Operator Manual

Broadcast Electronics

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AudioVAULT Operator Manual
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Section 1: System Architecture and Server Applications

By the end of this section you should understand these key concepts:

- Where audio originates in an AudioVAULT system
- How workstations **control** audio cards
- The types of computers on an AudioVAULT network
- The role of network cabling
- The role of the main server applications

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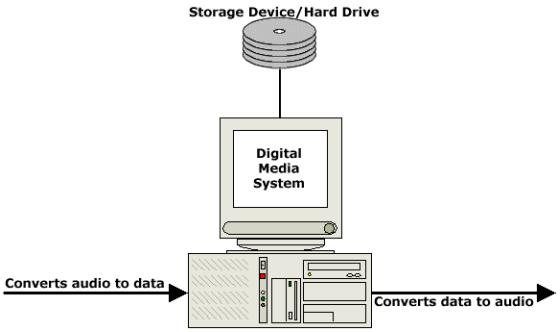
WHAT IS AUDIOVAULT?

AudioVAULT is a digital audio storage and retrieval system for radio broadcast stations. AudioVAULT systems provide radio broadcasters sophisticated digital audio recording and editing functions, storage, and playback of audio: ***music, news reports and segments, commercial announcements, themes, jingles, sound effects and programs.*** AudioVAULT is used in radio stations, station groups and networks of all sizes around the world.

More and more radio stations are turning to digital audio systems as the technology becomes more efficient, less expensive, and better suited to radio environments.



Digital audio systems are simple in concept. They are computer-based products with a few basic capabilities:

- A method of converting analog or digital sound into a digital audio file with computer software.
- A method of storing those digital audio files on a computer hard drive or other storage device.
- A method of converting stored digital audio files back into analog or digital sound with computer software.

Each system handles these three basic tasks with varying levels of complexity. Some may be hardware and software solutions, some may be just software. Most will take different approaches to user interfaces and storage schemes. Each approach has its own strengths and weaknesses.

WHAT DOES AUDIOVAULT DO?

Digital audio systems embody a unique marriage of technologies. Even though they can be overwhelming at first glance however, in many ways you're simply replacing the media you're using now. For example, many radio stations record audio onto carts. With a digital audio system, instead of storing audio on magnetic tape, it's stored on hard drives. A piece of hardware called a **sound card** converts audio into a digital file that's stored on a computer disk.

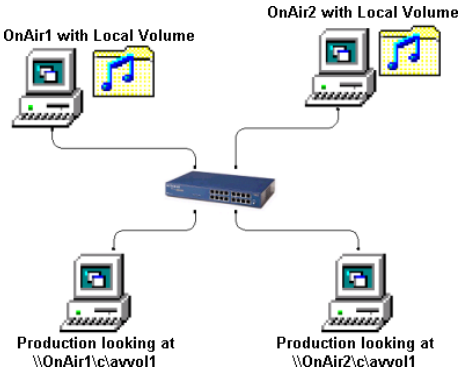
Your AudioVAULT system converts recorded radio commercials, jingles, announcements, news reports, programs, features or music to digital audio data, stores it on computer hard drives, then provides **Dynamic Access** to your digital audio for playback. **Dynamic Access** means:

- Multiple AudioVAULT workstations can record to a single digital-audio storage system at a given time.

- Multiple AudioVAULT workstations have simultaneous access to any single piece of recorded audio.

HOW DOES AUDIOVAULT WORK?

At the heart of any AudioVAULT system is a **professional-quality sound card**. The AudioVAULT system uses two main approaches to audio hardware: the **AV100** audio card, and sound cards from **Digigram**.



Regardless of the hardware platform, the implementation is similar. The AudioVAULT system stores audio files on a central hard drive called a **Volume**. Those files are available to multiple users. This means the audio is recorded into the system once and can be played back by any workstation. In fact, several audio cards can be playing the same piece of audio at the same time.

The sound cards themselves may be located in either the workstations or in a central server. A local area network (**LAN**) is setup between all the computers in an AudioVAULT system, allowing workstations to control remote audio cards, and to allow local sound cards access to remote volumes. The LAN consists of network interface cards (**NICs**), network cabling, and software.

It is important to understand that no audio is passed through the network cabling. The audio originates from the outputs on the sound cards.

MORE ABOUT LANS

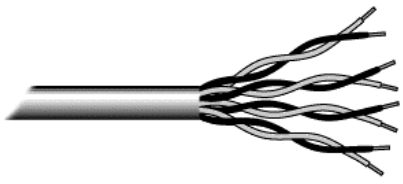
Ethernet networks can be wired with different types of cable, each with its own benefits and drawbacks. Network hardware components exist to easily connect the different Ethernet topologies, allowing a topology to be selected depending on the workgroup environment.

10BASET OVERVIEW

10BaseT is an Ethernet based LAN that uses unshielded twisted-pair cable and RJ-45 connectors to connect workstations, plus one or more hubs.

10BaseT networks are configured in a star pattern. Each workstation or server is located at the end-point of a cable connected to the hub.

Network cables can be up to 100 meters (about 328 feet) from the repeater to computer. The minimum cable length between computers is 2.5 meters (about 8 feet).



UTP cable

FAST ETHERNET OVERVIEW

Fast Ethernet is a generic term for a family of high-speed LAN types running at 100 MBPS over either Category 5 Unshielded Twisted Pair or fiber-optic cable. The main difference between Fast Ethernet and the older 10 MBPS system is speed.

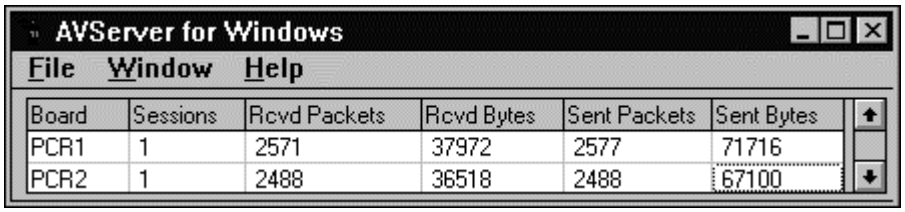
Fast Ethernet is currently the upgrade path most users of 10 MBPS Ethernet systems are using to speed up their networks. There are several reasons for this popularity. The first is that it is fairly easy and inexpensive to convert to Fast Ethernet. Normally, all that needs to be done to a PC to upgrade it to Fast Ethernet is to replace the Network Interface Card (NIC) with a new Fast Ethernet card and load the drivers for the new card.

SERVER APPLICATIONS

AudioVAULT can be considered a client-server system. In addition to the applications that most users see like AVRPS and AVAir, there are applications that work in the background on machines hosting audio cards or volumes. While users don't need to know much about these server applications, operators should know they're there and what they do as part of an overview of the system.

AVSERVER FOR WINDOWS

AVServer for Windows is responsible for making sound cards and volumes available to other workstations or servers. This program runs automatically on startup when Windows starts.

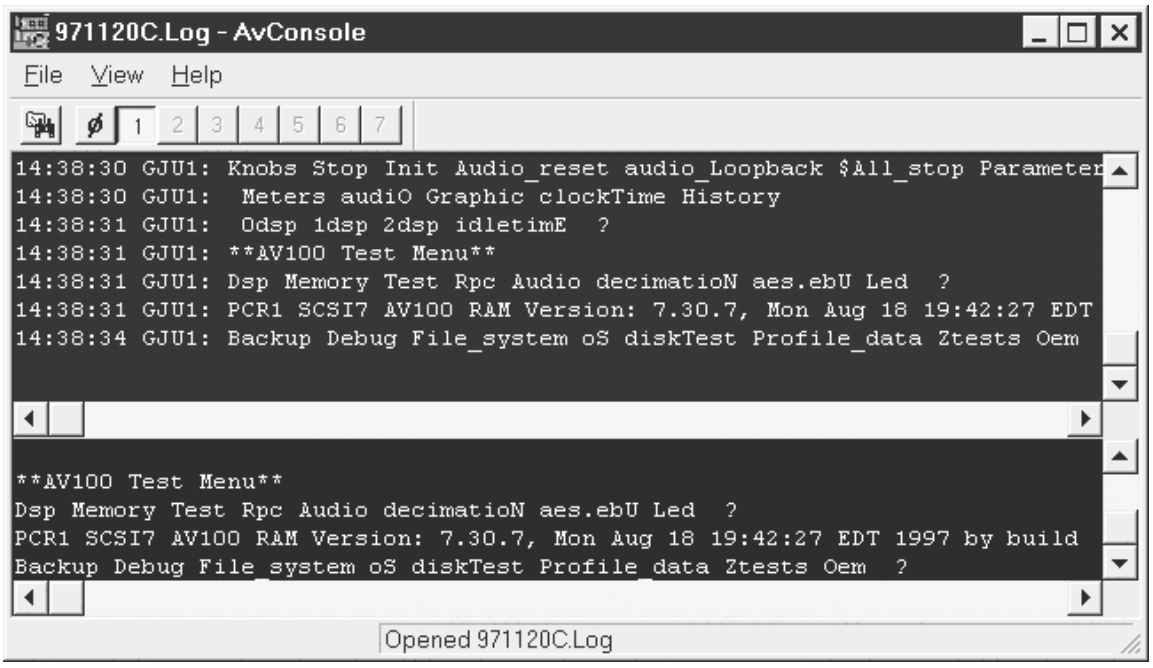


The program displays how many **Vaults** are configured. Other items found with AVServer for Windows display include:

- How many network connections to each Vault
- How long the server has been up and running
- Network traffic

AVCONSOLE

AVConsole for Windows is responsible for reporting how the Vaults are performing. It also creates a daily log of server activity.



AVCONSOLE TOOLBAR

- The icon with a folder & binoculars will pop today's daily log into PFE32, or an alternate viewer
- The 0/NIL icon closes the active console
- The 1-7 icons open the corresponding console. Icons for non-existing Vaults are disabled, as are icons for non-operational Vaults

Each AVConsole instance adds an icon to the system tray. Double click the icon to open/show AVConsole, or right-click on the icon to terminate AVConsole.

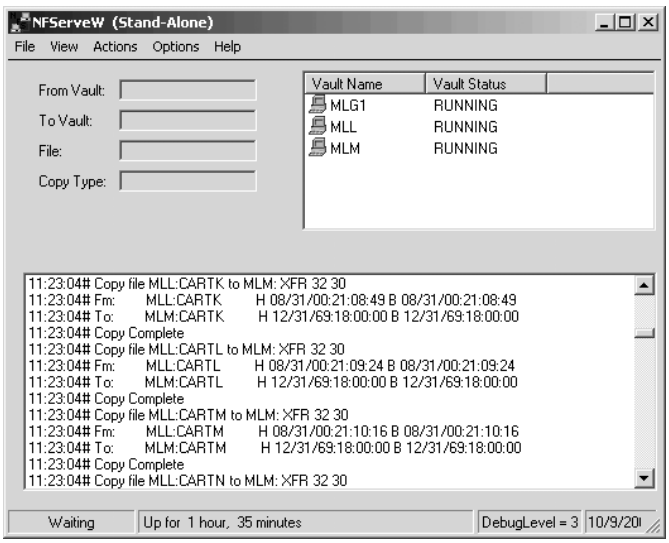
NFSERVER: COPYING FILES BETWEEN VOLUMES

The NFServer program is responsible for transferring items between multiple volumes. This program is only used when a system is configured with more than one volume. A system may run multiple copies of the NFServer program on different machines to increase transfer efficiencies.

The program displays when items are being transferred between servers, as well as the source (**From**) and destination (**To**) Vaults.

This displays also lists the volumes that NFServer is scanning for its information and whether or not NFServer has the ability to connect to the volumes in the list.

You'll also see what items have been copied and information about each file.



AVINIT (AV100 SYSTEMS ONLY)

When an AV100 server is rebooted, the AVInit session initializes all the AV100 cards. It also mounts the hard drives, making them accessible to the rest of the system. Depending on the speed of the server, this process can take several minutes. AVInit runs automatically, and requires no user intervention.

Section 2: Working with AudioVAULT files

By the end of this section you should understand these key concepts:

- Why each AudioVAULT file needs a Unique File Name
- How to set up numbering schemes for single stations
- How to set up numbering schemes for multiple stations
- How to perform basic tasks with AVRPS like:
    - How to record a cut
    - How to re-record a cut
    - How to modify a cut's properties
    - How to delete a cut
    - How to create a cart
    - How to build an Announcer Stack
    - How to create an Editlist
    - How to create and modify a playlist
    - How to re-import your daily Traffic Playlists
- The basics of AVSat operation
- The basics of Net Delay playlists

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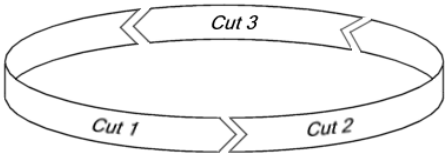
CREATING CUTS AND LISTS

There are a number of types of AudioVAULT files, but the two you will work with most often are **Cuts** and **Lists**. **Cuts** are individual pieces of audio material recorded into the AudioVAULT system. Any audio recording performed on the AudioVAULT results in the creation of a **cut**. AudioVAULT cuts are basically pieces of **digital tape**.

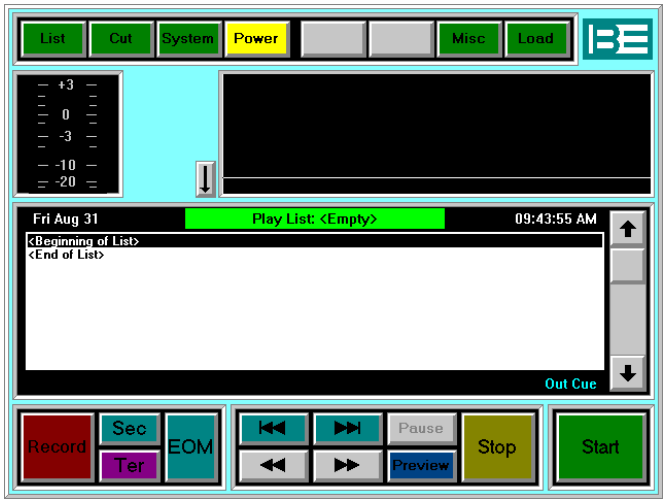
AudioVAULT **Lists** are instruction files. One type of **list** is an AudioVAULT **Cart**, which simply tells the AudioVAULT to play a rotating list of cuts. Carts are used where playback variety is needed, but you do not want to schedule each individual cut. The AudioVAULT system keeps track of which cut is next to play. When the last cut in the AudioVAULT cart is played, the software instructs the cart to reset the pointer to the beginning.



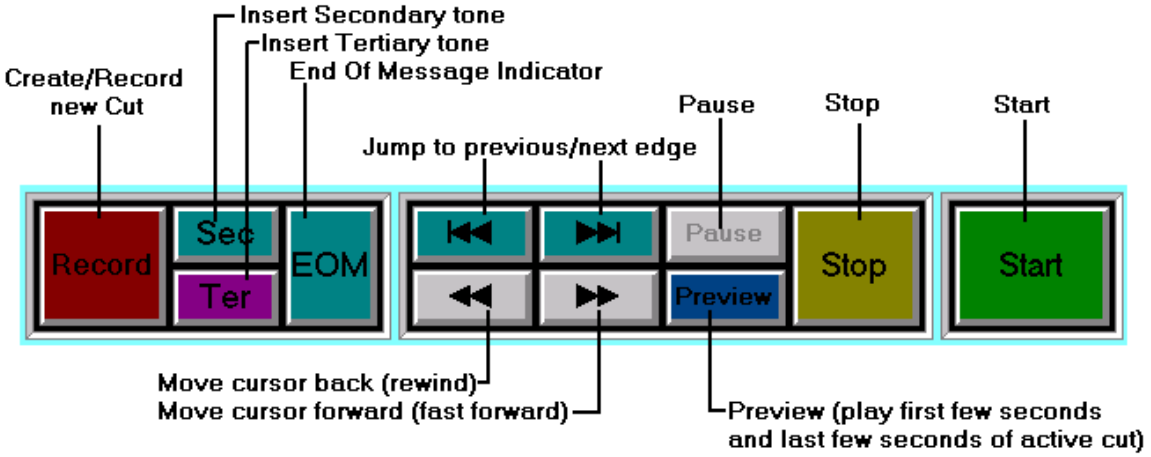
Other types of Lists may include instructions to execute commands like satellite switches and remote starts.

The AVRPS (**A**udio**V**AULT **R**ecord **P**lay **S**creen) is what you will most often use to create and modify AudioVAULT cuts and lists.

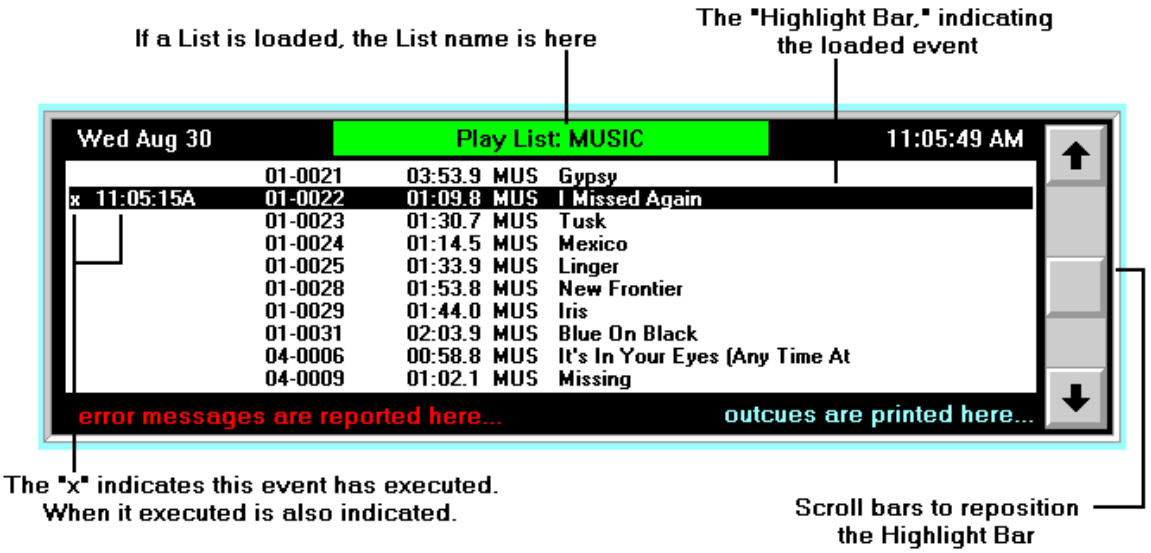
The process of recording a cut with the AudioVAULT system is similar to using an analog tape unit. AVRPS has all the buttons you expect to see on an analog unit…record, start, stop, fast-forward, rewind, and pause.



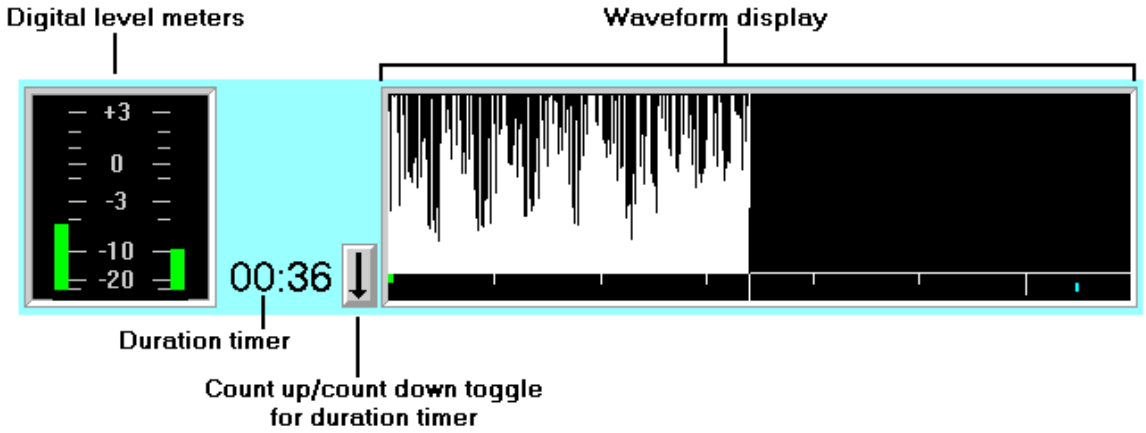
THE CONTROL AND TRANSPORT BUTTONS



THE PLAYLIST BOX



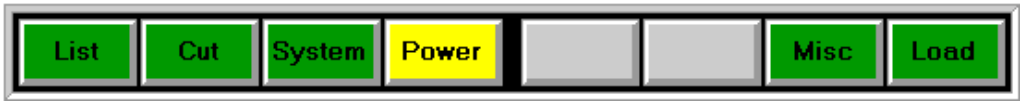
THE WAVEFORM DISPLAY



THE MENU BARS

AVRPS also has a series of menu bars along the top. If you ever get lost, simply click the "Done" button until you get back to the Main Menu.

Main Menu



List	**Pulls up the List Menu.**
Cut	**Pulls up the Cut Menu.**
System	**Pulls up the System Menu.**
Power	**Disables AVRPS functions.**
Misc	**Pulls up the Miscellaneous Menu.**
Load	**Pulls up the Load dialog to load existing cuts and lists.**

List Menu

Load	**Pulls up the Load dialog to load existing cuts and lists.**
Abandon	**Abandons changes made during the current editing session.**
New	**Allows you to create a New list.**
Import/Export	**Allows you to Import information into a list from a text file, or Export information from a list to a text file.**
Save	**Saves the current list.**
Save As	**Saves a copy of the current list under a new name.**
Label	**Allows you to access the List's label information.**
Contents	**If the list is expanded, this allows you to edit the List's contents, to add, change or remove elements.**
Done	**Go up one menu level.**

Cut Menu

Trim & Tones	**Allows to trim begin and end points, add or modify cue tones, or to do basic editing on the current cut.**
Modify	**Allows you to view or modify the current cut's information.**
Save As	**Saves a copy of the current cut under a new name.**
Timed Record	**Puts AVRPS into record ready mode using the current cut information.**
Auto Trim	**Automatically trims off silence before and after the current cut.**
Done	**Go up one menu level.**

System Menu

Help	**Pulls up the AudioVAULT Help File.**
About	**Displays information about your system, including the software version.**
Info	**Shows info about this server's SCSI storage devices.**
Setup	**Allows you to manually select the AV-100 card's input source (analog or AES/EBU digital) and setup other core functions.**
Files	**Access the file maintenance and search screen.**
Shutdown	**Exit the program.**
Done	**Go up one menu level.**

Misc Menu

Mixer	**Allows you to manually change the on-card mixer settings.**
Macros	**Pulls up the buttons for Macros 1-8.**
Indicators 1-8	**Pulls up the buttons for Indicators 1-8.**
Indicators 9-15	**Pulls up the buttons for Indicators 9-15.**
Quick Start	**Pulls up the AudioVAULT Quick Start palette.**
Time Announce	**Allows you to configure AudioVAULT's Time Announce function.**
Done	**Go up one menu level.**

AUDIOVAULT FILE PROPERTIES

In addition to the audio, all AudioVAULT files have other properties. When your create a cut, you'll need to assign some of these properties, including **Name/No.**, **Category**, **Class**, **Description**, **Client/Artist**, **Start and Kill Dates** and **Out Cue**. So what values should be assigned? Many of these properties have nice analogies to terms we're already used to.

A FILE BY ANY OTHER NAME…

The most important property a file has is the **Name/No,** or **filename**. **Regardless of whether a file is a CUT or a LIST, it must be assigned a unique name in your AudioVAULT system during production**. This unique filename guarantees that you will get the correct element each time you call for it, provided that the traffic system is scheduling the correct spot number.

When multiple stations share the same inventory pool they also must share the numbers in that pool. If both stations try to use the same number they will both access the one unique element assigned that filename. The best method for making sure that the correct copy is played on each station is to develop and assign blocks of numbers for each station.

It's important that you plan ahead. With a good plan in place, managing AudioVAULT inventory will be a much easier task. The details of the plan aren't as important as having a plan. This section describes some factors to take into consideration and offers some suggestions, but your plan should take existing numbering schemes into consideration.

NUMBERING COMMERCIALS

Typically, traffic systems generate 4-digit cart numbers. With this in mind, each station should be given a block of these numbers to assign commercial content. We suggest that you divide the 9999 numbers available into groups of thousands and then distribute these groups or ranges of numbers to each station. You may also want to assign a group such as 9000-9999 to hold commercials common to all stations.

NUMBERING MUSIC CUTS

Music numbering schemes are typically designed with the material's source in mind. For instance, if your material is from CDs, your numbering scheme might be designed so it refers to the CD number and the cut on the CD. If the CD number is 2308 and the cut is 11, then your AudioVAULT cut number might be 2308-11.

This method works pretty well, assuming that you only have one CD numbered 2308. If you have duplicate CD numbers you may want to include a library/provider number to the beginning of the cut number. You may assign the **prefix** 01- to songs from one library/provider (**01-2308-11**) and 02 to songs from another provider (**02-2308-11**).

Some music scheduling systems may have a limit to the number of characters that may be used for the song number, so verify that you are within the limits of your software.

AUDIO ELEMENTS NOT SCHEDULED BY TRAFFIC

The items that will be recorded which are not typically scheduled by traffic (*Jingles, Liners, ID's, Voice Tracks*) will also need their own unique numbering schemes.

RESERVED CHARACTERS

File names are alphanumeric, and can consist of the characters A-Z and the numbers 0-9.

Special characters such as (**! # $ & = _ ‘**) can only be used if the characters A-Z and 0-9 also appear in the file name. **BUT SPECIAL CHARACTERS SHOULD BE AVOIDED AS A GENERAL RULE.**

Files that begin with the dollar character (***$***) are considered by the system to be temporary files, and will not be copied by NFS. File names cannot begin with **#** or **=**. The character **=** designates a UFN (Universal File Name), while **#** designates a DOS file.

EXAMPLE CUT NUMBERING SCHEME

An example cut numbering scheme for a facility with 4 stations sharing the same AudioVAULT:

	WBEI	WBDC	WAVU	WAVR
Commercials	1000-1999	2000-2999	3000-3999	4000-4999
Liners	01- prefix	02- prefix	03- prefix	04- prefix
Jingles	01- prefix	02- prefix	03- prefix	04- prefix
Songs	01- prefix	02- prefix	03- prefix	04- prefix
Playlists	BEIMON-BEISUN	BDCMON-BDSUN	AVUMON-AVUSUN	AVRMON-AVRSUN
VoiceTracks	BEIVT000-999	BDCVT000-999	AVUVT000-999	AVRVT000-999

COMMERCIALS can be numeric, with the station number, and then a three-digit number for a total of 999 different numbers per station. For combo buys, use 0000-0999.

Examples:

1528	Nacho Mama/WBEI
1899	Bob’s Tires/WBEI
2355	Bubba’s Tattoos/WBDC
0245	KFC/ALL

LINERS and **JINGLES** can be alphanumeric, with the “01-“ prefix making them unique from the other stations.

Examples:

01-GIVEAWAY	WBEI/Summer Giveaway
01-LUNCH	WBEI/Lunch Bunch Promo
02-CONCERT	WBDC/Skynyrd Concert
03-CONCERT	WAVU/Jazz in the Park Series

SONGS can be alphanumeric, or defined by CD number and track. The “01-“ prefix would make each station’s number set unique.

Examples:

01-0003-10	WBEI/CD 0003-track 10
01-9099-05	WBEI/CD 9099-track 5
02-5020-15	WBDC/CD 5020-track 15
03-0665-12	WAVU/CD 0665-track 12

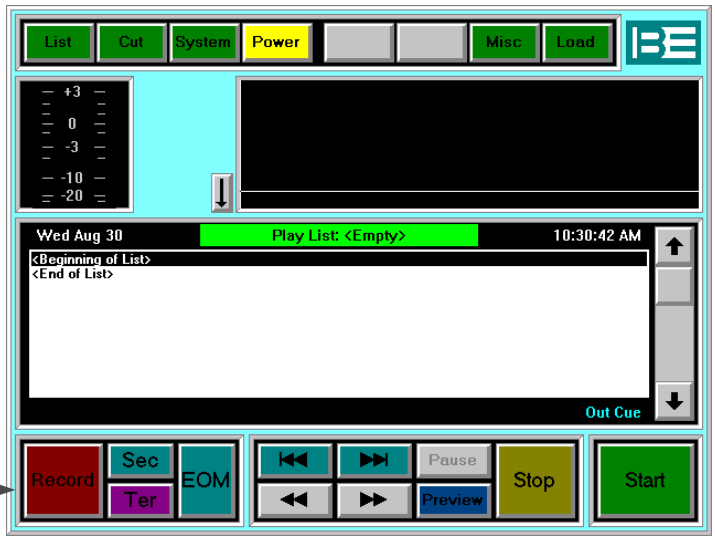
PLAYLISTS are alphanumeric, defined by call letters and day of the week.

VOICETRACKS are alphanumeric, defined by call letters, and a 3-digit number.

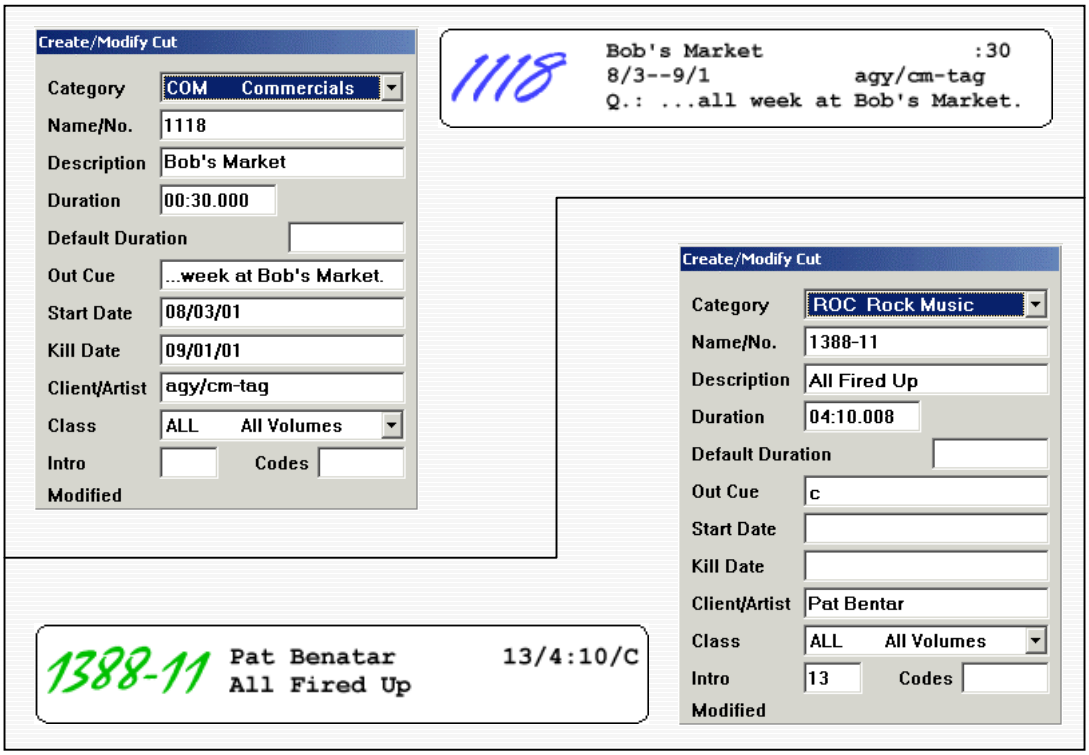
HOW TO RECORD A NEW CUT

Once you have a filename, we're ready to start creating our cut. The process of recording a new cut is pretty simple. We create the cut by clicking on the **Record** button, fill in the cut's **information**, set our **levels**, and **start** the recording. The system, using a function called Auto Trim, will remove any silence from before and after the cut.

Since we want to record a new cut, click **Record**.



Clicking **Record** brings up the **Create/Modify Cut** dialog where we set in this cut's properties. **Name/No.** is the cut number of the file. **Description** is the title of the song or the customer who bought the commercial. **Client/Artist** is who did the production…the artist who recorded the song, or the person who voiced the commercial. **Start and Kill Dates** and **Out Cue** mean the same things in both environments.



Selecting the Category

AudioVAULT **categories** can help you manage your inventory. Each system can have up to 255 categories that can be defined by the System Administrator. Categories can be used to:

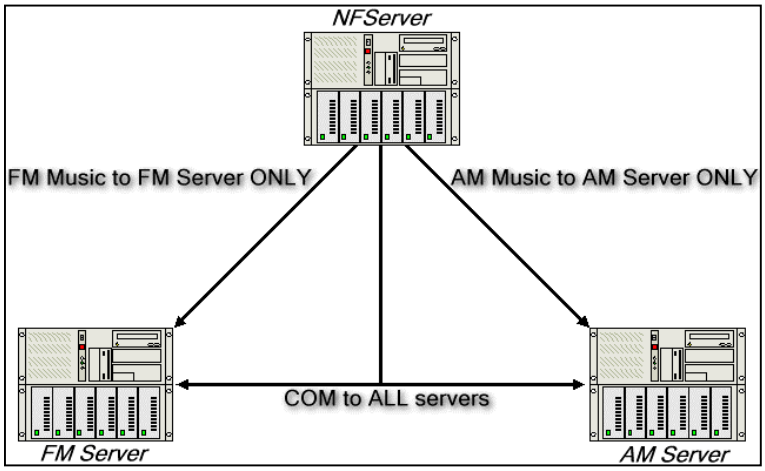
- Put different inventory onto AVAir tabs
- Limit AudioVAULT searches
- Enforce delete security restrictions
- Streamline file maintenance

Category **names** can be up to three characters with **descriptions** of up to 20 characters. Category does not impact filename…you can't have a file 100 in the COM category and a file 100 in the MUS category for example.

Information on adding and modifying categories is included in the System Administrator Training Manual.

Selecting the Class

Class is the property that determines how a file copies to other volumes with NFS. NFS has the ability to route files to different servers based on the file's class.



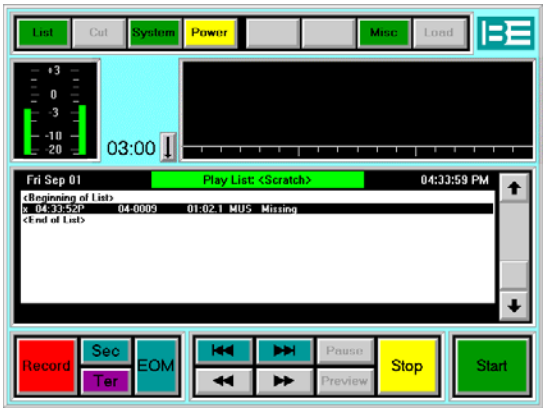
For example, you may want commercials to copy to **ALL** servers, but have FM music go to the **FM** Server **ONLY**, and the AM music go to the **AM** Server **ONLY**.

Three classes could be configured: **ALL**, **FMONLY** and **AMONLY**. Depending on the class assigned to a file, NFS would copy the file to the correct server.

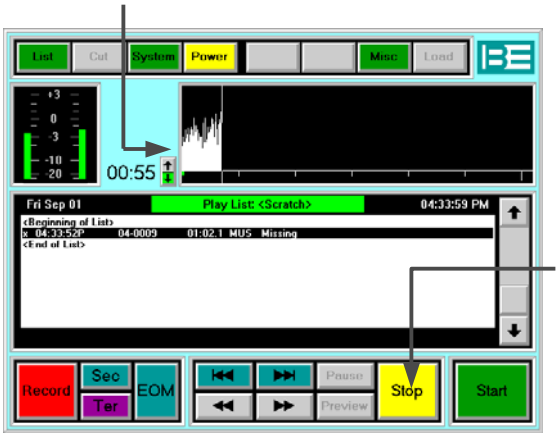
Class depends a lot on how your specific system is set up, so if you have a question about what class a file should have, contact your system administrator.

Once all the information is entered, click the OK button. This puts your AVRPS into a **Record Ready** mode.

In **Record Ready** mode, you can set your levels using the peak meters.



When you're ready to start recording, click **Start**. As audio feeds into the AudioVAULT, the cut's waveform will appear in the AVRPS screen.



When the audio is finished, click **Stop**. The AudioVAULT will stop recording, auto-trim any silence off the beginning and end of the cut, and instantly cues it up for playback.

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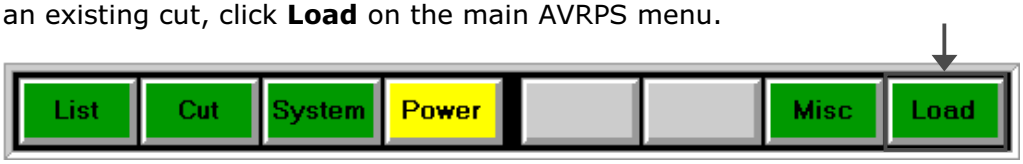
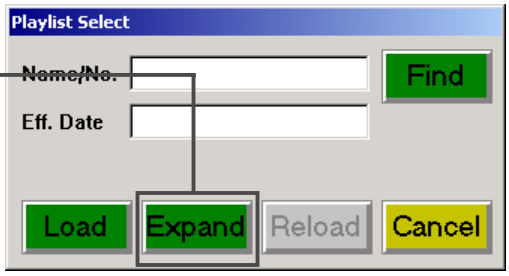
HOW TO FIND AN EXISTING CUT

Your AVRPS comes with a full search tool to help you find a specific piece of audio. To **Load** an existing cut, click **Load** on the main AVRPS menu.

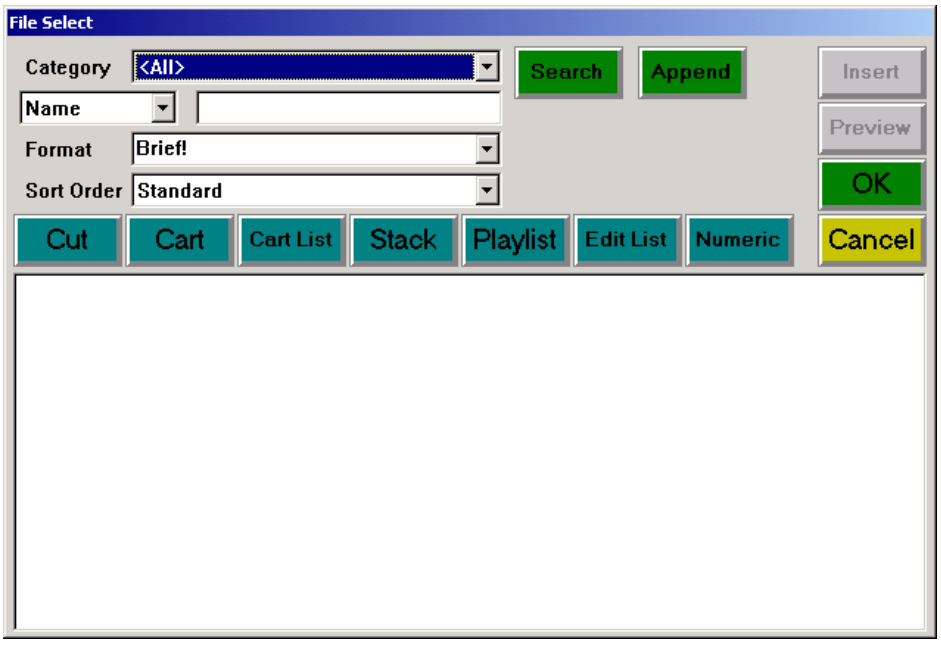


You'll see the Playlist Select dialog. If you know the name of the file you want to load, you can simply type it in to the **Name/No.** field and click **Expand**.



Load and **Expand** perform similar functions. **Load** is used to load individual cuts. The **Expand** button allows you to load Lists and work on their components: **Contents** and **Label**.

If you don't know the specific name of the file, click the **Find** button on the **Playlist Select** box to bring up the **Search** dialog.



The **File Select** dialog allows you to refine your search. Leaving the selection criteria fields open will report back every file on your system.

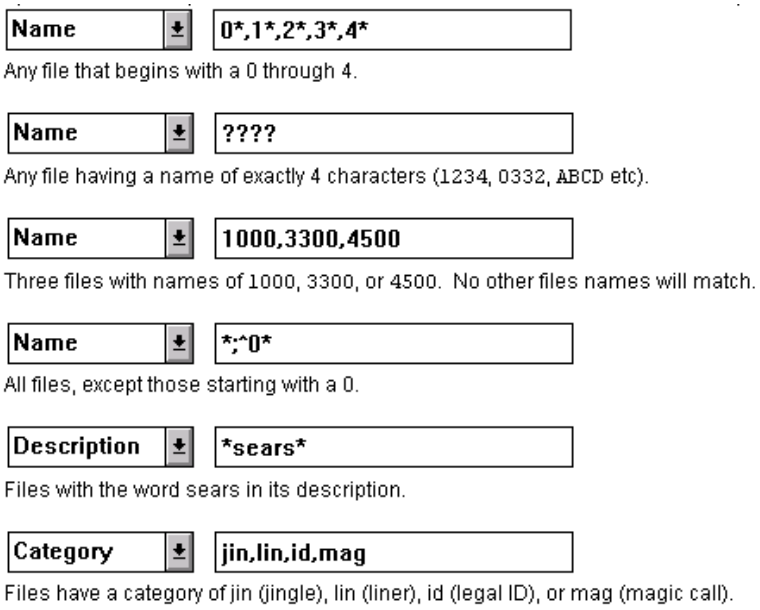
You can narrow your search by selecting a specific **Category** from the drop-down box, and by applying filters to the field selected here.

Available fields to filter are **Name**, **Description**, **Class**, **ClientID**, **Codes**, **Out Cue** and **Category**. The strength of using this field is that complex searches can be performed. By using a comma for example, multiple parameters can be applied to your search.

Other special characters that can be used in a search:

Character	Purpose
***** (asterisk)	Zero or more of and character(s)
? (question mark)	Any single character
^ (circumflex)	Files "except" the following--Remove names from those which have matched so far

For example:



By modifying the **Format**, we can change the information that appears in the search box. The search formats are defined in the AUDIOVAU.INI file, and can show information including Kill Dates, Length, and Category/Class.

This choice dictates what order the matched files are displayed.

Sort	Result
Standard	Alpha-numeric. "01000" comes BEFORE "11000" because the first letter of "01000" (0) comes before the first letter of "11000" (1) (ASCII sort). This order is the power-up default.
Numeric	Treats the names as though they were numbers. 01000 comes BEFORE 11000 because 1000 is (much) less than 11000.
None	Displays the names in directory-order.

Additional filtering can be done with the blue buttons on the File Select dialog. As with all buttons in the AudioVAULT software, when the button is illuminated, the choice is enabled.

Cut	When enabled (bright) show only **Cuts**.
Cart	When enabled (bright) show only **Carts** (rotating lists).
Cart List	When enabled (bright) show only **Cart Lists** (non-rotating lists).
Stack	When enabled (bright) show only **Stacks**.
Playlist	When enabled (bright) show only **Playlists**.
Edit List	When enabled (bright) show only **Edit Lists**.
Numeric	When enabled (bright) show only files that are **Numerically** named.

Other buttons on the File Select dialog include:

Search	This button initiates the search. The button is dim while the search is in progress.
Append	This is like Search, but anything that was previously displayed is retained (**Search** clears the list, **Append** doesn't).
Insert	When accessing the File Select dialog via the **Insert Line** button, this button is enabled and allows multiple files to be inserted.
Preview	This allows the highlighted item to be auditioned.
OK	Stop searching (*if still searching*) and return the selected name to the previous dialog.
Cancel	**Exit** the File Select dialog and return to the previous dialog but do NOT stop searching (*if in progress*).

Once you've found the specific file you want, highlight it and click **OK**. That will return that filename to the **Load** dialog. Click **Load** (or **Expand**) and the file will be loaded into AVRPS and be ready to play or edit.

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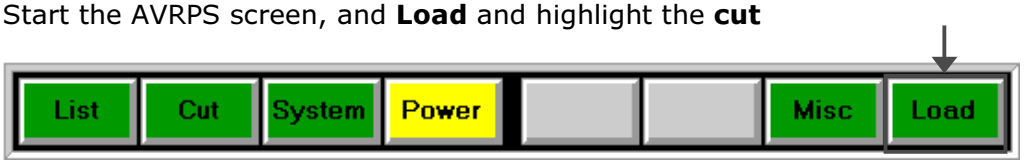
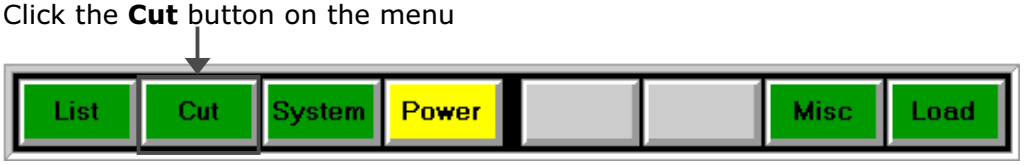
HOW TO RE-RECORD A CUT

Sometimes it's necessary to replace the audio of an existing file. You can replace the audio without having to retype the file's properties by using AudioVAULT's **Timed Record** function.

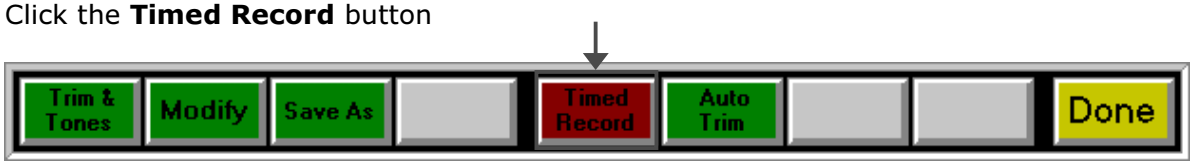
Start the AVRPS screen, and **Load** and highlight the **cut**



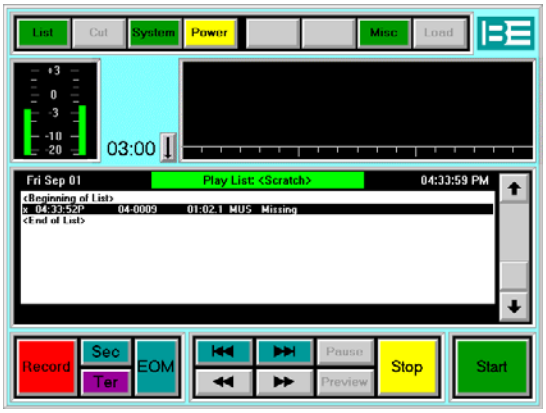
Click the **Cut** button on the menu



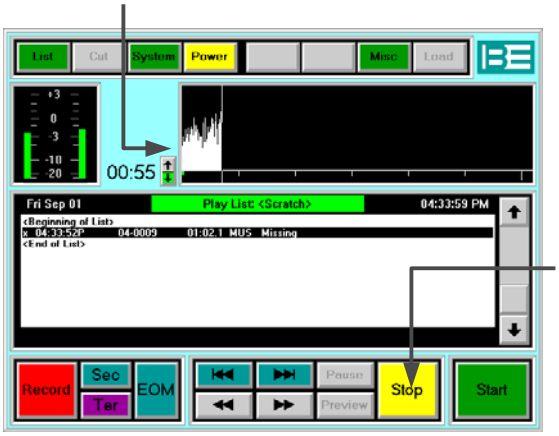
Click the **Timed Record** button



Once you click the Timed Record button, you'll be in **Record Ready** mode. Here, you can set your levels using the **peak meters**.



When you're ready to start recording, click **Start**. As audio feeds into the AudioVAULT, the cut's waveform will appear in the AVRPS screen.



When the audio is finished, click **Stop**. The AudioVAULT will stop recording, auto-trim any silence off the beginning and end of the cut, and instantly cues it up for playback.

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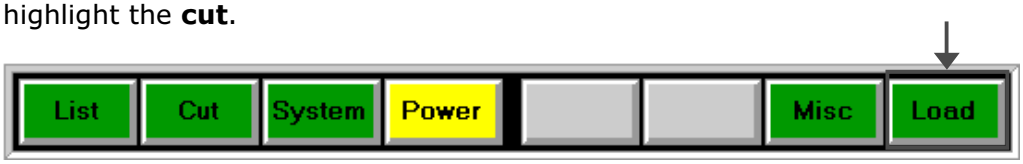
HOW TO MODIFY A CUT

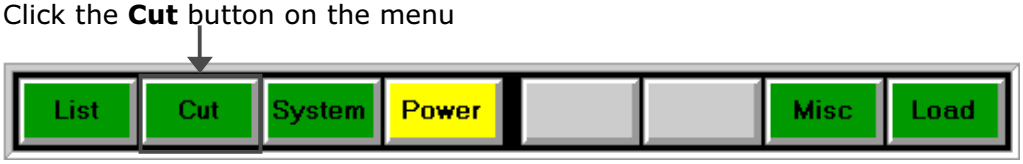
When working with cuts, there are two parts of the file you'll work with: **audio** and **properties**. **Audio** is the actual sound associated with the file. The properties of a cut include things like **Sec Tone positions**, the **description**, and the **start and end dates**.

Audio	Properties	
	Cut|Modify	Trim & Tones
Record TimedRecord	Category Name/No. Description Default Duration Out Cue Start Date Kill Date Client/Artist Class Intro Codes	Audio Begin & End Points Sec Tone Begin & End Points Ter Tone Begin & End Points Gain Convert to EditList

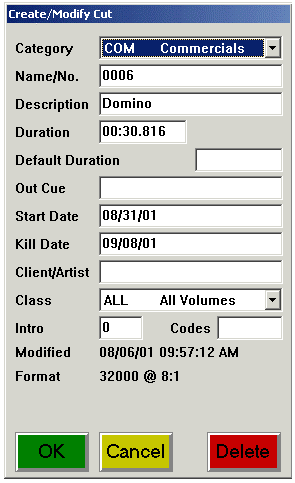
The **How to Re-Record a Cut** section covers how to modify the **audio** of a cut…this section will focus on modifying the **properties** of a cut. First, start the AVRPS screen, and **Load** and highlight the **cut**.



Click the **Cut** button on the menu

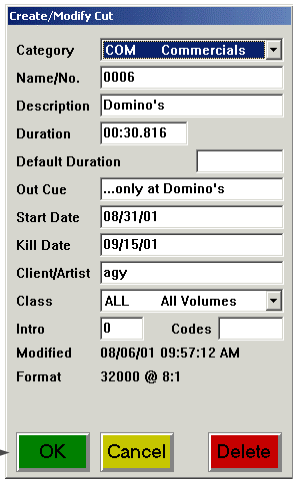


Click the **Modify** button



Now we have full access to this cut's properties. We can modify any of these properties just by typing in the new value. One we've made the changes, click on the **OK** button, and your changes are saved. In this example, we've modified the **Description**, added an **Out Cue** and **Client/Artist** information, and extended the **Kill Date** by a week.

As soon as hit **OK**, the changes will be saved with this cut.



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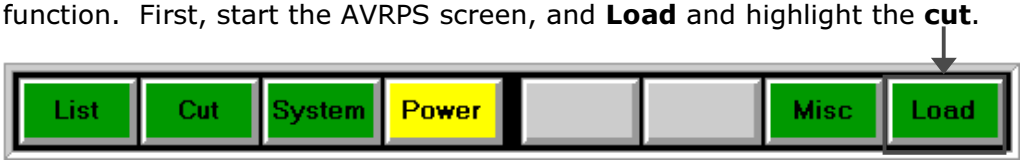
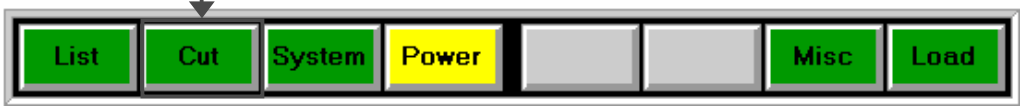
HOW TO MODIFY A CUT'S TRIM AND TONE POINTS

Adjustments to a cut's audio properties can be made with AudioVAULT's **Trim & Tones** function. First, start the AVRPS screen, and **Load** and highlight the **cut**.



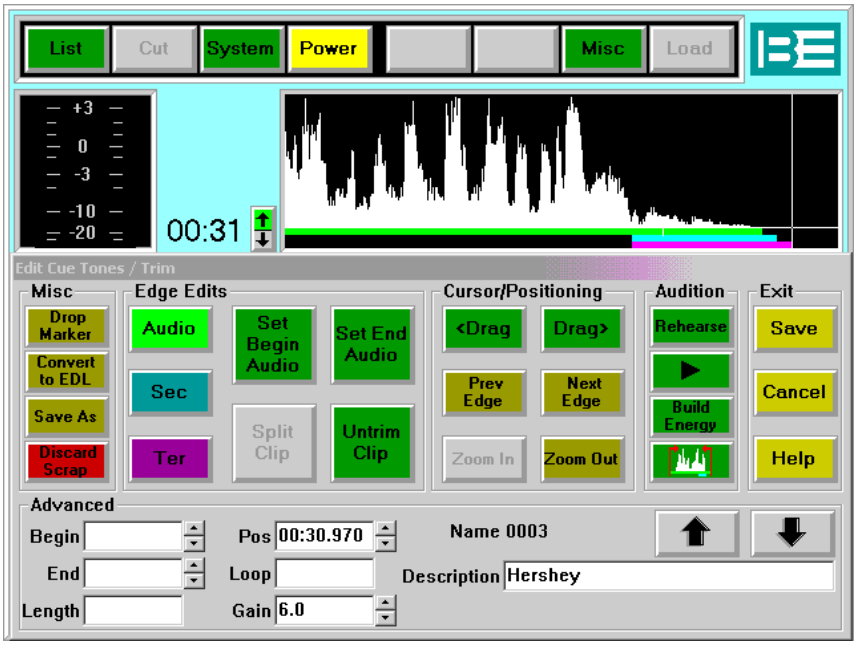
Click the **Cut** button on the menu



Click the **Trim & Tones** button

From this window, you can trim the **begin** and **end** points of the **audio**, and insert or modify **secondary** and **tertiary** tones.

There is space for three bars underneath the audio's waveform. Each represents a different part of this cut:



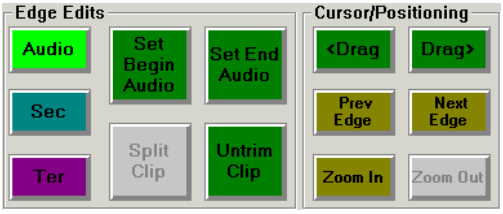
- Audio
- Secondary
- Tertiary

When this cut is loaded to play, only the portion of the file defined by the green bar will actually play back.

The **secondary tone** can allow you to overlap files in AVAir. AVAir will fire the next event when it hits the leading edge of the secondary tone. The audio will continue to play to the end of the file (defined by the green audio bar).

The purple bar represents a **tertiary tone** that can be configured by your system administrator for any number of remote control purposes.

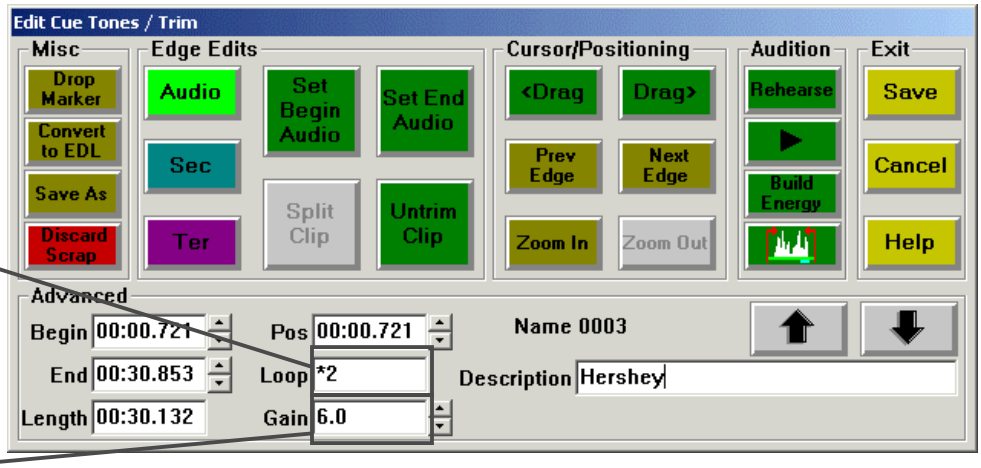
You can modify each of these three **edges** by clicking on them with the mouse and dragging them to their new position. You can also position the cursor where you want the edge to be and use the Edge Edits group to set the edges.



Once you made the necessary adjustments to the edges, click **Save** to save your changes and close the **Trim & Tones** dialog.

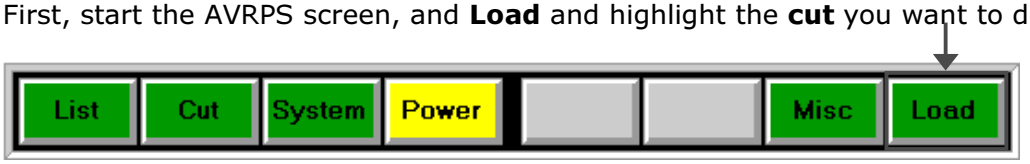
You can also force this cut to **Loop** from this dialog. You can loop an element a specific number of times (***2***) or for a specific duration (***30.0***).

Adjustments can also be made to the cut's **Gain** level. The adjustment is applied to the entire cut.

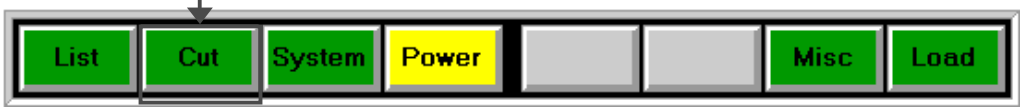


HOW TO DELETE A CUT

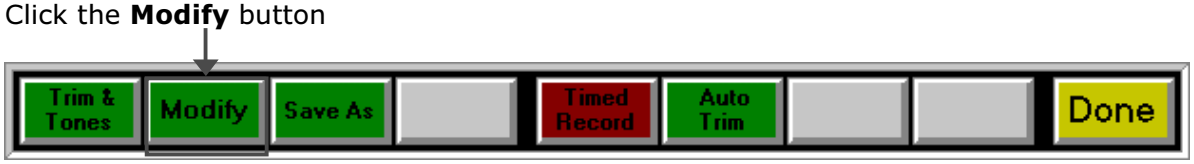
First, start the AVRPS screen, and **Load** and highlight the **cut** you want to delete.



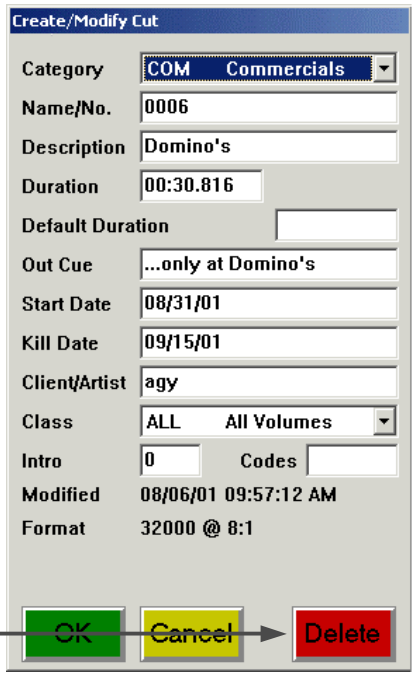
Click the **Cut** button on the menu



Click the **Modify** button



Now we have full access to this cut's properties. We can modify any of these properties just by typing in the new value. We can also delete the file from here, by clicking the **Delete** button.



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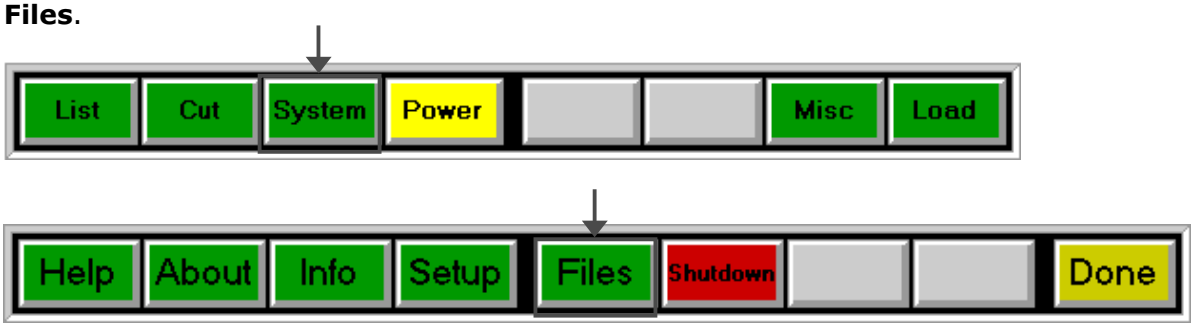
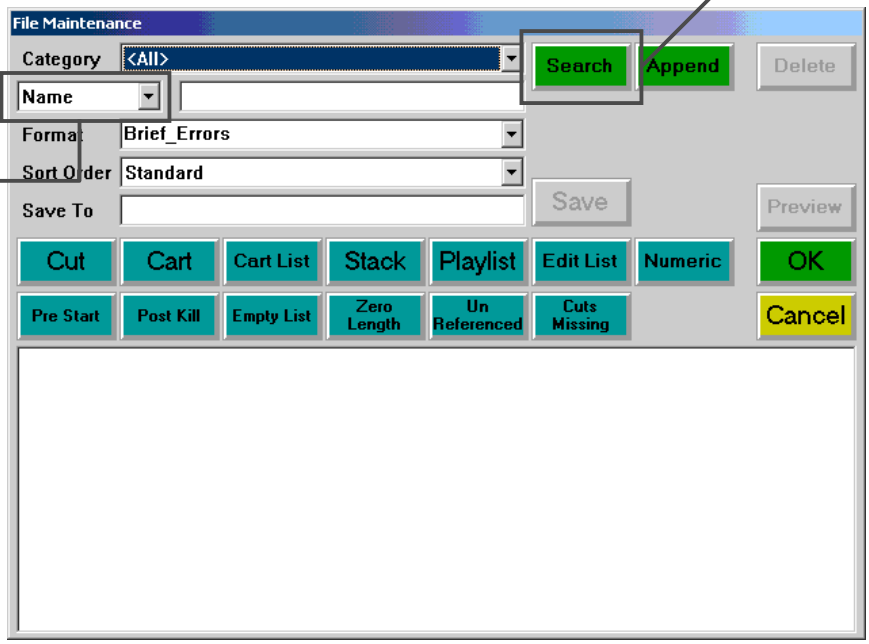
HOW TO CONDUCT DETAILED SEARCHES

There are other ways to delete AudioVAULT files. You can also delete a file, or group of files, with the AVRPS **File Maintenance** screen. In AVRPS, click the **System** button, and click **Files**.



You can also delete AudioVAULT files From the **File Maintenance** screen. The first step to deleting a file is to find it. By leaving the **Category** and **Name** fields blank, clicking **Search** will show all files in the system.

You can refine your search by selecting a specific **Category** from the drop-down box, and by applying filters to the **field** selected here.



Available fields to filter are **Name**, **Description**, **Class**, **ClientID**, **Codes**, **Out Cue**, **Category**, **Title** and **Artist**.

The strength of using this field is that complex searches can be performed. By using a comma for example, multiple parameters can be applied to your search.

Other special characters that can be used in a search:

Character	Purpose
* (asterisk)	Zero or more of and character(s)
? (question mark)	Any single character
^ (circumflex)	Files "except" the following--Remove names from those which have matched so far

These searches are performed just like the searches in the **File Select** dialog.

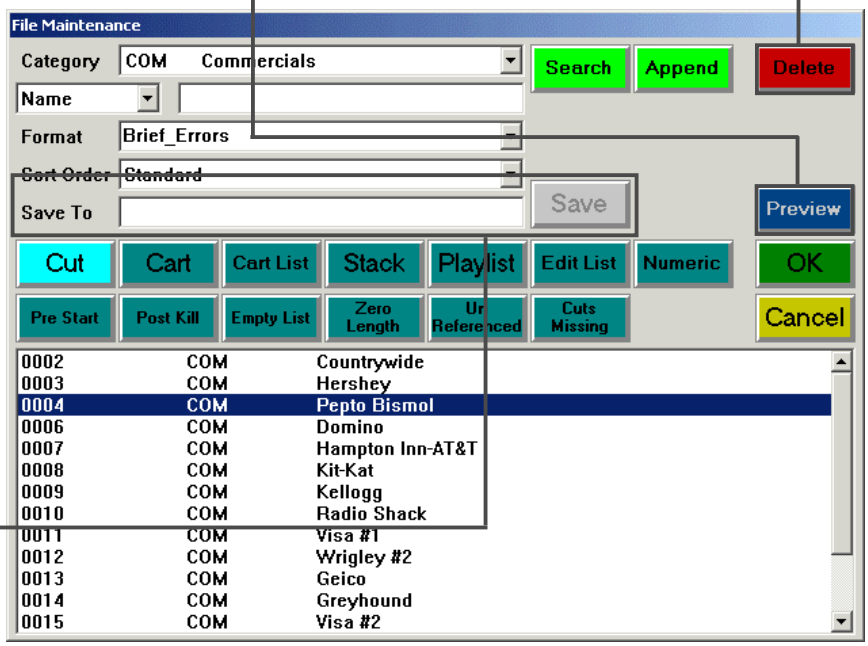
Additional filtering can be done with the blue buttons on the **File Maintenance** dialog. As with all buttons in the AudioVAULT software, when the button is illuminated, the choice is enabled.

Cut	When enabled (bright) show only **Cuts**.
Cart	When enabled (bright) show only **Carts** (rotating lists).
Cart List	When enabled (bright) show only **Cart Lists** (non-rotating lists).
Stack	When enabled (bright) show only **Stacks**.
Playlist	When enabled (bright) show only **Playlists**.
Edit List	When enabled (bright) show only **Edit Lists**.
Numeric	When enabled (bright) show only files that are **Numerically** named.
Pre Start	Limits the search results to files that have **Start Dates** in the future.
Post Kill	Limits the search results to files past their **Kill Dates**.
Empty List	Limits the search results to **Lists** that have no **Contents**.
Zero Length	Shows files that are **zero-length**. Should be used with the **Cut** button.
Un Referenced	Shows all files that are not referenced in a List.
Cuts Missing	Shows all lists that have missing elements.

Once you've set all your filters, clicking **Search** will return all files fitting the specified criteria. By highlighting one of the files, you can **Preview** the audio, or **Delete** the file.

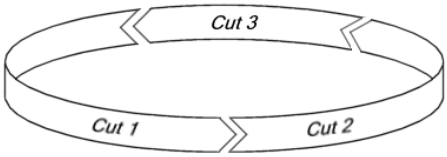
Multiple files can be tagged for deletion. Holding down the **Shift** key as you click with the mouse will highlight an entire block of files. Holding down the **Ctrl** key as you click with the mouse will highlight additional single files.

The search results can also be saved to a text file. Type a **path** and **filename** into the **Save To** field and click **Save**.

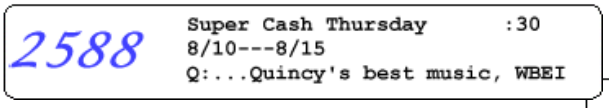


HOW TO BUILD A CART

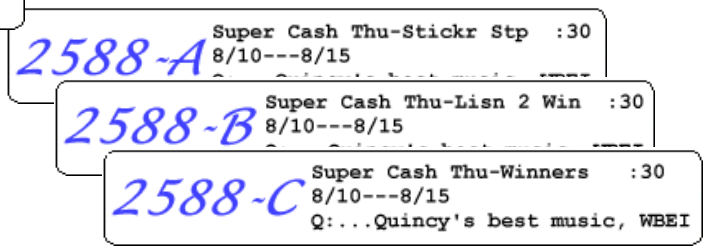
AudioVAULT **Lists** are instruction files. One type of **list** is an AudioVAULT **Cart**, which simply tells the AudioVAULT to play a rotating list of cuts. Carts are used where playback variety is needed, but you do not want to schedule each individual cut.



AudioVAULT **Carts** have two parts…the **Label** and the **Contents**. The **Label** is the number that will be scheduled by traffic. The **Contents** is the list of elements that will rotate under that number.



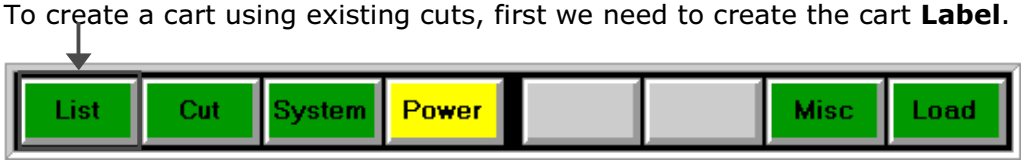
In this example, 2588 is the cart number. In our virtual cart, we'll rotate 3 different cuts.



Our 3 cuts are 2588-A, 2588-B and 2588-C. The number scheduled by traffic (and loaded by AVAir) will be 2588…the system will automatically pull up the correct cut, and rotate between the three, similar to a standard tape cart.

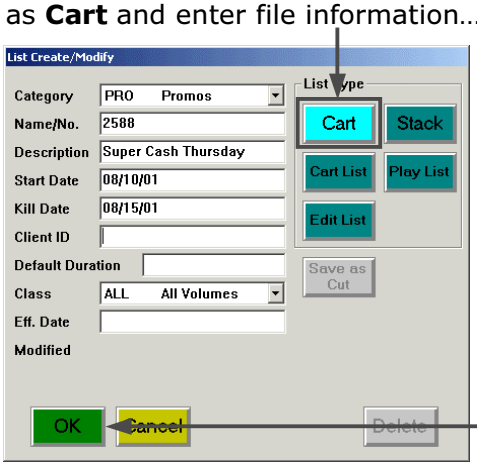
There are two ways to build a cart in AVRPS.
Create the cart and insert existing cuts
Create the cart and record new cuts

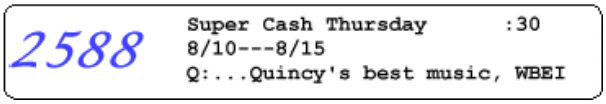
To create a cart using existing cuts, first we need to create the cart **Label**. Click **List.**



Click **New**

Set type as **Cart** and enter file information…

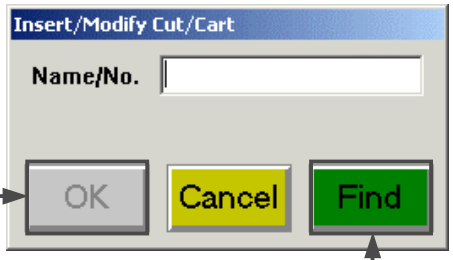




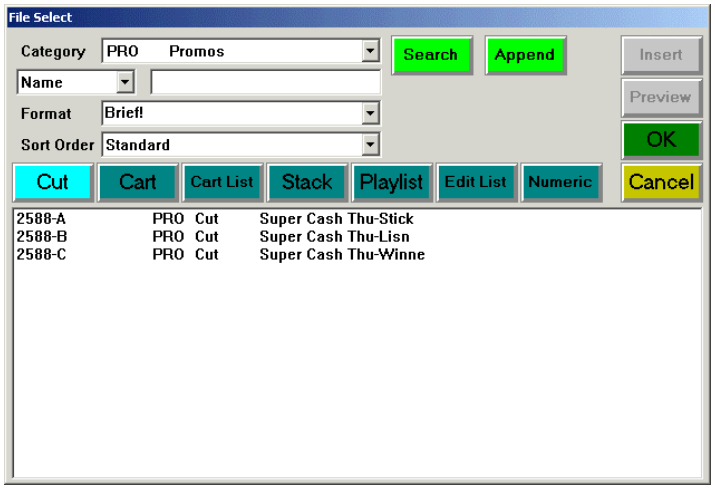
…and click **OK** to create the **Cart Label**.

Now that we've created the cart label, we can **insert** events into it. Click **Insert Line**.

If you know the names of the elements you want to rotate in this cart, you can type the filenames into the **Name/No.** field and click **OK**.



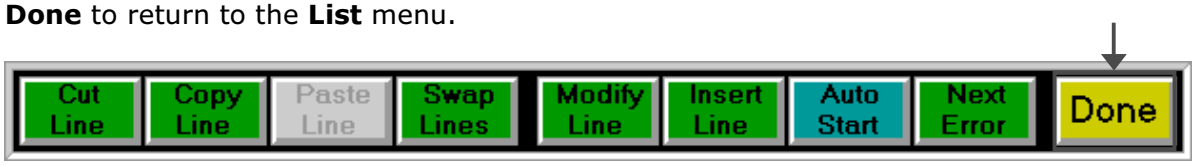
If you're not sure of the exact names of the files you want to rotate, click **Find**.



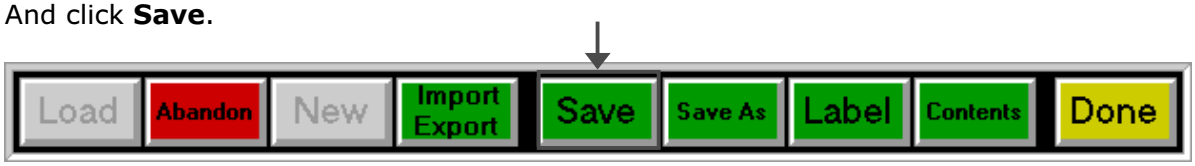
You can set multiple filters and search your inventory for cuts to insert into your cart. When you find the cut you want, highlight the cut and click **OK**.

The filename will be returned to the **Insert/Modify Cut/Cart** dialog. Clicking **OK** there will insert the element into your cart.

Once all of the elements have been inserted into the cart, you should **Save** the changes. Click **Done** to return to the **List** menu.



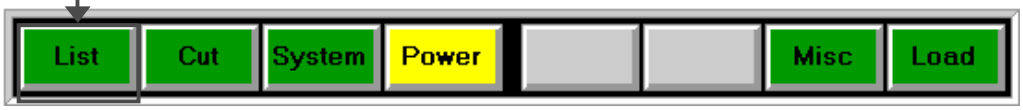
And click **Save**.



When you're done, click **Load**, hit the **Backspace** key, and click **Load**.

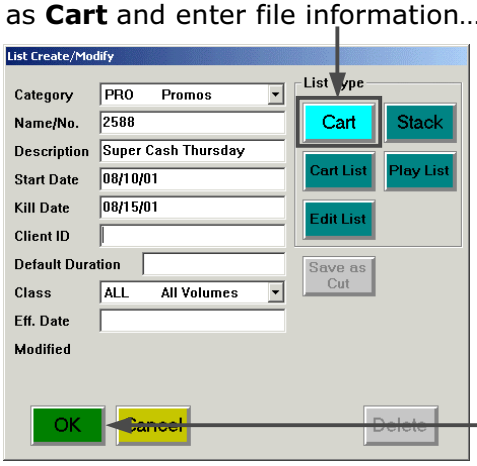
This returns the machine to the blank or empty scratch list, and prevents the next user from modifying your cart accidentally.

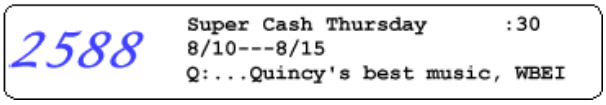
To create a cart when the cuts haven't been recorded yet, we still need to create the cart **Label** first. Click **List.**



Click **New**

Set type as **Cart** and enter file information…

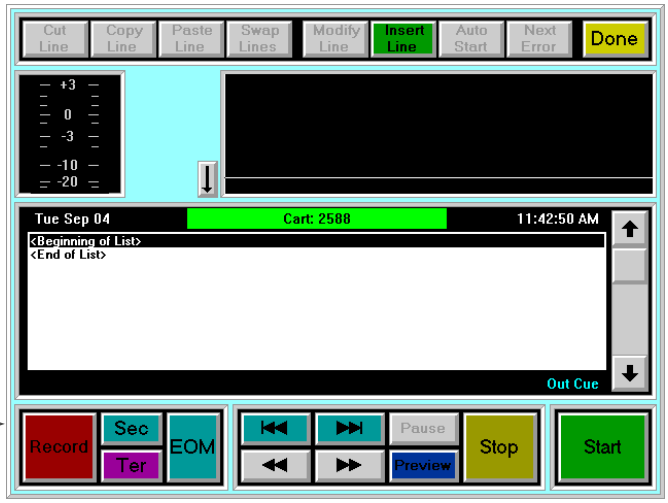


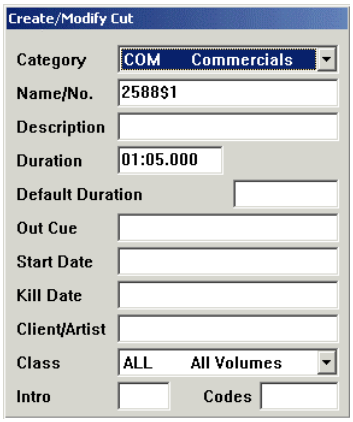


…and click **OK** to create the **Cart Label**.

Now that we've created the cart label, we can **record** events into it.

Click **Record** to record a new **cut**.



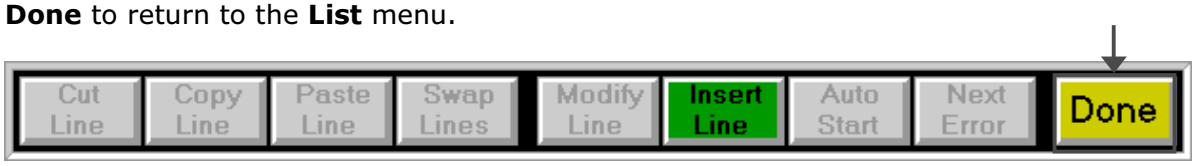


AudioVAULT will suggest a filename based on the name of the cart. It appends a **$1** on the end of the cart number for the new filename…the next cut's suggested name would be **$2**, and so on.

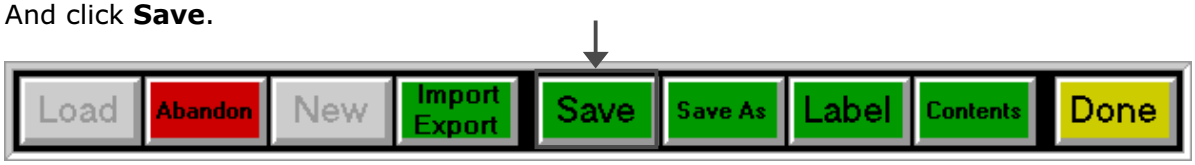
You can either stick with the suggested **dependent filename**, or type in your own name.

Once you've entered this cut's information, click **OK** to put AVRPS in **Record Ready** mode.

Once you've recorded all the new elements into the cart, you should **Save** the changes. Click **Done** to return to the **List** menu.



And click **Save**.

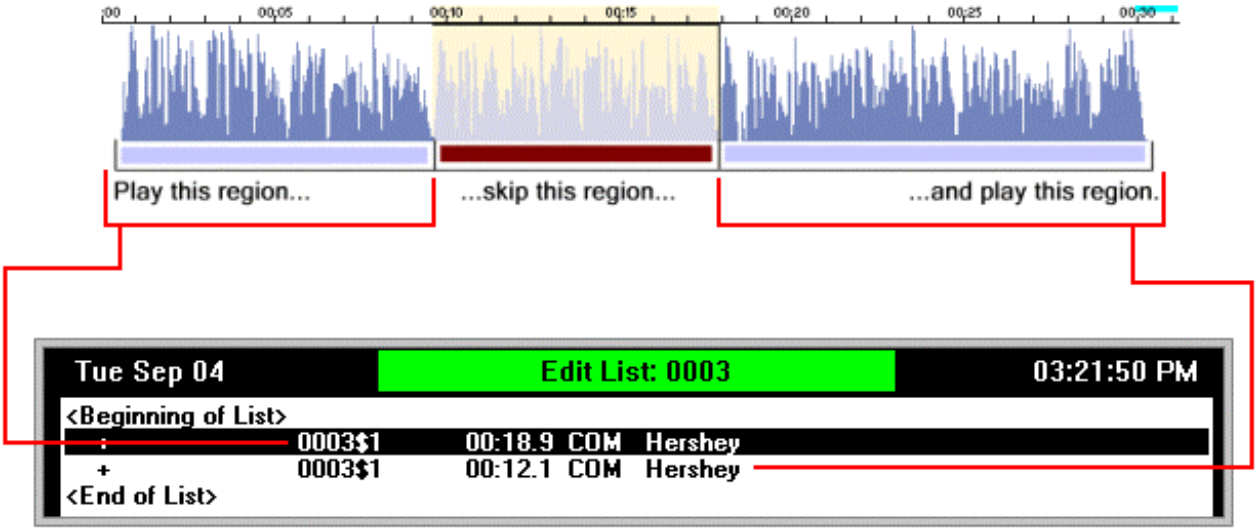


When you're done, click **Load**, hit the **Backspace** key, and click **Load**.

This returns the machine to the blank or empty scratch list, and prevents the next user from modifying your cart accidentally.

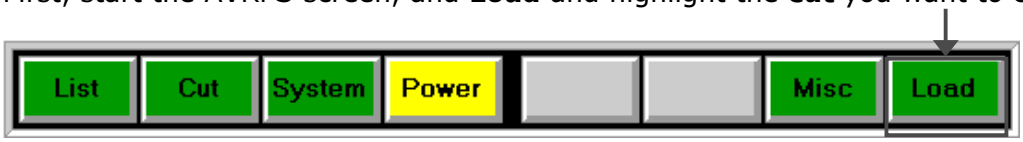
HOW TO CREATE AN EDIT LIST

Sometimes a file needs more than its begin and end points adjusted. To accomplish this, we can convert the file into an **Edit List**, which only plays specific regions of an audio cut or cuts.

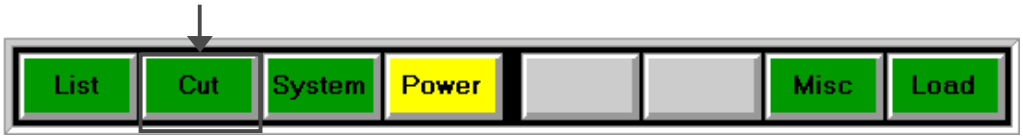


The process of creating an Edit List **splits** the original cut into multiple **clips**. All of the clips are saved to the Edit List as **auto-started elements**, meaning when you play back the file, each clip will start the next clip with no delay in between.

First, start the AVRPS screen, and **Load** and highlight the **cut** you want to edit.



Click the **Cut** button on the menu

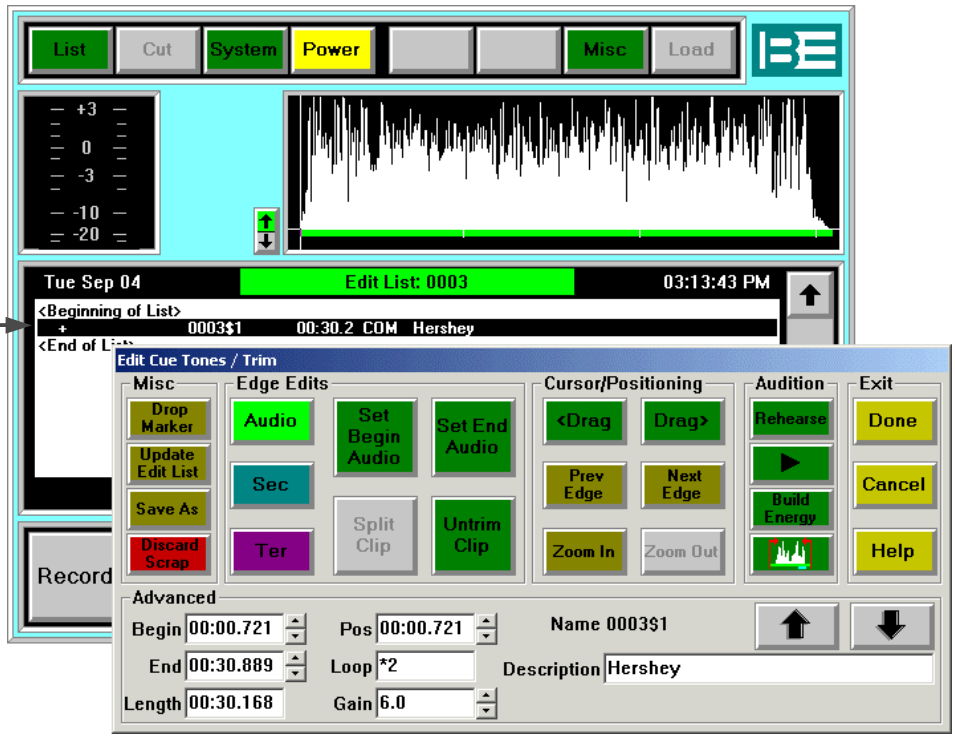


Click the **Trim & Tones** button

The first step of creating an Edit List is to convert our **cut** into a **list**. In the **Misc** group on the **Trim & Tones** screen, click **Convert to EDL**.

This raises some tricky issues with regards to the filename. If we're editing cut **0003** for example, we want the filename of our edited list to be **0003**…otherwise, we'd have to change the number being called in all of our scheduling software.

Clicking **Convert to EDL** creates a new edit list using the file's original name. The original cut is renamed with **$1** appended to the original name.

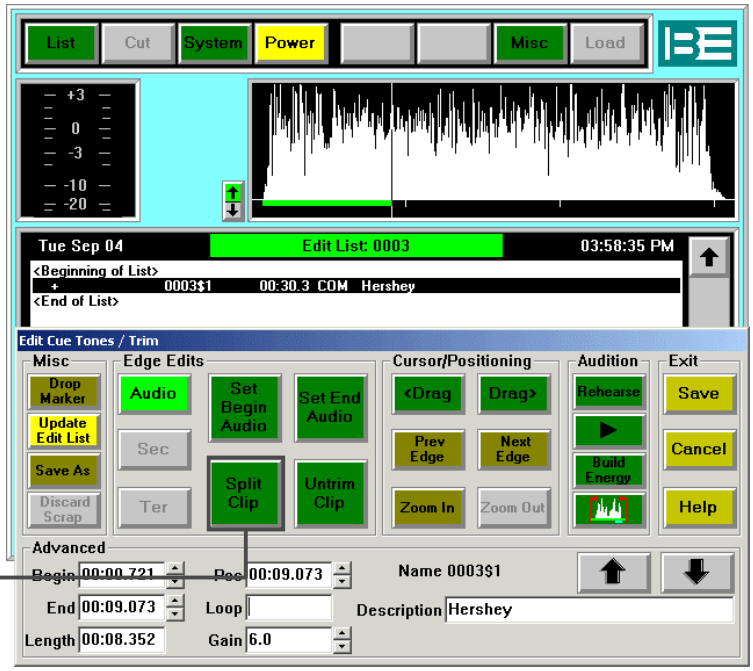


Now we can start updating our edit list and splitting the file into the different regions we want to define.

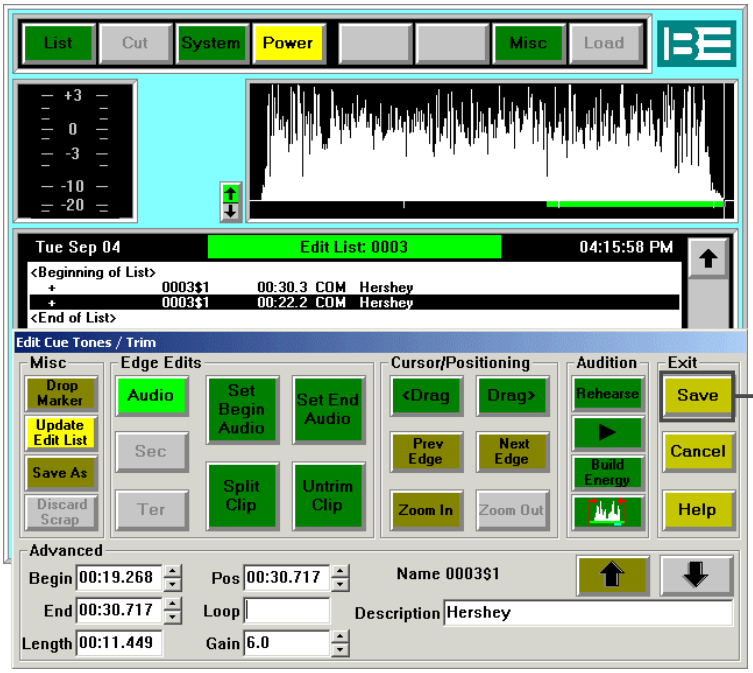
Click **Update Edit List** so it turns bright yellow.

Position the cursor at the end of the first region you want to define. You may want to use the **Cursor/Positioning** tools to get the cursor where you want it to be.

Think of this as marking the piece of tape we're going to set aside to splice into our final edit. When you're ready to make the cut with the razor blade, click **Split Clip**.



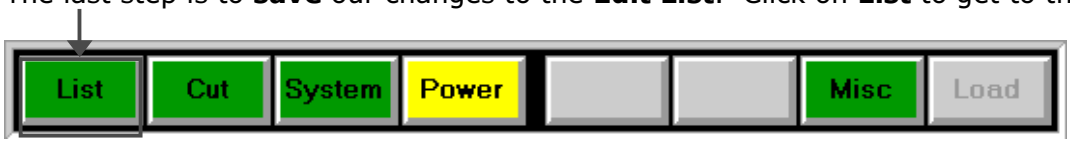
Once you've split the clip, identify the next region you want to set aside to splice into our final edit. The process is the same…set the **beginning of the clip**, set the **end of the clip**, make the cut with **split clip**.



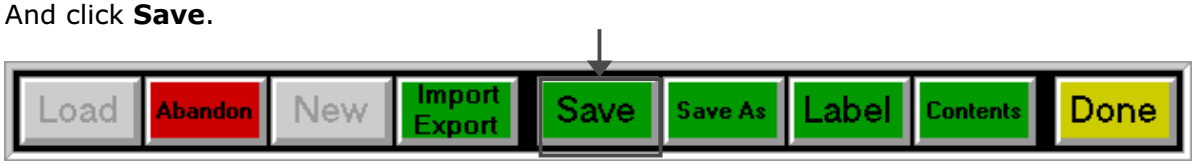
Continue with this until you've reached your last edit. When you're ready to set aside the final piece of tape, identify the beginning and end of the region and click **Save**.

Clicking **Save** splices all of our pieces together.

The last step is to **save** our changes to the **Edit List**. Click on **List** to get to the list menu…



And click **Save**.



When you're done, click **Load**, hit the **Backspace** key, and click **Load**.

This returns the machine to the blank or empty scratch list, and prevents the next user from modifying your edit list accidentally.

If additional audio needs to be attached to the cut, a music fill for example, it can be recorded in using standard record procedures. Just like we added new elements by recording directly into our cart, we can do the same with edit lists. Click **Record** to add an additional new element to your Edit List. By default, a name based upon the Edit List file name will be assigned to the new element.

Record audio into your new cut as you would normally. When you click **Stop**, it will appear as an auto-started element in your Edit List.

Don't forget to save the changes to the edit list!

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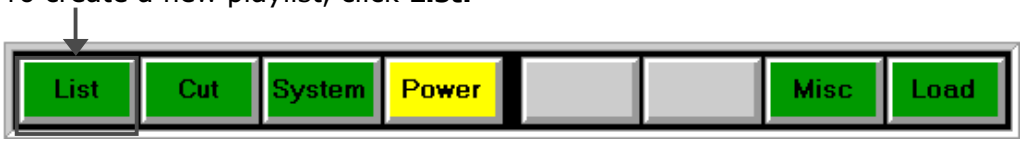
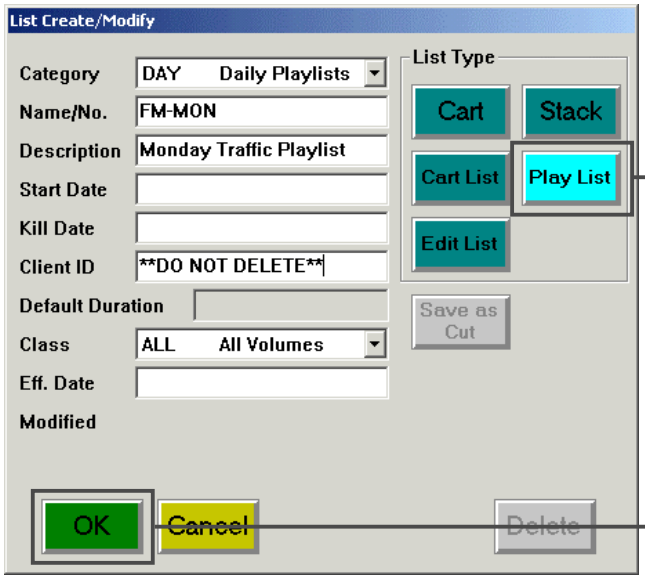
HOW TO CREATE A PLAYLIST

Your AudioVAULT can use **Lists** to perform complex automated functions. A cart is a simple type of list that tells the system to rotate a list of Cuts. More complex lists can contain commands to switch satellite sources, load cuts, or record network feeds.

To create a new playlist, click **List.**



Click **New**



Enter the list's information and set the type to **Playlist**.

Click **OK** to create the list.

So now that we have a playlist, what can we do with it? **Satellite traffic playlists**, **Satellite control playlists, Configuration playlists** and **Net Delay playlists** are covered in the System Administrator Training Manual. Playlists can be used for other purposes, including building Quick Start palettes.

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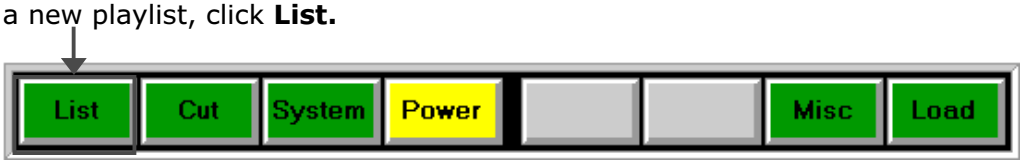
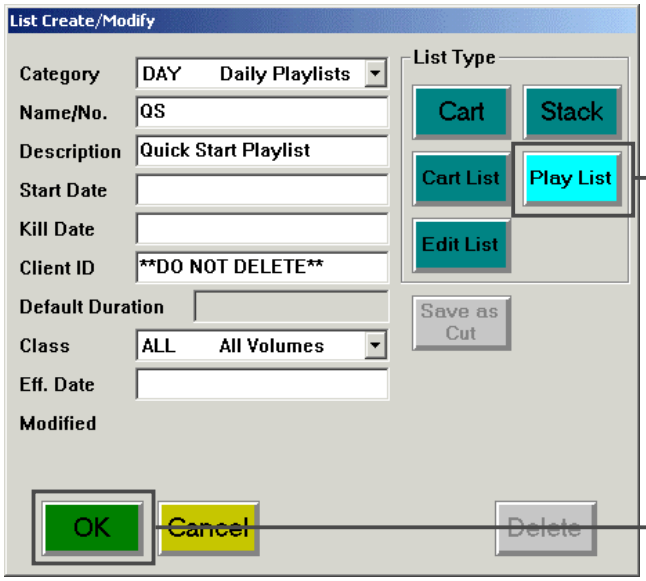
HOW TO BUILD A QUICK START PALETTE

Quick Starts can be used with both AudioVAULT and AVAir. Quick starts are a way to offer near-instant access to different sound effects or other audio elements on a button-covered **palette**.

Quick start palettes are configured using an AudioVAULT playlist that specifies the cuts to be used, the button size and color, and even the size and features of the palette itself. To create a new playlist, click **List.**



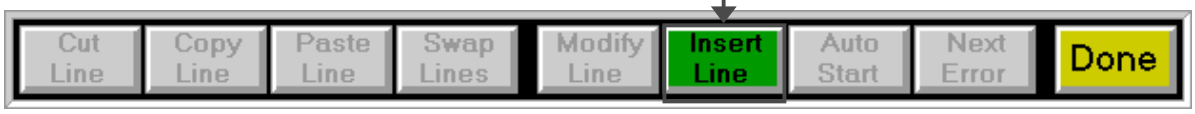
Click **New**

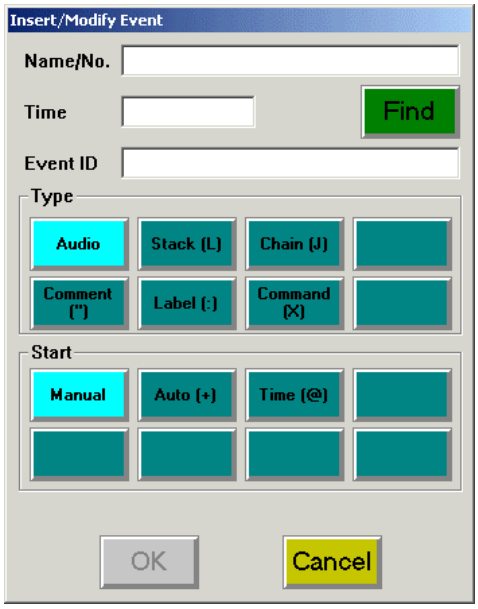


Enter the list's information and set the type to **Playlist**.

Click **OK** to create the list.

Now that we have created the list, we can add **contents** to the list. Click **Insert Line**.





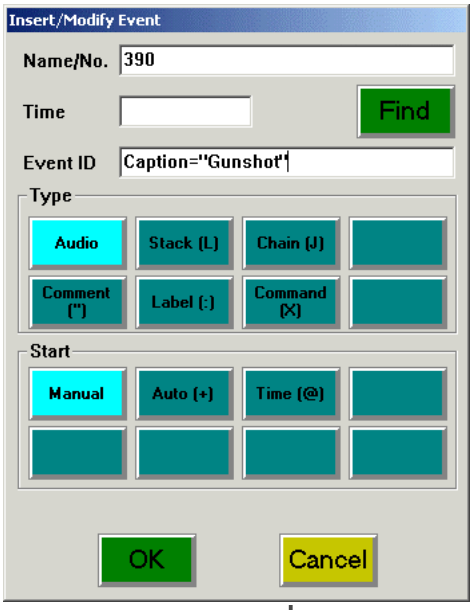
Clicking **Insert Line** opens the **Insert/Modify Event** dialog, where we can specify the details of each line in our playlist.

Lines in quick start playlists need at least the filename of each element you want to appear on your quick start palette. That filename needs to be listed in the **Name/No.** field.

If you don't know the exact filename, you can search for the files you want to include on your Quick Start palette by clicking the **Find** button. You can set multiple filters and search your inventory for cuts to insert into your playlist. When you find the cut you want, highlight the cut and click **OK**. The filename will be returned to the **Insert/Modify Event** dialog.

You can also specify other aspects of the button, including **caption** and **color**. Both of these properties are set in the **Event ID** field using the syntax…

Caption="*<caption>***"**
Configuration="#Color[*<color>***]"**

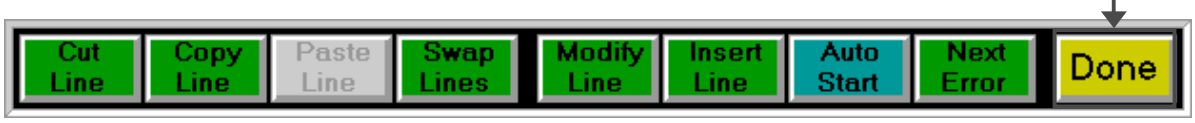


Valid colors are LGreen, DGreen, Yellow, Brown, LBlue, MBlue, DBlue, Red, LPurple, MPurple, DPurple, and Violet.

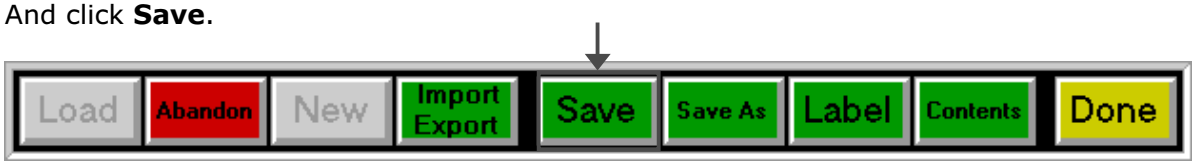
Both properties can be defined in the **Event ID** field by separating them with a colon.

Once you've entered the filename and set the properties, click **OK** to put the line in your playlist.

Repeat the process until you've entered all of the elements you want to appear on your palette. The last step is to save the changes to your playlist. Click **Done** to return to the List menu.

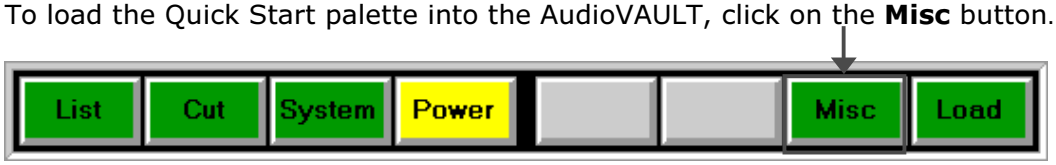


And click **Save**.

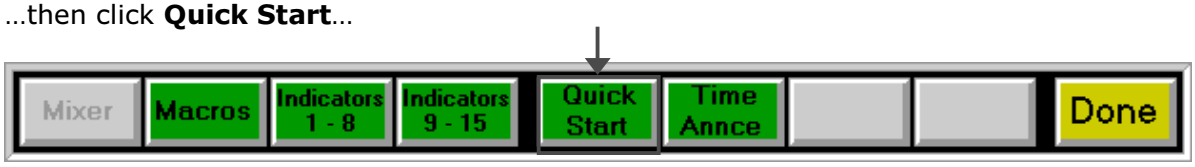


When you're done, click **Load**, hit the **Backspace** key, and click **Load**.

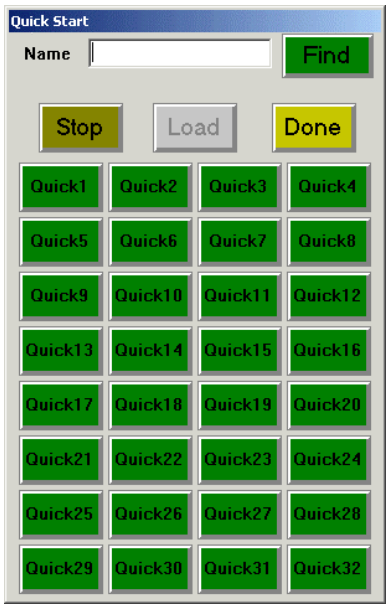
To load the Quick Start palette into the AudioVAULT, click on the **Misc** button…



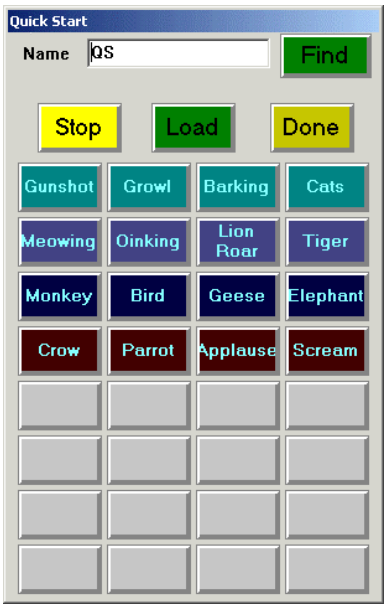
…then click **Quick Start**…



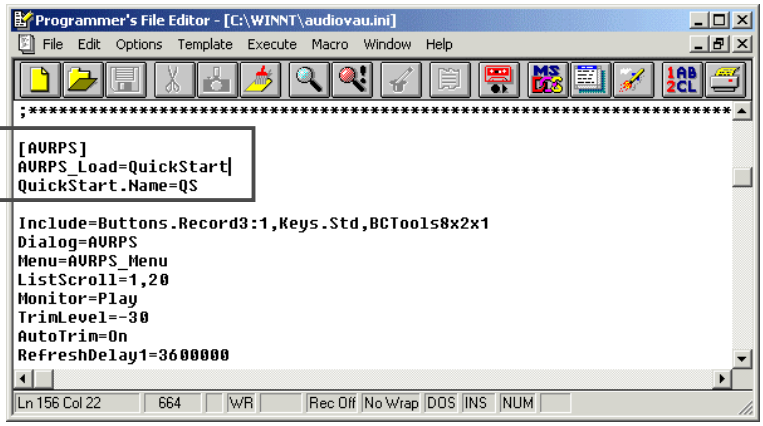
…which loads the default Quick Start palette. To load your playlist, type the playlist name into the **Name** field (*if you're not sure of the name, you can search for it by clicking the **Find** button*) and click **Load**.



The palette can be resized, the control buttons modified, and the buttons resized. Advanced configuration options are detailed in the **AudioVAULT Help File**.



To launch the Quick Start palette when you start the AudioVAULT, you can enter the commands in the **audiovau.ini**. Open the INI in a text editor like **Notepad** or **PFE**, find the **[AVRPS]** section, and type in **QuickStart.Name=** followed by the playlist name. **AVRPS_Load=QuickStart** will launch the palette on startup.



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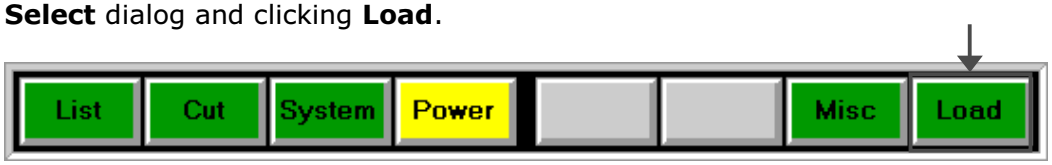
HOW TO RE-IMPORT THE DAILY TRAFFIC PLAYLIST

All playlists can be exported to text files, and imported from text files. This import process is the way we get information from traffic scheduling software into an AVSat traffic playlist. The procedure to import information from a Traffic System into an AudioVAULT is similar from site to site:

- The log is created in the traffic scheduling software.
- The log is written to a text file on a Floppy Disk or Network Drive.
- The text file is run through a BE provided **Filter** program if necessary.
- The resulting file is imported into an AudioVAULT screen and saved as a Playlist.

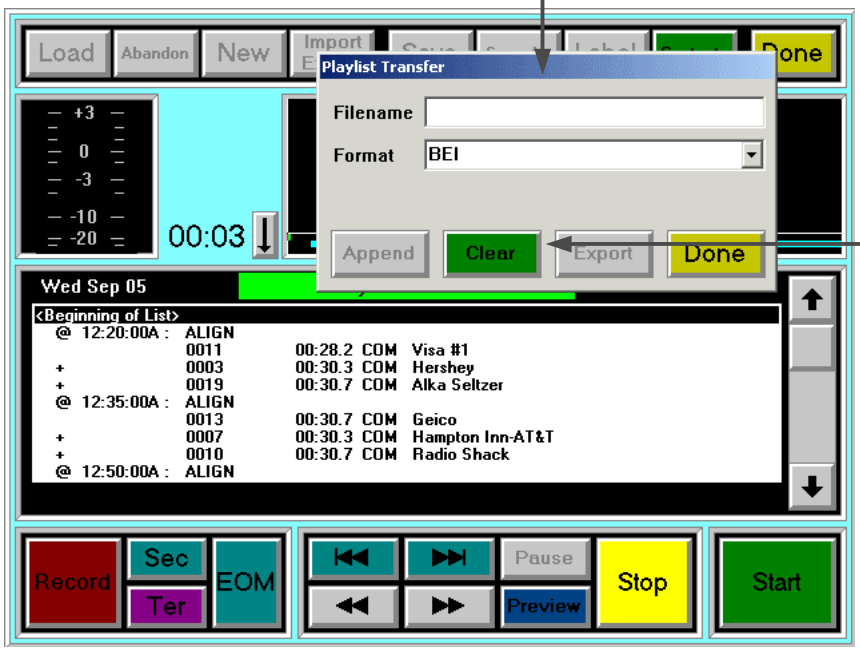
The best way to accomplish this is to have seven playlists…one for each day of the week. We'll simply overwrite the information in those playlists each week, so we always have the correct information in the playlist.

First, open AVRPS. Load the daily playlist to be overwritten with new information (*AM-TUE for this example*) by clicking on the **Load** button, entering the name of the list in the **Playlist Select** dialog and clicking **Load**.



Click **List** to access the List Menu, and then click **Import/Export**.

The **Playlist Transfer** dialog will pop up.

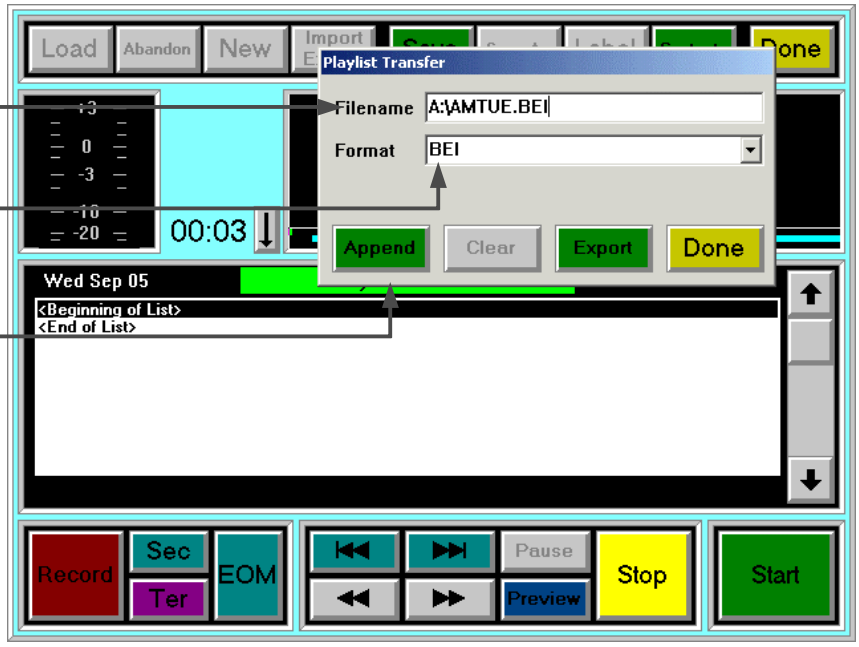


Click **Clear**. The information currently in the daily log (*the information that ran **LAST** Tuesday*) will be cleared out.

Type in the path and name of the filtered file you want to import.

Specify the format of the filtered file. The most commonly used formats are **BEI** and **Import/Export**.

Click **Append**. The new information from the filtered file will be read into the playlist.



The final step is to save the playlist. Click **Save**.

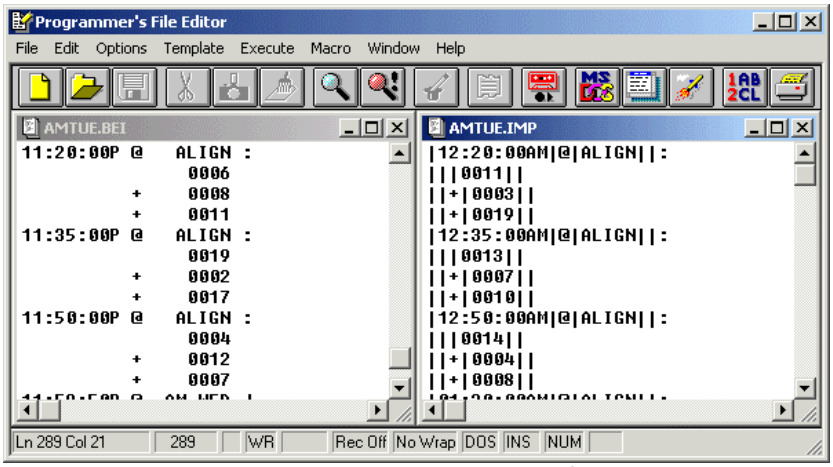
When you're done, click **Load**, hit the **Backspace** key, and click **Load**.

This returns the machine to the blank or empty scratch list, and prevents the next user from modifying your edit list accidentally.

Determining a file's format

The most commonly used formats of text files used with the AudioVAULT are **BEI Format** and **Import/Export Format**. The easiest way to tell what format a particular file is in is to open it in a text edit and look at it. The telltale sign is the existence of the **pipe** character…the straight up-and-down line (**|**).

If you see a pipe, it's probably Import/Export format.



BEI Format *Import/Export Format*

Section 3: Other AudioVAULT Screens

By the end of this section you should understand these key concepts:

- How AVSat passes, mutes and mixes audio
- The role of Indicators and Remote Control Sections
- Scheduling AVSat
- Recovery procedures
- What the playback bar is
- Remote Control capability…clicking Indicators and Remote-control sections
- How to reload the daily log
- How to load stacks
- The basics of AVNet
- Descriptions of other AudioVAULT screens

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AVSAT

AVSat is the AudioVAULT application designed to put satellite-delivered formats on the air. It combines satellite audio with local commercials and liners to localize network content. This module will look at four different aspects of the AVSat program:

1. Remote Control capability
2. Use of Announcer Stacks
3. Commercial playback from a Traffic Playlist
4. Ability to manage multiple audio sources

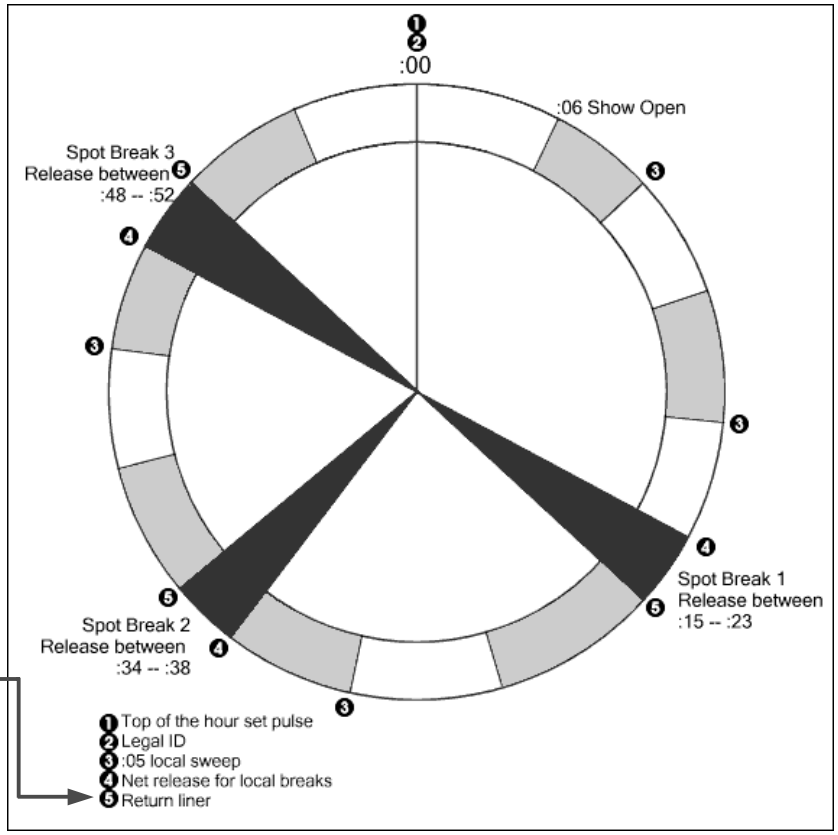
We'll also look at recovery procedures…what to do in the event of a computer failure or power outage.

REMOTE CONTROL CAPABILITY

AVSat can respond to signals called **closures** or **relays** from a network provider and insert local events into satellite audio.

Network providers offer a map of how an hour of satellite programming is schedule in the form of a **format clock**. The format clock describes when each closure is sent, and what each closure should do. Each closure is like a pair of wires…when the closure is **fired**, the wires are touched together, completing an electrical circuit. Your AudioVAULT can watch those wire pairs, and when it sense the completed electrical circuit, it can perform an action.

In the example to the right, when the jock at the network hits a button on his console that causes a ❺ to fire, the AudioVAULT should play a return liner.

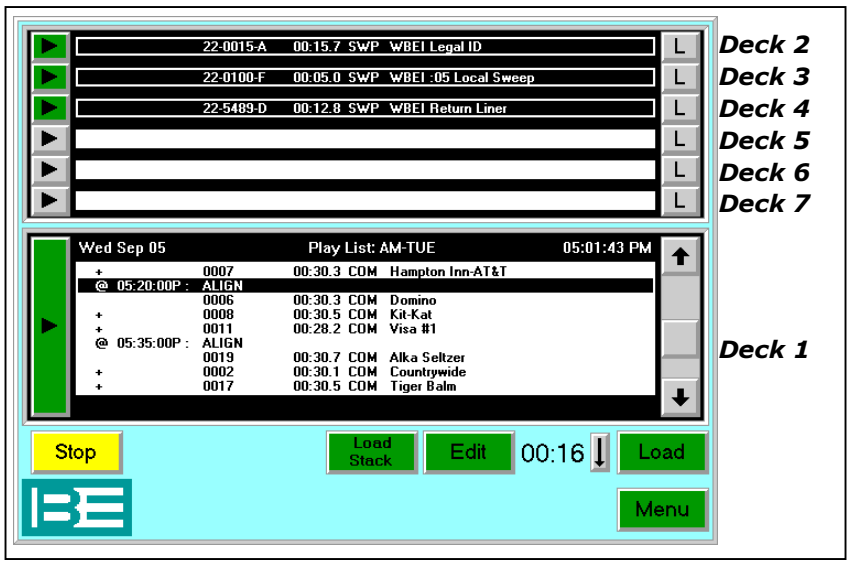


The actual command that we program into the AudioVAULT (*a process called **mapping***) is actually a command to start a specific deck. So when AVSat senses a completed circuit on the wires attached to relay 5, it starts the deck mapped to that closure. As long as we have a return liner loaded in that deck, the right audio element will play. Working with the engineering staff, programming has to make sure that the right audio is loaded at the right time, so when the closure comes down from the network, the correct audio plays.

Commands are mapped in a file called the **audiovau.ini** in **remote control sections**.

ANNOUNCER STACKS

So how do we make sure that the right events are loaded into the right decks? AVSat has 7 visible decks. Deck 1, the large deck, is generally configured to run the commercial playlist. The smaller decks are used to hold elements like return liners and Legal IDs.



One way to load these decks with the correct elements is to use a special AudioVAULT list called an **Announcer Stack**. In our example above, we have 3 non-commercial audio events to worry about…

❶	Legal ID
❷	:05 Local Sweep
❹	Return liner

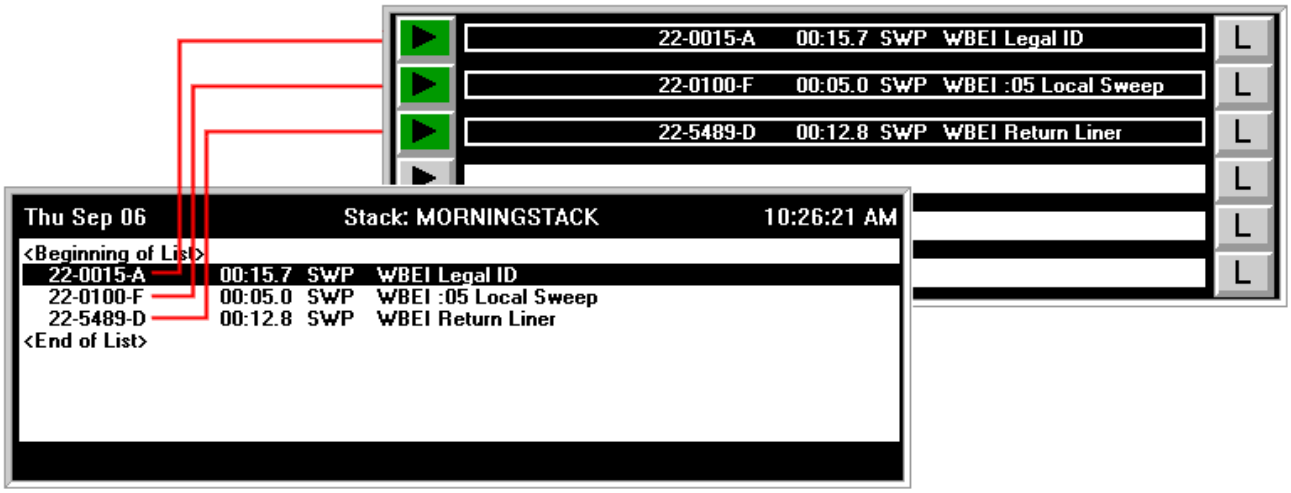
The first step is to work with the engineers to determine the deck mappings. Which deck will the relay that should fire the Legal ID (❶) be mapped to?

For this example, we'll assume that the engineers have **mapped** relay 1 (*the Legal ID*) to deck 2, relay 2 (*the local sweep*) to deck 3, and relay 4 (*the return liner*) to deck 4.

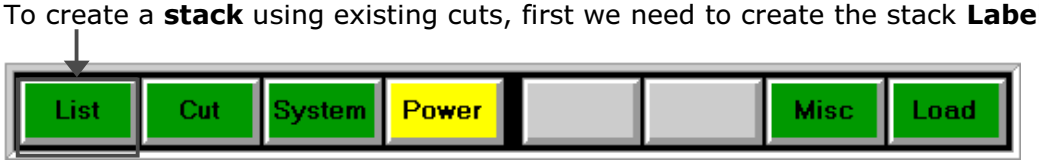
Relay	Function	Deck
❶	Legal ID	2
❷	:05 Local Sweep	3
❹	Return liner	4

Now that we know what type of event should be loaded in each deck during this network show, we can create an announcer stack to load these elements.

Announcer stacks are AudioVAULT lists that load in a very specific way. When a stack is loaded, the first element in the stack loads into AVSat's deck 2. The next element loads into deck 3, the next into deck 4, and so on. So the way the stack is built determines the deck each element loads into.

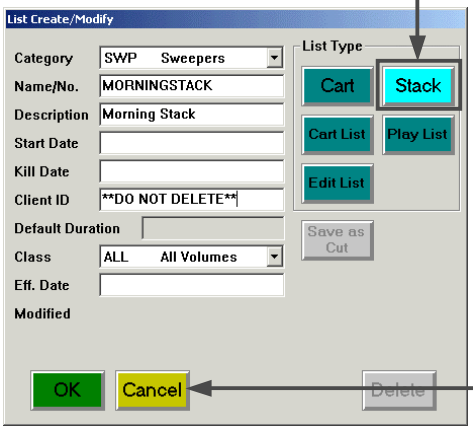


Once the stack is built, we can load all of the elements with a single command rather than multiple separate commands.
To create a **stack** using existing cuts, first we need to create the stack **Label**. Click **List.**



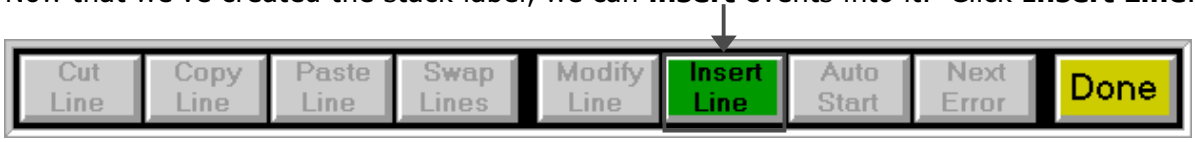
Click **New**

Set type as **Stack** and enter file information…

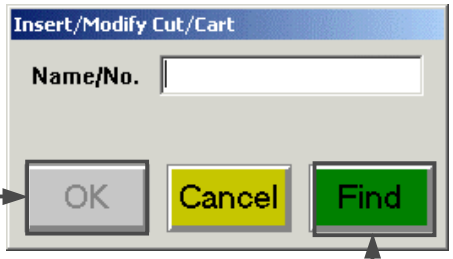


…and click **OK** to create the **Stack Label**.

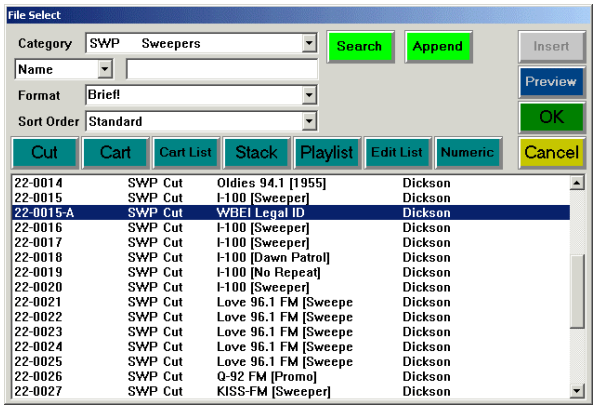
Now that we've created the stack label, we can **insert** events into it. Click **Insert Line**.



If you know the names of the elements you want to insert into this stack, you can type the filenames into the **Name/No.** field and click **OK**.



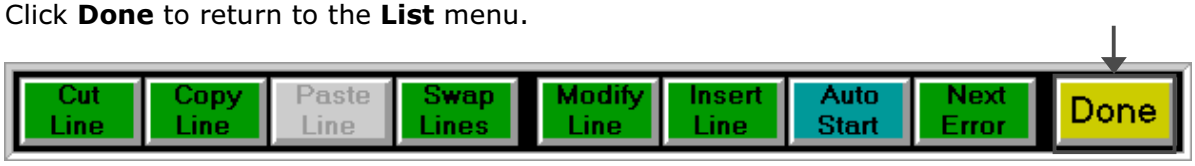
If you're not sure of the exact names of the files you want to include, click **Find**.



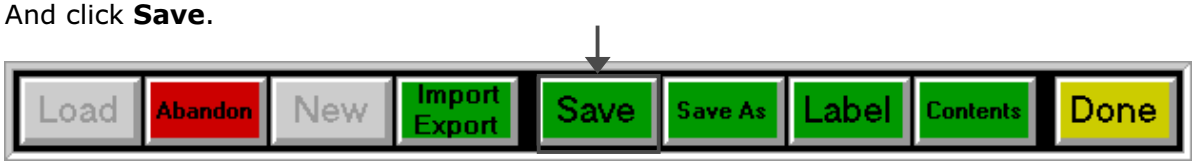
You can set multiple filters and search your inventory for cuts to insert into your stack. When you find the cut you want, highlight the cut and click **OK**.

The filename will be returned to the **Insert/Modify Cut/Cart** dialog. Clicking **OK** there will insert the element into your stack.

Once all of the elements have been inserted into the stack, you should **Save** the changes. Click **Done** to return to the **List** menu.



And click **Save**.



When you're done, click **Load**, hit the **Backspace** key, and click **Load**.

This returns the machine to the blank or empty scratch list, and prevents the next user from modifying your stack accidentally.

Loading the stack

There are three ways to load a stack into AVSat.

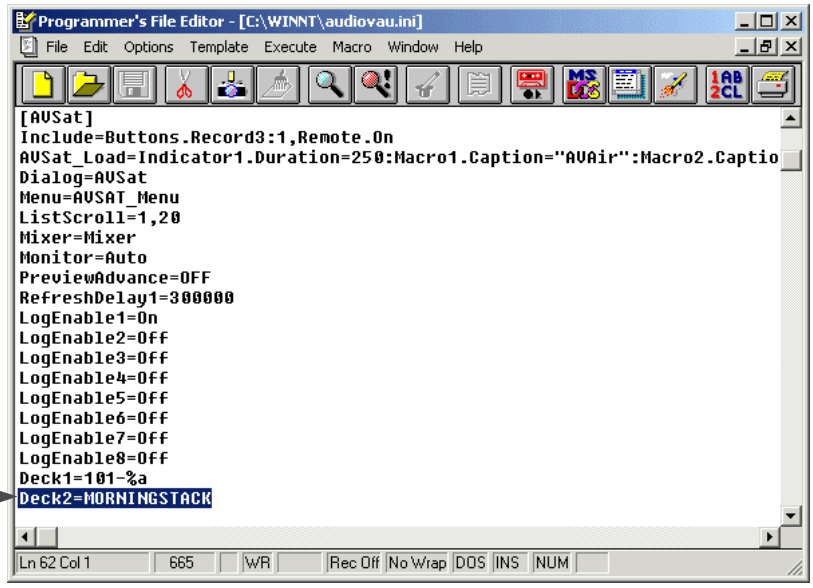
- Hard-coding it into the INI
- Using a playlist command
- Loading the stack manually

Hard-coding the stack load into the INI is a great way to set a **default** stack…whenever AVSat starts, it will load the stack specified in the INI file.

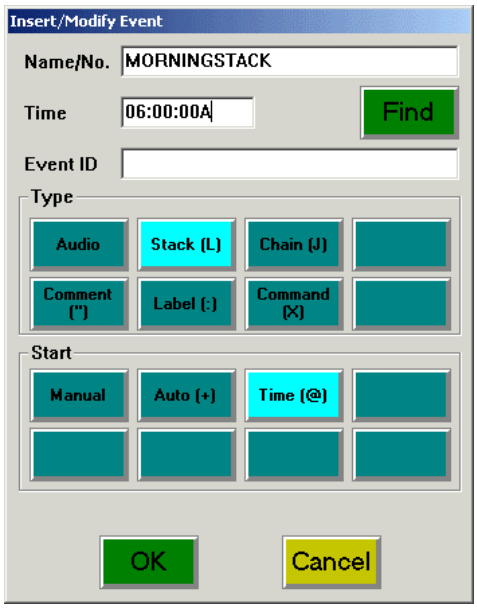
Open the INI file in a text editor like **Notepad** or **PFE**. Find the **[AVSat]** section, and add a line like this:

Deck2=<*stackname*>

For example, adding in the line **Deck2=MORNINGSTACK** will load a stack called **MORNINGSTACK** when AVSat first starts.



Stacks can also be loaded with a playlist command. If you use a Broadcast Electronics **Filter** program, the filter can automatically insert the commands. If you're not using a filter, there your traffic system may be able to schedule the commands.
If you need to insert the stack load commands manually, there's a specific button on the Insert/Modify Event dialog that allows you to do so.



The actual playlist lines need at least the **filename** of each stack and **when** you want it to load.

Enter the filename in the **Name/No.** field, and specify the time it should load in the **Time** field.

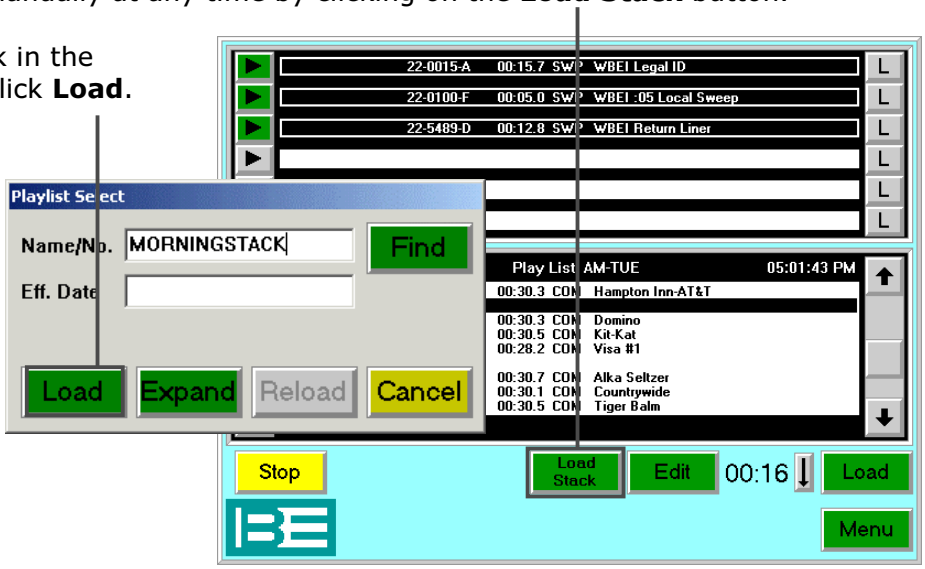
The **Type** should be **Stack (L)**, and the **Start** should be **Time (@)**.

Acceptable time formats are HH:MM:SSA/P or 24-hour time.

If you don't know the exact filename, you can search for the stack by clicking the **Find** button. You can set multiple filters and search your inventory for stacks to insert into your playlist. When you find the stack you want, highlight the cut and click **OK**. The filename will be returned to the **Insert/Modify Event** dialog.

You can also load a stack manually at any time by clicking on the **Load Stack** button.

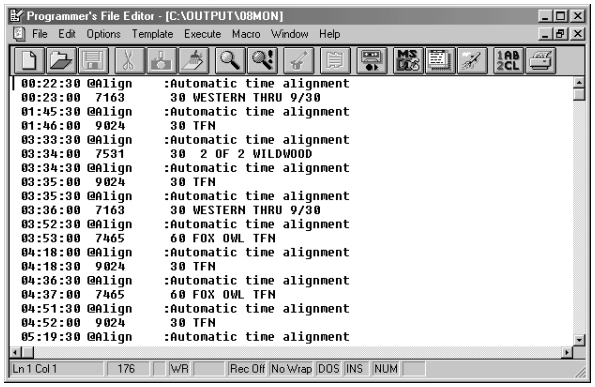
Enter the name of the stack in the Playlist Select dialog, and click **Load**.



COMMERCIAL PLAYLISTS

Since we can see more than a single line of a playlist in **Deck 1**, it's usually the deck we choose to contain the commercial playlist. The information that goes into the playlist, the list of spots that play in each break, is generated either by hand or by a piece of software specially written to schedule traffic. If you're using a traffic program to schedule commercials, the

playlist can be created from text files either generated by your traffic program or modified by a Broadcast Electronics **filter**.



An example of a text file in BEI format

The text file that is imported into the AudioVAULT playlist needs to be in a specific **format**, meaning it has to look a specific way in a text editor, with specific information in certain columns. Two common AudioVAULT formats are **BEI** and **Import/Export**.

The file you import into the AudioVAULT also must contain instructions pertaining to AVSat operation. For instance, AVSat loads the next day's playlist using a **Join** command. The **Join** command tells AVSat the name of tomorrow's playlist and when it needs to be loaded. The AudioVAULT playlist also defines how AVSat deals with breaks not filled by traffic, and when to load **announcer stacks**.

Commercials are divided into commercial breaks using the playlist **auto-start** command. All AVSat needs is the contact closure to start the first commercial in a break, and each subsequent auto-started commercial plays automatically.

If your traffic program is flexible enough to write a file in an AudioVAULT format, and include these elements…

- **Auto-start commands**
- **Align statements**
- **Join commands**
- **Empty Break statements**
- **Announcer Stack load commands**

…all you need to do is import the file created by the traffic program into an AudioVAULT playlist.

If your traffic program cannot add those elements, they can be added to the file using a special process called **filtering**. Not only does the **filter program** convert the traffic file into an AudioVAULT format, it inserts those AudioVAULT-specific elements.

The procedure to import information from a Traffic System into an AudioVAULT is similar from site to site:

- The log is created in the Traffic Program.
- The log is written to a text file on a Floppy Disk or Network Drive.
- The text file is run through a BE provided **Filter** program if necessary.
- The resulting file is imported into an AudioVAULT screen and saved as a Playlist.

The Filter looks for specific information in specific columns in the Traffic output file, so the format of that file is critical. For example, our CBSI filter requires that traffic output files have this format:

Columns 6-13 must contain the Estimated Start Time in HH:MM:SS format.
Columns 15-19 must contain the AudioVAULT filename.
Columns 39-68 are comment fields.

Example of CBSI line:

```
12345678901234567890123456789012345678901234567890123456789012345678901234567890123
         1         2         3         4         5         6         7
    |05:19:00|     |0000|11111-11    |COMMERCIAL0                    |0030
```

In addition to the internal structure of the file, there are specific requirements for the CBSI filename. The extension of a CBSI log file should be the three-letter abbreviation of the day. Also, the filter uses the **first two** characters of a CBSI log file to identify the station the log is associated with. We call those characters the **station ID**. Especially if you have multiple stations, those characters need to be unique. For example:

AM-KLM.FRI	AM is the station ID, FRI is the day
AMCBS.THU	AM is the station ID, THU is the day
FM-TKP.MON	FM is the station ID, MON is the day
FM.TUE	FM is the station ID, TUE is the day
01082701.TUE	08 is the station ID, TUE is the day

The reason those first two characters need to be unique is that the files created by the filter program will have file names based on the station ID. For example:

AM-KLM.FRI	Creates an import file called AMFRI
AMCBS.THU	Creates an import file called AMTHU
FM-TKP.MON	Creates an import file called FMMON
FM.TUE	Creates an import file called FMTUE
01082701.TUE	Creates an import file called 08TUE

The station ID is also used to determine the file names specified in the **Join** command:

AM-KLM.FRI	Joins to a playlist called AMSAT
AMCBS.THU	Joins to a playlist called AMFRI
FM-TKP.MON	Joins to a playlist called FMTUE
FM.TUE	Joins to a playlist called FMWED
01082701.TUE	Joins to a playlist called 08WED

Each filter has its own requirements regarding file format and station ID. The requirements for a specific filter can be found in a file called **README.TXT** that's included with each filter.

INSTALLING A FILTER PROGRAM

The **Filter** program executable is installed to a **Filter** directory, typically on a traffic computer, and will create AudioVAULT-importable traffic files, typically on a floppy in your A-Drive.

The first step in installing the filter is to find the correct one. There are several filters to chose from, each written for a specific traffic program or output format. Descriptions of the file formats required by each filter can be found in the **README** text file included with each filter. Once you've found the right filter, to install it run the **SETUP** executable. Each filter's setup routine is a bit different, but will basically ask questions including:

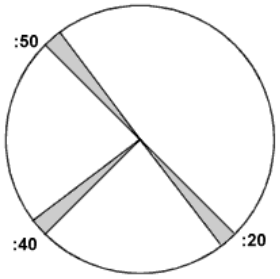
Where do you want to install the filter executable?
What is the station ID?
Where are the logs to be filtered located?
Do you want to include time align statements?
Where do you want the filter to write the finished file?

A description of each question asked by Setup can be found in the filter's **README** file.

EMPTY BREAK AND ANNOUNCER STACK FILES

Once you've installed the filter, you'll need to write the **Empty Break** and **Announcer Stack** files. In the filter's install set, you should have files called **IDDAY.BRK** and **IDDAY.STK**. Copy these and use them as your templates.

The empty break (with the **BRK** extension) files contain lists of all the breaks your station should take in a day. If traffic doesn't schedule any spots for a break, the filter knows to put in an Empty Break as a "placeholder" to absorb the satellite contact closure.



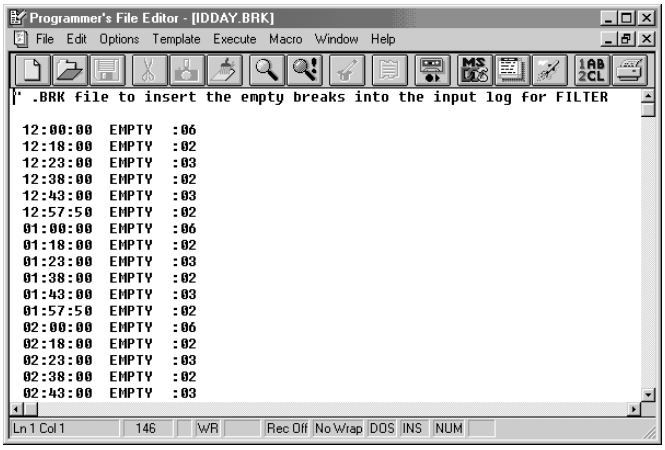
Regardless of whether the affiliate has commercials scheduled, the network will send closures at the start of each commercial break. In this example, each hour the network sends three closures: at 20, 40 and 50 minutes past the hour. These closures will start the break loaded in AVSat. If our schedule looks like this:

```
10:20:00   8070 Commercial
         + 4825 Commercial
         + 7632 Commercial
10:50:00   9030 Commercial
         + 0004 Commercial
         + 2084 Commercial
```

The closure at 20 will fire the break scheduled for 10:20:00. The next break that will be queued up is the break scheduled for 10:50:00, but the next closure will come at **40**. The end result is that the commercials scheduled for 50 will play at 40, and then your schedule is off. To get around this, the filter adds **Empty Break** statements that can compensate for unfilled commercial breaks.

```
10:20:00   8070 Commercial
         + 4825 Commercial
         + 7632 Commercial
10:40:00        EMPTY BREAK
10:50:00   9030 Commercial
         + 0004 Commercial
         + 2084 Commercial
```

The closure at 20 will fire the break scheduled for 10:20:00. The next event that will be queued up is the **EMPTY BREAK** statement. When the next closure will comes at **40** it fires the statement, which does not affect audio and does not play any commercials. The playlist then advances and gets the 10:50:00 break ready for the 50 after closure.
The empty break file lists each closure that will be received.



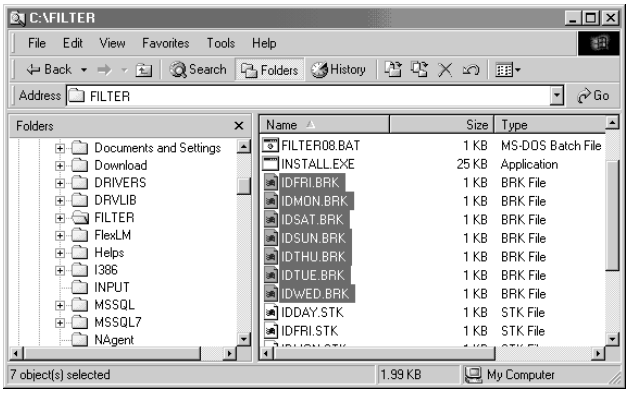
An example empty break file

All that is required is the time of the break in 24-hour format. Other fields in the file are for your reference. In the

example to the left, the text EMPTY is included, as well as the break's duration.

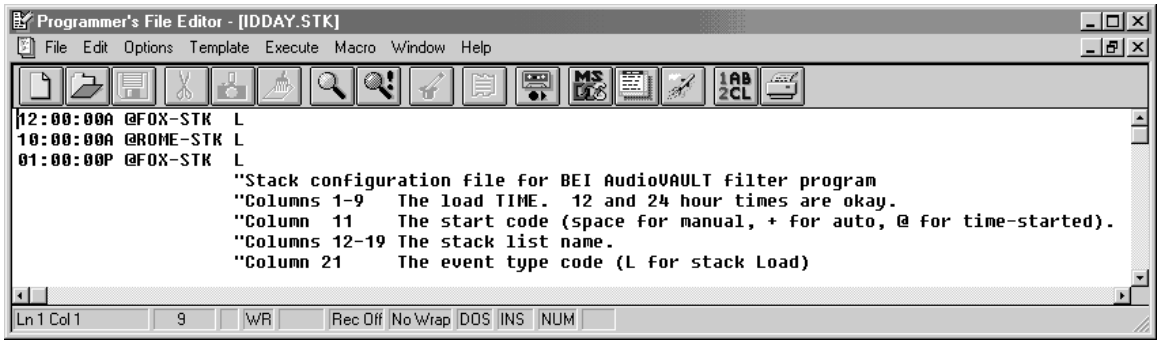
If your break times are consistent hour to hour, instead of listing each break individually, you can use **wild cards**. A station using the same clock every hour may have a break file like this:

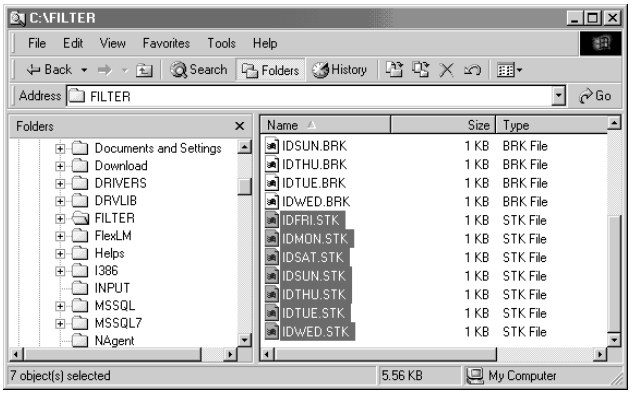
```
" .BRK file to insert the empty breaks into the input log for FILTER

  *:20:00  EMPTY  :03
  *:40:00  EMPTY  :03
  *:50:00  EMPTY  :03

"  Column 1 is the comment flag.
"  Column 2-9 is the time field in 24-hour time.
"  Column 10-rest are reference fields.
```



You should have seven break files stored in the filter directory with the station ID and day of the week in the file name.

The announcer stack (with the **STK** extension) files are simply a list of each Announcer Stack file you use and when they should load. These commands will be added as time-started commands at the end of the daily playlist.



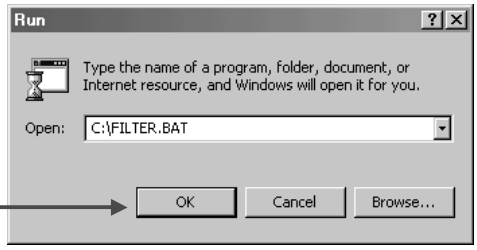


You should have seven stack files stored in the filter directory with the station ID and day of the week in the file name.

RUNNING THE FILTER

Once you've run **Setup**, and the **BRK** and **STK** files are done, the filter is installed and configured. Filtering a log is as easy as running the **FILTER.BAT** file.

Part of the setup program put the **FILTER.BAT** file on your c-drive. To run the filter, click on the Windows **Start** button, and select **Run**. **Browse** to the **FILTER.BAT** file, and double left-click on it. Then click on **OK** to filter your traffic log.

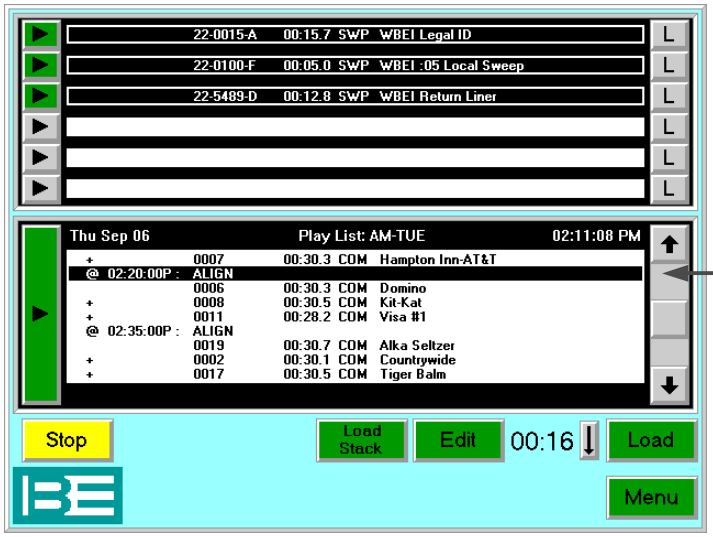


Since we specified where the files were located and where the finished file should go, we won't have to select any files. The filter will process all valid files located in the source directory. As a matter of fact, the window should pop up so quickly, you won't have time to read it!

Once you have your filtered file, you can import it into an AudioVAULT playlist using AVRPS.

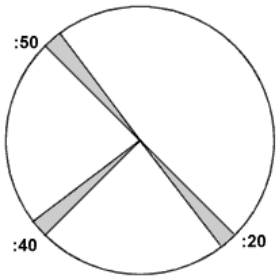
ALIGN STATEMENTS AND THE PLAYBACK BAR

ALIGN are **time-started labels**…the text associated with them isn't that important even though we use the word **ALIGN**. They're important in that they advance the **playback bar**. The **playback bar** is the black bar that highlights the next event to air.



Labels reposition the playback bar. Other time-started events cause the playback bar to jump to the time-started event, and the event executes, but then the playback bar returns to its original position. This feature allows announcer stack load commands, network feed selection commands, and other time-started commands to be located anywhere in the playlist. It's this ability to reposition the playback bar that makes ALIGN statements so valuable. One function of ALIGN statements is to advance the playlist in the event of a missed break. Using our 20, 40 and 50 break example, we may have a schedule in AVSat like this:

```
10:20:00    8070 Commercial
          + 4825 Commercial
          + 7632 Commercial
10:40:00    6449 Commercial
          + 7329 Commercial
          + 0495 Commercial
10:50:00    9030 Commercial
          + 0004 Commercial
          + 2084 Commercial
```



If for some reason the closure to start the 20 break is missed, the playback bar will still be on the first commercial of that break when the closure for the 40 break comes down. If we don't

have a mechanism in place to catch the playlist up to where it needs to be, our playbacks would be off a break for the rest of the day.

This is where ALIGNs come in. By placing time-started labels before each break, we can reposition the playback bar.

```
10:18:00 @      ALIGN
10:20:00   8070 Commercial
         + 4825 Commercial
         + 7632 Commercial
10:38:00 @      ALIGN
10:40:00   6449 Commercial
         + 7329 Commercial
         + 0495 Commercial
10:48:00 @      ALIGN
10:50:00   9030 Commercial
         + 0004 Commercial
         + 2084 Commercial
```

At 10:18:00, the time-started label will fire and advance the playback bar to the first commercial in the 10:20:00 break. If the closure isn't received to start that break, at 10:38:00, the ALIGN will get ready for the 10:40:00, and the schedule remains on time.

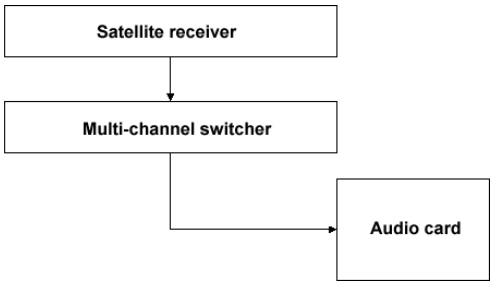
In addition to cueing up the correct break, the playback bar serves another purpose. All of the **auto-started** events in a break must be buffered to allow for tight segues between the multiple elements. When the playback bar is positioned on the first audio event of a auto-started sequence, all of the auto-started audio events are buffered so when AVSat gets the command to start the break it can start instantly. This buffering process can take a couple of seconds, depending on how many audio events are in the sequence. By firing an ALIGN **before** the break is supposed to air, we can get the buffering out of the way early and be prepared for the closure to start the break.

ALIGN statements can be inserted by the **filter** program.

MANAGING MULTIPLE AUDIO SOURCES

AVSat can integrate incoming satellite audio feed with AudioVAULT inventory. AVSat can be in one of three conditions:

- Sending satellite audio directly to the air chain during normal programming by passing audio from the card's inputs to its outputs.
- Muting satellite audio to play commercial elements when signaled to by the satellite.
- Mixing satellite audio and local elements like liners, jingles, and station IDs. AVSat can actually **duck**, or reduce the volume, of the satellite audio feed as it plays back recorded elements. When these elements are finished playing, the satellite audio feed returns automatically to its standard output level.



In all three cases, there are two sources of audio: audio feeding from a satellite receiver to the input of the audio card, and audio generated from a local volume.

Each AudioVAULT application is assigned to a specific audio channel. AVSat requires the dedicated use of a channel with record capability. AVSat, like all applications, can use audio cards that are either local to

the workstation or remotely located in a server. The only way AVSat can control the level of the satellite audio to handle ducking while playing back local elements is to have the satellite audio running through the audio card.

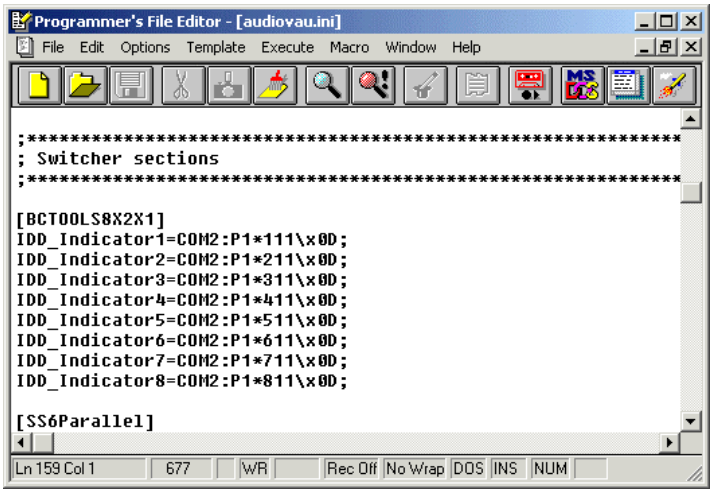
AVSat can only adjust the audio coming into the record input of the specified audio card. The card's input can be wired directly to the output of a satellite receiver or other device if you're only going to be using a single network provider.

If you're going to be using programs from multiple sources, you'll have to run each source to the input of a multi-channel switcher. By controlling the switcher from AVSat, the selected audio will be allowed to pass to the card.

The switcher can be remote controlled by commands in the AVSat playlist. AudioVAULT uses commands called **Indicators** and **Macros** to reference instructions coded into the **audiovau.ini** file…those instructions send commands to the switcher through contact closures, serial strings from a COM port, or through a TCP/IP connection.

INDICATORS: SELECTING THE SATELLITE SOURCE

Indicators and Macros are written into the AVSat workstation's **audiovau.ini** file. Depending on the type of switcher you're using, the commands in the ini file will vary. Work with the engineering team to come up with a grid showing the relationship between the Indicator or Macro and what's wired to each switcher channel.

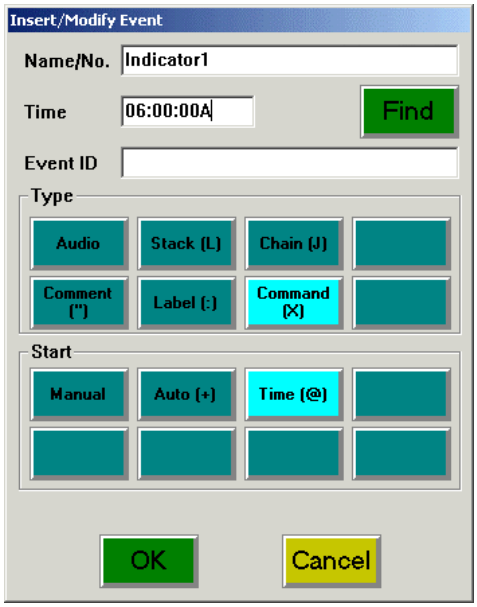


The example to the right shows 8 Indicators, each switching between channels on a switcher. To program anything useful with them, we'd need a grid like this:

	Switcher channel	Audio/Network
Indicator 1	1	ABC
Indicator 2	2	NBC
Indicator 3	3	CBS
Indicator 4	4	WW1
Indicator 5	5	JONES
Indicator 6	6	Premiere 1
Indicator 7	7	Premiere 2
Indicator 8	8	Premiere 3

What's important to know is that each Indicator or Macro corresponds to a specific satellite source or channel on the audio switcher. Once we know what audio is associated with Indicator, we can switch between the different audio sources by entering the Indicator number as a playlist command or by clicking on the Indicator button (**System|Misc|Indicators** on the AudioVAULT menu).

The Indicator or Macro commands used to switch between multiple audio sources are usually written to a **Control Playlist**. A control playlist is just like any other AudioVAULT playlist, except it typically only contains commands related to automation.



How you write the control playlist depends entirely on your program schedule. If you needed AVSat to switch to ABC at 6:00 AM for example, you'd reference your handy grid…

	Switcher channel	Audio/Network
Indicator 1	1	ABC
Indicator 2	2	NBC
Indicator 3	3	CBS
Indicator 4	4	WW1
Indicator 5	5	JONES
Indicator 6	6	Premiere 1
Indicator 7	7	Premiere 2
Indicator 8	8	Premiere 3

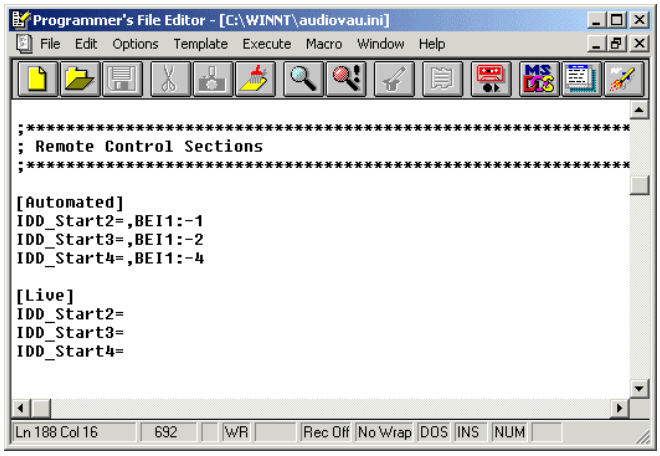
…and put the command **Indicator1** in the playlist as a time-started command. With this control playlist loaded in AVSat, at 6:00 AM, the command **Indicator1** will execute which tells the switcher to switch to ABC. Other commands can be entered into the control playlist, detailing every switch that AVSat needs to make in a day. More details about writing AVSat control playlists can be found in the **System Administrator Training Manual**.

REMOTE CONTROL SECTIONS

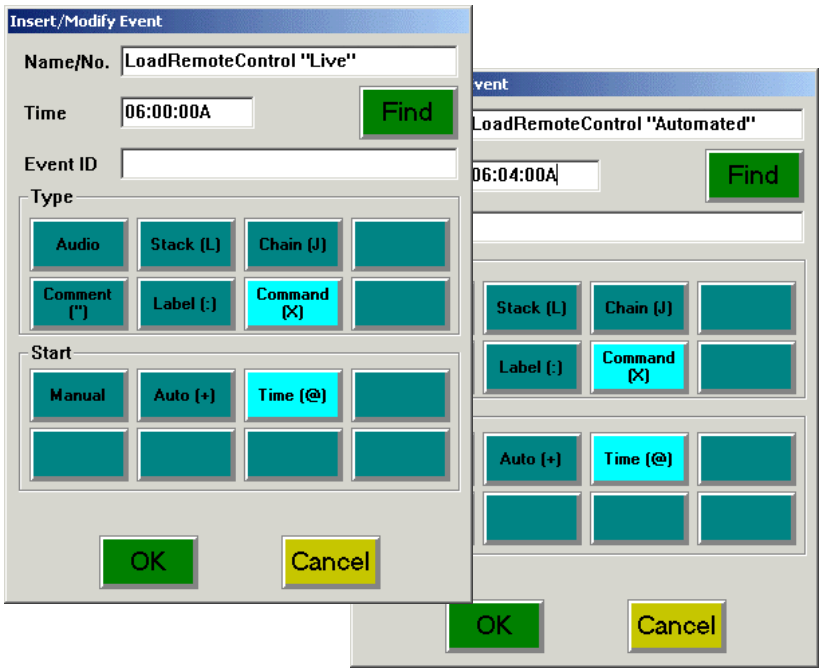
If you're using multiple satellite networks, you will also probably have to think about **remote control sections**. Different networks may associate relays with different functions. One of the best ways to think about this is to look at an **automated** state and a **live** state. During our automated hours, the network provider sends these relays:

Relay	Function	Deck
❶	Legal ID	2
❷	:05 Local Sweep	3
❹	Return liner	4

So whenever those closures are received, events loaded in those decks will play. During the hours we're live, we don't want those events to play automatically, so we need to tell AVSat to ignore those closures. The rules for both conditions, ignoring or responding to the closures, are written into the audiovau.ini as **remote control sections**. A **section** in an INI file has a header written in brackets, followed by the commands.



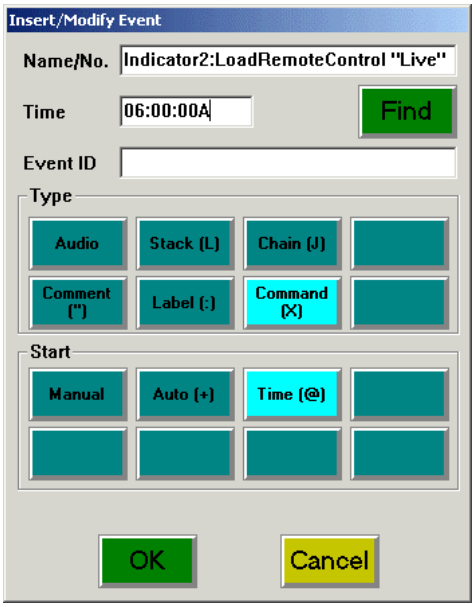
In this example, we have two remote control sections…**[Automated]** and **[Live]**. The **Automated** section tells the software how to respond to incoming closures. The **Live** section tells the software to ignore them.



Remote Control Sections are loaded using playlist commands. The syntax is:

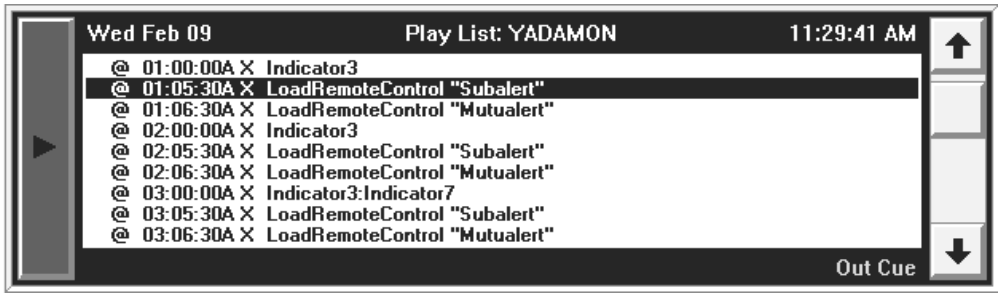
LoadRemoteControl "*<section>*"

Most often, these commands are written into the **control playlist** along with the Indicator switches.



Since changing remote control sections and changing audio with indicators are often related (*when you switch to ABC, you load the ABC remote control section*) it's possible, and often advantageous, to write both commands on the same line. Multiple commands can be written to the same playlist line using a **colon** to separate them.

Control playlists can be complex, but with proper planning, they're not difficult to write or understand. Once they're complete, they only need to be modified if you change programming. It's also recommended they be exported to text files and stored on floppy disks for backup purposes.



RECOVERY PROCEDURES

When AVSat is restarted, it's important to make sure the proper source and remote control sections are loaded…to make sure the right audio is on the air, and that the remote control events are correct for that satellite provider.

Defaults can be written into the INI file, telling AVSat to load a specific remote control section, to go to a specific source, and to load the correct day's playlist on start up. If AVSat is restarted during a time when those defaults are valid, there is no recovery procedure…the correct playlists will be loaded and ALIGNs will catch up the schedule to where it needs to be.

If AVSat is restarted when those defaults **aren't** valid, it's a little more difficult.

Obviously, the first thing to do is know what Indicator and remote control section **is** valid for a given time. It's a good idea to make a hard copy of your program log and to keep it near the AVSat.

By looking at the program log, you know at any given time what Indicator you **should** be on, and what remote control section **should** be loaded.

Time	Program	Indicator	Remote Control Section
0900	ABC News	1	[ABC]
0904	**Live News**	--	[LIVE]
0906	Dr. Joy Browne	3	[DRJOY]
1000	ABC News	1	[ABC]
1004	**Live News**	--	[LIVE]
1006	Dr. Joy Browne	3	[DRJOY]
1100	ABC News	1	[ABC]
1104	**Live News**	--	[LIVE]
1106	Dr. Joy Browne	3	[DRJOY]
1200	ABC News	1	[ABC]
1204	**Live News**	--	[LIVE]
1300	ABC News	1	[ABC]
1304	**Live News**	--	[LIVE]
1306	Sally Jesse	5	[SALLY]

It's possible to program an AudioVAULT button called a Macro to switch to a specific source and load the associated remote control section with a single mouse click. This is the easiest way to get AVSat back on track…have the program log list the right Macro for each program segment.

Time	Program	Indicator	RC Section	Macro
0900	ABC News	1	[ABC]	1
0904	*Live News*	--	[LIVE]	2
0906	Dr. Joy	3	[DRJOY]	3
1000	ABC News	1	[ABC]	1
1004	*Live News*	--	[LIVE]	2
1006	Dr. Joy	3	[DRJOY]	3
1100	ABC News	1	[ABC]	1
1104	*Live News*	--	[LIVE]	2
1106	Dr. Joy	3	[DRJOY]	3
1200	ABC News	1	[ABC]	1
1204	*Live News*	--	[LIVE]	2
1300	ABC News	1	[ABC]	1
1304	*Live News*	--	[LIVE]	2
1306	Sally Jesse	5	[SALLY]	5

You can access Macros on the AVSat screen by clicking **Menu|Misc|Macros**. Up to 8 macros are available on-screen.

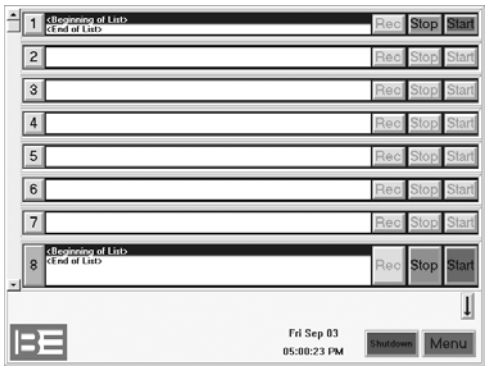
If you don't have a program log or programmed macros, you can get the same information from the control playlist itself **if** you know the name of the list. Load the list into Deck 1 (*it's normally in Deck 8, which is hidden*) and scroll down to the current time.

Back up to see what was the last Indicator fired; highlight that line and manually fire the command by clicking on the big green start button to the left of the playlist. You will want to do the same thing to load the correct Remote Control Section.

If you load the Control Playlist into Deck 1, be sure you load the correct playlist back into the Deck when you're done!

AVNET

AVNet is an AudioVAULT application designed specifically to automatically record network audio feeds. AVNet can operate without any manual intervention.

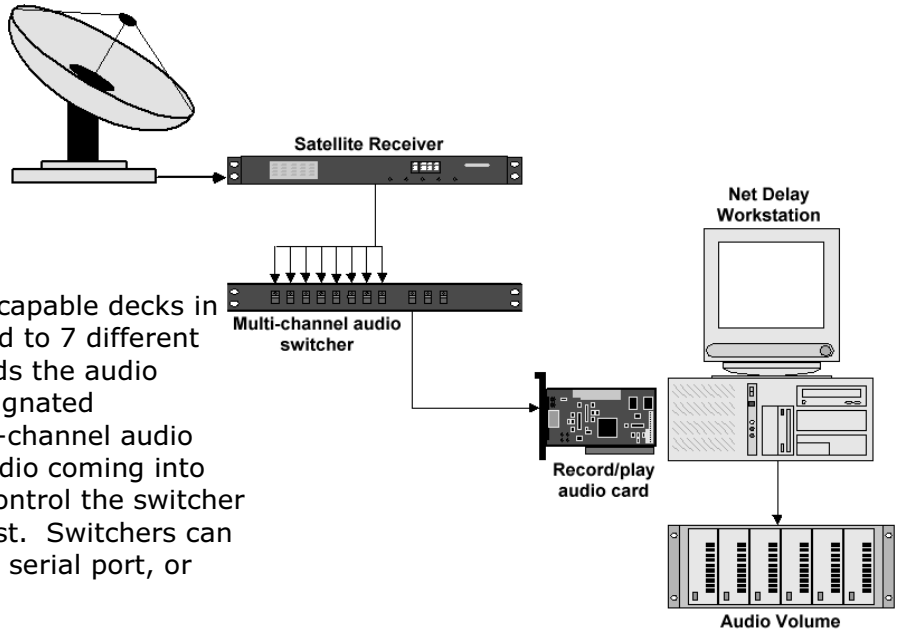


AVNet is basically an automated tape recorder. Using an AudioVAULT playlist, you can program AVNet to start recording an AudioVAULT cut at a specified time.

AVNet operates using an AudioVAULT Record/Play channel. **Deck 8** (the bottom deck in AVNet) contains a **control playlist**, which contains instructions describing details about each recording. Decks 1 through 7 are used to hold the cut currently being recorded. Even though there are 7 decks, AVNet can only record one event at a time.

Closure relays can also be wired to a remote control card in the workstation running the AVNet screen. Multiple decks are provided for ease of remote control wiring with multiple satellite channels.

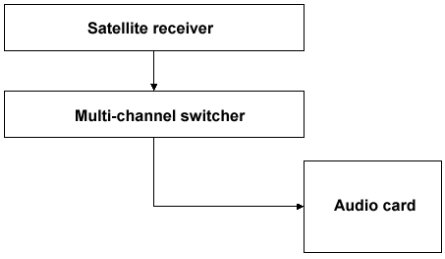
Audio is routed to the input of the Record/Play card assigned to the AVNet screen. Recorded feeds are stored on the main AudioVAULT volume, so the cuts are available automatically to the rest of the system.



Even though there are 7 record-capable decks in AVNet, the program is not limited to 7 different audio feeds. AVNet simply records the audio feeding into the input of the designated Record/Play card. Using a multi-channel audio switcher, you can change the audio coming into the audio card. Commands to control the switcher are included in the control playlist. Switchers can be controlled by contact closure, serial port, or TCP/IP connection.

WIRING AVNET

Each AudioVAULT application is assigned to a specific audio channel. AVNet requires the dedicated use of a channel with record capability. AVNet, like all applications, can use audio cards that are either local to the workstation or remotely located in a server. Regardless of where the physical audio card is located, AVNet will use that card to convert audio coming into the sound card into digital AudioVAULT files.



AVNet will only record the audio coming into the record input of the specified audio card. The card's input can be wired directly to the output of a satellite receiver or other device if you're only going to be recording from a single audio source.

If you're going to be capturing programs from multiple sources, you'll have to run each source to the input of a multi-channel switcher. Then wire the output of the switcher to the input of the audio card. Each channel is hot going into the switcher, but only the selected audio will be allowed to pass to the record card. The switcher can be remote controlled by commands in the AVNet playlist. AudioVAULT uses commands called **Indicators** and **Macros** to reference instructions coded into the **audiovau.ini** file…those instructions send commands to the switcher through contact closures, serial strings from a COM port, or through a TCP/IP connection.

Using AVNet also effectively precludes the use of the card's playback capability. The record and play capabilities of the audio cards are tied together, and are exclusive. You wouldn't be able to use AVAir for example, to play from the playback side of an AVNet record channel. First, they're not able to operate in both modes concurrently. Second, the monitor signal would play back through the AVAir wiring when AVNet is recording.

PREPARING FOR AUTOMATED RECORDING

The key to using AVNet is **planning**. Wiring AVNet is the easy part. Even writing the automation instructions (***playlists***) is simple once you've planned ahead.

A **playlist** is an AudioVAULT file that contains instructions that tell AVNet what to do and when. It's organized into **lines**, and stored as an AudioVAULT file. Playlists are written in an AudioVAULT screen like AVRPS.

As you think of AVNet playlists, think of recording a program to cassette or reel. You would do something like:

1. Set the audio source.
2. Insert or cue a tape.
3. Set the recorder to pause-and-record.
4. Start the recording.

AVNet follows those same steps, so you'll need to know the same information for each cut to be recorded in AVNet:

- The AudioVAULT Indicator or Macro associated with the recording's audio source
- The AudioVAULT filename of the cut to be recorded
- When each recording should begin
- The duration of each recording

Since AVNet playlists are generally written in sequential order, one of the handiest tools you can use in planning an AVNet record schedule is a grid like this:

Monday Record Schedule					
Feed Time	Start Time	Source	Filename	Duration	Record Deck

By filling out a grid entry for AVNet record event, you accomplish several important things. Not only do you gather all the information you'll need to write your playlist, you'll ensure that you're not trying to overlap your record events. If you start to overlap record events, you'll need an additional instance of AVNet.

Determining the Feed and Start Times

You should be able to track down the actual **feed time** of your net delay events fairly easily. As you decide what event you want to capture, when does the network begin sending the

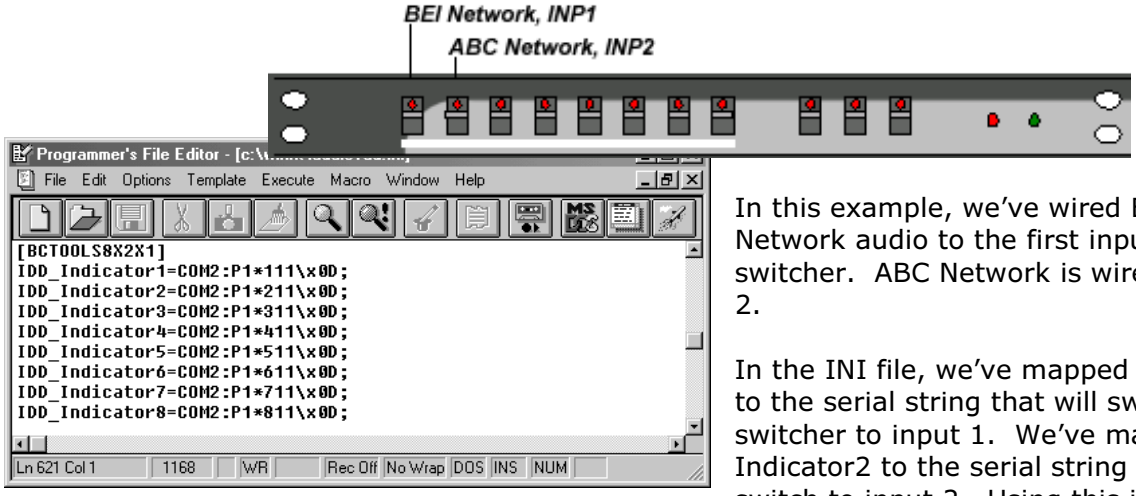
audio? If you want to record the BEI Network feed of "*Today in AudioVAULT News*" that comes down at noon, the feed time is 12:00:00. Arrange every feed you'll take in a day in chronological order, with one entry in your grid for each feed. If you record the top of the hour news every hour, your grid for Monday would have 24 entries describing those feeds.

As you fill out your record grid, try to factor in 15 seconds on either side of the recording. This gives the system time to load and arm a recording. So for the BEI Network feed "Today in AudioVAULT News," the feed time is at 12:00:00, but the **start time** is 11:59:45. So for this feed, our grid will be filled out like this so far:

Monday Record Schedule					
Feed Time	Start Time	Source	Filename	Duration	Record Deck
12:00:00	11:59:45				

Determining the Source

Source refers to the AudioVAULT Macro or Indicator that will route the correct audio to the input of the sound card. Since these commands often control a multi-channel switcher for example, each Macro or Indicator will be associated with a specific input of your switcher. Each input in turn, will be physically wired to a receiver or other audio source. Macro and Indicator **remote-control mappings** are established in the **audiovau.ini** file. Contact Broadcast Electronics Digital Customer Service for more help with writing remote control sections.



In this example, we've wired BEI Network audio to the first input on our switcher. ABC Network is wired to input 2.

In the INI file, we've mapped Indicator1 to the serial string that will switch our switcher to input 1. We've mapped Indicator2 to the serial string that will switch to input 2. Using this information, writing **Indicator1** in the playlist will switch the switcher to the first input, or the BEI Network. Writing **Indicator2** in the playlist will switch the switcher to the second input, or the ABC Network.

In your grid, write the correct Indicator or Macro.

Monday Record Schedule					
Feed Time	Start Time	Source	Filename	Duration	Record Deck
12:00:00	11:59:45	Ind1			

If you're only recording a single audio channel, not using a multi-channel switcher, or you're manually switching between sources, you won't need to add a source statement to the playlist.

Determining the Filename

AVNet uses the **timed record** feature of AudioVAULT to record over existing AudioVAULT cuts. AVNet does not automatically create new cuts for each recording, so cuts must be created in

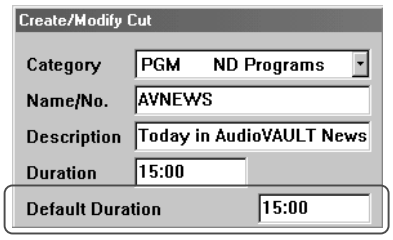
the system for AVNet to function. The cut can have any name that conforms to standard AudioVAULT naming conventions (13 alphanumeric characters and no spaces), but it's suggested that you give the cuts descriptive names. For our "*Today in AudioVAULT News*" feed, we could create an AudioVAULT cut named **AVNEWS**. If we recorded the file every day, and wanted to keep a week's worth of programs in the system, we could create multiple cuts called **AVNEWS-MON**, **AVNEWS-TUE**, and so on. How you name the cuts isn't important…you could use just numbers or develop your own coding system…as long as they conform to the AudioVAULT naming requirements and they make sense to you.

Once you've decided how to name your cuts for each feed, add them to your grid:

Monday Record Schedule					
Feed Time	Start Time	Source	Filename	Duration	Record Deck
12:00:00	11:59:45	Ind1	AVNEWS		

Determining the duration

The **timed record** feature uses the **Default Duration** attribute of the cut to determine how long the recording should be. AVNet cuts are created like any other AudioVAULT cut…most commonly in AVRPS. It may be advantageous to create a separate AudioVAULT category to help track your Net Delay files (see the **Category Add** topic in the AudioVAULT Help File).



In AVRPS, click **Record** to create a new cut. On the **Create/Modify Cut** dialog, assign the new cut to a category. Give the file a name and a description, and specify the **Default Duration**. In this example, the program we're recording is fifteen minutes long, so we'll set the **Default Duration** to **15:00**.

If the feeds you're recording have a history of not being an exact length, you may want to set the **Default Duration** longer than the actual scheduled duration. In your control playlist, you can have AVNet start recording a little early, and let the cut record for a little longer than the scheduled duration. By expanding this record window, you can capture the entire feed. There will likely be a period of fine-tuning after you start capturing network feeds.

Once you've decided how long the recording needs to be, add the value to your grid:

Monday Record Schedule					
Feed Time	Start Time	Source	Filename	Duration	Record Deck
12:00:00	11:59:45	Ind1	AVNEWS	15:00	

While the duration value isn't actually coded into the control playlist, it's an important value to know. Having it in a record grid can help you make sure you're not overlapping events. When the cut being recorded hits the **Default Duration**, the recording will stop automatically, just like a reel-to-reel running out of tape.

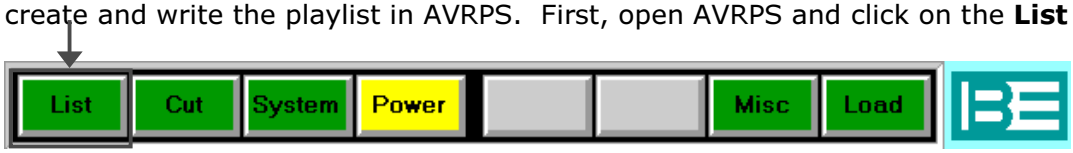
Determining the record deck

Even though AVNet can only record one event at a time, AVNet has seven decks capable of recording. It was set up this way to allow for easier remote control configuration. If you're using contact closures to start your recordings, consider using different decks for each source. Since you can only record one event at a time anyway, you can safely do all your recordings in AVNet's Deck 1 as long as you're using time-started commands instead of contact closures.

Monday Record Schedule					
Feed Time	Start Time	Source	Filename	Duration	Record Deck
12:00:00	11:59:45	Ind1	AVNEWS	15:00	1

Writing the Playlist

Now that we have this information, we have everything we need to write the playlist. You can create and write the playlist in AVRPS. First, open AVRPS and click on the **List** menu button.

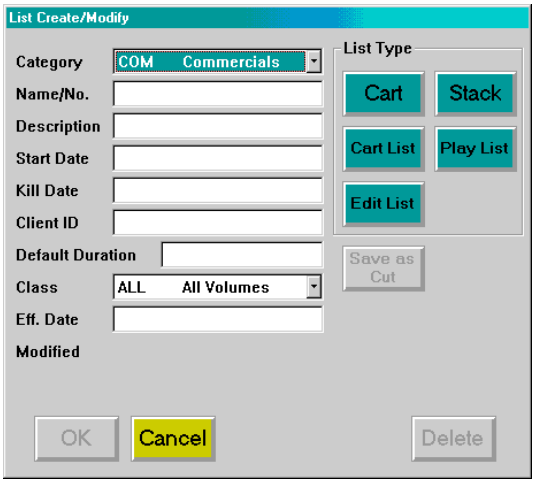


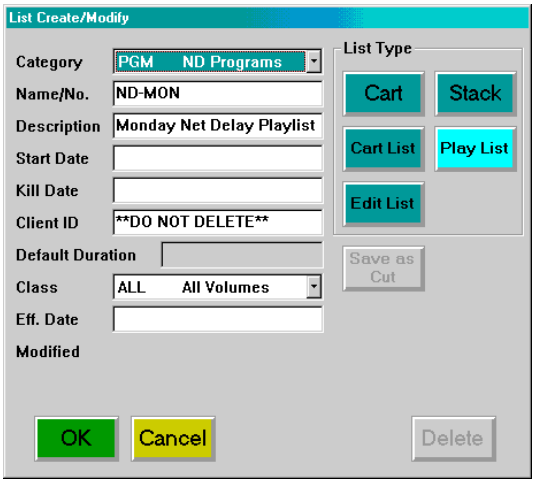
Since we're creating a new list, click **New**.

The **List Create/Modify** dialog will appear. Here, you'll enter the information pertaining to our new list.

Like all AudioVAULT files, you'll need to assign this file to a **Category**. It's recommended you keep all net delay cuts and playlists in the same category.

The playlist will also need a unique name. Select a name that includes a reference to the day of the week…we'll use that reference to load the playlist into AVNet later. The recommended naming convention is **ND-DAY**. **ND-MON**, **ND-TUE**, etc.





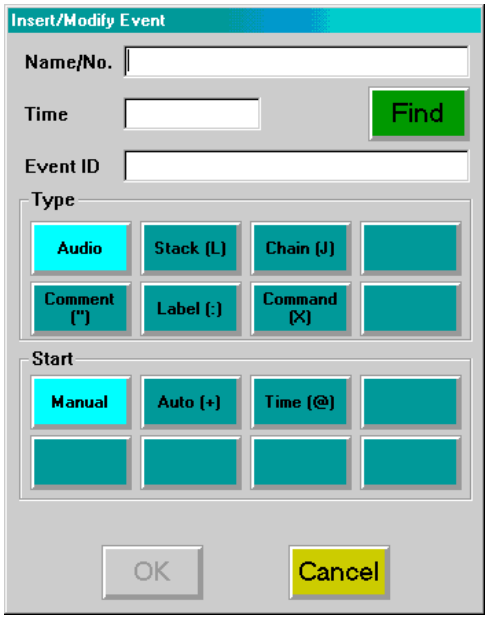
Click the **Playlist** button in the **List Type** group and add any other desired text. This is one of the few instances where it's recommended **Start Date** and **Kill Date** are left blank…it keeps the playlist out of any pre-start or post-kill file maintenance searches.

For this example, we've set a category of **PGM**, given the list the name **ND-MON**, a description of **Monday Net Delay Playlist**, and selected the **Playlist** type. We also added the text ****DO NOT DELETE**** to the **ClientID** field. Labeling the file clearly can reduce the chance that it will be deleted accidentally.

Once you've set the properties of your list, click **OK**.

The next step is to begin inserting lines of instruction into our new list. Click **Insert Line**.

This opens the **Insert/Modify Event** dialog.



The **Name/No.** field accepts the actual instruction codes.

If this event is supposed to execute at a specific time, enter the time in the **Time** field in **HH:MM:SSA/P** or **24-hour** format.

In the **Type** group, there are several options. For AVNet playlists, the major ones we need to be concerned with are:

Chain (J)	This loads the next day's playlist
Comment (")	You can add comments to your playlist
Command (X)	Most lines in the playlist are commands, or automation instructions

In the **Start** group, we specify how this line of code executes:

Manual	Some process executes the line. This could be a mouse click on the screen, a contact closure, or another playlist command.
Auto (+)	This starts this event automatically as soon as the previous event executes.
Time (@)	This starts the event at the time specified in the **Time** field.

Common playlist commands

As we prepared to write our playlist, we outlined the steps that need to happen:

1. Set the audio source.
2. Insert or cue a tape.
3. Set the recorder to pause-and-record.
4. Start the recording.

All we have to do is translate these commands into AudioVAULT language:

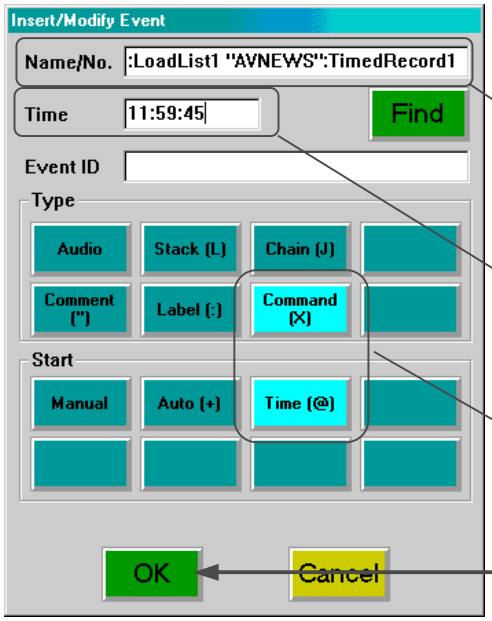
Process	AudioVAULT Command	Syntax
Set the audio source	Indicator or Macro	Indicator**X** or Macro**X**, where **X** is the Indicator or Macro number.
Insert or cue a tape	LoadList	LoadList**X "FILENAME"**, where **X** is the AVNet deck being loaded, and **"FILENAME"** is the AudioVAULT cut to load.
Pause-and-record	TimedRecord	TimedRecord**X**, where **X** is the AVNet deck
Start the recording	Start	StartX, where **X** is the AVNet deck

Using our record grid, we've answered most of these questions already.

Monday Record Schedule					
Feed Time	Start Time	Source	Filename	Duration	Record Deck
12:00:00	11:59:45	Ind1	AVNEWS	15:00	1

So we can write our playlist line using that information:

Process	Grid Field	AudioVAULT Playlist Command
Set the audio source	Source	Indicator1
Insert or cue a tape	Record Deck Filename	LoadList1 "AVNEWS"
Pause-and-record	*--None--*	TimedRecord1
Start the recording	*--None--*	Start1



Using colons to separate them, we can type the commands into the **Name/No.** field in the **Insert/Modify Event** dialog.

Indicator1:LoadList1 "AVNEWS":TimedRecord1

We'll use our record grid's **Start Time** entry to tell AVNet when to execute this event…

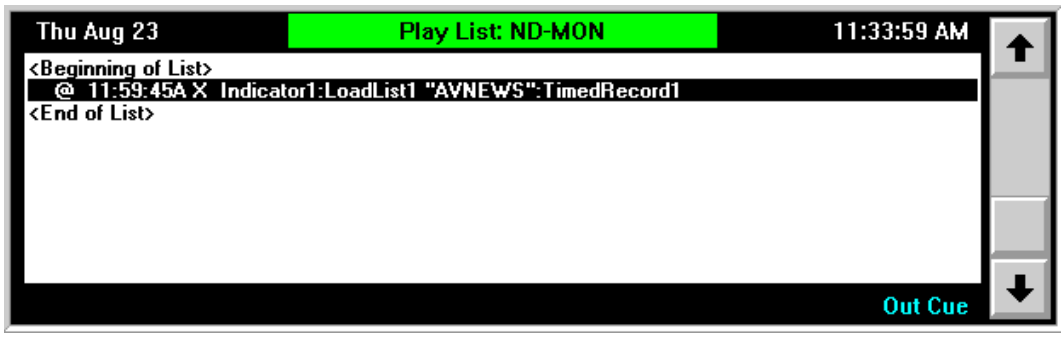
11:59:45

…and we'll define this playlist line as a…

Time-Started Command.

When you've completed the settings, click **OK** to accept your changes.

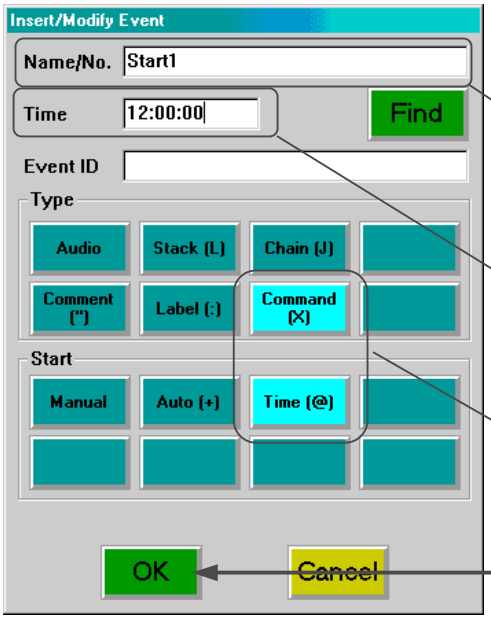
You'll see the line we just entered in the AVRPS playlist box.



This line says ***at 11:59:45A, switch the switcher to the BEI Network, load a cut called AVNEWS into deck 1, and set deck 1 to timed record so the new audio will record over the existing audio***.

The remaining step in our sequence is to start the recording. To accomplish this, we need to insert a **Start1** line to our playlist. Click on **Insert Line** on the menu bar.

This opens the **Insert/Modify Event** dialog.



Type the command into the **Name/No.** field in the **Insert/Modify Event** dialog.

Start1

We'll use our record grid's **Feed Time** entry to tell AVNet when to execute this event…

12:00:00

…and we'll define this playlist line as a…

Time-Started Command.

When you've completed the settings, click **OK** to accept your changes.

You'll see the line we just entered in the AVRPS playlist box, appended after our original statement

This line says ***at 12:00:00P, Start deck 1 and record for the default duration of AVNEWS***.

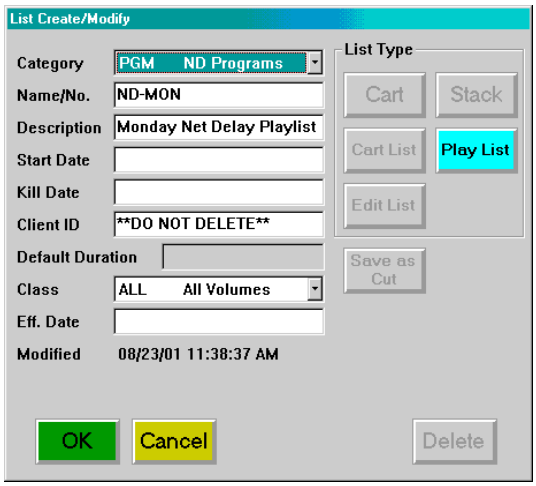
Before we go any further, save the playlist. Click **Done** on the menu bar, and click **Save**.

Repeat this process for the remainder of your net delay events.

- Click **Insert Line**
- In the **Name/No.** field, type the commands to switch the audio source, load a net delay cut, and set the deck to timed record
- Click **OK**
- Click **Insert Line**
- In the **Name/No.** field, type the command to start the deck

You'll need seven playlists

You'll need to create playlists for every day of the week, even if the only event in the playlist is a join command to the next day. If you're doing completely different events every day, it may be necessary to write each daily control playlist individually. If you're following basically the same schedule every day however, you can just save the same list to a new file and make copies of your work.



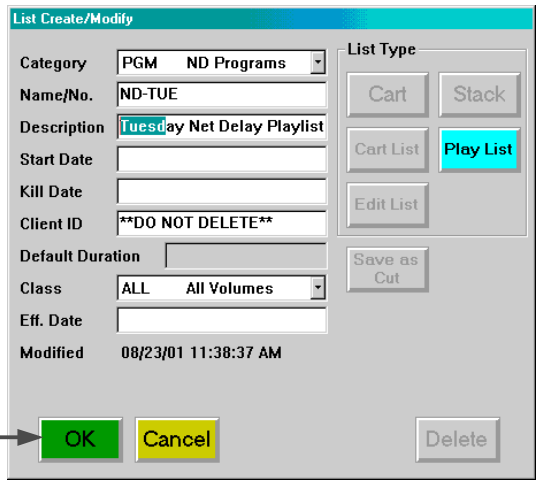
To save a playlist with a different name, first load the list you want to copy into AVRPS.

Click the **List** button on the AVRPS menu bar, and click **Save As**. This brings up the **List Create/Modify** dialog.

Change the **Name/No.** field to the new name, and change any other text fields as appropriate.

In this example, we're saving **ND-MON**, the **Monday Net Delay Playlist**, as **ND-TUE**, the **Tuesday Net Delay Playlist**.

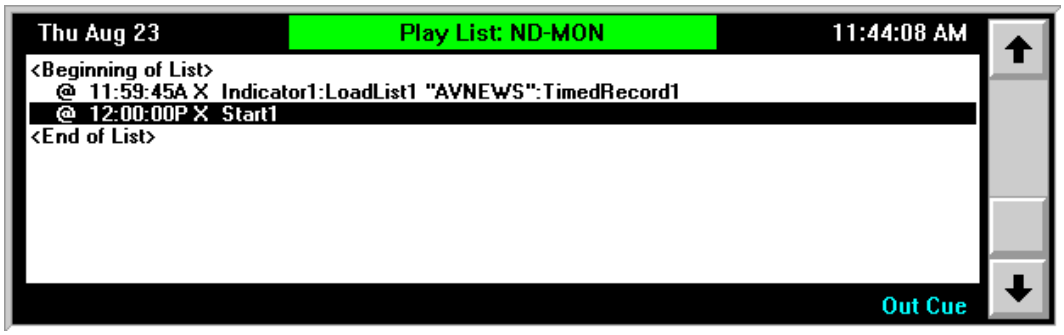
When you've made your changes, click **OK**.



Chaining the lists together

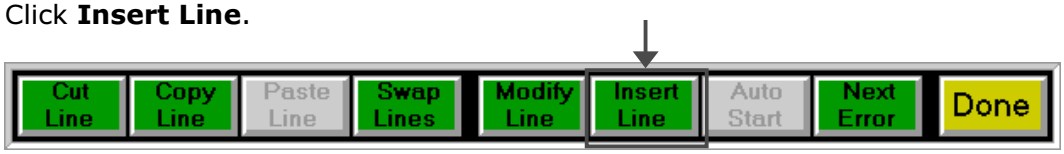
The last thing to do is to chain the seven lists together. The **chain** function is what loads the next day's list. You'll chain Monday's list to Tuesday's list, and so on.

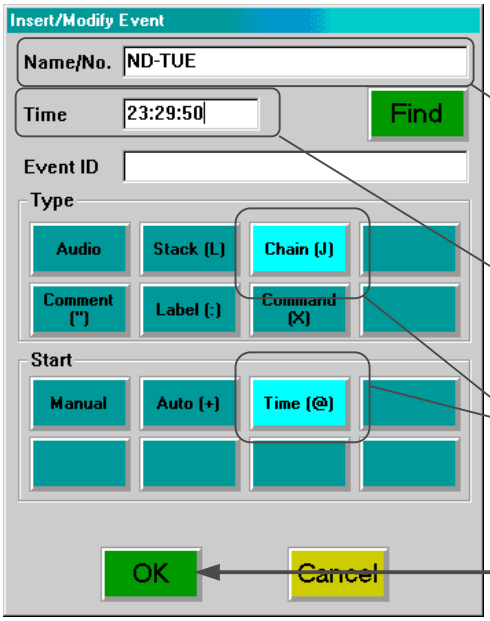
To insert a chain command, load the first playlist into AVRPS. We want to position the **Chain** command as the event of the day, so click the last event in the playlist. This repositions the black **highlight bar**. All new lines are inserted into the playlist immediately after the highlight bar.



Click the **List** button on the menu bar, and since we're adding something to the contents of the list, click the **Contents** button.

Click **Insert Line**.





Type the name of the following day's list in the **Name/No.** field.

ND-TUE

Enter the time for the **Chain** command to execute. All of the chain times for the series **must be the same**!!

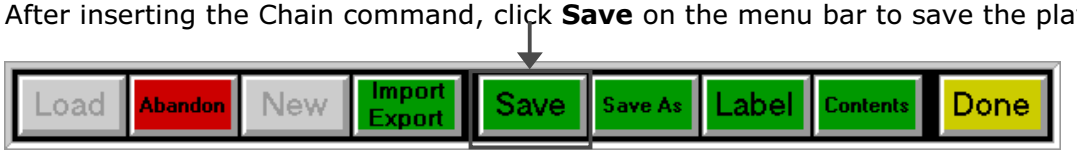
23:29:50

…and we'll define this playlist line as a…

time-started Chain command

When you've completed the settings, click **OK** to accept your changes.

After inserting the Chain command, click **Save** on the menu bar to save the playlist.

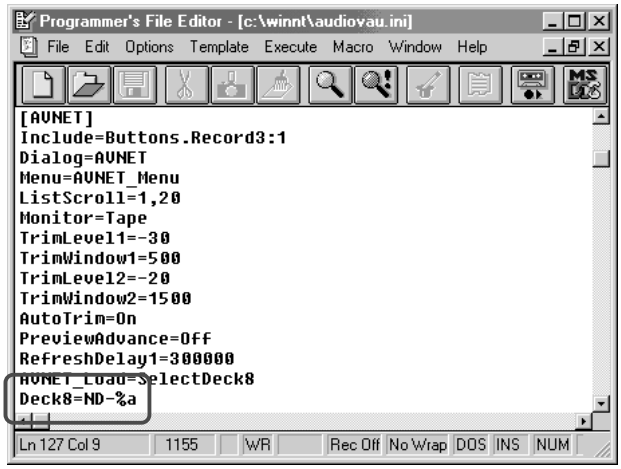


Make sure you get the correct Chain command in each of the seven daily playlists. Even if you're not recording any events on a day, you need to have a playlist with a **chain** command in it.

Loading the playlist in AVNet on startup

On startup, AVNet looks in the **audiovau.ini** file for default parameters. The file is located in your Windows directory (***c:\windows*** or ***c:\winnt***) and can be modified in a standard text editor like **Programmer's File Editor** or **Notepad**.

Open the INI file and find the AVNet section. You can search for **[AVNET]** using your editor's **find** feature.



Look for the **Deck8=** statement. This specifies the AudioVAULT file that AVNet will load into deck 8 on startup.

The default value is **ND-%a**. **%a** is a wildcard for the three letter day of the week abbreviation. AVNet is smart enough to know what day it is, and can load the correct list. With that default value, if you restarted on Monday, AVNet would automatically load an AudioVAULT file called **ND-MON** into deck 8 on startup.

If the value was set to **AVNET%a**, and you restarted on Wednesday, AVNet would automatically load an AudioVAULT file called **AVNETWED** into deck 8 on startup.

Once the file is loaded, the **Chain** commands take over, loading the next day's list each night.

OVERVIEW

Although it can appear overwhelming, the process isn't as complicated as it appears. Planning is the key.

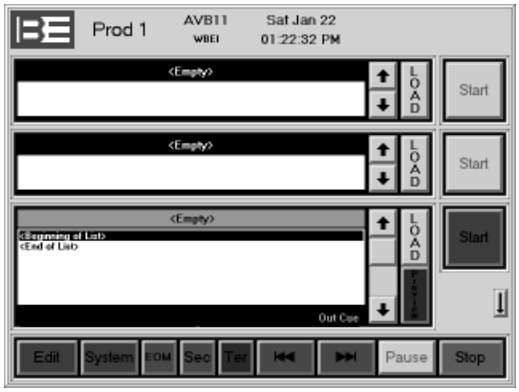
- Wire audio to the input of the record/play card being used by AVNet
- Organize each event you want to record, noting the specifics for each event in a Record Grid.
- Create the Net Delay files in AVRPS
- Write the seven control playlists in AVRPS
- Add join commands to the playlists
- Modify the INI to load the correct list on startup

Once those steps are accomplished, the automated features of AVNet will take over. As long as AVNet is open on the workstation, AVNet will follow the commands in the control playlist and capture the events you've described. You don't have to anything after the recording. Since the files are written directly to the AudioVAULT volume, they're instantly available to all workstations reading those drives.

OTHER AUDIOVAU SCREENS

AVPS

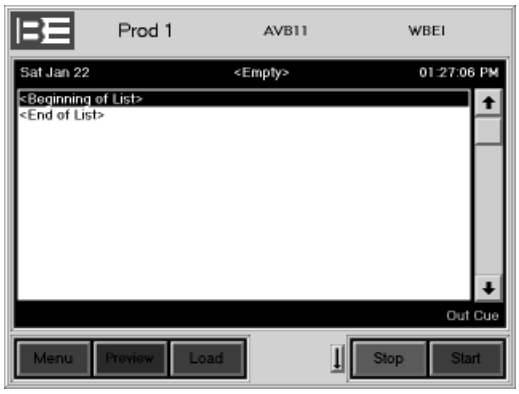
The **A**udio**V**AULT **P**layback **S**creen was designed for Live and Live Assist operations. AVPS has three visible decks. Each can contain either a playlist, or an individual cut.



AVPS uses only one AudioVAULT channel, so overlap is not possible, but cuts in each deck are buffered individually allowing for very tight transitions.

AVBPS

This one-deck screen offers large font, and shows many playlist lines. It is commonly used with a Quick Start palette for Jingles, Liners, and sound effects.



AVBPS uses only one AudioVAULT channel, so overlap is not possible, but cuts in each deck are buffered individually allowing for very tight transitions.

AVPDT

The **A**udio**V**AULT **P**lay **D**ual **T**op screen uses a single audio channel, but only half the standard 640x480 screen real estate.

It's often used with the AudioVAULT Play Dual Bottom (**AVPDB**) screen to provide two playback sources on the same screen. With multiple audio sources, overlap can be achieved.

AVRDT

The **A**udio**V**AULT **R**ecord **D**ual **T**op screen uses a single audio channel, but only half the standard 640x480 screen real estate. It's often used with the AudioVAULT Record Dual Bottom (**AVRDB**) screen to provide two Record/Playback sources on the same screen. With multiple audio sources, overlap can be achieved.

AVPTT

The **A**udio**V**AULT **P**lay **T**riple **T**op screen uses a single audio channel, but only a third of the standard 640x480 screen real estate.

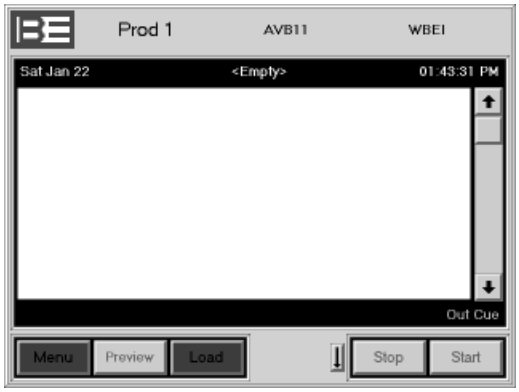
It's often used with the AudioVAULT Play Triple Middle and Bottom (**AVPTM** and **AVPTB**) screens to provide three playback sources on the same screen. With multiple audio sources, overlap can be achieved.

DTRTT

This screen configuration (**D**rama **T**ech **R**ecord **T**riple **T**op, **M**iddle and **B**ottom…**DTRTT**, **DTRTM** and **DTRTB**) offers three different production screens, each controlling an AudioVAULT audio channel and occupying 1/3 of the (SVGA) screen. They are used in applications where many feeds are coming in and are to be managed by a single human operator. Even though these are usually all found together, they can be used individually as well. (Drama Tech is the name of a theater in Atlanta, Georgia.)

AVTRAFFICBILLING

If your Traffic/Billing Department requires access to the AudioVAULT inventory, but not record or play capabilities, then a Traffic/Billing Workstation may be added to a networked AudioVAULT system. This screen attaches to an AudioVAULT channel, but the on-screen power is disabled--this allows database queries, playlist generation, and inventory deletion,



Section 4: AVProd

By the end of this section you should understand these key concepts:

- The basics of the AVProd screen layout
- How to perform basic tasks with AVProd like:
  - How to record a cut
  - How to edit a cut
  - How to break up long-form programming
  - How to move regions between multiple projects

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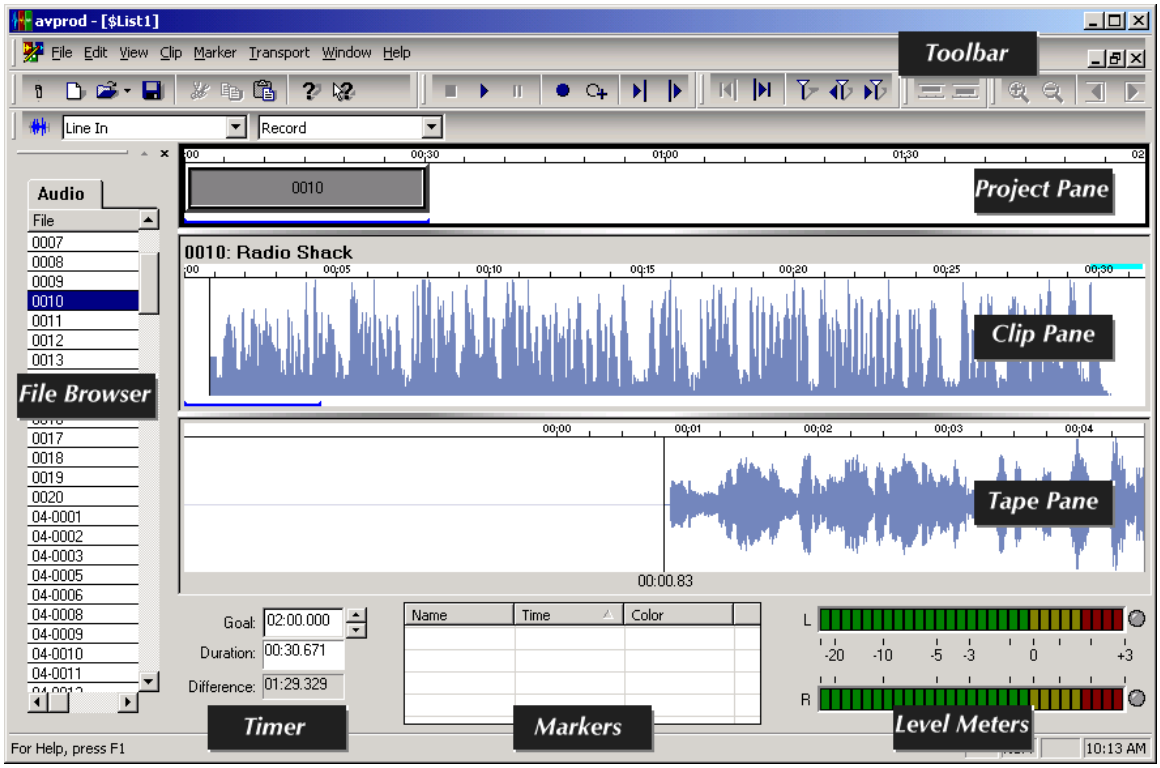
INTRODUCTION TO AVPROD

AVProd is a stereo editor best suited to newsrooms and light production work. It has the ability to cut and paste audio clips, edit begin and end points of existing cuts, quickly record news actualities or phone bits, and break long-form bulk feeds into individual pieces.

SCREEN LAYOUT

AVProd relies heavily on graphics and waveforms, and requires a screen resolution of 800x600 or greater.



AVPROD TOOLBARS

AVProd has three toolbars:

The General Toolbar

Toggles Power
Creates a New Project
Opens an Existing Project
Saves current Project
Cut clip
Copy clip
Paste
Help *(non-functional)*
Contextual Help *(non-functional)*

The Transport Toolbar

Stop playback
Play from selected Pane
Pause playback
Quick Record
Record New
Play to cursor
Play from cursor

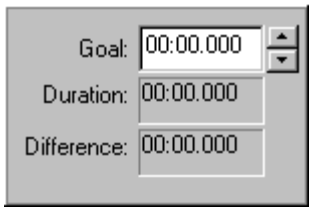
The Marker Toolbar

Jump to Previous Edge
Jump to Next Edge
Drop marker
Jump to Previous Marker
Jump to Next Marker

Wave the mouse over any button for a quick tool tip!

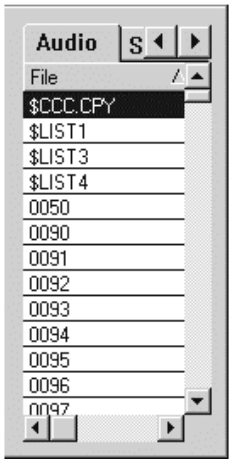
AVPROD PROJECT TIMER

The Project Timer reflects the duration of the combined elements in the Project Pane. Simply set the duration you want your project to be, and AVProd will show you what you have to add or remove to meet your goal.

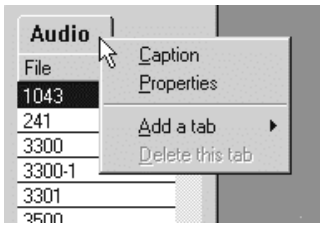


AVPROD FILE BROWSER

The File Browser reads an AVScan Database, giving you easy access to AudioVAULT inventory. You can sort the columns by clicking on the column heading.



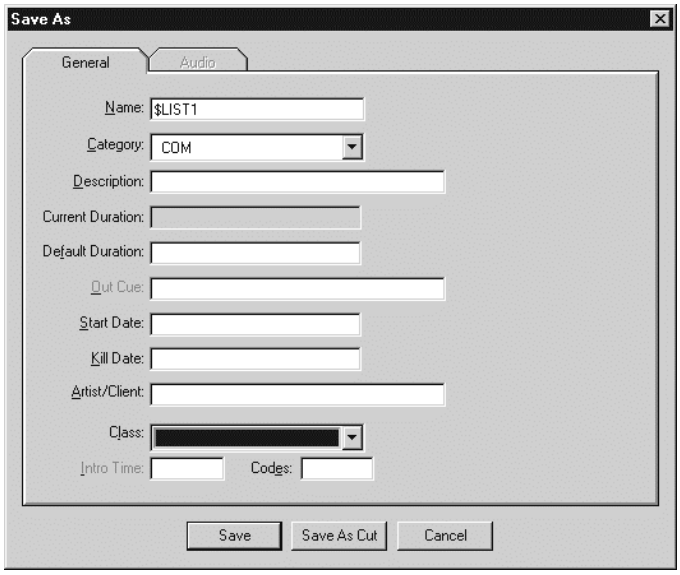
You can add new tabs by right clicking on an existing tab, choosing "Add a tab," and creating a new AudioVAULT tab.



You can filter the tabs to show any category or categories in the AVScan Database. The Filter Dialog also accepts SQL statements.

MAKING A NEW PROJECT

Click **New**.
Immediately **Save** the project using the name you want.



Either record a new element into the project using procedures described under **Recording in AVProd**, or drag elements from the **File Browser** into your new project.

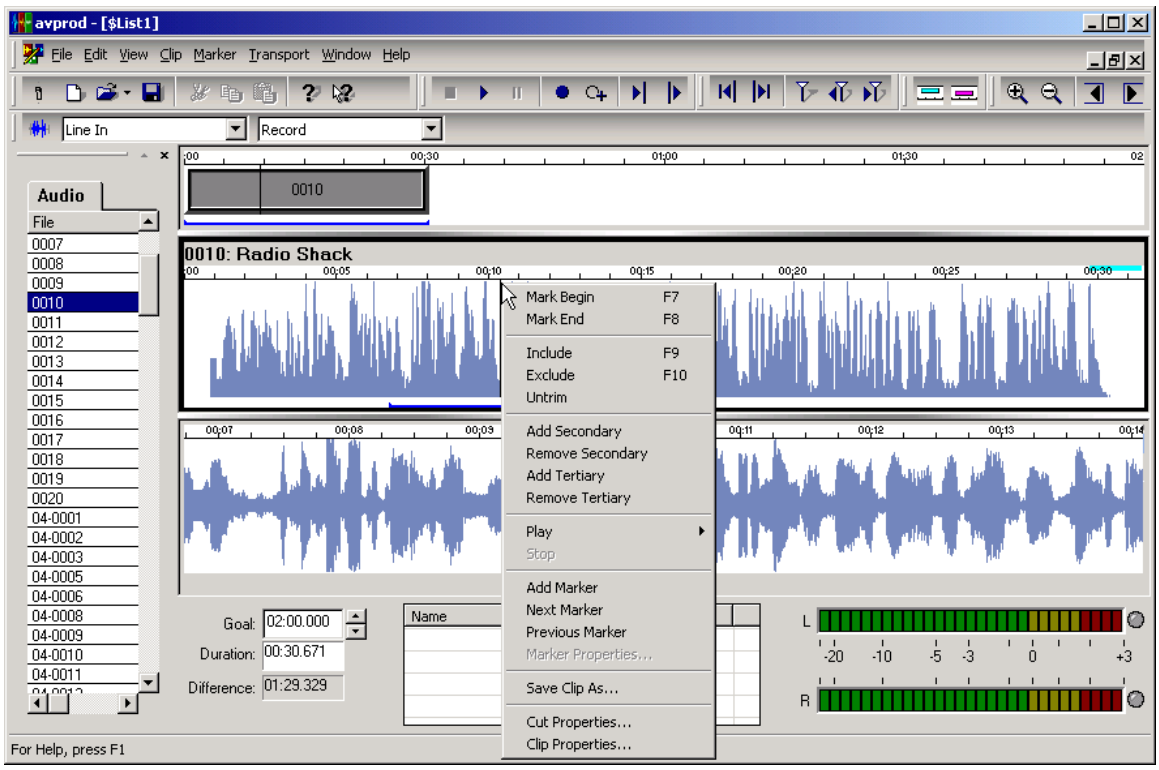
Make any necessary edits

When you save the project, it will save as an edit list. If you decide to save as a cut, the standard unique filename rules apply.

EDITING AN EXISTING CUT

Double Click on cut to open

Highlight the region you want to work on...either swipe with the mouse or position the cursor and set begin/end with right clicks or hot keys.



Right click on the defined region and select either **Include** or **Exclude**.

Click **Save**.

If you are simply adjusting begin and end points, the cut is simply trimmed. If your edit is within the body of the cut, the *Save As* dialog pops up and asks for a new name. Enter a file name, which can be the same as the original record name. Regardless of name, the original recording will be saved with the $1 on the end of its original name, and the project will be saved as an edit list. The Edit List can be saved as a cut, but a unique name must be used.

RECORDING IN AVPROD

Click "Record" to record a new cut with assigned name
Click "Quick Record" to record a new cut using dependent naming
Release "Pause"
When done, click "Stop"
If the cut records OK, that's it...close AVProd
If editing is needed, include and exclude your regions, then click "Save"
Enter a file name, which can be the same as the original record name.
Regardless of name, the original recording will be saved with the $1 dependent name, and the project will be saved as an edit list.

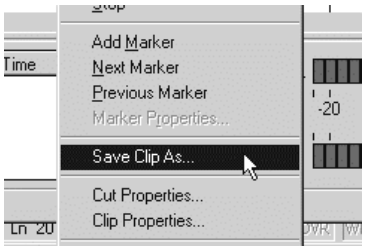
BREAKING UP BULK FEEDS

Launch AVProd

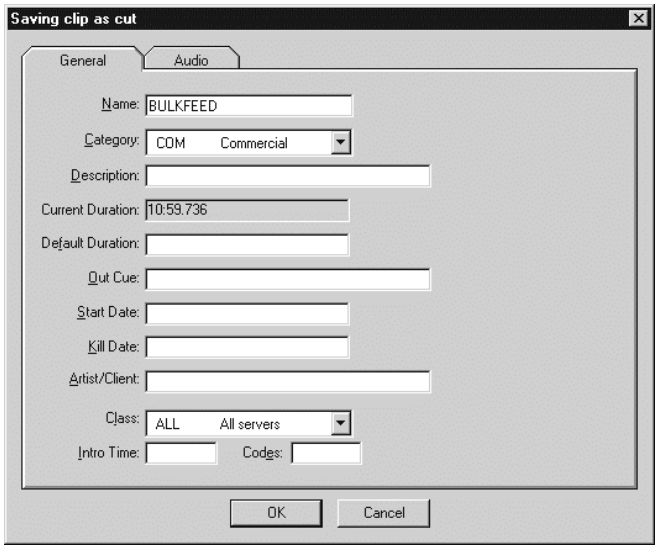
Locate the bulk feed in either the file browser, or click **Open** and type in the file name.

Highlight the segment you want to extract in the middle **Clip Pane**.

Right click on the segment and select Save Clip As...



This will bring up the **Saving clip as cut** dialog:

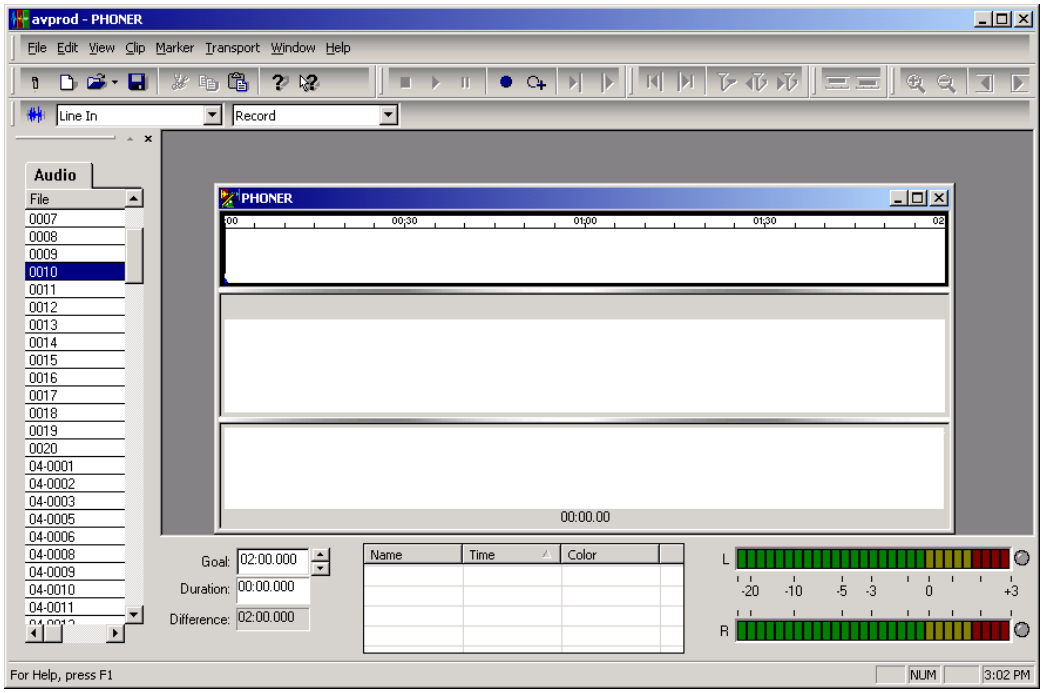


Select a unique file name for the segment. (You will have the option of overwriting existing filenames.)

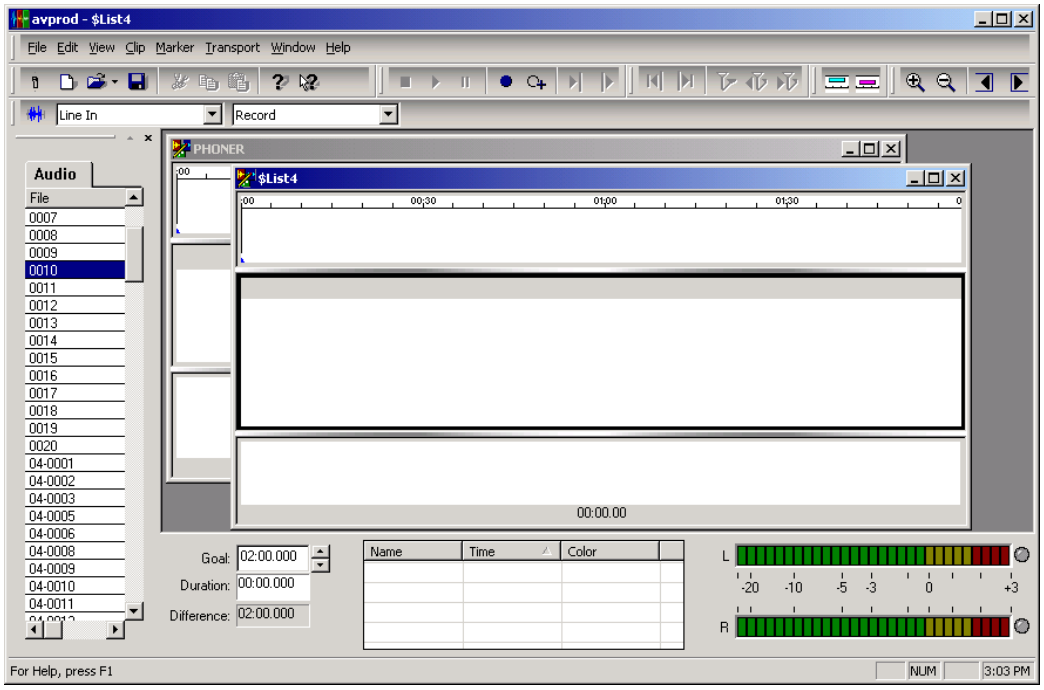
Repeat for remaining segments.

PHONERS THE EASY WAY

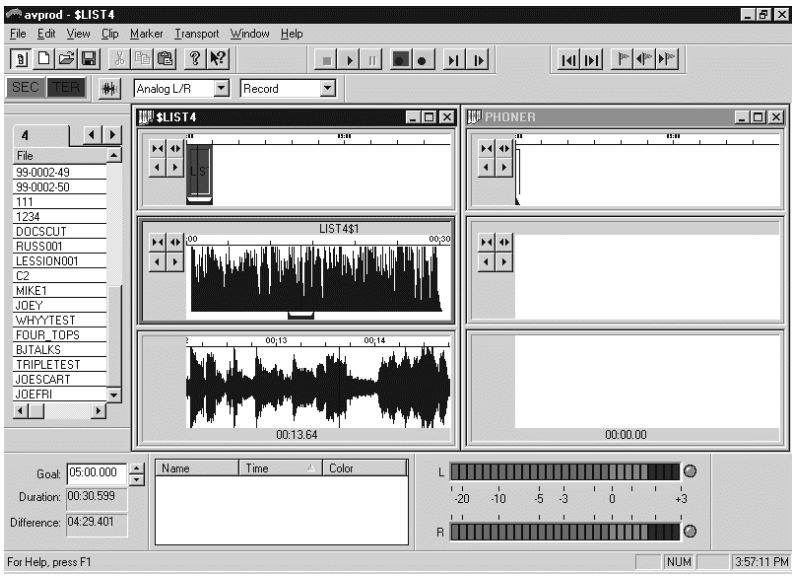
Create a file called "PHONER." This cut will remain in the system with the same name as we change the audio it contains.



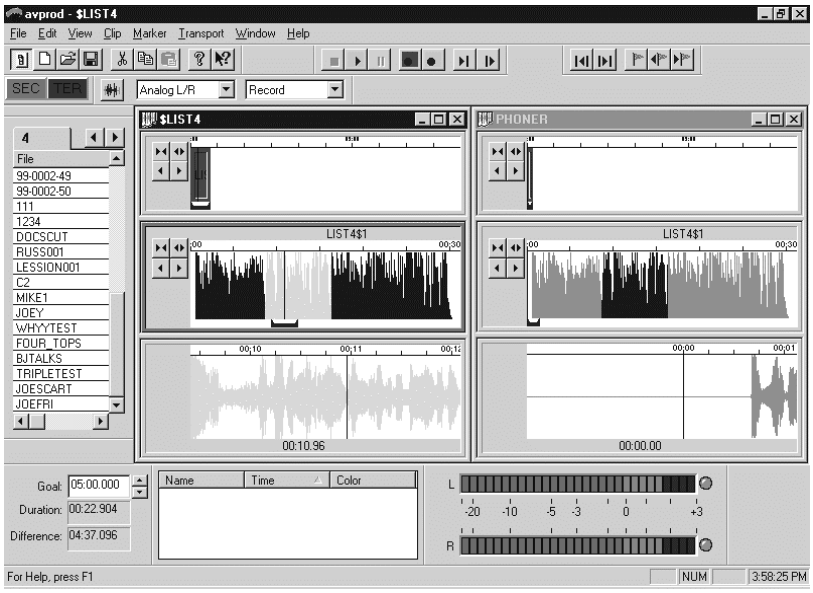
Create a second file. This is the file we will record into.



Record the phone bit into the new "scratch" file by clicking the Quick Record button. Begin recording by releasing the "Pause" button.



Highlight the segments you want to use from your scratch recording, left-click on them and drag them into the PHONER file.



Save the PHONER cut. When you're ready to clear out PHONER and put in new audio, double click on the segments to highlight them and CUT them from the PHONER project.

IMPORTANT NOTES TO REMEMBER

Dependent File Names:
This new feature allows one to name cuts in a list with respect to a format (most commonly an extension of the list name). This is mostly used with AVProd when quick recording cuts where you do not care/need to know what the new cuts are named, but will only need to reference the list name. Another place this is used is when a person has a cart "expanded" and is recording directly into it.

For example, if you create a cart named 100, then the cuts that you record into it will be named according to the cart name, like 100$1 for the first recording, 100$2 for the second recording, etc.

Dependent File Names and deleting Edit Lists:
When you delete an Edit List, you also delete its component parts, which would include the original cut the list was created from. To get around this, Expand the EDL in AudioVAULT, Click "List," "Contents," and remove the contents of the List. Save the changes, and then delete the EDL label. Rename the original cut, removing the $ dependent name.

Re-recording Edit List Elements:
The only way to do this is in AVRPS. Unfortunately, AVProd does not have a Timed Record or Re-record feature. Expand the Edit List in AVRPS, highlight the SINGLE element you want to redo, click "Cut" and "Timed Record." That particular element can be redone without affecting the other elements in the Edit List. If the element you want to redo were referenced elsewhere, you would be timed recording over those other elements as well, so be careful.

Energy Data:
Copying a file or saving an Edit List as a cut does not include energy or waveform data. Energy data must be generated for AVProd to display the waveform...this must be generated in real time.

Section 5: AVAir

By the end of this section you should understand these key concepts:

- The basics of the AVAir screen layout
- The differences between Live and Auto modes
- The role of the AVAIR.MDB
- The differences between AVAir tabs

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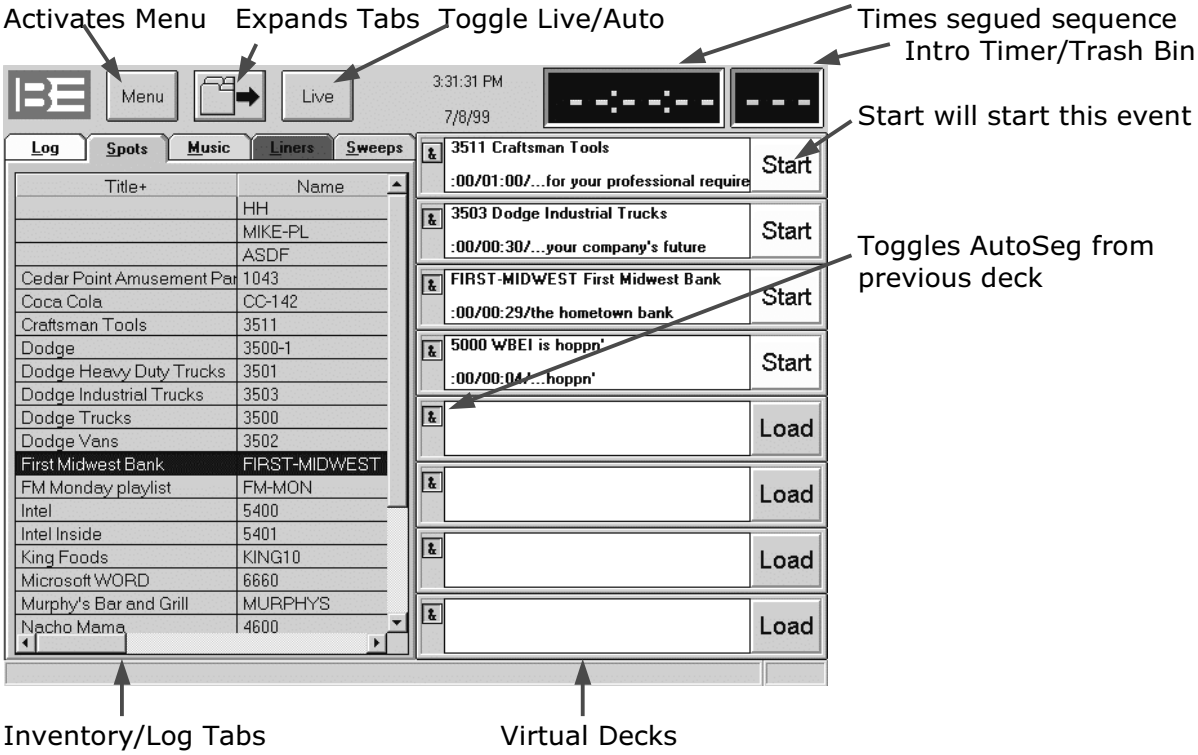
AVAIR OPERATION

AVAir is designed specifically for on-air playback in live studio and automated radio station formats. The AVAir machine is equipped with two modes of operation, live and auto.

AVAIR LIVE MODE SCREEN LAYOUT



Decks play audio cuts such as music and commercials. The decks are loaded manually in live mode, can be configured for autosegue operations, and allow the audio overlap of two or more cuts.

Overlap is accomplished by:

Manual starts/stops when Autosegue is **not** enabled
By EOM when Autosegue **is** enabled.

A deck is loaded manually with a cut or cart:

Using drag-and-drop placement
By selecting a cut with the mouse and using the deck load button.

Deck starting options include:

A mouse click on the start button
A touch screen
A remote control switch panel
A keyboard stroke or Hot Key

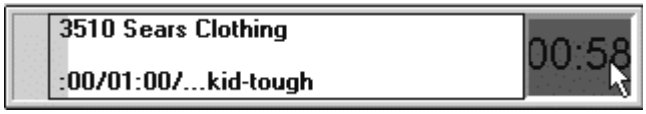
AutoSegue Decks

Decks can be programmed for autosegue operations. AutoSegue **(&)** is the automatic sequential starting of cuts contained in decks using a single start command.

ADDITIONAL LIVE-MODE FEATURES

Pause

With "Pause" enabled, you will have the ability to pause playback in that specific AVAir deck. Clicking once on the "Start" button will start the cut. Clicking on the "Start" button again will pause playback, and the button will go purple:



To Stop the cut, click on the label. Clicking on the label again will clear the cut.

Preview

With "Preview" enabled, you will have the ability to listen to the first and last few seconds of a cut. Once the feature is enabled, a small Preview button will show up on the deck in Live mode.

If the deck is loaded, clicking the preview button will play the beginning and ending of the song. One important notes…the Preview audio will playback through the regular faders on the console. Make sure the fader is in cue or audition, or the cut will preview on the air!

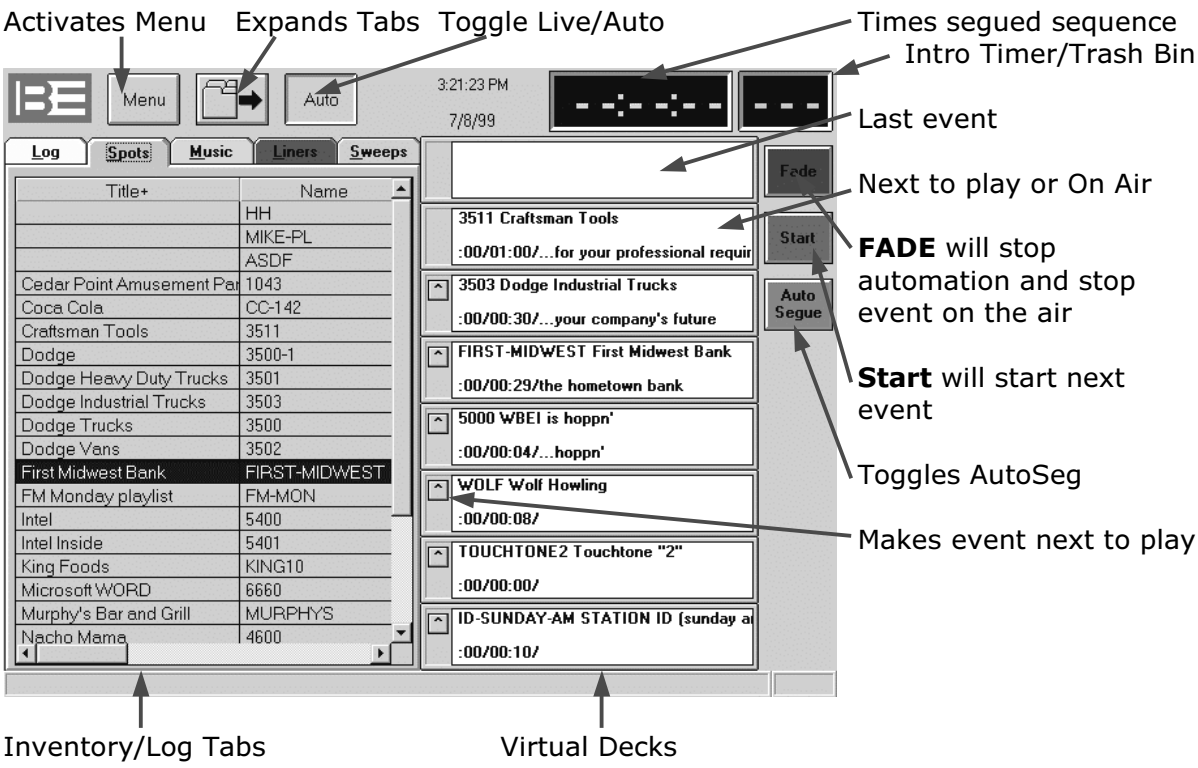
Editing

With the Edit feature enabled, you will be able to preview the cut. You will also be able to manually set the begin point and segue point of the selected event. The editing is temporary and non-destructive. It will remain in effect until the cut is completely unloaded. Once the feature is enabled, the small Preview button will show up on the deck in Live mode. When you click it, the Editing buttons will show up.

	|>	Previews beginning of cut
	>|	Previews end of cut
	<<	Adjusts edit point backwards
	>>	Adjusts edit point forwards

To adjust an edit point, click on either Preview Beginning or Preview End button, then use the Adjust buttons to reposition the edit point. To exit the Edit feature, click the "P" button again. Changes will be active until the cut is unloaded…it will retain the changes even if moved to another deck. Again, the Preview audio will playback through the regular faders on the console. Make sure the fader is in cue or audition, or the cut will play on the air!

AVAir Auto Mode screen layout



Decks play audio cuts such as music and commercials. The decks are loaded automatically in Audo mode, by default allow autosegue and overlap.

Overlap is accomplished by:
By EOM when Autosegue **is** enabled.

A deck can still be loaded manually with a cut or cart:
Using drag-and-drop placement

Deck starting options include:
A mouse click on the start button
A touch screen
A remote control switch panel
A keyboard stroke or Hot Key

USING THE AUTOMATION|GOTO FEATURE

When using an Event File and toggling between Live and Auto modes, use of the Automation|Goto feature is recommended. The function allows the operator to specify a location in the Log tab by clicking on that row, and hitting a menu option.

If you run in Live mode, and skip scheduled events, when you toggle to Auto mode, AVAir will assume those events still need to be played, and will automatically load them in decks for playback. Click Menu|Automation|Goto will discard these events and cause the current cursor position to be the beginning of the event list.

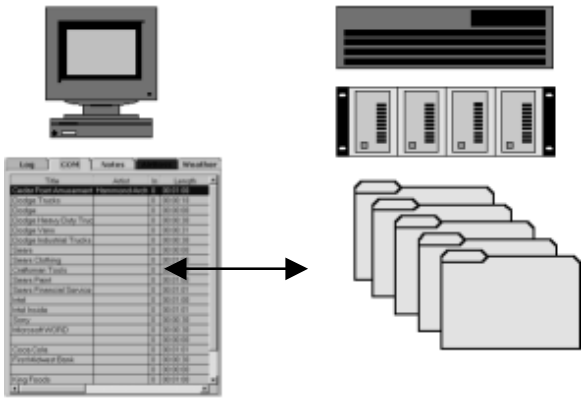
THE AVAIR.MDB

AVAir inventory tabs get their information from a file stored on each AVAir computer called the AVAIR.MDB. This is a Microsoft Access Database that is kept up to date by a utility called AVScan. The AVAIR.MDB contains:

- Inventory information, sorted by server and category
- Category and Class files
- Deck color information

Think of the MDB as a simple list. If you were to walk into your studio now and make a list of each cart in the rack and put that list by the operator, it would be like the AVAIR.MDB…a simple list of available inventory. If someone comes in and removes a cart, or adds a cart, that list is now out-of-date. The list needs to be refreshed to show the changed list of available inventory.

Just because a cut is on our list doesn't mean it's still in the cart rack, and just because a cart is in the rack doesn't mean it's on our list. Regardless, if the jock knows the name of the cart, they can grab the cart and play it. AudioVAULT works the same way. Whether or not a file appears in a tab (*in our AVAIR.MDB "list"*) has no impact on the availability of the audio. If AVAir knows the name of the file, and the file really exists, AVAir can play it. The name of the file can be retrieved from the Event File (*if it was scheduled by Traffic*) or inserted manually into the daily schedule.



The list is refreshed one of two ways. Either manually through an AVAir menu option, or with a separate utility called AVScan. If you are using AVScan, do not manually rebuild the database. This can cause damage to the database. It is possible to remove the manual option if AVScan is in use. Contact Digital Customer Service or your System Administrator for details.

AVAIR TABS

AVAir has the ability to display up to 15 tabs at a time. When using AVAir with a log generated by AVScheduler the first tab must be used for the log. All other tabs can be configured in several different ways.

Defining Tab type

Inventory Tab- consists of any audio element. This tab can be configured to show everything in the AVAir database or just a category

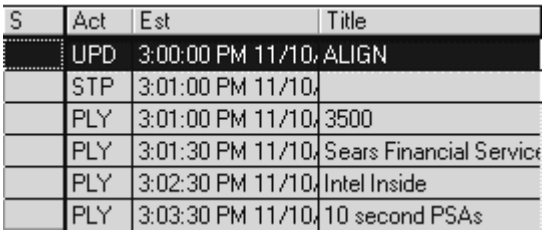
Playlist Tab- consists of a specific playlist the user wishes to have displayed. The playlist is typically created using the AVRPS screen.

History Tab- this tab consists of both a Today and Yesterday. This tab can display all elements that played on either the current day or the previous day.

Indicator Tab- This tab displays a series of 15 buttons, which can be used to send or receive contact from AVAir through the computer. This tab may require some special INI settings for certain remote control functions and even duration of the tabs.

Quick Start- this tabs displays a series of buttons that are configured to fire specific audio elements when clicked. This uses a playlist for this function.

Event List- this is the most import tabs in AVAir. This tab displays the log that is generated using AVScheduler. Without this tab, AVAir will not run properly in auto mode.



S	Act	Est	Title
	UPD	3:00:00 PM 11/10/	ALIGN
	STP	3:01:00 PM 11/10/	
	PLY	3:01:00 PM 11/10/	3500
	PLY	3:01:30 PM 11/10/	Sears Financial Service
	PLY	3:02:30 PM 11/10/	Intel Inside
	PLY	3:03:30 PM 11/10/	10 second PSAs

Note: *This tab uses either an Event File or a Playlist as it source. This tab requires special INI settings for proper configurations.*

Notes- this tab gives AVAir the ability to associate Audio and Text elements together. Plus it also allows for simply text to be displayed in a dialog in AVAir. This feature requires AirBoss.

Story Tab- This tab gives the Air Personality the ability to view stories that read into the NewsBoss database. Typically, this tab is configured for a specific Story Queue. Multiple tabs can be used.

Jock Note- this tab gives the Air Personality the ability to edit text of information within an AVAir tab. This tab is typically used for preparing show prep and requires the use of AirBoss.

AVAIR HOTKEYS

Sometimes the keyboard is easier than using the mouse. Just hold down the two-key combinations, and you're in business.

Need to CUT a line from the Log?

ctrl+x

This cuts the highlighted line from the Log tab. This also will copy the item to the Windows95 Clipboard, which gives you the ability to paste item somewhere else in the log.

Need to COPY a line from the Log?

ctrl+c

Much like a word processor, you can copy the highlighted line and paste elsewhere in the Log!

Need to PASTE a line in the Log?

ctrl+v

This will paste the cut or copied line to a point in the schedule immediately before your highlight bar.

Need to use the GOTO function to clear events falling before your blue highlight bar?

ctrl+g

Set your highlight bar, and then use the "Goto" function to discard previous events. It's easy to get a few days logs piled up in the log tab, which will decrease performance. It's important to clear those events out after your shift. This will bring up a warning box asking you if you are sure.

Need to INSERT an event by name in the Log?

ctrl+i

This brings up the "Insert by Name" dialog box. If you need to insert a new audio event into the Log (like a make good spot, for instance), use "
insert," enter the cut number, and hit "OK."

Note: Make sure that the type of event selected in the options is PLY. All other events will not insert the proper element into the log.

Need to activate AVAir's MENU?

ctrl+m

This opens AVAir's standard menu dialog wherever your cursor is on the screen.

Need to bring up the SEARCH box to search a tab?

ctrl+s

This pops up the search box directly below the current tab. Type in the first few letters or numbers of what you're looking for to narrow your search. When you switch tabs, the box disappears, and you'll have to open it again.

Section 6: Scheduling AVAir

By the end of this section you should understand these key concepts:

- The role of AVScheduler
- How Collections work and what they do
- How to build new Formats
- How to build new Days
- How to schedule using Collections
- Using Schedule Build
- How to schedule using Schedule Build

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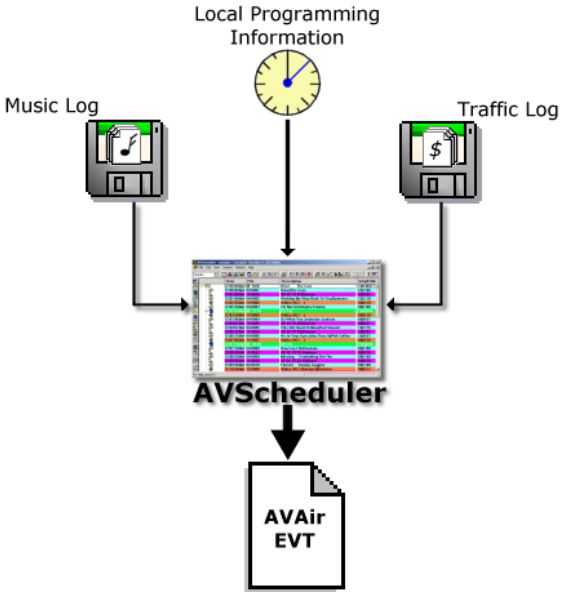
WHAT IS AVSCHEDULER AND WHY DO I NEED IT?

While AVAir can use AudioVAULT playlists, more often an EVT file generated by AVScheduler is used. AVScheduler imports traffic and music scheduling information, allows it to be integrated with other events such as news, weather, liners, and talk segments, and then combines and translates that information into an Event File that AVAir can understand.

AVScheduler is a component of the AudioVAULT software suite that writes the AVAir Event File. Instead of "scheduling" events itself, AVScheduler imports information from music scheduling programs and traffic scheduling programs. It can combine those files with local programming information and create a single file called an event file that contains a list of every event listed in order from the Legal ID at midnight to the last song in the 11 o'clock hour.



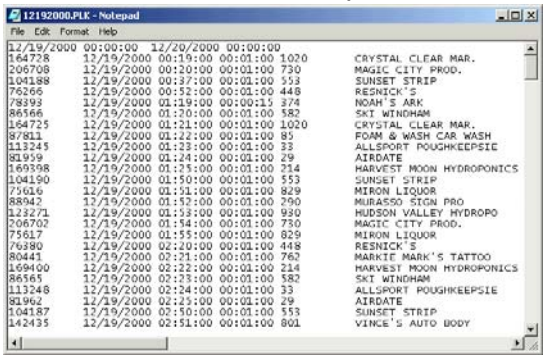
For the on-air talent, having the single Event File is great because it's like having all your carts pulled for the entire show. For the Programming staff, having the single combined file allows them to have a sequential overview of how all the elements in an hour or a day flow.

For Traffic directors, AVScheduler allows you to check what is scheduled against what AudioVAULT audio files are actually available with a feature called Log Check. AVScheduler will also give the Traffic department a way to modify the AVAir schedule without having to go into the on-air studio. There are even reconciliations that will report discrepancies between what was scheduled in AVScheduler and what was actually played in AVAir.

So to answer the original question, AVScheduler is a way to integrate schedules from your Music and Traffic programs into a single Event File. You need it to interface those programs with the AVAir software. You'll love it because of the flexibility it will provide.

SETTING UP TRAFFIC AND MUSIC SCHEDULING PROGRAMS

AVScheduler reads a computer file commonly called an **ASCII** (*ask-ee*) file. This is a simple file that you can open in a text editor like Windows' Notepad.



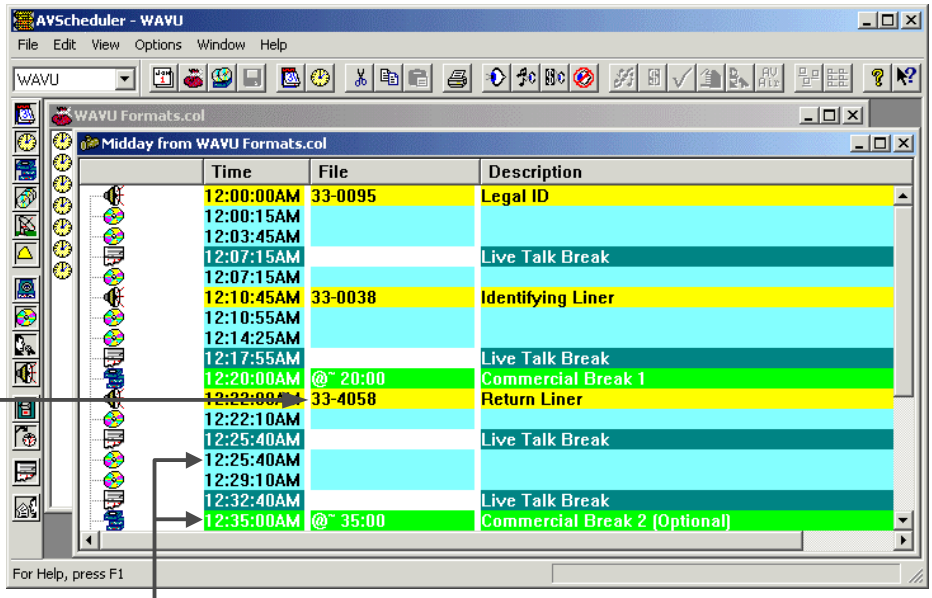
Most scheduling packages can write a file like this as part of an Automation Interface.

You will need to contact your scheduling software providers to get information on how to produce an ASCII export. Once the file is created, send it to Broadcast Electronics' Digital Customer Service team to verify that it will work with AVScheduler.

HOW DO AVSCHEDULER COLLECTIONS WORK?

AVScheduler allows you to build a collection of templates that will be able to accept information from your music and traffic scheduling software. These templates are divided into two collections: a **Formats** collection and a **Days** collection.

The **Formats** collection holds hour-long templates consisting of events. As you build a Format Hour, you include every event that happens in that hour. In this example, we start off the hour with a Legal ID, play 2 songs, go into a talk break, play a song, play a liner, do 2 more songs, and schedule a talk break into the 20-after commercial break.



We've assigned cut numbers for the Liners and IDs that will play every time we use this format.

For events that will change depending on the day like songs and commercials, we'll add empty events that will act like "containers." We'll fill in these containers when we go through the import process. These containers **must** be there so that when we import music or traffic, the events will have somewhere to go.

The **Days** collection holds 24-hour long templates consisting of **Format Hours**. This allows you to organize and reuse template combinations.

When we schedule a specific **Date**, AVScheduler reads the information stored in the Days templates to create a 24-hour long skeleton file called a **CSAW** file. Once that file has been created, we fill in the empty containers with information from the traffic and music scheduling software. The containers are already embedded in the local programming (IDs and Liners, for example) that we defined as we built the Formats collections, so when AVScheduler writes the Event File based on the CSAW, we have a 24-hour long file with every event in sequence.

WHAT IS "SCHEDULE BUILD?"

As you build the Formats templates, it's very important that the number of empty containers matches the number of events scheduled in your traffic and music programs. For example, if Programming schedules 15 songs an hour, you need to set aside 15 empty song containers every hour to not only accept all the import data, but also to make sure each event is written to the Event File in the right place.

So what happens if Programming decided to start scheduling 16 songs overnight? Not only do they have to tell their music software to start scheduling 16 songs overnight, the AVScheduler Formats will have to be modified to reflect the change with the additional containers for the extra songs. We need to make the change in two places.

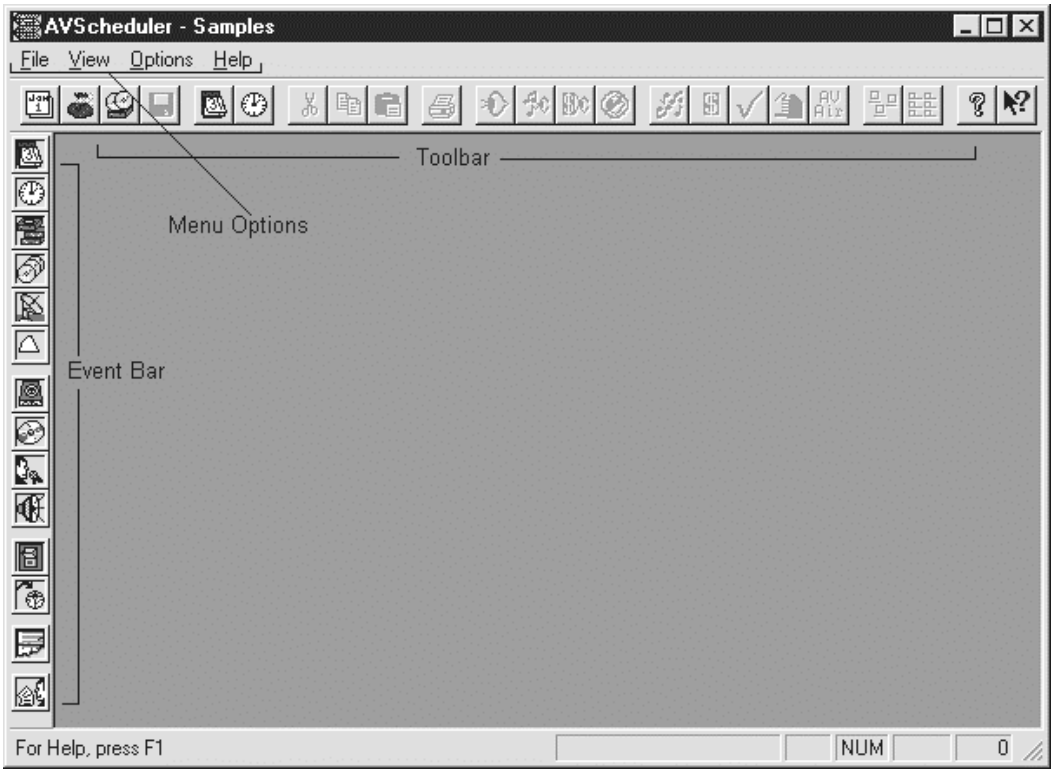
To avoid this, it's possible to store all of the information we normally store in the Formats Collection within the Music Scheduling software instead. **PowerGold**, **Music Master** and RCS'

Selector and **Linker** products are capable of creating a file that allows us to do a Schedule Build import.

With the Schedule Build import, programming information is stored in the music output file. When we import the file, the CSAW or skeleton file is created on the fly based on that information. The advantage is that when a change is made, it only has to be made in one place. The disadvantage is that until the music file is imported, containers don't exist to accept traffic information, so music **must** be imported before traffic. The output file must be in a specific format for Schedule Build to work. Contact Digital Customer Service for more information.

AVSCHEDULER SCREEN OVERVIEW

AVScheduler is a Windows-based application, so a lot of the toolbars and menus will feel familiar. In addition to the text menus, AVScheduler features a Toolbar and an Event Bar.



As you look at your AVScheduler screen, you will see the **toolbar** you will use to perform operations within AVScheduler. You will also see the **Event Bar** that you will to build scheduling information.

THE TOOLBAR BUTTONS

The Event Bar

Events are the basic elements you use to build scheduling and format information. Once you have created an empty format hour, you can add event elements into that format by clicking on the appropriate icon on the Event Bar and dragging it into your empty format hour.

Used to Create a new **DAY** in the Days Collection

Used to Create a new **FORMAT** in the Formats Collection

Used to Insert a **COMMERCIAL BREAK** into a Format Hour

Used to Insert a **MUSIC SWEEP** into a Format Hour
Used to Insert a **SATELLITE ELEMENT** into a Format Hour
Used to Insert a **PROGRAM SEGMENT** into a Format Hour
Used to Insert a **COMMERCIAL** into a Format Hour
Used to Insert a **SONG** into a Format Hour
Used to Insert a **VOICE TRACK** into a Format Hour
Used to Insert a **GENERIC AUDIO EVENT** into a Format Hour
Used to Insert a **COMMAND** into a Format Hour
Used to Insert an **UPDATE** into a Format Hour
Used to Insert a **COMMAND** into a Format Hour
Used to Insert a **LIVE READ** into a Format Hour

The Toolbar

Just like any standard Windows toolbar, here you will find shortcut buttons that allow you to access menu options.

Opens the **Calendar.**
Opens the **Collections** Dialog.
Opens the AVAir **Database**.
Saves the active window.
Opens the **Days** Collection.
Opens the **Formats** Collection.
Cuts the current line to the Windows Clipboard.
Copies the current line to the Windows Clipboard.
Pastes the contents of the Windows Clipboard.
Prints the current window.
Expands the contents of the current window.
Expands the **music** elements of the current window.
Expands the **traffic** elements of the current window.
Collapses all elements in the current window.
Import music.
Import traffic.
Perform **Log Check**.
Perform **Log Reconciliation.**
Export Log to AVAir.
Arrange icons within Collection windows.
AVScheduler and contextual "What's This" **Help.**

CREATING COLLECTIONS

The first time you try to open a collection, AVScheduler will report that the collection is not found. Simply click **OK**, and the collection will be created. Save the new empty collection.

BUILDING FORMATS IN THE FORMATS COLLECTION

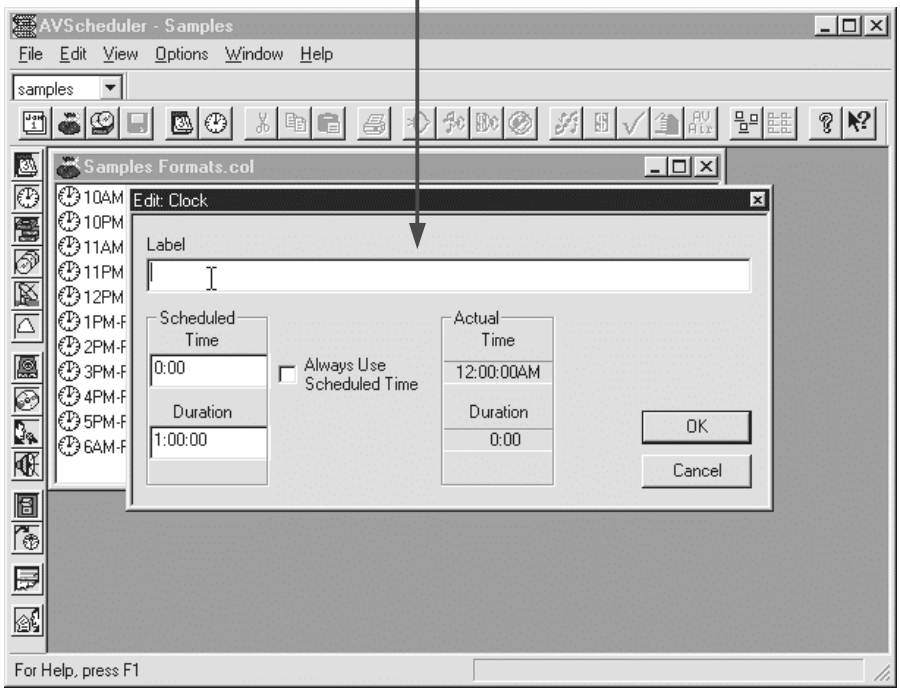
Each **Format** represents an hour's worth of programming. It will contain **slots** for music import information, **Commercial Breaks** to hold traffic import information, and any other elements you would normally play over the course of an hour.

Open up the Formats Collection.

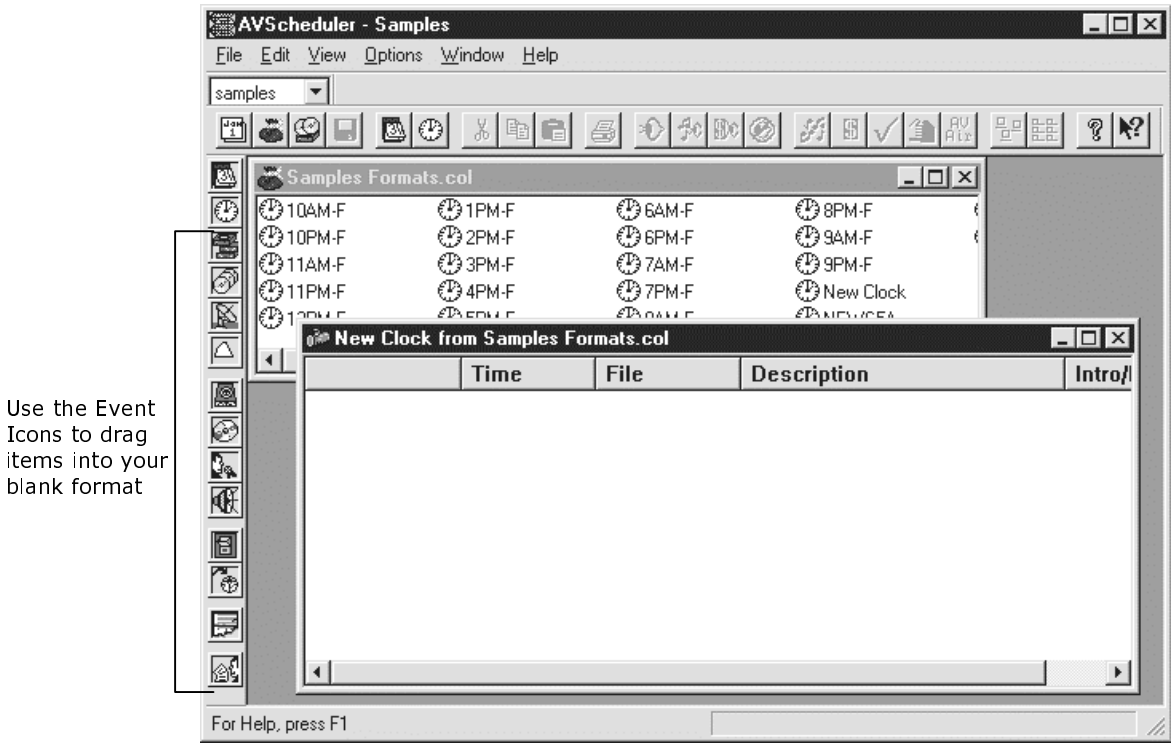
Drag a new blank **Format** into the collection.

Use this icon to add a new **Format** to the Formats Collection. Simply click and drag the new Format in…when you let go, you will be prompted to **name** the new Format.

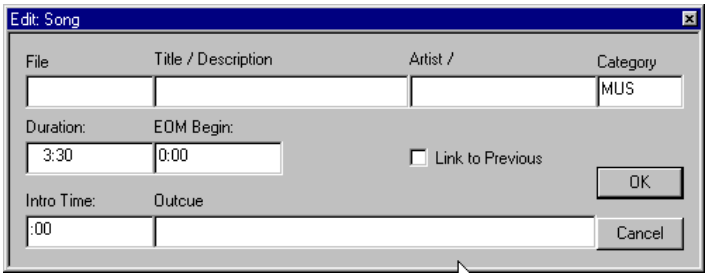
Give the Format a unique name or **Label**



Double-click on the New Format to open it. Now it's ready to accept Events.



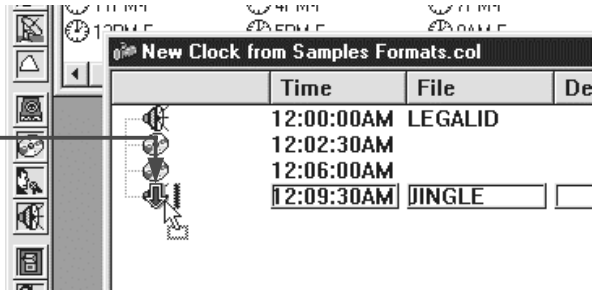
When you drag in most type of events, you will see an edit dialog.



You have two courses of action:

1. Assign a specific **File** name. If this were an event you want to play every time this format is scheduled, like a Legal ID or Jingle, you would want to hard code a specific file name.
2. Leave the **File** Name field blank. This creates a **slot** that can be filled by a Music or Traffic Import.

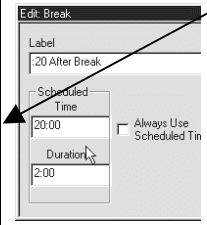
As you add new events, click on the icon on the Event Toolbar and drag it into the Format. Still holding the mouse key, position the mouse pointer over the previous event so the Red Arrow points **down**.



Once you have built the Format, close it and **Save** the Collection.

EVENT TYPES

Used to Insert a **COMMERCIAL BREAK**. When you drag in a Commercial Break, you will be prompted for a **Scheduled Time**. Only put in the MINUTES after the hour that the break should air. For example:



Used to Insert a **MUSIC SWEEP.** For **Scheduled Time,** follow the same guidelines as you would for a Commercial Break.

Used to Insert a **SATELLITE ELEMENT**. This is basically a "placeholder" to fill time for Satellite Segments. Same **Scheduled Time** guidelines apply.

Used to Insert a **PROGRAM SEGMENT.** This is basically a "placeholder" to fill time for Program Segments. Same **Scheduled Time** guidelines apply.

Used to Insert a **COMMERCIAL.** Used for stations requiring individual Commercial "slots" instead of Commercial Breaks. Not required if using Nearest Time Fill.

Used to Insert a **SONG.** Used for stations requiring individual Music "slots" instead of Music Sweeps.

Used to Insert a **VOICE TRACK.** Required for use with the VoiceTracker feature.

Used to Insert a **GENERIC AUDIO EVENT.** Most commonly used for hard-coded Liners, Legal ID's, and Sweepers.

Used to Insert a **COMMAND.** AVAir can process commands including:

Command	Code	Additional Arguments
Stop	STP	None
Turn Off Automation	OFF	None
Disable Updates	DSB	None
Enable Updates	ENB	None
Indicator On	RON	Indicator #1-15
Indicator Off	ROF	Indicator #1-15
Indicator Momentary	RMO	Indicator #1-15

Used to Insert an **UPDATE.** See next segment **Update Arguments**.

Used to Insert a **COMMENT** into the EVT file.

Used to Insert a **LIVE READ**. Used in conjunction with AirBoss.

UPDATE ARGUMENTS

Updates allow you to catch up the Format to real clock time. There are different types of Updates:

Update Type	AVAir Command	Additional Parameters
Simple	GTL	Time
Fade S	FGS	None
Fade M	FGM	None
Fade F	FGF	None
Deadroll	DRL	AV filename of Deadroll cut
Input	INP	Indicator Input #1-15

Simple Updates

At the Update End Time, the event scheduled immediately after the update will become the next event to play. All other events will be discarded.

Fade Updates

At the Update End Time, the event scheduled immediately after the update will become the next event to play. The event currently on the air will fade, and the event scheduled after the update will fire at the Update End Time. All other events will be discarded.

Deadroll Updates

Allows AVAir to start user-specified "Deadroll Files" that are back-timed to the Update End Time. The Deadroll File can be a rotating cart. Events are discarded as the Deadroll begins, and when the current event finishes, the Deadroll file fades in and rolls to the Update End Time.

Input Updates

Input Updates can serve two functions:

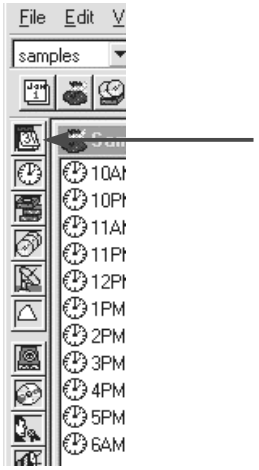
1) They can force AVAir to stop and wait for an outside contact closure (an Input)
2) If AVAir is in Auto Mode and AutoSegue is enabled, an Input Update will actually start AVAir at the Update End Time.

BUILDING DAYS IN THE DAYS COLLECTION

This is similar to building Formats, except instead of using Events as your building blocks, you use Formats.

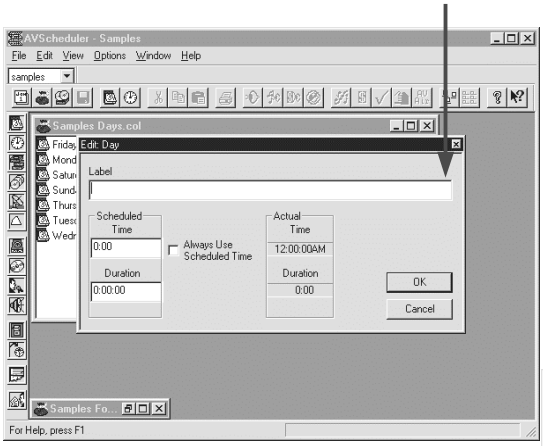
Open up the Days Collection.

Drag a new blank Day into the collection.

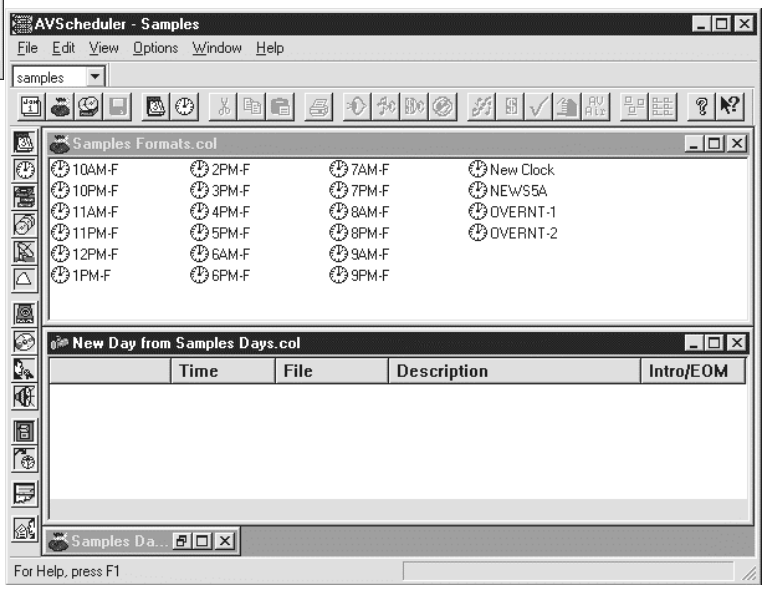


Use this icon to add a new Day to the Days Collection. Simply click and drag the new Day in…when you let go, you will be prompted to name the new Day.

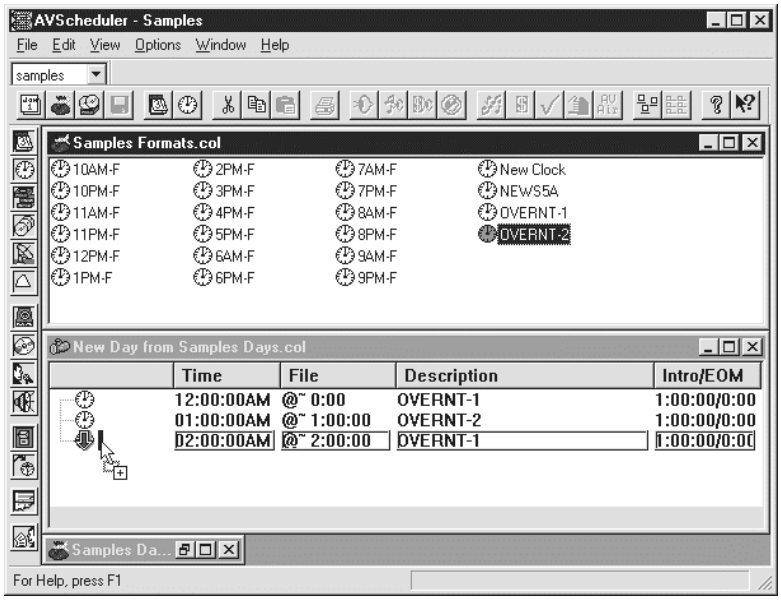
Give the Day a unique name or **Label**



This is where Screen Real Estate gets tricky. Double-click to open the new empty Day, minimize the Days Collection and open the Formats Collection. With the New Day and the Formats Collection open; click **Window** and **Tile Vertically** on the Menu. You should wind up with something like this:



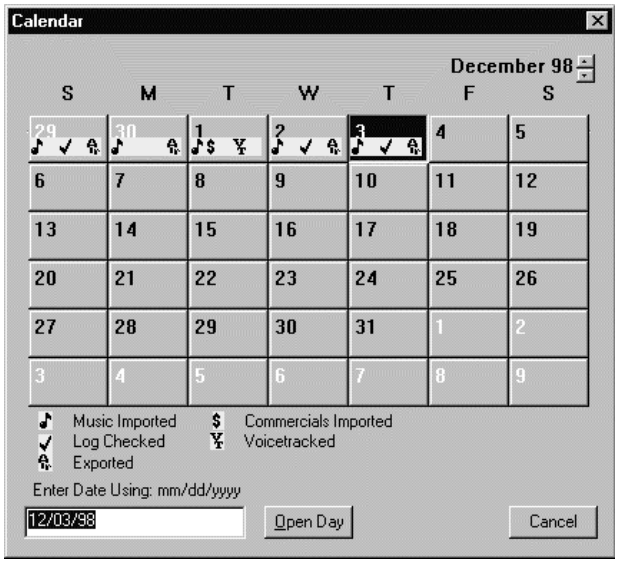
Now, we drag in Formats to build the Day just like we added Events to Formats.



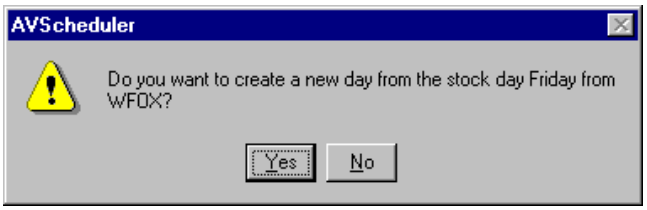
When your Day is complete, close it and **Save** the Collection.

SCHEDULING FROM START TO FINISH USING COLLECTIONS

When you open AVScheduler, you will see the Calendar. Select the Date you want to schedule, and hit Open Day.



AVScheduler will ask you if you want to create your new day from the **stock day** from your Days Collection, in this case the stock **Friday** from a station called **WFOX**.



Now that you have your Date created, it is ready to have your station's data imported into it. Right now, it contains "slots" to accept specific information stored in the files generated by your Music and Traffic software. To make this as easy as possible, we've grouped together on the Toolbar the 5 icons you will use the most.

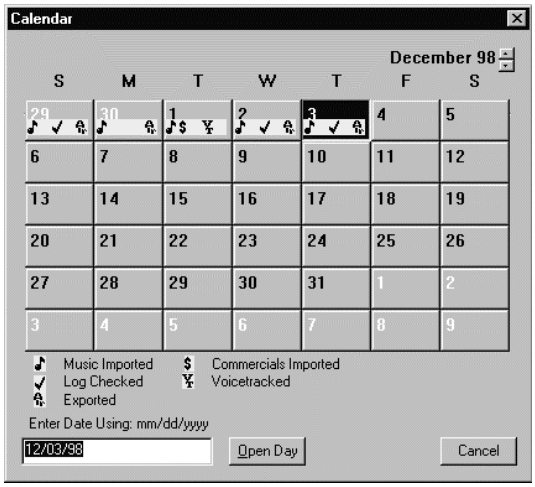
The **Import Music** icon will open a Win95 dialog box and allow you to select today's music log. The **Import Traffic** dialog box will open a Win95 dialog box and allow you to select today's traffic log. The **Log Check** Icon compares the scheduled information with the data stored in the AVAir database and will generate a report of what is missing or out-of-date. The **AVAir** icon will export your schedule to the AVAir machine as an EVR (event ready) file. When the AVAir machine "sees" that file, it appends it to the information in the Log tab, and renames it as an EVT (event today) file. The **Reconcile** icon will compare what was scheduled to what actually ran and prepare a report that can show if events were played outside a specific window, or were skipped or added.

Step-by-Step Procedure

- Click on the AVScheduler Icon on the desktop.
- Select a new date from the Calendar and click "Open Day."
- Click "Yes" if you want to use the stock Day from your Days Collection.
- **Import** Music.
- **Import** Traffic.
- Perform a **Log Check.**
- Export to **AVAir.**
- Close AVScheduler.
- Yes, you do want to **Save** your work!

SCHEDULING A NEW DAY USING SCHEDULE BUILD

When you open AVScheduler, you will see the Calendar. Type in the Date you want to schedule, and hit **Open Day**.



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The **Import Music** icon will open a Windows dialog box and allow you to select today's music log. The **Import Traffic** dialog box will open a Windows dialog box and allow you to select today's traffic log. The **Log Check** Icon compares the scheduled information with the data stored in the AVAir database and will generate a report of what is missing or out-of-date. The **AVAir** icon will export your schedule to the AVAir machine as an EVR (event ready) file. When the AVAir machine "sees" that file, it appends it to the information in the Log tab, and renames it as an EVT (event today) file. The **Reconcile** icon will compare what was scheduled to what actually ran and prepare a report that can show if events were played outside a specific window, or were skipped or added.

Step-by-Step Procedure

- Click on the AVScheduler Icon on the Win95 desktop.
- Enter a new date in the Calendar and click "New Day."
- **Import** Music.
- **Import** Traffic.
- Perform a **Log Check.**
- Export to **AVAir.**
- Close AVScheduler.
- Yes, you do want to **Save** your work!

USING VOICETRACKER

This feature will allow you to record voicetracks between songs, at the end of songs, at the end of commercials, virtually at any point where you have scheduled a VoiceTrack Event.

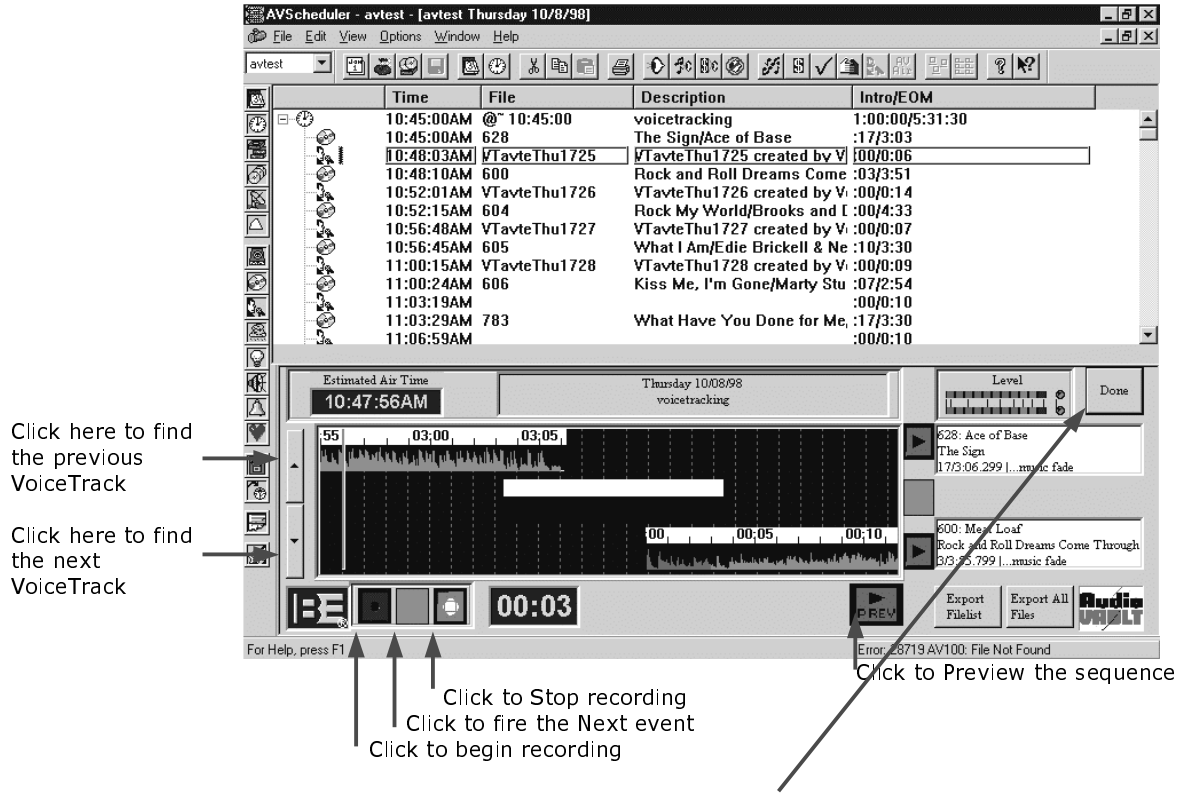
VoiceTracker requires three separate channels:

- A Playback channel for the Previous Song
- A Playback/Record channel for your VoiceTrack
- A Playback channel for the Next Song

VoiceTracker will automatically generate specific cuts names for each VoiceTrack instance using a FileName formula. (which should default to **VTK%a####**).

To Voice Track a show:

Open AVScheduler
Open the Date you want to Voice Track
Click the Voice Track button. VoiceTracker will open, and look like this:



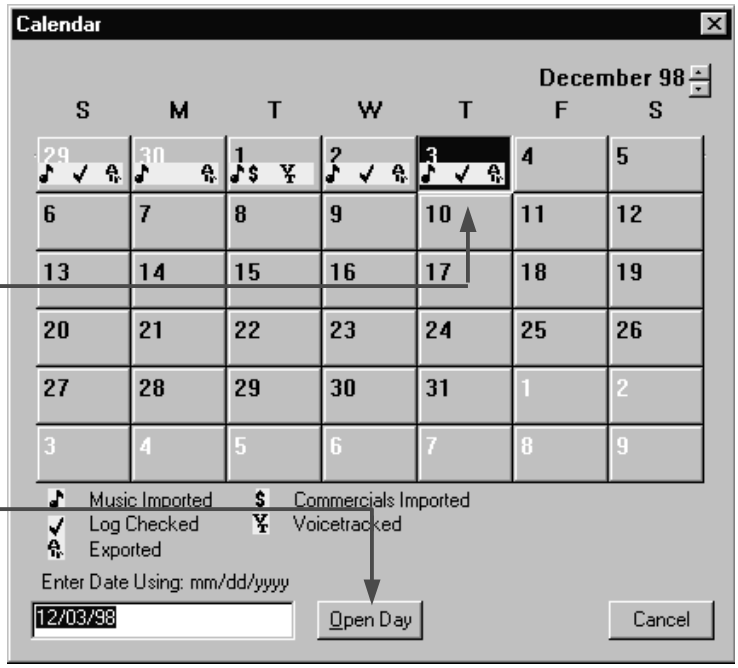
When you've completed all your VoiceTracks, click "Done."
Save the file, and Export to AVAir.

USING RECONCILIATIONS

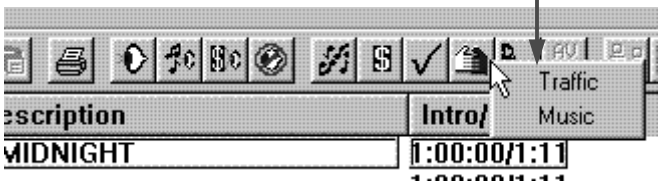
Open AVScheduler.

Click on a Date.
For reconciliations to work properly, the day must be completed. (Meaning, obviously, you can reconcile yesterday but not tomorrow.)

Open the day.



Click on the Reconcile button on the top toolbar.  You will see a list of the reconciliations that have been set up. Click on one.



The report will run and report errors as configured by the user.

AUTOSCHEDULER

AVScheduler has the ability to automatically import Music and Traffic log files into AVScheduler using a utility called AutoScheduler. This feature can also perform log checks, log reconciliation, and notify a list of people when tasks are completed or when they are not completed. One AutoScheduler can automate any number of stations, provided that all necessary information is provided for each station on the workstation AutoScheduler is running. AutoScheduler checks for new information every 10 minutes.

AVSCHEDULER SETUP STEP-BY-STEP

1. Contact the vendors of your music and traffic scheduling programs. Have them teach you how to export an ASCII automation file.
2. Send the resultant files to Digital Customer Service. If you would like to use the Schedule Build feature, we can help you configure the output file.
3. AVScheduler keeps all of its collections and data files in a single Windows Folder called a Data Directory. The next step is to use Windows Explorer to create the Data Directory. Create the directory on a machine that is always accessible, like the on-air workstation.
4. When you first start AVScheduler, it will ask you to create a station and identify that station's Data Directory. Type in your call letters in the **Station Name** field. Then use the **Browse** button next to the **Please select a folder to contain the station's data files** field and browse to the Data Directory we created in step three.
5. Go through AVScheduler's setup options to define the AVAir directories and the import definitions.
6. Build your Formats and Days templates. (Unless you're using Schedule Build.)

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Section 7: Basic Troubleshooting

By the end of this section you should understand these key concepts:

- How to find out what an error means
- What information to gather for problem resolution
- How to contact Broadcast Electronics

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FINDING AN ERROR MESSAGE

Most error messages reported by your AudioVAULT system can be researched in the on-line Help Files. Once the correct Help File entry is found, most error descriptions contain possible causes and suggested resolutions. Obviously, the key is to know the **exact** error message. If you encounter an error, please take the time to write down as much information as you can, including (when possible):

- The exact error message
- What was happening right before the error
- What happened when the error was reported
- What you had to do to recover from the error (restart the application, reboot the server, reseat a cable)

Of course, errors are uncommon with the AudioVAULT architecture. These are the uncommon errors you'll commonly see:

7208:NetBIOS Session Number Out of Range

AudioVAULT must attach to a remote volume using a network connection. This error indicates that connection can't be established. Always check the simple things first and move ahead in complexity.

- Network cable
- NIC hardware
- AudioVAULT software on both machines
- NIC configuration
- Protocol configuration

File Is Open For Read

The cut is highlighted, or has been loaded, and another machine attempted to record it. Move the highlight bar off the cluster/cut and retry the record.

In rare cases this can occur if a workstation crashes just after it has opened a file.

This could also be caused by two (or more) workstations attempting to load the same cart (possibly within an auto-started break) at the same time. Each would try to open the cart file to first get the rotation pointer and then again to write back the new/next rotation pointer. Another cause may be NFServer. If a cut is recorded, then NFServer reads the cut when copying the file to another server. If you attempt to record the cut again while NFServer is copying, the error will occur. If a production mistake is made while recording a cut, then use PAUSE and SKIP REVERSE to start over (instead of STOP and TIMED RECORD), thus leaving the cut in the RECORD mode and thus preventing NFServer from opening/reading the cut.

File Is Open For Write

The cut is being recorded, and another machine attempted to cue it up. When the recording is complete re-load the cut/cluster by clicking off and then back on the first event. In rare cases this can occur if a workstation crashes just after it has opened a file.

Communication Timeout

The AV2K.DLL is not responding to software requests. This can also be reported if the sound card fails.

MPEG Decoder has become unlocked

When playing MPEG-encoded cuts, if the MPEG decoder encounters a non-MPEG data block then "DECODER UNLOCKED" is reported and the decoder starts pitching bytes until a MPEG header is encountered in the data stream. Each MPEG block represents about 35mS of audio, so the dropout may go undetected. Play that cut back to see if the error can be reproduced. If so, delete the cut and re-record it. Also, AVFixUp can detect files with Holes or Bad MPEG.

Disk late

This would be reported when the AudioVAULT applications are requesting more data than the volume's drives are able to provide. This occurs when:

- Too many simultaneous records/plays are occurring. Switch to mono, or compress the cuts (more).
- The disk is encountering data errors.
- The drive is overheating.

Reset Received

Can be reported when there is an internal fault with the AV2K.DLL or the drives for the audio cards.

Macro processing error

A macro has a syntax error. Determine which macro has the error, then correct the macro definition by editing the playlist, or AUDIOVAU.INI. The error sometimes happens when a playlist event is mistakenly made a command instead of a comment or a cut/cart (audio) event. Verify that exact event of the playlist that reported the error.

Machine/Track already in use

The error is reported when an application tried to connect to a card of channel already in use by another workstation or application. Other possibilities:

- The machine was in use by a workstation that terminated abnormally.
- The card/channel has been configured in the AudioVAULT software, but doesn't physically exist in the workstation.

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