

D16 SYSTEM
VERSION **2.0**
Digital Recording Studio

Upgrade Guide

KORG

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Introduction

About this manual

This manual explains the new functions and improvements that have been added to the D16 in Version 2. Since the explanations are given in order of the contents of the "D16 Owner's Manual," you will need to read this manual in conjunction with the "D16 Owner's Manual."

Printing conventions in this manual

This manual uses the same conventions described on p.2 "Printing conventions in this manual" of the "D16 Owner's Manual."

Other conventions are as follows.

(→D16 p.■■■): This indicates a reference page in the "D16 Owner's Manual."

The D16 upgrade

Refer to p.107 "Updating the system software" in the D16 Owner's Manual for details on the system upgrade.

Major new functions

Backup/restore on CD-R/RW

A CD-R or CD-RW drive connected to the [SCSI] connector can be used to backup and restore D16V2 song data.

Restore D8 song data

Audio data which has been stored on an external SCSI drive by the **D8 Digital Recording Studio** can be restored to the D16V2 for playback and further editing.

Import and export WAV files

WAV format audio files can be loaded from a DOS format (FAT 16) external drive connected to the [SCSI] connector into a D16V2 song. Audio data from the clipboard of the D16V2 can now be exported to a DOS format (FAT 16) external SCSI drive as a WAV format audio file.

MTC slave, MMC transmission

The D16V2 can receive and synchronize to MTC (MIDI Time Code) transmitted from another D16V2 or external sequencer. MMC (MIDI Machine Control) message can now be received, allowing the D16V2 to be controlled by a connected external MMC-compatible device.

This makes it possible for two D16V2 units to be operated in synchronization.

MIDI control of mixer parameters

Mixer data (fader and pan etc.) of the D16V2 can be transmitted and received via MIDI control change messages.

This allows the D16V2 to be controlled by automation from an external MIDI sequencer.

Fade Track

A new Fade Track command has been added to track editing, allowing audio data recorded on a track to be faded-in or faded-out. Track groups can also be edited in this fashion, to easily create a total song fade-in/out. By using fade-in and fade-out in conjunction, you can also create crossfades.

Normalize Track

A new Normalize Track command has been added to track editing.

This allows the level of audio data recorded at an unintentionally low level to be boosted to a more appropriate level.

Sort scenes by time

Scenes are normally arranged in the order in which they were stored/created, but you can now use a "Sort" button to rearrange them in the order of their time locations.

Scene "EdtFiltr" button has been added

An "EdtFiltr" button has been added to the [SCENE] "ReadDel" tab page. By pressing this button you can view and modify the filter settings that have been recorded for each scene.

Guide indicator added to scene "MixView" page

A guide indicator has been added to the "MixView" tab page, showing the difference between the current setting of the selected fader or pan, and the value recorded in the scene.

Selectable undo levels

The number of undo levels had been fixed at 99 in the previous version, but now you can select from 1, 8, or 99 levels.

By setting this to a lower level than 99, you can avoid creating unwanted undo data, and make more effective use of the hard disk capacity.

"Erase" button added to the "CD-R/RW" page

Data such as audio tracks written to a CD-RW disc can now be erased.

Changes to the "Rename" page

"Insert," "Delete," and "BackSpace" buttons have been added.

These additions make it much easier to use the "Rename" function.

Forcible initialization for a protected song

A "Force" button has been added, allowing you to forcibly initialize even a protected song. This is helpful when choosing to initialize a drive after you have backed up your song data, avoiding having to unprotect each song individually.

Main changes from the D16

Tempo map creation (specification change)

When you create a tempo map in the [TEMPO/RHYTHM] “TmpMap” tab page, you can now specify the beginning and end measures of the tempo map, making it easier to manage the tempo map by measures. An “Insert” button has also been added, making it easier to edit a previously-created tempo map.

[STOP] + [FF] (specification change)

By holding down the [STOP] key and pressing the [FF] key, you can easily select the end of the song.

In the middle of the song, you can hold down the [STOP] key and press the [FF] key to move to the end of the song. At the end of the song, you can hold down the [STOP] key and press the [FF] key to move to the beginning of the next song.

Rhythm level control (specification change)

The “Mute” button in the [TEMPO/RHYTHM] “SetUp” tab page and the “RhythmLevel” button in the [Solo] “Monitor” tab page have been deleted.

This lets you adjust the “Rhythm” level and on/off setting in a single page, by using “Vol” in the [TEMPO] “SetUp” tab page.

You can also use the “Rhythm” button in the [Solo] “Monitor” tab page as a master and monitor on/off switch for the rhythm sound.

Optimize track (change)


This has been changed so that unneeded sound is not generated if a track, or specified region is blank. If the next event is not far away, the track will be generated as a single piece of sound data to avoid “DiskBusy” indications.

Insert effect routing (specification change)

In the [INSERT EFFECT] “InsAss” tab page when “Assign” is set to “In,” the “SelectInput” (input) setting is now disabled. This makes the input setting match the setting of [Input] “Ch1-8” and “Ch 9-16,” making the signal easier to manage.

Improved “locate” operation in the Track View display

You can move smoothly through time in the Track View display by rapidly turning the [VALUE] knob.

- In the [SYSTEM] “Control” page, the symbol indicating that the foot switch is pressed has been changed from * to .
- Due to the addition of the [SYSTEM] “MMC” page, the location of the [SYSTEM] “DiskUtil” page has changed from P4 to P6.

Basic operation

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In “2. Naming a song,” step ③ has been changed as follows.

2. Naming a song

③ Change the name of the song.

Use the “◀” “▶” buttons to move the cursor to the location of the character that you wish to change, and rotate the [VALUE] dial to modify the song name.



The buttons in the LCD screen have the following function.

- “A./a.” buttons: Select the alphabetical character “A.” Press it again to select the lowercase “a”.
- “0..9” button: Select the numeral “0–9”.
- “Symbol” button: Select a symbol.
- “Insert” button: Insert a space, moving the following characters backward.
- “Space” button: Select a space (blank).
- “Backsp” button: Delete the character before the cursor.
- “Delete” button: Delete the character at the cursor.
- “ClearAll” button: Delete the entire name.

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Part of “3. Selecting an existing song” has been changed.

[STOP] key + [FF] key

Use this to select the previous or next-numbered song in the same drive.

- Hold down the [STOP] key and press the [FF] key to move to the end of that song. If you are already at the end of the song, you will move to the beginning of the next song.

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Fade Track and Normalize Track commands have been added to “Track editing.”

Fade-in/Fade-out: Fade Track

This command creates a fade-in or fade-out in the selected region (IN–OUT) of the recorded track data. You can also create crossfades by combining fade-in and fade-out for identical regions in two tracks.

- You can fade-in or fade-out the IN–OUT region.
- A single or multiple tracks of data can be faded-in or faded-out simultaneously.

Boosting to an appropriate level: Normalize Track

If the recorded level is too low, you can use this command to boost the selected region (IN–OUT) of track data to the maximum level that will not cause clipping.

- The peak value of the audio data in the IN–OUT region is detected, and the level of the entire IN–OUT region is boosted as far as possible without causing the peak value to clip.
- The data of a single track or of adjacent tracks can be normalized simultaneously.
- ▲ If data that was recorded at an extremely low level is normalized, any noise component it contains will be boosted by the same amount.

The function of IN, OUT, TO, and END times for each command

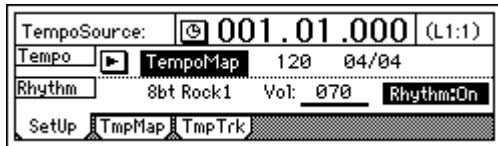
	IN	OUT	TO	END
Copy Track	Copy source start time	Copy source end time	Copy destination start time	---
Insert Track	Blank insert start time	Blank insert end time	---	---
Erase Track	Erase start time	Erase end time	---	---
Delete Track	Delete start time	Delete end time	---	---
Swap Track	Swap start time	Swap end time	---	---
Reverse Track	Reverse start time	Reverse end time	Reversed copy destination start time	---
Optimize Track	Optimize start time	Optimize end time	---	---
Expansion/Compression Track	Expand/compress start time	Expand/compress end time	Expand/compress destination start time and expand/compress result copy destination start time	Expand/compress destination end time
Fade Track	Fade start time	Fade end time	---	---
Normalize Track	Normalize start time	Normalize end time	---	---

Change the “Tempo map” explanation in “Setting the tempo.”

Tempo map

Tempo Map switches the tempo, time signature, and rhythm pattern at the specified measure.

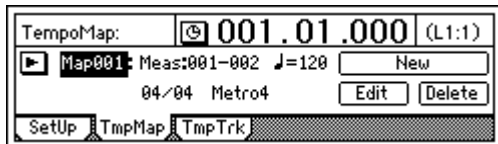
- ① **Specify Tempo Map as the tempo source.**
 - Select the [TEMPO/RHYTHM] “SetUp” tab page.
 - Press the “Rhythm” button to turn rhythm on.
 - Press “TempoSource,” and use the [VALUE] dial to select “TempoMap.”



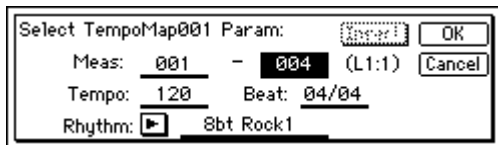
- ② **At the beginning of the song, specify the initial tempo in tempo map “001.”**

note Tempo map “001” is located at the beginning of the song, and specifies the initial tempo. Tempo maps “002” – “200” can be placed in successive measures of the song to change the tempo.

- Select the [TEMPO/RHYTHM] “TmpMap” tab page.



- Select “TempoMap,” and use the [VALUE] dial to select tempo map “001.”
- Press the “Edit” button to access the “Select TempoMap001 Param” dialog box.



- Specify the tempo in “Tempo,” the time signature in “Beat,” and the rhythm pattern in “Rhythm.”
It is not possible to change the starting location (Start Measure) of tempo map “001.” You can change only the ending location (End Measure).
- After you have finished making the settings, press the “OK” button.

- ③ **Add a tempo map at any point in the song where you want to change the tempo, time signature, or rhythm pattern.**

- Press the “New” button to display “Select TempoMap002 Param.”
- In the “Meas” area, specify the starting location (Start Measure) for which the tempo map will be created, and the ending location (End Measure). Specify the tempo in “Tempo,” the time signature in “Beat,” and the rhythm pattern in “Rhythm.” To add the tempo map by overwriting the previous data, turn **off** the “Insert” button.
- Press the “OK” button to add the tempo map. The map numbers will automatically be re-assigned from the beginning to the end of the song.


note By adding a tempo map and using “Rhythm” to change the rhythm pattern, you can create drum patterns for an entire song, including an intro, fill-in, and ending.

It is now possible to backup and restore song data using a CD-R or CD-RW.

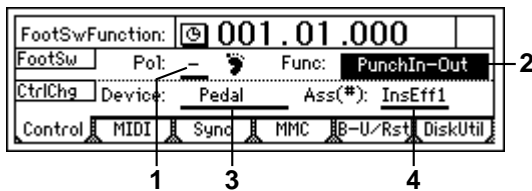
Reference


2. SYSTEM

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The symbol indicating foot switch polarity has been changed to “”.

P1 Control: Foot switch/Control change device (pedal/MIDI) setting



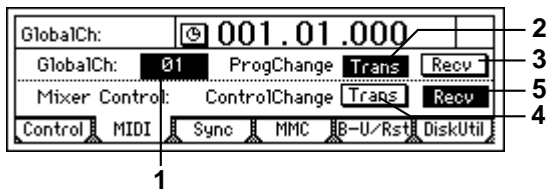
1. Pol (FootSwPolarity) [-, +]
Specifies the polarity of the foot switch.
Connect a foot switch (such as the separately sold PS-1 option) to the front panel [FOOT SWITCH] jack, and set this parameter so that the “” symbol appears when the foot switch is pressed.

Refer to the D16 Owner’s Manual for details on 2, 3, and 4.

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MIDI messages (control changes) can now be used to control mixer parameters.
An “MMC” tab page has been added.

P2 MIDI: MIDI settings



The D16V2 lets you use MIDI to do the following things.

- Control effects (→D16 p.33)
- Synchronize with a sequencer or other MIDI device
- Select scenes (→D16 p.67)
- Use control changes to control mixer parameters.

1. GlobalCh (Global Channel) [01...16]
Specifies the global MIDI channel.

This setting is required in the following cases.

- If you wish to control the effect by setting “Device” (P1-3) to a MIDI message other than “Pedal.”
- If you wish to transmit/receive program change messages to select scenes.

MIDI messages can be transmitted and received when you connect the D16V2 to the external MIDI device via MIDI and set the MIDI channel of the connected device to match the “GlobalCh” of the D16V2.

2. ProgramChange: Trans [On, Off]
This enables transmission of program change messages.

Program changes are transmitted when you change scenes, or store/recall a scene.

3. ProgramChange: Recv [On, Off]
This enables reception of program change messages.

When a program change message is received, the scene will change.

4. ControlChange: Trans [On, Off]
This enables transmission of control change messages.

When you modify a mixer parameter, the corresponding control change will be transmitted.

Control changes transmitted from the D16V2 can be recorded on a MIDI-connected external sequencer. The data recorded on the external sequencer can then be played back to automate the mixer parameters.

5. ControlChange: Recv [On, Off]
This enables reception of control change messages.

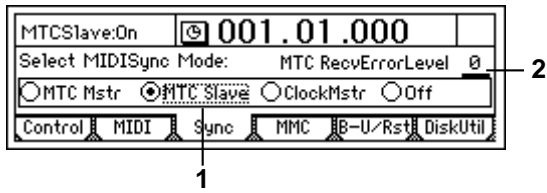
By receiving control changes that were previously recorded on a MIDI sequencer, you can control the corresponding mixer parameters. For details on the parameters that can be controlled, refer to the MIDI implementation chart (→p.21).

P3 Sync: Synchronization settings

By synchronizing the D16V2 and an external MIDI sequencer, you can simultaneously play back 16 tracks of audio together with external MIDI tone generators.

The action of making the D16V2 operate at the same timing as a MIDI sequencer is called **synchronization**. The device that outputs the synchronization clock is called the **master** device, and the device that receives the synchronization clock is called the **slave** device. The D16V2 can function either as the master or the slave.

It is also possible to transmit MMC messages from a MIDI sequencer etc. to control playback or recording on the D16V2.



1. Select MIDISync Mode [MTC Mstr, MTC Slave, Clock Mstr, Off]

Select the synchronization messages that will be transmitted and received from the MIDI IN/OUT connectors.

MTC Mstr: The D16V2 will function as the master device for MTC 30 NDF (MIDI time code 30 non-drop frame) messages.

MTC Slave: The D16V2 will function as the slave device for MTC 30 NDF (MIDI time code 30 non-drop frame) messages.

ClockMstr: The D16V2 will transmit MIDI Clock messages.

Off: The D16V2 will not transmit or receive synchronization messages.

2. MTC RecvErrorLevel [0...10]

Specify the MTC check level used if “SelectMIDISync-Mode” is set to “MTC Slave.”

If, due to some problem, MTC messages are not sent consecutively to the D16V2, the D16V2 will detect the abnormal MTC state and may stop synchronization and halt playback. In such cases, you can lower the “MTC RecvErrorLevel” setting so that synchronized playback will continue even if some problems occur with MTC reception.

note If this is set to “0,” synchronized playback will not stop even if a problem occurs.

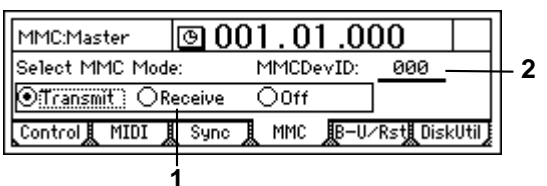
⚠ Depending on the compatibility between the two devices when a device other than the D16V2 is used as the MTC master for synchronization, correct synchronization may not be possible unless you start from the beginning of the song.

P4 MMC: MMC settings

The D16V2 supports MMC (MIDI Machine Control).

When synchronizing two D16V2 units, or when using the D16V2 together with an MMC-compatible MIDI sequencer, you can playback, stop, or fast-forward etc. by operating only the master device.

⚠ Some MIDI devices may not respond to the MMC functionality of the D16V2. Details on the MMC functionality of the D16V2 are given in the MIDI implementation.



1. Select MMC Mode [Transmit, Receive, Off]

Select the MMC mode.
Transmit: MMC will be transmitted.
Receive: MMC will be received.
Off: MMC will not be used.

2. MMCDevID (MMC Device ID) [000...127]

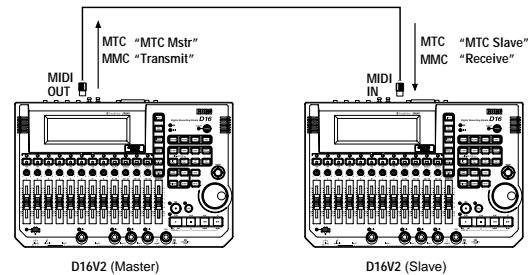
Specifies the device ID that will be used when transmitting/receiving MMC to/from the external MIDI device.
 To enable MMC transmission/reception, connect the external MIDI device to the D16V2 via MIDI, set the device ID to match, and set “Select MMC Mode” appropriate.

note If this parameter is set to “127,” MMC can be transmitted/received to/from all ID numbers.

Synchronizing two D16V2 units

Here’s how you can synchronize two D16V2 units. One D16V2 will be the master, and the other will be the slave.

Make connections as follows.



① Make settings on the master D16V2.

In the [SYSTEM] “Sync” tab page, set “Select MIDI SyncMode” to “MTC Mstr.” In the [SYSTEM] “MMC” tab page, set “Select MMC Mode” to “Transmit.” For this example, set “MMC DevID” to “10.”

② Make settings on the slave D16V2.

In the [SYSTEM] “Sync” tab page, set “Select MIDI SyncMode” to “MTC Slave.” In the [SYSTEM] “MMC” tab page, set “Select MMC Mode” to “Receive.” For this example, set “MMC DevID” to “10” (the same as the master).

Press the [PLAY] key on the slave D16V2 to put it in playback-ready mode.

note If you do not want to receive mixer control data, you can either turn the [SYSTEM] “MIDI” page “Control Change: Trans” parameter “Off” on the master D16V2, or turn the [SYSTEM] “MIDI” page “Control Change: “Recv” parameter “Off” on the slave D16V2.

③ Press the [PLAY] key on the master D16V2.

When the slave D16V2 receives time code and establishes synchronization with the time code of the master unit, the slave D16V2 will begin playback.

note Several seconds may be required in order for synchronization to be established.

- On the MTC slave D16V2, you must make sure that the [AUTOPUNCH] “AtPunch” tab page “AutoPunch” parameter and the [LOOP] “Loop” tab page “Loop” parameter are both turned “Off.”

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D8 backup data can now be restored into the D16V2.

.....

P5 B-U/Rst: Backup/restore from removable disk

Here you can backup (save)/restore (recall) data using a removable disk. The D16V2 supports backup/restore on CD-R or CD-RW. The following data can also be restored.

- D16 backup data
- D8 backup data (audio data only)
- Be aware that backup and some restore operations will overwrite the data on the destination drive.
- When backing up on CD-R or CD-RW, you must use a blank disk.

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Format types have been added to the display. A “Force” button has been added for forcible initialization.

.....

P6 DiskUtil: Initialize/format/check a drive

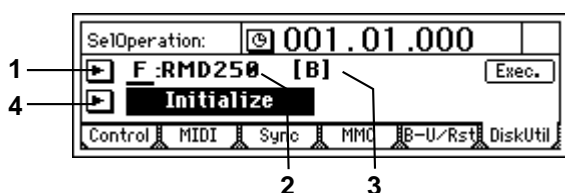
Here you can initialize, format, or check a drive.

Before a disk can be used to record/playback for the first time, it must be initialized or formatted.

- Initialize** a drive when you wish to erase the contents of the drive and use it for the first time, such as for a newly purchased drive.
- Format** a disk previously used by another device before using it on the D16V2, or if “DiskError” messages begin to appear frequently during playback.

note It is not necessary to initialize/format a removable disk that will be used for backup/restore.

- When you initialize or format a drive, the data on that drive will be lost.



Refer to the D16 Owner’s Manual for details on 1, 2, and 4.

3. Format Type..... (P, B, D8[B])

This displays the format type of the drive.

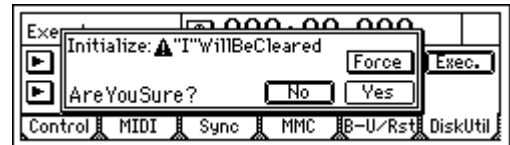
The internal drive of the D16V2, or an external drive connected to the D16V2 and initialized or formatted, will be displayed as a playable drive. Other drives will be displayed as backup drives.

[P] (Playable type): A disk for creating D16 songs

[B] (Backup type): A disk for backing up D16 data

D8 [B]: A D8 backup disk

Format: Format the drive selected by “Drive ID.”



Force [On, Off]

On: Even if the disk contains a song or songs protected by “Protect Song,” initialization will be performed forcibly.

Off: If the disk contains a song or songs protected by “Protect Song,” a message of “Song Protect” will be displayed when you attempt to initialize, and the command will be aborted.

4. TRACK

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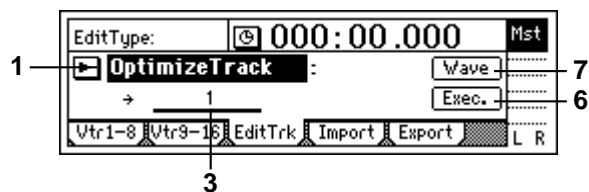
The edit type name has been changed from “***Trk” to “***Track.”

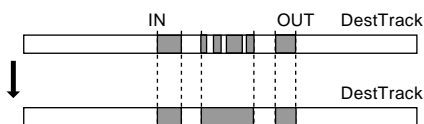
p.54

The explanation for Optimize Track has changed as follows.

Optimize Track: This optimizes the track data in the IN-OUT range of the destination track (“DestTrack”). The D16V2 will not generate unnecessary sound if the IN-OUT range contains unused blank portions. However in the case of brief blank portions that are close to the next audio event, the data will be generated as a single sound to avoid producing “Disk Busy” errors.

note By executing Optimize with IN-OUT set to the beginning and end of the song, you can ensure that the data will be accessed with ideal efficiency from the hard disk.





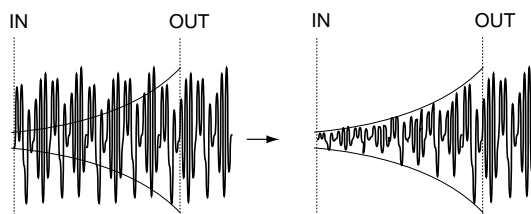
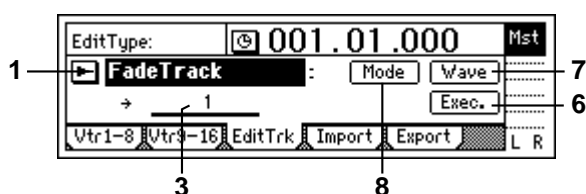
p.56-

Fade Track and Normalize Track have been added as edit types.

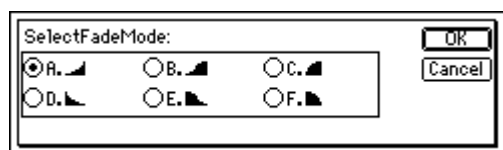
EditType: "FadeTrack"

This command creates a fade-in or fade-out in the IN-OUT region of the fade-in destination track ("DestTrack") data. When this is executed, the audio data of the IN-OUT region will be smoothly faded in toward the level at the OUT location.

⚠ When this is executed ("Exec."), the fade-in destination track will be overwritten.



8. **MODE**.....
Select the fade curve with which the fade-in or fade-out will be performed.



SelectFadeMode..... [A...F]

A type: This curve is ideal for conventional fade-in.

B type: This curve is ideal for creating cross-fades where two tracks are faded-in/out at the identical time location.

C type: This curve inverts the A curve, lengthening the sound that is heard before the fade.

D type: Fade-out using the A type curve.

E type: Fade-out using the B type curve.

F type: Fade-out using the C type curve.

Press the "OK" button to finalize the selected fade type.

Press the "Cancel" button to cancel the setting.

Fade-in procedure

As an example, here's how to fade-in the IN-OUT region of track 1.

- ① **Select the IN and OUT locations.**
Select/assign the fade-in start and locations.
(→D16 p.70)
- ② **Select the Fade Track edit type.**
In the [TRACK] "EditTrk" tab page, set "EditType" to "FadeTrack."
- ③ **Select the fade curve.**
Press the "Mode" button to access the dialog box. For this example, select the "A type" curve, and press the "OK" button to return to the [TRACK] "EditTrk" tab page.
- ④ **Select the fade-in destination track number.**
Set "DestTrack" to track "1."
- ⑤ **Execute the fade-in.**

Press the "Exec." button, then reply to the "Are You Sure?" confirmation. When the fade-in is completed, the display will indicate "Completed." Press the "OK" button.

- ⑥ **Listen to the results.**

Press the [IN/LOC1] key to play back from the IN location, and check that the fade-in was performed correctly.

You can use Undo to return the data to the state before the operation was executed.

⚠ The time required by this editing operation before the "Completed" display appears will take proportionally longer as the specified range (IN-OUT) is longer.

Fade-out procedure

Here's how to fade-out the IN-OUT region of track 1.

- ① **Select the IN and OUT locations.**
Select/assign the fade-out start and locations.
(→D16 p.70)
- ② **Select the Fade Track edit type.**
In the [TRACK] "EditTrk" tab page, set "EditType" to "FadeTrack."
- ③ **Select the fade curve.**
Press the "Mode" button to access the dialog box. For this example, select the "D type" curve, and press the "OK" button to return to the [TRACK] "EditTrk" tab page.
- ④ **Select the fade-out destination track number.**
Set "DestTrack" to track "1."
- ⑤ **Execute the fade-out.**
Press the "Exec." button, then reply to the "Are You Sure?" confirmation. When the fade-out is completed, the display will indicate "Completed." Press the "OK" button.
- ⑥ **Listen to the results.**

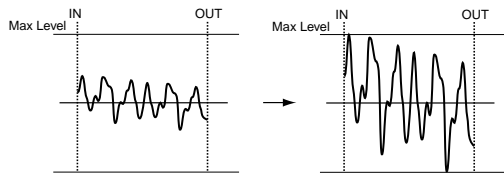
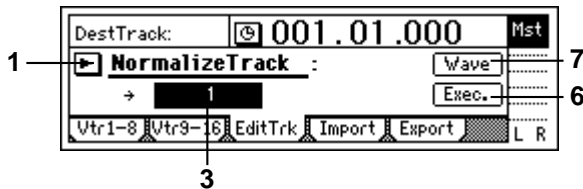
Press the [IN/LOC1] key to play back from the IN location, and check that the fade-out was performed correctly. You can use Undo to return the data to the state before the operation was executed.

⚠ The time required by this editing operation (i.e., before the “Completed” display appears) will take proportionally longer as the specified range (IN-OUT) is longer.

EditType: “NormalizeTrack”

This command searches for the peak level of audio data that was recorded at an unintentionally low level, and boosts the entire region of audio data so that this peak level will be the maximum level.

⚠ When this command is executed (“Exec.”), the normalize destination track will be overwritten.



3. DestTrack..... [1...16, 1-2...15-16]
Selects the normalize destination track.

note For a 24 bit song, only up to tracks 7-8 can be selected.

6. Exec. (Execute).....
Executes the track editing command.

Normalizing procedure

Here’s how to normalize the IN-OUT region of track 1.

- ① **Select the IN and OUT locations.**
Select/assign the starting and ending times of the region that you wish to normalize. (→D16 p.70)
- ② **Select the Normalize command.**
In the [TRACK] “EditTrk” tab page, set “EditType” to “NormalizeTrack.”
- ③ **Select the normalize destination track number.**
Set “DestTrack” to track “1.”
- ④ **Execute the Normalize command.**
Press the “Exec.” button, and respond to the “Are You Sure?” display. When the operation is completed, the display will indicate “Completed.” Press the “OK” button.
- ⑤ **Listen to the result.**
Press the [IN/LOC1] button to play back from the IN location, and verify that the Normalize operation was performed correctly. You can use Undo to return the data to its previous state.
⚠ The time required by this editing operation (i.e., before the “Completed” display appears) will take proportionally longer as the specified range (IN-OUT) is longer.

P4 Import: Import a WAVE file

An “Import” tab page and “Export” tab page have been added.



P4 Import: Import a WAVE file

A WAV file saved on a FAT 16 DOS format external SCSI device can be loaded into the beginning of a D16V2 track. (→p.20 “Note when using DOS format disks”)

You can also import this data into the clipboard, and paste it into a location other than the beginning of the track.

note In the case of CD-ROM, CD-R, and CD-RW, the D16V2 supports WAV files saved on ISO9660 format discs. Sub-directories are also supported for CD-ROM, CD-R, and CD-RW.

For external SCSI drives other than CD-ROM, CD-R, and CD-RW, the D16V2 supports only WAV files that are saved in the root directory of the first partition of FAT 16 format.

note The D16V2 can import WAV files of the following formats.

- Sampling frequency:** 44.1 kHz
- Quantization:** 8 bit, 16 bit, 24 bit
- Number of channels:** 1, 2 (monaural or stereo)

⚠ When this command is executed (“Exec.”), the import destination track will be overwritten.

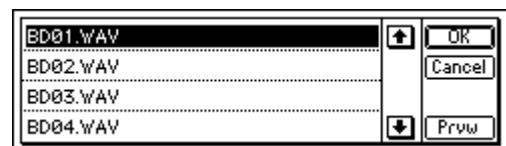
⚠ A certain amount of time is required when importing or exporting WAV files. Here are some example times when importing or exporting a five-minute 16 bit 44.1 kHz monaural WAV file from/to a Zip drive.

- Importing: approximately 9 minutes 20 seconds
- Exporting: approximately 10 minutes 30 seconds
- * The processing time will differ depending on the format of the WAV file and on the SCSI device you are using.



1. DriveList.....[A...G]
Select the drive. For details on the drive numbers, refer to “Drive ID” (→D16 p.47).


2. WavFileList
Select the WAV file.
Press the “OK” button to finalize the setting, press the “Cancel” button to cancel the setting.





2a. Prvw

You can preview the first two seconds of the selected WAV file.

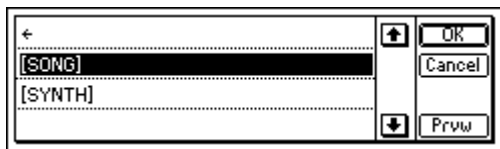
If you select a WAV file of an unsupported format, one of the following error messages will appear:

 **SAMPLE RATE NOT FIT:** This will appear if the sampling frequency of the WAV file is other than 44.1 kHz.

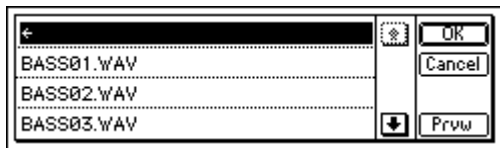
 **SAMPLE BIT NOT FIT:** This will appear if the quantization of the WAV file is other than 8 bit, 16 bit, or 24 bit.

 **ILLEGAL WAV DATA:** This will appear if the WAV file is unsupported for a reason other than the above (perhaps a form of data compression etc.).

note Sub-directories are also supported when importing from CD-ROM, CD-R, or CD-RW. Sub-directories are indicated as [...] in the Wav-FileList screen.



To enter this directory, select [...] and press the "OK" button. To return, select "←" and press the "OK" button.



3. DestTrack [1...16, 1-2...15-16, Clip#]
Selects the import destination track.

Clip# will be 1 if the selected WAV file is monaural, or 2 if the file is stereo.

4. FileType[M, St]
This indicates whether the selected WAV file is monaural or stereo.

Mono: The selected WAV file is monaural.

Stereo: The selected WAV file is stereo.

5. Exec. (Execute)
Executes the WAV file import command.

Importing a WAV file to the beginning of a track

Here's how a monaural WAV file named "Sound001.wav" can be imported into the beginning of track 1 from a DOS format external drive "A: DOS" connected to the SCSI connector.

- ① **Select Import.**
Select the [TRACK] "Import" tab page.
- ② **Select the import source drive.**
Press the "DriveList" button to access the dialog box. Select the DOS format drive that contains the WAV file. For this example select drive "A," and press the "OK" button to return to the [TRACK] "Import" tab page.
- ③ **Select the WAV file.**

Press the "WavFileList" button to access the dialog box. For this example, select "A:Sound001.wav," and press the "OK" button to return to the [TRACK] "Import" tab page.


Sub-directories are supported if you are importing from a CD. If you are importing from another SCSI drive, only WAV files saved in the root directory are supported.

You can use the "Prvw" button to audition the first two seconds of the selected WAV file.

- ④ **Select the import destination track number.**
Set "DestTrack" to track "1."


- ⑤ **Execute the import.**
Press the "Exec." button, and respond to the "AreYouSure?" display. When the import is completed, the display will indicate "Completed." Press the "OK" button.


- ⑥ **Listen to the result.**
Hold down the [STOP] key and press the [REW] key to return to the beginning of the song, and listen to the data to verify that it was imported correctly. You can use Undo to return the data to the previous condition.

 The longer the file being imported, the more time will be required for this operation (i.e., before the "Completed" display appears).

Importing a WAV file to the middle of a track

Here's how a monaural WAV file named "Sound001.wav" can be imported once into the TO location of track 1 from a DOS format external drive "A: DOS" connected to the SCSI connector.

- ① **Select Import.**
Select the [TRACK] "Import" tab page.
 - ② **Select the import source drive.**
Press the "DriveList" button to access the dialog box. Select the DOS format drive that contains the WAV file. For this example select drive "A," and press the "OK" button to return to the [TRACK] "Import" tab page.
 - ③ **Select the WAV file.**
Press the "WavFileList" button to access the dialog box. For this example, select "A:Sound001.wav," and press the "OK" button to return to the [TRACK] "Import" tab page. Sub-directories are supported if you are importing from a CD. If you are importing from another SCSI drive, only WAV files saved in the root directory are supported.
 - ④ **Select the clipboard as the copy destination track number.**
Set "DestTrack" to "Clip."
 - ⑤ **Execute the import.**
Press the "Exec." button, and respond to the "AreYouSure?" display. When the import is completed, the display will indicate "Completed." Press the "OK" button.
-  The longer the file being imported, the longer the time that will be required for this operation (i.e., before the "Completed" display appears).


- ⑥ **Specify the TO time location.**
(→D16 p.70)
- ⑦ **Select Copy.**
In the [TRACK] "EditTrk" tab page, set "EditType" to "Copy Track."
- ⑧ **Select the clipboard as the copy source track number.**
For "SourceTrack," select "Clip 1." The number indicates the number of tracks in the clipboard.
- ⑨ **Select the copy destination and track number.**
Set "DestTrack" to track "1."
- ⑩ **Specify the number of times that the data will be copied.**
Set "Times" to "1" copy.
- ⑪ **Execute the copy operation.**
Press the "Exec." button, and respond to the "AreYouSure?" display. When the copy is completed, the display will indicate "Completed." Press the "OK" button.
 The data will be overwritten onto the copy destination track.
- ⑫ **Listen to the result.**
Press the [TO/LOC3] key to play back from the TO time location, and listen to the data to verify that it was imported correctly. You can use Undo to return the data to the previous condition.


.....

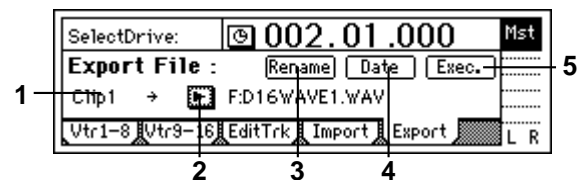
P5 Export: Export a WAV file

Audio track data copied to the clipboard of the D16V2 can be exported to a WAV file (16 bit, 44.1 kHz, mono or stereo) on a FAT 16 DOS formatted external SCSI drive. (→p.20 "Note when using DOS format disks")

Clip board data in 24 bit mode can be exported either as 16 bit or 24 bit data. When exporting 24 bit clipboard data as 16 bit data, you can select whether dithering will be performed.

 If dithering is performed, quantization noise will be less obvious.

 It is not possible to export to a CD device (CD-R, CD-RW).



1. **Clip#**
This shows the state of the clipboard. # indicates the number of tracks in the clipboard. # indicates the number of tracks in the clipboard. Only Clip1 (mono) or Clip2 (stereo) can be exported.
2. **Drivelist** [A...G]
Select the drive. For details on drive numbers, refer to "Drive ID" (→D16 p.47).

3. **Rename**
Press the "Rename" button to access the dialog box, and specify a name for the WAV file. Up to eight characters can be used in the WAV file name.
4. **Exec. (Execute)**
Execute the WAV file export.



- 4a. **Export Size** [16 bit, 24 bit]
This can be selected only if the clipboard contains 24 bit data.
Specify whether the 24 bit data copied to the clipboard will be exported as a 16 bit WAV file or as a 24 bit WAV file.

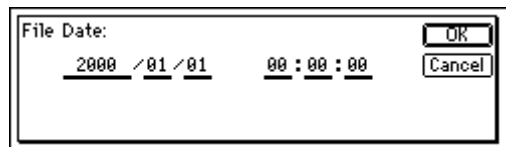


- 4b. **Dither SW** [ON, OFF]
This can be selected only for 24 → 16 bit.
Specify whether dithering will be performed when the 24 bit data copied to the clipboard is exported as a 16 bit WAV file.



- ON: Dithering will be performed in order to make quantization noise less obtrusive.
OFF: Dithering will not be performed.

5. **Date**
Input the date of the WAV file being exported. Press the "Date" button to access the dialog box, and specify the date on which the WAV file was created. Directly press the date that you wish to change, and use the [VALUE] dial to modify the date.



Press the "OK" button to finalize the setting. Alternatively, press the "Cancel" button to cancel any changes you made.

Exporting to a WAV file

Here's how the IN-OUT range of tracks 1 and 2 from song 001 can be exported to a SCSI-connected DOS format external drive "A:DOS" as a stereo WAV file named "Sound001.wav."

- ① **Select song 001.**
- ② **Assign the IN and OUT time locations.**
(→D16 p.70)
- ③ **Select Copy.**
In the [TRACK] "EditTrk" tab page, set "EditType" to "CopyTrack."
- ④ **Select the copy source track number.**
Set "SourceTrack" to tracks "1-2."
- ⑤ **Select the clipboard as the copy destination track number.**
Set "DestTrack" to "Clip."
- ⑥ **Execute the copy.**
Press the "Exec." button, and reply to the "Are You Sure?" message. When the copy is completed, the display will indicate "Completed." Press the "OK" button.
- ⑦ **Select Export.**
Select the [TRACK] "Export" tab page.
- ⑧ **Select the export destination drive.**
Press the "DriveList" button to access the dialog box. Select a DOS format drive. For this example, select drive "A" and press the "OK" button to return to the [TRACK] "Import" tab page.
- ⑨ **Assign a name to the WAV file.**
Press the "Rename" button to access the dialog box, and modify the name. You can input a name of up to eight characters.
 - 🔍 A filename extension of .wav will be input automatically.
- ⑩ **Input date information for the WAV file.**
Press the "Date" button to access the dialog box, and input the year, month, day, hour, minute, and second.
- ⑪ **Execute the export operation.**
Press the "Exec." button, and reply to the "Are You Sure?" message. When the data has been exported, the display will indicate "Completed." Press the "OK" button.
 - 🔍 If an identically-named WAV file already exists, the export operation cannot be executed.

5. SONG

p.62

An "Erase" button has been added to the "CD-R/W" tab page.

P4 CDR/RW: Creating and playing a CD-R/RW



Refer to the D16 Owner's Manual for details on 2-6.

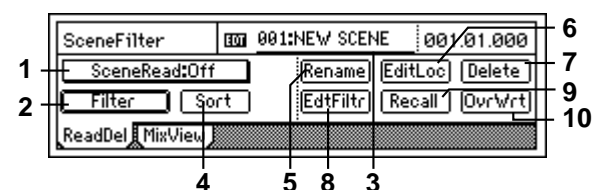
1. CD-R/RW Information
 [Trk01...99, BlankDisc, NoAudioTracks, NoDrive]
 This displays the song that will be played from the CD-R/RW disc.
Trk01...99: The song number within the CD-R/RW disc.
BlankDisc: Nothing has been written to the inserted CD-R/RW disc.
NoAudioTracks: Either a CD-R/RW disc has not been inserted, or no playable audio tracks were found on the disc.
NoDrive: No drive is connected.
7. Erase
 This erases the data that was written on the CD-RW.
 - 🔍 This cannot be executed for a CD-R.
Be aware that erased data cannot be recovered.

8. SCENE

p.65-

The "ReadDel" tab page has been changed.

P1 ReadDel: Scene playback on/off and editing



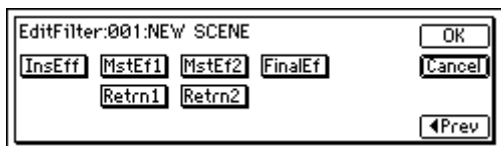
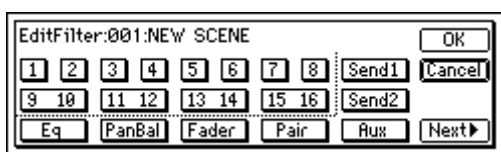
1. SceneRead [On, Off]
This turns scene playback on/off.

SceneRead:On **On:** Scenes will be played back. The mixer settings will change automatically when playback reaches the time location at which a scene was registered.

When “On,” the [SCENE] key will light.

SceneRead:Off **Off:** Scenes will not be played back. In this case, scenes can be freely recalled as general-purpose settings whenever you wish. (→D16 p.66 “Recalling a scene”)

2. Filter
You can use filters to disable specific mixer settings (parameters) when registering or playing back a scene. Here you can specify which mixer settings (parameters) will be disabled.



On: The filter will be turned on for the corresponding channel/parameter, and the scene settings will be disabled.

Off: The filter will be off, and the scene settings will be enabled.

When registering, the filter acts as a registration filter for the song.

When playing back, the filter acts as a playback filter for the song.

For example, suppose that you turned the “Pan” filter on for channels 1 and 2, and registered a scene “002” in the middle of the song. We will also suppose that you turned on the “EQ” filter during playback.

When you set “SceneRead” to “On” and play back from the beginning of the song, the pan settings will not be recalled when you reach scene “002” because the “Pan” filter is on. In other words, the same pan values as in scene “001” (located at the beginning of the song) will continue in effect, but the remaining parameters will change to the values of scene “002.” “EQ” settings are being played back through the playback filter, so the values registered in the scene at the beginning of the song will not be used; the current EQ values will be maintained.

3. SceneNumber [001...100]
Recalls the mixer settings of the selected scene at the current time.

This is also used to select a scene when you wish to change its name or modify the time at which it is registered.

The time at which the scene is registered is displayed beside “SceneNumber.”

If “SceneRead” (P1-1) is “Off,” you may select any scene you wish. If it is “On,” the scene for the current time location will be selected, and cannot be changed.

4. Sort
This sorts the scenes in order of time.

Normally, scenes are arranged in the order in which they were registered, but you may sort them in ascending order of registered time.

5. Rename
Here you can modify the scene name.

Use “SceneNumber” to recall the scene whose name you wish to change, press the “Rename” button, and modify the name in the dialog box. A name of up to 16 characters can be input. (→p.3 D16 p.14)

In addition to being shown in the “ReadDel” tab page, the scene name will also be shown in the [SONG] “Sel-Song” tab page if “Select DispParameter” (in that page) is set to “Scene.” (→D16 p.59)

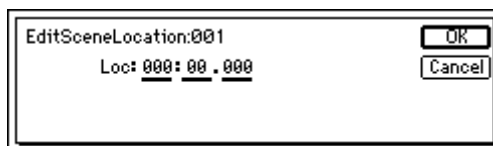


6. EditLoc
Modifies the registered time of a scene.


Use “SceneNumber” to access the scene whose time you wish to modify.

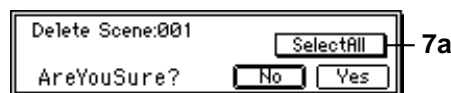
Press the “EditLoc” button to access the dialog box, and modify the time at which the scene is registered.

Press the time value that you wish to change, and use the [VALUE] dial to change the time. Press the “OK” button to confirm your settings, or press the “Cancel” button to cancel the settings you made.



7. Delete
This deletes a scene.

 When you delete a scene, the Undo operation is not available.



7a. SelectAll [On, Off]

SelectAll **On:** All scenes will be subject to deletion. The scene number will be shown as “***”.

SelectAll **Off:** The single scene selected for “SceneNumber” will be subject to deletion.

8. EditFiltr
Views or modifies the settings of the filter registered for the scene.

When a scene is stored, it saves all the parameters that can be registered, as well as the state of the filter. If the filter is defeated, you can enable scene data to be

recalled even after storing the scene.
 If the filter is enabled, you can disable recall of scene data even after storing the scene.

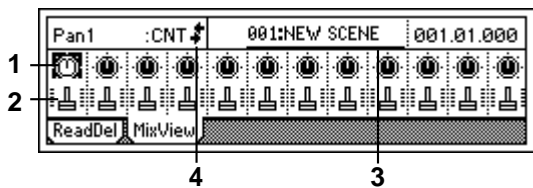
9. Recall
 This recalls the settings that were stored in a scene. If you recall a scene, edit the EQ etc., and then press the "Recall" button to recall once again, the unedited settings (the mixer settings that were registered in the scene) will be recalled.

10. OvrWrt.....
 This overwrites the current mixer settings onto the selected scene number. Use this when you wish to make minor changes to a scene, or to replace it with another scene.

p.67-

A guide function has been added for the pan and faders.

P2 MixView: Pan/fader scene display



Refer to the D16 Owner's Manual for details on 1-3.

4. Pan/fader guide [↓ ↓ ↓ ↓ ↓ ↑ ↑ ↑ ↑ ↑]
 These symbols show the difference between the actual fader or pan locations and the values that are registered in the scene.

When a scene is recalled, the current position of the faders may differ from the values registered in the scene. In this case, selecting the item that you wish to adjust will cause an indicator symbol to appear, showing the approximate difference between the internal setting value and the control.

Faders

- ↓ : The fader position is more than 51 steps above the internal value.
- ↓ : The fader position is between 21-50 steps above the internal value.
- ↓ : The fader position is between 1-20 steps above the internal value.
- ⚡ : The fader position matches the internal value.
- ↑ : The fader position is between 1-20 steps below the internal value.
- ↑ : The fader position is between 21-50 steps below the internal value.
- ↑ : The fader position is more than 51 steps below the internal value.

Pan

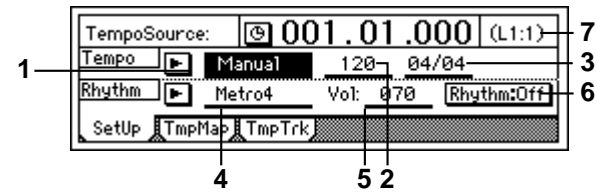
- : The pan knob is more than 51 steps to the left of the internal value.
- : The pan knob is between 21-50 steps to the left of the internal value.
- : The pan knob is between 1-20 steps to the left of the internal value.
- ⚡ : The pan knob matches the internal value.
- ← : The pan knob is between 1-20 steps to the right of the internal value.
- ← : The pan knob is between 21-50 steps to the right of the internal value.
- ← : The pan knob is more than 51 steps to the right of the internal value.

9. TEMPO/RHYTHM

p.68-

Part of the "SetUp" tab page has been changed.

P1 SetUp: Tempo and rhythm settings



Refer to the D16 Owner's Manual for details on 1-4 and 6.

5. RhythmVol [000...100]
 Specifies the volume of the rhythm. This volume will be sent to the master LR bus if the [SOLO/MONITOR] "Monitor" page "Rhythm" button is turned off. If this button is on, the volume will be sent to the monitor LR bus. (→D16 p.17)

7. Pattern Length, Pattern Position.....
 This shows the length (number of measures) of the rhythm pattern selected by "SelRhythm," and the measure that is currently playing.

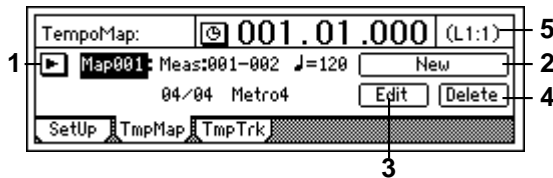
Example: (L4:1)... currently playing measure 1 of a four-measure pattern

P2 TmpMap: Tempo map editing

By specifying tempo maps you can change the tempo, time signature, and rhythm pattern while recording or playing a song.

note Changes in tempo, time signature, and rhythm can be placed only at the beginning of each measure.

For details on creating a tempo map, refer to p.4.



1. TempoMap[001...200]

This is the number of the selected tempo map. The starting measure, ending measure, tempo, time signature, and rhythm pattern of this tempo map are shown at the right.

You can press the "▶" button and select from a dialog box.

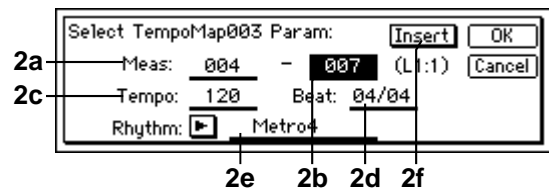
⚠ "TempoMap" cannot be selected if "TempoSource" (→P1-1) is "Manual."

2. New.....

Creates a new tempo map.

You will also create a new tempo map when you wish to add a tempo map between existing tempo maps.

The following "SelectTempo Map***Param" dialog box will appear.



2a. StartMeas.....[001...999]

Specifies the starting location of the tempo map. This is specified in units of a measure.

2b. EndMeas[001...999]

Specifies the ending location of the tempo map. This is specified in units of a measure.

2c. Tempo.....[40...240]

Specifies the tempo. The units are ♩=40-240.

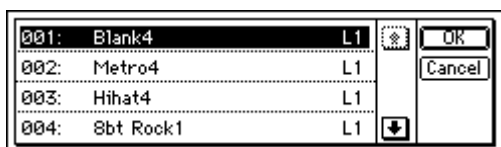
2d. Beat[01/04...16/16]

Specifies the time signature.

2e. Rhythm..... [(Rhythm Pattern List)]

Specifies the rhythm. If you want part of the rhythm to be silent, select a silent rhythm type. You can press the "▶" button and select from a dialog box.

The rhythms that can be selected will depend on the "Beat." (→D16 p.114)



2f. Insert..... [On, Off]

On: The new tempo map will be created in Insert mode, inserting the tempo map.

Off: The new tempo map will be created in Overwrite mode, overwriting the existing tempo map.

3. Edit

Modifies the settings of the tempo map.

Select this when you wish to modify a previously-created map. Use "TempoMap" to select the map that you wish to modify, and then press this button. The "Select Tempo Map *** Param" dialog box will appear, allowing you to set the various parameters. (→"New")

4. Delete.....

This deletes the tempo map.



4a. SelectAll [On, Off]

Selects which tempo maps will be deleted.

SelectAll On: All tempo maps will be deleted.

The tempo map number will be displayed as "****".

SelectAll Off: The single tempo map selected for "TempoMap" will be deleted.

⚠ On the D16V2, all tempo maps following the deleted tempo map will be moved forward.

5. Pattern Length, Pattern Position

This shows the number of measures (length) of the pattern selected by "SelRhythm," and the measure number that is currently playing.

13. UNDO

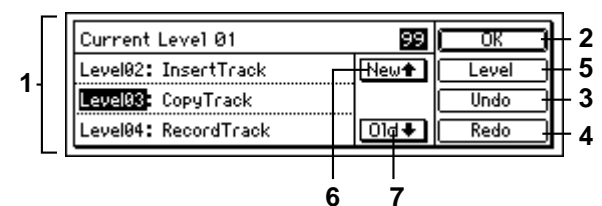
p.73

An undo level setting has been added.

The scroll buttons have been changed to "New" and "Old" buttons.

After executing the following operations, you can use Undo to return to the condition prior to executing the operation. You may then use Redo to return to the condition prior to executing Undo.

- Recording
- Track editing
 - Copy Track, Insert Track, Erase Track, Delete Track, Swap Track, Reverse Track, Optimize Track, Exp/Comp Track, Copy Whole Track, Swap Whole Track, Fade Track, Normalize Track
- WAV file import



Refer to the D16 Owner's Manual for details on 1–4.

5. **Level**..... [99 Level, 8 Level, 1 Level]
 Specifies the undo level. The data will be saved for the specified number of previously-executed operations. You can select the undo level from 99, 8, or 1 operations.

6. **New**.....
 Scroll the list toward the newer data.

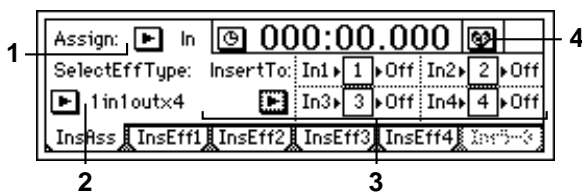
7. **Old**.....
 Scroll the list toward the older data.

19. INSERT EFFECT

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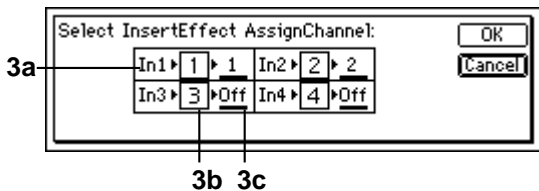
Some of the operations have been changed.

P1 InsASS: Insert effect insert position/type setting



Refer to the “D16 Owner’s Manual” for details on 1, 2, and 4.

3. **InsertTo**.....
 Selects the position at which the insert effect will be inserted.
 Press the “▶” button to access the dialog box, and make settings. Press the “OK” button to finalize the settings, or press the “Cancel” button to discard any changes you made.



■ When “Assign” is set to “In”
 Specifies the return channel.

3a. **Input**..... (In1...8, DrL, DrR)
 This shows the analog inputs.

3b. **Effect**..... (1...8)
 This shows the effect numbers.

3c. **SelectCh**..... [1...16, Off]
 This specifies the return channel of the effect output.

■ When “Assign” is set to “Trk”

Specifies the channel into which the effect will be inserted: → (effect) → (return=inserted channel).

3a. **SelectCh**..... [1...16, Off]
 Selects the mixer channel into which the effect will be inserted.

note If the “SelectEffType” is “2in2outx2,” only odd-numbered channels can be selected for “SelectCh.”

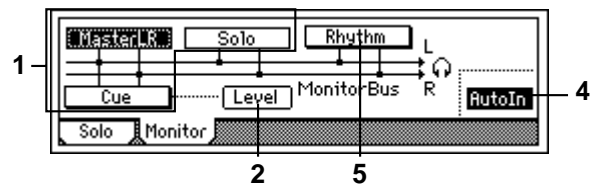
3b. **Effect**..... (1...8)
 This shows the insert effect number.

3c. **OutputCh**..... [1...16, Off]
 This shows the return channel of the effect output. The same channel as “3a. SelectCh” will be shown.

21. SOLO/MONITOR

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“Rhythm Level” has been deleted from “P2 Monitor: Monitor settings.”



Refer to the D16 Owner's Manual for details on 1, 2, and 4.

5. **Rhythm**.....[On, Off]
 Selects whether the internal rhythm sound will be sent to the monitor LR bus or to the master LR bus.
On: The internal rhythm sound will be sent to the monitor LR bus. It will not be sent to the master LR bus.
Off: The internal rhythm sound will be sent to the master LR bus. It will not be sent to the monitor LR bus.

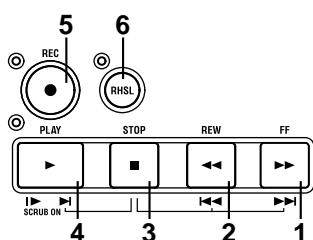
note The volume of the internal rhythm is adjusted by “RhythmVol” in the [TEMPO/RHYTHM] “Setup” page.

26. TRANSPORT KEY

p.87

Part of the operation of the [FF] and [REW] keys has been changed.

These keys perform recorder operations such as playback and recording.



Refer to the D16 Owner's Manual for details on 4-6.

1. [FF] key

When stopped or playing, this key moves forward in time (fast-forward).

If you hold down the [STOP] key and press the [FF] key, you will move to the end of the current song. If you are already at the end of the song, you will move to the beginning of the next song.

If the Scrub function is on, you can press this key to perform **Slow Play** (→D16 p.74).

2. [REW] key

When stopped or playing, this key moves backward in time (rewind).

If you hold down the [STOP] key and press the [REW] key, you will move to the beginning of the current song (if you are in the middle of the current song), or to the beginning of the previous song (if you are already at the beginning of the current song).

3. [STOP] key

This key stops recording or playback, and stops the recorder.

Appendices

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The following messages have been added to "Error messages."

Unsupported File Type

When importing a WAV file, you attempted to import an unsupported file.

→ Specify a WAV file that can be imported. (→p.9)

Same File Name Exists!

When exporting a WAV file, a WAV file of the same name already exists in the export destination drive.

→ Specify a different filename.

No CDRW Disc

The erase destination media is not a CD-RW.

→ Execute the erase command on a CD-RW.

Drive Condition Error

If this message appears when an unfinalized CD is played, it is possible that your drive does not support unfinalized CD's.

→ Finalize the disc before playing it.

If this message appears when using a CD-R/RW drive, an error has occurred in the drive.

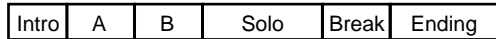
→ Check the drive connections. If no problem is found with connections or operation, replace the media.

Regarding disk capacity

This section explains how the D16V2 manages disk capacity.

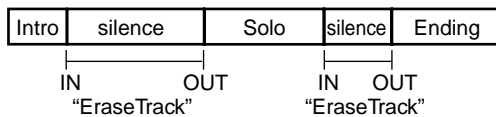
For explanatory purposes, we will assume that you have recorded a song with the following structure.

note It is not necessary that the Optimize Track operation explained here be used frequently. It is sufficient to use it only if "Disk Busy" is displayed when you are actually editing, or if you wish to recover more disk free space after you have finished the song.



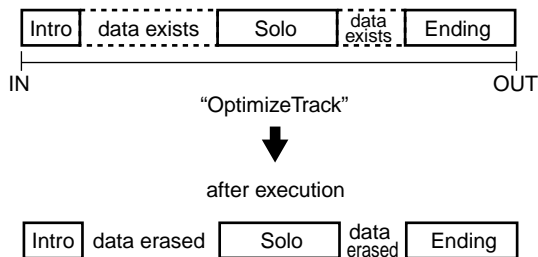
Example 1

Suppose that you began recording on track 1 from the beginning of the song, and recorded only the Intro, Solo, and Ending as the first pass of recording.



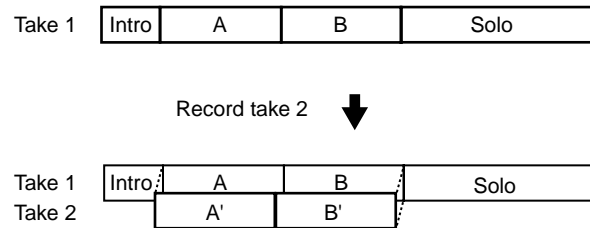
In this case, sections A, B, and the Break will be recorded as silence (in reality, sound at the noise level), and will occupy disk space unnecessarily. Execute the Erase Track operation on the silent portions (A, B, and Break) of track 1. At this time, the D16V2 is only "provisionally" erasing the unwanted portions A, B, and Break (the noise-level sound), meaning that the disk capacity will not be recovered.

→ If you wish to retain only the audio data that you are actually using (Intro, Solo, and Ending) and recover the rest of the space, execute Optimize Track on track 1 between the beginning and end of the song. This will create audio data for only the portions that are actually used, so that only the Intro, Solo, and Ending will occupy disk capacity.



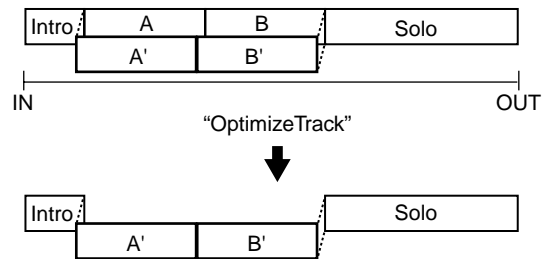
Example 2

Suppose that you began recording on track 1 from the beginning of the song, and played the Intro, A, B, and Solo as the first take. Then you recorded A' and B' as the second take.



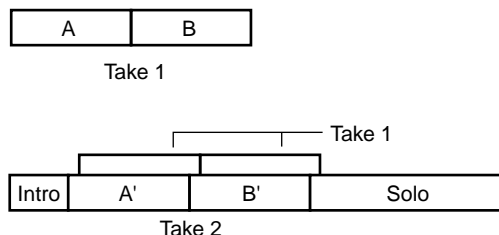
In this case, the A and B (take 1) data underlying A' and B' of track 1 will remain as a single piece of audio data together with the Intro and Solo, in order to allow Undo to be performed. This means that the disk capacity will be occupied by data for the Intro, A+A', B+B', and Solo.

→ If you wish to recover disk capacity by erasing the A and B data from the first take, execute the Optimize Track command on track 1 from the beginning to the end of the song. This will create audio consisting only of the Intro of take 1, A' of take 2, B' of take 2, and the Solo of take 1. Sections A and B of take 1 will no longer occupy disk capacity.

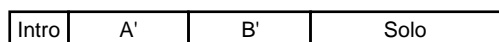


Example 3

Suppose that you recorded A and B on track 1 as the first take. Then you overwrote the Intro, A', B', and Solo as take 2.



In this case, the take 1 data for A and B will remain underlying A' and B' of track 1. However once take 2 is finished, the audio data of take 1 will not be used at all, so it is not necessary to perform the Optimize operation etc.



Even if you use disk capacity efficiently in the above situations (examples 1, 2, 3), the old data will remain on the hard disk in order to allow Undo.

To erase the data that is maintained by the Undo function, turn off the power of the D16V2. When you turn the power on once again, all data that had been maintained for purposes of Undo will be erased, thus allowing you to recover this disk capacity.

If before you executed Optimize Track, audio data was used by other tracks (including virtual tracks) or by another song on the same disk, the old audio data will not be erased. This will cause even more disk space to be occupied than before executing Optimize Track.

MIDI functions

On the D16V2, MIDI can be used to do the following things.

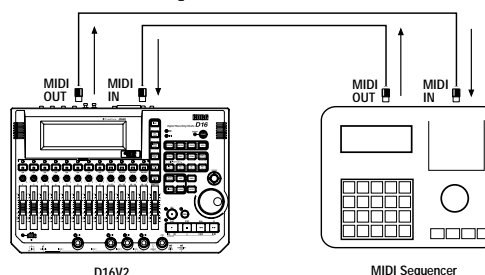
- (I) Control change messages can be used to control mixer parameters. (Refer to “Using mixer control”)
- (II) Effect parameters can be controlled via MIDI. (→ D16 p.45)
- (III) Program change messages can switch mixer scenes. (→D16 p.67, D16V2 →[SYSTEM] “MIDI” section)
- (IV) MMC can be used to control external MIDI devices, or to control the D16V2 from an external MIDI device. (→D16 p.46, D16V2 [SYSTEM] “MMC” section)
- (V) MTC can be used to synchronize the D16V2 with external MIDI devices. (→D16 p.46, D16V2 [SYSTEM] “SYNC” section)

Using mixer control

In the [SYSTEM] “MIDI” page, you can turn on “Control Change “Trans” and “Recv” to transmit and receive D16V2 mixer parameters.

Example 1

Here's how mixer operations on the D16V2 can be recorded on an external MIDI sequencer. Connect the D16V2 and MIDI sequencer as follows.



- ① **Make synchronization settings on the D16V2 and the external MIDI sequencer.**

Set the D16V2 as the master, and the external MIDI sequencer as the slave. Make settings so that the MIDI sequencer will synchronize to the MIDI Clock or MTC messages transmitted from the D16V2. (→D16 p.47)

- ② **Enable transmission of control change messages from the D16V2.**

In the [SYSTEM] “MIDI” page, set Mixer Control “Control Change Trans” to ON.

- ③ **Put the external MIDI sequencer in record-ready mode.**

Mixer control data of the D16V2 is transmitted on MIDI channels 1–16 corresponding to tracks 1–16. Make settings on your external MIDI sequencer so that it will record all MIDI channels 1–16. (For details refer to the operation manual of your MIDI sequencer.)

note Refer to the MIDI implementation for a list of parameters. To obtain the MIDI implementation, contact Korg dealer.

④ **Begin recording.**

Press the [PLAY] key of the D16V2 to begin playback, and the external MIDI sequencer will begin recording in synchronization. At this time, adjusting the D16V2 mixer parameters (fader, pan, EQ, etc.) will cause the corresponding control change to be transmitted from the D16V2, and recorded on the external MIDI sequencer.

⑤ **Stop the D16V2.**

When you press the [STOP] key of the D16V2 to stop playback, recording will also stop on the external MIDI sequencer. D16V2 mixer operations have now been recorded on the external MIDI sequencer.

Example 2

Here's how the mixer control data recorded in Example 1 (above) can be transmitted to the D16V2 to control its mixer. Make connections in the same way as described for Example 1.

① **Make synchronization settings on the D16V2 and on the external MIDI sequencer.**

Make the settings of Example 1 step ①.

② **Enable control change reception on the D16V2.**

In the [SYSTEM] "MIDI" page, set MixerControl "Control Change Recv" to ON.

③ **Put the external MIDI sequencer in playback-ready mode.**

④ **Start playback on the D16V2.**

When you press the [PLAY] key of the D16V2 to begin playback, the external MIDI sequencer will begin playback in synchronization. The previously-recorded mixer control data will be transmitted from the MIDI sequencer, and the mixer values of the D16V2 will change accordingly.

Note when using DOS format disks

The following functions of the D16V2 support FAT16 DOS format.

 CD, CD-R, and CD-RW are exceptions.

- WAV file import
- WAV file export
- System software update

If an external SCSI drive is connected to the D16V2 and the drive list indicates "Unknown Disk" (i.e., if the D16V2 cannot recognize the drive), you can use the following procedure to make the D16V2 recognize the drive.

- ① **Connect the external SCSI device to the D16V2, and use the "DiskUtil" page to initialize it. (→D16 p.47)**
- ② **Re-connect the external SCSI device (that you initialized in step ①) to your computer, and format it. For details on how to do this, refer to the owner's manual of your computer.**
 - For Windows → select normal format and execute formatting.
 - For Macintosh → select MS-DOS format and execute formatting.

Function		Transmitted	Recognized	Remarks
Basic Channel	Default	×	×	
	Changed	×	×	
Mode	Memorized	×	×	
	Messages Altered	×	×	

Note Number:	True Voice	×	0 — 127 *5	

Velocity	Note On	×	○ *5	
	Note Off	×	×	
Aftertouch	Polyphonic (Key)	×	×	
	Monophonic (Channel)	×	○ *5	
Pitch Bend		×	○ *5	
Control Change	0 — 119	○ *6	○ *5, *6	Effect control (reception only) All control numbers #000-119 are received Mixer control (transmission/reception) 07 Fader 10 Pan 12,13 EffSend1/2 14 AuxSend 16,19,20,25 Eq Low/Mid/MidFc/Hi 68,71,72,77 InEq Low/Mid/MidFc/Hi 80,81,82,83 SubIn Lev/Bal/Mono/Mute 86,87 MstEff1 RetLev/RetBal 88,89 MstEff2 RetLev/RetBal 08,94 ChannelPair/Function 95 Master fader
Program Change:	Variable Range	○ 0 — 99 *7	○ 0 — 99 *7	Scene numbers 1-100
System Exclusive		○ *8	○ *1	
System Common	: Quarter frame	○ *2	○ *9	Received/transmitted only for 30 frame non-drop
	: Song Position	○ *3	×	
	: Song Select	×	×	
	: Tune	×	×	
System Real Time	: Clock	○ *3	○ *4	
	: Command	○	○	
Aux Messages	: Local On/Off	×	×	
	: All Notes Off	×	×	
	: Active Sense	×	×	
	: Reset	×	×	
Notes		<p>*1: Received if "MMC Mode: Receive" is selected in [SYSTEM] "MMC." *2: Transmitted if "MTC Mstr" is selected in [SYSTEM] "Sync." *3: Transmitted if "Clock Mstr" is selected in [SYSTEM] "Sync." *4: Received if "MIDIClock" is selected for "SelectRecTempoTrackType" in [TEMPO/RHYTHM] "TmpTrk," and tempo is being recorded. *5: Received to control effects when selected in [SYSTEM] "Control." *6: Transmitted/received for mixer control when ControlChange is enabled in [SYSTEM] "MIDI." *7: Transmitted/received if ProgChange is enabled in [SYSTEM] "MIDI." *8: Transmitted if "MMC Mode: Transmit" is selected in [SYSTEM] "MMC." *9: [Received if "MIDISync Mode: MTC Slave" is selected in [SYSTEM]</p>		

Mode 1: OMNI ON, POLY

Mode 2: OMNI ON, MONO

○ : Yes

Mode 3: OMNI OFF, POLY

Mode 4: OMNI OFF, MONO

×

Consult your local Korg distributor for more information on MIDI IMPLEMENTATION.

NOTICE

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