

Connecting to a Modem using UnixWare 2.01

The instructions will help you connect a Hayes ACCURA 14.4 or Hayes ACCURA 28.8 FaxModem to a ProHelp Millennium System. If the modem you are using is not a Hayes ACCURA 14.4 or 28.8, these instructions may differ slightly.

The modem may be connected to a standard serial communications port, including ports on the RocketPort board. When configuring a modem, keep in mind that in UnixWare, ports like COMM1 and the RocketPort ports are referenced by a symbolic name like dev/term/r0A.

1. Determine the device name for the line on the RocketPort board that you intend to connect to. Connect the modem to this port. All RocketPort board ports are numbered at installation time. In a system where only one RocketPort board is present, the number on the port maps to a device name as in figure 1.

Port	Device Name
comm1	/dev/tty00 (Do not use)
comm2	/dev/tty01 (Do not use)
0	/dev/term/r0A
1	/dev/term/r0B
2	/dev/term/r0C
3	/dev/term/r0D
4	/dev/term/r0E
5	/dev/term/r0F
6	/dev/term/r0G
7	/dev/term/r0H (Good Choice)

Figure 1

It is probably best to connect the modem at the port farthest away from the ports used to connect MIUs to the Host. This will help prevent disconnecting the MIU cables now and in the future.

2. As root, edit the line that begins with *auto*, typically this is line ten, in */etc/ttydefs*. The original line appears like this:

```
auto:hupcl:ixany sane tab3 hupcl:A:9600
```

Alter the line to be identical to the following:

For Hayes 14.4K modem

```
auto:rtsxoff ctsxon cs8 -parenb hupcl:rtsxoff ctsxon cs8 -parenb tab3 hupcl:A:9600NP
```

For Hayes 28.8K modem

auto:rtsxoff ctsxon cs8 -parenb hupcl:rtsxoff ctsxon cs8 -parenb tab3 hupcl:A:38400NP

3. Create a symbolic link between the port you have selected and an administrative script. Switch user to root and type in the following line.

ln -s /dev/term/r0H /dev/tty09

4. Create a device that will be used as a dialup modem. This will be done through the desk top. Perform the following steps.

- A. Click on *Admin_Tools*
- B. Click on *Networking*
- C. Click on *Dialup_Setup*
- D. Select *Actions* and then *Setup Devices*
- E. Select *Device* and then *New*
- F. A port configuration page will appear. If you are following the example it should be configured as:
 1. Port: other
 2. Dialog box: tty09
 3. Connect to: Hayes
 4. Configure port as: Bi-directional
 5. Speed: auto-select
 6. Port is: enabled
 7. Add to save configuration
- G. When done correctly a new icon will appear labeled tty09 in *Dialog Setup: Devices* window.

5. Add the following line to the **/etc/uucp/Devices** file. The line should be added at the end of the file. The line to add is:

For 28.8 K Modem do the following

Direct /dev/tty09, M - 38400 direct_modem

Verify that the last three lines of the Devices file appear as:

```
#ACU /dev/tty09,M - Any hayes
#Reset /dev/tty09,M - 38400 atcmd_auto
Direct /dev/tty09,M - 38400 direct_modem
```

For 14.4 K Modem do the following

Direct /dev/tty09,M - 9600 direct_modem

Verify that the last three lines of the Devices file appear as:

```
#ACU /dev/tty09,M - Any hayes
#Reset /dev/tty09,M - 9600 atcmd_auto
Direct /dev/tty09,M - 9600 direct_modem
```

6. Verify the following file contains the below lines. The file is `/etc/saf/ttymon1/_pmtab`, to view the file without having to change it set vi to read only.

vi -R /etc/saf/ttymon1/_pmtab

```
1 # VERSION=2
2 tty09:u::reserved:reserved:login:/dev/tty09:bhro
  :0:/usr/bin/shserv:60:auto:ldterm:login\|: :::::#
```

The above line, marked as 2, is one continuous line.

7. Configure the modem for auto-answer.

Using the Hayes ACCURA 14.4 FaxModem it will be necessary to configure the modem using software. To accomplish this you must be root and have the modem connected to the proper port and turned on. At the prompt enter the following line:

cu -l/dev/tty09

If the modem has been properly connected a message will appear on the screen *Connected*. At this point attempt to configure the modem for auto-answer. Enter the following commands to accomplish this.

- | | | |
|----|------------------|--|
| A. | AT | |
| B. | AT&F | - Resets the modem to factory defaults. |
| C. | ATS0=2 | - Configures the modem for auto-answer. |
| D. | ATQ2 | - Return result codes in originate mode. Do not return result code when modem is in answer mode. |
| E. | AT&C2 | - Force DCD signal ON except during disconnect. |
| F. | AT&D3 | - Hang up, reset modem to init state on DTR transition. |
| G. | AT&W0 | - Saves changes to EPROM. |
| H. | AT&Y0 | - Use saved changes when rebooted. |

- I. ~. [enter] or ~.. [enter] - Exit cu mode.
8. Reboot the ProHelp Millennium / UinxWare System and the Modem.

9. Miscellaneous Notes

The steps required to configure a modem for auto-answer is device dependent and is beyond the scope of this document. Many modems this will be accomplished with switch or jumper settings.

After completion of step 7 and 8 the modem should have lights HS, AA and MR on.

Modem Lights

Light	On When Configured	Description
HS	Yes	<i>High Speed</i> indicates high speed operation. For example, this light will be on when the modem is connected to another modem at 14,400 baud.
AA	Yes	When <i>Auto Answer</i> is on, the modem is setup to answer incoming calls. When the AA light is off, the modem does not attempt to answer incoming calls. When the modem detects an incoming call, it turns the AA light off during the ring, if configured for auto answer.
CD	Doesn't matter	The <i>Carrier Detect</i> light indicates that the modem is connected to another modem.
OH	Doesn't matter	The <i>Off Hook</i> light is on when the modem is off hook. This is similar to when you have picked up the phone to answer it.
RD	Doesn't matter	The <i>Receive Data</i> light flashes on and off as data is transferred from the computer to the modem.
SD	Doesn't matter	The <i>Send Data</i> light flashes on and off as data is transferred from the computer to the modem.
TR	Doesn't matter	The <i>Terminal Ready</i> is on when the RS-232 DTR signal is active.
MR	Yes	If the <i>Modem Ready</i> light is on, the modem is receiving power. The MR light flashes on and off when the modem is in self-test or diagnostic mode.