

## Tech Note 386

# Verifying Modem Functionality with SCADAAlarm™ 6.0

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## Introduction/Overview

This Tech Note explains how to verify that a modem is working correctly for use with SCADAAlarm 6.0. This is accomplished using the **Modem Installation Test Utility for SCADAAlarm** ([Figure 2 below](#)), which is available as a [download](#) and is used with SCADAAlarm 6.0.

## What is a Voice Modem?

Most modems are supplied with these functions:

- Data
- Data/fax
- Data/fax/voice
- Data/fax/voice/speakerphone

A voice modem is a modem that is capable of playing and recording audio over a telephone line. While almost all modems are data and fax capable, more and more also have voice capabilities.

## What is a TAPI-Compliant Modem?

TAPI stands for **T**elephony **A**pplication **P**rogramming **I**nterface. It is a programming standard provided by Microsoft® within their Windows® operating system. It enables software developers to produce telephony software that will work with any modem, as long as that modem is TAPI-compliant.

**Note:** SCADAAlarm 6.0 supports any TAPI-compliant modem.

For a modem to work with Windows TAPI, the modem must have voice drivers and sound devices. The voice drivers are interfaced with Win 9x/Me through UniModem/V (and Win 2k/XP through UniModem 5), Windows' universal modem voice drivers. Audio devices (or Wave Devices) for the voice modem are usually provided by the manufacturer.

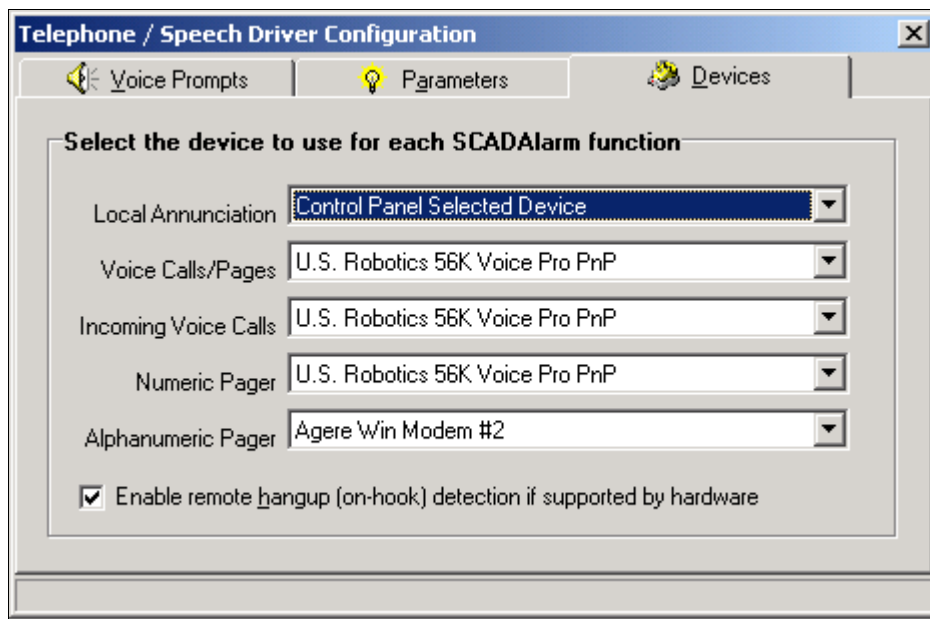
## Select Devices to Use with SCADAAlarm Functions

The first step is to configure each SCADAAlarm 6.0 function with the correct devices.

**Note:** This step must be completed before running the Modem Test Utility because Device Selection changes the **scadalarm.ini** file, which is read by the Modem Test Utility. Setting the Configuration options is usually all that is necessary for SCADAAlarm to work with the modem.


The **Telephone/Speech Driver Configuration** dialog box is accessed via the main menu by selecting **Configuration/Driver Configuration**, then selecting the **Devices** tab.

The following figure shows an example of a typical configuration:

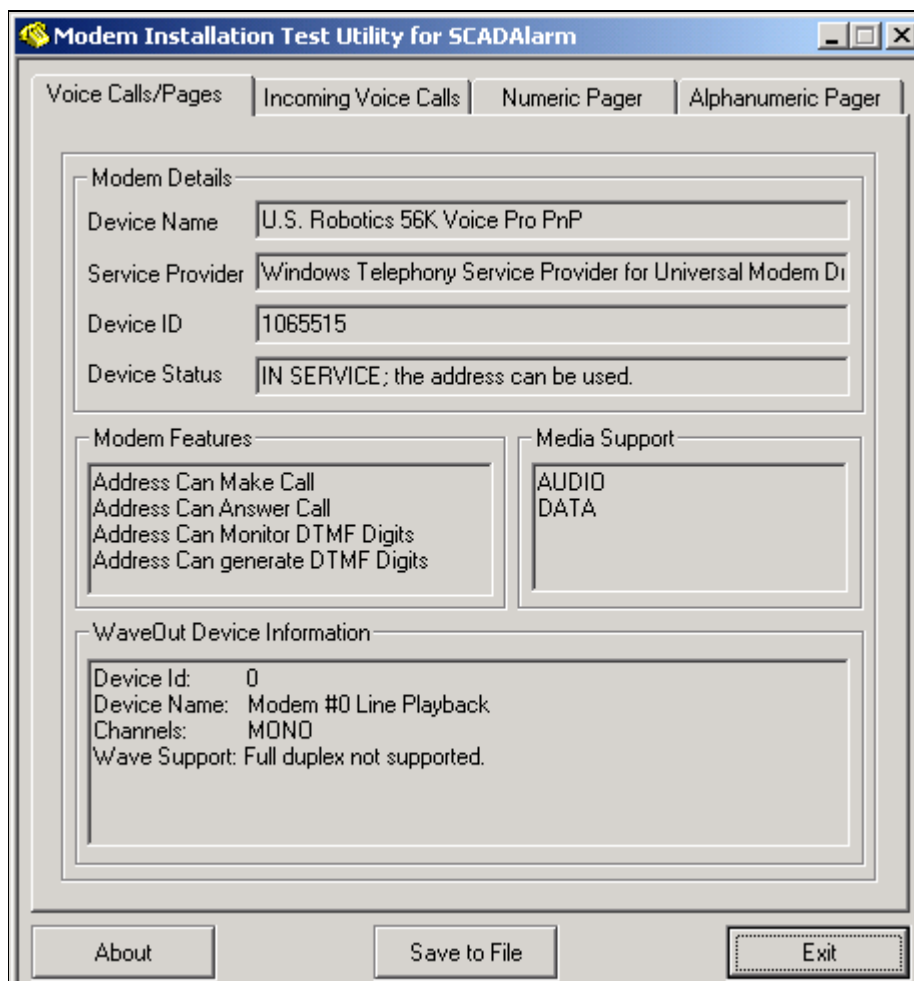


**FIGURE 1: SCADAAlarm DEVICES TAB FIELD**

## Modem Installation Test Utility for SCADAAlarm

If modem problems persist, download the **Modem Test Utility** . The downloaded zip file contains the Modem Test Utility and a document with more details about the output of the Modem Test Utility.

The Modem Test Utility provides more details of the **Voice**, **Numeric Paging**, and **Alphanumeric Paging** modem functions (Figure 2 below):



**FIGURE 2: MODEM TEST UTILITY INTERFACE**

## Checking for Correct Modem Drivers

If the Modem Test Utility shows that some modem functionality is not working correctly, read the following section to verify that the **Modem Drivers** are installed correctly.

**Note:** It is possible for a Modem to work correctly with SCADAAlarm 5.0, but not with SCADAAlarm 6.0. This is due to not having the correct Modem Drivers installed.

### How to Check If Your System has a MODEM WAVE Driver Installed

If your modem supports **VOICE**, then a modem wave driver must be listed in the **Windows Device Driver Manager**.

#### For Windows 2000/XP

1. Open the Windows Control Panel.
2. Double-click the **System** icon.
3. Select the **Hardware** tab.
4. Click the **Device Manager** button.
5. Click the **+** next to the **Sound, video and game controllers** icon (expand the list).
6. Confirm that the **UniModem Half-Duplex Audio Device** driver is listed (Figure 2 below):



**FIGURE 2: UNIMODEM HALF-DUPLEX AUDIO DEVICE ITEM**

### My Modem Supports VOICE but I Can't Find the "Wave Device"("Audio Device") Installed

Windows 2000/XP operating systems include a variety of "generic" modem drivers - including modems based upon all the popular chipsets. In many cases, adding, changing, or removing a modem is simple:

plug-and-play.

But, it doesn't always work that way. In most cases, the Windows 2000/XP operating systems recognize your Data/Voice/Fax modem as Data Modem only and install the "generic" modem driver which is shipped with Windows.

This means that you may not see the "Wave Device"("Audio Device") driver for modem listed in the Device Manager list. This also means that you can use dial-up to access the Internet but cannot record your phone calls with your Modem.

If you are sure your modem supports VOICE, please **Update** or **Reinstall** the correct modem driver.

## How do I Update the Modem Driver?

1. First, locate the correct modem driver. It is included on the CD-ROM that ships with your modem or locate a XP or Win2K-compatible driver from your modem vendor (provided by their Internet download sites).
2. Open the Device Manager as explained above.
3. Expand the Modems list by clicking the +.

Your modem driver should be listed.

4. Right-click the modem name and a sub-menu appears.
5. Select **Update Driver**.



**FIGURE 3: UPDATE DRIVER**

DO NOT use the **Search/Have Disk** option to point 2000/XP to a compatible driver you've downloaded or installed from the CD-ROM.

## How do I Reinstall the Modem Driver?

1. First, locate the correct modem driver. It is included on the CD-ROM that ships with your modem or locate a XP or Win2K-compatible driver from your modem vendor (provided by their Internet download sites).

2. Open the Device Manager as explained above.
3. Expand the Modems list by clicking the **+**.

Your modem driver should be listed.

4. Right-click the modem name and a sub-menu appears.

You can try **Uninstall** and then try the **Add Hardware** wizard(Scan for hardware changes) - don't use the **Search/Have disk** option to point to a compatible driver.

## Verifying Caller ID

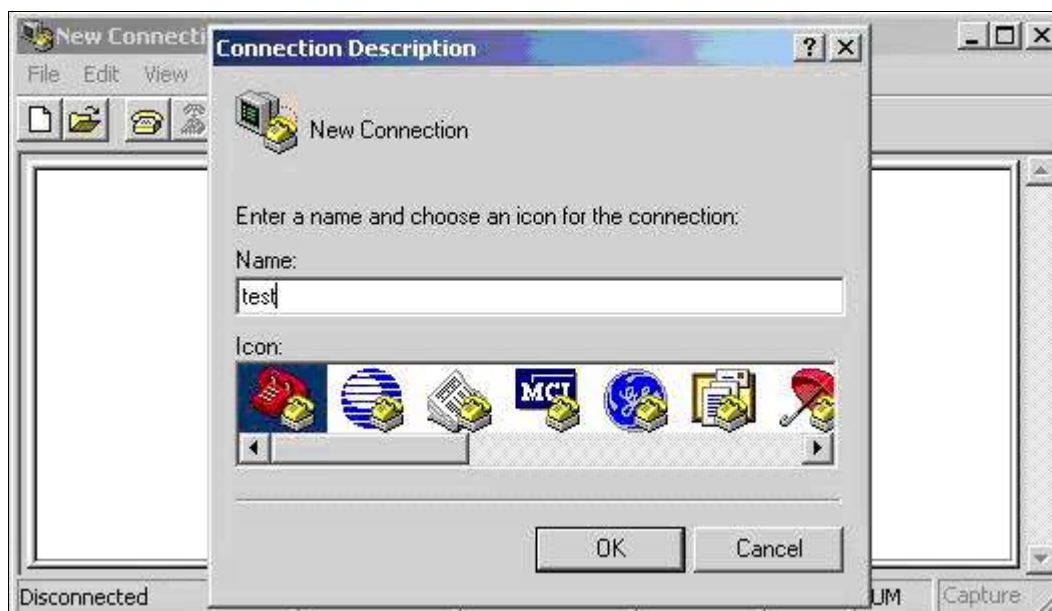
### Does my Modem Support Caller ID?

Generally we use HyperTerminal to test our modem if it supports Caller ID.

1. First make sure you can see the Caller ID information from a normal telephone LED displayer.

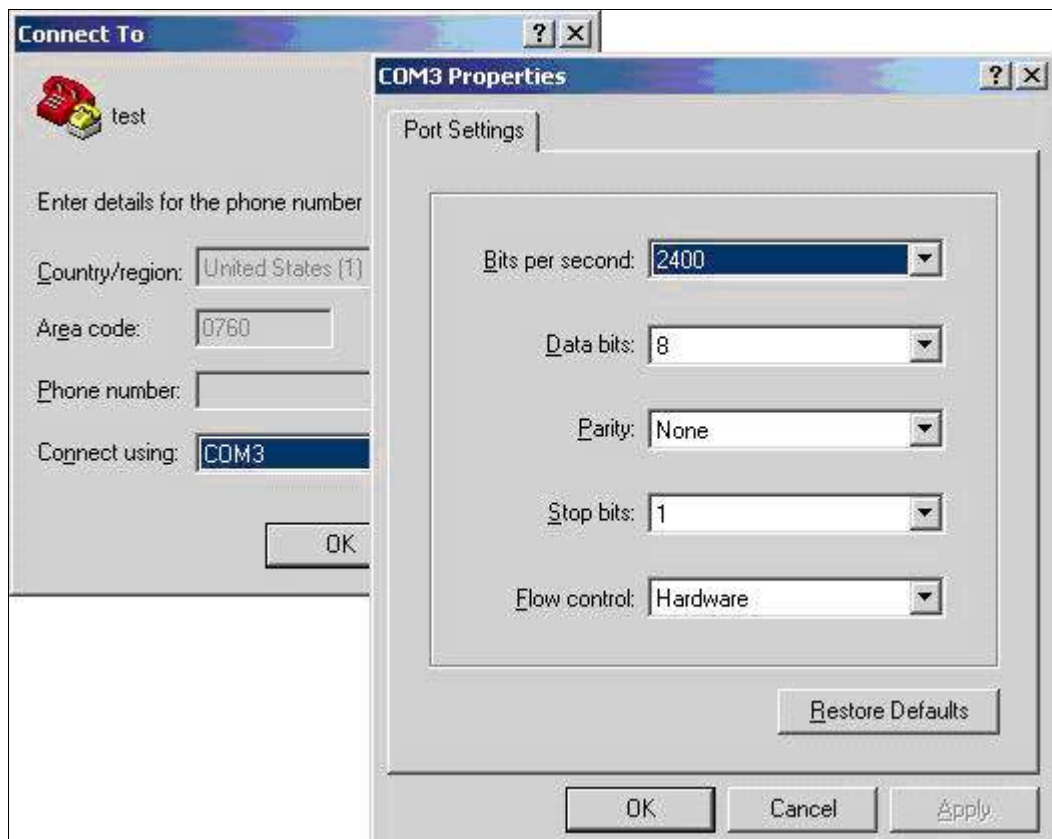
Then do the following:

2. Select **Start/Programs/Accessories/Communications/HyperTerminal**.
3. Double-click on **hyperterm** or **hyperterm.exe**.
4. Name the new connection **test**, and click **OK**.



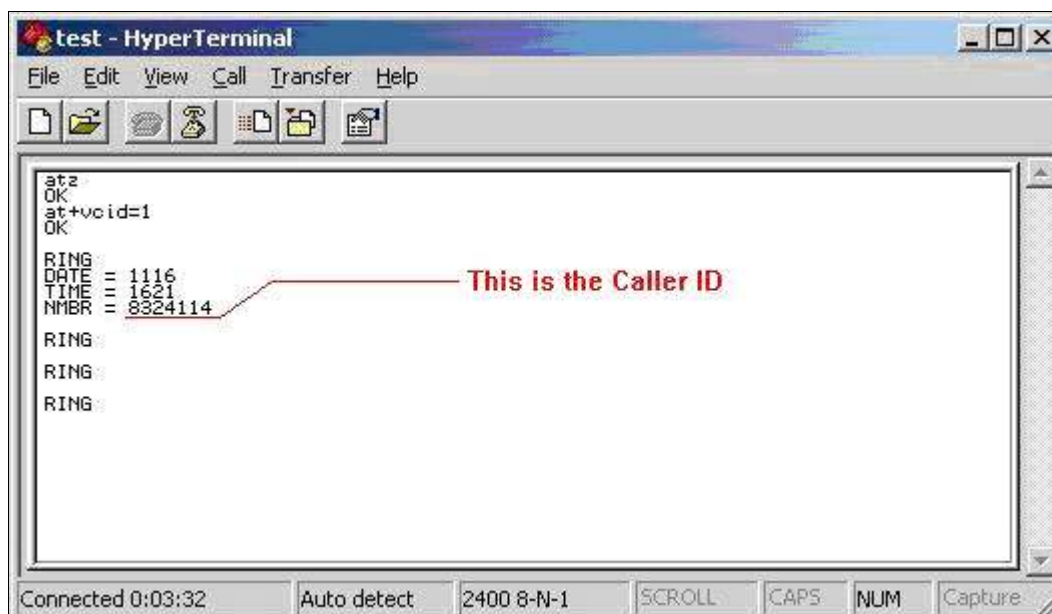
**FIGURE 4: TEST CONNECTION**

5. Change the **Connect using** field to **Direct to COM X**, where **X** is the COM port used by the Modem.
6. Click **OK** to save **Port Settings**, then click **OK** to exit the **Connect To** dialog box:



**FIGURE 5: COM PORT PROPERTIES**

7. Enter the string **ATZ** to initialize the modem (**OK** should appear on the screen).
8. Enter the **Caller ID setup string** to be tested: **AT+VCID=1** for most modems (see **Notes** section below).
9. If **OK** results, continue; If **ERROR** results the modem may not support Caller ID; try a different setup string.
10. Have someone call you and watch the terminal screen.
11. If Caller ID is working, you will see the word **RING**, followed by one or more additional data lines. The word **RING** will then continue to appear for each incoming ring.



**FIGURE 6: HYPERTERMINAL TEST**

If Caller ID is not working, you will only see the word RING for each incoming ring. If this is the

case try another Caller ID setup string and go back to step 2.

## Notes

For most MODEMs, the string **AT+VCID=1** will enable Caller ID. On some voice based MODEMs the string is **AT#CLS=8#CID=1**.

Look in the user's manual for your MODEM to see if any setup string is referenced or mentioned. Other common setup strings are:

**AT#CID=1**  
**AT%CCID=1**  
**AT%CCID=2**  
**AT#CID=2**  
**AT#CC1**  
**AT\*ID1**

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