OFFICECONNECT® ISDN LAN MODEM RELEASE NOTES FOR RELEASE 5.1.0

This release note describes the new features of the OfficeConnect ISDN LAN Modem (3C892) as part of release 5.1.0 and serves as an addendum to the current *Getting Started Guide* and *User Guide*.

- Support for 10 Workstations to the WAN
- Automatic Call Initiation Control
- Support for Internet Applications and Games (TCP/UDP applications)
- Reserving DHCP Addresses
- Alternate and Multilink Dialing Option
- Supplementary Voice Services
- Support for PPTP
- Distinctive Ringing
- Miscellaneous Changes

Support for Ten Workstations to the WAN

The ISDN LAN Modem's four 10BASE-T Ethernet connection are now expandable to ten connections by adding an eight port 10BASE-T Ethernet hub as shown in Figure 1.

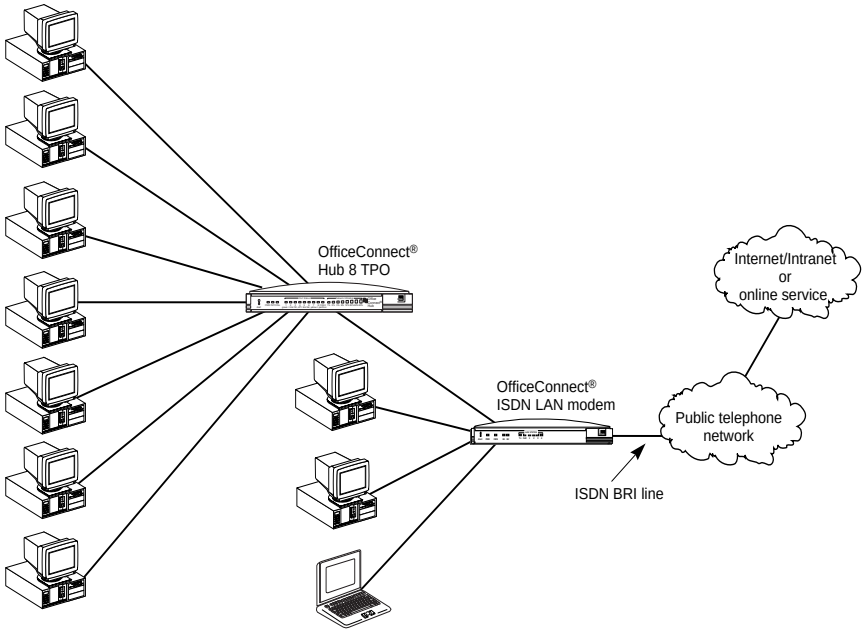

Figure 1 Local Networking with Access to the Internet

Connecting to Another Ethernet Hub

If you want to connect to another Ethernet hub to add up to ten users for WAN access, do the following. Note that the ten users currently configured in the ISDN LAN Modem's Workstation Parameters profile can have WAN access.

Before You Begin

In addition to another 10BASE-T Ethernet hub, you will need a 10BASE-T Ethernet cable if one was not provided with the other hub. If your other hub has an MDI/MDIX or equivalent switch, you will need a straight-through cable. If your hub does not have an MDI/MDIX switch, you will need a cross over Ethernet cable.

1 Insert one end of the 10BASE-T Ethernet cable into one of the four LAN ports on the back of the ISDN LAN Modem, as shown in Figure 2.

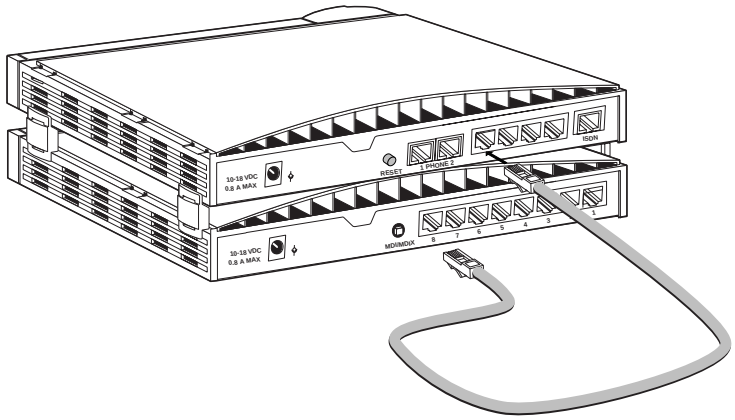

Figure 2 10BASE-T Ethernet LAN Connection

2 Insert the opposite end of the cable into a10 BASE-T Ethernet port on the other Ethernet hub.

If you are connecting to an OfficeConnect Hub 8/TPO, insert the opposite end of the Ethernet cable into port 8 and then set the MDI/X switch to MDI (that is, pressed in).

If the other Ethernet hub is an eight-port hub, then ten users are able to connect to these two hubs and access the LAN. One 10BASE-T port on each hub is used to make the connection.

Automatic Call Initiation Control

Allow Automatic Call Initiation has been added to the service provider profile screens to allow flexibility with automatic call initiation.

It is recommended that you leave the default setting which is *Yes*. Therefore no configuration is required.

If you selected *No*, you would have to manually launch a call (via the Manual Calling screen in the WebWizard) to this service provider every time you want to connect. You may want to set this field to *No* if your calls are being connected unintentionally as a result of packets generated by your workstations.

To change the default setting, do the following.

1. Go to the ISDN LAN Modem's main configuration page (http://3com.OC.LANmodem/mainpage).
2. Click *Service Providers*.
3. From the drop-down list box, select the service provider for which you would like to change the automatic call initiation setting.
4. Click *Select*.
5. Under Miscellaneous, find the *Automatic Call Initiation* field and change the setting as desired.
6. Click *Submit*.

Support for Internet Applications and Games

Previously, some Internet games and applications did not work properly with the ISDN LAN Modem. The following options have been added to the service provider profile screens to support applications that use the User Datagram Protocol (UDP)/Transmission Control Protocol (TCP).

While a number of Internet applications and games work with the ISDN LAN Modem, the following have been successfully tested and work when the options listed later in this section are left to their default settings.

- CuSeeMe 3.1 (White Pine)
- Newsreader 3.02 (Netscape)
- NetMeeting 2.1 (Microsoft)
- Quake II 1.09 (ID Software)
- Real Player, includes Real Audio and Real Video 5.0 (Real Networks)
- VDO Live 3.02 (VDO Net Corp.)

Look for the latest list of Internet applications and games that are interoperable with the ISDN LAN Modem at **`http://www.remoteaccess.3com.com/support/docs/lanmodem`**.

For both options, it is recommended that you leave the default setting. Therefore, no configuration is required.

Allow Automatic Incoming NAT.

For Allow Automatic Incoming NAT, leave the default setting which is *Yes*.

The ISDN LAN Modem delivers all unsolicited TCP/UDP packets to the workstation currently communicating with the remote host that has generated these packets. If you set this field to *No*, all unsolicited TCP/UDP packets are delivered to the default workstation.

Default Workstation for Incoming Packets.

In the *Default Workstation for Incoming Packets* field, specify the workstation to which all unsolicited TCP/UDP packets should be delivered.

Note that if the *Allow Automatic Incoming NAT* field is set to *Yes*, the ISDN LAN Modem first attempts to deliver the unsolicited TCP/UDP packets to the workstation currently communicating with the remote host that has generated these packets. Only if no such workstation is found, the packets are delivered to the specified default workstation.

To change the default setting for either of these two parameters, do the following.

1. Go to the ISDN LAN Modem's main configuration page (http://3com.OC.LANmodem/mainpage).
2. Click *Service Providers*.
3. From the drop down list box, select the service provider for which you would like to change the default workstation.
4. Click *Select*.
5. Under Miscellaneous, find the appropriate option and then change the setting as desired.
6. Click *Submit.*

Reserving DHCP Addresses

If you have some workstations on your LAN with static IP addresses and others on the same LAN with dynamic IP addresses, it is recommended that you reserve the static IP address for each workstation in the DHCP server to ensure that they are not dynamically assigned to another workstation.

Reserve DHCP addresses as follows.

1. Go to the ISDN LAN Modem's main configuration page (http://3com.OC.LANmodem/mainpage).
2. Click the *Workstations* graphic.

   The Workstation Selection window appears.
3. From the Workstations drop-down list box, select the Workstation for which you would like to reserve the IP address on the DHCP server.
4. Check the box labeled *Reserved*.
5. Click *Submit.*

Alternative & Multilink Dialing Option

When configuring additional service providers such as an ISP or a connection to a private network, you can now specify whether the second telephone you are configuring is an alternative number to dial, in case the first number is busy, or whether both numbers must be dialed because you want a Multilink PPP call and your provider requires that you dial two telephone numbers to do so.

For the Multilink option, you do not have to add a second telephone number if your ISP does not require you to do so, nor do you have to enter the same telephone number twice.

To specify how the second telephone number is used, do the following.

1. Go to the ISDN LAN Modem's main configuration page (http://3com.OC.LANmodem/mainpage).
2. Click *Service Providers*.
3. From the drop-down list box, select the service provider for which you would like to specify a second telephone number.
4. Click *Select*.
5. Under Telephone Number, select one of the following.

   Select *Alternative* if you want to enter a second, alternative telephone number for your ISP that will be automatically dialed (if, for example the first number is busy). Then, enter the alternative telephone number in the second *Number* field.

   Select *Multilink* if your ISP requires you to dial two telephone numbers to establish a Multilink PPP call and then enter the second telephone number in the *Number* field. In most cases a second telephone number is not required for a Multilink call.
6. Click *Submit*.

Supplementary Voice Services

The ISDN LAN Modem supports the following supplementary voice services.

- Call Waiting
- Call Conference (Three-Way Calling)
- Call Transfer
- Caller ID Blocking
- Call Forwarding
- Message Service

Before You Begin

In order to use these services, they must also be supported on your ISDN line. Refer to the *Ordering ISDN for the ISDN LAN Modem* technical note (**`http://www.remoteaccess.3com.com/support/docs/lanmodem`**) and then call your telephone company if you want to have these services added.

To use Call Conference, as well as Call Transfer, your ISDN line must support Flexible Calling. To use ISDN Call Waiting, your ISDN line must support Additional Call Offering (ACO). Additional line configuration may also be required for Caller ID Blocking, Call Forwarding and Message Service. Check with your telephone company to determine whether or not these services are supported. Note that there may be an extra charge to support these features.

Understanding Flexible Calling

Flexible Calling (also known as Flexible Call Offering (FCO)) is an additional service added to your ISDN line to allow you to use voice features such as Call Conference (Three Way Calling), Hold, Drop, Transfer and Message Service on telephones connected to the ISDN LAN Modem's phone ports. If you are not sure whether your ISDN line supports Flexible Calling, check with your telephone company.

In some cases your telephone company may enable Flexible Calling on your first telephone number only. You may need to specifically request that these services be enabled on your second telephone number as well.

Configuring FCO on the ISDN LAN Modem

Once Flexible Calling is provided on your ISDN line, you can either enable or disable Flexible Calling (that is, all of the associated voice features) on the ISDN LAN Modem on a telephone number basis.

By default, Flexible Calling is enabled on telephone number 1 and disabled on telephone number 2. If your ISDN line supports Flexible Calling only on the first telephone number, you should leave this default setting as is. If your ISDN line supports Flexible Calling on both telephone numbers, you may want to enable Flexible Calling on telephone number 2 so that you can use Call Conference and Call Transfer from telephones connected to either ISDN LAN Modem phone port.

To enable or disable Flexible Calling, do the following.

1. Go to the ISDN LAN Modem's main configuration page (http://3com.OC.LANmodem/mainpage).
2. Click *ISDN Parameters* or the wall outlet icon.
3. Next to *Flexible Calling Enable*, select the telephone number check box(es) for which you would like Flexible Calling enabled. Or, clear the telephone number check box(es) for which you would like Flexible Calling disabled.
4. Click *Submit*.

Flexible Calling Codes

Each Flexible Calling feature (that is, Conference, Transfer, Drop and Message Service) has a code associated with it that allows that particular feature to be enabled or disabled. By default these features are all enabled. The value displayed is the code required for this service to work between the ISDN LAN Modem and your telephone company. It is recommended that you leave the defaults unless your service provider is Pacific Bell, your telephone company has other required values or you want to disable any of these features.

To change these values, do the following.

1. Go to the ISDN LAN Modem's main configuration page (http://3com.OC.LANmodem/mainpage).
2. Click *ISDN Parameters* or the wall outlet icon.
3. To disable a feature, next to *Codes*, enter 0 in the box to the right of the feature you want to disable. To change the values, enter the appropriate value (provided by your ISDN service provider) in the appropriate box. Pac Bell users should enter 6 for Conference, 7 for Transfer, 8 for Drop and 9 for Message Service.
4. Click *Submit*.

Message Service

If you subscribe to voice mail on your ISDN line, then you have message service which tells you that you have new messages in your voice mail box. By default, Message Service is disabled. You must enable this feature on the ISDN LAN Modem to use it.

The Alert LED on the front of the ISDN LAN Modem flashes when there are new messages in your voice mail box. Note that the Alert LED also flashes during firmware download. The flash sequence distinguishes the difference— faster during firmware download and slower for message indication.

You are also notified when you lift the receiver and hear a stutter tone (that is, multiple short tones in quick succession). Note that this tone may be provided by either your telephone company or the ISDN LAN Modem.

To change the default setting, do the following.

1. Go to the ISDN LAN Modem's main configuration page (http://3com.OC.LANmodem/mainpage).
2. Click *ISDN Parameters* or the wall outlet icon.
3. Locate *Message Service Enable*, and then select the check box for the telephone number(s) for which you want Message Service enabled, or clear the boxes for the telephone number(s) for which you want Message Service disabled.
4. Click *Submit*.

Call Waiting

Call Waiting allows you to place an active call on hold in order to answer another incoming call on the same telephone number. By default, Call Waiting is enabled on port 1 and disabled on port 2.

To change the default setting, do the following.

1. Go to the ISDN LAN Modem's main configuration page (http://3com.OC.LANmodem/mainpage).
2. Click *ISDN Parameters* or the wall outlet icon.
3. Locate *Call Waiting Enable*, and then clear the check box for the port(s) for which you want Call Waiting disabled, or check the box for the port(s) for which you want Call Waiting enabled.

   You should disable Call Waiting on a port(s) to which a fax machine is connected so that any fax calls are not interrupted.
4. Click *Submit*.

How to Use Call Waiting

To use Call Waiting, do the following.

Table 1 How to Use Call Waiting

How Do I	Do This
Answer a call using Call Waiting?	When you hear the Call Waiting tone, press and release the switch hook button to put the first call on hold and connect to the second call.
	If you do not answer the second call, the caller will hear a ring.
Switch back to the first call	To put the second call on hold and switch back to the first call, press and release the switch hook button.
Toggle back and forth between the two calls	Press and release the switch hook button.
End a call when you hear the Call Waiting tone (instead of putting the call on hold)	Hang up the phone and wait for it to ring. (The phone rings to indicate that there is an incoming call and the B-channel LED flashes.)
	You are connected to the second call when you pick up. Or, if you already have a call on hold while on an active call and you want to end the active call before returning to the call on hold, hang up the phone and wait for it to ring back. Pick up the phone to reconnect to the call on hold.
Disconnect a call on hold	To disconnect a call on hold, make the call on hold active by pressing and releasing the switch hook button. Then, simply hang up the phone to drop the active call. If the other caller is still waiting on the line, then the phone will ring.
What if the active caller hangs up from the far end?	If the active caller hangs up from the far end, the call on hold will remain on hold until you retrieve it by either pressing and releasing the switch hook button or by hanging up the phone and then answering it when it rings.
What if the caller on hold hangs up from the far end?	If the caller on hold on the far end hangs up, you will receive no notice. When you try to access that caller, either you will remain on the same call (if you do not have Flexible Calling) or you will get a dial tone (if you have Flexible Calling and it is enabled).

The ISDN LAN Modem can support a maximum of two simultaneous voice calls per phone port. If you already have two calls up (one active and one on hold) and a third call comes in, that caller hears the "user busy" tone unless you have voice mail in which case the call is sent to your voice mail box.

Call Conference (Three-Way Calling)

Call Conference (also referred to as Three-Way Calling or TWC) allows you to add another party to an existing call. This feature can be used whether you have received or have placed the first call.

You cannot conference two incoming calls. You must initiate the second call in order to activate Call Conference.

Table 2 How to Use Call Conference

How Do I	Do This
Place a new conference call?	While the first call is active, press and release the switch hook button. The B channel LED light flashes to indicate that the first call is on hold, and you will hear a dial tone. Then dial a third party number.
	After the third party has answered, press and release the switch hook button to connect all three parties.
Drop the last party added to the conference call?	To drop the last party added to the conference call, press and release the switch hook button.
Abort the second call and switch back to the first call?	If the dialed party is busy, press and release the switch hook button to cancel the call and reconnect to the first call.
	If you dialed a wrong number, or the far end does not answer, hang up the phone to abort the attempted call. The phone will then ring, indicating that the first call is on hold. Answer the phone to reconnect to the first call.
What if I hear a dial tone when I attempt to conference all three parties?	A dial tone indicates that one of the parties has dropped their call. Press and release the switch hook button to return to the previously active call. You can then conference a third party as described previously.
What if the telephone rings after I hang up?	While you try to conference a call, the active call will be put on hold to allow you to dial a new call. If you hang up the phone before the call is connected, the telephone will ring to let you know that you still have a call on hold.

Call Transfer

Call Transfer is a voice call feature that allows you to transfer a call to a third party. This feature can be used whether you have received or have placed the first call.

Table 3 How to Use Call Transfer

How Do I	Do This
Place a new call?	While the first call is active, press and release the switch hook button, wait for the dial tone, and then dial a third party number.
	After the third party has answered, press and release the switch hook button to conference all three parties, and then hang up the telephone to transfer the call.
Cancel the second call and switch back to the first call?	If the dialed party is busy, press and release the switch hook button to cancel the attempted call and reconnect to the first call. If you hang up, the phone will ring back, indicating that you have a call on hold.
	If you dialed a wrong number, or the far end does not answer, hang up the phone to abort the attempted call. The phone will then ring, indicating that the first call is on hold. Answer the phone to reconnect to the first call.

Caller ID Blocking

To allow or prevent your telephone number from being displayed on a remote Caller ID device, do the following. By default your telephone number is displayed.

Not all telephone companies support Caller ID blocking. Check with your telephone company. If Caller ID blocking is not provided on your ISDN line, then you cannot use this feature.

1. Go to the ISDN LAN Modem's main configuration page (http://3com.OC.LANmodem/mainpage).
2. Click *ISDN Parameters* or the wall outlet icon.
3. Next to *Outgoing Caller ID Block*, select the port number box(es) for which you would like Caller ID blocking enabled. Clear the port number box(es) for which you would like Caller ID blocking disabled.

   For instance, if you check the box labeled Port 1, calls made from the telephone connected to that port will not display the telephone number to the user at the far end.
4. Click *Submit*.

Call Forwarding

Call Forwarding is a voice service provided by your telephone company that lets you forward your incoming calls to another telephone number. To use this feature, enter the appropriate touch-tone key(s) (as described by your telephone company) from the telephone attached to your ISDN LAN Modem. These tones are passed through the ISDN LAN Modem.

When a call is placed to a phone connected to the ISDN LAN Modem, the forwarded call is announced by a short ring on the telephone from which the Call Forwarding tones were entered. Note that you cannot answer the call. The ring is a reminder that Call Forwarding is still in effect.

To use call forwarding successfully, it is recommended that you configure each phone port to be associated with only one ISDN telephone number. For instance, associate telephone number 1 with port 1 exclusively, and telephone number 2 with port two exclusively. You can make this change by clicking Call Routing from the ISDN LAN Modem home page and then checking/clearing the appropriate boxes. If you have more than one telephone number routed to a single port, this can cause confusion regarding which telephone number has been forwarded. Note that this also applies if you have voice mail.

Point-to-Point Tunneling Protocol (PPTP)

The ISDN LAN Modem supports PPTP, a protocol that allows for Windows 95 and Windows NT systems to establish a secure multi-protocol connection to remote, private networks via your locally-dialed ISP account. This eliminates long distance charges that would occur from directly dialing to a remote private network.

General requirements for using PPTP

To use PPTP you need the following:

- Windows 95 or Windows NT operating system
- Dial-Up Networking version 1.2 (has the required software VPN adapter)

Multiple PCs on the LAN can access a remote private network using (which contains the required MS VPN adapter) via a single ISP account. Any networking protocols such as IPX and NetBEUI can be supported transparently through the tunnel. Note that the protocol required for the private network must be installed on each Windows 95 and NT- based client.

The remote private network must have a PPTP tunnel server such as a Windows NT server with one port accessible from the Internet and one port accessible from the private network.

ISDN LAN Modem Requirements for PPTP

Similar to PPP, there is no required configuration on the ISDN LAN Modem to use PPTP. However, you must have an ISP configured on the ISDN LAN Modem.

The ISDN LAN Modem launches a call to the first ISP listed in the Service Providers window. If you have more than one ISP listed, make sure that the ISP to which you want to connect is the only ISP checked in the Workstations parameter screen.

Distinctive Ringing

You can configure the ISDN LAN Modem to distinguish between telephone rings. When this feature is enabled, the ringing pattern for calls to telephone number one is different from calls to telephone number two.

By default this feature is disabled. To enable, do the following.

1. Go to the ISDN LAN Modem's main configuration page (http://3com.OC.LANmodem/mainpage).
2. Click *ISDN Parameters* or the wall outlet icon.
3. Locate *Distinctive Ringing* and then click the box labeled *Enable*.
4. Click *Submit*.

Miscellaneous Changes

Please note the following additional changes:

Date and Time Setting

The ISDN LAN Modem's date and time are set according to the workstation that is first to access the ISDN LAN Modem main page after a unit reset.

Keeping the Caller ID Date and Time Accurate

If the date and time on a Caller ID unit that is connected to one of the ISDN LAN Modem's analog ports is not accurate, do the following. Connect a PC that has the correct time to the ISDN LAN Modem and then turn the power off and then on again. Once it's powered up, launch your web browser and go to the LAN Modem's main page at http://3Com.OC.LANmodem/mainpage.

Caller ID Name Display

If you have a caller ID unit connected to one of the ISDN LAN Modem's phone ports that is capable of displaying the caller's name, that name is now displayed.

Not all telephone companies display the Caller ID name on a residential ISDN line. Check with your telephone company. If the Caller ID name is not provided on your ISDN line, then you only see the Caller ID telephone number.

When both B channels are in use, Caller ID is not available. Currently, one B channel must be available to provide the Caller ID information.

More Statistics

Statistics such as system date and time have been added. To view statistics, click *Statistics* from the ISDN LAN Modem main page.

The term PC has been replaced with Workstation

In the WebWizard graphic located on the ISDN LAN Modem main page, the name associated with the computer icon and listed in subsequent screens has been changed from PC to Workstation.