Technical Information

Audio Software Upgrade Instructions

The RSP-1570, RSX-1550 and RSX-1560 have three separate software modules – main software, video scaler software and DSP audio software. The instructions below detail the procedure to update the audio software.

The procedure to update the audio software is accomplished with the use of the Rotel DSP Upgrade Manager computer communications program.

This software is only for the RSP-1570, RSX-1550 and RSX-1560. Rotel does not take any responsibility for loss of information or problems resulting from a failed download. Units that fail after a download may be returned to Rotel for attention under warranty.

Items needed for upgrade:

- Windows-compatible PC with serial port connection, or USB-to-serial adapter.
- RS232 cable with DB-9 to RJ-45 terminations.
- Upgrade software and NEC Flash Upgrade download program.

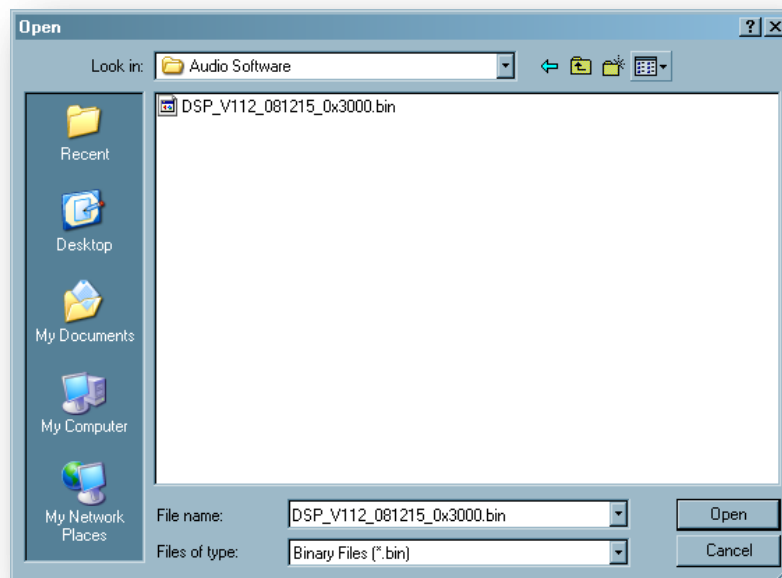### DSP Upgrade Manager Program Installation

1. Download and save the audio update files from Rotel to a folder on the PC. Make note of where the files are saved. (example: C:\Temp)

2. From the Windows Start Menu, choose "Run…"

3. When the run window opens, click Browse and locate the folder where the files were saved. Select the file named "Rotel DSP Updater.exe".

4. Hit OK to run the setup program.

5. Once setup is running, follow the prompts to install the program into the folder of your choice.

6. When installation is complete, please refer to the upgrade instructions on the following page.
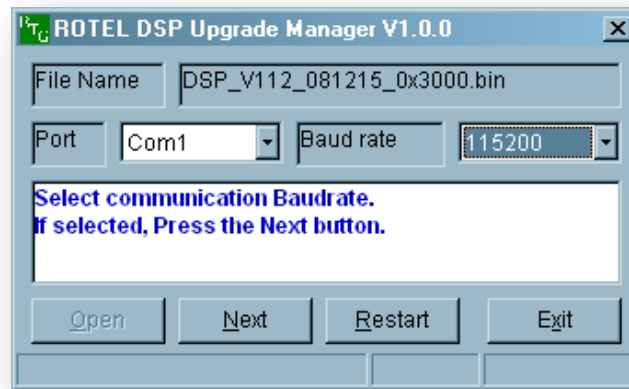
Upgrade Procedure

1. Power off the unit via the rear panel power switch, and all other components in the system.

2. Connect the RS232 cable between the unit and the computer.

3. Power the unit on to standby mode via the rear panel power switch, followed by powering it up via the front panel power button.

4. Launch the Rotel DSP Upgrade program from the start menu of the PC. It should be located in the folder labeled "Rotel DSP Upgrade Manager".
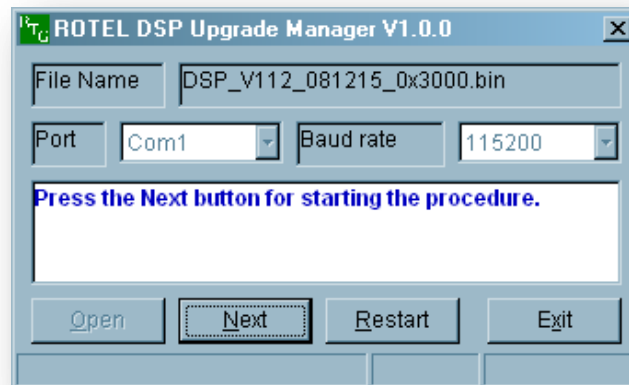

5. Click the Open button. From the Open window, select the current software file to load, and click Open.
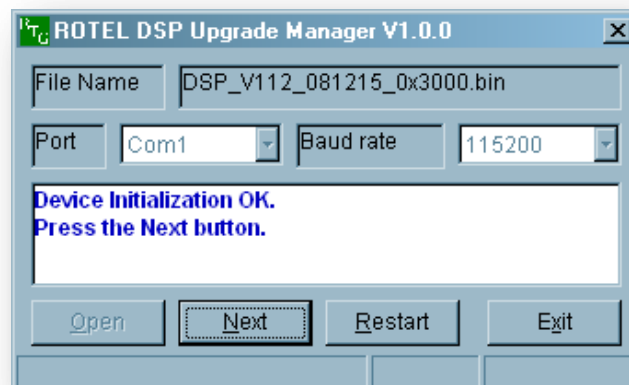
6. Set the appropriate Port and Baud Rate settings as follows:
   - Port: COM1 *(or the appropriate COM port for your PC's serial connection – see the Troubleshooting section at the end of this document for more information on determining the correct COM port)*
   - Baud rate: 115200

ROTEL DSP Upgrade Manager V1.0.0

File Name	DSP_V112_081215_0x3000.bin

Port	Com1	Baud rate	115200

Select communication Baudrate.
If selected, Press the Next button.
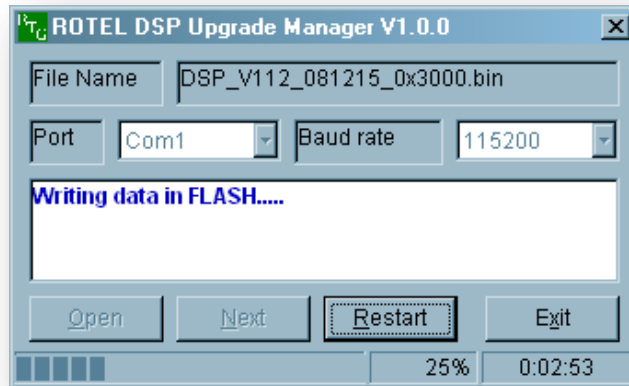
Open   Next   Restart   Exit

7. Click the Next button. The program display should read "Communication Port Initializing" followed by "Press the Next button for starting the procedure."
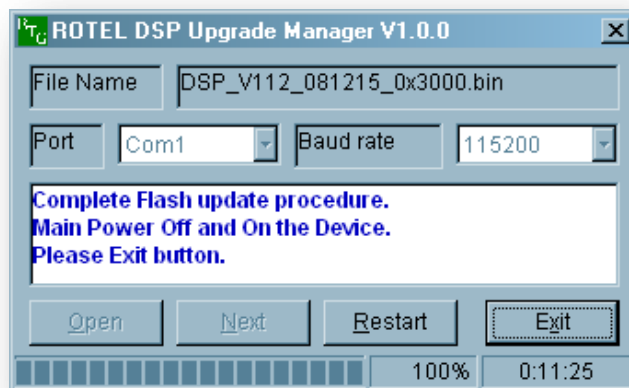
ROTEL DSP Upgrade Manager V1.0.0

File Name	DSP_V112_081215_0x3000.bin

Port	Com1	Baud rate	115200

Press the Next button for starting the procedure.

Open   Next   Restart   Exit

8. Click the Next button again. The program should now read "Device Initialization OK" followed by "Press the Next Button"

ROTEL DSP Upgrade Manager V1.0.0

File Name	DSP_V112_081215_0x3000.bin

Port	Com1	Baud rate	115200

Device Initialization OK.
Press the Next button.

Open   Next   Restart   Exit

9. Click the Next button again. The program should now read "Writing data in FLASH….." as the new software is loaded. This process may take several minutes to complete. *USB to serial adapters can take up to 20 minutes to complete, while PCs with built in serial ports typically will complete the process in less than 5 minutes.*

10. After the update procedure has completed, the program should briefly display "Checksum OK" followed by "Complete Flash update procedure". Press the Exit button to close the Rotel DSP Upgrade Manager program.

11. Power off the unit via the rear panel AC switch, disconnect the RS232 cable and power it back on. The update is now complete.

12. After completion of the upgrade, it is recommended that the unit be reset to its default configuration by navigating to the DEFAULT menu of the On Screen Display, setting FACTORY DEFAULT: Yes, and pressing Enter on the remote. After a confirmation prompt, the unit will shut down, and remain in standby. On power up, the unit will now be in its factory default configuration.

Troubleshooting

It is important when selecting the com port for updates and RS232 communication to be aware of what com port is being used on the PC for the upgrade, whether it be a built in serial port on the PC, or a USB to serial adapter. Selecting the incorrect com port in an update program or an RS232 terminal will result in communication errors.

Additionally, if using a USB-to-Serial adapter, please verify that the drivers are the latest available drivers for the device. Often there are newer drivers available on the manufacturer's website than the supplied CD-ROM. Old or incorrect drivers may allow the adapter to display in Windows but can sometimes cause connection issues.
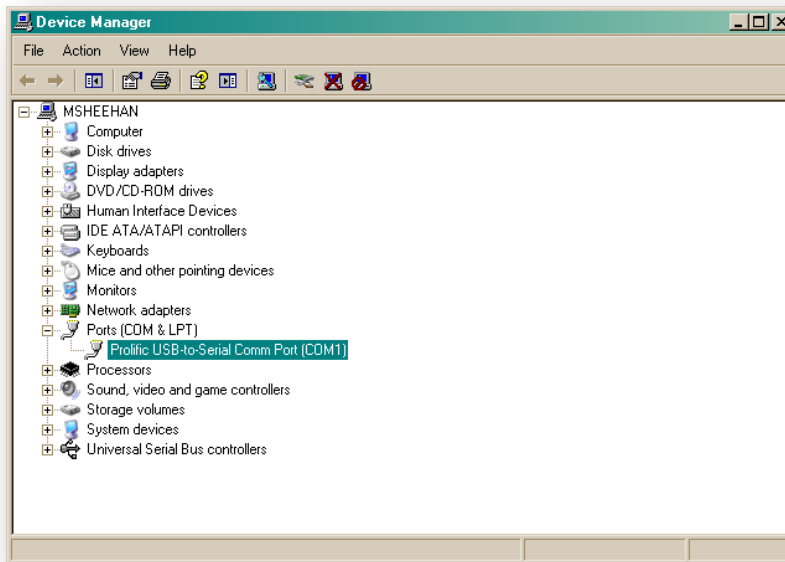
If you do encounter an error, please refer below for the various error messages and potential solutions.

- **"Communication port initial Error!"** – This error appears when selecting a com port that does not exist on the PC, or when the com port is already in use by another program.
  - o **Solution #1:** Refer to the section "Confirming and Changing the COM Port" for information on how to determine which com port the serial port is on, and how to change it if necessary.
  - o **Solution #2:** Close all other programs that are open that may be also using the serial port.

- **"Failed the Device Initialization"** – This error appears when the com port has been selected but the program is unable to connect to the Rotel unit being updated.
  - o **Solution #1:** Verify that the correct baud rate has been selected, and that the unit is in the ON state when attempting the upgrade. Power the unit off and then on via the back panel AC power switch, then power the unit up via the front panel power button before reattempting the update.
  - o **Solution #2:** If solution #1 did not help, try a Factory Default on the unit then attempt again. The Factory Default option is located on the DEFAULT page of the Main Menu of the unit. Set this to 'YES' and press Enter to reset the unit.
  - o **Solution #3:** If using a USB-to-Serial adapter, please verify that the drivers are the latest available drivers for the device. Often there are newer drivers available on the manufacturer's website than the supplied CD-ROM. Old or incorrect drivers may allow the adapter to display in Windows but can sometimes cause connection issues.
  - o **Solution #4:** If the cable being used is not one supplied by Rotel it would be advisable to obtain an upgrade cable from Rotel or an authorized Rotel dealer. An incorrect or fault pin configuration on the RJ45 to DB9 upgrade cable can result in this error.

Confirming and Changing the COM Port

Use the following steps to confirm which com port the serial port or USB to Serial adapter has been installed to and if necessary, change it to a more suitable port.

1. From the desktop, right click on "My Computer", and select Properties.

2. From the System Properties window, click on the Hardware tab, and select Device Manager.

3. From the Device Manager Window, look for the setting labeled Ports (COM & LPT), and click on the + to open this section. The USB to Serial adapter should be listed in this area, with the COM port in use listed in parenthesis next to it.
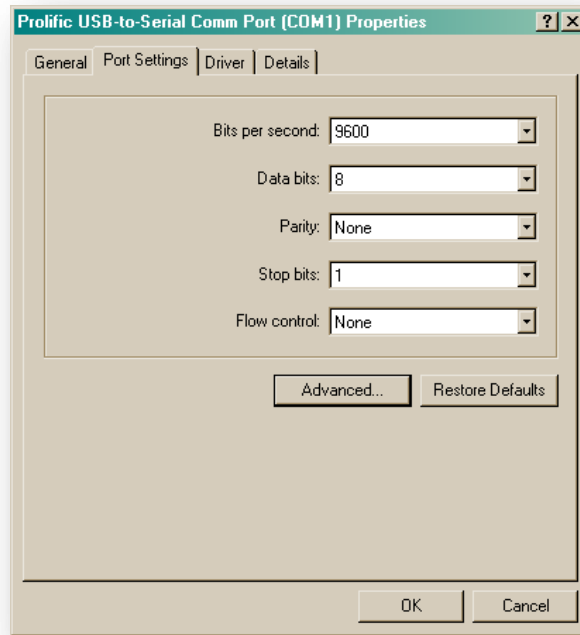

4. NEC updater allows selection of com ports 1-6 for updating. If the USB adapter has been installed to a port higher than com 4, the following steps can be used to change this.
   Note: *these instructions are for most Windows XP USB to Serial adapters; however some manufacturer's instructions may vary.*

5. To remap the com port, from Device Manager right click on the USB to Serial adapter and select Properties.

6. From the properties window, click on Port Settings. Then click on Advanced.

7. On the Advanced menu, there is a drop down menu listing all of the available com ports on the computer. Select an available port, and then press OK to close the menu and save the changes.

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