

## Technical Bulletin

2 Automatic Road, Suite 108  
Brampton, Ontario  
Canada L6S 6K8

### Integra32

#### Number: 32      Dialup Modem Configuration

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Setting up a dialup network requires two (2) modems – one connected to a serial port on the Server and one connected to the first IRC2000 board at the remote site.

#### Remote Site Modem:

1. Set DIP Switches 1 through 5 to define the IRC2000's address.
2. RBH recommends a U.S.Robotics® external Sportster modems and a baud rate of 9600.
3. Make any DIPswitch settings on your modem as per your modem manual and the Integra32™ hardware manual.

Parameter	Setting
Auto Answer (AA)	ON
Data Terminal Ready (DTR) or (TR)	ON (Override)
Verbal Result Codes	ON
Suppress Result Codes	OFF
Echo Commands	OFF
Carrier Detect (CD)	OFF (Normal)

*These settings on the recommended modem would mean that all modem DIPswitches (1, 3, 4, 7, and 8) were down, except switches 2, 5, & 6, which will be up.*

Note: PC side modem will not work with above DIP switches settings. PC side modem has to be set to default settings (3, 5, 8)

4. Check the telephone line for dial tone and connect the phone cord to the modem.
5. Power up the modem and check the front panel lights to verify that the AA, TR, and CD settings are correct as per the above table.
6. Plug in the IRC2000 to Modem cable (*See the Hardware Manual for pin outs*)

7. Power up the IRC2000. The IRC2000 will automatically reset the modem and download the initialization string required to receive a call from the Server modem.

## Server (Host) Site Modem:

### *Install modem in Windows*

1. Use the modem setup (TAPI) screen in Windows Control Panel to install a modem for any available COM port on the Server.
2. From the Modem Properties window you can add a modem, remove a modem, or edit a modem's properties (You can access modem properties from Control Panel). Click the Add button.

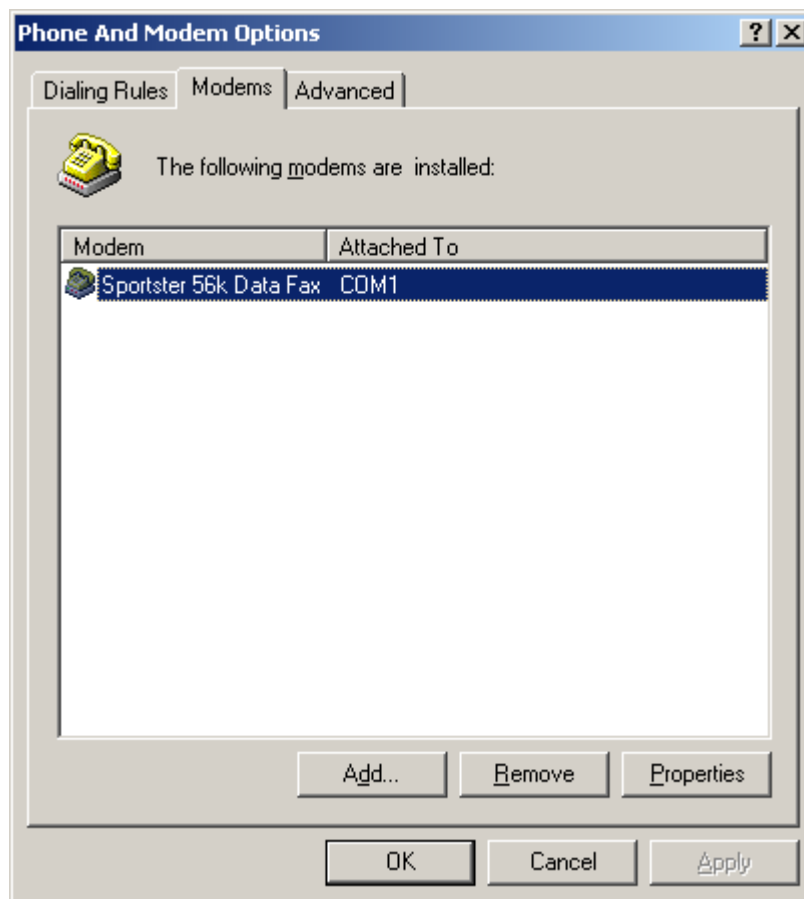


Figure1: Phone and modem Options window.

3. You may choose to let the Install New Modem wizard auto detect your modem or select it yourself. You will have to specify the COM port that you will use for that modem.
4. Once the modem has been installed, you may edit the settings to correspond with the remote site(s) settings.
5. In Figure 2, right click on modem and select properties to open modem properties window.

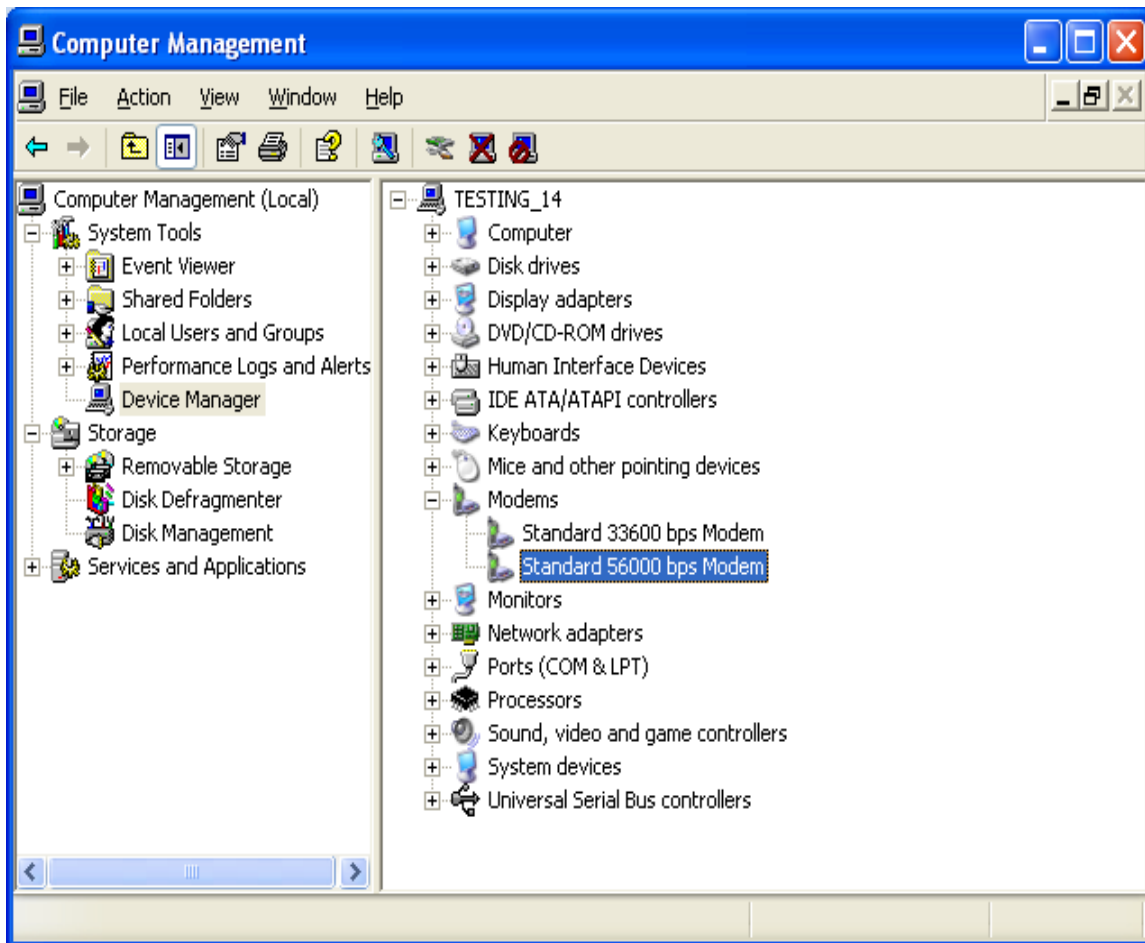


Figure 2: Opening modem properties from device Manager.

6. Use the Properties button to set the desired modem parameters e.g. Max. Speed of 9600 for a 56.6k modem. Use parameters appropriate for the remote site that you are connecting to.

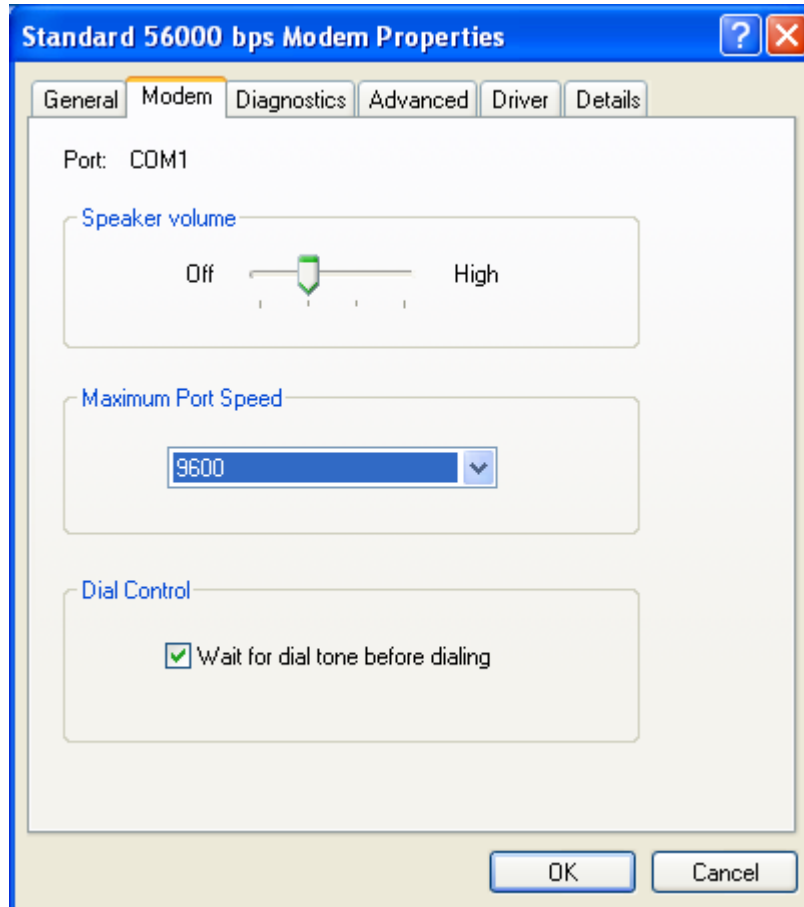


Figure 3: Modem properties

6. Set Advanced Connection Settings as follows.

Include 'Extra Initialization Commands' of &N6 to further force a baud rate of 9600.

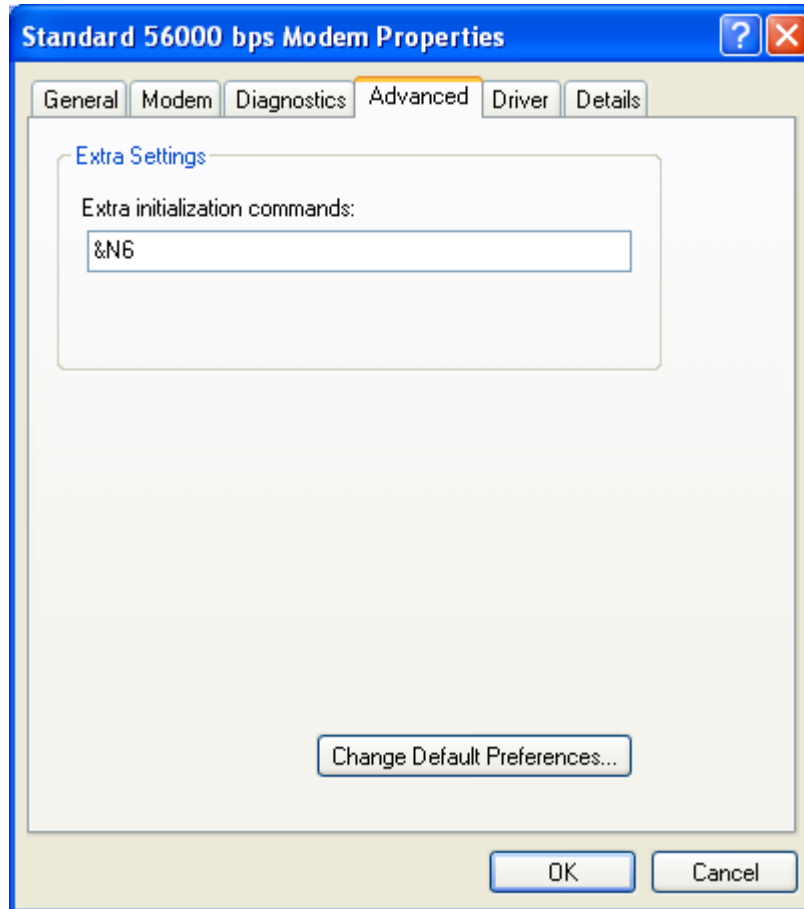


Figure 4: Modem Properties

Click on Query Modem button (Figure 5), and you will see 'success' message (Figure 6). Otherwise, you will see 'communication fails' message (Figure 7).

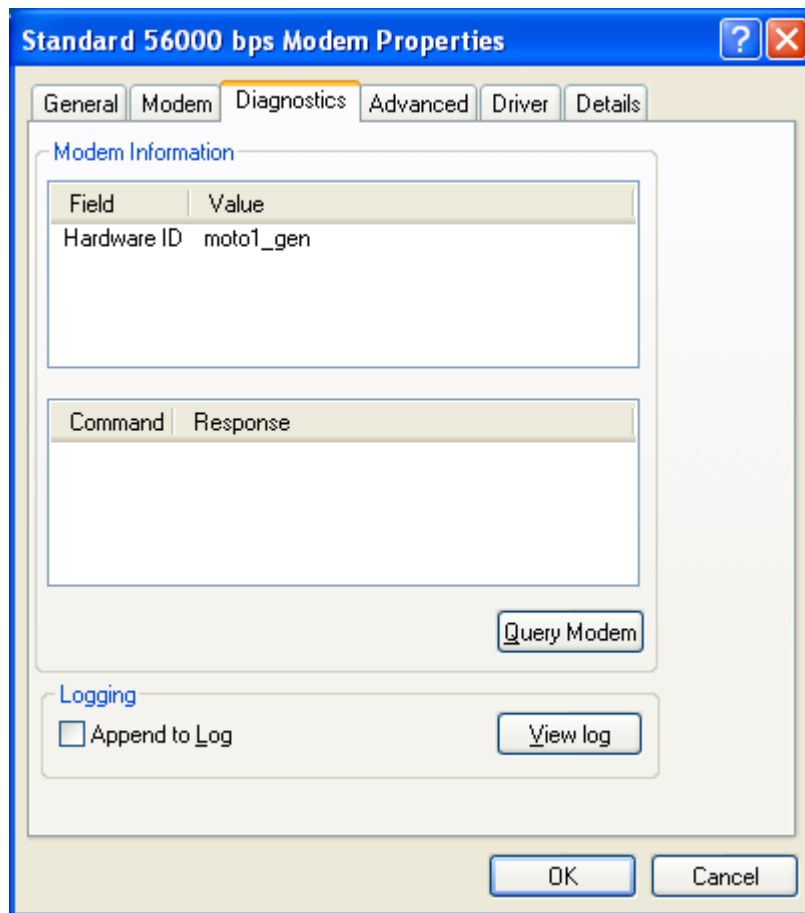


Figure 5: Modem Diagnostics properties

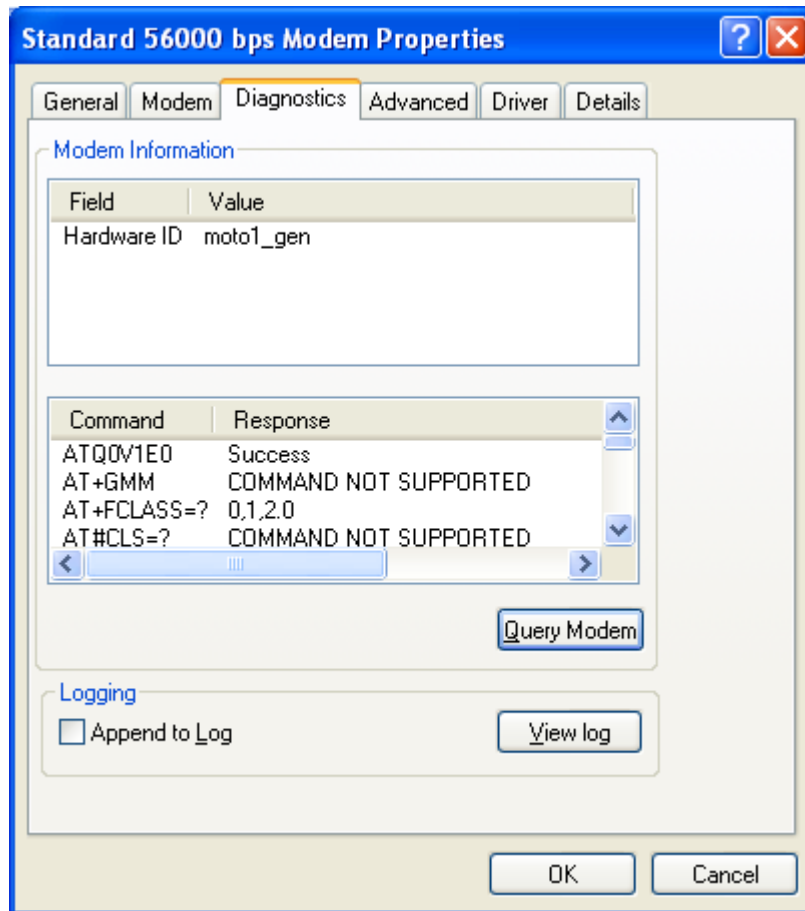


Figure 6: modem Query results

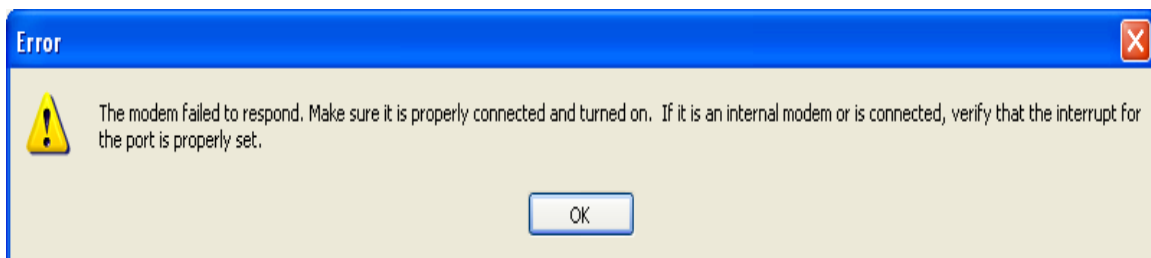


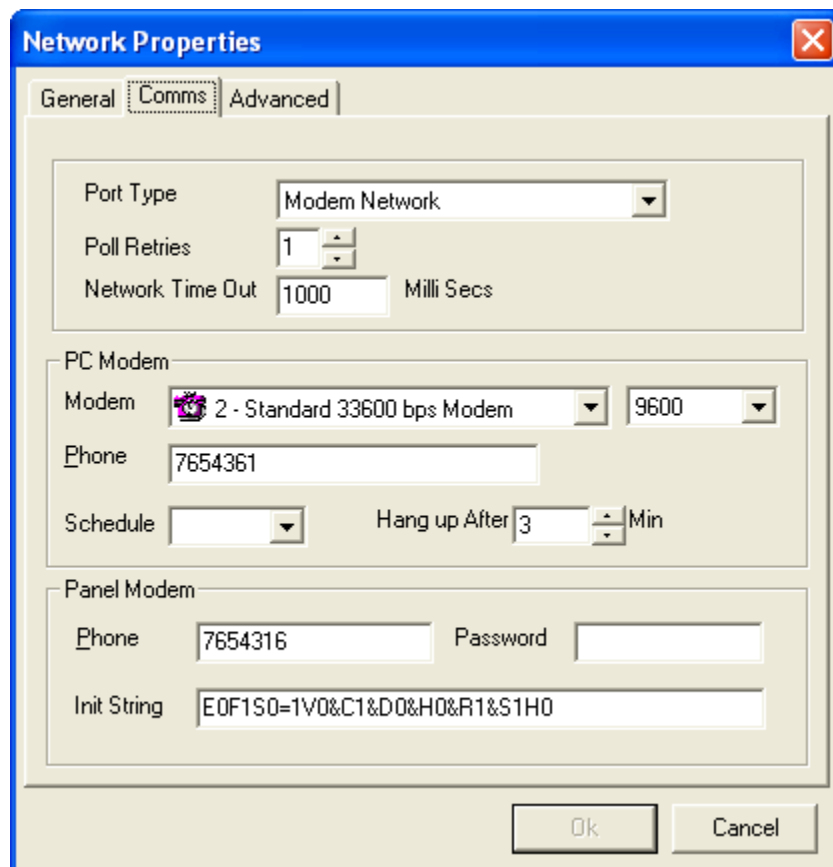
Figure 7: Modem Query error message.

### ***Cautions/Procedure for Modems connection***

1. Dipswitch 8 of all IRC-2000s should be set to OFF before making the modem connection.
2. After establishing the modem connection, download to all IRC-2000s and not just the IRC-2000 to which modem is connected (*so that the password is downloaded to all the panels*).
3. Change all Dipswitch 8s to ON.
4. Re-power the IRC-2000s.

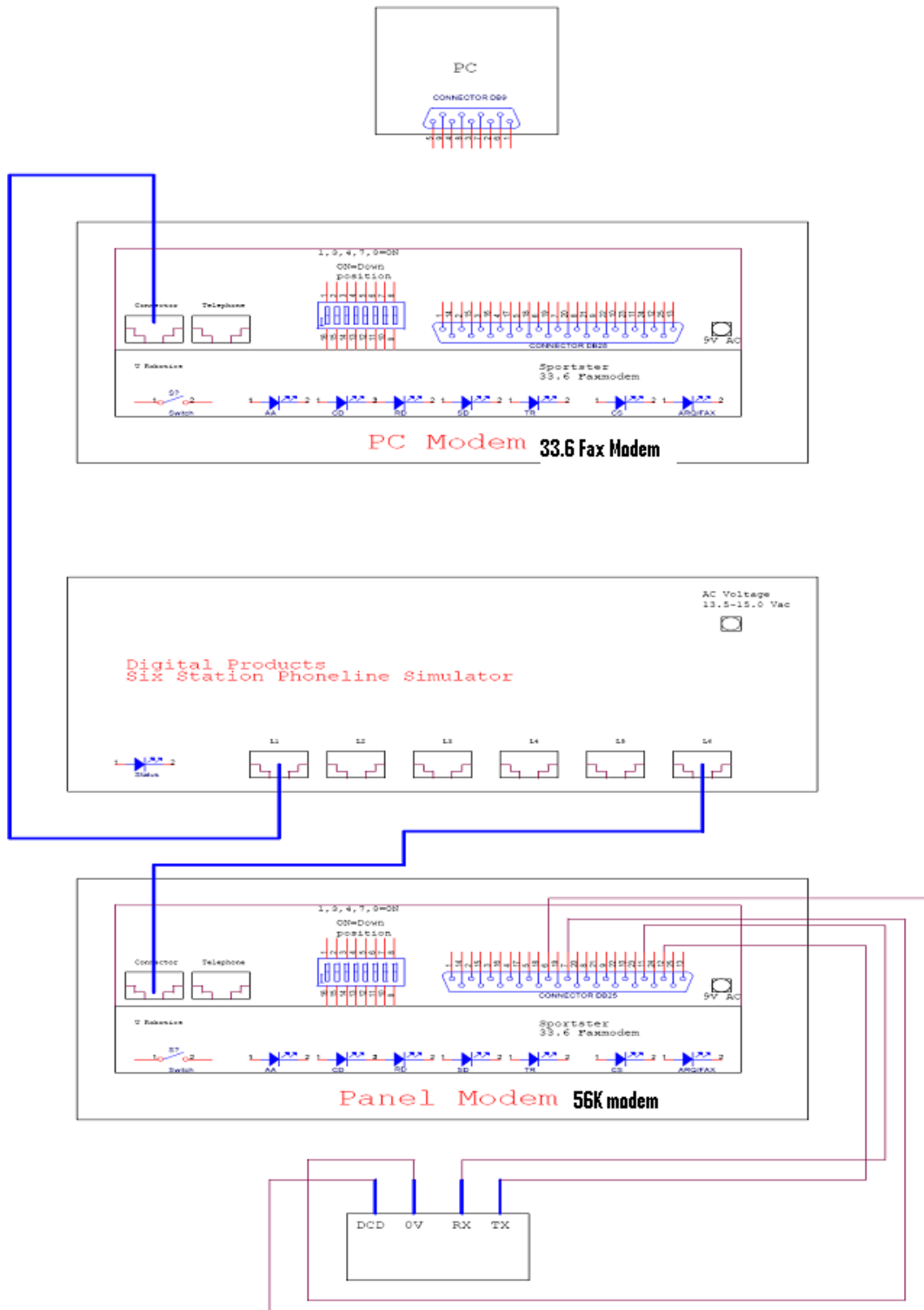
### ***Configure Modem COM Port on the Integra32™ Server***

1. Open the Network Properties window in the Integra32™ Database Manager.



2. Click on Port Type and select Modem Network.
3. Use the Modem combo box down arrow and select the modem from those already setup under Windows.
4. Set the baud rate 9600 and Phone number (for the software to call the remote site).
5. Enter a password. (Connect the first time with Dip switch 8 off.)
6. Click OK to complete the configuration.

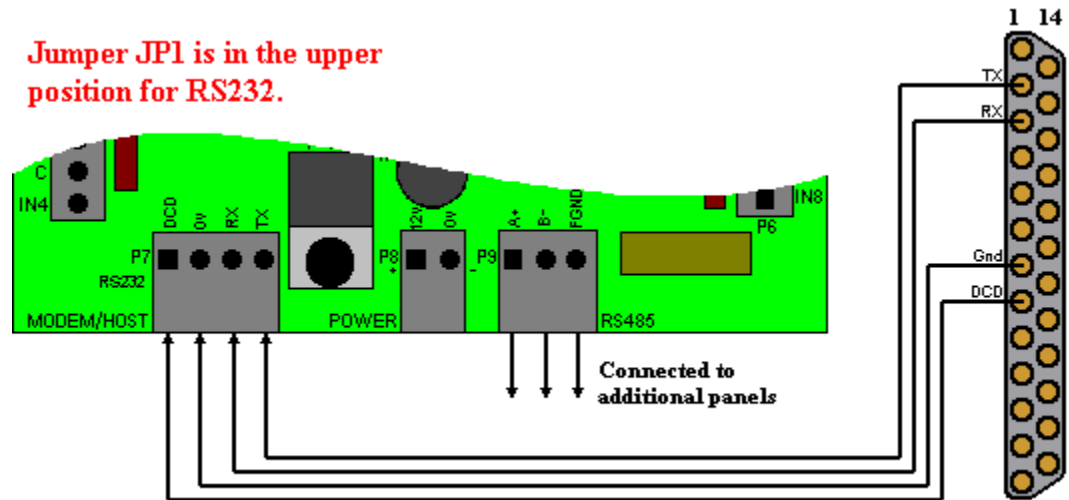
## In House Hardware Setup



Note: Panel\_modem side 25 pin DB connector wiring diagram is incorrect. Please refer to diagram below

## Modem Connection

The IRC-2000 can be connected to the PC via a modem. The modem connection is similar to the RS-232 connect (*except that the TX & RX connections are straight through instead of crossed*) with the inclusion of the DCD terminal. If multiple controllers are used then the RS-485 connector will be needed to connect the additional controllers to the modem controller.



## Cable Specification

4-conductor shielded, 18 to 22 AWG

## Maximum Cable Length

9600 baud 150 feet (50 meters)

56000 baud 50 feet (15 meters)