Audicy

Networking Option

Audicy's Networking Option lets you connect multiple Audicys to a central server. Productions, Wave files, "cart files" and library sounds can be moved, via the server, from any workstation on the network to any other. Audio can also be stored at the server and accessed at any workstation, so producers can work on a project in different studios or share projects with colleagues. Sophisticated access control lets Managers decide which producers are allowed into different file areas on the server. The server can also connect other accessories and computer functions to the network, including CD-ROMs, alternative backup devices, and Internet downloads.

Audicy networking uses powerful protocols and can be extended to include multiple servers or even cross-country links via private intranets. But producers don't need special computer skills to use networking, and will find little difference between working on the network or on their local hard drive.

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About this Guide… and your Network

This guide is divided into four sections:

> Section 1: Introduction to Networking

> Section 2: Using the Server — Microsoft Windows

> Section 3: Using the Server — Novell Netware

> Section 4: Installing the Network.

Producers, *Managers* and *Administrators* using Audicy networking should refer to these sections, as follows:

> *Producers* should read the first section. It explains how to get onto the network, and what to expect from it.

>> *Producers* are the operators and audio engineers who edit and mix on networked Audicys. They don't need computer knowledge, and can do their jobs without ever seeing the server or touching a mouse. As far as producers are concerned, the network is just a lot of additional hard drives accessible from the Audicy console. All they have to remember are their user names and optional passwords.

> *Managers* should read the first section, as well as Section 2 or 3, depending on what type of server they have. These sections detail basic network management operations.

>> *Managers* are responsible for assigning user names and passwords, creating network drives[1], and performing simple maintenance such as defragmenting and backing up the server. They have to understand basic point-and-click Windows operations, and be able to use a simple text editor such as the Windows Notepad, but don't need to be computer professionals. They should also understand audio production well enough to organize network resources in ways that are useful to the producers. Depending on how a facility is organized, a Manager might be a senior producer, production manager, or operations director. (In this manual, "Manager" refers to the person who takes care of the server. We might also talk about a "production manager," but that's a different job.)

> *Administrators* should read the first section, either Section 2 or 3 (depending on what type of server they are running) and Section 4, with a

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[1] Any storage area that can be defined on your server can be designated a networked "drive": these can be complete hard drives, folders or subfolders within a hard drive, removable drives, CD-ROM readers, and so on. (On a Microsoft server, anything you can open using Windows Explorer can be a network drive.)

particular emphasis on reading the fourth section before installing the network. They may also want to refer to the fourth section during troubleshooting.

> *Administrators* set up and maintain the network. They should understand Ethernet topologies, and be available in case network communications or servers break down. While basic networks are fairly easy to maintain, complex setups require sophisticated knowledge. Depending on a facility's requirements, the Administrator may be the Chief Engineer, someone from an Information Services department, or an independent consultant.

Working with Multiple Audicys

Users connecting multiple Audicy systems together on a network are strongly encouraged to configure their individual systems with the same hardware options; especially, the amount of RAM record memory. This will eliminate problems where a production created on a system with more resources can't be edited on a system with less resources.

Network Reliability

Parts of your network were not supplied — and can't be guaranteed — by Orban. In most cases this won't present a problem. But you should be aware of two potential trouble areas where third-party services or equipment can affect network reliability:

- The network wiring and communications hardware that connects Audicys to the server must be properly planned and installed. Ordinary telephone-wiring techniques won't do. Bad or poorly planned cable runs can make network operations slow down or stop. Since there are so many variables and potential trouble areas, we can't be very effective in helping you diagnose or fix problems with network cabling or hardware.

- The server itself must be reliable, and should be dedicated to Audicy use only. We sell an Orban-branded server that works well in an Audicy network, and we'll support you if there are configuration or hardware problems with it. But your server might have been supplied by another manufacturer, or even assembled from generic computer components. If you experience problems with non-Orban hardware we'll try to help you diagnose the problem, but we can't take responsibility for products from other vendors.

> ✔   Networks are complex. No matter what kind of wiring or server you use, a network can't be as reliable as an individual Audicy. Even if everything is working perfectly at your workstation, hardware problems or user errors elsewhere can shut the network down.
>
> To reduce risk, you can copy highly critical productions from a networked drive to your Audicy's local drive before editing, and then copy the edited version back to the server if others need to work on it.

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Section 1:
Introduction To Networking

Introduction to Networking

Everybody should read this section!

What Networking Does

Audicy Networking lets you access a remote computer — the server — as if it were part of the workstation in your studio. Anything you can do on the hard drive built into your Audicy is also possible on networked drives. From the Audicy console, you can:

- Edit new or existing productions that are stored at the server as well as on the local hard drive.

- Save library sounds onto the server and access them in any production on any Audicy.

- Copy, rename, sort, or erase productions and library sounds stored at the server.

- Create folders on networked drives at the server to organize projects.

- Access or save computer Wave sounds at the server.

Networking also gives you added flexibility to manage projects:

- You can use an Audicy in one studio to start a production on the server, and then move into another studio to keep working on it. Rooms with special facilities or equipment can be assigned based on the moment-to-moment needs of a project.

- You can move productions or elements from one Audicy to another by copying them to the server first.

- Many producers can work on a production at the same time, making individual copies on local or networked hard drives. The separate parts can then be gathered as library elements on the server and assembled into a finished project.

- Individual producers can be given access to specific networked drives, and restricted from others. For example, drives full of FM imaging elements can be hidden from the AM or news producers. These access rights are maintained no matter which Audicy a producer is using; if the FM imaging director has to use the AM studio, the FM networked drive will still be available.

- Production managers can be given access to every networked drive (up to ten at a time), regardless of how other producers' rights are assigned.

- An optional password can be assigned to any user, to help control access rights.

- You can keep libraries of jingles, sound effects, or news clips at the server so many producers can use them. If an element is updated or replaced at the server, every producer will have access to the latest version.

- You can use the server as a common storage area to simplify backups and to share resources such as tape and Jaz drives. Productions can then be copied to an Audicy that has these storage options, or to any Windows-based storage system that can be connected to the server.

- You can designate CD-ROMs as networked drives, for easy distribution of Wave files. You can also use the server to gather Wave files exported from Audicys and — with appropriate third-party tools — burn them onto recordable CD-ROMs or audio CDs.

In many cases, you can access network productions as fast — or faster — than productions on your local hard drive[2]!

Network Architecture

Audicy Networking is based on a *client/server* model: Producers can access networked drives at the server, but nobody can "reach across the network" to access files on a different Audicy. Files are totally private until they're moved to the server.

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[2] Speed depends on a lot of factors: what kind of computer you've chosen for a server, how many people are accessing the network simultaneously, what kind of network cards you use, and even which Audicy operation you're doing. All this is discussed in Section 4. As a rough guide, using a 100mHz Pentium server, short library sounds can be accessed as quickly over the network as they are from a local hard drive. With a 100Base-T network, long productions can be opened or copied faster over the network than locally!

Server

FM Prodn 1   FM Prodn 2   AM Prodn
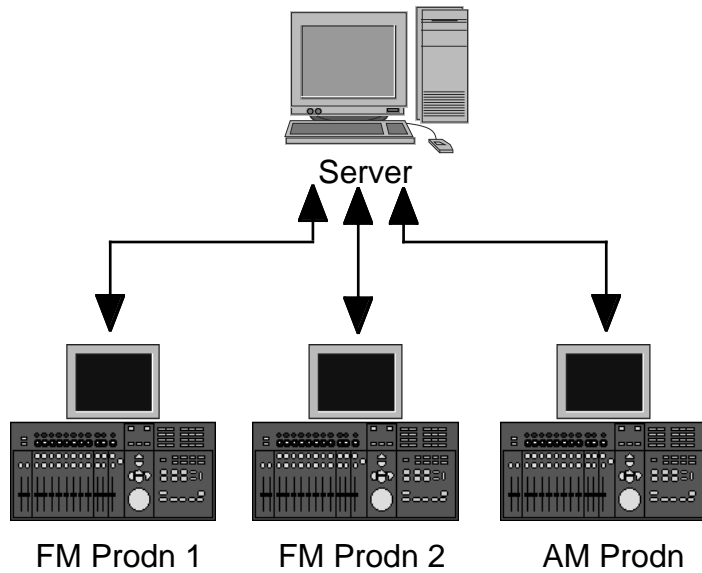
Figure 1: Networked Audicys can talk to the server,
reading or storing files on the server's hard drives...

FM Prodn 1   FM Prodn 2   AM Prodn
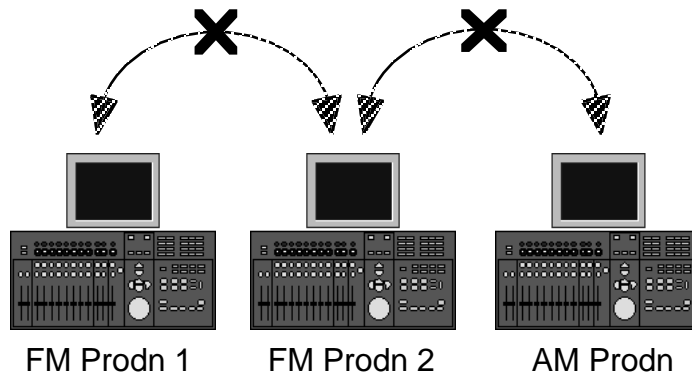
...but networked Audicys can't talk directly to each other.

Audicy networks can be any size. They can be as simple as a workstation or two
with a single server, or can contain many workstations and multiple servers.
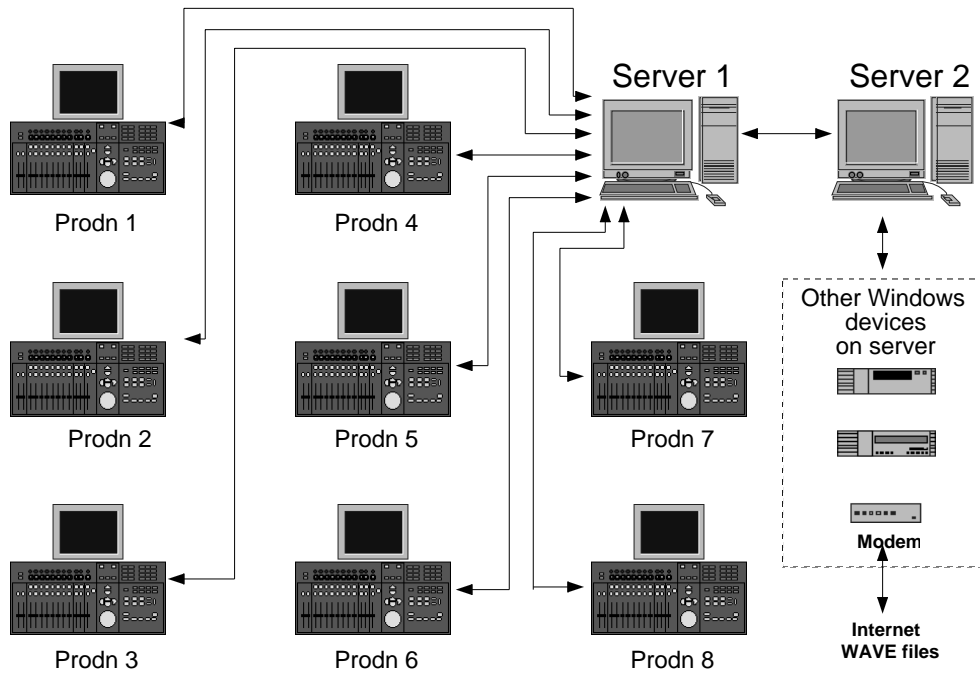
Figure 2: One example of a large Audicy network.

No matter how large or complex an Audicy network gets, you'll always use it the same way: Log on and choose a networked drive. After that, everything works as if you were using the built-in hard drive in your local Audicy.

Logging On

When Audicy is first turned on, no network drives are present. If you open a selection screen (such as with Production Manager: Edit Old) you'll see local hard drives, but networked ones will not appear.

Before you can use the network, you must log on (that is, you have to tell the network who you are). This lets the system determine which networked drives you're allowed to use. If you don't have permission to use a drive, you won't even be able to see it in the selection screens.

> ✔ Your user name (and optionally-assigned password) is the key to accessing the network. Always use the same name, no matter which Audicy you're working on.

To use the network:

A) Select Network Logon in the Job Controller's System Utilities menu and press

SYSTEM UTILITIES	
PREPARE DISK	
MAKE FOLDER	
NETWORK LOGON	NETWORK LOGOFF
SET DEFUALTS	
SET DATE/TIME	
PRINT MANAGER	

Enter.

B) A screen will appear like the one below. Enter your user name in the first field. If you've been assigned a password, type it in the second field; otherwise, leave the Password field blank.

LOG ON TO NETWORK

User name

Password

C) When you enter a password, asterisks appear in its field instead of the letters you're typing. We did this so others can't read your password from the screen.

D) When you're finished, press *Enter.* If you change your mind, press *Escape.*

User names and passwords are not case-sensitive. But don't enter additional punctuation or blank spaces; if you do, Audicy will tell you user name or password has an invalid format.

Acceptable Variations:

BarryD

BARRYD

barryd

BaRrYd

Unacceptable Variations:

Barry D

barry-d

Barryd.

Barry Demchak

You must enter your user name and password the way they were given to you. If you enter one incorrectly, Audicy will tell you either the user name is unknown on the server or the password is incorrect. Try again. If you still can't get in, contact the network Manager.

Once you've entered the information, Audicy will attempt to contact the network. Depending on how many other things the network and server are doing at the time, this may take a few seconds. A message will appear when you're successfully connected.

Whenever you're connected, your user name will be displayed in the Job Controller to the left of the Message Window.

> ✔ If the Manager made a mistake setting up your network access, you won't be able to log on. You might see a message like access control list has an undefined group for your user name or access control list has two entries for your user name. If you press *Help* when one of these messages appears, you'll see a more complete explanation and suggestions on how the Manager can correct it.

If there are problems in the network cabling, or the server is disconnected or otherwise unavailable, Audicy will keep trying for about ten seconds before it gives up. During that time, your system will appear frozen (don't worry; it really isn't broken). Once Audicy realizes that the network isn't available, it will tell you cannot locate server. You can continue working on a local drive.

If you think a network outage was temporary, try to log on again in a few minutes.

If you see the message Logon failed with some other explanation, make a note of the explanation and contact the Manager.

If one networked drive isn't available[3] but others are, Audicy will tell you that You are logged on, but some errors occurred. Check the Network Status submenu (discussed below) to find out what happened.

> ✔ If your Audicy server is running on Microsoft Windows or Windows NT using the NetBEUI network protocol, it doesn't matter whether the server is running and connected to the network when you start your Audicy workstation. As long as it is running and connected when you try to log on to the network, Audicy will make a proper connection and you will be able to access your productions and sound libraries on the server accordingly. This is not the case, however, if your server is running either on a Microsoft windows product using the TCP/IP network protocol or on Novell NetWare — the Audicy server must be running and connected to the network when you start your Audicy workstation in order for you to be able to log onto the network later. If it isn't, restart your Audicy workstation and then attempt to log onto the network.

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[3] Because of a hardware or configuration problem, or because a removable cartridge or CD-ROM hasn't been inserted at the server.

Verifying the Logon (Network Status)

Audicy checks which network drives are available at the moment you log on, and reports that information through the Job Controller's Information Center: Network Status choice. When you select it and *Enter*, you'll see a screen like this[4]:

NETWORK LOGON RESOURCE MAP

Status Logged On	**System name** FM_1		**User** GEOFF
ACL Location \\MAIN_SRV\AUDICY			

Resource Name	**Drive**	**Status**
\\MAIN_SRV\FM_SPOT	D:	OK
\\MAIN_SRV\FM_IMAGE	E:	OK
\\MAIN_SRV\NEWS	F:	OK
\\MAIN_SRV\SPOTS	G:	OK
\\MAIN_SRV\SFX_CD	H:	OK

System name: the name of the Audicy you've logged on from. System names are assigned when the software is installed, and usually indicate the studio where the workstation is located: FM_Prodn, News, MixPix_1, and so on.

User: your personal user name, which you entered when you logged onto the network. Audicy Networking uses that name to determine which networked drives will be accessible, based on instructions the Manager provides at the server. The Manager can change your list of accessible drives at any time; these changes take effect the next time you log on.

> ✓ System and user names are independent. You can walk into any studio, log on from any networked Audicy, and access the networked drives you've been assigned.

Location: the server you've connected to. This information can be helpful if the Manager or Administrator has to troubleshoot systems with multiple servers.

Resource Name: a list of all the drives you're allowed to access over the network. These may be actual hard drives connected to the server, sections of a larger hard drive that the Manager has split up to manage productions better, or server CD-ROMs and other devices that the Manager designated to appear as hard drives. No matter what physical form a network drive is, you can use it exactly like the local hard drive built into your Audicy[5].

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[4] The screen appears as shown below when your Audicy server is running on either Microsoft Windows or NT. It appears slightly differently for servers running on Novell NetWare.

[5] With a couple of exceptions: Obviously, you can't save productions to read-only devices like CD-ROM. Also, maintenance functions like Optimize can't be done across a network.

Drive: a code letter the operating system assigns to each local or network drive. It isn't used in other Audicy screens, and is shown here for diagnostic purposes.

Status: indicates if an assigned drive is actually available. This field may report errors because of hardware or configuration problems at the server. If the Manager corrects this problem, the drive will be available next time you log on.

To return to normal Audicy operation, press *Escape*.

Network Problems

Whenever you're logged on and access a selection screen[6], Audicy tries to contact the server to verify each drive's contents.

> ✔   Audicy can't respond to console or keyboard commands while attempting to contact the network, and may appear frozen for a moment. Don't worry, it's not broken.

Connection might be delayed because the server is so busy with other users that it can't respond. Audicy will keep trying, and you'll probably get through in a few seconds.

But the server also can't respond if someone accidentally turned it off, shut down its network capability, or unplugged a cable. Audicy has no way of knowing this is the problem, and will keep trying for as long as a minute. After that time, it gives up and shows you a selection screen with just the local drives: You can keep working on these drives, and copy your work back to the server after the network is restored.

> ✔   Audicy attempts to reach the server *each time* you open a selection screen, whenever you're logged on. If the network is disabled, this can mean a lot of one-minute delays while you're working. Log off to save time.

If you're working on a production on a network drive, and the network connection fails during shadowing, the production won't be saved properly. Part or all of it might not be usable the next time you try to edit.

If the network fails while you're working on a networked production, the system might appear frozen, and the console buttons unresponsive. Before you give up and press the reset button, wait 60 seconds: Your transport control should come back, and there is a good chance you will be able to play the audio, which is still stored locally in RAM. Note that you may see messages such as error writing edit state file or error writing track state file. While you will not be able to complete shadowing to the network, you should be able to:

> A) Save the important parts as library sounds on a local drive,
>
> *-or-*

---

[6] A selection screen is any list of drives and folders, like the ones you see when you Edit Old, Rename, Dub or Save in the Library menu.

B) Dub part or all of it to an external audio recorder.

Then Quit, and rebuild the production on a local drive.

> ✓ Because networks involve more variables — like multiple users, complex wiring, and third-party components — they can prove less reliable than an individual Audicy workstation. If you're working on a critical production and can't afford to take risks, shadow it to your local hard drive. When you're done, you can copy the production to the server.

Logging Off

Select System Utilities: Network Logoff and press *Enter*. Press the *right arrow* to confirm that you want to log off. If you change your mind, press *Escape*.

If you press the *right arrow* again, the Logoff confirmation screen gives you the opportunity to Log off and log back on as another user. A user can have more than one user logon name: If you need to access different groups of networked drives depending on the project, or need to access more than ten networked drives, ask the network Manager to give you multiple user names with different permissions.

> ✓ It's a good idea to log off whenever you leave a studio, to prevent others from accessing your work. Whenever you quit a production and return to the Job Controller, a message will inform you of the current user logged on to the network.

Working with Network Drives

Network drives are used exactly like your local hard drive or Jaz cartridge. You can use any Audicy Production Manager or Library Manager function with them, you can create or erase folders on them, you can prepare them (with the Prepare Disk choice), and you can check their usage. The only thing you can't do is Check Disk or Optimize; these have to be done from the server.

Locked Productions

Only one person can work on a single copy of a production at a time. Because Audicy productions are actually many files linked together — sometimes hundreds at a time — the entire folder containing a production is reserved for your exclusive use when you're working on a networked production. Nobody else can access that folder until you quit the production.

If you try to open an old production or start a new one in a folder that's being used elsewhere, you'll see a message like this: The folder FM_Spot:Spec is in use by FM_Prodn (GEOFF) since 10Sep98, 10:03. Select another. The system name and user are shown so you can contact them and ask when a folder will be free: In this example, you'd use your intercom to call Geoff in the studio "FM Production." If you can't wait for the other user to finish, ask them to temporarily quit while you copy the material you need to a different folder or your local drive.

If you're working on a production that's on a network drive but not in a folder, other productions on that drive but not in folders will be locked. However, folders on the drive will remain *un*locked, and productions in them are still accessible.

For example, imagine that networked drive FM_Prodn has two productions and two folders in it:

FM Prodn networked drive
—— Concert spot ◄——————————— Opening this spot locks Contest promo, but leaves folders unlocked.
—— Contest promo
—— SPEC_SPOTS folder ◄——— Opening this spot locks the SPEC_SPOTS folder for anyone else, but leaves Concert and Contest spots and the SFX_Library folder unlocked.
  —— DP Financial
  —— Steadman Travel
—— SFX_Library folder ◄ This folder of library sounds is locked whenever anyone dubs any of these sounds, but unlocks as soon as the dubbing operation is finished. Locking this folder doesn't affect any of the productions on this drive.
  —— acme whistle
  —— birdcalls
  —— car horn

✔ **Don't be a network hog!**

Create lots of folders for different purposes on network drives, and always keep productions in specific folders rather than at the top drive level without being in a folder. This helps prevent other peoples' productions from being inadvertently locked while you're working.

If you have to work on a networked production that's not in a folder, or is in a folder that others will want to use, copy it to your local hard drive and work on the copy. This way the folder will be locked only while you're copying, and not during the entire editing session.

Locked Library Files

Library folders are also reserved for your exclusive use while you're doing library operations. But as soon as you finish the Dub or Save operation, the folder is available to others again — even if you continue editing the version you've dubbed into your production.

Sample Network Scenarios

- Andy starts a production in Studio 1, using the local hard drive. He wants to record a crowd scene, but that studio isn't big enough for everybody. So he quits the production, and uses Production Manager: Copy to move it to a network drive. Then he walks into Studio 2 —

big enough for all his actors — and logs on from the Audicy there[7]. Since he uses his own user name, he sees exactly the same set of network drives. He chooses Edit Old and selects the copy he just made, records the crowd, quits, and logs off. He then returns to Studio 1, opens the same copy, and finishes the production. At his leisure, he can erase the version on his local drive.

- Nanci is working on a complex production with a tight deadline, and asks Don to help by editing the music while she finishes the voices. She makes a copy of the production for him on a different network folder. Don opens it from his Audicy, cuts the music, and saves the music mix as a library element on the network. Nanci dubs it into her production and makes the deadline.

- KORB-FM is about to change formats, and Seth is the only producer creating promos for the new format. His Manager sets up a password-protected network drive just for these promos: Seth can access it no matter which Audicy he's using, but other producers don't even know it's there. Seth can also access all of his normal network drives. After the format flip, the Manager removes the protection and makes the drive available to all the station's producers.

- Ace reporter Gail doesn't know much about production, but has an idea for a documentary. The Manager creates a network drive for her, and gives her a user name that accesses only that drive. This way she can walk into any studio that's temporarily available and work on her project. The Manager also gives other producers access to Gail's drive, so they can open the documentary and give her tips on production techniques.

- Jay likes to use Wave files he downloads from the internet in his productions. His manager creates a network drive called "waves" where he can send these files from his desktop machine, then import them into his productions or library when he logs on from Audicy. Jay can also export sounds to this directory, and upload them later from his desktop.

The point is, Audicy networking is more than just a fast way to store and manage audio in a large facility. It's also a flexible solution to a lot of production issues: With a little imagination, you and the network Manager can use it to help create better productions more efficiently.

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[7] Note that he didn't have to log off from Studio 1. Audicy networking lets a single user log on from more than one machine at a time.

Links to Digital Storage and Delivery Systems

Audicys running V2.5 or higher with an installed networking option can easily export linear Broadcast Wave Format (BWF) files directly from a production to a wide variety of on-air delivery systems. On-Air system partners that have adopted our "cart chunk" extension to the BWF format can also be sent Wave files with imbedded traffic/continuity information for direct "digital cart" injection into their on-air database. Contact Orban for a list of our current "cart partners." Or refer to the "Audicy Cart Option Installation and Operation Manual." Note that Audicy's MPEG hardware option provides MPEG 2 file creation for wave/cart export.

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Section 2:

Using The Server — Microsoft Windows

Using the Server — Microsoft Windows

Managers using a Microsoft Server should read this section!

This section applies if your Audicy server is running Microsoft Windows 95/98 or Windows NT. If your Audicy server is running Novell NetWare, skip to Section 3 below.

Manager's Responsibilities

Audicy networking is designed to be as fast, intuitive, and as easy to use as any other Audicy operation for the individual user. But if you're in charge of managing the network, you'll also have to deal with the *server*. This is a standard Windows 95/98 or Windows NT computer, probably located in your office or a central engineering room. While you won't need sophisticated computer skills, you'll have to be able to perform some basic Windows operations. It's the Manager's job to:

- Create and organize network resources[8] and assign sharing privileges to them.

- Maintain the Audicy Access Control List, a short text file that describes network resources and includes a list of users and their access rights.

- Keep the server running smoothly, performing backups and defragmenting as necessary. This may involve third-party utilities.

If you've never used a personal computer, we recommend you take a class or study some Windows manuals before attempting to manage an Audicy network. If you're comfortable with mouse-based computing (either Windows or UNIX), you probably have all the basic skills you'll need.

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[8] Individual drives and Windows folders on the server.

> ✔   The step-by-step instructions in this section of the User Guide refer to a Windows 95/98 computer set up as an Audicy server. Windows NT screens may look slightly different, but the functions will be the same.
>
> We've documented, step-by-step, the simplest ways to maintain the server. In some cases these steps might seem simplistic or redundant to someone who is already familiar with Windows. Please indulge our attempt to support *every* user, no matter what their level of sophistication. If you prefer keyboard shortcuts or other ways of working, go ahead and use them.
>
> Obviously, you should use the server's keyboard and mouse — not an Audicy keyboard or console — when working with the server.

Network Technology

Audicy networks are organized on a client/server model: Individual Audicys can access the server's hard drives and read or write files there, but they can't communicate directly with other Audicys. If a production has to be moved between workstations, it first has to be copied from the source to the server and then copied from the server to the destination. If a library sound is to be shared among multiple workstations, it must be stored on the server. We designed our software this way to make it secure and easy to use.

But even though our software is based on a client/server model, we're actually using Windows peer-to-peer networking — also called "Sharing" — as the underlying technology. As far as the server is concerned, the Audicys connected to it are additional Windows computers sharing its resources. This makes the system easy to maintain: Most network functions are clickable from the Windows desktop. It also makes the Manager's job easier to learn, since sharing is well documented in the on-screen Windows Help system and third-party manuals.

> ✓   **Respect the server!**
>
> Windows computers are general-purpose devices that can be used for spreadsheets, games, or other programs while still acting as a network server. These functions can interfere with the intense data and reliability requirements of broadcast audio. Installing certain programs may make the computer unstable or unusable for networking. We urge you *not* to install additional programs on an Audicy network server.
>
> If you use the server for other programs, Audicy network performance and reliability will suffer. In general, do not use a dedicated Audicy server as a workstation.

Creating Network Drives

Any storage device that can be designated a *share* on a Windows computer can become an Audicy network drive. This includes:

- Hard drives or their partitions, connected via SCSI or IDE

- Removable cartridges (Iomega, SyQuest, and other systems)

- CD-ROMs

- Floppy disks (though their size and speed makes them useless for all but the smallest files)

- Directories and subdirectories (also known as folders) within one of the above media

> ✔ Folders that are created on the Windows desktop are different from folders that have been created from a networked Audicy.
>
> ● Windows folders aren't visible to Audicy workstations until you enable sharing for them (see below) and designate them in the Audicy Access Control List (see page 31): This turns them into network drives. Drives can't be used to store productions or library elements until you have used Prepare Disk or Make Folder on them from an Audicy.
>
> ● Windows subfolders, located within folders that are already being shared, can't be used to store productions or library elements unless they are specifically turned into network drives. However, they can be used to store Wave files for Audicy import and export.
>
> ● If you create a network drive from a Windows folder, you can then create Audicy folders within it by using Audicy's Make Folder menu choice, specifying the folder as either for productions or library elements[9].

To create a network drive, you have to give it a name and enable sharing:

A) From the Start menu, open Programs: Windows Explorer.

B) In the window that appears, find the drive or directory you want to share. If the directory or subdirectory you want to share doesn't already exist, you can create it by clicking on the next higher level and then selecting File: New Folder.

C) Enable sharing for that drive or directory: Right-click again on its icon, and select Sharing. In the window that appears, click Shared As and Full.

FM_sound Properties

General | Sharing |

C:\AUDICY...
○ Not Shared
● Shared As:

Share Name: FM_SOUND

---
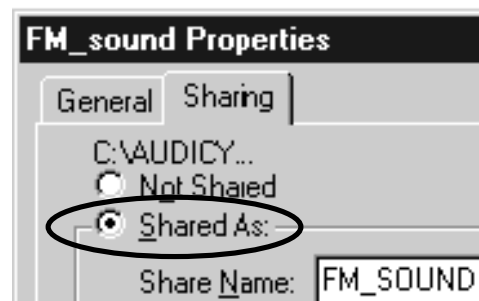
[9] If you really want to store both productions and sound elements in a single Audicy folder, create a library folder and a production folder in the same network drive, with exactly the same name. The system will merge the two folders together.

D) Then click OK or press *Enter*. When you look at Windows Explorer again,
that drive or directory icon should have a drawing of an outstretched hand
under it to indicate sharing is active.

The Audicy Access Control List

The Audicy Access Control List, a text file that is
created when you install Audicy server software
(page 76), is the key to networking. It defines which network resources will be
available for each user. Whenever you establish or change a network drive, or set
up a user, you'll have to modify this file. The Access Control List carries the
filename resdom.dat, and is easy to change by using the Windows Notepad.

The Access Control List is in plain English, and is relatively easy to understand.
The list includes text on how to use it. Figure 3 (page 32) shows a typical list and
how it controls its network.

In the figure, the rounded rectangles with folders in them represent *Resource
Groups*. Audicy organizes network drives into these groups to make it easier to
control access. A group can consist of one drive, or have as many as ten.
Individual users are then assigned access to one or more groups.

For example an "AM" group could include drives with all the imaging,
promotion, and production effects used by the AM station in a facility, while an
"FM" group could include material for just the FM station. Producers on the AM
side of a facility wouldn't have to worry about accidentally changing material that
belongs to the FM side. At the same time, a "Common" group could include
drives for news actualities or commercials carried on both stations.

When you change a Resource Group, it affects every user authorized for that
group[10]. This makes it easy to reconfigure or add storage devices without having
to change every user's entry in the Access Control List.

---

[10] Users that are currently on the network won't see the changes until the next time they log on.
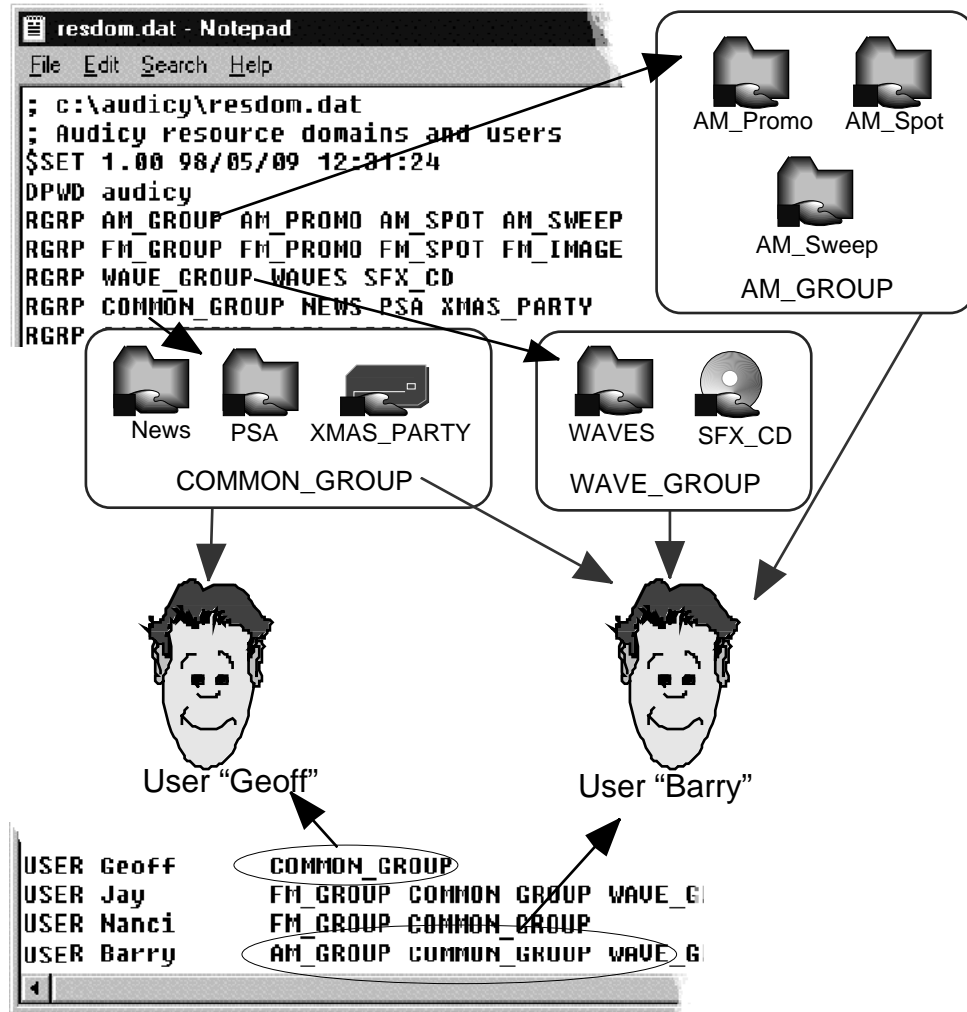
Figure 3: Access Control List

At the top of the Access Control List are lines that begin with RGRP, like this one:

RGRP AM_GROUP   AM_PROMO AM_SPOT AM_SWEEP

These lines define Resource Groups: network drives that are grouped to be accessible together:

- The first word after RGRP is the Resource Group name, in this example AM_GROUP. Since spaces aren't legal within group names, an underscore is used instead.

- The words that follow the group name are the names of the network drives in that group, created using the procedure above. This group consists of three network drives — actually, shared Windows folders — called AM_Promo, AM_Spot, and AM_Sweep. Again, underscores are used instead of spaces.

Following any number of RGRP lines, are any number of USER lines like this one:

USER Barry   AM_GROUP COMMON_GROUP WAVE_GROUP

Each line represents an individual Audicy user:

- The first word after USER is that operators' user name.

- Passwords can be assigned to users, but aren't shown in this example. Passwords are discussed in step-by-step instructions for adding a user (page 38).

- The words following the user name (and optional password) are the list of Resource Groups which that user has permission to access. In this case, Barry is allowed to work with network drives in the AM_Group, Common_Group, and Wave_Group. When Barry logs in to the network from an Audicy, all the drives in those groups will be accessible.

This example also shows a USER line for Geoff, who is allowed only to access drives in the Common_Group. When Geoff logs in, only the three drives in that group will be accessible to him.

Both Barry and Geoff can log in at the same time from separate Audicys, even though they both have access to Common_Group. Any number of users can access any group at the same time (though folders in the group will be locked while they're actually being used; see page 21.)

Modifying Access Control

The Audicy server software installation created an Audicy Access Control shortcut on your Windows desktop. Double-click it to open the Access Control List in Windows Notepad.

If you can't find the shortcut, look for the file resdom.dat. It should be in the Audicy network default directory, probably C:\Audicy. Open it using the Windows Notepad.

While actual text will vary, the first lines of the Access Control List will look like the illustration below. The numeric keys (①) will help you find specific lines while following instructions on the next few pages.

key

```
; c:\audicy\resdom.dat                                        ①
; Audicy resource domains and users
$SET  1.00 98/05/09 12:31:24
DPWD audicy                                                   ②
RGRP AM_GROUP      AM_PROMO AM_SPOT AM_SWEEP                  ③
RGRP FM_GROUP      FM_PROMO FM_SPOT FM_IMAGE FM_SWEEP
RGRP WAVE_GROUP    WAVES SFX_CD
RGRP COMMON_GROUP NEWS PSA XMAS_PARTY
USER Jay           FM_GROUP COMMON_GROUP WAVE_GROUP          ④
USER Barry,secret AM_GROUP FM_GROUP COMMON_GROUP            ⑤
```

```
USER Nanci        FM_GROUP COMMON_GROUP
USER Geoff        AM_GROUP COMMON_GROUP
USER Don_F        COMMON_GROUP WAVE_GROUP
$END


;                 THE ACCESS CONTROL LIST FILE          ⑥
```

Backing Up the Access Control List

The structure and spelling of the Access Control List is critical. Before changing it, you should make a backup copy. That way, you can revert to the backup if a typing error makes your changed version unusable. To make a backup copy:

A) Double-click the Audicy Access Control icon to open the resdom.dat file in Windows Notepad.

B) Use the Notepad's File: Save As command to enter a new name for the file. In the window that appears, type a new name such as resdom.old. Click the Save button to save a copy using that name.

C) Quit the Notepad using the File: Exit command. You must quit the Notepad, even if you're planning to do additional editing, so it reopens with the proper file.

> ✓   What you shouldn't change in the Access Control List:
>
> ① The first three lines are important for documenting and troubleshooting the list, and should never be changed. If you want to add your date or version number, put it on a separate line beginning with a semicolon. Lines beginning with a semicolon are ignored by the program.
>
> ② The DPWD line designates the default share password. This must match the password installed with the network software. New installations are automatically given a default share password of Audicy.
>
> ⑥ A full set of instructions follows the definitions and authorizations in the Access Control List. You should keep this for reference.

Working with Resource Groups

Rather than authorize network drives individually for each user — which could involve a lot of typing and chance for errors — Audicy networking organizes

drives into Resource Groups. The ③ RGRP lines define these groups. A group may include any number of drives, up to ten[11].

When you change a Resource Group, it affects every user who is authorized to access that group. Users who are currently on the network won't see the change until the next time they log on.

To Modify a Resource Group

A) Double-click the Audicy Access Control icon. This opens the Access Control List in the Windows Notepad editor.

B) Find the RGRP line ③ where the second word indicates the name of the group you want to change.

C) To remove a network drive from that group, double-click the drive's name and press *Back Space*. If you make a mistake, use Edit: Undo.

-or-

To add a network drive, make sure sharing is enabled for that drive (page 30) and type that drive's name at the end of the RGRP line. Use a space to separate the name from other drives in that line.

D) Use File: Save to save your changes. Then go to a networked Audicy and log in, using a user name that's authorized for that Resource Group. From Audicy's Job Controller, check Information Center: Network Status (page 19) to make sure your changes have taken effect.

E) If the change appears to be working correctly, go back to the server and use File: Exit to close the Notepad editor. If not, check for typing errors and that the network drive has been properly enabled for sharing.

To Create a New Resource Group

A) Double-click the Audicy Access Control icon. This opens the Access Control List in the Windows Notepad editor.

B) Click the mouse at the *end* of an existing RGRP line and press *Enter*. This starts a new line for text entry.

C) Decide on a name for the Resource Group. This should describe the files it will contain or its function in your facility, to make it easier to remember the name in user authorizations. Names can be up to 16 characters long, but cannot include any spaces (we suggest you use underscores instead of spaces). Some valid Resource Group names would include FM_Group, FM_Group_1, Creative-Dept, Joe's_Drives, Playground.

---

[11] Users can't access more than a total of ten network drives from all their groups taken together. If an operator needs access to more than ten network drives, give them multiple user names (e.g., Fred1, Fred2) with different access rights. But they'll still be limited to ten *at a time*. Drives can have multiple subfolders though, using the Job Controller's Make Folder choice.

D) Type RGRP and a space, then the name of this new group and a space. For example, RGRP FM_Group.

E) Then, on the same line, type the name of each network drive that will be part of this group, separated by a space. Be sure sharing is enabled for each of these drives (page 30). For example, a finished Resource Group line could look like RGRP FM_Group FM_Promo FM_Spot FM_Image FM_Sweep.

F) To verify the new Resource Group is working correctly, create a user named "test":

F1) Click the mouse at the *end* of an existing USER line and press *Enter*. This starts a new line for text entry.

F2) Type USER Test followed by the name of your new Resource Group (for example, USER Test FM_Group). Then use File: Save to save your changes.

F3) Go to a networked Audicy and log in with a user name Test. Check the Job Controller's Information Center: Network Status (page 19): All the network drives in the new Resource Group should be accessible. Then log out.

F4) If the change appears to be working correctly, go back to the server. Drag the mouse across the USER Test line you just created to select it, and then press *Back Space* to erase it. Use File: Exit to close the Notepad editor. If the change isn't working, check for typing errors and that the drives have been properly enabled for sharing.

To Delete a Resource Group

A) Double-click the Audicy Access Control icon. This opens the Access Control List in the Windows Notepad editor.

B) Find each reference to the group in USER lines (you may use the Notepad's Search: Find function to do this). Each time the group's name appears in a USER line, double-click on the group name to select it. Then press *Back Space* to delete it. If you make a mistake, use Edit: Undo.

C) Click the mouse at the *beginning* of the RGRP line you want to delete, and drag across the entire line to select it.

D) Press *Back Space* twice to delete the entire line and the blank line that remains. If you make a mistake, use Edit: Undo.

E) Use File: Save to save your changes.

Note that users who are logged on and have access to drives in that group will maintain access until they log off.

Working with User Privileges

The keys (④) refer to the example on page 33. Be aware that if the user is currently logged on, these changes don't take effect until they log on again.

To Add or Delete Resource Groups for an Existing User

A) Double-click the Audicy Access Control icon. This opens the Audicy Access Control List in the Windows Notepad editor.

B) Find the USER line ④ where the second word indicates the name of the user you want to change.

C) To remove a Resource Group from that user's access rights, double-click the group's name and press *Back Space*. If you make a mistake, use Edit: Undo.

-or-

To add a Resource Group, make sure the group is defined by an RGRP line in this Access Control List (see page 35), then type that group's name at the end of the USER line. Use a space to separate the group's name from others in that line.

D) Use File: Save to save your changes. Then go to a networked Audicy and log in as the user whose Resource Groups you just changed. From Audicy's Job Controller, check Information Center: Network Status (page 19) to make sure your changes have taken effect.

E) If the change appears to be working correctly, go back to the server and use File: Exit to close the Notepad editor. If not, check for typing errors and that the Resource Groups have been properly defined in RGRP lines.

To Add a New User

A) Double-click the Audicy Access Control icon. This opens the Access Control List in the Windows Notepad editor.

B) Click the mouse at the *end* of an existing USER line and press *Enter*. This starts a new line for text entry.

C) Decide on a user name for this user. It must be a single word up to 15 characters long, and should be easy for the user to remember. User names can't have any spaces, but can use any punctuation except < > / \ or |. Some valid user names would include Barry_D, J.S.Bach, Bob&Carol, Intern(AM), Intern(FM), ChiefEngineer.

D) Type USER and a space, then the new user name and a space. If you want to give this user a password, see instructions on page 38.

E) Type the name of each Resource Group that will be accessible by this user, separated by a space.

F) For example, a new user's entry could look like this:

USER Jay   FM_GROUP COMMON_GROUP WAVE_GROUP

Or, if that user had the password "magic," the entry could look like this:

USER Jay,magic FM_GROUP COMMON_GROUP WAVE_GROUP

G) Use File: Save to save your changes. Go to a networked Audicy and log on as this user. From Audicy's Job Controller, check Information Center: Network Status (page 19): All the network drives in the user's Resource Group should be accessible. Then log out.

H) If the change appears to be working correctly, go back to the server and use File: Exit to close the Notepad editor. If not, check for typing errors and that the Resource Groups have been properly defined in RGRP lines.

To Delete a User's Authorization

A) Double-click the Audicy Access Control icon. This opens the Access Control List in the Windows Notepad editor.

B) Click the mouse at the *beginning* of the USER line you want to delete, and drag across the entire line to select it.

C) Press *Back Space* twice to delete the entire line and the blank line that remains. If you make a mistake, use Edit: Undo.

D) Use File: Save to save your changes.

E) Go to a networked Audicy and attempt to log on with this user name. You should see a message that either the user name is unknown on the server or the password is incorrect.

F) If the change appears to be working correctly, go back to the server and use File: Exit to close the Notepad editor. If you were able to log on as this user, verify that you saved the changes (step D above). If this doesn't correct the problem, be sure this user name doesn't also appear on a different USER line.

Note that if this user is currently logged on, he or she will continue to have access until they log off.

Assigning Passwords

You can assign a password to any user simply by adding a comma and a password after the user name, example: Don,satori. This helps protect files from unauthorized access. Once a password has been assigned, the user can't log on without it. A password can be up to 15 characters long, but can't include spaces or the punctuation < > | or /.

This is a very basic form of password protection. Since the passwords aren't encrypted and are readable in the Access Control List, they're available to anyone who has physical access to the server computer. If you're relying on passwords, we suggest you keep the server in a secure location.

To assign a password or change an existing one[12]:

A) Double-click the Audicy Access Control icon. This opens the Audicy Access Control List in the Windows Notepad editor.

B) Find the USER line for the user who will be getting or changing a password.

C) If this user doesn't already have a password, click the mouse immediately after their name. Type a comma, and then the new password.

—or—

If this user has an existing password, double-click on the password to select it, then type the new password.

D) Verify there are no spaces between the user name and the password. Line ⑤ in the example on page 33 shows the password "secret" assigned to user Barry:

USER Barry,secret AM_Group FM_Group Common_Group

E) Use File: Save to save your changes. Go to a networked Audicy and log on as this user with the new password. Then log out.

F) If the change appears to be working correctly, go back to the server and use File: Exit to close the Notepad editor. If not, check for typing errors.

Keeping the Server Running Smoothly

Defragmenting the Server's Drives

Any hard drive will become fragmented as users store more data on it[13]. We recommend you defragment the server's hard drive at least once a week, and as frequently as once a day in a busy facility. If the server starts to respond slowly, defragmenting is one of the first things to try. While you can use third-party utilities to automate this function, Windows provides a simple manual defragmenter:

A) From the Start menu, open Programs: Accessories: System Tools: Disk Defragmenter.

---

[12] Passwords in the Audicy Access Control List are for Audicy's use only and have no relationship to Windows passwords.

[13] There's a discussion of disk fragmentation under Optimize, in chapter 3 of the Audicy Operators' Manual.

B) In the window that appears, select the drive you want to defragment. ("C:" will always be the server's main drive.) Then click OK.

C) Another window will appear. Click Start. If you change your mind and don't want to defragment, you can click Exit.

D) A window with a progress bar will appear, and defragmenting will begin.

> ✔ Defragmenting can take a while, depending on your computer's speed and the condition and size of the hard drive. While the process is going on, network performance is significantly slower and users may notice delays when accessing productions or library sounds.

You may Stop or Pause the defragmenting process at any time, by clicking appropriate buttons on the bottom of the defragmenting window.

> ✔ **Never try to stop defragmenting by turning off the server!** This can make your hard drive unreadable. Click the Stop or Pause button on the Defragmenting window instead, and wait for the process to come to a halt.

Getting Rid of Old Files

Audicy productions are data-intensive. Audio is stored in non-compressed (16-bit linear) format, and — depending on sample rate — a single stereo minute can run

more than ten megabytes[14]. In a busy facility, you can expect the server's hard drive(s) to fill up quickly.

We recommend you establish a policy for removing productions and library elements from the server when they're no longer current, to leave room for new projects. If the server is primarily used for transferring material from one Audicy to another, you can safely delete the server's copy as soon as the transfer is finished. But if a project exists *only* on the server, we urge you to make a backup copy before deleting it. Backups are discussed directly below.

Audicy uses a sophisticated indexing system to keep track of production and library names, creators, sample rates, frame rates, and other data. These indexes are maintained automatically by the workstation software. If you delete a production at the server, the Audicy index doesn't get updated to reflect the change. Users may then try to open a file that doesn't exist any more, with unpredictable results.

> ✓   The best — and only foolproof — way to delete an Audicy production or library sound on the server is by using the Erase menu choices from a networked Audicy.

Backing Up Data

It's a sad fact of modern computer life that data can get lost. Not only are files subject to intentional or accidental deletion, but hard drives — the only critical moving part in a computer — wear out and crash. The only protection is to perform frequent backups.

Backing Up at a Workstation

The easiest way to back up specific Audicy productions or library files is to use Orban's Multitrack DAT Backup option. This system installs at any Audicy on the network, and saves data on low-cost DDS DAT tapes. The DAT Backup option can perform batch backups of any local or networked Audicy files. Most importantly, it automatically maintains Audicy's index system when individual backed-up files are restored. The DAT Backup option is particularly appropriate for archiving projects that may need to be re-edited in the future. Using this option to back up and restore Audicy files is discussed in Chapter 9 of the Operators' Manual.

Backing Up at the Server

The easiest way to guard against disk crashes and other catastrophes at the server is to back up all its files at once, using a dedicated backup system. Orban offers a server option with integrated tape backup[15], or you may choose to use a third-party device and software.

---

[14] But not all in one file. Audicy breaks audio into four-second chunks and stores each chunk separately, for maximum immunity from disk errors.

[15] Part number AD/SRV1/DAT

We recommend you back up the server on a daily basis:

- Back up the server's entire hard drive. This may take three or four minutes longer than backing up just the Audicy data[16], but can save you hours if the hard drive fails.

- Don't try to compress the files while you're archiving them. Audio data is too random to be effectively processed by standard algorithms: a utility like PKZIP or its equivalent in a backup program won't be very efficient, and will achieve only a tiny savings in file space.

- Some backup programs let you optionally delete original files after they're backed up. *Do not use this feature.* If you want to erase a production or library sound, do it from a connected Audicy.

Restoring Backed-Up Server Data

> ✔ The best way to recover after a fatal disk error is to restore the entire drive. You'll lose any changes made after the backup was created; but if you've had to reformat or reinstall the hard drive, these changes are lost anyway.

To restore an entire drive from a backup tape, follow the instructions that came with the backup utility.

From time to time, you may want to restore individual Audicy files without losing other material on the drive, perhaps because a project was inadvertently erased or changed. You'll need to know which networked drive, and which Audicy folder (if any), held the original file.

There are two ways to restore an individual Audicy file:

- The simplest is to restore the entire Audicy folder where the file was located. If the file was on at the root level of a networked drive — that is, not in a specific Audicy folder — you'll have to restore the entire networked drive. This method also restores everything else in the folder or drive, so it may overwrite recent changes in other productions unless you follow the steps below. It can also result in a lot of duplicated productions or library files, which should then be erased from the Job Controller of an Audicy connected to the server.

- It's possible to restore just one specific production or library sound[17], but you'll need an understanding of Audicy's directory structure and have to run a DOS-based utility. Instructions for this method begin on page 46.

---

[16] Since you shouldn't use the server for anything other than Audicy networking, there won't be any non-Audicy files on the server's drive other than the operating system and utilities.

[17] It may even be necessary, if the server is running out of hard disk space.

To safely restore an individual Audicy file using the simpler method (restoring an entire Audicy folder):

A) Use the Windows Explorer to create a new Windows folder within the Audicy directory[18] and set it up as a networked drive (page 29). As an example, we'll call that folder Restored_Stuff.

B) Search your backup tape for the Windows folder whose name matches the networked drive or Audicy folder you want to restore. For this example, we'll assume the networked drive was FM_Image: Look for the FM_Image folder in your backup tape.

C) Restore that entire folder from the backup tape *into* the folder you created in step A. For this example, you'd restore FM_Image and all of its subfolders into Restored_Stuff.

D) Using Windows Explorer, open the folder you created in step A (Restored_Stuff). At its top level, you'll see the restored folder. Inside that folder, you'll see a folder named Dse; if the user created folders from a connected Audicy, you'll also see those folder names with the .aud, .aul, or .aup.

E) Select the Dse folder and any user-created folders, and move them up one level. They should now be at the top level of the folder you created in step A (Restored_Stuff), and the restored folder (FM_Image) should be empty.

F) Close Windows Explorer.

You should now be able to access the new networked drive from a connected Audicy. It will contain the Audicy files you want. To retrieve them, use the Job Controller's Production Copy or Library Copy function to move them to a different networked or local drive. After that, you can move the entire Restored_Stuff folder to the Windows Recycle Bin. Remember to also remove that folder from the Access Control List.

If the Restored_Stuff folder contains a lot of productions or elements you want, it may be easiest to keep it as a normal networked drive. Any Audicy files you don't want can be erased from a connected Audicy.

Depending on how much material was on the networked drive when you created the backup, this method might be very time-consuming. For small amounts of material, it's most efficient to directly restore the material you want, but you'll have to understand Audicy's directory and index structure to do it.

How Audicy Keeps Track of Files
Before you attempt to back up or archive individual productions or library sounds at the server, you should understand how Audicy keeps track of its files. When

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[18] In many cases, this will be the C:\Audicy folder. But your system Administrator might have assigned a different default folder.

you use Prepare Disk or Make Folder on Audicy's Job Controller to prepare a drive to hold productions or elements, a series of Windows folders are created. This applies to any kind of drive: networked or local, fixed or removable. The picture below shows how these folders are nested inside each other.
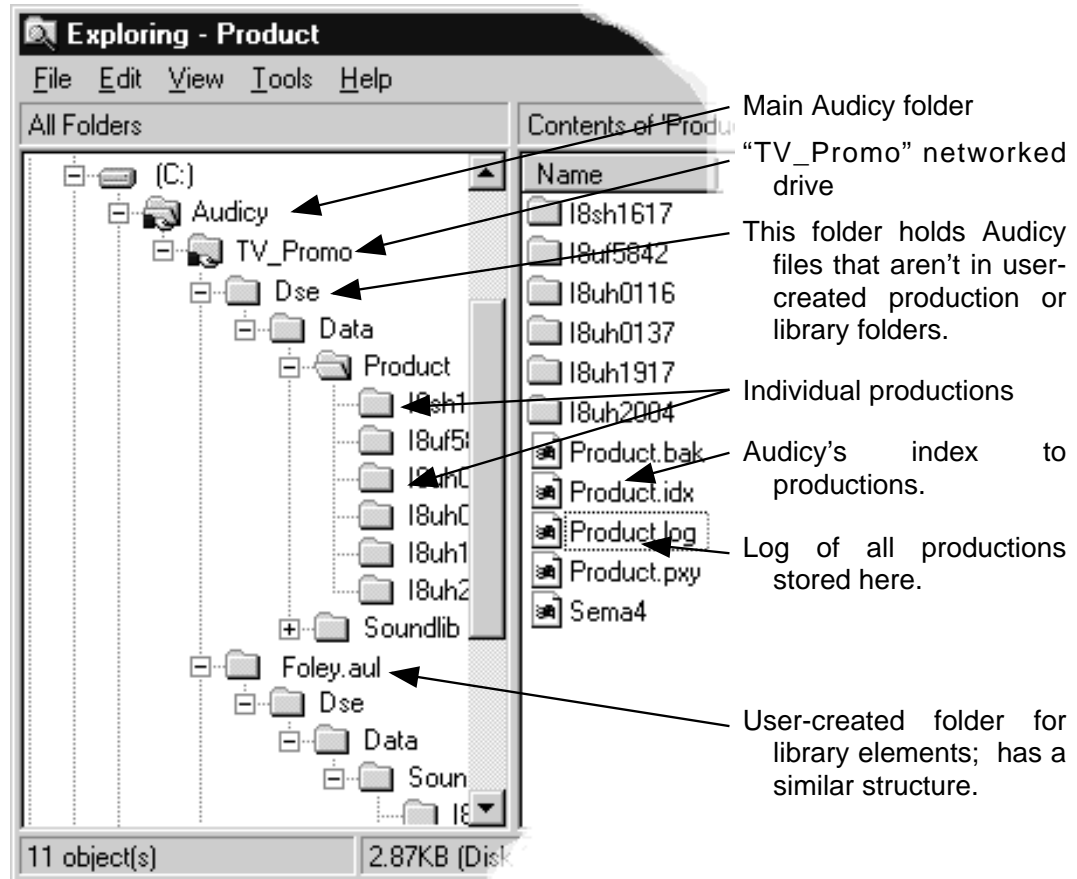
Figure 4: A section of Windows Explorer with callouts indicating how Audicy files are saved

When you use Prepare Disk, a Windows folder called Dse[19] is created at the drive's root level. Inside that is a folder called Data, and inside Data are two folders, Product for productions and Soundlib for library elements.

If you then Make Folder from Audicy's Job Controller, an additional Windows folder is created at the drive's root level. Its name matches the name you entered at Audicy, with the extension .aup for productions and .aul for library files[20]. There can be any number of these folders; inside each is a Dse and then a Data folder, and then — depending on what the Audicy folder was specified to hold —either a Product or Soundlib folder.

Each Product or Soundlib folder has a number of subfolders in it, one for each production or saved library sound. These subfolders are given coded names — such as I8SH1617 — based on the date and time they're created. There may be

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[19] Editor's note: The Dse directory name stands for Digital Sound Editor.
[20] There may also be a folder with the extension .aud, if it was created with an earlier software version.

dozens, or even hundreds, of individual audio and data files inside each one[21], but they all appear to an Audicy user as one production or library sound.

The Product and Soundlib folders also contain a database that keeps track of all these subfolders and matches them with their user-assigned names, sample rates, modification dates, and so on. This file, with an .idx extension, is updated automatically whenever you create, delete, or change an Audicy file. A .bak file is also updated as a backup.

The .idx and .bak files are designed to be used internally by Audicy's database system and not to be read by the user. There's also a human-readable log file alongside them, tracking every production or library sound ever created in the folder — regardless of whether the item was subsequently deleted. This file is named product.log for productions, or soundlib.log for library sounds, and lets you identify coded subfolder names based on the user-assigned name and its creation date.

To read a log file, open the Windows Notepad from the Start menu. Then use File: Open to open the log. A section of a typical product.log file could look like this:

Day/Month/Yr   Hours/Min/Sec   Production Full Name   Coded Name   Origin

```
 16Sep98   11:30:14   Sales reel logo      I1GB2634   PrMakNew

 26Oct98   15:08:46   Rock `n vole         I2QF0427   PrMakNew

 26Oct98   15:13:36   Morning opener       I2QF0847   PrMakNew

 26Oct98   15:15:59   Couch tato Salad     I2QF1336   PrRestor

 18Nov98   14:13:54   Mr. Boring           I3IE1218   PrCopy

 19Nov98   17:15:45   voice samples        I3JH1309   PrMakNew

 19Nov98   19:08:14   Make Mine Monkeys!   I3JJ0609   PrMakNew
```

The first two columns are the date and time the production was created. The third column is the production's full name, as it was entered by the user. The fourth column is the coded name (for example, I1GB2634) for the subfolder that contains this production. The codes PrMakNew or PrCopy indicate whether the production originated in this folder, or was copied from somewhere else.

Backing Up an Individual Production at the Server

    A) Find the desired production by reading up from the bottom of the product.log file[22] in the server's Dse\Data\Product folder containing the production. Note its coded production folder name. For example, if you wanted to back up "Couch tato salad" in the log above, you'd note I2QF1336.

    B) Instruct your backup software to make a backup of the production folder having that coded name. Make sure the software is set so that it *doesn't* delete the original after making the backup.

---

[21] Audicy saves audio in four second chunks to maximize protection from disk problems.

[22] So you're not confused by similarly-named productions that may have been erased long ago.

C) If you want to delete the production from the server after the backup is complete, use Production Manager: Erase from a networked Audicy. This guarantees the database files will be updated properly.

Restoring an Individual Production at the Server

Restoring a production is more complicated, because you also have to update Audicy's database file before connected workstations can recognize the restored production. Orban provides a utility, PRFIXIDX.EXE, to update the database.

A) Locate the production in the product.log file in the server's Dse\Data\Product folder that originally held the production. The production will be restored to this folder. Note the coded production folder name.

B) Use your backup software's database to find the tape containing the most recent backup of the production's folder, and follow its instructions for restoring it to the production's Product folder.

C) Using Windows Explorer, find the PRFIXIDX utility on the server[23], and select it.

D) Copy it to the Product folder into which you just restored a coded production folder. Do *not* move the utility into the coded production folder itself. Do not create a shortcut: Make sure you copy the utility itself.

E) Double-click the PRFIXIDX icon to start the utility running in a DOS window. It will look like this:

F) Press *Enter* to confirm that you want to create a new index.

G) The utility will then ask Do you wish to replace the old master index file now [type Y or N]? Type the letter Y to confirm.

H) The utility will replace the product.idx file with the updated one, and the DOS window will terminate. You can now close the window.

The utility scans all production folders in the Product folder and extracts each production's name, creator, and other data. Then it compares this information with the contents of the database and, if necessary, inserts it in the proper format.

_____

[23] On a standard installation, it would be in C:\AUDICY.

> ✔ The database is automatically rebuilt when you restore productions via Orban's Multitrack DAT Backup system. You don't have to do anything else to make them usable.

Backing Up and Restoring Individual Library Sounds at the Server

The procedure is exactly the same as described above for productions, except you'll be opening the Soundlib directory (instead of the Product folder), referring to soundlib.log (instead of product.log), and using LBFIXIDX.EXE (instead of PRFIXIDX.EXE) to rebuild the database.

Section 3:

Using   The   Server   —
Novell NetWare

Using the Server — Novell NetWare

> ***Managers using a Novell Server should read this section!***

This section applies if your Audicy server is running Novell NetWare. If your Audicy server is running Microsoft Windows 95/98 or Windows NT, skip to section 2 above.

Accessing the Server

Audicy networking is designed to be as fast, intuitive, and as easy to use as any other Audicy operation for the individual user. But if you're in charge of managing the network, you'll also have to deal with the *server*. This is a computer running the Novell NetWare system, and is probably located in your office or a central engineering room. Working with the server does *not* involve physical access to the server computer itself. Instead, you will use a computer connected to your Novell network, and it will communicate with the server across the network. Such a computer is called a *NetWare client*, and it must already have the NetWare client software loaded on it.

To access the server, the NetWare client must be logged on using a user ID having supervisor privileges.

To access and modify important Audicy files on the Novell server, your NetWare client must have a text-based editor (e.g., Edit) installed and accessible to you.

If you don't know how to access a NetWare client, log on with supervisor privileges, or access a text-based editor, you will need the assistance of your Novell Network Administrator.

> ✔   An Audicy workstation can function as a Novell client if it has the Audicy Networking for Novell NetWare option already installed on it, and it is connected to your Novell network. To use an Audicy workstation as a Novell client, start your Audicy workstation then terminate Audicy by pressing the *Ctrl+Alt+F10* keys. Audicy screens will shut down, leaving you at a DOS prompt. You can access the Novell LOGIN command in the Z:\PUBLIC directory to log in as a supervisor.

Manager's Responsibilities

While you won't need sophisticated computer skills, you'll have to be able to perform some basic operations. It's the Manager's job to:

- Create and organize network resources[24].

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[24] Individual directories on the server.

- Maintain the Access Control List, a short text file that describes network resources and includes a list of users and their access rights.

- Keep the server running smoothly, performing backups as necessary. This may involve third-party utilities.

> ✔ The step-by-step instructions in this section of the User Guide assume that your NetWare client software is MS-DOS-based and presents an MS-DOS command prompt. Additionally, they assume that your text-based editor is the standard MS-DOS Edit program. These facilities represent a bare-bones approach to administration, and your client and editor software may be more sophisticated. Please indulge our attempt to support *every* user (no matter what their level of sophistication) by using only the simplest methods and explanations. If you prefer other tools and other ways of working, go ahead and use them.

Network Technology

Audicy networks are organized on a client/server model: Individual Audicys can access the server's hard drives and read or write files there, but they can't communicate directly with other Audicys. If a production has to be moved between workstations, it first has to be copied from the source to the server and then copied from the server to the destination. If a library sound is to be shared among multiple workstations, it must be stored on the server. We designed our software this way to make it secure and easy to use.

Audicy workstations take advantage of the file server capabilities of a NetWare server, but avoid other specialized functions. Since all NetWare versions since V3.12 support these capabilities, Audicy will work fine with all of these versions.

Even so, the number of directories and subdirectories that can be made available by a NetWare server can be overwhelming. In order to make the list more manageable, Audicy and NetWare cooperate in creating a concept called a "share." A share is a directory, subdirectory, or device to which an Audicy user can store or retrieve productions and library elements.

A share consists of a share name (e.g., AM_sound or FM_sound) and the name of a directory on a NetWare server (e.g., SYS:AUDICY\AM_SOUND). You will create a limited number of shares to be used by Audicy users, and you will control which Audicy users can access which shares.

Creating Network Drives

Audicy users not connected to networks are accustomed to storing and retrieving productions and library elements on local hard drives and removable drives. When you give an Audicy user access to a share, it appears on his Audicy workstation as a network drive, which he can use in most of the same ways as a local or removable drive — no additional training is necessary.

Any "share" on a Novell network can become an Audicy network drive. This includes:

- Hard drives or their partitions, connected via SCSI or IDE

- Removable cartridges (Iomega, SyQuest, and other systems)

- CD-ROMs

- Floppy disks (though their size and speed makes them useless for all but the smallest files)

- Directories and subdirectories (also known as folders) within one of the above media

---

✓   Directories and subdirectories on a NetWare server aren't visible to Audicy workstations until you create shares for them and designate them in the Access Control List (discussed directly below): This turns them into network drives. Drives can't be used to store productions or library elements until you have used Prepare Disk or Make Folder on them from an Audicy.

● Subdirectories located within shares on a NetWare server can't be used to store productions or library elements unless shares are specifically created for them and they are turned into network drives. However, they can be used to store Wave files for Audicy import and export.

● If you create a share on a NetWare server, you can then create Audicy folders within it by using Audicy's Make Folder menu choice, specifying the folder as either for productions or library elements[25].

The Access Control List

The Access Control List, a text file that is created when you install Audicy server software (page 76), is the key to networking. It defines which network resources will be available for each user. Whenever you establish or change a share, establish or change a network drive, or set up a user, you'll have to modify this file. Once you install server software, the Access Control List is located in the file Z:\PUBLIC\AUDICY\RESDOM.DAT, and is easy to change by using a text editor.

The Access Control List is in plain English, and is relatively easy to understand. It represents a collection of network drives, Resource Groups, and users allowed to

---

[25] If you really want to store both productions and sound elements in a single Audicy folder, create a library folder and a production folder in the same network drive, with exactly the same name. The system will merge the two folders together.

use them. A common arrangement might be graphically represented as:

The rounded rectangles with folders in them represent *Resource Groups.* Audicy organizes network drives into these groups to make it easier to control access. A group can consist of one drive, or have as many as ten. Individual users are then assigned access to one or more groups.

For example, an "AM" group could include drives with all the imaging, promotion, and production effects used by the AM station in a facility, while an "FM" group could include material for just the FM station. Producers on the AM side of a facility wouldn't have to worry about accidentally changing material that belongs to the FM side. At the same time, a "Common" group could include drives for news actualities or commercials carried on both stations.

When you change a Resource Group, it affects every user authorized to use that group[26]. This makes it easy to reconfigure or add network drives without having to change every user's entry in the Access Control List.

The corresponding Access Control List would be:

```
; sys:audicy\resdom.dat
; Audicy resource domains and users (Novell)
$SET 1.10 99/03/02 17:22:00
SHAR AM_PROMO      SYS:PUBLIC\AUDICY\AM_PROMO
SHAR AM_SPOT       SYS:PUBLIC\AUDICY\AM_SPOT
SHAR AM_SWEEP      SYS:PUBLIC\AUDICY\AM_SWEEP
SHAR FM_PROMO      SYS:PUBLIC\AUDICY\FM_PROMO
SHAR FM_SPOT       SYS:PUBLIC\AUDICY\FM_SPOT
```

---

[26] Users that are currently on the network won't see the changes until the next time they log on.

```
SHAR FM_SWEEP      SYS:PUBLIC\AUDICY\FM_SWEEP
SHAR WAVES         SYS:PUBLIC\AUDICY\WAVES
SHAR NEWS          SYS:PUBLIC\AUDICY\NEWS
SHAR PSA           SYS:PUBLIC\AUDICY\PSA
SHAR XMAS_SND      SYS:PUBLIC\AUDICY\XMAS_SND
RGRP AM_GROUP      AM_PROMO AM_SPOT AM_SWEEP
RGRP FM_GROUP      FM_PROMO FM_SPOT FM_SWEEP
RGRP WAVE_GROUP    WAVES
RGRP COMMON_GROUP NEWS PSA XMAS_SND
USER Jay           FM_GROUP COMMON_GROUP WAVE_GROUP
USER Barry,secret AM_GROUP FM_GROUP COMMON_GROUP
USER Nanci         FM_GROUP COMMON_GROUP
USER Geoff         AM_GROUP COMMON_GROUP
USER Don_F         COMMON_GROUP WAVE_GROUP
$END


;                 THE ACCESS CONTROL LIST FILE
```

At the top of the Access Control List are lines that begin with SHAR, like this one:

SHAR AM_PROMO   SYS:PUBLIC\AUDICY\AM_PROMO

These lines define shares: network subdirectories that can be used as network drives by an Audicy user:

- The first word after SHAR is the share name, in this example AM_PROMO. Since spaces aren't legal within share names, you can use an underscore instead.

- The path that follows the share name is the path on the Novell network to a server, drive, and directory to use as an Audicy network drive. If there is only one server on your Novell network, you can leave the server name off (as in the example above).

Following any number of SHAR lines are lines that begin with RGRP, like this one:

RGRP AM_GROUP   AM_PROMO AM_SPOT AM_SWEEP

These lines define Resource Groups: share names (network drives) that are grouped to be accessible together:

- The first word after RGRP is the Resource Group name, in this example AM_GROUP. Since spaces aren't legal within group names, you can use an underscore instead.

- The words that follow the group name are the names of the network drives in that group, created using the procedure above. This group

consists of three network drives called AM_Promo, AM_Spot, and AM_Sweep. Again, underscores are used instead of spaces.

Following any number of RGRP lines, are any number of USER lines like this one:

USER Barry   AM_GROUP FM_GROUP COMMON_GROUP

Each line represents an individual Audicy user:

- The first word after USER is that operators' user name.

- Passwords can be assigned to users, but aren't shown in this example. Passwords are discussed in step-by-step instructions for adding a user (page 61).

- The words following the user name (and optional password) are the list of Resource Groups which that user has permission to access. In this case, Barry is allowed to work with network drives in the AM_Group, FM_Group, and Common_Group. When Barry logs in to the network from an Audicy, all the drives in those groups will be accessible.

This example also shows a USER line for Geoff, who is allowed only to access drives in the AM_GROUP and Common_Group. When Geoff logs in, only the six drives in those groups will be accessible to him.

Both Barry and Geoff can log in at the same time from separate Audicys, even though they both have access to Common_Group. Any number of users can access any group at the same time (though folders in the group will be locked while they're actually being used; see page 21.)

Modifying Access Control
The Audicy server software installation created an Audicy Access Control List file called resdom.dat in your NetWare server's Z:\PUBLIC\AUDICY directory. From the NetWare DOS client command line, log in to your network using a supervisor ID, then open the Access Control List using your text editor.

While actual text will vary, the first lines of the Access Control List will look like the illustration below. The numeric keys (①) will help you find specific lines while following instructions on the next few pages.

key

```
; sys:audicy\resdom.dat                                    ①

; Audicy resource domains and users (Novell)

$SET 1.10 99/03/02 17:22:00

SHAR FM_PROMO      SYS:PUBLIC\AUDICY\FM_PROMO             ②

SHAR FM_SPOT       SYS:PUBLIC\AUDICY\FM_SPOT

SHAR FM_SWEEP      SYS:PUBLIC\AUDICY\FM_SWEEP

SHAR WAVES         SYS:PUBLIC\AUDICY\WAVES

SHAR NEWS          SYS:PUBLIC\AUDICY\NEWS

SHAR PSA           SYS:PUBLIC\AUDICY\PSA

RGRP FM_GROUP      FM_PROMO FM_SPOT FM_SWEEP              ③

RGRP WAVE_GROUP    WAVES

RGRP COMMON_GROUP NEWS PSA

USER Jay           FM_GROUP WAVE_GROUP                    ④

USER Barry,secret FM_GROUP COMMON_GROUP                   ⑤

$END


;                  THE ACCESS CONTROL LIST FILE           ⑥
```

Backing Up the Access Control List

The structure and spelling of the Access Control List is critical. Before changing it, you should make a backup copy. That way, you can revert to the backup if a typing error makes your changed version unusable. To make a backup copy:

A) From the NetWare DOS client command line, log in to your network using a supervisor ID.

B) Use your text editor to open the resdom.dat file in the Z:\PUBLIC\AUDICY directory (if you haven't already opened it).

C) Use the editor's Save As command to enter a new name for the file (e.g., resdom.old) and save the file under that name.

D) Quit the editor (even if you're planning to do additional editing, so it reopens with the proper file).

> ✔   What you shouldn't change in the Access Control List:
>
> ① The first three lines are important for documenting and troubleshooting the list, and should never be changed. If you want to add your date or version number, put it on a separate line beginning with a semicolon. Lines beginning with a semicolon are ignored by the program.
>
> ⑥ A full set of instructions follows the definitions and authorizations in the Access Control List. You should keep this for reference.

Working with Network Drives

Creating a network drive for an Audicy user to store and retrieve productions and library elements involves creating a share. Rather than creating network drives individually for each user — which could involve a lot of typing and chance for errors — Audicy networking allows you to create a share once and use that share to create network drives in various Resource Groups.

The ② SHAR lines define these shares. You may define any number of shares, and use them in whichever Resource Groups you want. If you change a share, it becomes changed for all Resource Groups. Users who are currently on the network won't see the change until the next time they log on.

To create a share, you have to create a NetWare directory, then add a SHAR line to the Access Control List:

A) From the NetWare DOS client command line, log in to your network using a supervisor ID.

B) Set the current drive to the drive that will contain the new directory (e.g., Z:)

C) Set the current directory to the directory that will contain the new directory (e.g., CD \PUBLIC\AUDICY).

D) Create the new directory (e.g., MD NEWSHARE).

E) Use your text editor to open the Access Control List file (i.e., edit Z:\PUBLIC\AUDICY\RESDOM.DAT).

F) Add a new SHAR line to the Access Control List among the existing SHAR lines (e.g., SHAR NEWSHARE SYS:PUBLIC\AUDICY\NEWSHARE).

G) Quit the editor, writing the updated Access Control List file along the way.

As long as you create new directories under the Z:\PUBLIC\AUDICY directory, you need not take any additional action. However, if you create a new directory on another server, another volume, or under a different directory, you must also inform NetWare that Audicy has permission to access the new directory. The

command for doing this depends on the version of NetWare your server is running.

For NetWare V3.12, you must use the GRANT command from the DOS prompt (e.g., GRANT ALL FOR Z:\OTHER\NEWSHARE TO USER AUDICY).

For NetWare V4.11 and later, you must use the RIGHTS command from the DOS prompt (e.g., RIGHTS Z:\OTHER\NEWSHARE ALL /NAME=AUDICY).

Working with Resource Groups

Rather than authorize network drives (shares) individually for each user — which could involve a lot of typing and chance for errors — Audicy networking organizes drives into Resource Groups. The ③ RGRP lines define these groups. A group may include any number of drives, up to ten[27].

When you change a Resource Group, it affects every user who is authorized to access that group. Users who are currently on the network won't see the change until the next time they log on.

To Modify a Resource Group

    A) From the NetWare DOS client command line, log in to your network using a supervisor ID.

    B) Use your text editor to open the Access Control List file (i.e., edit Z:\PUBLIC\AUDICY\RESDOM.DAT).

    C) Find the RGRP line ③ where the second word indicates the name of the group you want to change.

    D) To remove a network drive from that group, erase the drive's name.

-or-

    To add a network drive, make sure the corresponding SHAR line has been added to the Access Control List (page 51) and type that share name at the end of the RGRP line. Use a space to separate the name from other share names in that line.

    E) Save your changes to the server disk. Then go to a networked Audicy and log in, using a user name that's authorized for that Resource Group. From Audicy's Job Controller, check Information Center: Network Status (page 19) to make sure your changes have taken effect.

    F) If the change appears to be working correctly, quit your editor. If not, check for typing errors in your Access Control List. Additionally, use NetWare commands to verify that Audicy has been granted the

---

[27] Users can't access more than a total of ten network drives from all their groups taken together. If an operator needs access to more than ten network drives, give them multiple user names (e.g., Fred1, Fred2) with different access rights. But they'll still be limited to ten *at a time*.

appropriate permissions to access the shared directory. (You may have to enlist the help of a Novell Network Administrator.)

To Create a New Resource Group

A) From the NetWare DOS client command line, log in to your network using a supervisor ID.

B) Use your text editor to open the Access Control List file (i.e., edit Z:\PUBLIC\AUDICY\RESDOM.DAT).

C) Add a blank line after an existing RGRP line.

D) Decide on a name for the Resource Group. This should describe the files it will contain or its function in your facility, to make it easier to remember the name in user authorizations. Names can be up to 16 characters long, but cannot include any spaces (we suggest you use underscores instead of spaces). Some valid Resource Group names would include FM_Group, FM_Group_1, Creative-Dept, Joe's_Drives, Playground.

E) Type RGRP and a space, then the name of this new group and a space. For example, RGRP FM_Group.

F) Then, on the same line, the name of each network drive (share) that will be part of this group, separated by a space. For example, a finished Resource Group line could look like RGRP FM_Group FM_Promo FM_Spot FM_Sweep.

G) To verify the new Resource Group is working correctly, create a user named "test":

G1) Add a blank line after an existing USER line.

G2) Type USER Test followed by the name of your new Resource Group (for example, USER Test FM_Group). Then save your changes to the server disk.

G3) Go to a networked Audicy and log in with a user name Test. Check the Job Controller's Information Center: Network Status (page 19): All the network drives in the new Resource Group should be accessible. Then log out.

G4) If the change appears to be working correctly, use your editor to erase the USER Test line. Quit your editor, saving the Access Control List file to disk along the way. If the change isn't working, check for typing errors in your Access Control List. Additionally, use NetWare commands to verify that Audicy has been granted the appropriate permissions to access the shared directory. (You

                             may have to enlist the help of a Novell Network
                             Administrator.)

To Delete a Resource Group

    A) From the NetWare DOS client command line, log in to your network using a supervisor ID.

    B) Use your text editor to open the Access Control List file (i.e., edit Z:\PUBLIC\AUDICY\RESDOM.DAT).

    C) Find each reference to the group in USER lines (you may use your editor's search function to do this). Each time the group's name appears in a USER line, erase it.

    D) Erase the entire RGRP line you want to delete.

    E) Quit your editor, saving the Access Control List file to disk along the way.

Note that users who are logged on and have access to drives in that group will maintain access until they log off.

Working with User Privileges

The keys (④) refer to the example on page 55

Be aware that if the user is currently logged on, these changes don't take effect until they log on again.

To Add or Delete Resource Groups for an Existing User

    A) From the NetWare DOS client command line, log in to your network using a supervisor ID.

    B) Use your text editor to open the Access Control List file (i.e., edit Z:\PUBLIC\AUDICY\RESDOM.DAT).

    C) Find the USER line ④ where the second word indicates the name of the user you want to change.

    D) To remove a Resource Group from that user's access rights, erase the group's name from the user's group list.

<p style="text-align:center;">-or-</p>

       To add a Resource Group, make sure the group is defined by an RGRP line in this Access Control List (see page 51), then type that group's name at the end of the USER line. Use a space to separate the group's name from others in that line.

    E) Save your changes to the server disk. Then go to a networked Audicy and log in, using a user name that's authorized for that Resource Group. From Audicy's Job Controller, check Information Center: Network Status (page 19) to make sure your changes have taken effect.

F) If the change appears to be working correctly, quit your editor. If not, check for typing errors and that the Resource Groups have been properly defined in RGRP lines.

To Add a New User

A) From the NetWare DOS client command line, log in to your network using a supervisor ID.

B) Use your text editor to open the Access Control List file (i.e., edit Z:\PUBLIC\AUDICY\RESDOM.DAT).

C) Add a blank line after an existing USER line.

D) Decide on a user name for this user. It must be a single word up to 15 characters long, and should be easy for the user to remember. User names can't have any spaces, but can use any punctuation except < > / \ or |. Some valid user names would include Barry_D, J.S.Bach, Bob&Carol, Intern(AM), Intern(FM), ChiefEngineer.

E) Type USER and a space, then the new user name and a space. If you want to give this user a password, see instructions on page 61.

F) Type the name of each Resource Group that will be accessible by this user, separated by a space.

G) For example, a new user's entry could look like this:

USER Jay   FM_GROUP COMMON_GROUP WAVE_GROUP

If that user had the password "magic," the entry could look like this:

USER Jay,magic FM_GROUP COMMON_GROUP WAVE_GROUP

H) Save your changes to the server disk. Then go to a networked Audicy and log on as this user. From Audicy's Job Controller, check Information Center: Network Status (page 19): All the network drives in the user's Resource Group should be accessible. Then log out.

I) If the change appears to be working correctly, quit your editor. If not, check for typing errors and that the Resource Groups have been properly defined in RGRP lines.

To Delete a User's Authorization

A) From the NetWare DOS client command line, log in to your network using a supervisor ID.

B) Use your text editor to open the Access Control List file (i.e., edit Z:\PUBLIC\AUDICY\RESDOM.DAT).

C) Erase the USER line for the user you want to delete.

D) Save your changes to the server disk.

E) Go to a networked Audicy and attempt to log on with this user name. You should see a message that either the user name is unknown on the server or the password is incorrect.

F) If the change appears to be working correctly, quit your editor. If you were able to log on as this user, verify that you saved the changes (step D above). If this doesn't correct the problem, be sure this user name doesn't also appear on a different USER line.

Note that if this user is currently logged on, he or she will continue to have access until they log off.

Assigning Passwords

You can assign a password to any user simply by adding a comma and a password after the user name, example: Don,satori. This helps protect files from unauthorized access. Once a password has been assigned, the user can't log on without it. A password can be up to 15 characters long, but can't include spaces or the punctuation < > | or /.

This is a very basic form of password protection. Since the passwords aren't encrypted and are readable in the Access Control List, they're available to anyone who has supervisor privileges.

To assign a password or change an existing one[28]:

A) From the NetWare DOS client command line, log in to your network using a supervisor ID.

B) Use your text editor to open the Access Control List file (i.e., edit Z:\PUBLIC\AUDICY\RESDOM.DAT).

C) Find the USER line for the user who will be getting or changing a password.

D) If this user doesn't already have a password, move the cursor to immediately after their name. Type a comma, and then the new password.

—or—

If this user has an existing password, type the new password over the old password, removing the old one.

E) There should be no spaces between the user name and the password. Line ⑤ in the example on page 55 shows the password "secret" assigned to user Barry:

    USER Barry,secret AM_Group FM_Group Common_Group

F) Save your changes to the server disk.

---

[28] Passwords in the Audicy Access Control List are for Audicy's use only and have no relationship to Windows passwords.

G) Go to a networked Audicy and log on as this user with the new password. Then log out.

H) If the change appears to be working correctly, quit your editor. If not, check for typing errors.

Keeping the Server Running Smoothly

Defragmenting the Server's Drives

Many computers store data on a hard disk so that over time, data becomes scattered all over the disk. This is a condition called *fragmentation*, and it results in slow data access. On Microsoft systems, the appropriate remedy is to occasionally run a "defrag" program. On a NetWare server, the remedy is performed automatically within the server software. Therefore, no manual defrag program is necessary to improve the performance of a NetWare server.

Getting Rid of Old Files

Audicy productions are data-intensive. Audio is stored in non-compressed (16-bit linear) format, and — depending on sample rate — a single stereo minute can run more than ten megabytes[29]. In a busy facility, you can expect the server's hard drive(s) to fill up quickly.

We recommend you establish a policy for removing productions and library elements from the server when they're no longer current, to leave room for new projects. If the server is primarily used for transferring material from one Audicy to another, you can safely delete the server's copy as soon as the transfer is finished. But if a project exists *only* on the server, we urge you to make a backup copy before deleting it. Backups are discussed directly below.

Audicy uses a sophisticated indexing system to keep track of production and library names, creators, sample rates, frame rates, and other data. These indexes are maintained automatically by the workstation software. If you delete a production at the server, the Audicy index doesn't get updated to reflect the change[30]. Users may then try to open a file that doesn't exist any more, with unpredictable results.

> ✔   The best — and only foolproof — way to delete an Audicy production or library sound stored on the server is by using the Erase menu choices from a networked Audicy.

Backing Up Data

It's a sad fact of modern computer life that data can get lost. Not only are files subject to intentional or accidental deletion, but hard drives — the only critical moving part in a computer — wear out and crash. The only protection is to perform frequent backups.

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[29] But not all in one file. Audicy breaks audio into four-second chunks and stores each chunk separately, for maximum immunity from disk errors.

[30] So never try to erase an Audicy file by moving it to the Recycle Bin, or using the DOS Delete command.

Backing Up at a Workstation

The easiest way to back up specific Audicy productions or library files is to use Orban's Multitrack DAT Backup option. This system installs at any Audicy on the network, and saves data on low-cost DDS DAT tapes. The DAT Backup option can perform batch backups of any local or networked Audicy files. Most importantly, it automatically maintains Audicy's index system when individually backed-up files are restored. The DAT Backup option is particularly appropriate for archiving projects that may need to be re-edited in the future. Using this option to back up and restore Audicy files is discussed in Chapter 9 of the Operators' Manual.

Backing Up at the Server

The easiest way to guard against disk crashes and other catastrophes at the server is to back up all its files at once, using a dedicated backup system provided by a third-party device and software.

We recommend you back up the server on a daily basis:

- Back up the server's entire hard drive. This may take three or four minutes longer than backing up just the Audicy data[31], but can save you hours if the hard drive fails.

- Don't try to compress the files while you're archiving them. Audio data is too random to be effectively processed by standard algorithms: A utility like PKZIP or its equivalent in a backup program won't be very efficient, and will achieve only a tiny savings in file space.

- Some backup programs let you optionally delete original files after they're backed up. *Do not use this feature.* If you want to erase a production or library sound, do it from a connected Audicy.

Restoring Backed-Up Server Data

> ✔ The best way to recover after a fatal disk error is to restore the entire drive. You'll lose any changes made after the backup was created; but if you've had to reformat or reinstall the hard drive, these changes are lost anyway.

To restore an entire drive from a backup tape, follow the instructions that came with the backup utility.

From time to time, you may want to restore individual Audicy files without losing other material on the drive, perhaps because a project was inadvertently erased or changed. You'll need to know which networked drive, and which Audicy subdirectory (if any), held the original file.

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[31] We recommend you don't use the server for anything other than Audicy networking, there won't be any non-Audicy files on the server's drive other than the operating system and utilities.

There are two ways to restore an individual Audicy file:

- The simplest is to restore the entire Audicy subdirectory where the file was located. If the file was on at the root level of a networked drive — that is, not in a specific Audicy subdirectory — you'll have to restore the entire networked drive. This method also restores everything else in the subdirectory or drive, so it may overwrite recent changes in other productions unless you follow the steps below. It can also result in a lot of duplicated productions or library files, which should then be erased from the Job Controller of an Audicy connected to the server.

- It's possible to restore just one specific production or library sound[32], but you'll need an understanding of Audicy's directory structure and have to run a DOS-based utility. Instructions for this method begin on page 68.

To safely restore an individual Audicy file using the simpler method (restoring an entire Audicy subdirectory):

A) From the NetWare DOS client command line, log in to your network using a supervisor ID.

B) At the MS-DOS command line create a new subdirectory within the Z:\PUBLIC\AUDICY directory and set it up as a networked drive (page 50). As an example, we'll call that directory ResStuff.

C) Search your backup tape for the subdirectory whose name matches the networked drive or Audicy subdirectory you want to restore. For this example, we'll assume the networked drive was FM_Image: Look for the FM_Image subdirectory in your backup tape.

D) Restore that entire subdirectory from the backup tape *into* the subdirectory you created in step A. For this example, you'd restore FM_Image and all of its subdirectories into ResStuff.

E) At the MS-DOS command line, use the DIR command to view the directory you created in step B. At its top level, you'll see the restored directory. Inside that directory, you'll see a directory named Dse; if the user created subdirectories from a connected Audicy, you'll also see those subdirectory names with the .aud, .aul, or .aup.

F) Use the MS-DOS XCOPY command copy the Dse subdirectory and any user-created subdirectories up one directory level. They should now be at the top level of the directory you created in step B (ResStuff). Use the DELTREE command to delete the restored subdirectory (FM_Image).

---

[32] It may even be necessary, if the server is running out of hard disk space.

You should now be able to access the new networked drive from a connected Audicy. It will contain the Audicy files you want. To retrieve them, use the Job Controller's Production or Library Copy function to move them to a different networked or local drive. After that, you can use the MS-DOS DELTREE command to erase the entire ResStuff directory. Remember to also remove that share from the Access Control List.

If the ResStuff subdirectory contains a lot of productions or elements you want, it may be easiest to keep it as a normal networked drive. Any Audicy files you don't want can be erased from a connected Audicy.

Depending on how much material was on the networked drive when you created the backup, this method might be very time-consuming. For small amounts of material, it's most efficient to directly restore the material you want, but you'll have to understand Audicy's directory and index structure to do it.

How Audicy Keeps Track of Files
Before you attempt to back up or archive individual productions or library sounds at the server, you should understand how Audicy keeps track of its files. When you use Prepare Disk or Make Folder on Audicy's Job Controller to prepare a drive to hold productions or elements, a series of DOS subdirectories are created. This applies to any kind of drive: networked or local, fixed or removable. The picture below shows how these subdirectories are nested inside each other.

```
C:\AUDICY                                          Main Audicy directory
C:\AUDICY\TV_PROMO                                 "TV_Promo"
C:\AUDICY\TV_PROMO\DSE                             networked drive       This subdirectory holds
C:\AUDICY\TV_PROMO\DSE\DATA                                              Audicy files that aren't in
C:\AUDICY\TV_PROMO\DSE\DATA\PRODUCT                                      user-created production or
C:\AUDICY\TV_PROMO\DSE\DATA\PRODUCT\I8SH1617                             library subdirectories.
C:\AUDICY\TV_PROMO\DSE\DATA\PRODUCT\I8UF5842                Individual
C:\AUDICY\TV_PROMO\DSE\DATA\PRODUCT\I8UH0116                Productions
C:\AUDICY\TV_PROMO\DSE\DATA\PRODUCT\I8UH0137
C:\AUDICY\TV_PROMO\DSE\DATA\PRODUCT\I8UH1917
C:\AUDICY\TV_PROMO\DSE\DATA\SOUNDLIB
C:\AUDICY\TV_PROMO\FOLEY.AUL                                 User-created subdirectory
C:\AUDICY\TV_PROMO\FOLEY.AUL\DSE                             for library elements.
C:\AUDICY\TV_PROMO\FOLEY.AUL\DSE\DATA
C:\AUDICY\TV_PROMO\FOLEY.AUL\DSE\DATA\SOUNDLIB
```

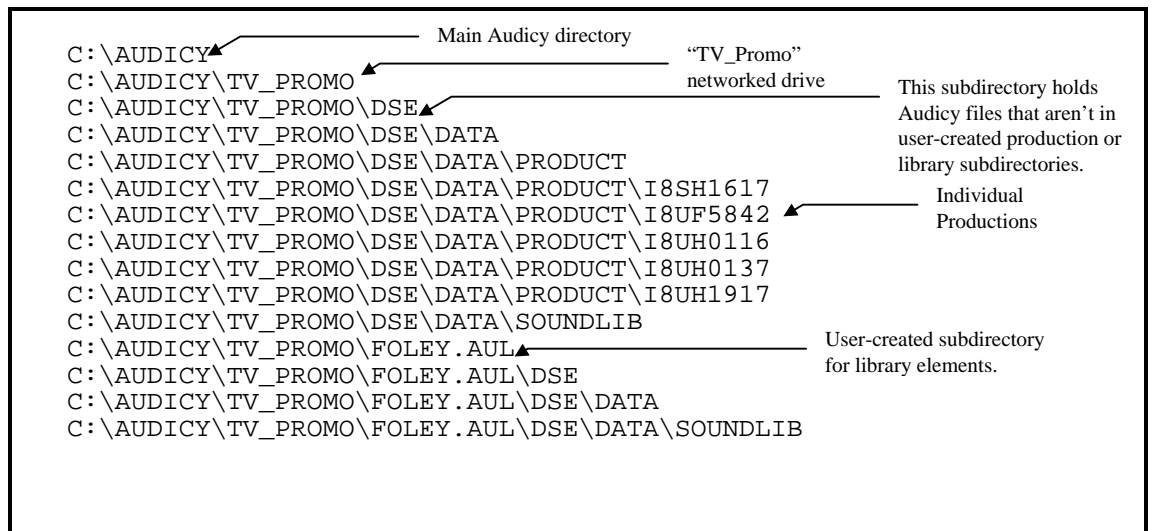Figure 5: A section of DOS with callouts
indicating how Audicy files are saved

When you use Prepare Disk, a subdirectory called DSE[33] is created at the drive's root level. Inside that is a subdirectory called DATA, and inside DATA are two subdirectories, PRODUCT for productions and SOUNDLIB for library elements.

---

[33] Editor's note: The DSE directory name stands for Digital Sound Editor.

If you then Make Folder from Audicy's Job Controller, an additional subdirectory is created at the drive's root level. Its name matches the name you entered at Audicy, with the extension .AUP for productions and .AUL for library files[34]. There can be any number of these subdirectories; inside each is a DSE and then a DATA subdirectory, and then — depending on what the Audicy subdirectory was specified to hold — either a PRODUCT or SOUNDLIB subdirectory.

Each PRODUCT or SOUNDLIB subdirectory has a number of subdirectories in it, one for each production or saved library sound. These subdirectories are given coded names — such as I8SH1617 — based on the date and time they're created. There may be dozens, or even hundreds, of individual audio and data files inside each one[35], but they all appear to an Audicy user as one production or library sound.

The PRODUCT and SOUNDLIB subdirectories also contain a database that keeps track of all these subdirectories and matches them with their user-assigned names, sample rates, modification dates, and so on. This file, with an .IDX extension, is updated automatically whenever you create, delete, or change an Audicy file. A .BAK file is also updated as a backup.

The .IDX and .BAK files are designed to be used internally by Audicy's database system and not to be read by the user. There's also a human-readable log file alongside them, tracking every production or library sound ever created in the subdirectories — regardless of whether the item was subsequently deleted. This file is named PRODUCT.LOG for productions, or SOUNDLIB.LOG for library sounds, and lets you identify coded subdirectory names based on the user-assigned name and its creation date.

To read a log file, log in to your network using a supervisor ID from the NetWare DOS client command line, then open the log using your text editor. A section of a typical PRODUCT.LOG file could look like this:

Day/Month/Yr	Hours/Min/Sec	Production Full Name	Coded Name	Origin
16Sep98	11:30:14	Sales reel logo	I1GB2634	PrMakNew
26Oct98	15:08:46	Rock `n vole	I2QF0427	PrMakNew
26Oct98	15:13:36	Morning opener	I2QF0847	PrMakNew
26Oct98	15:15:59	Couch tato Salad	I2QF1336	PrRestor
18Nov98	14:13:54	Mr. Boring	I3IE1218	PrCopy
19Nov98	17:15:45	voice samples	I3JH1309	PrMakNew
19Nov98	19:08:14	Make Mine Monkeys!	I3JJ0609	PrMakNew

The first two columns are the date and time the production was created. The third column is the production's full name, as it was entered by the user. The fourth column is the coded name (for example, I1GB2634) for the subdirectory that

---

[34] There may also be a subdirectory with the extension .AUD, if it was created with an earlier software version.

[35] Audicy saves audio in four second chunks to maximize protection from disk problems.

contains this production. The codes PrMakNew or PrCopy indicate whether the production originated in this subdirectory, or was copied from somewhere else.

Backing Up an Individual Production at the Server

A) Find the desired production by reading up from the bottom of the PRODUCT.LOG file[36] in the server's DSE\DATA\PRODUCT subdirectory containing the production. Note its coded production subdirectory name. For example, if you wanted to back up "Couch tato salad" in the log above, you'd note I2QF1336.

B) Instruct your backup software to make a backup of the production subdirectory having that coded name. Make sure the software is set so that it *doesn't* delete the original after making the backup. Also, be sure to do a *full* backup, not an *incremental* backup.

C) If you want to delete the production from the server after the backup is complete, use Production Manager: Erase from a networked Audicy. This guarantees the database files will be updated properly.

Restoring an Individual Production at the Server

Restoring a production is more complicated, because you also have to update Audicy's database file before connected workstations can recognize the restored production. Orban provides a utility, PRFIXIDX.EXE, to update the database.

A) Locate the production in the PRODUCT.LOG file in the server's DSE\DATA\PRODUCT directory that originally held the production. The production will be restored to this directory. Note the coded production subdirectory name.

B) Use your backup software's database to find the tape containing the most recent backup of the production's directory, and follow its instructions for restoring it to the production's PRODUCT directory.

C) From the NetWare DOS client command line, log in to your network using a supervisor ID.

D) Find the PRFIXIDX utility on the server[37], and select it.

E) Copy it to the PRODUCT directory into which you just restored a coded production directory.

---

[36] So you're not confused by similarly-named productions that may have been erased long ago.

[37] On a standard installation, it would be in Z:\PUBLIC\AUDICY.

F) Run the PRFIXIDX utility. It will look like this:

```
PRFIXIDX                                                    _ □ ✕
Auto  ▼   [::]  🗐  📋  ⊕   🖰🗗  A
PRfixIdx: Checking productions in C:\AUDICY\COMMON\DSE\DATA\PRODUCT.
PRfixIdx: Reading production index file 'product.idx'.
PRfixIdx: Read 1 entries from 'product.idx'.
PRfixIdx WARNING: Entry I6N44946 missing, rebuilt from subdirectory index:
  ['COMPCO INC         '] Jay              14:35 32.0kHz,
   Created 04:49:46 98/06/23, last updated 04:49:28 98/06/23
PRfixIdx: Reconstructed production index file 'product.fix', adding 1 entries.

Press [Enter] to continue
```

G) Press *Enter* to confirm that you want to create a new index.

H) The utility will then ask Do you wish to replace the old master index file now [type Y or N]? Type the letter *Y* to confirm.

I) The utility will replace the PRODUCT.IDX file with the updated one.

The utility scans all productions in the PRODUCT directory and extracts each production's name, creator, and other data. Then it compares this information with the contents of the database and, if necessary, inserts it in the proper format.

> ✓ The database is automatically rebuilt when you restore productions via Orban's Multitrack DAT Backup system. You don't have to do anything else to make them usable.

Backing Up and Restoring Individual Library Sounds at the Server
The procedure is exactly the same as described above for productions, except you'll be opening the SOUNDLIB directory (instead of the PRODUCT directory), referring to SOUNDLIB.LOG (instead of PRODUCT.LOG), and using LBFIXIDX.EXE (instead of PRFIXIDX.EXE) to rebuild the database.

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Section 4:

Installing The Network

Installing the Network

This section is intended for the Network Administrator, and contains highly technical material. Audicy networks rely on precise high-speed communications. A single misplaced jumper can make the network inoperable. A badly-routed cable or loose connection can slow the network down to unusable speeds, and take days to diagnose. In other words: If you're not sure of your abilities or don't already have experience working with this kind of technology, we recommend you hire a professional consultant.

If you're a professional consultant reading this on behalf of a client, you should also read "Section 1: Introduction To Networking" about how Audicy networks are used. Read either "Section 2: Using The Server — Microsoft Windows Server" or "Section 3: Using The Server — Novell NetWare," depending on what type of server you are running.

Network Requirements

An Audicy network normally consists of at least five elements:

- High-quality Category 5 (CAT5) cabling

- Network Hub

    We recommend the following hubs[38], based on your network interface:

Network Hub	Network Interface
LinkSys five-port hub	10Base-T
Bay Networks 4 or 8 prot hubs (model FE-104 and FE-108) or Centre COM hubs (models AT-MR904, AT-MR908, AT-MR912)	100Base-TX
3COM 12 port Super Stacker II	10/100Base-T

    Note: A network hub is not required if you are networking a "server" or your desktop machine to a single Audicy. Use a crossover cable[39].

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[38] These are our recommendations at the time this manual was published. Note that model numbers are bound to change. Always buy quality goods from reputable companies.

[39] Available from mail-order networking suppliers — do *not* try to use a normal network cable.

- Network Server

  Audicy supports the following servers and network protocols:

Audicy Network Server	Network Protocols
Win 95/98 or NT	NetBEUI or TCP/IP
Novell NetWare (3.12, 4.xx, 5.xx)	IPX/SPX
Non-Microsoft (emulating Win 95/98)	TCP/IP

- Audicy Workstation(s)

  All workstations require a Network Interface Card (NIC), based on the workstation's motherboard and network interface:

Workstation Motherboard	Network Interface	NIC
ISA	10Base-T	3COM 3C509
ISA	10Base-T, 100Base-TX, or 10/100Base-T	3COM 3C515-TX
PCI	10Base-T, 100Base-TX, or 10/100Base-T	Intel® PRO/100+, Corman FE-120, or Corman CE-110

  In addition, systems have additional requirements, based on their network protocol:

Network Protocol	Additional Workstation Requirements
NetBEUI	System Software V2.5, or higher
TCP/IP	System Software V2.5, or higher
Novell Networking	System Software V2.5, or higher and 16MB System Memory

- Audicy Network Software

    To enable Audicy networking, you will need the required server and workstation software:

Networking	Required Software (provided by Orban)
Microsoft 95/98 or NT using NetBEUI	Audicy Microsoft NetBEUI Networking Installation diskette Audicy Microsoft Server Installation diskette
Microsoft 95/98 or NT using TCP/IP	Audicy Microsoft TCP/IP Networking Installation diskette Audicy Microsoft Server Installation diskette
Novell NetWare (3.12, 4.xx, 5.xx) using IPX/SPX	Audicy Novell IPX/SPX Networking Installation diskette Audicy Novell Server Installation diskette
Non-Microsoft server (Linux, QNX, or UNIX) emulating Win 95/98 networking using TCP/IP	Audicy Microsoft TCP/IP Networking Installation diskette Audicy Generic Server Installation diskette

High-Quality Category 5 (CAT5) Cabling

While the cabling might seem the most trivial element — it's just copper, right? — successful Ethernet wiring can be difficult to achieve in a large facility because of the high frequencies involved. Audicy can run on a 10Base-T (10 Megabits per second) or 100Base-TX (100Mb/s) network, but you must use high-quality Category 5 (Cat5) cable and connections in either case.

Cables must be run in an environment free from electromagnetic noise, and connections have to follow precise specifications. Pay attention to lengthy runs (i.e., Cat 5 can't run over 200 yards). If you haven't worked with this kind of wiring and don't have Cat5 test equipment, hire a professional data communications company to supervise the installation. Bad planning or cheap components will make the network run badly — if it can run at all — and will cost you more in the long run because of all the troubleshooting it will require. Orban is not responsible for network problems brought about by bad wiring.

While it may be tempting to plug Audicys and the server into an existing Ethernet that's also used for other purposes, this is almost always a bad idea. High-quality

audio networking requires tremendous amounts of data: Audicy network transactions will interfere with other network traffic.

Network Hub

There are many choices for network hubs on the market[40]. The main thing to remember is quality is more important than price. We recommend a LinkSys five-port hub for 10Base-T networks, and Bay Networks 4 and 8 port hubs (models FE-104 and FE-108) or Centre COM hubs (models AT-MR904, AT-MR908 AT-MR912) for 100Base-TX. For dual speed (10/100Base-T), we recommend the 3COM 12 port Super Stacker II. In all cases, the hub speed controls the entire network speed.

10Base-T is sufficient (though not ideal) if you're using the network strictly to copy Audicy files from one workstation to another. If you're going to be editing productions that are on networked drives, 100Base-TX is highly recommended.

In an extremely simple network — one server and one Audicy — you can skip the hub and use a crossover cable[41] to connect the two units together.

Network Server

Orban supports networking Audicy to Microsoft servers (Win 95/98 or NT using NetBEUI or TCP/IP protocols), Novell servers (3.12, 4.xx, 5.xx using IPX/SPX protocol), or non-Microsoft servers such as Linux (using the TCP/IP protocol).

If you are installing and configuring your server, refer to "Installing The Server," below, and to the specific installation steps for your server.

Or, you can purchase from Orban a high-reliability server with all the necessary components installed and configured. If you purchase the server from a third party, we urge you to also get a comprehensive service guarantee: The server is mission-critical to your entire audio production network.

Network Protocols

A network protocol is the data structure that allows two or more computers to talk to each other. Orban supports Audicy networking to servers using the following network protocols:

- NetBEUI protocol: works well in small workgroups but can't cross routers. For use with Microsoft 95/98 or NT servers only.

- TCP/IP protocol: works well to network Audicy servers in the same building or around the world. Orban currently supports using TCP/IP network protocols with Microsoft 95/98 or NT servers, as well as with non-Microsoft servers running other operating systems, such as Linux, QNX, or UNIX.

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[40] These are our recommendations at the time this manual was published. Note that model numbers are bound to change. Always buy quality goods from reputable companies.

[41] Available from mail-order networking suppliers — do *not* try to use a normal network cable.

- IPX/SPX protocol: recommended for networking to multiple buildings or wide area networks (WANs) if you are using a Novell NetWare server.

Audicy Workstation(s)

Most Audicy or Audicy VX workstations can become a client on the network. Each networked unit requires a separate licensed copy of Orban Network Software and a pre-configured Orban Ethernet card. All of Orban's networking kits include both workstation software and a Network Interface Card (NIC). Installation steps are covered in "Installing The Workstation" on page 96.

Audicys networked to servers using the NetBEUI protocol must be running Audicy Software Version 2.01 or higher.

Audicys networked to servers using TCP/IP or IPX/SPX network protocols must be running Audicy Software Version 2.50 or higher.

In addition, if you are networking to a Novell server, each Audicy workstation must have 16MB of system memory.

You also need space (an available slot) on your motherboard to install the Network Interface Card. Audicys that use early models of Orban RAM Control, either because they've been upgraded from Orban DSE7000 workstations or because cards have been swapped, might not have an appropriate motherboard slot available. You may need to replace RAM cards before installing the network hardware on these machines; contact Orban for details.

Audicy Network Software

Audicy offers server and workstation software to network Audicy to Microsoft servers (Win 95/98 or NT using NetBEUI or TCP/IP protocols) or Novell servers (3.12, 4.xx, 5.xx using IPX/SPX protocol).

Server software is sold as a separate item. Installation steps are provided in "Installing The Server" directly below.

Workstation software is included with a Network Interface Card (NIC) in any of Orban's networking kits. Installation steps are covered in "Installing The Workstation" on page 96.

Installing the Server

Before you begin installing the server, first read over the following text about proper wiring and server location, then read the installation overview.

Ethernet Wiring

We cannot overemphasize the importance of well-thought-out Cat5-compliant Ethernet wiring and high-quality components. Audicy networking can place

greater demands on Ethernet than typical business or even graphics networks. Orban cannot help you with problems resulting from a poorly-planned or ill-equipped network. Refer to "High-Quality Category 5 (CAT5) Cabling" on page 74.

Location

The server should be located in a place accessible to the Network Manager. The manager will need to perform resource designation, user authorization and daily backup physically at the server.

Audicy networking supports a basic password scheme for access control. Passwords are not encrypted, and are visible at the server. If this is a concern, make sure there is physical security for the server: perhaps in a locked office, or a constantly supervised location.

Follow normal precautions regarding environment (heat and dust) and power. An Uninterruptible Power Supply (UPS) is recommended for your server, as well as for each Audicy workstation.

Installation Overview

If you are installing an Orban-branded Audicy server, it already has a Network Interface Card (NIC), and either Microsoft or Novell server software for networking to Audicy. These have been configured at the factory, and are ready to use. You can skip the following server installation steps. This is a good time for the Network Manager to set up resources and authorizations as described in Section 2 (Microsoft servers) and Section 3 (Novell servers). To set up the Audicy workstation, continue to "Installing The Workstation" on page 96.

If you are preparing an Audicy server, refer to the appropriate installation steps for the networking you are using:

Networking   Installation Instructions

Microsoft Win 95/98 or NT   Page 78
    (NetBEUI or TCP/IP protocols)

Novell NetWare 3.12, 4.xx, 5.xx   Page 87
    (IPX/SPX protocol)

Linux, QNX, UNIX   Page 92
    (TCP/IP protocol)

> After the server is installed, verify that the connection lights are lit on both the NIC and the hub port (if you are using one). If a light is not lit, suspect bad or missing cabling.

> When the server is completely configured, the Manager should set up resources and authorizations as described in Section 2 (Windows 95/98 or NT server) or in Section 3 (Novell server), then continue with "Installing The Workstation" on page 96.

Microsoft-Based Audicy Servers

This section describes how to configure a Microsoft Win 95/98 or NT server (using NetBEUI or TCP/IP network protocols) to provide production, sound library and Wave file storage for Audicy workstations.

[If you are networking Audicy to a different server/network protocol, refer to the appropriate server installation steps.]

1. Prepare for Installation (Requirements)

To prepare your server to network to Audicy, you will need the Orban Audicy Microsoft Server software diskette. If you do not have this diskette, contact Orban.

You will need supervisor-level privileges on your Microsoft network, as well as some familiarity with the administration of Microsoft networks, to complete server installation steps.

A Microsoft-based Audicy server using NetBEUI or TCP/IP network protocols must be a computer connected to your network. It must have:

- a Pentium 200MHZ processor or better

- at least 32MB of memory

- at least a 9GB SCSI hard drive

- Microsoft Windows 95b, Windows 98, or Windows NT Server V4.0 operating system already installed

- a high-quality 10Mb/s Ethernet Card (like the 3Com 3C905B) or a 100Mb/s Ethernet card (Intel PRO/100+ or Corman FE-120 for PCI motherboards, or 3COM 3C515-TX for ISA motherboards).

- a 3½″ floppy drive (to install Orban's Audicy Microsoft Server software disk)

If important productions and library sounds will be saved only on the server, and not on local Audicy drives, we also recommend the server have:

- a backup system consisting of a large, fast tape drive and software

- a RAID array or mirroring for reliability

2. Install the Network Interface Card (NIC)

If you are installing an Orban-branded Audicy server, it already has a Network Interface Card (NIC) and Microsoft server software for networking to Audicy. These have been configured at the factory, and are ready to use. You can skip the

remaining server installation steps. This is a good time for the Network Manager to set up resources and authorizations as described in Section 2 (Microsoft servers) and Section 3 (Novell servers). To set up the Audicy workstation, continue to "Installing The Workstation" on page 96.

If you are preparing your own Audicy server, install the NIC following manufacturer's recommendations. This may result in the installation of the NetBEUI network protocol and all appropriate networking services. Nevertheless, you should verify each component of the networking system and install or modify components as necessary. In addition, Windows may ask for a driver disk or for the card's installation disks or CD-ROMs. Be prepared to supply them; if you don't have them, contact the NIC manufacturer.

> ✓   Installing network hardware or software on a server frequently results in Windows needing access to floppies or CD-ROMs provided with the hardware or with Windows itself. Before you proceed, be sure you have access to all floppies or CD-ROMs pertaining to your hardware or Windows operating system. You may have to contact your hardware manufacturer or Windows supplier to get them.

When you've completed installing the server NIC, continue with the next step: step 3 "Install The NetBEUI Protocol" (directly below), or step 4 "Install The TCP/IP Protocol" (page 83), as required.

3. Install the NetBEUI Protocol

[Skip to step 4 if your Microsoft-based Audicy server will only be using the TCP/IP networking protocol.]

If your Microsoft server is going to use the NetBEUI networking protocol, it must be configured according to the following instructions. These instructions apply whether you are installing a Windows 95/98 or a Windows NT server. However, for a Windows NT server there are additional steps involved in configuring the Microsoft Server components. Refer to the Microsoft documentation for more information.

- For both Windows and Windows NT, in the course of installing new software, the installation program may report version conflicts between current files and files it is trying to install. *Always* choose to install the current file.

- Additionally, during the course of installation, you will reboot your server one or more times. At some point, it will ask you for an ID and a password. Enter the name of the server as the ID (e.g., AUDICY_SRV), and choose a password. You will be prompted for the password each time the server reboots.

> **Note:** The NetBEUI protocol can coexist with the TCP/IP protocol (see page 83) also installed on your server. Thus, it is possible to have both NetBEUI and TCP/IP on your LAN. There is no advantage, though, in having some Audicy workstations use one protocol while others use another.

When the server is completely configured, the Manager should also refer to Section 2 for detailed Microsoft server information and steps to:

- Create and organize network resources (individual directories on the server).

- Maintain the Access Control List, a short text file that describes network resources and includes a list of users and their access rights.

- Keep the server running smoothly, performing backups and defragmenting as necessary. This may involve third-party utilities.

To configure an Audicy Microsoft Win 95/98 or NT server for the NetBEUI networking protocol:

A) Use the Control Panel's Network applet, look at the installed components list and verify that your NIC is present.

   If it is not listed, install it according to the NIC manufacturer's instructions. Be sure to connect the NIC to the hub.

B) Use the Control Panel's Network applet, look at the installed components list and verify that the NetBEUI protocol is present.

   If you have more than one NIC installed, be sure that the component list contains a NetBEUI entry for the NIC you will use for the Audicy network.

   If the NetBEUI protocol is not listed, install it by completing the following steps:

   B1) Click the Add button.

   B2) Select Protocol.

   B3) Click the Add button.

   B4) Select Microsoft.

   B5) Select NetBEUI.

   B6) Click the OK button.

   B7) Click the OK button again.

      Windows may ask you for various Windows installation floppies or its CD-ROM. Be prepared to supply them, then reboot your server.

C) Use the Control Panel's Network applet, look at the installed components list and verify that the "Client for Microsoft Networks" is present.

   If it is not listed, install it by completing the following steps:

   C1) Click the Add button.

   C2) Select Client.

   C3) Click the Add button.

   C4) Select Microsoft.

   C5) Select Client for Microsoft Networks.

   C6) Click the OK button.

   C7) Click the OK button again.

   > Windows may ask you for various Windows installation floppies or its CD-ROM. Be prepared to supply them, then reboot your server.

D) Use the Control Panel's Network applet, look at the installed components list and verify that the File and Printer Sharing for Microsoft Networks service is present.

   If it is not listed, install it by completing the following steps:

   D1) Click the Add button.

   D2) Select Service.

   D3) Click the Add button.

   D4) Select Microsoft.

   D5) Select File and Printer Sharing for Microsoft Networks.

   D6) Click the OK button.

   D7) Click the File and Print Sharing button.

   D8) Click the top checkbox (to give others access to server files).

   D9) Click the OK button.

   D10) Click the OK button again.

   > Windows may ask you for various Windows installation floppies or its CD-ROM. Be prepared to supply them, then reboot your server.

E) Start the Control Panel's Network applet and use the Identification tab to set the Windows computer name, workgroup, and computer description.

> Audicy networking uses the server's name to locate the server on the network's computer: Set the server's computer name to Audicy_Srv, so it matches the default server name each workstation looks for. If you want to use a different name, you will need to use that name whenever you install Audicy Networking on a client. If you've already installed the Audicy Networking software on any Audicy workstations and gave a different name, you should re-install the Audicy networking software, according to the instructions starting on page 106.

> Audicy networking doesn't use the workgroup name except during troubleshooting. Unless the Audicy server is connected to a larger network that already relies on workgroup names, a simple name of Workgroup should be sufficient.

> Audicy networking doesn't use the computer description.

F) Reboot the server.

G) After the server is installed, verify that the connection lights are lit on both the NIC and the hub port.

> If both lights are not lit, suspect bad or missing cabling.

H) Customize your server configuration (optional).

> For the following configuration options, go to the Control Panel and choose the Network choice and choose the appropriate tab.

> Audicy Networking does not require any special settings for the Client for Microsoft Windows and File and printer sharing services, though you may wish to adjust these services if the Audicy server is also connected to a network of other Windows workstations.

> Use the Identification tab to set the Windows computer name, workgroup, and computer description, as described in step E, directly above.

> Use the Access Control tab to control how security is enforced beyond Audicy's simple password scheme. Unless you have a Windows NT server on the network and it is providing security validation services, leave Access Control set to Share level.

I) Continue with step 4 if you are also installing the TCP/IP protocol; otherwise, skip to step 5: "Install The Server Software" on page 86.

4. Install the TCP/IP Protocol

[Skip this step if your Microsoft-based Audicy server will only be using the NetBEUI networking protocol.]

If your Microsoft server is going to use the TCP/IP networking protocol, it must be configured according to the following instructions.

About TCP/IP Addresses

Each Audicy server and all Audicy workstations supporting TCP/IP must have unique TCP/IP addresses in order to send and receive TCP/IP data on a TCP/IP network. A TCP/IP address consists of four sets of numbers separated by periods (e.g., 192.168.1.12).

The TCP/IP addresses you choose for the Audicy workstations in your LAN will depend on whether or not your LAN will be connected to other networks in your organization. For stand-alone LANs, we recommend that you use TCP/IP addresses in the block of 192.168.1.1 through 192.168.1.255. For LANs connected with other networks (or stand-alone LANs that will eventually be connected with other networks), a Network Administrator within your organization can tell you what range you should use.

There are two methods for assigning a TCP/IP address to the Audicy workstations in your network: manual and automatic.

Using the manual method, you write down a list of the Audicy workstations and servers in your LAN. Next to each workstation or server, write down a different TCP/IP address from the block of addresses you are using. There should be exactly one unique address for each workstation. When you configure TCP/IP for each workstation, you will set it to use the address you chose for it. For example:

Computer Name	TCP/IP Address
AUDICY.SRV	192.168.1.1
AUDICY_1	192.168.1.2
AUDICY_2	192.168.1.3
AUDICY_3	192.168.1.4

Using the automatic method requires that you have a Windows NT server connected to your network and running DHCP server software. Generally, this software is installed and configured by a networking expert. Part of the configuration of a DHCP server is to provide it with the block of TCP/IP addresses your LAN will use. Once this is done, you won't have to assign each Audicy workstation on your LAN its own TCP/IP address — the DHCP server will automatically do this whenever the PC boots. However, when you configure each workstation, you must enable the DHCP choice.

The manual method is best used when you have a small LAN, the LAN is not connected to other networks, and you don't have access to a networking expert that can configure a DHCP server. The automatic method is best when your LAN

will be tied into a corporate network, you have access to networking experts that can integrate your LAN into it, and the DHCP server is guaranteed to be working when you start your Audicy workstation.

Other Addresses

Note that depending on the complexity of your network, other TCP/IP-related numbers may come into play. These include a subnet mask, a WINS server address, and a gateway address.

> If you are using the automatic method, the DHCP server that automatically provides a TCP/IP address to each Audicy workstation and server will also provide these values — you can skip reading this section.

> If you have manually assigned TCP/IP addresses, you must determine these numbers and supply them as you configure your Audicy server or workstations.

A subnet mask looks like a TCP/IP address and is used by the TCP/IP networking software to determine which TCP/IP addresses are on the same LAN. If you use the TCP/IP address block we suggested above (i.e., 192.168.1.1 through 192.168.1.255), you should use a subnet mask of 255.255.255.0. If your Network Administrator supplied the TCP/IP address block, he/she will also supply a subnet mask. Although you will configure different computers with different TCP/IP addresses, all computers will share the same subnet mask.

WINS server addresses and gateway addresses apply whenever your LAN is connected to other networks, and one or more Audicy workstations on your LAN must store productions on an Audicy server located on a different network. In this case, you must have access to a networking expert who can provide you with these addresses. Once you have them, you will use them while configuring each of your Audicy workstations.

For an Audicy workstation to work on a TCP/IP network, the Audicy server containing the Access Control List must be configured to work with the TCP/IP protocol, too. For Windows servers, this involves binding the TCP/IP protocol to your LAN adapter. This can be a complicated process, and is covered below.

Assuming your server is a simple Windows 95/98-based Audicy server with a single LAN adapter using no other network protocols, the following instructions will assist you in adding the TCP/IP protocol to your server. If not, you should seek assistance from the Microsoft documentation or a network expert.

> **Note:** The TCP/IP protocol can coexist with the NetBEUI protocol already installed on your server. Thus, it is possible to have both TCP/IP and NetBEUI on your LAN. There is no advantage, though, in having some Audicy workstations use one protocol while others use another.

Installation Steps

To configure an Audicy Microsoft Win 95/98 or NT server for the TCP/IP networking protocol:

A) Use the Control Panel's Network applet, look at the installed components list and verify that your NIC is present.

> If it is not listed, install it according to the NIC manufacturer's instructions. Be sure to connect the NIC to the hub.

B) Use the Control Panel's Network applet, look at the installed components list and verify that the TCP/IP protocol is present.

> If you have more than one NIC installed, be sure that the component list contains a TCP/IP entry for the NIC you will use for the Audicy network.

> If the TCP/IP protocol is not listed, install it by completing the following steps:

   B1) Click the Add button.

   B2) Select Protocol.

   B3) Click the Add button.

   B4) Select Microsoft.

   B5) Select TCP/IP.

   B6) Click the OK button.

C) Click the TCP/IP component, then click the Properties button.

D) Click the NetBIOS tab and make sure the NetBIOS over TCP/IP box is checked.

E) If you have configured your network so that a DHCP server automatically provides TCP/IP addresses, skip to step I. If you are configuring TCP/IP addresses manually, continue to the next step.

F) Click the IP Address tab, then click the Specify an IP address button. Enter the TCP/IP address you chose for your server in the space provided. Also, enter the subnet mask you chose in the space provided. (If you don't know which values to use, see the "About TCP/IP Address" section above.)

G) If your network Administrator has provided you with the TCP/IP address of a WINS server, click the WINS Configuration tab, then click the Enable WINS Resolution button. Enter the WINS server address(es) in the space provided.

H) If your Network Administrator has provided you with the TCP/IP address of a gateway (or router), click the Gateway tab, then enter the address of the gateway (or router) in the space provided. Click the Add button when you are done.

I) Click the OK button and reboot your server.

J) Once your server reboots, you can test your TCP/IP link by running the WINIPCFG program:

    J1) Click the Start button on the task bar.

    J2) Click Run…

    J3) Enter WinIPCFG, then click the OK button.

        The server's TCP/IP address and subnet mask should be displayed. If you supplied the address of a gateway or WINS server (or one was automatically provided by a DHCP server), they should also be displayed. (Note that you may have to click the More Info >> button to see the WINS server address.)

K) Continue with step 5: "Install The Server Software" directly below.

5. Install the Server Software

A) Insert the Audicy Microsoft Server software diskette into the server's floppy drive.

B) Use the Start menu's Run selection, run A:\SETUP and follow the on-screen instructions.

C) The Audicy Windows Server Setup program will create a C:\AUDICY folder, with a "sample" Access Control List[42] (ACL) and USER_1, USER_2, USER_3, COMMON, and WAVE networked drives in it. It will also place a shortcut to the Access Control List on the Windows Desktop.

D) Continue with "Installing The Workstation" on page 96.

    Note: Before you can use an Audicy workstation to store productions, sound libraries and Wave files on a Microsoft-based Audicy server, you must install a Network Interface Card (NIC) and either the Audicy Microsoft NetBEUI or Microsoft TCP/IP Networking software on each workstation. Installation instructions begin on page 96.

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[42] The file is called RESDOM.DAT.

Novell-Based Audicy Servers

This sections describes how to configure a Novell NetWare server (using the IPX/SPX network protocol) to provide production, library sound and Wave file storage for Audicy workstations.

> *[If you are networking Audicy to a different server/network protocol, refer to the appropriate server installation steps.]*

1. Prepare for Installation (Requirements)

To prepare your server to network to Audicy, you will need the Orban Audicy Novell Server software diskette. If you do not have this diskette, contact Orban.

You will need supervisor-level privileges on your Novell network, as well as some familiarity with the administration of Novell networks, to complete the server installation steps.

An Audicy Novell server using the IPX/SPX network protocol requires:

- a workstation connected to your Novell network, containing a 3½″ floppy drive; you can use an Audicy workstation running in DOS with the Audicy Novell IPX/SPX Networking software already installed (page 111), but you may find it simpler to use a workstation already running on your Novell system.

- a Novell-recommended server

- at least a 9GB hard drive

- NetWare V3.12 or higher already installed

- a high-quality 10Mb/s or 100Mb/s Ethernet card already installed.

If important productions and library sounds will be saved only on the server, and not on local Audicy drives, we also recommend the server have:

- a backup system consisting of a large, fast tape drive and software

- a RAID array for reliability

2. Install the Server Software

Audicy Novell Networking can work with Novell NetWare versions 3.12, 4.xx or 5.xx. The process for configuring a Novell server to work with Audicy's networking option depends on the version of the Novell server. In all cases, the procedure assumes that you have access to a workstation connected to your Novell network and running either DOS or a DOS window under Windows.

When the server is completely configured, the Manager should also refer to Section 3 for detailed Novell server information and steps to:

- Create and organize network resources (individual directories on the server).

- Maintain the Access Control List, a short text file that describes network resources and includes a list of users and their access rights.

- Keep the server running smoothly, performing backups as necessary. This may involve third-party utilities.

To configure an Audicy Novell server for the IPX/SPX networking protocol:

A) Configure server running Novell V3.12.

[Skip to step B, if you are using Novell 4.xx or 5.xx.]

A1) Log in to a Novell workstation using a supervisor's user ID and password.

A2) Run the Novell SYSCON program from a DOS prompt.

A3) Choose the User Information menu item and press the *Enter* key.

A4) Create the Audicy user ID by pressing the *Insert* key and typing AUDICY (followed by pressing the *Enter* key) in the popup. When the Home Directory popup appears, press the *Esc* key.

A5) Display the Audicy user ID's information by pressing the *Enter* key. A menu of information elements will appear.

A6) Select the Account Restrictions menu item and press the *Enter* key. Use the arrow keys and the *Y* or *N* keys to make the following settings:

Account Disabled	No
Account has expiration date	No
Limit Concurrent Connections	No
Allow User To Change Password	No
Require Password	Yes
Minimum Password Length	5
Require Unique Passwords	No

When all of the settings are correct, press the *Esc* key to return to the menu.

A7) Select the Change Password menu item and press

the *Enter* key. Type AUDICY! for the new password followed by pressing the *Enter* key. Re-enter this to verify the new password.

A8) Choose the Full Name menu item and press the *Enter* key. Type AUDICY WORKSTATIONS and press the *Enter* key.

A9) Quit the SYSCON program by pressing the *Esc* key three times, then pressing the *Enter* key.

A10) After the server is installed, verify that the connection lights are lit on both the NIC and the hub port.

   If both lights are not lit, suspect bad or missing cabling.

A11) Insert the Audicy Novell Server installation disk into the A: drive on the same workstation as you ran SYSCON. Type A: and press the *Enter* key.

A12) Start the server installation process by typing INSTALL 3 (with a blank between the word INSTALL and the numeral 3[43]) and pressing the *Enter* key.

A13) Continue to step C.

B) Configure server running Novell V4.xx or V5.xx.

   [Refer to step A, if you are using Novell V3.12.]

B1) Log in to a Novell workstation using a supervisor's user ID and password.

B2) Run the Novell NETADMIN program from a DOS prompt.

B3) Choose the Manage Objects menu item and press the *Enter* key.

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[43] '3' specifies Netware Version 3.12 systems.

B4) Create the Audicy user ID by pressing the *Insert* key, choosing the User menu item, pressing the *Enter* key, and typing the following information elements:

Login Name	Audicy
Last name	Audicy Workstation
Mailbox location	
Create a home directory	No
Copy the User Template object	Yes

When all of the settings are correct, press the *F10* key and answer No when you are prompted to create another user.

B5) Display the Audicy user ID's information by selecting the AUDICY user ID (if it isn't already selected), then pressing the *Enter* key.

B6) Select the View or Edit Properties menu item, press the *Enter* key, then select the Account Restrictions menu item, and press the *Enter* key. Select the Login restrictions menu item and press the *Enter* key. A menu of information elements will appear — enter the following values:

Account Disabled	No
Account has expiration date	No
Limit Concurrent Connections	No

Press the *F10* key when you are finished.

B7) Select the Password restrictions menu item and press the *Enter* key. A menu of information elements will appear — enter the following values:

Allow User To Change Password	No
Require Password	No
Minimum Password Length	5

When all of the settings are correct, press the *F10* key, then press the *Esc* key to return to the menu.

B8) Select the Change Password menu item and press the *Enter* key. Type AUDICY! for the new password followed by pressing the *Enter* key. Re-enter this to verify the new password.

B9) Quit the NETADMIN program by pressing the *Esc* key several times, until the Exit prompt comes up, then confirm the Exit by pressing the *Enter* key.

B10) After the server is installed, verify that the connection lights are lit on both the NIC and the hub port.

If both lights are not lit, suspect bad or missing cabling.

B11) Insert the Audicy Novell Server installation diskette into the A: drive (on the same workstation as you ran NETADMIN). Type A: and press the *Enter* key.

B12) Start the server installation process by typing INSTALL 4 (with a blank between the word INSTALL and the numeral 4[44]) and pressing the *Enter* key.

B13) Continue to step C.

C) Customize your server configuration (optional).

The Novell server installation procedure results in a Novell server capable of supporting Audicy Networking on one or more Audicy workstations. Users on Audicy workstations can use their logon forms to log in using either the USER_1, USER_2, or USER_3 user IDs. All users' productions and sound libraries are stored on the SYS volume of the Novell server.

You can customize your server configuration in a number of ways, including adding additional user IDs or setting up storage on another server volume or on a completely different server.

To do this, you must edit the RESDOM.DAT file in the SYS:PUBLIC\AUDICY directory. For example, to add a new user:

C1) From the NetWare DOS client command line, log in to your network using a supervisor ID.

C2) Use your text editor to open the Access Control List file (i.e., edit Z:\PUBLIC\AUDICY\ RESDOM.DAT).

C3) Add a blank line after an existing USER line.

C4) Decide on a user name for this user. It must be a single word up to 15 characters long, and should be easy for the user to remember. User names

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[44] '4' specifies Netware Version 4.xx and 5.xx systems.

can't have any spaces, but can use any punctuation except < > / \ or |. Some valid user names would include: Barry_D, J.S.Bach, Bob&Carol, Intern(AM), Intern(FM), ChiefEngineer.

C5) Type USER and a space, then the new user name and a space. If you want to give this user a password, see instructions on page 61.

C6) Type the name of each Resource Group that will be accessible by this user, separated by a space.

> For example, a new user's entry could look like this:
>
> > USER Jay   FM_GROUP COMMON_GROUP WAVE_GROUP
>
> If that user had the password "magic," the entry could look like this:
>
> > USER Jay,magic   FM_GROUP COMMON_GROUP WAVE_GROUP

C7) Save your changes to the server disk. Then go to a networked Audicy and log on as this user. From Audicy's Job Controller, check Information Center: Network Status (page 19): All the network drives in the user's Resource Group should be accessible. Then log out.

C8) If the change appears to be working correctly, quit your editor. If not, check for typing errors and that the Resource Groups have been properly defined in RGRP lines.

D) Continue with "Installing The Workstation" on page 96.

> **Note:** Before you can use an Audicy workstation to store productions, sound libraries and Wave files on a Novell-based Audicy server, you must install a Network Interface Card (NIC) and the Audicy Novell IPX/SPX Networking software on the workstation. Installation instructions begin on page 96.

Generic (Alternative) Audicy Server Installation

In response to customer requests, Orban has done some investigation with generic (or alternative) servers. This type of installation is do-it-yourself — at your own risk.

This section describes how to configure a generic file server to provide production, library sound and Wave file storage for Audicy workstations. It is intended for use with TCP/IP-based file servers not directly supported by an

Audicy Server Installation program and diskette. Currently, Orban supplies a pre-packaged installation program and diskette for Microsoft Windows 95/98 and NT servers, as well as for Novell NetWare servers. If you are using one of these packages, refer to their server installation instructions, above. The following instructions are intended for all other types of servers, including UNIX, Linux, and QNX.

1. Prepare for Installation (Requirements)

To prepare your server to network to Audicy, you will need the Orban Audicy Generic Server software diskette. If you do not have this diskette, contact Orban.

You will need supervisor-level privileges on your network, as well as some familiarity with the administration of networks, to complete the server installation steps.

An Audicy Generic server using the TCP/IP network protocol must have:

- a workstation connected to your network; the workstation must contain a 3½″ floppy drive to install Audicy Generic Server software. (Depending on the network system, the workstation could be the server computer itself or a computer connected to the server via a LAN.)

- A Microsoft SMB services software package installed on the server and configured for TCP/IP access. Orban does not recommend or endorse any particular package. However, various customers have used SAMBA (for QNX or Linux) successfully. Unfortunately, Orban cannot assist with the installation or configuration of any of these packages.

2. Install the Server Software

The exact process for configuring a TCP/IP-based server to work with Audicy's networking option depends on the server and its operating system. The following instructions are as precise as can be, but are not specific to any particular server or Microsoft SMB services package. Therefore, following these instructions requires a knowledge of the server and the SMB services package installed on it. Unfortunately, Orban cannot assist with issues of this sort.

When the server is completely configured, the Manager should also refer to Section 3. This section is for Novell servers, but generic server support is very similar. Section 3 contains information and steps to:

- Create and organize network resources (individual directories on the server).

- Maintain the Access Control List, a short text file that describes network resources and includes a list of users and their access rights.

- Keep the server running smoothly, performing backups as necessary. This may involve third-party utilities.

To configure an Audicy generic server using the TCP/IP networking protocol:

A) Sign onto your server using a supervisor's user ID and password.

B) Use your server's SMB services software to name your server.

> A good name might be AUDICY_SRV since that is the default server name in effect when you install the Audicy Networking for Microsoft TCP/IP option on an Audicy workstation. If you want to use a different name, you will need to use that name whenever you install Audicy Networking on a client. If you've already installed the Audicy Microsoft TCP/IP Networking software on any Audicy workstations and gave a different name, you should re-install the Audicy networking software, according to the instructions starting on page 106.

C) Create a directory called AUDICY.

D) Copy the files and directories contained on the Audicy Generic Server diskette into the AUDICY directory. Take care to make sure that all 0-byte files are copied. (The copy command for some server systems has special switches that enable subdirectories and 0-byte files to be copied. Research your server's copy command if you are not sure about this.)

E) Using your server's SMB services software, create shares for the AUDICY directory and each of the main subdirectories as follows:

Directory	Share Name	Password	Privileges
AUDICY	AUDICY	AUDICY!	Read-only
AUDICY\USER_1	USER_1	AUDICY	Read/write
AUDICY\USER_2	USER_2	AUDICY	Read/write
AUDICY\USER_3	USER_3	AUDICY	Read/write
AUDICY\COMMON	COMMON	AUDICY	Read/write
AUDICY\WAVES	WAVES	AUDICY	Read/write
AUDICY\EXPORT	EXPORT	AUDICY	Read/write

F) Test your configuration. (optional)

F1) Install the Audicy Networking for Microsoft TCP/IP option on the Audicy workstation (if you haven't already done so — to obtain the installation diskette for this option, contact Orban). During the installation process, be sure to supply the name of the Audicy server you supplied in step B above.

F2) Start Audicy on the workstation.

F3) From Audicy's main menu, terminate Audicy by pressing *the Ctrl+Alt+F10* keys.

F4) Use the PING command to verify that there is network contact with your server. To use the PING command, enter PING followed by the TCP/IP address of your server (e.g., PING 192.168.1.1), and press the *Enter* key. If you don't know the TCP/IP address of your server, contact your Network Administrator. If PING does not report contact with your server, you should suspect any of the following:

- you have supplied an incorrect server TCP/IP address

- your Audicy workstation is not properly configured for TCP/IP access

- your Audicy workstation is not connected to the LAN

- your server is not connected to the LAN

- TCP/IP services are not functioning on your server

F5) Assuming the PING command performs properly, reboot your Audicy workstation. Use the Network Logon menu item (under System Utilities) to log in to the server using USER_1 as an ID and a blank password. If the logon is not successful, an error message will appear in the message box. You can get additional help by pressing the *F1* key.

G) Customizing Your Server Configuration

The generic server configuration procedure results in a TCP/IP-based server capable of supporting Audicy Networking on Audicy workstations. Users on Audicy workstations can use their logon forms to log in using either the USER_1, USER_2, or USER_3 user IDs. All users' productions and sound libraries are stored in subdirectories under the AUDICY directory on your server.

You can customize your server configuration in a number of ways, including adding additional user IDs or setting up storage on another server volume or on a completely different server.

To do this, you must edit the RESDOM.DAT file in the AUDICY directory using the following procedure:

G1) Sign onto a network workstation in such a way as to give you read/write access to the RESDOM.DAT file in the AUDICY directory. On some networks, this will require that you log in to a network workstation using a supervisor ID and password. On other networks, this will require that you log in to the server computer itself.

G2) Make a copy of the existing RESDOM.DAT file in case you need to revert to it. Use your server's copy command to copy this file to some safe place.

G3) Run a standard text editor and edit the RESDOM.DAT file. The text editor should be able to update the RESDOM.DAT file contents without inserting any control or formatting characters — Audicy workstations will refuse to read a RESDOM.DAT file containing control or formatting characters.

G4) Read the instructions contained in the RESDOM.DAT file. They explain the structure of the file and how to modify it. When you are finished, be sure to write the file to the hard disk. Your new settings will take effect the next time a user logs an Audicy workstation into the network.

H) Continue with "Installing The Workstation" directly below.

> **Note:** Before you can use an Audicy workstation to store productions, sound libraries and Wave files on a generic Audicy server, you must install a Network Interface Card (NIC) and the Audicy Microsoft TCP/IP Networking software on the workstation. Installation instructions begin directly below.

Installing the Workstation

Before you can use an Audicy workstation to store productions, sound libraries and Wave files on a server, you must install and configure a Network Interface Card (NIC) and Audicy's Networking Software on the workstation.

[If you have not already configured your server, refer to the appropriate installation steps, above.]

1. Prepare for Workstation Installation (Requirements)

Any Audicy or Audicy VX workstation can become a client on the network. Each networked unit requires a separate copy of Orban Network Software and a pre-configured Orban Ethernet card installed in an available slot.

You also need space (an available slot) on your motherboard to install the Network Interface Card. Audicys that use early models of Orban RAM Control, either because they've been upgraded from Orban DSE7000 workstations or because cards have been swapped, might not have an appropriate motherboard slot available. You may need to replace RAM

cards before installing the network hardware on these machines; contact Orban for details.

If you are networking to a Novell server, the Audicy must have 16MB of system memory. Refer to the installation steps directly below.

16MB System Memory Upgrade (Novell Networking Only)

If you are networking to a Novell server, the Audicy workstation must have 16MB of system memory. If you ordered the Novell Networking kit for ISA motherboards, you were shipped four 4MB SIMMs.

> If you are not installing new system memory, skip to step 2 "Install The Workstation NIC."

The following steps explain how to check your system memory size and install new memory.

You will need the following:

- #2 Phillips screwdriver (or medium screwdriver)

- ¼″ nut drive

A) Check what type of motherboard and how much memory you have.

    A1) From the Audicy's Job Controller screen, highlight the About submenu pick, then press *Enter*.

    A2) Next, check the first line, on the right column, for your "CPU" motherboard type and memory amount.

> **Note:** If you have 16MB of memory, you do not need to install anymore system memory; continue with step 2 below after escaping from the About screen.

    A3) *Esc* from the About screen.

B) Open the System Unit.

[Skip to step C if the workstation's power is Off and the System Unit Tower cover has already been removed.]

Important: Perform steps under static control conditions, because static electricity can seriously damage the components in your workstation. Basic damage prevention consists of minimizing generation, discharging any accumulated static charge on your body or workstation and preventing that discharge from being sent to or through an electronic component. A static wristwrap (grounded through a protective resistor) and a static safe workbench with a conductive surface should be used. This will prevent any buildup of damaging static.

B1) Turn off mixers and consoles connected to the Audicy.

B2) Turn Audicy power Off.

B3) Disconnect all Audicy front panel input and output connections and rear panel data and power connections.

B4) Remove the Audicy System Unit Tower cover.

Take care not to snag any wires.

C) Firmly "seat" the supplied memory SIMM(s) into the Motherboard.

Note: On some motherboards, it may be easier to get to the SIMM sockets if you remove the PC Card closest to the SIMM sockets. If you do remove a card, make sure you re-install it immediately after you install the SIMMs.

If you have a 486 motherboard with one 4MB SIMM already installed, install three 4MB SIMMs into the second, third and fourth banks on the motherboard Note that SIMM banks are numbered in order, 0 through 3.

If you have a 486 motherboard with four 1MB SIMMs already installed, remove all the old 1MB SIMMs, and install the new 4MB SIMM into each of the four banks. Note that SIMM banks are numbered in order, 0 through 3.

If you have any other motherboard, contact Orban Customer Service (1/510-351-3500) for installation directions. Note that we do not recommend using 386 motherboards.

To insert a SIMM, check key orientation of how the SIMM fits into SIMM socket, then insert the SIMM at an angle, pushing it up, perpendicular with the socket, until it locks in place.

D) Save changes in CMOS.

> D1) After adding memory, reattach power cables, then turn power On to start the system.
>
> D2) The CMOS should detect that the amount of memory has been changed and will prompt you to enter the CMOS setup utility.
>
> D3) After the setup utility opens, simply press *Esc* to exit the CMOS and accept the option to save changes; this will automatically save the new memory configuration.
>
>> You do not need to make any other changes in the CMOS setup file.
>>
>> **Note:** Old SIMMs can be discarded or returned to the factory.

E) Continue to step 2 directly below.

2. Install the Workstation NIC

If an Audicy workstation is ordered with the Network Option already installed, no additional hardware installation is necessary. Connect the workstation to the network. You should see one or more connection lights on Audicy's Network Interface Card (NIC)[45] and on the hub. If these lights are not lit, check to see that Audicy's internal cards haven't come loose during shipping. If that doesn't fix it, suspect a problem with network wiring. When you've verified connection, continue to "Install Audicy Workstation Software" on page 106.

If you're field-installing a NIC, note that Orban supplies one of the three following NICs.

Supported NICs	Installation Steps
3COM 3C509	Step 2-B, Page 100
3COM515-TX	Step 2-C, Page 102
Intel PRO100+, Corman FE-120 or CE-110	Step 2-D, Page 104

> Only the network cards listed above are supported for Audicy networking. These can be obtained from Orban, along with the proper installation software.[46] All NICs will come pre-configured from Orban.

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[45] The 3COM 3C509 Card does not have a connection light. It only has a green power light, which goes on when the card is installed on the motherboard

[46] Please note that workstation network install disks are licensed for a single machine only.

To install a NIC in your Audicy tower, refer to the installation steps for your NIC, as noted above.

> **Note:** After disconnecting power and removing the cover, you'll see a number of ribbon cables connecting various motherboard cards to each other and to a pair of shielded chassis in the drive bays. These cables are Orban digital audio busses, and are essential to system operation. You may need to remove one or two of them to configure particular cards: Be sure, when you replace them, that they're oriented as they were originally and that all connectors are properly seated.

A) Open the System Unit.

> *[Skip to step B if the workstation's power is Off and the System Unit Tower cover has already been removed.]*

> **Important:** Perform steps under static control conditions, because static electricity can seriously damage the components in your workstation. Basic damage prevention consists of minimizing generation, discharging any accumulated static charge on your body or workstation and preventing that discharge from being sent to or through an electronic component. A static wristwrap (grounded through a protective resistor) and a static safe workbench with a conductive surface should be used. This will prevent any buildup of damaging static.

A1) Turn off mixers and consoles connected to the Audicy.

A2) Turn Audicy power Off.

A3) Disconnect all Audicy front panel input and output connections and rear panel data and power connections.

A4) Remove the Audicy System Unit Tower cover.

> Take care not to snag any wires.

B) Install the 3C509 card.

> *[Skip to step C if you are installing a different card.]*

> **Note:** The 3C509 card supports a 10Base-T network interface on an Audicy ISA motherboard.

B1) Install the 3C509 network card in an ISA slot of the Audicy ISA Motherboard.

> > **Note:** If there are no available card slots, you may need higher capacity Orban RAM Control cards to recover a slot. Contact the factory for details.

B2) Install the Orban 3COM Setup Utilities disk.

Audicy disks are self-installing: Insert the disk into the workstation's floppy drive, reboot, and follow the on-screen instructions.

This step creates a C:\3COM directory on your Audicy and installs a copy of the 3COM configuration utility 3C5X9CFG.EXE.

B3) Before you configure your NIC, note that running this network card setup utilities requires that the memory manager be disabled at startup. If you have a DOS system floppy disk available, you can boot from it, and skip this one step. Otherwise, with Audicy's Job Controller showing, press *Ctrl+Alt+F10* to drop to DOS. Then rename C:\CONFIG.SYS to CONFIG, and C:\AUTOEXEC.BAT to AUTOEXEC, so they are not used at the next reboot.

B4) Press *Ctrl+Alt+Del* to reboot the system. If you performed step B3, above, you can reboot from the hard drive. Otherwise, use a DOS system floppy disk.

B5) Run 3C5X9CFG.EXE, found in the C:\3COM directory.

B6) From the INSTALL menu, choose CONFIGURE (F4). In the dialog that appears, set these options:

EtherLink III Adapter Configuration	
I/O Base Address	200h
Interrupt Request Level	15
Boot PROM	Disabled
Transceiver Type	On-board TP (RJ-45)
Network Driver Optimization	DOS Client
Maximum Modem Speed	9600 Baud
Plug and Play Capability	Disabled

If you are setting options manually, press *Tab* until the Adapter Configuration settings window is highlighted. Use the ↑ and ↓ keys to navigate to an option and press *Enter* to select it. Then use the ↑ and ↓ keys to change the setting for that option, and press *Enter* to save it. Even if you're not changing its value, you should highlight and *Enter* at each of

the fields. Then continue to step B7.

To load this configuration automatically, press *Tab* until the File Options button becomes highlighted, then press *Enter*. Press *Enter* again to choose the Load button. A list of configuration files will appear; if it doesn't, navigate to the C:\3Com directory. Use *Tab* and the ↓ key to highlight the 3C5X9REF.SET file, then *Enter* to select it.

B7) After you have loaded a configuration or manually changed the settings, use the *Tab* key to highlight OK and then press *Enter*. This transfers the settings to the adapter.

B8) Press *Escape*. The program will ask if it's OK to quit. Press *Enter* to quit the program.

B9) If you performed step B3, return to the C: prompt, and rename those files back to CONFIG.SYS and AUTOEXEC.BAT. If you did not perform that step, eject the DOS floppy disk.

B10) Turn the power off and then back on to reboot the system.

B11) Connect the card to the network. You should see a connection light on Audicy's NIC and on the hub. If the hub light is not lit:

Suspect the network cabling first. Use Category 5 test equipment to verify compliance.

Check the card's designation: A 3Com 3C509 will not work with a 100Base-TX hub.

Check configuration steps above.

B12) Continue with step E below.

C) Install the 3Com 3C515-TX card.

[Skip to step D if you are installing a different card.]

C1) Install the 3C515 network card in an ISA slot of the Audicy ISA Motherboard.

Note: If there are no available ISA card slots, you may need higher capacity Orban RAM Control cards to recover a slot. Contact the factory for details.

C2) Install the Orban 3COM Setup Utilities disk.

Audicy disks are self-installing: Insert the disk into the workstation's floppy drive, reboot, and follow the on-screen instructions.

This step creates a C:\3COM directory on your Audicy and installs a copy of the 3COM configuration utility 3C515CFG.EXE.

C3) Before you configure your NIC, note that running this network card setup utilities requires that the memory manager be disabled at startup. If you have a DOS system floppy disk available, you can boot from it, and skip this one step. Otherwise, with Audicy's Job Controller showing, press *Ctrl+Alt+F10* to drop to DOS. Then rename C:\CONFIG.SYS to CONFIG, and C:\AUTOEXEC.BAT to AUTOEXEC, so they are not used at the next reboot.

C4) Press *Ctrl+Alt+Del* to reboot the system. If you performed step C3, above, you can reboot from the hard drive. Otherwise, use a DOS system floppy disk.

C5) Run 3C515CFG.EXE, found in the C:\3COM directory.

C6) From the INSTALL menu, choose CONFIGURE (F4). In the dialog that appears, set these options:

Adapter Configuration	
Network Driver Optimization	Normal
Full Duplex	Disabled
Media Type	*See text, below*
Boot PROM	Disabled
I/O Port Address	2A0h
Interrupt Level	15
DMA Channel	7

For Media Type, choose 100Base-TX or 10Base-T depending on the network speed or hub you're connecting to. 3Com also provides an Auto Select setting: This setting will cause Audicy to periodically freeze if the network is disconnected. **Do not use Auto Select unless you regularly change the speed of your network, and can assure that your network will be constantly connected and running.**

If you are setting options manually, press *Tab* until the Settings window is highlighted. Use the ↑ and ↓ keys to

navigate to an option and press *Enter* to select it. Then use the ↑ and ↓ keys to change the setting for that option, and *Enter* to save it. Even if you're not changing its value, you should highlight and press *Enter* at each of the fields. Then continue to step C7.

To load this configuration automatically, press *Tab* until the File Options button becomes highlighted, then press *Enter.* Press *Enter* again to choose the Load button. A list of configuration files will appear; if it doesn't, navigate to the C:\3Com directory. Use *Tab* and the ↓ key to highlight the 3C51510.SET file for 10Base-T, or 3C515100.SET file for 100Base-TX. 3Com also provides a 3C515AUT.SET file for Auto Select, but **this can cause Audicy to periodically freeze**. See the warning two paragraphs above. Once the file is highlighted, press *Enter* to confirm it.

C7) After you have loaded a configuration or manually changed the settings, use the *Tab* key to highlight OK and then press *Enter.* This transfers the settings to the adapter.

C8) Press *Escape.* The program will ask if it's OK to quit. Press *Enter* to quit the program.

C9) If you performed step C3, return to the C: prompt, and rename those files back to CONFIG.SYS and AUTOEXEC.BAT. If you did not perform that step, eject the DOS floppy disk.

C10) Turn power off, then back on to reboot system.

C11) Connect the card to the network. You should see connection lights on Audicy's NIC and on the hub. If both lights are not lit:

Suspect the network cabling first. Use Category 5 test equipment to verify compliance.

Check the card's designation: A 3Com 3C515 must be manually set for the correct network speed.

Check configuration step, above.

C12) Continue with step E below.

D) Install the Intel PRO/100+, Corman FE-120 or CE-110 card (PCI systems only).

[Skip to step E if you are installing a different network card.]

D1) Install the network card in the third slot of the Audicy PCI Motherboard (looking down from the

keyboard connector).

> **Note:** If you are using an Intel or Corman PCI card, no configuration is necessary. You can ignore any setup disks shipped with the card.

D2) Once the card is installed, connect it to the network. You should see connection lights on Audicy's NIC and on the hub. If both lights are not lit:

> Suspect the network cabling first. Use Category 5 test equipment to verify compliance.

D3) Continue with step E directly below.

E) Close the system tower.

E1) Carefully check all cable connections. Make sure that none of the ribbon cable connections have unseated from the installed peripherals.

E2) Carefully check to make sure that all of the plug-in circuit boards are firmly seated in the main CPU Motherboard. Sometimes it can be difficult to ascertain if the cards are partially unseated, so look very carefully.

E3) Reconnect all front panel input and output connections and rear panel data and power connections.

E4) Turn system power On.

> The Job Controller should come on normally and you should be able to start a production.

> If the Job Controller comes up, but you cannot start a production, it is likely that the SIMMs, DSP engine, memory card(s) or other peripheral cards are not fully seated. Verify that they are fully seated.

> If you experience any other startup problems, review all installation steps to verify the steps were done in order and completely. If after review, you still experience problems, please contact Orban Customer Service at 1-510-351-3500.

E5) Re-attach the cover.

> Continue to step 3.

3. Install Audicy Workstation Software

The workstation networking software installation procedure depends on the type of networking you are using. Refer to the appropriate networking step below.

Networking	**Installation Steps**
Microsoft NetBEUI	Step 3-A, Page 106
Microsoft TCP/IP	Step 3-B, Page 107
Novell IPX/SPX	Step 3-C, Page 111

A) Install Audicy Microsoft NetBEUI Networking software.

[Skip step A if you are configuring the Audicy workstation to network with a Microsoft 95/98 or NT server (using a networking protocol other than NetBEUI).]

A1) From the Audicy's Job Controller, place the Microsoft NetBEUI Networking disk in the Audicy's floppy drive.

A2) Press *Reset* on the Tower or *Ctrl+Alt+Del* on the keyboard.

A3) Follow directions on-screen.

During installation, you'll be asked to enter an Audicy Workstation name and an Access Control List server name. Use the left and right arrow keys to indicate whether you want to accept the defaults, or enter other names.

The Audicy Workstation name defaults to Audicy. If you have more than one workstation on the network, you must provide a unique name for each workstation. We recommend these names refer to the room where each Audicy is located, such as FM_Prodn, News_1, and so on. The name can contain up to 15 non-blank characters, including digits, letters, and $ - _ ( ) ! @ % & ' . ~ { } @, but cannot use characters < > / \ or |.

The Access Control List server name defaults to Audicy_Srv. If you chose a different Windows server computer name (page 82), use it instead. Please note that while you can have multiple servers on your network, only one can host the Access Control List.

A4) When prompted on-screen, remove the floppy disk and restart Audicy.

A5) With the server and hub running, attempt to log on from an Audicy workstation (page 16). Enter a

user name of USER_1 and no password[47]. After contacting the network, Audicy's Message Window should indicate that all resources have mounted properly.

If the Message Window indicates errors, use Information Center: Network Status (page 19) to determine the cause. Audicy's on-line Help system (press *HELP* while the Network Status form is showing) will give more information on the problem and direct you to a solution.

This completes Audicy Workstation installation for networking with Microsoft NetBEUI.

B) Install Audicy Microsoft TCP/IP Networking software.

[Skip step B if you are configuring the Audicy workstation to network with a Microsoft 95/98 or NT server (using a networking protocol other than TCP/IP).]

Before you install TCP/IP, verify the TCP/IP addresses used when the server was installed. Refer to "About TCP/IP Addresses" on page 83.

B1) Insert the Audicy Networking for Microsoft TCP/IP option diskette into the A: drive on the Audicy workstation.

B2) Reboot the Audicy workstation and follow the installation program's instructions.

In most cases, you should accept the defaults. If you want to change your workstation's TCP/IP configuration after you have installed the Audicy TCP/IP Networking option, insert the Audicy TCP/IP option diskette into the workstation's A: drive, then restart your workstation and follow the installation program's instructions. Note that the first screen is likely to inform you that the TCP/IP Networking option has already been installed. Press the *Ctrl+Alt+F1* keys to proceed.

B3) Configure Audicy for servers outside your LAN.

Your Audicy workstation with TCP/IP can access Audicy servers located both on your LAN and on networks connected to your LAN. Your Network Administrator may choose to locate your primary Audicy server or secondary Audicy servers either on your LAN or on other LANs or WANs connected to your LAN. (The primary Audicy server

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[47] Assuming that the Access Control List has not been modified since its original installation. If the list has been changed, log on as some other authorized user.

is the server you name when you install the Audicy Networking option on your Audicy workstation. A secondary Audicy server is a server your Audicy Administrator names in the Access Control List as accessible to one or more Audicy workstations.)

Configuring Audicy for use with servers located outside of your LAN can be difficult and confusing, depending on the complexity of your network. While it is possible for a network-savvy Administrator to achieve satisfactory results, you would be wise to have a network expert on call in case your network doesn't behave as you expect.

You need not make any special arrangements for your Audicy workstation to access a primary or secondary Audicy server connected to your own LAN. However, to access either kind of server when it is located on another LAN or a WAN, you must either make sure your Audicy workstation can access a WINS server, or you must edit your Audicy workstation's LMHOSTS file.

WINS is software that runs on a Microsoft Windows NT server and provides Audicy with the TCP/IP address of any Audicy server it must access outside of its own LAN. If your network has both a DHCP server and a WINS server, and you enabled DHCP access when you installed the Audicy Network option on your Audicy workstation, you need not take any further action — your Audicy workstation automatically has access to the WINS server and all primary or secondary Audicy servers connected to your LAN and all other LANs or WANs connected to it.

If your network has a WINS server but no DHCP server, you can enable your Audicy workstation access to the WINS server by entering the TCP/IP address of the WINS server when you install the Audicy Network option on your Audicy workstation. Ask your Network Administrator for the TCP/IP address of your WINS server before installing this option. If you have already installed the Audicy Networking option, you can reinstall it and enter the WINS TCP/IP address at that time.

If your network has no WINS server, you can enable your Audicy workstation access to servers outside of your LAN by entering the servers' names and TCP/IP addresses in the LMHOSTS file on your Audicy workstation. To configure the LMHOSTS file:

a) Start your Audicy workstation.

b) Exit to DOS by pressing the *Ctrl+Alt+F10* keys.

c) Edit the LMHOSTS file in the \DSE\SYS\UTILS directory by typing:

     EDIT C:\DSE\SYS\UTILS\LMHOSTS

d) At the end of the file, list the TCP/IP address and name of each Audicy server outside of your local LAN, one per line. A sample of such a line is given at the end of the file — be sure to leave off the leading ";" on the lines you enter.

e) Update the LMHOSTS file by pressing *Alt+F*, then *S*, then *Alt+F*, then *X*.

f) Restart your Audicy workstation.

Note that unless you are very network savvy, you will likely find it necessary to solicit the help of your Network Administrator in order to add correct entries into an LMHOSTS file.

If you modified the LMHOSTS file to define Audicy server names and addresses on one Audicy workstation, you are likely to make the same modifications to the LMHOSTS file on other Audicy workstations. We recommend that you copy the LMHOSTS file to a diskette then copy it to the other Audicy workstations instead of editing the file on each workstation.

B4) Test your TCP/IP connections.

Once you have installed the Audicy Networking for Microsoft TCP/IP option, you can test your workstation's connections to the LAN and to your Audicy server. To do this and understand the results, you must be an experienced computer user with some TCP/IP network experience. To test your TCP/IP connections:

a) Restart your Audicy workstation — be sure any diskette in the floppy drive has been removed.

b) Terminate Audicy by pressing the *Ctrl+Alt+F10* keys

c) Send a trial TCP/IP message to your own Audicy workstation by typing:

```
ping 127.0.0.1
```

You should immediately see a message indicating that an echo was received. If the response takes longer than 2 seconds, it is likely that either an error has occurred in configuring your Audicy workstation, or you have configured your Audicy workstation to use a DHCP server but no DHCP server is available on your network. See your Network Administrator for assistance.

d) You can use the PING utility to send trial messages to servers on your LAN or to servers on LANs or WANs connected to your LAN. To do this, determine the TCP/IP address of the server and use the PING command followed by the server address (instead of 127.0.0.1 in the previous step).

To determine the TCP/IP address of a primary or secondary Audicy server running either Windows 95/98 or NT, execute the WINIPCFG utility on that server: Click the Start button on the task bar, then choose the Run... menu item. Type WINIPCFG, then click the OK button. The server's TCP/IP address will appear in the resulting window.

To determine the TCP/IP address of a WINS server, use the same procedure on the Windows NT computer on which the WINS server runs.

If your Audicy workstation is not configured to use DHCP services, you can determine the TCP/IP address of the gateway (router) or WINS server your Audicy workstation is attempting to use by typing:

```
edit c:\dse\sys\utils\protocol.ini
```

You can find the gateway's TCP/IP address in the DefaultGateway0= line. You can find the WINS server's TCP/IP address in the WINS_Server0= line. Be sure the workstation is not configured to use DHCP services by verifying that the DisableDHCP= line is set to 1. To quit the editor, press the *Alt+F* keys followed by the *X* key.

e) Be sure to use the PING utility to find each of the Audicy servers (if any) you defined in the LMHOSTS file.

C) Install Audicy Novell IPX/SPX Networking software.

[Skip this step if you are configuring the Audicy workstation to network with a Novell-based server (using a networking protocol other than IPX/SPX).]

To configure the Audicy workstation for Novell networking:

C1) From the Audicy's Job Controller, place the Audicy Novell Networking disk in the Audicy's floppy drive.

C2) Press *Reset* on the Tower or *Ctrl+Alt+Del* on the keyboard.

C3) Follow directions on-screen.

During installation, you'll be asked to enter an Audicy Workstation name and an Access Control List server name. Use the left and right arrow keys to indicate whether you want to accept the defaults, or enter other names.

The Audicy Workstation name defaults to Audicy. If you have more than one workstation on the network, you must provide a unique name for each workstation. We recommend these names refer to the room where each Audicy is located, such as FM_Prodn, News_1, and so on. The name can contain up to 15 non-blank characters, including digits, letters, and $ - _ ( ) ! @ % & ' . ~ { } @, but cannot use characters < > / \ or |.

The Access Control List server name defaults to Audicy_Srv. If your Novell server has a different name (page 82), use it instead. Please note that while you can have multiple servers on your network, only one can host the Access Control List.

C4) When prompted on-screen, remove the floppy disk and restart Audicy.

C5) With the server and hub running, attempt to log on from an Audicy workstation (page 16). Enter a user name of USER_1 and no password[48]. After contacting the network, Audicy's Message Window should indicate that all resources have mounted properly.

If the Message Window indicates errors, use Information Center: Network Status (page 19) to determine the cause. Audicy's on-line Help system (press *HELP* while the

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[48] Assuming that the Access Control List has not been modified since its original installation. If the list has been changed, log on as some other authorized user.

Network Status form is showing) will give more information on the problem and direct you to a solution.

This completes Audicy Workstation installation for networking with Novell IPX/SPX.