applications are running that access the same COM port.
- Repeat the upgrade process, making certain that the on-screen instructions of the upgrader are followed exactly.

If the above suggestions do not 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.

## ***Support***

Visit your local RadioShack store for support for this firmware upgrade and any other product issues.