



GAI-TRONICS®
A HUBBELL COMPANY

Telephone Management Application (TMA) Installation Bulletin

Confidentiality Notice

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This manual covers TMA version 7.6.0 and newer.

Introduction

The GAI-Tronics Telephone Management Application (TMA) is used to monitor the activity and health of GAI-Tronics RED ALERT®, SMART Industrial, VoIP/WiFi, and GSM Cellular Telephones. The reports and information provided by TMA can prove useful in reducing maintenance labor costs and greatly reduce liabilities typically associated with an emergency communication system.

TMA runs continuously on a dedicated personal computer and it uses a GSM cellular modem, an Ethernet connection and one or more voice-mode modems or Dual Tone Multi Frequency (DTMF) transceivers to gather status information from each telephone at regular intervals. In addition, the System Manager uses TMA to remotely adjust the behavior of individual telephones. These adjustments are either sent to the telephone immediately or in the case of the analog telephones can be held to be sent during the next scheduled health-check maintenance call.

TMA provides an at-a-glance view of the status of the telephones as well as customizable reporting in the form of scheduled printed reports, and reports generated on demand.

For questions about TMA, please contact:

Service Group
GAI-Tronics
3030 Kutztown Road
Reading PA 19605
800-492-1212 (8 a.m. to 5 p.m. EST)
610-777-1374 outside the USA

TMA Product Package

Upon receipt of a TMA product, inspect the contents of the carton to ensure the following items are included:

Table 1. TMA Product Packages

Item	Description	Model 12509-042 TMA Application Package	Model 12509-043 TMA Line Expansion Kit	Model 12509-044 TMA VoIP Only Kit	Model 12509-047 GSM TMA Application Package
44008-004	TMA DTMF Transceiver Unit	■	■		
44306-7xx	USB Flash Drive	■	■	■	■
49186-008	Security Key	■		■	■
61007-007	Cable Assembly, 4-conductor	■	■		
61007-044	USB Cable	■	■		
44012-001	GSM Cellular Modem				■

Component Descriptions

The TMA Dual Tone Multi Frequency.(DTMF) Transceiver is used to interface the PC running the TMA application and dedicated PABX telephone line. The DTMF Transceiver is a black plastic box with sloped sides measuring 5.50 L× 5.25 W × 1.75 D inches. The front of the unit has three LEDs and the rear has one USB type “B” jack, and one RJ11 jack. **NOTE:** The TMA DTMF Transceiver is not required for VoIP or GSM cellular applications.

The USB Flash Drive contains all the files to be installed on a PC that are required to run the TMA application and the TMA User Guide.

The USB Security Key provides the necessary hardware security for the Administrator account access to the TMA application. The USB Security Key has the appearance of a USB flash drive (or memory stick).

The USB cables are used to interconnect the PC running the TMA application with the DTMF Transceiver and GSM modem. The cable is equipped with a USB type “A” plug at one end for connection to a USB port at the PC, and a USB type “B” plug at the other end for connection to the DTMF Transceiver and GSM modem.

The telephone line cord is used to connect the DTMF Transceiver to a dedicated PABX telephone line. The telephone line cord is equipped with an RJ11 plug at each end and is approximately 7 feet in length.

The MultiTech® GSM cellular modem is an aluminum chassis measuring 3.17 L × 2.45 W × 1.16 D inches. The modem has LEDs to indicate status of the GSM wireless signal. A local antenna is included, but depending on the location of the installation a remote antenna (not included) may be required.

NOTE: Before you can begin to use the modem, a SIM card from your wireless carrier will need to be installed for network access.

System Requirements
The minimum system requirements for installing and running the TMA are:

- The GAI-Tronics TMA software
- System Manager (Host) PC equipped with the following:
 - Intel® or AMD® 32-bit or 64-bit Processor
 - Microsoft® Windows® 7 SP1 or Windows® 8.1 operating system
 - RAM, hard disk space, and processor speed is dependent on the operating system's recommended requirements
 - One USB port for the security key
 - One USB port per TMA DTMF Transceiver
 - One USB port for the GSM modem
 - One printer port
 - One Ethernet connection to a Local Area Network (For VoIP telephones only)
- One telephone line connection (PBX/PABX only*) per TMA DTMF Transceiver (for analog telephones only)
- SIM card from a wireless service to install in the GSM modem (For GSM telephones only)

***The No. 44008-004 DTMF Transceiver is not an FCC approved device. This prohibits connection to the “public network” without first being routed through a PBX/PABX telephone switch.**

The host PC should be installed in a controlled environment such as an office without extremes in temperature, humidity or dust.

The “System Manager” must be Microsoft Windows® literate and knowledgeable of the use of a computer, copying files, renaming files, etc.

Microsoft® is a registered trademark of Microsoft Corporation. Windows® 7 and Windows® 8.1 are trademarks of Microsoft Corporation.

Windows® 7 users: SP1 or above is required. Refer also to the Readme.txt file on the installation USB Flash Drive. To confirm the Service Pack is installed, right click on the desktop icon Computer, and select Properties. Examine the Windows edition section, and confirm the Service Pack is listed.

Windows® Considerations

The TMA application is intended to run on a PC dedicated to the Telephone Management Application. Running other applications while TMA is active may affect the operation of TMA. To make optimum use of the Windows® taskbar while TMA is running Full Screen, activate the Windows® taskbar “Auto Hide” option.

NOTE 1: Having the Windows® taskbar at the top or bottom of the screen and set to ‘Always on top,’ and without the ‘Auto Hide’ option being active may block a portion of the TMA display.

NOTE 2: TMA is intended for use with the Windows® Regional setting set as either English (United States), or English (United Kingdom). Avoid using a 12-hour date format without an AM/PM setting.

Windows® 10 and Windows® 11 USB Connectivity Requirements for TMA DTMF Transceivers

Important USB Compatibility Notice:

When using a GAI-Tronics TMA DTMF Transceiver with a PC running Microsoft® Windows® 10 or Windows® 11, special consideration must be given to how the USB connection is established.

The TMA DTMF Transceiver is designed for operation over **USB 2.0 only**. Newer computers frequently provide USB 3.0 / USB 3.1 / USB 3.2 ports that may exhibit unreliable behavior when interfacing with legacy USB 2.0 serial devices.

Direct connection from the TMA DTMF Transceiver to a USB 3.0/3.1/3.2 port on the PC is **not** recommended and may result in:

- Intermittent or failed communication with the DTMF Transceiver,
- SPICom failing to sustain a connection,
- COM ports appearing but not responding correctly, and/or
- Transceivers disconnecting after initial enumeration.

To ensure reliable operation, GAI-Tronics requires that each TMA DTMF Transceiver be connected through a powered USB 2.0 hub.

Configuring COM Port Advanced Settings

For proper operation of SPICom, each COM port associated with a TMA DTMF Transceiver must be manually configured in Windows Device Manager.

1. Open **Device Manager**.
2. Expand **Ports (COM & LPT)**.
NOTE: If you are having difficulties locating **Ports (COM & LPT)**, open the View menu and ensure that "Show hidden devices" is enabled.
3. Identify the COM port corresponding to the TMA DTMF Transceiver.
4. Right click the COM port and select **Properties**.

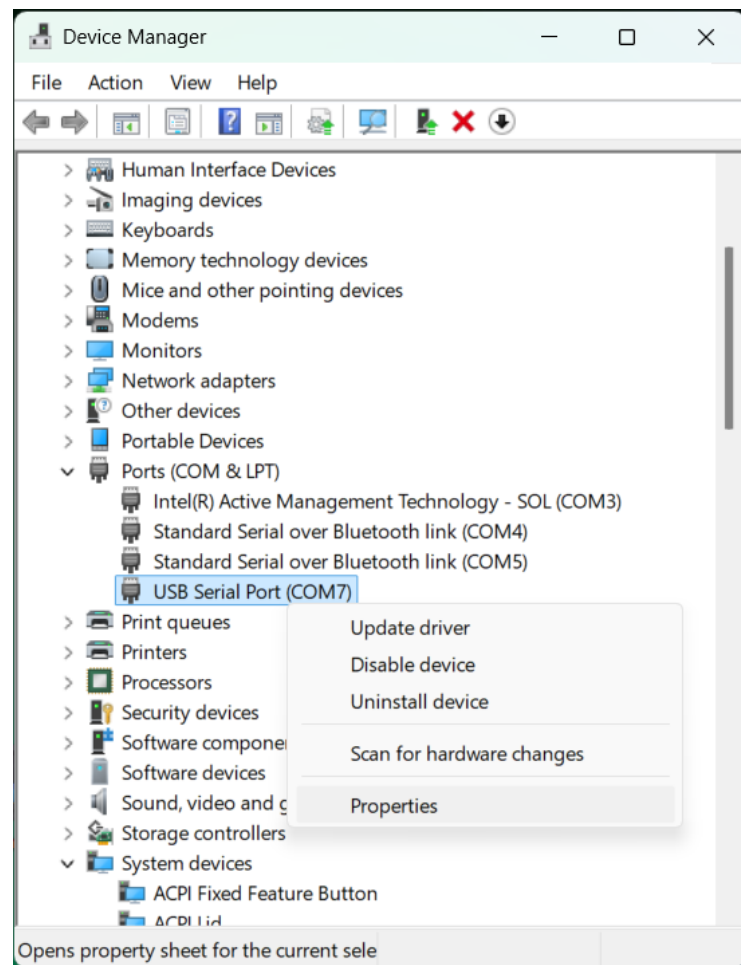


Figure 1. Device Manager

5. Select the **Port Settings** tab.
6. Click **Advanced...**

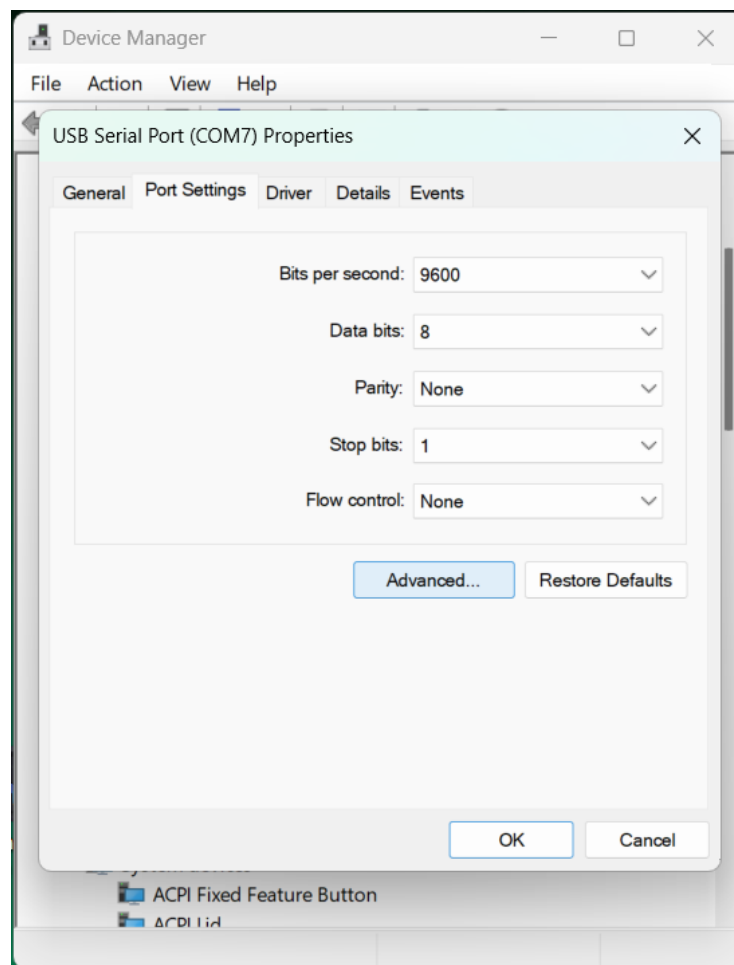


Figure 2. Port Settings

7. Under **Miscellaneous Options**, ensure that **Serial Enumerator** is enabled (see Figure 3).
8. Click OK, then OK again to apply the change.

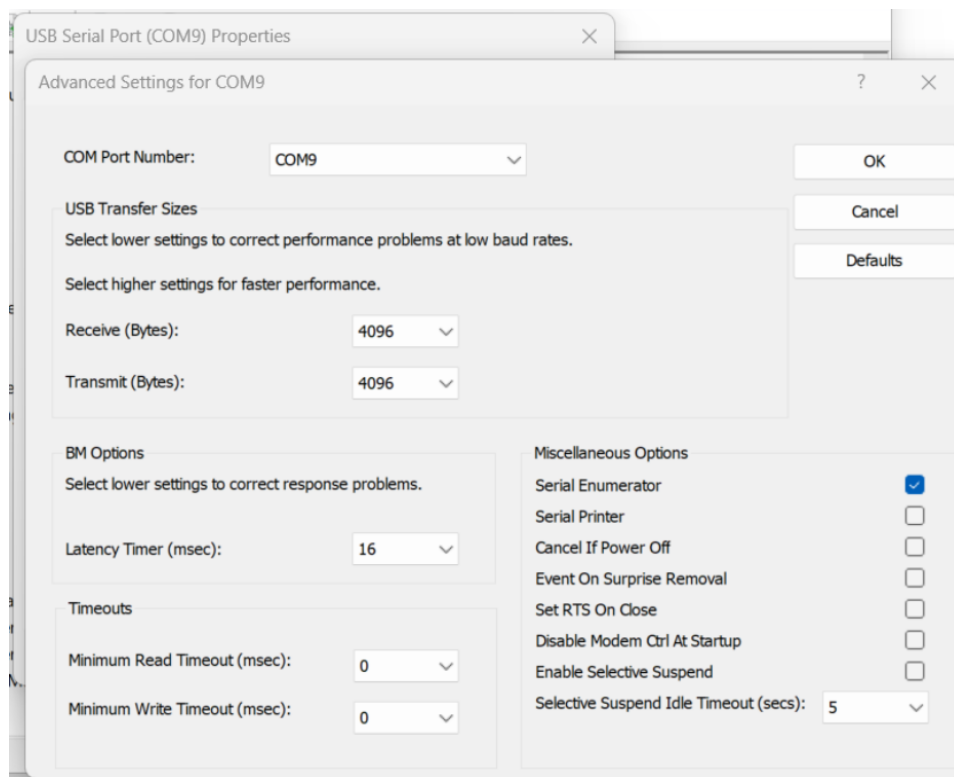


Figure 3. Advanced Settings

Installing TMA

To install TMA, you must be logged on with administrator rights.

TMA and its components are contained on the provided USB Flash Drive. Please exit all other programs that are running before beginning the installation. To install TMA to your PC, perform the following steps:

NOTE 1: Do **not** insert the USB security key until instructed to do so. If TMA is already installed on the PC, uninstall the existing TMA application prior to starting this TMA installation.

NOTE 2: The installation examples shown on the following pages represent a Windows® 7 installation, and may differ slightly in appearance to an installation on a PC running Windows® 8.1.

NOTE 3: MultiTech® serial port modems (Models MT5656ZDXV and MT5600ZDXV) employed with older versions of TMA are compatible with this version of TMA.

1. Place the USB Flash Drive into the PC's USB port. If the "AutoRun" feature is enabled, the main installation screen should appear in approximately 20 seconds. If the installation does not start up automatically, use Windows® Explorer to open the USB Flash Drive folder and double-click the Tma_Setup.exe filename. When the installation begins, the following screen should appear:



Figure 4. TMA Welcome

2. Click **Next >** to continue.

3. The License Agreement window will appear. After reading the license agreement, select “I accept the agreement” and click **Next >** to continue.

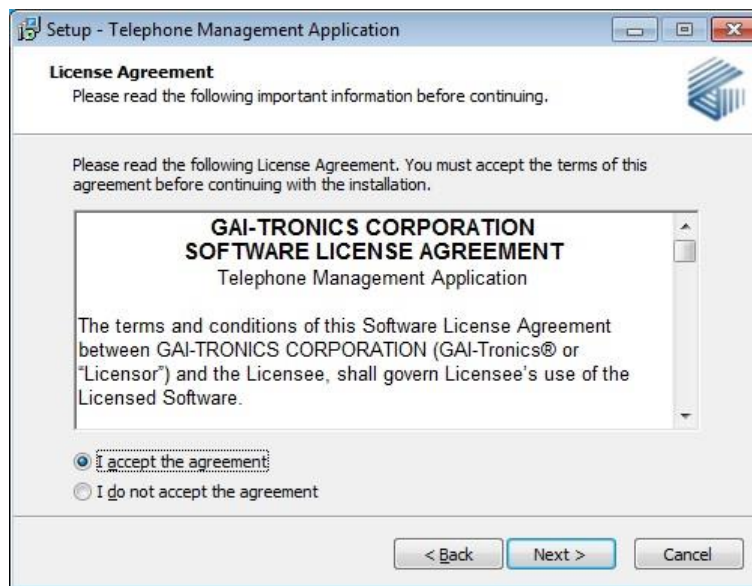


Figure 5. License Agreement

4. Upon acceptance, an “Information” window will appear. Click **Next >** to continue.

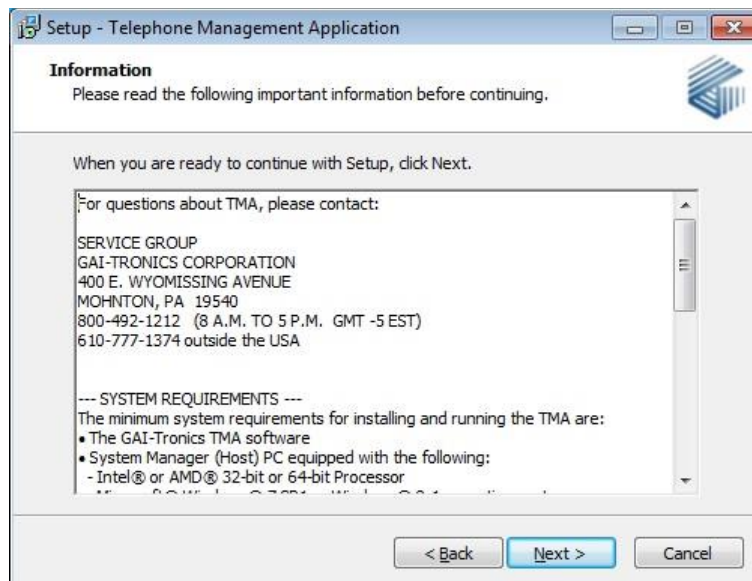


Figure 6. Information Window

- The “Select Destination Location” window will appear. Click **Next >** to accept the default folder location.

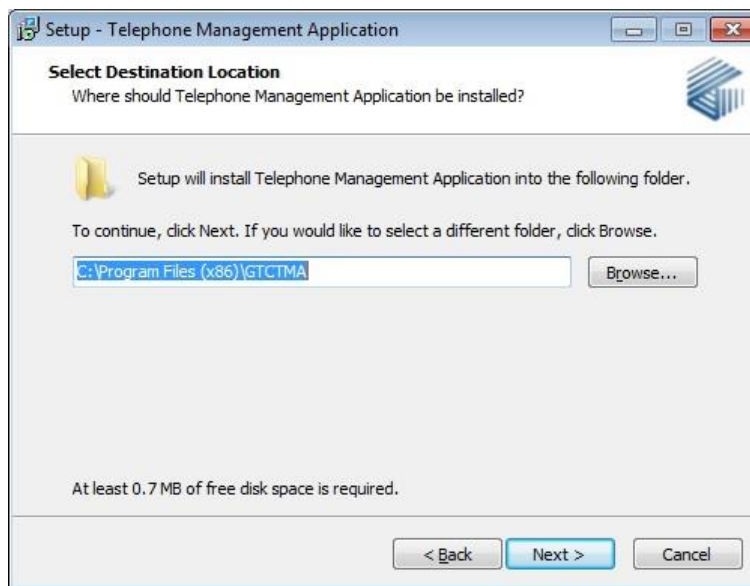


Figure 7. Select Destination Location

- The next window asks “Which components should be installed?” A typical installation requires all components to be installed. Ensure all check boxes are checked and click **Next >** to continue.

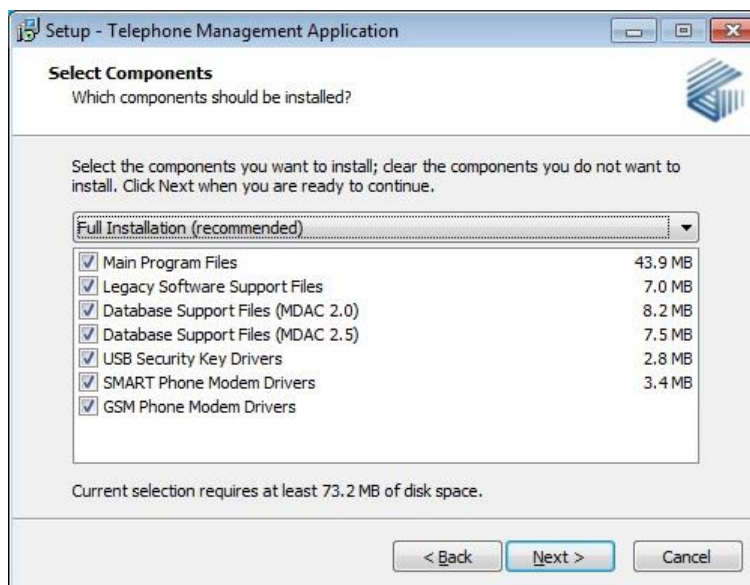


Figure 8. Select Components

7. The next window asks to select which GSM modem drivers to be installed. Unselect the modem type that will not be used. Unselect both if there will be no GAI-Tronics GSM phones to be polled. Let both selected if it is unknown which modem is to be used. Click **Next >** to continue.

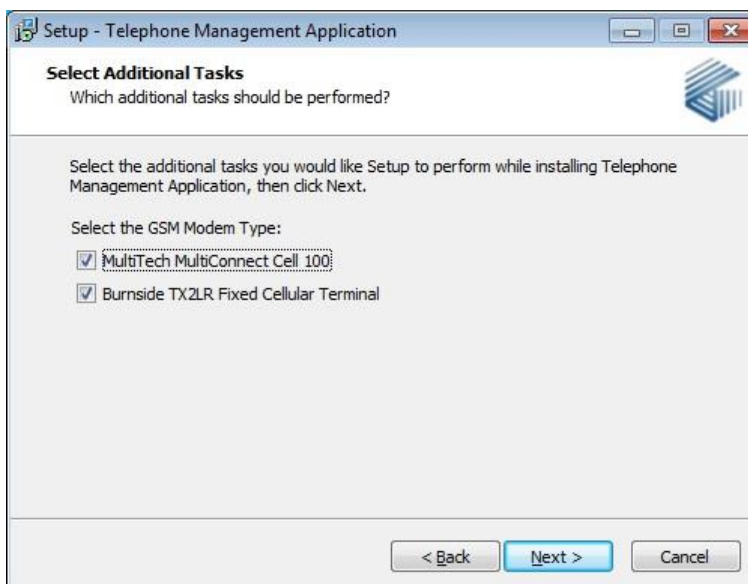


Figure 9. Additional Tasks

8. An installation summary is then presented. Click **Install** to continue.

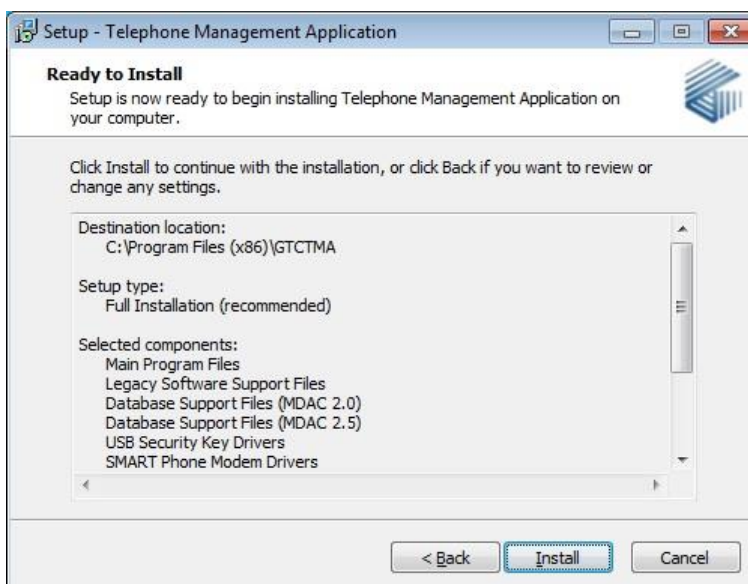


Figure 10. Installation Summary

9. The “Installing” window reveals progress of the TMA components being installed on the PC, and may take a few minutes to complete.

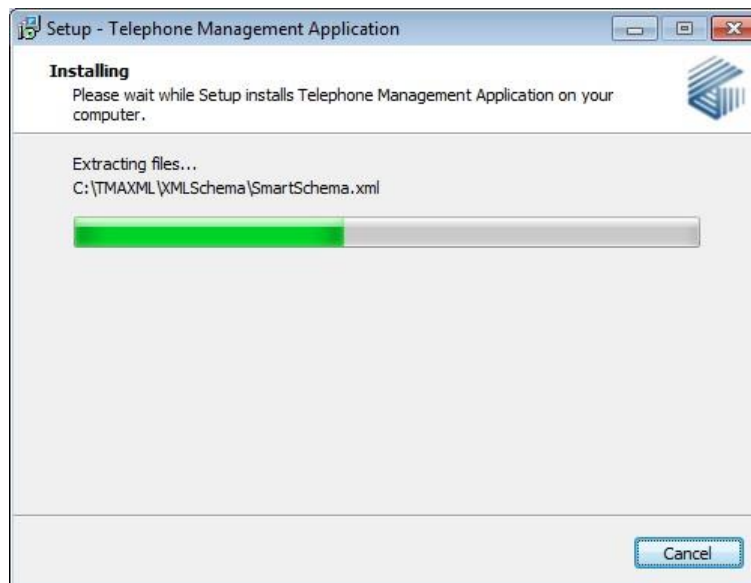


Figure 11. Installation Loading

10. The following security window will appear for each driver to be installed. Click **Install** to continue, each time the window appears.

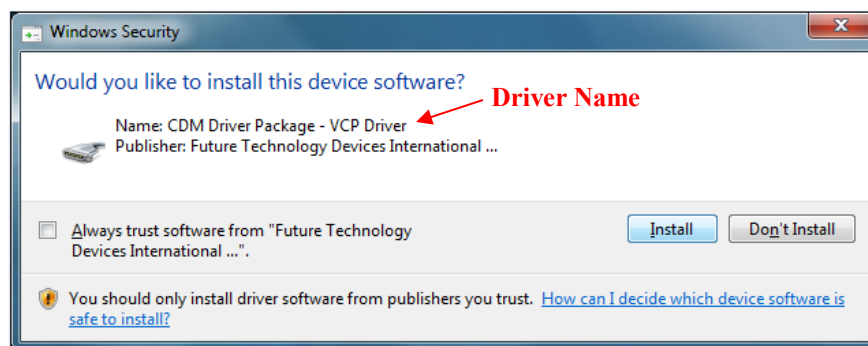


Figure 12. Windows Security

11. If the MultiTech® GSM modem was selected for installing the drivers this window will appear. Click **Next >** to install the drivers.



Figure 13. Telit HE Family USB Driver Installer

12. Once the MultiTech® GSM modem driver installation is completed the following window will appear. Click **Finish** to continue.



Figure 14. USB Driver Installation Complete

13. The next window to appear provides information about this and previous release versions of the software. Click **Next >** to continue.

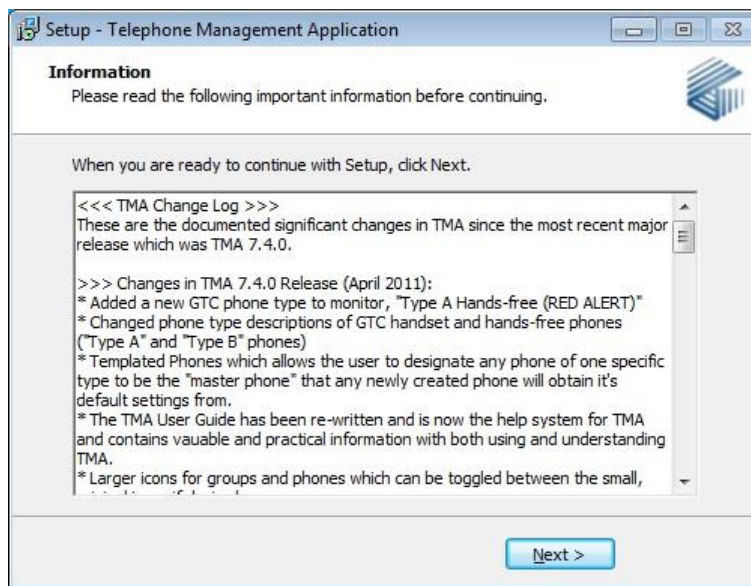


Figure 15. TMA Change Log

14. Click **Finish** to exit the setup.



Figure 16. TMA Installation Complete

15. Upon conclusion of the installation process, the following icon should appear on the PC desktop.



TMA Desktop Icon

Device Connections

Connections for Analog Telephones

1. With the TMA software installation complete, the TMA DTMF Transceiver must be connected to the PC and PBX/PABX extension telephone line using the USB cable and telephone line cords provided. Refer to Figure 17 below and the following guidelines for these connections:
 - **USB connection** – Insert the large USB type “A” plug into a USB port at the PC, and the small USB type “B” plug into the USB jack at the rear of the TMA DTMF Transceiver.
USB CONNECTION NOTE (WINDOWS 10 / WINDOWS 11): When connecting the TMA DTMF Transceiver to the PC, the USB cable must be routed through a USB 2.0 hub, as described in the “USB Connectivity Requirements” section above. This applies even if the PC provides USB ports marked as “USB 2.0 compatible.”
 - **PABX telephone connection** – Insert one end of the telephone line cord into the RJ11 jack at the rear of the TMA DTMF Transceiver, and the other end into a dedicated PABX jack at the wall.

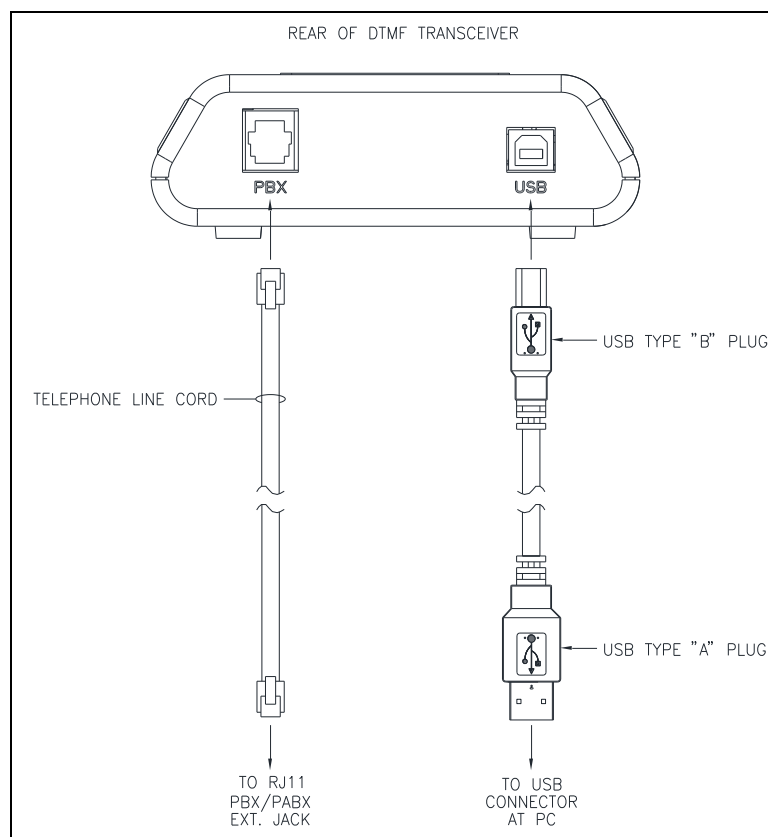


Figure 17. TMA DTMF Transceiver Connections

2. After the USB and telephone cables are connected, the TMA DTMF Transceiver OH/PWR LED should begin to flash on and off to indicate the unit is receiving power via the USB connection.
3. Insert the USB security key into an available USB port at the PC.
4. Upon Windows® recognizing the hardware it will begin installation of the drivers. After the drivers are installed you may be asked to restart the system.

NOTE : If using MultiTech® serial port modems (Models MT5656ZDXV and MT5600ZDXV) see **Appendix A** about ensuring the correct drivers are installed.

Connections for VoIP/WiFi Telephones

1. Connect the computer's Ethernet adapter to the Local Area Network using a standard RJ45 Ethernet cable. This is required for VoIP telephones only. **NOTE:** Port 23 (TCP/UDP) and port 514 (Syslog) must be open on the network for communication with the VoIP telephones.
2. Insert the USB security key into an available USB port at the PC.

Connections for GSM Telephones

Refer to the user manual of the GSM modem for specific installation information. In general the following steps are required.

1. Connect the supplied antenna to the GSM modem. **NOTE:** Depending on the location of the installation a remote antenna (not included) may be required.
2. Install the SIM card acquired from a GSM wireless service provider into the GSM modem.
3. Insert the large USB type "A" plug into a USB port at the PC, and the small USB type "B" plug into the USB jack at the GSM modem. Apply power to the GSM modem if it is not powered by the USB port. The Power LED will light after the device powers up.
4. Insert the USB security key into an available USB port at the PC.
5. Upon Windows® recognizing the hardware it will begin installation of the drivers. After the drivers are installed you may be asked to restart the system.

TMA DTMF Transceiver (Used only with analog telephones)

The TMA DTMF Transceiver interfaces the PC running the TMA software to the telephone line. A front view of the TMA DTMF Transceiver and a description of the LED indicators are provided below:

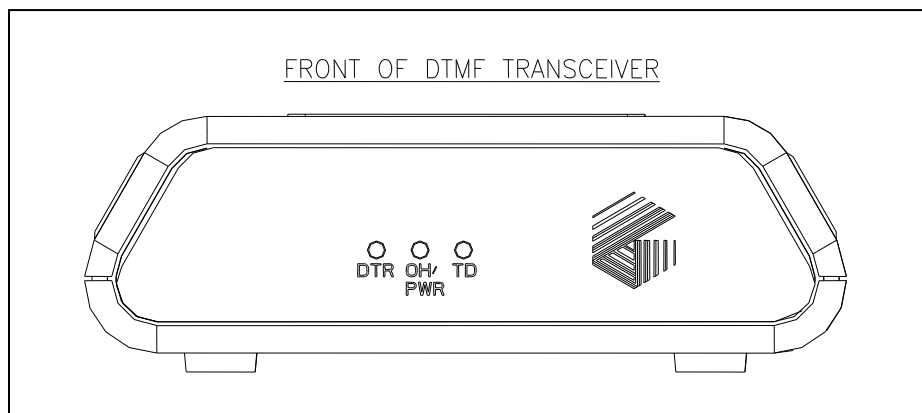


Figure 18. TMA DTMF Transceiver Front View

Table 2. TMA DTMF Transceiver Status Indicators

LED	Status	Description
DTR	On	The SPI application is running on the PC and is connected to the TMA DTMF Transceiver.
	Off	The SPI application is no longer running on the PC and is disconnected from the TMA DTMF Transceiver.
OH/PWR	Flashing	The TMA DTMF Transceiver is receiving power via the USB connection to the PC.
	On	The TMA DTMF Transceiver is off-hook and connected to the phone line.
	Off	The TMA DTMF Transceiver is on-hook. If the DTR LED is also off, the DTMF Transceiver is not powered.
TD	Blinking	Data is being transmitted to the PC.
	Off	No data is being transmitted to the PC.

Starting TMA

After the TMA software has been installed, and the hardware security key has been inserted into a USB port, TMA can be started. To start TMA, double click the desktop TMA icon with the GAI-Tronics logo (shown below) or start the application via the Windows Start menu. The path is **Start > All Programs > TMA**.



TMA Desktop Icon

When TMA is initially started after installation, it will display a “No Current Database” dialog box over the startup splash screen, which indicates TMA was not able to open the most recently used telephone database. This is due to a database name not being defined for this new TMA installation.

Read the dialog box, and then select **OK** to dismiss it. The TMA window will now contain empty panels, and pull-down menu selections for **FILE**, **EDIT**, **VIEW**, etc., as shown below.

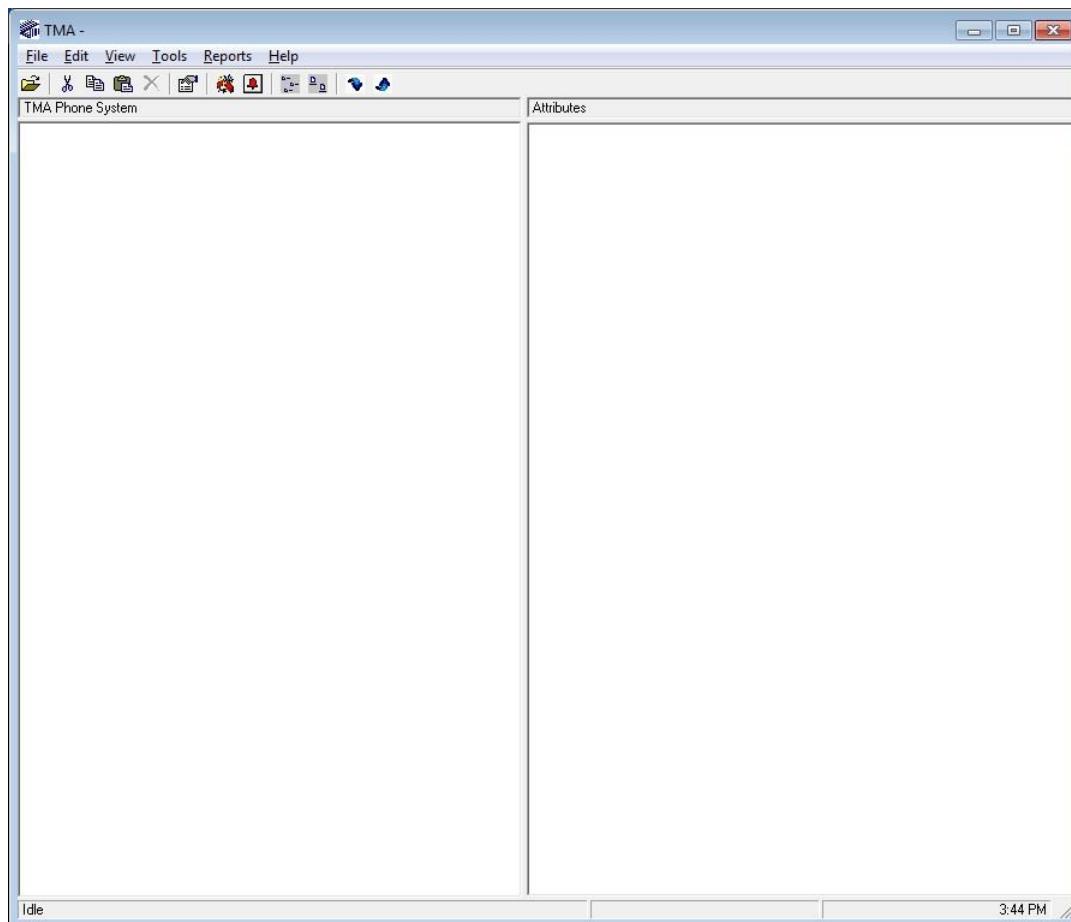


Figure 19. Empty TMA Screen

When TMA starts, it also starts the interface applications necessary to communicate with the three different types of telephones. These applications are the SMART Phone Interface (SPI), the VoIP Phone Interface (VPI) and the GSM Phone Interface (GPI).

Depending upon the Windows® firewall settings, the very first time the VPI is started; a security window may appear informing the VPI component is currently blocked from network access. Select to **Allow access** to the network.



Figure 20. Windows Security Alert

When the GPI application starts for the first time, it may be necessary to assign the communication port to which the GSM modem has connected. If this occurs, a connection setup warning window appears (as shown below). Select **Cancel** to reach the connection settings window. Select from the drop-down list the port name to which the GSM modem has connected. If a GSM modem will not be used click **Cancel** to exit the settings window.



Figure 21. Connection Setup

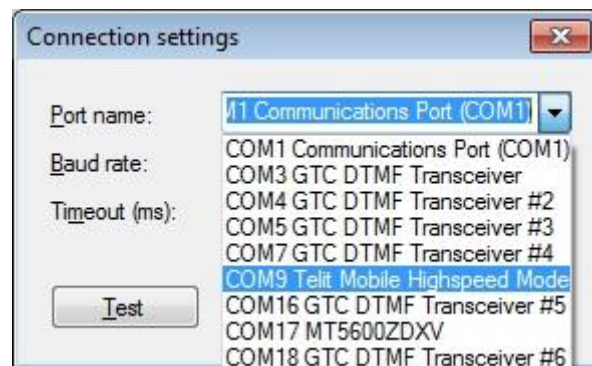
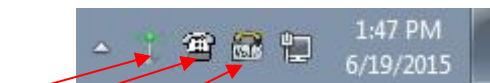


Figure 22. Connection Settings

Once these selections have been made the settings window should not reappear unless the COM port assignment to the GSM modem is lost due to it being disconnected from the PC.

After a few seconds, confirm an icon appears in the taskbar notification area for each of the interface applications that are running.



GPI, SPI and VPI Icons in Taskbar Notification Area

If the VPI and GPI icons fail to appear, service pack 1 for Windows® 7 may not be installed. Perform a Windows® update to install the needed system files.

Double-click the SPI icon to reveal the call status window. On the left is the list pane of DTMF transceiver lines configured to use by the SPI. Initially, no lines are configured.

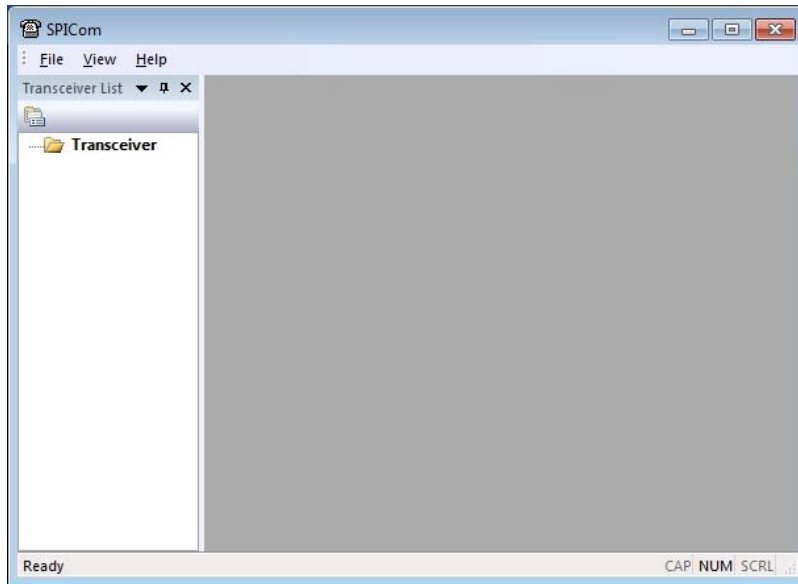


Figure 23. Call Status Window

Using Multiple DTMF Transceivers

TMA allows multiple lines (up to eight) to be monitored simultaneously, which is useful in larger systems with hundreds of phones or when daily updates are needed.

Equipment Required

Since most PCs are typically equipped with two to four USB ports, a powered USB 2.0 hub must be added. Powered USB 2.0 hubs are available with four to ten ports. In addition to the powered USB 2.0 hub, a Model 12509-043 TMA Expansion Kit is required for each additional line to be added. (See Table 1 for kit components.)

Refer to Figure 24 for typical interconnection of a system utilizing four lines to monitor the telephones.

Figure 24 below is a diagram showing connections for a four-line monitoring system.

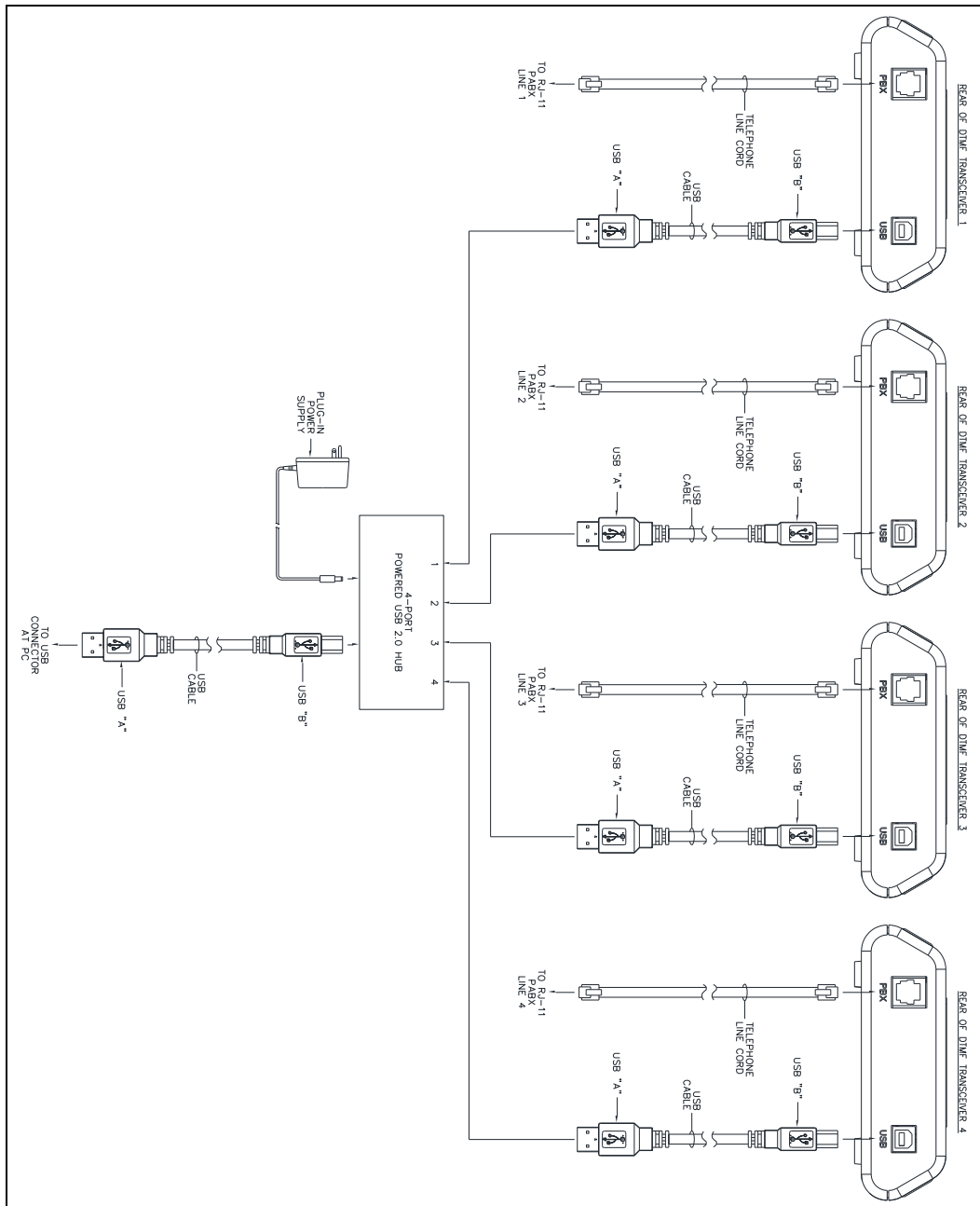



Figure 24. Typical Four-Line Monitoring Detail

To add a line, select **File**, then **New** from the menu or click the  icon above the list pane of the SPI call status window. A Transceiver Select window appears.

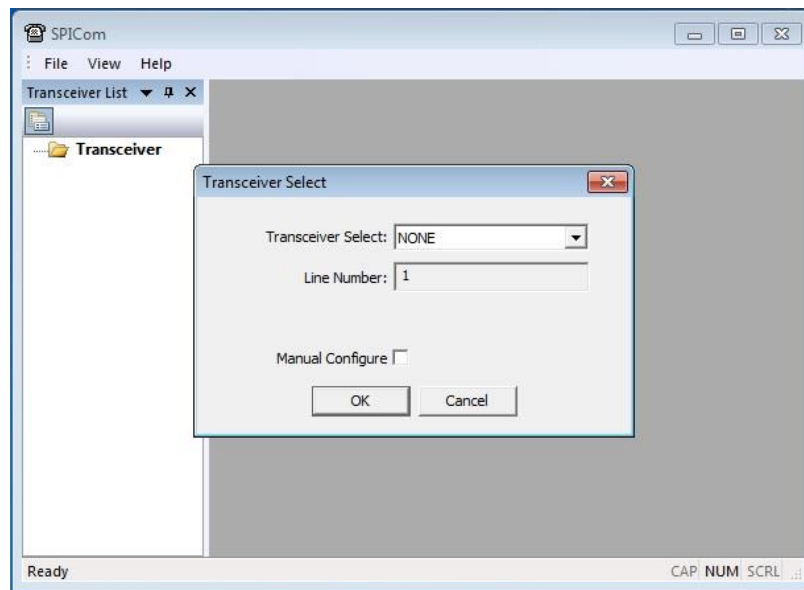


Figure 25. Transceiver Select Window

Choose from the drop-down list in the Transceiver Select field the transceiver to connect to the line and click **OK**.

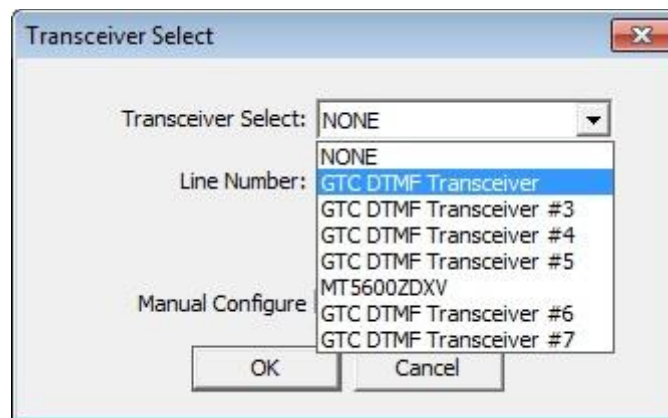


Figure 26. Transceiver Select Dropdown

The status window will then show COM port initialization occurring indicating a successful addition.

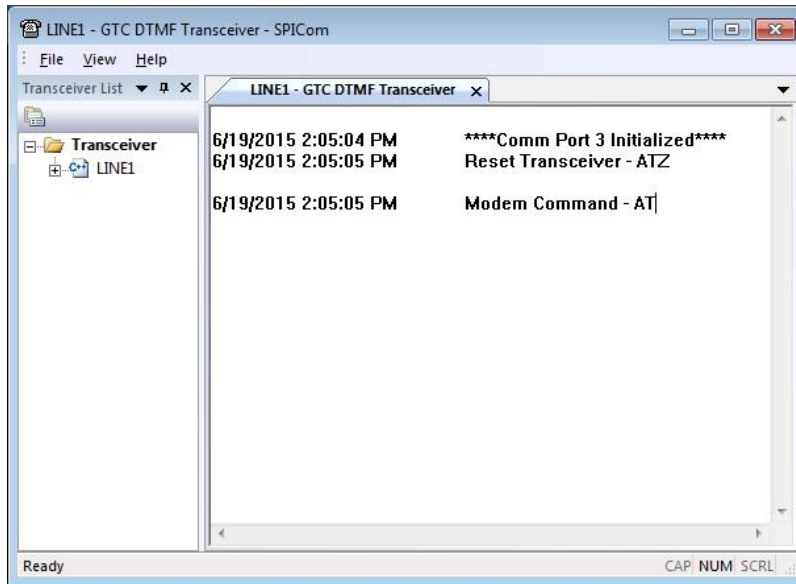


Figure 27. COM Port Initialization

Repeat the above steps for each additional transceiver line to be used. The result will be multiple tabs appearing, one for each line added.

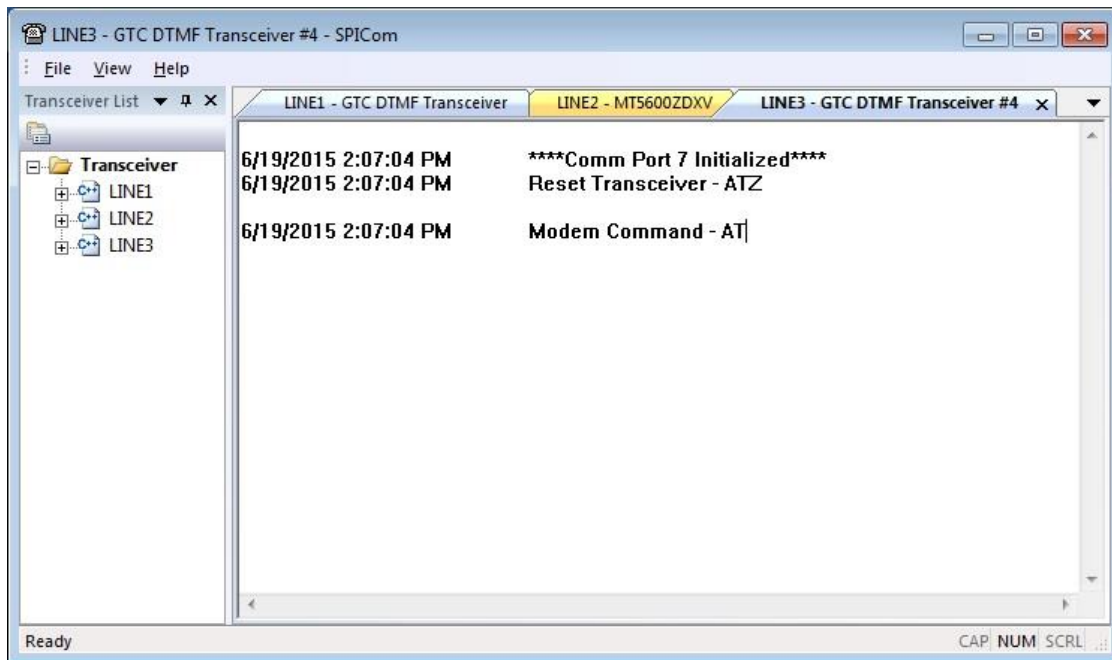


Figure 28. COM Port Multiple Lines

If a line needs to be removed, right-click on the line number in the transceiver list and select **Remove** from the menu options.

Double-clicking the GPI and the VPI icons will reveal the call status window for each application as shown below. In the GPI call status window a signal strength meter appears in the top right.

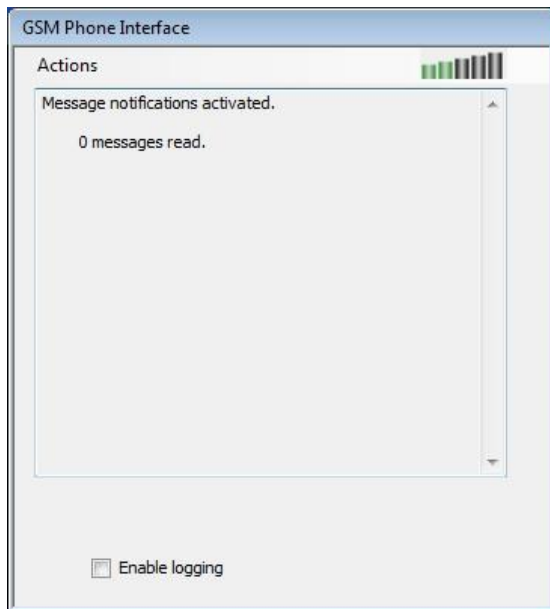


Figure 29. GSM Phone Interface

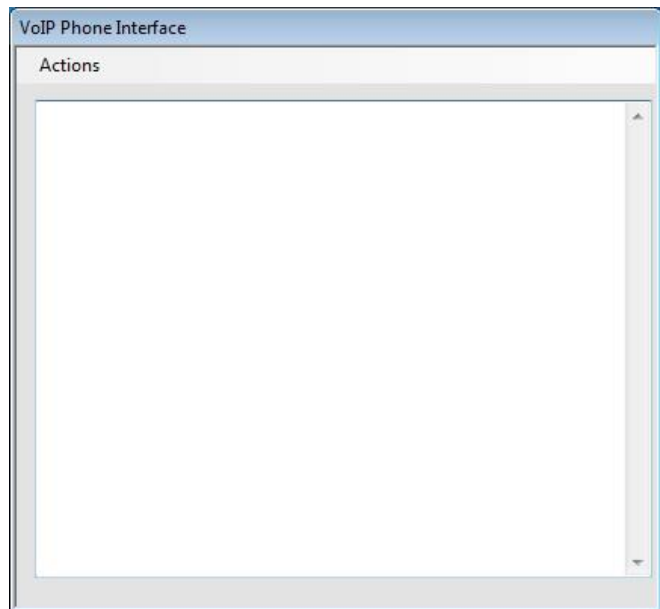


Figure 30. VoIP Phone Interface

The call status windows of the three interface applications allow the progress of a maintenance call with a SMART phone, VoIP phone and GSM phone to be viewed. Please note that the status windows may be visible, or hidden; in either case, they will run normally, processing calls at the request of the main TMA application.

Helpful Tips

It may be more convenient to have the main TMA application running in a window (not full screen), and simultaneously have the status windows visible on the Windows[®] desktop.

To prevent any of the interface applications from running when TMA is started, go to the Communication tab in the TMA **Options** window found in the **Tools** menu. For telephone types not being monitored, unselect the start-up application for those telephone types. When TMA is restarted, the application will not be started and its icon will not appear in the Taskbar Notification Area.

Installation Completed

To begin using TMA, select **Help** from the TMA menu, then **TMA Help** to display the online manual. Go to the “Starting TMA” section of the manual for further instructions for creating and building the TMA database, and how to use TMA to maintain the GAI-Tronics telephones on site.

Appendix A

When Windows® installs the drivers for the MultiTech® serial port modems it is possible that default drivers were installed. To ensure proper operation with the TMA application perform the following steps to choose the drivers provided with the TMA software package.

1. Navigate to Windows® Device Manager and expand the modems list. Right-click on the serial port modem and select Properties from the menu list. Choose the Driver tab and click on the Update Driver button. The following window will appear. Click on the 'Browse my computer for driver software' selection.

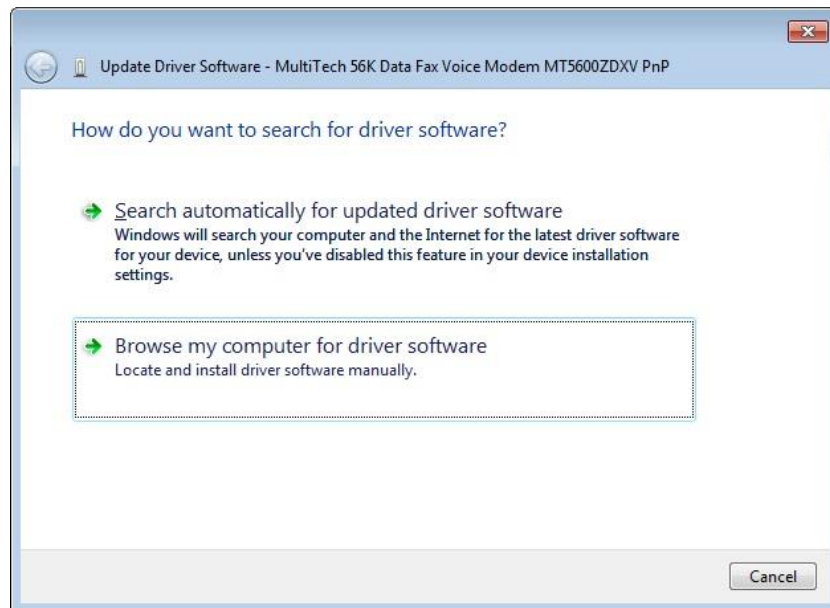


Figure 31. Update Driver Software

2. Choose the 'Let me pick from a list of device drivers on my computer' option.

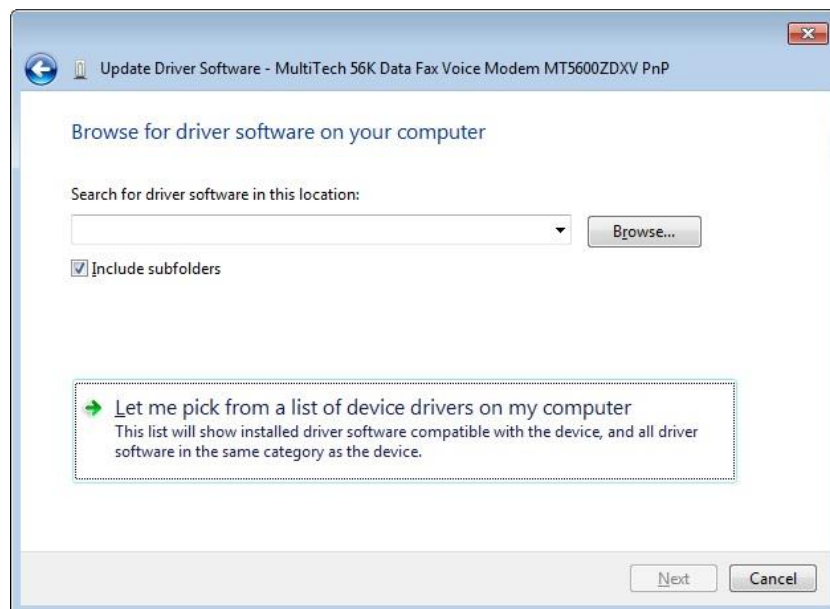


Figure 32. Update Driver Software Selection

3. Choose **Have Disk...** to continue.

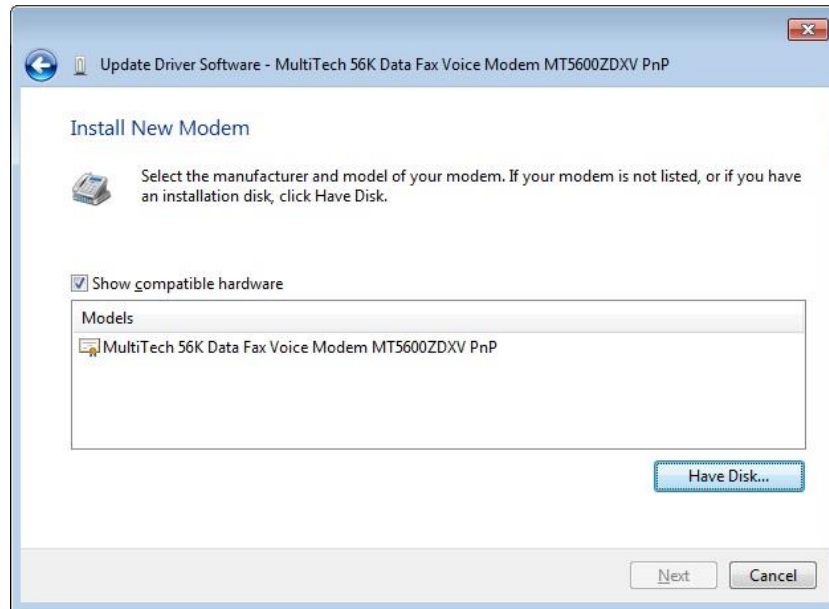


Figure 33. Install New Modem

4. Choose **Browse...** to locate the drivers.

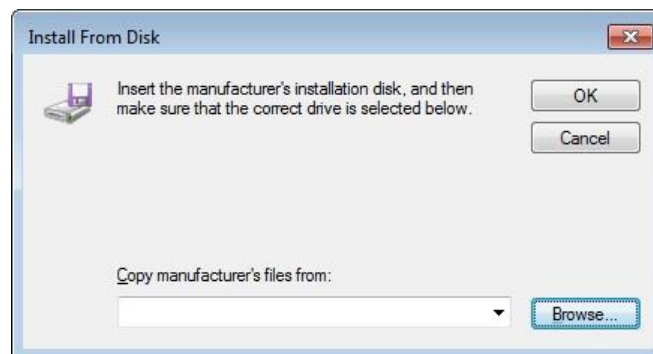


Figure 34. Install From Disk

5. Navigate to the TMA_Modem_Driver_MT5656ZDXV folder for **Look in**.

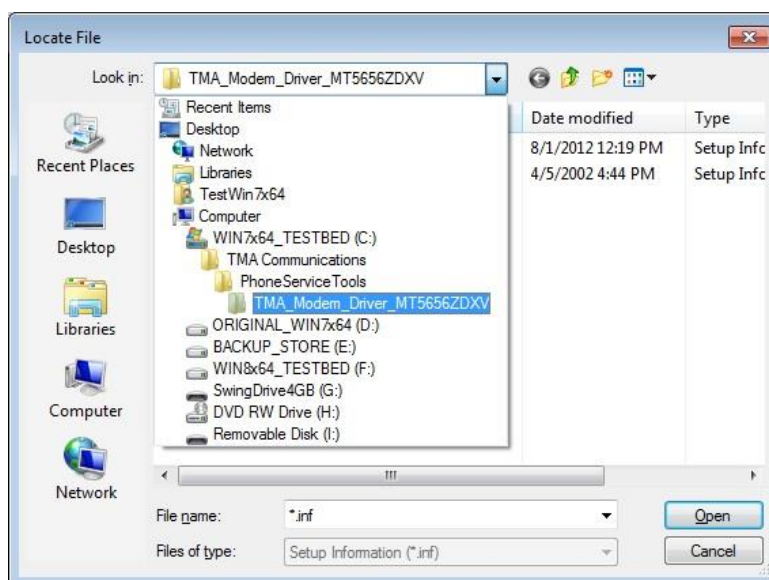


Figure 35. Locate File

- Open the .INF file that matches the model serial modem in use.

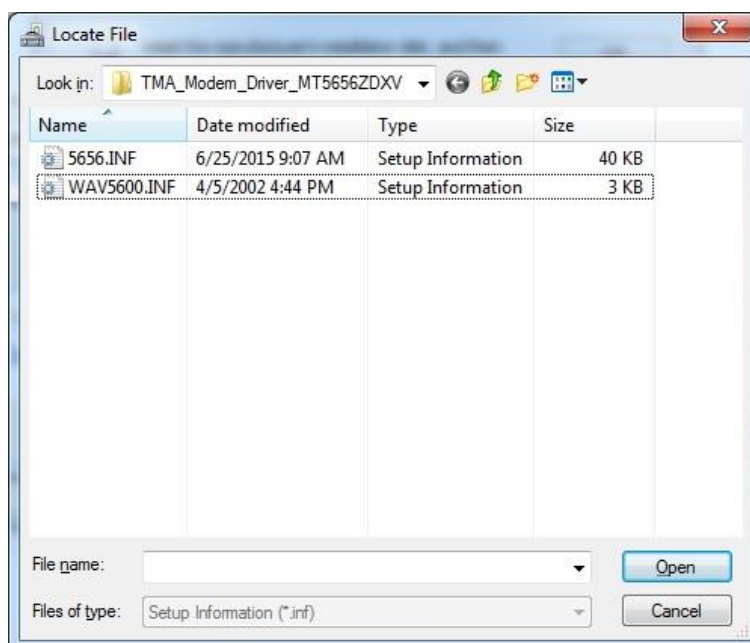


Figure 36. Locate .INF File

- Click **Next** to install the driver.

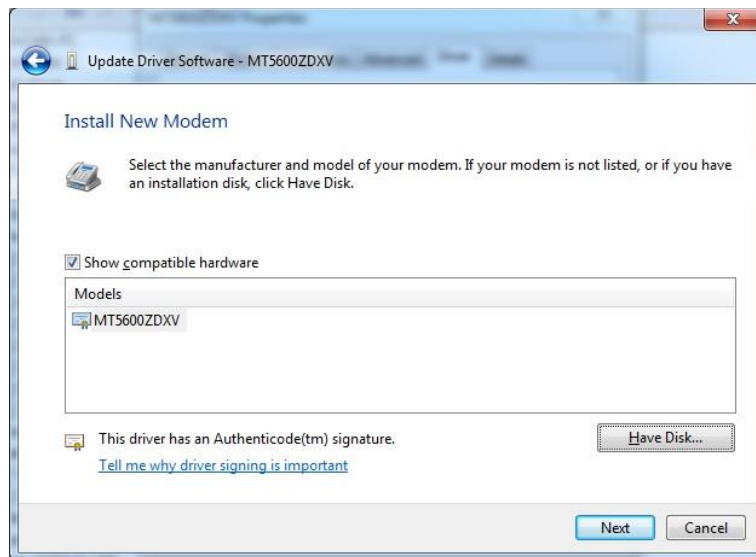


Figure 37. Install New Modem Selected

8. Click **Close** to finish the driver installation.

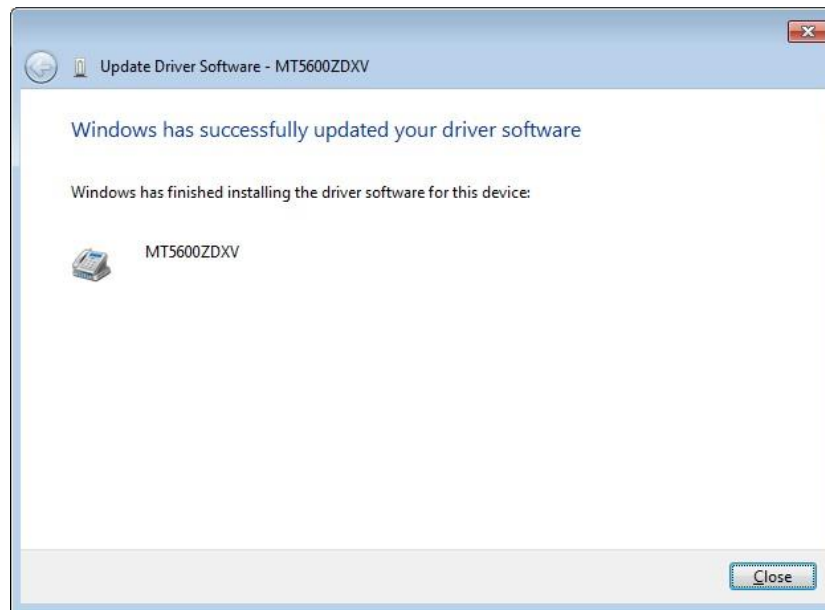


Figure 38. Successful Update Driver

9. Return to the modem Properties window to view the Driver tab. The driver installed should be version 7.5.4.9 with a date of 5/4/2009.

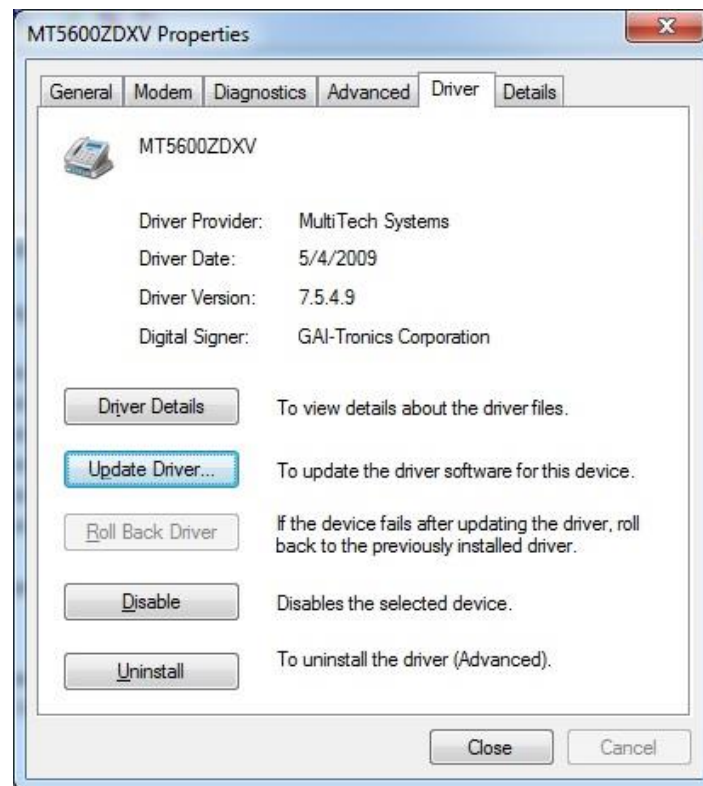


Figure 39. Updated Modem Properties

10. Click **Close** to finish.