MTU

System Firmware Recovery and Upgrade Procedure

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MTU Firmware Recovery and Upgrade Procedure

CAUTION: This procedure is intended to be used only in specific situations in which hardware and software incompatibilities have arisen. Do not undertake this procedure without consulting Phoenix Geophysics first.

Overview

This procedure provides a method for manually upgrading the operating system software of a Phoenix V5-2000 SSMT data acquisition unit (MTU). You will perform the following steps:

- Copy necessary files onto CompactFlash memory card.
- Load card in MTU, start it up and interrupt the boot process.
- Move files from the card to the MTU hard drive.
- Run the setup program.

Requirements

To perform this procedure, you will need:

- Parallel cable for PC.
- Serial cable for PC.
- MTU, battery and cable, CompactFlash memory card.
- Distribution disk (floppy or CD-ROM).
- WinHost PC software.
- Windows Hyperterminal software.

Preparing the CompactFlash memory card

Two files must be copied from the distribution medium (floppy disk or CD-ROM) onto a CompactFlash memory card.

Note: If you are using the existing memory card from the MTU, ensure that the battery is disconnected before removing or replacing the card.

To prepare the memory card:

1. Delete all files except Startup.Tbl from the Data directory of the memory card.
2. Use any Windows copy method to copy the files Setup.Bat and `*.UPG` from the distribution disk (floppy or CD-ROM) to the `DATA` directory of the memory card.
3. Install the memory card in the MTU.

Connecting the PC and MTU

Two connections must be made from the MTU to the PC: a serial connection to enable communication with the MTU operating system via Hyperterminal, and a parallel connection to enable communication via WinHost.

To connect the PC:

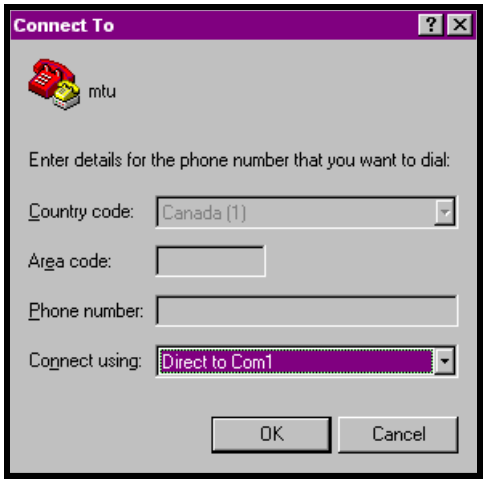
1. Install a parallel cable on the PARALLEL I/O connector of the MTU, and connect the other end to the PC parallel port.
2. Install a serial cable on the MAG INPUT connector of the MTU, and connect the other end to the PC serial port.

Setting up Hyperterminal

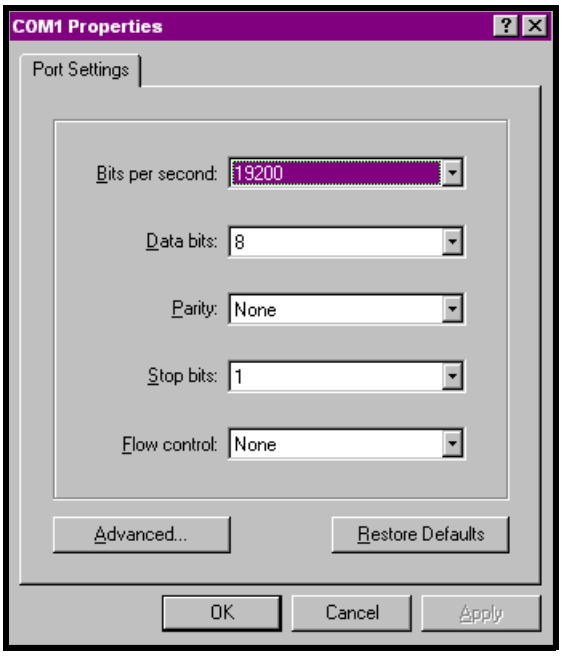
Hyperterminal is a communications application provided as part of the Windows operating system. You will use it to interrupt the MTU boot process and to move files in the MTU directories.

To set up Hyperterminal:

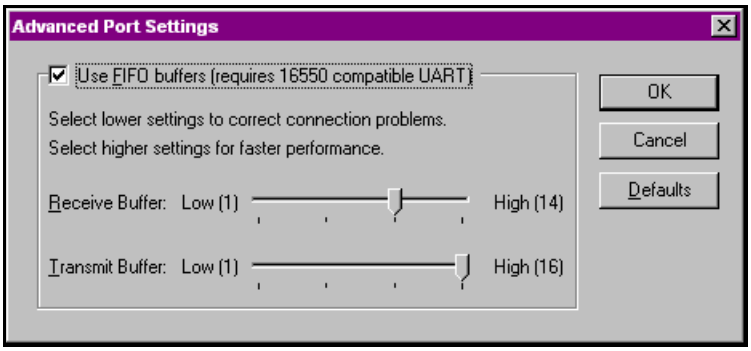
1. From the **Start** menu, choose **Programs > Accessories > Communications > Hyperterminal**.
2. Double click Hypertrm.exe .
3. If the **Connection Description** dialog box does not open, choose **New Connection** from the **File** menu.
4. In the **Name** box, type `MTU`.
5. Click **OK**.
6. In the **Connect To** dialog box, under **Connect using**, select **Direct to Com1**. (If your PC serial port is not COM 1, then select Direct to ComX where X is the number of your COM port.)



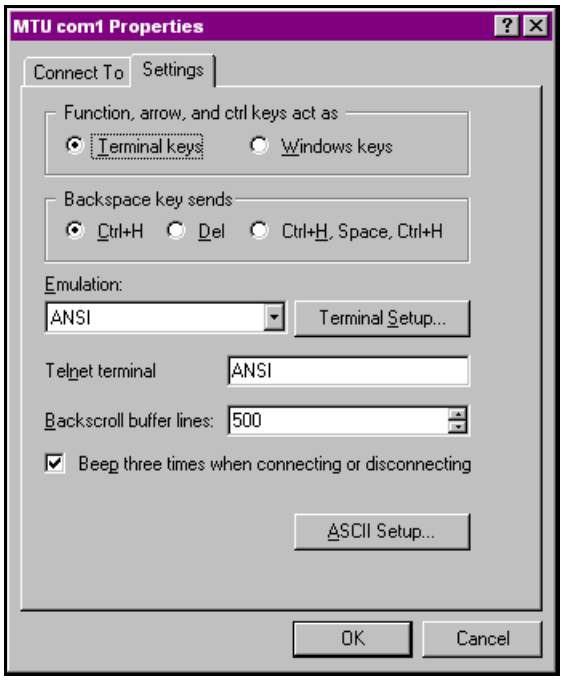
7. Click **OK**.
8. Set the COM1 Properties as shown below:



9. Click **Advanced**.
10. Set the **Advanced Port Settings** as shown below:



11. Click **OK** to close the **Advanced Port Settings**.
12. Click **OK** to close the **COM1 Properties**.
13. From the **File** menu, choose **Properties** and click the **Settings** tab.
14. Set the **MTU Com1 Properties** as shown below:



15. Click **OK**.
16. If the status bar says Disconnected, choose **Call** from the **Call** menu.

    Hyperterminal displays a blank window, and the status bar in the lower left corner shows the duration of the connection.

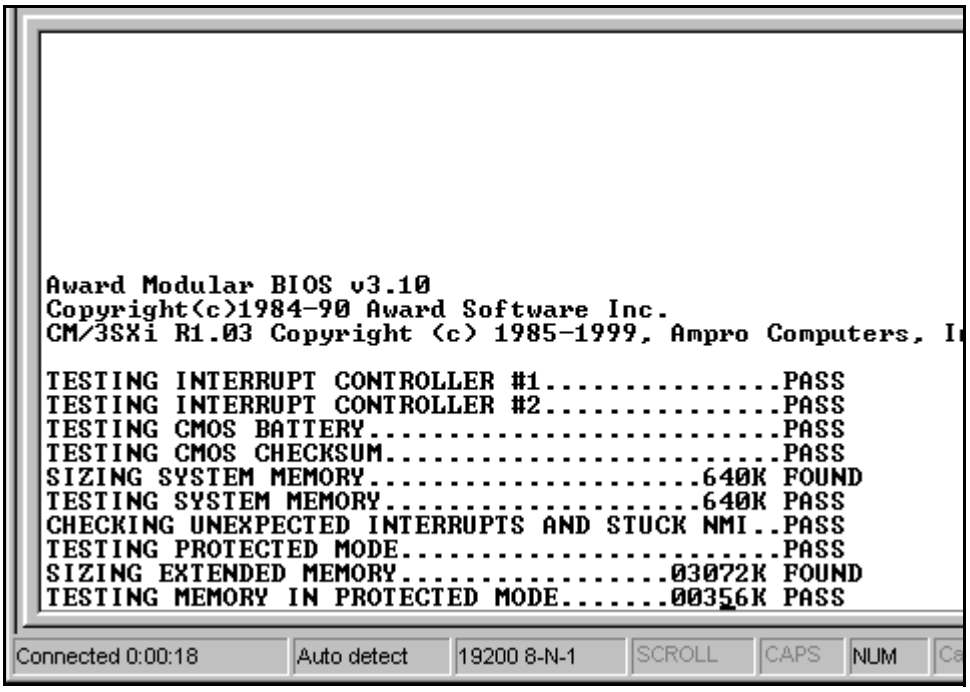
Performing the upgrade

You are now ready to begin the system recovery and upgrade.

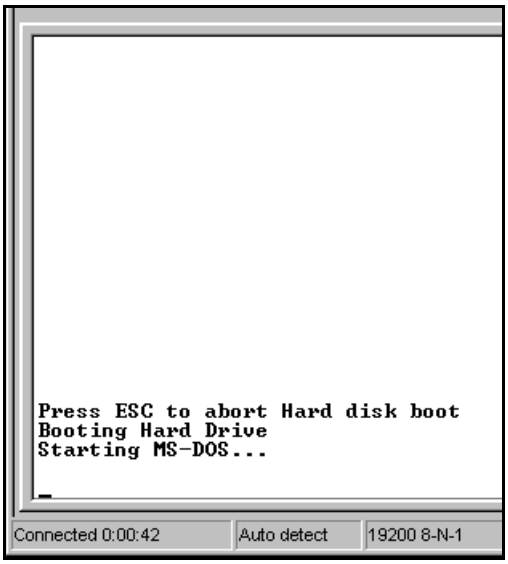
To perform the upgrade:

1. Connect the battery and turn on the MTU.

   In the Hyperterminal window, a variety of messages appear, beginning with the Power On Self Test (POST) messages.

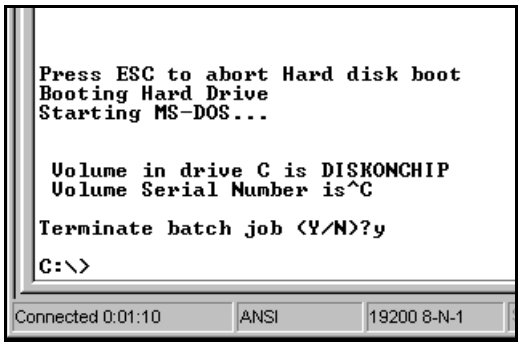


2. Hold down CTRL on the PC keyboard, and be ready to press PAUSE (which may be labelled Pause/Break or Break). Watch the Hyperterminal window, waiting approximately 30 seconds for the message, “Starting MS-DOS...” Press PAUSE (i.e., send Ctrl-Break) **immediately**.



3. When prompted Terminate batch job <Y/N>?, type Y and press ENTER.

   You are returned to the MS-DOS Command prompt (C:\>).



4. Type the following commands exactly as below, pressing ENTER after each line:

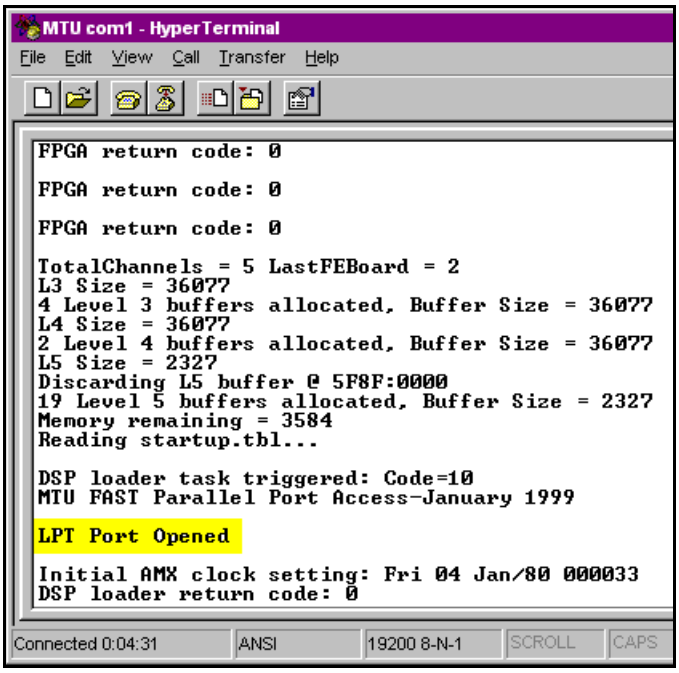
   ```
   COPY D:\DATA\SETUP.BAT C:\
   COPY D:\DATA\*.UPG C:\
   DIR
   ```

5. Examine the display to ensure that setup.bat and your .upg file appear in the file list.

6. Type the following commands exactly as below, pressing ENTER after each line:

   ```
   DEL D:\DATA\*.BAT
   DEL D:\DATA\*.UPG
   SETUP.BAT
   ```

7. Watch the Hyperterminal window as the upgrade progresses. The MTU will reboot at least twice. When you see the message, “LPT Port Opened,” the upgrade has successfully completed.



Verifying the upgrade

To be sure that the upgrade was successful, launch WinHost. The WinHost fields should automatically update with the current MTU settings.