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.

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**

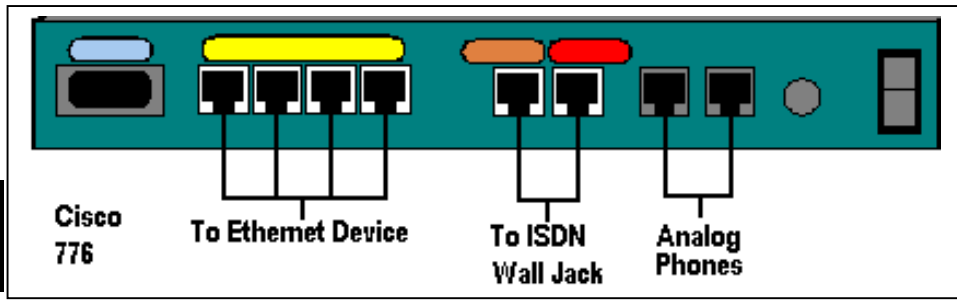
Setup: Cisco 700 Series Router for LAN-ISDN

Instructions for connecting your Cisco 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:_____ _____
- Directory ID: 7 digits of the SPID numbers excluding the area code.

Note: The Cisco 700 series routers work with our LAN-ISDN service, although they are **not** supported as certified solutions with our services. We have made the information available as a service to our customer base and are not responsible for accuracy or ongoing maintenance of those documents.



Start Setup Flow

Connect the ISDN cable from the ISDN port (S/T or U, depending on router model) to the ISDN wall jack.

Does the router have a Hub/Node switch?

Yes

When the switch is in NODE position, the router is seen as a node and connects to a hub with a straight Ethernet cable. When the switch is in HUB position, the router can connect to a network interface card (NIC) installed in a PC.

No

Cisco 766 and Cisco 776 routers have an unmanaged 4-port Ethernet hub. If you are connecting a Cisco 766 or Cisco 776 router to another Ethernet hub, you must use a crossover cable.

Power on the router. When the router is powered on, it is automatically booted, and the router attempts to establish links to the LAN and the WAN.

Is the Ready light on?

No

~~Check for green light after each of the following suggestions:~~

- ~~Verify the ISDN cable is connected.~~
- ~~Swap cable with a different straight through RJ45 cable or RJ11 cable.~~
- ~~Verify Switch Type and SPID numbers on configuration print out.~~
- ~~Have telephone company verify line activation, Switch Type and SPIDs.~~

~~If you still do not have a green light any of the above please call our or you need assistance with Technical Support Group.~~

Yes

Check Connectivity. See Connectivity Flow Chart.

Connectivity:

Continue from Router Flow Chart.

Run the "ping" command to test connectivity. For PC users open a DOS window and type ping 38.9.211.2 and hit enter.

Replies?

No

Ping your router's IP address (see the configuration print out for your Ethernet IP address) Ping 38.xxx.yyy.zzz and hit enter.

Yes

Replies?

No

Ping the IP address of the machine you're using. You would have assigned it an address in the TCP/IP configuration.

Yes

Check the router configuration for the correct default gateway: 38.1.1.1 for U.S. dialup accounts or 154.11.1.1 for Canadian accounts. For Leased Line accounts it would be the address of our POP: SER.SER.SER.1.

Replies?

No

TCP/IP is not configured. For assistance please call Technical Support.

Yes

TCP/IP is configured. Try pinging the router after each of these suggestions:

- reseat cable connections from your machine to the hub and from the hub to the router.
- replace these cables.

If you still cannot ping the router or you need assistance with any of the above please call our Technical Support Group.

Verify that name resolution is working. At the DOS prompt type ping mit.edu and hit enter.

Replies?

No

DNS is not enabled in the TCP/IP Configuration. For further assistance on this or any of the above please call our Technical Support.

Yes

Congratulations!

You are now connected to the Internet. At this point you may load your Internet browser and surf the web. For assistance in setting up your other Internet services, such as E-mail or Usenet News please contact our Technical Support Group and ask to setup an installation appointment.

Welcome to the Internet!

Configuring the Cisco 700 Series Router for LAN-ISDN

Setup:

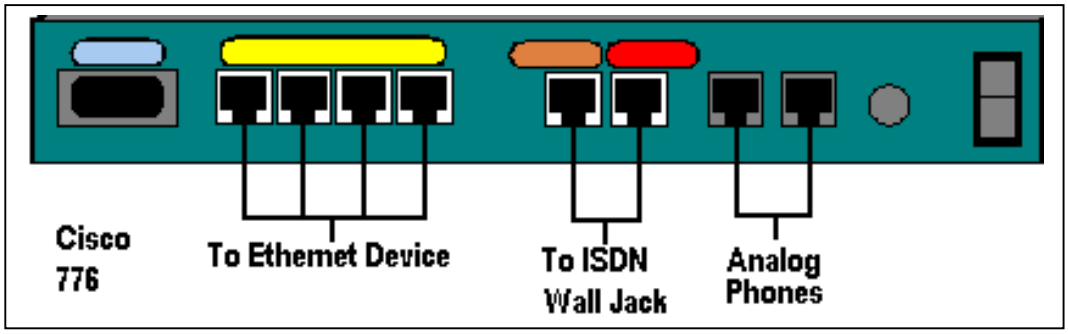
To setup your Cisco 700 Series router the following cable connections should be made:

1. Connect the Ethernet Cable from the machine's Ethernet card to one of the Cisco 700's yellow Ethernet (10BaseT) ports.
2. Connect the ISDN cable from the ISDN port on the back of the Cisco 700 to the ISDN wall jack.
3. Connect the power cord to the power supply. Wait a few minutes for the Cisco 700 to finish its diagnostics test, then check the front panel for link lights.

Note: If you're Ethernet cable is connected to an external Hub, be sure to depress the Uplink button.

Hooking up a Console to the Netopia:

To start a console session, you must connect the blue DB-9-to-DB-9 serial cable from your terminal to the rear-panel port labeled CONFIG. Be sure your emulation software is set to VT100, 9600 Baud, 8 Bits, 1 Stop Bit, No Parity and Flow Control to Hardware.



Configuration:

To configure a LAN-ISDN account, you need only change the parameters that are always set in the router to match individual needs. Stated another way, the router has a huge configuration and it is always present. We need only modify it slightly to get it to work. It is also set up in levels and uses the CD command to go from level to level.

Ethernet info is under USER LAN, while WAN is setup under an arbitrary USER, which will be called USERNAME.

There are some "profiles" associated with the Cisco 700 series that are always intact. These profiles must be disabled; to do that use the following procedure:

```
CD INTERNAL
RESET USER INTERNAL
```

The router will ask if you are sure and may object; just answer "Yes" and hit Return.

```
CD STANDARD
RESET USER STANDARD
```

Again, the router will ask if you are sure and may object; just answer "Yes" and hit Return.

The following are all system parameters that are set from the root or base level:

```
CD SET SCREENLENGTH 20
SET COUNTRYGROUP 1
SET MULTIDESTINATION ON
SET SWITCH [SWITCH TYPE]
SET 1 SPID [SPID 1]
SET 1 DIRECTORYNUMBER [DIR 1]
SET 2 SPID [SPID 2]
SET 2 DIRECTORYNUMBER [DIR 2]
SET AUTODETECTION ON
SET BRIDGING OFF
SET SPEED AUTO
SET SYSTEMNAME [ROUTERNAME]
```

The following are modifications to the default configuration that will keep the connection up for 10 min / 600 seconds before dropping due to inactivity:

```
TIMEOUT 1 DURATION 600
TIMEOUT 2 DURATION 600
```

The following is the Ethernet setup. We only need to turn on routing and set IP and mask:

```
SET USER LAN
SET IP ROUTING ON
SET IP ADDRESS [LAN IP ADDRESS]
SET IP NETMASK [SUBNET NETMASK]
```

Setup the dialup profile, including number to dial, username and password:

```
SET USER PSINET
SET PROFILE ID 000000000000
SET PROFILE POWERUP ACTIVATE
SET PROFILE DISCONNECT KEEP
SET BRIDGING OFF
SET 1 NUMBER [1st POP NUMBER]
SET 2 NUMBER [1st POP NUMBER]
set 1 BACKUPNUMBER [2nd POP NUMBER]
set 2 BACKUPNUMBER [2nd POP NUMBER]
SET IP ROUTING ON
SET IP ADDRESS 0.0.0.0
SET IP NETMASK 0.0.0.0
SET IP FRAMING NONE
SET IP ROUTE DEST 0.0.0.0/0 GATEWAY 38.1.1.1 PROPAGATE ON COST 1
```

NOTE: Do not cut and paste the following two lines: **TYPE THEM IN MANUALLY!**

```
SET PPP CLIENTNAME [DIALUP/RADIUS USERNAME]
SET PPP PASS CLIENT [DIALUP/RADIUS PASSWORD]
```

To setup the telnet password, enter the following:

```
SET SYSTEM PASSWORD [TELNET PASSWORD]
```