S90-015 IOM/JUL 2001

File: SERVICE MANUAL - SECTION 90
Replaces: NOTHING (New Manual)
Dist: 3, 3a, 3b, 3c

INSTALLATION - OPERATION - MAINTENANCE

FRICK QUANTUMTALK

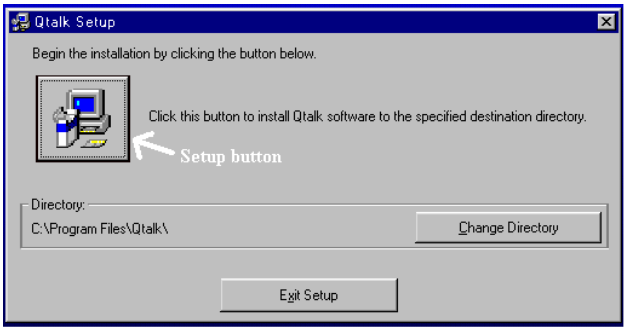
VERSION 1.4x

Table Of Contents

QTalk Installation

This manual will guide installation personnel through the basic steps necessary to install, connect, configure and execute the Frick QTalk (QuantumTalk) program. Throughout this manual, brackets (**[ ]**) are utilized to indicate either commands that are to be entered by the operator/installer at the computer, or at the Frick Quantum panel, or will refer to a key that is displayed at either location. If the command is to be typed into the computer, do not include the brackets themselves, only the text within the brackets. The brackets and text will be in bold type, to help it stand out from the rest of the text.

To load the QTalk program on a computer, insert the CD into the computer and run the Setup**.**exe program. For example, if the CD drive is D**:** go to the **[Run]** item on the **[Start]** menu and type **[D:\Setup]** in the **[Open]** line. The Setup program will begin execution and will soon ask permission to load the QTalk files in the directory C:\Program Files\QTalk.



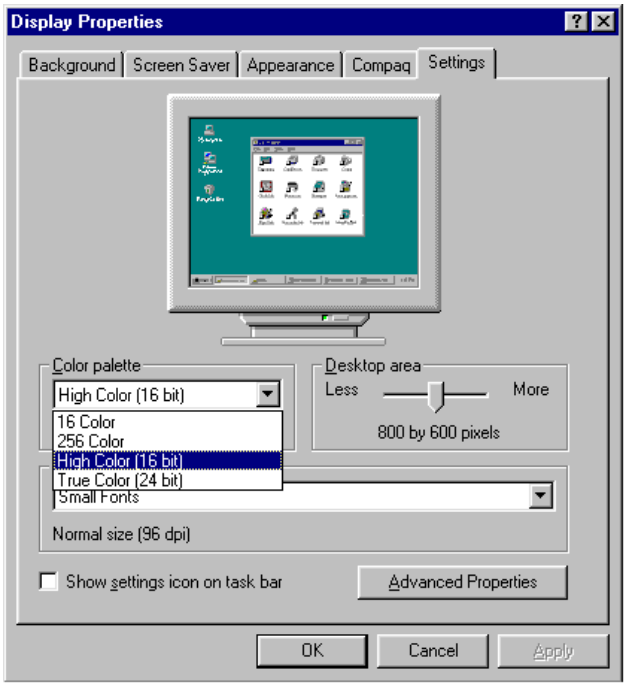
If the program is to be loaded in a different directory, press the **[Change Directory]** key and enter the directory of choice. When the program directory has been selected, press the **[Setup]** key to allow the necessary files to be loaded. Setup will copy several files to the Windows directory, and the rest of the files will be loaded into the directory selected above.

Setup Screen

QTalk's screens look best when Window's Color Settings are set to at least High Color (16-bit). These settings can be changed by selecting the **[Settings]** item in Window's Start menu. Under **[Settings]**, select **[Control Panel]**, and then go to the **[Display]** item in that window. Click on the **[Display]** item to bring up the **[Display Properties]** window which will have tabs across the top indexing different pages. Select the **[Settings]** tab, which should be on the right, and information about screen colors and the display area will be shown.

Colors Setup

Under the **[Colors]** area, click on the down arrow in the list box and a list of possible color settings will be displayed. Select either High Color (16-bit) or 65536 Colors and then select **[OK]** to accept those colors. Windows will then give instructions regarding how to properly adopt these new color settings.



Physical Connection

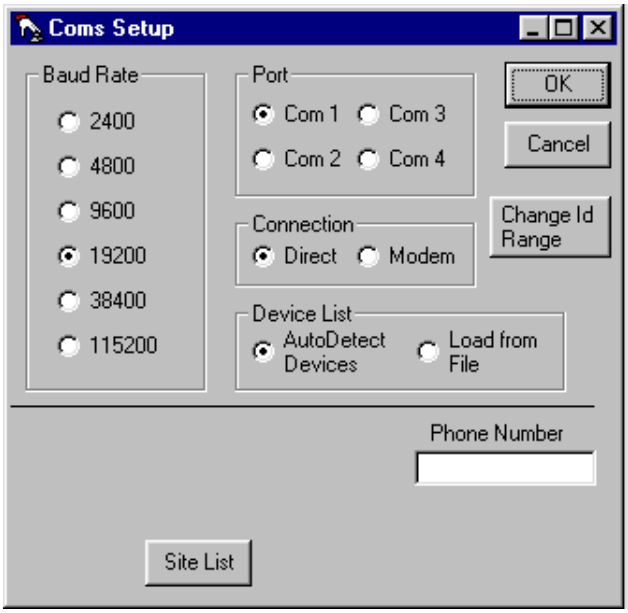
To allow QTalk to download the necessary information, a physical connection must be installed between the computer executing QTalk, and the devices that will be communicating with the program. This connection can be a direct connection between one of the serial ports on a computer and the ports on the selected devices, or the connection may be a modem connection.

When connecting with modems, it is recommended that a Hayes or compatible modem be used at the site with the Frick units. See the attached sheet of network diagrams for setup examples, as well as the appropriate Frick manual (S90-010 CS Communications Setup) for specific connection instructions.

If QTalk will always be used to communicate with the same device, command line arguments can be used to enter the setup values. This is a more complicated setup feature, so ensure that you read the rest of this manual and run the program several times before attempting to use this feature.

Command line arguments can be placed in the QTalk "Shortcut" file after the program name in the **[Target]** textbox. The values that must be entered are; baud-rate, Com port number, ID number and device-type. Only values that are listed on the **Coms Setup** screen may be used for command line values, and these values must be entered in order. The possible choices for device-type are; COMPR, ACUair, RWBII, RXB, RDB, RXF, CSI, and EVAP. and COND/VESSEL. To connect at a baud rate of 19200 through Com port 1 to an RXF device with an ID number of 3, the command line would be "…\Qtalk.exe 19200 1 RXF 3".

If a modem is being used, the phone number to be dialed can also be entered at the end of the command line, but it must be written with no spaces between the numbers. If the device above is to be accessed through a modem and the phone number to be dialed is 1-787-555-3425, the command line would be "…\Qtalk.exe 19200 1 RXF 3 17875553425". QTalk will still either auto-detect devices or load the device list from a file depending on the default setting, so before setting up the command line, run the program normally, and chose the setting that is to be the standard setting. Then connect to a device and exit by pressing the **[Exit]** key and that choice will remain the default setting.



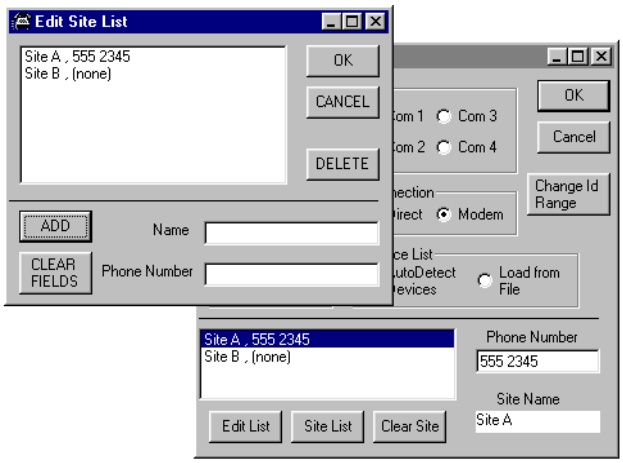
Program Execution:

The QTalk Setup program installs a QTalk icon in the **[Program]** menu that can be found under the **[Start]** key. Click on this icon to start the program.

Coms Setup Screen

The first screen to be displayed in the QTalk program is the **Coms Setup** screen. If a direct connection is to be established with the devices, the **[Direct]** connection choice should be selected. In this case, a baud rate should be selected which matches the baud rate of the devices that will be connected to QTalk. At the same time, the Com port on the computer that is used to make the direct connection must also be specified.

If the connection is not direct, but is to be established over a modem, then the **[Modem]** connection choice should be selected. The selected Com port now refers to the modem's Com port, which can be found under Window's Control Panel. In addition, the chosen baud rate should match the baud rate of the attached devices while also taking into account the capabilities of the modem. In addition, a phone number must be entered in the **[Phone Number]** textbox.



Site List and Edit Site List screens

When a set of devices will be accessed several times, this group of devices can be saved in the Site list. Press the **[Site List]** key, and the current list of sites will be displayed. Each site will have a name, and may have a phone number. The **[Edit List]** key allows new sites to be added to the list and also allows a person to edit the name and phone number of a current site. When the **[Edit List]** key is pressed, a new window is displayed, also containing the current list of sites. To add a new site to the list, type in the site name, and phone number if applicable, and then press the **[ADD]** key. To edit the name or number of a site in the list, double-click on the site and the name and number will drop into the Name and Phone Number textboxes. Make the proper changes, and then press the **[RE-ADD]** key to place the site back in the list. After all changes have been made, press the [**OK]** key to save the new list.

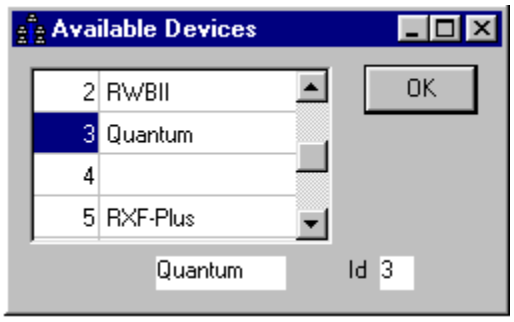
Selecting a site from the Setup screen will place the site name and phone number in textboxes, making this the current site. Any devices formerly saved with this site can be loaded to the default device list, and when the user exits the program, the current device list will be saved with this site.

To build a list of the devices that are currently connected to QTalk, select the **[Autodetect Devices]** choice from the **Coms Setup** screen. Also, press the **[Change Id Range]** key and set the Min and Max ID Values to cover the range of device ID's that QTalk is to detect. If the Device list has already been saved, select the **[Load from File]** choice to load the device list.

When the **Coms Setup** screen is properly completed, press the **[OK]** key to continue. If the Autodetect choice was selected, the program will proceed from the Min to Max ID values, building a list of the connected devices in that ID range. After this process is finished, or the device list has been loaded from a file, the list is displayed in the **[Available Devices]** window with the ID values on the left, and device-types on the right. For each ID value, the device-type can be manually edited by double clicking on the rectangle to the right of the selected ID. This action displays a list box containing the set of possible device types for that ID. Click on the list box's down arrow to reveal the list, and then click on an item in the list to associate that device-type with the selected ID value.

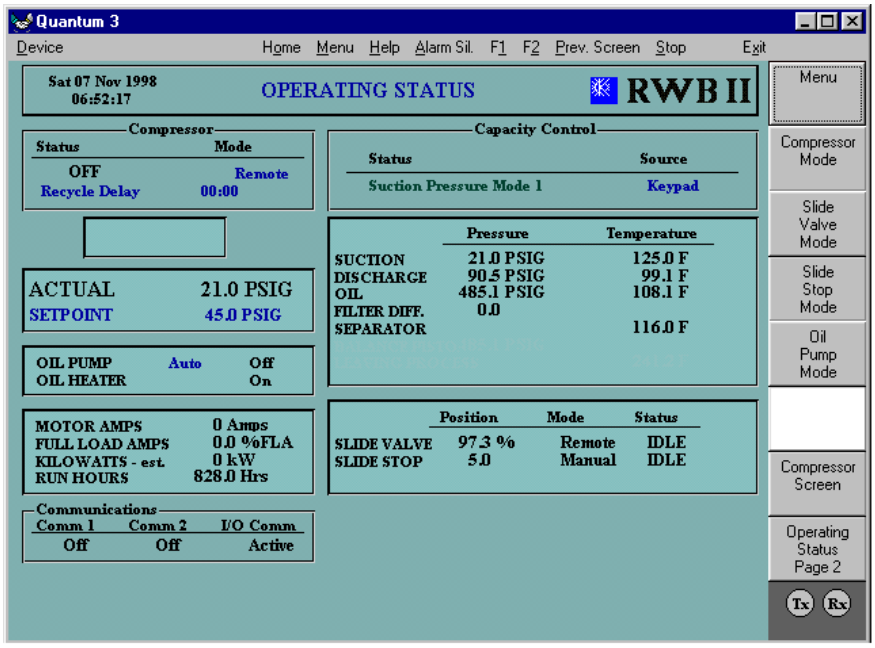
Available Devices Screen

To choose a device to initially access, single-click on any row in the list that has a device-type associated with an ID value. The-device type and ID number will then be displayed in the rectangles below the device list. After a selection has been made, press **[OK]** to confirm that choice.



At this point, the first screen from the selected device should be loaded. If this has not occurred, check that the ID number and device-type are valid, and that the baud rate and Com port values entered in the Setup screen are correct. To change the ID number and device-type, or to simply move to another machine, press the **[Device]** key on the toolbar, and a drop-down menu will appear. Select the **[Change Id]** item in this menu, and the same **[Available Devices]** window will appear that was described above. In addition, the **[Id Range]** item, which is also under the **[Devices]** menu, allows the range of ID's displayed in the **[Available Devices]** window to be changed.

Quantum "HOME" Screen



Quantum "HOME" Screen

The QTalk Quantum screen is designed to show the same screen that is shown on the Quantum, including the eight screen keys. Additional keys that may be used are displayed on the toolbar across the top of the screen. While the mouse can be used to press any of the keys, the function keys **[F1- F8]** also can be utilized to press the screen keys, and the **[Alt]** key will select keys on the toolbar. In some instances, screen keys will be blocked in the QTalk program. When this occurs, these keys will be shown in white. Because the QTalk program shows the same screen as the Quantum, pressing a key on the QTalk screen changes the corresponding screen on the Quantum, and this change is reflected back to the QTalk program. In addition, changing screens at the Quantum causes the QTalk screen to change.

Any setpoints on a screen will be displayed in white boxes. To change a setpoint, click on the white box and a form will appear containing a textbox where the new setpoint value can be entered. If the new setpoint value is not valid, an error message will be displayed; otherwise, the new value should replace the old setpoint.

Under the **[Device]** key on the toolbar, the QTalk Quantum screen also has a **[Language]** and a **[Slide Valve]** menu item. Selecting the **[Language]** item shows a form with a list of the possible languages that can be displayed by QTalk. Clicking on one of the language choices allows the user to view the Quantum screens in that language. The language setting on the Quantum has no affect on QTalk's language setting and vice-versa, so that different languages can be viewed on the two machines simultaneously.

The **[Slide Valve]** menu item displays a form with setpoints for Load Time and Unload Time. The Load Time setpoint determines the amount of time the Slide Valve will load when the Slide Valve Manual Load key is pressed, and the Unload Time setpoint determines the amount of time the Slide Valve will unload when the Slide Valve Manual Unload key is pressed. Because the Slide Valve is

being controlled remotely, the Slide Valve Mode will switch to Remote when either the Load or Unload key is pressed. The Slide Valve will remain in Remote Mode until the user selects another mode.

Other Devices:

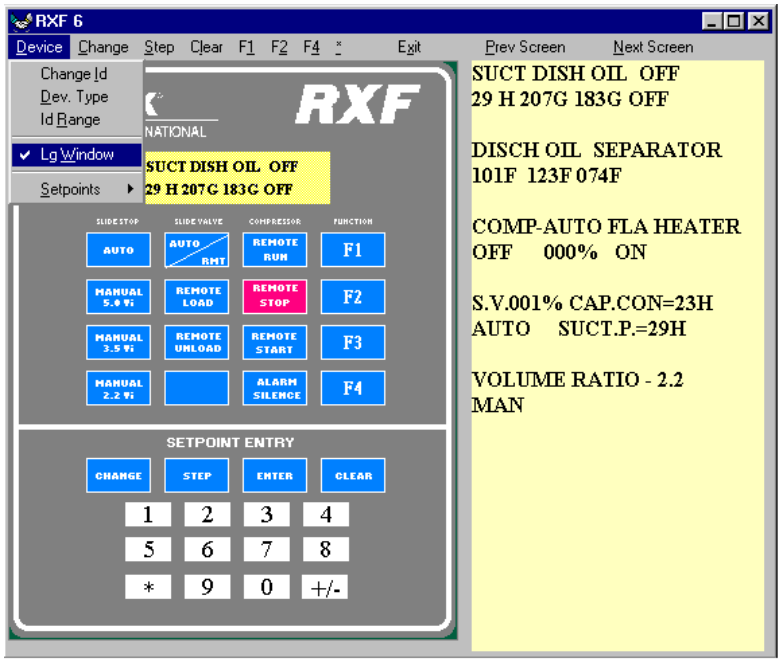
RXF Screen

In addition to the Quantum, QTalk has the ability to communicate with RWBII, RXB, RDB and RXF panels. After selecting the appropriate device-type and Id value from the **[Available Devices]** window, a picture of that device's faceplate should be displayed on the screen. At this point, press the **[Device]** key on the toolbar and select the **[Dev. Type]** item from the menu. A form will be displayed listing several possible varieties of the current device. Select the option that best describes the panel that is currently communicating with QTalk to insure that proper message transfer can occur.

To the right of the toolbar's **[Device]** key are listed the active keys for this device. The user may press these keys to change a screen or may also press the corresponding keys on the faceplate.

Under the **[Device]** key, the **[Setpoints]** item displays a drop-down menu with a list of the setpoints that may be changed. Selecting a setpoint from this list displays a form with a textbox where the new setpoint can be entered. If the setpoint value is not valid, an error message will be shown; otherwise, the new value will replace the original setpoint.

Because the RXF screens display so little data at a time, a larger window showing several screens at once has been added to the RXF faceplate. If the **[Lg. Window]** item under the **[Device]** key is selected, this window will be displayed along with **[Next Screen]** and **[Prev. Screen]** keys. These keys allow the user to jump directly to the next group of screens, instead of moving sequentially through each screen. Deselecting the **[Lg. Window]** item will again hide this screen and its keys.



Modem Setup for use with Quantum

Introduction

The purpose of this section is to assist with setting up a modem that will be used for Quantum communications. The modem described here is the one that is connected through serial communications to one or more Quantum panels, not the modem that dials in to the Quantum site.

It is not difficult to set up a modem that will answer properly and send commands through to the Quantum panel. It is somewhat more difficult to specify the baud rate for the data being transferred between the answering modem and the Quantum panel. Since the Quantum panel must be configured with a baud rate for communications, it is important that the modem be setup to always communicate to the Quantum at the same baud rate. To ensure that the baud rate is always correct, force the modem to only answer incoming calls at a specified baud rate, and then to send the commands on the Quantum at the same speed. Unfortunately, different types of modems require different configurations to accomplish this.

This section describes in general terms how to setup a modem to only answer at one baud rate and then how two specific types of modems can be configured in this way.

General Setup Instructions

- Familiarize yourself with the modem documentation and find a description of that modem's AT command set.
- Connect to the modem through Hyperterminal. Most modems are configured with AT commands, which can be easily sent to the modem through the Hyperterminal program.
- Configure the modem to Auto-Answer. Some modems can be setup to Auto-Answer by setting a DIP switch, but most modems have an AT

command that will perform this job. Look through the modem's documentation to find the proper command and then type the command into Hyperterminal. For example if the &A0 will setup the modem to Auto-Answer, type **[AT &A0]** and then press **[Enter]**. The modem should respond with **"OK"** if the command was accepted.

- Find the command or commands that will fix the modem's connection speed. There may be one command that will fix the connection speed at a certain baud rate, or there may be one command that indicates the speed is fixed and another register to hold the baud rate. Send the proper commands to the modem.
- Disable any data compression in the modem or set any flags that will match the modems serial communications with its connection speed. Depending on the modem, these options may not be available, but if they are available, they should be selected.
- Find the command to display the current modem settings, and verify that all the changes are stored in the modem's active profile.
- Save the active profile to one of the profiles in memory so it will be reloaded the next time the modem is turned on. Also, make sure that the correct profile is loaded on power-up so that the new settings will become active.
- Disconnect Hyperterminal and install the modem at the Quantum site.

Specific Modem Examples

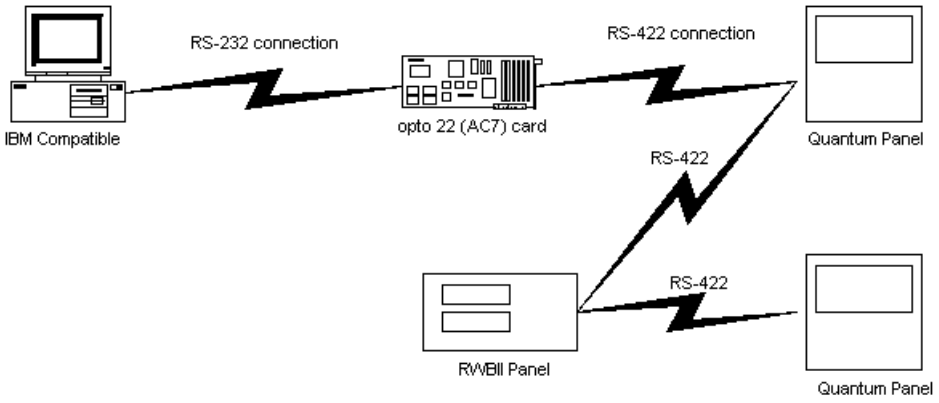
Hayes modem

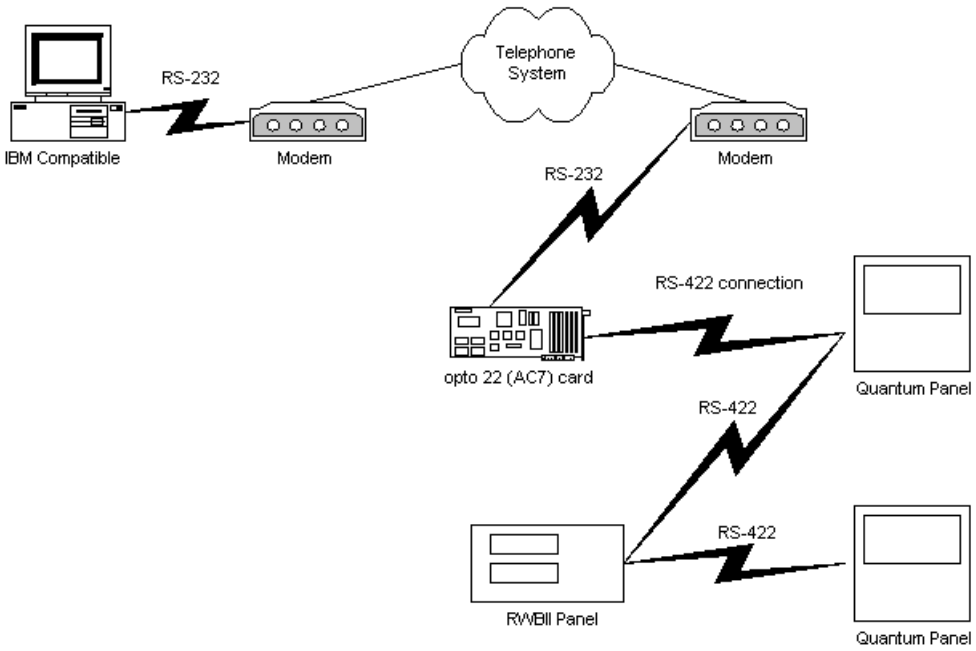
1. Setup Hyperterminal so that it talks to the modem.
   - Connect the modem that is being configured to one of your computer's com ports.
   - Locate the Hyperterminal program on your computer and run the program. (Hyperterminal can usually be found in the Accessories folder.)
   - Enter a name for your session and then press **[OK]**.
   - In the Connect using box, select the com port the modem is connected to. Then press **[OK]**.
   - Set the Bits per second field to **[19200]** and then press the **[OK]** key again.
2. Set the modem to Auto-Answer through Hyperterminal. Type **[AT &A0]** and then press **[Enter]**. The modem should respond with **"OK"**.
3. Fix the modem's baud rate at 19200.
   - Type **[AT N0]** and then press **[Enter]**. The modem should respond with **"OK"**.
   - Then type **[AT S37=12]** and press **[Enter]**, and the modem should return **"OK"**.
4. Disable data compression by typing **[AT &Q0]** and pressing **[Enter]**. The modem should return **"OK"**.
5. Type **[AT &V]** and press **[Enter]**. The modem will display a whole list of stored values. Scroll up to the Active Profile and look at the list of values displayed under this heading. Check that the values match what was just entered into the modem: &A0, N0, S37:12 and &Q0.
6. Set the modem to load settings from memory and then save these settings to memory.
   - Type **[AT &Y0]** and press **[Enter]**.
   - Then type **[AT &W0]** and press **[Enter]**.
   - Power the modem off and then back on and then type **[AT &V]** and **[Enter]** again. Check that the proper values are still in the Active Profile.
7. Install the modem at the Quantum site.

US Robotics modem

1. Set the modem to Auto-Answer through the modem's DIP switches. Set DIP switch #5 to the Set the modem to Auto-Answer through the modem's DIP switches. Set DIP switch #5 to the
2. Setup Hyperterminal so that it talks to the modem.
   - Connect the modem that is being configured to one of your computer's com ports.
   - Locate the Hyperterminal program on your computer and run the program. (Hyperterminal can usually be found in the Accessories folder.)
   - Enter a name for your session and then press **[OK]**.
   - In the "Connect using" box, select the com port the modem is connected to. Then press **[OK]**.
   - Set the Bits per second field to **[19200]** and then press the **[OK]** key again.
3. Fix the modem's baud rate at 19200. Type **[AT &N10]** and press **[Enter]**, and the modem should return **"OK"**.
4. Match the modem's serial com speed with its connection speed by typing **[AT &B0]** and pressing **[Enter]**. The modem should return **"OK"**.
5. Type **[AT I4]** and press **[Enter]**. The modem will display a whole list of stored values. Scroll up to the current settings and look at the list of values. Check that the values match what was just entered into the modem: &N10 and &B0.
6. Set the modem to load settings from memory and then save these settings to memory.
   - Type **[AT Y0]** and press **[Enter]**.
   - Then type **[AT &W0]** and press **[Enter]**.
   - Power the modem off and then back on, and then type **[AT I4]** and **[Enter]** again. Check that the proper values are still in the current settings.
7. Install the modem at the Quantum site.

Qtalk Connection Diagrams





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