

Important Router Information

Dear Valued Customer:

This packet includes **important information about your equipment** which should be reviewed by you prior to speaking with our Installations Group.

It is not a replacement for our Technical Support but is designed to help us help you get your internet connection up and running as quickly as possible.

Our Installations Group will work with you via one hour appointments. **Please review this packet and follow the setup flowchart prior to your initial appointment with your Installations Representative**

Thank you very much and welcome to the Internet.

Technical Support: (888) 774-4206

Enclosed are the following documents regarding your Internet equipment:

- **Router Setup Flowchart**
- **Connectivity Flowchart**
- **Configuration Print Out**
- **Configuration Instructions**

Additional documents for Leased Line Customers:

- **Astrocom CSU/DSU Diagram**
- **Important Circuit Information**

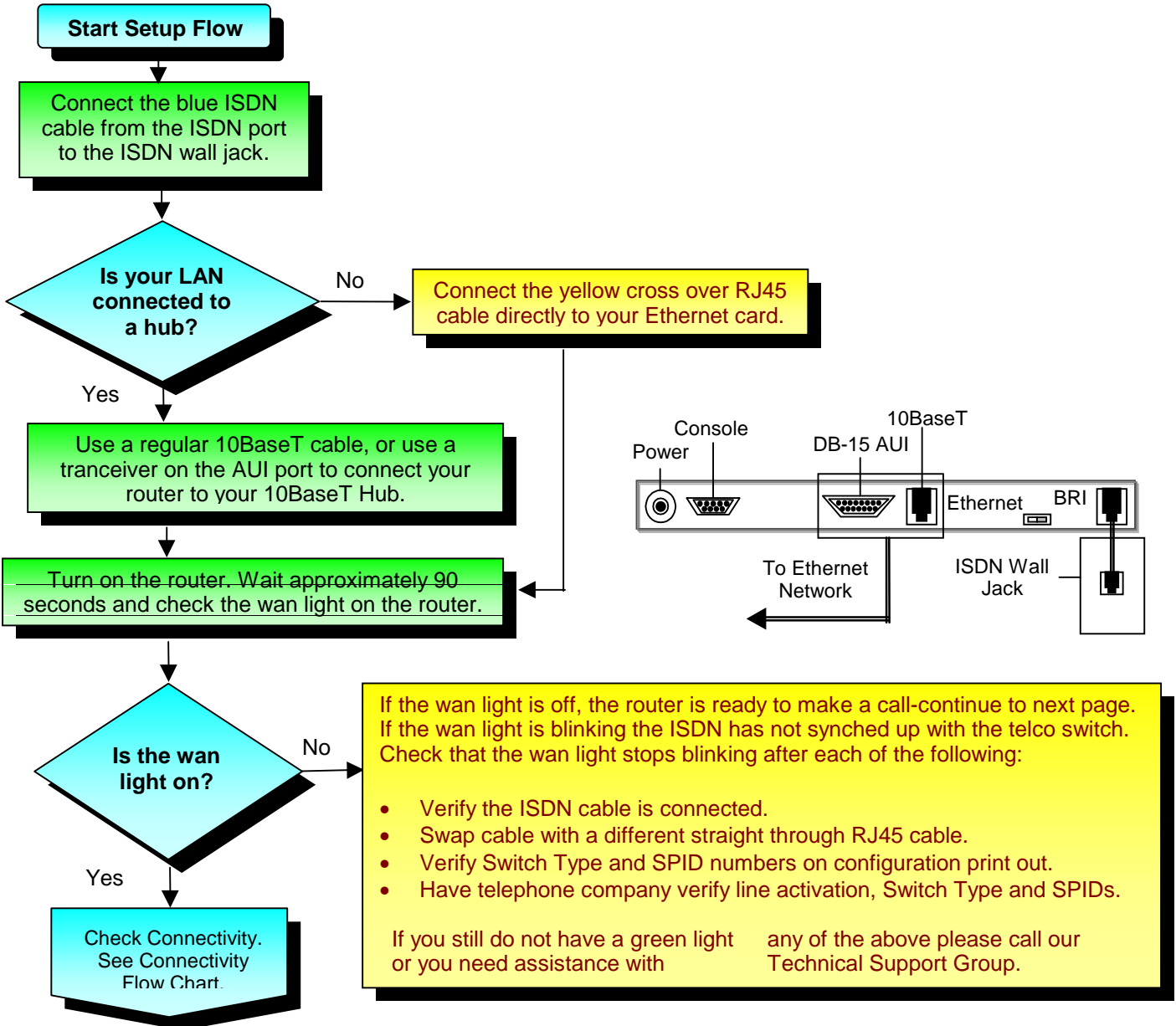
Setup: Ascend Pipeline 50 for LAN-ISDN

Instructions for connecting your Ascend Pipeline 50 Router:

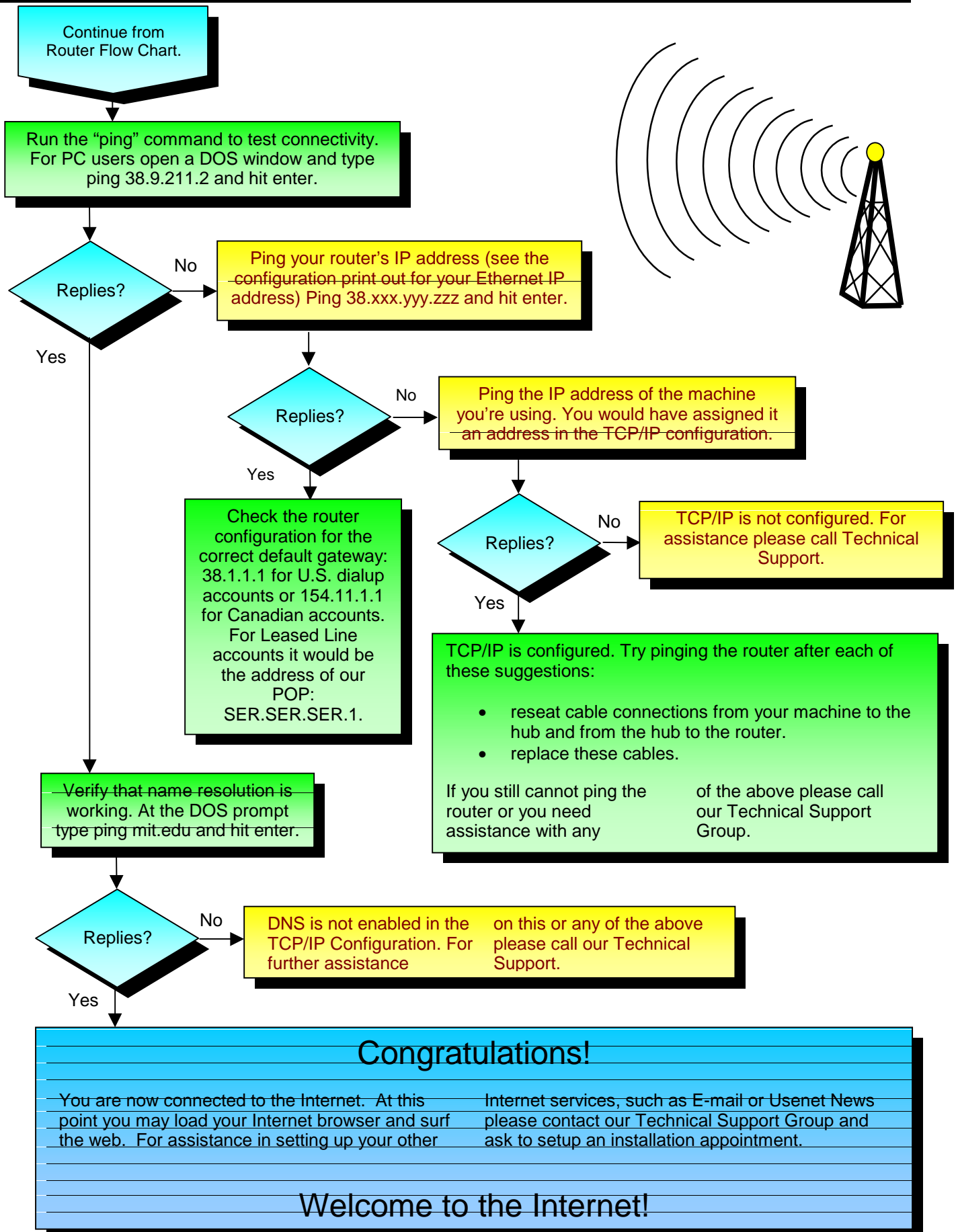
Prerequisites: Please run through the following flowchart to connect your equipment prior to scheduling your initial appointment with our Installations Group.

- Local Area Network (LAN) already setup
- TCP/IP configured on the individual workstations
- ISDN line installed by your telephone company
- Switch Type: **National ISDN-1**, 5ESS pt to pt, 5ESS multipoint, DMS100
- SPID Numbers: _____
- My Num: 7 digits of the SPID numbers excluding the area code.

Your router has been shipped to you preconfigured. If you provided us with the Switch Type and SPID numbers prior to shipment, the router's configuration should be complete. If we did not receive this information in time you will need to telnet into the router to add these parameters to the router's configuration. Please check the configuration print out to verify that the dial-up phone number is the number you want to be dialing into. Also, when the connection is up and running, don't forget to change the router password.



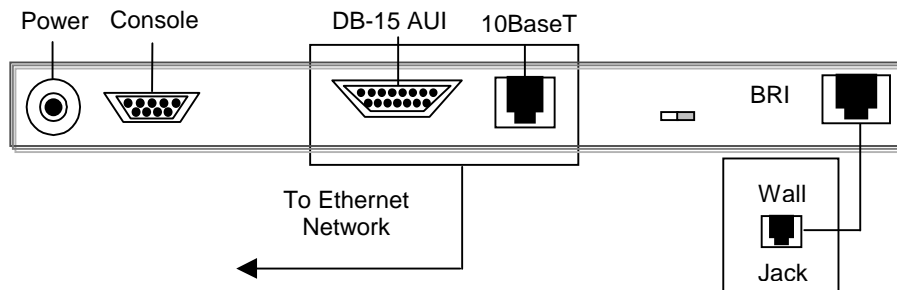
Connectivity:



Configuring the Ascend Pipeline 50 for LAN-ISDN

To configure the Ascend connect a console to the console port of the router. If the router was preconfigured by us a console session is unnecessary, just telnet into the router.

1. Connect the DB-9 to DB25 adapter to the console port of the router.
2. Connect the DB25 end of the adapter to an RS-232 cable (this is not provided).
3. Connect the RS-232 to a PC, or Mac with proper cables, with VT100 emulation software set to 9600 baud, 8 data bits, no parity, and 1 stop bit.
4. Connect the router to the LAN (see wiring diagram below).
5. Connect the BRI interface to the ISDN demarc (see wiring diagram below).
6. Make sure the router is turned on.
7. Press control – L to refresh the screen.



After hitting Ctrl-L you should see a window similar to the following:
In the main edit window you will see the configure menu.

Main Edit Menu --+

+-- Configure

```

+----- LIACCT EDIT -----+
| Configure...              | | 10-100 1                | | 00-200 00:00:05        |
| >Switch Type=CUST.SWITCH | | Link X                  | | >M31 Line Ch          |
| Chan Usage=Switch/Switch | | B1 .                    | | Ethernet Up           |
| My Num A=CUST.PHONE.A    | | B2 .                    | |                         |
| My Num B=CUST.PHONE.B    | +-----+                | +-----+                |
| SPID 1=CUST.SPID.A       | | 20-100 Sessions        | | 20-500 DYN Stat       |
| SPID 2=CUST.SPID.B       | | > 0 Active              | | Qual N/A 00:00:00     |
| My Name=ACCT.ID          | |                         | | OK 0 channels         |
| My Addr=LAN.LAN.LAN.LAN/24 | |                         | | CLU 0% ALU 0%         |
| Rem Name= Net            | +-----+                | +-----+                |
| Rem Addr= 38.1.1.1/8     | | 20-300 WAN Stat        | | 20-400 Ether Stat     |
| Dial #=POP.PHONE.NUM    | | >Rx Pkt: 0^            | | >Rx Pkt: 0             |
| Route=IP                 | | Tx Pkt: 0              | | Tx Pkt: 1             |
| Bridge=No                | | CRC: 0v                | | Col: 0                 |
| Send Auth=PAP            | +-----+                | +-----+                |
| Send PW=PASSWORD         | | 00-100 Sys Option      | | 00-300 HW Config      |
| Recv Auth=None           | | >Security Prof: 3 ^    | | >BRI U Interface ^    |
| Recv PW=N/A              | | Software +4.5A+       | | Adrs: 00c07b520036    |
| Save=                    | | S/N: 5366006 v        | | Enet I/F: AUI v       |

```

Press Ctrl-n to move cursor to the next menu item. Press return to select it.
Press Tab to move to another window --- thick border indicates active window.

The Telco should be able to tell you your switch type, phone numbers, and SPIDS.

LAN.LAN.LAN.LAN is the address of your router.
PHONE.NUM is the phone number of the POP you are dialing into.
PASSWORD is the password that goes with your Account ID.

Configuring the Ascend Pipeline 50 for LAN-ISDN (cont'd)

After entering the values press Esc to get to the main edit menu. You will then need to go under the following menus to enter additional values and confirm that the values set in the Configure Menu are there.

Highlight the Save= entry and press Return. This will save the configuration information.

Go under the Ethernet Menu, then under the Connections Menu, then under the Net menu. In this menu you will see the information you entered in the Configure Menu. Please make sure that this information is correct.

```

Main Edit Menu --+
  +- 20-000 Ethernet --+
    +- 20-100 Connections --+
      +- 20-101 Net
        +----- LIACCT EDIT -----+
        | 20-101 Net                    | 10-100 1                    | 00-200 00:00:05
        | >Station=Net                  | Link X                    | >M31 Line Ch
        | Active=Yes                    | B1 .                      | Ethernet Up
        | Encaps=MPP                    | B2 .                      |
        | Dial #=POP.PHONE.NUM          | +-----+                | +-----+
        | Route IP=Yes                  | |20-100 Sessions          | |20-500 DYN Stat
        | Route IPX=No                  | |> 0 Active                | |Qual N/A 00:00:00
        | Bridge=N/A                    | |                          | |OK 0 channels
        | Dial Broadcast=N/A            | |                          | |CLU 0% ALU 0%
        | Encaps Options...              | +-----+                | +-----+
        | IP Options...                  | |20-300 WAN Stat          | |20-400 Ether Stat
        | Ipx Options...                 | |>Rx Pkt: 0^               | |>Rx Pkt: 0
        | Session Options...             | |Tx Pkt: 0                 | |Tx Pkt: 1
        | Telco Options...                | |CRC: 0v                   | |Col: 0
        |                               | +-----+                | +-----+
        |                               | |00-100 Sys Option        | |00-300 HW Config
        |                               | |>Security Prof: 3 ^      | |>BRI U Interface ^
        |                               | |Software +4.5A+          | |Adrs: 00c07b520036
        |                               | |S/N: 5366006 v          | |Enet I/F: AUI v
  
```

Press Ctrl-n to move cursor to the next menu item. Press return to select it.
Press Tab to move to another window --- thick border indicates active window.

Configuring the Ascend Pipeline 50 for LAN-ISDN (cont'd)

Go to the Encaps Options... menu:

```

Main Edit Menu --
  +- 20-000 Ethernet --
    +- 20-100 Connections --
      +- 20-101 Net
        Encaps Options...
+----- LIACCT EDIT -----+
| 20-101 Net                  | 10-100 1                  | 00-200 00:00:05          |
| Encaps Options...          | Link X                    | >M31 Line Ch            |
| >Send Auth=PAP             | B1 .                      | Ethernet Up             |
| Send PW=PASSWORD          | B2 .                      |                          |
| Recv PW=N/A                |                            |                          |
| Base Ch Count=1           | 20-100 Sessions          | 20-500 DYN Stat        |
| Min Ch Count=1            | > 0 Active                | Qual N/A 00:00:00      |
| Max Ch Count=2            |                            | OK 0 channels          |
| MRU=1524                   |                            | CLU 0% ALU 0%          |
| LQM=No                     |                            |                          |
| LQM Min=600                | 20-300 WAN Stat          | 20-400 Ether Stat     |
| LQM Max=600                | >Rx Pkt: 0^              | >Rx Pkt: 0             |
| Link Comp=None             | Tx Pkt: 0                | Tx Pkt: 1              |
| VJ Comp=Yes                | CRC: 0v                  | Col: 0                  |
| Dyn Alg=Linear              |                            |                          |
| Sec History=15              | 00-100 Sys Option        | 00-300 HW Config      |
| Add Pers=5                  | >Security Prof: 3 ^      | >BRI U Interface ^    |
|                             | Software +4.5A+          | Adrs: 00c07b520036    |
|                             | S/N: 5366006            | Enet I/F: AUI v        |
+-----+-----+-----+

```

Press Ctrl-n to move cursor to the next menu item. Press return to select it.
Press Tab to move to another window --- thick border indicates active window.

Verify that all of the settings are correct, You may want to change the MPP options (see Ascend Pipeline 50 Advanced Options – MPP).
Press Esc and this will bring you back to the Connections Menu.

Go into the Session Options Menu:

```

Main Edit Menu --
  +- 20-000 Ethernet --
    +- 20-100 Connections --
      +- 20-101 Net
        Session Options...
+----- LIACCT EDIT -----+
| 20-101 Net                  | 10-100 1                  | 00-200 00:00:05          |
| Session Options...          | Link X                    | >M31 Line Ch            |
| >Data Filter=0             | B1 .                      | Ethernet Up             |
| Call Filter=0              | B2 .                      |                          |
| Idle=600                   |                            |                          |
| Preempt=60                 | 20-100 Sessions          | 20-500 DYN Stat        |
| Backup=N/A                 | > 0 Active                | Qual N/A 00:00:00      |
|                             |                            | OK 0 channels          |
|                             |                            | CLU 0% ALU 0%          |
|                             |                            |                          |
|                             | 20-300 WAN Stat          | 20-400 Ether Stat     |
|                             | >Rx Pkt: 0^              | >Rx Pkt: 0             |
|                             | Tx Pkt: 0                | Tx Pkt: 1              |
|                             | CRC: 0v                  | Col: 0                  |
|                             |                            |                          |
|                             | 00-100 Sys Option        | 00-300 HW Config      |
|                             | >Security Prof: 3 ^      | >BRI U Interface ^    |
|                             | Software +4.5A+          | Adrs: 00c07b520036    |
|                             | S/N: 5366006            | Enet I/F: AUI v        |
+-----+-----+-----+

```

Press Ctrl-n to move cursor to the next menu item. Press return to select it.
Press Tab to move to another window --- thick border indicates active window.

Verify the above information. Note the Idle parameter is the number of seconds that the link will stay up when no IP traffic is being passed. Press Esc to get back to the Sessions. . . Menu.

Configuring the Ascend Pipeline 50 for LAN-ISDN (cont'd)

Go to the Telco Options... Menu:

```

Main Edit Menu --+
  +- 20-000 Ethernet --+
                    +- 20-100 Connections --+
                              +- 20-101 Net
                                  Telco Options...
+----- LIACCT EDIT -----+
| 20-101 Net                  | 10-100 1                  | 00-200 00:00:05          |
| Telco Options...           | Link X                    | >M31 Line Ch           |
| >AnsOrig=Call Only         | B1 .                      | Ethernet Up            |
| Callback=No                | B2 .                      |                         |
| Call Type=Switched         |                             |                         |
| Group=N/A                  |                             |                         |
| Data Svc=LINE.SPEED        |                             |                         |
| Force 56=No                |                             |                         |
| Bill #=#                   |                             |                         |
+-----+-----+-----+
|                             | 20-100 Sessions          | 20-500 DYN Stat        |
|                             | > 0 Active               | Qual N/A 00:00:00      |
|                             |                             | OK 0 channels          |
|                             |                             | CLU 0% ALU 0%         |
+-----+-----+-----+
|                             | 20-300 WAN Stat         | 20-400 Ether Stat     |
| >Rx Pkt: 0^                | >Rx Pkt: 0                | >Rx Pkt: 0             |
| Tx Pkt: 0                  | Tx Pkt: 1                 | Tx Pkt: 1              |
| CRC: 0v                    | Col: 0                    | Col: 0                 |
+-----+-----+-----+
|                             | 00-100 Sys Option        | 00-300 HW Config       |
| >Security Prof: 3 ^        | >BRI U Interface ^       | >BRI U Interface ^     |
| Software +4.5A+           | Adrs: 00c07b520036       | Adrs: 00c07b520036    |
| S/N: 5366006 v           | Enet I/F: AUI v          | Enet I/F: AUI v       |

```

Press Ctrl-n to move cursor to the next menu item. Press return to select it.
 Press Tab to move to another window --- thick border indicates active window.

Verify the information in the Telco Options menu... Your telco should have provided you with the proper Data Svc (or line speed). This will either be 56K or 64K. Press Esc to get back to the Sessions menu, then press Esc again to get to the Ethernet... menu

Go to the Mod Config... Menu:

```

Main Edit Menu --+
  +- 20-000 Ethernet --+
                    +- 20-800 Mod Config
+----- LIACCT EDIT -----+
| 20-800 Mod Config          | 10-100 1                  | 00-200 00:00:05          |
| >Ether Options...         | Link X                    | >M31 Line Ch           |
| SNMP Options...          | B1 .                      | Ethernet Up            |
| Bridging=No              | B2 .                      |                         |
| Shared Prof=No           |                             |                         |
| Telnet PW=               |                             |                         |
| Domain Name=DOMAIN       |                             |                         |
| Pri DNS=38.8.82.2        |                             |                         |
| Sec DNS=38.8.84.2       |                             |                         |
| Syslog=No                |                             |                         |
| Log Host=N/A             |                             |                         |
| Log Facility=N/A         |                             |                         |
+-----+-----+-----+
|                             | 20-100 Sessions          | 20-500 DYN Stat        |
|                             | > 0 Active               | Qual N/A 00:00:00      |
|                             |                             | OK 0 channels          |
|                             |                             | CLU 0% ALU 0%         |
+-----+-----+-----+
|                             | 20-300 WAN Stat         | 20-400 Ether Stat     |
| >Rx Pkt: 0^                | >Rx Pkt: 0                | >Rx Pkt: 0             |
| Tx Pkt: 0                  | Tx Pkt: 1                 | Tx Pkt: 1              |
| CRC: 0v                    | Col: 0                    | Col: 0                 |
+-----+-----+-----+
|                             | 00-100 Sys Option        | 00-300 HW Config       |
| >Security Prof: 3 ^        | >BRI U Interface ^       | >BRI U Interface ^     |
| Software +4.5A+           | Adrs: 00c07b520036       | Adrs: 00c07b520036    |
| S/N: 5366006 v           | Enet I/F: AUI v          | Enet I/F: AUI v       |

```

Press Ctrl-n to move cursor to the next menu item. Press return to select it.
 Press Tab to move to another window --- thick border indicates active window.

Verify the setting in the Mod Config... menu. DOMAIN is your InterNIC registered domain name. Pri DNS should have your Primary assigned DNS Name Resolver. Sec DNS should have your Backup assigned DNS Name Resolver.

Configuring the Ascend Pipeline 50 for LAN-ISDN (cont'd)

Go to the Ether Options... Menu:

```
Main Edit Menu --
      +- 20-000 Ethernet --
                +- 20-800 Mod Config
                  Ether Options...
```

----- LIACCT EDIT -----		
20-800 Mod Config Ether Options... >IP Adrs=LAN.LAN.LAN.LAN /24 2nd Adrs=0.0.0.0 RIP=Off Proxy Mode=Always Filter=0 IPX Fram=802.3	10-100 1 Link X B1 . B2 .	00-200 00:00:05 >M31 Line Ch Ethernet Up
	20-100 Sessions > 0 Active	20-500 DYN Stat Qual N/A 00:00:00 OK 0 channels CLU 0% ALU 0%
	20-300 WAN Stat >Rx Pkt: 0^ Tx Pkt: 0 CRC: 0v	20-400 Ether Stat >Rx Pkt: 0 Tx Pkt: 1 Col: 0
	00-100 Sys Option >Security Prof: 3 ^ Software +4.5A+ S/N: 5366006 v	00-300 HW Config >BRI U Interface ^ Adrs: 00c07b520036 Enet I/F: AUI v

Press Ctrl-n to move cursor to the next menu item. Press return to select it.
 Press Tab to move to another window --- thick border indicates active window.

Verify the above information.

Press Esc and got to the Static Rtes Menu:

```
Main Edit Menu --
      +- 20-000 Ethernet --
                +- 20-300 Static Rtes
```

----- LIACCT EDIT -----		
20-300 Static Rtes >20-3**Default 20-301 20-302 20-303	10-100 1 Link X B1 . B2 .	00-200 00:00:05 >M31 Line Ch Ethernet Up
	20-100 Sessions > 0 Active	20-500 DYN Stat Qual N/A 00:00:00 OK 0 channels CLU 0% ALU 0%
	20-300 WAN Stat >Rx Pkt: 0^ Tx Pkt: 0 CRC: 0v	20-400 Ether Stat >Rx Pkt: 0 Tx Pkt: 1 Col: 0
	00-100 Sys Option >Security Prof: 3 ^ Software +4.5A+ S/N: 5366006 v	00-300 HW Config >BRI U Interface ^ Adrs: 00c07b520036 Enet I/F: AUI v

Press Ctrl-n to move cursor to the next menu item. Press return to select it.
 Press Tab to move to another window --- thick border indicates active window.

Configuring the Ascend Pipeline 50 for LAN-ISDN (cont'd)

Go to the 20-3** Default Menu:

```

Main Edit Menu --+
  +- 20-000 Ethernet --+
    +- 20-300 Static Rtes
      20-3**Default
+----- LIACCT EDIT -----+
| 20-3**Default | | 10-100 1 | | 00-200 00:00:05 |
| >Name=Default | | Link X | | >M31 Line Ch |
| Active=Yes | | B1 . | | Ethernet Up |
| Dest=0.0.0.0/0 | | B2 . | | |
| Gateway=38.1.1.1 | | | | |
| Metric=1 | | | | |
| Private=Yes | | | | |
| | | | | |
+-----+-----+-----+
| 20-100 Sessions | | 20-500 DYN Stat | |
| > 0 Active | | Qual N/A 00:00:00 |
| | | | OK 0 channels |
| | | | CLU 0% ALU 0% |
+-----+-----+-----+
| 20-300 WAN Stat | | 20-400 Ether Stat |
| >Rx Pkt: 0^ | | >Rx Pkt: 0 |
| Tx Pkt: 0 | | Tx Pkt: 1 |
| CRC: 0v | | Col: 0 |
+-----+-----+-----+
| 00-100 Sys Option | | 00-300 HW Config |
| >Security Prof: 3 ^ | | >BRI U Interface ^ |
| Software +4.5A+ | | Adrs: 00c07b520036 |
| S/N: 5366006 v | | Enet I/F: AUI v |
+-----+-----+-----+

```

Press Ctrl-n to move cursor to the next menu item. Press return to select it.
 Press Tab to move to another window --- thick border indicates active window.

Verify the above information.

Press Esc until you reach the Main menu... You will be prompted if you save configuration changes.
 Answer Yes.

To test the connectivity:

Go to the Ethernet::Connections::Net menu.

Highlight the Net entry and press Control-D then press 1 to dial.
 This should establish a connection to the POP.