

HDR-TRI

Hard Disk Recorder Option

User's Guide



KORG

© ①

Table of Contents

1. Introduction	1
Features of the HDR-TRI	1
About hard disk recording	1
About hard disks	2
About sound and audio events	2
2. Operation	3
Settings for recording	3
Hard disk connections and settings	3
Formatting a hard disk	4
Types of SCSI devices that can be connected and their ID settings	5
Connections for recording	6
Song settings	7
Checking the external input	8
Recording	10
Recording an audio track	10
Recording a guitar in stereo on tracks 3 and 4 while listening to audio tracks 1 and 2	11
The Compare function.	11
Playback	12
Playing back the track(s) you recorded.	12
Adjusting the pan or volume balance of the tracks	12
Recording mixer events.	13
Re-recording	14
Using the rehearsal function	14
Using auto punch-in recording to edit.	14
Editing	15
Creating repetitions of the same phrase	15
Track bouncing (“ping-pong” recording)	15
Bouncing MIDI tracks and audio tracks together	16
Applying master effects	16
Creating a song in conjunction with the MIDI sequencer	17
Saving/loading recorded data.	19
Saving song data to a hard disk.	19
Loading data from a hard disk	19
Using a recorded sound more than once in the same .SNG file	20
Creating different arrangements using the same vocal	20
Using the same sound more than once	20
3. Parameters	21
Sequencer P1	21
1-5: Audio Track Rec	21
1-6: Mix Audio Track 1-4	26
1-7: Preference	29
Sequencer P2	30
2-5: Audio Track parameter (Audio Track 1-4)	30
Sequencer P5	31
5-3: Audio Track Edit.	31

5-4: Audio Track Name	44
Disk P1	46
1-1: Load	46
1-3: Utility	47
1-4: Audio Utility	50
4. Appendix	55
Block diagram	55
Messages	56
Troubleshooting	56
Specifications	57

1. Introduction

Thank you for purchasing the **HDR-TRI hard disk recorder option**. In order to enjoy long and trouble-free use, please read this manual carefully.



In this manual, tracks recorded by the hard disk recorder are referred to as “**audio tracks**.” In contrast, tracks of the sequencer discussed in the Parameter Guide and Basic Guide are referred to in this manual as “**MIDI tracks**.”



This manual explains the functions which are newly added when the **HDR-TRI hard disk recorder option** is installed. For the parameters whose functions remain unchanged, refer to your Parameter Guide, Basic Guide, and Effect Guide.

Features of the HDR-TRI

- 4-channel hard disk recorder
- 16-bit linear PCM recording
- A 540 Mbyte hard disk allows approximately 47 minutes of stereo recording
- Up to 7 SCSI disks can be connected
- Instantaneous cueing
- Rehearsal function
- Manual or Auto Punch In/Out recording is supported
- Editing operations such as Copy, Move, Erase, Delete, Insert, and Edit Undo
- Backup to DAT via the S/P DIF OUT connector
- Digital EQ
- Two master effect sends

About hard disk recording

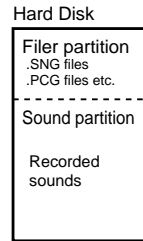
Realtime recording to an audio track can be performed using Overwrite Recording, Auto Punch-In Recording, or Manual Punch-In Recording. Unlike when recording to a MIDI track, Overwrite Recording overwrites only the measures that were recorded.

As when recording to a MIDI track, recording to an audio track creates “events” (audio events) which can be edited in detail using the Audio Event Edit functions. Since individual audio events can be edited, you can edit (move, delete, copy, etc.) even small segments of sound such as orchestra hits. In addition, the mixer allows you to adjust the pan, volume, etc. for each audio track, and to record these changes so that they will be faithfully reproduced when the data is played back.

About hard disks

When a hard disk connected to the TRINITY is formatted, it is divided into two partitions: a **filer area** and a **sound area**. The **filer partition** is used to save .SNG files and .PCG files, and also includes an area used to manage these files. The **sound partition** is used to record sound.

When you specify the size of the filer partition in the Format dialog box before executing the Format command, the disk will be formatted with the remaining space allotted to the sound partition (☞page 48 of this manual). In order to modify the partitioning, you must either execute Format once again, or execute the Wipe command.



About sound and audio events

When audio recording is performed, sound is recorded directly into the sound partition of the hard disk. At the same time, event data (audio events) pertaining to that sound is recorded into the audio track that is currently selected. (The sound data itself does not exist in the audio track.) Audio events contain data that specifies the name of the sound that they use, and data that specifies the portion of the sound that will be played back.

When a song is played back and an audio event is encountered, the appropriate sound will be played back from the hard disk. This means that playback is not possible unless the sound itself as well as the audio event that uses that sound are both present.

Be aware that audio events can be erased using the event edit commands, and can also be erased by accident by turning the power off before they have been saved to the hard disk. Furthermore, if just the sound is left, it will not be possible to re-use that sound in an audio track. If you allow these unusable sounds to accumulate in your hard disk, they will simply occupy disk space to no purpose, so we recommend that you execute the “Delete Unused Sound” command (☞page 53 of this manual) to make the best use of your hard disk.

2. Operation


Settings for recording

This section explains how to make the necessary settings for hard disk recording. Be sure to make these settings before performing hard disk recording.

Hard disk connections and settings

Up to 7 hard disks can be connected using **SCSI cables**. Use hard disks with a maximum capacity of **4 Gbytes** and an average seek time of 11.5 ms or less. The **TRINITY** uses a **D-Sub 25-pin** connector. The connectors of different hard disks may vary, so read the manual of your hard disk to check the type of connector it has before purchasing an appropriate SCSI cable.


- 1 Turn the power **OFF** for the **TRINITY** and the hard disk(s).

 The power of the **TRINITY** and any hard disk(s) must be **OFF** before connecting or disconnecting SCSI cables or changing the ID number of a hard disk.


- 2 On the hard disk, set an ID number in the range of 0–6.

If you are connecting two or more hard disks, set them to different ID numbers so that they can be distinguished.

For details on setting the ID number, refer to the manual for your hard disk.

 Setting two or more hard disks to the same ID will cause malfunctions or loss of data.

- 3 Connect the SCSI connector of the **TRINITY** to the SCSI connector of the hard disk.

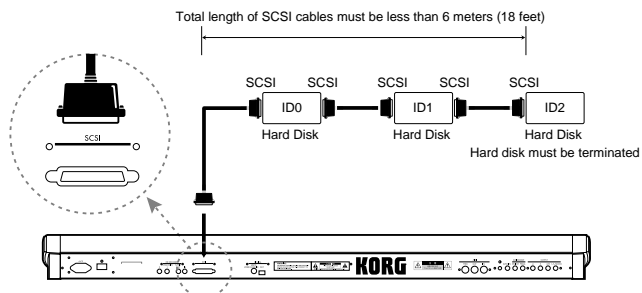
 If you are **connecting two or more hard disks**, make sure that the total length of the cables is less than 6 meters (18 feet).

- 4 Terminate the hard disk.

If **two or more hard disks are connected**, terminate the last hard disk in the chain (the hard disk furthest from the **TRINITY**).


Even if only one hard disk is connected, that hard disk must be terminated.

Some hard disks require an externally attached terminator. Others have a switchable terminator built-in. Refer to the manual for your hard disk.




- 5 Turn on the power of the hard disk(s), and then turn on the power of the TRINITY. When turning on the power, turn on devices in sequence from the **hard disk** → **TRINITY**.


When turning off the power, turn off devices in sequence from the **TRINITY** → **hard disk**.

 Never turn off the power while the hard disk is being accessed (e.g., while the LED indicator of the hard disk is lit).

Formatting a hard disk

If the hard disk is being used by the **TRINITY series** for the first time, the hard disk must first be formatted to establish a filer partition and a sound partition.

 When formatting is executed, all data that was previously on that hard disk will be erased. Before formatting a disk, make sure that it does not contain data you wish to keep.

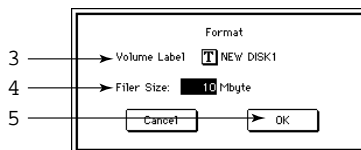
 The only way to modify the size of the filer partition or the volume label is to execute formatting once again or to execute the Wipe command.

- 1 In Disk mode P1 tab 3 page (Utility), use the drive select field to select the hard disk that you wish to format.



When using Drive Select to select a hard disk, the ID numbers of hard disks that have not been formatted will appear as Unformatted, and the ID numbers of hard disks that are not connected will appear as None. Even if a hard disk has been formatted by a personal computer, etc., it will be shown as Unformatted, and such a hard disk must be formatted as well.

- 2 Choose the page menu command "Format," and the following dialog box will appear.




- 3 Assign a volume label (up to 11 characters).

When formatting is executed, this volume label will be displayed in the drive select area.


- 4 Specify the size (0-540 Mbyte) of the filer partition.


When formatting is executed, the remaining space on the disk will become the sound partition.

 If you are using only a single hard disk to perform hard disk recording, you must specify a filer partition larger than 0 in order to create an area where .SNG files and .PCG files etc. can be saved. If you are using two or more hard disks, a filer partition must be created on at least one of the disks.

5 Press the OK button to execute formatting.

Formatting a hard disk will require a certain amount of time depending on the size of the hard disk. (e.g., formatting a 540 Mbyte hard disk requires approximately 5 minutes.)

 After formatting has been executed, pressing the [COMPARE] key will not restore the original state of the disk.

 Do not install a hard disk that was formatted on the **TRINITY series** into another computer. Korg cannot guarantee the operation of such a disk.

Types of SCSI devices that can be connected and their ID settings

SCSI devices other than hard disks can also be connected, including removable media such as magneto-optical disks (MO).

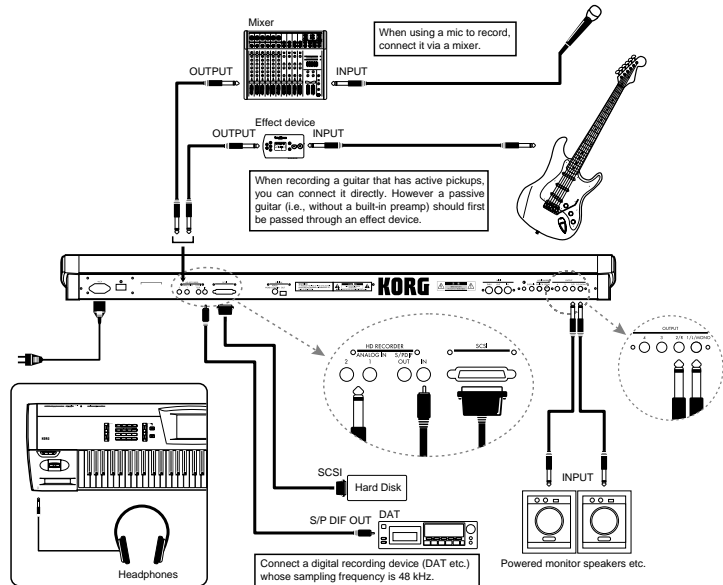
Hard disks can be set freely to any ID number 0–6, but a removable media device can be used only when its ID number is set to 6.

If you have connected only one removable media device, and no other device is connected, that removable media can be used to load and save .SNG files.

However if one or more hard disks are also connected in addition to the removable media device, the hard disk(s) will be able to record sound and load/save .SNG files, but the removable media device will not be able to record sounds nor load/save .SNG files. The removable media device will be usable only for operations such as “Copy with Sound” (⇨page 52 of this manual) or “Copy” (⇨page 47 of this manual).

Connections for recording

Be sure that the **power is turned OFF** for all devices before you make connections.



Sources that are input to the **ANALOG IN 1 jack** will be recorded on audio track 1 or 3. Sources that are input to the **ANALOG IN 2 jack** will be recorded on audio track 2 or 4.

Sources that are input to the **S/P DIF IN** connector will be recorded with the left channel on audio track 1 or 3, and the right channel on audio track 2 or 4. Use a commercially **available video cable** to make connections.

When turning on the power, turn on each device in sequence from the **connected devices** → **TRINITY**.

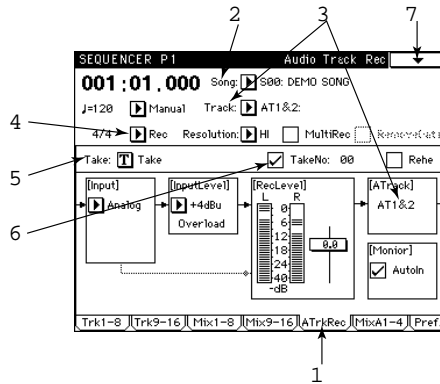
When turning off the power, turn off each device in sequence from the **TRINITY** → **connected devices**.



Never turn off the power while the hard disk is being accessed (e.g., while the LED indicator of the hard disk is lit).

Song settings

- 1 Access the Sequencer mode P1 tab 5 page (ATrkRec).

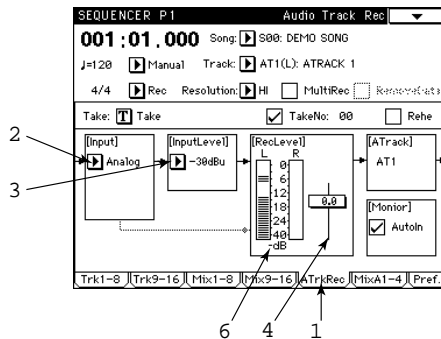


- 2 In the Song field, select a new song and assign a song name.
The display will ask "Are You Sure?" Press the OK button.
- 3 In the Track field, select the audio track(s) that you wish to record.
Select **AT1-AT4** for monaural recording, or **AT1&2** or **AT3&4** for stereo recording. Make sure that the audio track(s) selected here appear in the Audio Track Display.
- 4 If you wish to hear the metronome while you record, set the Metronome setting to **On** or **Rec** (to sound only during recording), and adjust the tab 7 page (Preference) Metronome settings **Precount**, **Output**, and **Level**.
With a metronome Output setting of **L**, **L+R**, or **R**, the metronome sound will be output from the headphone jack and from output jacks 1/L/MONO and 2/R.
With a metronome Output setting of **Send 1**, **Send 1+2**, or **Send 2**, the metronome sound will be output from output jacks 3 and 4.
- 5 In the Take field, specify the take name.
- 6 If you want to differentiate sounds by a number added to the end of the take name, check the **Take No.** box.
- 7 If two or more hard disks are connected, execute the Page Menu Command "Rec HD Select" and select the hard disk that will be used for recording.
If only one hard disk is connected there is no need to execute this command.

Checking the external input

Before you begin, go to “Song settings” (⇨ page 7 of this manual) and select an audio track (AT1 for this example).

- 1 Access the Sequencer mode P1 tab 5 page (ATrkRec).



- 2 Select the Input Select item.


If you are recording from an analog device such as a guitar connected to the ANALOG IN 1 or 2 jack, select **Analog**.

Input from the ANALOG IN 1 jack will be recorded on audio track 1 or 3.


Input from the ANALOG IN 2 jack will be recorded on audio track 2 or 4.

If you are recording from a digital device such as a DAT connected to the S/P DIF connector, select **Digital**. In this case, make sure that the Global mode P2 System Clock setting is set to **S/P DIF**. If you are recording from a digital device, proceed to step 6.

If a digital signal containing a copy inhibit flag is input, the display will indicate **Copy Inhibit**. The **HDR-TR1** is able to record a digital signal which contains the SCMS (Serial Copy Management System) flag. However it will be recorded as digital audio data without the SCMS flag.

 When digitally recording from copyrighted audio material such as a commercial DAT tape, you must be sure to obtain permission. Otherwise, you must use non-copyrighted material. Korg will take no responsibility for the consequences of any copyright violation which you may commit.

Input from the S/P DIF connector will be recorded with the left channel of the source on audio track 1 or 3, and the right channel on audio track 2 or 4.

 It is not possible to record a sampler or CD with a sampling frequency other than 48 kHz via the S/P DIF connector. If you wish to record from such a sampler or CD, use the ANALOG 1 or 2 jacks.

- 3 Set the **Input Level** setting to a level appropriate for the connected device. When recording vocals, pass the signal through a mixer and set this to -10 dBu or $+4$ dBu. When recording a guitar that has active pickups, or a passive-type guitar through an effect unit, set this to -30 dBu. However the input level will depend on the characteristics of the connected device, or on the loudness of the vocalist, the guitar playing technique, etc., so use the following table only as a general guideline.

	Example of connected device
-30 dBu	Guitar
-10 dBu	Consumer audio equipment such as CD player
$+4$ dBu	Professional audio equipment and keyboards

- 4 At this point, set the **Rec Level** fader to 0.0.
- 5 Play the connected guitar or other source. The **Rec Level** meter will light, allowing you to confirm that an external audio signal is being received. If the level meter is not responding, check the **Input Select** setting, connections, cables, and the connected devices once again.



If the **Input Level** indicates **Overload**, the input level is too high. If this occurs, set the **Input Level** to the next higher level.

- 6 Using the fader at the right of **Rec Level**, adjust the recording volume so that the level meter does not rise all the way.



The output volume will be affected by this setting, so if you have connected external monitor speakers, etc., lower their volume before adjusting this setting.




The volume that is output from external monitor speakers is determined by the combination of the **Rec Level** and the tab 6 page (MixA1-4) channel **Volume**. Also, there will be no output if the **Pan** settings are **OFF** for the various channels in the tab 6 page (MixA1-4). If the level meter is moving but you hear no sound, make sure that the volume is raised and that **Pan** is not set to **OFF**.



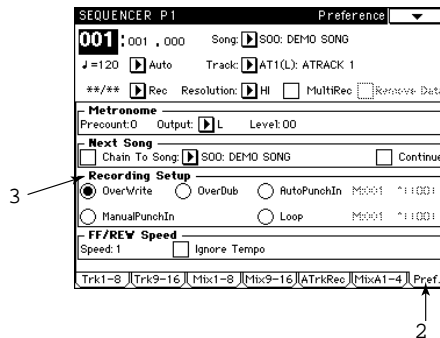
If the sound is distorted even though the **Input Level** does not indicate **Overload**, or the **Rec Level** indicate **Over**, access the tab 6 page (MixA 1-4) and adjust the volume downward. A volume setting of 0 is $-\infty$, 100 is 0 dB, and 127 is $+127$ dB.

Recording


Recording an audio track

 When recording an audio track, it is not possible to select Rec as the Tempo Mode. If you wish to record tempo changes on the Master track, select a MIDI track or MIXER REC in “1-4d: Track.” Even when the Tempo Mode is manual, do not modify the Tempo setting during recording.

- 1 Perform the procedure “Settings for recording” (⇨ page 3–10 of this manual).
- 2 Access the Sequencer mode P1 tab 7 page (Preference).



- 3 In the Recording Setup item, select the recording method. If you are recording for the first time, select **Overwrite**.
- 4 Press the [REC/WRITE] key. In 1 or 2 seconds you will enter record-ready mode, and the [START/STOP] key LED will blink.
- 5 Press the [START/STOP] key. Recording will begin.
- 6 To end recording, press the [START/STOP] key.

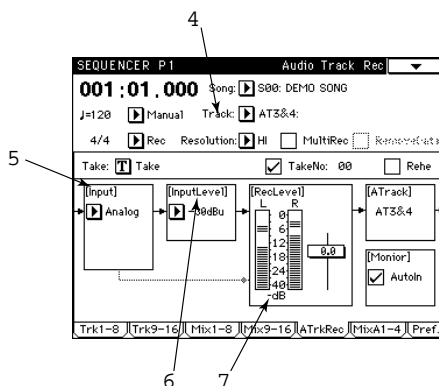
 If you play the keyboard while an audio track is selected in “1–5: Track,” the settings (MIDI channel, Program, Track Status etc.) of the last-selected MIDI track will be used.

Recording a guitar in stereo on tracks 3 and 4 while listening to audio tracks 1 and 2

- 1 Use the procedure of "Recording an audio track" to record onto audio tracks 1 and 2.
- 2 Connect your guitar to a stereo-output effect device.
- 3 Connect the stereo-output effect device to the ANALOG IN 1 and 2 jacks.

Checking the external input

- 4 In the Track setting, select AT3&4.
The input to the ANALOG IN 1 jack will be recorded onto audio track 3, and the input to the ANALOG IN 2 jack will be recorded onto audio track 4.



- 5 In the Input Select setting, select Analog.
- 6 In the Input Level setting, select -30 dBu.
- 7 Play your guitar, and adjust the Rec Level so that the level meter does not rise all the way.
If the Input Level indicates **Overload**, the input level is too great. If this occurs, select the next higher setting for Input Level.
- 8 Press the [RESET] key to return to the beginning of the song. Press the [REC/WRITE] key and then (after making sure that the [START/STOP] key LED is blinking) press the [START/STOP] key.
Recording will begin. While listening to audio tracks 1 and 2, play your guitar and record it on audio tracks 3 and 4.
- 9 To stop recording, press the [START/STOP] key.

The Compare function

If you press the [COMPARE] key, the TRINITY will return to the state it was in before recording began (this is referred to as the Compare function). Press the [COMPARE] key once again, and the recorded data will reappear.

Playback

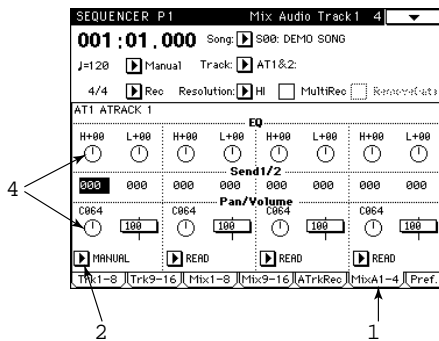
Playing back the track(s) you recorded

- 1 Press the [RESET] key to return to the beginning of the song.
- 2 Press the [START/STOP] key.
The audio that was recorded will be played back.

Adjusting the pan or volume balance of the tracks

You can adjust the pan and volume of each track so that the recorded tracks are played back in an appropriate balance. You can also use the equalizer to adjust the tone of each track.

- 1 Access the Sequencer mode P1 tab 6 page (MixA1-4).

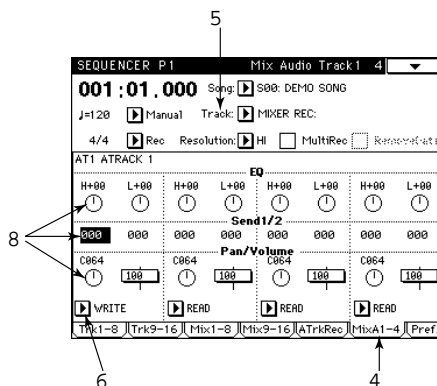


- 2 Set the Mix Audio Track Mode to MANUAL for the audio tracks that have already been recorded.
- 3 Press the [RESET] key to return to the beginning of the song, and press the [START/STOP] key.
Playback will begin.
- 4 Use the Pan/Volume settings to adjust the pan and volume of each track, and use EQ to adjust the tone.
- 5 When you are finished, press the [START/STOP] key.

Recording mixer events

You can record pan, volume and equalizer settings as mixer events on the audio track. The audio track will be played back according to the Pan/Volume, EQ, and Send 1/2 settings that were recorded.

- 1 Use the procedure "Recording an audio track" to record an audio track.
- 2 Access the Sequencer mode P1 tab 7 page (Preference).
- 3 In Recording Setup, specify the recording method for mixer events. When recording mixer events, select Overwrite. Alternatively, you may use Auto Punch-In or Manual Punch-In to specify the measures of the area in which recording will take place.
- 4 Access the tab 6 page (MixA1-4).



- 5 For the Track selection, select MIXER REC.
- 6 For the audio track on which you want to record mixer events, set the Mix Audio Track Mode to WRITE.
 - ▲ For audio tracks on which you do not want to record mixer events, set the Mix Audio Track Mode to READ or MANUAL.
- 7 Press the [RESET] key to return to the beginning of the songpress the [REC/WRITE] key and then (after making sure that the [START/STOP] key, LED is blinking) press the [START/STOP] key. Recording will start.
- 8 While listening to the song, adjust EQ, Send 1/2, and Pan/Volume for the audio track on which you want to record mixer events. If you execute the page menu command "Volume Pairing," adjusting the volume of one channel in a stereo pair will simultaneously adjust the volume of the other channel.
- 9 When you are finished, press the [START/STOP] key.

Re-recording

This section explains the procedure for re-recording part of a previously-recorded audio track.

If you wish to re-record the entire track, select **Overwrite**, and record using the procedure "Recording an audio track."

Using the rehearsal function

- 1 Access the Sequencer mode P1 tab 7 page (Preference).
- 2 In the Track setting, select the audio track that you wish to edit.
- 3 For Recording Setup, select Auto Punch In.
- 4 Specify the area of measures that you wish to edit.
- 5 Access the tab 5 page (ATrkRec).
- 6 Check the Rehearsal check box.
- 7 Output sound from the instrument, etc. that you are recording, and adjust the Input Level and Rec Level.
- 8 Check the Monitor Mode check box to set Auto Input ON.
When Auto Input is ON, you will be able to monitor the external input between the punch-in and punch-out points, and at other times you will be able to monitor the previously-recorded sound. For example if you have set punch-in at 005 (measure 5) and punch-out at 008 (measure 8), you will be monitoring the previously-recorded sound for the first four measures, and will monitor the external input sound during measures 5 through 8.
- 9 Press the [REC/WRITE] key and then (after making sure that the [START/STOP] key LED is blinking) press the [START/STOP] key.
Simulated recording will start (nothing will actually be recorded). Between the punch-in and punch-out points, you can practice the phrase that you intend to record.
- 0 When you are finished, press the [START/STOP] key.

Using auto punch-in recording to edit

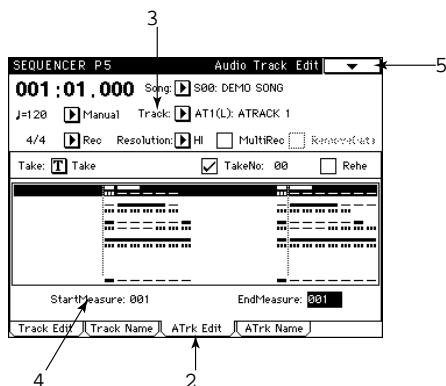
- 1 Access the Sequencer mode P1 tab 7 page (Preference).
- 2 In the Track setting, select the audio track that you wish to edit.
- 3 For Recording Setup, select Auto Punch In.
- 4 Specify the area of measures that you wish to edit.
- 5 Access the tab 5 page (ATrkRec).
- 6 Un-check the Rehearsal check box.
If you wish to rehearse the punch-in, check the box.
- 7 Output sound from the instrument, etc. that you are recording, and adjust the Input Level and Rec Level.
- 8 Press the [REC/WRITE] key and then (after making sure that the [START/STOP] key LED is blinking) press the [START/STOP] key.
Recording will start. Play between the punch-in and punch-out points to re-record the desired phrase.
When auto punch in recording is performed with Auto Input ON, approximately 0.5 seconds will be required from when the Punch Out point is reached until the track playback sound can once again be monitored. (The audio for this

- portion of track has not been lost.)
- When you are finished, press the [START/STOP] key.

Editing

Creating repetitions of the same phrase

- Record using the procedure "Recording an audio track."
- Access the Sequencer mode P5 tab 3 page (Atrk Edit).



- In the Track setting, select the audio track that you wish to edit.
- In the Start Measure field, specify the copy destination.
- Press the page menu command "Copy Measure."
- In the dialog box, make settings for Song, A.Track, and Measure Start/End to specify the phrase that you wish to re-use, and then press the OK button. The phrase of the area you specified here will be copied to the measure of the track that you specified in step 4.
- Repeat steps 4–6.
- Press the [RESET] key to return the current location to the beginning of the song, and then press the [START/STOP] key to listen to the playback.

Track bouncing ("ping-pong" recording)

Here's how to bounce (i.e., combine or "ping-pong") audio tracks 1, 2 and 3 to audio track 4. Because the TRINITY can bounce tracks in the digital domain, you can perform this operation any number of times without degrading signal quality.

- In the Sequencer mode, set Track to AT4(R).
- In the Sequencer mode P1 tab 6 page (MixA1–4), set audio track 4 to a Volume of 0. To be sure that audio track 4's volume stays at 0, set its Mix Audio Track Mode to Manual.
- In the Sequencer mode P1 tab 1 and 2 pages (Trk1–8, Trk9–16), set each MIDI track's Track PLAY/MUTE/REC setting to MUTE.

This way, only the audio tracks will be bounced. If you want to bounce the MIDI tracks' audio as well, see "Bouncing MIDI tracks and audio tracks together" below.

- 4 **Make the appropriate Volume, Panning, EQ and Send 1/2 settings for audio tracks 1, 2 and 3.**

Since you will be mixing these three tracks down to a single track, you will not be able to change their mix at a later time. *Be sure you are satisfied with the settings you make at this point.*

- 5 **Set Pan to R127 for audio tracks 1–3.**

The playback from audio tracks 1–3 will be output from the right channel of the S/P DIF jack. This is necessary because audio tracks 2 and 4 record signals from the right channel (you selected audio track 4 as the recording track in the previous step). Audio tracks 1 and 3 record signals from the left channel. If you had chosen to bounce to audio track 1 or 3, you would need to set Pan to L000 for this step.

- 6 **Connect the S/P DIF OUT connector to the S/P DIF IN connector.**
Use a commercially available video cable to make connections.
- 7 **Set the Global mode P2 System Clock setting to Internal.**
- 8 **Set the P1 tab 5 page (ATrkRec) Input setting to Digital.**
- 9 **Press the [RESET] key to return to the beginning of the song, press the [REC/WRITE] key and then (after making sure that the [START/STOP] key LED is blinking) press the [START/STOP] key.**
Recording from audio tracks 1, 2, and 3 to audio track 4 will begin.
- 0 **Disconnect the video cable from the S/P DIF OUT and IN connectors.**



If the mixer volume is raised when the S/P DIF connectors are connected, oscillation may occur. For this reason, the S/P DIF OUT and IN connectors should not be connected to each other except while bouncing tracks.

Bouncing MIDI tracks and audio tracks together

The TRINITY also lets you bounce MIDI tracks and audio tracks together, down to audio tracks. Bouncing tracks in this way allows you to conserve MIDI tracks and polyphony. For example, you can bounce MIDI tracks 1–16 plus audio tracks 1 and 2 to audio tracks 3 and 4, preserving the stereo mix you have created.

The procedure is basically the same as outlined in the previous section (ignore steps 3 and 5). Make the appropriate Volume, Panning, EQ and Send 1/2 settings for audio tracks 1 and 2 and the MIDI tracks (you can also set the MIDI tracks' insert effects). In step 2, set the Volume of audio tracks 3 and 4 to 0. In step 1, set Track to AT3&4.

Applying master effects

- 1 **Access the Sequencer mode P1 tab 6 page (MixA1–4).**
- 2 **Use Send 1/2 to adjust the send levels (the amount of signal sent to the master effects) for each track.**
Send 1 is the input to the modulation-type master effect (effect 1).
Send 2 is the input to the reverb-type master effect (effect 2).
With a setting of 064, the send level to the master effect will be 50 percent.
- 3 **Access the P8 tab 1 page (Master FX).**
To use a master effect, select the effect and turn it ON, and raise the return 1 and

2 levels.

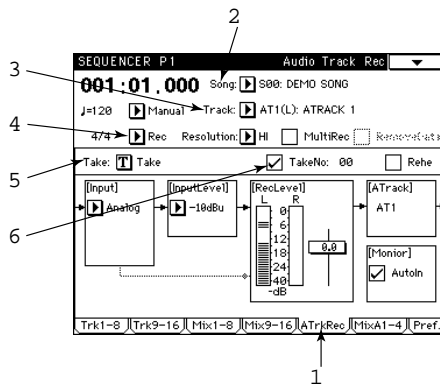
If you check the check box located at the left of the display, the right side output of effect 1 will be sent to effect 2, and effects 1 and 2 will be mixed. Refer to the Parameter Guide for details on the P8 tab 1 page (Master FX), and to the Effect Guide for an explanation of the settings of the master effects.

Creating a song in conjunction with the MIDI sequencer

This section explains how to record a vocal on audio track 1 to the accompaniment of the MIDI sequencer.

Recording the vocal

- 1 Access the Sequencer mode P1 tab 5 page (ATrkRec).



- 2 In the Song field, select the song that will provide the accompaniment.
- 3 For the Track setting, select the desired audio track (AT1 in this example). Make sure that the Audio Track Display shows the selected audio track.
- 4 If you wish to hear the metronome as you record, set Metronome to On or Rec (to hear it only during recording), and make Metronome settings for Precount, Output, and Level in the tab 7 page (Preference).
With a metronome Output setting of L, L+R, or R, the metronome sound will be output from the headphone jack and from output jacks 1/L/MONO and 2/R. With a metronome Output setting of Send 1, Send 1+2, or Send 2, the metronome sound will be output from output jacks 3 and 4.
- 5 In the Take field, assign a take name.
- 6 If you want a number to be added at the end of the take name to distinguish takes, check the Take No. box.

Checking the external input

- 7 Access the Sequencer mode P1 tab 5 page (ATrkRec).
- 8 Set the Input Select to Analog.
- 9 For the Input Level, select a level appropriate for the device that is connected (-10 dBu) for this example, and sing into the mic while you adjust the Rec Level so that the meter does not go all the way.
If the Input Level indicates **Overload**, the input level is too high. If this occurs,

set Input Level to the next higher setting.

Recording

- O** Press the [RESET] key to return to the beginning of the song, press the [REC/WRITE] key and then (after making sure that the [START/STOP] key LED is blinking) press the [START/STOP] key.

Recording will start. Sing into the mic while listening to the accompaniment of the MIDI sequencer.

- A** When you finish recording, press the [START/STOP] key.

Adjusting the balance and equalizer for the monitor output

Here's how to adjust the pan, volume and EQ of the vocal that was recorded on the audio track. To make adjustments for the MIDI sequencer, use the tab 3 or 4 page (Mix 1–8 or Mix 9–16).

- B** Access the tab 6 page (MixA1–4).

- C** Set the Mix Audio Track Mode to MANUAL for the channel that you wish to adjust (channel 1 in this example).

- D** Press the [RESET] key to return to the beginning of the song, and then press the [START/STOP] key.

The song with vocals will begin playing back.

- E** Use Pan/Volume to adjust the pan and volume of channel 1 to create an appropriate balance of sound in the monitor output. Use EQ to adjust the tone.

A Pan setting of C064 will produce the impression of singing from center stage.

Using effect processing

If you wish to apply effects to give spaciousness to the vocal, use the Send parameters and the "Master Effects" of P8 to make settings for the effect types and the amount of the effects.

- F** With the recorded song playing back, set Send to about 64.

- G** Access the P8 page.

Select the effects in the tab 1 (Master FX) page (make detailed effect settings in the tab 2 and tab 3 pages as necessary), and raise the Return parameters to adjust the mix with the original sound.

To adjust the depth of the effects, use the master effect parameters to make settings for each effect, and use the P1 Send and P8 Return parameters to adjust the sends and returns.

Recording mixer events

Here's how to record pan, volume, send, and equalizer mixer events.

- H** Access the Sequencer mode P1 tab 5 page (MixA1–4).

For the Track item, select MIXER REC.

- I** Set the Mix Audio Track Mode to WRITE for the channel that you wish to record (channel 1 for this example).

- J** Press the [RESET] key to return to the beginning of the song, press the [REC/WRITE] key and then (after making sure that the [START/STOP] key LED is blinking) press the [START/STOP] key.

The song will playback.

- K** Adjust the Pan/Volume, Send, and EQ of the channel whose Mix Audio Track Mode was set to WRITE (channel 1 for this example).

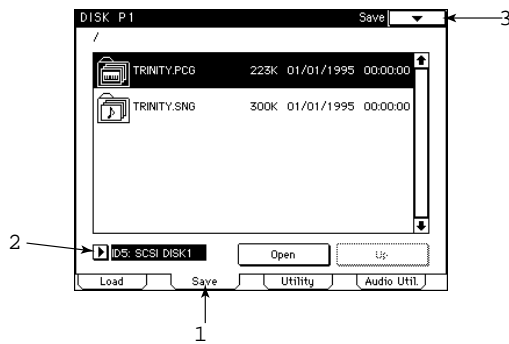
Your adjustments will be recorded as mixer events.

- L** When you are finished, press the [START/STOP] key.
When playing back the song, set the Mix Audio Track Mode to READ for channel 1. Playback will be controlled according to the mixer events that were recorded.

Saving/loading recorded data

Saving song data to a hard disk

- 1 Access the Disk mode tab 2 page (Save).



- 2 In the Drive Select box, select the hard disk on which you want to save the data. As necessary, use the Open button and the Up button to move through the directory hierarchy, and select the saving destination.

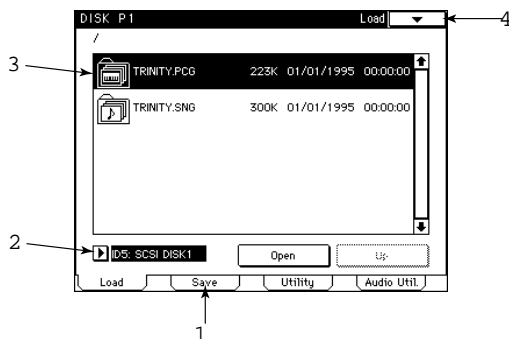


Song data that includes an audio track(s) cannot be saved to a floppy disk.

- 3 Execute the page menu command "Save Song."

Loading data from a hard disk

- 1 Access the Disk mode tab 1 page (Load).



- 2 In the Drive Select box, select the hard disk that contains the data you wish to load.
- 3 In the directory window, specify the data that you wish to load.
As necessary, use the Open or Up buttons to move through the directory hierarchy, and specify the data to be loaded.
- 4 Execute the page menu command "Load Selected."
The dialog box that appears when Load Selected is executed will depend on the type of data that is being loaded. Follow the instructions given in the dialog box that appears. For details on the various dialog boxes and the procedure, refer to the explanations for the page menu commands in "1-1: Load" of Disk mode in the Parameter Guide.

Using a recorded sound more than once in the same .SNG file

Creating different arrangements using the same vocal

After selecting a new song in Song mode, select the "Copy from Song" function from the page menu of Sequencer mode P1 to copy the song containing the data you wish to use to a new song. Then re-record the MIDI tracks, etc. to create a new accompaniment.


Using the same sound more than once

Here is a useful way to use a recorded sound effect more than once. For example, suppose that you are using song 19 as a "library song" that contains various sound effects recorded at different locations. To use a sound from this "library song," use the P5 tab 3 page (ATrkEdit) page menu command "Copy Measure" to copy sounds to the desired location in the song that you are creating. If you need to make fine adjustments to the location of the sound, use the P5 tab 3 page (ATrkEdit) page menu command "Audio Event Edit."
If you use the "Copy Measure" command to copy all sounds recorded in other songs to a "library song," these sounds will be ready for immediate use if they are ever needed later; you will not have to re-record them. Collecting sounds in a "library song" in this way also provides a backup of the sounds.



In the "Copy Measure" dialog box, specify the Start Measure and End Measure of the copy source, and execute the copy command. At the copy destination, the number of measures specified in the dialog box will be overwritten. For example if measures 1-4 were specified as the copy source, the four measures 1-4 will be overwritten at the copy destination. However if "Copy Measure" is executed between songs that have a different Tempo setting, the playback time will differ even if the number of measures is identical, meaning that the copied data may not fit into the specified number of measures, or that a gap may occur at the end of the measures.

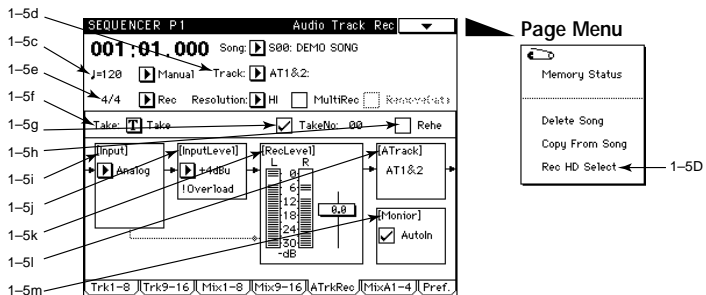
3. Parameters

-  This manual explains the functions which are newly added when the **HDR-TRI** hard disk recorder option is installed. For the parameters whose functions remain unchanged, refer to your Parameter Guide, Basic Guide, and Effect Guide.

Sequencer P1

1-5: Audio Track Rec


Here you can make basic settings for recording onto the audio tracks. Since real-time recording is done according to the recording method selected in “1-7: Preference,” make settings for those parameters as well. Detailed editing after recording (non-realtime editing) can be performed in “5-3: Audio Track Edit.”



1-5c: Tempo/Tempo Mode

Tempo Mode

With a setting of **Manual**, the tempo data in the master track will be ignored, and playback will play at the Tempo setting.

-  Never modify the Tempo setting while recording an audio track, since this will prevent proper recording.

With a setting of **Auto**, the tempo during playback will change according to the tempo data in the master track.

It is not possible to select **Rec** in this mode. If you wish to record tempo changes to the master track, go to “1-5d: Track” and select a MIDI track or MIXER REC.

1-5d: Track [T01...16, MTR, AT1(L), AT2(R), AT3(L), AT4(R), AT1&2, AT3&4, MIXER REC]

Select the track that you wish to record.

When the **HDR-TRI** is installed, you will be able to select audio tracks **AT1(L)**, **AT2(R)**, **AT3(L)**, **AT4(R)**, **AT1&2** or **AT3&4**, and **MIXER REC** in addition to the MIDI tracks **T01-16** and the **MTR** (Master Track) that were previously available.

When **T01-16** are selected, you can record onto the selected MIDI track. Basic settings for recording a MIDI track and settings that determine how the notes will be sounded and output are made in "1-1: Track Play/Rec"-"1-4: Mixer (Track 9-16)," and the recording method is selected in "1-7: Preference."

MIDI When a MIDI track is selected, playing the keyboard and operating the controllers will cause the internal tone generator to sound with the settings (program and level, etc.) of the MIDI track that you select here (if the Track Status is INT or BOTH). In addition, other MIDI tracks with the same MIDI channel will also sound (if the Track Status is INT or BOTH). Furthermore, messages will be transmitted on the MIDI channels specified for those MIDI tracks (if the Track Status is EXT or BOTH).

MIDI If you play the keyboard while an audio track is selected in "1-5: Track," the settings (MIDI channel, Program, Track Status etc.) of the last-selected MIDI track will be used.

When realtime recording a single track, the musical data will be recorded onto the MIDI track you select here.

When realtime recording multiple tracks, you can specify in "1-1i: PLAY/MUTE/REC" whether recording will occur for each MIDI track.

Select **MTR** when using "5-1: Track Edit" to edit the master track.

If **AT1-AT3&4** is selected, you can record onto the selected audio track(s). When **AT1&2** or **AT3&4** are selected, you can record a stereo pair of audio tracks. The audio track(s) selected here will also appear in the "1-5l: Rec Audio Track Name Display."

Here you can make basic settings for recording the audio track(s), set the output level and EQ settings, etc. in "1-6: Mix Audio Track 1-4," and select the recording method in "1-7: Preference."

Select **MIXER REC** when you wish to record mixer events using "1-6: Mix Audio Track 1-4."

The audio track name displayed here is set in "5-4: Audio Track Name," and the MIDI track name is set in "5-2: Track Name." However if **AT1&2** or **AT3&4** are selected, the audio track name will not be displayed.

This parameter is displayed in all pages "1-1: Track Play/Rec" through "1-7: Preference," and can be modified from any page.

1-5e: Meter/Metronome/Resolution/Multi Rec/Remove Data

Multi Rec

If this is **checked**, multi-track recording mode will be used, but the audio tracks cannot be recorded.

If this is **un-checked**, single-track recording mode will be used. Un-check this when you wish to record audio tracks.

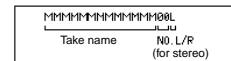
1-5f: Take

Specify the name of the “take” that you are about to record.

Press the text edit button, and the rename page will appear. (⇨ Basic Guide page 6). Up to 13 characters can be used here.

If you wish to append a number at the end of the take name to manage your takes, check “1-5g: Take Number.” When you stop recording, the number will be automatically incremented, and added to the take name (for the next recording).

When you begin recording, a sound will be created and a name assigned to it. The sound name will consist of the take name you specify here plus the incrementing number. When recording in stereo, an **L** or **R** will be added.



Sound name = first 13 characters of Take name + 2 digit number + 1 character L/R

The sound name will be displayed during the event edit or sound trim operations performed in “5-3J: Audio Event Edit.”

If you re-assign the take name here, the incremented number will begin from 00. Also, if in “1-5g: Take Number” you change the number to a value other than 00, the count-up will begin from that number.

If you wish to change the sound name that was recorded, use the “Trimming an audio event” command (⇨ page 39 of this manual) that appears when you press the Trim button in “5-3J: Audio Event Edit.”

1-5g: Take Number

If this is **checked**, the number shown at right will be automatically added to the take name (up to 13 characters) that was assigned in “1-5f: Take.”

This number will be incremented each time you record using the same take name.

If you re-assign the take name in “1-6f: Take,” the incremented number will begin from 00. Also, if you change the number to a value other than 00, the count-up will begin from that number.

If this is **un-checked**, an incremented number will not be added to the take name of the sound that you are about to record.

1-5h: Rehearsal

If this is **checked**, recording operations will be simulated (recording will not actually take place).

Monitoring during rehearsal will depend on the selection in “1-5m: Monitor Mode Select.” When Auto Input is ON, you will be able to monitor the external input between the punch-in and punch-out points, and at other times you will be able to monitor the previously-recorded sound. For example if you have set punch-in at 005 (measure 5) and punch-out at 008 (measure 8), you will be monitoring the previously-recorded sound for the first four measures, and will monitor the external input sound during measures 5 through 8.

1-5i: Input Select

[Analog, Digital]

Select either **Analog** or **Digital** as appropriate for the signal that is being input. When **Digital** is selected, please input a digital signal at a sampling frequency of

48 kHz.

If a digital signal containing a copy inhibit flag is input, the display will indicate **Copy Inhibit**. The **HDR-TRI** is able to record a digital signal which contains the SCMS (Serial Copy Management System) flag. However it will be recorded as digital audio data without the SCMS flag.

When a signal with a sampling frequency of 48 kHz is being input, the display will indicate **48 kHz**. For other sampling frequencies, the display will indicate **FsError**, and recording will not be performed correctly.

Also, when recording digitally, you must set the Global mode System Clock setting of "1-1d: MIDI Clock/System Clock" to **S/P DIF** so that the **TRINITY** will use the S/P DIF clock of the external device.



When recording from a CD or a sampler whose sampling frequency is other than 48 kHz, use the ANALOG IN 1 or 2 jacks and select Analog for this setting.

1-5j: Input Level

[+4 dBu, -10 dBu, -30 dBu]

This controls the gain amp that adjusts the level of the analog input.

If the input level is higher than this Input Level and the input is distorted (clipping), the display will indicate **Overload**.

This parameter will be available when Analog is selected in "1-5i: Input Select."

When recording vocals, route the signal through a mixer and set this to either -10 dBu or +4 dBu. Set this to -30 dBu when recording a guitar that has active pickups, or when recording a guitar that has passive pickups routed through an effect device. However input levels will depend on the characteristics of the equipment that is connected, on the loudness of the vocalist, and on playing technique, etc., so use the following table merely as a guideline.

	Example of connected device
-30 dBu	Guitar
-10 dBu	Consumer audio equipment such as CD player
+4 dBu	Professional audio equipment and keyboards

1-5k: Rec Level

[-∞...+18 dB]

Adjust the level for recording.

Adjust the fader so that the level meter does not rise all the way.



The output volume will be affected by this setting, so if you have connected external monitor speakers, etc., lower their volume before adjusting this setting.



If an audio track is not selected in "1-5d: Track," there will be no output from the monitor even if the level meters are up.

1-5l: Audio Track Name Display

This indicates the audio track selected in "1-5d: Track."

If T01...T16, MTR, or MIXER REC is selected in "1-5d: Track," this will be displayed as OFF. It will likewise be displayed as OFF during multi-track recording of MIDI tracks.

1-5m: Monitor Mode Select

This selects Auto Input ON/OFF.

Audio tracks that are selected in "1-5d: Track" will be monitored differently than audio tracks that are not selected. (Refer to the table below.)

If this is **checked**, Auto Input will be **ON**. During auto/manual punch in recording, monitoring will be switched automatically for the audio tracks selected in the Track page: the external input will be monitored during the measures being recorded, and the track playback will be monitored before and after these measures.

For audio tracks which are not selected in the Track page, the track playback will always be monitored.

If this is **not checked**, Auto Input will be **OFF**. Audio tracks selected in the Track page will always monitor the external input.

For audio tracks which are not selected in the Track page, the track playback will always be monitored.

Audio track monitoring (Line: external input, Track: track playback)

	Auto Input	Stopped	Playing	During Overwrite Rec	During Punch Rec		
					...In	In...Out	Out...
Audio track(s) selected by Track	ON	Line	Track	Line	Track	Line	Track*
	OFF	Line	Line	Line	Line	Line	Line
Audio tracks not selected by Track	ON	Track	Track	Track	Track	Track	Track
	OFF	Track	Track	Track	Track	Track	Track

* When auto punch in recording is performed with Auto Input ON, approximately 0.5 seconds will be required from when the Punch Out point is reached until the track playback sound can once again be monitored. (It is not the case that the track audio in this portion has been lost.)

Page Menu Command

1-5D: Rec HD Select

Select the hard disk on which recording will take place.

The amount of time available for recording (Free Time) will also be displayed here. Since the amount of recorded sound will gradually increase, we recommend that you periodically use the Disk mode command "1-4F: Delete Unused Sound" to organize the sound and maintain the Free Time space.

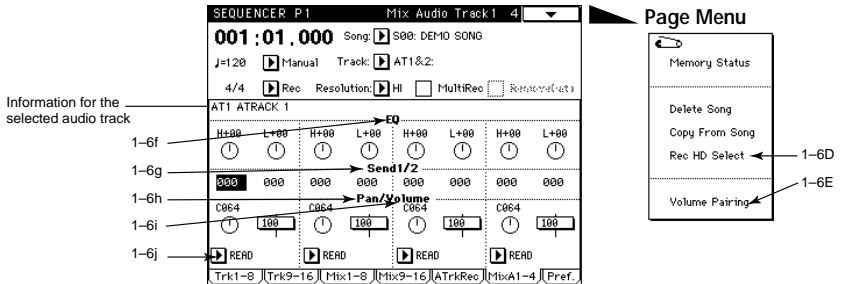
- 1 When you select **Rec HD Select**, the dialog box at right will appear.
- 2 Select the hard disk for recording: ID0-ID6. Keep in mind the amount of Free Time as you select a hard disk.
- 3 To execute Rec HD Select, press the OK button. To cancel without executing, press the Cancel button.



1-6: Mix Audio Track 1-4

Here you can make basic settings for recording audio tracks, and make mixer event settings for each track. Mixer events are recorded according to the recording method selected in “1-7: Preference,” so you will need to set those parameters as well. Editing of mixer events can be performed in “5-3: Audio Track Edit.”

For details on the basic settings for recording an audio track, refer to “1-5: Audio Track Rec.”



1-6f: EQ (Equalizer)

This adjusts the tone of the audio signal that is output from the 1/L/MONO and 2/R output jacks (and the S/P DIF output).

Depending on the selection in “1-6j: Mix Audio Track Mode,” it may not be possible to modify this parameter. Refer also to “1-6j: Mix Audio Track Mode.”

H (High EQ) [-15...0...+15]

Adjusts the level of the high frequency range (Fc= 10 kHz) of the audio track playback.

L (Low EQ) [-15...0...+15]

Adjusts the level of the low frequency range (Fc= 100 Hz) of the audio track playback.

1-6g: Send1/Send2 [0...127]

Adjusts the send levels to the master effects (left is Send 1, right is Send 2).

Depending on the selection in “1-6j: Mix Audio Track Mode,” it may not be possible to modify this parameter. Refer also to “1-6j: Mix Audio Track Mode.”

1-6h: Pan (Panpot) [OFF, L000...C064...R127]

Specifies the panning to the 1/L/MONO and 2/R output jacks (and the S/P DIF output).

With a setting of **OFF**, there will be no output to the 1/L/MONO and 2/R output jacks (or the S/P DIF output).

Depending on the selection in “1-6j: Mix Audio Track Mode,” it may not be possible to modify this parameter. Refer also to “1-6j: Mix Audio Track Mode.”

1-6i: Volume**[0...100...127]**

Adjusts the volume of each audio track.

A setting of **0** is $-\infty$, **100** is 0 dB, and **127** is +12 dB.

Depending on the selection in "1-6j: Mix Audio Track Mode," it may not be possible to modify this parameter. Refer also to "1-6j: Mix Audio Track Mode."

1-6j: Mix Audio Track Mode [MANUAL/READ/MUTE/SOLO/WRITE]

When a track is played back with a setting of **MANUAL**, the mixer events that were recorded will be ignored, and EQ, Send, Pan, and Volume will be set manually.

When a track is played back with a setting of **READ**, the mixer events that were recorded will be played back. Even if you adjust EQ, Send, Pan, or Volume during playback, the setting will change to the setting of a mixer event when the location of that mixer event is reached. (If there are no mixer events, the parameters can be set in the same way as for **MANUAL**.)

When a track is played back with a setting of **MUTE**, the muted audio track will not be heard.

When a track is played back with a setting of **SOLO**, all other audio tracks will be set to **MUTE**, and you will hear only the sound of the selected audio track. Audio tracks which are set to **SOLO** will be played back according to the mixer events which were recorded. At this time, even if you adjust EQ, Send, Pan, or Volume during playback, the setting will change to the setting of a mixer event when the location of that mixer event is reached.

Two or more audio tracks can be set to **SOLO**, but the modes which can subsequently be selected for each audio track will differ as follows, depending on whether only one, or two or more audio tracks were set to **SOLO**.

When SOLO is selected for one audio track

	Selectable modes
SOLO tracks	MANUAL, READ, MUTE, SOLO, WRITE
MUTE tracks	SOLO, MUTE

If the **SOLOED** audio track is switched to a different mode, audio tracks which are **MUTED** will switch to the same mode as was selected for the previously **SOLOED** audio track.

For example if the **SOLOED** audio track is switched to **MANUAL**, the **MUTED** tracks will also be switched to **MANUAL**. Similarly, if the **SOLOED** audio track is switched to **WRITE**, the **MUTED** tracks will also be switched to **WRITE**.



So be careful not to accidentally record over existing tracks.


When SOLO is selected for two or more audio tracks

	Selectable modes
SOLO tracks	SOLO, MUTE
MUTE tracks	SOLO, MUTE

Select **WRITE** to record mixer events. In order to record mixer events, select **Mixer Rec** as the Track setting, and select **WRITE** here. Then begin recording (simultaneously press the [REC] key and the [PLAY] key). The various audio track parameters that were set in this tab page will be recorded as **mixer events** in the range of measures specified by Recording Setup in "1-7: Preference." Dur-

ing recording, you can adjust EQ, Send, Pan, and Volume and the changes you make will be recorded. By changing this setting to READ and then playing back the song, EQ, Send, Pan, and Volume settings will change according to the mixer events that were recorded.

Mixer events can also be edited individually in "5-3B: Automation Edit."

 WRITE can be selected only if MIXER REC has been selected in "1-5d: Track."

If after using WRITE you change from MIXER REC to another track, the Mix Audio Track Mode of the audio track that was written will automatically change to READ.

Page Menu Command

1-6D: Rec HD Select

This selects the hard disk on which recording will take place.

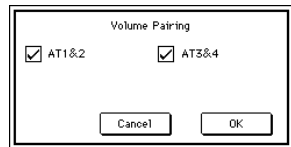
The Free Time (recordable time) will also be displayed.

For the procedure, refer to "1-5D: Rec HD Select."

1-6E: Volume Pairing

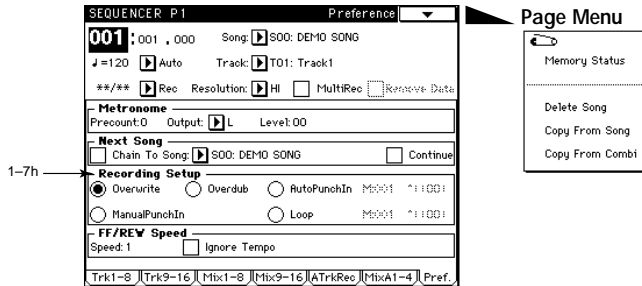
This links the volume of a pair of channels. (When you adjust the volume of one channel, the volume of the other channel will change automatically.)

- 1 When you choose **Volume Pairing**, the dialog box at right will appear. Check the check box for the pair(s) of channels that you wish to link.
- 2 To execute Volume Pairing, press the OK button. To cancel without executing, press the Cancel button.



1-7: Preference

Here you can make overall settings for the entire song, recording settings for MIDI tracks, audio tracks, and mixer events, and settings for playback.



1-7h: Recording Setup

Use the radio buttons to select the realtime recording method.

When you record using **Overwrite**, the new data will be recorded over (i.e., will replace) the previously recorded data.

When Overwrite recording a MIDI track, the musical data that was previously recorded in measures later than the measure at which recording began will be erased. However this is not the case for audio tracks; the previously recorded data will be overwritten only in the measures which are actually re-recorded, and the previously recorded data in subsequent measures will remain.

When you record using **Overdub**, newly recorded audio tracks will be overwritten over the previously recorded data, just as with Overwrite recording. However when mixer events are recorded, they will be added to the previously existing data.

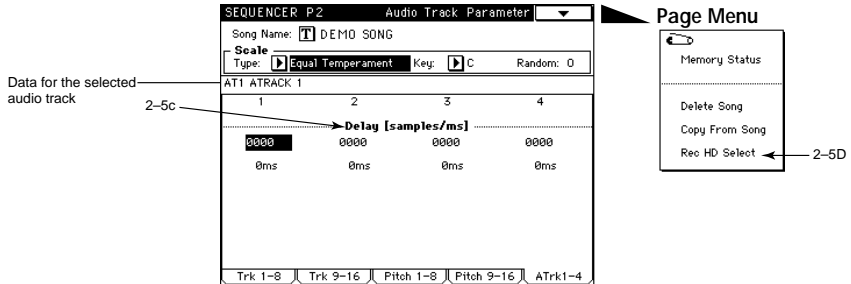
Recording is not possible when Loop is selected.

As when recording MIDI tracks, you will first use **Overwrite** to record the data. If you wish to use realtime recording to modify previously recorded data, use **Auto/Manual Punch In**. To modify individual events (for example to insert part of an orchestra hit), you can use the editing commands of "5-3J: Audio Event Edit" to **trim** (⇐ page 39 of this manual), move, or **copy** the data.

Sequencer P2

2-5: Audio Track parameter (Audio Track 1-4)

Here you can specify the song name, the scale used by MIDI tracks, and the delay for each audio track.



2-5c: Delay

[0...255 samples/0...5 ms]

Specify the time delay from the location of an audio track event until when the sound is heard from the **TRINITY** during playback.
This can be set in units of either samples or milliseconds.
Normally you will leave this set at 0.

Page Menu Command

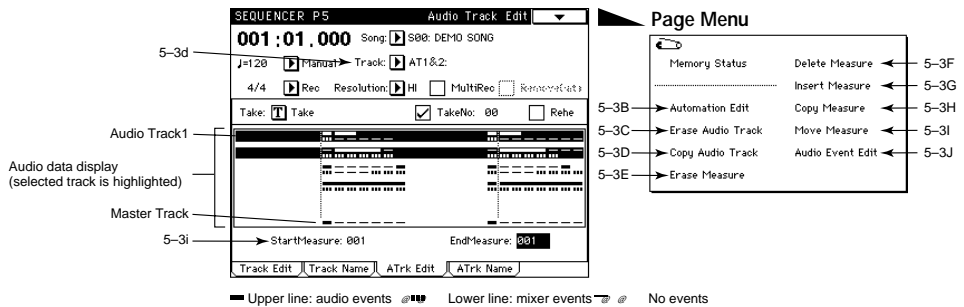
2-5D: Rec HD Select

Select the hard disk on which recording will take place.
The Free Time (remaining time for recording) will also be displayed here.
For the procedure, refer to "1-5D: Rec HD Select."

Sequencer P5

5-3: Audio Track Edit

Here you can edit audio events and mixer events of a previously-recorded audio track.



5-3d: Track [T01...16, MTR, AT1(L), AT2(R), AT3(L), AT4(R), AT1&2, AT3&4, MIXER REC]

Select the track that you wish to edit (or the copy destination track).

When the hard disk recorder option is installed, you will be able to select audio tracks AT1(L), AT2(R), AT3(L), AT4(R), AT1&2 or AT3&4, and MIXER REC, in addition to the MIDI tracks T01-16 and the MTR (Master Track) which were previously available.

If you wish to edit audio events or mixer events, select AT1(L), AT2(R), AT3(L), AT4(R), AT1&2, or AT3&4.



Since this tab page is for editing audio tracks, it will not be possible to edit T01-16 or MTR even if you select them. To edit MIDI tracks or the master track, use "5-1: Track Edit."

Conversely, it is not possible to use "5-1: Track Edit" or "5-2: Track Name" to display or edit audio tracks.

Select MIXER REC when you wish to use "1-6: Mix Audio Track 1-4" to record mixer events. After making your selection here, move to "1-6: Mix Audio Track 1-4" and record.

5-3i: Start Measure/End Measure

Specifies the range of measures in the audio track that will be edited.

Start Measure [1...999]
Specifies the first measure.

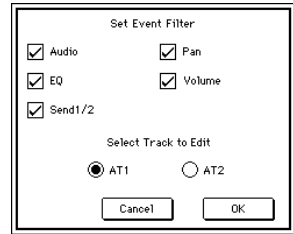
End Measure [1...999]
Specifies the last measure.

Page Menu Command

5-3B: Automation Edit

Here you can edit individual mixer events that were previously recorded. To perform event editing on audio tracks, use “5-3J: Audio Event Edit.”

- 1 In the tab 3 page, select an audio track that contains the mixer events you wish to edit, and specify the Start Measure.
- 2 When you choose **Automation Edit**, the dialog box at right will appear.

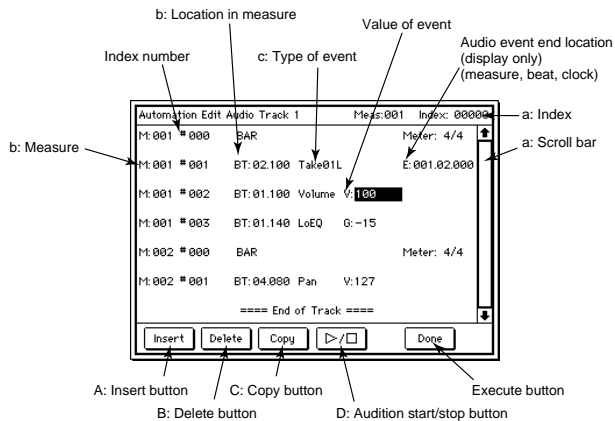


- 3 The Set Event Filter check boxes in the Automation Edit dialog box allow you to select the type(s) of data which will be edited.
You can select **Audio** (Audio Event), **EQ**, **Send 1/2**, **Pan**, and **Volume** data. Data types whose check box is checked will appear in the Automation Edit dialog box. If you set the Track setting to AT1&2 or AT3&4 in the tab 3 page, you can select which track in the pair to edit.



Event editing of audio tracks is performed using “5-3J: Audio Event Edit.” (Even if the Audio box is checked, audio events will only be displayed here, and cannot be edited.)

- 4 To move to the Automation Edit dialog box, press the **OK button**. To return to the previous display, press the **Cancel button**.
When you press the **OK button**, a dialog box like the following will appear.



- a: Specify measures or locations, etc. by selecting an index number, by using the scroll bar, or by directly pressing an event.
- b: You can move through the events by changing the measure or location values.

c: The following table shows the types of events and the possible values for each type.

Sound name (ex. Take01L) (display only) (Audio event)		E:001.00.000...999.15.191 (display only) (end of audio event: measure, beat, clock)
HiEQ	G: -15...+15 (gain)	
LoEQ	G: -15...+15 (gain)	
Send1	V: 0...127 (value)	
Send2	V: 0...127 (value)	
Pan	V: 0...127 (value)	
Volume	V: 0...127 (value)	

5 Press the appropriate button to make the desired edits as follows.

When you have finished editing mixer events and wish to return to the tab page, press the **Done button**.

A: Insert button

Inserting a mixer event

Select a mixer event located where you wish to insert a new event, and press the **Insert button**. A new mixer event will be inserted at the location of the selected mixer event.

Moving a mixer event

Select the mixer event that you wish to move, and press the **Delete button**. Then press the **Insert button** at the desired new location, and that mixer event will be inserted.

B: Delete button

Deleting a mixer event

Select the mixer event that you wish to delete, and press the **Delete button**. The mixer event will be deleted.

C: Copy button

Copying a mixer event

Select the mixer event that you wish to copy, and press the **Copy button**. Then press the **Insert button** at the desired new location, and that mixer event will be inserted.

D: Audition Start/Stop button

Starting/stopping audition

When an audio event is highlighted, you can press the **Audio Start/Stop button** to playback that audio event. During playback, you can press the button once again to stop playback.

5-3C: Erase Audio Track

This command erases all playback data from the audio track specified in the tab 3 page.

- 1 In the tab 3 page, specify the audio track to be erased.
- 2 When you choose **Erase Audio Track**, the dialog box at right will appear.
- 3 If you wish to erase the playback data of all tracks including MIDI tracks, **check All Tracks**.



If this is **not checked**, the audio track specified in the tab 3 page will be erased.

- 4 To execute the Erase Audio Track command, press the **OK button**. To cancel without executing, press the **Cancel button**.

5-3D: Copy Audio Track

This command copies playback data from the audio track specified in the dialog box to the audio track specified in the tab 3 page.

Be aware that when you execute the Copy Audio Track command, the playback data that was previously in the copy destination track will be erased.

- 1 In the tab 3 page, select the copy destination audio track.
- 2 When you choose **Copy Audio Track**, the dialog box at right will appear.
- 3 Specify the copy source track.
- 4 To execute the Copy Audio Track command, press the **OK button**. To cancel without executing, press the **Cancel button**.

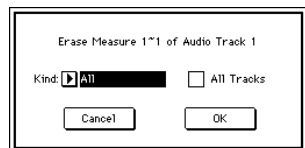


5-3E: Erase Measure

This command erases specified measures of playback data from the track specified in the tab 3 page. You can specify the type of data that will be erased.

Unlike the Delete Measure command, executing the Erase Measure command will not cause the playback data of subsequent measures to move.

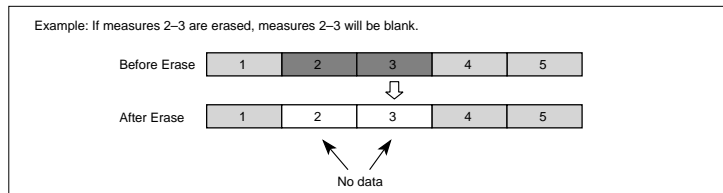
- 1 In the tab 3 page, specify the audio track from which data is to be erased, and the Start Measure and End Measure.
If MTR is specified as the track, the Kind item in 3 will change to Tempo.
- 2 When you choose **Erase Measure**, the dialog box at right will appear.
- 3 Use the **Kind and All Track settings together** to specify the data that will be erased. (Refer to the table on the following page.)




The **Kind** setting lets you select the type of data (All, Audio Event, Mixer Event, EQ, Send1/2, Pan, Volume) that will be erased.

Kind	All Tracks	
	Checked	Un-checked
All	MIDI tracks, master track, audio events and mixer events of the audio tracks	Audio events and mixer events of the selected audio track
Audio Event	Audio events of audio tracks 1–4	Audio events of the selected audio track
Mixer Event	All mixer events of audio tracks 1–4	All mixer events of the selected audio track
EQ	Equalizer events of audio tracks 1–4	Equalizer events of the selected audio track
Send 1/2	Send 1/2 events of audio tracks 1–4	Send 1/2 events of the selected audio track
Pan	Panpot events of audio tracks 1–4	Panpot events of the selected audio track
Volume	Volume events of audio tracks 1–4	Volume events of the selected audio track

- 4 To execute the Erase Measure command, press the **OK button**. To cancel without executing, press the **Cancel button**.



-  Be aware that if this command is executed with “All” selected for Kind and the All Tracks box checked, any control data in MIDI tracks which spans the boundary of the erased and non-erased sections will be erased only in the specified area. Also, erasing measures through which a note is held (i.e., measures falling within the duration of a note) will cause that note data to be erased from subsequent measures as well.

5-3F: Delete Measure

This command deletes specified measures of playback data from the track specified in the tab 3 page.

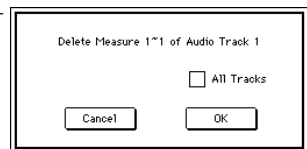
Unlike the Erase Measure command, executing the Delete Measure command will cause the playback data of subsequent measures to move toward the beginning of the song to fill the gap.

- 1 In the tab 3 page, specify the audio track from which measures are to be deleted, and the Start Measure and End Measure.

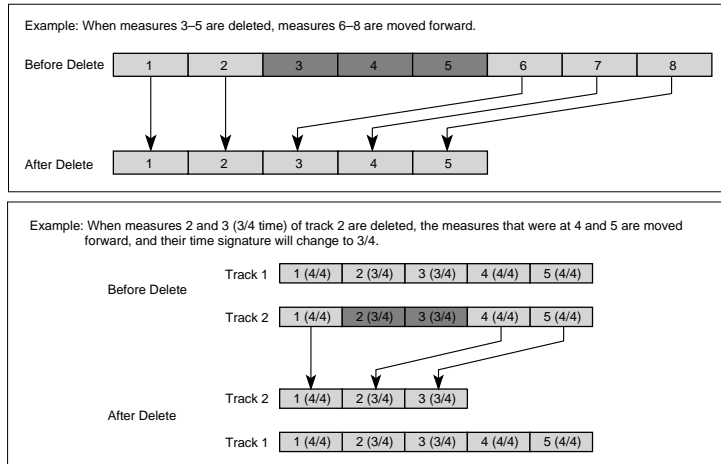
- 2 When you choose **Delete Measure**, the dialog box at right will appear.


- 3 If you wish to delete measures from all tracks including the MIDI tracks, **check** the All Tracks box.

If this box is **not checked**, measures will be deleted from the audio track specified in the tab 3 page.



- 4 To execute the Delete Measure command, press the **OK button**. To cancel without executing, press the **Cancel button**



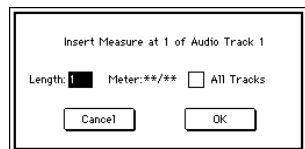
 If this command is executed with the All Tracks box checked in step 3, the playback data in the measures specified in the tab page will be deleted from all tracks including the MIDI tracks and master tracks, and the time signature and tempo will also slide forward according to the number of measures deleted.

Be aware that when this command is executed, any control data in MIDI tracks which spans the boundary of the deleted and non-deleted sections will be deleted only in the specified area. Also, deleting measures through which a note is held (i.e., measures falling within the duration of a note) will cause that note data to be deleted from subsequent measures as well.

5-3G: Insert Measure

This command inserts the number of measures specified in the dialog box into the track specified in the tab 3 page. When the Insert Measure command is executed, the measures will be inserted at the location specified for the Start Measure. Playback data located after the inserted measures will slide toward the end of the song to make room.

- 1 In the tab 3 page, specify the audio track into which measures will be inserted, and the Start Measure.
- 2 When you choose **Insert Measure**, the dialog box at right will appear.
- 3 If you wish to insert measures into all tracks including the MIDI tracks, **check** the All Tracks box. Playback data located after the inserted measures will play in the same way as before.

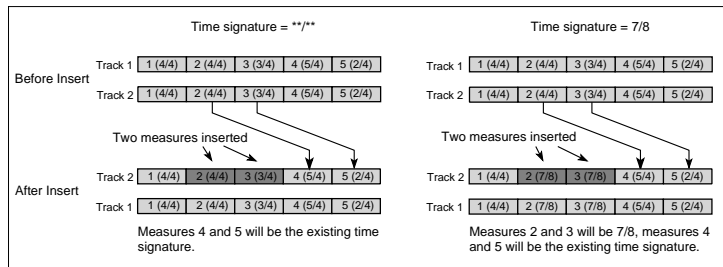


If this box is **not checked**, measures will be inserted into the audio track selected in the tab 3 page. The playback data located after the insertion point will slide toward the end of the song to make room, but be aware that the time signature and tempo will not move.

- 4 For the **Length** field, specify the number of measures that will be inserted.
- 5 For the **Meter*** field, specify the time signature of the measures that will be inserted.
- 6 To execute the Insert Measure command, press the **OK button**. To cancel without executing, press the **Cancel button**.

* If you want the time signature of the inserted measures to match the existing time signature, set this to ****/****.

With a setting other than ****/****, the time signature of the inserted measures will change, and all tracks will be played with the specified time signature for those measures.



- 🔍 If measures are inserted between measures spanned by a note in a MIDI track, that note will be turned off immediately before the inserted measure; i.e., it will be shortened from its original duration.

5-3H: Copy Measure

This command copies playback data from the audio track specified in the dialog box to the Start Measure of the audio track specified in the tab 3 page.

Be aware that executing the Copy Measure command will change the playback data as follows.

- If you copy measures which contain no playback data, the copy destination measures will be blank.
- The playback data previously located at the copy destination will be erased, and replaced by the copied playback data.
- The playback data of the copied measures will be played back in accordance with the time signature of the copy destination.

- 1 In the tab 3 page, specify the copy destination track and the Start Measure.
- 2 When you choose **Copy Measure**, the dialog box at right will appear.
- 3 Specify the copy source song.
- 4 Specify the copy source audio track. If you wish to copy the playback data of all tracks of the specified song including the MIDI tracks, **check** the All Tracks box.

This is an easy way to create repeated sections such as refrains within a song.

- 5 Specify the copy source Start Measure and End Measure.
- 6 To execute the Copy Measure command, press the **OK button**. To cancel without executing, press the **Cancel button**.

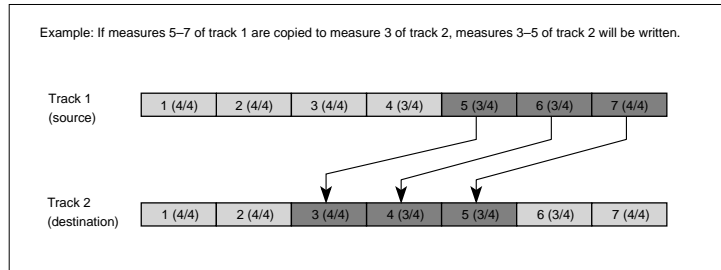
Copy from Song: 1



A.Track 3&4 All Tracks

Measure Start:001 End:001

to Measure 001 of A.Track 3&4(S00)

Cancel OK



-  If Audio Events would overlap as a result of executing this command, the lower portion of the overlap will be erased when you press the Execute button.
-  If you execute the Copy Measure command between songs whose Tempo settings differ, the playback time will be different even if the number of measures is identical. This will cause problems such as the data failing to fit within the specified measures, or a gap resulting.

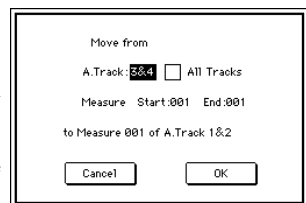
5-31: Move Measure

This command moves measures of playback data from the audio track specified in the dialog box to the Start Measure of the audio track specified in the tab 3 page.


Be aware that executing the Move Measure command will change the playback data as follows.

- Playback data following the move source measures will slide toward the beginning of the song by the number of measures that were moved.
- Playback data following the move destination measure will slide toward the end of the song by the number of measures that were moved.

- 1 In the tab 3 page, specify the move destination track and the Start Measure.
- 2 When you choose **Move Measure**, the dialog box at right will appear.
- 3 Specify the move source audio track.
If you wish to move the playback data of all tracks including the MIDI tracks, **check the All Tracks box**.
- 4 Specify the Start Measure and End Measure of the move source.



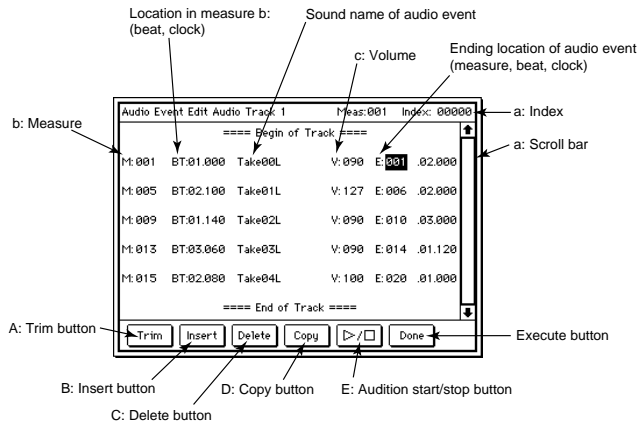
- 5 To execute the Move Measure command, press the **OK button**. To cancel without executing, press the **Cancel button**.

-  If Audio Events would overlap as a result of executing this command, the lower portion of the overlap will be erased when you press the Execute button.

5-3J: Audio Event Edit

This command lets you perform event editing of audio events (events in the audio tracks), and trim the sound used by an audio event (i.e., adjust the location or the area where the sound will be heard, in steps of one sample). If you wish to modify the sound name after recording, you can do so in the Trim dialog box.

- 1 In the tab 3 page, select the track that contains the audio event you wish to edit, and specify the Start Measure.
- 2 When you choose Audio Event Edit, the following dialog box (**Audio Event Edit**) will appear.



- To select the audio event that you wish to edit, select an index, use the scroll bar, or directly press the desired event. At this time, you can press the Audition Start/Stop button once to playback the event, allowing you to hear the contents. During playback, press the button once again to stop.
 - You can move the event by modifying the measure or location values. When moving an event in this way by modifying its location values, you are not limited to movement within the current measure (unlike Event Edit for a MIDI track).
 - Adjust the volume for each audio event. The value will be 127 immediately after recording.
- 3 Press the appropriate button to perform the desired operations explained below: "Trim audio event," "Insert audio event," "Delete audio event," "Copy audio event," or "Audition start/stop." When you are finished with event editing, press the **Done** button to return to the tab page.

A: Trim button

Trimming an audio event

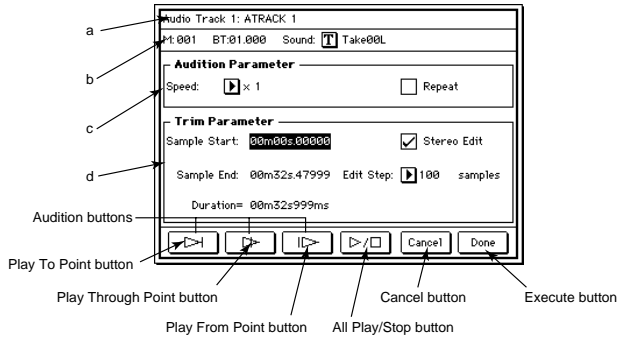
The Trim operation lets you specify in units of a sample the portion of a recorded sound that will be played back, allowing you to adjust the timing of the sound or to remove unwanted space.

Since the trim source sound is kept unchanged from its original recorded state, you can later restore the sound to its original condition even if you shorten it excessively by mistake. Executing the Trim operation simply changes the location where the sound begins to playback, and the location of the sound event

within the song is not affected.

Here you can also modify the **sound name** that was recorded.

Select the audio event that you wish to trim, and press the **Trim button**. You will enter **Trim mode**, and the following dialog box will appear.



Audition buttons

Play To Point button	Playback from approximately 2 seconds before the edit point until the edit point and then stop.
Play Through Point button	Playback approximately 4 seconds surrounding the edit point and then stop.
Play From Point button	Playback from the edit point for approximately 2 seconds and then stop.

When you press the **All Play/Stop button** once, the audio event will playback from start to end, allowing you to check the result of your trim setting. During playback you can press the button once again to stop. This button can also be used to stop playback that was initiated by the three audition buttons at left.

To execute the Trim operation, press the **Done button**. To return to the previous tab page, press the **Cancel button**. If you press the **Cancel button**, your edits will be canceled, and you will return from this dialog box to the Audio Event Edit dialog box. However a sound name that you have edited here will not be canceled.

a: Audio Track

This displays the selected track (the track selected when you entered Trim mode).

b: Location/Sound name

This displays the location in the track of the audio event being trimmed, and the name of the sound used by that event. You can use the text edit button to **edit the sound name**.

c: Audition Parameters

- **Speed** [x1, x7/8, x6/8, x5/8, x4/8] lets you specify the playback speed. By adjusting the playback speed you can find the appropriate trim points more accurately.
- If the **Repeat** box is **checked**, pressing an audition button will cause the audio event to be played back repeatedly. To stop playback, press the All Play/Stop button.

d: Trim Parameters

Here you can specify the various points for trimming (refer to the diagrams below).

- **Sample Start** and **Sample End** (min:sec.sample) specify the range of the recorded audio event that will actually be played back.
- **Sample Start** is the location where the audio event will begin playing back. This is indicated as the time from the beginning of the sound.
- **Sample End** is the location where the audio event will stop playing back. This is indicated as the time from the beginning of the sound. When Sample Start or Sample End are selected (i.e., when the parameters are highlighted, you can use an audition button to playback the audio event and press the [Enter] key at the appropriate moment to input that location as the Sample Start or Sample End value (the “grab” function).
- **Duration** (min:sec:msec) indicates the length of the audio event that will be played back (the distance between Sample Start and Sample End). This is only displayed, and cannot be edited.
- If the **Stereo Edit** box is **checked**, selecting an audio event in one audio track of a stereo-recorded pair will cause the Trim operation to be applied to the other audio event as well.



If you perform the Trim operation on only one of a stereo pair of tracks, phase discrepancies may occur. We recommend that you check the Stereo Edit box when trimming stereo data.

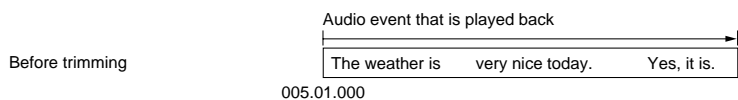


If the selected audio event is monaural, it will not be possible to check the Stereo Edit box.

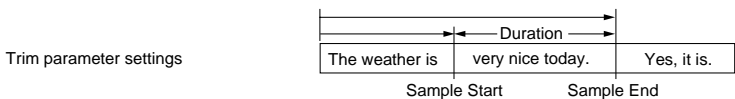
- **Edit Step** (1, 100, 10000 samples) determines the detail (the units) with which the VALUE dial or the [▲]/[▼] keys will adjust the Sample Start or Sample End values.

Executing the trim operation

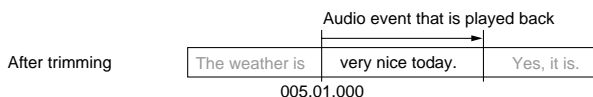
Suppose that you are trimming an audio event located at the beginning of measure 5 and consisting of the phrases: “The weather is very nice today.” “Yes, it is.”



If you want “very nice today” to playback at the beginning of measure 5, set Sample Start before “very” and Sample End after “nice today.”



Executing these settings will cause the audio event to playback from the specified Sample Start location, and “very nice today” will playback at the beginning of measure 5.



If you once again adjust the trim duration to include “The weather is” and “Yes, it is,” the entire audio event will be played back as originally.

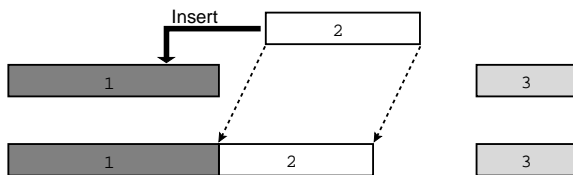
B: Insert button

Inserting an audio event

Select the audio event that you wish to insert, and press the **Copy button**. Next, select an audio event and press the **Insert button** to insert the previously copied event at the End Time location of the selected audio event (refer to the diagrams below).

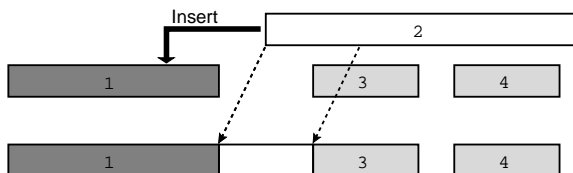
Audio events can be inserted into locations in which other events do not exist. (They cannot be inserted where other events exist.)

If the interval between audio events **1** and **3** is longer than audio event **2**, audio event **2** can be inserted as it is.



If the interval between audio events **1** and **3** is shorter than audio event **2**, audio event **2** can be inserted, but it will be played only up to the Start Time of audio event **3**.

Although event **2** will be played only for a limited duration in this case, it will once again play in its entirety if it is moved to an unoccupied location of sufficient length.



Moving an audio event

To move an inserted audio event, use “b: Location” to adjust the Start Time. This can be set anywhere between the End Time of the preceding audio event and the Start Time of the following audio event. If you wish to move an audio event past another audio event, select the audio event that you wish to move and press the **Delete button**. Then press the **Insert button** at the desired new location to insert that audio event.

C: Delete button

Deleting an audio event

Select the audio event that you wish to delete, and press the Delete button. The audio event will be deleted.

D: Copy button

Copying an audio event

Select the audio event that you wish to copy, and press the Copy button. Then use the Insert button to insert the audio event that you copied.

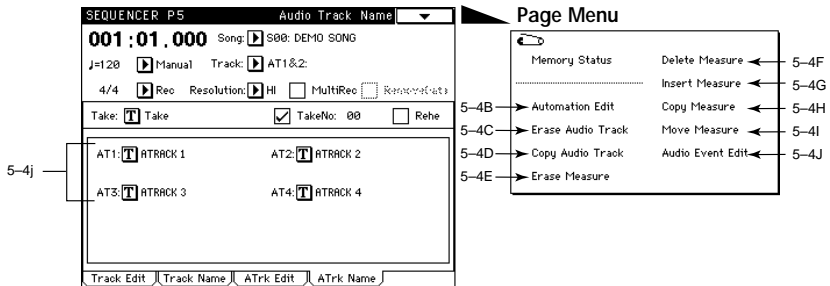
E: Audition Start/Stop button

Start/stop audition

When an audio event is highlighted, you can press the **Audition Start/Stop button** once to playback that audio event. Pressing the button once again during playback will stop the playback.

5-4: Audio Track Name

Here you can assign a name to each audio track.



5-4j: Audio Track Name

Use the text edit button to assign a name to the audio track.

The audio track name is displayed in the various tab pages of Sequencer mode P1, P2, and P5.

Page Menu Command

5-4B: Automation Edit

This command lets you edit individual mixer events that were recorded. Event editing of an audio track can be done using "5-3J: Audio Event Edit."

For details on the procedure, refer to "5-3B: Automation Edit."

5-4C: Erase Audio Track

This command erases all playback data from the audio track selected in the tab 3 page.

For details on the procedure, refer to "5-3C: Erase Audio Track."

5-4D: Copy Audio Track

This command copies playback data from the audio track selected in the dialog box to the audio track specified in the tab 3 page.

Be aware that when you execute the Copy Audio Track command, all playback data that previously existed in the copy destination track will be erased.

For details on the procedure, refer to "5-3D: Copy Audio Track."

5-4E: Erase Measure

This command erases specified measures of playback data from the track selected in the tab 3 page.

You can specify the type(s) of data that will be erased.

Unlike the Delete Measure command, executing the Erase Measure command will not cause playback data following the erased area to be moved toward the beginning of the song.

For details on the procedure, refer to “5–3E: Erase Measure.”

5–4F: Delete Measure

This command deletes specified measures of playback data from the track selected in the tab 3 page.

Unlike the Erase Measure command, executing the Delete Measure command will cause playback data following the deleted area to be moved forward toward the beginning of the song.

For details on the procedure, refer to “5–3F: Delete Measure.”

5–4G: Insert Measure

This command inserts the number of measures specified in the dialog box into the track specified in the tab 3 page. When the Insert Measure command is executed, the measures will be inserted at the location specified by the Start Measure. The playback data following the inserted location will be moved backward toward the end of the song.

For details on the procedure, refer to “5–3G: Insert Measure.”

5–4H: Copy Measure

This command copies specified measures of playback data from the audio track selected in the dialog box to the Start Measure of the audio track selected in the tab 3 page.

Be aware that the playback data will change as follows when the Copy Measure command is executed.

- If measures which contain no playback data are copied, the copy destination measures will be blank.
- Any playback data existing at the copy destination will be erased, and replaced by the copied playback data.
- The playback data that is copied will be played back according to the time signature of the copy destination.

For details on the procedure, refer to “5–3H: Copy Measure.”

5–4I: Move Measure

This command moves playback data of the audio track selected in the dialog box to the Start Measure location of the audio track specified in the tab 3 page, in steps of a measure.

Be aware that the playback data will change as follows when the Move Measure command is executed.

- Playback data located after the move source measures will be shifted forward by the number of measures that were moved.
- Playback data located after the move destination measure will be shifted backward by the number of measures that were moved.

For details on the procedure, refer to “5–3I: Move Measure.”

5–4J: Audio Event Edit

This command lets you perform event editing of audio events (events in an audio track), and trim the sound that is used by an audio event (make sample-unit adjustments in the location or portion of a sound that will be played back). You can use the Trim dialog box to modify the sound name after recording.

For details on the procedure, refer to “5–3J: Audio Event.”

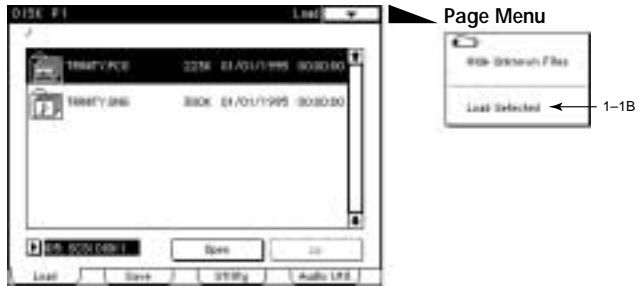
Disk P1

A note about .SNG files which contain audio tracks

Sequence data that contains audio tracks in the song is saved as a .SNG file. The filename extension is the same as for song files which contain only MIDI song data, but the following icon will appear for songs which contain an audio track.



1-1: Load



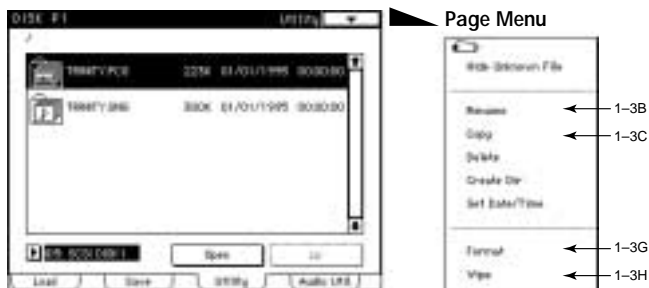
Page Menu Command

1-1B: Load Selected

If an .SNG file was selected, all audio track data will be loaded. If a 1-song file was selected, the audio events used by that song will be loaded.

1-3: Utility

Here you can perform various operations on the selected file or disk drive. Use Drive Select or the directory window to select a disk drive or file, and then choose a command from the page menu.



Page Menu Command

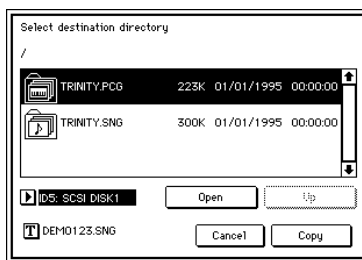
1-3B: Rename

Modifies the name of the selected file or directory. However it is not possible to modify the name of a .SNG file containing a song that includes an audio track. (Refer to the top of page 46 for the icon.) Also, the Rename command is available only when a DOS file or DOS directory is selected.

1-3C: Copy

Copies the selected file.

- 1 In the tab 3 page, select the file you wish to copy.
- 2 When you choose **Copy**, the dialog box at right will appear.
- 3 Use Drive Select to select the copy destination disk, and use the Open or Up buttons to select the copy destination directory.
- 4 If you wish to change the filename, use the text edit box to change the name.
- 5 To execute the copy command, press the **Copy button**. To cancel without copying, press the **Cancel button**.





If the drive selected by Drive Select is removable media (such as a floppy disk or a removable hard disk, etc.), it will not be possible to copy between different media on the same drive.

1-3G: Format

Formats the selected floppy disk or hard disk (or other SCSI device).

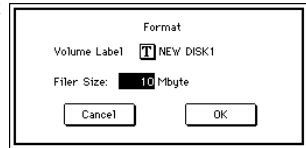
If the hard disk is being used by the **TRINITY series** for the first time, the hard disk must first be formatted to establish a filer partition and a sound partition.

 When formatting is executed, all data that was previously on that hard disk will be erased. Before formatting a disk, make sure that it does not contain data you wish to keep.

 The size of the filer partition cannot be modified during use. If you wish to change the size, you must once again execute either Format or Wipe. Be aware that this will erase all data of the hard disk.


1 In the tab 3 page, select the floppy disk or hard disk.

2 When you choose **Format**, the dialog box at right will appear. (The dialog box pictured here is for formatting a hard disk. For a floppy disk, the Filer Size setting will not appear.)




3 Use the text edit button to assign a volume label to the hard disk.


4 Specify the size of the partition used for saving .SNG files and .PCG files, etc. This can be set in a range of **0-540 Mbytes**. The remaining space of the hard disk will be used for recording sound.

 If you are using only a single hard disk to perform hard disk recording, you must specify a filer partition larger than **0** in order to create an area where .SNG files and .PCG files etc. can be saved. If you are using two or more hard disks, a filer partition must be created on at least one of the disks.

5 Press the **OK button**, and the display will ask "Are you sure?". Press OK once again to execute the Format command.


Formatting a hard disk will require a certain amount of time depending on the size of the hard disk. (e.g., formatting a 540 Mbyte hard disk requires approximately 5 minutes.)

 Pressing the [COMPARE] key after executing this command will not undo the command.

 Do not install a hard disk that was formatted on the **TRINITY series** into another computer. Korg cannot guarantee the operation of such a disk.

1-3H: Wipe

Erases all data existing on the selected floppy disk or hard disk.

 The size of the filer partition cannot be modified during use. If you wish to change the size, you must once again execute either Format or Wipe. Be aware that this will erase all data of the hard disk.

1 In the tab 3 page, select a floppy disk or a hard disk.

2 When you choose **Wipe**, the dialog box at right will appear. (The dialog box pictured here is for wiping a hard disk. For a floppy disk, the Filer Size setting will not appear.) If you wish to change the volume label, use the text edit button.



- 3 Specify the size of the partition that will be used for saving .SNG files and .PCG files, etc. The remaining area of the hard disk will be used for recording sound.

This can be set in a range of **0-540 Mbytes**.

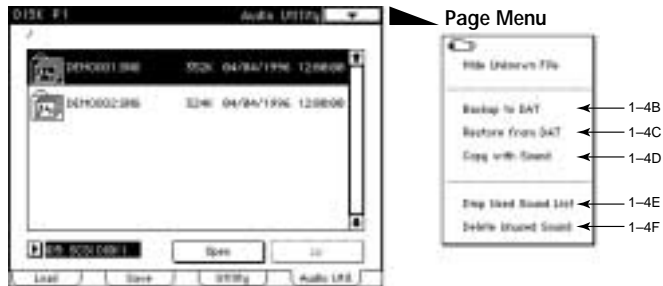
- 4 Press the **OK button**, and the display will ask "Are you sure?". Press OK once again to execute the Wipe command.



Pressing the [COMPARE] key after executing this command will not undo the command.

1-4: Audio Utility

Here you can perform operations such as backing up data from hard disk to a DAT tape, or restoring backed up data from a DAT tape to a hard disk.



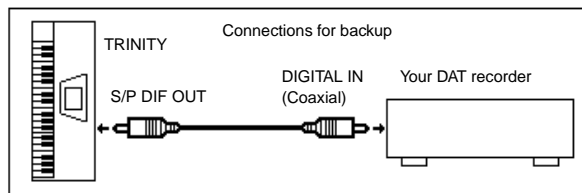
Page Menu Command

1-4B: Backup to DAT

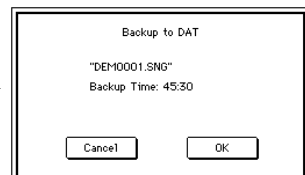
This command backs up one selected .SNG file to DAT tape.

When one .SNG file is backed up, all .PCG files of the same name existing in the current directory will be backed up together.

Connect the S/P DIF OUT connector located on the rear panel of the **TRINITY** to the DIGITAL IN (coaxial) connector of your DAT recorder.





- 1 In the tab 4 page, select a .SNG file.
- 2 When you choose **Backup to DAT**, the dialog box at right will appear.
- 3 The Backup Time will be displayed. Insert a DAT tape of sufficient length into your DAT recorder.



- 4 Press the **OK button**, and the dialog box at right will appear.
- 5 Start recording on your DAT recorder.
- 6 Press the **OK button** in the dialog box. The data will begin to be output, and backup will begin.
Within approximately 10 seconds, the level meter on your DAT recorder will begin to move.

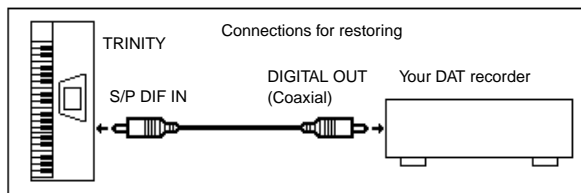


-  If audio devices are connected to your DAT recorder, make settings so that the sound from the DAT is not output to speakers or headphones. Speakers or headphones may be damaged if this precaution is not taken.
- 7 When the backup is finished, the display will indicate Complete. When this display appears, stop your DAT recorder.
-  If you press the Cancel button during backup in an attempt to create a partial backup, the backed-up data will be incomplete, and even if this data is restored it will be unusable.

1-4C: Restore from DAT


This command restores backed-up data from DAT tapes to the hard disk(s).

Connect the S/P DIF IN connector located on the rear panel of the **TRINITY** to the DIGITAL OUT (coaxial) connector of your DAT recorder.



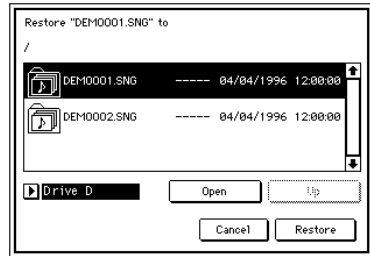
- 1 Load the tape containing the backup data into your DAT recorder.
- 2 When you choose **Restore from DAT**, the dialog box at right will appear.
- 3 Playback your DAT recorder.
- 4 When the header of the DAT tape has been read, the dialog box at right will appear. Stop your DAT recorder within 30 seconds. (Do not rewind the DAT tape.)



-  If you do not stop the DAT recorder within 30 seconds, restore cannot be performed correctly.



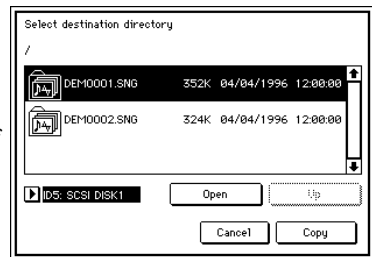
- 5 Press the **OK button**. The dialog box at right will appear.
Specify the directory into which the file will be restored.
- 6 The dialog box of step 2 will reappear. Start the DAT recorder, and restoring will begin.
- 7 When the restoration operation is completed, the display will indicate Completed. When this display appears, stop your DAT recorder.



1-4D: Copy with Sound

This command copies the selected .SNG file with the sounds it uses to another hard disk. If at this time a .PCG file with the same name exists in the current directory, it will also be copied. However if a hard disk and removable media (fixed at ID6) are both connected, and you select a hard disk of ID0-5 as the copy source, the copy destination will be the removable media of ID6. If you select the removable media of ID6 as the copy source, you will be able to select a hard disk of ID0-5 as the copy destination.

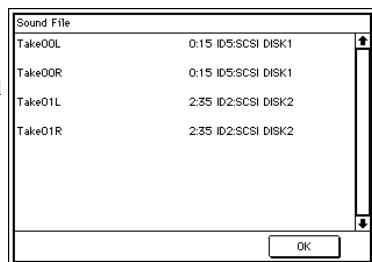
- 1 In the tab 4 page, select the copy source /SNG file.
- 2 When you choose **Copy with Sound**, the dialog box at right will appear.
- 3 Select the hard disk and directory of the copy destination, and press the **Copy button**.



1-4E: Disp Used Sound List


This command displays the sounds used by the selected .SNG file.

- 1 Select a .SNG file.
- 2 When you choose **Disp Used Sound List**, the dialog box at right will appear.
- 3 Press the **OK button**.



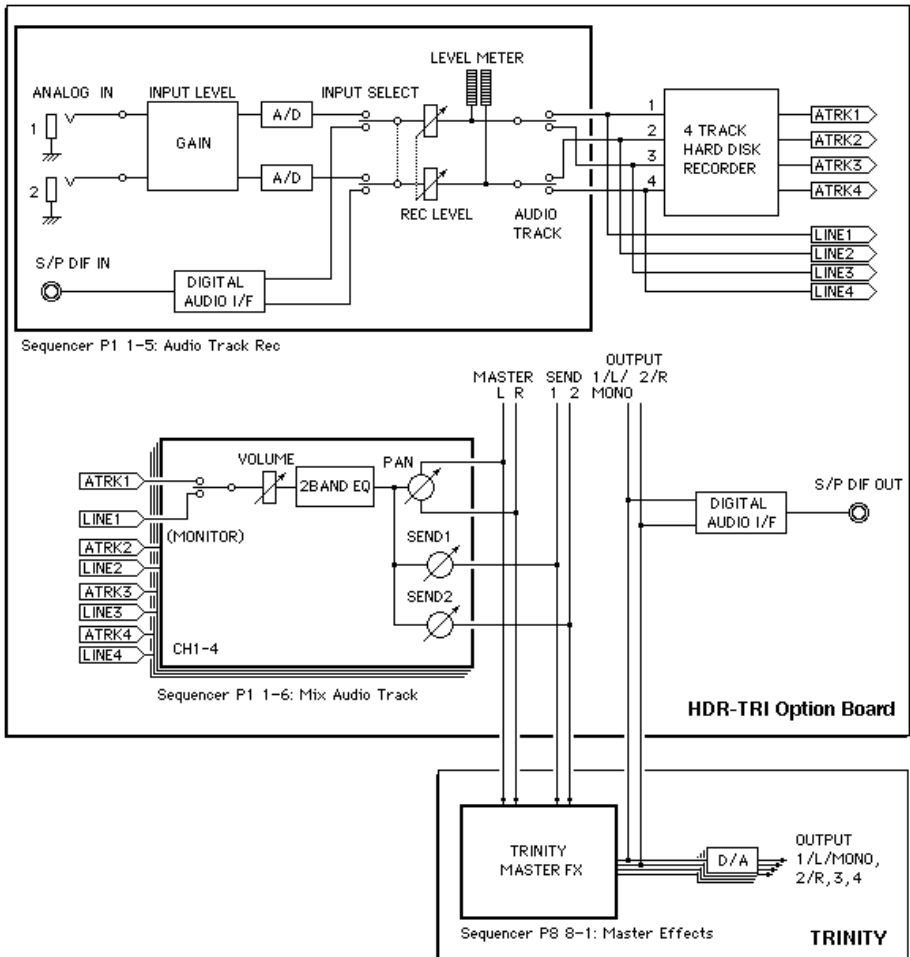
1-4F: Delete Unused Sound

This command deletes sounds which are not used by any .SNG file from all hard disks.

-  After this command has been executed, it is not possible to use the [COMPARE] key to bring back the deleted data.

4. Appendix

Block diagram



Messages

When the **HDR-TRI** is installed, the following messages will be added.

Disk not formatted

Meaning: The disk for which Wipe was attempted is not formatted.

Action: Use the Format command of the **TRINITY** to format the disk.

Error in wiping medium

Meaning: Disk wipe could not be performed.

Action: The disk is damaged. Use a different disk.

Memory full. Audio track can't play to the end.

Meaning: The master track's memory has been used up, so the audio track cannot be played back to the end.

Action: Increase the available memory of the master track by deleting tempo changes etc. from the master track.

No unused sounds found

Meaning: When you executed the Disk mode command Delete Unused Sound, no unused sounds were found.

Troubleshooting

Problem: An asterisk “ * ” appears to the right of the page menu button (as shown in the graphic at the right), and problems such as a flickering LCD and a drop in volume occur.



If you continue using the unit under these circumstances, functions may stop working properly. Take the following actions immediately.

Cause: The clock is not being detected correctly. The cable connected to the S/P DIF IN connector may not be plugged in, a frequency other than 48 kHz may be transmitting to the S/P DIF IN connector or for a similarly related reason. Also, if the DI-TRI is installed, the clock may not be correctly detected because the BNC cable may not be plugged in, etc.

Action: First, confirm that the connected cable is working. Then, input the correct clock [48 kHz (±5 Hz) to both the S/P DIF IN connector and the WORD CLOCK IN connector], and set the Global mode P1 (Global Setup) parameter System Clock to “Internal.” Before continuing to use the unit, make sure that normal operation has resumed and that the asterisk “ * ” is no longer displayed next to the page menu button. If these steps do not restore normal operation, turn the power off and back on. You must first back up the Sequencer memory since all data will be lost when the power is turned off.

Problem: Sound is distorted.

Cause 1: If the Sequencer mode P1 tab 5 page (Audio Track Rec) settings for Input Level and/or Rec Level are excessively high (and the display indicates Overload and/or Over), the input will be overloaded and distorted sound will be recorded.

- Action:** Lower the Input Level and/or Rec Level settings so that the Overload and/or Over displays do not appear.
- Cause 2:** Even if the Input Level and Rec Level settings are appropriate, distorted sound will be output from the monitor if the P1 tab 6 page (Mix Audio Track 1–4) Volume setting is too high. (However the sound that is recorded is not distorted.)
- Action:** Adjust the volume downward. A volume setting of 0 is -infinity, 100 is 0 dB, and 127 is +127 dB.
- Cause 3:** In situations other than the above, the output from the monitor will be distorted if Pan is set to C064 during stereo recording.
- Action:** During stereo recording, set Pan to L000 and R127.

- Problem:** Sound is not output from the monitor even though the level meters are up.
- Cause 1:** There is a problem with the settings of the TRINITY itself or with the connections.
- Action:** Raise the TRINITY's volume, or check the monitor connections.
- Cause 2:** An audio track is not selected in Track.
- Action:** Select an audio track.
- Cause 3:** Even if an audio track is selected, the tab 6 page (Mix A1–4) Volume setting is 0, or Pan is OFF.
- Action:** Adjust the Volume and Pan settings.

Specifications

INPUT/OUTPUT connectors: SCSI connector, ANALOG IN 1/2 connectors, S/P DIF IN/OUT connectors

Sampling frequency: 48 kHz

Recording time: when using a 540 Mbyte hard disk, approximately 94 minutes of monaural recording, approximately 47 minutes of stereo recording (approximately 5 Mbytes per minute of monaural recording)

Tracks recorded simultaneously: 2

Tracks played back simultaneously: 4

Digital mixer specifications

Volume: 0—127 (100=unity)

High EQ: -15—+15 (0=unity)

Low EQ: -15— +15 (0=unity)

Send 1: 0—127 (send to Master Effect 1)

Send 2: 0—127 (send to Master Effect 2)

Pan: L000—C064—R127, OFF

Analog audio input gain structure

Input Level setting	Typical input level	Max input level	Typical gain
-30 dBu	-30 dBu	-20 dBu	+20 dB
-10 dBu	-10 dBu	0 dBu	0 dB
+4 dBu	+4 dBu	+14 dBu	-14 dB

S/N ratio (A-weighted): better than 90 dB

Measured at OUTPUT 1 and 2 for a 1 kHz sine wave input, Rec Level=0.0, AT1: Pan=L000, Volume=100, AT2: Pan=R127, Volume=100, AT3/4: MUTE

Hard Disk Recording Demo Songs: Hard Disk Recording Demo Songs consist of TRINITY sequence data and Audio Data.

1. Godzilla Wants my Trinity

written by John Lehmkuhl, Nick Forcillo and Steve Hunt

©1996 Real-Kuhl Music

Steve Hunt – Vocals

Nick Forcillo – Guitars

Caroline Lehmkuhl – Female radio announcer

John Lehmkuhl – voice of Male radio announcer & Godzilla. All production on Trinity including sequencing & playing.

2. WhatCha'GonnaDo?

written by John Lehmkuhl

raps composed by Aaron Bray, Jason Floyd, Jahmad Rollins, Edwin Hamilton, Jason Smith, Ryan Young

©1996 Real-Kuhl Music

Aaron Bray, Jason Floyd, Jahmad Rollins, Edwin Hamilton, Jason Smith, Ryan Young – Raps John Lehmkuhl – All production on Trinity including sequencing & playing.

3. Holy Trinity

written by John Lehmkuhl and Kathy Talbott

©1996 Real-Kuhl Music

Kathy Talbott – Vocal

John Lehmkuhl – All production on Trinity including sequencing & playing.

4. Paddy Wack

written by John Lehmkuhl

©1996 Real-Kuhl Music

Mindi Abair – Alto Saxophone

Charles Moore – Mute Trumpet

Ty Stevens – Electric Guitars

John Lehmkuhl – All production on Trinity including sequencing & playing.

* John Lehmkuhl / Real-Kuhl Music can be contacted at "realkuhl@pacifcnet.net" for questions/comment.

** Above Demo song data are not attached to this product.

*** LIMITATION: These HD Demos are for demonstration purposes only in the Trinity Workstation DRS. Unauauthorized duplication, rebroadcast or any other use of the music and/or PCM audio data is strictly prohibited and would constitute a violation of all applicable laws.

Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>