

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**

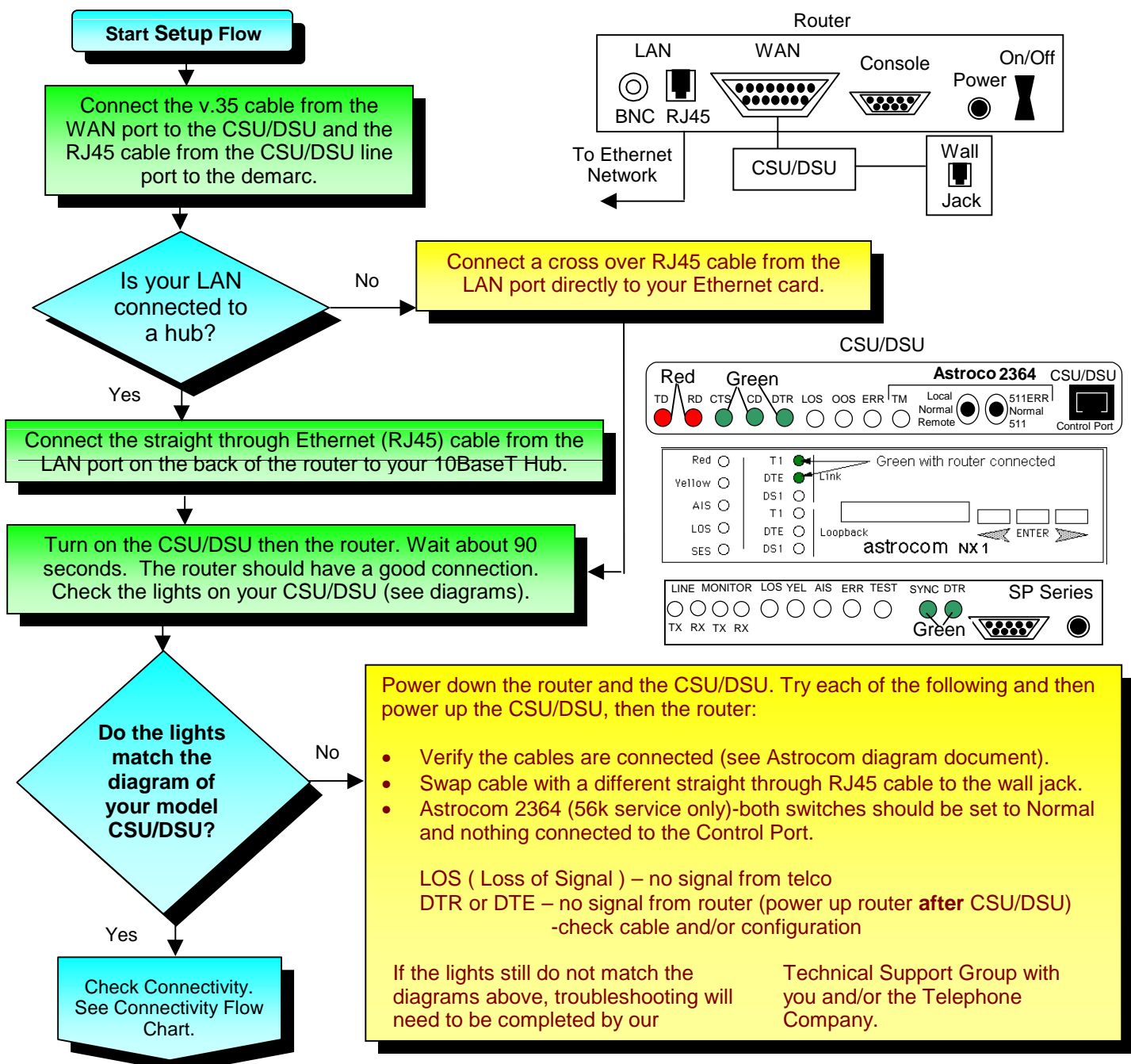
Setup: Proteon GlobeTrotter 60 – Leased Line

Instructions for connecting your Proteon GlobeTrotter 60 Router:

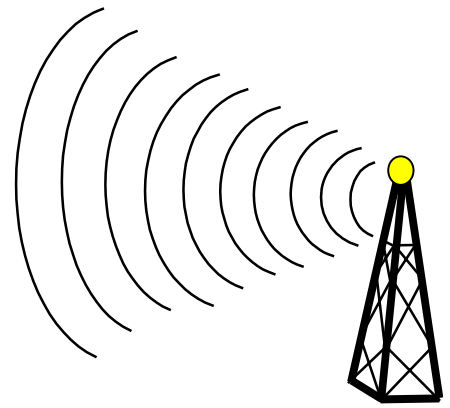
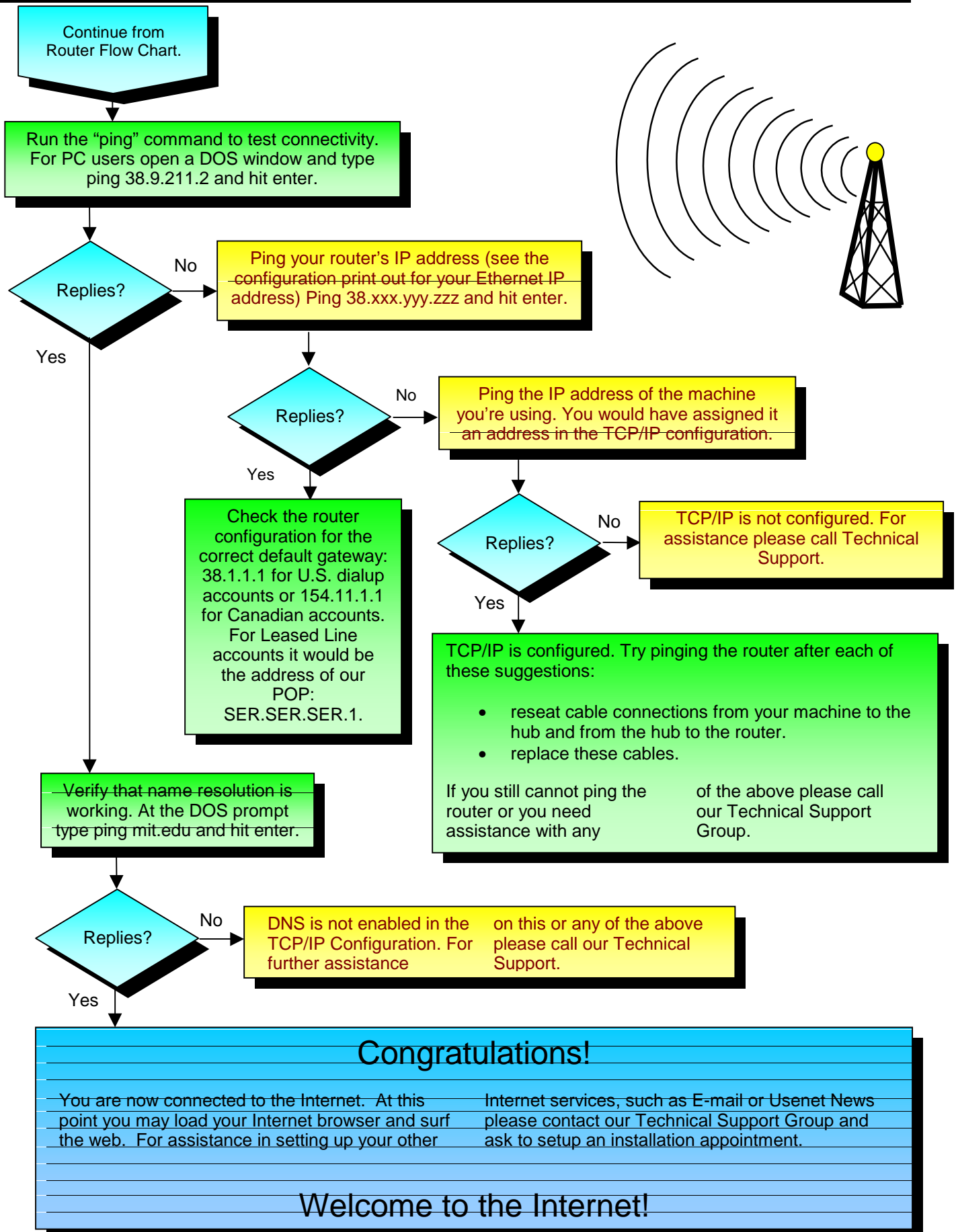
Prerequisites: Please run through the following flowchart to connect your equipment prior to scheduling your initial appointment with our Installations Group.

- Local Area Network (LAN) already setup
- TCP/IP configured on the individual workstations
- Circuit installed and tested - you will receive a message from us asking you to call for your installation appointment. Equipment should not be connected until this message is received.

Your router has been shipped to you preconfigured. Please check the configuration print out to verify that your Serial IP address and the DLCI number for your connection has been included. Also, when the connection is up and running, don't forget to change the router password.



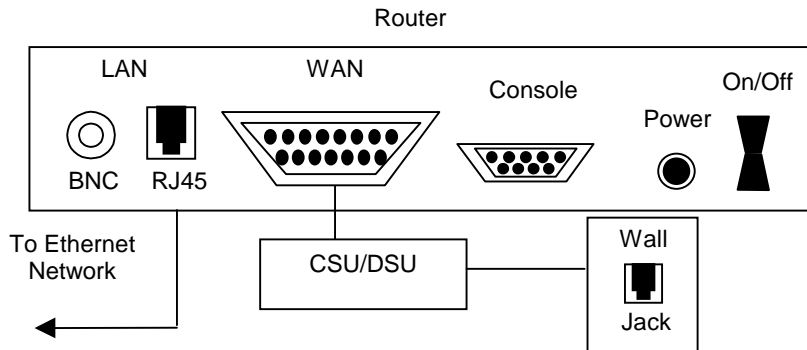
Connectivity:



Configuring the Proteon GlobeTrotter 60 – Leased Line

If you received the router from us it should be preconfigured. You can telnet into the box using the default account of admin with the password of letmein.

If not preconfigured you can connect a console to the console port of the router. A null modem adapter is provided. Connect the Null Modem to the console cable provided and then to the serial port of a PC (or Mac with proper cables) with VT100 emulation software set to 9600, 8, none 1. If the router has not been preconfigured, it will run through an interactive script upon bootup. **NOTE: Connect the console port prior to powering up the router, otherwise the router will not see that the console port is available for use.**



```
*****  
Interface Configuration  
*****
```

```
Type 'Yes, to Configure Interfaces  
Type 'No' to skip Interface configuration  
Type Quit, to exit Quick Config
```

```
Configure Interfaces? (Yes, No, Quit): [yes] <enter>  
Type 'r' any time at this level to restart Interface Configuration
```

```
Intf 0 is Ethernet
```

```
Intf 1 is WAN PPP  
Encapsulation for WAN 1 (PPP, Frame Relay): [PPP] Frame Relay  
Internal clock speed (decimal) (4800 - 2048000): [56000] <enter>
```

```
This is all configured device information:
```

```
Intf 0 is Ethernet, Connector (10baseT, 10base2) auto-configured  
Intf 1 is WAN 1 with Frame Relay Encapsulation, Connector auto-configured
```

```
Save this configuration? (Yes, No): [Yes] <enter>
```

```
Device configuration saved
```

Configuring the Proteon GlobeTrotter 60 (cont'd)

Protocol Configuration

Type 'Yes' to Configure Protocols
Type 'No' to skip Protocol Configuration
Type 'Quit' to exit Quick Config

Configure Protocols? (Yes, No, Quit): [Yes] <enter>
Type 'r' any time at this level to restart Protocol Configuration

Configure IP? (Yes, No): [Yes] <enter>
Type 'r' any time at this level to restart IP Configuration

Configuring Per-Interface IP Information

Configuring Interface 0 (Ethernet)
Configure IP on this interface? (Yes, No): [Yes] <enter>
IP Address: [] LAN.LAN.LAN.1
Address Mask: [255.0.0.0] 255.255.255.0

Configuring Interface 1 (WAN Frame Relay)
Configure IP on this interface? (Yes, No): [Yes] <enter>
IP Address: [] SER.SER.SER.SER
Address Mask: [255.0.0.0] 255.255.255.0

Per-Interface IP Configuration complete

Configuring IP Routing Information
Enable Dynamic Routing? (Yes, No): [Yes] <enter>

Routing Configuration Complete

SNMP will be configured with the following parameters:
Community: public
Access: READ-ONLY

This is the information you have entered:

Interface #	IP Address	Address Mask
0	LAN.LAN.LAN.1	255.255.255.0
1	SER.SER.SER.SER	255.255.255.0

Save this configuration? (Yes, No). [Yes] <enter>

IP configuration saved

Booting Configuration

Type 'Yes' to Configure Booting
Type 'No' to skip Booting Configuration
Type 'Quit' to exit Quick Config

Configuring the Proteon GlobeTrotter 60 (cont'd)

Configure Booting? (Yes, No, Quit): [Yes] <enter>
Type 'r' any time at this level to restart Booting Configuration

Previous Boot information

Booting Method: IBD Boot
IBD Load Name: gt60.ldc

Create an IBD boot record using this information? (Yes, No): [Yes] <enter>

Boot configuration saved
Enable Console Modem-Control? (Yes, No, Quit): [No] <enter>

Quick Config Done
Restart the router for this configuration to take effect

Restart the router? (Yes, No): [Yes] <enter>

RESTARTING THE ROUTER.....

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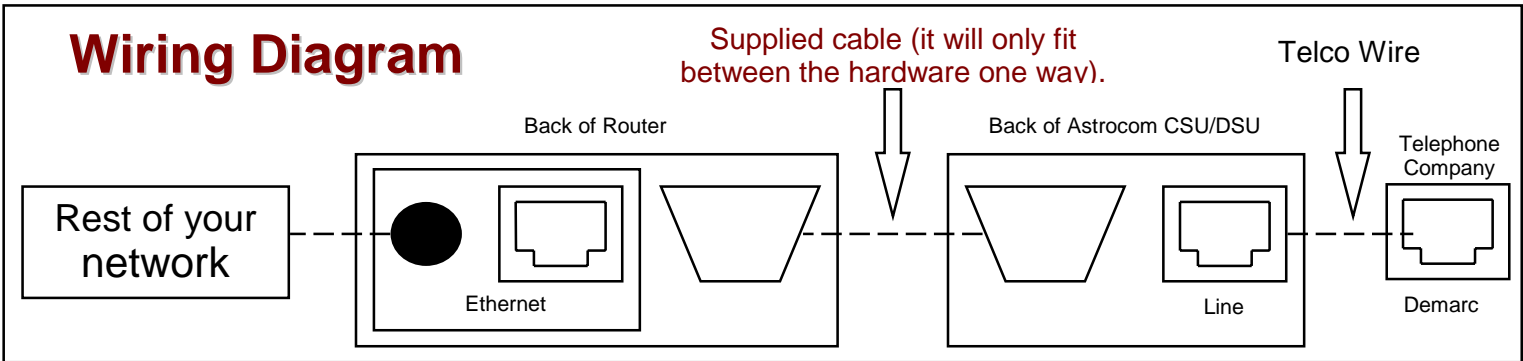
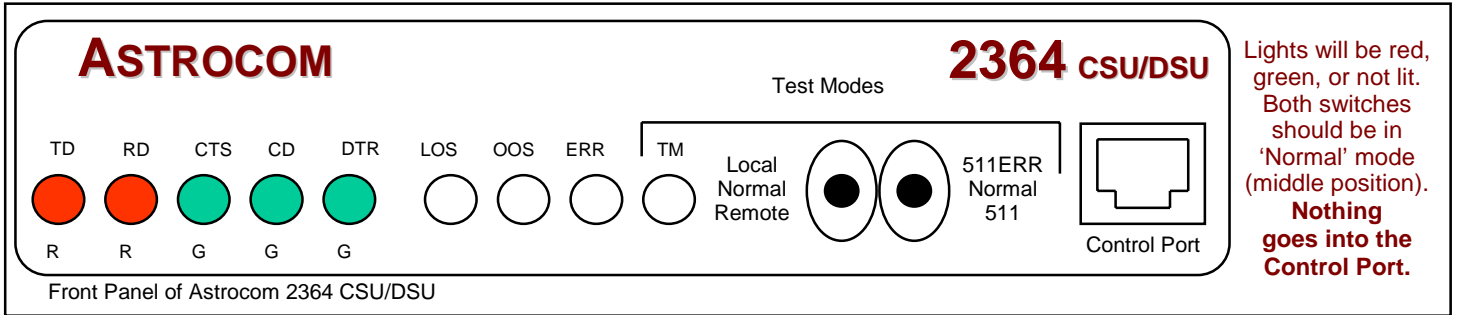
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MOS Operator Control

```
*t 6
Gateway user configuration
Config>network 1
Frame Relay user configuration
FR Config>add proto ip SER.SER.SER.1 DLCI
FR Config>exit
Config>proto IP
Internet protocol user configuration
IP config>add route
IP destination [0.0.0.0]? <enter>
Address mask [0.0.0.0]? <enter>
Via gateway at (0.0.0.0)? SER.SER.SER.1
Cost [1]? <enter>
IP config>enable rip
IP config>enable send subnet-routes SER.SER.SER.SER
IP config>exit
Config> <cntrl>-<p>
* re
Are you sure you want to restart the gateway? (Yes or [No]): yes
```

LAN.LAN.LAN.1 = Ethernet address of Customer Router
LAN.LAN.LAN = Customer Network Number
SER.SER.SER.SER = Serial address of Customer Router
SER.SER.SER.1 = Address of POP Router
DLCI = Customer DLCI

Astrocom Troubleshooting



Troubleshooting your connection and hardware:

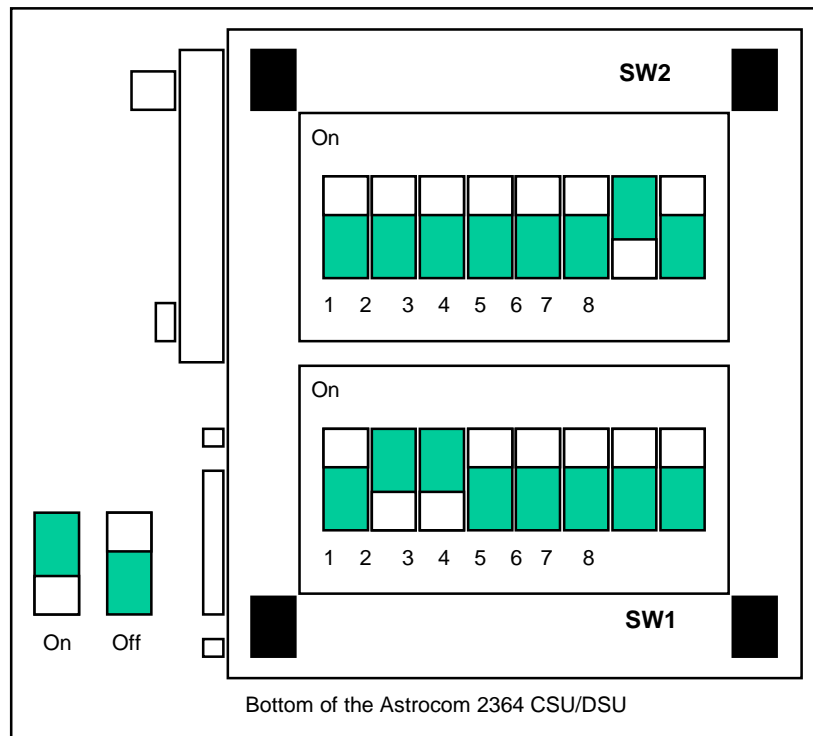
What you should see:

1) Confirm the settings on the bottom of the Astrocom.

See diagram below.

- 2) Plug in the power cord only and turn it on.
- 3) Put it into local loopback mode (put the left dip switch up).
- 4) Do hard loop (both switches to normal, put loop plug in line port).
- 5) Leave settings as above, and put 511ERR switch to up.
- 6) Move switches to normal, and now plug in actual Telco circuit.
- 7) Plug router in to the CSU and turn it on.

TD	RD	CTS	CD	DTR	LOS	OOS	ERR	TM
R	R	G	R	---	R	---	---	---
R	R	G	G	---	---	---	---	R
R	R	G	G	---	---	---	---	---
R	R	R	G	---	---	---	flash	R
R	R	G	G	---	---	---	---	---
R	R	G	G	G	---	---	---	---



Important Circuit Information

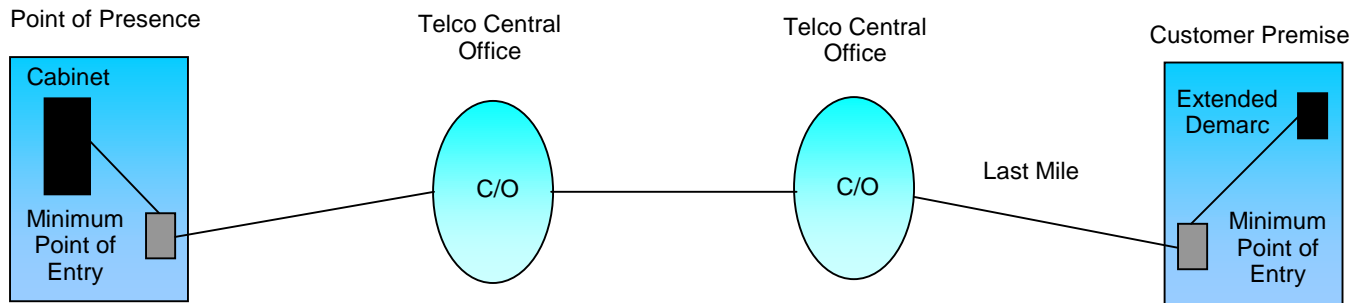
This document is designed to give you a general idea of what is involved in building a circuit for your Internet use.

You will be receiving weekly status updates which include the following dates concerning your Leased Line Circuit:

- Date the circuit was ordered by us.
- Estimated date of circuit installation (unconfirmed)
- Scheduled date of circuit installation (if provided by the telco)
- Date circuit turn up was accepted by our Network Operations Group

Once the circuit has been accepted by NOPs you will receive an “available” message indicating that the circuit is ready and to call our Corporate Installations Group to setup your initial appointment.

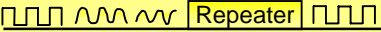
Please be aware that the circuit is not ready until you receive this message. It is often thought that when the circuit is installed at your site that all is ready to go. Sometimes it is, sometimes it is not. The following is a simple diagram of a circuit:



General Process:

1. The circuit is ordered by us with the telco. The telco “designs” the circuit from our Point of Presence (POP) to your site’s Minimum Point of Entry (MPOE).
2. The telco completes the circuit from our POP, through the Central Office(s), to your MPOE. An extended demarc needs to be run from the MPOE to your equipment room which is usually handled by the telco.
3. When the telco is done they will contact us to test the line. When test is complete and satisfactory you will be sent a message asking you to setup your initial appointment.

Some Pitfalls:

1. Due to timing, design changes may be required at one or more Telco Central Office.
2. Facilities problems occur, usually in the “Last Mile.” For example, construction requirements, repeaters required to “clean up” the signal.  Repeater
3. All looks ready to go but you still cannot get a good connection. It may be that a loop has been left at one of the Telco Central Offices not allowing the signal to reach your site. We have no way of knowing this at the time of testing but our Operations Group will work with the Telco to resolve.