Storing and recalling projects, tracks and cues

AR-06-0190

Backing up to tape

Because Direct-to-Disk recording is done directly to the hard disks installed in your system, the sounds you record remain there even when you turn off the system. To make room for new projects and tracks, however, you will want to back up completed projects to the tape storage system.

Tape drive status indicators

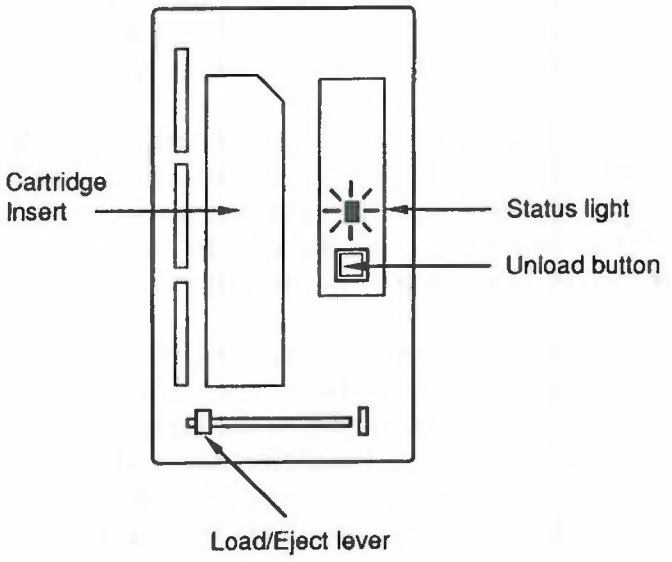
The **status** light on each tape drive is located above the **unload** button, indicating when the drive is in motion.

- When the status light is on, the tape is moving and cannot be removed from the drive.
- When the status light is off, the tape is not in motion, and it is safe for you to load or unload a cartridge.

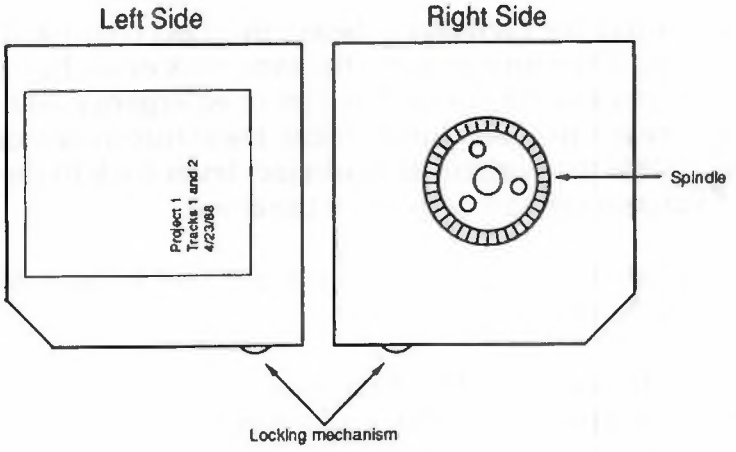
If you inadvertently leave the Real-Time Performance system while tapes are loaded in the drives, you may remove the tapes without re-entering the Real-Time Performance system by pressing the **unload** buttons on the tape drives. It is recommended, however, that you use the Eject command on the Project Directory whenever possible.

> WARNING: Operation of the backup system is quite different from that of a tape recorder. Please read the backup documentation carefully before attempting to back up or load projects or tracks. Never press the unload button on the tape drive while the Direct-to-Disk system is operating.

The Patriot tape drive



Tape cartridge



Backing up to tape (con't)

Overview of the backup system

The following explanation is a basic overview of the Direct-to-Disk backup procedure. These step are explained in more detail on the following pages.

Step 1. Insert the tape cartridges. Insert a cartridge into each tape drive, making sure the leading edge of the cartridge is the one with the notched corner on the bottom. Push the cartridge all the way in and to the right so that the cartridge is seated in the drive.

Step 2. Loading the tape. The cartridges used in the tape drives consist of computer tape wound onto a spindle. Loading locates the beginning of the tape. To load the tape, slide the horizontal **load/eject lever** all the way to the right. Loading takes approximately 30 seconds, during which a clicking sound may be heard.

Step 3. Back up the desired project or track. Use the Backup command to write the sound information to the beginning of the tape. Previously data stored on the tape is erased as you back up.

Step 4. Eject the cartridges. Select the Eject command on the Project Directory to wind the tape back onto the spindle and eject the cartridge. (In an emergency you could use the **unload** button below the status indicator light.) Slide the horizontal **load/eject lever** back to the left to unseat the cartridge from the drive.

Step 5. Label the cartridges. It is important to label each cartridge carefully.

Step 6. Make a second backup copy. As with any digital media, it is important to backup a second copy on separare tapes to ensure the safety of your data.

Overview of the backup system (con't)

For easier and quicker data retrieval, we recommend that you put only one project on a tape.

If you want to put more than one project or track on a tape, use the Skip All command in the Project Directory to skip to the end of the last signal recorded on the tape before using the Backup command. This way you can add a project or track to the end of a tape without accidentally recording over something on the tape.

It is possible to write a project or track to a specific location on the tape using the Skip command to locate to the next project or track on the tape. **This is not recommended, however.**

To verify your projects on the tape, you use the Skip command to skip to the next project on the tape. The system reads and verifies each block of data for a project or track. If there is an error in the data, an error message appears on the screen.

Backing up to tape (con't)

Project backup

You store a project onto tape from the Project Directory.

1. Insert the cartridges into the tape drives that correspond to the project tracks and seat them in their drives.

2. Slide each horizontal lever all the way to the right to load each tape in the drive.

   The status light is on until loading is complete.

3. If you want to append a project to the end of the tape, execute the **Skip All** command to skip to the end of recorded projects.

   The status light is on until the tape stops at the storage location.

4. Execute either the Backup Project command (if you are backing up a single project) or the Backup All command (if you are backing up all projects).

   The project is written to tape location you indicated. Previously recorded projects at this location are erased. When project backup is complete, the current project's Mod status is reset to "No." If the Mod status is not reset, the backup was not successful. The status light is on until the backup procedure is complete.

(continued next page)

Project backup (con't)

5. If you backed up more than one project on the tape, use the Home command to rewind the tapes to the beginning, and then use the Skip command to verify all projects on the tape.

6. Select the Eject command on the Project Directory.

   Each tape is wound back onto its cartridge. The status light is on until unloading is complete.

7. Slide the horizontal lever all the way to the left.

   The cartridge is ejected.

8. Label each cartridge with the name of the project and the number of the track recorded.

9. Repeat the backup procedure on a second set of tapes for added security.

If the project uses fewer than half the total number of tracks available, odd-numbered tracks are backed up first, followed by even-numbered tracks. You can minimize backup time by recording on odd-numbered tracks only. For example, backing up a one-minute recording on Tracks 1 and 3 takes half as long as the same recording on Tracks 1 and 2.

Backing up to tape (con't)

Track backup

You can store a single track of a project onto a single tape from the Track Display. Use a different cartridge from the ones on which you stored your project.

1. Insert the cartridge into the tape drive that corresponds to the track you want to back up and seat it in its drive.

2. Slide each horizontal lever all the way to the right to load the tape in the drive.

   The status light is on until loading is complete.

3. If you want to append a track to the end of the tape, execute the Skip All command to skip to the end of recorded material on the tape.

   The status light is on until the tape reaches the desired storage location.

4. Execute the Backup Track command from the Track Display.

   The track is written to the current position on the tape. Previously recorded tracks at this location are erased. The track backup does not reset the project's Mod status on the Project Directory. The status light is on until the backup procedure is complete.

(continued next page)

Track backup (con't)

5. If you backed up more than one track on the tape, use the Home command to rewind the tapes to the beginning, and then use the Skip command to verify all projects on the tape.

6. Select the Eject command on the Project Directory.

   The tape is wound back onto its cartridge. The status light is on until unloading is complete.

7. Slide the horizontal lever all the way to the left.

   The cartridge is ejected.

8. Label each cartridge with the name of the project and the number of the track recorded.

9. Repeat the backup procedure on a second set of tapes for added security.

Track backup is designed primarily for storing individual tracks; it is not compatible with the project backup format. You should keep track backups on separate carefully labelled tapes.

Verifying the Tape Backup

You can verify whether or not the data has been accurately backed up. The verify software detects if the data on the tapes cannot be read for any reason, such as a medium error on the tape or a hardware problem with the cartridge. It can also detect data errors (noise) that were introduced during the transfer of the data to the tape, that is, noise introduced by cabling or other hardware problems in the system.

The verification procedure will not, however, detect noise errors already on the Direct-to-Disk that are transferred to tape. Nor will it detect some types of memory errors that can occur during the backup process.

Although the verify feature detects the majority of errors that could occur during a tape backup, it cannot directly compare the data on the tape with the data on the Direct-to-Disk. It remains that the only completely reliable way to verify that a backup is correct is to reload the data and listen to it.

> WARNING: The addition of the verification data on the backup tapes means that projects backed up with Release 2.1 or later software cannot be reloaded onto a system running earlier software. However, all projects backed up with earlier software will be loaded correctly by Release 2.1 or later.

Verification procedure

Before proceeding with the verification procedure, read the **WARNING** on the previous page.

1. Insert the tape cartridge, position the tape and select the appropriate Backup command.

2. After the backup has been completed, click the instruction line near the bottom of the Project Directory.

   If the message "Backup Completed" appears, the backup was successful.

   If any other message appears, use a different cartridge and repeat the backup procedure.

3. Once the message "Backup Completed" has appeared, select the Home command from the Project Directory.

4. Perform a Skip or a Skip All command of the project or track that you want to verify.

   The message "Backup Tape is Now at End" or "One Project has been Skipped" indicates that the track or project was accurately backed up.

5. Eject and label the tape cartridges.

Note: The message "Data errors were encountered in this project" indicates a serious hardware problem. If this or any other hardware error message appears, call your Customer Service Representative.

Backing up to tape (con't)

Protecting your tapes

In order to protect the projects and tracks on your tape cartridge from accidental erasure, you can manually lock the tape cartridge. You can load a locked tape onto your Direct-to-Disk, but you cannot record anything onto the tape until it is unlocked.

The tape locking mechanism is located near the notched corner on the bottom edge of the cartridge. It is a circular gear mechanism which can be manually rotated. When the tape is locked, you cannot record on the tape.

To lock the cartridge

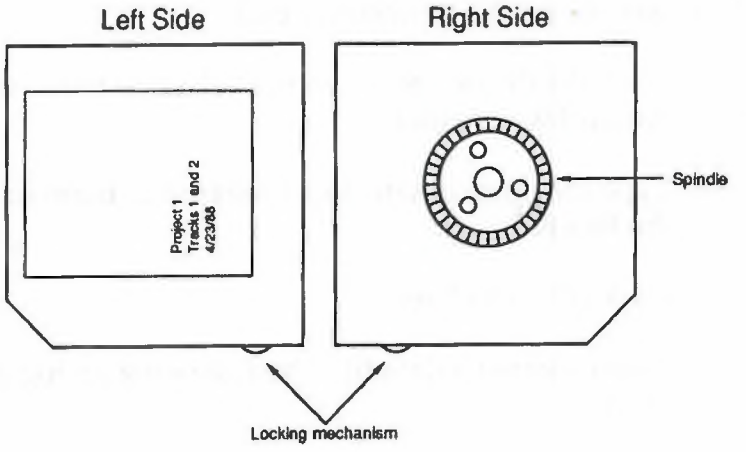
- Roll the locking mechanism until a white dot appears.

To unlock the cartridge

- Roll the locking mechanism until the white dot is not visible.

As with any electronic media, you should always make a second backup copy of your tapes, and verify their contents.

When labelling the tapes, keep the labels within the recessed areas on the cartridge and do not stack labels over each other. Otherwise, tapes can get stuck in the drives.



The tape cartridge

Storing cues on the system Winchester

You can backup cue definitions—track location, duration and editing—to your system Winchester disk.

(For more information on using the Monitor, see the manual *Organizing and Storing Sounds.)*

Storing cues to the Winchester

All the cue definitions in the current project can be stored to a data file on the Winchester disk.

1. Click the CUE STOR box in the Selection panel of the Audio Event Editor.

2. Type the appropriate data filename or treename into the FILE field.

3. Click [DTD-to-File].

   If you created a data file, the following dialog appears.

   > Copy and REPLACE cues FROM Direct-to-Disk to file "filename" [OK] [CANCEL]
   >
   > Any previous cue information stored in the file is overwritten.

   If you did not create a data file, the following dialog appears.

   > Copy and SAVE cues FROM Direct-to-Disk to file "filename" [OK] [CANCEL]
   >
   > A file big enough to store your cues is created for you on the Winchester disk.

4. Click [OK].

   The cue definitions are stored to the Winchester disk data file.

The Cue Store/ Recall panel

Storing cues on the optical disk

You can copy a cue to an optical disk and store it as a sound file. Note that the optical disk is not meant to replace the Patriot drives as a backup system.

(For more information about the optical disk, see the section "Recording" or the *Organizing and Storing Sounds* manual.)

Setting up to copy a cue to the optical disk

An individual cue can be copied from the Direct-to-Disk onto an optical disk. The sample rate of the cue stays the same as the project. No sync or cue track information is saved on the optical disk.

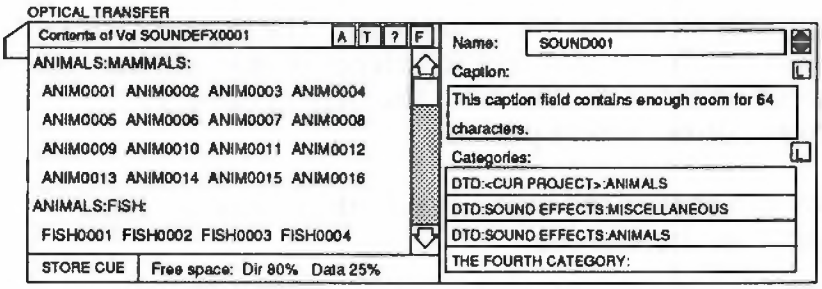
A cue is transferred using the Optical Transfer panel in the Audio Event Editor.

1. Click OPT XFER in the Selection panel to display the Optical Transfer panel.

2. Click the F (Fold Out) button in the upper right corner of the panel.

   The panel displays seven rows of sound files on the left and cue information on the right. It cannot be resized. If there is not enough room on the screen for the panel, an error message appears and the panel does not redraw.

The Optical Transfer panel



Storing cues on the optical disk (con't)

Displaying sound file and cue information

The left side of the Optical Transfer panel lists sound files currently stored on the optical disk. The right side of the panel shows the caption and categories that will be stored with the current cue. The default category is always **dtd:<current project>**.

You can change the caption and category assignments before storing the cue.

1. Select a cue by clicking the up and down arrows at the top right of the panel.

   The first eight characters of the sound file name appear. (You can scroll through the cues in the current project or in all projects by select Curr Proj or All Proj from the Cue Directory.)

2. Type a new caption, if desired, in the Caption field. A total of 64 characters can be entered.

3. Type additional categories, if desired, into the Categories fields.

   OR

   Click a category name on the left side of the panel to add it to the list on the right side of the panel.

Displaying the amount of space and time available

The amount of space remaining on the optical disk for the directory and sound files is given at the bottom of the Optical Transfer panel. This field can be toggled to display the amount of space or time available on the optical disk.

- Click "Free space" or "Free time" at the bottom of the display to toggle between the two.

  One of the following messages appears.

  Free space: Dir 80% Data 25%

  The amount of space available in the directory (Dir) and the amount of sample memory available on the optical disk (Data) is displayed.

  OR

  Free time: 1000 min. at 50.0 kHz

  The amount of time available for mono sound files at the given sample rate is displayed.

Storing cues on the optical disk (con't)

Locking cue information

The current caption or category fields can be locked when scrolling from one cue to the next. This way, several cues can be saved with the same caption or categories without having to retype them each time.

1. Enter caption or category information.

2. Click the L (Lock) button on the right side of Caption or Categories.

   The caption and/or categories are locked and do not change from one cue to the next.

Storing a cue on the optical disk

Once the cue name, caption and categories have been assigned, you can store the cue to the optical disk.

1. Click the STORE CUE button at the bottom of the panel.

2. If you want to change the cue name, click on it in the dialog, and type a new name.

3. Click [STORE] in the dialog.

   The cue is copied to the optical disk in the selected categories.

   OR

   If a sound file of the same name is already on the volume, respond to the following dialog.

   Sound file by that name already exists [REPLACE]
   [CANCEL]

4. If you want to abort the transfer, press Control–Spacebar.

   No data is transferred to the optical disk.

Recalling projects and tracks from tape

You can recall whole projects or individual tracks from the tape backup system to the Direct-to-Disk hard disks.

Recalling projects from backup cartridges

You can recall a project from a backup cartridge onto the hard drives from the Project Directory.

1. Insert the cartridges on which the project is stored into the tape drives and seat them in their drives.

2. Slide each horizontal plunger all the way to the right to load each tape into the drive.

   The status light is on until loading is complete.

3. Position the tape at the desired project you want to recall by using the **Skip** command in the Project Directory.

   The status light is on until the tape reaches the desired location.

(continued next page)

Recalling projects from backup cartridges (con't)

4. Place the cursor on the project line of the Project Directory where you want the project recalled.

5. Recall the project using the Load Project command.

   The project at the current tape position is loaded at the current cursor position; any project at the current cursor position is overwritten.

   The status light is on until the project is loaded.

Note: When you have used the Erase All command to reconfigure for one track per drive, leaving you with half as many tracks available, you cannot recall projects from even-numbered tracks. (See "Recalling projects with different track configurations" below.)

Recalling projects and tracks from tape (con't)

Recalling tracks from backup cartridges

You can recall a track from either a project or track backup cartridge. If you recall from a track backup cartridge, the track can be recalled to either of the two tracks corresponding to that tape drive. If you recall from a project backup cartridge, which contains information for two tracks, only the track associated with the current disk track can be recalled.

1. Insert the cartridge on which the track is stored into the tape drive and seat the cartridge in its drive.

2. Slide the horizontal plunger all the way to the right to load each tape in the drive.

   The status light is on until loading is complete.

3. Use the Skip Project command on the Project Directory to locate the track you want to recall.

(continued next page)

Recalling tracks from backup cartridges (con't)

4. Set the selected track status to *READY*.

5. Recall the track using the Load Track command.

   The track at the current tape position is loaded at the current cursor position; any track at the current cursor position is overwritten.

Since each tape drive corresponds to a hard drive, you can bounce a track by storing it onto a cartridge in one drive and recalling it from the same cartridge placed in another drive.

Note: When you have used the Erase All command to reconfigure for one track per drive, leaving you with half as many tracks available, you cannot recall tracks from even-numbered tracks. (See "Recalling projects with different track configurations" below.)

Recalling projects with different track configurations

When you record a project with your system configured for a greater or fewer number of tracks than the standard configuration, you will normally reload that project with the system in the same track configuration. However, when certain criteria are met, a project that was backed up when the system was configured for fewer tracks can be reloaded onto a system now configured for a greater number of tracks. Similarly, a project that was backed up while the system was configured for a greater number of tracks can be reloaded onto a system now configured for fewer tracks.

Two rules must be kept in mind when doing this kind of reloading.

- The number of tracks currently available must be equal to or greater than the number of tracks being loaded onto the system. For example, you cannot load 12 tracks of audio onto a system currently configured for eight tracks.

- The length of the project being loaded must be equal to or less than the time available in the current configuration. For example, you cannot load a 16-minute track onto a track that is only 12 minutes long.

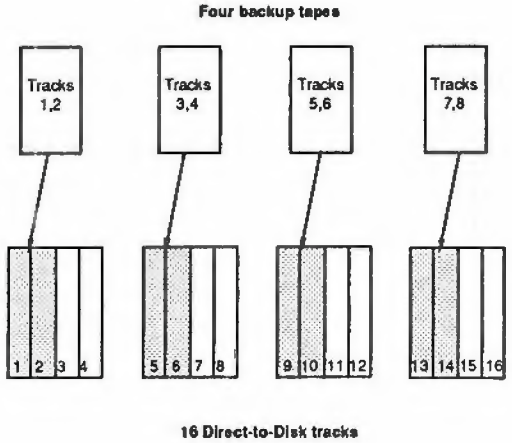
For example, you might start a project with a 16-track configuration, use only eight tracks and find that you need more audio time per track. Or, you might start a project with an 8-track configuration, use less than half the time available and find that you need a greater number of tracks. In either case, reload the project and finish it in the new configuration.

Recalling a project when configured for more tracks

If you backed up a project and then reconfigured your system for a greater number of tracks, you can reload the project provided the length of the project is not greater than the time available.

For example, if you were configured for two tracks per drive on a four-drive system when you backed up a project and now want to reload the project with the system reconfigured for four tracks per drive, the current time available on your system is half what it was when you backed up the project. Before attempting to reload the project, check to make sure that the project length is compatible with the new configuration.

When you reload the project (using the normal procedure), the track numbers will change as shown in the figure below. Any cues that were stored with the project will be restored intact. Any cues backed up to the Winchester in a separate file, however, must have their track numbers manually readjusted to match the new track numbers.



Recalling projects and tracks from tape (con't)

Recalling a project when configured for fewer tracks

If you backed up a project and then reconfigured your system for fewer tracks, you can reload the project provided the number of project tracks is not greater than the number of tracks available.

For example, if you were configured for four tracks per drive on a four-drive system when you backed up a project and now want to reload the project with the system reconfigured for two tracks per drive, the current number of tracks available on your system is half what it was when you backed up the project. Before attempting to reload the project, check to make sure that no more than eight tracks are recorded on the project.

If the project is the first project on the backup tapes, you can load all the tracks with the **Load Project** command.

1. Insert the first backup tape into tape drive 1.

2. Insert the second backup tape into tape drive 3. Note this is tape drive 3, not tape drive 2.

3. From the Project Directory, select the Load Project command.

   Project tracks 1, 2, 5 and 6 are loaded onto Direct-to-Disk tracks 1, 2, 5 and 6. After the tracks are loaded, a prompt appears.

(continued next page)

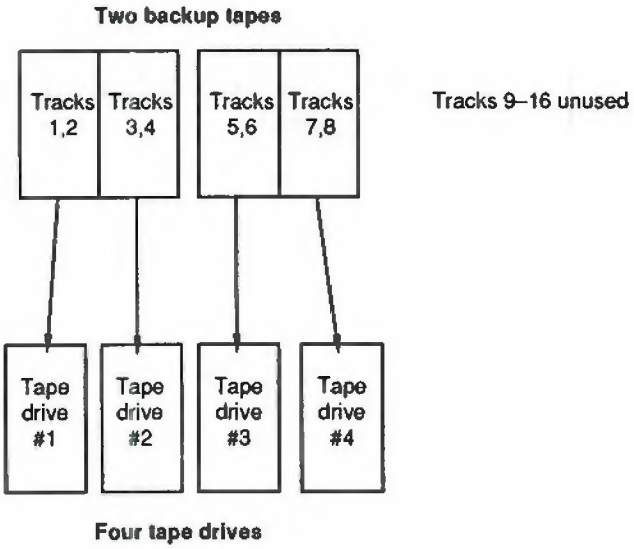
Loading a project when configured for fewer tracks (con't)

4. Press the unload button for tape drive #1, manually remove the tape from the drive and insert it into tape drive #2.

5. Repeat step 4 for the tape in tape drive #3, inserting it into tape drive #4.

   The rest of the project is loaded.

If the project is not the first project on the tape, each track must be loaded separately using the Load Track command. The backup tapes must be placed into the proper drive, as shown in the figure on this page.



Recalling cues from the Winchester

You can recall cues that have been backed up to a data file and stored on the Winchester.

(For information on recording cues from the optical disk onto the Direct-to-Disk, see "Recording sound files from the optical disk" in the section "Recording.")

Recalling cues from a file

The cue definitions stored in the data file on the Winchester disk can be recalled to the current project and added to the list of cues already in the proejct. If a cue of the same name appears in the project and in the data file, the cue definition from the file is used.

1. Click the CUE STOR box in the Selection panel of the Audio Event Editor.

   The Cue Store/Recall panel appears.

2. Type the desired filename into the FILE field, or scroll to the correct name.

3. Click [File-to-DTD].

4. Click [OK] in the dialog.

   The cue definitons stored in the specified file are recalled to the current project.

The Cue Store/ Recall panel