Technical Information

Video Software Upgrade Instructions

The RSP-1572 and RSX-1562 have six separate software modules – main software, video software, scaler software, front USB software, standby software and DSP audio software. The instructions below detail the procedure to update the video software.

The procedure to update the video software is accomplished with the use of the NEC Upgrade computer communications program.

This software is only for the RSP-1572 and RSX-1562. 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 V2.10 download program.

NEC Upgrade Program Installation

1. Download and save the video software updates 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 to, and select the file named "NEC Update 2.10 Setup.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.

NOTE: The upgrade process can require a large amount of system resources on the PC when it is updating the unit, so it is *strongly* recommended that any unnecessary programs be closed prior to running the software update.

Upgrade Procedure

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

2. Close any unnecessary programs running on the computer.

3. Connect the RS232 cable from the PC to the jack labeled "Computer I/O" on the unit.

4. Power the unit on to standby mode via the rear panel power switch, then power the unit on via the front panel switch.

5. Launch the NEC Upgrade program from the start menu of the PC. It should be located in the folder labeled "NECUpgrade V2.10".

6. Click on Model Name, and select "*HDMI Receiver > Target VIDEO > RSP-1580/RSP-1572/RSX-1562*".
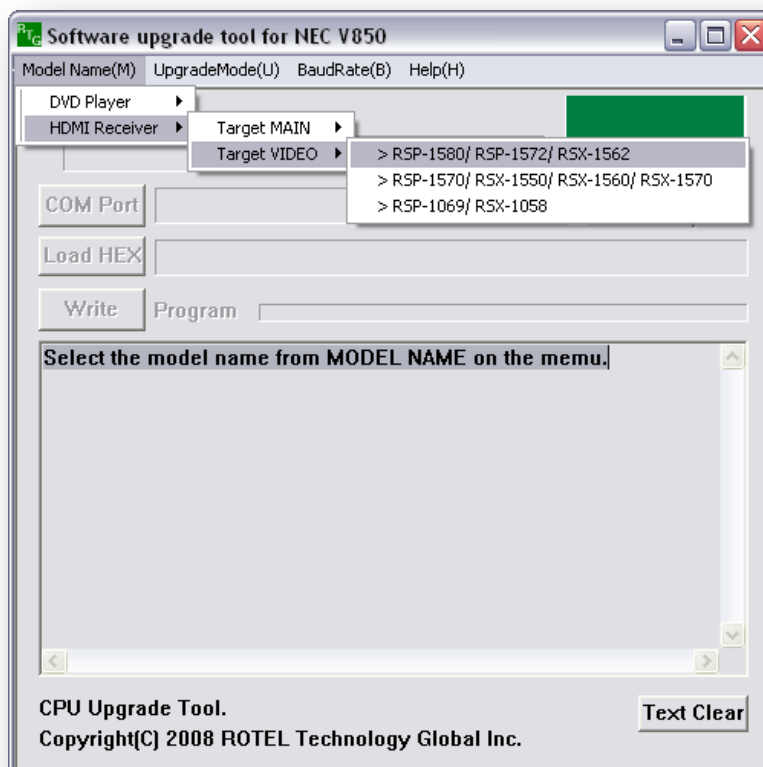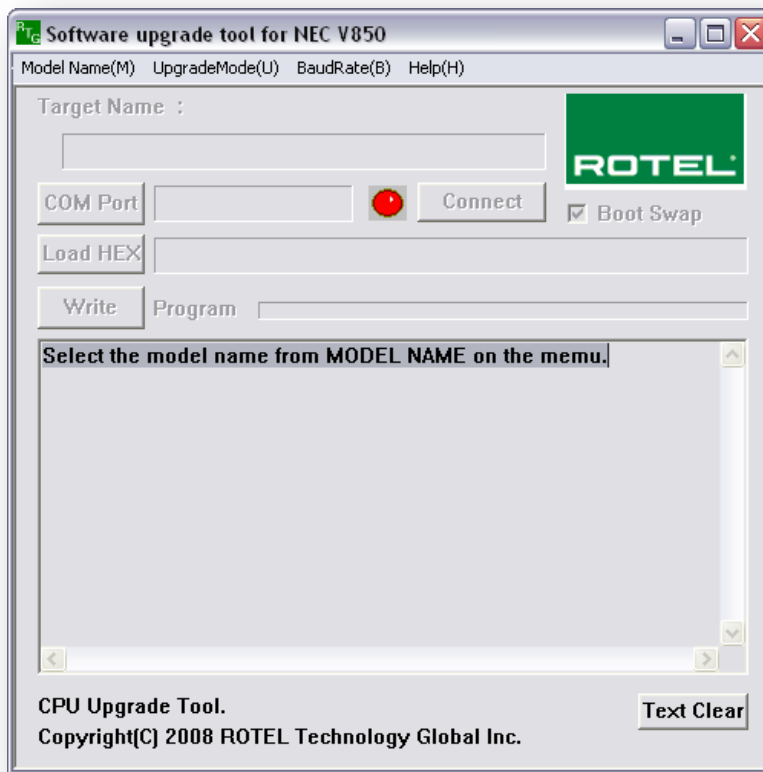
7. Click on COM Port, and select the appropriate COM port for the PC's serial connection.

   Once the COM port has been selected the program should display a short message confirming that the unit can be updated and that the target has been changed to update mode.

   If uncertain which COM port to select refer to the Troubleshooting section at the end of this document for more information on determining the correct COM port.
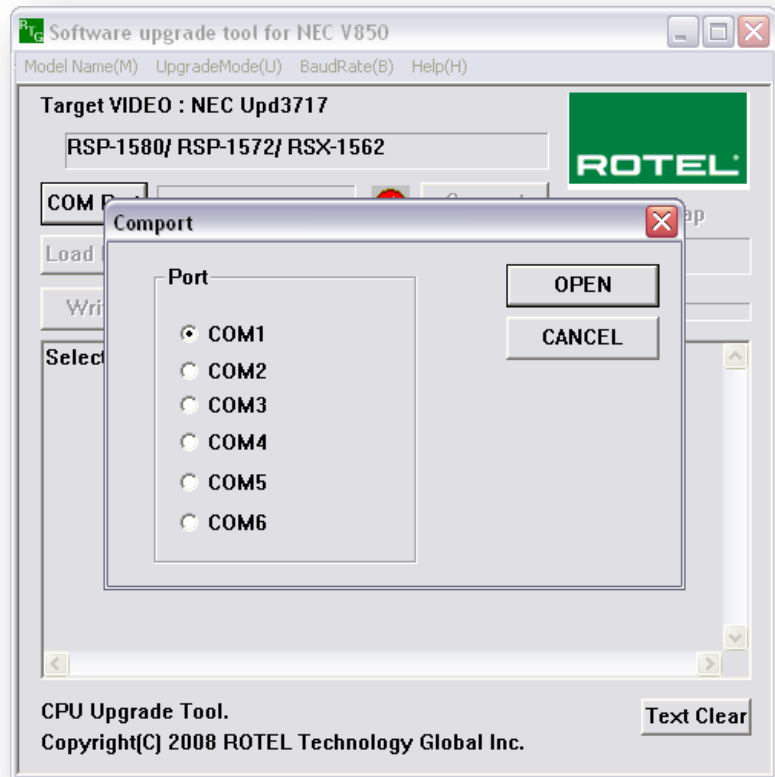
8. Once the COM port is selected wait 5 seconds, then press Connect. The program should run a short connection test to confirm there is communication between the PC and the unit. If all goes well, the screen should look similar to the shot below.
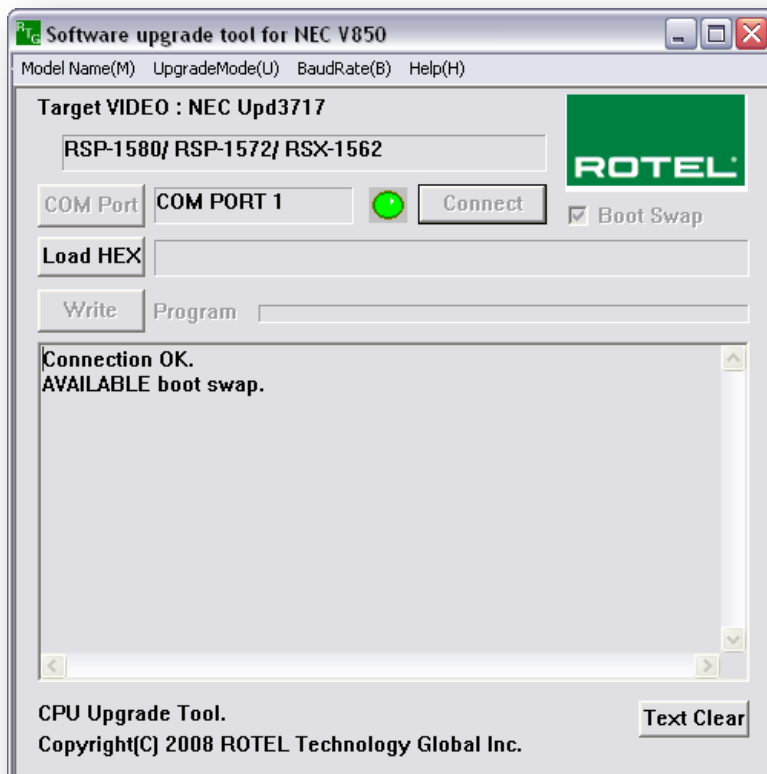
   If there is an error when trying to connect, please confirm that the correct COM port has been selected.

   If the COM port setting is correct, a factory default may also allow connection to the unit. See the final step of this procedure for details on how to perform a factory default.

9. Once the connection has been established, click the "Load HEX" button. A window will open to locate the software update hex file which was included with the upgrade files. Browse to the location on the computer where this file was saved, select the file and click OK.
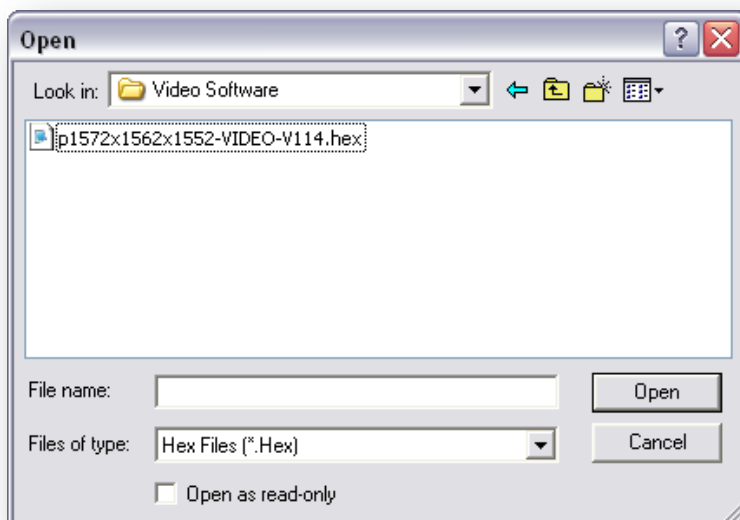

10. Once the hex file has been loaded, press the "Write" button to begin updating the scaler software. When prompted "Are you sure?" select Yes. The write process should then begin and will take a few minutes.

Note: During the write process the program may appear unresponsive and Windows may report the program as "Not Responding". The program is still writing however, so do not close it if this occurs. The write process could take up to 5 minutes.
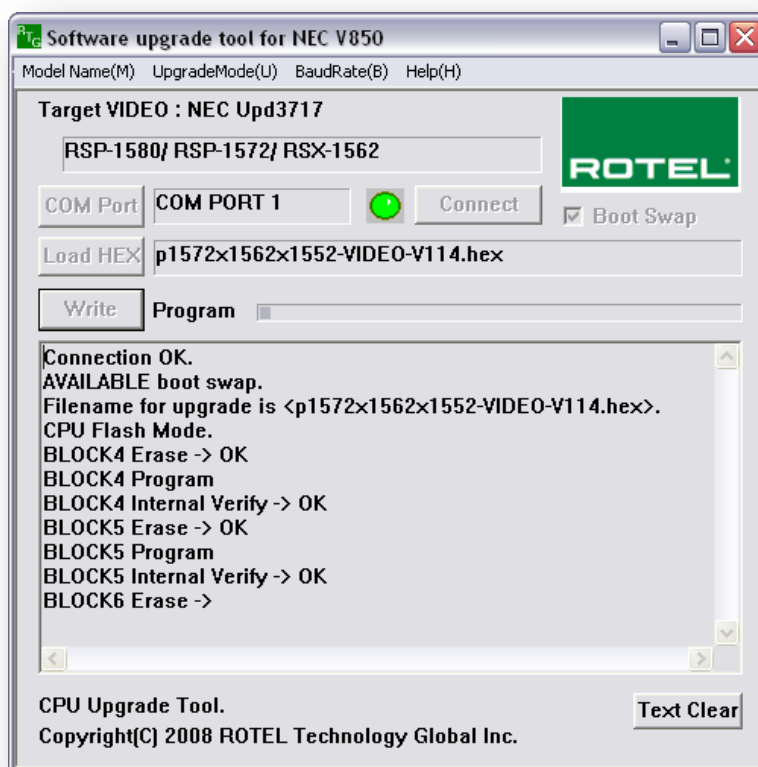
11. After the update procedure has finished, the screen should display "Write complete". Click OK to close this dialog box, and then close the upgrade program. Power off the unit via the back panel switch, disconnect the upgrade cable, and power it back on.
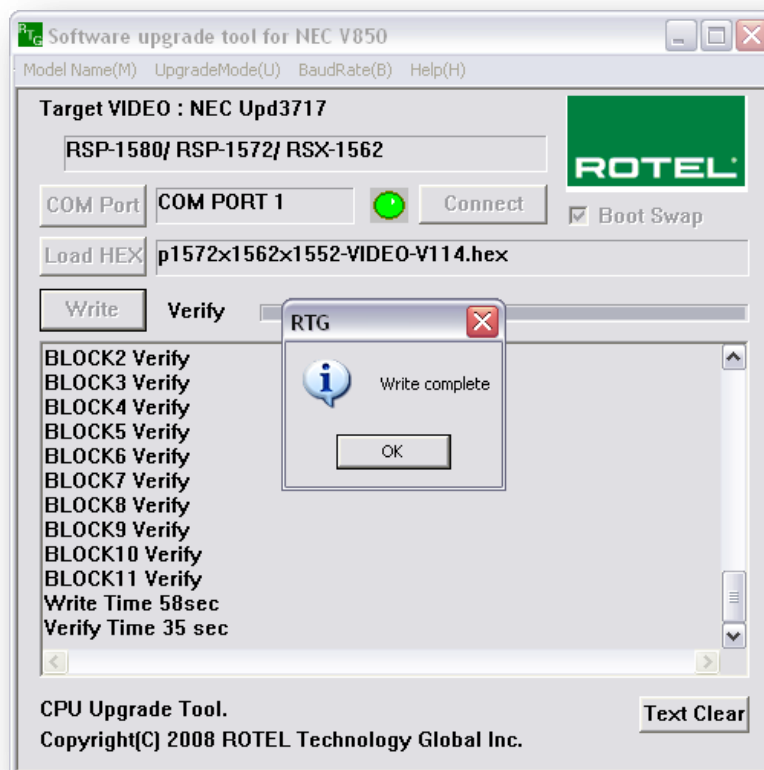
12. After completion of the upgrade, it is recommended that the unit be reset to its default configuration by navigating to the DEFAULT menu of the On Screen Display, setting FACTORY DEFAULT: Yes, and pressing Enter on the remote. After a confirmation prompt, the unit will shut down, and remain in standby. On power up, the unit will now be in its factory default configuration.

If at any time the update is interrupted or failed, or the unit does not respond after upgrade, try the procedure again. If the unit does not connect at Step 8, a Forced Upgrade can be attempted to update the unit and restore operation. Please see the next section for details on this process.
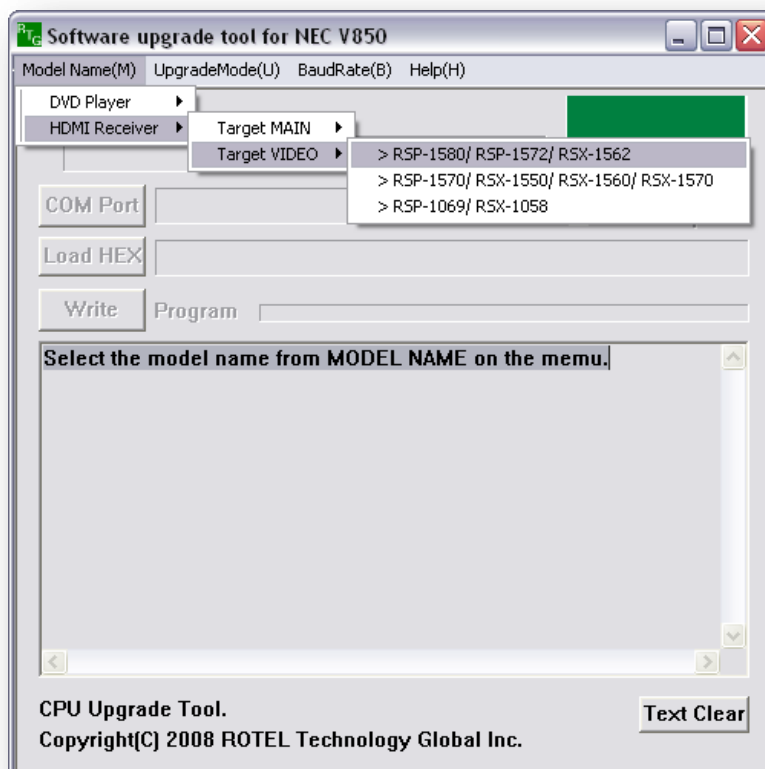
Forced Upgrade Procedure

WARNING: *Only attempt this method if the unit does not connect or respond to the normal upgrade procedure after a failed or interrupted update. If the unit does not connect the first time the normal software upgrade was attempted, be sure to verify all other factors such as proper COM port selection and upgrade cable connection first.*

**Note**: *The forced upgrade procedure also requires use of the RR-CX94 remote control.*

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

2. Close all unnecessary programs running on the computer.

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

4. Power the unit on to standby mode via the rear panel power switch, then power the unit on via the front panel switch.

5. On the RR-CX94 remote, Press the "USB" button followed by the buttons "2 5 8 0" in that order. This will put the unit into a video upgrade mode where it can accept the scaler software update.

    Note: *When the unit changes to this video upgrade mode, the front display should say "Video Upgrade".*

6. Launch the NEC Upgrade program from the start menu of the PC. It should be located in the folder labeled "NECUpgrade V2.10".

7. Click on Model Name, and select "*HDMI Receiver > Target VIDEO > RSP-1580/RSP-1572/RSX-1562*".

8. Click on Upgrade Mode, and select *"Forced Upgrade Mode".*
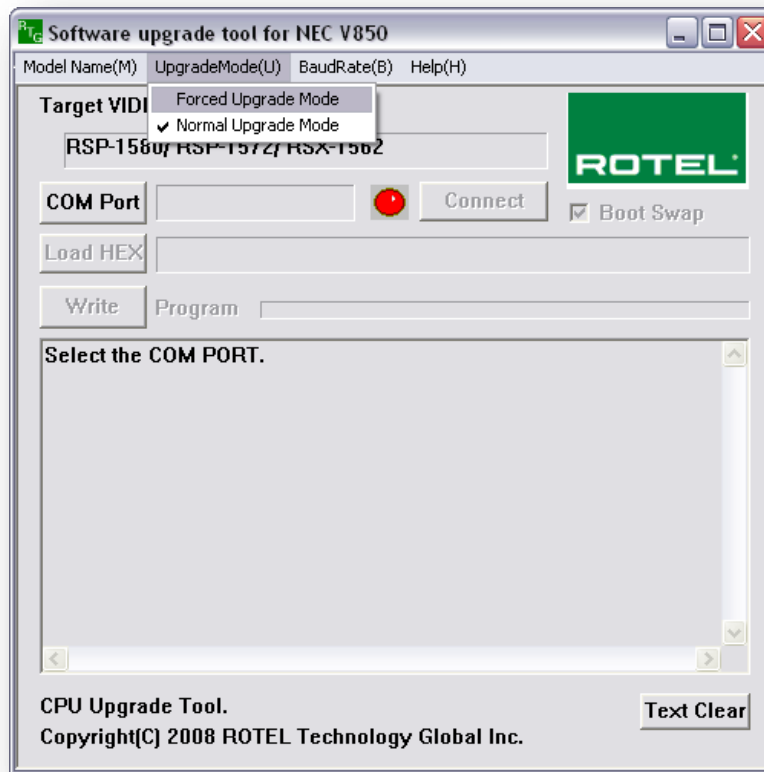
9. Click on COM Port, and select the appropriate COM port for the PC's serial connection.

Once the COM port has been selected the program will display a short message that the program is in Forced upgrade mode.

If uncertain which COM port to select refer to the Troubleshooting section at the end of this document for more information on determining the correct COM port.

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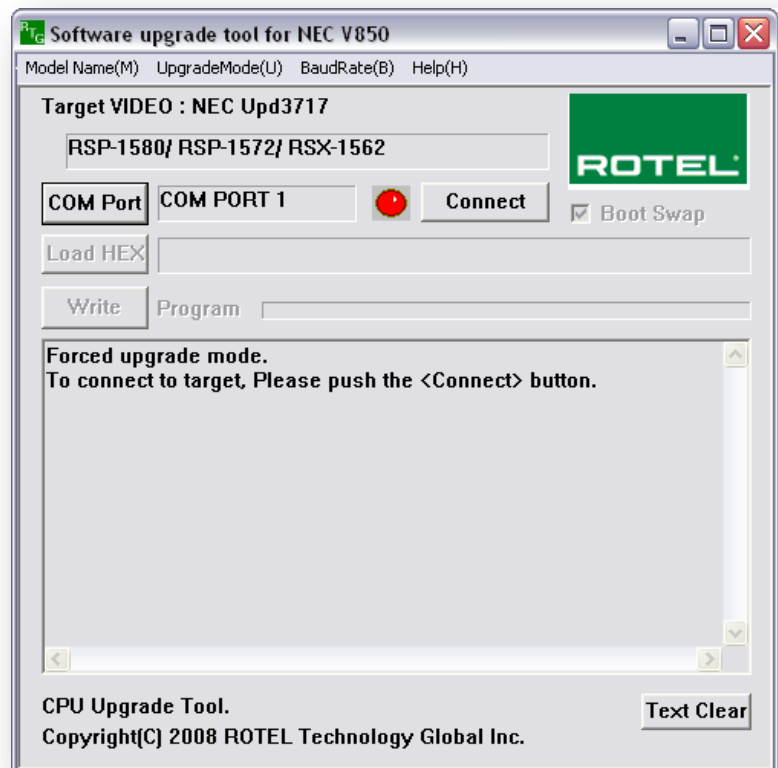
10. Press Connect. The program should run a short connection test to confirm there is communication between the PC and the unit.
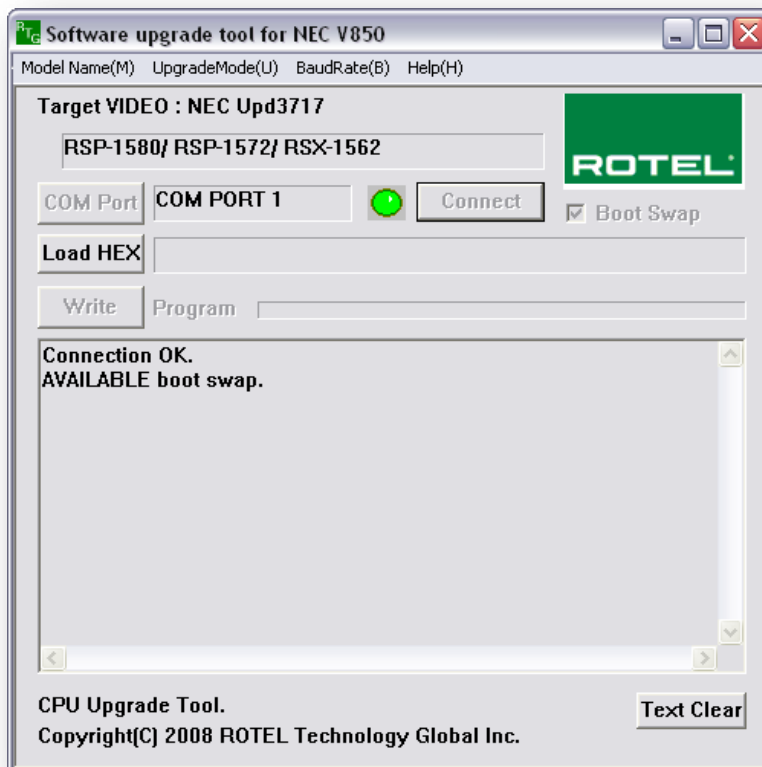
Once connection has been established, the update procedure can continue via the normal procedure. Refer to Step 9 of the upgrade procedure and continue from there to complete the update.

If there is an error when trying to connect, please confirm that the correct COM port has been selected. If the unit does not connect via the Forced Upgrade mode, please contact Rotel Technical Support for further assistance.

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.

- **"Error: cannot open com port" –** 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.

- **"Error: no reply from CPU" –** This error appears when the com port has been selected but the program is unable to connect to the Rotel unit being updated.

    Clicking connect too quickly can cause this error as it takes a few seconds for the Rotel unit to initialize to upgrade mode.

    o **Solution #1:** Power the Rotel unit off and on via the back panel AC power switch. Turn the unit on from the front panel power button. Re-attempt the update, but after selecting the com port and pressing OK be sure to wait at least 5-10 seconds before pressing "Connect".

    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.

- **"Error: invalid project file"** – This error appears when the wrong upgrade data file has been selected. (i.e. you are upgrading the MAIN software, but selected the VIDEO data file).

  - o **Solution #1:** Verify that the correct data file has been downloaded and is used for the update.

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.
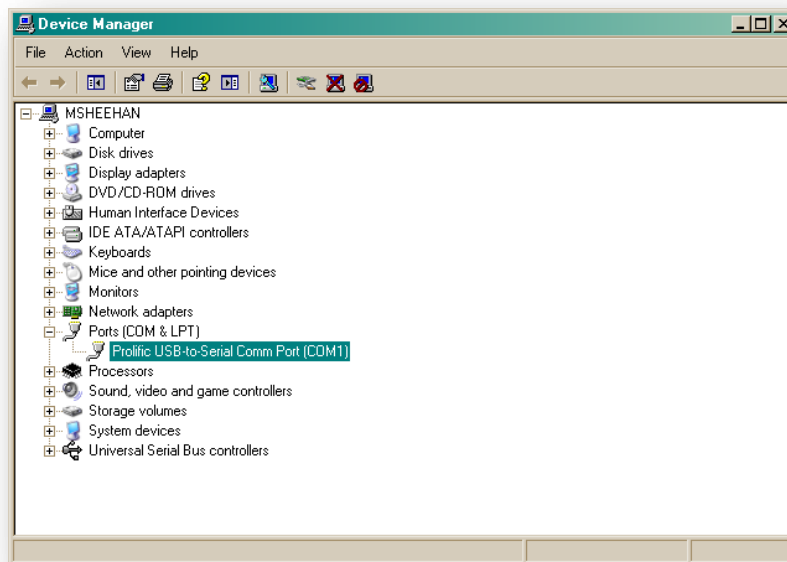

4. NEC updater allows selection of com ports 1-6 for updating. If the USB adapter has been installed to a port higher than com 4, the following steps can be used to change this.
   Note: these instructions are for most Windows XP USB to Serial adapters; however some manufacturer's instructions may vary.

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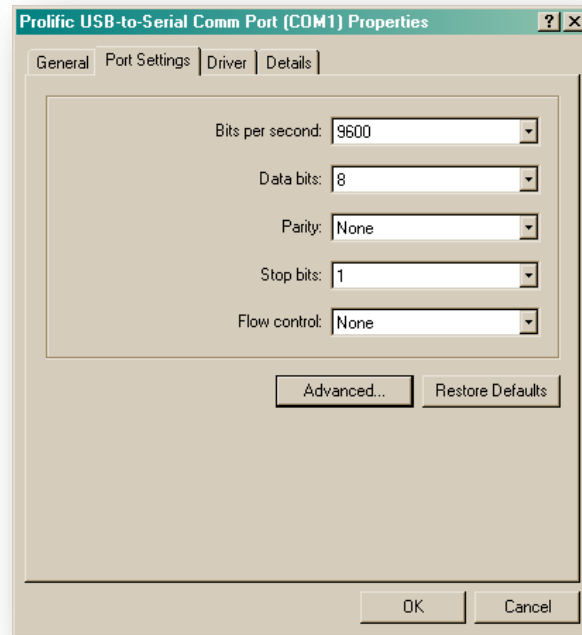
7. On the Advanced menu, there is a drop down menu listing all of the available com ports on the computer. Select an available port, and then press OK to close the menu and save the changes.

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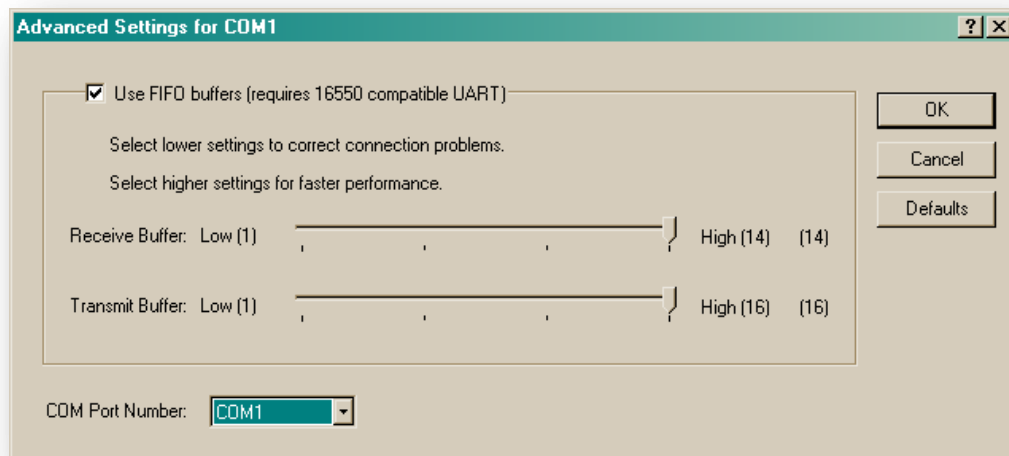
Technical Information

Important Note for Windows 7 Users

There is currently an identified issue when running the Video Update process on Windows 7 64-bit operating systems with certain USB-to-Serial adapters. The symptom of the issue is the unit will connect, but as soon as the write portion of the update process begins it will crash with the error message "Communication Error". Once this has occurred, the unit will no longer have video output until a successful Video Update can be performed.

The issue appears isolated to Windows 7 64-bit PCs and with certain USB to Serial adapters. Older versions of Windows such as Windows XP, and Windows 7 32-bit are not affected.

Rotel is currently investigating the issue, but for the current time please be aware of this issue when attempting to update units.

To check if an installation of Windows 7 is 32 or 64-bit, right click on the "Computer" icon from the Start Menu or Desktop and choose "Properties". Under the "System" section the "System type" field will identify whether the system is 32 or 64-bit.

For users running Windows 7 Professional 64-bit, an alternative is to download and run Windows XP Mode. Windows XP Mode is a virtual Windows XP installation that runs within Windows 7. Windows XP Mode can be downloaded from Microsoft's website via the link below:

* http://www.microsoft.com/en-us/download/details.aspx?id=8002

Note: If a unit has encountered this error and no longer has video, to restore operation follow the "Forced Update Procedure" as detailed in the Video Update instruction document. You can use a Windows 7 32-bit PC or an older version of Windows, or Windows 7 running Windows XP Mode.