Chapter 13

Cart Options

"Cart Replacement" Systems

Many broadcast facilities are now being built with networked audio delivery systems. Terminals in on-air studios, master control, and production rooms are all connected to a central server. Commercials, promos, and even program material are stored on the server and delivered via Ethernet as needed. The systems eliminate old-fashioned tape cartridge systems, and are usually designed — as much as possible — to look and feel like carts as well.

Audicy's "Make Cart" option lets you take any mono or stereo library sound and send it to the digital delivery system[1].

- Network transfers are fast and easy, and audio stays in the digital domain.

- Audicy library sounds are entered into the delivery system's database complete with scheduling, class, category and other information supported by the system.

- As far as the delivery system is concerned, Audicy is simply another terminal on its network. This saves money and space in the production room.

Fast MPEG Compression

The MPEG hardware option lets you send your cart files to the delivery systems in MPEG Layer II compressed format, when desired. This perceptually-encoded audio compression format affords very high-quality audio yet has storage requirements as small as 1/16th of that normally required. This means much more efficient utilization of your digital audio delivery systems network and disk storage resources. Audicy's own files, of course, remain in uncompressed 16-bit linear format.

Using the MPEG compression feature is fast and simple. Simply select a compression rate (or use a default) that suits your station's requirements, and Audicy automatically compresses that data as it is sending it to the delivery system.

How It Works

Each Audicy-digital delivery system link was created through joint development efforts, and allows users to intelligently export mono or stereo digital sound files from an Audicy production system to an appropriate network server via high speed computer network.

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[1]Presently, Make Cart is available for either ENCO DAD486™ or BE AudioVault™. Other systems are being added. Since data formats vary widely, you must specify the system when ordering.

There is no standard language for these systems, either in the data stream or the way information is presented to the user. For that reason, Audicy borrows the language and definitions found in each digital delivery system's world. If you know the language of your station's particular digital delivery system, you'll find it easy to use the Make Cart interface on Audicy.

Audicy's Make Cart option works intelligently. For example, you can't overwrite an existing cut number on the server without first getting a warning. Audicy even logs on and off the network automatically each time you send a cut, so problems with the network can't affect Audicy operations.

About This Chapter

Since each brand of cart replacement system works differently, operation of each is described separately. Installation and configuration instructions are at the end of this section.

Operation instructions are different for different brands of audio delivery system. Make sure you're reading the right ones for your system.

Making Carts

Making A BE AudicVault "Cart"

Any Audicy mono or stereo sound may be exported to the AudioVault, and become a cut on the system. This is just a matter of adapting an Audicy library file so the AudioVault sees it as one of its own sound files. This process takes place within the Make Cart menu choice in the Library Manager category of the Audicy's Job Controller screen.

If you're creating a production that'll be sent to the AudioVault, first use Bounce mode to mix it to a mono track or stereo pair. Then save that mix to the Library.

To send a library sound to an AudioVault:

   A) Press *Enter* on the Make Cart menu choice in the Job Controller. A list of library sounds will appear.

   B) Use the *up* and *down* arrow buttons or scrubwheel to select the sound you wish to send, then press *Enter*. The Create BE AudioVault Cut form will appear.

   While the form is organized to match AudioVault's, you can use it just like any other Audicy form. Jump from field to field by using the arrow or *Enter* buttons, or cancel the entire process by pressing *Esc*.

   Since the form requires text entry, you may find it easier to use the pull-out keyboard for navigation. The arrow keys and *Enter* and

Escape on the keyboard work just like their counterparts on the Console.

Vault Name

The Vault Name indicates the specific AudioVault where the cut will be sent, for example, PCR1. Use the *left* and *right* arrow buttons to toggle through available AudioVaults. This field will always start with the default name that was set when the Audicy Cart Software was installed (see "Configuring BE AudioVault Defaults," at the end of this chapter). Up to eight AudioVault names may be entered during installation.

Once you've selected a Vault to receive your cut, press *Enter*. Audicy will attempt to contact or "log on" to that AudioVault. When the connection is successful, you'll see a message Successfully connected to vault with the name of that particular AudioVault in parenthesis. If connection fails, you'll see a help message. The most common failures occur because network cables aren't properly connected, the target vault is off-line, or the AudioVault name listed when defaults were configured is wrong or misspelled. Check for these problems.

Category

Cuts are stored within categories in the AudioVault system, and different Vaults can have different categories. Audicy asks the current AudioVault for its list of categories, and displays it here.

This field always comes up with TMP (Temporary) as the default category. Use the *left* and *right* arrow buttons to select another category, and press *Enter*.

Name/No

Each cut must have its own unique name. This name can be an alphabetic string, a number or a combination of letters and numbers, but it must be between 2 and 8 characters long. Until you have selected a valid name or number, the system will not allow you to leave this field. Enter a name/number from Audicy's keyboard, or the numeric keypad on the Console. If the name/number you select is already in use, the confirmation field at the bottom of the form will warn you by displaying Replace Cart on BE system? in yellow letters. If you confirm Yes when you leave the form, your new cut will overwrite and replace the old one on the AudioVault. If you don't want to overwrite this cut, return to the Name/No field and enter an unused name/number.

Description

When you open the form, this field will have the name you saved for the library sound you're about to send. You can keep it or enter any other name, up to 40 characters.

Duration

The Duration field displays the length of the library sound you're about to send in minutes: seconds: and tenths of seconds. While Audicy normally deals in frames

as the smallest increment of time, it automatically translates frames to decimals to match the AudioVault's conventions.

Out Cue

You may type up to 40 characters to describe an out cue, so on-air talent will know when the cut is ending and can segue to the next event.

Start Date

You may enter a date for the cut to begin airing, so commercials and promos aren't run before they're valid. The default is TOD, standing for "Today." If you want to enter a specific date, use the mm/dd/yy format. As a shortcut, you can type TOD+N, where N is a number of days.

For example, if today is January 10, 1998:

You enter:	Start date will be:
TOD+8	January 18, 1998
01/25/98	January 25, 1998

Please note that Audicy only knows what "Today" is by looking at its own system clock. If the Audicy clock is wrong, the wrong start date will be entered. Audicy's clock is displayed to the right of the Message Window when the Job Controller is active. You can reset it by using the System Utilities:Date/Time menu choice. Start dates are valid one minute after midnight.

Kill Date

This field tells the AudioVault when the cut should stop airing. Once a Kill Date is reached and the cut expires, it will still be left on the AudioVault's hard disk, but users will be warned if they try to air it. The default for this field is TFN, standing for "til further notice." You may enter a specific Kill Date using the mm/dd/yy format, or TOM for "tomorrow," or the shortcut TOM+N. This shortcut works similarly to TOD+N in the Start Date.. A sound is "killed", and the warning begins to appear, after 11:59 PM on kill date.

Client /Artist

You may enter up to 40 characters describing the cut.

Class

This field refers to the class of BE servers you wish your cut to be sent to. Audicy automatically enters the list of available servers in this field based on the particular AudioVault workstation you are connected to. For smaller AudioVault systems, there will be only one available class. Use your arrow buttons to toggle through the list of available servers classes, then press *Enter* to select one.

Create Date

This field displays the creation date when you first saved the library sound.

Sample Rate

This field displays the sample rate of the library sound (shown as 32000 or 44100). Sample rates are part of a library sound, and are based on the sample rate of the production you created the sound in.

Older AudioVault AV-100 cards can't handle 44.1 kHz cuts that are MPEG compressed, so Audicy won't let you send them that way.

BE systems with newer AV-100 cards which can handle MPEG compressed cuts at 44.1 must have the following line included in Audicy's BE_ENV.DAT file:

BE_MPEG44=1

If you must change the sample rate of a library sound, use the Export WAVE command in the Library Manager menu and save it at the new rate. Then use Import WAVE to turn it back into a library sound. This process may take a while.

Mode

This field displays whether the library sound you're sending is mono or stereo.

Comp Type

Library sounds may be sent directly to the AudioVault as MPEG (layer 2) compressed sound files, or in a PCM (linear) format. If MPEG is selected, the sound's mono or stereo mode may further determine the compression type. If the library sound is mono, MPEG compression is run as a mono algorithm. If the sound is stereo, you can choose Joint or Stereo MPEG compression. For a given compression ratio, Joint provides higher quality midrange sound by sacrificing stereo imaging on high frequencies; Stereo preserves the stereo image but applies more processing to the midrange. Depending on the program material, most listeners won't be able to tell the difference. These choices may be set up as a default by running the Audicy/BE AudioVault Cart Software installation disk. If the default is Linear PCM, this field will say None.

Comp Ratio

The Compression Ratio field selects the amount of data reduction to be performed by the MPEG algorithm. This field has no effect when you select None or Linear PCM as the compression type; in this case, the field displays n/a. Choices for compression ratios match those on the AudioVault: 3.2:1, 4:1, 4.57:1, 5.33:1, 6.44:1, and 8:1. Choosing a compression ratio is a tradeoff between sound quality and system performance, and policies vary from station to station. Ask your Chief Engineer for guidelines.

As previously noted, some AudioVault systems don't support compression of 44.1 kHz sounds. The compression ratio in this field is used for Audicy-to-AudioVault transmission only. The version of that same library sound that stays on the Audicy remains in high-quality 16-bit linear format.

Scale Level

Library sounds being sent from Audicy may be digitally attenuated by -3, -6, -10, -12, -15, and -20 dB. The 0 setting offers unity gain, or no attenuation. This field is provided because the AudioVault's meter calibration of "0 dB" is different from Audicy's. Audicy uses the dBFS calibration found on DAT recorders and other professional digital equipment, where 0 dB represents the digital maximum of "all bits on". AudioVault sacrifices a few bits to provide an equivalent of analog headroom. There's no perceptible difference in sound quality from one standard to the other, just in philosophy. To help compensate, library sounds can be digitally attenuated as they leave Audicy. This way, they'll match the average levels of signals you might be recording into AudioVault from analog equipment. Use *left* and *right* arrow buttons to toggle through choices, then press *Enter*.

Confirming The Make Cart Process

When you have finished supplying information in the Make Cart form, you'll see one of two possible confirmations at the bottom of the form:

- If you see Create Cart on BE system, in green letters, simply press *Enter* to confirm Yes, which will start the upload process.

- If you see Replace CART on BE system in yellow letters, you've chosen a cut name or number that's identical to one already on the server. If you choose Yes and Enter, the original cut will be erased from the server and your new cart will take its place. If you don't want to overwrite that cut, return your cursor to the Name/No field, and enter a different, unused name/number.

After the cut is sent to the AudioVault, the Message Window will say: successfully sent cut '[cut description]' to vault [vault ID].. The cut is now on the server, and after it's entered into the AudioVault database, it'll be ready to air according to schedule.

Making An Enco DAD "Cart"

Any Audicy mono or stereo sound may be exported to a server-based ENCO DAD system, and become a cut on the system. This is just a matter of adapting an Audicy library file so the DAD sees it as one of its own sound files. This process takes place within the Make Cart menu choice in the Library Manager category of the Audicy's Job Controller screen.

If you're creating a production that'll be sent to the DAD, first use Bounce mode to mix it to a mono track or stereo pair. Then save that mix to the Library.

To send a library sound to an DAD:

- A) Press *Enter* on the Make Cart menu choice in the Job Controller. A list of library sounds will appear.

B) Use the *up* and *down* arrow buttons or scrubwheel to select the sound you wish to send, then press *Enter*. Audicy will attempt to log on to the ENCO server.

> If the server is off line, Audicy will stop trying after about a minute, and report this in the Message Window.

C) Once Audicy has logged on, the Create Enco Cart form will appear.

> While the form is organized to match Enco's, you can use it just like any other Audicy form. Jump from field to field by using the arrow or *Enter* buttons, or cancel the entire process by pressing *Esc*; this will log you off the DAD network.

> Since the form requires text entry, you may find it easier to use the pull-out keyboard for navigation as well. The arrow keys and *Enter* and *Escape* on the keyboard work just like their counterparts on the Console.

Select Cut

Enco requires that each cut to have a unique number. Use the *left* and *right* arrow buttons to toggle through the choices. The first three check the server, and automatically put a number into the form's cut field.

- Next available adds one to the highest cut number in the Enco library.

- Lowest available fills in unused numbers starting with the lowest number in the library.

- Sequential adds one to the previous cut number, so you can have a series of cuts in sequence.

- Manually appears as the selection choice if you type in a number from the Cut field.

Next available is the default choice you'll see when you first enter the Make Cart form after a power up. After that, Audicy remembers your cut selection choice, and defaults to it the next time you use Make Cart.

Cut

Each cart has a unique cut number which is between 1 and 5 digits. If you select a cut using the Next, Lowest, or Sequential choices, an unused cut number is automatically inserted in this field. You may also enter a cut number manually by typing numbers in this field. If the number you select is already in use, the confirmation field at the bottom of the form will warn you by displaying Replace existing CART on DAD server? in yellow letters. If you confirm Yes when you leave the form, your new cut will overwrite and replace the old one on the server. If you don't want to overwrite this cut, enter an unused number.

Title

When you open the form, this field will have the name you saved for the library sound you're about to send. You can keep it or enter any other name, up to 24 characters.

Group

Carts are stored within categories in the Enco DAD system. This field allows you to type in the name of an existing Group (such as Comm or Jingle) on your system. This field will always come up with TEMP (Temporary) as the default group. Groups may be defined on any DAD workstation. If you enter a group name that doesn't exist, it will not create one on the DAD, and you can't use the DAD's sort functions to find your cart.

OutCue

You may type up to 24 characters to describe an out cue, so on-air talent will know when the cut is ending and can segue to the next event. This field is displayed as the second line of text in the PLAYBACK SLOT of a DAD Playback machine..

Agency

You may type up to 24 characters naming the Cart's agency, or some other descriptive information..

Both the OutCue and Agency fields may be left blank.

Kill Date

This field tells the DAD when the cut should stop airing. Once a Kill Date is reached the cut remains on the DAD's hard disk, but users will be warned if they try to air it. The default for this field is never: the cart is valid until further notice. You may enter a specific Kill Date using the computer keyboard, in mm/dd/yy format (e.g., 02/07/98 means February 7, 1998). A sound is "killed", and the warning begins to appear, after 11:59 PM on its kill date.

Userdef

The Userdef field may be used to enter descriptive information about a cart. If no unique entry is made, the word Audicy will appear in this field when viewed from a DAD Workstation.

Length

The Length field is automatically entered by Audicy, and displays the duration of the library sound you're about to send in minutes: seconds: and tenths of seconds. While Audicy normally deals in frames as the smallest increment of time, it automatically translates frames to decimals to match the DAD 's conventions.

Recorded

This field automatically displays creation date when you first saved the library sound.

Format

Library sounds may be sent directly to the DAD Server as MPEG (layer 2) compressed sound files, or in a PCM16 (linear) format. If MPEG is available and selected, the sound's mono or stereo mode will determine whether the sound is run through mono or stereo MPEG algorithm, and M or S will be displayed in the adjacent field. For systems with MPEG capability, either MPEG or PCM16 may be set as a default from the Audicy/Enco installation disk. If MPEG is not available, this field will always come up as PCM16.

Mode

This single letter field displays whether the library sound you're sending is M for mono or S for stereo.

Bit Rate

The Bit Rate field selects the amount of data reduction to be performed by the MPEG algorithm. (If you've selected PCM16 as the format type, this field has no effect and displays n/a.) Bit Rate choices in Audicy match those available in MPEG capable DAD Workstations. For 32 kHz carts, the choices are: 96, 80, 64, 56, 48 and 32 KB. Higher bit rates use less compression, resulting in better sound. The amount of compression is also influenced by the sample rate: a 44.1 kHz library sound has more data than a 32 kHz one, and so requires more compression to achieve the same bit rate.

Choosing the bit rate is a tradeoff between sound quality and system performance, and policies vary from station to station. Ask your Chief Engineer for guidelines.

The compression determined by this field is used for Audicy-to-DAD transmission only. The version of that same library sound that stays on Audicy remains in high-quality 16-bit linear format.

Scale By Level

Library sounds being sent from Audicy may be digitally attenuated by -3, -6, -10, -12, -15, and -20 dB. The 0 setting offers unity gain, or no attenuation. This field is provided because Enco's meter calibration of "0 dB" is different from Audicy's. Audicy uses the dBFS calibration found on DAT recorders and other professional digital equipment, where 0 dB represents the digital maximum of "all bits on". Enco changes its metering scale 10 dB to provide an equivalent of analog headroom. To compensate, library sounds can be digitally attenuated as they leave Audicy. This way, they'll match the average levels of signals you might be recording into AudioVault from analog equipment. Use *left* and *right* arrow buttons to toggle through choices, then press *Enter*.

Sample Rate

This field displays the sample rate of the library sound (either 32000 or 44100). Sample rates are part of a library sound, and are based on the sample rate of the production you created the sound in.

Location

This field lists the DAD one-letter Location where you're sending sounds. Most systems will have only one choice (usually F:), but up to 4 locations may be entered by running the setup utility on the Audicy Enco/DAD Cart Software installation disk. As you leave this field, the system checks whether your request is valid. If your request is ok, you'll get a connected to server message.

If your request is not valid, you'll get a message saying could not connect to cut server, select another. The likely cause of this is that your Cut location, server and path definitions were not properly set up in the installation process.

Confirming The Make Cart Process

When you have finished supplying information in the Make Cart form, you'll see one of two possible confirmation at the bottom of the form:

- If you see Create Cart on Enco system, in green letters, simply press *Enter* to confirm Yes, which will start the upload process.

If you see Replace CART on Enco system in yellow letters, you've chosen a cut number that's identical to one already on the server. If you choose Yes and Enter, the original cut will be erased from the server and your new cart will take its place. If you don't want to overwrite that cut, return your cursor to the Cut field, and enter an unused number. Once you start sending a cart, a progress meter will appear in the message window, followed by a confirmation message once the send is complete.

Logging Out

Audicy is logged on to the Enco Server only when the Make Cart form screen is up, displaying the fields described above. Logging out is automatic after the Cart is sent, or when the form is manually closed.

Turning any workstation off while it's logged into a server can cause problems for the entire network. If you don't want to make a cart, or you need turn off your Audicy, press *Esc* to leave the Make Cart screen. This will take you off the Enco network.

System Errors

Audicy is excellent at diagnosing problems within its own circuits, but only because it can run its own internal tests, and is smart enough to "take its own temperature." For network problems, Audicy's *Help* system has very little information coming back to it from the outside (network) world. It is not able to tell the difference between a server not responding, an improperly terminated cable, a bad path name typed in the server or Audicy setup, or a broken cable, so you may receive the same help message for a variety of failures.

In these cases, it is the operator that must do the troubleshooting. If your Audicy is functioning normally and the About screen shows the proper setup for your digital delivery system, but you have problems sending sound files, check your network connections and settings first.

Error With Cuts Database

If somehow the cuts database gets updated, but there is no corresponding audio file sent, trying to send another cut with the same name/number to a database will result in an error. This can happen if the network is disconnected, or Audicy's power is turned off, during an upload. If this happens, your network administrator will need to manually delete the entry in the cuts database.

Database Collision

If two users on two machines try to make a cut at the same time, there's a chance they'll both choose the same name/number. This is particularly likely if they've both chosen next available or lowest available number before either Audicy has uploaded audio. The first cut will be sent ok, but the second cut may either be blocked from being uploaded, or may overwrite the first file without warning the user. You can safeguard against this by adopting a numbering system that reserves groups of cart numbers for different Audicys or operators.

Installation and Configuration

Some of the following instructions are common to all audio delivery systems, and some apply only to specific systems. We recommend you glance through this entire part before starting, and identify the instructions that'll apply to you.

Audicy System Requirements

The Make Cart option requires 2 free 16 bit ISA slots on your Audicy's motherboard[2], and Audicy software version 1.00A3 or higher.

BE AudioVault Link System

These components are provided with the Audicy BE AudioVault Option.

Hardware

- 1 network adapter card (tested and configured at the factory)

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[2]If your motherboard is already full, contact your dealer about Orban's Extended Memory cards. These let you install more audio memory in fewer slots.

- 1 MPEG encode/decode card (configured at the factory)

Software:

- Audicy/MPEG driver software

- Audicy/BE AudioVault link software

- 3-Com Setup Utilities software

Note: later versions of the BE AudioVault database require Audicy software Version 1.50 or higher.

Enco DAD Link System

These components are provided with the Audicy Enco DAD Option

Hardware

- 1 network adapter card (configured at the factory)

- 1 ASP (Atlanta Signal Processing) MPEG encode/decode card (configured at the factory: MPEG files compatible only with DAD Workstations running MPEG capable hardware)

Software

- Audicy/MPEG driver software

- Audicy/Enco DAD link software

- 3-Com Setup Utilities software

Files must be edited on the DAD server for the Enco system to recognize Audicy. See "Setting up Enco Server to Recognize Audicy."

Note: There are 2 Enco database versions; a historic 16 bit system, and a newer 32 bit system. If you have a later version of the Enco system, you'll need Audicy Version 1.5 and higher, and Audicy/Enco version 6.0 or higher. The newer Audicy software is compatible with both Enco database types, and adapts itself on installation.

Hardware Installation

Factory Installation Notes

Systems configured at the factory have been tested in-house, and should be fully functional, however, you will need to create a new user on the network server so it can recognize your Audicy. Specific instructions vary by system and appear later

in this chapter. Factory-configured Audicys are set up for one database and cuts server. If you have multiple servers, you'll need to reinstall Audicy's Cart Software following the instructions for configuring defaults, below.

Audicy Installation Instructions

Installing this option as a field upgrade is an involved process, and should be carried out by a qualified technician familiar with PC technology and upgrades. If no one on your staff is qualified, you may ship your Audicy System unit to Orban for factory installation.

Please read these instructions thoroughly before you attempt to install this option. Take precautions against static whenever opening the Audicy system tower case. Wear an anti-static wristband, and ground the tower chassis.

Installing the Boards

Each board fits into one of the 16-bit ISA slots on Audicy's motherboard. You may need to remove the cover plate for that slot to install the board. Use the cover plate's screw to secure each board after they're both installed. Use caution when inserting these boards; sometimes the motherboard can flex during this process, unseating adjacent boards.

Install Network Adapter Board

The network adapter board comes pre-configured from Orban. Install the 3-Com board in one of the Audicy motherboard's available 16 bit ISA slots.

Install MPEG Compression Board

Install the MPEG board in one of the system board's available 16 bit ISA slots.

There are two banks of jumpers on the ASP MPEG board, one next to each of the two edge connectors. These are configured at the factory. If you need to reinstall them, use the following illustrations.

Looking down at the component side of the board, with the mounting bracket to your left:

- JB1: Jump all 3 pairs: 1&2, 3&4, 5&6 (corresponds to port 220h).

1	2
3	4
5	6
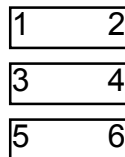
- B2: Jump 3 & 7, (corresponds to IRQ 12).

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1   2  │3│  4

5   6  │7│  8
```
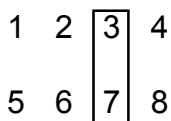
Finishing The Hardware Installation

After you've installed both boards, you should install the software. We recommend you do this with the System Unit's cover still off, just in case you need to reseat a new or existing Audicy board.

Important! Don't replace the cover until you've tested both the software and the network link.

Software Installation

First, Check Your Hardware

Turn Audicy on and let the Job Controller start. Then check the Info Center:About screen. All of the Audicy hardware and the network adapter should show as okay. The MPEG card won't be recognized until you've installed its software.

- If you see any problem, go back and check the hardware. Again, the most likely cause is that the motherboard flexed while you were inserting a card. Check all the cards; not just the Cart System ones.

- If you see an Error display in the I/O module or Memory fields, it is likely that your Audicy's DSP or Memory boards have come unseated.

- Note which Audicy software version is installed. You must have Audicy version 1.5 or higher if you are using the later version of either BE AudioVault or Enco DAD database.

Now start a production using Make Temp. If the production starts, and you can record and output audio, the hardware is okay. But leave the System Unit's cover off until software installation is complete.

Install The Software

Software components must be installed in a particular order; some components will refuse to install until others have been installed before them. Audicy's installation software will warn you if you attempt to install disks out of order, and tell you which software components are missing.

A) Insert the Audicy ASP MPEG Software disk in the System Unit's floppy disk slot, and press the red Reset button.

> The system will reboot and launch the installation software. Follow all on-screen instructions.

B) After MPEG installation is complete, use a similar procedure to install the Audicy Digital Delivery System software disk for the cart replacement system you have.

> **Enco Users:**

> Systems with only one Enco database and cuts server can use factory defaults on the installation disk. If you have multiple DAD servers, have this software installed by your network administrator, or someone familiar with the Enco system's drive, user and server definitions.

> **Note:** A 3-COM Setup Utilities disk is shipped as part of the Audicy-Enco link package. This disk isn't part of the normal installation, but is used for Audicy network hardware configuration: See "Configuration Changes For Coax/Twisted Pair," below.

C) Eject the disk, and put all the disks in a safe place

Checking The Installation

When you have finished installing these hardware and software components, Check Audicy's About screen.

For Enco-DAD systems, the About screen should appear as follows:

> Cart System: ENCO DAD

> Network/Compress: 3Com 509 Peach OK[3]

> Memory mgr: QEMM 7.50

> Network software: Novell okay

For BE AudioVault systems, the About screen should appear as follows:

> Cart System: BE AudioVault

> Network/Compress: 3Com 509[4] Peach OK

> Memory mgr: QEMM 7.50

> Network software: NetBIOS okay

If your About screen matches one of these examples, installation was successful. Put the cover back on your System Unit.

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[3]Some ENCO workstations can't play MPEG compressed files. In this case, you can set up Audicy without compression for compatibility. If you do this, the Network/Compress field will read 3Com 509 none.
[4]Or possibly a different Orban-qualified network card.

Network Connections

The network adapter hardware shipped as part of the Audicy-digital delivery system link kit will handle coax or twisted pair connections. This hardware is typically shipped from the factory set up for coax connection; note that coax network cables must be properly terminated when connected. Follow the same rules in connecting an Audicy's network adapter as you would to connect your specified Workstation to the Server.

Configuration Changes For Coax/Twisted Pair

To switch operation from coax to twisted pair or back, you must run a network adapter setup utility, the 3-Com Setup Utilities Software disk. Since this is not Audicy software, it's not as user-friendly as you might be used to. Here's a guide on navigating through this utility:

A) Make sure the Job Controller is showing, and then turn off Audicy. Insert the 3-Com Setup Utilities Software disk, and turn the power back on.

B) After the system has restarted, follow on-screen directions to "press any key", and continue until you reach the "Configuration and Diagnostic Program" screen.

C) Once you're in this screen the "Configure Adapter" choice will be highlighted. Press *Enter*.

D) The screen will redraw to display the adapter board's settings (reference settings are supplied below). "Autoconfigure" will be highlighted. Press your *Tab* key until the top line of the adapter configuration window; "I/O Base Address" is highlighted. Do not modify this selection, but now, use your *up/down* arrow keys to select or highlight the "Transceiver Type" selection.

E) Press *Enter* if you wish to change this selection, then use the *up/down* arrow keys to toggle your choice between "On-board Coax" and "External." A choice is selected when it appears as a dot between parentheses: (.). Press *Enter* to confirm "OK" on your selection. (Please note that choices may differ depending on network adapter)

F) Confirm that the reading on the "Adapter Configuration" screen is correct, then use the *Tab* key to highlight "OK." Press *Enter*; you should receive a message that your settings are being saved to the adapter.

G) Your cursor should now be on highlighting the "TEST" selection. Use your *left* arrow key to select "Quit," and press *Enter*.

H) You will be returned to a C: prompt. Eject the 3-Com utilities disk, then press *Reset* to re-start your Audicy.

Important! Do not change any other network adapter settings! Doing so will make your system inoperable. Refer to the list of factory defaults below as a reference.

The 3-Com network adapter is software configured at the factory with the following defaults:

I/O base address:	200H
Interrupt request level:	15
Boot PROM size:	disabled
Transceiver type:	on-board coax (user option, depends on local hardware)
Network driver optimization:	DOS client
Maximum interrupt disable time:	250 microseconds (equivalent to 19,200 baud)
Plug and play option:	disabled

Configuration

Configuring BE AudioVault Defaults On Your Audicy

To configure your Audicy to recognize AudioVault, you must know the name of your vault(s). Refer to your AudioVault or system administrator for this information.

Use the pull-out keyboard for all installation commands. Audicy's Console buttons are not active at this time.

Begin the configuration process by inserting the Audicy/BE AudioVault Cart Software Installation disk in the Audicy floppy disk drive, then press *Reset*. If the AudioVault software has not been installed on Audicy yet, this part of the installation will proceed before you can set the defaults. If the AudioVault software has already been installed, the system will detect this, and skip to a screen which displays your current defaults, and allows you to set new ones. The factory presets of these default selections are:

Available Vaults:	PCR1
Default Vault:	PCR1
Compression Type:	MPEG JOINT
Compress. Ratio:	3.20
Attenuation:	−10 dB

To change these defaults:

A) At the prompt: "Do you want to keep the old settings?" type N, or use your *left* and *right* arrow keys to select "NO," then press the *Enter* key.

B) At the next prompt "Are you sure you want to proceed?" press "Y," or use your *left* and *right* arrow keys to toggle "yes," then press the *Enter* key.

There are 5 selectable default choices. Set your defaults according to what you anticipate will be the most commonly used settings. Regardless of what defaults you set, you will still be allowed to make other selections when you are in the Make Cart form screen.

Available Vaults

Since AudioVault users may customize the names of the vaults on their BE system, you must enter those names here. Audicy cannot recognize an AudioVault it doesn't know the name of. Refer to your AudioVault or system administrator for the vault name(s).

Once you type in your first vault name, press the *Enter* key. A blank field will come up where you can type the name of another vault. Press *Enter* again, and you'll see another blank field. Continue this way until all your vaults are entered. After you've entered all the vaults, leave the next field blank and press *Enter*. Audicy interprets a blank field as meaning "I don't have any more vaults to tell you about." You can list up to 8 AudioVault servers.

Default Vault

One AudioVault workstation may be designated as a default from this selection. If you have only one available vault, it will automatically appear as the default. If you have two or more available vaults, use the *left* and *right* arrow keys to toggle to the selection you wish to set as the default, and press the *Enter* key. The default name you select will always appear when you bring up the Make Cart form screen, but you may change your selection from within the form to any available vault.

Compression Type

There are 3 possible default selections in this field: MPEG JOINT, MPEG STEREO, and Linear PCM (no compression). Use the *left* and *right* arrow keys to toggle a selection, and press the *Enter* key to confirm it. Please note that if the library sound you're sending to the AudioVault is mono, and your default is either of the MPEG selections (Stereo or Joint), the system assumes you want MPEG compression and automatically assigns the MPEG Mono algorithm, since Stereo and Joint algorithms can't be used for a mono sound.

Compress Ratio

The MPEG compression ratio you anticipate using most frequently should be set as the default. The Audicy follows the AudioVault's definitions, and offers 6 possible settings: 3.2:1, 4:1, 4.57:1, 5.33:1, 6.44:1, and 8:1. Audio compression schemes like MPEG are data reduction algorithms: They take the original signal,

and remove data from it. Clearly, the higher the compression rate, the greater the risk that compression artifacts will be noticeable.

Attenuation

The AudioVault's meter calibration of "0 dB" is different from Audicy's. In Audicy, "0 dB" is the maximum level before digital saturation or overload, while in the AudioVault world, "0" is several dB lower, such that you have headroom above 0 before you reach overload. To help compensate for this difference in metering, library sounds being sent from Audicy may be digitally attenuated by -3, -6, -10, -12, -15, and -20 dB, to match what you may run as average levels on the AudioVault. The 0 setting offers unity gain, or no attenuation. Select a setting, and press the *Enter* key.

When you have finished making changes, you'll be prompted: "Do you want to accept these settings?" Enter "Y," and your changes will be written to the Audicy, or if you wish to go through the setup again, confirm "No" by pressing the *Enter* key.

Once you have completed setting defaults, eject the BE AudioVault Software disk and press *Reset* to restart your Audicy.

Configuring The ENCO DAD On The Server And Audicy

In order for an Audicy to send sound files to a DAD server, the server must recognize Audicy when it logs on. To facilitate this, a "user" must be created on the DAD server. The following instructions for creating a User were provided by Enco Systems, and should be implemented by your facility's Network Administrator, or other qualified operator. Type in all information exactly as presented.

At a Networked DAD Workstation:

A) Exit completely to DOS (you should see the F:\DAD prompt).

B) Enter the command: LOGIN SUPERVISOR.

C) Enter the command: SYSCON.

D) Choose: USER INFORMATION, then press the *Insert* key.

E) You should see a prompt to enter a new user name. Type the name: Audicy, then press *Esc*.

F) On the pop-up that creates a path to the user's home directory, choose: DSE7000 User name, then press *Enter*.

G) Choose: GROUPS BELONGED TO, then press the *Insert* key.

H) Choose: DAD_GROUP, then press the *Esc* key 4 times to exit SYSCON.

I) Answer the exit pop-up with YES.

Information such as the definitions of Enco cut locations, as well as defaults used when you're in Audicy's Make Cart form, may only be set up on Audicy by running an Audicy/Enco/DAD Cart Software installation disk. When running this installation disk, use your computer keyboard for all installation commands, since your Audicy controller is off-line during software installations.

Begin the configuration process by inserting the Audicy/Enco DAD Cart Software Installation disk in Audicy's floppy disk drive, then press reset. If the DAD software has not been installed on Audicy yet, this part of the installation will proceed before you can set the defaults (defaults are the settings your system always starts with when you enter a form). If the DAD software has already been installed, the system will detect this, and skip to a screen which displays your current settings and defaults, and allows you to set new ones. The original factory settings and defaults are:

Page 1

DSE Login Name:	DSE7000
Database Server:	
DB Network Path:	SYS:DAD\FILES
CUT Locations:	F:
CUT Servers:	
CUT Paths:	SYS:CUTS
Def. Location:	
Attenuation:	−10dB

Page 2

Compress. Format:	MPEG
Bit Rate:	128k (@ 44.1 kHz sampling)
	96k (@ 32 kHz sampling)

Please note: If you do not have MPEG hardware/software installed in your Audicy, you will not gain access to Page 2 of this setup utility.

Enco allows facilities to build elaborate, multi-file server network systems. The factory defaults listed here are designed to work with basic single-file-server systems. Generally, with a single server system it is not necessary to specify a database server or cut server, since the network will automatically pick up files sent from the Audicy login. If you need to alter this minimal setup to include multiple servers, your network administrator should run this part of the install process. As a rule, Audicy's definitions of cut, location (drive) and path, are all borrowed from the DAD/Novell context, and should be consistent with User definitions for DAD workstations. If you enter invalid names, paths or locations, your Audicy/DAD link will not function properly.

To change these defaults, at the prompt: Do you want to keep the old settings?, type *N*, or use your *left* and *right* arrow keys to select No, then press the *Enter* key.

At the next prompt Are you sure you want to proceed? press *Y*, or use your *left* and *right* arrow keys to toggle "yes," then press the *Enter* key.

When you have finished making changes for both pages, you'll be prompted: Do you want to accept these settings? Enter *Y*, and your changes will be written to Audicy, or if you wish to go through the setup again, confirm No by pressing *Enter* key.

Once you have completed setting defaults, eject the Enco/DAD Cart Software disk and press *Reset* to restart your Audicy.

Network link selections, such as login name, paths and locations may not be changed from the Make Cart form, but defaults, such as Attenuation, and MPEG Bit rate may. Set your defaults according to what you anticipate will be the most commonly used settings. Following are explanations of choices in the installation screen.

Audicy Login Name

Whenever you select a library sound to send to the Enco Server from the Make Cart choice, Audicy "logs in" to the network. To successfully log in, Audicy must have a User name that the server. This field is where you would enter a login name, matching one registered as a user on the network. Audicy is listed here as a factory default. You may have multiple Audicy's on an DAD network, all using the same name, or you may use different names, as long as there are matching user names registered on the network.

Database Server

The DAD database is where the master list of cut and cart information is stored. Audicy looks to this database to see what cart numbers are in use so you don't overwrite existing carts, then it updates this database when it sends a new cart. This field is provided for users who have large Enco systems with multiple database servers, but in most cases, as long as you enter in a valid database path in the next DB network path field, you will not need to make an entry in this field.

Please note that you may only use one database server at a time, and even if your Enco system has multiple database servers, you will not be able to select one other than the default from the Make Cart form.

DB Network Path

The Database network path tells Audicy where to look for the database once it has logged in. The standard path is SYS:DAD\FILES. If your database network path differs from this setting, the correct path will be specific to your network set up, and must be provided by your network administrator.

Cut Locations, Cut Servers and Cut Paths

Within a DAD network, its possible for users to store audio in several drives, on multiple servers. Cut location, server, and path can be thought of as the components which define where the actual audio of a cart is kept once it is sent from Audicy. From the Make Cart form, the Audicy user specifies where to send a Cut by entering a location "drive letter." However, those drive letter names must be associated with a Cut server and Cut path in this setup utility, to match the definitions of the DAD system.

The Cut Location field is the drive letter name where you send audio. The drive letters you specify must match those available from your DAD workstation(s). From this field, enter in a drive letter (F: is the default), and press the *Enter* key. The system will now prompt you to enter another drive letter. If you only have one location, press the *Enter* key on this empty field; if you have more than one location where audio will be stored, enter another letter. You may enter up to 4 Cut locations. These location names will be available in the Make Cart form, so you can specify which drive to send a cut to.

Once you have finished entering up to 4 Cut locations, you will be prompted to enter a Cut Server for each of the drive letters you entered. This field links the Cut Location name to a specific server. If you only have one Cut Server, you can leave this entry blank. If you have multiple servers, you must specify which server should be associated with a given location.

Once you have finished entering servers to associate with your Cut locations, you will be prompted to enter network Cut Paths for each of the drive letters you entered. The default is SYS:CUTS, which follows Enco's conventions, and should be valid if you have only one server. If you have multiple servers or volumes, enter the appropriate paths here, based on your Enco network's definitions.

Def. Location

This field allows you to set a default Cut Location, which will be displayed whenever you open the Make Cart form. You may select any of the 4 possible Cut Location "drive letters" as the default, and you may change between these selections in the Make Cart form screen. If you only have one location (F: for example), it will automatically be listed as the default, and you won't have to enter anything in this field.

Attenuation

The DAD's meter calibration of "0 dB" is different from Audicy's. In Audicy, "0 dB" is the maximum level before digital saturation or overload, while in the Enco DAD world, "0" is calibrated 10 dB lower, such that you have headroom above 0 before you reach overload. To help compensate for this difference in metering, library sounds being sent from Audicy may be digitally attenuated by -3, -6, -10, -12, -15, and -20 dB, to match what you may run as average levels on the DAD. The 0 setting offers unity gain, or no attenuation; -10dB is the factory default. You

may select any of the possible levels from the Make Cart form, under the Scale by field. Select a setting using your *left* and *right* arrow keys, and press the *Enter* key.

Compress. format

This field exists on Installation Defaults: Page 2, and is only accessible if you have MPEG hardware/software installed.

From this field you can select whether the Make Cart form defaults to MPEG or PCM16 (no compression). Use the *left* and *right* arrow keys to toggle a selection, and the *Enter* key to confirm it. Regardless of what default you set, you will be able to change selections from the Make Cart form.

Bit Rate

This field exists on Installation Defaults: Page 2, and is only accessible if you have MPEG hardware/software installed.

This field allows you to set a default bit rate for use in sending an MPEG compressed Cart. Available choices range from 128k to 32k, where the higher the Bit rate number, the lower the compression ratio and better the sound quality. Actual MPEG compression ratios are calculated based on the Bit Rate, and the sample rate of the sound you're sending, as discussed in the first part of this chapter.