

# FAXserve 5.0 for NetWare and GroupWise

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# 1

## Chapter

# INTRODUCING FAXSERVE

In this chapter, you will learn:

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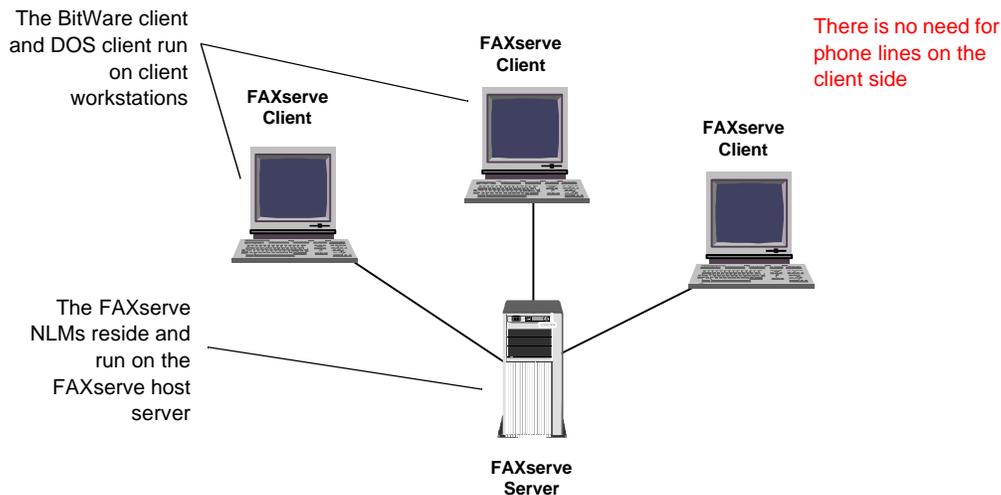
- |       |                                  |
|-------|----------------------------------|
| 1-2 > | About the client/server design   |
| 1-4 > | About FAXserve's main features   |
| 1-8 > | FAXserve and GroupWise           |
| 1-8 > | About the components of FAXserve |

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## Understanding the client/server design

FAXserve's design is based on the Client/Server model so that it functions efficiently on a Novell NetWare LAN and is able to centralize fax services.

FAXserve components can be broken down into two functional groups: the client, and the server. The client is composed of DOS and Windows executable files which are executed at the user's (client) workstation. The server is composed of NetWare Loadable Modules (NLMs) which reside on and are executed from the NetWare file server designated as the FAXserve host server. Note that each server that has FAXserve installed is called a host server.



This client/server design provides distinct advantages to FAXserve and you. It allows you to access all the server modules on your network with one client module, as well as to use the host server to send and receive faxes without dedicating a workstation to perform the process.

The Windows client offers:

- Easy to use, point and click functionality.
- the ability to send, receive, print, and manage all faxes from one location.

1

The capabilities of the DOS client are not as advanced as the Windows client. It uses menus, lists, and forms and requires navigation through these options and functions.

Due to DOS memory limitations, FAXserve 5.0 does not support the FAXserve DOS client when installed in NDS mode. The DOS Client will operate in Bindery Emulation Mode.

Cheyenne offers you advanced fax services with the integration of FAXserve and Novell's GroupWise. The integration between the two allows you to send and receive faxes in an e-mail format. We also combine integrated GroupWise faxing and desktop faxing with popular Windows applications into one solution.

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## FAXserve features

FAXserve provides centralized fax services for Novell NetWare local area networks (LANs) running NetWare 3.12 and above. NetWare Directory Services (NDS) is fully supported in NetWare 4.1x configurations (except with the DOS client as mentioned previously). Authorized users send their faxes from workstations transparently to a queue on the server. Notification is given to the user at the workstation when the fax has been transmitted.

Coupled with GroupWise 4.1 or 5.0, FAXserve provides advanced fax services. The integration between the two products allows users to easily send and receive faxes as e-mail through the GroupWise Universal Mailbox.

The supervisor or assigned administrator can look at incoming faxes and route them to users' MAIL directories (i.e. a USER subdirectory under the FAXserve home directory) or, alternatively, faxes can be printed and distributed. All FAXserve users have their own mail directories on the FAXserve host server from which viewing and printing of incoming faxes can be accomplished. With the addition of Novell Embedded System Technology (NEST) protocol, faxes can be sent directly to a user's pre-set CSID.

The following features are integral to FAXserve:

- **Security** - Only users authorized by the supervisor can have access to FAXserve's services. Logs are kept of all faxes sent and the user that sent each one. Confidentiality is ensured since faxes are routed to your NetWare MAIL directory and NetWare security is preserved. If NEST is enabled, incoming faxes are directly routed using your CSID.

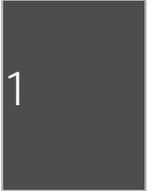
- **Centralized fax services** - All faxes are transmitted from and received at one location, the server.
- **Accounting** - Do you charge for fax services? FAXserve has accounting features which will compute the cost of each fax. You can configure faxing costs by time, number of pages sent, or by a fixed cost for each fax. A dBASE-compatible transaction database can be analyzed for billing purposes.
- **Reduced cost** - FAXserve can save users money in several ways. Overall cost should be reduced by tracking faxes and discouraging non-business use. Many offices have several fax machines to handle the volume. The cost of fax boards is low in comparison to full-featured fax machines. And, FAXserve has more features than a fax machine!  
In addition, workstation-based products need a dedicated workstation (extra cost), while server-based FAXserve does not. Just add modems to your current file server and FAXserve will do the work in the background, using the extra processing power that is normally under-used.
- **Scheduling** - FAXserve lets you decide when to send your fax. Is it more appropriate to send the fax to a foreign country when it's daytime there? Or is it more cost-effective to transmit a fax when long-distance rates are lower? You can even schedule a fax to be sent next week or next month while you're thinking about it now.
- **Run-time or host server configuration** - FAXserve gives you the flexibility of installing its NLMs on a run-time server or a host server. Run-time servers are designated for FAXserve's

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hardware, and allow you to perform any maintenance on your server without having to sever connections to the host.

- **GroupWise & MHS E-mail compatibility** - FAXserve supports both Novell's GroupWise and Message Handling System (MHS) messaging software. This e-mail compatibility allows FAXserve users to send e-mail as a fax. Therefore, if your network has UNIX or Macintosh users who can send and receive MHS and GroupWise compatible e-mail, they can also use FAXserve!
- **Command line utilities** - FAXserve contains two DOS command line utilities that allow you to fax files directly from the command line, without ever having to open FAXserve.
- **CAS-compliance** - CAS, or Communications Application Specification, is an industry standard developed to ensure the compatibility of information sent and received by software and hardware. Since FAXserve was designed to include CAS-compliant functionality, off-the-shelf CAS-compliant applications can be used to send/receive faxes.
- **Hardware flexibility** - FAXserve's design is based on a device independence concept, allowing users flexibility when choosing the fax boards and modems to use with the system. Drivers for various fax boards have been included with the software, and more will be certified over time. FAXserve's hardware independence ensures trouble-free integration of new modems.
- **Plain paper fax clarity** - FAXserve will print your faxes on HP LaserJet, Epson, postscript, and compatible printers. No more curled up,

fuzzy, hard-to-read faxes! Faxes sent by FAXserve are of super clarity since the distortion caused by scanning is eliminated.



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## FAXserve and GroupWise

FAXserve 5.0 consists of NetWare NLMs, a Windows client for administration, and a Windows Rendering Agent. It supports NDS, providing administrators with the flexibility to configure FAXserve users and services from a central location. The FAXserve GroupWise Gateway Agent is installed through the Administrator and communicates with the GroupWise Message server to obtain messages ready for faxing.

Once faxes have been sent, automatic inbound routing provides quick and easy distribution of faxes to the recipients' GroupWise Universal Mailbox.

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### The FAXserve components

FAXserve contains several components that work together to allow you to send and receive faxes. They are:

- **FAXserve NLMs** - There are several NetWare Loadable Modules (NLMs) that make up FAXserve. These NLMs are installed on your server, providing fax and print services.
- **FAXserve Administrator** - Using a Windows interface, the FAXserve Administrator program allows you and designated FAXserve "Administrators" to perform administrative and maintenance functions on your FAXserve system.
- **FAXserve Manager** - The FAXserve Manager is the DOS version of the FAXserve Administrator.
- **BitWare Client** - Using a Windows interface, the BitWare Client acts as a "front-end" to your FAXserve system. The BitWare Client allows your Windows applications users to send, view, print, and maintain their own

faxes. Each Windows workstation that will use the FAXserve system will need the BitWare Client installed.

- **DOS Client** - The DOS client allows users of DOS applications to send, view, print, and maintain their personal faxes. This is the DOS “front-end” to FAXserve.
- **FAXserve Rendering Agent** - provides accurate conversion of popular Windows and Windows 95 applications into a faxable format.
- **FAXserve GroupWise Gateway Agent** - the link between FAXserve and GroupWise.



# 2

## Chapter

# INSTALLING FAXSERVE

This chapter describes the steps necessary to successfully install FAXserve.

In this chapter, you will learn how to:

Page:

- 2-2 > Use the Installation Task Summary to prepare for your installation
- 2-3 > Determine what hardware and software you will need
- 2-4 > Upgrade your system
- 2-7 > Modem Information
- 2-11 > Prepare for a Bindery Emulation and/or NDS mode installation
- 2-17 > Install FAXserve on your server
- 2-32 > Install the Client software

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## Installation task summary

The following table summarizes the steps you need to take to install, load, and configure FAXserve successfully. Each step includes one general task that must be completed, followed by a page reference for more detailed information.

In order to install FAXserve:

Task	Explanation	Pg.#
Verify you have all the hardware and software required for installation.	Preparing for your FAXserve installation includes checking memory and disk space requirements, version of operating system software, etc. FAXserve is supported only on NetWare 3.12 and NetWare 4.1x.	2-3
Verify your modems are certified for use with FAXserve.	Refer to Cheyenne's Certified Device List to determine if a modem is certified for use with FAXserve. A Certified Device List is provided when you purchase FAXserve. You can also obtain an up-to-date copy from Cheyenne's InfoFax system, WEB site, or from Technical Support.	N/A
Upgrade to FAXserve version 5.0.	Upgrading includes changes made to NDS schema (in the 4.1x environment), etc.	2-4
Install your modems.	There are different types of modems. Go to this section to find out more about Class 2/2.0 modems, fax boards, multi-port serial boards, and installing to COM ports.	2-7
Prepare to install on NetWare 4.1x.	Installing FAXserve on a NetWare 3.12 or 4.1x server can involve configuring your host server, and configuring a runtime server, in either NDS mode or bindery emulation mode. It can also involve assigning access rights, synchronizing server, etc.	2-11
Install FAXserve.	Run the Setup program to install FAXserve to your server(s). You <b>MUST</b> also configure your modems during the installation.	2-17
Install FAXserve using Windows 95.	Specifics to installing FAXserve from a Windows 95 workstation.	2-30

## Hardware and software requirements

The following hardware and software are required to successfully run FAXserve:

	Client	Server
<b>Machine Type</b>	80386 or higher PC, PS/2, or compatible.	80386 processor or higher.
<b>RAM</b>	At least 4 MB. (8MB recommended).	16 MB for NetWare 3.12. 20MB for NetWare 4.1x. (Does not include GroupWise server requirements.)
<b>Disk Space</b>	At least 4 MB.	At least 14 MB.
<b>Fax/Modem</b>	None.	Contact Cheyenne's InfoFax service for a certified device list (see inside cover for more information).
<b>Operating System</b>	DOS v3.3 or above; Windows 3.1; Windows for Workgroups v3.11; or Windows 95	NetWare 3.12 or Netware 4.1x only.
<b>Support Files</b>	<ul style="list-style-type: none"> <li>• VLM 1.20B</li> <li>• NetWare Client 32</li> <li>• MSNDS emulation w/ Novell's NW*.DLL and NLS (Unicode table)</li> <li>• NETX 3.32 (works only with Win 3.x)</li> </ul>	CLIB 3.12d or 3.12i (with NetWare 3.12) or LIBUP9 (with NetWare 4.10) CLIB4.11 (with NetWare 4.11) (including server patches from Novell).
<b>CONFIG.SYS file</b>	We recommend FILES=40 as a minimum setting for this parameter.	Not applicable.

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## Upgrading your system



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Before installing FAXserve 5.0 over an existing installation, we recommend that you back up the NetWare server and workstations. This will allow you to restore fax images and control files if necessary.

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### Upgrading your CLIB.NLM

FAXserve requires CLIB.NLM version 3.12d, 3.12i, LIBUP9, or CLIB4.11 (see the table on the previous page). If you do not have access to them, you can upgrade CLIB with the software that is provided by FAXserve.

To upgrade your CLIB.NLM:

1. Insert the Novell Support diskette 2 into your disk drive, or access your CD-ROM.
2. Copy the file CLIB.NLM to your SYSTEM directory.

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### Upgrading to VLM 1.20b

The NetWare 4.x1 release version of VLM 1.20b provides the three files listed below.

These are self-extracting files. Simply follow the instructions in the readme for each file, copy them to a temporary directory and execute.

- NWDLL2.EXE
- VLMUP4.EXE
- WINDR3.EXE

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### Upgrading from FAXserve 3.x

The following notes are important to be aware of when upgrading from FAXserve 3.x to 5.0.

- Make sure that there are no users using FAXserve and that there are no pending transmit fax jobs when upgrading to FAXserve 5.0.
- Due to changes made to FAXserve 5.0's NDS, users running earlier versions of FAXserve's BitWare Client and Administrator programs will not be able to access a FAXserve 5.0 host server. Therefore, users who have installed the BitWare Client on their local workstations MUST update their client programs to 5.0 in order to access FAXserve 5.0 NDS services.
- If you have FAXserve 3.x installed on your system (using Bindery emulation mode) you can upgrade to 5.0 using Bindery or NDS modes. Within a NetWare 4.1x environment, FAXserve 5.0 can be installed in Bindery Emulation or NDS mode. Bindery Emulation mode in FAXserve 5.0 requires that all FAXserve users exist within a bindery context in the server.
- When upgrading a FAXserve 3.x installation in Bindery mode to FAXserve 5.0 in NDS mode, the FAXserve files of the user SUPERVISOR need to be moved to a valid NDS user object. (NDS does not know about the Bindery SUPERVISOR object.) The FAXserve installation will prompt for the name of an NDS user where the SUPERVISOR FAXserve files will be migrated to.



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We recommend that you select a non-FAXserve user for the SUPERVISOR's fax files. Otherwise, the selected user's FAXserve files will be overwritten. Note that the selected user will be a FAXserve User/Admin, but will not have "S" rights set to the Server object.

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- During migration, FAXserve requires at least the same amount of disk space as your current FAXserve system.
- Following an upgrade from FAXserve 3.x, if the NetWare Print Server or MHS server is located on the FAXserve Host Server, the installer must use the FAXserve Administrator to reconfigure the MHS Fax Services and the FAXserve Printer Configuration.
- Cheyenne does not recommend manually deleting or moving the FAX\_SERVICES\_<HostServerName>, FAX\_QUEUE\_<HostServerName> and the FAXQUEUEERUNTIME\_<RuntimeServerName> objects. Deleting or moving these objects while the FAXSERVE NLMs are loaded could cause a server abend.

## Modem(s)

Before you can install any software for FAXserve, the modem(s) must be installed on the host or runtime server. Since modems vary by manufacturer, refer to the installation instructions that came with your modem(s). To help make the installation and configuration process as trouble-free as possible, be sure to keep a record of the settings used for each board when you install them.

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In FAXserve,  
channel = modem

FAXserve uses a concept known as “channels” to represent your modems. Each modem you plan to use has a corresponding FAXserve channel. If you have four modems, you must assign four channels. Each channel has its own set of characteristics, which you, the FAXserve administrator, may set. You may set channels to serve a specific purpose such as receive only, send only, or send and receive. Channels should be configured in ascending order, and be consecutive (i.e., your first modem is connected to Channel 1, your second modem is connected to Channel 2, etc.). You will actually configure your modems during the installation process, but you should decide ahead of time how each modem will be used.

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Single channel vs.  
multi-channel  
system

A single channel system is for systems that have only one modem. A multi-channel system is for systems that have multiple modems using a multi-port serial board (such as a DigiBoard or Arnet).

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Fax hardware that  
FAXserve  
supports

Essentially, the types of fax hardware that FAXserve supports can be divided into two categories:

- Standard fax boards - internal, single and multiple channel fax boards.
- Class 2 and 2.0 modems - internal or external fax boards that can allow multiple channels.



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You cannot mix standard fax boards and Class 2/2.0 modems on your server, nor can you mix boards with different manufacturers.

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What is a fax board?

Standard proprietary fax boards (hereafter referred to simply as “fax boards”) are single or multiple channel boards that are installed directly in your FAXserve server.

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What is a Class 2/2.0 modem?

Class 2/2.0 modems are similar to fax boards in that they also contain all the technology necessary to send and receive faxes. However, unlike fax boards, Class 2/2.0 modems can be external to the server. They may be connected to the server through a multi-port serial board (also called a multi-port serial card) installed within the server.

A multi-port serial board contains multiple serial communication ports (typically 2, 4, 8, or 16), enabling connection of a separate modem to each port. This configuration makes adding new channels to FAXserve easy, since you can simply add a new modem to the multi-port serial board, eliminating the need to down the server to add new fax boards for channel expansion.



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FAXserve allows up to 32 Class 2/2.0 modems to be used per server. Because of the flexibility with Class 2/2.0 modems, your modems do not need to be the same model.

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A UART is required if using a serial port

A UART (Universal Asynchronous Receiver Transmitter) is an electronic device that transmits and receives data on a serial port. Due to the non-preemptive nature of the NetWare operating system, NetWare’s asynchronous serial

communication driver, AIOCOMX.NLM, requires that a 16550 UART exist in the serial port in order to reliably communicate at higher speeds.



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Some older machines have a 16450 UART which can cause fax transmissions to be corrupted and is incompatible with FAXserve due to this limitation.

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### Determining the UART type

Many newer PCs contain 16550 UART devices for the COM1 and COM2 ports. Alternatively, there are several board manufacturers who sell serial boards which contain the 16550 UARTs.

Most PCs contain COM1 and COM2 ports. If you are not sure which UART your server's COM1 or COM2 ports use, you can use the AIOCOMX.NLM program to display the UART type. To do this:

1. Load AIO.NLM at the console by typing:

```
LOAD AIO
```

2. Load AIOCOMX to test COM1 by typing:

```
LOAD AIOCOMX PORT=3F8 INT=4 NODE=0
```

The console will display

```
the 16XXX device detected
```

3. Unload AIOCOMX by typing: **UNLOAD AIOCOMX**

4. Load AIOCOMX to test COM2 by typing:

```
LOAD AIOCOMX PORT=2F8 INT=3 NODE=0
```

The console will display

```
the 16XXX device detected
```

---

5. Unload AIOCOMX.

6. Unload the AIO NLM by typing:

```
UNLOAD AIO
```

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FAXserve will support up to two COM ports

Class 2/2.0 modems may be connected directly to your server's serial ports, thereby eliminating the need for a multi-port serial board. However, using this type of configuration limits you to two channels (COM1 and COM2).



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Note that IRQ2 on an AT bus is actually connected to IRQ9. Therefore, if a COM port is configured for IRQ2 on an AT serial board, the port within FAXserve is configured for IRQ9. This is determined by Novell for the NetWare operating system.

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Installing multi-port serial boards

If you are using a multi-port serial board (such as a DigiBoard) and a Class 2/2.0 modem(s), install the multi-port serial board in your host server according to the board manufacturer's instructions.

When a multi-port serial board is installed during FAXserve modem configuration, FAXserve creates a file called FAXAIO.NCF in your server's SYSTEM directory. This file will contain the names of the appropriate AIO NLMs for your multi-port serial board. These NLMs will then be loaded when the FAXAIO.NCF file is executed.



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With Class 2/2.0 modems, you must run FAXAIO before loading the FAXserve NLMs. At the server console type: FAXAIO.

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## Installing FAXserve using bindery emulation

If you want to install FAXserve 5.0 on a 4.1x server using bindery emulation, review the following sections before running the FAXserve installation program.




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This installation is recommended if you want to use FAXserve's DOS components: FAXDOS, FAXSEND, or FSEND.

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FAXserve allows you to install using one of the following configurations:

- On a single server that will process all faxing operations.
- On two servers, called the Host and Runtime servers.

You must consider these options when installing for bindery emulation. Also note that this installation requires that you use VLM 1.20B, or NETX 3.32 or later. These files are available on the NetWare Support diskette or CD-ROM. that has been included in your package.

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Possible  
FAXserve  
configuration

NetWare 4.1x Host, NetWare 3.12 Runtime

This configuration supports enterprise communication servers. If this configuration is selected, the FAXNCPSV.NLM will be installed on the Host server. This NLM provides a communications link for the FAXserve NLMs loaded on the Runtime server, and requires no hardware. NDS information can be requested from the bindery-based 3.12 server, allowing customers with NetWare 4.1x NDS trees to continue to utilize FAXserve on the 3.12 communications server.

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NetWare 4.1x  
bindery context  
install

If FAXserve is to be installed in a Host/Runtime configuration in bindery context mode, the Runtime and Host server contexts must be unique during the FAXserve installation -- so the installation program can locate the correct bindery object.

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Setting bindery  
context

To configure your server for bindery emulation, you must set the designated Organizational Unit(s) to bindery context. Enter the following command at the server:

```
set bindery context = xxx
```

xxx is the organizational unit which you are setting to bindery context.

---

Operating in  
bindery context

FAXserve users can log in to the NDS tree (in NDS mode) providing they exist in an OU (Organizational Unit) where bindery context has been set.



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All FAXserve users must be within the FSHost server's bindery context(s). This limitation requires system administrators to carefully plan the organizational units for users who will be configured for FAXserve.

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NetWare 4.1x allows up to 16 organizational units to be defined within a single bindery context. However, we recommend that you use as few OU's as possible.

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Host server  
configuration

If you are installing in bindery emulation with a host server configuration, follow these steps:

1. Set the bindery context on the server to the organizational unit (OU) where the users exist.
2. Login as a user that has full rights to the server and who exists in the OU where the bindery context is set.

3. Insert setup Disk1 and run the installation program.

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Runtime server  
configuration

If you are installing in bindery emulation with a runtime server configuration, then follow these steps:

1. Set the bindery emulation for the host server (FSHost) and the runtime server (FSRuntime) to separate organizational units.  
FSHost and FSRuntime can be placed in the same OU, but when you set bindery emulation for each server, you must specify different OU's.
2. Set the bindery context for FSHost to the (OU) where the FAXserve users exist.  
Do not set bindery context on FSHost to any of the OU's where FSRuntime exists. The OU's where bindery context is set on both servers must be unique.
3. Log in to both the FSHost and FSRuntime servers as a user that has full rights to the server and who exists in the OU where the bindery context is set.
4. Insert setup Disk1 and run the installation program.



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## Installing FAXserve in NDS mode

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### NDS schema

FAXserve 5.0 utilizes two new NDS objects to manage the FAXserve services. Any time new objects are defined in NDS, the object's schema must be added to the NDS tree. The NDS schema for the FAXserve objects is installed in the NDS tree during the first FAXserve 5.0 installation. Note that any previous FAXserve schema will not be deleted, since old FAXserve objects that require the old FAXserve schema still remain. The FSREPAIR utility can be used to remove the old FAXserve schema and their objects. Refer to the 'Post installation note' on page 2-28 for additional information.

In order to install the NDS schema, NetWare 4.1x requires the user have Supervisor access rights to the [ROOT] of the NDS tree. Therefore, the first FAXserve 5.0 installer must have Supervisor access to the [ROOT] of the NDS tree. Second and subsequent FAXserve installations do not need Root Supervisor access rights.



---

If the NDS schema is chosen, FAXserve's DOS components will not be available. If they are required, you must install in bindery mode.

---



---

If you are using Client 32, you must make sure the tree you are logged into is set as the current tree.

---

---

### NDS distributed database and FAXserve installation

The NDS database is distributed over servers and partitions. When FAXserve is installed (or re-installed), several FAXserve objects are created or renamed. More importantly, file system access rights must be assigned.



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You should verify that the date/time on your servers are synchronized. It is strongly recommended to change the time via DSREPAIR or at the SERVMAN.NLM, not from the server console.

---



---

FAXserve requires that the FAXserve server's objects exist in order to assign file rights. This can take time in the loosely consistent database. If the FAXserve install seems to be "hung", we recommend that you wait five minutes before trying to reboot the workstation -- to see if the install continues.

---

2

#### NDS install recommendations

For best results during the FAXserve installation, you should log in to the NDS tree by setting the Preferred Server to a read/write replica that contains the Server object where FAXserve is to be installed. (If it will be a host/runtime installation, the preferred server should be set to the replica containing the Host Server object.) This will allow NDS to utilize the FAXserve server's NDS replica for creating and modifying NDS objects during the FAXserve installation process.

For VLMS, the Preferred Server can be set within the NET.CFG file. Alternatively, the "vlm /ps=<server>" command line option can be used to set the workstation's Preferred Server.



---

After installation, you can log in to the NDS tree in your normal manner. Note that if the server is separated from the rest of the tree, you can only access FAXserve through a read/write replica.

---

---

Once installed, FAXserve will operate from your normal workstation's NDS replica. As stated above, be patient when installing FAXserve 5.0 in an NDS tree. If Directory Synchronization is required, it could take up to 10 minutes to synchronize replicas.

## Installing FAXserve on the server

This is the main part of FAXserve 5.0 installation. The process you will follow leads you through selecting your server and configuring your modems, among various other steps. When it has been successfully completed, the FAXserve NLMs will be installed.

2

Reminders:

- You must have supervisory rights on the server to which you are installing.  
The installer must have 'S' rights to the root, and full rights to the server, during the first installation of FAXserve in NDS mode on NetWare 4.1x.
- To install FAXserve in Bindery Emulation mode on a NetWare 4.1x server, you must be logged into an organizational unit where bindery context is set.
- Before installing FAXserve 5.0 over any existing FAXserve installation, Cheyenne recommends that you back up the NetWare server and workstations. This will allow you to restore fax images and control files if necessary.

To install FAXserve from Windows, follow the instructions below:



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To install FAXserve from a Windows 95 workstation, refer to 'Using Windows 95 with FAXserve' on page 2-30.

---

1. If you are installing from a CD:

---

go to the drive designated for the CD-ROM.

If you are installing from diskettes, insert Disk 1 of FAXserve into your workstation floppy drive and select *File -> Run...* in the Windows Program Manager.

2. In the Run dialog box, type: *drive:SETUP* and click OK.

After a brief initialization message, the License Agreement is displayed. Select *Accept* or *Not Accept*. If *Accept* is chosen, the installation continues and the FAXserve Setup dialog box opens:

FAXSERVE SETUP

Please enter your name and company for licensing purposes. Then enter the station information. This information will be the default values of each client station setup.

This product is licensed to

Name: Jonathan Scott

Company: Cheyenne Software

OK

Exit

Help

Client station information

Address: 2000 Marcus Avenue

City: Lake Success State: NY Postal Code: 11042

Country: Fax #: 465-5834

Local Area Code: Long distance code: 1

Local Country Code: 1 International Code: 011

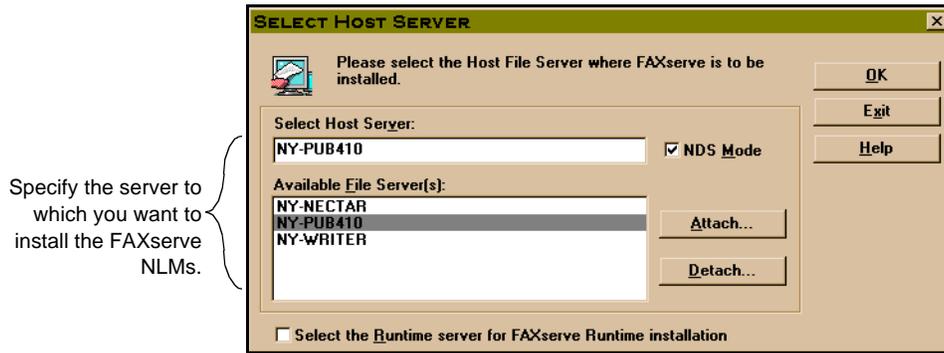
Cover Page Language: English

FAXserve will be registered under this name and company.

This information will apply to all FAXserve users unless a user customizes his/her information.

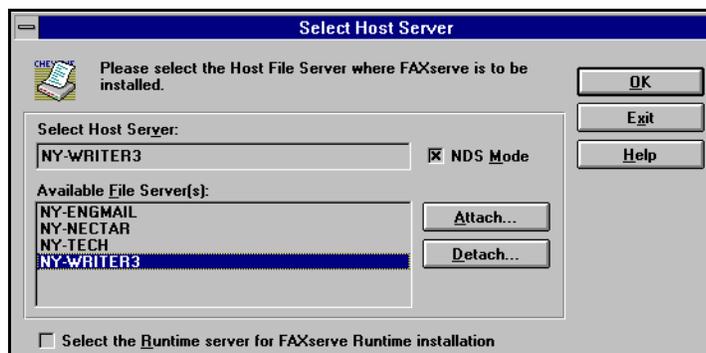
3. Click OK when done.

The Select Host Server dialog box opens:



The host server name must not exceed 30 characters.

4. If this is a NetWare 3.12 install, click OK and skip to step 11.  
If this is an NDS install, proceed to step 5.
5. Verify NDS installation for NetWare 4.1x Host servers.



If you have selected a NetWare 4.1x server as your host server, the *NDS Mode* check box is automatically selected.

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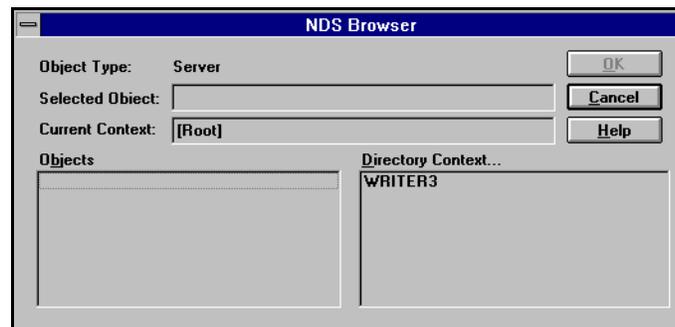
If you do not wish to install in NDS format, clear this check box.

Click OK. The following screen appears:



Check that the FAXserve host and the GroupWise server are on the same tree and click Continue.

6. If you are logged into a NetWare 4.1x NDS tree, click Attach to use the NDS Browse feature to attach to a remote server.
7. From the Attach Server dialog box, click NDS Browse. The NDS Browser dialog box appears:



8. Double-click on the parent object in the *Directory Context* box.
9. After stepping down the directory tree, select the server from the *Objects* box.

10. Click OK.

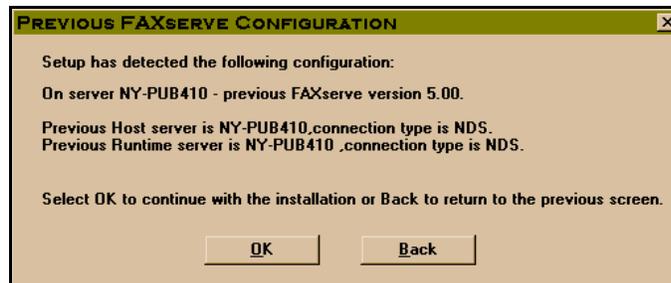
The selected server is added to the Available Servers list in the Select Host Server dialog box.

11. (Optional) Select a Runtime server.

The Runtime server is the server in which your fax hardware (i.e., modems) is installed and where the FAXserve NLMs are loaded. An advantage of separating the runtime server from the host server is that it allows you to perform system maintenance on your runtime server without having to sever all network connections to the primary server.

To specify a Runtime server that is different from the Host server, select this option.

12. If this installation is an upgrade, the following screen appears:



Take the appropriate action.

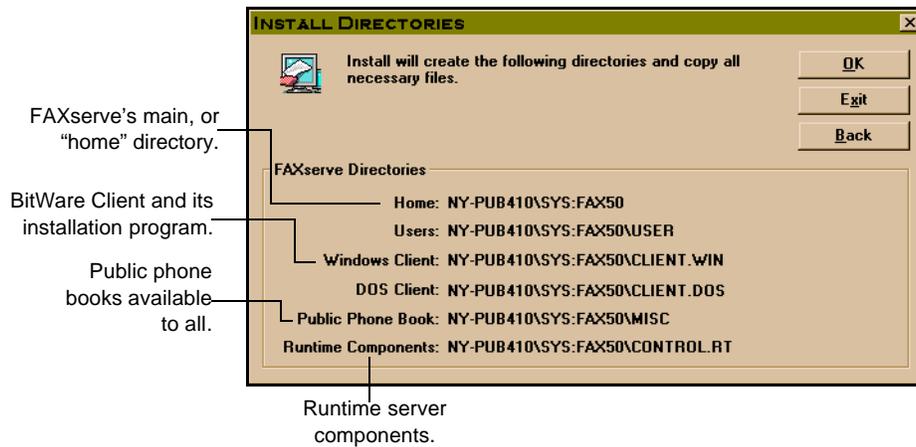
---

If you click OK to continue, the Select Directory dialog box opens:



13. Click OK when done.

The Installation Directories dialog box opens:



To change any of the FAXserve directories, click the Back button to return to the preceding dialog box.

14. Click OK when done.

15. If you have previously migrated or upgraded, the following screen appears:



2

16. Click OK to continue.

The Add License dialog box appears.

Select your license type. You will find the license key code on the back of the CD sleeve.

Files will now be copied to the selected directories.

In a NetWare 4.1x installation, FAXserve will take the next few minutes to create FAXserve NDS objects, rename FAXserve objects, etc.

17. Configure your modems.

---

Select board type, channel numbers, and hardware specifics.

Select the modem group to which your modem belongs.

Choose the specific model you are configuring.

Highlight the next available channel and click Assign.

Number	Modems	Total: 1
Channel 01:	PureData SatisFAXtion Model 200	
Channel 02:	<Not Used>	
Channel 03:	<Not Used>	
Channel 04:	<Not Used>	
Channel 05:	<Not Used>	
Channel 06:	<Not Used>	
Channel 07:	<Not Used>	
Channel 08:	<Not Used>	
Channel 09:	<Not Used>	
Channel 10:	<Not Used>	

To install a new modem:  
Step 1: Select modem class from Groups.  
Step 2: Select modem model.  
Step 3: Select next available Channel.  
Step 4: Click << Assign.  
Step 5: Click Channel.  
Step 6: Click Hardware.



---

Please refer to Appendix A, “Communications Information” for all specific modem configuration issues with ISDN, Digital T-1, and Class 2/Class 2.0 modem support.

---

**18. Click Assign when done.**

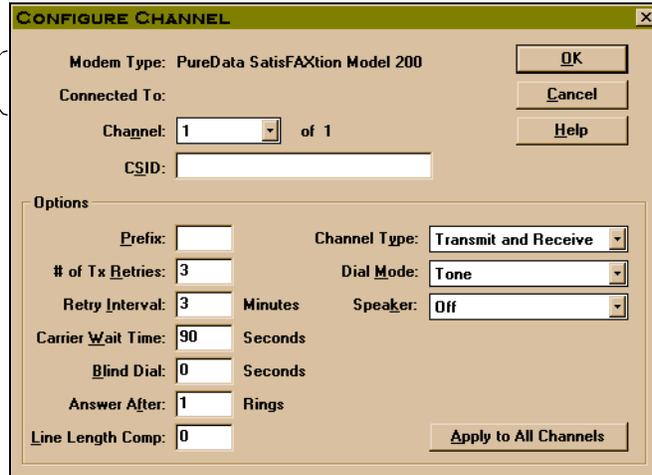
The Configure Hardware dialog box appears. Make changes to the hardware settings as necessary. Depending on the type of communications board you have selected, some fields may not be applicable. These fields will be “grayed out” and unavailable for editing. Refer to your specific communication board’s instruction manual if you need help determining settings.

Click OK to return to the Configure Modems dialog box.

**19. Click Channel.**

The Configure Channel dialog box appears.

The specific modem model and the board the modem is connected to appear in these fields. The information in these fields change, depending upon the channel number you select in the *Channel* field.



Specify your channel-specific configuration options and click OK. This returns you to the Configure Modems dialog box.

You can select modems and set channel hardware information for additional modems by repeating steps 17-19.

Click OK to confirm your selections.

Field Name	Explanation
<i>Channel</i>	Select the channel you want to configure. All configuration options that you specify will be applied to this channel only (unless you click the Apply to All Channels button, described later in this table).
<i>CSID</i>	The Calling Station ID (CSID) is provided to a remote device when it communicates with your system. The CSID is intended to contain the telephone number of the fax line. You may enter numeric characters as well as hyphens and spaces within this field.
<i>Prefix</i>	If your phone system (such as PBX) requires any special number(s) to dial out, such as 9, enter them here. You may also enter special characters such as a comma which tells the system to wait for one second, or "w" which tells the system to wait for a dial tone.

<b>Field Name</b>	<b>Explanation</b>
<i># of Tx Retries</i>	If this channel is configured to send faxes, enter the number of times you want the system to retry the sending of a fax in case of an error such as a busy signal or a transmission error. Entering "0" will tell the system not to attempt a retry. Default value is "3".
<i>Retry Interval: n Minutes</i>	FAXserve will wait a specified amount of time (in minutes) between retrying to send your fax. If you have set the <i># of Tx Retries</i> field to "0", this value is not used. Default value is "3".
<i>Carrier Wait Time: n Seconds</i>	Instructs FAXserve how long (in seconds) it should wait to connect after dialing a number. If no connection is made within the specified amount of time, the job will be cancelled or rescheduled based upon the <i># of Tx Retries</i> field. Default value is "90".
<i>Blind Dial: n Seconds</i>	In certain countries, when you pick up the telephone, there is no dial tone, or the dial tone is unrecognizable by FAXserve. In these cases, you can use this field to enter an amount of time (in seconds) that FAXserve will wait before dialing. If the default value of zero is entered in this field, FAXserve will wait two seconds for a dial tone.
<i>Answer After n Rings</i>	If this channel is configured to receive faxes, FAXserve will answer after the phone rings the amount of times specified in this field. Default value is "1".
<i>Line Length Comp.</i>	Applicable to Intel fax boards only. Enter a length for which FAXserve will adjust or compensate the telephone signal strength. This can be useful if sending faxes to foreign countries, and the destination is far enough away that the signal would be too weak to interpret. The default value for this field is zero.
<i>Channel Type</i>	Valid values are: <ul style="list-style-type: none"> <li>• "Receive Only" - This channel will be used to receive faxes only.</li> <li>• "Transmit only" - This channel will be used to transmit faxes only.</li> <li>• "Transmit and Receive" - The default value, specifies that this channel will be used to transmit and receive faxes. If you have only one channel installed in your host, you should select this option.</li> </ul>
<i>Dial Mode</i>	Tells FAXserve what type of dialing system you have. Valid values are: <ul style="list-style-type: none"> <li>• "Tone" - the default value</li> <li>• "Pulse"</li> </ul>

Field Name	Explanation
<i>Speaker</i>	Valid values are: <ul style="list-style-type: none"><li>• “On While dialing” - The default value, the speaker will be on only when dialing a number for fax transmission. The speaker then will turn off once the modem connects.</li><li>• “On At All Times” - the speaker will be on at all times during operation.</li><li>• “Off” - the speaker will be off at all times during operation.</li></ul>
<i>Volume</i>	If you selected “On While Dialing” or “On At All Times” in the <i>Speaker</i> field, this field will allow you to adjust the speaker volume. Valid values are: <ul style="list-style-type: none"><li>• “Low” - the default value.</li><li>• “High”</li></ul>
Apply to All Channels button	Takes the settings you have made (within Options) to the current channel and applies them to all channels if you are performing a multi-channel installation. The CSID is not overwritten.

20. Review summary information that is displayed upon completing the installation.

---

## Post installation notes: FSREPAIR

After completing the FAXserve installation, we recommend that you use FSREPAIR, a Windows utility that saves the FAXserve bindery and/or NDS objects. It is provided so that if the FAXserve bindery or NDS objects are accidentally deleted, the administrator does not have to re-install FAXserve. You must save your configuration now in order for FSREPAIR to recreate the bindery or NDS objects at a later time.



---

Cheyenne does not recommend manually deleting or moving the FAX\_SERVICES\_<HostServerName>, FAX\_QUEUE\_<HostServerName> and the FAXQUEUE\_RUNTIME\_<RuntimeServerName> objects. Deleting or moving these objects while the FAXSERVE NLMs are loaded could cause a server abend.

---

The objects that are saved by FSREPAIR are as follows:

NDS Objects:

FAXSERVE\_HostServerName  
FAX\_QUEUE\_HostServerName  
FAX\_SERVICES\_HostServerName  
FAXSERVE\_RuntimeServerName

Bindery Objects:

FAX\_TASK  
FAXSERVE  
FAX\_INSTALLED



---

To create FAXserve's NDS or Bindery Objects you must have admin or supervisory rights.

---

The following describes the steps necessary to create FAXserve's objects:

1. Use File/Run from the Program Manager and run FSREPAIR.EXE located in the FAXSERVE\CLIENT.WIN directory.
2. Select the *Save Users* option from the Save menu.
3. Enter the FAXserve Host Server name.
4. Press the <Save> button to save the FAXserve Objects.

2



---

Cheyenne does not recommend manually deleting or moving the FAX\_SERVICES\_<HostServerName>, FAX\_QUEUE\_<HostServerName> and the FAXQUEUEERUNTIME\_<RuntimeServerName> objects. Deleting or moving these objects while the FAXSERVE NLMs are loaded could cause a server abend.

---

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## Using Windows 95 with FAXserve

There are currently four different Windows 95 NetWare interfaces:

1. Windows 95 supplied network interface, with Novell's NW\*.DLLs
2. NetWare VLMs
3. Microsoft's NDS Emulation (MSNDS) 32-bit driver
4. NetWare's Client 32

All interfaces require that a search path be set to the BitWare Client directory. This search path is needed to automatically load the BitWare Client when needed.

Interfaces 1, 2, and 3 require that the following steps be taken for the BitWare Client for FAXserve to function properly:

1. Copy NetWare's NWLOCALE.DLL, NWGDI.DLL, NWCALLS.DLL, NWNET.DLL, NWPSRV.DLL, NWIPXSPX.DLL to the \WIN95\SYSTEM or WINDOWS\SYSTEM directory.

These DLLs can be found on the NetWare support disks supplied by Cheyenne (NOVSUPP2) in the self extracting file NWDLL2.exe.

2. Create an NLS directory under the Windows 95 root directory (e.g. Win95\NLS) and copy NetWare's unicode table files into the NLS directory.
3. Set a search path to the NLS directory as well as the BitWare Client directory.



---

A drive mapping must be available in order to install and use the BitWare Client. The Client's programs will not work properly if they are executed using UNC paths.

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When installing any of the four interfaces, please read all documentation that came with them to make sure they are installed correctly. The majority of the problems reported with the BitWare Client on Windows 95 are related to incorrect installation of one of the four clients.

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## Installing the client software

This part of the FAXserve installation involves installing the BitWare Client and the FAXserve Administrator. Once they are installed, we will move on to installing the FAXserve components necessary for working with GroupWise.

---

### BitWare Client for Windows

The BitWare Client allows users to send, receive, print, and manage faxes through FAXserve. A supervisor or an authorized FAXserve user can install the BitWare Client for FAXserve at any time after FAXserve has been installed on the host server. Later, after you have specified authorized FAXserve users, you (or the user) can install the BitWare Client to his/her workstation.

---

### FAXserve Administrator

The FAXserve Administrator is a Windows-based administration tool that allows designated FAXserve administrators to perform maintenance tasks needed to keep FAXserve running smoothly. Later, after you have specified authorized FAXserve administrators, you (or the FAXserve administrator) can install the FAXserve Administrator to his/her workstation.



---

You must be an authorized FAXserve user on the host server in order to install the Windows Client.

---

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### The BitWare Client setup program installs both

The BitWare Client setup program gives the FAXserve user/administrator the option to install each of the programs separately. Default installation of the BitWare Client does not include the FAXserve Administrator.

You can install the BitWare Client and FAXserve Administrator programs to the same location.

## Installing the BitWare Client and FAXserve Administrator

The setup program for the Client and the Administrator is located in your FAXserve home directory\CLIENT.WIN directory.

Specify where you want to install to

When installing the BitWare Client and FAXserve Administrator, you must decide where you want these programs to run from once they are installed:

- > From your local workstation
- > From the FAXserve host server

Installing locally

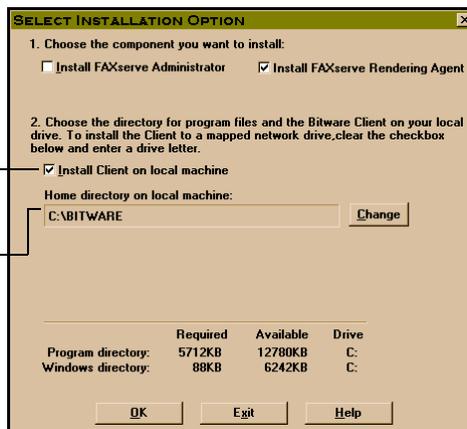
This entails copying all of the BitWare Client and FAXserve Administrator files to a directory you specify on your local workstation. In general, the BitWare Client and FAXserve Administrator will run faster if they are installed locally.

To install the BitWare Client, and/or the FAXserve Administrator locally:

Click the client(s) you wish to install...

Make sure this option is set...

... then specify the path on the local workstation.



The Rendering Agent requires a dedicated workstation. Refer to chapter 3 for additional information.

---

If you do not have the BitWare Client directory in your search path, you will be prompted to either have the install modify it for you at this time, or you will need to modify it yourself once the installation is complete.

Running remotely  
from the host  
server

This entails copying several .INI files to your workstation, specifying a (permanently) mapped network drive to the FAXserve host server, and editing your WIN.INI file to include these paths.

To be able to run the Client and FAXserve Administrator from the FAXserve host server, follow the procedure described below:

1. Turn off the *Copy program files to local drive* option.
2. Specify the permanently mapped network drive to the FAXserve host server.
3. Specify the path to install local files.

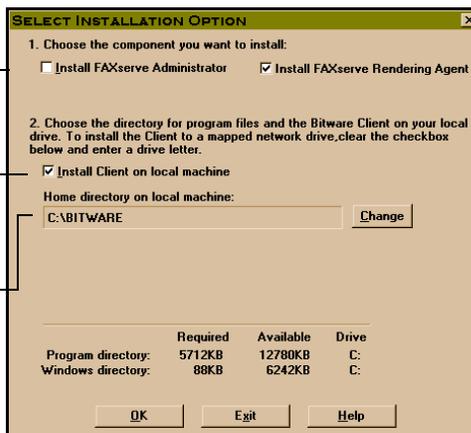
There are certain files that must be installed to the local machine. By default, the path is C:\BITWARE.

The local path can also be a network drive for diskless workstations.

Check which component(s) you wish to install.

Turn off this option to run the Client (and FAXserve Administrator, if applicable) from the host server...

...then specify path information here.



**Printer driver** You are given the option to select the BitWare driver as your default printer driver. Making BitWare your default printer device makes faxing your documents easier – each time you select the *Print* command from within an application, BitWare will already be selected as the device to print to. On the other hand, if you fax periodically, but print on paper more frequently, you may want to leave your default print driver selected and only select the BitWare Fax Driver when you want to fax.

**Specify whether to copy macros for your applications** The BitWare Client comes with macros for Microsoft Excel, Microsoft Word, Ami Pro, WordPerfect, and Goldmine that add a SendFax command to the program. The SendFax command allows for easy no-hassle faxing from your applications. Setup will attempt to detect these programs and display the location of any programs it finds. You may edit the locations that Setup finds.

Clicking *Copy* will simply copy the macro into the program directory. Refer to Appendix B, “Faxing from Windows applications” for more information on installing the macro in each program. If a directory is not specified for a program, a macro will not be copied for that program.



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FAXserve icon  
group

The BitWare Client Setup program creates a group of icons in the Cheyenne FAXserve program group. From this group you can easily access the FAXserve components.



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Installing and  
running the Client  
on a Windows 95  
workstation

To install the BitWare Client on a Windows 95 workstation that is logged on a NetWare 4.1x server with Directory Services, make sure your network clients are properly installed.

1. Re-boot and re-start Windows 95 if you have just finished installing FAXserve and wish to install the BitWare Client on the same workstation.
2. Run SETUP.EXE from the FAXSERVE\CLIENT.WIN directory.

This can be done from the *Explorer* or from the *Run* command in the Start Menu.



Make sure your VLMs are properly installed w/NDS. Check this by running NWADMIN.EXE. This should be verified before trying to install FAXserve.

---



The subdirectory that contains the BitWare Client files (default is set to C:\BITWARE) must be in your directory path in order to use the BitWare Print driver.

---

# 3

## Chapter

# CONFIGURING FAXSERVE AND GROUPWISE

In this chapter, you will learn how to:

Page:

- 3-2 > Use FAXserve and GroupWise together
- 3-3 > Install the FAXserve GroupWise Gateway Agent
- 3-9 > Install and set up the Rendering Agent

---

## How FAXserve and GroupWise work together

Transparent integration between FAXserve and GroupWise allows you to send and receive faxes in the form of e-mail, with or without attachments. Outbound e-mails with attachments are automatically converted to a fax image and then sent to your fax recipients.

The Rendering Agent converts any e-mail message with attachments by launching the associated application(s) and generating a rasterized image of the document.

The following are a list of tasks that are required to set up for GroupWise support:

<b>Task</b>	<b>Explanation and Reference</b>	<b>Pg.#</b>
Install the FAXserve GroupWise Gateway Agent.	The Gateway Agent is the link between FAXserve and GroupWise.	3-3
Create Gateway objects.	Instruction is given for both GroupWise 4.1 and 5.0.	3-6
Install and configure the Rendering Agent.	Set up options such as how often to scan for attachments/files, when to delete extraneous files, and when to gather statistics on Agent activity.	3-9

## Installing the FAXserve GroupWise Gateway Agent



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Before installing the Gateway, perform a test, such as sending an e-mail between two users, to ensure that the GroupWise installation went smoothly.

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The GroupWise Message server must be up and running in order to install the Gateway.

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If FAXserve is in NDS mode, the FAXserve server and the GroupWise server must be located on the same tree.

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3

You must be an administrator of your GroupWise e-mail server in order to install the Gateway Agent. Double click the FAXserve Administrator icon from the Cheyenne group and follow the instructions below:

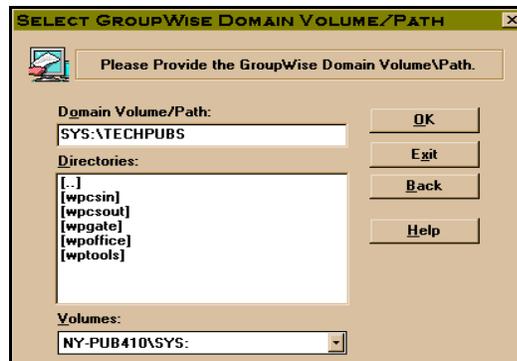
1. From the Install menu, select *FAXserve GroupWise Gateway Agent*.

The Select GroupWise Server dialog box appears:



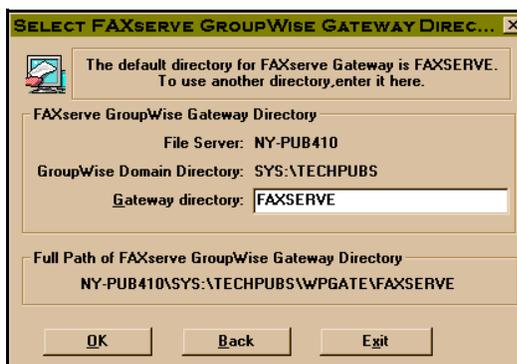
- 
2. Select the server where GroupWise has been installed and click OK.

The following screen appears:



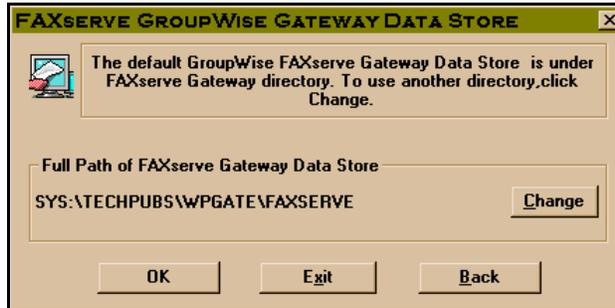
3. Select the domain volume and path that you determined when GroupWise was installed and click OK.

The following screen appears:



4. Provide the FAX Gateway directory and click OK.

The following screen appears:



5. Determine where you want the Data Store to be located and click OK.

Once an e-mail or fax with an attachment has been sent, the file is put in the Data Store until it is picked up by the FAXserve Rendering Agent (refer to 'Setting up the FAXserve Rendering Agent' on page 3-10 for further explanation).

6. Click the FAX Gateway working volume and path and click OK.

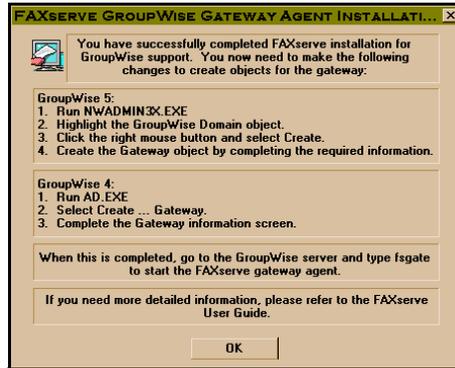
Once the FAXserve GroupWise Gateway Agent has been installed, the following screen appears:

This feature is enabled by default. If you do not wish to take advantage of it, disable this option.



Click OK. You have now successfully completed installation of the Gateway Agent. The following screen appears:





Before proceeding, you must create objects for the gateway.

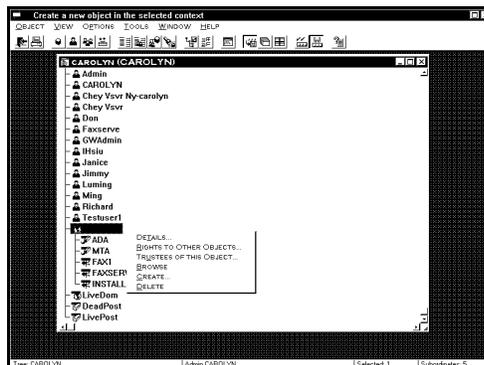
Creating the GroupWise Gateway object

The steps taken to create the gateway object differ between GroupWise 5.0 and GroupWise 4.1. Instructions are provided for both versions.

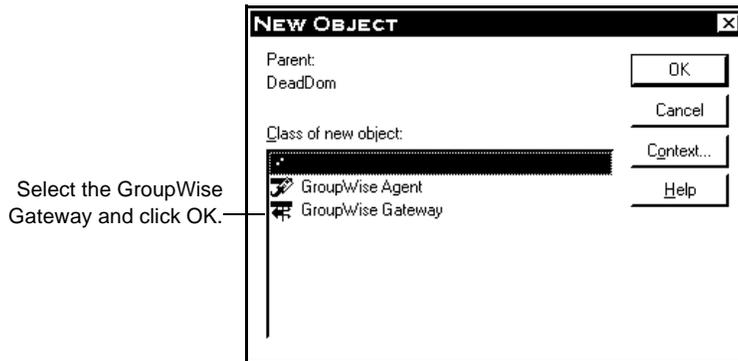
If you are using GroupWise 5.0

1. Open the NetWare Administrator (NWADMIN3X.EXE). This file can be found in the \PUBLIC directory of your GroupWise server.

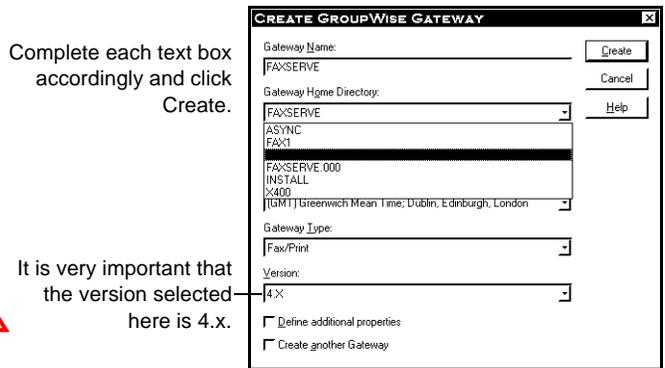
The following screen appears:



2. Highlight the domain object that you created when you installed GroupWise.
3. Right click on the name and select *Create*.  
The following screen appears:



The Create GroupWise Gateway dialog box appears:



*We recommend that the Gateway home directory and Gateway name be the same.*

The object has now been created.

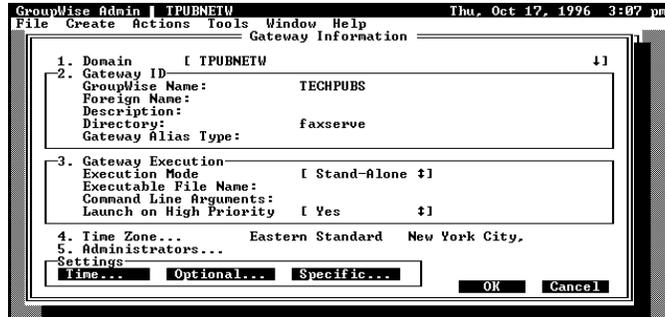
If you are using GroupWise 4.1

1. Go to your Domain directory. At the DOS prompt, type:  
AD  
The GroupWise Admin screen appears.

2. Select *Create... Gateway*.

The Gateway Information screen appears:

Only the *GroupWise Name*, *Directory*, and *Time Zone* fields are required. Click OK when done.



The object is now installed.

Starting the FAXserve Gateway Agent

At the GroupWise server console, type:

`fsgate`

the following screen appears:

F7 is the correct way to unload this NLM; do not unload at the command line.

TPUBNETW.Erik Hughes		UpTime: 13 Days 6 Hrs 13 Mins			
Status	\	Message Statistics			
Processing		Out	10 Minutes	In	10 Minutes
GroupWise	Open	Normal	9	0	7
Other Link	Closed	Status	0	0	0
Program	Idle	Passthrough	0	0	0
Log Level	Normal	Conv Errors	0	0	0
Process ID	000	Comm Errors	0	0	0
		Total Bytes	0.0		0.0

```

00:00:00 Daylight Saving Change= 1 hours, 0 minutes
00:00:00 Daylight Saving Begin= 4/3 (month/day)
00:00:00 Daylight Saving End= 10/30 (month/day)
00:00:00 Procedure ID= 000
00:00:00 Startup Switches= -ph-SYS:TECHPUBS\WPGATE\FAXSERVE -pw-SYS:TECHPU
00:00:00 BS\WPGATE\FAXSERVE
00:00:00 End Configuration Information
    
```

You are now ready to configure the FAXserve Rendering Agent.

## Installing the Rendering Agent

As you may recall, the Rendering Agent can be installed from the same setup program used for the BitWare Client and the FAXserve Administrator.

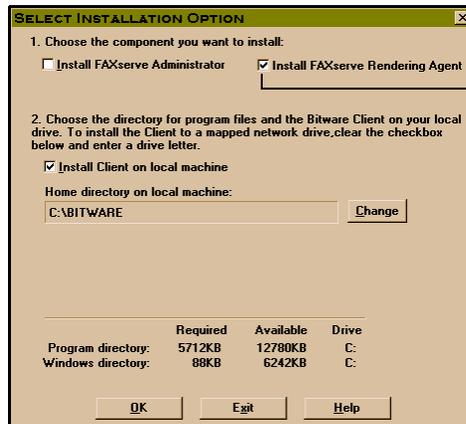


The FAXserve user installing the Rendering Agent must have Read, Create, Delete, Write, File Scan, and Modify rights to the FAXserve datastore directory. The Rendering Agent will be disabled if you do not have the appropriate rights.

3

1. From the FAXserve home directory\CLIENT.WIN directory, select SETUP.EXE.

The following screen appears:



Check this box and click OK.

The Rendering Agent has been successfully installed.

---

## Setting up the FAXserve Rendering Agent

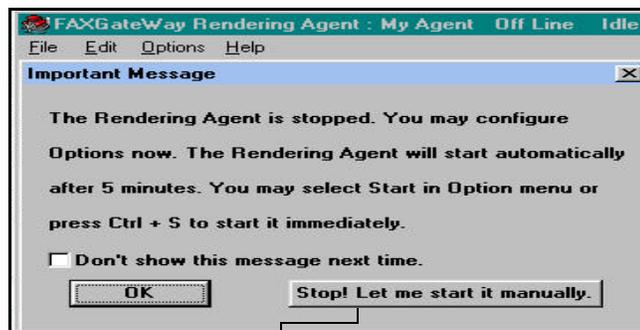
The Rendering Agent is the FAXserve component that manages the rasterization of files. The main function of the Agent is to scan for all file attachments that are designated as faxes and convert them to a file format readable by FAXserve.

To access the Rendering Agent, follow these steps:

1. Go to the workstation you have designated as the Rendering Agent. From the icon group, click the Rendering Agent.

The opening screen appears:

*The primary screen provides information such as date and time an entry is displayed, job statistics, and error messages.*



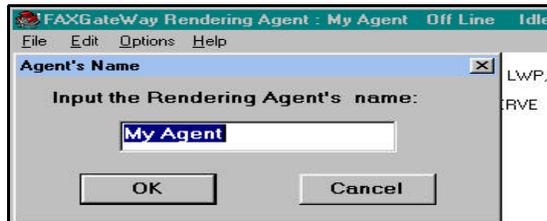
Clicking here allows unlimited time for Agent configuration.

When the Agent is first accessed, it is inactive. You are given a five minute grace period to configure any options before it is automatically started (the options are discussed over the next few pages). You can override this option by clicking the “Stop...” button.

2. Select *Options... Name* from the toolbar.

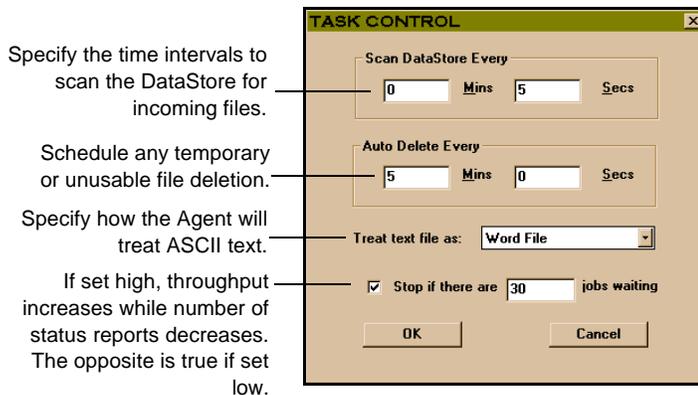
The Agent Name dialog box appears:

*You may have multiple Rendering Agents and log files. Naming them will differentiate between them.*



3. Select *Options...Task* from the toolbar.

The Task Control screen appears:



If a text file (such as AUTOEXEC.BAT) is sent as an attachment, its format will not be recognizable by FAXserve. However, you can specify in this dialog box that it be treated as a Word, NotePad, or Write file.

Files for applications that are not supported remain in the DataStore until they are deleted. To set up automatic deletion of any temporary or extraneous files, select *Auto Delete Every* n minutes, n seconds.



---

Logs and reports of e-mail/fax activity

The Rendering Agent also keeps logs and reports of e-mail/fax activity. To access them:

1. Click on *Options...Config.*

The Configuration screen appears:

The log file will be sent to GXAGENT.LOG.

If an application produces an error message, the Rendering Agent will bypass it, to ensure that Agent activities continue.

If checked, the Agent will ignore the opening message screen and will begin activity immediately.

Click here and you can specify the log file path and maximum size.

If an Agent determines it cannot access a file (i.e., it does not have the required application loaded), it can be passed to other rendering Agents, or deleted immediately.

**CONFIGURATION**

Options

- Write all messages to log file Detail >>
- Handle all applications' error dialog boxes
- Immediately start Rendering Agent at load time
- Restart Windows when memory resources are low

How to handle unknown document formats?

- Pass it to other Rendering Agents
- Delete it immediately

OK Cancel

---

First time configuration

During the first time configuration, the Rendering Agent will search the Registry for the applications present on the dedicated machine. It will automatically “check” the applications it finds in the Applications dialog box:

**CHECK THE APPLICATIONS INSTALLED...**

Applications

<input checked="" type="checkbox"/>	AmiPro 3.x
<input checked="" type="checkbox"/>	MSPaint
<input checked="" type="checkbox"/>	PaintBrush
<input checked="" type="checkbox"/>	MS WordPad
<input checked="" type="checkbox"/>	MS Write
<input checked="" type="checkbox"/>	MS NotePad
<input checked="" type="checkbox"/>	MS Word 6.x
<input checked="" type="checkbox"/>	MS Excel 5
<input checked="" type="checkbox"/>	MS PowerPoint 4
<input checked="" type="checkbox"/>	MS Word 7(MSOffice 95)
<input checked="" type="checkbox"/>	MS Excel 7(MSOffice 95)
<input checked="" type="checkbox"/>	MS PowerPoint 7(MSOffice 95)

OK Default Cancel

Stopping the Rendering Agent

There may be instances when you want to stop the Rendering Agent. For example, you may find that you need to temporarily free up the workstation for other use. To stop the Rendering Agent:

1. Select *Options... Stop Rendering*.

Gathering statistics

The Rendering Agent also gathers statistics for you regarding job success/failure, the number of jobs waiting in the queue, etc. To view these statistics:

1. Select *File ... Statistic*.

The following screen appears:



# 4

## Chapter

# FAXSERVE AND THE CLIENTS

This chapter describes how to expand FAXserve by taking advantage of its client functionality.

In this chapter you will learn:

Page:

- 4-2 > How to Load FAXserve (with options)
- 4-9 > About the Administrator/basic configuration tasks
- 4-15 > How to authorize administrators and users
- 4-16 > How to set up users to receive and send e-mail
- 4-35 > About managing and routing incoming faxes
- 4-38 > How to assign route IDs to individuals *and* groups
- 4-43 > Managing the Transmission Queue
- 4-48 > How to set up the BitWare Client

---

## Loading FAXserve on the server

After you have installed FAXserve on a server, you are ready to load the FAXserve NetWare Load Modules (NLMs). This will activate FAXserve on the server.

To load FAXserve on the server:

---

If you are using  
Class 2/2.0  
modems with  
FAXserve

1. At the server console, type: **FAXAIO**

You must first tell your server to establish Asynchronous Input/Output by loading FAXAIO. FAXAIO is a Novell NCF (batch) file. The files within FAXAIO will remain in memory until you unload them manually, even after unloading FAXserve.

---

Load FAXserve  
without options

2. At the server console, type: **LOAD FAXSERVE**

The FAXserve NLMs are loaded on the server and the FAXserve console screen is displayed.

When the FAXSERVE.NLM is loaded or unloaded, it automatically loads or unloads all of its NLMs.

To load FAXserve with options, refer to page 2-4, 'FAXserve NLM command line options'.

---

Pre-flight Check

You can also load FAXserve in a way that it will check the dates and versions of all Novell files and FAXserve components to ensure that they are current and up-to-date. For more information, please see the readme.wri file.

## SNMP support

FAXserve contains SNMP support files. By following the instructions below, you can configure FAXserve to send status messages to an SNMP network station(s).

1. Download the ALERT.NLM files from one of Cheyenne Software's on-line services (CompuServe, BBS, or WWW server).
2. Install the ALERT.NLM (for use with SNMP messages).
3. Copy the following files to the SYS:PUBLIC directory:  
<FAXSERVE>\TOOLS\SNMP\faxserve.alt
4. Copy the following files to the SYS:SYSTEM directory:  
<FAXSERVE>\TOOLS\SNMP\albuild.nlm  
<FAXSERVE>\TOOLS\SNMP\faxmib.nlm
5. Copy the  
<FAXSERVE>\TOOLS\SNMP\faxmib.bib file to your network workstation's SNMP MIB directory.
6. Load the SNMP.NLM if it is not already loaded.  
This NLM is provided by Novell.
7. Load the ALBILD.NLM.
8. Load the ALERT.NLM.
9. Type the following command at the NetWare system console command line while FAXserve is loaded:  
FAXSERVE SNMP=ALL

---

Make sure the `SYS:ETC\TRAPTARG.CFG` file is configured properly to ensure that SNMP messages are being sent to the SNMP workstations.

### FAXserve NLMs

There are seven NLMs that contribute to FAXserve's faxing services. These NLMs work together to provide FAXserve's centralized services. The functions of each NLM are summarized below:

- **FAXSERVE.NLM** - The primary NLM, FAXSERVE.NLM manages faxing on the host server. This NLM allows scheduling in the queue and tracking of incoming and outgoing faxes. It maintains the Transaction Database and creates logs. It also manages faxing activities, such as automatic rescheduling. The FAXserve server NLM has a console that displays information about the NLM and the fax boards. The console and command information for this NLM is explained in the following sections. This NLM must be loaded on the server for faxes to be sent and received.
- **FAXCONV.NLM** - The conversion NLM is responsible for converting files that will be transmitted. Many files have formats that are incompatible with transmission and will be converted into files with acceptable formats.
- **FAXDRV.NLM** - This is the board driver NLM. This NLM controls the operation of the modems and fax boards.
- **FAXPRINT.NLM** - The print NLM prints incoming faxes as directed to a specific print queue on a file server.

- **FAXMAIL.NLM** - The MHS mail NLM allows FAXserve to collect MHS-compatible e-mail from its FAXserve MHS mail subdirectory on the MHS host server. Once collected, this e-mail is transmitted as a fax. This NLM can also be reconfigured with the FAXserve Administrator should the MHS host change. *The FAXMAIL NLM should only be loaded if you use MHS.*
- **FAXLIB.NLM** - This NLM loads automatically with FAXMAIL.NLM. The MHS mail NLM calls on this NLM to submit jobs for e-mailing.
- **FAXROUTE.NLM** - Handles the automatic routing of inbound faxes as well as FAXserve notifications.

Messages from any of these NLMs appear on the NetWare system console and in the FAXserve Error Log.

---

FAXserve NLM  
command line  
options

There are several command line options that can be added to the LOAD FAXSERVE command to customize the look and functionality of FAXserve.

To load any of the following command line options for FAXSERVE.NLM (you can specify more than one at a time), enter the LOAD FAXSERVE command (described in the previous section) as follows:

---

**LOAD FAXSERVE *option***

Option	What it does
COLOR	Overrides auto monitor detection for color monitors and forces color.
MONO	Overrides auto monitor detection for monochrome monitors and forces monochrome.
DIS (or DISABLE)	Initializes with channels disabled. DIS = ALL for all channels (ex: DIS=ALL).
HELP (or ?)	Displays the command line options for FAXSERVE.NLM.
NOSCRNSAV	Disables the FAXserve screen saver on the host server.

For example:

Load FAXserve without the screen saver by typing:

```
LOAD FAXSERVE NOSCRNSAV
```

Load FAXserve with channels 1 through 3 disabled by typing:

```
LOAD FAXSERVE DIS = ALL
```

---

**Debugging**

FAXserve debug options can be controlled from the server console screen. To display the options, type:

```
faxserve / show
```

Please contact Cheyenne's Technical Support team for additional information. Contact information can be found on the inside front cover of this manual.

---

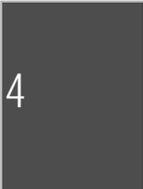
**FAXPRINT.NLM  
command line  
options**

The FAXprint NLM allows you to override certain settings you may have previously made. The settings you make on the command line are only valid for the duration the module is loaded. Once you unload the module, FAXprint will revert

back to the configured settings (as made in the FAXserve Administrator). To enable these options, enter the following at the command line:

**LOAD FAXPRINT *option***

Option	What it does
LETTER	Letter size output (8.5 x 11).
LEGAL	Legal size output (8.5 x 14).
A4	A4 size output (European).
SERVER = <server>	Specifies a print server (temporary setting).
QUEUE = <queue>	Specifies a Print Queue (temporary setting). The following options are available only when using the Queue option:
TYPE = x	Printer type, where x can be: "E" - Epson 24-pin "F" - Fujitsu 24-pin "H" - Hewlett-Packard "L" - Fujitsu laser "N" - NEC NPDL "P" - Postscript
MODE = x	Specifies which pages of faxes get printed, where x can be: "N" - None "F" - First page only "A" - All pages
HEADER = x	Applicable only when "MODE = F" is specified. Print FAXprint header, where x can be: "0" - No "1" - Yes
FORMFEED = x	Form feed mode at end of print job, where x can be: "0" - No "1" - Yes
MARGIN = x	Left margin adjustment [For HP, Fujitsu Laser, and NEC printers only], where x is a number between -5 and +5.
UTIL = x	Utilization threshold, where x is a number between 0 and 100.  This option should not be used unless told to do so by Cheyenne Software Technical Support.



---

## The FAXserve Administrator

The FAXserve Administrator is a Windows-based administration tool that allows designated FAXserve administrators to perform such system maintenance tasks as setting up user profiles and phone books, tracking scheduled and received faxes, and selecting the FAXserve host server.

This administration facility allows administrators to carry out duties specific to their administrative role, such as assigning new FAXserve users and routing faxes to their applicable recipients.

## FAXserve Administration basics

---

Only FAXserve administrators can use the FAXserve Administrator program

The NetWare user “supervisor” determines the FAXserve user security level, whether it be as a basic FAXserve user or as a FAXserve administrator. In addition, FAXserve administrators who have NetWare supervisor rights have access to more FAXserve Administrator program functions. Access to the various functions of the FAXserve Administrator is divided into two groups:

- FAXserve administrators
- FAXserve administrators with NetWare supervisory rights




---

By default, the NetWare user “supervisor” has full access to all the functions provided by the FAXserve Administrator.

---

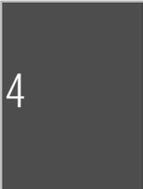


---

Functions every FAXserve Administrator can perform

There are certain functions that every FAXserve administrator can perform. They are listed in the table below.

View everyone’s faxes before routing
View/clear FAXserve error log
Examine the transaction database
Configure e-mail fax services
Configure incoming faxes
Configure the inbound router database
Configure the FAXserve printer



---

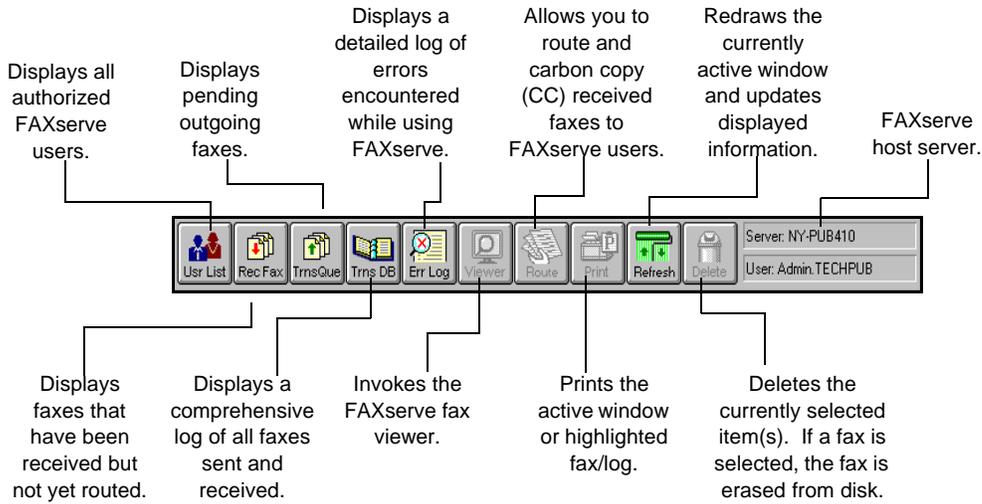
Functions  
FAXserve  
Administrators  
with supervisor  
rights can perform

In addition to the functions listed in the previous table, FAXserve Administrators that have NetWare supervisor rights can perform the following functions:

View the queue
Authorize FAXserve users
Authorize FAXserve administrators
Install the FAXserve GroupWise Gateway Agent
Edit individual user profiles
Edit the Default User Profile
Edit e-mail addresses
Configure modems
Configure accounting services
Maintain user licensing
Activate/Deactivate FAXserve NLMs

**Quick Access toolbar**

The FAXserve Administrator allows quick access to the most frequently used options via icons on the Quick Access toolbar.



**Obtaining online help**

Online help is available from the FAXserve Administrator anywhere you see a Help button. Click this button to invoke the FAXserve online help system. Pressing the F1 key will also invoke the help system.



---

## Setting up FAXserve

You must configure the FAXserve Administrator before you can start sending and receiving faxes with FAXserve:

### Set up FAXserve's default user



---

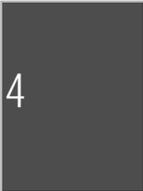
The default user profile must be set up before you can authorize FAXserve users and/or administrators.

---

The fields in the Default User Profile dialog box are discussed in the following table:

Field name	Explanation/Valid Values
Notify via -> <ul style="list-style-type: none"><li>• <i>Broadcast</i></li><li>• <i>E-mail</i></li></ul>	Specify whether you want users to be notified via NetWare broadcast message when they have received a fax.  NOTE: The <i>E-mail</i> option cannot be set in the default user profile. This option can only be set when specifying a user profile for a specific user or group.
Notify On -> <ul style="list-style-type: none"><li>• <i>Unrouted Faxes (N/A)</i></li><li>• <i>Receive Events</i></li><li>• <i>Transmit Error</i></li><li>• <i>Transmit Success</i></li></ul>	The notification options allow users to be notified of specific FAXserve events, and allows you to select the manner in which users are notified. If notification is not required, do not mark any options. Event types: <ul style="list-style-type: none"><li>• <i>Unrouted Faxes</i> (UNAVAILABLE) - This option can not be set in the default user profile. This option can only be set when specifying a user profile for a specific user or group authorized as a FAXserve Administrator.</li><li>• <i>Receive Events</i> - Notify users each time a newly received fax is routed to their mail directory.</li><li>• <i>Transmit Error</i> - Notify users when a fax they have scheduled is transmitted unsuccessfully.</li><li>• <i>Transmit Success</i> - Notify users each time FAXserve successfully sent a fax they have scheduled.</li></ul>

Field name	Explanation/Valid Values
DOS Client Options (Optional) <ul style="list-style-type: none"> <li>• <i>Phone Book File</i></li> <li>• <i>Logo File</i></li> </ul>	Specify default information for users of the DOS Client for FAXserve. The default phone book file and logo file that you specify here must reside in the CONTROL subdirectory under the FAXSERVE home directory. Copies of these files are then copied to each new FAXserve user's home directory.  <i>Phone Book File</i> - Specify the default (public) phone book file to be used.  <i>Logo File</i> - Specify the default logo file to be used. NOTE: There is a logo file, FSLOGO.PCX, that is distributed with FAXserve.



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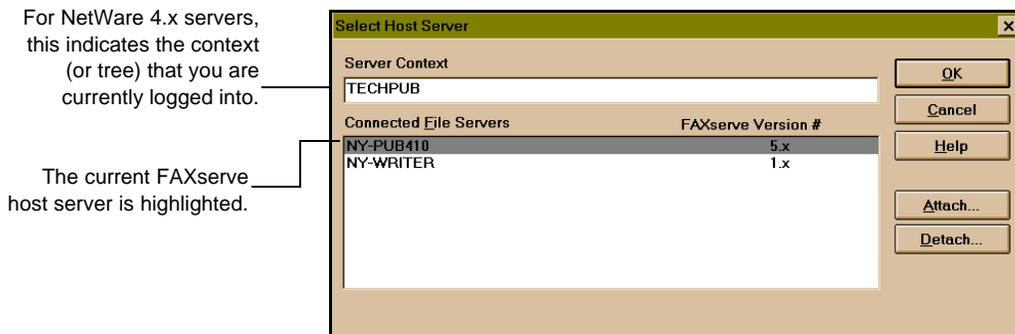
## Selecting a FAXserve host server

The FAXserve host server processes your fax jobs. However, there may be instances when you need to select a different server, such as when a server goes down for system maintenance.

To view or change the FAXserve host server, follow the directions below:

1. From the FAXserve Administrator, select *Configure -> Select Host Server*.

The Select Host Server dialog box opens:



2. Select a new FAXserve host server.  
Select a new host server from the list of connected servers, or click Attach to attach to a server that is not listed.
3. Click OK.  
You are now attached to a new FAXserve host server.

## Authorizing FAXserve administrators

FAXserve administrators can route faxes to users' MAIL directories, and view/print database and log files. NetWare's full rights to the user directory are assigned to FAXserve administrators. Therefore, all FAXserve users' mail directories can be accessed by the FAXserve Administrator.



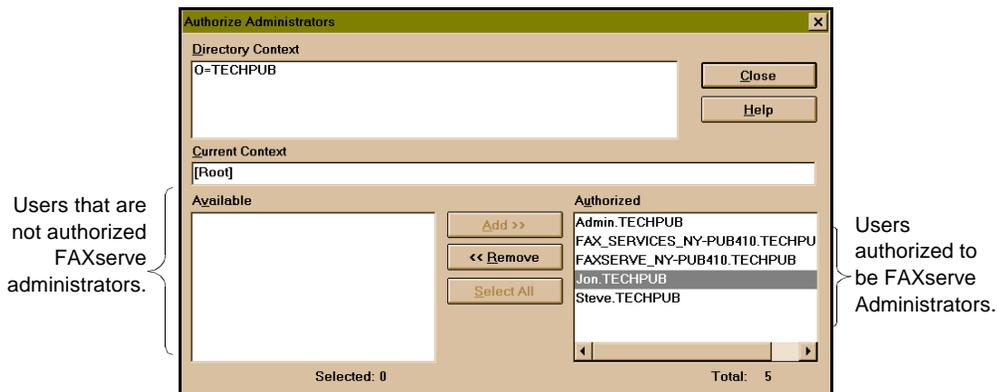
Administrators with NetWare supervisor rights can view all pages of incoming faxes and must be prepared to handle confidential material.

When you select *User -> Authorize Administrators*, the Authorize Administrators dialog box appears.

1. Select the FAXserve user(s) you want to make a FAXserve administrator, then click Add.

The names that appear under the Available Administrators list are users who are not administrators.

4



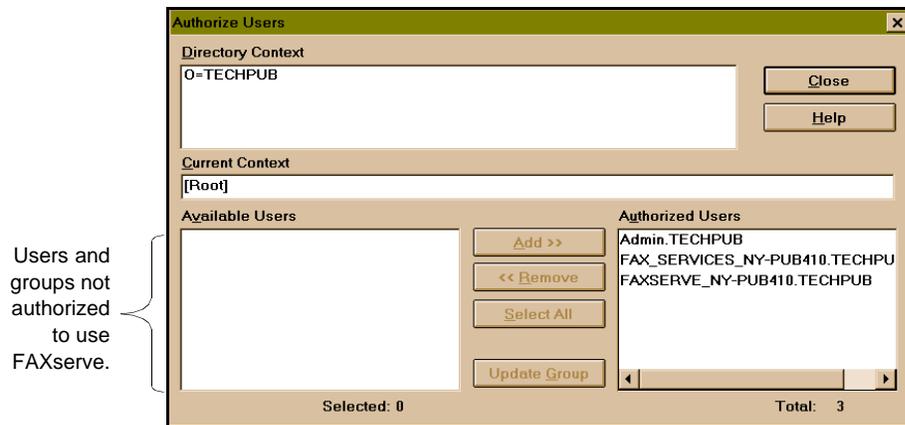
When you click the Add button, the names that you selected from the Available Users list will appear in the Authorized Administrators list.

---

## Authorizing FAXserve users

Only NetWare users that you have authorized as FAXserve users will be able to send or receive faxes via FAXserve.

1. When you select *User*, then *Authorize Users*, from the menu, the Authorize Users dialog box appears.



---

The FAX\_SERVICES and FAXSERVE\_HostServerName objects will appear within the FAXserve user list. These objects will not take up a FAXserve license.

---

---

Adding a new FAXserve user

1. Select a user from the Available Users list, and click Add. The names that appear under the Available Users list are NetWare users who currently cannot use FAXserve. Names enclosed in brackets indicate a NetWare group (e.g., [EVERYONE]).

If a group is authorized, all users that belong to the group are authorized. This is true even if the user is not specifically authorized.

Suppose John's user name is JOHNS. If JOHNS belongs to the group EVERYONE, and [EVERYONE] is authorized as a FAXserve user, John will be able to use FAXserve, even though JOHNS (the user name) may not have been specifically authorized.

---

Removing a FAXserve user

If you remove access from a group, all members of that group also lose access to FAXserve. The only way these users will be able to continue using FAXserve is if their user name is in the Authorized Users list, or if they are members of another group authorized to use FAXserve.

(CAROLYNO) and Scott (SCOTTS) are members of the group MARKETING. Suppose [MARKETING] is removed from the list of authorized users. In effect, this would mean that all members of MARKETING, including Carolyn and Scott, will not be able to use FAXserve any more. However, Carolyn will still be able to use FAXserve, since CAROLYNO is authorized as a FAXserve user. Scott, though, will not be able to use FAXserve, since SCOTTS is not authorized, and he is not a member of another group that is authorized.

4

---

Updating group information

FAXserve is unaware of any member changes to NetWare groups, unless you specifically update this information. This is done with the Update Group button.

1. In the Authorize Users dialog box, click the Update Group button.

Any user that has been added to or removed from an authorized FAXserve group is now either able to or unable to use FAXserve.

The same is true of users who have been added to or removed from groups not authorized to use FAXserve.

---

## Configuring your e-mail package with FAXserve

Before you can specify an e-mail address for any user who will be using FAXserve with e-mail, you will need to configure your e-mail application and FAXserve to work together. The following pages contain important information about how FAXserve works with MHS and GroupWise.

---

Configuring  
NetWare 4.1x  
MHS to work with  
FAXserve

The FAXMAIL.NLM allows you to send your electronic mail messages as faxes. To use this NLM, Novell's Message Handling System (MHS) must be loaded on the FAXserve server and you will need an e-mail application that is MHS-compatible. Refer to the following page for more information on the FAXMAIL.NLM.

If you have MHS Fax Services configured to work with NetWare 4.1x MHS, you must do the following:

1. Generate a FAX gateway directory under the MHSMAIL\GATES directory.

Using NWADMIN, configure the MHS Postmaster with all access rights to the GATES directory tree. The subdirectories are shown below.

```
GATES
  FAX
    IN
    IPARCEL
    OUT
    OPARCEL
    PUBLIC
```

2. Using NWADMIN, add an MHS gateway with the name "FAX" and a type called "FAX".
3. Using NWADMIN, give rights [RWCEMF] to the GATES\FAX directory to the FAXSERVE user and all other users using FAXserve file rights.



---

In a configuration where FAXserve is installed in NDS mode on a NetWare 4.1x server and MHS 1.5N or Global MHS 2.0 is installed on the same server, the users FAXSERVE and FAXSERVE\_HostServerName must be made authorized users of MHS.

---

---

Using FAXMAIL.NLM

The FAXMAIL.NLM allows you to send your electronic mail messages as faxes. To use this NLM, Novell's Message Handling System (MHS) must be loaded on the FAXserve server and you will need an e-mail application that is MHS-compatible.



---

FAXMAIL.NLM works only with MHS-compatible e-mail applications. Do *NOT* load this NLM if your business does not use this type of e-mail system. If MHS is added later, you can then load and configure this NLM. Refer to the NetWare manual for more information on MHS installation.

---

---

Loading the FAXMAIL.NLM

To load the FAXMAIL.NLM on the host server:

1. At the FAXserve host server console, type:  
**LOAD FAXMAIL**  
This will automatically load FAXLIB.NLM, as well.

---

Unloading the FAXMAIL.NLM

To unload the FAXMAIL.NLM from the host server:

1. At the FAXserve host server console, type:  
**UNLOAD FAXMAIL**



---

## Faxing e-mail messages using MHS

To send your e-mail messages as faxes, the only thing you need is MHS loaded on the FAXserve server (or a remote server) and an e-mail application package that is MHS-compatible.

A user called "FAXSERVE" must be added to your e-mail application package. This user must also be specified as an MHS user. FAXSERVE, the e-mail user, will have its own MHS mailbox. It is in this mailbox that all e-mail messages to be sent as faxes will be stored.

The faxing of e-mail is controlled by the FAXMAIL.NLM. A few commands placed at the beginning of the e-mail message are all that are needed for the FAXMAIL.NLM to be able to fax it. The e-mail messages are then sent to the e-mail user, FAXSERVE, and are stored in its mailbox, awaiting transmission.

The FAXMAIL.NLM polls FAXserve's mailbox, looking for e-mail to send. When FAXMAIL finds a message, it places it in the FAXserve queue for transmission.

---

### Faxing e-mail - the basic steps

Follow these basic steps to fax an e-mail:

**1. Add the user, FAXSERVE, to your e-mail application.**

Different electronic mail packages run differently, so you may want to check the documentation that came with your application for further details.

If your e-mail package does not automatically add FAXSERVE to the MHS structure, make sure that the user FAXSERVE is added to your MHS system by using the MHS directory manager (MHS.EXE) if you have a MHS 1.5 system, or by using the NGM 2.0 NGMADMIN.NLM if you have a global MHS system.

2. Create a new e-mail message or open an existing message you want to fax.

Again, refer to your e-mail application's manuals if you do not know how to create an e-mail message.

3. Provide the FAXserve commands to send this message as a fax.

The FAXserve commands must be grouped together and appear before the body of the message. Additionally, all commands must begin on the first character space of each line. These commands do not have to appear in any particular order.

4. Address the e-mail to the user FAXSERVE.

Regardless of who you want the actual fax to be sent to, **you must address the e-mail to the user FAXSERVE.** When the FAXSERVE user receives the e-mail, the system will fax the e-mail to the appropriate party you specified using the @:TO: command. (Refer to the following section for full instructions on the use of the @TO: command.)

5. Send the e-mail as you would any other e-mail.

FAXserve will receive the e-mail and fax it according to the instructions you specified.

#### Commands for faxing e-mail

The following commands inform FAXserve where and when to send an e-mail as a fax. All commands must be grouped together, but may be in any order. They are not case-sensitive, and are prefaced with the at (@) symbol and appended with a colon (:).

- 
- **@TO:** - provides FAXserve the name and fax number of the person to whom you want to send the e-mail fax.
  - **@FROM:** - allows you to customize the sender name of the e-mail fax.
  - **@LOGO:** - allows you to send a general logo file with your e-mail fax.
  - **@USERLOGO:** - allows you to send a personal logo file with your e-mail fax.
  - **@TIME:** - specifies the time the e-mail fax is to be sent.
  - **@DATE:** - specifies the date the e-mail fax is to be sent.
  - **@LORES:** - submits e-mail faxes in low resolution (200Hx100V dpi).
  - **@HIRES:** - submits e-mail faxes in high resolution (200Hx200V dpi).
  - **@GROUPSEND:** - Submits multiple destinations as a CAS group event.
  - **@TEXTSIZE:** - Allows you to select either small or normal sized text fonts.

Place each command at the beginning of a new line. You may place blank lines between consecutive commands to separate and organize them, but this is optional.

The format and summary of use for these commands is provided below:

---

**@TO:** command

The **@TO:** command is essential, as it provides FAXserve with transmission information. The name and fax number of the recipient are provided with this command in the following format:

**@TO:** *name / fax\_num*

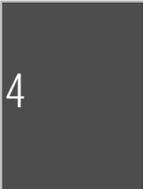
where, *name* is the name of the recipient (consisting of up to 31 alphanumeric characters) and *fax\_num* is the telephone number of the recipient's fax machine or FAXserve channel (consisting of up to 46 numeric characters. In addition, commas (,) can be added to signify one-second pauses while dialing.

For example, to send an e-mail fax to someone named Scott Carroll, whose fax number is (516) 555-5110, you would enter the following for the @TO: command:  
 @TO: Scott Carroll : 5165555110



Note that an area code has been used in the example above. Area codes are only to be used when necessary. Faxing will not work if you attempt to use an area code when faxing from the same area.

The @TO: command may appear multiple times, since you might want to send this fax to several destinations. However, your e-mail package may limit the number of lines that can be used and, thus, limit the number of @TO: entries.




---

@LOGO:  
command

Use the @LOGO: command to send a logo file as the first page of your fax. The logo file must be in PCX format. When this command is issued, the system will search for the specified file in the \MISC subdirectory of the FAXserve home directory. Therefore, you need only to enter the name of the file after the @LOGO: command. The full server name, volume and path is not required.

The format for this command is:

@LOGO: *filename*.PCX

---

**@USERLOGO:**  
command

The **@USERLOGO:** command works similarly to the **@LOGO:** command described above, but instead of searching the **/MISC** directory for the logo file, the system will search the user's mail directory. This is useful if the user has personal logo files that do not reside in the **/MISC** directory.

---

**@TIME:**  
command

The **@TIME:** command is an optional command used to schedule the time of day that transmission will take place. If a time is not specified, the fax is placed into the queue with the current time.

You can use either a 24-hour clock or use a 12-hour clock accompanied with an "am" or "pm" to specify day or evening time.

The format for this command is as follows:

```
@TIME: hh:mm xx
```

where, *hh* is the hour (00-23 are valid entries), *mm* is the minute (00-59 are valid entries), and *xx* is the specification of "am" or "pm". Specify the *xx* value if you are not using a 24-hour clock for this command.

For example, if you want the fax to be sent at 10:21 in the evening, you would enter the **@TIME:** command one of the following ways:

```
@TIME: 10:21 pm or @TIME: 22:21
```



---

If you specify an "am", but the hour you specify is greater than 11, the "am" will be ignored.

The time separator that appears between the hour and minute specified may be a colon (as in the examples above) or you may use a period (e.g. 10.21), a comma (e.g. 10,21), or a space (e.g. 10 21).

---

**@DATE:**  
command

The @DATE: command is optional. If a date is not specified, the fax is placed into the queue with the current date. Once this date and the time specified in the @TIME: field are reached, the fax will be sent. If neither this command nor the @TIME: command are used, the fax will be sent immediately.

The format for this command is as follows:

@DATE: *mm/dd/ccyy*

where, *mm* is the month you want the fax to be sent (1-12 are valid entries, *dd* is the day the fax should be sent (1-31 are valid entries, *cc* is the optional century specification (19 or 20 are valid entries), and *yy* is the year (00-99 are valid entries).

For example, to send a fax on October 10, 1996, you would enter the following:

@DATE: 10/10/96 or @DATE: 10/10/1996



If you specify the century, note the valid year ranges differ as such:

YY = 00 - 79, which refers to 2000 - 2079

YY = 80 - 99, which refers to 1980 -1999

CCYY = 1980 - 2099

The date separators in the @DATE command can be slashes, as in the examples above, or you may use periods (10.10.1996), commas (10,10,1996), or spaces (10 10 1996).

Addressing faxes  
from the MHS  
application's 'To'  
field

As previously explained, all e-mails that you intend to fax must be addressed to the user FAXSERVE in the application's "To" field. The FAXMAIL commands (i.e. @TO:, @FROM:, etc.) are then used to specify such things as whom the fax should be sent to and how it should be sent. However, the FAXMAIL.



---

NLM also allows you to add the same fax address information to the MHS application's "To" field, making it unnecessary to add the FAXMAIL commands to the body of the e-mail.

The syntax for adding the address information to the "To" field is as follows:

```
To: FAXSERVE {FAX: num/name/commands}
```

where,

Variable	Explanation
num	The fax number the fax is to be sent to.
name	Name of the fax recipient.
commands	Any additional FAXMAIL commands.

Notice that the *num* and *name* variables take the place of the @TO: command, making it unnecessary. Then, any additional FAXMAIL commands can be added to the line. Also notice that the address information is enclosed within brackets (i.e. '{ }'). These brackets, as well as the command 'FAX:', are mandatory entries and must be entered exactly as shown above (and in the example below).

For example, to send a high resolution fax to John Smith at 555-9000 without putting FAXMAIL commands in the body of the e-mail, you would type the following in the MHS application's 'To' field:

```
To: FAXSERVE {FAX: 5559000 / John Smith / @HIRES:}
```

You can enter a simpler form of the above information by omitting the 'FAX:' command and entering only the recipient's name and fax number in the brackets (e.g. 'To: FAXSERVE {recipient / number}'). However, using this simplified format prevents you from adding additional FAXMAIL commands (such as @HIRES:).



---

Any FAXMAIL commands that appear in the body of the e-mail will override any addressing information in the MHS application's "To" field.

---

### E-mail application notes

Many e-mail packages also have the capability of adding attachments. These files are copied by the application along with the e-mail message into the FAXserve mailbox. Therefore, they do not have the restriction of being located on the MHS host server. These attachment files must have ASCII, PCX, or DCX formats. Please be aware that certain applications will create multiple copies of the e-mail (one for each attachment) when this option is used, thereby creating more faxes to be transmitted. If this occurs, your telephone charges will increase dramatically, and therefore we suggest that you test how your e-mail package handles the situation.



### E-mail fax order

The fax that is sent to the recipient will be in the following order:

- Logo File
- Cover Page
- Subject
- Message Text
- E-mail Application Attachment

### Messages/Notification

A broadcast message and/or e-mail is sent informing you of the status of the e-mail sent as a fax. You will be notified if the transmission was successful or not. An MHS message will be sent if FAXMAIL fails to submit the e-mail to the FAXserve transmission queue.

---

## Addressing options with GroupWise

There are two methods for GroupWise users to address fax messages:

- Entering the address on the message's 'TO' line
- Selecting the Addressee from the the Address List

The following addressing options will not be recognized by FAXserve:

- bill token
- route token
- options within French braces

## Configuring E-Mail fax services

FAXserve allows you to use your e-mail application with FAXserve. Supported applications are, GroupWise 4.1, GroupWise 5.0, Global MHS, MHS 1.5, and MHS 4.10 Services. With these applications and FAXserve, you can:

- Use your e-mail application to e-mail a fax that you received via FAXserve.
- Use FAXserve to fax an e-mail that you received via your e-mail application.

Whichever action you choose to perform, you must configure your e-mail application and FAXserve to work together.



This procedure must be followed in the order it is presented in this section.

4

1. In the FAXserve Administrator, select *Configure -> E-Mail Fax Services*.

The E-Mail Fax Services dialog box appears:

You must check this box in order to activate e-mail fax services. Complete the required e-mail server information. If you are a GroupWise user, you can specify a logo for your cover page.

Fill in the user FAXserve's e-mail address here.

2. Add a user named FAXSERVE to your e-mail application.

---

This name will be used to create a mailbox for FAXserve. Then, when outgoing e-mails are addressed to this user, they will be routed to FAXserve and faxed. Refer to your e-mail application's documentation for details on adding a user (in this case, FAXSERVE) to your e-mail program.



---

Take note of the e-mail address given to the user FAXSERVE, as this information must be provided in the FAXserve Administrator.

---

3. In the E-Mail Fax Services dialog box, enter the e-mail address assigned to the user FAXSERVE, then click OK. You can now send e-mail to the user FAXserve.

## Specifying a user's e-mail address



Your e-mail application and FAXserve must have been configured to work with each other before you can specify e-mail addresses.

1. **Select *User -> E-Mail Address*.**  
The E-Mail dialog box appears.
2. **Highlight a user, then specify his/her e-mail address and click Save.**  
Click the Save button to save the e-mail information for each user. Now, any time a fax for this user is received via e-mail, it will be sent to the e-mail address you specify here.

The user you select here...

...appears here, as well. In the *Edit E-Mail Address* field, specify the e-mail address for this user and click Save.

3. **Repeat this step for each user whose e-mail address you want to specify.**  
Click Close when done.

---

## Creating and editing a specific user's user profile

The default user profile is a framework used by all newly authorized FAXserve users. However, for certain users, you may need (or want) to customize the information provided in the user profile. Therefore, FAXserve allows you to create a user profile specific to a user.



---

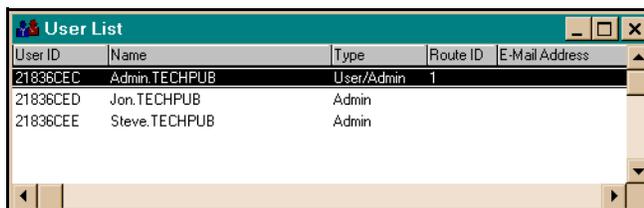
The information that is provided in a user profile supersedes the information provided for the same fields in the default user profile.

---

1. Display the FAXserve user list and select the user whose use profile you want to edit.

To display the FAXserve user list, click the User List button on the Quick Access toolbar.

The User List lists all authorized FAXserve users and administrators.

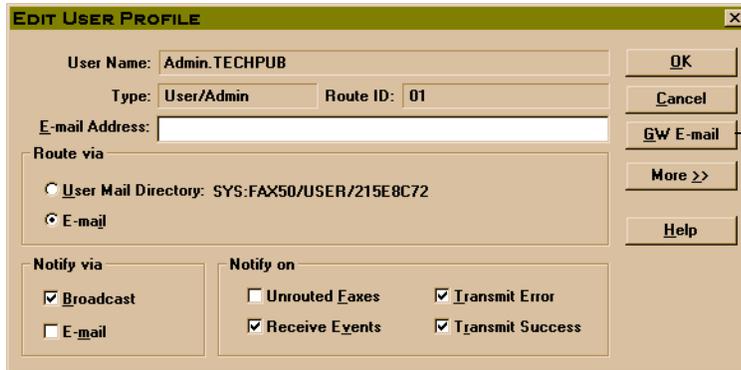


User ID	Name	Type	Route ID	E-Mail Address
21836CEC	Admin.TECHPUB	User/Admin	1	
21836CED	Jon.TECHPUB	Admin		
21836CEE	Steve.TECHPUB	Admin		

2. Select *User -> Edit User Profile*.
3. Make changes to the user's profile information as needed.

The information that appears in the user profile comes from the default user profile, unless the user profile was

previously edited. In that case, the information comes from the specifications made previously.



Click here for automatic entry of a GroupWise 5.0 user's e-mail address.

### Edit User Profile fields

Field name	Explanation/Valid Values
<i>User Name</i>	Displays the name of this user for whom you are editing a user profile.
<i>Type</i>	Displays whether this user is a FAXserve user, administrator, or both.
<i>Route ID</i>	Displays this user's Route ID, if applicable. A Route ID allows faxes that are sent to this user to be directly routed to this user's FAXserve directory. Refer to the 'Setting up automatic fax routing' section on page 4-37 for more information.
<i>E-mail Address</i>	Specify this user's e-mail address in order for this user to use e-mail with FAXserve. You may need to refer to your e-mail application for this information. If FAXserve is an NDS installation and the user is using GroupWise 5.0, press the GW E-mail button for automatic entry.
<b>Route via options -</b>	Defines the path where faxes that you (or another FAXserve administrator) route to this user are placed.
<i>Route via -&gt; User Mail Directory:[path]</i>	Specify the path to this user's mail directory. Faxes routed to this user will be routed to this path.

### Edit User Profile fields

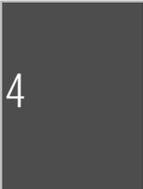
Field name	Explanation/Valid Values
<i>Route via -&gt; E-mail</i>	This option can be set only if you have configured your e-mail application to work with FAXserve. Refer to Chapter 2, "Installing FAXserve", for further details.
<i>Notify via -&gt; options</i>	Specify how you want this user to be notified when he/she has received a fax.
<i>Notify via -&gt; Broadcast</i>	A NetWare broadcast message will be sent to this user's workstation.
<i>Notify via -&gt; E-mail</i>	This option is available only if you have configured your e-mail application to work with FAXserve. Refer to Chapter 2, "Installing FAXserve", for further details. If you select this option, the user will be notified via e-mail that he/she has received a fax.
<i>Notify On options -</i>	Select the FAXserve event(s) that this user should be notified of. This user will be notified per the <i>Notify via</i> specification.
<i>Notify On -&gt; Unrouted Faxes</i>	This option is available only to users who have been authorized as FAXserve administrators. This user will be notified when a fax has been received by FAXserve and has not been routed to its proper recipient(s).
<i>Notify On -&gt; Receive Events</i>	This user will be notified each time a newly received fax is routed to him/her.
<i>Notify On -&gt; Transmit Error</i>	This user will be notified when a fax he/she has scheduled for transmission was unsuccessful.
<i>Notify On -&gt; Transmit Success</i>	This user will be notified each time FAXserve successfully sends a fax he/she has scheduled.

## Managing Faxes

Configuring incoming faxes

To configure FAXserve to receive incoming faxes, follow the procedure below:

1. Select *Configure -> Incoming Faxes*.
2. Enter your selections in the Manage Incoming Faxes dialog box, then click OK.



Field Name	Explanation/Valid values
<i>After Successful Reception -&gt; Automatically Route Fax</i>	Incoming faxes will be forwarded to FAXserve user accounts. Click database button to make changes in the inbound router database. Note: When you set this option, incoming faxes will be routed to their proper recipient upon receipt by FAXserve only if the fax was sent with a valid DTMF number. If the fax does not have a valid DTMF number, then the fax will be manually routed by the administrator.
<i>After Successful Reception -&gt; Automatically Print Fax</i>	Incoming faxes will be printed upon receipt. Click the Printer button to make changes to printer settings. Also, the <i>Print Options</i> section of this dialog box are activated when you set this option. For more information about the <i>Print Options</i> fields, refer to the following cells of this table.
<i>Print Options -&gt; All Pages</i>	Every page in a fax will be printed.

---

Field Name	Explanation/Valid values
<i>Print Options-&gt; First Page</i>	Only the first page of a fax will be printed.
<i>Print Options-&gt; First Page with FAXprint Page Header</i>	Only the first page of a fax, including the FAXprint header, will be printed. The FAXprint header is a header that prints at the top of the first page of incoming faxes, listing the server name (if applicable), the date and time of receipt, and the CSID of the fax machine (or server) that sent the fax.
<i>Print Options-&gt; Delete after print</i>	The fax will be deleted immediately after is it printed.

## Setting up automatic fax routing

FAXserve allows you to automatically route incoming faxes by assigning a Route ID to a user or a group of users. The following types of Route ID's can be assigned:

Type	Routing Method
Route ID	Routinh methods include NEST, DID, and DTMF. This is modem/board dependent -- it must support the method in order for you to utilize this option.
Channel Number	All faxes from a single channel (fax line/modem) can be routed to a user or group, by assigning a Channel Number to the user or group. Each modem is assigned a Channel Number. Only one user or group can be assigned to a modem.

The FAXserve Administrator must assign a Route ID to a user or group of users in order for a fax to be automatically routed to them.

---

Assigning  
"Default" as the  
Recipient Number

A valid Route ID number of "Default" specifies that this user will receive all incoming faxes that do not contain a valid Route ID, regardless of the channel on which the fax was received.

When a fax is received with a Route ID, FAXserve will first check if anyone has been assigned the Route ID upon which the fax was received. If no matches are found, FAXserve will then check to see if any users have been assigned the value "Default". If FAXserve still cannot place the fax, the fax will remain in the FAXserve user's mail directory. From there it must be manually forwarded to its proper recipient by the system administrator.

---

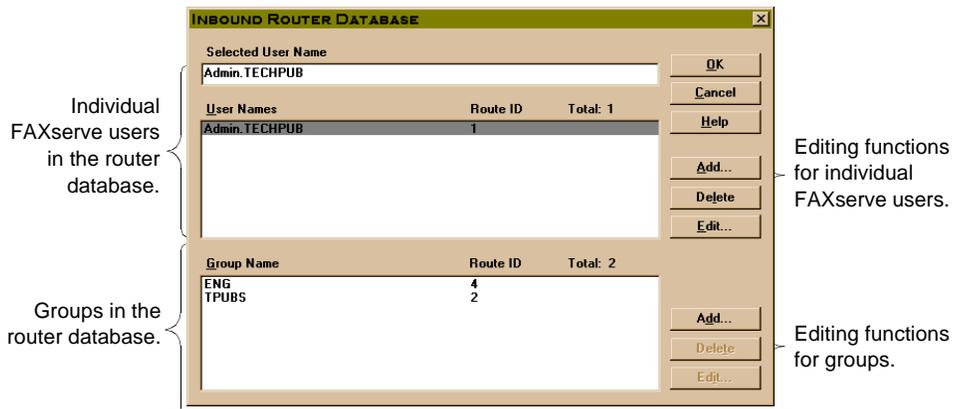
## Assigning a Route ID to a user

The FAXserve Administrator must assign a Route ID to a user in order for a fax to be automatically routed to them.

To assign a Route ID to a user:

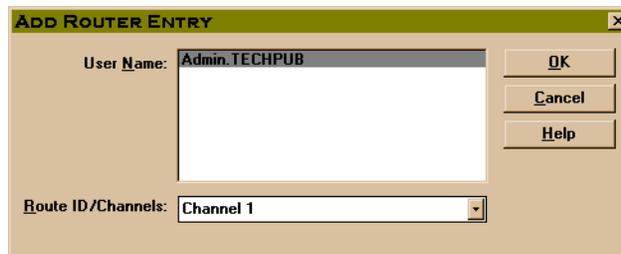
1. Select *Configure -> Inbound Router Database*.

The Inbound Router Database dialog box opens:



2. Click the top Add button (next to the User Name area).

The Add Router dialog box opens:



**To specify a User Name:** Select a user and enter it in the User Name Field.

**To specify a Route ID/Channel:** The code that you enter here will be Route ID for the specified user.



---

You may enter the same Route ID for more than one user. Incoming faxes with the same Route ID will be routed to all users sharing the ID.

---

3. Click OK to close the Add Route Entry dialog box.

Repeat steps 2-3 for each Route ID that you wish to assign.

4. When finished adding Route IDs, click Close.

The specified Route IDs are added to the Router Database for future sessions.

4

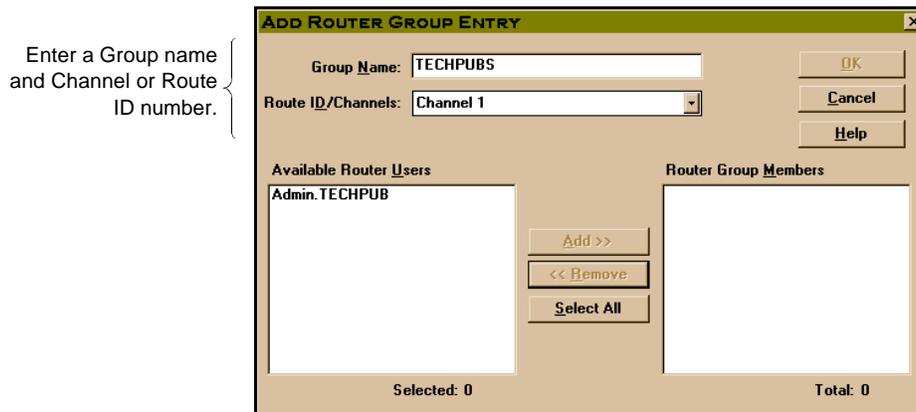
### Assigning a Route ID to groups

To assign a Route ID to a group of users:

1. Select *Configure -> Inbound Router Database*.
2. From the Inbound Router Database dialog box, click the Add button located next to the Group Name window.

---

The Add Router Group Entry dialog box opens:



**3. Assign users to the group.**

From the Available Router Users list, select users who should be members of this group and click Add>>. These users will now appear under the Router Group Members list. Click OK to close the Add Route Entry dialog box.

**4. Repeat steps 2-6 for each Route ID that you wish to assign.**

**5. When finished adding Route IDs, click Close.**

The specified Route IDs are added to the Router Database for future sessions.

---

Deleting or editing  
a Route ID

To delete or edit a Route ID:

1. From the Inbound Router Database dialog box, highlight the user name or group name.
2. To delete the selected user or group, click Delete.
3. To edit the selected user or group, click Edit.

The appropriate editing dialog box opens for the user or group. Enter your changes in the open dialog box.

---

Faxing to a user with a Recipient Number

In order to send a fax to the FAXserve inbound router system, the fax sender will have to dial a Recipient Number after dialing the fax number.

---

Sending a fax to FAXserve from a fax machine (DTMF method)

In order to auto-route faxes that are sent from a fax machine, the sender must follow these steps when dialing:

1. Using either the speaker or handset, dial the fax number.  
Example: 5165551212
2. Wait to hear the receiving fax/modem pick up and transmit a tone.
3. Dial the Recipient Number, followed by the # key.  
Example: 1234#
4. Press the Start/Send button on the fax machine to begin transmission.
5. If you used the handset, return it to the fax machine.

---

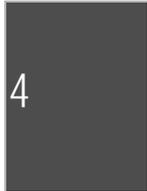
Sending a fax to FAXserve from a fax/modem

To send a routed fax to FAXserve from a fax/modem, enter the Recipient Number in the following format:

@\* <RECIPIENT>#

The characters '&' or ',' may be substituted for the '@' character, if these dialing modifiers are supported by your fax modem.

For example, to send a fax to a FAXserve user with a fax number of 555-8888 and a DTMF code of 6666, you would dial the following with your fax/modem:  
5558888@\*6666#



---

The sending modems must support the '@' and '&' dialing modifiers. The '@' symbol tells the sending modem to wait for 1 or more rings before dialing the rest of the digits. The '&' tells the sending modem to wait for the receive modem to send an acknowledgment before dialing the rest of the digits. The numbers before these symbols are the phone number of the fax modem/machine.

---

Using DTMF modifiers

There are several dialing modifiers that you can use when dialing to a DTMF code. These modifiers are:

Modifier	Description
<i>T</i>	To select touch tone. This may be required if the modem is connected to a telephone line which supports only pulse mode dialing.
<i>P</i>	To select pulse mode.
,	To pause for a pre-programmed interval (usually 1 or 2 seconds).
@	To wait for one or more rings followed by 5 seconds of silence before dialing the rest of the telephone number.

When using any of these modifiers, be sure to place them directly after the fax telephone number and before the \* in the Recipient Number.

## Managing the transmission queue

Opening the Transmission Queue window



The Transmission Queue displays all of the faxes that are waiting to be sent by FAXserve. To view the Transmission Queue:

1. Click the Trnsque button on the Quick Access toolbar.

Status	Date	Time	Pages	Fax Number	Recipient	Sender
Dialing	12/5/96	21:17:38	2	4841435	James Milligan	Scott Thom
Waiting	12/5/96	21:14:48	2	4841435	James Milligan	Scott Thom

The first column of the Transmission Queue, labeled Status, allows you to view the status of each fax on the list. Each entry on the list will contain one of the following status codes:

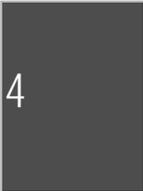
- > submitting
- > waiting
- > dialing
- > sending
- > aborting

Rescheduling when a fax is to be sent

To reschedule a fax:

1. Double-click the fax you want to reschedule.
2. Specify when to send the fax.

The Send Now button can be used to immediately send a fax that was originally scheduled for later transmission.



---

Otherwise, you can specify a date and/or time that you want the fax to be sent.

Information about the fax you are looking at.

Specify the new date and/or time FAXserve should send the fax.



---

Removing a fax from the queue



To delete a fax from the Transmission Queue:

1. Highlight the fax you want to delete.
2. Click the Delete button on the Quick Access toolbar.

The fax will be removed from the Transmission Queue and erased from disk.



---

If the fax is “in progress”, the status will change to “Abort” and is not deleted immediately.

---

## Maintaining the Transaction Database

The Transaction Database is a collection of records of all faxes transmitted and received by FAXserve. The database can be viewed on the screen and it can also be captured to a file. It can be used for analysis, billing, or printing. When the accounting feature is activated, the cost of the fax will appear on the record.

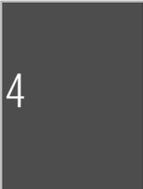
To access the Transaction Database window:



1. Click the Trns DB button on the Quick Access toolbar.

The Transaction Database window appears:

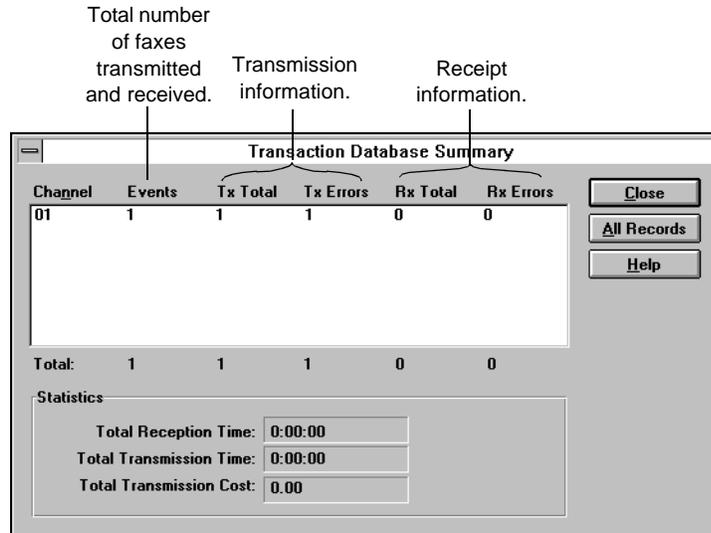
Type	Date	Time	Duration	Speed	Pages	Cost	Fax Number	Recipient	Sender	Status
Send	03/30/95	12:38:06	00:00:00	300	0/1	0.00	8297256	BAGELMAN	SUPERVISOR	User canceled
Recv	03/30/95	13:42:14	00:01:04	9600	2/2	0.00		G	5166273393	Successful
Send	03/30/95	16:18:58	00:23:14	9600	26/26	0.00	6273393	Christian Poor	AUDREY	Successful
Send	03/30/95	16:43:04	00:00:44	9600	1/1	0.00	6896949	Keith Brazier	AUDREY	Successful
Recv	03/30/95	16:51:18	00:01:44	9600	3/3	0.00		G	5166273393	Successful
Send	03/31/95	07:31:10	00:00:34	9600	1/1	0.00	6896949	Keith Brazier	Sean Robert	Successful
Send	03/31/95	13:05:56	00:00:34	9600	1/1	0.00	8297256	Bagelman	AUDREY	Successful
Send	03/31/95	15:48:02	00:00:52	9600	1/1	0.00	9446167	dadadad	David W. Pfister	Successful
Send	03/31/95	16:05:56	00:00:52	9600	1/1	0.00	9446167	dadadad	David W. Pfister	Successful
Send	03/31/95	21:31:02	00:00:34	9600	1/1	0.00	6273393	Naomi Sanders	Sean Robert	Successful
Send	04/01/95	00:00:26	00:00:44	9600	1/1	0.00	4377402	Richard Mar	AUDREY	Successful
Send	04/03/95	11:33:08	00:00:34	9600	1/1	0.00	8297256	OF GREAT NE	SUPERVISOR	Successful



Viewing information about all FAXserve transactions

1. Select *Administration -> Summary*.

The Transaction Database Summary window appears. The information displayed pertains to each configured fax channel.



Viewing information about a specific transaction(s)

To obtain information about a specific transaction listed in the Transaction Database, follow the directions below:

1. In the Transaction Database window, highlight the transaction.
2. Select Administration -> Summary.

You can also print and/or delete the Transaction Database by clicking the appropriate icon.

Accounting

FAXserve can keep track of accounting procedures, including the cost per unit (whatever you wish) and the charge unit (page, fax, minute). To enable accounting:

1. Select Configure -> Accounting.  
Check the *Activate accounting* option.

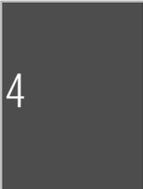
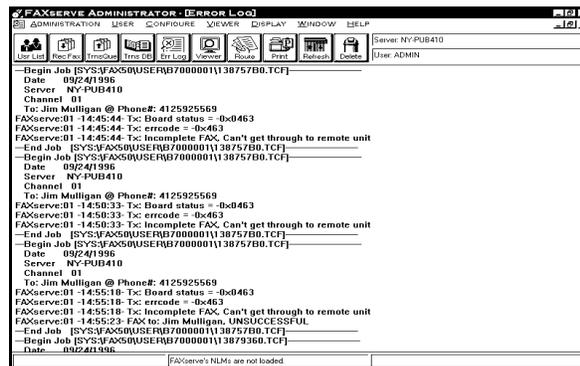
## Viewing the Error Log

The FAXserve Error Log displays information about the FAXserve NLMs resident on the FAXserve host server. Each FAXserve host server has its own Error Log. Any errors that occur for each module are documented in this file. In addition, the loading, unloading, and initialization functions are also recorded.

To view the Error Log:

1. Click the Err Log button on the Quick Access toolbar.

The following screen appears:



You can also print and/or delete the error log by choosing the appropriate icon.

---

## Setting up the BitWare Client

BitWare lets you store information about yourself, such as your name, fax number, and any special numbers that you routinely dial. BitWare uses this information to address your cover pages and to automatically dial special numbers, such as an outside line number or your calling card number.

To set up your station:

1. In the BitWare toolbar, click the Setup button.
2. In the Setup dialog box, click the Station button.

The Station Setup dialog box appears.

**STATION SETUP**

User Information

Name: Scott Thomas Title: LAN Administrator

Company: Cheyenne

Address: 2000 Marcus Avenue

City: Lake Success State: NY Zip Code: 11042

Country:

Voice #: Fax #: 465-5834

Add Delete Update Private Data...

Station Information

Local Area Code: 516 Long Distance Code: 1

Local Country Code: 1 International Code: 011

OK Cancel Help

3. In the *User Information* group, enter your name, company name, fax and voice number, and address.

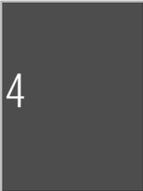
Click on *Private Data* to insert credit card number, access code, dialing sequence, and password. Click OK when done.

4. In the Station information group, enter any special numbers that you want BitWare to dial.

**Local Area code** - You can enter your current area code. When you send a fax, BitWare checks the area code you entered here with the area code of the number it is dialing. If they match, BitWare will automatically not dial the number's area code.

**Local Country code** - Enter your current country code.

**International code** - Enter the number you normally dial to make an international call. In the United States, for example, you would dial 011.



---

## Configuring the way you receive faxes

After you receive a fax, BitWare can do one or more of the following:

- Beep or play a Windows sound file (.WAV)
- Pop up a notification dialog box, showing how many faxes you have received
- Flash or “float” the Receive Manager icon
- Print a copy of the fax
- Forward the fax to a remote fax machine or email it to any package that conforms with VIM or MAPI standards

When you receive a fax, by default BitWare will beep and display the Receive Status dialog box, which shows the number of faxes you have received.

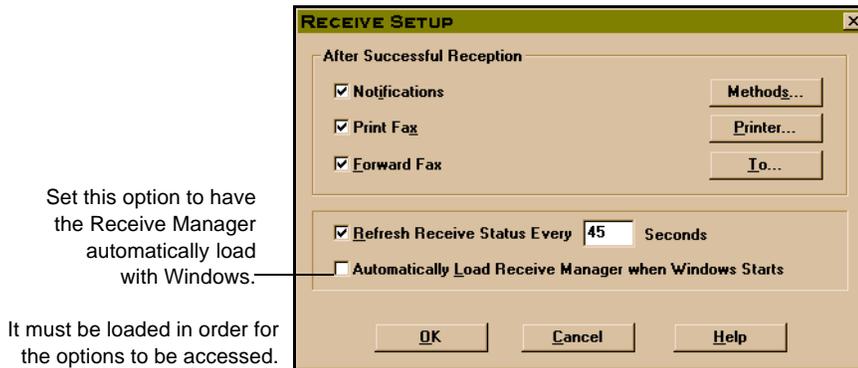
---

Changing  
BitWare's receive  
options

To change BitWare's receive fax options:

1. In the BitWare toolbar, click the Setup button.
2. In the Setup dialog box, click the Receive button.

The Receive Setup dialog box appears:

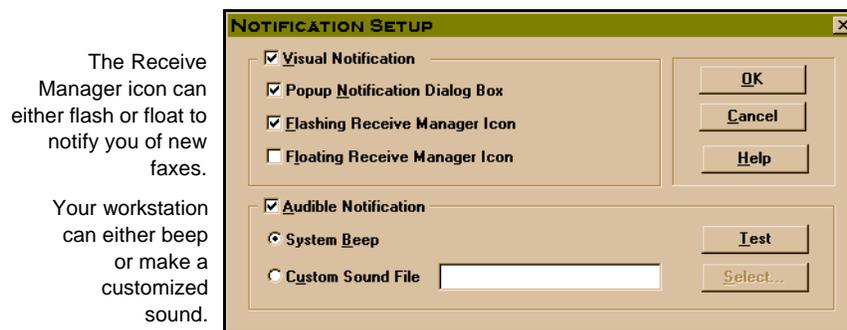


3. Select and configure one or more options and click OK. To configure the receive options, refer to the applicable section(s) below.

### Notifications

Notification options control how you will be notified of incoming faxes. As mentioned previously, BitWare has several ways of notifying you of incoming faxes, both visually and audibly.

When you select *Notifications* and click the *Methods* button, the Notification Setup dialog box appears:





---

To select a sound file, you must have a sound card properly installed and configured, or have a sound driver that can play waveform (.WAV) files using your PC's internal speaker. Users can use the <test> button to check if sound is audible.

---

---

### *Print Fax*

When *Print Fax* is selected, Receive Manager will automatically print received faxes. The Receive Manager must be loaded in order to print.

To use this option, you must first select the printer to which you want received faxes to print. To do this, click the Printer button. In the dialog box, select the printer to which you want received faxes to print and click OK.

---

### *Forward Fax*

When the *Forward Fax* option is selected from the Receive Manager, BitWare will automatically forward your received faxes to the destination you specify.

To specify a destination, select *Forward Fax*, and click the To button.

The screenshot shows the 'FORWARD FAX SETUP' dialog box with the following fields and options:

- Forward Fax via MAPI
  - Address: [Text Field]
  - Login Name: [Text Field]
  - Password: [Text Field]
- Forward Fax to Fax Machine
  - Name: Milligan, James [Text Field] Phone Book... [Button]
  - Company: APS Ltd. [Text Field]
  - Fax Phone: 484-1435 [Text Field]
- Send Cover Page [Text Field] Cover Page... [Button]
- Forward Fax after: 0 [Text Field] Minutes

Annotations on the left side of the dialog box:

- Have your faxes forwarded to you via e-mail or to your fax machine. (Points to the MAPI and Fax Machine sections)
- Click here if you'd like to send a cover page... (Points to the Send Cover Page checkbox)
- ...and here if you want your system to wait before sending a fax. (Points to the Forward Fax after field)

The BitWare Client will forward your mail to any e-mail package that conforms with the VIM or MAPI standards. The name of the e-mail package will appear.



---

Faxes can only be forwarded via VIM or MAPI. In order to select this option, the BitWare Client will first check to see whether or not a VIM or MAPI e-mail system is installed on your workstation.

---

If you select to forward faxes by e-mail, enter the VIM or MAPI address, login name, and password of the person to whom you want your incoming faxes forwarded. This person will most likely be you, although it could be another person such as your secretary or assistant.

If you select to forward faxes by fax machine, enter the name (optional), company (optional), and fax number of the person/fax machine to which you want your incoming faxes sent.

---

Refresh Receive  
Status Every n  
Seconds

BitWare periodically checks the fax server for new faxes. In this field, you can change the number of seconds BitWare will wait between checks.

---

Automatically  
Load Receive  
Manager when  
Windows Starts

When selected, Receive Manager will automatically load in the background and wait for new faxes. Receive Manager will be minimized.



---

If this option is not selected, you will not be notified of incoming faxes.

---



# 5

## Chapter

# CONSOLE OPERATION

FAXserve provides two server console screens which allow you to view information and perform administrative functions. This chapter explains how to load and configure the FAXserve NetWare Load Modules (NLMs) from the FAXserve server console. You can also specify command-line options.

In this chapter, you will learn how to:

Page:

- 5-2 > Access the console screen
- 5-3 > Get information about the fax channels
- 5-6 > Manage a fax channel
- 5-11 > Access the FAXserve Runtime Message screen
- 5-11 > Specify system messages

---

## Accessing the FAXserve server console screen

The FAXserve server console screen allows you to get information about and manage the fax channels configured for your FAXserve system. Follow the directions below to display the FAXserve console screen:



---

FAXSERVE.NLM must be loaded on the file server in order for you to be able to switch to the FAXserve console screen. Refer to page 4-2 in this manual for instructions on loading the server NLM.

---

1. At the server system console screen, press CTRL+ESC.
2. Select *FAXserve Console* from the list of available console screens.

Press ENTER for the Available Options menu.



## Getting information about a specific fax channel

When the FAXserve console screen is first displayed, information about Channel 1 is shown by default. If you have more than one fax board or a multi-port board with more than one modem, you can select which channel you want to display information about.

---

Select the fax channel you want information about

To view information about a fax channel:

1. Press ENTER at the FAXserve console screen.
2. From the Available Options menu, select *Select FAX Channel*.

- 
3. From the list of available channels, select the channel you want to view information about.

**Fax Channel Status fields**

<b>Field Name</b>	<b>Explanation</b>
<i>Channel #</i>	The number of the channel to which the following fields refer appears in this field. Since multiple boards can be placed in the host server and certain boards can contain more than one channel, the channels are numbered.
<i>Channel Type</i>	The types are receive (Rx), transmit (Tx), and bidirectional (RxTx). Each channel type is configured during the fax board configuration.
<i>Process State</i>	The process state describes the status of the selected channel. The possible states are Idle, Send, Receive, and Status change.
<i>T30 Line State</i>	The CCITT T30 protocol defines dynamic states for both parties to the fax transaction (the receiving side and the transmitting side). These T30 states can be Idle, Dialing, Answering, Transmitting, Receiving, Pre-message, Post-message, and Disconnect.
<i>Baud Rate</i>	The baud rate being used to transmit faxes.
<i>Remote CSID</i>	The identification of the remote fax device appears in this field when a call is in progress and the CSID can be detected. The field will change from DIALING # and will display the fax number being dialed to (DIALED #) if the CSID cannot be detected.
<i>Fax Resolution</i>	The resolution of the fax transmission, set when a fax is transmitted, appears. The resolution can be either Fine (200 x 200 DPI) or Normal (200 x 100 DPI).
<i>Processing Page #</i>	The page number of the fax information currently being transmitted or received.

**Fax Channel Statistics fields**

<b>Field Name</b>	<b>Explanation</b>
<i>Total Events</i>	The number of transmitted and received events processed by the selected channel. These events are tallied from the time the channel was initialized, which occurs when the FAXserve NLM is loaded.
<i>Tx Successful</i>	The total number of completed transmitted events (see <i>Total Events</i> field above) appears in this field.
<i>Tx Unsuccessful</i>	The total number of transmit events that were unsuccessful. If an event is unsuccessful, it and the associated error code which defines the problem appears in the FAXserve Error Log.
<i>Rx Successful</i>	The total number of received events that were successful.
<i>Rx Unsuccessful</i>	The total number of received events that were unsuccessful. If the event is unsuccessful, it and the associated error code which defines the problem appears in the FAXserve Error Log.
<i>Last Event Time</i>	The time and date that the last event took place on this channel.
<i>Last Event Type</i>	The type of event that occurred last on this channel.
<i>Last Event Status</i>	The status of the last event that took place on this channel. This status is defined by CAS. If the status number displays 0000, then no error has occurred. Press F5 to see the definition of the code displayed in this field.



---

## Viewing information about all fax channels

If you want to review the activity of more than one fax channel at one time, FAXserve provides two summary screens describing global information for all configured fax channels:

- Global Status
- Global Statistics

---

### Displaying Global Status

To view the Global Status screen, press F3.

---

### Displaying Global Statistics

To view the Global Statistics screen, press F4.

## Managing a fax channel from the console screen

The FAXserve console screen's Available Options menu is used to manage your FAXserve fax channels.

### Displaying configuration information:

1. From the Available Options menu, select *Display Channel Configuration*.

The configuration data for the channel is divided into two screens. Press TAB to toggle between them.

The first screen of this channel's configuration.

FAX Channel 01 Configuration Data - Intel SatisfAXtion v5.00			
CSTID	:		Tx Power Level : 0
# Receive Rings	:	1	# Tx Retries : 3 at 3 mins each
Speaker	:	Off	Carrier Timeout : 90
Dialing Mode	:	Tone	Blind Dial Wait : 0
Dialing Prefix	:		

The second screen of this channel's configuration.

FAX Channel 01 Configuration Data - Intel SatisfAXtion v5.00			
I/O Port Address	:	0300	Bus Type : ISA
I/O Memory Address	:	00000000	Slot # : N/A
DMA Channel #	:	00000000	
IRQ #	:	000	
Firmware	:	DOWNLOAD.200 2.14	

### Channel Configuration Data fields

Field Name	Explanation
<i>CSTID</i>	This is the Calling Station Identification entered for this channel.
<i># Receive Rings</i>	This is the number of rings after which a connection will be made.
<i>Speaker</i>	Whether the fax board speaker is on or off. Valid value may be: <ul style="list-style-type: none"> <li>• "1" = (On)</li> <li>• "0" = (Off)</li> </ul>
<i>Dialing Mode</i>	The method (tone/pulse) used by a channel.
<i>Dialing Prefix</i>	The sequence of numbers that is dialed before the actual telephone number is dialed (e.g., "9" for many businesses).
<i>Tx Power Level</i>	The amount by which FAXserve will adjust or compensate the telephone signal strength.
<i># Tx Retries</i>	The number of times that FAXserve will try to transmit an outgoing fax when the receiver's line is busy or when there is no response. The interval in minutes for the next transmit retry is also listed.
<i>Carrier Timeout</i>	The amount of time (in seconds) upon which, if the receiving telephone line does not pick up, the job will be cancelled or rescheduled.
<i>Blind Dial Wait</i>	The amount of time (in seconds) that FAXserve will wait before transmitting a fax when no dial tone is received.



---

### Channel Configuration Data fields

Field Name	Explanation
<i>I/O Port Address</i>	The I/O port address used by the selected fax channel for server/board communication.
<i>I/O Memory Address</i>	The memory address for the fax board being used.
<i>DMA Channel #</i>	The Direct Memory Address (DMA) channel being used by the fax channel.
<i>IRQ #</i>	The Interrupt Request number being used by the fax channel.
<i>Firmware</i>	The name and version of the fax board software (i.e., the software that runs the fax board).
<i>Bus Type</i>	The bus type employed in the host file server.
<i>Slot #</i>	The number of the slot in the host file server in which the current Micro Channel fax board is inserted.

#### 2. Press the PgDn key to view other channels' data.

If you have more than one fax channel, the Configuration Data screens for each subsequent channel will be displayed.

### Displaying FAXserve statistics

The statistics presented by the *Display FAXserve Statistics* option refer to the FAXserve Server NLM and not to a specific channel.

To display general information about FAXserve:

1. From the Available Options menu, select *Display FAXserve Statistics*.

The FAXserve Statistics screen appears, as shown below:

FAXserve Statistics	
FAXserve Loaded At:	13:58 on 12/03/96
# FAX Channels	: 1
# Events Pending	: 0 NY-PUB410
# Unrouted FAXes	: 0
# Database Records:	1

**FAXserve Statistics fields**

Field Name	Explanation
<i>FAXserve Loaded At</i>	Time and date the FAXserve NLM was loaded on the host server.
<i># FAX Channels</i>	Total number of fax channels configured for this host server.
<i># Events Pending</i>	Number of faxes queued for transmission.
<i># Unrouted Faxes</i>	Number of unrouted faxes received by FAXserve.
<i># Database Records</i>	Total number of records in the FAXserve Transaction Database.

**Updating configuration data**

The data displayed in the Channel Configuration Data screen is the same as the parameters selected when the board configuration was performed. None of this information can be changed here; it can only be changed with the Configuration program.

If you have changed the configuration of the fax board, you can update the information without unloading and reloading the NLMs:

1. Press L at the Configuration Data screen.

This re-initializes the channels. The NLM and all fax boards and channels will then operate with the new configuration.



---

### Resetting the selected channel

The *Reset Channel* option will reinitialize the selected channel displayed in the FAX Channel Status console screen's *Channel #* field.

To reset a channel, follow the procedure below:

1. Select *Select Fax Channel* from the Available Options menu and select the channel you want to reset.
2. Select *Reset Channel* from the Available Options menu.

### Disabling/Enabling a fax channel

To disable/enable a fax channel:

1. Select *Disable/Enable Channel(s)* from the Available Options menu.

A list of channels is displayed. This list is a set of toggle fields with either "Enable" or "Disable" appearing next to the channel.

2. Select the channel to change.

## Accessing the FAXserve Runtime Message screen

The FAXserve Runtime Message screen displays the FAXserve system messages. Follow the directions below to display the FAXserve Run-time screen (after FAXserve is loaded):

1. At the server system console screen, press CTRL and ESC.
2. Select *FAXserve Runtime Message Screen* from the list of available console screens.

The Runtime Message screen is displayed.

## Specifying system messages

You can specify the types of FAXserve system messages that are logged using the FAXSERVE command.

At the command line of your server console (after FAXserve has been loaded), enter the following:

**FAXSERVE** *OPTION*

The following table describes the valid options for this command:

Option	Description
LOG = x	Specifies the destination of messages. Valid values for x are: FAX_CONSOLE - FAXserve Console Screen FILE - Debug file (contact Cheyenne Technical Support for information on working with a debug file.)

---

Option	Description
VERbosity=x	Specifies the type of messages that are logged. Valid values for x are: DEBUG - Debug, Info, Warning, and Critical messages INFO - Info, Warning, and Critical messages WARNING - Warning and Critical messages CRITICAL - Critical messages only
SNMP=x	Specifies broadcast method. Valid values for x are: (AL)L - Info, Warning, and Critical broadcast methods (I)NFO - Info, Warning, and Critical broadcast methods (W)ARNING - Warning and Critical broadcast methods (C)RITICAL - Critical broadcast methods (N)ONE - No messages

### Broadcasting system messages

You can broadcast your system messages using Cheyenne's Alert notification system, which is available on the Cheyenne BBS. Refer to the front pages of this guide for the BBS phone number.

# 6

## Chapter

# MANAGING FAXES

You can manage your faxes from within the FAXserve Administrator or the BitWare Client.

In this chapter, you will learn how to:

Page:

- 6-4 > Route faxes to the proper recipient
- 6-5 > Print received faxes
- 6-8 > Use the BitWare Transmit and Receive Logs
- 6-11 > Export the Transmit and Receive Logs
- 6-13 > Organize your faxes

---

## Routing methods

---

### Manual

All faxes that are received by FAXserve are automatically stored in a default directory. The FAXserve Administrator receives a message from FAXserve indicating that there are unrouted faxes in the pool. The Administrator then reviews the fax through the FAXserve Administrator and routes it to the correct user.

---

### DTMF

Dual Tone Multi-Frequency method is a way of signalling in which two frequencies are combined to indicate a value to a switching system (i.e., 'touch-tone' telephone).

The sender of the fax dials in the fax number, followed by the DTMF code, which can be considered to be a fax extension number. The Intelligent Fax within the server decodes the DTMF code and passes it on to FAXserve. FAXserve looks up the number, finds the corresponding recipient, and passes the fax to that user.

---

### DID

Direct Inward Dialing allows the sender to dial a direct fax number, bypassing any "codes". The fax router converts the last three or four digits of the fax number into a DTMF string and passes it on to FAXserve. FAXserve consults its Inbound Router Database and automatically forwards the fax to the correct addressee.

---

### NEST

FAXserve 5.0 has implemented Novell's NEST (Novell's Embedded System Technology) architecture. Faxes can now be auto-routed using NEST's route codes.

The NEST code format: RecipientFaxNumber#RouteCode#  
Where the RouteCode between the two '#' characters must contain at least 4 digits and no more than 8 digits.

Example: 516-555-1212#1234#

---

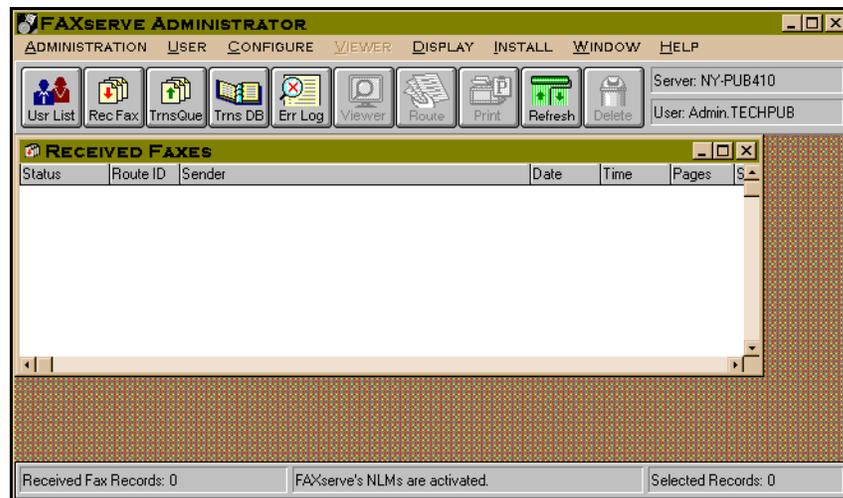
## Routing faxes to their proper recipients

Opening the  
Received Faxes  
window

The Received Faxes window displays all of the faxes sent to and received by FAXserve. From this window, a FAXserve administrator can determine to whom a fax is sent, and then route this fax to him/her. To view the list of received faxes:

1. Click the Rec Fax button on the Quick Access toolbar.  
From here, you can route a fax to the appropriate recipient(s).

Search for  
entries  
according to  
time and  
date.



### Basic steps to routing a fax

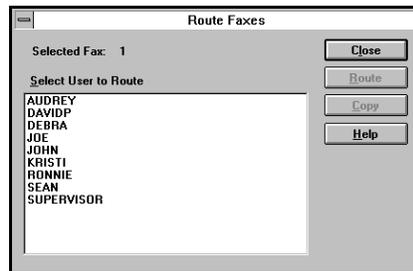
1. Determine whom the fax is for.  
You can determine the recipient(s) for a fax by printing out a page (or more) of the fax or by viewing the fax via the FAXserve Administrator.



2. Click the Route button from the Quick Access toolbar.

3. In the Route Faxes dialog box, highlight the fax recipient(s).

To select multiple recipients at once, press and hold the CTRL key while selecting the names of the users.



4. Click Route or Copy.



Before you click the Route button in the Route Faxes dialog box, make sure no other user needs this fax routed to him/her. Once you click the Route button, this fax is deleted from the Received Faxes list, and as a result, you will not be able to route this fax to anyone else.

---

Routing to one recipient

If the fax is for only one recipient, click Route. The fax is removed from the Received Faxes window and is routed to the user's FAXserve directory.

---

Routing to multiple recipients

If the fax should be routed to several people, click Copy. The original fax remains listed in the Received Faxes window, and a copy of the fax is routed to these users' FAXserve directories.

---

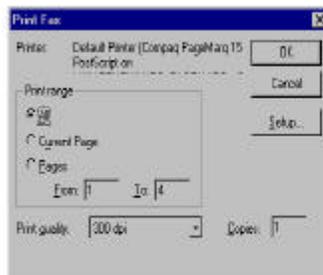
Printing a received fax

Only administrators with NetWare supervisory rights can print the entire fax. An administrator can print only the first page of a fax to preserve confidentiality.

To print a fax:



1. In the Received Faxes window, double-click the fax.
2. Click the Print button on the toolbar.
3. In the Print Fax dialog box, verify your printer specifications, and click OK.



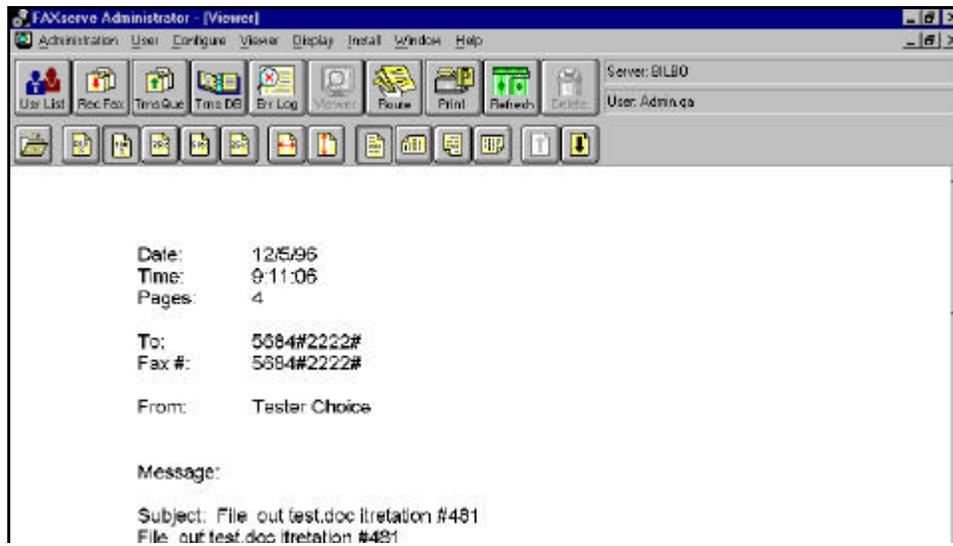
### Viewing a received fax

Only administrators with NetWare supervisory rights can view the entire fax. An administrator can view only the first page of a fax to preserve confidentiality.

To view a fax that needs to be routed:

1. In the Received Faxes window, double-click the fax.

The FAXserve Viewer window appears with the fax displayed.



---

## Managing your faxes from the Client

BitWare gives you all the tools you need to manage your fax documents easily and effectively. The Transmit Log and Receive Log automatically keep track of each fax you send and receive. In addition, these logs let you view, print, send, delete, and label your fax documents.

To help you further organize your fax documents, the Fax Filer lets you group your fax documents into folders for easy storage, printing, and viewing.

---

### The Transmit and Receive logs

The Transmit and Receive logs keep a detailed record of each fax you send and receive, recording when and where the fax was sent to or received from, the status of the transmission, and other details.

From the Transmit or Receive Log, you can:

- View a selected fax
- Send or resend a selected fax
- Delete selected log entries and fax documents
- Print a copy of the log
- Export the log
- Choose which fields the log will display and in what order
- Sort entries by a selected field in an ascending or descending order
- Search for one or more entries according to any field

---

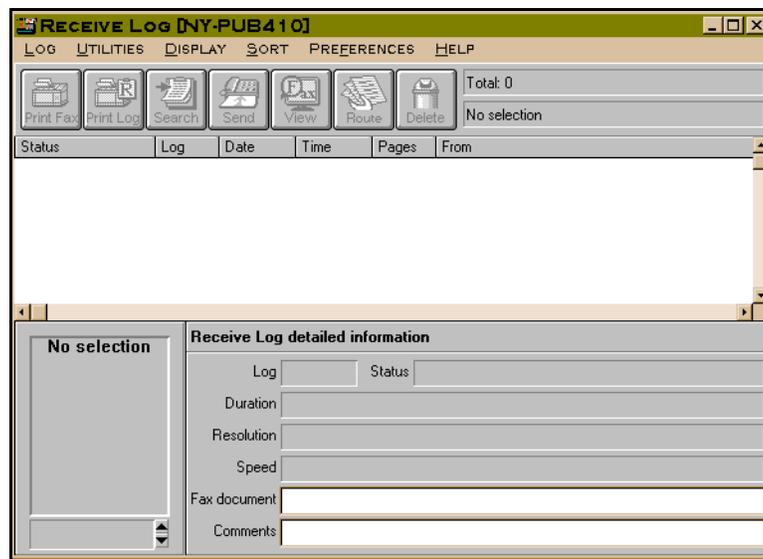
### Viewing the Receive Log

To open the Receive Log:

1. Click the Receive Log button on the BitWare toolbar.

2. Click on the Log button on the Receive Manager window.
3. Choose *Receive Log* from the Receive Manager Utilities menu.

The following screen appears:



<i>Status</i>	Displays the status of the transmission — <i>OK</i> , <i>Error</i> or <i>User Abort</i> . This field also shows whether the fax has been viewed.
<i>Log</i>	Displays the log number of the fax. The log number indicates the order in which the fax was received.
<i>From</i>	Displays the remote ID of the fax machine or fax modem that sent the fax.
<i>Duration</i>	Displays the duration of the fax transmission for the selected fax.

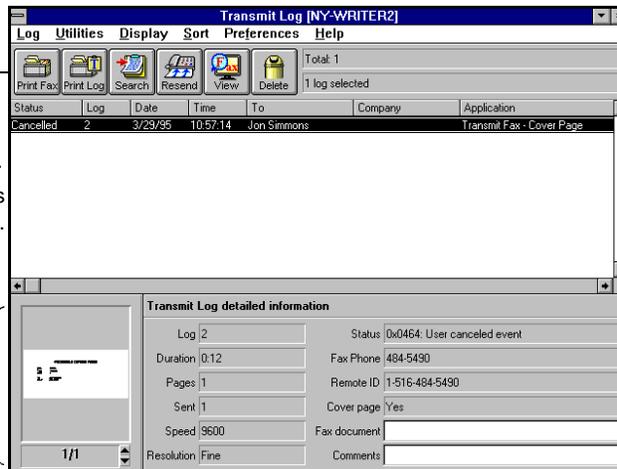


- 
- Speed*
Displays the speed or baud rate at which Receive Manager received the fax document.
  - Resolution*
Displays the resolution of the received fax.
  - Fax document*
In this text-entry box, you can label the log entry with a short description. BitWare automatically inserts the date and time Receive Manager received the fax.
  - Thumbnail*
Displays a thumbnail of the currently selected log entry. The current page number and the total number of pages are displayed below the thumbnail.
  - Viewing the Transmit Log
    1. Click the Transmit Log button on the BitWare toolbar.
    2. Choose *Transmit Log* from the Utilities menu.

Use these buttons to print, send, view, and delete the selected fax.

Possible status.  
Order the faxes  
were sent.

A thumbnail  
of the  
selected fax



## Exporting the Transmit and Receive Logs

BitWare lets you export your log entries into a text file. Then you can open the log file with virtually any word processor or spreadsheet.

To export a log:

1. Open either the Transmit Log or the Receive Log.
2. From the Log menu, choose *Export Log*.

The Export Log dialog box appears:



3. Click on OK.

BitWare will export the log as a text file.



---

## Deleting faxes and log entries

To help prevent your logs from becoming cluttered with old faxes, you can set up BitWare to automatically delete old log entries and their corresponding fax files. For example, you can set up BitWare to automatically delete received faxes that are seven or more days old.

You can also specify how many days BitWare will keep log entries before automatically deleting them. You can also set up BitWare to delete just log entries, just fax files, or both. For example, you might want to keep a record of all the faxes you have sent, but not the fax (image) files themselves.

To delete log entries and their corresponding fax files automatically:

1. Open the Receive Log or the Transmit Log window.
2. From the Preferences menu, choose *Auto Delete Log*.  
The Automatic Delete Log Setup dialog box appears.



---

If a fax file is in use by another fax document, it will not be deleted, even if Automatic Delete is enabled.

---

3. Click OK.

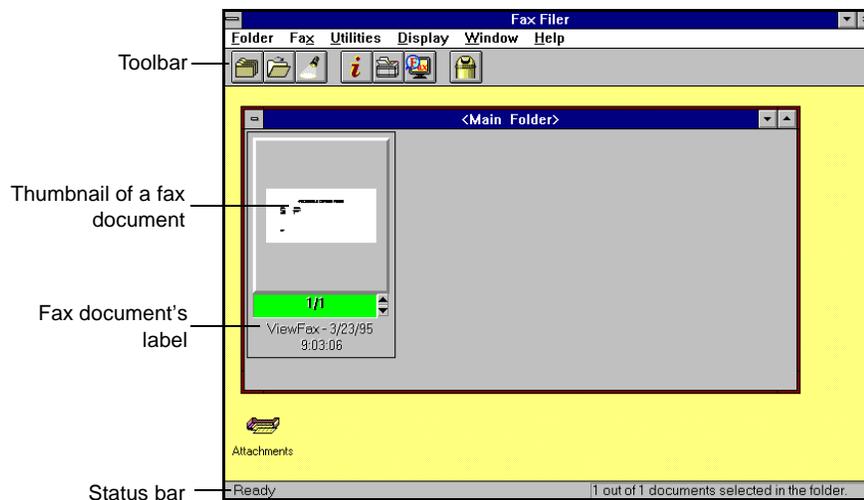
## Organizing your faxes

The Fax Filer helps you organize and manage your fax documents. From the Fax Filer, you can:

- Group related fax documents into folders
- Search for fax documents
- Copy and move fax documents between folders
- Print fax documents
- Delete fax documents or entire folders
- Arrange folder windows and icons

Open the Fax Filer

To open the Fax Filer, click the Fax Filer button on the BitWare toolbar.



The Main folder

When first opened, the Fax Filer contains only the Main folder. This folder automatically contains all the fax documents currently in your system.

---

To open the Main folder:

1. Click the Open Folder button on the toolbar.



2. In the Open Folder dialog box, select *Main Folder* and click OK.

The Main Folder window appears.

In each folder, fax documents are represented by a thumbnail. The number of pages in the fax document and its name appear just below the thumbnail.

---

#### Creating a Fax Folder

You can create fax folders to help you organize your fax documents into related groups.

To create a fax folder:



1. Click the Create New Folder button on the toolbar.

The Create New Folder dialog box appears.

2. Enter a meaningful name and click OK.

The new folder appears.

To add fax documents to your new folder, just click and drag any fax document into the folder.

Searching for fax documents

The Fax Filer lets you quickly find fax documents. You can search for fax documents according to when they were received or sent, and according to a specified field.

Searching for documents also lets you quickly group together related fax documents. For example, if you frequently exchange fax documents with ABC Inc., you could search for all the fax documents that you have sent and received from this company. You could then create a folder for those fax documents.

To search for fax documents:



1. Click the Search button on the toolbar.  
The Search dialog box appears.

Specify a time period, or fill in one or more of the available search fields.

These fields correspond to fields in the Transmit Log and the Receive Log.

A screenshot of the 'SEARCH' dialog box. It has a title bar with 'SEARCH' and a close button. The dialog contains several input fields: 'Date/Time' with 'From' and 'To' sub-fields, 'Fax document', 'Comment', and 'Correspondence'. The 'From' field contains '1/21/96 12:00:00 AM' and the 'To' field contains '12/17/96 2:40:13 PM'. At the bottom are 'OK', 'Cancel', and 'Help' buttons.

2. Click OK.  
BitWare will find all fax documents that meet the specified criteria and group them in a temporary Found folder.  
You can now easily copy these found fax documents to another folder.



# 7

## Chapter

# USING THE BITWARE CLIENT

In this chapter, you will learn how to:

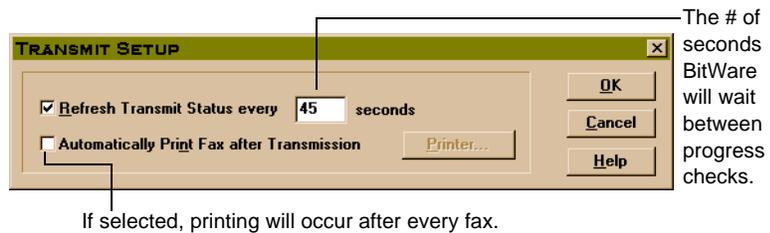
Page:

- 7-3 > Create a cover page
- 7-8 > Send faxes from Windows
- 7-13 > Resend a fax
- 7-16 > Re-schedule a fax transmission
- 7-20 > Receive faxes automatically

---

## Configuring how faxes will be transmitted

This section explains the options in the Transmit Setup dialog box. To open the Transmit Setup dialog box, click on *Transmit* in the Setup dialog box.



## Creating a cover page

When you send a fax, you have the option of including a cover page. BitWare automatically addresses each cover page with information about the recipient and the sender, as well as the time, date, and number of fax pages. If you broadcast a fax to multiple destinations, BitWare will automatically address a cover page to each recipient.

In addition to the information block that BitWare automatically includes, you can add a logo, a brief message and a signature. The standard cover page can contain up to four parts.

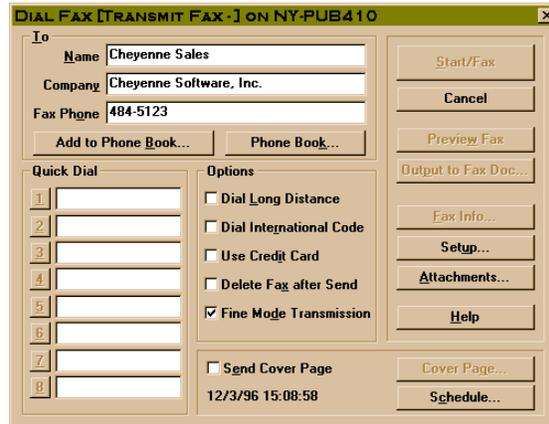
---

### Setting up a cover page

To set up your cover page when sending a fax:

1. Click the Transmit button  on the BitWare toolbar.  
The Transmit Fax window displays information about your pending fax transmissions, and allows you to cancel or change the date and time BitWare will send a fax.
2. Click the New button in the transmit fax window.  
The Dial Fax dialog box appears:

This Dial Fax dialog box is used to set the fax parameters for the faxes you send. You will be seeing this dialog box throughout this section of the guide

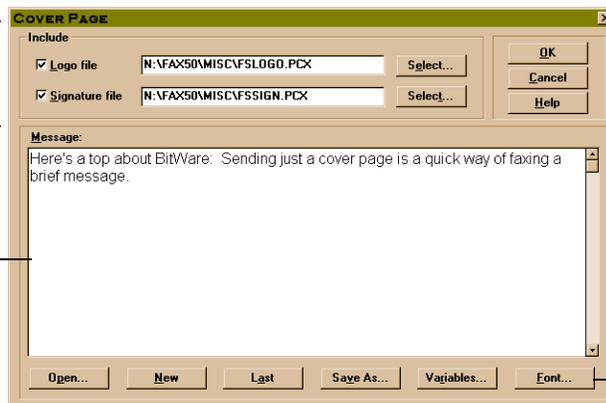


### 3. Click the Cover Page button.

The Cover Page dialog box appears:

Select to include your company logo or other BMP or PCX file at the top...  
...or bottom of the fax.

Type your message here.



Select a different font to use.

Logos can be either Windows BMP or PCX format. Only monochrome (black and white) images are supported. The maximum pixel size is 1728 x 600 pixels.

---

Inserting  
variables into the  
message

When broadcasting a fax to multiple destinations, BitWare allows you to send personalized cover page messages — without creating separate messages for each person. For example, instead of each message starting with Dear Sir or Madam, you can personalize each fax by inserting a name variable after the word Dear. To insert a variable:

1. Position the cursor where you want the variable to appear.
2. Click the Variable button.
3. In the dialog box, select a variable and choose OK.

The variable will appear after the cursor.

The list of variables you can insert include:

- Sender's: name, fax number, voice number, and company name
- Recipient's: name, fax number, and company name
- Current date and time

---

## Setting up Quick Dial buttons

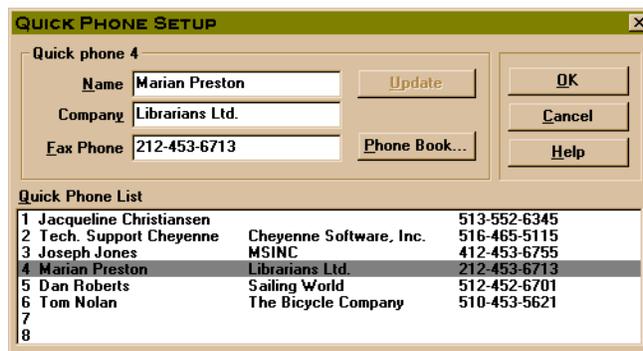
Quick Dial buttons act like the memory buttons on an automatic-dialing telephone. Appearing in the Dial Fax dialog box, each button can store the name, company name, and fax number of people to whom you frequently send faxes.

To set up the Quick Dial buttons:



1. In the BitWare toolbar, click the Setup button.
2. In the Setup dialog box, click the Quick Phones button.

The Quick Phone Setup dialog box appears:

A screenshot of the "QUICK PHONE SETUP" dialog box. It has a title bar with "QUICK PHONE SETUP" and a close button. The dialog is divided into two main sections. The top section is for editing a specific entry, labeled "Quick phone 4". It contains three text input fields: "Name" with "Marian Preston", "Company" with "Librarians Ltd.", and "Fax Phone" with "212-453-6713". To the right of these fields are buttons for "Update", "Phone Book...", "OK", "Cancel", and "Help". The bottom section is titled "Quick Phone List" and contains a table with 8 rows. The fourth row is highlighted in grey.

Quick Phone List		
1	Jacqueline Christiansen	513-552-6345
2	Tech. Support Cheyenne	Cheyenne Software, Inc. 516-465-5115
3	Joseph Jones	MSINC 412-453-6755
4	Marian Preston	Librarians Ltd. 212-453-6713
5	Dan Roberts	Sailing World 512-452-6701
6	Tom Nolan	The Bicycle Company 510-453-5621
7		
8		

3. In the *Quick Phone List*, select the number for an entry you want to add, or the item you want to edit.
4. Fill in the Name, Company, and Fax phone text-entry boxes and click the Update button.

Your changes will appear in the Quick Phone List. Repeat these two steps to add or edit other entries.

Using the phone  
book to set up  
Quick Dial buttons

If you want to add existing phone book records to the list:

1. Select the entry you want to edit.
2. Click the Phone Book button.
3. In the Phone Book dialog box, select one or more records and click OK.

The record will appear in the Quick Phone list.

If you have selected more than one record from the phone book, BitWare will fill in the Quick Dial entries in the same order in which they appear in the phone book, starting from the selected entry.

4. Click the Update button to save the new entry as part of the Quick Phone List.

---

## Sending a fax from a Windows application

Sending a fax is as easy as printing a document. From any Windows application, simply select “BitWare Fax Driver on FAXserve” as your printer and then use the application's print command. BitWare will then automatically pop up and ask you where and when to fax the document.

You can also send faxes directly from BitWare, such as a cover page with a brief message, a previously saved fax document, or any combination of the above.

---

FAXserve, the  
“post office”

When you send a fax, BitWare forwards it through your network to FAXserve, which acts like an electronic post office. Once received, FAXserve will place your fax in its queue. The fax queue is a “line” where faxes wait before FAXserve sends them. If no other faxes are in line, FAXserve will immediately begin sending your fax through one of its modems.

---

Using fonts

For the best results when sending a fax, we strongly recommend that you use Microsoft's TrueType fonts (included with Windows 3.1), or fonts generated by another Windows font package, such as Adobe Type Manager or Bitstream Facelift.

The advantage of using these fonts is that they appear the same on your screen as they do when printed or faxed. If you do not use these fonts, the fonts in your faxes might appear differently from the fonts in your printed documents.

---

Instructions

To send a fax from a Windows application:

1. Open or create a document in any Windows application.



---

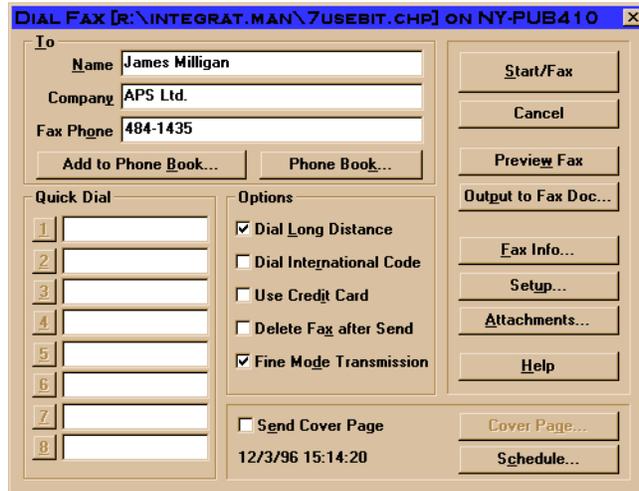
If you use Word for Windows, Excel for Windows, WordPerfect, or Ami Pro, refer to Appendix B, “Faxing from Windows Applications”. It explains how to add a new command to these applications that lets you quickly send your documents as faxes.

---

2. From the application's File menu, choose *Print*.  
The Print dialog box will appear.
3. Check that *BitWare Fax Driver on FAXserve* is selected as your current printer.  
If BitWare is not selected, use the application's Printer command to select it. Some applications use other commands, such as Print Setup.  
After you choose BitWare as your printer, some applications will recompose the document. This is done to ensure that your document looks the same on your screen as it will when faxed.
4. In the Print dialog box, choose any necessary options (page range, number of copies, etc.) and click OK.

---

Next, the Dial Fax dialog box appears:



---

The Quick Dial setup is described in the previous section.

---

5. In the Dial Fax dialog box, choose one or more recipients.

You can use the Phone Book button to select one or more recipients from the phone book. When you have selected more than one, the *To* section of the Dial Fax dialog box will change to *To "X" Destinations*, the X equal to the number of selected recipients.

You can also use the Quick Dial buttons to address your fax. Just click one of these buttons to automatically fill in the *Name*, *Phone*, and *Company* boxes.

6. Select any other options.

The following describes the options in the Dial Fax dialog box.

<b>Field</b>	<b>Explanation</b>
<i>Preview Fax</i>	Allows you to see what your fax looks like before you send it.
<i>Output to Fax Doc</i>	Save your fax as a fax document, instead of sending it out to your modem.
<i>Fax Info</i>	See information about the fax document you are about to send.
<i>Setup</i>	Change BitWare's setup options.
<i>Attachments</i>	Attach previously saved fax documents or other Windows application files to your outgoing fax.
<i>Dial Long Distance</i>	Select if you want BitWare to dial the access code of your long-distance phone service. You enter this number in the Long Distance Code box of the Station Setup dialog box.
<i>Dial International Code</i>	Select if you want BitWare to dial your country's international code. (This is the number you dial before making a call outside of your country, e.g., 011 in the United States.) You enter this number in the <i>International Code</i> box of the Station Setup dialog box.
<i>Use Credit Card</i>	Select if you want BitWare to dial your calling card's number, which you can enter in the Station Setup dialog box.
<i>Delete Fax After Send</i>	Select if you want BitWare to delete the fax file it generates. When you send a fax from a Windows application, BitWare first creates a fax image file (BFX). The fax file is a graphic file, similar to a Paintbrush (PCX) file. This option helps reduce the amount of disk space BitWare uses.
<i>Fine Mode</i>	When selected, BitWare will send the fax in fine resolution (200 by 200 dpi). Use this option when sending graphics and charts. The default is to send in standard resolution.
<i>Send Cover Page</i>	Select if you want BitWare to include a cover page with your fax.
<i>Schedule</i>	Send your fax at a later date and time. By scheduling your fax transmissions, you can take advantage of lower phone rates and international time differences.



---

If you select the *Delete Fax After Send* option, you will not be able to print, resend, or view the transmitted fax in the Transmit Log.

---

7. Click the Start/Fax button.

The application will then print the document to the BitWare Fax print driver. BitWare will retain the document's original formatting.



---

When you want to print a document to your printer again, remember to reselect its print driver.

---

## Resend a fax

The BitWare client allows you to quickly resend a fax from the Transmit Log. This saves you the time of opening the application that created the fax and printing the document again.

To resend a fax:

1. **Open the Transmit Log.**  
Click the Transmit Log button on the BitWare toolbar.  
The Transmit Log contains information about the faxes you have already sent.
2. **Select the fax you want to resend.**  
You can choose only one fax at a time.
3. **Click the Resend button.**  
The Dial Fax dialog box appears. Notice that BitWare remembers all the options and destination information you entered the first time you sent the fax.
4. **Click the Start/Fax button.**  
BitWare will proceed to resend the selected fax.

---

## Broadcasting a fax to a group

BitWare can automatically send a fax to any number of selected recipients. For example, you could broadcast a product announcement to all your customers, or a memo to your offices across the country.

To help you quickly broadcast a fax, you can define a group of recipients in your phone book. Please refer to Chapter 8, “Using the Phone Book” for instructions on how to set up your phone book.

To broadcast a fax to a group of recipients:

1. In the Dial Fax dialog box, click the Phone Book button.

The Phone Book dialog box appears:

To select more than one destination manually, press the CTRL key while clicking on phone book records.

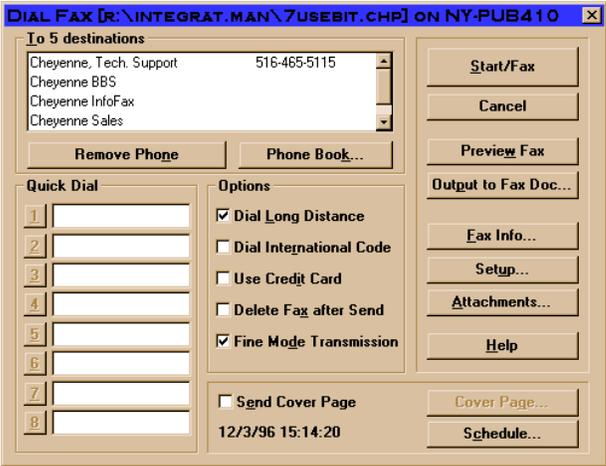
You can also use the SHIFT key with the right mouse button.



2. Select one or more records or groups from the *Select Groups* list box.

- 3. After selecting the recipients, click OK.  
A text box displays all the selected phone book records.

The To Section of the Dial Fax dialog box will change to To "X" destinations, X equal to the number of selected recipients.



If you are broadcasting a fax to both local and long-distance numbers, include the area code in each number, even local numbers. Also, make sure you have entered your local area code and long distance code in the Station Setup dialog box. When BitWare dials, it will automatically check the number's area code. If its area code matches the one you entered in the Station Setup dialog box, BitWare will not dial a 1 or the number's area code. If the area code is different from your local one, BitWare will dial a 1, the area code, and then the fax number. For international calls, the check box must be checked in the Dial Fax window.

- 4. Select any other options and click the Start/Fax button.  
BitWare will begin sending the fax to the first recipient.

---

---

**Rescheduling a  
fax transmission**

You can change the date and time BitWare will send a scheduled fax transmission, as well as pause, resume, and delete pending transmissions from the queue.

To reschedule a fax transmission:

1. In the BitWare toolbar, click the Transmit button.  
The Transmit Fax window appears.
2. Select the job you want to reschedule.
3. Click on the Change button in the toolbar.  
The Schedule dialog box appears.
4. Change the date and time.
5. Click OK.  
You will see the new date and time.

## Saving a fax as a document

Saving a fax as a document has two advantages. First, you can later attach the fax document to other faxes you are sending. This lets you combine several documents into a single fax. For example, if you want to include your company's price list with your other faxes, you could save the list as a fax document and then later attach it to other faxes. Second, you can send a fax document directly from BitWare without reopening the application that created it. This lets you quickly send the same fax repeatedly.

To save a fax as a document:

1. Open or create a document.
2. From the application's File menu, choose *Print*.  
The application's Print dialog box appears.
3. Check that BitWare is your current printer.
4. In the Print dialog box, select any necessary options (page range, number of copies, etc.) and click OK.  
The Dial Fax dialog box appears.
5. In the Dial Fax dialog box, click the Output to Fax Doc button.  
The Output to Fax Document dialog box appears.  
Insert a name for the document. By default, BitWare will name the fax document according to the application.
6. After inserting a name, click OK.  
BitWare will save the specified fax document. It can be retrieved through *Dial/Fax Attachments*.

---

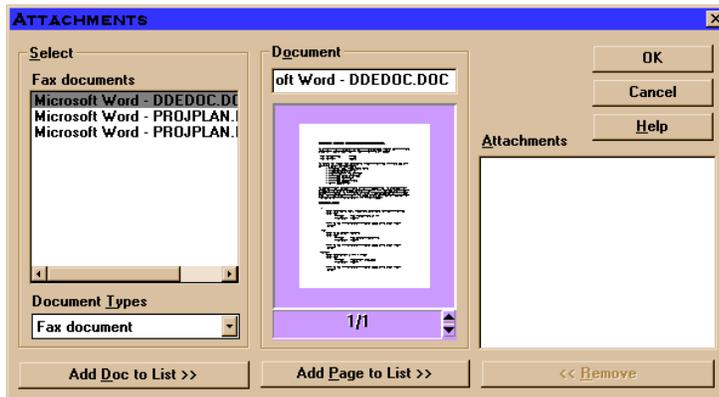
## Attaching documents to a fax

BitWare lets you combine documents from several Windows applications into a single fax. For example, you can combine a report from a word processor, a graphic from a paint program, and a price list from a spreadsheet program all into a single transmission.

Before you can attach a document to a fax, you must first save it as a fax document. For step-by-step instructions, refer to the preceding section 'Saving a fax as a document'.

To combine documents:

1. **Begin sending a fax, either from a Windows application or directly from BitWare.**
2. **In the Dial Fax dialog box, click the Attachments button.**  
The Attachments dialog box appears. It contains a list of faxes that you have sent and received, as well as fax documents that you have saved.
3. **Select the type of document to attach.**  
In the Document Types list, select the type of document that you want to attach to the fax.



Select from various format types, including PCX and DCX fax files and graphics files.



Other types of documents can be attached but they must have an association. You can send your fax with attachments by clicking *transmit ... new* on the BitWare toolbar. This allows you to fax a wider variety of files, including: \*.wpd, \*.bmp, \*.tif, \*.wri, \*.ppt.

4. Select as many documents as you would like.  
Documents that you choose will appear in the *Attachments* list box. The order in which documents appear in the list is the order in which BitWare will send them.
5. Click OK when done.  
In the Dial Fax dialog box, a number will appear in the Attachments button, indicating how many documents you have attached.
6. Choose one or more recipients, select any other options, and click the Start/Fax button.  
BitWare will begin sending the fax and its attachments.

---

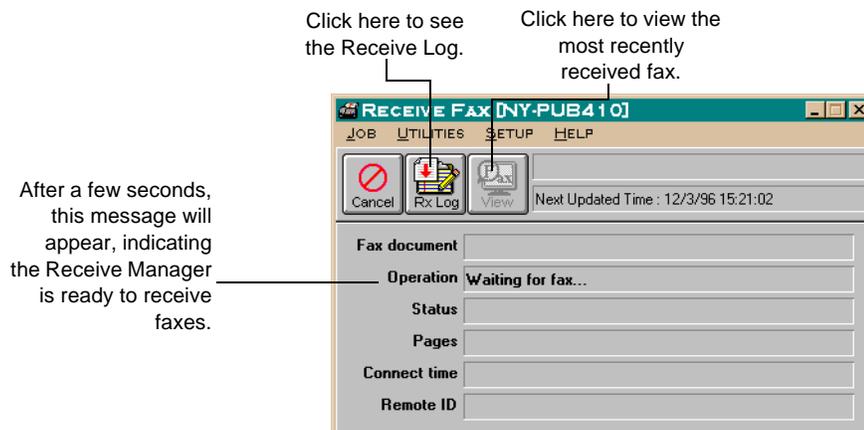
## Receiving faxes automatically

When people send you faxes, they are actually sending them to your network's FAXserve server. The faxes are then forwarded to you, either automatically via inbound routing or manually by the FAXserve administrator.

To receive your faxes:

1. Click the Receive button in the BitWare window.

The Receive Fax Manager appears:

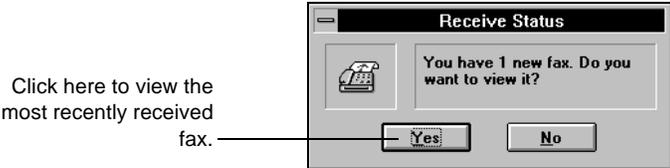


---

You can set up the Receive Manager to load automatically by selecting the *Automatically Load Receive Manager when Windows Starts* option in the Receive Setup dialog box.

---

By default, the Receive Status dialog box will pop up after you receive a fax. It will display the number of faxes you have received.



---

## Automatically forwarding faxes

BitWare can automatically forward your received faxes. For example, if you are away on business, BitWare can forward your faxes to your hotel, or if you telecommute to work occasionally, BitWare can forward your faxes from work to your home.

To automatically forward faxes:

1. Click the Setup icon on the BitWare toolbar.  
The Setup dialog box appears.
2. Click the Receive button.  
The Receive Setup dialog box appears.
3. Select the *Forward Fax* option.
4. Click the To button.  
The Forward Fax Setup dialog box appears.
5. Select how you want your faxes forwarded.

have your e-mail forwarded to any package that conforms to the VIM and MAPI standards.

**FORWARD FAX SETUP**

Forward Fax via MAPI

Address

Login Name

Password

OK

Cancel

Help

Forward Fax to Fax Machine

Name  Phone Book...

Company

Fax Phone

Send Cover Page Cover Page...

Forward Fax after  Minutes

---

Printing faxes

When a new fax is received, BitWare can automatically print a copy of the fax to any user-specified printer.

The *Print Received Faxes* option is set up in the Receive Setup dialog box as previously explained.

BitWare will print the fax at the resolution it was sent. BitWare will also proportionally scale down a fax if it is too long (up to 14 inches) to print on a standard (8.5 by 11 inch) page. If a page is longer than 14 inches, BitWare will print it on two pages.

To print faxes automatically after they have been received:

1. Click the Setup icon on the BitWare toolbar.  
The Setup dialog box appears.
2. Click the Receive button.  
The Receive Setup dialog box appears.
3. Select the *Print Fax* option.  
Select the desired printer settings and click OK.

---

Printing on demand



BitWare lets you print faxes from several different places.

- Click the Print Fax button on the BitWare toolbar.  
When this option is selected, the Print Fax dialog box appears, allowing you to choose the fax you want to print.
- Click the Print Fax button in the View Fax window.
- Click the Print Fax button in the Receive Log window.
- Click the Print Fax button in the Fax Filer.

---

The Fax Filer is a tool that lets you easily organize all your faxes. It is explained in detail in Chapter 6 of this guide, “Managing Faxes”.

- Click the Print Fax button in the Transmit Log. This will allow you to print faxes that you have already sent.

Each of these Print commands opens the Print dialog box, from which you can choose the pages you want to print, the number of faxes per page, the number of copies, and other options.

## Viewing a fax

BitWare is designed to let you easily view one or more faxes you have received, preview a fax before sending it, or review faxes that you have sent.

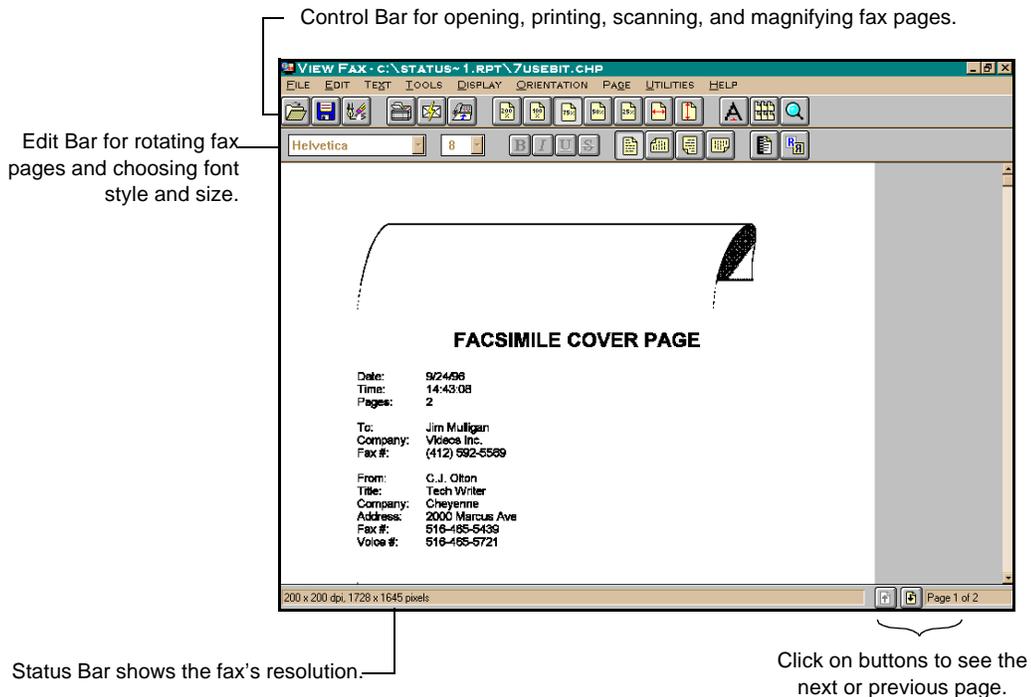
To view a fax that you have received, you can:

- Click the View button in the Receive Log window.
- Click the View button in the Receive Manager window to view the last fax you received.
- Click Yes in the Receive Status dialog box to view the last fax you received.
- Click the View button in the Transmit Log window to review a fax that you have sent.

To view a fax that is waiting to be sent, you can:

- Click the View button in the Transmit Fax window.

- Click the Open button from the View Fax window.



## Manipulating faxes

### Rotating a fax document

Occasionally, you will receive a fax that was sent upside down or sideways. To compensate, View Fax lets you rotate your fax documents in a 90-degree increment. To save you the trouble of rotating each page separately, View Fax lets you rotate all the pages in your fax with a single command.

Open the document with View Fax and click a rotation button. To rotate an entire fax document, select *Do To All Pages* from the Edit menu, and then click a rotation button.

---

Zooming in and out of a fax document

View Fax lets you zoom in to see detailed portions of a fax page or zoom out to see a thumbnail overview of the entire fax document.

To zoom in or out of a fax document, click a view button in the Control Bar.

---

Enhancing fax images (anti-aliasing)

The Anti-Aliased command enhances the appearance of fax images, making text easier to read at lower magnifications and giving graphics a smoother, cleaner appearance.



---

The Anti-Aliased command enhances the appearance of fax documents only. It has no effect when printing or sending a fax.

---



To enhance a fax image, click the Anti-Aliased command button in the Control Bar.

To restore the image to its original appearance, select Anti-Aliased again.

---

Inverting a fax document

View Fax can display a negative of the fax page, turning white pixels to black, and black pixels to white. This command makes text easier to read on some monitors. It can also help to reserve battery power for laptop and other portable computers.



To invert a fax document, click on the Reverse Video command button in the Control Bar.

---

Flipping a fax document

View Fax can display a mirror image of a fax page by flipping it about an imaginary vertical line. This command is especially useful if someone faxes you a transparency that was flipped.



To flip a fax document, click on the Mirror button in the Control Bar.

---

## Annotating (marking up) fax documents

You might occasionally need to modify a fax before forwarding it to others. For example, you might want to add notes, circle a passage, or remove a header.

Using View Fax's annotation tools, you can mark up your faxes in the following ways:

- Add notes by typing text using any available Windows font.
- Highlight portions of a fax document with filled boxes and ellipses.
- Add boxes, lines, and ellipses.
- Draw objects freehand using the Pen tool.
- Erase portions of the fax using the Erase tool or the Cut command.
- Undo or redo your editing actions.
- Move objects using the Cut and Paste commands.
- Paste and copy graphic objects to and from the Clipboard.

---

Annotating a fax

To annotate a fax:

1. Click **Receive** on the BitWare Toolbar, then click on *View* to open a fax document.
2. Use the annotation tools to modify the fax image.
3. Click the **Save** button in the Control Bar.



## Converting a fax into a graphic file

BitWare lets you convert your faxes into graphic files, which you can then import into another graphic application, such as Microsoft Windows Paintbrush or Adobe PageMaker. You can convert your faxes into the following popular graphic formats:

- BMP
- TIFF
- PCX
- DCX
- BFX

To convert a fax into a graphic file:

1. Open a fax with View Fax.
2. From the File menu, choose *Save As*.  
The Save As dialog box appears.
3. Choose a format from the *File Format* drop-down list box.
4. Enter a name in the *Save Filename* text box.
5. Choose which pages you want to convert.  
BMP, PCX, and TIFF are single-page formats, so BitWare will convert only the open page. The DCX and BFX formats let you convert several pages at a time.
6. Click Save.

# 8

## Chapter

# USING THE PHONE BOOK

This chapter shows you how to use BitWare's phone book.

In this chapter, you will learn how to:

Page:

- 8-3 > Create a phone book
- 8-4 > Add a new phone book record
- 8-8 > Create a phone book group
- 8-11 > Import a phone book from another application
- 8-19 > Link to an external phone book

---

## BitWare phone books

Phone books make addressing faxes an easy process that saves time and keystrokes. When sending a fax, you select the recipient(s) from the phone book without retyping all of the necessary information, such as name and fax number. The phone books in BitWare are dBASE-III-compatible and support field mapping, giving you the flexibility to import phone books from other applications.

The public phone book is one that is available to all users and may only be edited by a FAXserve administrator. Each user can also have his/her own phone books to use and edit. There is a 25 phone book limit for the total of both public and private phone books.

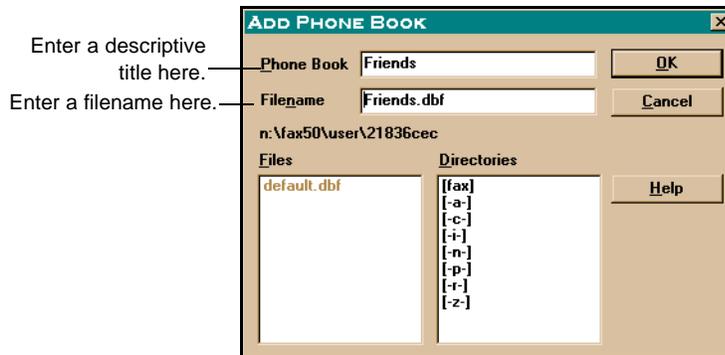
## Creating a new phone book

You can create different phone books for different purposes, such as business contacts, prospective customers, and personal contacts.

To create a new phone book:

1. Click the Phone Book icon on the BitWare tool bar to open the Phone Book dialog box.
2. Click the Phone Book List button.  
The Phone Book List dialog box appears.

3. Click the Add button.  
The Add Phone Book dialog box appears:



4. Click OK when done.  
The new list will appear highlighted in the Phone Book List dialog box.
5. Click OK to open the new phone book.  
You can now add records and groups into the new phone book.

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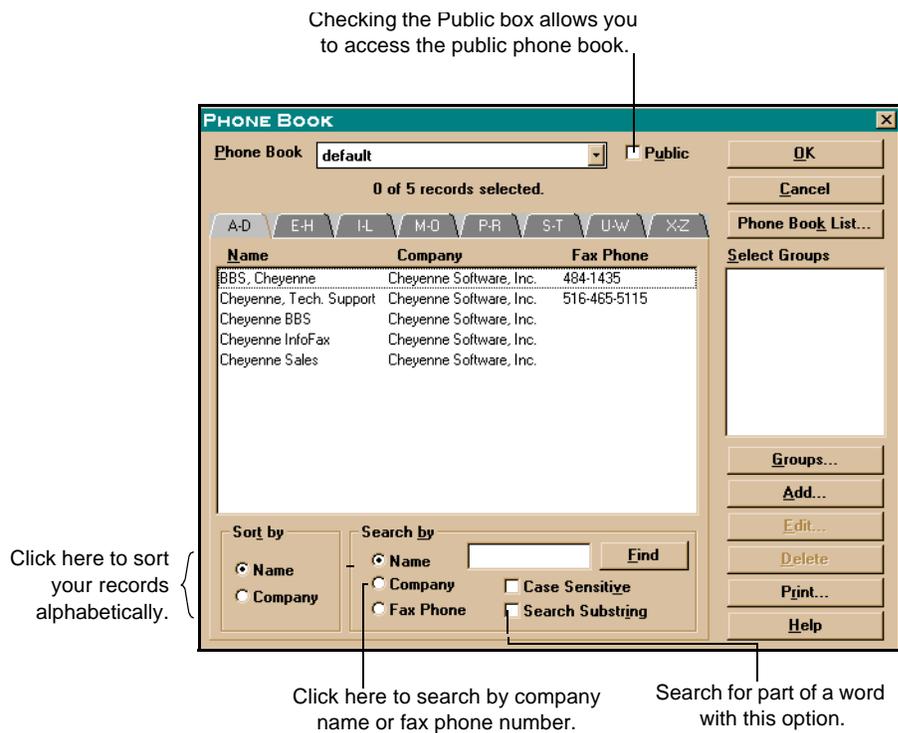
## Maintaining phone book records

Each phone book record contains a fax number, a first and last name, and other details about the recipient. There are two types of phone books; public phone books and private phone books. Private phone books can be used and modified only by their creator.

---

Opening the  
Phone Book

1. Click the Phone Book button on the BitWare toolbar.



---

Adding a new  
record

2. Click the Add button.

The Add Record dialog box appears:

8

### 3. Fill in the text-entry boxes.

You must fill in at least the *Last Name* and *Fax Number*. The other fields can be left blank.

To make broadcasting a fax easier, include the country code and the area code in each number, even local numbers. Also, make sure you have entered your local area code, local country code and international code, and long distance code in the Station Setup dialog box.

When BitWare dials, it will automatically check the number's country code and area code. If they match the ones you entered in the Station Setup dialog box, BitWare will automatically include or exclude the international code, country code, long distance code, and area code, when appropriate.



To make use of the automatic country code and area code dialing, you must enable the *Long Distance* and *Dial International Code* options in the Dial Fax dialog box.

---

Here is an example illustrating the above:

You are a FAXserve user in New York City, U.S.A.

It is important that the following information be included in the station information section of your Station Setup dialog box:

- Local Area Code = 212 (New York City)  
Long Distance Code = 1  
(In NY, you must dial a “1” + area code for any phone number outside of the 212 area)
- Local Country Code = 1  
(country code for U.S.A)
- International Code = 011  
(In the U.S.A., you must dial “011” + country code for any number outside of the U.S.A., with a few exceptions.)

Assume you are sending a fax to three people:

a person in NYC -- 212-123-4567

a person in San Francisco -- 415-234-5678

a person in Sydney, Australia -- +61-2-876-543 (note that “61” is the country code for Australia, and “2” is the area code for Sydney).

To fully utilize BitWare’s auto-translation features, the above numbers should be entered in the phone book with the full country code + area code + number format:

1-212-123-4567            translated as: 123-4567

1-415-234-5678           translated as 1-415-234-5678

61-2-876-543             translated as 011-61-2-876-543

4. Click the **Add Next** button to save the new record and create another, or click **OK** to save the record and close the Phone Book dialog box.

---

Editing phone  
book records

To edit a record:

1. Open the Phone Book dialog box and select a phone book record.
2. Click the **Edit** button.  
The Edit Record dialog box appears.
3. Edit the text-entry boxes.
4. Click the **Update** button to save.

---

Deleting phone  
book records

You can easily delete one or more phone records from the currently opened phone book. If you delete a phone record that is a member of a group, BitWare will automatically delete it from that group. When you remove a member from a group, however, you do not delete the phone record itself.

To delete one or more records:

1. Open the Phone Book dialog box and select the record(s) you want to delete.  
To select more than one record at a time, hold down the **CTRL** key (or **SHIFT** key) and click on the records you want to delete.
2. Click the **Delete** button.  
BitWare will ask you to confirm the deletions.
3. Click **OK**.

---

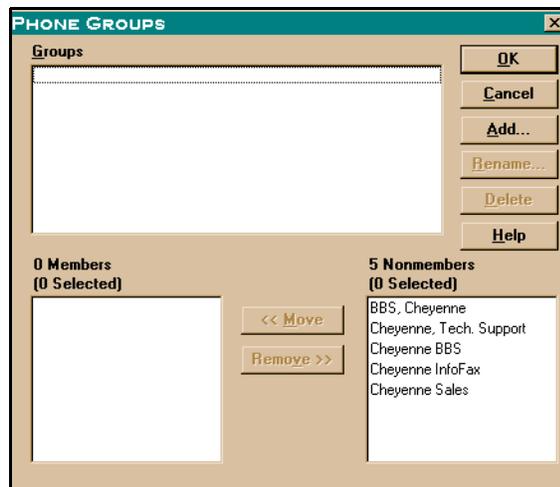
## Creating a phone book group

If you frequently send faxes to the same group of recipients, creating a phone book group can save you a lot of time. For example, if you routinely send faxes to your clients in New York, you can create a group called New York Clients. Then when you want to send a fax to each person in that group, all you have to do is select the New York Clients group, instead of manually selecting each record.

To create a phone book group:

1. Click on the Phone Book button on the BitWare toolbar.
2. Click the Groups button.

The Phone Groups dialog box appears:



3. Click the Add button.  
BitWare will prompt you for a group name.
4. Enter a descriptive name and click on OK.

The new group will appear in the Groups list.

5. **In the Nonmembers list, select one or more records.**  
To select more than one record at a time, hold down the CTRL key (or SHIFT key) and click on the records you want to add.
6. **Click on the << Move button.**  
Double-clicking on a record also moves it from one list to another.
7. **Repeat steps five and six to add more records to the Members list.**

---

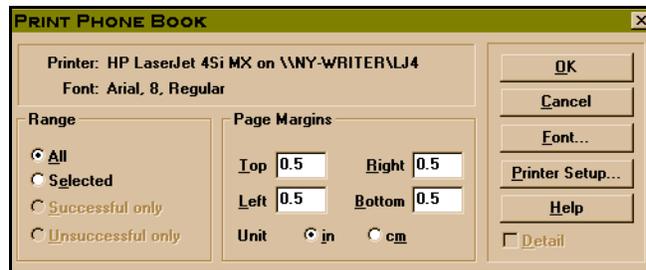
## Printing a phone book list

You can use the *Print* command to print the entire phone book or just the currently selected records.

1. Open the Phone Book dialog box.
2. If you want to print only part of the phone book, highlight the records you want to print.
3. Click the Print button.

The Print Phone Book dialog box appears:

To print specific entries, choose *Selected*. To print the entire book, choose *All*.



4. Click OK when done.

## Importing a phone book from another application

BitWare lets you import phone books that were created in other applications. When you import a phone book, BitWare will merge it into one of its existing phone books. BitWare can import phone books in one of the following formats:

- A BitFax phone book
- dBASE III or IV
- ASCII
- WinFax Pro 3.0
- FAXserve 2.0 - 3.x phone book

---

### Importing a BitFax phone book

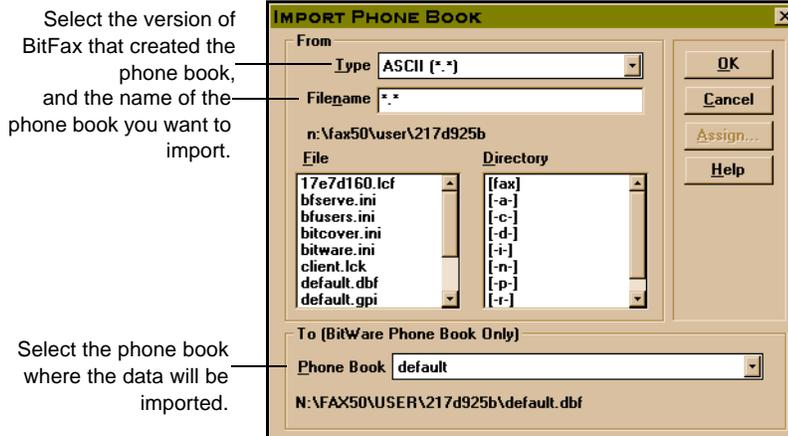
If you are upgrading from an earlier version of BitFax for DOS, BitFax for Windows or BitFax Easy for Windows, you can easily move your existing phone book into BitWare.

To import an earlier phone book into BitWare:

1. Open the BitWare phone book.
2. Click on the Phone Book List button.  
The Phone Book List dialog box appears.
3. Click the Import button.

---

The Import Phone Book dialog box appears:



4. Click OK to import the data into the selected phone book.

---

#### Importing a dBASE phone book

BitWare imports a dBASE phone book by copying the information from its database fields into the phone book fields used by BitWare. When you import a phone book, you need to map its database fields to the corresponding fields used by BitWare.

For example, if you were importing a phone book that stores its fax numbers in the field *FAXNUM*, you would assign that field to BitWare's *PB\_PHNUM1* field. Refer to Appendix F for more information.

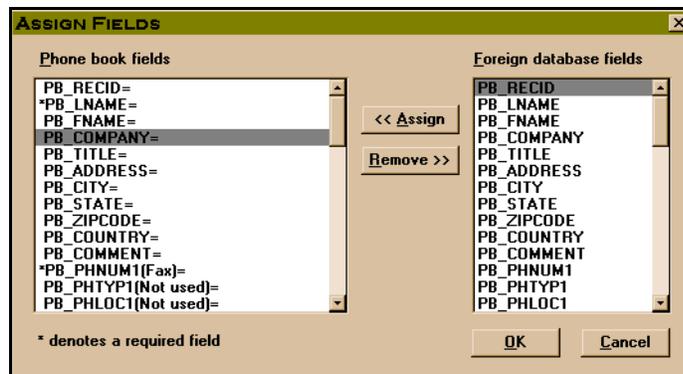
To import a dBASE phone book into BitWare:

1. Open the BitWare phone book.
2. Click the Phone Book List button.  
The Phone Book List dialog box appears.
3. Click the Import button.

The Import Phone Book dialog box appears.

4. In the *Type* list box, select *dBASE III or IV*.
5. Select a dBASE file to import.
6. In the Phone Book drop-down list, select a phone book.  
BitWare will merge the imported data into the phone book you select.
7. Click the Assign button.

The Assign Fields dialog box appears:



8. Assign the Foreign database fields to the corresponding Phone Book fields.  
Use the <<Assign button to assign the selected foreign database file to BitWare's selected phone book field. The name of the foreign field will appear to the right of the equal sign (e.g., \*PB\_PHNUM1=FAXNUMS).
9. Click OK to save the assignments.
10. Click OK again to import the data into the selected phone book.

---

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Importing an  
ASCII phone book

Since virtually all database applications let you convert their files into the ASCII (text-only) format, you can import a phone book from almost any application by simply converting it into an ASCII file.

BitWare gives you great flexibility in importing ASCII phone books. Fields and records can be separated by any single-character delimiter, such as a comma, tab, or carriage return. Also, fields do not have to be any specific length.

Before you can import an ASCII phone book, it must have the following characteristics:

- Each record must be separated by a single-character delimiter, such as a carriage return or a line-feed character.
- Each field must also be separated by a single-character delimiter, such as a comma or a tab.
- If a field contains a delimiter character, the field must be enclosed in double quotation characters.
- If a field contains double quotation marks, the quote mark must be doubled for BitWare to import it (e.g., ““is imported as””).

The following is an example of a phone book in ASCII format:

```
Kemp,Jennifer,"KIS Marketing, Inc.",(456) 667-9807
Monahan,Jim,"ABC, Inc.",(544) 342-4349
Neler,Kevin,Murry Productions,(544) 345-8009
Holt,James,Fenton Corp.,(414) 756-5656
Blacker,Scott,"New City Productions, Inc.",(415) 751-
0248
Drake,Stillman,Publishing Designs,(415) 751-0255
```

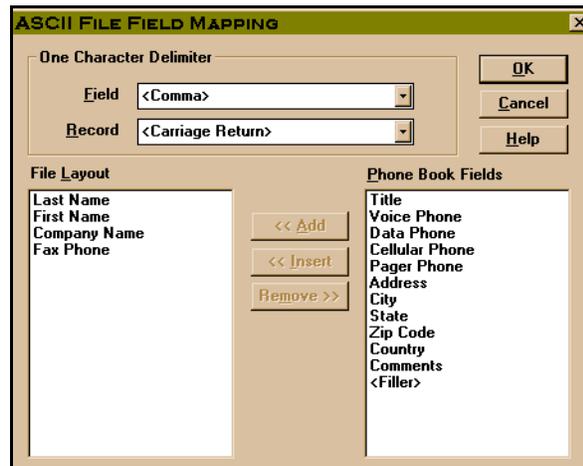
In this example, each field is separated by a comma, and each record is separated by a carriage return. The first field is the last name, and the second is the first name. The third field is the company name, and the fourth is the fax number.

To import an ASCII phone book into BitWare:

1. Open the BitWare phone book.
2. Click the Phone Book List button.  
The Phone Book List dialog box appears.
3. Click the Import button.  
The Import Phone Book dialog box appears.
4. In the *Type* list box, select *ASCII*.
5. Select an ASCII file to import.
6. In the Phone Book drop-down list, select a phone book.  
BitWare will merge the imported data into the phone book you selected.
7. Click the Assign button.

---

The ASCII File Field Mapping dialog box will appear.



8. Add the fields from the Phone book fields list box to the File layout list box in the order that they appear in the ASCII file.

The fields in the File layout list box must be in the same order as the fields in the ASCII file. In the earlier example, you would select the Last Name, First Name, Company Name and the Fax Phone fields, in that order.

9. If the ASCII file contains any extra fields that appear between the fields BitWare is going to import, add the <Filler> field to maintain the sequential order of the file's fields.

For example, if the file had three extra fields between the Fax Phone field and the Voice Phone field, you would add three <Filler> fields between those two fields.

10. Click OK to save the assignments.
11. Click OK again to import the data into the selected phone book.

---

Importing a  
WinFax PRO 3.0  
phone book

If you are upgrading from WinFax Pro 3.0, you can easily move your existing phone book into BitWare.

To import a WinFax Pro 3.0 phone book into BitWare:

1. Open the BitWare phone book.
2. Click the Phone Book List button.  
The Phone Book List dialog box appears.
3. Click on the Import button.  
The Import Phone Book dialog box appears.
4. In the *Type* list box, select *WinFax PRO 3.0*.
5. In the *Filename* text-entry box, enter or select the phone book file you want to import.
6. In the *Phone Book* drop-down list, select a phone book.  
BitWare will merge the imported data into the phone book you selected.
7. Click OK to import the data into the selected phone book.

---

## Migrating phone books from FAXserve 3.0x

If you are upgrading from FAXserve 3.0x or below, you should be aware the phone book file structure has changed.

In FAXserve 3.0x and below, all group information was stored in the same DBF file as the phone book. Now, there is a separate file for phone book information.

Each FAXserve phone book consists of the following files:

- *phone\_book\_name*.DBF: all phone book information except groups.
- *phone\_book\_name*.GPI: all group information for the phone book.

To migrate a FAXserve 3.0x and below phone book open the phone book in the current version of FAXserve. FAXserve will automatically create the GPI file.

## Linking to an external phone book

BitWare lets you create a link between its phone book and a dBASE-compatible phone book from another application. This lets you use BitWare to access a phone book that is maintained and updated in another application.



---

BitWare can only access and read a linked phone book. Note that you cannot add, edit, or delete records, use book tabs, sort phone book records, etc. if you are accessing them from BitWare.

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To link to an existing phone book file:

1. Open the Phone Book dialog box.
2. Click the Phone Book List button.  
The Phone Book List dialog box appears.
3. Click the Link button.  
The Link To An Existing Phone Book dialog box appears.
4. In the *Phone Book* text-entry box, enter a descriptive title.  
You can enter up to 40 characters.
5. In the *Filename* text-entry box, enter or select a phone book file.  
The filename should have the extension.DBF, indicating the file is a dBASE database file.
6. Click the Assign button.  
The Assign Fields dialog box appears.

- 
7. Assign the dBASE fields of the phone book you are linking to ones used by BitWare.

For example, if you are importing a phone book list that stores its fax numbers in a field called FAXNUMS, you would assign that field to BitWare's fax number field, PB\_PHFAX.

To assign one dBASE field to another, highlight the fields you want to link and click the Assign button.

8. Click OK to assign the fields.
9. Click OK again.
10. To open the linked phone book, select it and click OK.

## Exporting a phone book

BitWare allows you to export your phone books as ASCII (text-only) files.

To export a phone book:

1. Open the BitWare phone book.
2. Click the Phone Book List button.  
The Phone Book List dialog box appears.
3. Click the Export button.  
The Export Phone Book dialog box appears.
4. In the *Type* list box, select *ASCII*.
5. Enter or select a filename in the *Filename* text-entry box.
6. Click the Assign button.  
The ASCII File Field Mapping dialog box appears.
7. In the *Phone book fields* list box, choose the information that you want to export.
8. If necessary, change the field and record delimiters in the *Field* and *Record* list boxes.
9. Click OK to save the mapping settings.
10. Click on OK to export the phone book and return to the Phone Book dialog box.

# 9

## Chapter

# USING BITCOM

This chapter gives a hands-on overview of going online with BitCom.

In this chapter, you will learn how to:

Page	
9-6	➤ Send and receive files
9-10	➤ Use BitCom remotely
9-16	➤ Automatically dial your favorite online service
9-18	➤ Program function keys for popular keystrokes
9-22	➤ Automate tasks
9-24	➤ Use the phone book

---

## Calling/answering remote computers

To call a remote computer:

1. **Open BitCom.**

To open BitCom, click the BitCom button on the Bitware toolbar.

2. **Open a phone book and select the record of the remote computer you want to call.**

If a phone book record for the remote computer does not exist, create a new record by clicking on the "Add..." command.

3. **Check that both BitCom and the remote computer are using the same communication settings.**

Most PCs and PC-based bulletin boards use the setting N81 — parity set to None, data bits set to 8, and stop bits set to 1. Most online services and mainframe computers use the setting E71 — parity set to Even, data bits set to 7, and stop bits set to 1.

4. **If you are calling another PC, make sure that it is in answer mode.**

5. **Dial the remote computer.**

From the Phone Book dialog box, click the Dial button. From the BitCom window, click the Dial button on the toolbar, and then click the Dial button in the Dial dialog box that appears.

When your modem has made a connection with the remote computer, the lower-left status bar displays "Online."

If you connected to a BBS or an online service, a message will appear on your screen. If you have made a connection

with another PC running BitCom or another communication program, you can start typing.

---

**Answering a call**

Once you put BitCom in *Answer Mode*, it will answer incoming data calls automatically.

To place BitCom in *Answer Mode* (also known as *Host Mode*):

1. From the Action menu, select *Auto Answer*.

The message "Waiting for call..." appears.

2. Wait for the remote computer to call.

When a remote computer calls, BitCom answers automatically answer.

---

**Troubleshooting the connection**

Once you have made a connection, a few adjustments might be necessary. The following offers a few tips on solving some problems you may encounter while online.

- *No response.*

If you make a connection with an online service or BBS but you see nothing after a few seconds, press ENTER once or twice. This should prompt a response. If you still get no response, check that the baud rate and the other communication settings are correct.

- *Double characters.*

If everything you type appears twice (lIiikkee tthhiiss), choose the *Parameters* button to open the Edit Parameters dialog box. In the upper-right corner, choose the *Terminal...* button. In the Terminal Settings dialog box, clear the "Local echo" option. Click OK to accept the new settings and choose OK again to return to your online session.

---

The "Local echo" option tells BitCom to send each character you type to your screen and the remote computer. When communicating with a full-duplex system, the "Local echo" option is unnecessary since the remote computer is already "echoing" each character you type.

➤ *No characters.*

If you cannot see anything you type, choose the "Parameters" button to open the Edit Parameters dialog box. In the upper-right corner, choose the *Terminal...* button. In the Terminal Settings dialog box, select the "Local echo" option. Choose OK to accept the new settings and choose OK again to return to your session.

The "Local echo" option tells BitCom to send each character you type to your screen and the remote computer. The "Local echo" option is necessary when you communicate with a half-duplex system because the remote computer is not "echoing" each character you type.

➤ *The cursor moves to the beginning of the same line or text on screen is doubled-spaced.*

If the cursor moves to the beginning of the same line when you press ENTER, or if the text appears doubled-spaced, choose the *Parameters* button to open the Edit Parameters dialog box, choose *Terminal* and then select the "Auto linefeed" option. Click OK to accept the new settings and return to your session.

➤ *“Garbage” on screen.*

If you see gibberish on your screen, check the port settings. They should match those of the remote system. If you are using N81 (parity set to None, data bits set to 8 and stop bits set to 1), try using E71 (parity set to Even, data bits set to 7 and stop bits set to 1). Likewise, if you are using E71, try using N81. You can change these settings either from the communications port area of the status bar, or by opening the Edit Parameters dialog box.

If you still see gibberish on your screen, check that you are using the correct terminal emulation setting. If you are not using the correct terminal emulation, BitCom will not be able to translate your keyboard characters correctly, nor will it be able to interrupt the characters sent from the host computer.

If you still see garbage, try lowering the baud rate. If this does not work, you probably have a bad connection and the garbled characters you see are caused by line noise. Try waiting a few minutes and then call back.



---

## Sending and receiving files

Sending and receiving files is one of the most useful aspects of telecommunications. BitCom allows you to send and receive spreadsheets, documents, and even computer programs from anywhere in the world. Transferring files with BitCom is faster and often cheaper than overnight courier services.

---

### Choosing a file transfer protocol

Before you can exchange files with another system, both sides must agree to use the same file-transfer protocol. BitCom supports the ASCII, Xmodem, Ymodem, Zmodem, and the Kermit protocols. If you are unsure which protocol to use, check with the host system.

---

### Transferring files with a PC

To receive a file:

1. Connect to the remote PC.
2. Click on the Receive File button on the toolbar.
3. Choose a mutually supported protocol.  
Both ends must use the same protocol.
4. Click OK.

If you are using the Ymodem, Zmodem, or Kermit protocol, the File Transfer Status dialog box appears automatically, showing the status of the transfer. These protocols retain the original name of each file you receive.

5. If you are using the ASCII or Xmodem protocol, enter a name in the *Filename* text-entry box of the Receive File dialog box.

The filename does not have to match that of the received file.

6. Click OK.

The File Transfer Status dialog box will appear. When you receive a file, the File Transfer Status dialog box will show the status of the transfer. To stop receiving a file, click "Cancel".

---

To send a file:

1. Check that you have a good connection with the remote PC and that it is ready to receive files.

The Status area displays "Online."

2. Click the Send File button on the toolbar.

3. Select a mutually supported protocol.

When possible, use the Zmodem protocol.

4. Click OK.

The Send File dialog box appears.

5. In the *Files* list box, select one or more files to send.

6. Click the "Select" button.

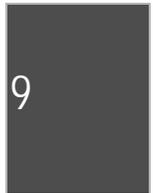
The files appear in the *Selected files* list box. If you are using the Xmodem or ASCII protocol, you can send only one file at a time.

7. Click the Send button.

---

Transferring files  
with an online  
service

How you send (upload) and receive (download) files varies from one online service to another. The following instructions give you some general guidelines.



---

To download a file from an online service:

1. Connect to the host system and log on.
2. Ask the host to start sending downloading a file.
3. Click the Receive File button on the toolbar.  
The Receive File - Select Protocol dialog box appears.  
Before receiving the file(s), you can use the "Path..." command to change the directory that BitCom will save the received files to.
4. Select a protocol and click OK.
5. If you use the ASCII or Xmodem protocol, you must enter a filename in the *Filename* text-entry box.
6. Click OK.

To upload a file to an online service:

1. Connect with the host system and log on.
2. Ask the host to stand by to receive a file.
3. Click the Send File button on the toolbar.
4. Select a mutually supported protocol.
5. Click OK.  
The Send File dialog box appears.
6. In the *Files list* box, select one or more files to send.
7. Click the Select button.
8. Click the Send button.

The File Transfer Status dialog box will show the status of the transmission. If you want to stop sending a file, click Cancel.



---

## Placing BitCom into host mode

BitCom's host mode lets callers exchange files with your system while you are away from your desk. When a caller makes a data connection, they will be greeted with a welcome message, asked for a password, and then asked whether they want to send or receive files.

You do not need to place BitCom into host mode. The Receive Manager will automatically place BitCom into host mode when it receives a data call.



---

While BitCom is in host mode, the Receive Manager is unable to receive faxes or voice messages.

---

To place BitCom in host mode manually:

1. Click the Host Quick Dial button.

BitCom will run the REMOTE.SCP file and place itself in host mode. The Auto Answer dialog box appears.

---

Calling host mode and transferring files

BitCom's host mode uses the same communication settings as the Remote phone book record, which is in BitCom's default phone book. When you run the REMOTE.SCP script file, it will open the Remote record and use its communication settings. If you want to use different communication settings, change the settings in the Remote phone book record.

After the caller has entered his or her password, a welcome message appears. The message BitCom displays is contained in the file WELCOME.TXT, which is in the BITWARE\BFPRO directory. You can use Windows Notepad (or any other text editor) to change this message.

Next, BitCom asks whether the caller wants to transfer a file or quit. To transfer a file, the caller types "FILE" and presses ENTER. BitCom asks which protocol to use. BitCom supports Xmodem, Ymodem, Zmodem, and Kermit. Next, BitCom asks whether the caller wants to [D]ownload (receive) or [U]pload (send) a file.

Callers can send files to and receive files from the BFPRO\XFER\ directory only. If you want certain files available for downloading, place them in the BFPRO\XFER\ directory.

To log off of BitCom, type "BYE". BitCom then returns to remote mode.

---

Password  
Protection

To prevent unauthorized users from accessing your system, BitCom's host mode features password-protection. After a caller makes a connection, BitCom asks for a password and then check the response against each password in the file PASSWORD.DAT. If BitCom does not find a match after the third attempt, it displays the message "BAD PASSWORD" and disconnects. Passwords are not case-sensitive.

To add passwords, open the PASSWORD.DAT file with Windows Notepad and enter a new password. Each password should be on its own line and capitalized. The default password is PASSWORD. Although the passwords must be capitalized in the PASSWORD.DAT file, BitCom ignores case when callers enter a password.



---

## Capturing text on your screen

BitCom makes it easy to "capture" the text you see on your screen to a file or your printer. Capturing data can reduce the time you spend online. Instead of reading data as it appears on your screen, you read it later at your leisure. Capturing data is also sometimes the only way to transfer data from one computer to another.

---

### Capturing to a file

BitCom can save the text that appears on your screen to a file. By default, BitCom saves captured files in the Capture Directory. You can later view captured files using the View File button on the toolbar.

To capture data to a file:

1. From the Action menu, choose *Capture File Start...* The Capture File Start dialog appears.
2. Enter a filename in the *Filename* text-entry box.  
Enter a new filename or choose an existing file.  
When the *Replace* option is selected, BitCom will replace the data in the file with the newly captured data, and you will lose the data in the existing file. If the *Append* option is selected, BitCom adds the captured data to the end of the existing file.
3. Select a capture mode.  
BitCom has three ways to capture data - Normal, Raw, and Screen.  
CALLOUTS "Normal" records everything you see on screen, ignoring the control codes and escape sequences. These are the special codes that control the position of the cursor and the text.

"Raw" records all data that you receive from the host, including control codes and escape sequences. This is useful for debugging a connection.

"Screen" records data as it appears on your screen, but not in the exact order it is received. This compensates for special codes that control the movement of the cursor.

4. Select where you want to start capturing data.

There are three choices:

CALLOUTS "Here" saves all new data that appears on your screen to a file. BitCom will not save data that is already on your screen.

"Top of the scroll buffer" saves, in addition to new data, all the data that is already in your scroll buffer. This option is useful for saving data that has already scrolled off your screen.

"Top of screen" saves all new data and all the data that is on your screen.

5. Click OK.

BitCom starts capturing data to the specified file.

---

Capturing to your printer

To capture to your printer:

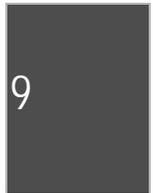
1. From the Action menu, select *Print Start...*

The Print Start dialog box appears.

2. Select one of the options; *Here*, *Top of scroll buffer*, or *Top of screen*.

3. Click OK.

BitCom now prints the captured data.



---

---

Viewing captured files

BitCom can view and print text-only files to which you've captured data. These files cannot contain formatting characters as BitCom cannot open formatted documents that were prepared in a word processor.

To view a captured file:

1. Click the **View File** button in the toolbar.

2. Select a file to view.

To view the default captured file, click the **View Capture File** button. The current capture file appears in the **Filename** text-entry box.

3. Click **OK**.

BitCom opens the Windows Notepad with the captured file. You can now read, edit, rename, or print the file.

---

---

Printing captured files

BitCom lets you print captured files:

To print a file:

1. From the **File** menu, select **Print File**.

The **Print File** dialog box appears:

2. Select a file to print.

3. Click **OK**.

BitCom will print the file.

---

---

Using the Windows clipboard

One of the most useful aspects of BitCom for Windows is that you can move text to and from the Terminal Screen using the Windows Clipboard. For example, you can copy a portion of a report you are writing in Microsoft's Word for Windows and paste it into the Terminal Screen, where (if connected) BitCom will send it to the host.

---

Moving text to the terminal screen

To move text from the Clipboard to BitCom:

1. Switch to or open the application you want to copy text from.
2. Select the text you want to copy and select *Edit, Copy*.
3. Switch back to BitCom.
4. From the Edit menu, select *Paste to Host*.

If you want to append the capture file, you can use the *Paste to Capture File* command to copy the text to the captured file. BitCom appends the text to the end of the captured file.

---

Moving text from the terminal screen

To move text from BitCom to another Windows application:

1. Select the text you want to move.
2. From the Edit menu, select *Copy*.
3. Switch to or open the application to which you want to paste text.
4. In the application you are pasting to, select *Paste* from the Edit menu.

The text you copied from BitCom appears in the opened application.

---

Searching for text

BitCom lets you find a word or phrase with its *Search* command. You can search for words that have the right combination of uppercase and lowercase letters, or you can ignore case.



---

## Using the Quick Dial keys

The Quick Dial keys let you automatically dial and log on to your favorite online services with just a click of your mouse. The Quick Dial keys are initially set up to dial MCI Mail, CompuServe, EasyLink, Dow Jones News/Retrieval, GENie, and DELPHI.

When you choose a Quick Dial key, BitCom does the following:

- Selects the corresponding phone book record. For example, if you click the "CompuSer" button, BitCom automatically opens the CompuServe record.
- Dials the online service using the phone number in the corresponding phone book record.
- Automatically logs you on to the online service by entering your user ID and password.

Before you can use a Quick Dial key, you must do the following:

1. **If the corresponding phone book record does not have an 800 number, enter the online service's local phone number.**

CompuServe, DowJones, and DELPHI do not have 800 numbers, but MCI, GENie, and EasyLink do.

2. **In the corresponding script file, enter your user ID and password.**

To see which script file is associated with a Quick Dial key, click the QKeys button. You can see in the Command text-

entry box, the script file associated with each Quick Dial key is .

3. Close the Quick Dial Keys dialog box and select *Script Editor* from the Script menu.
4. In the Open File dialog box, select the script file you want to edit and then click OK.

BitCom will open the script file with Windows Notepad. In the script file, enter your user ID and password. Save your changes and close Notepad. The Quick Dial key is now ready to use.



---

## Creating function keys

BitCom's function keys are programmable on-screen buttons that reduce almost any routine communication task to a single key stroke or a click of your mouse. For example, you can use BitCom's function keys to open your E-mail, join a forum, get stock quotes from Wall Street, etc.

You can create a custom set of function keys for each system you call. After you make a connection, the function keys you created for the system will automatically appear, temporarily replacing the Quick Dial keys. (You can assign a different set of function keys to each phone book record.) After you hang up, the Quick Dial keys will automatically reappear.

For example, you could choose the Quick Dial key "CompuServ" to call the online service CompuServe. After making a connection, the function keys you created for the CompuServe phone book record will automatically appear. When you log off, the Quick Dial keys will reappear.

This is how they work: For each key, you can assign a string of text, a script command, or a script file. Then when you choose a defined key, BitCom will then send the text, execute the command, or invoke the script file that you assigned to it.

To define one or more function keys:

1. **Open the phone book record for which you want to create the function keys.**

For example, if you want to create function keys for CompuServe, you would open CompuServe's phone book record.

2. **Click on the "Function keys" icon in the toolbar.**

You can also choose the *Function Key* button in the Edit Record or Add Record dialog boxes. This will open the Function Keys dialog box.

If you want to reuse the function keys you created in other phone book records, open the *Filename* drop-down list box, select one of the previously saved function key files, and click the *Open* button. The function key for that file will appear.

3. In the *Key* text-entry box, enter a key combination.

A key combination can be any function key (F1 - F12) or a combination of the [ALT] or [CTL] keys with almost any other letter (e.g., [CTL-L]). You cannot use a number. The following are valid keys and key combinations:

CTL-A through CTL-Z

ALT-A through ALT-Z

F1 through F12

If you use terminal emulation, be careful not to assign a key that has a special meaning to the terminal you are emulating. For example, [F1] on the VT100 terminal is the Gold key.

4. In the *Label* text-entry box, enter a name.

The number of characters BitCom can display depends on the number of buttons you have defined, whether BitCom is displaying one or two rows of keys, and the size of the BitCom window.

5. In the *Command* text-entry box, you can enter one of the following:

- Text that you routinely send to the host.

Text you want BitCom to send to the host must be in double quotes. For example, if you were to create a set of function keys for a phone book record for CompuServe, you

---

could enter something like this:

```
"GO MAIL $0D$0A"
```

This command to start CompuServe's electronic-mail service is followed by a carriage return and a line-feed character. A carriage return is represented by the hexadecimal value "\$0D," and the line-feed character is represented by the value "\$0A."

➤ A script command.

You can enter a script command. For example, if you want BitCom to send a break signal to the host, enter:

```
SBREAK
```

You can enter more than one script command, but they must be separated by a semicolon (for example, SBREAK; CLEAR).

➤ A script file.

To assign a script file to a key, enter the INVOKE command followed by the name of the script file. For example, you could enter:

```
INVOKE LOGON.SCP
```

When you choose the assigned function key, BitCom will run the LOGON.SCP script file.

6. In the *Color* list box, choose the color of the key's label.  
You can choose from eight colors.

7. Repeat steps 2 - 6 to define more function keys.  
To define keys seven through twelve, choose the "7-12" option button.

8. Enter a filename in the *Filename* text-entry box and click the Save button.
9. Click OK.



---

## Automating BitCom with script files

Script files are small programs that automate often-repeated communication tasks. Similar to the programming language BASIC and other script languages, these macros tell BitCom to perform certain tasks, such as making a connection, giving a password, or downloading a file. If you frequently call services such as CompuServe, script files can save you a great deal of time and money.

This chapter briefly introduces you to script files. It does so by showing you how to create a simple script file that will automatically log you on to an online service.

---

### Creating a script file

The simplest script files automatically log you on to an online service or BBS. These script files wait for the host to ask for your user's ID and password and then automatically reply with an ID and password. You just dial the host system and BitCom takes care of the formalities.

BitCom's directory contains several sample script files for logging on to online services. For example, you can use the file COMSERV.SCP to log on to CompuServe. The names of all script files end with the.SCP extension.

To create a simple log-on script file:

1. From the Scripts menu, select *Script Editor*.  
The File Open dialog box appears.
2. Enter or select the COMSERV.SCP script file and click OK.  
The COMSERV.SCP file appears.
3. Replace the X's and Y's with your user ID and your password.

4. Select *Save* from the File menu.

5. Close Notepad.

You have just created a script file that will automatically log you on to CompuServe. BitCom includes several sample script files that you can use with little editing.

Logging on with a script file

Additional log-on script files included with BitCom have a similar structure and can be use in the same way. The instructions below assume you have a subscription to CompuServe.

9

To log on with the COMSERV.SCP script file:

1. Open BitCom's phone book.

Select the Phone Book button on the toolbar.

2. Select the CompuServe phone book record and click the *Edit* button.

The Edit Record dialog box appears.

3. Click the *Startup* button.

The Startup dialog box appears.

4. Select COMSERV.SCP in the *Script file* pull-down list and click OK.

5. Click OK in the Edit Record dialog box.

6. Click the *Dial* button.

BitCom will dial CompuServe. Once it has made a connection, BitCom will automatically enter your user ID and password.

---

## Using BitCom's phone book

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### Creating a phone book record

Before making a connection with a host computer, BitCom needs to know a little about it — its phone number, its communication settings, its connection speed, etc. BitCom stores this information in a phone book record. When you want to make a connection with the host computer, simply choose its phone book record and dial.

Each record contains all the information needed to make a connection. These settings include the following:

- A name, company name, and comments.
- One or more phone numbers, including fax and voice numbers.
- Communication settings, such as baud rate, parity, and data and stop bits.
- Terminal emulation setting.
- A default file-transfer protocol.
- A script file to run automatically after connection.
- A custom set of on-screen function keys.
- The phone book can be shared with a fax

To create a new phone book record:

1. From the Phone Book menu, choose *Add Record*  
The Add Record dialog box appears.
2. Enter a unique Record ID and phone number, and select the necessary communication settings.

Each phone book record must have a uniquely named record ID, a phone number and communication settings

that match those of the remote system, such as the number of data bits, parity setting, etc.

Depending on the system you call, the phone book record might also require other settings, such as terminal emulation.

3. Click OK.

You can also add a new record by choosing the Add command in the Phone Book dialog box.



---

Editing a phone book record

BitCom gives you several ways to edit the parameters of your phone book records.

1. From BitCom's phone book, click *Edit*.

The Edit Record dialog box appears. From here, you can change any of the phone book record's settings.

2. From BitCom's toolbar, Click on the "Edit" button.

This opens the Edit Parameters dialog box.

You can also change many of the parameters from the status bar at the bottom of the screen. With a click of your mouse, you can change the baud rate, parity, data bits, stop bits, terminal emulation setting and COM port.

---

Deleting a phone book record

Removing a phone book record is straightforward.

1 Open the phone book, select the record you want to delete, and choose the "Delete..." button.

BitCom will ask whether you are sure you want to delete the record. Choose "Yes," and BitCom will delete the record.

---

---

Creating a new  
phone book

To help you further organize your records, you can create more than one phone book. For example, you can create a phone book for work and another for home. You can also use a phone book that is shared over a network.

To create a new phone book:

1. From the Phone Book menu, choose "Select Phone Book...."

The Select Phone Book dialog box appears.

2. Choose the "Add..." command button.

The Add Phone Book dialog box appears.

3. Enter the name of the new phone book in the "Phone Book" text entry box.

You can enter up to 16 characters.

4. In the "Filename" text-entry box, enter or select the file to which BitCom will save the phone book.

You must use a valid DOS filename with the DBF extension.

If you copied a phone book file to your disk or if you want to use a phone book file that is shared over a network, enter its filename. BitCom's phone book files are in the dBASE III format and are shared with BitWare.

5. Choose "OK."

The Select Phone Book dialog box reappears with the name of the new phone book in the Phone Books list box.

6. Select the new phone book from the Phone Books list box.

7. Choose "OK."

If the new phone book file does not exist, BitCom asks whether you want to create the file.

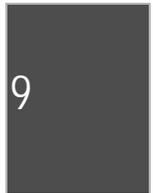
If the phone book file already exists, the Phone Book dialog box will appear.

8. Choose "Yes" to continue.

The Phone Book dialog box appears.

9. Choose "OK."

You will see the name of your new phone book in the "Phone Book" area of the Status Bar.



---

#### Removing a phone book

You can remove the name of the phone book from the "Phone Books" list box in the Select Phone Book dialog box, which appears when you choose the "Select Phone Book..." command. You cannot, however, remove the file the phone book records are saved to. This arrangement is designed to allow you to remove a phone book that is shared over a network without deleting the actual phone book file.

To remove a phone book:

1. From the Phone Book menu, choose "*Select Phone Book...*"

The Select Phone Book dialog box will appear.

2. Select a phone book to delete.

3. Choose the "Remove" button.

BitCom asks whether you want to delete the phone book.

4. Choose "Yes."

---

BitCom removes the phone book name from the "Phone Books" list box.

---

Copying a phone  
book

BitCom lets you copy your currently opened phone book. This feature is useful for backing up your phone book records.

To copy your phone book:

1. From the Phone Book menu, choose "Select Phone Book...."

The Select Phone Book dialog box will appear.

2. In the Select Phone Book dialog box, select the phone book file you want to copy.

3. Choose the "Copy..." button.

The Copy Phone Book dialog box will appear. The FROM: section of the dialog box shows the name and filename of the selected phone book.

4. In the TO: section, enter a phone book name, a filename and a destination.

5. Choose "OK."

## dBASE compatibility

BitCom's phone book is in the same dBASE III format as BitWare's, allowing them to share the same phone book. Because BitCom's phone book is in the dBASE III format, you can import a phone book that was created in a dBASE-compatible application.



# 10

## Chapter

# USING THE DOS CLIENT

The DOS Client allows you to fax from DOS-based applications.

In this chapter, you will learn how to:

Page:

- 10-4 > Set up the DOS Client
- 10-10 > Set up your applications to support FAXserve
- 10-11 > Send out faxes
- 10-17 > Use the phone book
- 10-22 > Send a fax from the command line

---

## What is the DOS Client?

The FAXserve DOS Client is the tool that FAXserve uses to allow you to fax from your DOS-based applications. When configured to work with your DOS applications, the DOS Client will appear when you select the application's print option. After you enter the applicable fax number and select some other options you're ready to send the output of your application as a fax.

---

### DOS Client features

The DOS Client allows you to:

- Run from the host server or on individual workstations.
- Pop up windows that show the progress of fax conversions and transmissions as they occur.
- Perform command line faxing. This allows you to fax a PCX, DCX, or ASCII file directly from the command line rather than having to enter the DOS application to send the file.
- Hot key toggle between faxing and printing. If you want to print output instead of faxing a document, this option allows you to toggle easily between the DOS Client and the application without reconfiguring the DOS application.
- Support any printers that use PCL 5 (scalable fonts) and any AGFA Intelligent font support packages.
- XMS NETX or EMS NETX compatibility.

## About the DOS Client

---

FAXDOS.EXE performs the FAX services in the background

The DOS Client consists of a terminate-and-stay resident (TSR) program called FAXDOS.EXE. This TSR allows you to send output from any DOS-based application as a fax. In order to use the DOS Client, FAXDOS.EXE must be loaded into your workstation's memory. (You will see later in this chapter how to do this.)



---

The DOS Client files, including FAXDOS.EXE, were copied to the host server from floppy disk during installation. These files will be copied onto your workstation during DOS Client setup if you intend to use the DOS Client directly from your workstation. (Alternatively, you can simply access the DOS Client from the host server.)

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---

DOS applications must be configured to support FAXserve

When you send your output to print to FAXserve, FAXserve re-directs your output, converts it to a format acceptable to print to a fax machine, and places the fax job in its transmission queue. This means that **you must configure your DOS applications to support FAXserve before you can use them to send your faxes.** Instructions for configuring your DOS applications to work with the DOS Client are provided later in this chapter.

---

## Running the setup program

If this is the first time the DOS Client is being used and it has not yet been set up, you can run the setup program now.



---

This is an optional step. If you do not install the files on your machine, you can run the DOS Client from the server, as long as it is installed there. The DOS Client files **MUST** be on the FAXserve host server before you can run the setup program.

---



---

If you want the ability to select the fax resolution on a per fax basis, then DCSETUP must be used to install a user copy of the executable files in a directory other than the installed server copy.

---

To run the DOS Client setup program:

1. Log in to the FAXserve host server.
2. If necessary, map a drive, or change to the drive for the FAXserve host server.
3. Change to the CLIENT.DOS subdirectory off of the FAXserve home directory.  
The DOS Client setup program resides in this subdirectory.
4. At the command line, type: `DCSETUP hst_srvr`  
Substitute the name of the FAXserve host server for the variable `hst_srvr`.
5. Enter the path where you want to install the DOS Client.  
By default, the setup program will set up the DOS Client in a directory called CLIENT.DOS off the C drive.

If you want to set up the DOS Client in a directory that does not exist, the setup program will automatically create the directory for you. If you enter the name of an already existing directory, the system will ask you if you wish to overwrite the existing files in the directory if it is NOT an existing DOS Client directory. If it is a DOS Client directory, the files will be overwritten without any prompting.

6. **Select whether to have your DOS path and AUTOEXEC.BAT file or your network mapping and login script modified by the setup program.**

If you install the DOS Client on a local drive, the setup program can modify the DOS line in your AUTOEXEC.BAT file so that it includes the path to the DOS Client directory.

If you install the DOS Client on a network drive, the setup program can modify your login script to include the DOS Client directory.

Select “Yes” to have the setup program perform automatic modification. If you select “No”, you will have to manually change to the DOS Client directory when you want to run the DOS Client.

---

## Loading the FAXDOS TSR

Before using your DOS application to create a file for faxing, you must first load the FAXDOS TSR into workstation memory. This must be done each time your workstation is re-started (if you intend to send faxes).

FAXDOS.EXE must be loaded for use with a specific FAXserve host server and port number. The host server that you specify will be the FAXserve host server that will be responsible for all your faxing activity. The port number that you specify will be the port to which all printing re-direction will be sent.

FAXDOS can be loaded into conventional or reserved (i.e. “upper” memory), but may not be loaded into expanded or extended memory.

In order to load and initialize FAXDOS in upper memory, the workstation must have at least 48K of upper memory available. After loading and initializing, only 28K bytes of memory is required in upper memory. The additional 20K is used during initialization only. If the attempt to load FAXDOS into upper memory fails because of insufficient memory, then FAXDOS will be loaded into conventional memory.



---

The FAXDOS TSR must be loaded after any other keyboard enhanced TSRs (e.g. Norton Commander). Also, FAXDOS must be loaded into the primary DOS shell. In other words, applications that “shell out” to DOS cannot load the TSR from this shell. The Windows DOS Shell is an exception to this rule because Windows recreates the primary DOS shell environment exactly.

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 Loading  
FAXDOS.EXE

Follow the steps below to load the FAXDOS TSR.

1. Change to the directory where you set up the DOS Client.
2. At the command line type: **FAXDOS /Shst\_svr /#** where, *hst\_svr* is the name of the FAXserve host server and # is a specific printer port number (either 1, 2, or 3).

For example, if your FAXserve host server is called "MACHINE" and you want to configure the DOS Client to work from printer port LPT 3, you would enter the following at the command line:

```
FAXDOS /SMACHINE /3
```



When starting FAXDOS, it is imperative that you include /S before the name of the server. If /S is omitted, the FAXDOS TSR will not start. If the LPT number is omitted, FAXDOS will automatically load to LPT1.

---

 FAXDOS  
command line  
options

There are several command line options that can be used in conjunction with the FAXDOS command described above. These options allow you to tailor your FAXDOS configuration to your particular needs and to view information about the TSR. To use these options, simply type the appropriate option along with any additional information required (such as drives, server names, etc.) along with the FAXDOS command.

Command line option	Explanation
/S	FAXserve host server.
/LPT <i>n</i>	LPT number for faxing, or just <i>n</i> where <i>n</i> = LPT # (1-3).

Command line option	Explanation
<i>/Tn</i>	Specify capture inter-character time-out where <i>n</i> = time-out in seconds. For more information about this option, refer to the next section, 'The Time-out command line parameter'.
<i>/U</i>	Unload FAXDOS TSR.
<i>/X</i>	Do not use XMS for swapping, even if XMS is available.
<i>/E</i>	Do not use EMS for swapping, even if EMS is available.
<i>/Rd</i>	Specify a drive for the swap file. Where, <i>d</i> is the drive to reserve.
<i>/Dd</i>	Drive(s) skipped on directory save. For example, <i>/DAB</i> to skip drives A: and B: <i>/D*</i> skips all drives.
<i>/I</i>	Obtain information about the <b>loaded</b> FAXDOS TSR.
<i>/?</i>	Lists available command line options.

For instance, if you want to load the FAXDOS TSR without using EMS for swapping purposes, you would type:

```
FAXDOS /SMACHINE /3 /E
```

---

The time-out command line parameter

Certain applications create very significant delays between the capture initialization and sending the data to the specified parallel port. To overcome this, a time-out command line parameter is added to the FAXDOS program.

If left unspecified, the default time-out is 10 seconds between capturing two consecutive characters. If this delay is insufficient, the initial pop-up screen reappears after the job is submitted successfully. To change the default, reload

FAXDOS using the /T command line option described in the previous chart. After the /T, enter a new delay time in seconds.

For example, to enter a new delay time of 15 seconds, load the FAXDOS TSR with the following command:

```
FAXDOS /Hhst_srvr /# /T15
```



---

Note that this time-out period is always enforced after the last character is captured. You may begin to notice a delay if the time-out specified is large. Therefore, it is suggested that you be as conservative as possible when extending this timeout.

---

---

## Configuring your application to support FAXserve

In order to send your DOS files as faxes, you will have to configure each DOS application that you will use to support faxing via FAXserve. This means selecting the correct type of printer driver and printer port to use with each application.

To configure your DOS-based application to support FAXserve, follow the procedure listed below:

1. Go to the application's printer configuration.

2. Select an HP LaserJet printer as your printer type.

You *must* select a Hewlett Packard LaserJet that generates generic HP PCL Level 4 files or HP PCL Level 5 files (i.e. scalable fonts). Since most applications have LaserJet printer drivers, this requirement should be supported by almost all word processors and graphics applications. To generate HP PCL Level 5 files, you must select an HP LaserJet III or 4 as your printer type. These are the only printers that support PCL 5.

3. Select the port that you specified when loading the FAXDOS TSR.

When loading the FAXDOS TSR, you had to specify a printer port. (Refer to the 'Loading the FAXDOS TSR' section earlier in this chapter.) Select this same port in your application's printer configuration.

For example, if you loaded FAXDOS with LPT3, you would select LPT3 as the printer port the application will use when faxing with FAXserve.

## Faxing from a DOS application - the basic steps

After you have configured your application to support FAXserve, you can use the application to create your faxes.

To fax your file with FAXserve:

1. Open the application you will use and create your fax file.
2. After saving your file, send your file to print to the FAXserve printer port.

The FAXserve printer port is the port that you specified when configuring the application to support FAXserve.

After sending your file to print to this port, FAXserve displays the Fax Transmission Parameters form. This form is the heart of the DOS Client and contains all of the fields necessary to schedule and tailor your fax output.

3. Enter information in the Fax Transmission Parameters form, and press F10.

A dialog box will appear asking you if you want to schedule the fax for transmission.

4. Confirm that you want to send the fax.

---

## FAXserve faxing basics

---

The FAXserve Conversion Status dialog box shows file conversion progression

When you fax a file, the format of your file will be converted and then sent to the FAXserve transmission queue on the FAXserve host server. As the file is being converted, the FAXserve Conversion Status dialog box will appear.

The FAXserve Conversion Status dialog box contains a metered bar across its top that allows you to view the progress of the file's conversion. Additionally, the dialog box will increment the percent of the file being converted, the number of pages for the file, and the amount of bytes converted.

---

The FAXserve Event Status dialog box tracks all fax events

After the file has been converted and the FAXserve Conversion Status dialog box has disappeared, the FAXserve Event Status dialog box will appear.

The FAXserve Event Status dialog box allows you to track each fax "event". Each fax that is sent is a separate event, so if you have chosen to fax the file to three separate fax numbers, there would be three events.

### Fax Transmission Parameters form fields

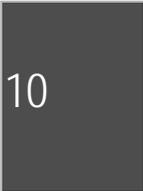
---

The Fax Transmission Parameters form

FAXserve Host : NY-WRITER2		
CAS Directory :	SYS:FAXSERVE\USER\E6000083\	
USER Directory :	SYS:FAXSERVE\USER\E6000083\	
PCX Logo Files :	CAS	Directory
Cover Text Files:	CAS	Directory
ENTER>Select	ESC=Cancel	F10=Accept/Save

The fields of this form are described in the table below.

Field name	Explanation	Notes
<i>When</i>	The date and time that the fax should be sent.	<p>“Immediately” (the default value) will send the fax at the current date and time.</p> <p><b>To specify a date and time:</b></p> <p>1) Press Enter.</p> <p>2) In the Event Date/Time form, specify the date and time you want the fax to be sent, where the date is in the MM/DD/YY format, and the time is in the HH:MM format, based on a 24 hour clock.</p>
<i>From</i>	Who is sending the fax.	<p>By default, your FAXserve server login name appears.</p> <p><b>To specify a name:</b></p> <p>1) Press Enter.</p> <p>2) Type the fax sender’s name.</p>
<i>To</i>	The recipient of the fax.	<p><b>To use a phonebook:</b></p> <p>1) Press F9.</p> <p>Refer to the section of this chapter titled “Using phone books” for more information.</p> <p>When you select fax recipients from the phone book, you can still send the same fax to one additional destination not in your phone book by entering the appropriate information in the <i>Fax Number</i> and <i>To</i> fields.</p>
<i>Fax Number</i>	The recipient’s fax number.	Enter the fax number, including the area code (if needed). You can also enter needed prefix numbers (such as “1” for long distance).
<i>Resolution</i>	Set the output resolution to standard or fine.	This will default to <i>fine</i> when using the global server copy. Settable only when running a workstation or private copy of FAXDOS. Always settable when using FAXSEND from the command line.
<i>Cover Page</i>	Allows you to send a cover page with your fax.	



Field name	Explanation	Notes
<i>Logo File</i>	Specify the logo file to attach to the cover page (if the <i>Cover Page</i> is selected).	<p>Logo files must be black and white and in PCX format (consists of up to 800 lines, which are 1728 dots per each scan line).</p> <p><b>To specify the logo file to attach:</b></p> <ol style="list-style-type: none"> <li>1) Press ENTER.</li> <li>2) Select the logo file from the screen listing all logo files located in your default CAS directory. Make sure the logo file you want to attach is in your default CAS directory. Otherwise, you will receive an error message.</li> </ol> <p>The CAS (Communications Application Specification) directory is where the information needed by CAS is stored. CAS is a standard that provides functions for sending and receiving information. This standard was adhered to by Cheyenne during the development of FAXserve. In addition to containing the necessary CAS compliancy files, each user's default CAS directory is used to store logo and phone book files.</p>
<i>Cover Text</i>	Specify a message or note that will appear on the cover page (if <i>Cover Page</i> is selected).	<p>Up to 19 lines of text can be entered in this form. Lines will wrap around to the next line if more than 77 characters are typed without pressing ENTER.</p> <p>The DOS Client also provides a way for importing ASCII text files as cover page text, should you wish to use already existing text from a previous cover page or even another application.</p> <p><b>To provide text on your cover page:</b></p> <ol style="list-style-type: none"> <li>1) Press ENTER.</li> <li>2) In the Cover Text form, type your message.</li> <li>3) When done typing, press F10.</li> </ol> <p>You can get on-line help to assist you in navigating the Cover Text form by pressing F1.</p>

## Saving, exporting, and importing cover page text

You can easily save cover page text as exported ASCII files for later use. The DOS Client also allows you to import any ASCII text file that has a .TXT extension for use as cover page text, provided that the file is stored either in your default CAS directory or your FAXSERVE\USER directory on the host server.

---

### Saving and exporting cover page text to an ASCII file

To export cover page text to an ASCII file:

1. When done entering your cover page text, press F4.

A window appears in which you must provide a file name for this text.

2. Enter a name for the file to be exported to.

The file name may contain up to eight characters. **Do not enter an extension;** the extension.TXT will automatically be added to the file name you enter.

The file is automatically saved in your default CAS directory or FAXSERVE\USER directory on the host server, depending on which directory you specify the files to be saved to.

---

### Importing ASCII text files to your fax

To import an ASCII text file to your fax file:

1. Press ENTER in the *Cover Text* field of the Fax Transmission Parameters form.

The Cover Text editor will appear.

2. Press F3.

A list of all ASCII text files with the .TXT extension will be displayed. These files are stored in either your mail directory or your default CAS directory, depending on

---

which one you previously specified your cover text files to be saved to.



---

You can change your CAS/USER specification “on the fly” by pressing F8 and calling up the Configure FAXclient Directories form. Refer to the ‘Specifying where phone book, logo, and cover page files are kept’ section for more information.

---

3. Select the name of the file you want to import.
4. If necessary, edit the cover page text.
5. Press F10 when done.

# Using phone books

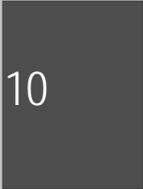
A phone book is a list of people and/or destinations and their applicable fax numbers. Phone books make addressing faxes an easy process and save you time and key strokes by providing “pick lists” from which you can choose one or more fax numbers.

Below is a typical phone book file:

When a group is selected from a phone book, each member of the group will be sent the fax.

Current Phonebook: DEFAULT.PB		Selected Entries
Accounting	GROUP	
Technical Support	GROUP	
Bill Simmons	4549000	
David Hosek	5389276	
Deborah B. Macke	5863327	
Fred Driscoll	6677667	
Jacob Daniels	3231122	
Terry Woodward	5577070	
Tony Panacchio	8874555	
Wanda Smith	8996876	

ENTER=Mark/Unmark    ESC=Cancel    F3=Select Phonebook    F10=Complete



Each user’s phone book is kept in the CAS directory specified in his/her User Profile. If you do not yet have a phone book, you may set one up for yourself at this time by using the Phonebook Maintenance option in the FAXserve Manager. Refer to Chapter 8 “Using the Phone Book”, for information regarding the creation of phone book files.

Selecting fax recipients from a phone book

To select fax numbers/recipients from a phone book:

- 
1. Press F9 in the *To* field in the Fax Transmission Parameters.

The phone book specified in your User Profile will appear.

2. Select the person/group to whom you want to send the fax.

Use the Up and Down arrow keys to make your selection and press ENTER to select them. After pressing ENTER, the name of the individual or group will appear in the “Selected Entries” column of the phone book.

3. Repeat step 2 to add additional fax recipients.

You can select up to 10 phone book entries to receive a fax.



You can add one additional fax number manually in the “*To*” field if you wish to address the fax to phone book entries and to one additional recipient not listed in your phone book.

---

4. Press F10 when done selecting fax recipients.

The message “Selected from Phonebook” will appear in the fax number field of the Fax Transmission Parameters form, indicating that the fax is now properly addressed.



If you have created more than one phone book, you can switch between phone books by pressing F3 or by pressing F8 and specifying either “USER directory” or “CAS Directory” in the applicable field of the form that appears. (This Configure FAXclient Directories form is detailed in the following section.) Note however that you can not select fax recipient's from two different phone books for a single event.

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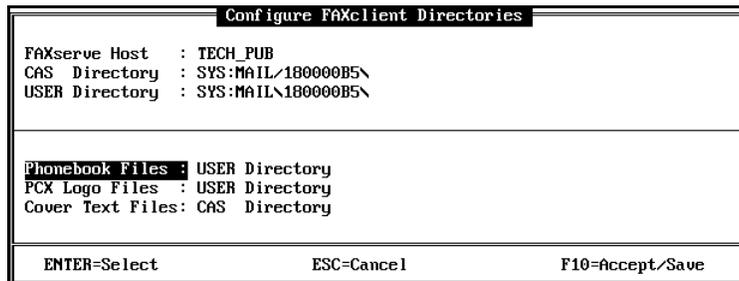
## Specifying where phone book, logo, and cover page files are kept

The DOS Client provides a quick and simple means of specifying the directory from which you want to access your phone book files, logo files, and cover page ASCII files. This is done from the Fax Transmission Parameters form.

By default, phone book, logo, and cover page text files will be accessed from your default CAS directory on the FAXserve host server. However, you can export these files to, and access them from, your mail (i.e. user) directory instead.

Follow the procedure below to specify from what directory you want to access these files:

1. Press F8 in the Fax Transmission Parameters form.  
The Configure FAXclient Directories form appears:



```
Configure FAXclient Directories
FAXserve Host : TECH_PUB
CAS Directory : SYS:MAIL\180000B5\
USER Directory : SYS:MAIL\180000B5\

Phonebook Files : USER Directory
PCX Logo Files : USER Directory
Cover Text Files: CAS Directory

ENTER=Select      ESC=Cancel      F10=Accept/Save
```

Note that your CAS directory and User directory may be the same. This is the default setting. What you see when you call up the Configure FAXclient Directories form depends on what the supervisor, FAXserve administrator, or you have set as your default CAS directory when you were authorized as a FAXserve user.

There are different scenarios that can be set up for you, according to your preference. The CAS and User

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directories do not have to be the same. The following are examples:

Your organization has more than one FAXserve host server that you log into on a regular basis. You may want to configure your User Profile on all FAXserve host servers to use the same directory. This way, you can centralize your personal phonebooks and edit them easily. If you always use the same workstation, you may want to define your private directory locally.

Your organization has one FAXserve host server. You need access to the company phonebook, but you don't want to copy it to your private directory. What you can do is keep your personal phonebook in your FAXserve User directory, and configure your User Profile to specify the directory (CAS) where the company phonebook resides (you MUST have read access rights to this directory). The CAS directory can be used by the DOS Client and will let you select which directory the FAX Client will use for phonebooks, logos, and cover text files.

2. **Select the directory from which you want to access your phone book, logo, and cover text files.**

By default, all files will be accessed from your default CAS directory. To access files from your mail directory on the FAXserve host server, press ENTER and select "USER". Note that you do not have to access each type of file from the same directory. In other words, you can access your phone book files from your CAS directory, and access your logo files and cover text files from your mail directory.

## Toggling between printing and faxing

Obviously, there will be times when you will want to use your application for printing rather than faxing. For these situations, the DOS Client contains a facility that allows you to toggle between faxing and printing with just a few key strokes.

---

Use CTRL-R to toggle between printing and faxing

The “hot key” combination that allows you to toggle between faxing and printing is **CTRL-R**. When this key combination is pressed, the DOS Client toggles between “Local” and “Remote” modes.

“Local” allows you to print your output to the physical printer that is configured to your LPT. “Remote” allows you to fax your output.



---

Some applications have a graphics mode. If you are in your application’s graphics mode and press CTRL-R, the pop-up window that informs you whether you are in “Local” or “Remote” mode will not appear. Instead, you will hear one or two beeps. One beep represents “Local” mode and two beeps represents “Remote” mode.

---

---

## Sending a fax from the command line

There may be times when you have a PCX, DCX, or ASCII file that you want to quickly fax to someone. The DOS Client supplies two DOS commands, FAXSEND and FSEND, that allow you to directly send files to the FAXserve transmission queue for faxing. To send faxes from the command line, all you need to do is enter the applicable command along with some defining information about the file(s) to be faxed and some destination information. **You do not need to have the FAXDOS TSR loaded to use the FAXSEND or FSEND commands.**

---

What's the difference between FAXSEND and FSEND?

FAXSEND.EXE is a command line utility used to send only a single file as a fax without the need for the FAXDOS TSR. When FAXSEND is executed, the Fax Transmission Parameters form appears, allowing you to enter fax information just as you would if the DOS Client were running.

FSEND.EXE works similarly to FAXSEND in that it also allows you to fax PCX, DCX, or ASCII files from the command line, but FSEND allows you to fax more than one file at a time. For example, you could fax three separate files to a single destination by executing FSEND only once. However, when using FSEND, you must specify faxing parameters (i.e. fax numbers, time, etc.) in the command line, since executing FSEND does not call up the Fax Transmission Parameters form.



---

You must be logged in or attached to the FAXserve host server before you can use FAXSEND or FSEND.

---

### Sending a fax with FAXSEND

To send a single file as a fax from the DOS prompt:

1. Type: **FAXSEND /Shst\_srvr**  
**[/xfilenam.ext] or [/c]**

Specify the name of the FAXserve host server for *hst\_srvr*.  
You will then be asked to provide the complete path to the file that you want to fax.

The /c is used if you want to send only a cover page.

2. Provide the complete path and file name (including extension) for the file you want to fax.

The file you want to fax must be an ASCII, PCX, or DCX file.

The Fax Transmission Parameters form will appear after you provide the path and file to fax.

3. Fill out the fields of the Fax Transmission Parameters form as per the instructions previously provided.
4. When the form is complete, press F10 to schedule the fax for transmission.

The FAXserve Event Status dialog box will display. However, the FAXserve Conversion Status dialog box will not display since no conversion takes place on the workstation with FAXSEND.

### Sending a fax with FSEND

To send one or more files as a fax using FSEND:

1. Type: **FSEND file /Shst\_srvr num /option**

---

Where:

*file* = the name of the file(s) that you want to fax.

*hst\_srvr* = the name of the FAXserve host server.

*num* = the destination fax number.

*option* = any FSEND command line options (explained below).

You may specify more than one file name for faxing with FSEND. To do so, simply enter each file in the command line in succession. Paths may be included when specifying file names.

For example, to specify two files for faxing on different drives, the FSEND command might look like this:

```
FSEND c:\report.doc b:\letter.doc  
/Sserver1 /P7879090
```

Once you press ENTER, the message “Scheduled Successfully” will appear at the bottom of the screen along with the FAXserve event number.



---

Faxes sent with the FSEND command will not include a cover page unless you specify that one should be sent using one of the applicable command line options described below.

---

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Use command line options to tailor FSEND to your needs

There are several command line options available for use with the FSEND command that can be used to further tailor the transmission of the fax. These options are explained below:

Option	Explanation
<i>/Pnumber</i>	This option is used to specify the fax number. It can not be used if the /G option is used.

Option	Explanation
<i>/P#</i> ,	<p>The addition of a number and a comma before the fax number allows for a delay before the fax number is dialed. The number used to specify the delay time indicates seconds.</p> <p>For example, to send a fax with a delay of nine seconds before dialing, this command line option would look like the following:</p> <pre data-bbox="776 646 915 667">/P9,7879090</pre>
<i>/Lfilename</i>	<p>Used to specify the logo file to send with the fax. Entering a value of "default" with this option sends the default logo.</p>
<i>/Mtext</i>	<p>Used to specify the cover page message. The text for the message must be entered in quotes. Using this command line option automatically forces a cover page to be sent with the fax.</p> <p>For example, to send a message "Hello", the command line option would appear as:</p> <pre data-bbox="776 953 878 974">/M"Hello"</pre>
<i>/Cfilename</i>	<p>Used to specify a file to be used as text for the cover page message.</p>
<i>/Dmm/dd/yy</i>	<p>Used to specify the date that the fax is to be sent. Use the format mm/dd/yy when using this option.</p>
<i>/T hh:mm</i>	<p>Used to specify the time that the fax is to be sent. Time must be specified using a 24 hour clock and the HH:MM format. For example, to send a fax at 4:00 PM, enter the command line option as:</p> <pre data-bbox="776 1255 867 1276">/T16:00</pre>
<i>/Gfilename</i>	<p>Used to specify a file name that contains a group of names and destinations for sending a fax to a group of recipients (i.e. more than one person). This option cannot be used if the /P option is used.</p> <p>The file used with this option must be in ASCII format and must specify the names and fax numbers in the following format:</p> <pre data-bbox="776 1486 1117 1562">Destination Name1 : Phone Number1 Destination Name2 : Phone Number2 Destination Name3 : Phone Number3</pre>
<i>/Rtext</i>	<p>Used to specify the fax recipient's name. The text for the name must be entered in quotes. For example, to send a fax to Bill, the command line option would appear as:</p> <pre data-bbox="776 1667 867 1688">/R"Bill"</pre>
<i>/W</i>	<p>Used to specify the use of wide (132 column) font.</p>

---

Option	Explanation
/H	Used to specify that the fax should be sent in high resolution (i.e. 200 x 200 DPI).
/S	Used to specify the FAXserve host server.

# 11

## Chapter

# USING THE FAXSERVE MANAGER FOR DOS

This chapter introduces the FAXserve Manager. It is the DOS based counterpart to the Windows FAXserve Administrator.

In this chapter, you will learn how to:

Page:

- |       |   |   |
|-------|---|---|
| 11-4  | ➤ | Perform administrative functions - such as authorizing users and administrators |
| 11-9  | ➤ | Route inbound faxes   |
| 11-13 | ➤ | Send faxes directly to the recipient  |
| 11-27 | ➤ | Work with received faxes  |

---

## About the FAXserve Manager

The DOS FAXserve Manager is a menu-driven administration tool that allows both users and supervisors to perform such system maintenance tasks as setting up user profiles and phone books, tracking scheduled and received faxes, and selecting the FAXserve host server.

Not all of the FAXserve Manager's functions will be available for use by every user. As a supervisor, you will have full access to the functions of the FAXserve Manager, but users will be given only limited use of the facility. The level of system access that a user has is determined by you, the supervisor, when you set up a new user.

## Starting the FAXserve Manager

Before you can perform any administrative function, you must first start the FAXserve Manager. To access the FAXserve Manager:

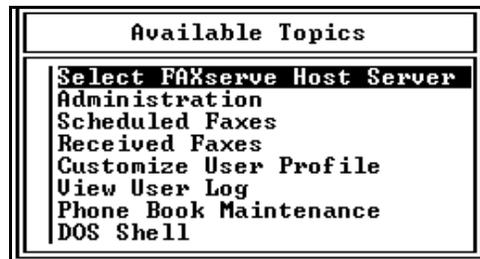
1. Log in or attach to a FAXserve host server.
2. Map a drive to the FAXserve host server.
3. Go to the directory where the FAXserve Manager is installed.

For example, if the FAXserve Manager is installed in a subdirectory, `MANAGER`, off the directory, `FAXSERVE`, you would enter the following at the DOS prompt:

```
CD FAXSERVE\MANAGER
```

4. At the DOS prompt, type: `FAXSERVE`

The Available Topics Menu, shown below, appears on your screen.



---

Press F1 for on-line help

On-line help is available from every window of the FAXserve Manager by pressing the F1 key.

---

## Performing administrative functions

You can use the Administration option to set up various program features and to manage others.

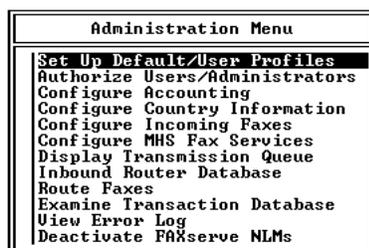
---

### Accessing the Administration Menu

To use the Administration Menu:

1. From the Available Topics Menu, select *Administration*.

The Administration Menu appears:



---

Only a supervisor or authorized administrator who is a supervisor equivalent may use all the features on the Administration Menu. Authorized administrators who are not supervisor equivalents may only use certain items. Users without supervisor equivalent privileges and/or administrator designation, will not see this option on the Available Topics Menu.

---

### Setting up authorized FAXserve users and administrators

To authorize FAXserve users or administrators:

1. From the Administration Menu, select *Authorize Users/Administrators*.

The Authorization Menu appears.

2. Select the type of user you want to authorize.
3. Press INS.  
 If you selected *Users*, a list of all users and groups shows all users who are not authorized FAXserve users appears.  
 If you selected *Administrators*, a list of all users and groups who are not authorized FAXserve administrators appears.
4. Mark the user(s) and/or group(s) you want to add, then press ENTER.

### Setting up a user profile

Follow the steps below to set up a user profile, whether default or individual:

1. From the Administration Menu, select *Set Up Default/User Profiles*.  
 The Profile Menu appears.
2. Select the type of user profile you want to set up.

Setting up a default user profile

Select *Default Profile* to set up a default user profile. The Default Profile form appears:

Default Profile	
Default CAS Directory:	User's Mail Directory
Phone Book File:	[REDACTED]
Logo File:	
Sender:	User Login Name
Notification:	<See List>
Routing Method:	Via User Mail Directory
Server / Print Queue:	Local / LPT1
Paper Size:	Letter
Printer Type:	HP LaserJet
Form Feed At The End:	Yes
LaserJet Type:	II, IID & Earlier
Resolution:	150 DPI
Margin Adjustment:	0
Cut Remainder:	No
Horizontal View Scale:	37 %
Vertical View Scale:	20 %

---

Setting up an individual user profile



Select *User Profile* to set up an individual user profile.

Make sure a default user profile has been created before you try to set up an individual user profile. Remember, also, that you will only be able to customize the user profiles of authorized FAXserve users. If you have not yet authorized any FAXserve users, proceed to the section of this chapter titled 'Setting up FAXserve users and administrators' now.

The individual's User Profile form appears:

Can be sent via User Mail or via MHS.

JOHN's User Profile	
Default CAS Directory:	SYS:FAXTEST2\USER\180000B5\
Phone Book File:	
Logo File:	
Sender:	JOHN
Notification:	<See List>
Routing Method:	Via User Mail Directory
Server / Print Queue:	WRITER / POSTSCR
Paper Size:	Letter
Printer Type:	HP LaserJet
Resolution:	150 DPI
Form Feed At The End:	Yes
Cut Remainder:	No
LaserJet Type:	II, IID & Earlier
Margin Adjustment:	0
Horizontal View Scale:	37 %
Vertical View Scale:	20 %

Controls the view in which you view received faxes.

---

*Default CAS Directory*

The default CAS directory is where the information needed by CAS is stored. The directory used by FAXserve for each user is the FAXserve Mail directory, as all users have their own. This field can not be changed in the Default Profile Form, but can be changed in individual User Profile Forms.

---

*Notification*

Press ENTER to display a list of notification options:

- **Rx Events** - users will be notified each time FAXserve places a newly received fax into their mail directory.

- ***Tx Error*** - users will be notified when a fax they have scheduled has not been transmitted.
- ***Tx Success*** - users will be notified each time FAXserve successfully sends a fax they have scheduled.
- ***Via Broadcast*** - users will be notified via a 25th screen line NetWare broadcast message. This broadcast will appear on each workstation to which the user is logged in, provided that they have not executed the NetWare CASTOFF command.
- ***Via MHS*** - users will be notified via an e-mail message that the system will automatically address to them for each event. This option will not be available when setting up a default user profile.

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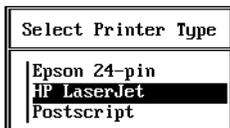
*Server/Print Queue*

When you press ENTER a list of local printer ports and network print queues that you can select appears. Designate a printer for use.

---

*Printer Type*

Use this field to specify the type of printer that you will use to print the received faxes. Press ENTER to select the type of printer on the server queue or attached to the local port.



If you select HP LaserJet as the printer type, several other fields will appear, including *Resolution*, *Form Feed At the End*, *Cut Remainder*, *LaserJet Type*, and *Margin Adjustment*.

---

## Configuring accounting for billing purposes

To set up accounting features for use with FAXserve:

1. From the Administration Menu, select *Configure Accounting*.

The Accounting Configuration Form appears:

Select "Yes" to activate.

Accounting Configuration Form	
Activate Accounting :	<input checked="" type="checkbox"/> Yes
Charge Unit :	Page
Cost Per Unit :	0.02

Charge units are by the page, by the minute, or by fax.

2. Specify the billing information for faxing services.  
Press the ENTER key to display a list of units by which you can bill.
3. Specify the amount you want to charge for a unit.

## Configuring incoming faxes

You can determine how FAXserve will handle newly received faxes. You will need to do this if you did not configure incoming faxes during the installation of the FAXserve NLMs.

To configure incoming faxes:

1. Select *Configure Incoming Faxes*.

The Incoming Fax Configuration Form appears.

---

### *Print Incoming Fax Pages*

The FAXprint NLM allows you to print all incoming faxes automatically on a network printer. While in this field, press ENTER and then select to print “*All*” pages of an incoming fax or just the “*First*” page. If confidential faxes are received, printing only the first page of the file will allow you to route the fax to the proper recipient without having copies of the fax itself printed. (This field will not appear if “*Route Only*” is selected in the “*Incoming Fax Setup*” field.)

---

### *FAXprint Header*

When set to *Yes*, this field allows you to print the FAXprint header on the first page of the fax when the “*Print Incoming Fax Pages*” field is set to “*First*”.

---

### *Routing Method*

This field is used to select the means by which incoming faxes will be routed to their recipients. The two options for this field are:

- *Auto/Manual* - Incoming faxes will automatically be routed to their proper recipient provided that the fax contains a valid DTMF number. If the fax does not have a valid DTMF number, then it must be manually routed by the administrator.



---

Faxes without valid DTMF numbers must be routed manually only if channel numbers or “Default” are not used as routing options in the inbound router database. Refer to the section of this chapter titled ‘Setting up the inbound fax routing system’ for detailed information about inbound routing, DTMF numbers, and the channel number and default routing options.

---

- **Manual Only**- Incoming faxes will not be routed automatically, regardless of whether or not they have a valid DTMF number. All incoming faxes will have to be routed manually by the administrator.

### Configuring the FAXmail NLM

This NLM's function is to send MHS-compatible e-mail as faxes. If MHS is not installed on your network, you cannot use this NLM.

If you did not set up the FAXmail NLM at the time of installation, you can do it now using the FAXserve Manager. Or, if the MHS host server has changed since installation, you can modify the configuration here.

---

You must add the user, FAXSERVE, to the MHS system. This name will be used to create a mailbox for FAXserve.

---

To configure the FAXmail NLM:

1. From the Administration Menu, select *Configure MHS Fax Services*.

The MHS Fax Services Configuration Form appears:

Select Yes.

MHS Fax Services Configuration Form	
Include MHS Fax Services:	<input checked="" type="checkbox"/> Yes
MHS Server Name:	NY-PUB410
MHS Master Volume / Path:	SYS:GATEWAY
FAXSERVE E-Mail Address:	faxserve@tpubnetu@writers

MHS Host Name

Press the INSERT key twice to display a list of all the servers you are currently attached to. From this list, select the server on which your MHS compatible e-mail system is located.



If the applicable server is not listed, press the INSERT key once again to call up a list of available servers.

You can then select the applicable server from this list, and the system will prompt for your user name and password. Once you've entered these, press F2 to return to the list of attached servers.

MHS Master Volume/Path

Enter the volume and path of the MHS host server where the e-mail system is located.

FAXserve Email Address

Enter the e-mail address for the user FAXSERVE.

2. Press F2 to exit the form and save the information.

### Using the Transmission Queue

A supervisor or administrator with supervisor equivalence can view a list of the faxes that are in the FAXserve transmission queue on the selected host server. You cannot see the contents of outgoing faxes because they may be confidential.

Viewing scheduled faxes

To view the transmission queue:

- 
1. From the Administration Menu, select *Display Transmission Queue*.

---

Status

The last column of the Transmission Queue, labeled Status, allows you to view the status of each fax on the list. Each entry on the list will contain one of the following status codes:

Status code	Explanation
W	Waiting - FAXserve is waiting to dial the fax number.
D	Dialing - The fax number is presently being dialed.
S	Sending - The fax is currently being sent.
A	Aborted - The fax transmission has been aborted.

---

Rescheduling  
when a fax is to  
be sent

To reschedule a fax:

1. Highlight the fax you want to reschedule and press F3.
2. Specify whether to send the fax immediately or specify a later date and/or time.

The *Send Immediately* field can be used to change a fax previously scheduled for later transmission to be sent now. Otherwise, you can specify a date and/or time that you want the fax to be sent.

3. Press F2 to save the new transmission date/time.

---

Removing a fax  
from the  
transmission  
queue

To delete a fax from the transmission queue:

1. Highlight the fax you want to delete and press DELETE.

A message window will appear asking you to confirm the deletion. Select "Yes" in the window to delete the fax.

If you want to delete all of the faxes in the Transmission Queue, press SHIFT F2. To refresh the Transmission Queue (i.e. remove all failed or cancelled faxes), press F10.

## Setting up the inbound fax routing system

FAXserve's inbound-routing feature allows FAXserve users to receive their faxes directly in their mailboxes without the need for system administrator involvement. With the inbound-router option, each FAXserve user is assigned a specific route ID.

In order for the inbound-routing system to work, the person sending the fax must dial the fax recipient's route ID along with the fax number. Then, when FAXserve receives the fax, the system will compare the incoming route ID against its database, locate the name that matches the ID, and route the fax to the appropriate mail box.

Of course, before the inbound-routing system can be used, each FAXserve user must be assigned a route ID. For this, the Inbound Router Database option is used.

The inbound router system can be set up for both individuals and groups. Individual route IDs are assigned to specific users, while group route IDs are assigned to groups of users, usually groups with a common purpose. For example, you might set up a group called "Accountants" and assign it a route ID. Then, when a fax is sent to that ID, each member that you assigned to the group will receive the fax.

If you wish, you can assign channel numbers in place of route IDs for users. In this case, you assign a channel number that corresponds to a specific fax board, each fax board having its own channel numbers. Then, each time a fax is received by that fax board, the user who has been assigned that particular channel number will receive the fax. Only one user or group can be assigned to a channel.

---

Lastly, you can assign a value of “Default” in place of a route ID for a user. In this case, the user will receive all incoming faxes that do not contain a valid route ID, regardless of the channel on which the fax was received.

If a fax is received with a route ID that does not match any ID in the database, the system will first check if anyone has been assigned the channel upon which the fax was received. If not, the system will then check to see if any users have been assigned the value “Default”. If the system still can not place the fax to a recipient, the fax will remain in the FAXserve Users Mail directory. From there it must be manually forwarded to its proper recipient by the system administrator.

### Configuring individual Route IDs



---

Remember that you can only add authorized FAXserve users to the inbound router configuration. Once you have added every authorized user, the system will not allow you to add any more individual entries. In this case, the *Type* field of the Add Inbound Entry window will always read *Group*, and you will not be able to change it to *Individual* until you add new users to the FAXserve system.

---

To assign individual route IDs:

1. Select *Inbound Router Database* from the Administration Menu.

The inbound router configuration screen will appear. This screen will be blank when you first call it up.

2. Press the INSERT key.

3. Provide the information in the Add Inbound Router Entry form.

Individual must be selected in this field.

Add Inbound Router Entry	
Type:	Individual
Name:	
Route ID:	

---

*Name*

Enter the name of the individual for whom you want to assign a route ID.

You may enter the name of any FAXserve user in this field. However, if you attempt to enter the name of a non-user, you will receive an error message. Alternatively, you can press the INSERT key to call up a list of FAXserve users from which to choose.

---

*Route ID*

Enter the Route ID (the extension that the fax sender must dial on the fax machine in order to directly route the fax to the applicable individual).



---

You may enter the same ID for more than one individual. Incoming faxes with the applicable route ID will be routed to all users sharing the code.

---

Alternatively to entering a route ID, you can press INSERT to select a channel number or the value "Default".

4. Press F2 to exit the Add Inbound Router Entry form.
5. (Optional) Repeat steps 2 through 4 to specify additional individual route IDs.
6. Press F2 to save the information and return to the Administration Menu.



---

If you press the ESC key instead of F2, a confirmation screen will appear asking whether you want to save the entries. If you select “No” from this confirmation screen, any entries that you have created will NOT be saved.

---

### Configuring Group Route IDs

To create group route IDs:

1. Select *Inbound Router Database* from the Administration Menu.

The Inbound Router Configuration screen appears.

2. Press the INSERT key.

The Add Inbound Router Entry screen appears:

3. Provide the information in the form.

---

*Type*

Specify “Group” in this field.

Press the “G” key to change from the default value of “Individual” to “Group”.

---

*Name*

Enter the name of the group.

---

*Route ID*

Enter a route ID.

Alternatively to entering a route ID, you can press INSERT to select a channel number or the value “Default”.

4. Press F2 to exit the form and save the information.

The group entry will be saved and will appear in the inbound router configuration screen. At this point you need to assign members to the group.

5. **Highlight the group name and press ENTER.**

In order to add members to a group, you must call up the list of group members. You do so by highlighting the group name and pressing the ENTER key. The Group Members screen appears. When you call up this screen for a group for the first time, you will see that there are no group members listed.

6. **Press INSERT.**

A list of individuals appears.

7. **Press F5 to select the individuals you wish to add to the group and then press ENTER.**

You can select every individual by pressing F6.

8. **Press ESC to return to the inbound router database screen.**

Your entries are saved automatically.

---

Press F3 to  
modify inbound  
router entries



You can modify both individual and group inbound router entries at any time by highlighting the applicable entry and pressing F3. When you have finished making changes, press F2 to return to the Inbound Router Configuration screen.

---

When you are ready to exit the Inbound Router Configuration screen remember to press the F2 key again to save the changes you have made.

---

---

## Viewing and Routing Faxes

One of your main functions as a supervisor or an administrator is to route faxes received by FAXserve to the proper recipients. To determine who to route the fax to, you can either use the page(s) printed by FAXprint when the fax was received, or you can view each fax on your screen.

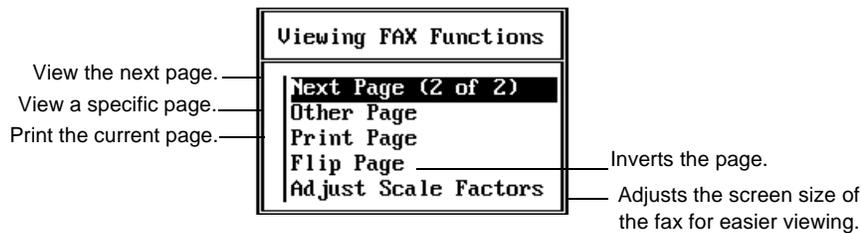
Viewing faxes that need to be routed

To view a fax that needs to be routed:

1. In the list of faxes to be routed, highlight the fax you want to view and press ENTER.

The first page of the fax will appear on the screen.

3. While viewing a page of the fax, press the ESC key to display the Viewing Fax Functions Menu.

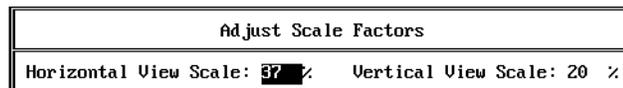


Scaling the size of the fax for easier viewing

If the image that appears on the screen is either too large or too small to read, you can scale its size for easier viewing. To do this:

1. Select *Adjust Scale Factors* from the Viewing FAX Functions Menu.

The Adjust Scale Factors form appears:



This window contains two fields that allow you to adjust the scale of the horizontal and vertical view scales. The higher the percentages entered in these fields, the larger the fax image will appear. The maximum value for both fields is 100%, while the minimum value is 1%.

2. Enter values in the *View Scale* fields and press F2.

The fax image will return to the screen, scaled to the factors you entered.

You may need to experiment with these settings as there can be quite a bit of variation depending upon the hardware that you are using and the faxes that you will be viewing.

3. Press F2.

The scale is only saved for the current session, so you may wish to note the settings.

If you wish to use the same scale settings for all the faxes you view, set the proper scale values in the *Default User Profile*.



---

Printing faxes  
that need to be  
routed

If you do not have access to the printed faxes, you can print one now. Note that all of the printing parameters for the FAXserve Manager should have been set previously using the *Default User Profile* option from the Administration Menu.

To print a fax:

1. In the list of faxes to be routed, highlight the fax and press F4.

---

Routing faxes

After the faxes have been printed or viewed, you can match the information on the fax with the list of faxes that need to be routed.

---

To check the list of received faxes and to route them to the proper recipient(s):

1. From the Administration Menu, select *Route Faxes*.

If there are faxes among the list that have not yet been routed to the proper recipient(s), a list of them will appear.

2. Highlight the unrouted fax and press F10.

To route several faxes to one user, highlight each fax and mark it. When all faxes that should be routed to that user are marked, press F10.

A list of authorized FAXserve users will appear. Members of groups, instead of the groups themselves, will appear in this list.

3. Select the name of the fax recipient.

If routing the fax(es) to a single user, highlight the name of the user to whom the fax(es) should be routed and press ENTER. The fax will be deleted from the list of faxes that need to be routed.

If a fax is to be routed to several users on the list, press SHIFT and F1. This is the CC (Carbon Copy) function and allows you to select more than one recipient from this list. Mark the names of the fax recipients by pressing F5. After all the fax recipients have been marked, press ENTER to route the fax to each of them.

---

Removing master copies of faxes that have been routed to several users

To remove a master copy of a fax after it was routed to several users:

1. From the list of faxes that need to be routed, highlight the fax that was routed, and press DEL.

You will be asked to confirm this deletion.

### Examining the Transaction Database

The Transaction Database is a collection of records of all faxes transmitted and received by FAXserve. The database can be viewed on the screen and it can also be captured in a file. It can be used for analysis, billing, or printing.

When viewing the Transaction Database, you will need to specify a time interval for which records will be displayed. This is so you can eliminate viewing old fax records that you have already seen or do not want to see.

If the accounting feature was activated, the cost of the fax will appear on the record. A summary of all charges will appear at the end of the report.

---

#### Viewing the Transaction Database

To view the Transaction Database:

1. From the Administration Menu, select *Examine Transaction Database*.

The Time Interval Specification form appears.

2. Specify the dates and times for the time range.

The default time interval includes only the current day. To change this, specify the time range using the *From* and *To* fields in the Time Interval Specification form.

3. Press F2.

The Transaction Database will appear on the screen, similar to the one shown below:

```

*** FAXserve Transaction Database Report ***
Server Name      : NY-PUB410
Generated By     : ADMIN
Date            : 09-30-96 - 17:57
Report Time Interval: 09-30-96 17:57 - 09-30-96 17:57
-----
*** Summary Of FAXserve Transaction Database Report ***
-----
TOTAL :          0          0          0          0          0
          Transmit Time :    0:00:00
          Receive Time  :    0:00:00
          Transmit Cost  :    0.00

```

Key	Function
F10	View the next section of the database
F8	View the previous section of the database
Shift, F10	View the last page of the accounting report (applicable only when accounting is used)
Shift, F8	View the first page of the accounting report (applicable only when accounting is used)
ESC	Exit the Transaction Database You will be asked whether to delete the file. You must be a supervisor or equivalent to delete the Transaction Log.  If you select "Yes", the ENTIRE database will be deleted, not just the selected interval!

Capturing records in the Transaction Database to a file or printer

To capture the database records for the specified time interval:

1. Press F4.
2. Enter a path and file name for the report, or, enter a port specification (such as LPT1) to send it to a printer.

3. Press ENTER to create the report.

The file that is created will be in ASCII format.

### Viewing the Error Log

The FAXserve Error Log displays information about the FAXserve NLMs resident on the FAXserve host server. Each FAXserve host server has its own Error Log. Any errors that occur for each module are documented in this file. In addition, the loading, unloading, and initialization functions are also recorded.

To see the Error Log for the selected FAXserve host server:

1. From the Administration Menu, select *View Error Log*.

A screen similar to the one shown below appears:

```
FAXserve: 01 - 13:52 - Tx: Sending PCX page failed, errcode = Can't get through to remote unit
FAXserve: 01 - 13:52 - Tx: Board status = -0x0463
FAXserve: 01 - 13:52 - Tx: errcode = Can't get through to remote unit
FAXserve: 00 - 14:00 - 09/09/93 - DATE
FAXserve: 00 - 16:00 - 09/09/93 - DATE
FAXserve: 00 - 17:00 - 09/09/93 - DATE
FAXserve: 00 - 22:00 - 09/09/93 - DATE
FAXserve: 00 - 00:00 - 09/10/93 - NEW DATE
FAXserve: 00 - 00:00 - 09/11/93 - NEW DATE
FAXserve: 00 - 04:00 - 09/11/93 - DATE
FAXserve: 00 - 06:00 - 09/11/93 - DATE
FAXserve: 00 - 12:00 - 09/11/93 - DATE
FAXserve: 00 - 00:00 - 09/12/93 - NEW DATE
FAXserve: 00 - 01:00 - 09/12/93 - DATE
FAXserve: 00 - 12:00 - 09/12/93 - DATE
```

### Deactivating (or activating) the FAXserve NLMs

At any time, a FAXserve administrator with supervisor privileges may put the FAXserve NLMs “on hold”. To do this:

1. Select *Deactivate FAXserve NLMs* from the Administration Menu.

- 
2. When prompted, confirm that you want to deactivate the FAXserve NLMs.



---

If a fax is being transmitted or received at the time FAXserve is deactivated, this operation will be completed before deactivation occurs.

---

## Performing user functions

FAXserve users can send, receive, delete, view, or print their own sent or received faxes.

### Working with scheduled faxes

#### Viewing the list of scheduled faxes

To view the list of your scheduled faxes:

1. Select *Scheduled Faxes* from the Available Topics Menu.  
The User Scheduled Fax List shown below appears. This list includes all faxes created and sent by you that are queued to be transmitted by FAXserve.

Date	Time	Sender	Recipient	Fax Number	Status
02/06/94	08:09	John	Cheyenne	2456467	Wait

The last column of the User Scheduled Fax list, labelled *Status*, allows you to view the status of each fax on the list. Each entry on the list will contain one of the following status codes:

Status	Explanation
Wait	FAXserve is waiting to dial the fax number
Dial	The fax number is presently being dialed
Send	The fax is currently being sent
Abort	The fax transmission has been aborted

---

Status	Explanation
X###	The fax transmission failed. Where, ### is the error code for a failed fax.

To reschedule a fax:

1. Highlight the fax you want to reschedule and press F3.
2. Modify the *Time* and/or *Date* fields.  
The *Send Immediately* field, which is a toggle, can be used to change a fax scheduled for later transmission to be sent immediately. Otherwise, specify the new date and/or time that you want this fax to be transmitted.
3. Press F2.

---

Deleting a fax  
from the list of  
scheduled faxes

1. Highlight the fax you want to delete and press DEL.  
A message window appears asking you to confirm your desire to delete the fax.
2. When prompted, confirm that you want to delete the fax.  
The fax disappears from the list of scheduled faxes. It will also be deleted from the FAXserve transmission queue.  
To delete all of the faxes from the list of scheduled faxes, press Shift F2.
3. Press F10 to refresh the list.

## Viewing and printing received faxes

To see the list of your received faxes:

1. Select *Received Faxes* from the Available Topics Menu.

A list of newly received faxes that have been routed to you and old faxes that you have already seen but not deleted from your mail directory appears.



Status	Route ID	Sender	Date	Time	Pages	S
--------	----------	--------	------	------	-------	---



---

Viewing your received faxes

---

Each user can only see those faxes that have been routed to him/her. This includes the supervisor, equivalent, and FAXserve administrator.

---

At any time you can view your faxes, one page at a time. To view a fax:

1. Highlight the fax you want to view and press ENTER.

The first page of the fax appears.

---

Searching for a particular fax

If you have received many faxes, you can quickly access the fax that you want by performing a search. You provide the text to search for and a search is performed on all of your received faxes. Those faxes matching the search criteria will be highlighted one by one, allowing you to find the fax that you need.

1. In the list of received faxes, press F8.

A search criteria box appears.

---

**2. Enter your search criteria and press ENTER.**

If a match is found, the system will highlight the matching fax from the list of received faxes.

---

**Printing your  
received faxes**

Whereas you can print a fax page-by-page while viewing the fax, printing from the list of received faxes will print the entire fax at once.

To print a fax:

**1. Highlight the fax you want to print and press F4.**

All pages of the fax will be printed to the FAXserve printer and print queue specified in the user's profile.

---

**Copying your  
faxes to other  
users**

You can copy a fax to another FAXserve user.

**1. From the list of received faxes, press SHIFT F1.**

A box appears listing all of the authorized FAXserve users to whom you may copy the fax.

**2. Mark the user(s) you want to copy the fax to, and press ENTER.**

---

**Saving your fax to  
a file**

Once you have viewed and/or printed a fax, you can save it to a file. The fax will be saved as a DCX file to the path that you specify. It will then be automatically deleted from your Mail directory and from the list of your received faxes. This is because fax images take up a lot of server disk space. If the server runs out of disk space because it is storing too many fax images, it will be unable to receive any more faxes.

To save a fax to a DCX file:

**1. Press ESC until you reach the list of received faxes.**

Once you reach the list of received faxes, a screen will appear, prompting you to provide a path and file name to save the fax.

**2. Specify a path and file name for the fax image.**

The fax will be saved to the path and file name that you specify, and it will be deleted from your mail directory on the FAXserve host server. You will no longer see it in your list of received faxes.

At this point you will not be able to view the fax from the FAXserve Manager. However, there is a command line utility under the \CLIENT.DOS\UTIL directory called LASERVUE.EXE which can be used to view the fax.

---

Deleting a fax image without having saved it to a file

Faxes consume a lot of disk space,. If you have old faxes that you no longer need, you can simply delete them from your Mail directory while scanning your list of received faxes.

To delete a fax directly from the list of received faxes:

**1. Highlight the fax you want to delete and press DELETE.**

The fax will be deleted from your mail directory and your list of received faxes.

---

## Customizing your user profile

The user profile contains information for each authorized FAXserve user, including the user's default CAS directory, the name of the phone book and logo files the user is using, the name of the FAXserve user, and printer parameters.

To customize your personal user profile:

1. Select *Customize User Profile* from the Available Topics Menu.
2. Modify the fields in the User Profile form and then press F2.

User Profile For ADMIN	
Default CAS Directory:	SY8-FAX50\USER\B7000001\
Phone Book File:	CJ2.PB
Logo File:	
Sender:	ADMIN
Notification:	<See List>
Routing Method:	Via User Mail Directory
E-Mail Address:	admin@pubnetw.writers
Server / Print Queue:	Local / LPT1
Paper Size:	Letter
Printer Type:	HP LaserJet
Form Feed At The End:	Yes
LaserJet Type:	II, IID & Earlier
Resolution:	150 DPI
Margin Adjustment:	0
Cut Remainder:	No
Horizontal View Scale:	37 %
Vertical View Scale:	20 %

## Viewing the User Log

Each user has a personal log of all faxes transmitted or received with FAXserve.

To examine your User Log:

1. Select *View User Log* from the Available Topics Menu.

Your log summary screen appears:

Press F4 to capture the entire log to a file. The file will be in ASCII format.

Date	Time	Event	Fax Phone Number	To/Fron	Status
10/27/93	11:30	Tx	8642166	Helen	OK
10/27/93	11:30	Tx	8642166	Helen	OK
11/18/93	18:46	Tx	6258838	Roger	OK
11/18/93	18:48	Tx	8789000	Steve	OK
11/22/93	20:01	Tx	6258838	Cheyenne	OK
12/06/93	12:55	Rx			OK
12/21/93	16:42	Tx	6258838		OK
12/21/93	16:42	Tx	6258838		OK

11

Viewing details about a log entry

You can view detailed information about each fax in your user log.

1. Highlight the desired log entry and press ENTER.

A screen similar to the one below appears:

Info about success or failure of the fax event. Number of times FAXserve attempted to send the fax.

Date	Time	Event	Fax Phone Number	To/Fron	Status
10/27/93	11:30	Tx	8642166	Helen	OK
*** SUPERVISOR'S Log ***					
Sent To	: Helen	Date	: 10/27/93 11:30:12		
Resolution	: Fine	Duration	: 00:00:58		
Event Status	: OK				
From	: John				
FAX Number	: 8642166				
Total Pages	: 1	Pages Sent	: 2		
Attempts	: 1	Cover Page	: Yes		
App. Tag	: FAXserve DOS Client - v2.00				

Length of time taken to send/receive a fax.

*App. Tag*

Application Tag - displays the version of the FAXserve application used to send the fax.

---

## Maintaining your phone book

Phone books make addressing faxes an easy process, saving time and keystrokes. When sending the fax, you select the recipient(s) from the phone book without retyping all the necessary information.



---

The FAXserve Windows FAXclient creates and maintains separate phone books, although the phone book created here can be converted to a style compatible with the Windows FAXclient.

---

Each user's phone book is kept in the CAS directory specified in his User Profile. If you do not have a phone book, this option can be used to create one.

### Creating a phone book

You may wish to create more than one phone book. All phone books should be kept in your CAS directory, which is specified in your User Profile.

To create a phone book:

1. Select *Phone Book Maintenance* from the Available Topics Menu.

The Phone Book Options window appears, listing all of your current phone books.

2. Press INSERT.
3. Enter a name for the phone book and press ENTER.

When you enter the name for the phone book file, remember to add the extension "PB".

Enter Phone Book Name With Extension .PB: NATHAN.PB

The name of the new phone book will appear in the Phone Book Options window.

### Modifying entries in a phone book

Each user is given a default phone book when he is authorized as a FAXserve user (provided that the FAXserve administrator has added the default phone book file to the default user profile before each user was authorized). This default phone book contains no entries at first except for the Cheyenne Technical Support entry. The user must modify the phone book in order to add names of individuals and groups.

---

Adding or  
modifying entries  
in a phone book

To add or modify entries to a phone book:

1. Select *Phone Book Maintenance* from the Available Topics Menu.

The Phone Book Options window displays. This window lists all of your available phone books.

2. Press F3 to modify.

The selected phone book is displayed.

Highlight the individual or group you want to modify information for and press F3.

- 
3. Provide the information in the Phone Book Entry form.

Phone Book Entry Modification Form	
Entry Type :	Individual
Name :	Scott
Destination Phone # :	5396
Destination Hardware :	Fax Machine
Phone Book Note :	
Voice Phone # :	████████████████████

4. Press F2 to save the entry.

---

Specifying members for a group entry

1. Highlight the group entry and press ENTER.
2. Press INSERT to display the Available Members List.
3. Mark the members for the group and press ENTER.
4. Press ESC to return to the Phone Book Screen.

The changes you have made to the phone book will be saved automatically when you exit the phone book.

---

Printing a phone book

1. Press F4.
2. Provide a path and file name for the phone book file.  
Alternatively to providing a path, you can specify a port (such as LPT1) to print the phone book file directly to a printer. The file produced will be in ASCII format.

---

Deleting a phone book

You can not delete your current phone book. However, you can delete phone books no longer in use by following the steps below:

1. Highlight the phone book you want to remove and press DELETE.
2. When prompted, confirm the deletion.

## Using the DOS Shell

You can temporarily leave FAXserve and return to the DOS prompt.

---

To access the  
DOS shell

1. From the Available Topics Menu, select *DOS Shell*.

---

To return to  
FAXserve

1. At the DOS prompt, type: **Exit**  
The Available Topics Menu reappears on your screen.



---

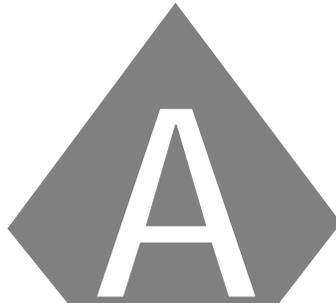
You may need to use the DOS SET COMSPEC command to help FAXserve locate your COMMAND.COM file if any of the following apply:

- > You have set up your machine without a path to your COMMAND.COM file.
- > COMMAND.COM is not in the root directory.
- > The boot drive is not C:

For example:

```
SET COMSPEC=D:\COMMAND.COM  
SET COMSPEC=C:\COMMAND.COM  
SET COMSPEC=C:\BIN\COMMAND.COM
```

---



*A p p e n d i x*

# COMMUNICATIONS INFORMATION

In this appendix, you will learn about:

Page:

- |      |   |                                  |
|------|---|----------------------------------|
| A-2  | ➤ | Configuring GammaLink fax boards |
| A-8  | ➤ | Brooktrout board setup           |
| A-9  | ➤ | Brooktrout T-1 Support           |
| A-12 | ➤ | Class 2/2.0 modem specifications |
| A-14 | ➤ | NetWare Connect and FAXserve     |

---

## Configuring modems

---

### GammaLink fax boards

FAXserve has added modem support for the GammaLink fax boards.

By using the appropriate GammaFax board models, FAXserve 5.0 will support inbound routing via DTMF or Direct Inward Dialing (DID).

FAXserve supports six GammaFax models: CPi, CP4/LSI, CPD, XPi, CP, and XP.

---

### GammaLink Board setup for FAXserve

FAXserve does not require any Gamma related software installation. The Gamma installation documentation is required only to understand and select the I/O Dip Switch settings. There is no need to load the GammaFax Dispatcher software on the server.

---

### CP4/LSI board

Gamma CP4/LSI boards must be configured with FAXserve to utilize the same block of I/O addresses (logical channels) as those specified in the *Gamma Installation Guide*.

When using the FAXserve Administrator, simply add the “Gamma CP4” selection to FAXserve’s Channel list within four consecutive channels. Select the I/O address from the block of addresses.

For example, if the first modem on the CP4/LSI board was set for I/O Address 0x350, the four FAXserve channels would be configured for:

FAXserve Channel 1: I/O Address: 0x350  
FAXserve Channel 2: I/O Address: 0x360  
FAXserve Channel 3: I/O Address: 0x370  
FAXserve Channel 4: I/O Address: 0x250

---

CPD board

Refer to the *Gamma CPD Installation Manual* before installing and configuring the Direct Inward Dial (DID) Gamma CPD board. Please contact your local phone company if you have questions concerning DID connections or DID setup procedures.



---

Note that the Gamma CPD board requires a separate 48V power supply for proper CPD board DID operation. Also note that this board is a DID “inbound” only board. It can not be used to transmit faxes. If your installation requires sending faxes, you will need to purchase another Gamma (e.g., CPI, CP4) board for FAXserve.

---

The default DTMF code string length from the Gamma boards is four characters. This string length can not be changed on the CPD board.

---

Baud rate and fax resolution

FAXserve does not display the actual baud rate of the transmitted fax on the FAXserve console screen. It is, however, reported correctly in the Transaction Database.

The Gamma board does not report the received fax resolution to FAXserve. FAXserve correctly receives the fax -- and stores the image as a 200x200 format. Both of these issues will be resolved with assistance from Gamma.

---

Document limit

Limit the page number to 50 when you send faxes to the GammaLink boards.

---

Formatting ASCII files

ASCII files should be formatted to no more than 80 columns if they are submitted to a FAXserve server that is configured with GammaLink boards.



---

## ISDN (Integrated Services Digital Network) support



---

ISDN support is available in Europe. There is no certified ISDN device available for the U.S. market at this time. Please refer to the Certified Device List for future availability in the U.S.

---

FAXserve supports Integrated Services Digital Network (ISDN) through a Common ISDN Application Interface (CAPI) manager. Cheyenne supports:

- > the Novell CAPI manager

or

- > the CAPI manager for each board (provided with FAXserve)

---

Installing FAXserve with ISDN support

Install FAXserve software as detailed in chapter 2 “Installing FAXserve on your server”. After the software has been installed, the next step is to configure your modems.



---

FAXserve does not require any special hardware settings for its certified ISDN boards. All hardware options must be configured by the NLMs supplied for that board.

---

To configure your modems with FAXserve and ISDN:

---

Loading the BinTec board with the BRI driver

The BinTec Basic Rate Interface (BRI) board includes its own NLM version of its driver. However, this NLM may not work properly with FAXserve. We recommend using the BinTec driver NLM that is shipped with FAXserve.

To load FAXserve with the BinTec board using the BRI driver supplied by Cheyenne:

1. **At the FAXserve console, type:**  
LOAD BRICONF.NLM
2. **Under D-Channel options, select the appropriate D-Channel Protocol.**
3. **Under Advanced Configuration options, set the following:**  
Suppress BIANCA/FAX header line: YES  
Suppress BIANCA/FAX logo: YES
4. **Exit to save these options.**

---

Loading the BinTec board with the BinTec CAPI Manager

1. **At the FAXserve console, type:**  
LOAD BRILOAD  
LOAD BRI2MGR  
LOAD FAXSERVE

---

Loading the BinTec board with Novell's CAPI Manager

1. **At the FAXserve console, type:**  
LOAD BRILOAD  
LOAD CAPIMGR  
LOAD BRI2DRV  
LOAD FAXSERVE

---

Configuring call routing with ISDN

An MSN (Multiple Subscriber Number) is a phone number that is associated with a particular channel. If you choose to route your calls based upon MSN numbers, you will need to edit the FAXISDN.CFG file, located in the CONTROL.RT directory of your FAXserve host or runtime server.



---

A typical ISDN interface provides for 2 B-channels. Using MSNs, the ISDN Protocol allows several numbers to be assigned to one ISDN line. When a call comes in, the call is answered by the device configured for the corresponding MSN. Here is an example:

A phone call with the phone number 212-555-1212 comes through the ISDN network. On your ISDN line you have two B-channels. Each channel is specified for an application, in this case FAXserve and another ISDN application. FAXserve is configured to answer the MSN 555-1212 and the other application the MSN 555-1211. The call will only be accepted by the device for the application which has been configured for the matching MSN, which in this case is FAXserve.

---

#### Configuring your channels

There are three ways to configure your controller's channels:

- A channel will accept any call coming in on the line (this is the default).
- A channel will accept calls for a specific MSN number.
- A channel will accept calls for a range of MSN numbers (for PBX systems only).

This example shows you how to edit the FAXISDN.CFG so that channel 1 will only accept calls for phone number (MSN) 123-4567:

```
[CHANNEL 1]
CONTROLLER      =1
#MSNNUMBER      =1234567
HEADERLINE      =
PPCONFIG        =MSN
PPRANGEBEGIN    =000
```

PPRANGEEND =999

PPNOLENGTH =3 (the # of digits that must match  
in order to accept the call.)

SETPRESENTATION=128

This example shows you how to edit the FAXISDN.CFG so  
channel 1 will accept calls whose numbers range between 444-  
1111 and 444-3333.

[CHANNEL 1]

CONTROLLER =1

#MSNNUMBER =

HEADERLINE =

PPCONFIG =PP

PPRANGEBEGIN =4441111

PPRANGEEND =4443333

PPNOLENGTH =4

SETPRESENTATION=128



---

## Brooktrout board setup for FAXserve

FAXserve 5.0 includes modem support for the Brooktrout fax boards. The following Brooktrout models are now certified and supported: TR114 I2L, TR114 I4L, TR114 I4C, and TR114 I4D.

By using the appropriate Brooktrout board models, FAXserve 5.0 will support inbound routing via DTMF or Direct Inward Dialing (DID).

FAXserve does not require any Brooktrout related software installation. The Brooktrout installation documentation is required only to understand and select the I/O dip switch settings. There is no need to load the Brooktrout-supplied drivers and utility software.

---

### Brooktrout I/O address selection

Multiple Brooktrout boards can reside in the same server. All of the boards must reside within the same I/O address space range as specified in the *Brooktrout Hardware Guide*.

The example on page 3-9 of the *TR114 Analog Hardware Guide* shows TR114 boards I/O addresses for three boards. Contiguous I/O addresses 0x228 through 0x26f are required for the three boards listed in the Configuration 1 example.

From FAXserve's configuration perspective, all of the Brooktrout cards are specified to utilize the same I/O address, even though all of the I/O address space is required. The FAXserve driver uses the starting I/O address, and the number of channels to determine the I/O address of each channel. In the Configuration 1 example, you would choose I/O address 0x228 for all of the 12 Brooktrout channels from the three TR114 boards.

When using the FAXserve Administrator, select the desired Brooktrout board for the number of consecutive channels of the board. Provide the same I/O address and the same interrupt for each of the channels.

As an example, if the three TR114 I4L boards were used at address 0x228 and interrupt 7, the 12 FAXserve channels would be configured for:

FAXserve Channel 1: I/O Address: 0x228, Interrupt: 7  
FAXserve Channel 2: I/O Address: 0x228, Interrupt: 7  
" " " "  
FAXserve Channel 14: I/O Address: 0x228, Interrupt: 7

Brooktrout  
interrupt selection

Not all of the interrupts are supported on the NetWare server. FAXserve supports interrupts 2, 3, 4, 7, 10, and 11. All of the Brooktrout cards in the server must use the same interrupt.

Brooktrout DMA  
channel

The FAXserve driver does not utilize DMA.

Digital T-1  
support

FAXserve supports the Brooktrout TR114 I8P digital fax board with the TR-EA24T T1 interface card.

The TR114 I8P is an eight channel fax board that interfaces with a PEB bus. It can be connected to a variety of telephone interface cards such as the TR-EA24T T1 card.

To use these boards with FAXserve:

1. Install the TR114 I8P and TR-EA24T boards as instructed by the hardware guides that came with them.
2. Install FAXserve, configuring each Brooktrout channel as described below:

Map each channel on the TR114 I8P via a configuration file (DIGITAL.CFG) to a time slot on the PEB bus. The



---

DIGITAL.CFG file is located in the /CONTROL.RT directory in the FAXserve home directory on the runtime server.

The default DIGITAL.CFG file looks like this

# The values on the first line are:

# MVIP/PEB, u-Law/A-Law, Robbed bit, Clock rate, Signal protocol, MF freq.

0 1 1 0 0 0

# The rest of the lines contain: channel, tstream, tslot, (rstream, rslot).

0 0 0 0 0

1 0 1 0 1

2 0 2 0 2

3 0 3 0 3

4 0 4 0 4

5 0 5 0 5

6 0 6 0 6

7 0 7 0 7

8 0 8 0 8

9 0 9 0 9

10 0 10 0 10 <--- These continue through 23 0 23 0 23

The first lines of this file describe the configuration of the PEB bus and must be modified according to the setup of your TR-EA24T.

The values are set as follows:

| MVIP/PEB | PCM Coding | robbed bit | clock rate | signal  
prot | MF Freq

|-----|

| 0= PEB | 0= A-law | 0=disabled | 0=1.544M | 0= E&M  
wink | 0

| 1= MVIP | 1= u-law | 1=enabled | 1=2.048M | 1= E&M  
immed|not used

The default is set up for PEB, u-law, robbed bit, 1.544 (T1),  
and Wink.

The remaining lines map each digital channel to a PEB time  
slot on the T1 line. These lines are set correctly for the  
TREA-24T and do not need to be modified.

You can find additional information about the  
DIGITAL.CFG file and configuring the TR-EA24T with the  
TR114 I8P in the Brooktrout *TR-EA24T Hardware Guide*  
section 3-1.

Information on the hardware setup for the TR114 can be  
found in the Brooktrout TR114 Digital Hardware Guide.

---

Pure Data (Intel)  
driver

This driver was improved to better protect against the fax  
modem hanging in the Disconnect State when transmitting or  
receiving.

The FAXserve 5.0 modem support files include the Pure Data  
supplied DOWNLOAD and LOADER files for the Model  
200 and Model 400 fax boards.

FAXserve 5.0 currently does not support the Pure Data  
SatisFAXtion 2000 and 4000 line of fax modems.



---

## Configuring Class 2/2.0 modems

1. In the Configure Modems list box, select Class 2 and Class 2.0.
2. Highlight the modem model.
3. Click on the Channel number you select.
4. Click Assign.



---

**For multi-channel systems only:** If you are configuring a multi-channel system, repeat steps 2-4 for each modem.

---

5. Click Channel.  
The Configure Channel dialog box appears.  
Specify your channel-specific configuration options, then click OK. This returns you to the previous screen.
6. Click Connect.  
The Connect Channels dialog box appears.
7. From the *Installed Modems* list, highlight the channel with the modem you want to connect. Click Add.  
The Add Communication Board dialog box appears.
8. Select the communication board you are assigning to this modem and click OK.  
The Configure Hardware dialog box appears.
9. Fill in the required information and click OK.
10. Click Connect.

11. To exit the Connect Channels dialog box, click Close.
12. In the Configure Modems dialog box, click OK to save the information.

US Robotics modem	FAXserve 5.0 supports the US Robotics Courier modem -- firmware Version 6.4.5 dated 1/23/96.
ZyXEL U-1496E modem	FAXserve 5.0 supports the ZyXEL U-1496E modem -- firmware Version 6.15.
Added support for ZyXEL's DTMF modem.	Faxes can now be auto-routed using ZyXEL's modem via DTMF.
With Multi-port boards	FAXserve 5.0 supports many fax modems and multi-port serial boards. Please review the FAXserve Certified Device List to determine if your modem or multi-port board is supported by FAXserve. To obtain the latest Certified Device List please call Cheyenne's InfoFAX system at (516)-465-5979. The document number is 60001.



---

## Installing NetWare Connect and FAXserve on the same server

---

Configuring from  
a multi-port serial  
board

To configure NetWare Connect to work with FAXserve, follow the procedure described below:

1. Select a multi-port serial board that is supported by both FAXserve and NetWare Connect.

2. Install the multi-port serial board (i.e. DigiBoard, Control) according to the instructions provided with the board.

During the installation of the board, make note of both the memory and port addresses. Then proceed to install NetWare Connect according to the Connect documentation.

At this point, Connect should be configured and loaded on the server with the multi-port serial board and the modems which are intended for Connect.

3. Attach the Class 2/2.0 modems (Cheyenne-certified models and firmware revisions) to the multi-port serial board which is intended for FAXserve.

Install FAXserve according to the installation instructions.



Prior to loading the NLMs, the following configuration changes must be made to the NetWare Connect NWCCON.NLM:

1. The NWCCON.NLM contains an option to *Configure Ports*. This option will display all of the server's available ports. Choose the port with which FAXserve is configured to work.
  2. Under the *Applications Allowed* option, delete the reference to CONNECT and insert the string AIO.
  3. Since FAXserve configures its own hardware ports, use the DELETE key to select a Modem Type of NONE. Save all changes through the NWCCON NLM. Make sure AIOXXXX.NLM is loaded with NODE=0 (for example LOAD AIODGXI.NLM PORT=320 MEM=D0000 NODE=0). Then, type LOAD FAXSERVE.
- 

---

Configuring from  
a COM port

1. **Assign a COM port to either FAXserve or Connect, not both.**  
Make note of the port address and IRQ of each UART 16550 COM port.
- 



Install NetWare Connect according to the Connect documentation. At this point, Connect should be configured and loaded on the server with the COM port that is intended for Connect. Attach the data and Class 2/2.0 fax modem (Cheyenne-certified models and firmware revisions).

---

2. Install FAXserve according to the installation instructions.
3. Make sure the AIO driver is loaded for all ports BEFORE going into NWCCON.



---

The NWCCON.NLM contains an option to *Configure Ports*. This option will display all of the servers available ports.

4. Choose the port with which FAXserve is configured to work.
5. Under the *Applications Allowed* option, delete the reference to CONNECT and insert the string AIO.  
Since FAXserve configures its own hardware ports, use the DELETE key to select a Modem Type of NONE.
6. Save all changes through the NWCCON NLM.
7. Type LOAD FAXSERVE (it is not necessary to type FAXAIO since the AIO NLMs are already loaded).



---

When loading AIOCOMX.NLM for a COM port OTHER than COM1 add NODE="n" to the end of the load line.

For example, for each COM port:

```
{load aiocomx.nlm port=2f8 int=3 node=0}  
{load aiocomx.nlm port=3f8 int=4 node=1}  
{load aiocomx.nlm port=2fe int=5 node=2}
```

---

# B

## A p p e n d i x

# FAXING FROM WINDOWS APPLICATIONS

In this appendix, you will learn how to:

Page:

- B-2 > Fax easily from your Windows applications
- B-3 > Set up macros for MicroSoft Word 2.0, 6.0, and 7.0
- B-6 > Set up a macro for Excel 4.0, 5.0, and 7.0
- B-9 > Set up a macro for WordPerfect 6.0a and 6.1
- B-11 > Set up a macro for Goldmine 2.5a

---

## Simple faxing from Windows applications

The provided macros let you send faxes for the supported applications more quickly. They are located in your FAXserve home directory, under \TOOLS. The applications include:

- Word for Windows v2.0, v6.0, and v7.0
- Excel for Windows v4.0, v5.0, and v7.0
- Ami Pro for Windows v3.0
- WordPerfect v6.0a and 6.1
- Goldmine v2.5a

Each macro adds a new command to your application called *Send Fax*. This command automatically faxes the opened document using the BitWare Fax print driver, even if another printer driver is selected.

You no longer need to use your application's *Printer* or *Print Setup* command to manually switch printers. The Send Fax macro does it for you. When you want to print a document to your printer, use your application's *Print* command. When you want to send it as a fax, use the *Send Fax* command.

You are given the option to automatically copy the macros when you install the BitWare Client. If you choose not to copy them during installation and want to copy and install them now, follow the procedures on the next several pages.

## Word for Windows - version 2.0

B

The Send Fax macro appears as a new command in Word's File menu and as a new button on its toolbar.

Word stores macros in template documents. These documents end with the extension .DOT.

If you did not have the BitWare Setup program automatically copy the macro files, you will need to copy the BITWARE.DOT file from your \FAXSERVE\CLIENT.WIN directory on your FAXserve host server.

---

### Installing the Send Fax macro

1. Open Word for Windows and load the BITWARE.DOT document.  
The document template appears as a blank document.
2. From the Tools menu, choose *Macro*.  
The Macro dialog box appears.
3. Select *Template Macros* from the Show options.
4. Choose *Install* from the Macro Name list.
5. Click the Run button.

When Word asks whether you want to save the global glossary and command changes, choose *Yes*.

---

## Word for Windows - version 6.0 and 7.0

The Send Fax macro appears as a new command in Word's File menu and as a new button on its standard toolbar.

If you did not have the BitWare Setup program automatically copy the macro files, you will need to copy the BITWARE.DOT file from your \FAXSERVE\CLIENT.WIN directory on your FAXserve host server.

---

### Installing the Send Fax macro

1. Run Word for Windows 6.0 or 7.0.

2. Open the template file BITWARE.DOT.

3. Double-click the *Install BitWare macros* button.

The BitWare Send macro will be saved in Word's global template NORMAL.DOT.

---

### Using the FaxMerge macro

The BITWARE.DOT macro file includes a FaxMerge macro. The FaxMerge macro works in conjunction with Word's mail merge feature and allows you to personalize mass faxed documents.

To try the example:

1. Start the BitWare Client BITWARE.EXE program.

2. Start MS Word 6.0 or 7.0.

If the BITWARE.DOT macro file has not been installed, File ...Open BITWARE.DOT from within the WINWORD\TEMPLATE directory. Double click on the *Install BitWare macros* button.

3. Open the example FAXMRG.DOC file from within your FAXserve home directory \TOOLSWORD.

4. Click on the MailMerge *Fax Merge* icon (next to the *Merge to Printer* icon) on the MailMerge button bar.
5. Use NotePad to edit the FAXMRG.DAT file as database entries to practice sending faxes to multiple recipients.



B

---

## Excel for Windows - version 4.0, 5.0, and 7.0

The macro for Excel creates a new menu called *BitWare* with the command *Send Fax*. The Send command automatically “prints” your document using the BitWare Fax print driver. A new button is also added to the toolbar.

If you did not have the BitWare Setup program automatically copy the macro files, you will need to copy the file BFXCEL.XLL to Excel’s \EXCEL\XLSTART directory. This file can be found in the \FAXSERVE\CLIENT.WIN directory on your FAXserve host server.

To remove the BitWare macro, you must delete BFXCEL.XLL from the \START directory, exit Windows, and then restart.

## Ami Pro for Windows - version 3.0

B

In Ami Pro, you can install the BitWare Send macro as a new icon in the SmartIcons bar or as a new command in one of Ami Pro's menus. The files for the BitWare Send macro are BITWARE.SMM and BITWARE.BMP.

If you did not have the BitWare Setup program automatically copy the macro files, you will need to copy the file BITWARE.SMM from the FAXSERVE\CLIENT.WIN directory to Ami Pro's \MACROS subdirectory, and copy the file BITWARE.BMP to the \ICONS subdirectory.

---

Installing the  
macro to the  
SmartIcons bar

1. Open Ami Pro.
2. Choose *SmartIcons* from the Tools menu.  
The SmartIcons dialog box appears.
3. In the Available icons list, select the BitWare icon.  
It should be the last one on the list.
4. Drag the icon to a suitable location in the Default list box.
5. Click the Edit Icon button.  
The Edit SmartIcon dialog box appears with the BitWare icon opened.
6. In the Macros list, choose BITWARE.SMM, and in the *Description* text-entry box, enter: `BitWare macro`.
7. Click OK to close both dialog boxes.

---

Installing the  
macro as a menu  
command

1. Copy the BITWARE.SMM to Ami Pro's \MACRO subdirectory, and copy the file BITWARE.BMP to the \ICONS subdirectory.

- 
2. From the Tools menu, choose *Macro Playback*.  
The Play Macro dialog box appears.
  3. Choose AMIMENUS.SMM from the Macros list and click OK.  
The Customize Ami Pro dialog box appears.
  4. From the Menus list, choose the menu to which you want to add the command, and click the Add an Ami Pro Function or Macro button.  
The Add Menu Item dialog box appears.
  5. Click the Macro button.  
The Add Macro dialog box appears.
  6. Select the BITWARE.SMM macro and click OK.
  7. In the *Name for Menu* text-entry box, enter: **BitWare send**, and in the *Insert before list* box, select where you want the command to appear in the menu.
  8. Click OK, and in the Ami Pro Macro dialog box, click Yes.  
Ami Pro will install the BitWare Send macro to the chosen menu.
  9. Click the Done button.

## WordPerfect for Windows - version 6.0a and 6.1\*

In WordPerfect for Windows, you can install the BitWare Send macro as a new icon on the button (tool) bar. The file for the BitWare Send macro is BITWARE.WCM.

B

---

Installing the  
BitWare Send  
macro

1. If you did not have the BitWare setup program automatically copy the macro files, copy the file BITWARE.WCM from FAXSERVE\CLIENT.WIN to WordPerfect's MACROS subdirectory.
2. Open WordPerfect.
3. Select *Preferences* from the File (Edit) menu.  
The Preferences window appears.
4. Double-click the Button (Tool) Bar icon.
5. Select the button bar you want the icon added to and click Edit.
6. Select the Play A Macro option.
7. Click the Add Macro button.
8. For filename, choose BITWARE.WCM. Click the Select button.  
You will be asked "Save macro with full path?" Click *Yes*.
9. Click OK, followed by Select, then Close to return to the main WordPerfect window.

\*All text in parenthesis refers to v6.1.

---

To re-position the  
BitWare macro  
icon

At this point, a BitWare macro button has been added at the end of the selected button (tool) bar by default. To re-position the selected button (tool) bar, click on the top edge and drag it to the middle of the screen. Expand the size of the button (tool) bar window until all of the buttons are visible. Click on the BitWare macro button at the end of the button (tool) bar, drag it, and release it on the right hand side of the Print button. Click on the top edge of the button (tool) bar again and drag it back to its original place.



---

In version 6.0a, you also have the option to drag and drop the icon to the new location.

---

## Goldmine for Windows - version 2.5a

B

By customizing the GoldMine File Menu, users can fax documents from within the GoldMine tool.

Follow the steps provided below:

- Install and configure GoldMine
- Install and configure the FAXserve BitWare Client
- Update the Windows Registry to configure BitWare for use by GoldMine

---

Using a Windows  
3.1 or 3.11  
workstation

1. If the BitWare Client was not installed to the default C:\BITWARE directory, you must edit the BITWARE4.REG file, located in the FAXserve home directory, under TOOLS\GOLDMINE to include the location of the BITWARE.EXE program.
2. From the Windows Program Manager, select *File ... Run* and enter:  
`RGEDIT.EXE /v`
3. Select *File ... Merge Registration file BITWARE4.REG*.
4. Exit GoldMine if the program is running.
5. In the x:\GOLDMINE directory edit the [USER\_ID].INI file for each GoldMine user and add the "Sendfax" option to the [FileMenu] section of the file.

Below is an example INI entry. If there are other "Optx" entries, simply add the "SendFax" entry in the order you want to see the File Menu item.

```
[FileMenu]
Opt1=SendFax, BitWare, GMSEND
```

---

Using a Windows  
95 workstation

6. The FAXserve/GoldMine installation and configuration is now complete.

1. If the BitWare Client was not installed in the default C:\BITWARE directory, you must edit the BITWARE4.REG file, located in the FAXserve home directory under TOOLS\GOLDMINE to include the location of the BITWARE.EXE program.

2. From Windows 95, select Start... Run... and enter:

**REGEDIT . EXE**

3. Under the Registry menu item, select Import Registry File and select the **BITWARE4.REG** file.

Select Registry then Exit.

4. Exit GoldMine if the program is running.

5. In the x:GOLDMINE directory edit the [USER\_ID].INI file for each GoldMine user and add the "Sendfax" option to the [FileMenu] section of the file.

Here is an example INI entry. If there are other "Optx" entries, simply add the "SendFax" entry in the order you want to see the File Menu item.

**[FileMenu]**

**Opt1=S&endFax, BitWare, GMSEND**

6. The FAXserve/GoldMine installation and configuration is now complete.

## Sending faxes from GoldMine

B

1. Start the BitWare Client BITWARE.EXE program.
2. Start the GoldMine GMW.EXE program.
3. To send a fax:
  - > Select the contact you want fax to
  - > Select the File/SendFax option in the File menu
  - > Select the document you want to fax



---

The Windows application for the documents you wish to fax **MUST** be installed and configured properly on the same workstation that is running the GoldMine program. For example, if an MS Word document file is selected, MS Word must be installed on the workstation.

---





# FAX-ENABLING WINDOWS APPLICATIONS USING DDE

---

## Using DDE

FAXserve's BitWare DDE interface makes fax enabling of third party Windows applications simple, and powerful.

This means that faxes can be sent from *within* the Windows application. During fax submission, FAXserve will start the associated application, print the document to the "BitWare Fax Driver on FAXserve", and submit the fax to FAXserve. The BitWare DDE Interface allows users to specify up to 10 attachment files per fax.

Fax enabling a Windows Application using the BitWare DDE interface is easy. The actual syntax used in providing the DDEPoke and DDERequest data to the BitWare DDE Server is dependent upon the Windows application DDE interface. The FoxPro syntax, for example, is slightly different than the MS Word Basic syntax. Refer to the examples in this section of the manual, as well as the BitWare DDE examples provided within the FAXSERVE\TOOLS directory of the FAXserve installation.

The BitWare DDE Server is contained within the BITWARE.EXE program. Therefore, the BITWARE.EXE program must be running within Windows in order to use the BitWare DDE Interface.

- DDE Application Name: BitWare
- DDE Topic name: SendFax

The SendFax Topic is used to send a fax through the FAXserve BitWare Client. The SendFax topic allows the following data to be sent concerning a fax:

- The recipient's name, company, and fax number.



- The date and time to send the fax.
- The fax resolution (i.e. Fine or Normal)
- The cover page message text file name.
- The cover page logo file name.
- The cover page signature file name.
- Up to 10 attachment files.

---

DDE Poke Items:

**To**

Specify the fax recipient's name, company name, and fax number is provided within this field.

Return Value:

“DDE Fail” - If the cover text file does not exist.

“DDE Success” - Otherwise.

---

NOTE: The value of “DDE Fail” and “DDE Success” depends upon the specific Windows Application.

---

**When**

Specify the date and time to send the fax.

Return Value:

“DDE Fail” - If the date or time could not be set.

“DDE Success” - Otherwise.

**Resolution**

Specify the fax resolution as “Fine” or “Normal”

Return Value:

“DDE Fail” - If the resolution setting failed.

“DDE Success” - Otherwise.

---

### **CoverText**

Specify the ASCII text file whose contents contains the text to appear on the fax cover page. The location of the cover page text file must be specified as a full path name.

Return Value:

“DDE Fail” - If the cover test file does not exist.

“DDE Success” - Otherwise.

### **LogoFile**

Specify the cover page logo file. The logo file must be in PCX or BMP image format. The location of the logo file must be specified as a full path name.

Return Value:

“DDE Fail” - If the logo test file does not exist.

“DDE Success” - Otherwise.

### **SignatureFile**

Specify the cover page signature file. The signature file must be in PCX or BMP image format. The location of the signature file must be specified as a full path name.

Return Value:

“DDE Fail” - If the signature file does not exist.

“DDE Success” - Otherwise.

---

NOTE: If one or more of the CoverText, LogoFile, or SignatureFile pokes are sent a cover will be generated in the resulting fax.

---

### AttachFile

Specify the attachment file to add to the fax. Up to ten attachment files can be sent as one fax. The location of the attachment file must be specified as a full path name.

Return Value:

“DDE Fail” - If the attach file does not exist.

“DDE Success” - Otherwise.

---

NOTE: The Windows workstation must contain the Windows application which is associated with the specified attach file(s). e.g. If a c:\abc\xyz.doc file is sent as an attachment, the workstation must have MS Word installed.

---

---

DDE Request  
Items:

### ClearJob

Clear all previously POKEd or REQUESTed data.

Return Value:

“T”

ClearJob is useful when you’ve already poked some data, but don’t want to submit the fax for whatever reasons. If you use Submit, the data will be cleared automatically.

### Submit

Submit the fax job as detailed by all of the previous POKEs.

Return Value:

“T” - If the fax was submitted to FAXserve. “DDE Timeout”. The application did not complete fax printing within the DDE Timeout value.

“F” - Otherwise.

---

After one submit, whether it is successful or not, all the poked data will be cleared. As long as you have poked 'To' and at least one of CoverText, LogoFile, SignatureFile, AttachFile, a new fax job will be submitted.

---

NOTE: The actual submit may take a long time (20 seconds or more) depending on the application and the size of the fax. In most applications, the DDE timeout value is set to a value in the range of seconds. If the "Submit" returns with a "DDE Timeout" simply ignore the return. The DDE Request "Status" should be utilized within a While Loop to wait for the completion of the "Submit".

---

### **Status**

Query for the status of the previously "Submit" request.

Return Value:

"T" - Previous submit is successful.

"F" - Previous submit has failed.

### **SelectFile**

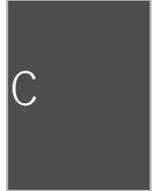
Display a Windows "Open File" dialog box to allow the user to select the attachment file. This file will be attached to the file list.

Return Value:

"T" - If success.

"F" - Otherwise.

## Example programs



---

These utility programs are provided on an “as-is” basis by Cheyenne Software. They are example programs. They may not, and are not intended, to meet any customer’s particular needs. Please modify the example program to meet your particular needs.

---

---

### FoxPro Example

The following program is an example program using Visual FoxPro 3.0. The example program will send a TEST.DOC MS Word document to all of the contacts within the FoxPro PBOOK.DBF database. In addition, a cover page is sent with each fax. The cover page text is contained within the TESTCVR.TXT file; the cover page uses the FSLOGO.PCX logo image as well as the FSSIGN.PCX cover page signature image.

---

NOTE: The Windows workstation must have MS Word installed to run this example program.

---

This example program can be found in the <faxserve>\TOOLS\FOXPRO directory on the server where FAXserve was installed.

### EXAMPLE.PRG

```
*****
* example.prg
*
* BitWare Client DDE Example using Visual FoxPro
* 3.0
* This example program will send the MS Word
* TEST.DOC document to each of the entries in
* the FoxPro PBOOK.DBF database. A cover page
* will be included which contains the text
```

---

```

* within the TEXTCOV.TXT file as well as the
* FSLOGO.PCX logo image and the FSSIGN.PCX
* signature image.
*
* Usage: To execute the example program:
*
* 1. Ensure that the EXAMPLE.PRG,
*    FSDDELIB.PRG, and PBOOK.DBF files are in
*    the same directory as the fax document,
*    cover text, and image files.
* 2. Start the BitWare Client BITWARE.EXE
*    program.
* 3. Start the Visual Fox Pro VFP.EXE program.
* 4. From within the FoxPro command box, enter
*    set default to x:\path
*    where x:\path is the directory path of the
*    example files listed in step 1
* 5. From within the FoxPro command box, enter
*    do example
*
* NOTES:
*
* 1. This utility program is provided on an
*    "as-is" basis by Cheyenne Software. It is
*    an example program. It may not, and was
*    not intended to, meet any customer's
*    specific needs. Please modify the example
*    program to meet your particular needs.
*
* Revisions:
* 09-17-96 nl    - Original
*
* Copyright (C) 1996 Cheyenne Software, Inc.
* All rights reserved.
*****
*
* Set the number of cycles for test purposes.
* For each test cycle, all PBOOK.DBF entries
* will be faxed.
*
TEST_CYCLES = 1
*
* Make FSDDELIB accessible to FoxPro

```

```
*
set procedure to fsddelib additive

=DDESetoption ('Safety', .F.)
*
* Start the BitWare Client DDE session. Note
* that the BITWARE.EXE program must already be
* running.
*

dc = DDEInitiate ('BitWare', 'SendFax')
if (dc = -1)
    return
endif

*
* Prepare for the test. Use the PBOOK.DBF
* database. Set the default path to the current
* directory.
*

use pbook
path = SYS(5)+SYS(2003)+'/'

cycle_count = 0
res = .T.
do while ((cycle_count<TEST_CYCLES) AND
(res=.T.))

    * For each entry in the PBOOK database, fax
    * the document with an associated cover
    * page.
    *

    go top
    scan

        *
        * Call the FoxPro function to send
        * the specified fax. Note that
        * full path names are needed.
        *
```

C

---

```

        res=faxdoc(dc, path+'test.doc', faxnumber,
name, company, '8/6/96', '12:00:00',
path+'fslogo.pcx', path+'testcov.txt', path+
'fssign.pcx')
        if (res = .F.)
            exit
        endif
    endscan

        *
        * Increment the cycle count
        *

        cycle_count = cycle_count + 1

    enddo

use
release procedure fsddelib
; *** End Of FoxPro EXAMPLE.PRG Source *****

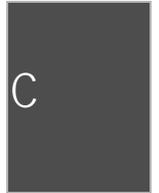
```

## **FSDDELIB.PRG**

```

* *****
* fsddelib.prg
*
* This is an MS FoxPro procedure file which
* provide several BitWare Client DDE functions
* to fax enable FoxPro.
*
* Refer to the EXAMPLE.PRG file to find examples
* of how to call the functions in this library.
*
* NOTES:
*
* 1. This utility program is provided on an
* "as-is" basis by Cheyenne Software. It
* is an example program. It may not, and
* was not intended to, meet any
* customer's specific needs. Please
* modify the example program to meet your
* particular needs.

```



```
*
* Revisions:
* 09-17-96 nl - Original
*
* Copyright (C) 1996 Cheyenne Software, Inc.
* All rights reserved.
* *****
*
*
* *****
* Function BEGINFAX
*
* Begin a FoxPro Fax Session. Save the original
* printer information and set the printer to the
* "BitWare Fax Driver". After this function is
* called, printing from within FoxPro will cause
* the output to be sent to the Cheyenne FAXserve
* printer driver.
*
* NOTES:
*
* 1. This function is not needed if the
* "Faxdoc" function is used.
*
* *****
*
procedure beginfax
  public oldprinter
  oldprinter = sys(6)
  set printer to
  set printer to name 'BitWare Fax Driver'
return

*
* *****
* Function ENDFAX
*
* End the FoxPro Fax Session. Restore the
* printer information to the value saved by the
* beginfax call.
*
* NOTES:
```

---

```

*
* 1. This function is not needed if the
* "Faxdoc" function is used.
*
* *****
procedure endfax
    set printer to &oldprinter
return
*
* *****

* Function FAXDOC
*
* Fax the specified document to the specified
* recipient using the BitWare DDE Interface.
*
* Parameters:
*   docfile      - path of the document to fax
*   faxnumber    - fax number to send the fax
*                 (including any '1', or '011'
*                 dialing prefix.
*   name         - recipient name
*   company      - recipient company
*   senddate     - fax submit date
*   sendtime     - fax submit time
*   logfile      - path of the logo file
*   cvrtextfile - path of the ASCII cover text
*                 file
*   signfile     - path of the signature file
*
* NOTES:
*
* 1. The selected attachment file must have
* the Windows application installed and
* configured properly on the same
* workstation running this FoxPro program
*
* 2. The Logo and Signature files must be a
* PCX or a BMP image file.
*
* *****
*

```

```
procedure faxdoc
parameter dc, docfile, faxnumber, name, company,
senddate, sendtime, logfile, cvrtextfile,
signfile

set exact on

* =DDESetOption ('TimeOut' 100000)

*
* set the To information
*
faxnumber = ltrim(faxnumber)
faxnumber = rtrim(faxnumber)
name = ltrim(name)
name = rtrim(name)
company = ltrim(company)
company = rtrim(company)
todata = '(' + Chr(34) + faxnumber + Chr(34) +
', ' + chr(34) + name + Chr(34) + ', ' + Chr(34) +
company + Chr(34) + ')'
tocode=DDEPoke (dc, 'TO', todata)

* Set the fax resolution
*

rescode=DDEPoke (dc, 'Resolution', '(' + Chr(34)
+ 'Fine' + Chr(34) + ')')

*
* Set the date/time to send the fax
*

if (senddate<>' AND sendtime<>')
    senddata = '(' + Chr(34) + senddate + Chr(34)
+ ', ' + Chr(34) + sendtime + Chr(34) + ')'
    whencode=DDEPoke (dc, 'When', senddata)
endif

* Set the Cover Text, Logo and Signature files
* if they were specified.
*
```

---

```

if (cvrtextfile<>'')
    ctextcode=DDEPoke (dc, 'CoverText',
        cvrtextfile)
endif

if (logfile<>'')
    logocode=DDEPoke (dc, 'LogoFile', logfile)
endif

if (signfile<>'')
    signcode=DDEPoke (dc, 'SignatureFile',
        signfile)
endif

*
* Set the fax document as an attachment file.
*

if (DDEPoke(dc, 'AttachFile', docfile) = .F.)
    ? 'Error Quit'
    return .F.
endif

*
* Submit the fax job. Ignore the Submit return
* code because the printing application may not
* be finished before the DDETimeout.
*

submitcode = DDERequest(dc, 'Submit')

statuscode = 'F'
do while (statuscode <> 'T')

    statuscode = DDERequest(dc, 'Status')

enddo

return .T.
; *** End Of FoxPro FSDDELIB.PRG Source *****

```

---

WinBatch  
example

The following program is an example program using Wilson WindowWare's WinBatch programming toolkit. The example program will ask for the fax recipient's name, company, and fax number. The example program will then ask the user to select a file to fax.

NOTE: The Windows workstation must contain the Windows application which is associated with the selected file. For example, if the user selects a abc.xls file to fax, MS Excel must be installed on the workstation.

This example program can be found in the <faxserve>\TOOLS\WINBATCH directory on the server where FAXserve was installed.

#### WBSEND.WBT

```
; *****  
;  
; BitWare Client DDE Example using WINBATCH from  
; Wilson WindowWare.  
;  
; This program will ask for a file, the  
; recipient's name, company, and fax number and  
; send the fax to FAXserve using the BitWare  
; DDE Interface.  
  
; Usage: WBSEND  
;  
; NOTES:  
;  
; 1. This utility program is provided on an  
; "as-is" basis by Cheyenne Software. It is  
; an example program. It may not, and was  
; not intended, to meet any customer's  
; particular needs. Please modify the  
; example program to meet our particular  
; needs.  
;
```



C

---

```

; 2. The selected attachment file must have
; the Windows application installed and
; configured properly on the same
; workstation running this WBSEND program.
;
; Revisions:
; 09-17-95 dac - Original
; Copyright (C) 1996 Cheyenne Software, Inc.
; All rights reserved.
; *****
;

;
; Set the WinBatch program name and version
; information
;

appVersion      = 'v1.0'
appProgName     = 'WBSEND %appVersion%'
wbtAppName      = '['%appProgName%]: Example
BitWare Client DDE Program'

appTitle        = WinName()

;
; Program Constants
;

bwProgDir       = 'C:\BITWARE'
bwProgName      = 'BITWARE.EXE'
bwPrinter       = 'BitWare Fax Driver'
bwErrorMsg      = 'The BitWare program
'%bwProgName%' was not found at directory
'%bwProgDir%', aborting.'

statusDelay     = 2          ; seconds delay between
status checks

wbsendTimeout   = 120000 ; Program DDE Timeout
of 120 seconds

origDir = DirGet()
origTimeOut = DDETimeout(wbsendTimeout)

```

```
;
; Check if the BitWare Client Program can be
; found -- so that it can be automatically
; loaded. If it is not located immediately,
; check at the default directory.
;

bwFound = FileLocate(bwProgName)
If (bwFound == '')
  If (DirExist(bwProgDir) == @TRUE)
    DirChange(bwProgDir)
    bwFound = FileLocate(bwProgName)
  Endif
Endif

If (bwFound == '')
  Message(wbtAppName, bwErrorMsg)
  DirChange(origDir)
  Exit
Endif

;
; Start the BitWare Client program so that the
; BitWare DDE Server is active.
;

If (AppExist(bwProgName) == @FALSE)
  RunShell(bwProgName, '', '', @ICON, @NOWAIT)
Endif

;Debug(@ON)

;
; See if the printer driver can be found. If so,
; temporarily reset it in case the user cancels
; out of the data entry screens.
;

GoSub SetPrinter
GoSub ResetPrinter

;
```

---

```

; Query for the recipient name, company and fax
; number.
;

toName = AskLine('Recipient Name',
StrCat('[%appProgName%]:', @CRLF, 'Please enter
the Recipient's Name'), '')
companyName = AskLine('Recipient Company',
StrCat('[%appProgName%]:', @CRLF, 'Please enter
the Recipient's Company Name'), '')
faxNumber = AskLine('Fax Number',
StrCat('[%appProgName%]:', @CRLF, 'Please enter
the Fax Number to send the document'), '')

;
; Now set the printer driver for the real use.
;

GoSub SetPrinter

;
; Start the BitWare DDE Interface
;

chanNum = DDEInitiate('BITWARE', 'SendFax')
If (chanNum == 0)
    errorMsg = 'DDEIntiate('BITWARE', 'SendFax')
    failed, aborting.'
    GoSub ResetOriginalData
    Exit
Endif

;
; Test to see if the current version of the
; FAXserve BitWare Client supports the Printxxx
; DDERequest calls.
;

pStatus = DDEPoke(chanNum, 'AttachFile',
'foo~bar.xyz')
If (!(pStatus == '1' || pStatus == '0'))
    If (msgDisplay != 0)

```

## Fax-enabling Windows Applications using DDE

---

```
        errorMsg = 'ERROR!, this version of
BITWARE.EXE does not support the DDERequest
commands, aborting.'
        GoSub ResetOriginalData
        Exit
    Endif
Endif

;
; Clear the DDE Channel so that all job
; information is reset for a new job.
;

clearCode = DDERequest(chanNum, 'ClearJob')
If (clearCode != 'T')
    errorMsg = 'ERROR, DDERequest (ClearJob)
returned %clearCode%.'
    GoSub ResetOriginalData
    Exit
Endif

;
; Set the fax resolution to Fine.
;

resCode = DDEPoke(chanNum, 'Resolution',
'Fine')
If (resCode != '1')
    errorMsg = 'ERROR, DDEPoke (Resolution)
returned %resCode%.'
    GoSub ResetOriginalData
    Exit
Endif

;
; Set the recipient's name, company, and fax
; number.
;

toCode = DDEPoke(chanNum, 'To',
'%'faxNumber%', "%toName%", "%companyName%')
If (toCode != '1')
    errorMsg = 'ERROR, DDEPoke (To) returned
%toCode%.'
```

C

---

```

        GoSub ResetOriginalData
        Exit
    Endif

;
; Query for the attachment file. Note that the
; DDETimeout has been previously set to
; "wbsendTimeout" seconds. If the user has not
; selected a file within this amount of time,
; the DDERequest will return due to the timeout.
;

        selectCode = DDERequest(chanNum, 'SelectFile')
        If (selectCode != 'T')
            If (selectCode == 'F')
                errorMsg = 'ERROR, DDERequest
(SelectFile) returned %selectCode%.'
            Else
                errorMsg = 'ERROR, No document was
selected to fax.'
            Endif
            GoSub ResetOriginalData
            Exit
        Endif

;
; "Submit" the job via the DDERequest call. Note
; that this call may indeed return a DDE "Nack"
; due to a DDETimeout which can occur before the
; application completes printing. A "Nack" is
; not a fatal error in this case.
;

        submitCode = DDERequest(chanNum, 'Submit')

;
; Wait for the completion of the print job. Note
; that this loop could be improved to utilize a
; timer so that a failure will be declared after
; a prolonged period without a "T" being
; returned.
;

        statusCode = 0

```

## Fax-enabling Windows Applications using DDE

---

```
While (statusCode != 'T')

    statusCode = DDERequest(chanNum, 'Status')
    Delay(statusDelay)

EndWhile

;
; Terminate the BitWare DDE session.
;

DDETimeout(origTimeout)
DDETerminate(chanNum)

;
; Restore the printer
;

GoSub ResetPrinter

Return
; *****
; Reset the Printer Driver and the original
; directory
;
; Subroutine: ResetOriginalData
;
; Input:  origDir      - string: the original
;                default directory
;         origTimeout - integer: the original
;                DDE timeout value
;         origPrinter - string: printer device
;         errorMsg    - string: error message to
;                display
;         wbtAppName  = string: application name
;
; Output: None
;
; *****
;

:ResetOriginalData

Message(wbtAppName, errorMsg)
```

C

---

```

DDETimeout(origTimeout)
GoSub ResetPrinter
DirChange(origDir)

Return

;
*****
;
; Save the original Windows-wide printer
; setting, and set the printer to the BitWare
; print driver.
;
; Subroutine: SetPrinter
;
; Input:  bwPrinter   - string: BitWare printer
;         device name
;         wbtAppName  - string: program name
;         orgDir      - string: original
;                   directory name
; Output: origPrinter - string: original printer
;         device name
; *****
;

:SetPrinter

origPrinter = IniRead('windows', 'device', 'No
printer selected')

devParm = IniRead('devices', bwPrinter, 'XXX')
If (devParm == 'XXX')
    Message(wbtAppName, 'Error reading the
Printer Driver '%bwPrinter%' within the WIN.INI,
aborting.')
    DirChange(origDir)
    Exit
Endif

newPrinter = StrCat(bwPrinter, ',', devParm)
IniWrite('windows', 'device', newPrinter)

;

```

## Fax-enabling Windows Applications using DDE

---

```
; Now broadcast wmdevmode out to all Windows
; This IntControl(#22) broadcasts a Windows
; WM_DEVMODECHANGE(27)
; message to all Windows (-1) pointing to the
; new device (bwPrinter)
;

IntControl(22, -1, 27, 0, bwPrinter)

Return

; *****
;
; Reset the Windows-wide printer to the
; specified Original
;
; Subroutine: ResetPrinter
;
; Input:  origPrinter - string: printer device
;
; Output: None
;
; *****

:ResetPrinter

IniWrite('windows', 'device', origPrinter)

;
; Now broadcast wmdevmode out to all Windows
; This IntControl(#22) broadcasts a Windows
; WM_DEVMODECHANGE(27)
; message to all Windows (-1) pointing to the
; new device
; (origPrinter)
;

IntControl(22, -1, 27, 0, origPrinter)

Return

; *** End Of WinBatch Example Program *****
```

C





# ERROR MESSAGES

In this appendix, you will learn:

Page:

D-2 > | About the FAXserve error messages

---

### FAX warnings (not an error)

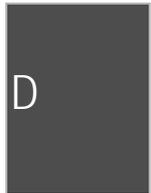
<b>Code</b>	<b>Meaning</b>
000	No error
002	Bad scanline count
003	Page sent with errors, couldn't resend
004	Receive data lost
005	Invalid or missing logo file
006	File name doesn't match NSF file
007	File size doesn't match NSF file
06C	Insufficient Memory

### DOS warnings

<b>Code</b>	<b>Meaning</b>
101	Invalid function number
105	File access denied
106	Invalid file handle

**Fatal errors**

<b>Code</b>	<b>Meaning</b>
200	Multiplexer handler failed
201	Unknown command (bad function number)
202	Event not found (bad event handle)
203	Attempted to Find Next before Find First
204	No more queue events
207	Invalid queue type
208	Bad control file
209	Communication board busy
20A	Invalid command parameter
20B	Can't unload the Resident Manager
280	Bad/unknown task type
281	Bad phone number
282	Bad PCX/DCX header
283	Unexpected EOF
284	Unexpected disconnect
285	Exceeded maximum dialing retries
286	No files specified for Send event
287	Communication board timeout
288	Received more than 1023 (maximum) pages of data
289	Manual connect posted too long ago
28A	Hardware command set error
28B	Bad nonstandard format (NSF) header file



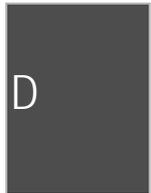
---

### Fatal DOS errors

Code	Meaning
302	DOS file not found
303	DOS path not found
305	Access denied
31D	Write fault
31E	Read fault

Fax errors

Code	Meaning
401	Remote unit not G3 compatible
402	Remote unit didn't send its capabilities
403	Remote unit requested disconnect
404	Remote is not capable of file transfer
405	Exceeded retrain or FAX resend limit
406	Can't agree on bit rate/line noise
407	Remote disconnected after receiving data
408	No remote response after sending data
409	Remote unit not compatible
40A	No dial tone
40B	Invalid remote response (send)
40D	Line dead or remote disconnected
40E	No dial tone
411	Invalid remote response (receive)
415	Sender incompatible
41F	Unexpected EOF while receiving
45C	Receive buffer overflow
45D	Remote unit stopped sending data
45E	Remote unit didn't send any data
45F	Remote scanline timeout
463	Can't get through to remote unit
464	User canceled event



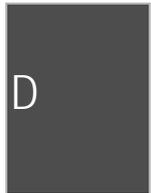
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### Extended CAS errors

<b>Code</b>	<b>Meaning</b>
600	(Ext) Service failure
601	(Ext) Invalid function
602	(Ext) NULL pointer argument
603	(Ext) Invalid string argument
604	(Ext) No connection with the current FAX server
605	(Ext) User is NOT authorized for FAX services
606	(Ext) FAXserve is NOT installed on the file server

Hardware errors

Code	Meaning
801	Bad entry argument
802	Hardware I/O timeout error (board doesn't respond)
803	Hardware DMA timeout error
804	Hardware DMA error (no transfer)
805	Hardware I/O read timeout
806	Hardware transfer buffer is full
807	Hardware receive buffer is empty
808	Hardware driver may be incorrect
809	Invalid message length
80A	Feature not supported by hardware
80B	Driver login/connection problems
80C	Driver state error
80D	Wrong/unexpected response from modem
80E	Modem did not respond
80F	Class 2 protocol error
810	Modem Reset/Init error
811	Data phase (receive) error
812	Data phase (transmit) error
813	Fatal channel initialization error



Things to check before calling Technical Support

- If it is an installation problem, retrieve the `install.log` from the `FAXSERVE\CONTROL` directory.

- 
- If it is a Windows Client problem, retrieve the debug log
  - If it is a server problem, retrieve FAXSERVE.DLG. This will give you a list of modules, and recommended parameters.

In all cases, confirm that there is no hardware conflict, and that the recommended versions of drivers and patches are being used.



# COMMON QUESTIONS AND ANSWERS

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Question: When loading FAXserve an Error 0x0810 “hardware initialization error” appears on the server console screen. What is wrong?

**Cause:** This usually means that when FAXserve tried to initialize the modem, it could not communicate with it properly.

**Solution:** The first thing to check is the modem hardware being used. Most of the time this error is caused by a modem that is not certified for use with FAXserve. If the modem is certified and is connected to a COM port, make sure the COM port has a 16550 UART chip. The UART can be determined when loading the AIOCOMX.nlm.

If the UART reported is 16450, FAXserve will fail to initialize the modem. If the COM port is using a 16550 UART, go to the FAXserve Administrator and make sure the modem is configured properly. If it is configured properly, you may want to try swapping out the cable.

---

Question: When loading FAXserve an error 0x0813 “failed to acquire AIO port 0” appears on the server console screen. What does this mean?

**Cause:** The AIO drivers may not have been loaded.

**Solution:** Make sure the drivers are loaded. If they are not, type FAXAIO at the server console screen. If the drivers are already loaded, unload both drivers and load them manually. Make sure you put “NODE=0” on the load line for the AIO\*.nlm (e.g. load aiocomx.nlm port=3f8 int=4 node=0). Try loading FAXserve. If the error still occurs check to see if

you have NetWare Connect installed on the file server. If it is installed, follow the directions in the manual for installing FAXserve with NetWare Connect.

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Question: After installing FAXserve on a NetWare 4.1x server, the server abends intermittently. What is causing this?

**Solution:** Load the NetWare utility SERVMAN and check to make sure the “ALLOC MEMORY CHECK FLAG” is set to OFF.

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Question: FAXserve 5.0 and ARCserve 5.x (or 6.x) are installed on the same server. ARCserve loads fine but when FAXserve is loaded an error “undefined public variable” appears on the console screen. What is the problem?

**Cause:** The FAXlib.nlm that ships with ARCserve is not compatible with FAXserve 5.0.

**Solution:** Use the FAXlib.nlm that ships with FAXserve 5.0.

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Question: When loading the FAXDOS.EXE on the workstation, the following error message appears on the workstation monitor:

Error: Specifying Capture File  
Returned error code 156  
Error: SetupCapture: 156

What does it mean?

**Cause:** Older versions of the VLMs on the workstation.

**Solution:** The error is caused by older versions of VLMs. To correct this problem, upgrade the workstation to the latest version of VLMs (1.20b at the time of print).



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**Question:** When installing FAXserve on my NetWare 4.1x server, I get the following message: "Error occurred while creating FAXserve schema". What does this error mean?

**Cause:** The user performing the install does not have full rights to the ROOT of the NDS tree.

**Solution:** Full rights to the ROOT of the tree is required so FAXserve can extend the NDS schema. After the first install is complete and the schema has been modified, subsequent installs do not require full rights. The user will only need full rights to the container they are installing FAXserve into.

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**Question:** After installing FAXserve in a NetWare 3.12 file server, the server intermittently abends. What's happening?

**Cause:** An incorrect version of CLIB is a known cause of these intermittent abends.

**Solution:** FAXserve requires CLIB version 3.12d, 3.12g, or 3.12I.

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**Question:** When installing the BitWare Client onto the workstation, the message "you are not connected to a FAXserve host server" appears, even though the user is logged into the file server.

**Cause:** There can be several causes, including user authorization.

**Solution:** Go into the FAXserve Administrator and check to see if the user has been authorized.

If the user is authorized and FAXserve was installed in NDS mode, make sure the user is logged into the NDS, and not in Bindery mode. You can check this by typing "WHOAMI " from a DOS window.

Make sure the user is logged in to the same area of the NDS tree as the user who was authorized. NetWare 4.1x allows 2 users with the same name to exist in different parts of the NDS tree. You should also verify that the workstation has the correct NETWARE.drv installed. There is a different NETWARE.drv for both VLMs and NETx.

If all of the above appear to be correct, try running the Config Pro Exec utility that is shipped with FAXserve. It will check the workstation for any outdated DLLs or VLMs.

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**Question:** FAXserve is installed in a Host/RunTime configuration. When faxes are submitted they stay in a wait state and never get sent. What is the reason for this?

**Cause:** The job is not being processed by the NLMs.

**Solution:** The first thing to check is the version of the CLIB running on both the host and runtime server. The same version (3.12d or 3.12I) should be running on the servers. If the CLIB version is correct on both servers, check to make sure the time on the workstation that submitted the fax is synchronized with the FAXserve Host server.

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**Question:** FAXserve has been installed and configured to use a Pure Data Satisfaction modem. When FAXserve is loaded at the server, the following message appears on the server console: "Hardware initialization Error - 0x0808, Failed Satisfaction Signature Test". What does this mean?

**Cause:** There could be two different problems: either the Pure Data installation was not completed properly, or the wrong address was configured for the board.

**Solution:** Check the Pure Data manual for an installation process, and make sure you have the correct address for the board.



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# FAXSERVE PHONE BOOK STRUCTURE

This appendix contains information regarding the FAXserve 5.0 phone book.

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## Phone book structure

Each FAXserve 5.0 phone book consists of the following files:

- *phone\_book\_name*.DBF: all phone book information except groups
- *phone\_book\_name*.GPI: all group information for the phone book.

The structure of the DBF file is described here. When using dBASE or a compatible program to create or edit a phone book, follow these guidelines:

- The field names and lengths must be the same as below.
- The phone book file must have the extension DBF.
- Use the dBASE naming conventions. You cannot use spaces in any field name. Field names can contain up to 10 letters and numbers, but must start with a letter.
- You cannot remove any field. You can, however, add new fields for further control.
- Leave the fields with the description “*Internal System Use Only*” blank.

Field Name	Type	Length	Description/Format
PB_RECID	CHAR	40	The record ID of a phone book entry
PB-LNAME	CHAR	20	Last Name
PB_FNAME	CHAR	20	First Name
PB_COMPANY	CHAR	50	Company Name
PB_TITLE	CHAR	40	Title

## FAXserve Phone Book Structure

Field Name	Type	Length	Description/Format
PB_ADDRESS	CHAR	80	Address
PB_CITY	CHAR	30	City
PB_STATE	CHAR	30	State
PB_ZIPCODE	CHAR	16	Zip Code
PB_COUNTRY	CHAR	30	Country
PB_COMMENT	CHAR	128	Comment
PB_PHNUM1	CHAR	40	Phone number string
PB_PHTYP1	CHAR	1	Type of number (D=Data, F=Fax, V=Voice)
PB_PHLOC1	CHAR	8	Location of specification (Home, Work, etc.)
PB_PHNUM2	CHAR	40	Phone number string
PB_PHTYP2	CHAR	1	Type of number (D=Data, F=Fax, V=Voice)
PB_PHLOC2	CHAR	8	Location of specification (Home, Work, etc.)
PB_PHNUM3	CHAR	40	Phone number string
PB_PHTYP3	CHAR	1	Type of number (D=Data, F=Fax, V=Voice)
PB_PHLOC3	CHAR	8	Location of specification (Home, Work, etc.)
PB_PHNUM4	CHAR	40	Phone number string
PB_PHTYP4	CHAR	1	Type of number (D=Data, F=Fax, V=Voice)
PB_PHLOC4	CHAR	8	Location of specification (Home, Work, etc.)
PB_PHNUM5	CHAR	40	Phone number string
PB_PHTYP5	CHAR	1	Type of number (D=Data, F=Fax, V=Voice)
PB_PHLOC5	CHAR	8	Location of specification (Home, Work, etc.)
PB_PHNUM6	CHAR	40	Phone number string
PB_PHTYP6	CHAR	1	Type of number (D=Data, F=Fax, V=Voice)
PB_PHLOC6	CHAR	8	Location of specification (Home, Work, etc.)
PB_PHNUM7	CHAR	40	Phone number string
PB_PHTYP7	CHAR	1	Type of number (D=Data, F=Fax, V=Voice)
PB_PHLOC7	CHAR	8	Location of specification (Home, Work, etc.)
PB_PHNUM8	CHAR	40	Phone number string



Field Name	Type	Length	Description/Format
PB_PHTYP8	CHAR	1	Type of number (D=Data, F=Fax, V=Voice)
PB_PHLOC8	CHAR	8	Location of specification (Home, Work, etc.)
PB_DBAUD	numeric	8	Baud Rate (110... 19200)
PB_DDATA	numeric	1	Number of data bits (7 or 8)
PB_DPARITY	CHAR	1	Parity (N=None, O=Odd, E=Even, S=Space, M=Mark)
PB_DSTOP	numeric	1	Stop Bits (1 or 2)
PB_DFLOW	CHAR	1	Flow Control (N=None, X=Xon/Xoff, H=Hardware)
PB_DIGNORE	logical	1	Ignore parity (Y=Yes, N=No)
PB_DTERM	CHAR	16	Terminal Emulation file name (not including path)
PB_DUPCASE	logical	1	Convert all characters to upper case (Y=Yes, N=No)
PB_DECHO	logical	1	Local echo (Y=Yes, N=No)
PB_DLF	logical	1	Auto linefeed (Y=Yes, N=No)
PB_DBREAK	numeric	4	Break time in 1/100 of a second
PB_DFT	CHAR	16	File transfer protocol name (e.g, YMODEM or KERMIT)
PB_DFTASC	CHAR	32	<i>Internal System Use Only</i>
PB_DFTSET	CHAR	64	<i>Internal System Use Only</i>
PB_DFKEYS	CHAR	16	Function key file name (e.g., FUNCT.KEY)
PB_DACTION	CHAR	16	Startup action file name (e.g., COMPSEV.ACT)
PB_DCONMOD	CHAR	1	Default connection mode (D=direct, C=call, A=auto answer). Used only by the script command DOCOMM.
PB_DINPF	logical	1	Input filter (Y=yes, N=no)
PB_DFGROUP	CHAR	34	<i>Internal System Use Only</i>