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World Leader of In-Rack, Audio, Video, Data Monitoring, and Closed Captioning Solutions

HDCC-200A (OP-47/WST) Multi-Function Card

Multi-Purpose Closed Caption Card: Inserter, Decoder, Bridger, Monitor, and Transcoder

System Test

Software Version: V2.34
PIC Code Version: V1.09

Part Number 821049, Revision A

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Encode Testing

Introduction

Overview

This chapter describes how to install, set up, and use the Newfor Streamer application to test the closed caption encoding through the HDCC-200A in your production environment.

Topics

Downloading and Installing the Application

1. Launch your web browser and navigate to www.wohler.com (shown in Figure 1–1 below).

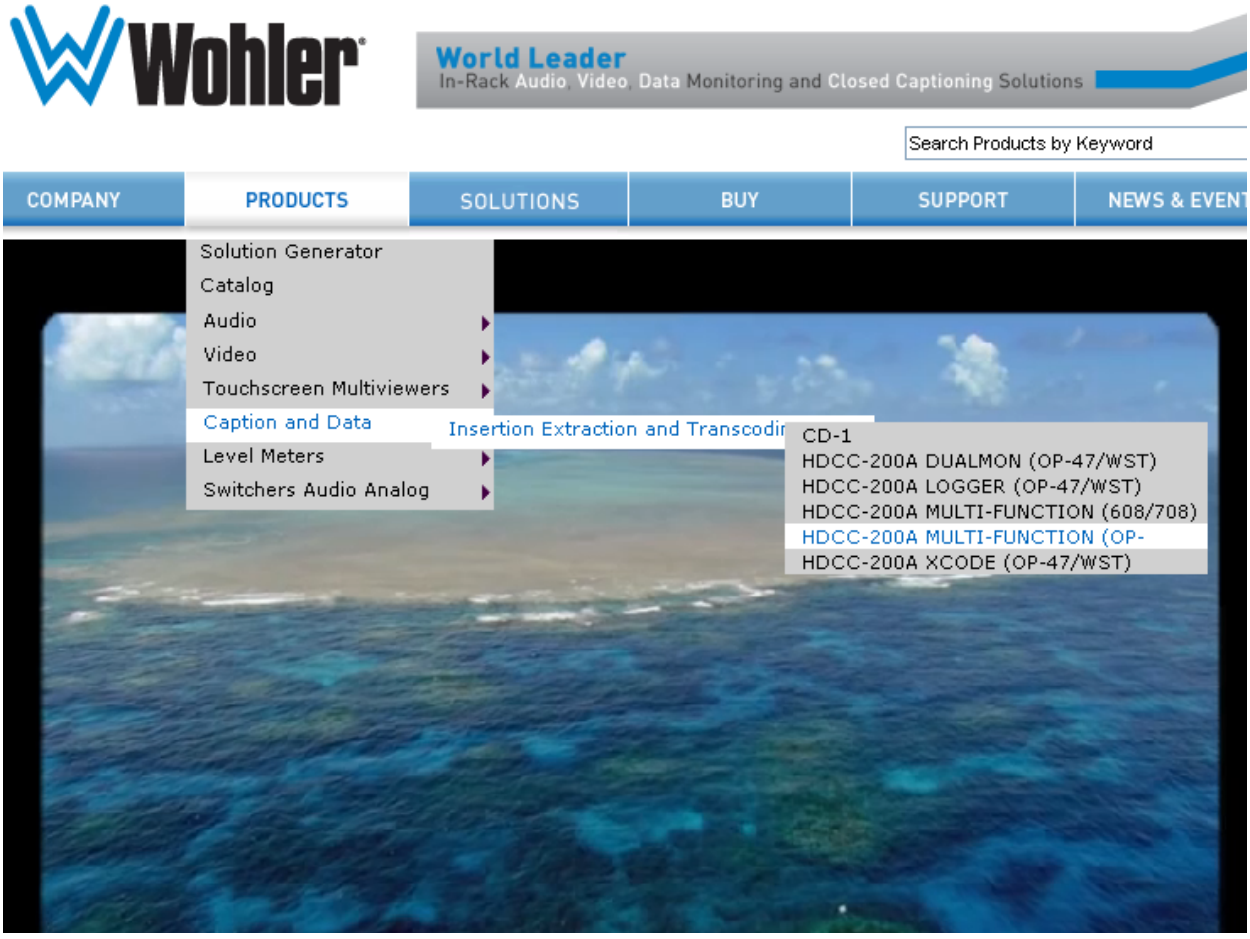
2. Click the **Products** tab.

   A. Mouse down to **Caption and Data**.

   B. Mouse right to **Insertion, Extraction and Transcoding**.

   C. Mouse down to **HDCC-200A Multi-Function (OP**... and click to select.

Figure 1–1 Selecting the HDCC-200A (OP-47 / WST) Multi-Function Card



3. When the product displays, click the **Downloads** tab about halfway down the page (shown in Figure 1–2 below).

Figure 1–2 Displaying the HDCC-200A Multi-Function Card

4. Click on **NewforStreamer.zip**.

5. When the **Save As** dialog box appears, navigate to the desktop and click **Save**.

6. Unzip the application and save it to the desktop.

Setting Up the Hardware

1. Refer to the *HDCC-200A (OP-47/WST) Installation Guide* (PN 821046) for instructions to connect your HDCC-200A card to your PC or laptop and a monitor.

Important: When connecting the monitor, verify that you are connecting the monitor to the output port that corresponds to the input data stream you selected. In other words, if you connected your input test signal to I/P 1, then verify that you connected the monitor to O/P 3. If you connected the input signal to I/P 2, verify you have connected the monitor to O/P 4.

2. In our example, we're using the serial port to demonstrate how to set the serial communications. Set **Switch 1 to E** to display the engineering menu via the serial port.

   Note: To use the Ethernet port, refer to *HDCC-200A (OP-47/WST) Installation Guide* (PN 821046) for instructions to configure the Ethernet port as a virtual serial port. Also, don't forget to set SW1 to F.

Establishing Communications from the Laptop to the HDCC-200A

1. On the laptop, launch **HyperTerminal**.

   A. Click the Windows **Start** button.

   B. Mouse over **All Programs**.

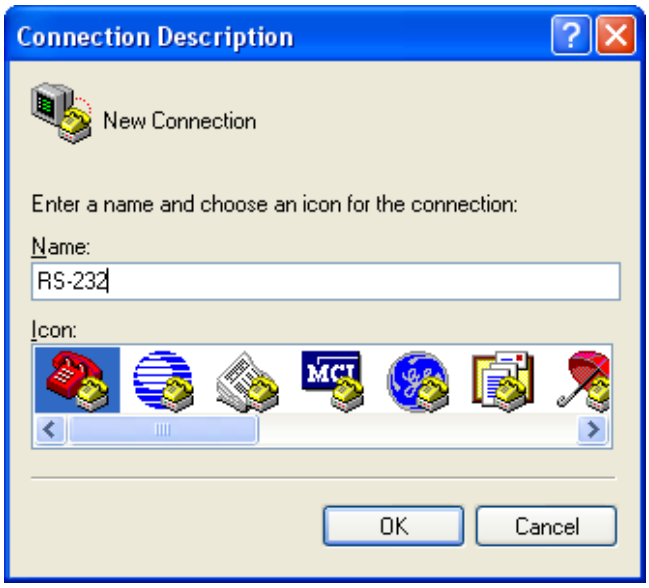
   C. Mouse over **Accessories**.

   D. Mouse over **Communications**.

   E. Click on **HyperTerminal** (usually at the top of the list).

2. When the **Connection Description** dialog displays (Figure 1–3 below) you can optionally enter a name for this connection's configuration so that you can re-use it next time you launch HyperTerminal. Press Enter to continue.

Figure 1–3 Connection Description Dialog



3. On the **Connect To** dialog, set the COM port for your particular serial connection (Figure 1–4 below). In our example, we're using COM1. Press Enter to continue.

Figure 1–4 Setting the COM Port

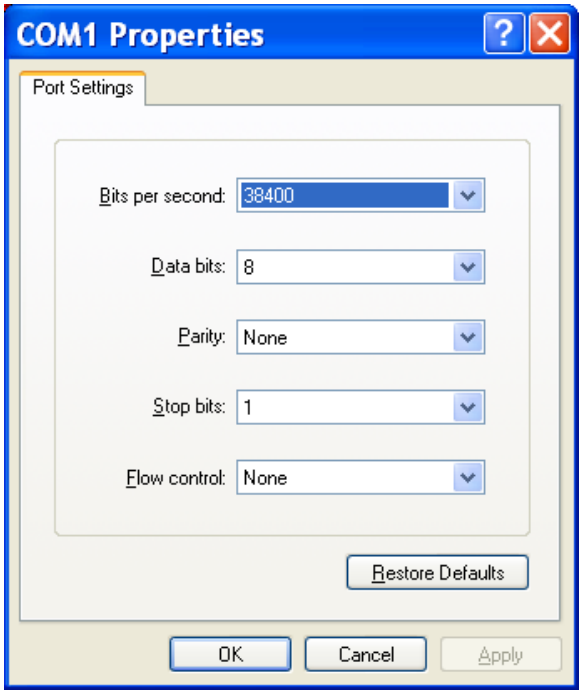
4. When the **COMx Properties** dialog displays,

   A. Set the **Bits per second** to 38400, and

   B. Set the **Flow control** to None as shown in Figure 1–5 below.

   C. Press Enter to continue.

Figure 1–5 Setting the Communication Parameters

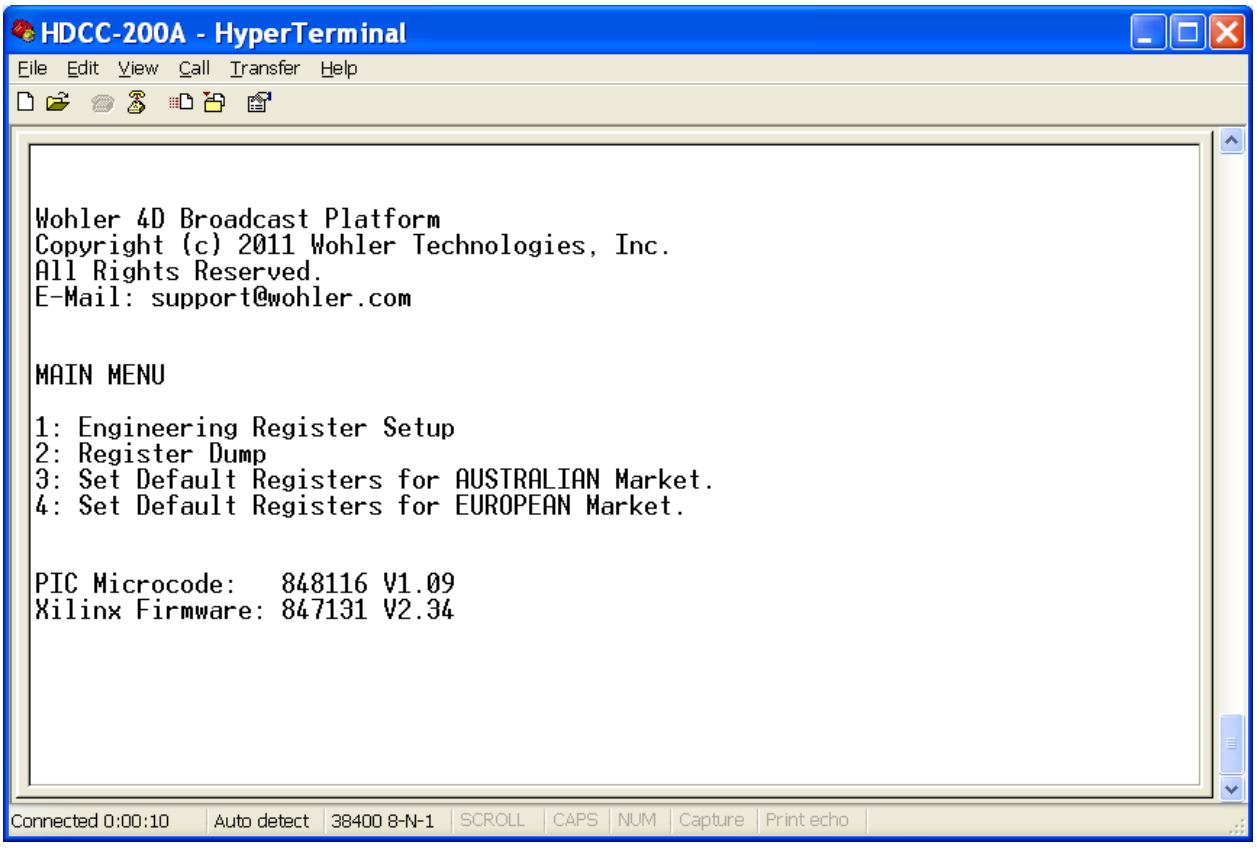


Note: The baud rate is always 38400 for the **Main Menu**.

Selecting the Regional Defaults

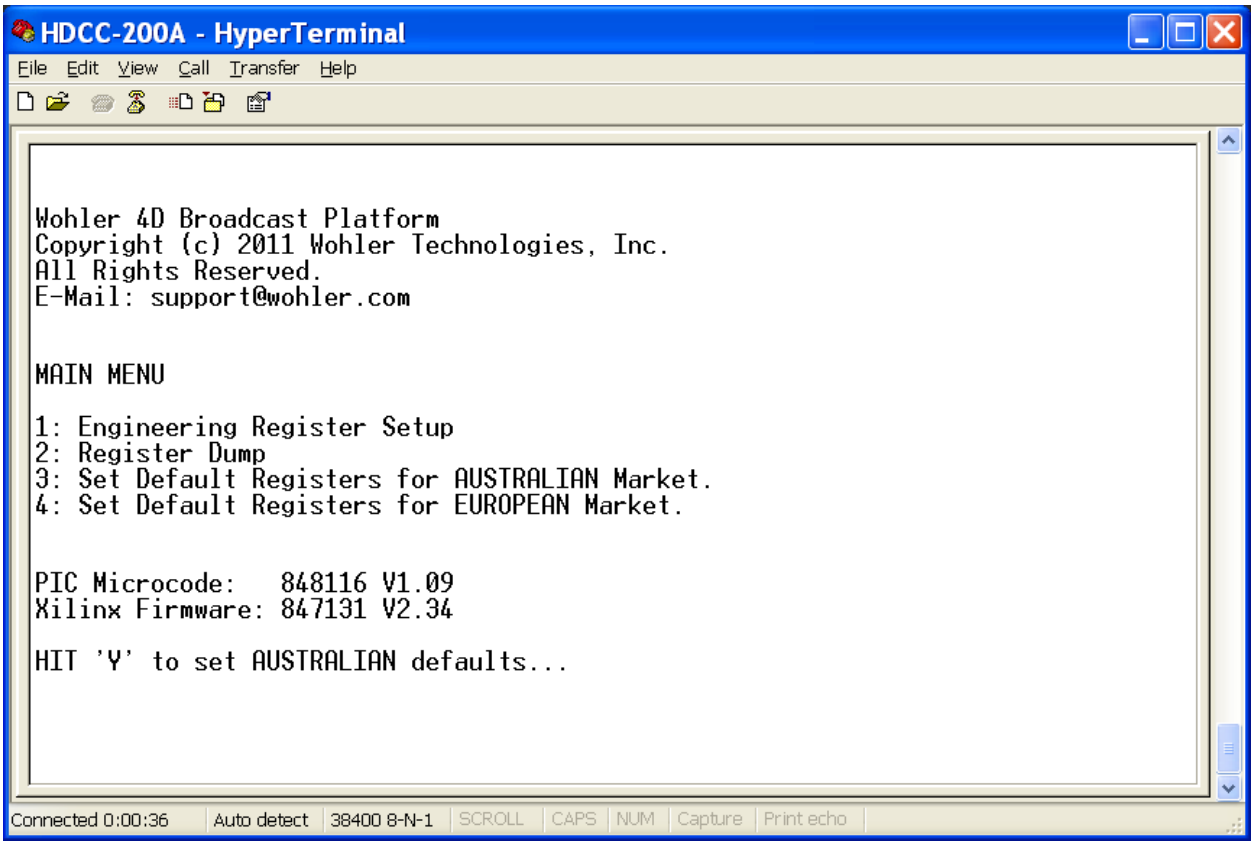
1. When the **HyperTerminal** application displays, and press the Enter key. You should see the HDCC-200A **Main Menu** (as shown in (Figure 1–6 below).

Figure 1–6 Launching Your Terminal Emulator



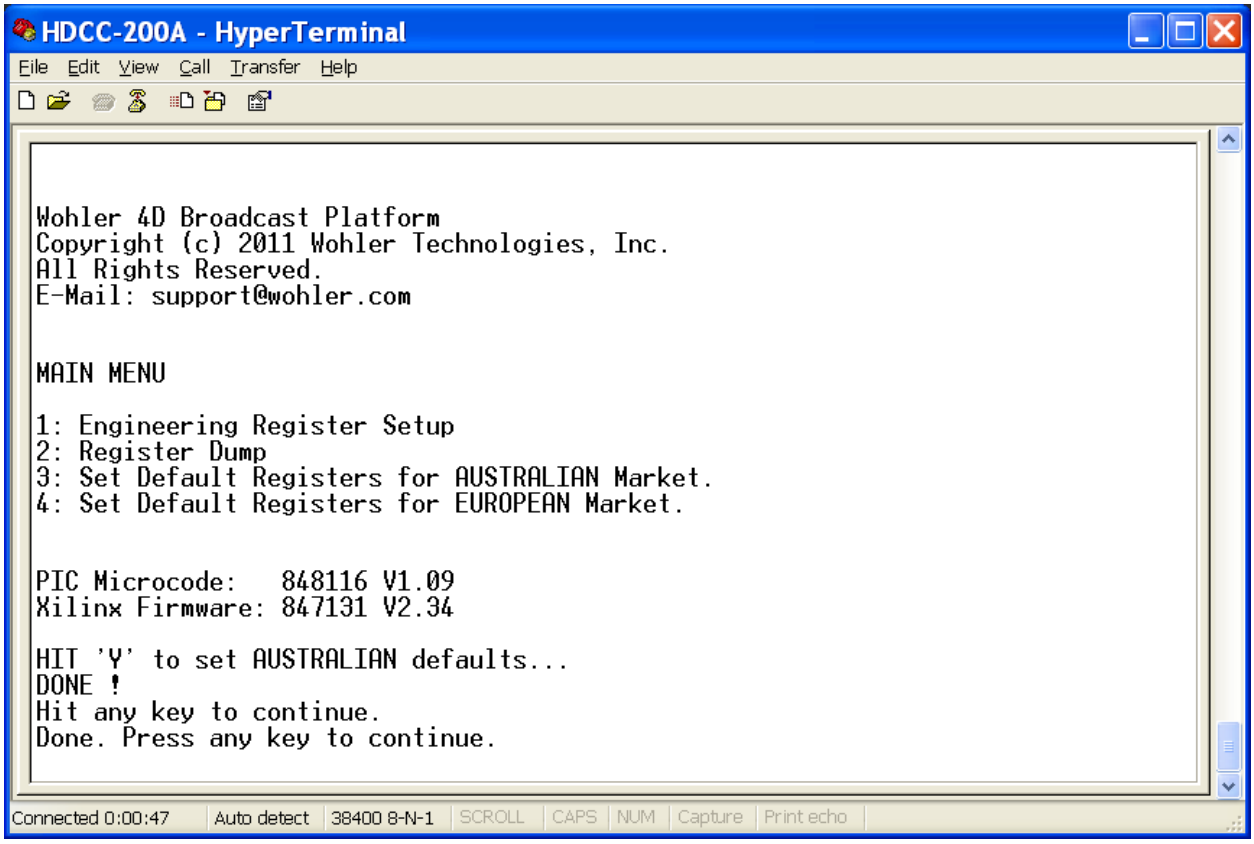
2. On the **Main Menu** type either 3 to select Australian defaults, or 4 to select European defaults. See Figure 1–7 below.

Figure 1–7 Selecting the Regional Defaults



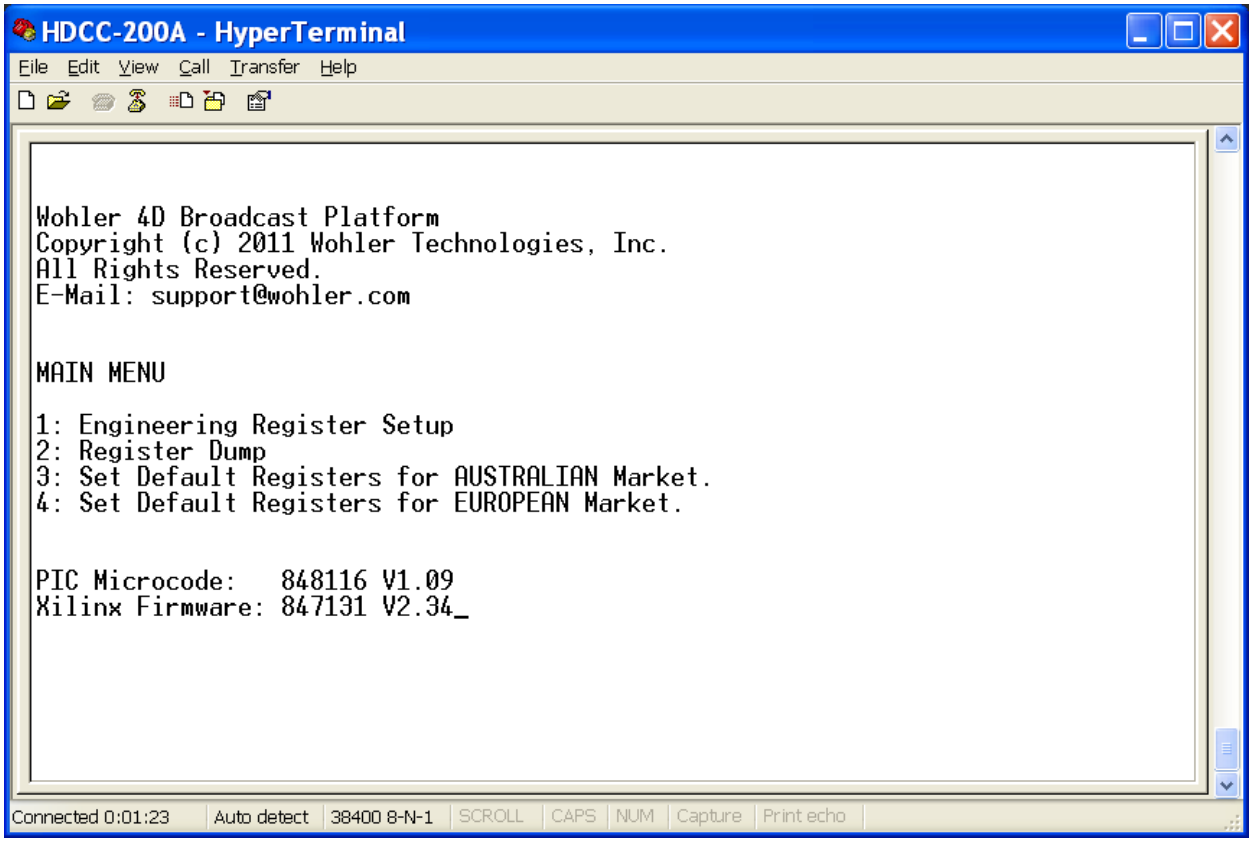
3. Press y to confirm your selection. See Figure 1–7 below.

Figure 1–8 Confirming the Selection



4. Press the Enter key to complete the operation.

Figure 1–9 Confirming the Selection

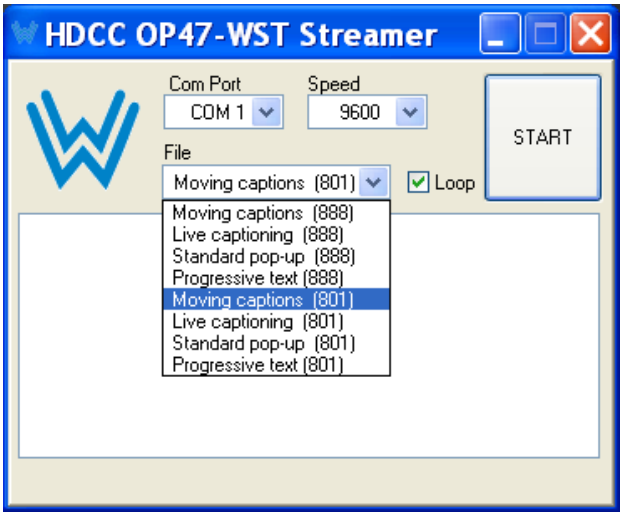


5. When the **Main Menu** reappears, close **HyperTerminal**.

Using Newfor Streamer

1. Launch the **Newfor Streamer** application from the desktop.
2. Select the **COM Port** for the laptop's serial port. In our example, we used COM1.
3. Set the communication **Speed**. In our example, we used 9600.
4. Click the drop down menu for the **File** field to display the options (See Figure 1–8 below).

Figure 1–10 Selecting the Text Style



Important: Note that all the options in the **File** drop down list end in either 888 or 801. Make sure you're selecting the correct options for your regional standard:

- 801 = Australia
- 888 = Europe

5. For your region, select any of the available options:

   - **Moving Captions**: Selecting this option displays two lines of text that move from the top of the screen (starting at line 4) and step to the bottom of the screen (ending at line 22).

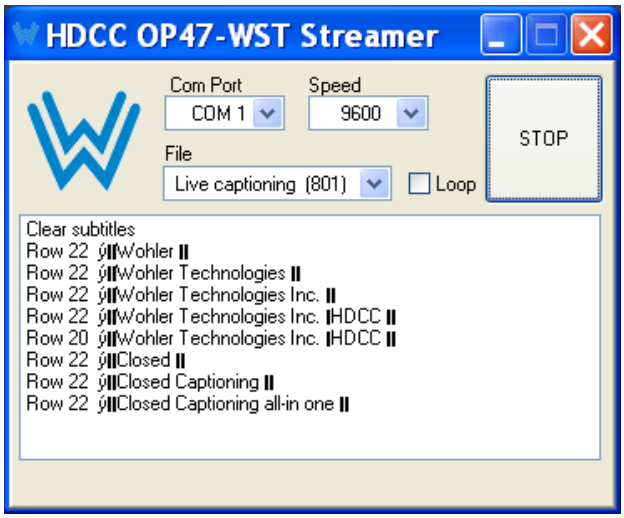
   - **Live Captioning**: Selecting this option momentarily displays a text string that appears on lines 18, 20, and/or 22 and then displays the next text string in the queue.

   - **Standard Pop-Ups**: Selecting this option displays two or three lines of text on the screen at a time randomly on the screen simulating live dialog.

   - **Progressive Text**: Selecting this option displays two lines of text that appear on lines 18 and 20 that scroll continuously.

6. After selecting the text display option from the **File** field, click the **Start** button and verify that you see captions scrolling in the Newfor **Streamer** application as shown in Figure 1–9 below.

Figure 1–11 Newfor Streamer Content Display



7. Also verify that you see the captions on the monitor as shown Figure 1–12 below.

Figure 1–12 Captions Display on the Monitor Connected to the HDCC-200A

CHAPTER 2
Decode Testing

Introduction

Overview

This chapter describes how to install, set up, and use the Calisto Lite application to test the closed caption encoding through the HDCC-200A in your production environment.

Topics

Downloading and Installing the Application

1. Launch your web browser and navigate to www.wohler.com (shown in Figure 2–1 below).

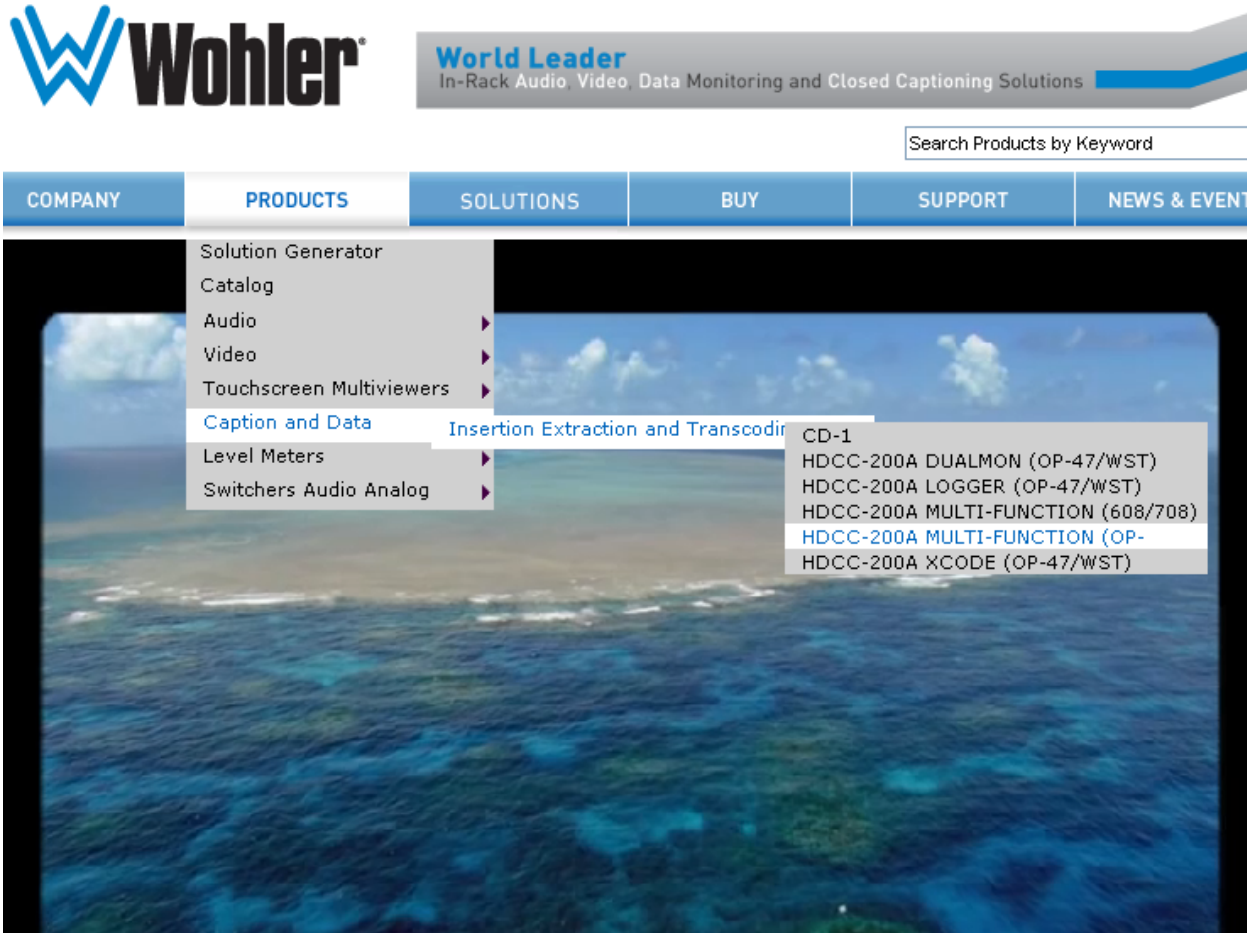
2. Click the **Products** tab.

   A. Mouse down to **Caption and Data**.

   B. Mouse right to **Insertion, Extraction and Transcoding**.

   C. Mouse down to **HDCC-200A Multi-Function (OP**... and click to select.

Figure 2–1 Selecting the HDCC-200A (OP-47 / WST) Multi-Function Card



3. When the product displays, click the **Downloads** tab about halfway down the page (shown in Figure 2–2 below).

Figure 2–2 Displaying the HDCC-200A Multi-Function Card

4. Click on **CalistoLite.zip**.

5. When the **Save As** dialog box appears, navigate to the desktop and click **Save**.

6. Unzip the application and save it to the desktop.

Setting Up the Hardware

1. Refer to the *HDCC-200A (OP-47/WST) Installation Guide* (PN 821046) for instructions to connect your HDCC-200A card to your PC or laptop and a monitor.

Important: When connecting the monitor, verify that you are connecting the monitor to the output port that corresponds to the input data stream you selected. In other words, if you connected your input test signal to I/P 1, then verify that you connected the monitor to O/P 3. If you connected the input signal to I/P 2, verify you have connected the monitor to O/P 4.

Also verify that your incoming video stream already has embedded closed captions. It it doesn't, this test will not work.

2. In our example, we're using the serial port to demonstrate how to set the serial communications. Set **Switch 1 to E** to display the engineering menu via the serial port.

   Note: To use the Ethernet port, refer to *HDCC-200A (OP-47/WST) Installation Guide* (PN 821046) for instructions to configure the Ethernet port as a virtual serial port. Also, don't forget to set SW1 to F.

Establishing Communications from the Laptop to the HDCC-200A

1. On the laptop, launch **HyperTerminal**.

   A. Click the Windows **Start** button.

   B. Mouse over **All Programs**.

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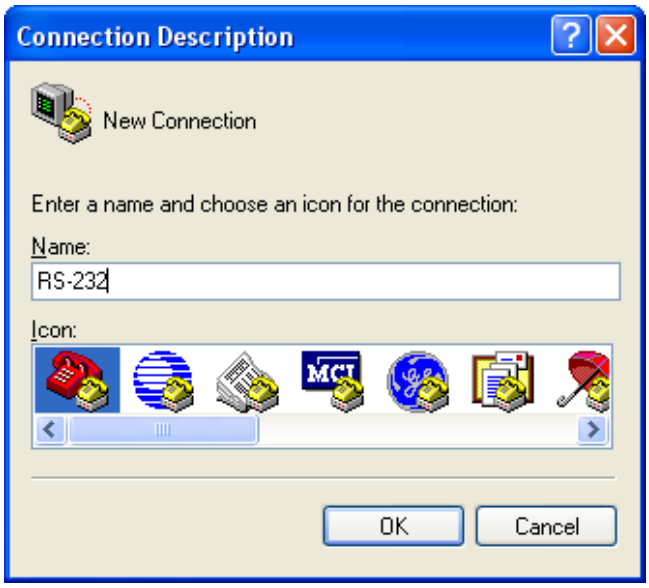
   D. Mouse over **Communications**.

   E. Click on **HyperTerminal** (usually at the top of the list).

2. When the **Connection Description** dialog displays (Figure 2–3 below) you can optionally enter a name for this connection's configuration so that you can re-use it next time you launch HyperTerminal.

Figure 2–3 Connection Description Dialog

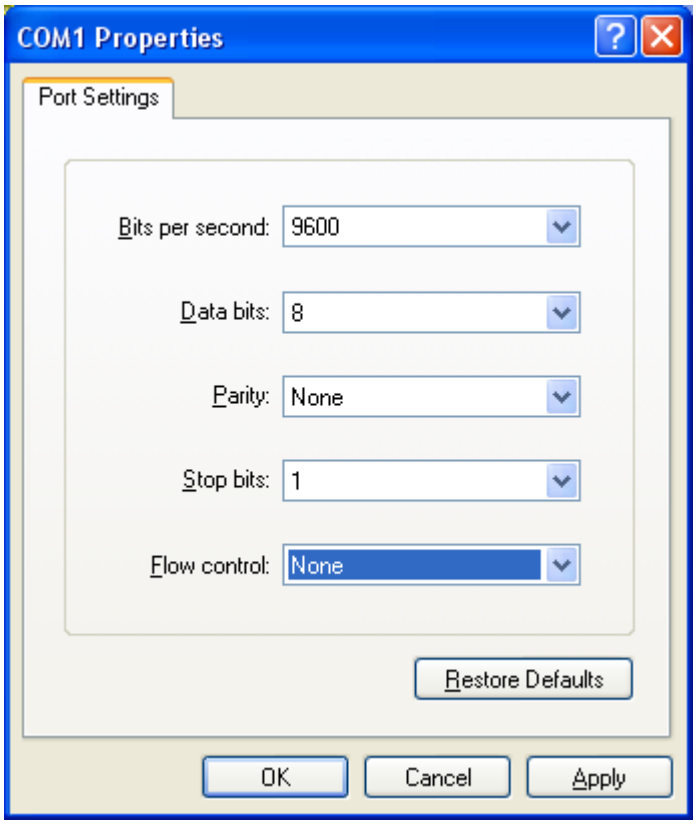


3. On the **Connect To** dialog, set the COM port for your particular serial connection (Figure 2–4 below).

Figure 2–4 Setting the COM Port

4. When the **COMx Properties** dialog displays, set the **Bits per second** to 9600 and **Flow control** to None as shown in Figure 2–5 below.

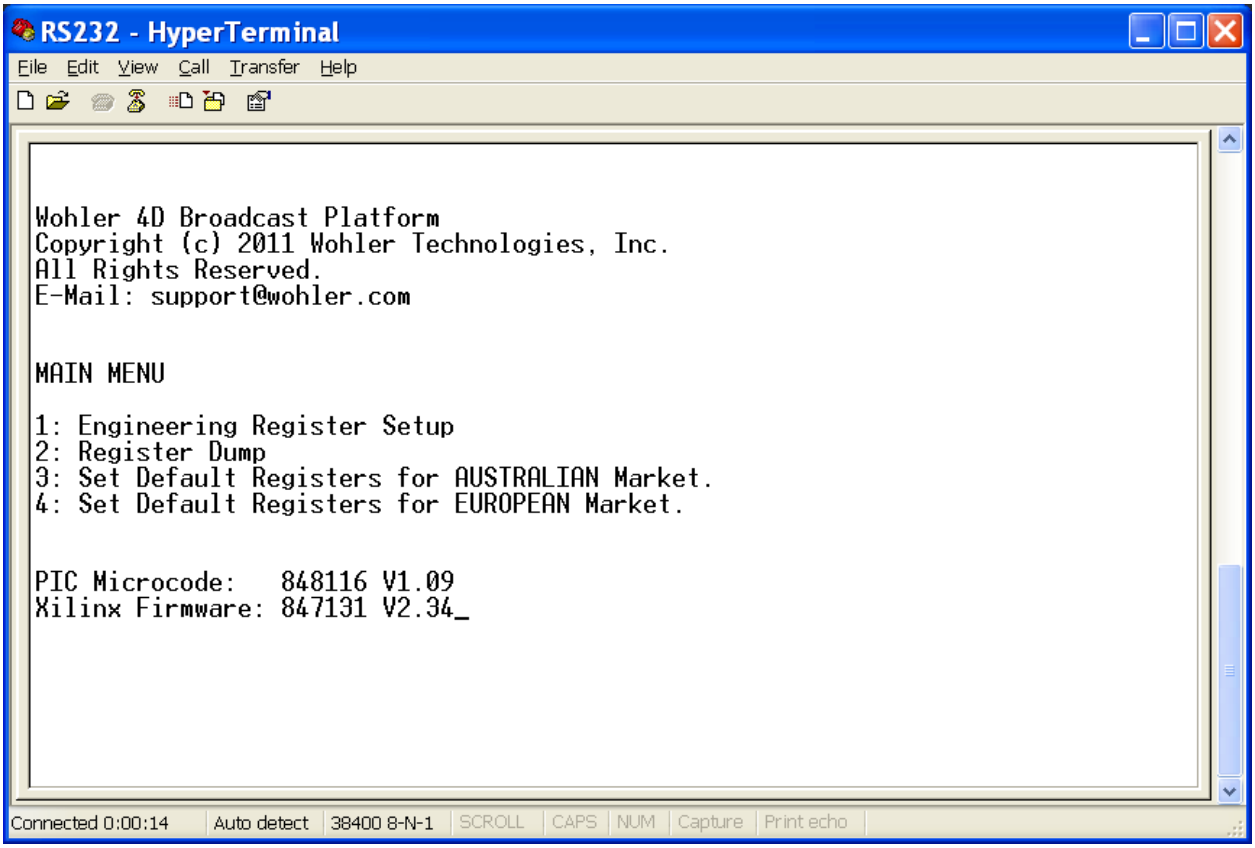
Figure 2–5 Setting the Communication Parameters



Selecting the Regional Defaults

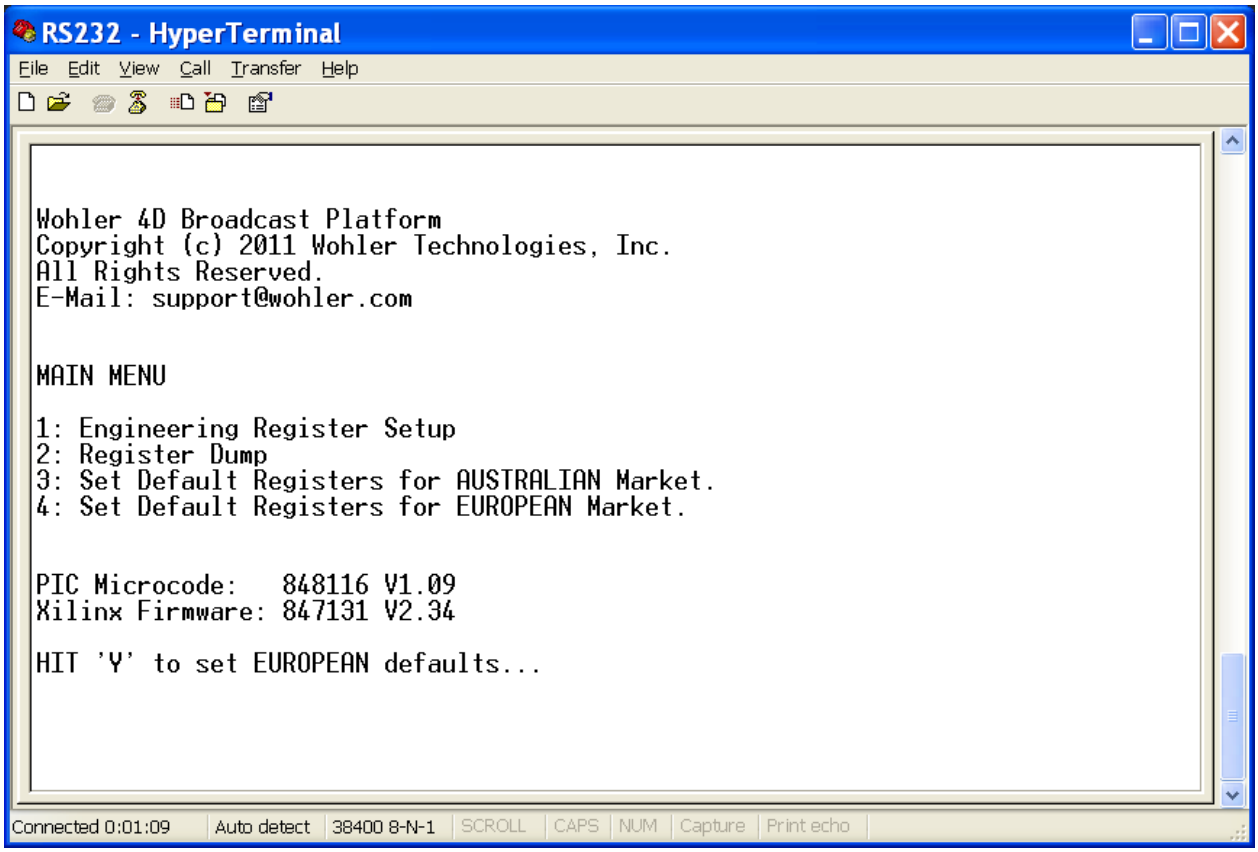
1. On the laptop, select the **HyperTerminal** application and press the Enter key. You should see the HDCC-200A **Main Menu** (as shown in (Figure 2–6 below).

Figure 2–6 Launching Your Terminal Emulator



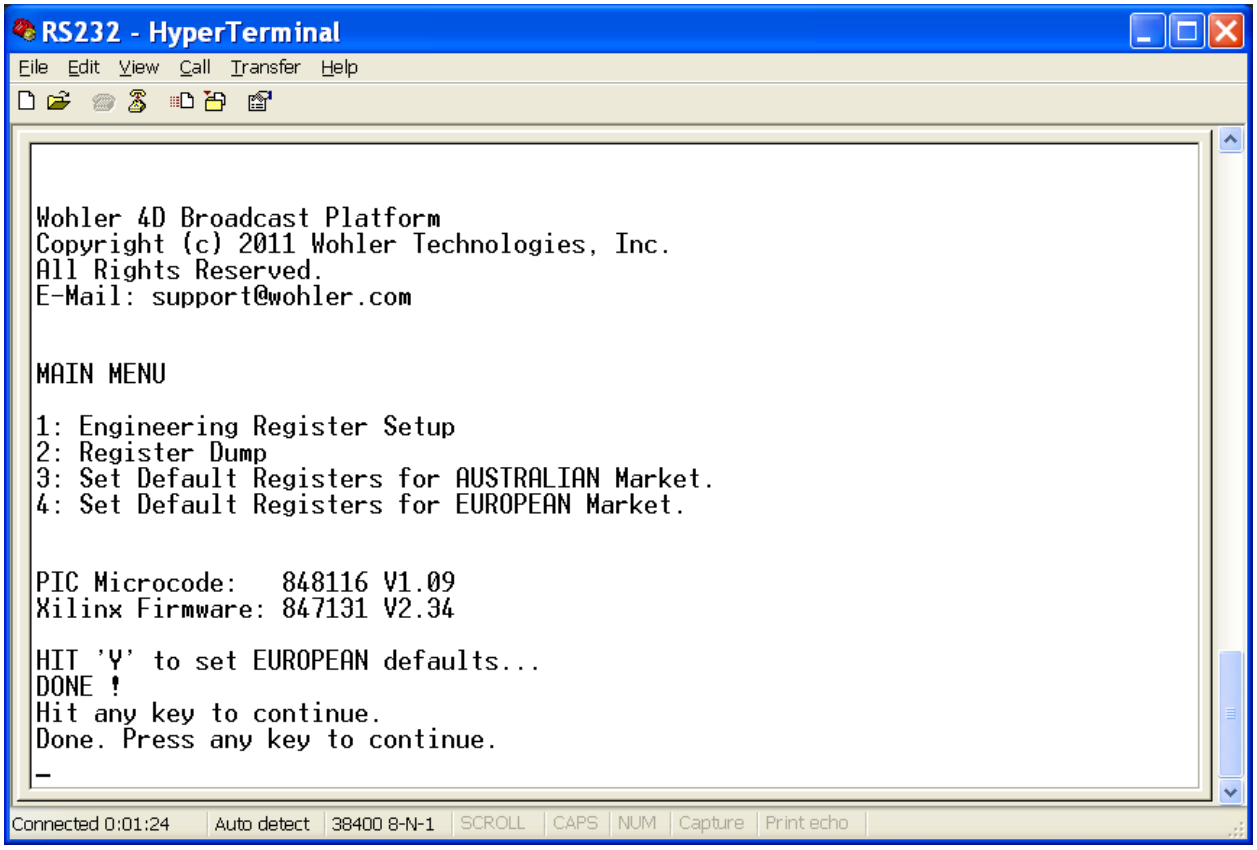
2. On the **Main Menu** type either 3 to select Australian defaults, or 4 to select European defaults.

Figure 2–7 Selecting the Regional Defaults



3. Press y to confirm your selection. See Figure 2–7 below.

Figure 2–8 Selecting the Regional Default Set



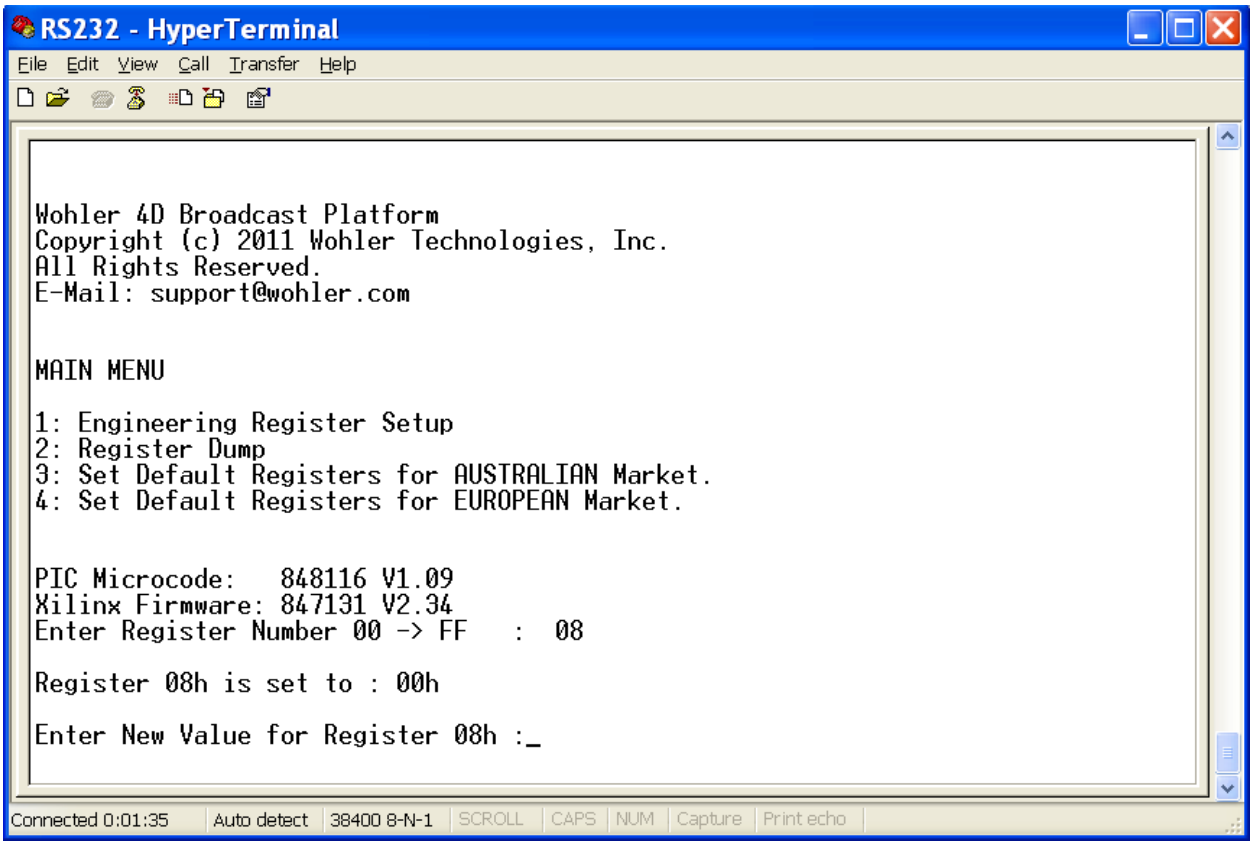
4. Press the Enter key to return to the **Main Menu**.

Resetting the Communications Speed

For decoding, the minimum baud rate is 38400. In this section, you will update the baud rate in the HDCC-200A for this communications speed.

1. Referring to Figure 2–8 below, type 1 at the **Main Menu** to modify the engineering registers.

Figure 2–9 Resetting the Baud Rate



2. When the prompt appears, type 08. Register 08h is the one responsible for the baud rate.

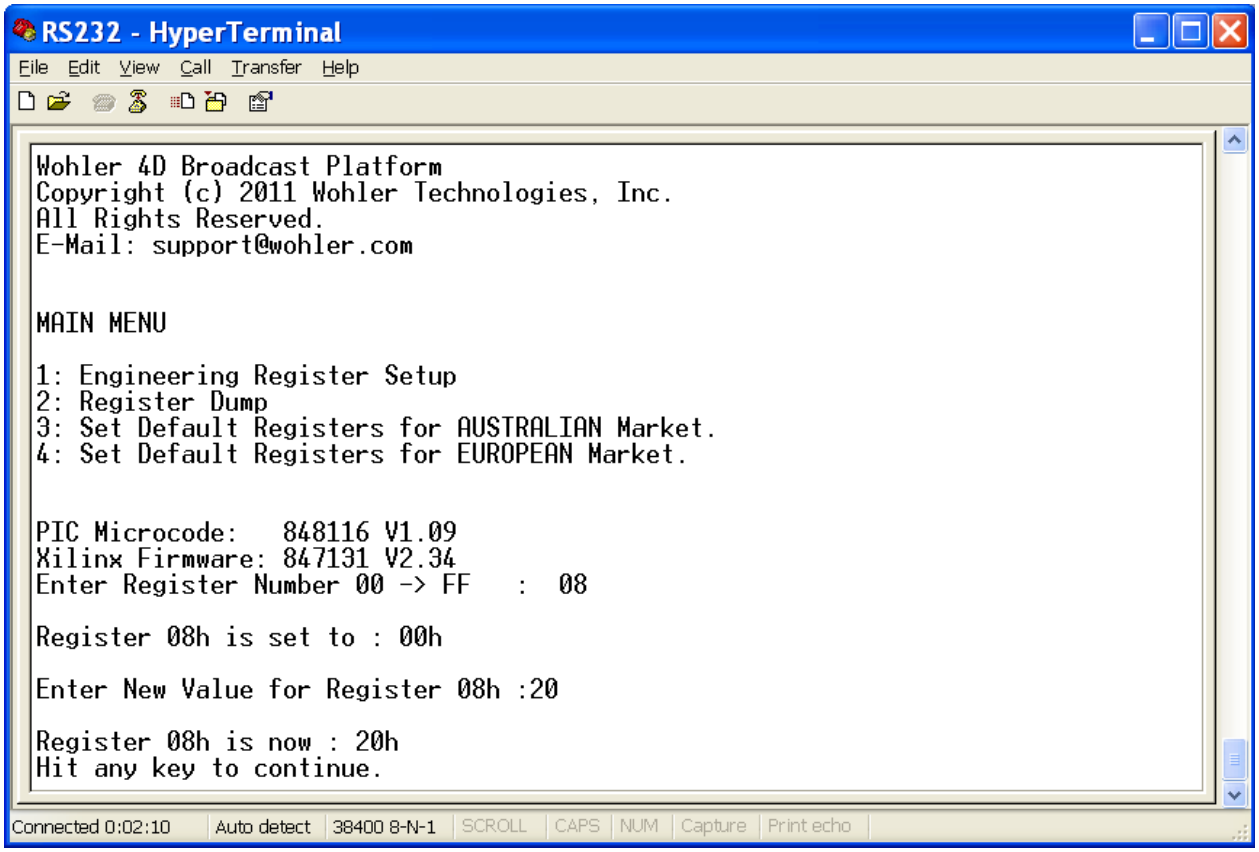
```
Enter Register Number 00 -> FF : 08
Register 08h is set to : 00h
```

3. Now enter the new value for register 08h, in this case 20.

```
Enter New Value for Register 08h : 20

Register 08h is now : 20h
Hit any key to continue.
```

Figure 2–10 Resetting the Baud Rate

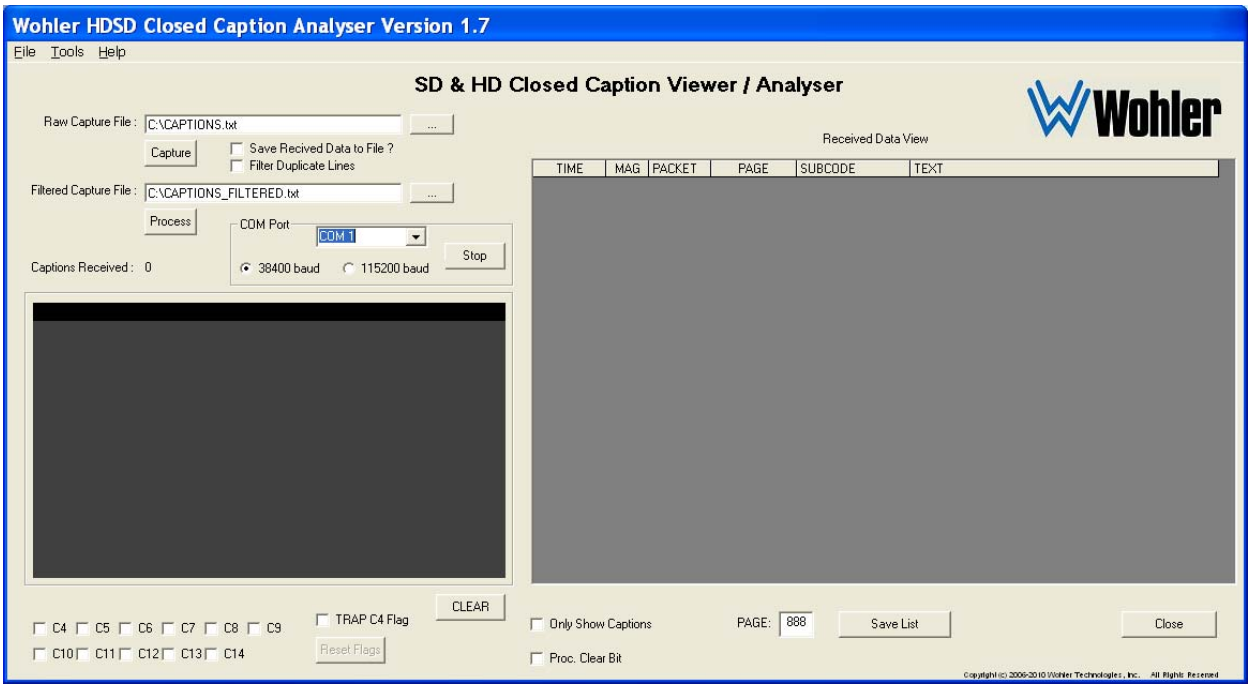


Now the baud rate is set to 38400. You can begin your decode test.

Using Calisto Lite

1. Set SW 1 on the HDCC-200A to 8.
2. Launch the Calisto Lite application from the desktop (Figure 2–10).

Figure 2–11 Calisto Lite Application Window



Important: Note that the default value for the Page field (bottom of the screen) is 801. Make sure you select the correct page value for your regional standard:

- 801 = Australia
- 888 = Europe

3. Click the **38400 baud** radio button if it is not already selected.
4. Set the **COM Port** field to the COM port you selected. In this example, we're using COM1.

5. Click the **Stop** button to begin decoding text. You should now see closed caption data both in the Calisto Lite application and on the monitor connected to the HDCC-200A.

Figure 2–12 Calisto Lite Application with Closed Caption Data