Roland®

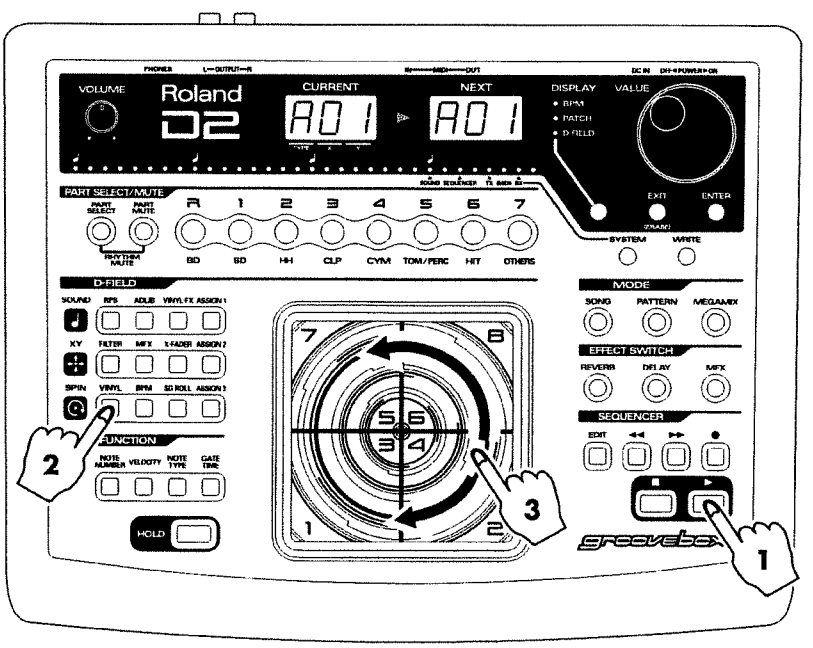
groovebox D2

Owner's Manual

Thank you, and congratulations on your choice of the Roland D2 Groovebox.

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" (pp. 2–3) and "IMPORTANT NOTES" (p. 4). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

Let's start off by playing some sounds!



1. Press the [►] button to start the pattern.
2. Press the [VINYL] button.
3. Move your finger in a circle on the D-FIELD.

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For the U.K.

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.
Under no circumstances must either of the above wires be connected to the earth terminal of a three pin plug.

USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠WARNING and ⚠CAUTION Notices

⚠WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
⚠CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols

⚠	The △ symbol alerts the user to important instructions or warnings.The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
⃠	The ⃠ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
●	The ● symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

ALWAYS OBSERVE THE FOLLOWING

⚠WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual.

- Do not open (or modify in any way) the unit or its AC adaptor.

- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

- Never use or store the unit in places that are:
  - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
  - Damp (e.g., baths, washrooms, on wet floors); or are
  - Humid; or are
  - Exposed to rain; or are
  - Dusty; or are
  - Subject to high levels of vibration.

⚠WARNING

- Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces.

- Be sure to use only the AC adaptor supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock.

- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards!

- This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist.

⚠WARNING

- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.

- Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:
  - The AC adaptor, the power-supply cord, or the plug has been damaged; or
  - Objects have fallen into, or liquid has been spilled onto the unit; or
  - The unit has been exposed to rain (or otherwise has become wet); or
  - The unit does not appear to operate normally or exhibits a marked change in performance.

- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.

- Protect the unit from strong impact. (Do not drop it!)

- Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.

- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

⚠CAUTION

- The unit and the AC adaptor should be located so their location or position does not interfere with their proper ventilation.

- Always grasp only the plug or the body of the AC adaptor when plugging into, or unplugging from, an outlet or this unit.

- Whenever the unit is to remain unused for an extended period of time, disconnect the AC adaptor.

- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.

- Never climb on top of, nor place heavy objects on the unit.

- Never handle the AC adaptor body, or its plugs, with wet hands when plugging into, or unplugging from, an outlet or this unit.

- Before moving the unit, disconnect the AC adaptor and all cords coming from external devices.

- Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet (p. 11).

- Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet.

IMPORTANT NOTES

In addition to the items listed under "USING THE UNIT SAFELY" on pages 2 and 3, please read and observe the following:

Power Supply

- Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- The AC adaptor will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

Placement

- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.
- To avoid possible breakdown, do not use the unit in a wet area, such as an area exposed to rain or other moisture.

Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Additional Precautions

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of loosing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory in another MIDI device (e.g., a sequencer).
- Unfortunately, it may be impossible to restore the contents of data that was stored in another MIDI device (e.g., a sequencer) once it has been lost. Roland Corporation assumes no liability concerning such loss of data.
- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.
- When connecting / disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.

Contents

Features of the D2

D-FIELD controller for total freedom of expression

The newly developed "D-FIELD controller" is located in the center of the panel. Its three modes (SOUND/XY/SPIN) allow you to control phrases and sounds in a completely uninhibited way, simply by touching the controller, scratching it from top to bottom or side to side, or spinning it like a turntable, thus giving rise to performance possibilities that were unavailable until now.

High-performance sound-synthesis engine

For sound generation, the D2 features a high-performance synthesizer module equivalent to the one that's in the MC-505. A rich assortment of parameters, including precision filters and ADSR-type envelopes, can be controlled by the D-FIELD controller to create new sounds. The D2 can also be used as an eight-part multitimbral sound module.

The latest patterns and sounds put you at the forefront of most any scene

The built-in 157 preset patterns and the 232 patterns for use with RPS (original patterns and single-track data extracted from the preset patterns) cover styles including techno, house, and hip-hop, and are ready for immediate use. The D2 is all you need to take care of most styles. In addition, 600 sounds and 30 rhythm sets indispensable for dance music have been carefully selected from classic instruments such as the TB-303, TR-808/909, JUNO, and JUPITER, letting you use the sounds that match your music scene. Original sounds and patterns that you yourself create can also be saved in internal memory and recalled at any time.

MEGAMIX function lets you create original patterns in remix fashion

The D2 comes equipped with a newly enhanced version of the MEGAMIX function, which was so popular on the MC-505. You can create original patterns by recalling and mixing phrases from different parts, such as drums and bass. Using the D-FIELD controller or the VALUE dial, patterns can be created quickly and easily.

New type of step recording

The D2 features a new feel in step recording. Use the 32 indicators on the panel to specify the input point, and use the REC FUNCTION section and the D-FIELD controller to instantly edit that point. It's easier than ever before to create original patterns from scratch. In addition, D-FIELD recording allows operations of the D-FIELD controller to be recorded exactly as performed, and you can also perform realtime recording using an external keyboard or other MIDI source.

How to read this manual

The D2 manual is structured as follows.

Chapter 1. An Overview of the D2

This chapter explains how the D2 sound generator and sequencer are organized, and explains the basic operation. By reading this chapter, you can gain an overall understanding of the D2.

Chapter 2. Playing Patterns

This chapter explains the most basic operations used with the D2: how to play patterns, adjust the tempo, and mute sounds. Be sure to read this chapter.

Chapter 3. Using the D-FIELD Controller

This chapter explains how to use the D-FIELD controller. Be sure to read this chapter.

Chapter 4. Applying Effects to the Sound (Effects)

This chapter explains the various effect types and how to use them. Read this chapter when you wish to use the arpeggiator.

Chapter 5. Replacing Phrases to Create a New Pattern (MEGAMIX)

This chapter explains how to use MEGAMIX to replace phrases within a pattern. Read this chapter when you wish to use MEGAMIX to create patterns.

Chapter 6. Creating an Original Pattern

This chapter explains how to use the RPS functions and how to assign your own phrases. Read this chapter when you wish to use the RPS function.

Chapter 7. Playing and Creating Songs

This chapter explains how to play, record, and edit songs. Be sure to read this chapter when you wish to use songs.

Chapter 8. System Settings and MIDI Applications

This chapter explains settings that affect the entire D2, such as tuning and synchronization, and how to use the D2 together with external MIDI devices. Read this chapter as necessary.

Appendices

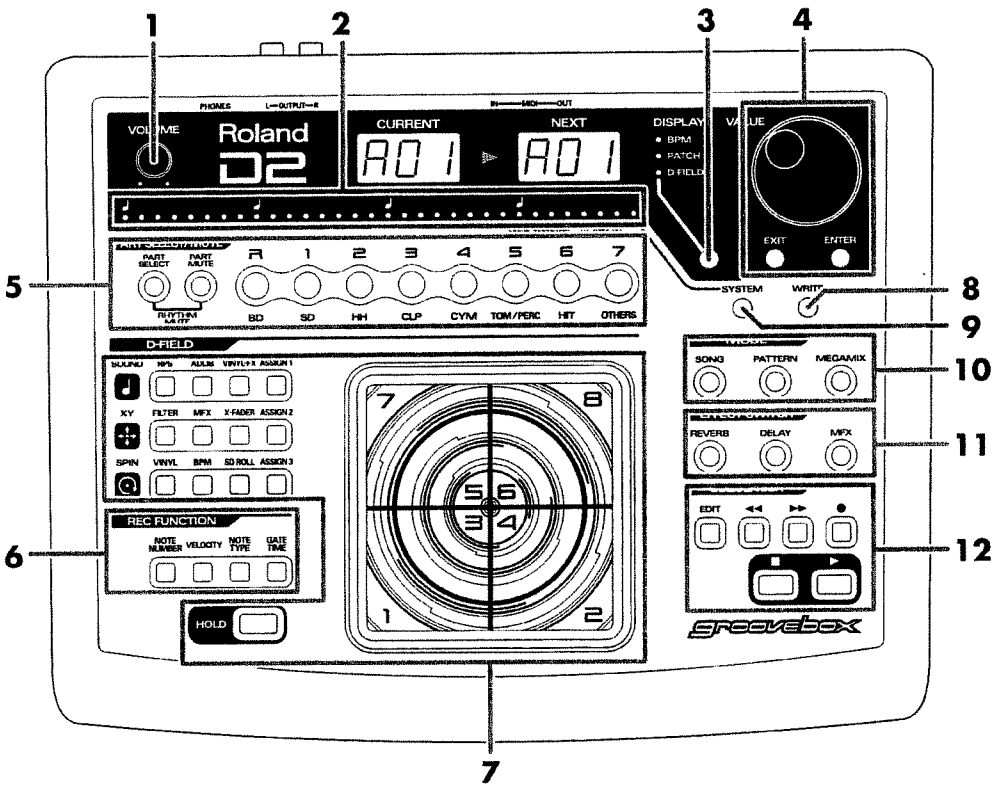
Consult this chapter when the D2 does not function as you expect, or if an error message is displayed. This chapter also contains information such as parameter lists and the MIDI implementation.

Conventions in this manual

In this manual, text or symbols enclosed in square brackets [ ] indicate buttons or dials on the panel.
(Example) [EDIT]: Edit button

Panel Descriptions/ Making Connections

Top panel



1. VOLUME knob

This knob adjusts the volume of the entire D2.

2. Beat scan indicators

These indicators show the playback/recording location within the measure of the pattern or song.

3. DISPLAY button

This switches the display. Each time you press the button, the display will alternate between BPM, patch number, information regarding the D-FIELD, and the original screen (such as the pattern number display).

4. VALUE dial, ENTER/EXIT button

These are used to switch patterns or songs (p. 15, p. 69), or to modify settings.

5. Part buttons

These are used to select whether each part will be heard (p. 16), or to select the part whose settings you wish to edit (p. 19).

6. REC FUNCTION buttons

When recording a pattern, these buttons are used to make settings for the notes being input (p. 63).

7. D-FIELD

You can produce a variety of effects by touching this area with your finger (p. 21).

8. WRITE button

Use this to save settings you have modified.

9. SYSTEM button

Use this when you wish to modify settings that affect the entire D2 (p. 73).

10. Mode buttons

These buttons switch between Pattern mode (p. 15), Song mode (p. 69), and MEGAMIX mode (p. 58).

11. Effect switches

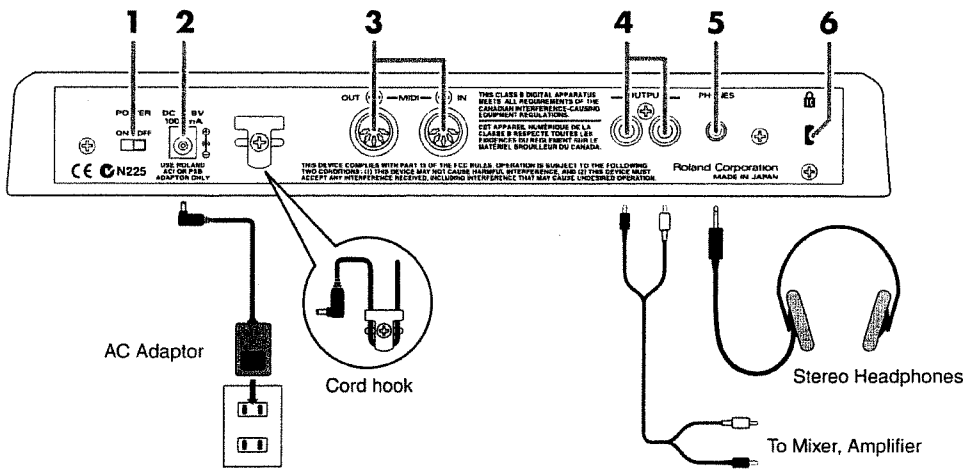
These are on/off switches for Reverb (p. 42), Delay (p. 43), and Multi-effect (p. 44).

12. Sequencer section

These buttons are used to play back or record a pattern or song (p. 15, p. 69).

Rear panel

* *To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.*



1. POWER switch

This turns the power on/off.

2. AC adaptor jack

Connect the supplied AC adaptor to this jack.

* *To prevent the inadvertent disruption of power to your unit (should the plug be pulled out accidentally), and to avoid applying undue stress to the AC adaptor jack, anchor the power cord using the cord hook, as shown in the illustration.*

3. MIDI connectors (IN, OUT)

These connectors are used when you want to use the D2 to play external sound generating devices, or use an external sequencer to play the D2's sound generator; or when you want to save or load D2 settings.

* *For details concerning MIDI devices, refer to* ***Chapter 8. System Settings and MIDI Applications*** *(p. 73).*

4. OUTPUT jacks (L, R)

Connect these jacks to your mixer or amp.

5. Headphone jack

This jack accepts connection of a set of stereo headphones. Sound will still be output from the OUTPUT jacks even while headphones are connected.

6. Security Slot ( )

http://www.kensington.com/

Turning On/Off the Power

* *Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.*

1. **Make sure that all volume controls on the D2 and connected devices are set to "0."**
2. **Turn on the D2's [POWER] switch.**
3. **Turn on the device connected to the OUTPUT Jacks.**
4. **Adjust the volume levels for the devices.**

* *This unit is equipped with a protection circuit. A brief interval (a few seconds) after power up is required before the unit will operate normally.*

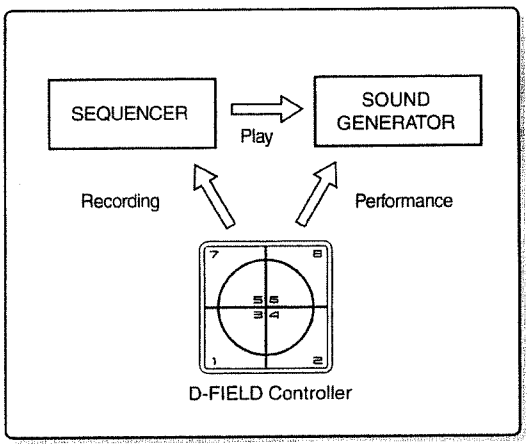
Turning off the power

Before switching off the power, lower the volume on each of the devices in your system and then TURN OFF the devices in the reverse order to which they were switched on.

Chapter 1. An Overview of the D2

How the D2 is structured

This section explains the main sections of the D2: the sequencer section, sound generator section, and the D-FIELD.



The sequencer section

A sequencer is a device that records musical performance data, and can play back the performance data that was recorded.

Recording/playing a performance

The D2 comes with 157 previously prepared patterns (**preset patterns**). These preset patterns can be played back easily.

You can also create your own original patterns, either by modifying preset patterns or by creating a pattern from scratch.

Simultaneous playback of multiple parts

The D2 is able to play multiple sounds (patches) simultaneously. For example, with the following part configuration, you can simultaneously play drums, bass, piano and guitar; and the resulting performance will sound like a band.

Part R	Rhythm (Drum) Set
Part 1	Guitar
Part 2	Bass
Part 3	Piano

Editing performance data

Unlike a cassette tape or MD, a sequencer records a performance as musical data (not as sound). It's easy to edit the performance data to create your own original patterns.

The sound generator section

The sound generator is what actually produces the sound. The sounds are generated in accord with information arriving from the D2's D-FIELD and sequencer. Performance data from an external MIDI device can also play the sound generator.

The sound generator of the D2 is able to produce up to 64 notes simultaneously, more than enough for playing multiple parts at once.

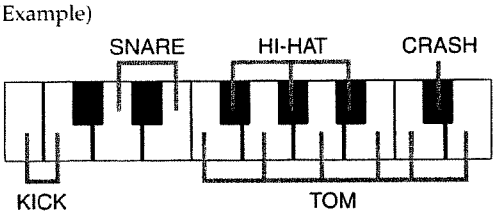
Patches

A patch is analogous to a particular instrument, such as a piano or guitar. The D2 contains 600 preset patches, and you can enjoy virtually any type of sound simply by selecting one of these patches.

Rhythm Sets

A rhythm set has a different instrument assigned to each note. It is not possible to play scales using any one instrument. 30 different preset rhythm sets are provided.

(Example)



Parts

A part is analogous to an individual musician in a band or orchestra. There are eight parts, [R], [1]... [7], allowing you to use seven patches and one rhythm set to play a total of up to eight performances simultaneously.

Effects

The D2 provides three effect processors that can be used to apply various tonal effects to a patch or rhythm set: Reverb (reverberation), Delay (echo-like effects), and Multi-effects (choose from 25 effects such as equalizer or compressor). All three effect processors can be used simultaneously.

About the D-FIELD

The **D-FIELD** is a controller on the panel of the D2. By operating the D-FIELD in real time, you can modify the performance, or the way in which the sounds are heard. This can also be used when playing RPS or the arpeggiator (pp. 21–41).

How characters and numerals are displayed

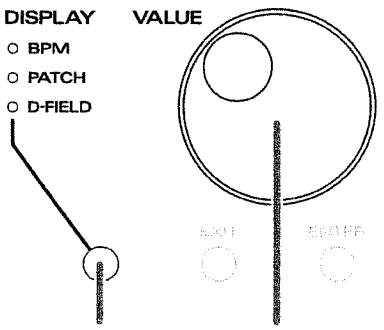
The display of the D2 indicates characters and numbers as follows.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Capital letters	A	b	C	d	E	F	G	H	I	J	K	L	M	n
Small letters	a		c		e		g	h	i	j				
	O	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**	**Z**		
Capital letters	O	P	Q	r	S	T	U	V	W	X	Y	Z		
Small letters	o					t	u			=				
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**0**		♭		
	1	2	3	4	5	6	7	8	9	0		b		

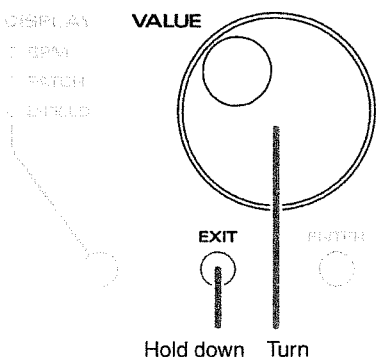
Changing a value in large steps

If you hold down [DISPLAY] and turn [VALUE], the value will change in large steps.

If you do this when selecting a patch (p. 18), the first patch of the category (type of sound) will be selected.



When selecting a pattern (p. 15) or patch (p. 18), you can hold down [EXIT] and turn [VALUE] to switch banks.



Saving your settings

After you modify settings or record a performance, you must perform the Save procedure if you wish to keep the results. If you turn off the power without doing this, your settings or the recorded contents will be lost.

For details on saving, refer to the following pages.

- Patch → **Saving a patch** (p. 18)
- Pattern → **Saving a pattern** (p. 20)
- Song → **Saving a song** (p. 72)
- Arpeggio style → Step 4 of "Making detailed settings" in **Playing arpeggios (ASSIGN 1: ARPEGGIATOR 1)** (p. 26)

NOTE

It will take several seconds for the data to be saved. Do not turn off the power until the Save operation has been completed. Doing so may cause malfunctions.

Since the following settings are saved automatically when they are modified, you do not need to perform the Save operation.

- RPS set → **Assigning phrases to the D-FIELD** (p. 23)
- Pattern set → **Assigning patterns to the D-FIELD** (p. 30)
- MEGAMIX set → **Registering the parts for use with MEGAMIX (MEGAMIX Set)** (p. 30)

NOTE

It will take several seconds for the data to be saved. Do not turn off the power until the Save operation has been completed. Doing so may cause malfunctions.

Restoring the factory settings (Factory Reset)

The settings of the D2 can be restored to their factory-set condition.

NOTE

Approximately 2 minutes are required for the Factory Reset operation.

Never turn off the power while the display indicates "Factry." Doing so can destroy the contents of memory.

NOTE

When you execute the Factory Reset operation, the internal memory data will be lost. If you have any data in the D2's internal memory that you don't want to lose, you must first use the Bulk Dump (p. 81) operation to save the data on an external MIDI sequencer or similar device before you perform the reset.

1. **Hold down [WRITE] and press [SYSTEM].**

   "Factry" will blink in the display.

2. **Press [ENTER].**

   The display will ask "SurE" (are you sure you want to proceed with the reset?).

3. **Press [ENTER].**

   The display will indicate "Factry," and the Factory Reset operation will be executed.

* *If you decide not to execute the operation, press [EXIT].*

Once the Factory Reset is complete, the D2 will be in the same state as it is normally after being powered-up.

Chapter 2. Playing Patterns

Basics of playing a pattern

A **pattern** consists of 1 to 32 measures of play that include patches and rhythm sets of up to 8 parts.

The D2 is a sequencer that plays back patterns and adds changes to the playback method. This type of sequencer is referred to as a **pattern sequencer**.

The D2 is provided with 157 preset patterns. In addition to these, an area for up to 100 user-created patterns is also available.

In order to play patterns, press [PATTERN] to put the D2 in Pattern mode.

Indication of the pattern number

The CURRENT display (left) shows the bank and number of the pattern that's currently playing (the **current pattern**).

The NEXT display (right) shows the bank and number of the pattern that will be played next (the **next pattern**).

Selecting a pattern

Turn [VALUE] to select a pattern, while a pattern stops.

- By holding down [DISPLAY] and turning [VALUE] you can change the pattern number in steps of ten.
- By holding down [EXIT] and turning [VALUE] you can switch banks.

A01–A100 Preset Pattern (Bank A)

B01–B100 Preset Pattern (Bank B)

C01–C100 Preset Pattern (Bank C)

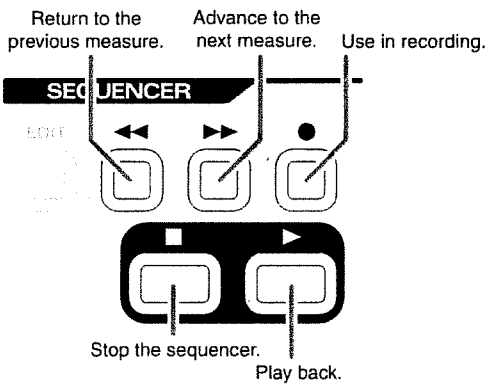
D01–D89 Preset Pattern (Bank D)

U01–U100 User Pattern

* *Preset patterns B58–D89 are patterns for use with RPS (p. 23).*

Playing Back Patterns

Use the following buttons to play back.



* *[◀◀], [▶▶] buttons can also be used while playback is in progress.*

NOTE

If you select the D-FIELD function "VINYL" (p. 40), it will not be possible to use [◀◀] and [▶▶].

Playing back patterns in succession

Selecting the next pattern while a pattern is being played back, the new pattern is played back when playback of the current one is completed.

This technique is used to keep playing back patterns in sequence. The BPM (tempo) of the performance is determined by the tempo of the first Pattern that is played back.

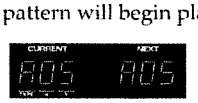
1. **While a pattern is playing back, turn [VALUE] to select the next pattern.**

The NEXT display will begin flashing.

2. **Press [ENTER] to confirm your selection.**

The NEXT readout will change from flashing to steady.

When the current pattern finishes playing, the selected pattern will begin playing.



* *Immediately before the pattern finishes playing, the CURRENT readout will begin flashing. During this time, preparations are being made for moving to the next pattern, so it is not possible to change the pattern.*

Playing Back at the Tempo Set for the Pattern

In order to play back patterns at the BPM (standard tempo) set up for the respective patterns, select a pattern while no pattern is being played back, then start playback.This secures playback at the optimal BPM for the pattern.

Changing the BPM (tempo)

The BPM can be set to any value from 20.0 up to 240.0.

NOTE

For some preset patterns, raising the BPM excessively can cause the playback to lag.

Using the VALUE dial to change the BPM

Playback can be set to take place at any desired BPM value. This is convenient when you want to carry out playback at a known BPM.

1. **Press [DISPLAY] enough times to get the BPM indicator to light.**
2. **Turn [VALUE] to change the BPM.**
   - By holding down [DISPLAY] and turning [VALUE] you can change the BPM in steps of one.

3. **After you have finished making the setting, press [EXIT] to return to the previous display.**

Using the D-FIELD to change the BPM

You can use the D-FIELD to set the BPM. This method lets you set the BPM using your own sense of rhythm, even if you do not know the numerical value (p. 40).

Muting a part or rhythm tone

The part button indicators show the mute status of each part (rhythm instrument) as follows:

- Lit: The part will play.
- Blinking: The part is muted.
- Dark: No performance has been recorded for the part.
  (This will light when data is recorded for the part.)

Muting an individual part

Parts R and 1–7 can be muted (silenced) individually.

1. **Press [PART MUTE].**
   [PART MUTE] will light, and part buttons [R] and [1]–[7] will function as Part Mute buttons.
2. **Press the [R] or [1]–[7] button for the part that you wish to mute, making the indicator blink.**
   The sound of that part will be muted.
3. **To cancel muting, once again press the button of the muted part, making it light.**

* *In the preset patterns, part 1 does not contain performance data. This allows you to conveniently use D-FIELD (p. 24) to perform along with the pattern.*

* *Since the RPS preset patterns are for use with RPS, they contain performance data only for part 1 (or part R).*

* *You can change the mute status of each part and save the pattern as a user pattern (p. 20).*

Muting individual rhythm sounds

The instruments used within part R can be muted (silenced) individually. A certain category of instrument, such as bass drum (BD) or snare drum (SD) can be muted as a group.

1. **Simultaneously press [PART SELECT] and [PART MUTE].**

   [PART SELECT] and [PART MUTE] will light, and part buttons [R] and [1]–[7] will function as Rhythm Tone Mute buttons ([BD]–[OTHERS]).

2. **Press the [BD]–[OTHERS] button for the part that you wish to mute, making the indicator blink.**

   The corresponding rhythm instrument will be muted.

3. **To cancel muting, once again press the button of the muted part, making it light.**

MEMO

Association of rhythm groups and buttons for muting them

- BD: Bass Drum
- SD: Snare Drum
- HH: Hi-Hat
- CLP: Hand Claps
- CYM: Cymbal
- TOM/PERC: TomTom/Percussion
- HIT: hit such as a one-shot SFX sound.
- OTHERS: Other instruments

* *If you would like to know which instrument is muted by muting a particular rhythm group?*
→ ***Preset Rhythm Set List*** *(p. 86)*

* *Using the part muting function to mute Part R mute all rhythm tones regardless of the settings for respective rhythm tones.*

Applying the mute status to the next pattern as well (Mute Remain)

This operation is used to maintain the muting mode for playing back the next part. It is useful, for example, to play back the next pattern with the rhythm track muted by maintaining the current setting.

1. **Hold down [PART MUTE] and press [HOLD].**

   [PART MUTE] will begin flashing.

   * *If you once again hold down [PART MUTE] and press [HOLD], this function will be cancelled.*

2. **Turn [VALUE] to select the next pattern.**

   After a time, the newly selected pattern will begin playing, using the current Part Mute settings.

   * *Mute Remain will be cancelled automatically.*

Using D-FIELD to mute

By using D-FIELD you can perform the following mute operations (p. 25).

- Mute all parts at once
- Put only one specific part in playback mode
- Reverse the status of muted parts versus playing parts
- Fade in/out only a specific part
- Fade in/out all parts
- Put only the bass drum and bass in playback mode

Selecting a sound (Patch/Rhythm set)

The D2's Patterns are composed of up to eight Parts, and different Patches (Part1 - 7: Patches, Part R = Rhythm set) can be selected for each Part. To change tones, first select the desired Part.

First, specify the part for which you will select a patch.

1. **Press [PART SELECT].**

   The part button of the currently selected part (the **current part**) will light.

2. **Press the part button ([R] or [1]–[7]) of the part whose patch you wish to change.**

   The part of the button you pressed will become the current part, and that part button will light.

Select a patch.

3. **Press [DISPLAY] enough times to get the PATCH indicator to light.**

4. **Turn [VALUE] to select the desired patch.**

   - By holding down [DISPLAY] and turning [VALUE] you can change the patch (or rhythm set) in units of ten.
   - By holding down [EXIT] and turning [VALUE] you can switch banks.

5. **After you have finished making the setting, press [EXIT] to return to the previous display.**

Part R

R-A 01–26 Preset Rhythm Set (Bank A)
R-B 01–04 Preset Rhythm Set (Bank B)
R-U 01–20 User Rhythm Set

Part 1–7

P-A 001–128 Preset Patch (Bank A)
P-B 001–128 Preset Patch (Bank B)
P-C 001–128 Preset Patch (Bank C)
P-D 001–128 Preset Patch (Bank D)
P-E 001–088 Preset Patch (Bank E)
P-U 001–256 User Patch

Saving a patch

Here's how the sound you modified by using D-FIELD filter (p. 33), envelope (p. 34), and LFO (p. 36) operations can be saved as a patch.

1. **Press [DISPLAY] to access the patch select screen.**

2. **Modify the sound parameters.**

3. **Press [WRITE].**

   A screen will appear in which you can specify the save destination patch.

4. **Turn [VALUE] to select the save destination patch.**

   The settings will be saved in the patch you select here. The previously-saved patch will be erased, so be careful when making this selection.

5. **Press [ENTER].**

   The display will ask "SurE" (are you sure you want to save?).

6. **If you wish to save, press [ENTER].**

* *If you decide not to save, press [EXIT].*

NOTE

If you select another patch or turn off the power without saving the patch you edited, your edits will be lost.

Modifying the settings of each part (Part Edit)

You can modify the settings of each part to change the way in which the pattern is sounded.

First specify the part whose settings you wish to modify.

1. **Press [PART SELECT].**

   The part button of the currently selected part (the **current part**) will light.

2. **Press the part button ([R] or [1]–[7]) of the part whose settings you wish to modify.**

   The part whose button you pressed will become the current part, and the part button will light.

Modify the settings.

3. **Hold down [PART SELECT] and press [EDIT].**

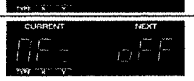
4. **Press [ENTER] to select a parameter.**

   The parameter will change each time you press [ENTER].

   LEVEL → PAN → KEY SHIFT → REVERB → DELAY → MFX SW → SEQ OUT → LEVEL → ...

5. **Turn [VALUE] to modify the setting.**

6. **When you are finished, press [EXIT].**

Indication	Parameter	Explanation	Value
	LEVEL (Part Level)	Set the volume of the part.	0 – 127
	PAN (Part Pan)	Set the left/right position of the part.	L64 – 0 – R63
	KEY SHIFT (Part Key Shift)	Set the transposition of the part.	-48 – 0 – 48
	REVERB (Part Reverb Level)	Set the amount of reverb for the part.	0 – 127
	DELAY (Part Delay Level)	Set the amount of delay for the part.	0 – 127
	MFX SW (Part MFX switch)	Determines whether the multi-effect will be used for the part. * *You can also set this using the D-FIELD function button [MFX] and the part button [R] or [1]–[7] (p. 33).*	OFF, ON, RHY * *RHY can be set only for the rhythm part. If you specify RHY, the multi-effect will be applied according to the settings of each tone in the rhythm set. If you select ON for the rhythm part, the multi-effect will apply to all tones.*
	SEQ OUT (Sequencer Output Assign)	Specify the output destination from the sequencer to the sound source.	INT: Output to the internal sound generator. EXT: Output to the MIDI OUT connector. BOTH: Output to both of the above simultaneously.

Saving a pattern

When you have made the settings for **setup parameter**, save the pattern as a user pattern.

NOTE

If you edit another pattern, switch to Song mode, or turn off the power without saving the pattern you recorded or edited, your edits will be lost.

* *For a pattern to be saved, pattern playback must be stopped.*

1. **Press [PATTERN] to enter Pattern mode.**
2. **Press [WRITE].**

   A screen will appear, allowing you to specify the save-destination pattern.

3. **Turn [VALUE] to select the save-destination pattern.**

   The data will be saved to the pattern you select here. Make your selection carefully, since the pattern that was previously saved in this location will be erased.

4. **Press [ENTER].**

   The display will ask "SurE" (are you sure you want to proceed with the save?).

5. **To save the pattern, press [ENTER].**

* *To cancel without saving, press [EXIT].*

Setup Parameters

On the D2, the following parameters are saved for each pattern. These parameters are collectively referred to as the "**Setup parameters**."

- Standard Tempo (p. 16)
- Patch/Rhythm Set * (p. 18)
- Part LEVEL * (p. 19)
- Part PAN * (p. 19)
- Part KEY SHIFT* (p. 19)
- Part REVERB LEVEL * (p. 19)
- Part DELAY LEVEL * (p. 19)
- Part MFX SWITCH * (p. 19)
- SEQ OUT * (p. 19)
- REVERB settings (p. 42)
- DELAY settings (p. 43)
- MFX settings (p. 44)
- Part Mute status * (p. 16)
- Rhythm Mute status (p. 17)

The "*" indicates parameters that are set independently for each part.

Chapter 3. About the D-FIELD

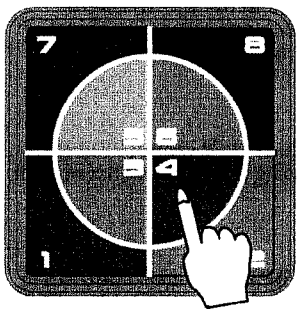
What is the D-FIELD?

The D-FIELD is a controller that lets you produce various effects by touching the surface of the controller with your finger. The effect can be controlled by the location of your touch, or by how you move your finger.

Broadly speaking, there are three ways to use the D-FIELD.

SOUND mode

By pressing on the eight areas of the D-FIELD, or by rubbing the surface of the D-FIELD up/down/left/right, you can play back phrases or play sounds.



- **RPS** (Realtime Phrase Sequence)

Play phrases by pressing on the eight areas of the D-FIELD.

- **ADLIB** (Ad-lib)

Play solos or arpeggios.

- **VINYL-FX** (Vinyl effects)

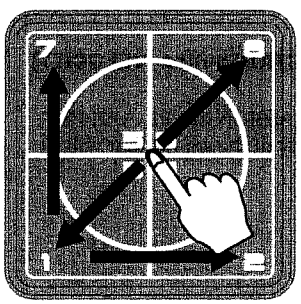
Produce effects, such as backspin, which are perfect for DJ work.

- **ASSIGN 1**

Control muting and play arpeggios.

XY mode

By rubbing the surface of the D-FIELD up/down/left/right, you can control two parameters simultaneously to modify the sound.



- **FILTER**

Simultaneously control the cutoff frequency and resonance to modify the sound.

- **MFX** (Multi-effects)

Control the effect parameters to modify the sound.

- **X-FADER** (Crossfader)

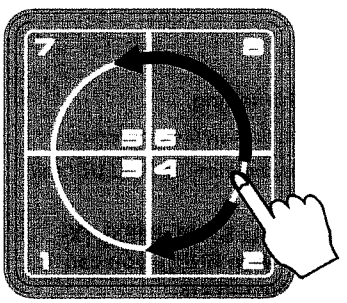
Crossfade between two desired parts of the pattern.

- **ASSIGN 2**

Control the pitch, timbre, or volume of the sound, or the rhythmic feel of the pattern.

SPIN mode

By moving your finger in a circle over the surface of the D-FIELD you can control how the pattern sounds in a manner similar to when manually spinning a turntable.



- **VINYL**

Just as on a turntable, you can make the pattern play forward, backward, or stop.

- **BPM**

Control the BPM (tempo).

- **SD ROLL** (Snare drum roll)

Control the speed of the snare roll.

- **ASSIGN 3**

You can control things such as Step Mute and Pan (stereo location).

NOTE

- When touching the D-FIELD, you must use only one finger and touch only one location. If you touch two or more locations, the controller will determine that you touched a point between those locations.
- If you press too hard on the edge of the D-FIELD, the location of your finger may not be recognized properly.
- Do not poke the surface of the D-FIELD with a sharp object. Doing so will cause malfunctions.

Basic use of the D-FIELD

Selecting a function

1. **Of the D-FIELD function buttons [RPS]–[ASSIGN 3], press the button for the desired function to make its indicator light.**

   The function of the illuminated button will be selected.

2. **For [ASSIGN 1–3], hold down the button and turn [VALUE] to select the desired function.**

Functions that can be selected for [ASSIGN 1]


Mute effect


Arpeggiator 1


Arpeggiator 2


Pattern Call


Patch Preview


Solo Synth


Keyboard Pad

Functions that can be selected for [ASSIGN 2]


Envelope


LFO


Bender


Quantize


Reverb


Delay


External Control

Functions that can be selected for [ASSIGN 3]


Step Mute


Pan

* *For details on each function, refer to pp. 25–41.*

Memorizing the location from which you released your finger (Hold)

If you press [HOLD] to make it light, you can take your finger off of the D-FIELD and the effect will continue as if you were still pressing at that location.

If you press [HOLD] once again to make it go dark, the effect will change as though you had taken your finger off of the D-FIELD.

This is convenient when you want to use RPS to keep a phrase sounding, or when you want to sustain a sound that is being modified by filter or MFX.

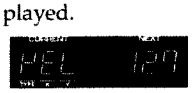
There are some functions for which Hold cannot be used. If such a function is selected, pressing [HOLD] will not make it light.

When used in conjunction with RPS, there are some cases in which [HOLD] will blink. For details refer to "Holding RPS" (p. 23).

Setting the volume of SOUND mode

1. **Hold down the REC FUNCTION button [VELOCITY] and turn [VALUE].**

   You can use [ADLIB] and [ASSIGN 1(AP1, AP2, PRV, PAD)] to specify the velocity of the sound that will be played.

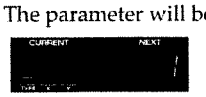


   Values: 1–127

Changing the D-FIELD settings

1. **Press and hold the D-FIELD function button [RPS]–[ASSIGN 3] whose settings you wish to change.**

   The parameter will be displayed.



2. **Turn [VALUE] to modify the setting.**

* *For [ASSIGN 1–3], this will be the selection of function.*

* *The VINYL-FX setting is fixed, and turning [VALUE] will not change it.*

For [ADLIB], [ASSIGN 1(AP2, PCL, SYN)], [MFX], [X-FADER], and [ASSIGN 2 (other than BND)], you can further perform the following operations.

1. **Continue holding the D-FIELD function button.**
2. **Press [ENTER] to select a parameter.**
3. **Turn [VALUE] to modify the setting.**

For details on each setting, refer to the explanations on the subsequent pages.

SOUND mode

Playing back a phrase (RPS: Realtime Phrase Sequence)

Phrases assigned to each of the eight areas of the D-FIELD will continue playing as long as you continue pressing that area.

The phrases assigned to each of the eight areas of the D-FIELD are collectively managed as an "RPS set." You are free to re-assign the contents of an RPS set, and internal memory can accommodate 30 different sets. You can also switch RPS sets while a pattern is playing.

Display		Explanation	Setting
TYPE		Select an RPS set.	1–30

→ **Changing the D-FIELD settings** (p. 22)

Holding RPS

You can hold the RPS so that the phrase continues playing even when you take your finger off of the D-FIELD.

- **Holding all phrases**

1. **Press [HOLD] to make it light.**
2. **Press the D-FIELD to play a phrase.**

   When you once again press the same area of the D-FIELD, that phrase will stop.

- **Specifying whether each phrase will be held or not**

1. **While pressing [HOLD], press the D-FIELD to play a phrase.**

   [HOLD] will blink, and that phrase will continue playing until the same area of the D-FIELD is pressed once again.
2. **The phrases being held will continue playing until you hold down [HOLD] and press the D-FIELD as you did in step 1.**

   The phrases will be heard together.
3. **A phrase that you do not want to hold can be played by pressing only the D-FIELD.**

   When you release your finger, that phrase will stop playing.

* *As an alternative to holding down [HOLD] and pressing the D-FIELD in steps 1 and 2, you can obtain the same result by holding down the D-FIELD to play the phrase and pressing [HOLD].*

MEMO

By pressing [HOLD] to make it go dark, you can stop all phrases.

Assigning phrases to the D-FIELD

You may find it convenient to assign your favorite or frequently used phrases as one RPS set.

1. **Select the pattern that contains the phrase you want to assign.**
2. **Press [PART MUTE], and use the mute buttons to mute all but the part that you wish to assign to RPS.**
3. **Hold down [RPS] and turn [VALUE] to select the RPS set to which you will assign the phrase.**
4. **While holding down [RPS], press the D-FIELD area number to which you will assign the pattern.**

<Note when assigning RPS>

* *It is not possible for multi-part phrases to be assigned to each of the eight D-FIELD areas. You must mute all parts other than the part that contains the phrase you wish to assign. If you attempt to assign a phrase in which two or more parts are un-muted, the display will indicate "noASGn".*

* *If you have assigned a phrase from a user pattern to RPS, and modify the performance data of the pattern that contains that phrase after it has been assigned, be aware that the phrase played by RPS will be affected by these modifications. For example if you delete the performance data of a pattern that contains an assigned phrase, no sound will be heard when you use RPS to play that phrase.*

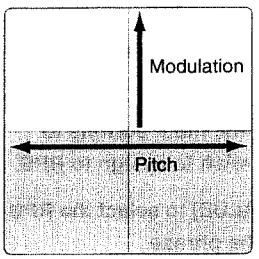
* *If you assign a phrase from a part that uses MFX, the MFX settings during RPS playback will be determined by the MFX settings of the currently selected pattern. This means that the RPS playback may sound different than the original phrase.*

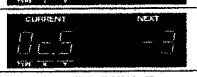
* *If you assign a phrase from the rhythm part, the rhythm mute settings will be ignored during RPS playback.*

* *Each phrase will be played back by a dedicated RPS part 1–8 that corresponds to the eight areas of the D-FIELD. However, phrases that were assigned from the rhythm part will be played back by the rhythm part of the currently selected pattern. This means that in some cases, the phrase may be sounded by a different rhythm set than that of the assignment source. If a different rhythm set is selected when you switch patterns, the rhythm set played by RPS will also change.*

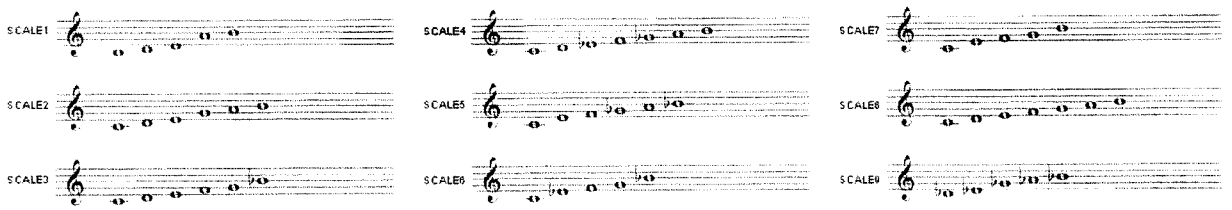
Improvising along with a chord progression (ADLIB)

After pressing one of the areas in the lower half of the D-FIELD, move your finger in the left/right direction to play an ad-lib performance. While sound is being produced, you can move your finger upward to apply modulation.



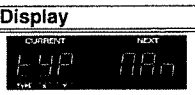
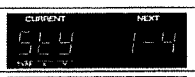
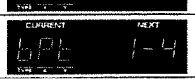
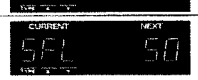
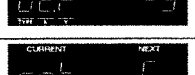
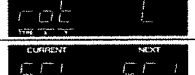
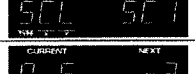
Display		Explanation	Setting
TYPE		Select how the sound will be played.	MAN (MANUAL): Notes of any pitch and duration are available for play at will. ARP (ARPEGGIO): Play automatic arpeggios.
X		Specify the scale.	Scale 1–Scale 9
Y		Raise or lower the pitch in octave units.	-3–3

→ **Changing the D-FIELD settings** (p. 22)



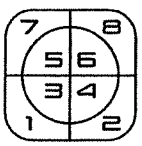
Making detailed settings

1. **Hold down [ADLIB] and press [EDIT].**
2. **Press [ENTER] to select the desired parameter.**
3. **Turn [VALUE] to modify the value.**

Display	Parameter	Explanation	Setting
	TYPE	Select how the sound will be played.	MAN (MANUAL): Notes of any pitch and duration are available for play at will. ARP (ARPEGGIO): Play automatic arpeggios.
	STYLE	Select how the sound will be played when TYPE is "ARPEGGIO."	Refer to "Arpeggio settings" (p. 28). * *Arpeggio settings are common to Adlib and Arpeggiator 1 and 2.*
	MOTIF	Specify the order in which the component notes of the chord will sound.	
	BEAT PATTERN	Specify the pattern of accent locations and note lengths.	
	SHUFFLE RATE	You can vary the timing of the backbeats to create shuffle rhythms. With a setting of 50%, the notes will be spaced equally. As this value is increased, the notes will be played with a more "dotted" feel. * *When the Beat Pattern setting is 1/4, no "shuffle" feel will be applied even if you increase the Shuffle Rate.*	50–90(%)
	ACCENT RATE	You can add expression to the arpeggio by varying the strength and note length of the accented notes. Increasing this value will produce a greater sense of groove.	0–100
	OCTAVE RANGE	Specify the pitch range of the arpeggio in octave units. Lowering this value below 0 will cause the arpeggio to be played in a pitch range below the chord you specified.	-3–3
	ROOT	Specify the root note of the chord.	C–B
	SCALE	Specify the scale.	Scale 1–Scale 9
	OCTAVE SHIFT	Raise or lower the pitch that is sounded, in units of an octave.	-3–3

Applying special turntable-type effects (VINYL-FX: Vinyl Effects)

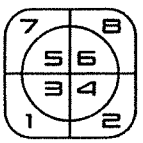
You can apply various special effects by pressing each of the eight areas of the D-FIELD.



No.	Function	Explanation
1	POWER OFF	The tempo will slow down and the pitch will fall, just as when a turntable is powered-off during playback. Finally the playback will stop. If you wish to play back once again, after the playback has stopped completely, press [►].
2	REVERSE	The sounds of the rhythm part will be played backward.
3	PITCH DOWN	The pitch of all parts will become lower.
4	PITCH UP	The pitch of all parts will become higher.
5	BPM HALF	The BPM will be halved (minimum 20).
6	BPM DOUBLE	The BPM will be doubled (maximum 240).
7	RETURN TO TOP	Play back from the beginning of the pattern.
8	BACK SPIN	The sound will be as when a turntable is spun backward.

Applying various muting effects (ASSIGN 1: MUTE-FX: Mute Effects)

You can perform various muting operations by pressing each of the eight areas of the D-FIELD.



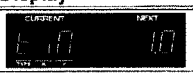
No.	Function	Explanation
1	DEFAULT	Return to the mute status that is registered in the pattern.
2	ALL MUTE ON	All parts will be muted.
3	SOLO	All parts other than the current part will be muted.
4	REVERSE	The current mute settings will be inverted.
5	FADE OUT	The volume of the current part will gradually decrease.
6	FADE IN	The volume of the current part will gradually increase.
7	ALL CROSSFADE	The current mute settings will gradually be inverted.
8	KICK & BASS	Sounds other than the BD (bass drum) of the rhythm group and Part 2 (bass) will be muted.

* *The fade-in/out of D-FIELD area numbers 5–7 will continue even after you take your finger away, and the volume(s) will not return to the original setting(s).*

Making detailed settings

1. Hold down [ASSIGN 1] and press [EDIT].

2. Turn [VALUE] to modify the setting.

Display	Parameter	Explanation	Setting
	FADE TIME	Specify the time over which the volume will be changed by D-FIELD effects No.5–7.	1.0–10.0 (sec.)

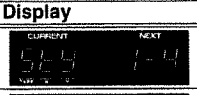
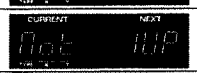
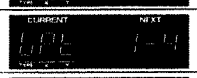
Playing arpeggios (ASSIGN 1: ARPEGGIATOR 1)

You can specify ahead of time how the arpeggio will be sounded; then change the root note by varying the left/right location at which you press the D-FIELD, and change the chord by moving up/down.

Display		Explanation	Setting
TYPE	none	none	none
X	none	Root note	Root note (fixed)
Y	none	Chord	Chord (fixed)

Making detailed settings

1. **Hold down [ASSIGN 1] and press [EDIT].**
2. **Press [ENTER] to select the desired parameter.**
3. **Turn [VALUE] to modify the setting.**

Display	Parameter	Explanation	Setting
	STYLE	Select how the sound will be played.	Refer to "Arpeggio settings" (p. 28). * *Arpeggio settings are common to Adlib and Arpeggiator 1 and 2.*
	MOTIF	Specify the order in which the component notes of the chord will sound.	
	BEAT PATTERN	Specify the pattern of accent locations and note lengths.	
	SHUFFLE RATE	You can vary the timing of the backbeats to create shuffle rhythms. With a setting of 50%, the notes will be spaced equally. As this value is increased, the notes will be played with a more "dotted" feel. * *When the Beat Pattern setting is 1/4, no "shuffle" feel will be applied even if you increase the Shuffle Rate.*	50–90(%)
	ACCENT RATE	You can add expression to the arpeggio by varying the strength and note length of the accented notes. Increasing this value will produce a greater sense of groove.	0–100
	OCTAVE RANGE	Specify the pitch range of the arpeggio in octave units. Lowering this value below 0 will cause the arpeggio to be played in a pitch range below the chord you specified.	-3–3
	OCTAVE SHIFT	Raise or lower the pitch that is sounded, in units of an octave.	-3–3

When you have created an arpeggio that you like, save it as a user style.

4. **Press [WRITE].**

A screen will appear in which you can specify the save destination for the arpeggio style.

5. **Turn [VALUE] to select the save destination arpeggio style.**
6. **Press [ENTER].**

The display will ask "SurE" (are you sure you want to save?).

7. **If you wish to save, press [ENTER].**

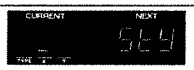
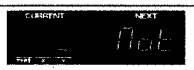
* *If you decide not to save, press [EXIT].*

NOTE

If you switch to another style without saving the edited arpeggio settings in a user style, your settings will be lost.

Playing arpeggios (ASSIGN 1: ARPEGGIATOR 2)

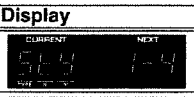
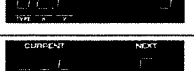
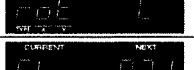
Arpeggios can be played using the root note and chord that you specify ahead of time. By varying the location at which you press the D-FIELD, you can change how the arpeggio is sounded.

Display		Explanation	Setting
TYPE	none	none	none
X		Select the part that will be affected when you move your finger in the left/right direction.	OFF, STYLE, MOTIF, BEAT PATTERN, SHUFFLE RATE, ACCENT RATE, and OCTAVE RANGE * *It is not possible to select the same parameter for X, Y.*
Y		Select the part that will be affected when you move your finger in the up/down direction.	

→ **Changing the D-FIELD settings** (p. 22)

Making detailed settings

1. **Hold down [ASSIGN 1] and press [EDIT].**
2. **Press [ENTER] to select the desired parameter.**
3. **Turn [VALUE] to modify the setting.**

Display	Parameter	Explanation	Setting
	STYLE	Select how the sound will be played.	Refer to "Arpeggio settings" (p. 28). * *Arpeggio settings are common to Adlib and Arpeggiator 1 and 2.*
	MOTIF	Specify the order in which the component notes of the chord will sound.	
	BEAT PATTERN	Specify the pattern of accent locations and note lengths.	
	SHUFFLE RATE	You can vary the timing of the backbeats to create shuffle rhythms. With a setting of 50%, the notes will be spaced equally. As this value is increased, the notes will be played with a more "dotted" feel. * *When the Beat Pattern setting is 1/4, no "shuffle" feel will be applied even if you increase the Shuffle Rate.*	50–90(%)
	ACCENT RATE	You can add expression to the arpeggio by varying the strength and note length of the accented notes. Increasing this value will produce a greater sense of groove.	0–100
	OCTAVE RANGE	Specify the pitch range of the arpeggio in octave units. Lowering this value below 0 will cause the arpeggio to be played in a pitch range below the chord you specified.	-3–3
	ROOT	Specify the root note of the chord.	C–B
	CHORD	Select the type of chord.	Major, minor, 7th, m7, M7, mM7, 6th, m7-5, dim, sus4, 7sus4, aug
	OCTAVE SHIFT	Raise or lower the pitch that is sounded, in units of an octave.	-3–3

When you have created an arpeggio that you like, save it as a user style.

→ Refer to steps 4 and following of "Making detailed settings" on the preceding page.

Arpeggio settings

Arpeggio Styles

When you wish to make arpeggiator settings, you will first select an Arpeggio Style. When you select a style, optimal values will be set for the four parameters "Motif," "Beat Pattern," "Shuffle Rate," and "Accent Rate." You can adjust parameters such as Accent Rage and Octave Range to modify the pattern to your taste.

STYLE	Explanation
1/4	The rhythm will be divided in quarter notes.
1/6	The rhythm will be divided in quarter note triplets.
1/8	The rhythm will be divided in eighth notes.
1/12	The rhythm will be divided in eighth note triplets.
1/16	The rhythm will be divided in 16th notes.
1/32	The rhythm will be divided in 32nd notes.
PORTAMENTO A, B	A style using the portamento effect.
GLISSANDO	A glissando style.
SEQUENCE A–D	Styles for sequenced patterns.
ECHO	An echo-like style.
BASS 1–4	Styles appropriate for bass playing.
RHYTHM GUITAR 1–5	Guitar strumming styles.
3 FINGER	Three-finger guitar style.
STRUMMING GUITAR	A style simulating a guitar chord strummed upward (downward).
PIANO BACKING, CLAVI CHORD	Styles for keyboard instrument backing.
WALTZ, SWING WALTZ	Styles in triple meter.
REGGAE	A reggae-type style.
PERCUSSION	A style suitable for percussive instrument sounds.
HARP	The playing style of a harp.
SHAMISEN	The playing style of a Shamisen.
BOUND BALL	A style suggestive of a bouncing ball.
RANDOM	A style in which the notes sound in random order.
BOSSA NOVA	Bossa nova guitar strumming style. Can also be used for Samba by making the BPM faster.
SALSA	Typical salsa style.
MAMBO	Typical mambo style.
LATIN PERCUSSION	A rhythm style with Latin percussion instruments such as Claves, Cowbell, Clap, Bongo, Conga, Agogo etc.
SAMBA	Typical samba style. Use for rhythm patterns or bass lines.
TANGO	Typical tango rhythm style.
HOUSE	A style for house piano backing.
LIMITLESS	The settings of all parameters can be freely combined without restriction.
USER STYLE 1–10	Arpeggio settings can be modified and saved in one of these user styles.

MOTIF

Specifies the order in which the notes of the chord will be sounded.

* *The values which can be set will depend on the currently selected arpeggio style. For details on the possible values for each style, refer to "Table of STYLE/MOTIF/BEAT PATTERN" on next page.*

MOTIF	Description
SINGLE UP	Notes will be sounded individually, beginning from low to high.
SINGLE DOWN	Notes will be sounded individually, beginning from high to low.
SINGLE UP&DW	Notes will be sounded individually, from low to high, and then back down from high to low.
SINGLE RANDOM	Notes will be sounded individually, in random order.
DUAL UP	Notes will be sounded two at a time, beginning from low to high.
DUAL DOWN	Notes will be sounded two at a time, beginning from high to low.
DUAL UP&DW	Notes will be sounded two at a time, from low to high, and then back down from high to low.
DUAL RANDOM	Notes will be sounded two at a time, in random order.
TRIPLE UP	Notes will sound three at a time, from low to high.
TRIPLE DOWN	Notes will sound three at a time, from high to low.
TRIPLE UP&DOWN	Notes will sound three at a time, from low to high and then back down from high to low.
TRIPLE RANDOM	Notes will sound three at a time, in random order.
NOTE ORDER	Notes you press will be sounded in the order in which you pressed them. By pressing the notes in the appropriate order you can produce melody lines. Up to 32 notes will be remembered. * *This is valid only when playing arpeggios from an external MIDI device.*
GLISSANDO	Each chromatic step between the highest and lowest notes will sound in succession, repeating upward and downward. Press only the lowest and the highest notes.
CHORD	All notes will sound simultaneously.
BASS+CHORD 1–5	The lowest of the notes you play will sound, and the remaining notes will sound as a chord.
BASS+UP 1–8	The lowest of the notes you play will sound, and the remaining notes will be arpeggiated.
BASS+RND 1–3	The lowest of the notes you play will sound, and the remaining notes will sound in random order.
TOP+UP 1–6	The highest of the notes you play will sound, and the remaining notes will be arpeggiated.
BASS+UP+TOP	The highest and the lowest of the notes you play will sound, and the remaining notes will be arpeggiated.

Beat pattern

It will affect the accent location and note length, causing the beat (rhythm) to change.

* *The values which can be set will depend on the currently selected arpeggio style. For details on the possible values for each style, refer to "Table of STYLE/MOTIF/BEAT PATTERN" on this page.*

Types of Beat pattern

1/4, 1/6, 1/8, 1/12, 1/16 1-3, 1/32 1-3, PORTA-A 1-11, PORTA-B 1-15, SEQ-A 1-7, SEQ-B 1-5, SEQ-C 1–2, SEQ-D 1-8, ECHO 1-3, MUTE 1-16, STRUM 1-8, REGGAE 1–2, REF 1–2, PERC 1-4, WALKBS, HARP, BOUND, RANDOM, BOSSA NOVA, SALSA 1-4, MAMBO 1-2, CLAVE, REV CLA, GUILO, AGOGO, SAMBA, TANGO 1-4, HOUSE 1–2

Table of STYLE/MOTIF/BEAT PATTERN

Style	Motif	Beat Pattern
1/4	all	1/4
1/6	all	1/6
1/8	all	1/8
1/12	all	1/12
1/16	all	1/16 1 - 3
1/32	SINGLE UP, SINGLE DOWN, SINGLE UP&DOWN,SINGLE RANDOM, DUAL UP, DUAL DOWN, DUAL UP&DOWN, DUAL RANDOM, NOTE ORDER, GLISSANDO, BASS+UP 1 - 8, BASS+RND 1 - 3, TOP+UP 1 - 6	1/32 1 - 3
PORTAMENTO A	all	PORTA 1 - 11
PORTAMENTO B	all	PORTA 12 - 26
GLISSANDO	GLISSANDO	1/16 1 - 3, 1/32 1 - 3
SEQUENCE A	all	SEQ-A 1 - 7
SEQUENCE B	all	SEQ-B 1 - 5
SEQUENCE C	SINGLE UP, SINGLE DOWN, SINGLE UP&DOWN,SINGLE RANDOM, DUAL UP, DUAL DOWN, DUAL UP&DOWN, DUAL RANDOM, NOTE ORDER, GLISSANDO, BASS+UP 1 - 8, BASS+RND 1 - 3, TOP+UP 1 - 6	SEQ-C 1 - 2
SEQUENCE D	all	SEQ-D 1 - 8
ECHO	SINGLE UP, SINGLE DOWN, SINGLE UP&DOWN, SINGLE RANDOM, DUAL UP, DUAL DOWN, DUAL UP&DOWN, DUAL RANDOM, NOTE ORDER	SEQ-D 1 - 8
BASS 1	BASS+UP 2	SEQ-A 1, SEQ-C 1
BASS 2	BASS+UP 5, TOP+UP 5	MUTE 02, 03
BASS 3	BASS+UP 5, TOP+UP 5	MUTE 02, 03
BASS 4	SINGLE UP, SINGLE DOWN, SINGLE UP&DOWN, SINGLE RANDOM, NOTE ORDER, GLISSANDO	WALKBS
RHYTHM GTR 1	SINGLE UP, SINGLE DOWN, SINGLE UP&DOWN, SINGLE RANDOM, DUAL UP, DUAL DOWN, DUAL UP&DOWN, DUAL RANDOM, NOTE ORDER, BASS+UP 1 - 8, BASS+RND 1 - 3, TOP+UP 1 - 6	MUTE 01, 04
RHYTHM GTR 2	CHORD	MUTE 07, 13, 14
RHYTHM GTR 3	CHORD	MUTE 08, 12, 15
RHYTHM GTR 4	CHORD	MUTE 09, 10, 11, 16
RHYTHM GTR 5	SINGLE UP, SINGLE DOWN	STRUM 1 - 6
3 FINGER	BASS+UP+TOP	SEQ-A 7
STRUMMING GTR	SINGLE UP, SINGLE DOWN	STRUM 7, 8
PIANO BACKING	CHORD	MUTE 12, REF 2
CLAVI CHORD	BASS+CHORD 4, BASS+CHORD 5	MUTE 05, 06
WALTZ	BASS+CHORD 2, BASS+UP 2, BASS+RND 2, TOP+UP 2	1/6, 1/12
SWING WALTZ	BASS+CHORD 2, BASS+UP 2, BASS+RND 2, TOP+UP 2	1/16 1 - 3
REGGAE	CHORD, BASS+CHORD 1	REGGAE1 - 2
PERCUSSION	SINGLE UP, SINGLE DOWN, SINGLE UP&DOWN, SINGLE RANDOM, DUAL UP, DUAL DOWN, DUAL UP&DOWN, DUAL RANDOM, NOTE ORDER, BASS+UP 1 - 8, BASS+RND 1 - 3, TOP+UP 1 - 6	PERC1 - 4
HARP	SINGLE UP, SINGLE DOWN, SINGLE UP&DOWN, GLISSANDO	HARP
SHAMISEN	TOP+UP 4 - 6	SEQ-A 2
BOUND BALL	SINGLE UP, SINGLE DOWN, SINGLE UP&DOWN, SINGLE RANDOM, DUAL UP, DUAL DOWN, DUAL UP&DOWN, DUAL RANDOM, NOTE ORDER, GLISSANDO	BOUND
RANDOM	SINGLE RANDOM, DUAL RANDOM, BASS+RND 1 - 3	1/4,1/6,1/8,1/12,1/16 1-3, 1/32 1-3, RANDOM
BOSSA NOVA	all	BOSSA NOVA
SALSA	all	SALSA 1 - 4
MAMBO	all	MAMBO 1 - 2
LATIN PERCUSSION	SINGLE UP, SINGLE DOWN, SINGLE UP&DOWN, SINGLE RANDOM, DUAL UP, DUAL DOWN, DUAL UP&DOWN, DUAL RANDOM, NOTE ORDER, GLISSANDO	CLAVE, REV CLA, GUIRO, AGOGO
SAMBA	all	SAMBA
TANGO	all	TANGO 1 - 4
HOUSE	all	HOUSE 1 - 2
LIMITLESS	all	all

Recalling a pattern (ASSIGN 1: PATTERN CALL)

The eight areas of the D-FIELD can be used as buttons that select patterns. You can prepare the desired patterns ahead of time, and then use this method to switch patterns quickly.

The patterns assigned to the eight areas of the D-FIELD are collectively managed as a "pattern set." You are free to re-assign the contents of a pattern set, and internal memory can accommodate 20 different sets. You can also switch pattern sets while a pattern is playing.

When you perform Pattern Call in MEGAMIX mode, the parts registered in the MEGAMIX set will be selected.

Display		Explanation	Setting
TYPE		Select a pattern set.	1–20

→ **Changing the D-FIELD settings** (p. 22)

Assigning patterns to the D-FIELD

You may find it convenient to assign your favorite or frequently used patterns as one pattern set.

1. **Set [ASSIGN 1] TYPE to "PCL."**
2. **Select the pattern that you wish to assign.**
3. **While holding down [ASSIGN 1], turn [VALUE] to select the pattern set to which you will assign the phrase.**
4. **Hold down [ASSIGN 1], and press the D-FIELD area to which you will assign the pattern.**

   This specifies the correspondence of the D-FIELD and the part.

Registering the parts for use with MEGAMIX (MEGAMIX Set)

It is convenient to register the parts you wish to use for MEGAMIX (p. 58) as a single MEGAMIX Set. You can store twenty MEGAMIX Sets separately from the conventional pattern sets.

1. **Select the pattern that contains the part you wish to assign.**
2. **Press [MEGAMIX] to enter MEGAMIX mode.**
3. **Press [PART MUTE], and use the mute buttons to mute all parts except for the one that you wish to register.**
4. **As the [ASSIGN 1] TYPE, select "PCL."**
5. **Hold down [ASSIGN 1] and press [ENTER] to access the MEGAMIX set select screen, and while continuing to hold down [ASSIGN 1], turn [VALUE] to select the MEGAMIX Set in which you wish to register the part.**
6. **Hold down [ASSIGN 1], and press the D-FIELD to which you wish to assign the part.**

   This specifies the correspondence of the D-FIELD and the part.

* *It is not possible to register multiple parts to each of the eight D-FIELD areas. You must mute all parts other than the part being registered. If you perform the registration operation with more than one part unmuted, the display will indicate "noASGn."*

Auditioning the sound of a patch (ASSIGN 1: PATCH PREVIEW)

You can press each of the eight D-FIELD areas to hear the sound of each part. Pressing D-FIELD 8 will sound the rhythm part.

* *The note number (pitch) that is played can be modified by holding down REC FUNCTION (p. 63) [NOTE NUMBER], and turning [VALUE].*

MEMO

You can check the currently sounding part and note number by pressing [DISPLAY] to set it to "D-FIELD."

Playing a monophonic synth sound (ASSIGN 1: SOLO SYNTH)

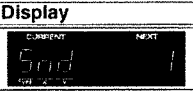
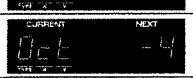
The sound will play when you press the D-FIELD. Left/right movement will change the pitch, and up/down movement will change the volume.

Display		Explanation	Setting
TYPE		Select the solo synth sound.	1–14
X	none	Pitch	Pitch (fixed)
Y	none	Level	Level (fixed)

→ **Changing the D-FIELD settings** (p. 22)

Making detailed settings

1. **Hold down [ASSIGN 1] and press [EDIT].**
2. **Press [ENTER] to select the desired parameter.**
3. **Turn [VALUE] to change the setting.**

Display	Parameter	Explanation	Setting
	SOUND	Select the solo synth sound.	1–14
	OCTAVE RANGE	Adjust the pitch range in octave units.	-4–4
	REVERB SEND LEVEL	Adjust the reverb depth.	0–127
	DELAY SEND LEVEL	Adjust the delay depth.	0–127

* *The solo synth sounds are the sounds of the following patches.*

No.	Patch	No.	Patch	No.	Patch
1	P-E001: SOLO Saw	11	P-A030: Square Lead1	21	P-B005: Saw Stack 1
2	P-E003: Fright Saw	12	P-A040: PortaSynLead	22	P-B006: Saw Stack 2
3	P-E006: SOLO PWM	13	P-A042: Beep Mod	23	P-B012: Good Bean
4	P-E007: SOLO Square	14	P-A045: JU2 SubOsc 1	24	P-B014: Mega 5th
5	P-E008: Square Lead4	15	P-A054: Sine Tone	25	P-B025: Sweep Pad 2
6	P-E012: SOLO Choir	16	P-A057: Big Up Massv	26	P-B045: Atmosphere 2
7	P-E013: SOLO Sin	17	P-A064: Dark SawLead	27	P-B094: Cal + After
8	P-E015: Sweep Beep	18	P-A068: Voc Saw	28	P-C005: P5 Noise
9	P-E037: Saw Stack 3	19	P-A112: NU-NRG Bass	29	P-C050: Pop Organ
10	P-E063: Powerful Org	20	P-B001: Strong Brass	30	P-C098: Hush Brass

Playing rhythm instruments / scales (ASSIGN 1: KEYBOARD PAD)

By pressing the eight areas of the D-FIELD you can play any eight notes of the current part.

In the case of part R alone, you can specify different note numbers than the other parts. This allows you to assign various instruments of the rhythm set for part R, and assign a scale for the other parts.

Specifying the notes (note numbers) that will sound

1. **Press [PART SELECT] and select the part.**
2. **Hold down [ASSIGN 1] and press [EDIT].**
3. **Press the D-FIELD to select the D-FIELD area to which you wish to assign a note number.**

   Example displays

   Part R, D-FIELD No.1, Note number 36

   Part 1–7, D-FIELD No.5, Note G4

4. **Turn [VALUE] to specify the note.**

* *For the note numbers that can be assigned to the D-FIELD for part R, refer to "Preset Rhythm Set List" (p. 86).*

5. **When you are finished, press [EXIT].**

XY mode

Changing the brightness of the sound/Adding character to the sound (FILTER)

You can vary the brightness of the current part by the location of your touch. Left/right movement will vary the **cutoff frequency**. Upward movement will apply more emphasis to the region surrounding the cutoff frequency (**resonance**), producing a distinctive tone.

Display		Explanation	Setting
TYPE		Select the type of filter. * *At the factory settings, the filter will be as specified by the patch selected for the current part of the current pattern.*	OFF: The filter will not be applied. LPF (Low Pass Filter): Moving your finger toward the right will cause the sound to become increasingly closer to the original waveform, and be brighter. Moving your finger toward the left will increasingly cut the higher frequencies, making the sound darker. * *For some waveforms, you may hear no sound at all if you move your finger far toward the left.* BPF (Band Pass Filter): Moving your finger toward the right will increasingly cause only the high frequency range to be heard. Moving your finger toward the left will increasingly cause only the low frequencies to be heard. HPF (High Pass Filter): Moving your finger toward the right will increasingly cut the lower frequencies, sharpening the sound. Moving your finger toward the left will cause the sound to become increasingly closer to the original waveform. * *For some waveforms, you may hear no sound at all if you move your finger far toward the right.* PKG (Peaking Filter): Moving your finger toward the right will increasingly emphasize the high frequency range. Moving your finger toward the left will increasingly emphasize the lower frequency range.
X	none	Cutoff Frequency	Cutoff Frequency (fixed)
Y	none	Resonance	Resonance (fixed)

→ **Changing the D-FIELD settings** (p. 22)

Applying special effects to the sound (MFX)

You can simultaneously control any two desired parameters of a multi-effects (p. 44).

* *There will be no effect if [MFX] is dark. Press [MFX] to make it light.*

Display		Explanation	Setting
TYPE		Select the multi-effects type.	Refer to "Available Settings" (p. 44).
X		Select the parameter that will be affected when you move your finger to left or right.	Refer to the explanation for each effect (pp. 45–57). * *When you change the type, the parameter whose value is followed by an "X" or "Y" will be selected automatically (X = left/right, Y = up/down).* * *It is not possible to select the same parameter for both X and Y.*
Y		Select the parameter that will be affected when you move your finger upward or downward.	

→ **Changing the D-FIELD settings** (p. 22)

HINT

While setting X or Y, you can hold down the D-FIELD function button [MFX] and press one of the part buttons to turn the Part MFX Switch (p. 19) on/off. The part button will light to indicate parts for which the multi-effects is on.

Making detailed settings

1. **Hold down the D-FIELD function button [MFX], and press [EDIT].**
2. **Press [ENTER] to select the desired parameter.**
3. **Turn [VALUE] to change the setting.**

   For details on the parameters and their settings, refer to the explanation for each effect (pp. 45–57).

Changing the volume of the parts (X-FADER)

The volume or pan of two parts can be controlled simultaneously.

Display		Explanation	Setting
TYPE		Specify whether you will control volume or pan.	LEV (LEVEL), PAN
X		Select the part that will be affected when you move your finger to left or right.	P-r, P-1–P-7 * *It is not possible to select the same part for both X and Y.*
Y		Select the part that will be affected when you move your finger upward or downward.	

→ **Changing the D-FIELD settings** (p. 22)

HINT

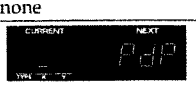
As an alternate way to select the part that will be controlled, you can hold down [X-FADER] and press a part button while making X or Y settings. (At this time, the selected part button will blink.)

MEMO

When TYPE is "LEVEL," it is not possible for the volume to become louder than the volume setting of the pattern.

Making the sound change over time (ASSIGN 2: ENVELOPE)

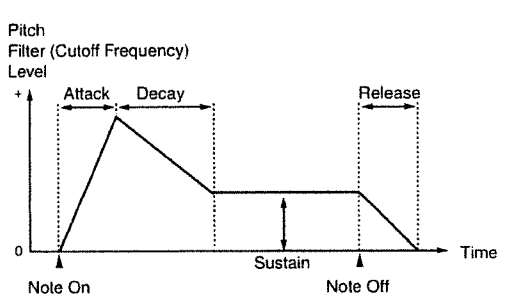
You can control the time-variant change in pitch, tone, and volume of the current part.

Display		Explanation	Setting
TYPE	none	none	none
X		Select the parameter that will be affected when you move your finger to left or right.	OFF, PITCH DEPTH, PITCH ATTACK TIME, PITCH DECAY TIME, PITCH SUSTAIN LEVEL, PITCH RELEASE TIME, FILTER DEPTH, FILTER ATTACK TIME, FILTER DECAY TIME, FILTER SUSTAIN LEVEL, FILTER RELEASE TIME, AMP ATTACK TIME, AMP DECAY TIME, AMP SUSTAIN LEVEL, AMP RELEASE TIME * *It is not possible to select the same parameter for both X and Y.*
Y		Select the parameter that will be affected when you move your finger upward or downward.	

→ **Changing the D-FIELD settings** (p. 22)

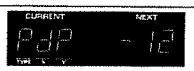
About the envelope

These parameters specify how the pitch, filter, or amp will change over time. As shown in the diagram below, this allows you to specify how change will occur from the beginning to the end of the sound.



Making detailed settings

1. Hold down [ASSIGN 2] and press [EDIT].
2. Press [ENTER] to select the desired parameter.
3. Turn [VALUE] to change the setting.

Display	Parameter	Explanation	Setting
PITCH ENVELOPE			
	DEPTH	Adjust the range of pitch change. Negative (-) settings will invert the shape of the envelope, causing the pitch to change in the opposite direction.	-12–12
	ATTACK TIME	Refer to "About the envelope" on previous page.	0–127
	DECAY TIME		0–127
	SUSTAIN LEVEL		-63–63
	RELEASE TIME		0–127
FILTER ENVELOPE			
	DEPTH	Adjust the range of tonal change. Negative (-) settings will invert the shape of the envelope, causing the tone to change in the opposite direction.	-63–63
	ATTACK TIME	Refer to "About the envelope" on previous page.	0–127
	DECAY TIME		0–127
	SUSTAIN LEVEL		0–127
	RELEASE TIME		0–127
AMP ENVELOPE			
	ATTACK TIME	Refer to "About the envelope" on previous page.	0–127
	DECAY TIME		0–127
	SUSTAIN LEVEL		0–127
	RELEASE TIME		0–127

Applying cyclic change to the sound (ASSIGN 2: LFO)

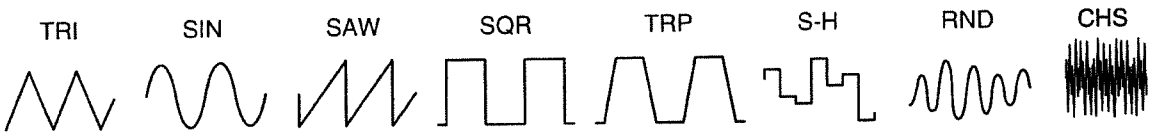
The LFO (Low Frequency Oscillator) applies cyclic change to the sound. By cyclically changing the pitch, cutoff frequency, or volume, you can create effects such as vibrato, wah, tremolo, or auto-pan.

* *There will be no effect for part R.*

Display		Explanation	Setting
TYPE		Select the LFO waveform.	TRI, SIN, SAW, SQR, TRP, S-H, RND, CHS
X		Select the parameter that will be affected when you move your finger to left or right.	OFF, PITCH, FILTER, AMP, PAN, RATE * *It is not possible to select the same parameter for both X and Y.*
Y		Select the parameter that will be affected when you move your finger upward or downward.	

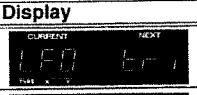
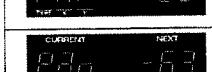
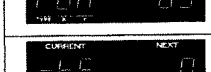
→ **Changing the D-FIELD settings** (p. 22)

LFO waveforms



Making detailed settings

1. **Hold down [ASSIGN 2] and press [EDIT].**
2. **Press [ENTER] to select the desired parameter.**
3. **Turn [VALUE] to change the setting.**

Display	Parameter	Explanation	Setting
	LFO	Select the LFO waveform.	TRI, SIN, SAW, SQR, TRP, S-H, RND, CHS
	PITCH DEPTH	The pitch will be cyclically modulated to produce a vibrato effect. Positive (+) and negative (-) settings will produce inverse waveforms.	-63–63
	FILTER DEPTH	The cutoff frequency will be cyclically modulated to produce a wah effect. Positive (+) and negative (-) settings will produce inverse waveforms.	-63–63
	AMP DEPTH	The volume will be cyclically modulated to produce a tremolo effect. Positive (+) and negative (-) settings will produce inverse waveforms.	-63–63
	PAN DEPTH	The pan (stereo position) will be cyclically modulated to produce an auto-pan effect. Positive (+) and negative (-) settings will produce inverse waveforms.	-63–63
	RATE	Specify the speed of modulation.	0–127

Changing the pitch or vibrato depth (ASSIGN 2: BENDER)

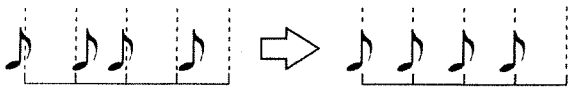
Pressing the right half of the D-FIELD will raise the pitch of the current part, and pressing the left half will lower the pitch. Pressing the upper half or lower half will apply vibrato. *This has no effect on part R.

Display		Explanation	Setting
TYPE	none	none	none
X	none	Pitch	Pitch (fixed)
Y	none	Vibrato	Vibrato (fixed)

* *There will be no effect for part R.*

Changing the rhythmic feel of a pattern (ASSIGN 2: QUANTIZE)

You can change the rhythm feel of the performance data of a pattern. By modifying the timing and velocity (volume) of the notes in the pattern, you can produce a rhythm feel that is different than that of the original pattern.



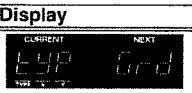
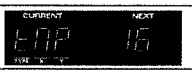
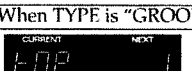
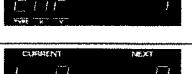
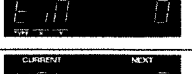
You can modify the note timing by the location at which you press the D-FIELD.
When TYPE is set to "GROOVE," you can also modify the velocity by pressing a higher or lower location.

Display		Explanation	Setting
TYPE		Select the type of quantization.	OFF, GRID, SHUFFLE, GROOVE
X	none	Timing	Timing (fixed)
Y	none	Velocity (Only when the type is set to "GROOVE.")	Velocity (fixed)

→ **Changing the D-FIELD settings** (p. 22)

Making detailed settings

1. **Hold down [ASSIGN 2] and press [EDIT].**
2. **Press [ENTER] to select the desired parameter.**
3. **Turn [VALUE] to change the setting.**

Display	Parameter	Explanation	Setting
	TYPE	Select the type of quantization.	OFF: Quantize will not be applied. GRID: The note timing of the pattern will be corrected toward the note value specified by the template setting. SHUFFLE: The timing of the backbeats of the pattern will be adjusted to create a "bouncy" feel as in shuffle or swing. GROOVE: The note timing and velocity of the pattern will be adjusted toward the values specified by the template, producing a variety of different grooves.
When TYPE is "GRID"			
	TEMPLATE	Specify the note value to which the timing will be aligned.	32, 16T, 16, 8T, 8, 4T, 4
	TIMING	Specify the strength of the correction. Higher settings will cause the timing to be corrected more precisely (tightly).	0–100
When TYPE is "SHUFFLE"			
	TEMPLATE	Specify the note value to which the timing will be aligned.	16, 8
	TIMING	Adjust the amount of swing. With a setting of "50," there will be no sense of swing at all. Normally, a setting in the range of 60–66 will produce a pleasant shuffle rhythm.	0–100
When TYPE is "GROOVE"			
	TEMPLATE	Select the template. *The templates are for a 4/4 time signature. The desired result will not be obtained for other time signatures.	1–71 * *Refer to "List of GROOVE templates" on next page.*
	TIMING	Specify the strength of the timing correction. Higher settings will cause the timing to be adjusted closer to the timing of the template.	0–100
	VELOCITY	Specify the strength of the velocity correction. Higher settings will cause the velocity to be adjusted closer to the velocity of the template.	0–100

NOTE

Quantization will correct only note messages; other messages are not corrected. This means that if messages that modify the sound in real time (such as pitch bend) have been recorded in the pattern, some Quantize settings may cause the timing of these messages to become incorrect, so that they are no longer played correctly. It is best to use Quantize on patterns that do not contain messages that produce realtime change.

List of GROOVE templates

16 Beat Dance type

01: DANCE-NM-L.AC	exact/low dynamics
02: DANCE-NM-H.AC	exact/high dynamics
03: DANCE-NM-L.SW	exact/light swing
04: DANCE-NM-H.SW	exact/strong swing
05: DANCE-HV-L.AC	dragging/low dynamics
06: DANCE-HV-H.AC	dragging/high dynamics
07: DANCE-HV-L.SW	dragging/light swing
08: DANCE-HV-H.SW	dragging/strong swing
09: DANCE-PS-L.AC	rushing/low dynamics
10: DANCE-PS-H.AC	rushing/high dynamics
11: DANCE-PS-L.SW	rushing/light swing
12: DANCE-PS-H.SW	rushing/strong swing

16 Beat Fusion type

13: FUSON-NM-L.AC	exact/low dynamics
14: FUSON-NM-H.AC	exact/high dynamics
15: FUSON-NM-L.SW	exact/light swing
16: FUSON-NM-H.SW	exact/strong swing
17: FUSON-HV-L.AC	dragging/low dynamics
18: FUSON-HV-H.AC	dragging/high dynamics
19: FUSON-HV-L.SW	dragging/light swing
20: FUSON-HV-H.SW	dragging/strong swing
21: FUSON-PS-L.AC	rushing/low dynamics
22: FUSON-PS-H.AC	rushing/high dynamics
23: FUSON-PS-L.SW	rushing/light swing
24: FUSON-PS-H.SW	rushing/strong swing

16 Beat Reggae type

25: REGGE-NM-L.AC	exact/low dynamics
26: REGGE-NM-H.AC	exact/high dynamics
27: REGGE-NM-L.SW	exact/light swing
28: REGGE-NM-H.SW	exact/strong swing
29: REGGE-HV-L.AC	dragging/low dynamics
30: REGGE-HV-H.AC	dragging/high dynamics
31: REGGE-HV-L.SW	dragging/light swing
32: REGGE-HV-H.SW	dragging/strong swing
33: REGGE-PS-L.AC	rushing/low dynamics
34: REGGE-PS-H.AC	rushing/high dynamics
35: REGGE-PS-L.SW	rushing/light swing
36: REGGE-PS-H.SW	rushing/strong swing

8 Beat Pops type

37: POPS-NM-L.AC	exact/low dynamics
38: POPS-NM-H.AC	exact/high dynamics
39: POPS-NM-L.SW	exact/light swing
40: POPS-NM-H.SW	exact/strong swing
41: POPS-HV-L.AC	dragging/low dynamics
42: POPS-HV-H.AC	dragging/high dynamics
43: POPS-HV-L.SW	dragging/light swing
44: POPS-HV-H.SW	dragging/strong swing
45: POPS-PS-L.AC	rushing/low dynamics
46: POPS-PS-H.AC	rushing/high dynamics
47: POPS-PS-L.SW	rushing/light swing
48: POPS-PS-H.SW	rushing/strong swing

8 Beat Rhumba type

49: RHUMB-NM-L.AC	exact/low dynamics
50: RHUMB-NM-H.AC	exact/high dynamics
51: RHUMB-NM-L.SW	exact/light swing
52: RHUMB-NM-H.SW	exact/strong swing
53: RHUMB-HV-L.AC	dragging/low dynamics
54: RHUMB-HV-H.AC	dragging/high dynamics
55: RHUMB-HV-L.SW	dragging/light swing
56: RHUMB-HV-H.SW	dragging/strong swing
57: RHUMB-PS-L.AC	rushing/low dynamics
58: RHUMB-PS-H.AC	rushing/high dynamics
59: RHUMB-PS-L.SW	rushing/light swing
60: RHUMB-PS-H.SW	rushing/strong swing

Others

61: SAMBA 1	samba (pandero)
62: SAMBA 2	samba (surdo and timba)
63: AXE 1	axe (caixa)
64: AXE 2	axe (surdo)
65: SALSA 1	salsa (cascara)
66: SALSA 2	salsa (conga)
67: TRIPLETS	triplets
68: QUITUPLETS	quintuplets
69: SEXTUPLETS	sextuplets
70: 7 AGAINST 2	seven notes played over two beats
71: LAGGING TRI	lagging triplets

Changing the reverb depth (ASSIGN 2: REVERB)

* *There will be no effect if [REVERB] is dark. Press [REVERB] to make it lit.*

Display		Explanation	Setting
TYPE		Select the type of reverb.	ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2
X		Select the parameter that will be affected when you move your finger to left or right.	Refer to the explanation of reverb (p. 42). * *When you change the type, the parameter whose setting is followed by an "X" or "Y" will be selected automatically (X = left/right, Y = up/down).* * *It is not possible to select the same parameter for both X and Y.*
Y		Select the parameter that will be affected when you move your finger upward or downward.	

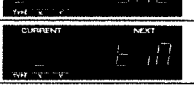
→ **Changing the D-FIELD settings** (p. 22)

Making detailed settings

1. **Hold down the D-FIELD function button [ASSIGN 2] and press [EDIT].**
2. **Press [ENTER] to select the desired parameter.**
3. **Turn [VALUE] to change the setting.**
   For details on the parameters and settings, refer to the explanation of reverb (p. 42).

Changing the delay depth (ASSIGN 2: DELAY)

* *There will be no effect if [DELAY] is dark. Press [DELAY] to make it lit.*

Display		Explanation	Setting
TYPE		Select the type of delay.	SHORT, LONG
X		Select the parameter that will be affected when you move your finger to left or right.	Refer to the explanation of delay (p. 43). * *When you change the type, the parameter whose setting is followed by an "X" or "Y" will be selected automatically (X = left/right, Y = up/down).* * *It is not possible to select the same parameter for both X and Y.*
Y		Select the parameter that will be affected when you move your finger upward or downward.	

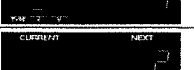
→ **Changing the D-FIELD settings** (p. 22)

Making detailed settings

1. **Hold down the D-FIELD function button [ASSIGN 2] and press [EDIT].**
2. **Press [ENTER] to select the desired parameter.**
3. **Turn [VALUE] to change the setting.**
   For details on the parameters and settings, refer to the explanation of delay (p. 43).

Controlling an external MIDI device (ASSIGN 2: EXT CTRL: External Control)

You can transmit control change messages to an external MIDI device.

Display		Explanation	Setting
TYPE		Select the MIDI channel on which the messages will be transmitted.	CH1–CH16
X		Select the control change number that will be transmitted when you move your finger to left or right.	1–5, 7–31, 64–95 * *It is not possible to select the same control change number for both X and Y.*
Y		Select the control change number that will be transmitted when you move your finger upward or downward.	

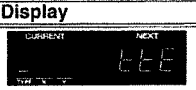
→ **Changing the D-FIELD settings** (p. 22)

SPIN mode

You can produce a variety of effects by moving your finger in a circle on the D-FIELD.

Changing the sound as on a turntable (VINYL)

In the same way as by spinning a turntable manually, you can change the tempo or pitch, play a pattern backward, or produce scratch effects. You can also vary the volume by the size of the circle in which you move your finger.

Display	Explanation	Setting
	Select the effect.	TTE (TURNTABLE EMULATION), MAN (MANUAL): The tempo and pitch will be affected by the speed at which you move your finger in a circle, and the volume will be affected by the size of the circle. SR1 (SCRATCH 1), SR2 (SCRATCH 2): A scratch sound will be produced according to the way in which you move your finger. Circling broadly with a counterclockwise motion will produce a backspin sound. "SCRATCH 2" will produce the scratch sound while continuing to play the pattern.

→ **Changing the D-FIELD settings** (p. 22)

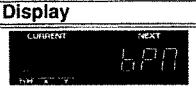
* *While "TURNTABLE EMULATION" simulates the operation of a turntable, "MANUAL" selects the portion of the pattern that will be played according to the location at which you press the D-FIELD. The two effects are similar, but have a slightly different character.*
* *You can specify independently whether tempo, pitch, and volume will change.*
  → *"D-FIELD BPM SW/D-FIELD PITCH SW/D-FIELD LEVEL SW" (p. 75).*

NOTE

- *If you select the D-FIELD function "VINYL," [◄◄] and [►►] cannot be used.*
- *When you are playing back patterns consecutively (p. 15) and you select the next pattern and press [ENTER], the "VINYL" effect cannot be obtained until the pattern changes.*

Changing the tempo (BPM)

The tempo (BPM) can be changed by the speed at which you rotate your finger or the timing at which you strike the D-FIELD.

Display	Explanation	Setting
	Select how the BPM will be determined.	BPM: Clockwise rotation speeds up the tempo, while rotating counterclockwise will slow it down. When you remove your finger, the tempo will return to the original setting. TAP: You can specify the tempo by striking the D-FIELD three times.

→ **Changing the D-FIELD settings** (p. 22)

Sounding a snare roll (SD ROLL)

You can sound a snare drum roll. The speed at which you rotate your finger will affect the speed of the roll. You can also change the volume by varying the size of the circle in which you move your finger.

Display	Explanation	Setting
	Select how the speed of the roll will change.	AUT (AUTO): The speed of the roll will change in stages, according to the tempo of the song. Speed of finger rotation: STOPPED: 8th notes, SLOW SPEED: 16th notes, HIGH SPEED: 32nd notes MAN (MANUAL): The speed of the roll will change according to the speed at which you rotate your finger, regardless of the tempo of the song.

→ **Changing the D-FIELD settings** (p. 22)

* *You can change the sound that is used to play the roll.* → ***SD ROLL NOTE NUMBER (snare roll note number)*** *(p. 73)*

* *The volume change can be turned on/off.* → ***D-FIELD LEVEL SW*** *(p. 75)*

Changing the number of notes that are sounded (ASSIGN 3: STEP MUTE)

Counterclockwise rotation produces a gradual decrease in the number of notes being sounded. By switching to clockwise rotation, you can gradually increase the number of notes that are sounded.

Changing the stereo location of the sound (ASSIGN 3: PAN)

You can change the pan and volume of the current part.

Low-range parts such as kick and bass will tend to remain to the end.

Display		Explanation	Setting
TYPE	none	none	none
X	none	Pan	Pan (fixed)
Y	none	Level	Level (fixed)

Chapter 4. Applying Effects to the Sound (Effects)

Reverb

Reverb is an effect which adds reverberation and ambiance to the sound, creating an impression of spatial depth. It simulates the sound of music played in a concert hall. This section describes the settings for using the reverb function.

Turning reverb on/off

Reverb is turned on by pressing [REVERB] and confirming that its indicator has lighted. To turn it off, press the button again, extinguishing the indicator.

* *This lets you turn the effect on/off for all parts regardless of other settings.*

Adjusting the reverb depth for individual parts

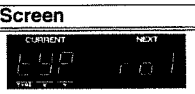
Refer to the explanation of "Part Reverb Level" in "Modifying the settings of each part" (p. 19).

Making detailed settings

1. **Hold down [REVERB] and press [EDIT].**

* *If the D-FIELD function ASSIGN 2 is set to "REVERB," you can also access the setting screen by holding down the D-FIELD function button [ASSIGN 2] and pressing [EDIT].*

2. **Press [ENTER] to select a parameter.**
3. **Turn [VALUE] to modify the setting.**
4. **When you are finished, press [EXIT]**

Screen	Parameter	Explanation	Value	
	TYPE	Selecting the type.	ROOM1 (reverb with short decay and high density), ROOM2 (reverb with short decay and low density), STAGE1 (reverb with much lingering reverberation), STAGE2 (reverb with strong early reflections), HALL1 (clear-sounding reverb), HALL2 (rich-sounding reverb)	
	TIME	Adjusting the length of reverberation. You can adjust the time over which the reverberation will continue.	0–127	X
	HF DAMP	Specifies the frequency at which the high frequency portions of the reverberation will be cut. Lowering this setting will cause more of the upper frequency content to be cut, making the reverberation more muted.	200 (Hz)–8.00 (kHz), BYPASS * *If this "BYPASS" is selected, the high frequency range will not be cut.*	
	REVERB LEVEL	You can adjust the overall volume of reverb for the eight parts (rhythm part and parts 1–7).	0–127	Y
	MFX TO REV LEVEL	Specifies the volume of the reverb that will be applied to the Multi-effects sound. Applies reverb equally to each of the parts with Multi-effects set at ON regardless of the Part Reverb Level for each part.	0–127 * *This setting does not have any effect on a part with the MFX switch turned off (p. 19).*	

* *Parameters with an "X" or "Y" following the value will be selected when using D-FIELD to control the reverb (p. 39). "X" can be controlled by moving your finger to left and right, and "Y" by moving your finger up and down.*

Delay (Add echoes to the sound)

Delay is an effect which adds echoes to the sound. It is effective when applied to solo phrases or to densely rhythmic phrases. Described here is how to set the Delay effect.

Turning delay on/off

Delay is turned on by pressing [DELAY] and confirming that its indicator has lighted. To turn it off, press the button again, extinguishing the indicator.

* *This lets you turn the effect on/off for all parts regardless of other settings.*

Adjusting the delay volume for individual parts

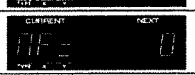
Refer to the explanation of "Part Delay Level" in "Modifying the settings of each part" (p. 19).

Making detailed settings

1. **Hold down [DELAY] and press [EDIT].**

* *If the D-FIELD function ASSIGN 2 is set to "DELAY," you can also access the setting screen by holding down the D-FIELD function button [ASSIGN 2] and pressing [EDIT].*

2. **Press [ENTER] to select a parameter.**
3. **Turn [VALUE] to modify the setting.**
4. **When you are finished, press [EXIT].**

Screen	Parameter	Explanation	Value	
	TYPE	Selecting the type.	SHORT, LONG	
	TIME	Adjusts the time from the original sound until when the delayed sound is heard (the interval between repeats). * *On the D-2, it is not possible to set a delay time longer than 1 second. When the delay time is synchronized to the BPM, selecting a note value which would make the delay time exceed 1second will cause the delay time to be halved, and the delay sound will be heard at 1/2 the specified interval. In addition, even if 1/2 the length would exceed 1 second, the delay time will be shortened to 1/4 the length.*	When "TYPE" is SHORT: 0.1-275 (ms) When "TYPE" is LONG: 200 (ms)-1 (s), notes (*1)	X
	FEEDBACK	Sets the amount of delayed sound to be repeated, as a proportion of the original sound.	0–98 (%)	Y
	HF DAMP	Specifies the frequency at which the high frequency portions of the reverberation will be cut. Lowering this setting will cause more of the upper frequency content to be cut, making the reverberation more muted in tone.If this "BYPASS" is selected, the high frequency range will not be cut.	200 (Hz)–8.00 (kHz), BYPASS	
	OUTPUT	Allows you to select a destination for the sound after reverb has been applied.Selecting LINE outputs the sound to the OUTPUT jacks on the rear panel; selecting REV outputs it to Reverb; or selecting LINE + REV outputs the sound to both the OUTPUT jacks and Reverb.	LINE, REV, LINE+REV	
	DELAY OUTPUT LEVEL	This adjusts the volume of the delay sound for all eight parts (the rhythm part and parts 1-7).	0–127	
	MFX TO DLY LEVEL	Applies the Delay equally to each of the parts with Multi-effects set at ON regardless of the Part Delay Level for each part.	0–127 * *This setting does not have any effect on a part with the MFX switch turned off (p. 19).*	

* *1: 16 (16th note), 8T (8th note triplets), 16. (dotted 16th note), 8 (8th note), 4T (quarter note triplets), 8. (dotted 8th note), 4 (quarter note), 2T (half note triplets), 4. (dotted quarter note), 2 (half note)*

* *Parameters with an "X" or "Y" following the value will be selected when using D-FIELD to control the delay (p. 39). "X" can be controlled by moving your finger to left and right, and "Y" by moving your finger up and down.*

Multi-Effects (MFX)

Multi-effects provides 25 different Effect Types, each of which let you apply a different effect. Described here is how to enter the MFX-related settings.

Turning the multi-effects on/off

The multi-effects is turned on by pressing [MFX] and getting the indicator to light. To turn it off, press the button again, extinguishing the indicator.

* *This lets you turn the effect on/off for all parts, regardless of other settings.*

Applying the multi-effects to individual parts

Refer to the explanation of "Part MFX Switch" in "Modifying the settings of each part" (p. 19).

Using the part buttons to turn the multi-effects on/off

You can also turn the multi-effects on/off for an individual part by holding down the D-FIELD function button [MFX] and pressing the corresponding part button.

The multi-effects is on for parts whose part button is lit while you are pressing the D-FIELD function button [MFX].

* *This method cannot be used to set the MFX switch of the rhythm part to "RHY." The setting can be changed from "RHY" to "OFF," but will always change from "OFF" to "ON."*

Making detailed settings

1. **Hold down [MFX] and press [EDIT].**

* *You can also access the setting screen by holding down the D-FIELD function button [MFX] and pressing [EDIT].*

2. **Turn [VALUE] to select the desired type of multi-effects.**
3. **Press [ENTER] to select the parameter.**
4. **Turn [VALUE] to modify the setting.**
5. **When you are finished, press [EXIT].**

Available Settings

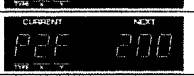
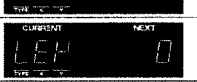
No	MFX TYPE	Description
1	4BAND EQ	modify the tone
2	SPECTRUM	add character to the sound
3	ENHANCER	add sparkle to the sound
4	OVERDRIVE	distort the sound mildly
5	DISTORTION	distort the sound severely
6	Lo-Fi	simulate a "low-fidelity" sound
7	NOISE	add various types of noise
8	RADIO TUNING	simulate a radio being tuned
9	PHONOGRAPH	simulate an old record
10	COMPRESSOR	make the volume level more consistent
11	LIMITER	smooth out irregularities in volume
12	SLICER	apply successive cuts to the sound
13	TREMOLO	cyclic changes in volume
14	PHASER	modulate the sound
15	CHORUS	add spaciousness and depthto the sound
16	SPACE-D	add transparent depth
17	TETRA CHORUS	layer chorus sounds to add spaciousness
18	FLANGER	add metallic resonance to the sound
19	STEP FLANGER	add metallic resonance to the sound while changing the pitch in steps
20	SHORT DELAY	add echoes to the sound
21	AUTO PAN	automatically move the stereo location
22	FB PITCH SHIFTER	skew the pitch
23	REVERB	add reverberation
24	GATE REVERB	sharply cut the reverberation
25	ISOLATOR	Cuts off a specific range

* *For details on the settings for each effect, refer to the explanations on the next and following pages.*

* *Parameters with an "X" or "Y" following the value will be selected when using D-FIELD to control the multi-effects (p. 33). "X" can be controlled by moving your finger to left and right, and "Y" by moving your finger up and down.*

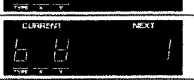
1. 4 Band EQ (Modify the tone)

This is a 4 band (high, midrange x 2, low) stereo equalizer.

Screen	Parameter	Explanation	Value	
	LOW FREQ (LOW Frequency)	Determines the frequency of the low range.	200, 400 (Hz)	
	LOW GAIN	Adjusts the volume of the low frequency range.	-15–15	
	HIGH FREQ (HIGH Frequency)	Determines the frequency of the high range.	4.00, 8.00 (kHz)	
	HIGH GAIN	Adjusts the volume of the high frequency range.	-15–15	
	PEAK1 FREQ (Peaking 1 Frequency)	Determines the frequency of midrange 1.	200 (Hz)–8.00 (kHz)	
	PEAK1 Q (Peaking 1Q)	Specifies the width of the frequency range affected by midrange 1. As this setting is increased, the affected area will become narrower.	0.5–8.0	
	PEAK1 GAIN (Peaking 1 GAIN)	Adjusts the volume of midrange 1.	-15–15	X
	PEAK2 FREQ (Peaking 2 Frequency)	Determines the frequency of midrange 2.	200 (Hz)–8.00 (kHz)	
	PEAK2 Q (Peaking 2Q)	Specifies the width of the frequency range affected by midrange 2. As this setting is increased, the affected area will become narrower.	0.5–8.0	
	PEAK2 GAIN (Peaking 2 GAIN)	Adjusts the volume of midrange 2.	-15–15	Y
	OUTPUT LEVEL	Adjusts the output level from the 4 band EQ.	0–127	

2. Spectrum (Add Character to the Sound)

This is a type of filter, which modifies the tonal character by boosting or cutting specific frequencies. It is similar to an equalizer, but when you wish to add character to the sound, the Spectrum effect will produce a more distinctive result.

Screen	Parameter	Explanation	Value	
	LOW-HIGH GAIN	Specifies the volume change at 500 Hz and 8.00 kHz.	-15–15	X
	MIDDLE GAIN	Specifies the volume change at 1.25 kHz.	-15–15	Y
	BAND WIDTH	Specifies the width of the bands in which the volume will be adjusted.	1–5	
	OUTPUT PAN	Specifies the panning of the sound that is output from the Spectrum effect.	L64–R63	
	OUTPUT LEVEL	Specifies the volume that is output from the Spectrum effect.	0–127	

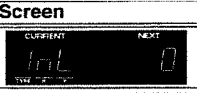
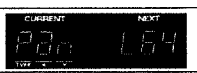
3. Enhancer (Add Sparkle to the Sound)

By controlling the overtones of the high frequency range, this effect adds sparkle to the sound, giving it more definition.
Use this effect when you want to make a specific sound stand out from the rest of the ensemble, or to give it greater definition.

Screen	Parameter	Explanation	Value	
	SENS (Sensitivity)	Adjusts the depth of the enhancer effect.	0–127	
	MIX (Mix Level)	Determines the proportion at which the overtones generated by the enhancer will be mixed with the original sound.	0–127	Y
	LOW GAIN	Adjusts the volume of the low frequency range.	-15–15	X
	HIGH GAIN	Adjusts the volume of the high frequency range.	-15–15	
	OUTPUT LEVEL	Specifies the volume of the output from the Enhancer effect.	0–127	

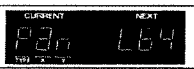
4. Overdrive (Distort the Sound Mildly)

This simulates the soft distortion that occurs when you raise the gain of a vacuum tube amp. The effect also contains an amp simulator, and produces the natural distortion that is created by sounds played through a guitar amp. It is suitable for use with guitar and synth-bass sounds.

Screen	Parameter	Explanation	Value	
	INPUT LEVEL	Adjusts the level of the input signal.	0–127	
	DRIVE	Adjusts the depth of distortion. This will also affect the volume.	0–127	Y
	AMP TYPE	Selection for the type of guitar amp.	SMALL (small amp), BUILTIN (built-in type amp), 2STACK (large double amp stack), 3STACK (large triple amp stack)	
	OUTPUT PAN	Specifies the stereo location of the sound that is output from the Overdrive effect.	L64–R63	X
	OUTPUT LEVEL	Specifies the output volume from the Overdrive effect.	0–127	

5. Distortion (Distort the Sound Severely)

This effect produces a more severe distortion than the Overdrive effect. It also contains an amp simulator, and produces the natural sound of a guitar amp.

Screen	Parameter	Explanation	Value	
	INPUT LEVEL	Adjusts the level of the input signal.	0–127	
	DRIVE	Adjusts the depth of distortion. This will also affect the volume.	0–127	Y
	AMP TYPE	Determines the type of guitar amp.	SMALL (small amp), BUILTIN (built-in type amp), 2STACK (large double amp stack), 3STACK (large triple amp stack)	
	OUTPUT PAN	Specifies the stereo location of the sound that is output from the Distortion effect.	L64–R63	X
	OUTPUT LEVEL	Specifies the output volume from the Distortion effect.	0–127	

6. Lo-Fi (Simulate a "Lo-Fidelity" Sound)

This effect intentionally degrades the audio quality to simulate a Lo-Fi sound. It is particularly effective on drums.

Screen	Parameter	Explanation	Value	
	BIT DOWN	This setting lowers the audio quality. The audio quality will worsen as this setting is increased.	0–7	X
	SAMPLE RATE DOWN	This coarsens the output signal. The sound will become coarser as this setting is lowered.	32, 16, 8, 4	Y
	POST GAIN	Adjusts the output signal.	0, +6, +12, +18	
	LOW GAIN	Adjusts the boost or cut applied to the low frequency range.	-15–15	
	HIGH GAIN	Adjusts the boost or cut applied to the high frequency range.	-15–15	
	OUTPUT	Specifies how the sound will be output. With a setting of "MONO," the output sound will be monaural.	MONO, STEREO	
	OUTPUT LEVEL	Specifies the output volume from the Lo-Fi effect.	0–127	

7. Noise Generator (Add Various Types of Noise)

In addition to a Lo-Fi effect, this effect also generates various types of noise such as hum, pink noise, and disk noise.

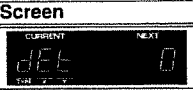
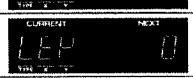
Screen	Parameter	Explanation	Value	
	NOISE TYPE	Determines the type of noise(s) that will be generated.	1–18	
	NOISE LEVEL	Specifies the volume of the noise.	0–127	Y
	NOISE FILTER	Adjusts the tone of the noise. If you do not wish to filter the noise, select "BYPASS."	200 (Hz)–8.00 (kHz), BYPASS	X
	LO-FI LEVEL	Increasing this setting will make the original sound rougher.	0–127	
	OUTPUT PAN	Specifies the stereo location of the sound output from the Noise Generator.	L64–R63	
	OUTPUT LEVEL	Specifies the output volume of the Noise Generator effect.	0–127	

For each setting, the type(s) of noise marked by " o " will be generated.

NOISE TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Hum noise (50Hz)							o	o	o	o	o	o						
Hum noise (60Hz)													o	o	o	o	o	o
Pink noise		o		o		o		o		o		o		o		o		o
Disc noise (45 RPM)					o	o					o	o					o	o
Disc noise (33 RPM)			o	o					o	o					o	o		
Disc noise generated at random	o		o	o	o	o			o	o	o	o			o	o	o	o

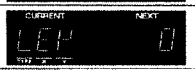
8. Radio Tuning (Simulate a Radio Being Tuned)

This effect simulates the sound of a radio being tuned.

Screen	Parameter	Explanation	Value	
	RADIO DETUNE	Specifies the frequency being tuned.	0–127	X
	NOISE LEVEL	Specifies the volume of the tuning noise.	0–127	Y
	LOW GAIN	Adjusts the boost or cut of the low frequency range.	-15–15	
	HIGH GAIN	Adjusts the boost or cut of the high frequency range.	-15–15	
	OUTPUT	Specifies how the sound will be output. With a setting of "MONO," the output sound will be monaural.	MONO, STEREO	
	OUTPUT LEVEL	Specifies the output volume of the Radio Tuning effect.	0–127	

9. Phonograph (Simulates an Old Record)

This effect mutes the tone and adds disc noise to simulate the sound of music played on an old record player.

Screen	Parameter	Explanation	Value	
	DISC TYPE	Determines the type of disc noise.	LP (33 RPM record), EP (45 RPM record), SP (78 RPM record)	
	DISC NOISE LEVEL	Specifies the volume of the disc noise.	0–127	Y
	DEPTH	Adjusts the tone. As this value is increased, the high range and low range will be cut, and the mid range will be emphasized.	0–20	X
	OUTPUT PAN	Specifies the stereo location of the output from the Phonograph effect.	L64–R63	
	OUTPUT LEVEL	Specifies the output volume from the Phonograph effect.	0–127	

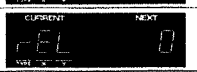
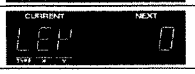
10. Compressor (Make the Volume Level More Consistent)

This effect suppresses loud volume levels and boosts soft volume levels, making the volume more consistent.

Screen	Parameter	Explanation	Value	
	ATTACK	Specifies the duration of the attack when sound is input.	0–127	X
	SUSTAIN	Specifies the time over which low-level sounds will be boosted to reach the specified volume.	0–127	Y
	POST GAIN	Adjusts the output signal.	0, +6, +12, +18	
	LOW GAIN	Adjusts the boost or cut of the low frequency range.	-15–15	
	HIGH GAIN	Adjusts the boost or cut of the high frequency range.	-15–15	
	OUTPUT LEVEL	Specifies the output volume from the Compressor effect.	0–127	

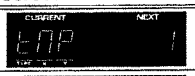
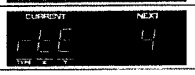
11. Limiter (Smooth Out Irregularities in Volume)

This effect compresses the sound when it exceeds a specified volume level, thus preventing distortion.

Screen	Parameter	Explanation	Value	
	THRESHOLD (Threshold Level)	Specifies the volume level at which compression will begin.	0–127	Y
	RATIO (Compression Ratio)	Specifies the ratio of compression.	1.5:1, 2:1, 4:1, 100:1	X
	RELEASE	Specifies the time from when the volume drops below the Threshold Level until compression is no longer applied.	0–127	
	POST GAIN	Adjusts the output signal.	0, +6, +12, +18	
	OUTPUT PAN	Specifies the stereo location of the output from the Limiter effect.	L64–R63	
	OUTPUT LEVEL	Specifies the output volume of the Limiter effect.	0–127	

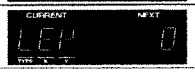
12. Slicer (Apply Successive Cuts to the Sound)

By applying successive cuts to the sound, this effect turns a conventional sound into a sound that appears to be played as a backing phrase. This is especially effective when applied to sustain-type sounds.

Screen	Parameter	Explanation	Value	
	TIMING PATTERN	Select a pattern to specify the timing at which the sound will be cut.	34 types	X
	ACCENT PATTERN	Specifies the location of the accents.	16 types	
	ACCENT LEVEL	Adjusts the volume of the accents. As this setting is increased, the accent will be more pronounced.	0–127	Y
	ATTACK	Adjusts the attack speed of the sound. As this setting is increased, the attack will become faster.	1–10	
	OUTPUT LEVEL	Adjusts the output volume from the Slicer effect.	0–127	
	RATE	Determines the note value unit which will be cut.	4, 2, 1	

13. Tremolo (Cyclic Changes in Volume)

This effect cyclically modulates the volume to create tremolo.

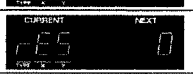
Screen	Parameter	Explanation	Value	
	LFO TYPE	Determines the waveform that will be used to modulate the sound.	TRI, TRP, SIN, SAW1, SAW2, SQR	
	DEPTH	Specifies the depth of modulation.	0–127	Y
	LOW GAIN	Adjusts the boost or cut of the low frequency range.	-15–15	
	RATE	Specifies the frequency of modulation. If a note value or measure is selected as the value of this parameter, the Rate will synchronize with the BPM of the pattern at intervals of the specified note value or measure.	0.1–10.0 (Hz), notes (*1), measures (*2)	X
	HIGH GAIN	Adjusts the boost or cut of the high frequency range.	-15–15	
	OUTPUT LEVEL	Specifies the output volume of the Tremolo effect.	0–127	

* *1: 16 (16th note), 8T (8th note triplets), 16. (dotted 16th note), 8 (8th note), 4T (quarter note triplets), 8. (dotted 8th note), 4 (quarter note), 2T (half note triplets), 4. (dotted quarter note), 2 (half note), 1T (whole note triplets), 2. (dotted half note), 1 (whole note)*

* *2: 2M (2 measures), 3M (3 measures), 4M (4 measures), 8M (8 measures), 16M (16 measures)*

14. Phaser (Modulate the Sound)

By adding a phase-shifted sound to the original sound, this effect modulates the sound to add depth and a sense of rotation.

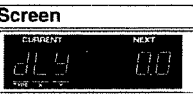
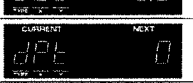
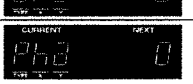
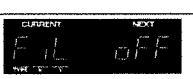
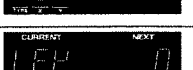
Screen	Parameter	Explanation	Value	
	MANUAL	Specifies the center frequency at which the sound will be modulated.	100 (Hz)–8.00 (kHz)	
	DEPTH	Specifies the depth of modulation.	0–127	Y
	RESONANCE	This setting emphasizes the frequency range in the vicinity of the center frequency.	0–127	
	RATE	Specifies the frequency of modulation. If a note value or measure is selected as the value of this parameter, the Rate will synchronize with the BPM of the pattern at intervals of the specified note value or measure.	0.1–10.0 (Hz), notes (*1), measures (*2)	X
	MIX (Mix Level)	Adjusts the proportion of the original sound that will be combined with the phase-shifted sound.	0–127	
	OUTPUT PAN	Specifies the stereo location of the output from the Phaser effect.	L64–R63	
	OUTPUT LEVEL	Specifies the output volume of the Phaser effect.	0–127	

* 1: *16 (16th note), 8T (8th note triplets), 16. (dotted 16th note), 8 (8th note), 4T (quarter note triplets), 8. (dotted 8th note), 4 (quarter note), 2T (half note triplets), 4. (dotted quarter note), 2 (half note), 1T (whole note triplets), 2. (dotted half note), 1 (whole note)*

* 2: *2M (2 measures), 3M (3 measures), 4M (4 measures), 8M (8 measures), 16M (16 measures)*

15. Chorus (Add Spaciousness and Depth to the Sound)

This effect creates an impression of multiple sound sources in unison (Chorus effect), giving spaciousness and depth to the sound.

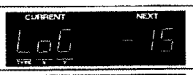
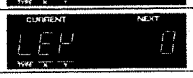
Screen	Parameter	Explanation	Value	
	PRE DELAY (Pre Delay Time)	Specifies the time from the original sound until when the chorus sound is heard.	0.0–100	
	DEPTH	Specifies the depth of modulation.	0–127	Y
	PHASE	Adjusts the spaciousness of the sound.As this setting is increased, the sound will spread more toward left and right.	0–180	
	RATE	Specifies the rate of modulation. If a note value or measure is selected as the value of this parameter, the Rate will synchronize with the BPM of the pattern at intervals of the specified note value or measure.	0.1–10.0 (Hz), notes (*1), measures (*2)	X
	FILTER TYPE	Determines the type of filter that will be applied to the chorus sound.	OFF (a filter will not be used), LPF (the frequency range above the cutoff frequency will be cut), HPF (the frequency range below the cutoff frequency will be cut)	
	CUTOFF (Cutoff Frequency)	Specifies the cutoff frequency of the filter.	200 (Hz)–8.00 (kHz)	
	BALANCE (Effect Balance)	Adjusts the volume balance between the original sound and the chorus sound.With a setting of "0," no chorus sound will be output.	0–100 (%)	
	OUTPUT LEVEL	Specifies the output volume from the stereo chorus.	0–127	

* 1: *16 (16th note), 8T (8th note triplets), 16. (dotted 16th note), 8 (8th note), 4T (quarter note triplets), 8. (dotted 8th note), 4 (quarter note), 2T (half note triplets), 4. (dotted quarter note), 2 (half note), 1T (whole note triplets), 2. (dotted half note), 1 (whole note)*

* 2: *2M (2 measures), 3M (3 measures), 4M (4 measures), 8M (8 measures), 16M (16 measures)*

16. Space-D (Add Transparent Depth)

This is a type of chorus, but unlike a conventional chorus, it does not create a sense of modulation.

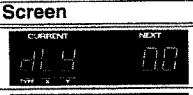
Screen	Parameter	Explanation	Value	
	PRE DELAY (Pre Delay Time)	Specifies the time from the original sound until the chorus sound is heard.	0.0–100	
	DEPTH	Specifies the depth of modulation.	0–127	Y
	PHASE	Adjusts the spread of the sound.As this value is increased, the sound will have a broader left/right spread.	0–180	
	RATE	Specifies the rate of modulation. If a note value or measure is selected as the value of this parameter, the Rate will synchronize with the BPM of the pattern at intervals of the specified note value or measure.	0.1–10.0 (Hz), notes (*1), measures (*2)	X
	LOW GAIN	Adjusts the boost or cut of the low frequency range.	-15–15	
	HIGH GAIN	Adjusts the boost or cut of the high frequency range.	-15–15	
	BALANCE (Effect Balance)	Adjusts the volume balance between the original sound and the chorus sound.With a setting of "0," no chorus sound will be output.	0–100 (%)	
	OUTPUT LEVEL	Specifies the output volume from the Space-D effect.	0–127	

* *1: 16 (16th note), 8T (8th note triplets), 16. (dotted 16th note), 8 (8th note), 4T (quarter note triplets), 8. (dotted 8th note), 4 (quarter note), 2T (half note triplets), 4. (dotted quarter note), 2 (half note), 1T (whole note triplets), 2. (dotted half note), 1 (whole note)*

* *2: 2M (2 measures), 3M (3 measures), 4M (4 measures), 8M (8 measures), 16M (16 measures)*

17. Tetra Chorus (Layer Chorus Sounds to Add Spaciousness)

This effect layers four chorus sounds to produce even more depth and spaciousness than a conventional chorus.

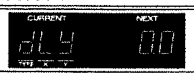
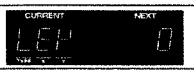
Screen	Parameter	Explanation	Value	
	PRE DELAY (Pre Delay Time)	Specifies the time from the original sound until when the chorus sound is heard.	0.0–100	
	DEPTH	Specifies the depth of modulation.	0–127	
	PRE DELAY DEVI (Pre Delay Deviation)	Adjusts the difference in pre delay between each of the chorus sounds.	0–20	
	RATE	Specifies the rate of modulation. If a note value or measure is selected as the value of this parameter, the Rate will synchronize with the BPM of the pattern at intervals of the specified note value or measure.	0.1–10.0 (Hz), notes (*1), measures (*2)	X
	DEPTH DEVI (Depth Deviation)	Adjusts the difference in modulation depth between each of the chorus sounds.	-20–20	
	PAN DEVI	Adjusts the pan difference between each chorus sound.As this value is increased, the sound will have a greater left/right spread.	0–20	Y
	BALANCE (Effect Balance)	Specifies the volume balance between the original sound and the chorus sound.With a setting of "0," no chorus sound will be output.	0–100 (%)	
	OUTPUT LEVEL	Specifies the output volume from the Tetra Chorus effect.	0–127	

* *1: 16 (16th note), 8T (8th note triplets), 16. (dotted 16th note), 8 (8th note), 4T (quarter note triplets), 8. (dotted 8th note), 4 (quarter note), 2T (half note triplets), 4. (dotted quarter note), 2 (half note), 1T (whole note triplets), 2. (dotted half note), 1 (whole note)*

* *2: 2M (2 measures), 3M (3 measures), 4M (4 measures), 8M (8 measures), 16M (16 measures)*

18. Flanger (Add Metallic Resonance to the Sound)

This creates a sharp and mechanical sound. It can add a metallic resonance to the sound, or produce an effect that sounds like an jet airplane taking off and landing.

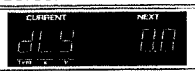
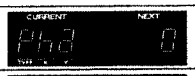
Screen	Parameter	Explanation	Value	
	PRE DELAY (Pre Delay Time)	Specifies the time from the original sound until the flanger sound is heard.	0.0–100	
	DEPTH	Specifies the depth of modulation.	0–127	
	FEEDBACK (Feedback Level)	Specifies the proportion of the flanger sound that is fed back into the input.	0–98 (%)	Y
	RATE	Specifies the rate of modulation. If a note value or measure is selected as the value of this parameter, the Rate will synchronize with the BPM of the pattern at intervals of the specified note value or measure.	0.1–10.0 (Hz), notes (*1), measures (*2)	X
	PHASE	Adjusts the width of the sound. As this setting is increased, the left/right spread of the sound will increase.	0–180	
	FILTER TYPE	Determines the type of filter that will be applied to the flanger sound.	OFF (a filter will not be used), LPF (the frequency range above the cutoff frequency will be cut), HPF (the frequency range below the cutoff frequency will be cut)	
	CUTOFF (Cutoff Frequency)	Specifies the cutoff frequency of the filter.	200 (Hz)–8.00 (kHz)	
	BALANCE (Effect Balance)	Adjusts the volume balance between the original sound and the flanger sound.With a setting of "0," no flanger sound will be output.	0–100 (%)	
	OUTPUT LEVEL	Specifies the output volume from the stereo flanger.	0–127	

* 1: *16 (16th note), 8T (8th note triplets), 16. (dotted 16th note), 8 (8th note), 4T (quarter note triplets), 8. (dotted 8th note), 4 (quarter note), 2T (half note triplets), 4. (dotted quarter note), 2 (half note), 1T (whole note triplets), 2. (dotted half note), 1 (whole note)*

* 2: *2M (2 measures), 3M (3 measures), 4M (4 measures), 8M (8 measures), 16M (16 measures)*

19. Step Flanger (Add Metallic Resonance to the Sound While Changing the Pitch in Steps)

This is a flanger that changes the pitch of the sound in steps. The frequency of pitch change can also be synchronized to the BPM.

Screen	Parameter	Explanation	Value	
	PRE DELAY (Pre Delay Time)	Specifies the time from the original sound until the flanger sound is heard.	0.0–100	
	DEPTH	Specifies the depth of modulation.	0–127	
	FEEDBACK (Feedback Level)	Specifies the proportion of the flanger sound that is fed back into the input.	0–98 (%)	X
	RATE	Specifies the frequency of modulation.If a note value or measure is selected as the value of this parameter, the Rate will synchronize with the BPM of the pattern at intervals of the specified note value or measure.	0.1–10.0 (Hz), notes (*1), measures (*2)	
	PHASE	Adjusts the spread of the sound.As this value is increased, the left/right spread of the sound will increase.	0–180	
	BALANCE (Effect Balance)	Adjusts the volume balance between the original sound and the flanger sound.With a setting of "0," no flanger sound will be output.	0–100 (%)	
	OUTPUT LEVEL	Specifies the output volume of the Step Flanger effect.	0–127	
	STEP RATE	Specifies the rate at which the pitch will change.If a note value is selected as the value of this parameter, the Step Rate will synchronize with the BPM of the pattern at intervals of the specified note value.	0.05–10.0 (Hz), notes (*3)	Y

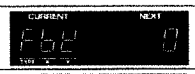
* 1: *16 (16th note), 8T (8th note triplets), 16. (dotted 16th note), 8 (8th note), 4T (quarter note triplets), 8. (dotted 8th note), 4 (quarter note), 2T (half note triplets), 4. (dotted quarter note), 2 (half note), 1T (whole note triplets), 2. (dotted half note), 1 (whole note)*

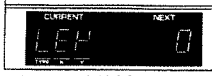
* 2: *2M (2 measures), 3M (3 measures), 4M (4 measures), 8M (8 measures), 16M (16 measures)*

* 3: *16 (16th note), 8T (8th note triplets), 16. (dotted 16th note), 8 (8th note), 4T (quarter note triplets), 8. (dotted 8th note), 4 (quarter note), 2T (half note triplets), 4. (dotted quarter note), 2 (half note)*

20. Short Delay (Add Echoes to the Sound)

This is a short delay which allows you to set the left and right delay times independently. You can also move the panning of the delay sound in synchronization with the BPM.

Screen	Parameter	Explanation	Value	
	TIME L (Left Delay Time)	Specifies the time from the original sound until the left delay sound is heard.	0.1–190	Y
	TIME R (Right Delay Time)	Specifies the time from the original sound until the right delay sound is heard.	0.1–190	X
	HF DAMP	Determines the frequency at which the high frequency portions of the delay sound will be cut. As this parameter is set to a lower frequency, more of the high range will be cut, making the delay sound more muted in tone. If you do not wish to cut the high frequency range, select "BYPASS."	200 (Hz)–8.00 (kHz), BYPASS	
	FEEDBACK (Feedback Level)	Adjusts the number of delay repeats.	0–98 (%)	
	LOW GAIN	Adjusts the boost or cut of the low frequency range.	-15–15	
	HIGH GAIN	Adjusts the boost or cut of the high frequency range.	-15–15	
	BALANCE (Effect Balance)	Adjusts the volume balance between the original sound and the delay sound. With a setting of "0," no delay sound will be output.	0–100 (%)	
	AUTO PAN	This setting causes the panning of the delay sound to move in synchronization with the BPM.	0.1–10.0 (Hz), notes (*1), measures (*2)	

Screen	Parameter	Explanation	Value	
	OUTPUT LEVEL	Specifies the output volume from the Short Delay effect.	0–127	

* 1: *16 (16th note), 8T (8th note triplets), 16. (dotted 16th note), 8 (8th note), 4T (quarter note triplets), 8. (dotted 8th note), 4 (quarter note), 2T (half note triplets), 4. (dotted quarter note), 2 (half note), 1T (whole note triplets), 2. (dotted half note), 1 (whole note)*

* 2: *2M (2 measures), 3M (3 measures), 4M (4 measures), 8M (8 measures), 16M (16 measures)*

21. Auto PAN (Automatically Move the Stereo Location)

This effect automatically moves the stereo location of the sound. You can cause the sound to be panned left and right in time with low notes such as a Bass Drum, or in synchronization with the BPM of the pattern.

Screen	Parameter	Explanation	Value	
	LFO TYPE	Determines the waveform that will be used to pan the sound to left and right.	TRI, TRP, SIN, SAW1, SAW2, SQR	
	BASS SENS	Make this setting when you wish to shift the panning at the timing of the bass notes.	OFF (the panning will change at the speed specified by Rate), MODE1 (the Rate value will increase at the timing of the bass notes), MODE2 (the panning will change at the timing of the bass notes)	
	DEPTH	Specifies the depth of panning.	0–127	Y
	RATE	Specifies the rate at which the pan will be moved.If a note value or measure is selected as the value of this parameter, the Rate will synchronize with the tempo of the pattern at intervals of the specified note value or measure. * *When the Bass Sensitivity parameter is set to "MODE2," the Rate setting will be ignored.*	0.1–10.0 (Hz), notes (*1), measures (*2)	X
	LOW GAIN	Adjusts the boost or cut of the low frequency range.	-15–15	
	HIGH GAIN	Adjusts the boost or cut of the high frequency range.	-15–15	
	OUTPUT LEVEL	Specifies the output volume of the AUTO PAN effect.	0–127	

* 1: *16 (16th note), 8T (8th note triplets), 16. (dotted 16th note), 8 (8th note), 4T (quarter note triplets), 8. (dotted 8th note), 4 (quarter note), 2T (half note triplets), 4. (dotted quarter note), 2 (half note), 1T (whole note triplets), 2. (dotted half note), 1 (whole note)*

* 2: *2M (2 measures), 3M (3 measures), 4M (4 measures), 8M (8 measures), 16M (16 measures)*

22. Feedback Pitch Shifter (Skew the Pitch)

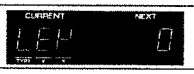
This effect shifts the pitch of the original sound and layers it with the original sound. It can be used to play unison lines at an interval of an octave or fifth, or to layer a slightly pitch-shifted with the original sound to create a chorus effect.

Screen	Parameter	Explanation	Value	
	COARSE (Coarse Pitch)	Specifies the amount of pitch shift relative to the original sound, in semitone steps.	-24–12	X
	FINE (Fine Pitch)	Adjusts the amount of pitch shift in 2-cent steps.	-100–100	
	OUTPUT PAN	Determines the stereo location of the pitch-shifted sound.	L64–R63	
	PRE DELAY (Pre Delay Time)	Specifies the time from the original sound until the pitch-shifted sound is heard.	0.0–100	
	MODE (Pitch Shifter Mode)	Specifies how the pitch will be shifted.As this setting is increased, the response will be slower, but the sound will be more stable.	1–5	
	FEEDBACK (Feedback Level)	Specifies the proportion of the pitch-shifted sound that will be fed back into the input.	0–98 (%)	
	LOW GAIN	Adjusts the boost or cut of the low frequency range.	-15–15	
	HIGH GAIN	Adjusts the boost or cut of the high frequency range.	-15–15	
	BALANCE (Effect Balance)	Specifies the volume balance between the original sound and the pitch-shifted sound. When the setting is "0," the pitch-shifted sound will not be output.	0–100 (%)	Y
	OUTPUT LEVEL	Specifies the output volume of the Feedback Pitch Shifter effect.	0–127	

23. Reverb (Add Reverberation)

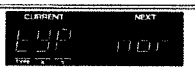
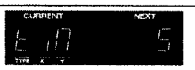
This effect adds reverberation and ambiance to the sound, creating spatial depth.

Screen	Parameter	Explanation	Value	
	TYPE (Reverb Type)	You can select one of the following six basic types of reverb.	ROOM1 (reverb with short decay and high density), ROOM2 (reverb with short decay and low density), STAGE1 (reverb with much subsequent reverberation), STAGE2 (reverb with strong early reflections), HALL1 (clear-sounding reverb), HALL2 (rich-sounding reverb)	
	TIME (Reverb Time)	Specifies the duration of the reverberation.	0–127	X
	HF DAMP	Determines the frequency at which the high frequency portions of the reverberation will be cut. As this parameter is set to a lower frequency, more of the high range will be cut, making the delay sound more muted in tone. If this "BYPASS" is selected, the high frequency range will not be cut.	200 (Hz)–8.00 (kHz), BYPASS	

Screen	Parameter	Explanation	Value	
	BALANCE (Effect Balance)	Specifies the volume balance between the original sound and the reverberation.With a setting of "0," no reverb sound will be output.	0–100 (%)	Y
	OUTPUT LEVEL	Specifies the output volume from the reverb effect.	0–127	

24. Gate Reverb (Sharply Cut the Reverberation)

This is a type of reverb, in which the reverberation is cut off before the natural completion of its decay.

Screen	Parameter	Explanation	Value	
	TYPE (Gate Reverb Type)	Select one of the following four basic types of gated reverb.	NORMAL (normal gated reverb), REVERSE (reverse-playback reverb), SWEEP1 (the reverberation will sweep from right to left.), SWEEP2 (the reverberation will sweep from left to right)	
	TIME (Gate Reverb Time)	Specifies the time from when the reverberation begins until it ends.	5–330	X
	BALANCE (Effect Balance)	Specifies the volume balance between the original sound and the reverberation. With a setting of "0," no reverb sound will be output.	0–100 (%)	Y
	OUTPUT LEVEL	Specifies the output volume of the Gate Reverb effect.	0–127	

25. Isolator (Cuts Off a Specific Range)

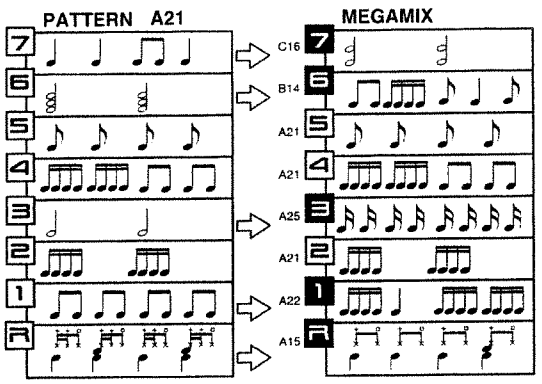
An equalizer which cuts the volume greatly, allowing you to add a special effect to the sound by cutting the volume in varying ranges. The Isolator parameters are, in general, effective when applied to the following musical instruments.

- LOW: Bass drums and basses
- MID: Vocals and the like
- HIGH: High-pitched musical instruments such as cymbals

Screen	Parameter	Explanation	Value	
	LOW GAIN	Specifies the amount of low-frequency range to be cut.	0–127	X
	MID GAIN	Specifies the amount of mid-range to be cut.	0–127	
	HIGH GAIN	Specifies the amount of high-frequency range to be cut.	0–127	Y
	PAN	Specifies the stereo position of the sound output from the Isolator.	L64–R63	
	LEVEL	Determines the loudness output from the Isolator.	0–127	

Chapter 5. Replacing phrases to create a different pattern (MEGAMIX)

MEGAMIX is a function which lets you play back a pattern while you exchange the musical data of one part with the data from a different pattern. You can combine phrases for each instrument to create a completely different pattern, just as if you were creating a remix.



* *This diagram is intended to explain the concept of MEGAMIX. It does not imply that phrases of actual patterns are as shown in the diagram.*

Replacing phrases

* *MEGAMIX can be used both when a pattern is playing or stopped.*

1. **Press [PATTERN] to select Pattern mode.**
2. **Use [VALUE] to select a pattern.**
3. **Press [MEGAMIX] to select MEGAMIX mode.**
4. **Press [PART SELECT].**

   The part button of the currently selected part (current part) will light.
5. **Press the part button ([R] or [1]–[7]) of the part that you wish to replace, making it the current part.**
6. **Turn [VALUE] to select the pattern containing the performance data that you wish to use.**
7. **Press a part button [R] or [1]–[7] to select the part containing the performance data.**

   The part button of the current part will change from blinking to lit, and the part button of the selected part will blink.

   * *If you select the same part as the current part, the part button of the current part will blink.*
8. **Press [ENTER].**

   * *To cancel, press [ENTER].*

   The part button of the current part will remain lit, and the part button of the selected part will go dark.

   * *If you selected the same part as the current part in step 7, the part button of the current part will change from blinking to lit.*

The performance data of the selected part will be placed in the current part, and the performance will change when the currently-sounding pattern makes a complete cycle.

NOTE

It is not possible to perform MEGAMIX between part R and parts 1–7.

* *Even after you exit MEGAMIX mode, the state you created using MEGAMIX will be maintained until you select a different pattern. [MEGAMIX] will blink during this time.*

* *It is not possible to record a pattern in the state you created using MEGAMIX. If you wish to record, you must first save the pattern (see next page).*

* *The time signature and number of measures of the pattern that is played by MEGAMIX will depend on the time signature and number of measures of the Rhythm part. Also, the mute status of each part will be maintained during MEGAMIX.*

* *If you switch to a part that contains no performance data, that part will not play anything. In each of the preset patterns, part 1 contains no performance data (regardless of the pattern you select). For other parts as well, please be aware that the part you select may not necessarily contain performance data.*

Using D-FIELD for MEGAMIX

If D-FIELD function ASSIGN 1 is set to "PCL (Pattern Call)," entering MEGAMIX mode will let you use the eight areas of the D-FIELD to access the performance data assigned to each part.

For details refer to p. 30.

Saving the pattern you rearranged

When you have used MEGAMIX to create a pattern that you like, you can save it as a User Pattern. The saved pattern can be recalled during normal pattern playback, just as any other pattern.

NOTE

If you edit another pattern, switch to Song mode, or turn off the power without saving the pattern you recorded or edited, your edits will be lost.

* *You must stop pattern playback before saving the pattern.*

1. **Use MEGAMIX to create a pattern.**
2. **Press [■] to stop pattern playback.**
3. **Press [WRITE].**

   A screen will appear in which you can specify the save-destination pattern.

4. **Turn [VALUE] to specify the save-destination pattern.**

   The data will be saved in the pattern you specify here. Be careful not to specify the wrong pattern, since the pattern that was previously saved in this location will be erased.

5. **Press [ENTER].**

   The display will ask "SurE" (are you sure you want to proceed with the save?).

6. **To save the data, press [ENTER].**

* *To cancel without saving, press [EXIT].*

After the data has been saved, the save-destination pattern number will be displayed.

Tips when using MEGAMIX to create a pattern

If the patterns that you combine using MEGAMIX have different time signatures or a different number of measures, their playback may not be connected appropriately. When using MEGAMIX to combine patterns, it is best to combine patterns of the same number of measures and time signature.

When you use MEGAMIX to replace phrases within a pattern, the volume balance of the parts may change significantly, depending on the phrase that you replaced. In such cases, you should re-adjust the Part Level (p. 19) before you save the pattern.

Most of the preset patterns have the following part structure.

Part R	Drums
Part 1	For D-FIELD performance (contains no performance data)
Part 2	Bass
Parts 3–7	Chords, lead, other

Keeping the above structure in mind, you can replace part 2 when you wish to replace the bass, replace part R when you wish to replace the drums, and so on.

If you follow the above guidelines when creating user patterns as sell, it sill be easier to use your patterns with MEGAMIX.

NOTE

It is not possible to perform MEGAMIX between part R and parts 1–7.

Chapter 6. Creating an Original Pattern

Creating a pattern

Two methods of creating an original pattern are available: **realtime recording** (a method similar to recording on a tape recorder or MD recorder), and **step recording** (a method by which simple button operations are used to record the pattern).

* *If you edit another pattern, switch to Song mode, or turn off the power without saving the pattern you recorded or edited, your edits will be lost.* → "Saving a pattern" (*p. 20*)

Recording as you perform (Realtime Recording)

Here's how you can record your performance on the D2's D-FIELD controller or an external MIDI keyboard.

1. **Press [PATTERN] to enter Pattern mode.**
2. **Turn [VALUE] to select the number of the pattern that you wish to create, and press [ENTER].**
3. **Press [PART SELECT].**
4. **Press a part button [R] or [1]–[7] so that the part you wish to record is the current part.**

   The part being recorded can also be switched during recording.
5. **Select a patch.**

   → **Selecting a sound (Patch/Rhythm set)** (p. 18)
6. **Press [●].**

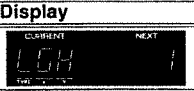
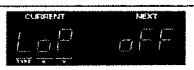
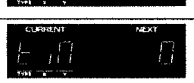
   [●] will light, and the D2 will be in REC STANDBY mode.

   
7. **Make settings for the pattern.**

   Press [ENTER] to select a parameter, and turn [VALUE] to set its value. Refer to "List of pattern settings."
8. **Press [►] to begin realtime recording.**

   Your performance, including operations on the D-FIELD will be recorded.
9. **To stop recording, press [■].**

List of pattern settings (common to both Realtime Recording and Step Recording)

Display	Parameter	Explanation	Setting
	LENGTH	Specify the length (number of measures) of the pattern.	1–32
	COUNT IN	Specify the number of measures in the count that will occur before recording. If this is "OFF," no count will occur. If this is "NTE," recording will start when you first operate the D-FIELD. (*1)	OFF, 1, 2, NTE (WAIT NOTE)
	LOOP REST	If this is ON, there will be a one-measure rest (blank) before playback resumes from the beginning of the pattern. This is convenient when you wish to prevent the end of the last measure of the phrase from being recorded onto the beginning of the first measure. (*1)	OFF, ON
	METRONOME	Specify whether the metronome will sound. If you want the metronome to sound during step recording, set this to "ALL."	OFF: The metronome will not sound. ALL: The metronome will sound all the time, regardless of the mode of operation. REC (REALTIME REC ONLY): The metronome will sound only during realtime recording. PLY (PLAY&REC): The metronome will sound during playback and during realtime recording.
	INPUT QUANTIZE TEMPLATE	This adjusts the recorded result so it is aligned with the template's timing. Specify the shortest note value that you will be performing. (*1)	OFF, notes (*2)
	INPUT QUANTIZE TIMING	Specify the degree of input quantization. Higher settings of this parameter will cause the timing to be corrected more precisely. (*1)	0–100

* *1 This parameter is valid only for realtime recording.*

* *2 32 (32th note), 16T (16th note triplets), 16 (16th note), 8T (8th note triplets), 8 (8th note), 4T (quarter note triplets), 4 (quarter note)*

The display during realtime recording

The CURRENT display will indicate the measure and beat being recorded. The NEXT display will indicate the number of measures in the entire pattern.

(Example) Measure 3, beat 2, pattern length is 8 measures

The current recording location (**grid line**) within the measure is also shown by the beat scan indicators.

D-FIELD functions that can be recorded in real time

Functions that can record sound

- [ADLIB]
- [ASSIGN 1 (AP1, AP2, PRV, PAD)]
- [SD ROLL]

Functions that can record effects

- [FILTER]
- [MFX]
- [X-FADER]
- [ASSIGN 2 (all except for QTE and EXT)]
- [ASSIGN 3 (PAN)]

Practice performing in recording mode (Rehearsal)

You can temporarily suspend recording without actually stopping realtime recording. This allows you to alternate between practicing and recording without having to actually start and stop recording.

1. **During realtime recording, press [●].**

   [●] will blink, and you will be in rehearsal mode. In this state, your performance will not be recorded.

2. **When you are finished practicing, press [●] once again.**

   [●] will light, and you will return to normal realtime recording mode.

Erasing unwanted data while recording (Realtime Erase)

Instances of a particular kind of data that occur within data you are playing back can be erased from the current part. Simply press the relevant button (see below) while holding down [EXIT (ERASE)].

Instances of the specified form of data that occur at the moments when you have the buttons pressed will be erased.

[EXIT]+[●]	All performance data will be erased.
[EXIT]+[EDIT]	Erase all control data etc.
[EXIT]+[NOTE NUMBER]	Notes of the selected note number will be erased.
[EXIT]+[VELOCITY]	All notes will be erased.
[EXIT]+external keyboard	Notes between the lowest and highest notes you pressed on the keyboard will be erased.

NOTE

If you wish to connect an external keyboard and record, turn Auto Channel (p. 77) to "ON."

Part editing while you record in real time

If you perform part edit (p. 19) operations during realtime recording, your editing operations will also be recorded.

By using this feature, you can reproduce changes in level and pan during pattern playback.

Inputting notes one by one (Step Recording)

1. **Press [PATTERN] to enter Pattern mode.**
2. **Turn [VALUE] to select the number of the pattern that you wish to create, and press [ENTER].**
3. **Press [PART SELECT].**
4. **Press a part button [R] or [1]–[7] to make the current part the part that you wish to record.**

   The part to be recorded can also be switched while recording.
5. **Press [●].**

   [●] will light, and the D2 will be in REC STANDBY mode.

6. **Make pattern settings.**

   Press [ENTER] to select the desired parameter, and turn [VALUE] to change its setting. Refer to the "List of pattern settings" (p. 60).
7. **Press [●] to begin step recording.**

   Input notes. Refer to "Inputting notes."
8. **To stop recording, press [■].**

NOTE

If you wish to connect an external keyboard and record, turn Auto Channel (p. 77) to "ON."

The display during step recording

The CURRENT display will indicate the measure and beat being recorded. The NEXT display will indicate the note number (pitch), velocity (strength), and duration (length) of the note (**event**) at the note input location (**grid line**).

(Example) Measure 2 beat 3, note pitch C4

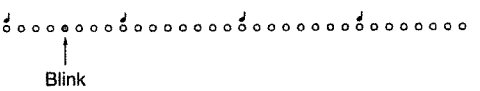
* *If the location of the event is between that grid line and the next, a dot will be displayed after the beat.*

* *If the grid line has no event, the NEXT display will indicate "—".*

When you press and hold [HOLD], the CURRENT display will indicate the location (tick) in 1/96th of a beat.

(Example) 7th tick of beat 3, note pitch E5

The grid line is also indicated by the beat scan indicator that is blinking.



How the note length is displayed

For notes that have already been input, both [NOTE TYPE] and [GATE TIME] will indicate the length (**duration**) of the sound.

The first digit of the NEXT display indicates the number of beats, and the second and third digits indicate the number of ticks that the sound will continue.

(Example) The first beat of the first measure is two beats and 35 ticks long

If the duration is longer than 9 beats and 95 ticks, the CURRENT display will also be used to indicate the duration.

(Example) 13 beats and 58 ticks

NOTE

Only notes specified by the REC FUNCTION [NOTE NUMBER] will be displayed.

Inputting notes

Changing the location at which to input notes

Turn [VALUE] to move to the next (previous) grid line.

Hold down [HOLD] and turn [VALUE] to move in steps of a tick.

When you reach the end of the measure, you will move to the next (previous) measure.

Specifying the note to input

Hold down a REC FUNCTION button [NOTE NUMBER]–[GATE TIME], and turn [VALUE], or move your finger horizontally on the D-FIELD to set the pitch/strength/length of the note that will be newly input.

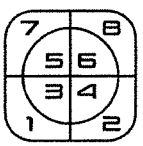
Operation	Function	Setting
[NOTE NUMBER]+[VALUE]	Specify the pitch of the note.	C–(C-1)–G9
[VELOCITY]+[VALUE]	Specify the strength (velocity) of the note.	1–127
[NOTE TYPE]+[VALUE]	Specify the time value of the note.	32, 16T, 16, 8T, 8, 4T, 4, 2, 1
[GATE TIME]+[VALUE]	Specify the length (gate time) that the note will be held.	5–200 (%)

* *1: 32 (32nd note), 16T (16th note triplets), 16 (16th note), 8T (8th note triplets), 8 (8th note), 4T (quarter note triplets), 4 (quarter note), 2 (half note), 1 (whole note)*

Note settings for the D-FIELD

Specify the note number, velocity, and gate time by moving your finger to left and right on the D-FIELD.

The type of note can be specified by pressing the eight areas of the D-FIELD.



No.	Notes
1	32 (32nd note)
2	16T (16th note triplets)
3	16 (16th note)
4	8T (8th note triplets)
5	8 (8th note)
6	4T (quarter note triplets)
7	4 (quarter note)
8	2 (half note)

Inputting/erasing notes

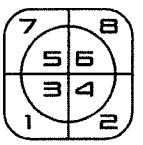
When you press [ENTER], the note you specified using the REC FUNCTION buttons will be input at the current tick.

If you press [EXIT (ERASE)], the note at the current tick will be erased.

* *Only notes specified by the REC FUNCTION [NOTE NUMBER] will be displayed.*

Using the D-FIELD to enter notes

During step recording, you can press the eight areas of the D-FIELD to record efficiently.



No.	Function	Explanation
1	REST	Input a rest at the current tick and advance to the next tick.
2	ENTER	Input a note at the current tick and advance to the next tick.
3	ERASE	Erase the note at the current tick.
4	TIE	Extend the length of the most-recently input note by the amount of the current REC FUNCTION setting.
5	PREV NOTE	Move to the note of the same note number located immediately before the current tick.
6	NEXT NOTE	More to the note of the same note number located immediately after the current tick.
7	SEARCH BWD	Move to the note located immediately before the current tick, regardless of the note number.
8	SEARCH FWD	Move to the note located immediately after the current tick, regardless of the note number.

Part editing while carrying out step recording

If you perform part edit operations during step recording, the part settings will be modified, but the edit operations will not be recorded.

Modifying a note that you input (Note Edit)

You can modify the pitch, strength, and length of an already-entered note.

1. **During step recording, turn [VALUE] or use the D-FIELD to move to the location of the note that you wish to edit (p. 63).**
2. **Hold down one of the REC FUNCTION buttons [NOTE NUMBER]–[GATE TIME], and press [EDIT].**
   The REC FUNCTION button that you pressed will blink, and you will be in Note Edit mode.
3. **Turn [VALUE] to modify the value.**
4. **By pressing another REC FUNCTION button other than the one that is currently blinking, you can modify its parameter.**
5. **Repeat steps 3 and 4 to edit the note.**
6. **When you are finished with note editing, press [ENTER] or [EDIT].**
   The REC FUNCTION button will change from blinking to lit.

HINT

By using REC FUNCTION [NOTE NUMBER] to switch pitches, you can independently edit each note of a chord.

NOTE

For notes that are between two grid lines, the beat scan indicator of the preceding grid line will light (or blink), but if you press [EDIT] on that grid line, the display will indicate "noEdit." In this case, use the D-FIELD 5–8 functions (p. 63) to select the note.

Adjusting the location of a previously input note

You can move the location of a previously input note (Move Note), or copy it to a different location (Copy Note).

1. **During step recording, turn [VALUE] or use the D-FIELD to move to the location of the note that you wish to move (copy).**
2. **Press [EDIT].**
3. **Turn [VALUE] to select whether the note will be moved or copied.**

Move the note.

Copy the note.

4. **Press [ENTER].**
   The grid-setting screen will appear.
   (Example) 86th tick of beat 2, 1st measure

5. **Turn [VALUE] to specify the location that you wish to move (copy).**
   By holding down [DISPLAY] and turning [VALUE], you can specify the location in grid units.
   By holding down [EXIT] and turning [VALUE] you can specify this in beat units.
6. **When you have specified the location, press [ENTER].**
   The display will ask "SurE" (are you sure you want to move or copy?).

7. **To execute the move (copy) operation, press [ENTER].**

* *If you press [EXIT] during steps 3–7, you will return to the previous screen.*

NOTE

For notes that are between two grid lines, the beat scan indicator of the proceeding grid line will light (or blink), but if you press [EDIT] on that grid line, the display will indicate "noEdit." In this case, use the D-FIELD 5–8 functions (p. 63) to select the note.

Editing a pattern (Pattern Edit)

The process of editing the performance data of a pattern in measure units is called Pattern Editing. By editing the performance data in a pattern, or by combining various patterns, you can create a completely new pattern.

* *In order to perform pattern editing, you must stop the pattern.*

NOTE

The pattern data that you create by editing will be lost if you simply turn off the power. If you wish to keep the pattern that you create, you must perform the Pattern Write operation.

–> "Saving a pattern" (p. 20)

Pattern Initialize

This operation initialized a user pattern to a state of containing no musical data.

1. **Turn [VALUE] to select a pattern that you wish to initialize.**
2. **Hold down [EXIT] and press [PATTERN].**

   The display will ask "SurE" (are you sure you want to initialize?)

3. **To execute, press [ENTER].**

* *To cancel without executing, press [EXIT].*

Basic procedure for pattern editing

1. **Press [PATTERN] to enter Pattern mode.**
2. **Turn [VALUE] to select the pattern that you wish to edit.**
3. **Press [EDIT].**

4. **Turn [VALUE] to select the desired editing function.**
5. **Use [ENTER] and [EXIT] to select the desired parameter.**

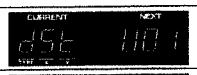
   Press [ENTER] to advance to the next parameter, or press [EXIT] to go back.
6. **Turn [VALUE] to specify the desired value.**
7. **Repeat steps 5–6 to continue editing.**
8. **When you are finished setting the last parameter, the display will ask "SurE" (are you sure you want to proceed?).**

9. **To execute, press [ENTER].**

* *To stop editing, press [■].*

Copying a pattern (Pattern Copy)

This operation copies a pattern to a different pattern.

Display	Parameter	Explanation	Setting
	SOURCE	Select the data that you wish to copy. * *Press the part button [R] or [1]–[7] of the part whose data you wish to erase, getting its indicator to light.*	ALL: all performance data, PHRASE: only note data, SETUP: only setup parameters (p. 20)
	TOP/END	Specify the range of measures that will be copied. The CURRENT display will indicate the first measure to be copied, and the NEXT display will indicate the last measure to be copied. * *This will not be displayed if Source is "SETUP."*	001–END
	DESTINATION	Specify the copy-destination pattern.	A01–U00
	MEASURE	Specify the number of the measure in the copy-destination pattern to which the data will be copied.	001–END
	TIMES	Specify the number of times that the data will be copied.	1–32 (maximum)
	MODE	Specify whether the data at the copy destination will be replaced by the copy-source data, or will be mixed with the copy-source data.	REPLACE, MIX

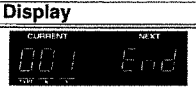
* *The copy destination part can be specified only if the copy source part is a single part. If the copy source consists of two or more parts, each will be copied to the same part.*
* *If you are copying the data of a part to another part within the same pattern, you can select only one part at a time.*

NOTE

It is not possible to copy between part R and parts 1–7.

Erasing unwanted data (Erase)

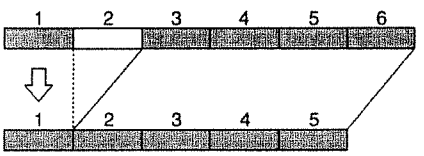
This operation erases part (or all) of the data in a pattern.

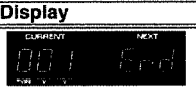
Display	Explanation	Setting
	Specify the range of measures that will be erased. The CURRENT display indicates the first measure, and the NEXT display indicates the last measure.	001–END

Press the part button [R] or [1]–[7] of the part whose data you wish to erase, getting its indicator to light.

Deleting unwanted measures (Delete Measure)

This operation deletes unwanted measures from a pattern, bringing the previous and subsequent measures together. If the pattern contains data following the deleted range, the performance data for that part will become shorter by the number of measures that were deleted. If you specified that the deletion be performed on all parts, this operation will shorten the pattern itself.

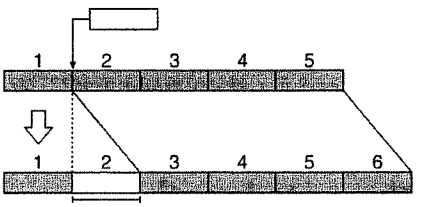


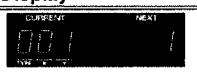
Display	Explanation	Setting
	Specify the range of measures that will be deleted. The CURRENT display indicates the first measure, and the NEXT display indicates the last measure.	001–END

Press the part button [R] or [1]–[7] of the part whose measure you wish to delete, getting its indicator to light.

Inserting blank measures (Insert Measure)

This operation inserts blank measures between the specified measure of the pattern and the next measure. If you want to add a performance in the middle of a pattern, you can use this operation to insert one or more blank measures, and then record the additional performance. The time signature of the inserted measure(s) will be the same as the time signature that precedes the inserted location.

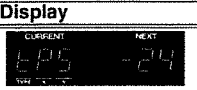


Display	Explanation	Setting
	CURRENT display: Specify the measure at which the blank measure(s) will be inserted. * *For the example shown above, select step 2.*	001–END
	NEXT display: Specify the number of measures that will be inserted. * *It is not possible to specify a number that would cause the pattern to be longer than 32 measures after insertion.*	1–32

Press the part button [R] or [1]–[7] of the part you wish to insert measure, getting its indicator to light.

Shifting the pitch (Transpose)

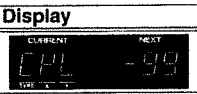
This operation shifts the note numbers (pitch) of a part in the pattern. You can transpose in a +/-2 octave range.

Display	Explanation	Setting
	Specify the amount of transposition. Each increase (decrease) of 1 will raise (lower) the pitch by a semitone.	-24–0–24

Press the part button [R] or [1]–[7] of the part that you wish to transpose, getting its indicator to light.

Changing the strength of the notes (Change Velocity)

This operation changes the velocity (strength) of the notes recorded in the pattern. Higher settings will cause the notes to be played more strongly. Use this when you want to make the notes stronger or weaker.

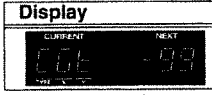
Display	Explanation	Setting
	Specify the amount of the change in velocity.	-99–0–99

Press the part button [R] or [1]–[7] of the part whose velocity you wish to change, getting its indicator to light.

* *If this operation would result in a velocity greater than 127 (or less than 1), that velocity will be converted to 127 (or 1).*

Changing the note length (Change Gate Time)

This operation changes the gate time (duration that the note is held) of the notes recorded in the pattern. Use this when you want to make the entire performance more staccato or tenuto.

Display	Explanation	Setting
	Specify the amount of change in gate time.	-99–0–99

Press the part button [R] or [1]–[7] of the part whose gate time you wish to change, getting its indicator to light.

Make fine adjustments in timing (Shift Clock)

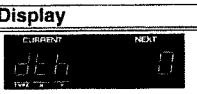
Using this operation, the timing of the performance data recorded in the pattern can be shifted forward or backward in units of one clock (1/96th of a beat). Use this when you wish to move the entire performance slightly forward or backward.

Display	Explanation	Setting
	Specify the shift clock amount.	-99–0–99

Press the part button [R] or [1]–[7] of the part whose timing you wish to change, getting its indicator to light.

Thinning out unnecessary data (Data Thin)

Since data such as Pitch Bend and Control Change typically has a continuously changing value, it can occupy an unexpectedly large amount of memory. The Data Thin operation thins out such data to reduce the amount of the data without affecting the audible result. This lets you make more efficient use of internal memory.

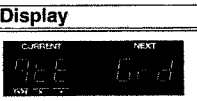
Display	Explanation	Setting
	Specify the amount by which the data will be thinned.	0–99

Press the part button [R] or [1]–[7] of the part whose data you wish to thin, getting its indicator to light.

Creating a quantized pattern (Edit Quantize)

This operation modifies the actual performance data of the pattern so it is aligned with the timing produced by the Quantize operation (p. 37).

The normal Quantize operation does not modify the contents of the performance data; it merely adjusts the timing at which the pattern data is played back. Through the use of Edit Quantize, you can create data that incorporates the result of quantization.

Display	Explanation
	Apply the quantization settings. * *You must first set Quantize (p. 37) to either GRID, SHUFFLE, or GROOVE. (If one of these are not selected, the data will not be modified.) Edit Quantize will be performed with this setting.*

Press the part button [R] or [1]–[7] of the part that you wish to quantize, getting its indicator to light.

Saving a pattern

When you have created a pattern that you like, you should save that pattern as a user pattern.

For details on saving, refer to p. 20.

NOTE

If you edit another pattern, switch to Song mode, or turn off the power without saving the pattern you recorded or edited, your edits will be lost.

Chapter 7. Playing and Creating Songs

Playing a song

A song consists of two or more patterns connected in the desired order of playback.

When you play back a song, the patterns will be selected automatically in the specified order, so you do not need to select them yourself. For each song, you can register up to 50 patterns in the desired order of playback.

1. **Press [SONG] to enter Song mode.**

   The number of the currently selected song will appear in the NEXT display.

2. **Turn [VALUE] to select the song that you wish to play.**

3. **When you press [▶], the song will begin playing.**

   When the song begins playing, the displays will indicate the current pattern and next pattern in the same way as when patterns are played back. The BPM can also be adjusted in the same way as when playing patterns.
   –> **Changing the BPM (tempo)** (p. 16)

4. **Press [■] to stop song playback.**

<Cautions for song playback>

Songs do not actually contain the musical data of the patterns; they contain only the order in which the patterns are to be played back. This means that if you modify a pattern that has been registered in a song, the playback of the song will also be affected. If you delete all of the musical data of the pattern, playback will stop at the moment that pattern is selected.

<Fast-forward and rewind>

Each time you press the [▶▶] button, the cursor moves to the beginning of the next pattern.

Each time you press the [◀◀] button, the cursor moves to the beginning of the previous pattern.

Press [■] button while the song is stopped to return to the beginning.

<Step and pattern number display during playback>

1. **Press [ENTER] during song playback.**

   The CURRENT display will indicate the currently playing step, and the NEXT display will show its pattern number.

2. **Press either [ENTER] or [EXIT].**

   You are returned to the previous screen.

* *This screen will also appear when you use [◀◀][▶▶] to move between steps.*

<Displaying the pattern number, measure, and beat during playback>

1. **Press [▶] during song playback.**

   The CURRENT display will show the currently-playing pattern number, and the NEXT display will show the measure and beat.

2. **Release your finger from [▶].**

   You are returned to the previous screen.

Creating a song (Song Recording)

You can input patterns one by one to specify the order in which the patterns will be played back. The playback order of the patterns is indicated by a number called the **step**.

1. **Press [SONG] to enter Song mode.**
2. **Turn [VALUE] to select the song number that you wish to create.**
3. **Press [●].**

   [●] will light, and the D2 will be in SONG REC mode.

4. **Turn [VALUE] to select the pattern that will play back for this step.**

5. **As necessary, edit the setup parameters (p. 20) such as the mute and patch setting of each part.**
6. **Press [ENTER] to proceed to the next step.**

7. **Repeat steps 4–6 to input the pattern for the second and subsequent steps.**
8. **After you have input the last step, press [■] to end the procedure.**

<Auditioning a pattern>

During recording, you can select a pattern and press [►] to audition that pattern.

<Modifying and registering setup parameters>

If you have modified setup parameters (p. 20) such as part mute and effect settings during song recording, you can press [ENTER] to register the modified state of these settings. This merely registers the pattern setup parameters as song data, and does not affect the original patterns.

You can use this function to change the mute settings or MFX type of a pattern, or to make a song in which a pattern develops gradually.

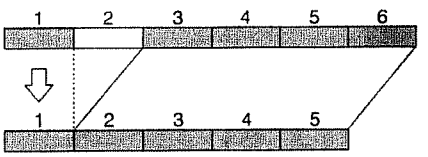
<Editing a step>

After recording several steps, you can use [◄◄][►►] in SONG REC mode to move between steps.

- Tempo (BPM) can be input/edited only for the first step.
- Tempo cannot be changed during the song.

Deleting an unwanted step (Step Delete)

You can delete an unwanted step from a song, joining the prior and subsequent portions of the song.



1. **Press [SONG] to select Song mode.**
2. **Turn [VALUE] to select the song from which you wish to delete a step.**
3. **Press [●].**

   [●] will light, and the D2 will enter SONG REC mode.
4. **Press [◄◄][►►] to display the step that you wish to delete.**
5. **Press [EDIT] to make the following display appear.**

6. **Press [ENTER].**

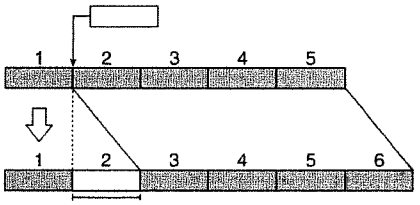
   The display will ask "SurE" (are you sure you want to proceed with the deletion?).

7. **To delete the step, press [ENTER].**

   * *To cancel the operation, press [EXIT].*
8. **Press [■] to return to the normal song mode.**

Inserting a step (Step Insert)

You can insert a step into the middle of a song, causing subsequent steps to be moved back by one step.



1. **Press [SONG] to enter Song mode.**
2. **Turn [VALUE] to select the song into which you wish to insert a step.**
3. **Press [●].**

   [●] will light, and the D2 will enter SONG REC mode.
4. **Use [◄◄][►►] to display the step at which you wish to insert a pattern.**

   For the example shown above, select step 2.
5. **Press [EDIT].**
6. **Turn [VALUE] to make the following display appear.**

7. **Press [ENTER].**

   The display will ask "SurE" (are you sure you want to proceed with the insertion?).

8. **To insert the step, [ENTER].**

   * *To cancel the operation, press [EXIT].*
9. **Turn [VALUE] to select patterns, or edit setup parameters (p. 20).**
10. **Press [■] to return to the normal song mode.**

Editing a song (Song Edit)

* *You must stop song playback before editing a song.*

Erasing a song (Song Clear)

When this operation is executed, all the steps you input will be set to an empty state. This is convenient when you wish to create a song from scratch.

1. **Press [SONG] to enter Song mode.**
2. **Turn [VALUE] to select the song whose steps you wish to clear.**
3. **Press [EDIT].**

   The display will indicate "SnG CLr."

4. **Press [ENTER].**

   The display will ask "SurE" (are you sure you want to proceed with the clear?).

5. **To clear the steps, press [ENTER].**

   * *To cancel the operation, press [EXIT].*

Copying a song (Song Copy)

This operation copies the song data to a different song.

1. **Press [SONG] to enter Song mode.**
2. **Turn [VALUE] to select the copy-source song.**
3. **Press [EDIT].**
4. **Turn [VALUE] to make the display read "SnG CPy."**

5. **Press [ENTER].**

   A screen will appear in which you can specify the copy-destination song.

6. **Turn [VALUE] to select the copy-destination song.**

   The song will be copied to the number you select here. Be aware that the song that was previously saved at this number will be erased.

7. **Press [ENTER].**

   The display will ask "SurE" (are you sure you want to proceed with the copy?).

8. **To execute the copy operation, press [ENTER].**

* *To cancel the operation, press [EXIT].*

Saving a song

When you have created a song that you like, you should save that song as a user song.

If you wish to save the song with the changes you made, use the following procedure to save it.

1. **Press [SONG] to enter Song mode.**
2. **Press [WRITE].**

   A screen will appear in which you can specify the save-destination song.

3. **Turn [VALUE] to select the save-destination song.**

   The song will be saved into the number you select here. Be aware that the song that was previously saved at this number will be erased.

4. **Press [ENTER].**

   The display will ask "SurE" (are you sure you want to carry out the save?).

5. **To save the song, press [ENTER].**

* *To cancel the operation, press [EXIT].*

MEMO

The edited song will be remembered until you turn the power off.

Chapter 8. System Settings and MIDI Applications

Making system settings (System)

Here you can make settings that affect the operation of the entire D2, such as tuning and the synchronization method.

* *It is not possible to enter these set-up screens while a pattern or song is being played back.*

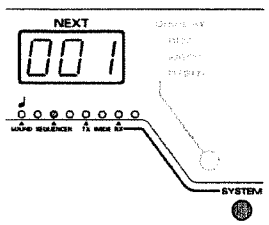
MEMO

System setting parameters are saved to internal memory when you move to another screen by pressing [EXIT] (or in some other way). These settings will still be in effect the next time the power of the D2 is turned on.

1. Press [SYSTEM] to enter System Edit mode.

Each time you press [SYSTEM], you will cycle through "Sound generator settings" → "Sequencer settings" → "MIDI transmission settings" → "MIDI reception settings."

* *The beat scan display indicators below the NEXT display will blink to indicate the settings that you are making.*



2. Press [ENTER] to select the parameter that you wish to set.

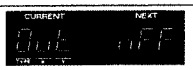
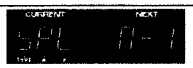
3. Turn [VALUE] to modify the setting.

4. When you are finished, press [EXIT].

Sound generator settings

Indication	Parameter	Explanation	Values
	MASTER TUNE	For tuning the sound generator. The displayed value is the frequency of the A4 note.	27.4 (427.4)–40.0 (440.0)–52.6 (452.6) (Hz)
	SD ROLL NOTE NUMBER	Select the instrument that will be rolled by SD ROLL in D-FIELD. Within the rhythm set that is selected for part R of the current pattern, the instrument having the note number you specify here will be sounded. –> Preset Rhythm Set List (p. 86)	35–98
	RESONANCE LIMITER RHYTHM	Determines the maximum resonance value for the rhythm part. Higher settings of this value will increase the range of change.	50–127
	RESONANCE LIMITER NORMAL	Determines the maximum resonance value for parts 1–7. Higher settings of this value will increase the range of change.	50–127

Sequencer settings

Indication	Parameter	Explanation	Values
	SYNC MODE	Specifies how the internal sequencer will operate and how MIDI Clock messages will be transmitted and received.	INT: The internal sequencer will synchronize to the internal tempo clock. Any MIDI Clock messages received from an external device will be ignored. REMOTE: Operation will be essentially the same as "INT." However, Start/Stop messages from the external MIDI device will control playback/stop for the internal sequencer. SLAVE: The internal sequencer will synchronize to MIDI Clock messages received from an external device. If no MIDI Clock messages are being received, pattern/song playback will not occur even if you press the [▶] button.
	SYNC OUT	Determines whether synchronization-related MIDI messages will be transmitted. When this is on, the following messages will be transmitted from the MIDI OUT connector. * *If the SYNC MODE is set to "SLAVE," it will not be possible to set SYNC OUT to "ON."* * *If "VINYL" is selected as the D-FIELD function, Timing Clock (F8) and Song Position Pointer (F2) will not be output even if you set SYNC OUT to "ON."*	OFF: Messages will not be transmitted. ON: The following messages will be transmitted from the MIDI OUT connector. •Timing clock: F8 •Start: FA •Continue: FB •Stop: FC •Song Position Pointer: F2
	SONG LOOP MODE	Specifies how songs will be played back. You can cause the same song to be played back repeatedly, or all songs to be played back in sequence.	OFF: This is the normal condition. The currently selected song will be played back only once. LOOP1: The currently selected song will be played back repeatedly. ALL: All songs will be played back repeatedly in sequence. * *When using "ALL" to playback a song, we recommend that a pattern which mutes all parts (i.e., a silent pattern) be inserted at the end of the song, so that songs are joined smoothly.*
	SONG PLAY MODE	Specifies whether or not the pattern setup parameters will be loaded when you move to the next step of the song.	MODE1: The setup parameters, mute, and realtime modify settings will be loaded each time you move to the next step. MODE2: Setup parameters, mute, and realtime modify will be maintained during playback only if the next step plays a pattern that is the same as the currently playing pattern.

Indication	Parameter	Explanation	Values
	RPS TRIGGER QUANTIZE	When using RPS during pattern playback, patterns and phrases may not play back in precise alignment, depending on the timing at which you press the D-FIELD. On the D2 you can specify the playback timing of the phrase, so it will play back in precise synchronization with the pattern. * *Except when this parameter is set to "OFF," pressing on the D-FIELD slightly before the actual desired timing will help you synchronize the phrase to the pattern.*	OFF: The phrase will play back immediately, at the timing at which you pressed D-FIELD. 16, 8, 4: The pattern will be divided into selected note units, and when you press the D-FIELD, the phrase will begin playing at the beginning of the next note unit. MES: The pattern will be divided into one-measure units, and when you press the D-FIELD, the phrase will begin playing at the beginning of the next measure. * *If the pattern is stopped, the phrase will play back immediately, regardless of the setting that is selected in the above procedure.*
	TURNTABLE TOP	When the D-FIELD function is VINYL (TTE or SR1), this setting specifies whether the pattern will return to the beginning when you release your finger.	OFF, ON
	D-FIELD BPM SW	When the D-FIELD function is VINYL (TTE), this setting specifies whether the BPM will change according to the speed at which you move your finger in a circle.	OFF, ON
	D-FIELD PITCH SW	When the D-FIELD function is VINYL (TTE or MAN), this setting specifies whether the pitch will change according to the speed at which you move your finger in a circle.	OFF, ON
	D-FIELD LEVEL SW	When the D-FIELD function is VINYL (TTE or MAN) or SD ROLL, this setting specifies whether the volume will change according to the size of the circle in which you move your finger.	OFF, ON

MIDI transmission settings

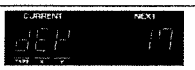
Indication	Parameter	Explanation	Values
	TX MODE (transmit mode)	Specifies the types of MIDI message that will be transmitted. At the factory settings, this is set to "MODE1." When using a MIDI connection to a D2, MC-307, MC-505, or JX-305, setting this to MODE2 will reduce the amount of data transmitted and received, in comparison to MODE1. * *For the controller numbers that are switched by MODE1 and MODE2, refer to "Table of transmitted data" on this page.*	MODE1, MODE2
	TX BULK (bulk transmit)	Internal settings and the data of the current pattern can be transmitted as a group for storage on an external device. For details refer to p. 81.	OFF: Data will not be transmitted. PTN: Data of the current pattern will be transmitted. ALL: All data will be transmitted.

Table of Transmitted Data

	Parameter	EDIT TX/RX		Value
		MODE1 (Default)	MODE2	
PITCH	COARSE TUNE	EXCLUSIVE	CC#21	16 - 112 Center=64)
	FINE TUNE	CC#77	CC#77	14 - 114 (Center=64)
FILTER	FILTER TYPE	EXCLUSIVE	CC#34	0 - 4
	CUTOFF	CC#74	CC#74	0 - 127
	RESONANCE	CC#71	CC#71	0 - 127
AMPLIFIER	TONE LEVEL	EXCLUSIVE	CC#36	0 - 127
	TONE PAN	EXCLUSIVE	CC#35	0 - 127 (Center=64)
	RND PAN	EXCLUSIVE	CC#37	0 (OFF), 63 (ON)
P-ENVELOPE	DEPTH	EXCLUSIVE	CC#25	52 - 76 (Center=64)
	A	EXCLUSIVE	CC#26	0 - 127
	D	EXCLUSIVE	CC#27	0 - 127
	S	EXCLUSIVE	CC#39	1 - 127 (Center=64)
	R	EXCLUSIVE	CC#40	0 - 127
F-ENVELOPE	DEPTH	CC#81	CC#81	1 - 127 (Center=64)
	A	CC#82	CC#82	0 - 127
	D	CC#83	CC#83	0 - 127
	S	EXCLUSIVE	CC#28	0 - 127
	R	EXCLUSIVE	CC#29	0 - 127
A-ENVELOPE	A	CC#73	CC#73	0 - 127
	D	CC#75	CC#75	0 - 127
	S	EXCLUSIVE	CC#31	0 - 127
	R	CC#72	CC#72	0 - 127
LFO1	WAVEFORM	EXCLUSIVE	CC#15	0 - 7
	RATE	CC#16	CC#16	0 - 127
	P-DEPTH	CC#18	CC#18	1 - 127 (Center=64)
	F-DEPTH	CC#19	CC#19	1 - 127 (Center=64)
	A-DEPTH	CC#80	CC#80	1 - 127 (Center=64)
PORTAMENTO	SW	CC#65	CC#65	0 - 63 (OFF), 64 - 127 (ON)
	TIME	CC#5	CC#5	0 - 127
	SOLO	CC#126/127	CC#126/127	126=1 (ON), 127=0 (OFF)
PART MIXER	LEVEL	CC#7	CC#7	0 - 127
	PAN	CC#10	CC#10	0 - 127 (Center=64)
	KEY SHIFT	EXCLUSIVE	CC#85	16 - 112 (Center=64)
	REVERB	CC#91	CC#91	0 - 127
	DELAY	CC#94	CC#94	0 - 127
	MFX SW	EXCLUSIVE	CC#86	0 (OFF), 1 (ON), 4 (RHY)

* *If this parameter is changed while a pattern is playing, the data recorded in the sequencer will stop being transmitted to the sound generator. (This is because panel operations take priority for producing sounds.) This state will continue until a different pattern is recalled.*

MIDI reception settings

Indication	Parameter	Explanation	Values
	AUTO CHANNEL	Determines how MIDI messages will be received from external MIDI devices. * *At the factory settings this is set to "OFF."* * *Set this "OFF" if you want note messages of the channel specified as the Arpeggio Control Channel or RPS Control Channel to control arpeggios or RPS from an external device.*	OFF: The patches of each part can be played independently according to the channel of the MIDI data transmitted from an external MIDI device. ON: The patch of the part selected on the D2 can be played, regardless of the transmit channel of the external MIDI device.
	ARPEGGIO CTRL CH (arpeggio control channel)	Specifies the channel on which note messages from an external MIDI device will control arpeggios when Auto Channel is "OFF." When note messages of the specified channel are received from an external MIDI device, an arpeggio can be generated according to that note data, and will sound the current part. At the factory settings this is set to "16." * *This setting is ignored if Auto Channel is "ON."*	OFF, 1–16
	RPS CTRL CH (RPS control channel)	Specifies the channel on which note messages from an external MIDI device will control RPS when Auto CHANNEL is "OFF." RPS can be played by receiving note messages on the specified channel. At the factory settings this is set to "15." * *This setting is ignored if Auto Channel is "ON."*	OFF, 1–16
	RX SYSEX (receive system exclusive)	Determines whether the D2 will receive system exclusive messages. When this setting is "OFF," system exclusive messages will not be received.	OFF, ON
	SOFT THRU	If this is "ON," MIDI messages received at the MIDI IN connector will be re-transmitted without change from the MIDI OUT connector.	OFF, ON
	DEVICE ID (device ID number)	This setting is necessary only if data is being transmitted separately to two or more D2 units. Otherwise, you should not change this setting. At the factory settings, the device ID number is set to "17." * *If you forget the device ID that was used when bulk data was saved on an external device, it will no longer be possible to receive the saved bulk data.*	17–32
	RX BULK (bulk receive)	Data that was saved on an external device can be sent back to the D2. For details refer to p. 81.	OFF: Data will not be received. PTN: Data of the current pattern will be received. ALL: All data will be received.

Advanced Operation Using MIDI

About MIDI

The D2 records and plays back MIDI musical data, and when MIDI musical data is received its sound generator will produce sound.

MIDI (Musical Instrument Digital Interface) is a standard specification that allows musical data to be exchanged between electronic musical instruments and computers. Devices that have a MIDI connector can be connected using a MIDI cable, allowing them to transmit and receive data. Today, MIDI is found on virtually all electronic musical instruments. Without MIDI, it would not be possible to use an external keyboard to play the D2, or to use the D2 to record and play back a performance played on an external keyboard. Although you can use the D2 without knowing much at all about MIDI, you might also want to take full advantage of the possibilities offered by electronic musical instruments. This chapter will provide a simple explanation of the D2's MIDI-related functionality.

About MIDI connectors

The D2 has two kinds of MIDI connectors.

- MIDI OUT Connectors
  These connectors transmit MIDI messages to external MIDI devices. These can also be used as connectors from which data received from the MIDI IN connector are directly transmitted. (Refer to **SOFT THRU** (p. 77).)
- MIDI IN Connectors
  Performance messages from an external MIDI device are received here. The D2 can receive these messages to play notes or select sounds, etc.

MIDI Channels

MIDI is able to transmit 16 parts of independent musical data over a single MIDI cable. This is made possible by the concept of "MIDI channels." MIDI channels allow messages intended for a given instrument to be distinguished from messages intended for another instrument. There are sixteen MIDI channels (1–16), and normally the transmitting device must be set to the same MIDI channel as the receiving device in order for messages to be received.

With the factory settings, the D2's AUTO CHANNEL setting is ON. (p. 77) In this condition, an external MIDI keyboard will be able to play the patch of the current part, regardless of its transmit channel setting.

* *The transmit/receive channel settings of each part are as follows. It is not possible to change the channel settings of each part.*

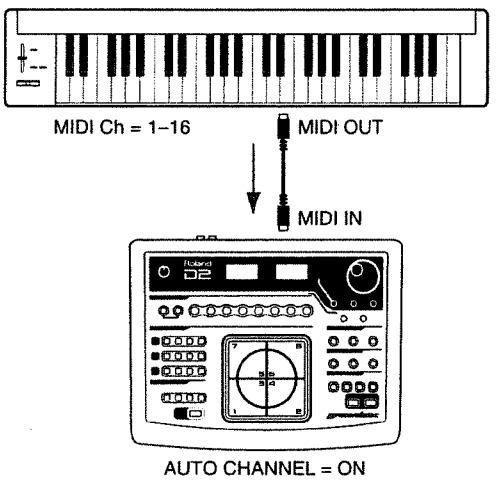
Rhythm part	Ch. 10
Part 1	Ch. 1
Part 2	Ch. 2
Part 3	Ch. 3
Part 4	Ch. 4
Part 5	Ch. 5
Part 6	Ch. 6
Part 7	Ch. 7
RPS (factory setting)	Ch. 15
Arpeggiator (factory setting)	Ch. 16

Using the D2 together with an external MIDI device

Using an external MIDI keyboard to record on the D2

Use these settings when you wish to perform on an external MIDI keyboard and record on the D2.

Set the Auto Channel to "ON" (p. 77).



With this setting, the part selected on the D2 will be the recording part (regardless of which channel is used for transmission by the external MIDI keyboard).

Using the D2 as a sound module for an external MIDI sequencer

Set the Auto Channel to "OFF" (p. 77). (At the factory settings, this is "OFF.")

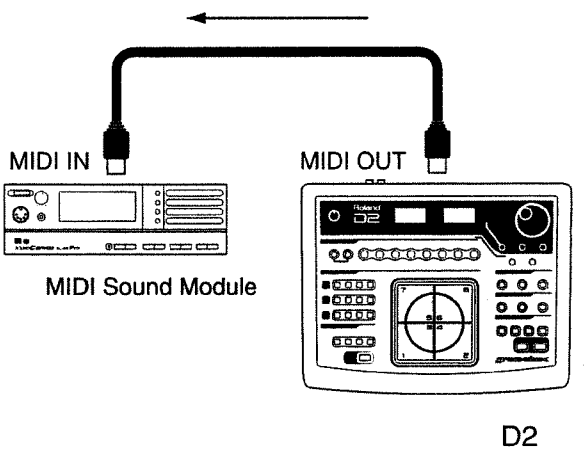
With this setting, the D2 can receive multiple channels of MIDI data and sound them simultaneously.

Set the transmit channel of the external MIDI sequencer to match the receive channel of the D2 part that you wish to play. For example if you wish to play part 2, set the transmit channel of the external MIDI sequencer to "2," since the receive channel of part 2 is "2."

Playing an external MIDI device using the D2

The D2 can transmit D-FIELD operations from its MIDI OUT connector. Recordings in the respective parts of the D2 can also be transmitted to an external device. In such transmission, MIDI channels 10 and 1 to 7 are assigned to data in parts R and 1 to 7, in this order.

Setting the external MIDI sound module channel, the receiving channel, to one of channels 10 and 1 to 7 enables playback on the external MIDI device.



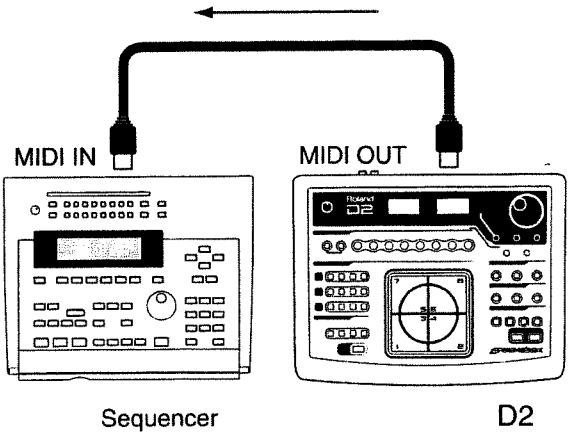
1. **Set the MIDI channel of the external sound module to one of channels 10 and 1 to 7.**
2. **Play back the data on the D2 by pressing [►] or using the D-FIELD.**

Synchronization with an External MIDI Device

Timing of the D2's sequencer can be synchronized with that of another sequencer for playback. This feature enables large-scale performance playing back a number of parts at the same time.

Making an external MIDI sequencer synchronized with playback on the D2

Now, let's make D2's patterns synchronized with an external MIDI sequencer. (In this example, the external MIDI sound generator is played back using the MIDI data from the external MIDI sequencer.)



Set up the D2

1. **Set SYNC OUT to "ON" (p. 74).**

   This setting enables synchronizing signals to be transmitted from the D2's MIDI OUT.

2. **Set the sequence output assignment for all parts of the pattern to be used to "INT" (p. 19).**

   This setting enables the D2 to output only MIDI clocks and start/stop information from the MIDI OUT connector.

Set up the external sequencer

3. **Set the external MIDI sequencer so it will synchronize to the MIDI Clock messages that it receives.**

   For details on the setting, refer to the owner's manual for your MIDI sequencer.

Start synchronized playback.

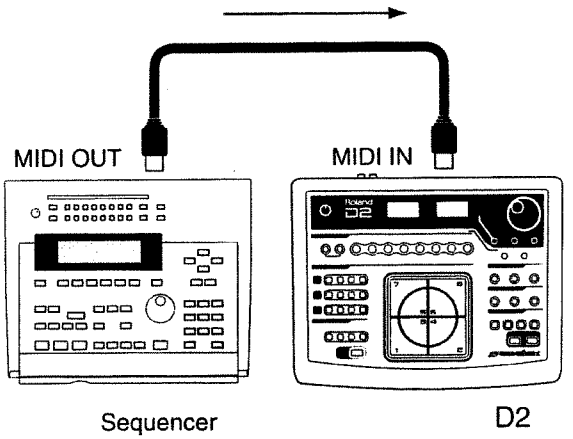
4. **Press the [►] button of the D2, and synchronized playback will begin.**

5. **To stop synchronized playback, press [■] button on the D2.**

   The external MIDI sequencer will also stop.

Making the D2 synchronized with performance on an external sequencer.

The playback of the D2's sequencer can be synchronized to the MIDI Clock messages transmitted from an external MIDI sequencer or from a hard disk recorder (optional). In the following example, we will synchronize the D2 pattern playback to an external source of timing.



Set up the D2.

1. **Set SYNC MODE to "SLAVE" (p. 74).**

2. **Press the [■] button on the D2.**

   Returns to the beginning of pattern.

Set up the external sequencer.

3. **Set up so that MIDI clocks are transmitted from the external MIDI sequencer.**

   For details on the setting, refer to the owner's manual for your external MIDI sequencer.

Start synchronized playback.

4. **Press the [PLAY] button of the external MIDI sequencer, and synchronized playback will begin.**

5. **To stop synchronized playback, press [STOP] button on the external sequencer.**

* *As required, set up to block transmission of playback information from the external device to the D2. (Or, set MIDI channels 1 to 7 and 10, corresponding to those used on the D2, not to be used for data transmission.) Otherwise, the D2 performs playback with playback information from the external device. For details, see the operation manual of the external MIDI device.*

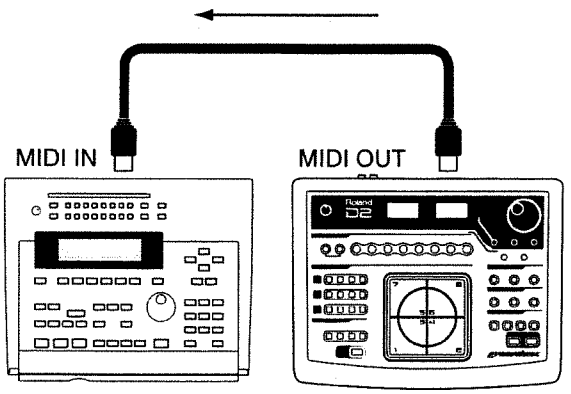
* *It is also possible to control playback/stop operations only without synchronization with MIDI clocks transmitted from the external MIDI sequencer. In this case, set Sync mode of the D2 to "REMOTE."*

Saving data on an external sequencer (Bulk Dump)

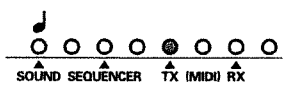
Data for the currently selected pattern or for all data in memory can be transmitted from the D2 to another D2, or to an external MIDI sequencer (such as the Roland MC-80) for saving. Transmitting this data is called **bulk dump**, and receiving this data is called **bulk load**.

Transmission (bulk dump) procedure

Here's how data stored in the D2 can be transmitted to a sequencer or other external MIDI device for saving.



1. **Press [SYSTEM] several times to access the MIDI transmission setting display.**



2. **Press [ENTER] to access the Bulk Dump setting display.**

3. **Turn [VALUE] to select either "Ptn" (transmit the data of the current pattern) or "ALL" (transmit all data).**
4. **Press [ENTER].**
   The display will ask "SurE" (are you sure you want to proceed with the transmission?)

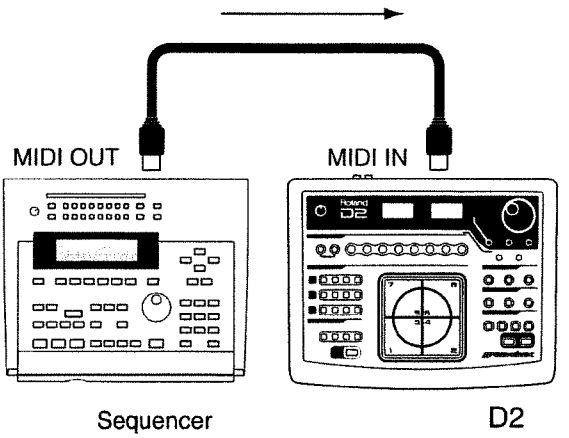
* *To cancel the operation, press [EXIT].*

5. **Set your connected MIDI device so it is ready to receive data.**
6. **Press [ENTER] to begin the transmission.**

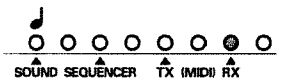
Once the data transmission has been completed, the previous display will reappear.

Reception (bulk load) procedure

Here's how to receive data that was stored on an external MIDI device.



1. **Press [SYSTEM] several times to access the MIDI reception setting display.**



2. **Press [ENTER] several times to access the Bulk Load setting display.**

3. **Turn [VALUE] to select either "Ptn" (receive the data of the current pattern) or "ALL" (receive all data).**
4. **Press [ENTER].**
   The display will ask "SurE" (are you sure you want to proceed with the reception?).

* *To cancel the operation, press [EXIT].*

5. **Press [ENTER] and reception will begin.**

6. **Transmit data from the connected MIDI device.**
   Once the data reception has been completed, the previous display will reappear.

NOTE
When you enter Bulk Load, the contents of the pattern being editing will be changed. If you selected "ALL" in step 3, all of the data will be changed.

NOTE
Never turn off the power while bulk load is in progress. Doing so may destroy the contents of memory.

Troubleshooting

If the D2 stops producing sound, or if it does not function the way you expect, please check the following points first.
If checking these points does not resolve the problem, please contact your dealer or a nearby Roland service center.

* *Roland can take no responsibility for the recovery of any lost data, or for any damages incurred as a result of such loss.*

Problem	Cause	Action
No sound	The D2 and/or connected equipment is not powered-on.	Turn on the power.
		Make sure that the AC adaptor is connected correctly.
	The volume of the D2 and/or connected equipment has been lowered.	Raise the volume.
	MIDI cable(s) and/or audio cables are not connected correctly.	Make the correct connections (p. 11).
	The part level of the corresponding part is lowered.	Raise the part level (p. 19).
Part R does not sound	All rhythm tones are muted.	Defeat muting of the rhythm tones (p. 17).
Sound is interrupted	You are attempting to sound too many notes at once (the maximum polyphony is 64 notes).	Reduce the number of notes that are played simultaneously.
		Reduce the number of notes in the pattern that is playing back.
Some notes continue sounding unnaturally.	The delay time, feedback, or amp envelope release time settings are too high.	Lower these values (p. 43, p. 35).
Touching the D-FIELD does not produce sound	A function that does not produce sound has been assigned as the D-FIELD function.	Select a function that produce sound (such as RPS or ADLIB) (pp. 23–32).
D-FIELD effect does not occur	You didn't press the D-FIELD strongly enough.	Press the D-FIELD with an appropriate amount of force.
	The D2 is in SYSTEM/EDIT/WRITE modes.	Press [EXIT] several times to exit these states.
	The Sync Mode is set to "SLAVE."	Change the Sync Mode setting to "INT" (p. 74).
The sound continues even after you remove your hand from the D-FIELD.	[HOLD] is lit.	Press [HOLD] to make it go dark.
Reverb/Delay/MFX is not applied.	Reverb/Delay/MFX is turned "OFF."	Turn the desired effect "ON" (p. 42, p. 43, p. 44).
	The Reverb Level or the Part Reverb Level setting of each part is set to "0."	Raise the value (p. 42, p. 19).
	The Delay Level or the Part Delay Level setting of each part is set to "0."	Raise the value (p. 43, p. 19).
	The MFX Output Level is set to "0." The Part MFX SW value of each part is set to "OFF."	Raise the MFX Output Level. Turn the Part MFX SW "ON" (pp. 45–57, p. 19).
Pitch is incorrect.	The tuning of the D2 or the external MIDI sound source is incorrect.	Check the tuning setting (p. 73).
Patterns or songs will not play back.	The D2 is in SYSTEM/EDIT/WRITE modes.	Press [EXIT] several times to exit these states.
	The Sync Mode setting is set to "SLAVE."	Chang the Sync Mode setting to "INT" (p. 74).
Pattern playback is not "on the beat," or lags.	The pattern contains too much data.	Remove unwanted data. Use the Data Thin function to thin out the data (p. 68).
		Using the Move Note function, move note data that was input as a chord (i.e., note data that is located at the same position) backward in time (p. 64).
		Use the Shift Clock function to move data of parts other than the rhythm part backward in time (p. 68).
	Tempo is too fast.	Slow down the tempo (p. 16).
Can't change patterns	The CURRENT display is blinking when you select a pattern.	Select a pattern when the CURRENT display is not blinking (p. 15).
	The D2 is in Song mode or MEGAMIX mode.	Press [PATTERN] to enter Pattern mode.
	[ENTER] was not pressed.	Press [ENTER] to finalize your selection.
The D2 does not operate correctly.	A panel button is being held down.	Release the button.

Error Message List

If the D2 is operated incorrectly or if an operation could not be executed correctly, an error message will be displayed. Take the appropriate action for the error message that is displayed.

Display	Meaning	Action
	There is a problem with the internal system.	Please contact your dealer or a nearby Roland service center.
	It is possible that the contents of user memory have been lost.	Please perform the Factory Reset operation (p. 14). If this does not resolve the problem, contact your dealer or a nearby Roland service center.
	That operation cannot be performed because the D2 is now playing back.	Press [■] to stop playback before performing the operation.
	That operation cannot be performed because the pattern has been mega-mixed.	Save the pattern, or re-select the pattern.
	The data cannot be registered in a RPS set (or MEGAMIX set) because there are multiple un-muted parts.	Decide on one part of the phrase that you wish to register, and mute all of the remaining parts (p. 23, p. 30).
	There is no item to edit.	(This will be displayed if there is no editable parameter when you press [EDIT].)
	Playback is not possible because no performance data has been recorded in the pattern.	Select a pattern that contains data.
	No further pattern recording is possible because the maximum number of notes recordable in one pattern has been exceeded.	Delete unwanted data from the pattern being recorded (p. 67).
	No further song recording is possible because the maximum number of patterns recordable in one song has been exceeded.	Up to 50 patterns can be recorded in one song. No more patterns than this can be recorded.
	The pattern cannot be saved because of insufficient user memory.	Either initialize unwanted patterns (p. 65), or save the data on an external sequencer (p. 81).
	Since a large amount of MIDI messages was received in a short time (or because there was too much pattern data), the D2 was not able to process the MIDI messages.	Reduce the amount of MIDI messages transmitted to the D2.
	There is a problem with the MIDI cable connection.	Make sure that the MIDI cable has not been disconnected or broken.

Preset Patch List

Preset A
(CC#0 = 81, CC#32 = 0)

No.	Name
001	Lead TB 1
002	Dist TB 1
003	Dist Sqr TB
004	Dist TB 2
005	Dist TB 3
006	TB + Voco
007	Dist TB 4
008	Lead TB 2
009	Devil TB
010	Dual TB
011	HiLo303ModSw
012	Arpness TB
013	Acid Line
014	Dist TB 5
015	Lead TB 3
016	Lead TB 4
017	TB Tra Bass
018	Acid TB
019	Psyche-TB
020	TB + Sine
021	Hi-Pass TB
022	Moog Saw
023	OB Saw
024	MG Lead
025	Poly Key
026	Synth Pulse
027	Dual Profs
028	Axe of 80
029	MG Square
030	Square Lead1
031	Square Lead2
032	Square Lead3
033	Lucky
034	Synth Lead 1
035	Moon Lead
036	Rezo SynLead
037	Wspy Synth
038	Enorjizor
039	JP8 Sprang
040	PortaSynLead
041	Wah Lead
042	Beep Mod
043	Dist Lead 1
044	Freaky Fry
045	JU2 SubOsc 1
046	JU2 SubOsc 2
047	Froggy
048	Synth Lead 2
049	Singin' MINI
050	Plastic Tone
051	SinusoidRave
052	Sine Me Up
053	Spooky Sine
054	Sine Tone
055	D50 Saw Lead
056	Dst Syn Lead
057	Big Up Massv
058	Warm SawLead
059	Hartnoll Era
060	Skegness 97
061	Simply June
062	The Brothers
063	Dist Lead 2
064	Dark SawLead
065	Dist Lead 3
066	Mosquito
067	Phazyn Vox
068	Voc Saw
069	VT Vox
070	Pure Voice
071	Robo Vox
072	Hallucinate
073	Seq.Synth
074	Analog Seq
075	Ana Punch
076	Atom Brain
077	Fooled MC
078	101 Bass 1
079	House Bass
080	101 Bass 2
081	202 Bass
082	Psycho Funk
083	Talking Line
084	Inside Bass
085	Bubble Bass
086	Bass Bleep
087	Wiggle Bass
088	Twist Bass
089	Octa Bass
090	BT's Sticky
091	MG Bass
092	FM Super Bs
093	Solid Bass
094	T Nite Bass
095	Front 505
096	Def Bass 1
097	Def Bass 2
098	Sine Bass 1
099	Sine Bass 2
100	RollModRezBs
101	Gate Me Buzz
102	System Bass
103	Spike Bass
104	Solid Goa
105	Rezo Bass
106	Blip Bass
107	Pizz Bass
108	Voco Bass
109	VoCoRoBo
110	Dust Bass
111	ArtCore Bass
112	NU-NRG Bass
113	TalkBox Bass
114	Incontinence
115	Bari Voice
116	Ac.Bass
117	E.Ac.Bass
118	Acid Jazz Bs
119	Soup's Bass
120	Fingered Bs
121	FingBsVeloSw
122	PickedBass 1
123	PickedBass 2
124	Fretless Bs
125	Phot Bass
126	Slap Bass
127	R&B B-Slides
128	Syn Stack 1

Preset B
(CC#0 = 81, CC#32 = 1)

No.	Name
001	Strong Brass
002	You Can Fly
003	Syn stack 2
004	Dawn Of Man
005	Saw Stack 1
006	Saw Stack 2
007	DLM Stack
008	DOC Stack
009	LN2 Stack
010	Bend Stack
011	Freedom
012	Good Bean
013	JP8000 5th
014	Mega 5th
015	5th Saw
016	4th Saw
017	Soundtrack
018	Rise Pad
019	Warm Pad
020	JP + OB Pad
021	Planet
022	Additive
023	Noise Pad
024	Sweep Pad 1
025	Sweep Pad 2
026	Alles Padde
027	Sky Light
028	Stargate MC
029	Middle Grow
030	AiRye Bread-
031	NU-NRG Org
032	Halo Pad
033	Str/Brs Pad
034	Syn Brs Pad
035	Simple Pad
036	OB Rezo Pad
037	Sweet Vocode
038	Thin Pad
039	Attack Pad
040	Metal Pad
041	Atmosphere
042	Fantasia
043	Feedbackwave
044	Pacifica
045	Atmosphere 2
046	Sub Atmosphe
047	Machine Pad
048	Detuned Pad
049	Scoop Pad
050	Psycho Trevo
051	Floating Pad
052	Fancy Pad
053	Strings 1
054	Strings 2
055	Old StringSW
056	Swim Strings
057	Eclip-Str
058	Slow Strings
059	OB Slow Str
060	Syn.Strings1
061	Syn.Strings2
062	OB Strings
063	Rhap Strings
064	Banded Jupe
065	NU-NRG Str
066	Violin
067	Contrabass
068	Tremolo Str
069	Pizzicato 1
070	Pizzicato 2
071	Pizz It
072	Guardians
073	Gat Passion
074	Syn Harp
075	Voice Oohs
076	Solo Vox
077	Syn Vox
078	Choir Aahs
079	Space Voice
080	Star Voice
081	Brightness
082	Vox Lead
083	Auhbient
084	Auh Luv Rave
085	PCM Life
086	Noisevox
087	Trance Voice
088	Effect Acer
089	Alternative
090	Hard Pure
091	Metal EF
092	Dly Tone
093	Osci Frog
094	Cal + After
095	8b Pad
096	SpaceHighway
097	Trek Storm
098	Abduction
099	1st Contact
100	Ice Cave
101	Rev Cord
102	Blue Random
103	Sync Tone
104	Seq Up
105	SawLFOSaw
106	Calculating
107	Touch EF
108	Welding
109	Press Machin
110	EF Tribe
111	Scratch Alt
112	Analog FX
113	Non TB
114	Nasty Filt
115	Psy-Ence
116	Music Hi
117	Uber Zone
118	Down Gown
119	For Giving
120	Sound Alarm
121	Acid Drone
122	X-Mod
123	X-FM/Org
124	X-FM Bass
125	Hard BD?
126	S&H Voc
127	X-TlkBxBass
128	X-Kick/TB

Preset C
(CC#0 = 81, CC#32 = 2)

No.	Name
001	X-Org/Nz
002	X-Pizz/Rng
003	White Noise
004	Pink Noise
005	P5 Noise
006	Toy Noise
007	Rezo Noise
008	Vinyl Noise
009	Tornado Jet
010	Smooth Jet
011	Sweep Noise
012	ModWhtSweep
013	Perk Breath
014	Pink Bomb
015	64voicePiano
016	Ac.Piano 1
017	Ac.Piano 2
018	Epic House
019	Hush Piano
020	Happy Piano
021	BPF Piano
022	Honky-tonk
023	NY Piano+Str
024	Voice Piano
025	Old E.Piano
026	E.Piano 1
027	E.Piano 2
028	Cool Rhodes
029	Psycho EP
030	Trip E.Piano
031	Rotary Rhode
032	EP-Organ
033	Harpsichord
034	Clavi
035	Digi Clavi
036	FM Clavi
037	AnalogClavi1
038	AnalogClavi2
039	Funky Clavi
040	RotaryOrg Sl
041	RotaryOrg Fs
042	Gospel Spin
043	L Org F
044	Organ 1
045	Lp-Hp Organ
046	Organ 2
047	Percsv Organ
048	Ballad B
049	FM Club Org
050	Pop Organ
051	Cheese Organ
052	Reed Organ
053	Telstar
054	Church Org
055	Organ Bass
056	Strict Organ
057	SmkyChrd Org
058	Sweep Organ
059	Accordion
060	Vibraphone
061	FM Marimba
062	Marimba
063	Xylophone
064	Balaphone

No.	Name
065	Timpani
066	Steel Drum
067	Digi Bell
068	Acid Perc
069	MetaL-SD
070	Classy Pulse
071	Glockenspiel
072	Fanta Bell
073	Crystal
074	Tubular-Bell
075	Shank Bells
076	MKS-30 Melts
077	Trip Lead
078	Steel-Str.Gt
079	Clean Gtr
080	Jazz Gtr 1
081	Jazz Gtr 2
082	Muted Gtr
083	Lo-Fi Gtr
084	Terror Dome
085	Psycho-G
086	Dist Gtr Chd
087	Going Bald
088	Gt.Harmonic1
089	Gt.Harmonic2
090	Shafted Gtr
091	WahGT 2 Menu
092	Gtr Up
093	Gtr Down
094	Gtr Sweep
095	Orch Gtr
096	Brass
097	Bright Brass
098	Hush Brass
099	Synth Brass1
100	Synth Brass2
101	Synth Brass3
102	Syn Brs Lead
103	Obilator
104	OpenUp Brass
105	Brass Fall
106	Trumpet
107	MutedTrumpet
108	Soprano Sax
109	Alto Sax
110	Baritone Sax
111	SlideBiteSax
112	Sax & Tp
113	Tuba
114	Syn F.Horn
115	Oboe
116	Whistle
117	Ocarina
118	Recorder
119	Jazz SynLead
120	Solo Flute
121	Pan Flute
122	Bottle Blow
123	Funky Pipe
124	Breath Noise
125	Shakuhachi
126	Sitar 1
127	Sitar 2
128	Santur

Preset D
(CC#0 = 81, CC#32 = 3)

No.	Name
001	Kalimba
002	Bagpipes
003	PnoBendM7-m7
004	Org Chd m7
005	BalapChd 9th
006	Wah Gtr Hit
007	Orch Hit 1
008	Orch Hit 2
009	Rave-X-Tasy
010	Philly Hit 1
011	Philly Hit 2
012	Attack Hit
013	Funky Hit
014	Tekno ChdHit
015	Dist Hit
016	Glasgow Hit
017	Happy Hit
018	Scene Hit 1
019	Scene Hit 2
020	Drill Hit
021	Gaia Message
022	Rezo Perc
023	Syn Perc
024	MG Blip
025	Rev Blip
026	Air Blip
027	Radical Perc
028	Machine
029	Metal Hit
030	Tanz Devil
031	Headz Direkt
032	ShoppingCart
033	Noisy Drill
034	Thump Bounce
035	Tape Rewind
036	Stop
037	Ao!
038	Ha!
039	Seashore
040	Bird
041	Telephone
042	Helicopter
043	Applause
044	Gun Shot
045	Machine Gun
046	Laser Gun
047	Sci-Fi Laser
048	Breath
049	Rain
050	Siren
051	TR909 Tom
052	TR808 Tom
053	Syn Tom 1
054	Syn Tom 2
055	Old Syn Tom
056	Taiko
057	Slow Down
058	Boom Drop
059	B-Tom-D
060	Mr.Bong Bass
061	Friends of 0
062	Latin Perc
063	Bongo Fury
064	High Timbale

No.	Name
065	MutePandeiro
066	Open Surdo
067	Brazil Perc
068	Tablabaya
069	Mute Cuica
070	Long Whistle
071	Agogo
072	Short Tamb
073	808 Cowbell
074	CR78 Cowbell
075	CR78 Beat
076	Wind-Chime
077	Rim Shot
078	TR909 Rim
079	Hyoshigi
080	TR626 Shaker
081	727 Quijada
082	Real CH
083	TR909 OH
084	Syn OH
085	TR909 Crash
086	Reverse Cym.
087	Asian Gong
088	TR808 Clap
089	Down Clap
090	Clap Tail
091	Rap&Real Clp
092	Maddening
093	TR909 Snare
094	TR808 Snare
095	House Snare
096	Jungle Snr 1
097	Jungle Snr 2
098	TR808 Kick
099	Plastic BD
0100	Gate Kick
0101	Jungle Kick
0102	Scrtch/Vo Mn
0103	Flexi Vox Mn
0104	Hit Menu
0105	Indust Menu
0106	Tom Menu
0107	Percus1 Menu
0108	Percus2 Menu
0109	Cowbell Menu
0110	Shaker+ Menu
0111	Rim Menu
0112	Cymbal Menu
0113	CHH 1 Menu
0114	CHH 2 Menu
0115	PHH Menu
0116	OHH 1 Menu
0117	OHH 2 Menu
0118	Clap 1 Menu
0119	Clap 2 Menu
0120	Snare 1 Menu
0121	Snare 2 Menu
0122	Snare 3 Menu
0123	Snare 4 Menu
0124	Snare 5 Menu
0125	Snare 6 Menu
0126	Kick 1 Menu
0127	Kick 2 Menu
0128	Kick 3 Menu

Preset E
(CC#0 = 84, CC#32 = 0)

No.	Name
001	SOLO Saw
002	Stereo Saw
003	Fright Saw
004	Seq Strings
005	Delay Seq
006	SOLO PWM
007	SOLO Square
008	Square Lead4
009	Fbk 8000
010	Juno Lead
011	Dark Lead
012	SOLO Choir
013	SOLO Sin
014	PortaDetLead
015	Sweep Beep
016	Pow Lead
017	NonReality
018	HardTranceLd
019	Dist Reso TB
020	Dark TB
021	SpaceKhoomij
022	80s Bass
023	Mini Bass
024	Percus Bass
025	Filter Chop
026	Hard Bass
027	Solid Reso
028	Electro Bass
029	Master Bass
030	FX Bass
031	Sine Bass 3
032	Def Bass 3
033	DnB Dist Bs
034	PickedBass 3
035	Heavy PBass
036	Euro Stab
037	Saw Stack 3
038	Trance Riff
039	Galactic Stb
040	Devil Stab
041	Sweep Pad
042	Detroit Pad
043	Church Pad
044	Eternal Pad
045	Strong Orch
046	Mellow Str
047	Strings 3
048	Big Choir
049	Drop FX
050	Old Space
051	LaughMachine
052	Hicuts
053	Spaceship
054	FXM Blip
055	Wierd Mod
056	4Dimensions
057	LowdownBass
058	Radio Sweep
059	SF Noise
060	Clear Piano
061	Space Piano
062	Trip E.P 2
063	Powerful Org
064	E.Org Sweep

No.	Name
065	Digi Steel
066	OctoLimba
067	Alto Sax 2
068	Synth Brass4
069	DiscoAction
070	Dooomed Hit
071	Hard Rave
072	Analog Hash
073	PR riff
074	HardRock Hit
075	Retro SE 1
076	Retro SE 2
077	Reso Blip
078	Dark Rim
079	R&B Rim
080	Tabla Seq
081	Afro Attack
082	Cyber Cymbal
083	D&B Ride
084	Real Snap
085	TR909 Snare2
086	HipHop Snare
087	Nrg BD
088	Beats Kick

User: 001–128
(CC#0 = 85, CC#32 = 0)

User: 129–256
(CC#0 = 85, CC#32 = 1)

Preset Rhythm Set List

* The Rhythm Group column shows the button that can be pressed to mute that rhythm tone.

P: A 01–26 (CC#0 = 81, CC#32 = 0), P: B 01–04 (CC#0 = 84, CC#32 = 0), User: 01–20 (CC#0 = 85, CC#32 = 0)

Note No.	Rhythm Group	P: A01 TR-909	P: A02 TR-808	P: A03 TR-606	P: A04 CR78&Cheaps	P: A05 Techno 1
35	BD	Plastic BD 4	TR808 Kick 5	TR808 Kick 3	Toy Kick	Plastic BD 3
C2 36	BD	Plastic BD 3	TR808 Kick 3	Analog Kick	Plastic BD 4	Plastic BD 2
37	TOM/PERC	TR808 Rim	TR808 RimLng	TR808 Rim	TR808 Rim	TR707 Rim
38	SD	TR909 Snr 1	TR808 Snr 8	TR606 Snr 3	TR808 Snr 5	TR909 Snr 6
39	CLP	TR909 Clap 2	TR909 Clap 1	Cheap Clap	TR909 Clap 1	TR909 Clap 1
40	SD	TR909 Snr 3	TR808 Snr 9	TR808 Snr 5	Deep Snare	TR909 Snr 7
41	TOM/PERC	TR707 Tom	TR606 Tom	TR606 CmpTom	MG Blip	TR909 DstTom
42	HH	TR909 CHH 2	TR808 CHH 2	TR606 CHH 2	TR808 CHH 1	TR909 CHH 2
43	TOM/PERC	TR707 Tom	TR606 Tom	TR606 CmpTom	MG Blip	TR909 DstTom
44	HH	TR909 PHH 2	TR808 PHH 2	Hip PHH	TR606 PHH 2	TR909 PHH 1
45	TOM/PERC	TR707 Tom	TR606 Tom	TR606 CmpTom	MG Blip	TR909 DstTom
46	HH	TR909 OHH 1	TR808 OHH 2	TR606 DstOHH	TR606 OHH	TR909 OHH 2
47	BD	TR909 Kick 4	TR808 Kick 1	TR606 Dst BD	TR606 Kick	TR909 Kick 5
C3 48	BD	TR909 Kick 2	TR808 Kick 4	TR606 Kick	Analog Kick	TR909 Kick 4
49	TOM/PERC	TR909 Rim	TR808 Rim	Analog Rim	Analog Rim	TR909 Rim
50	SD	TR909 Snr 2	TR808 Snr 6	TR606 Snr 2	TR808 Snr 1	TR909 Snr 4
51	CLP	TR909 Clap 1	TR808 Clap	TR808 Clap	TR808 Clap	Group Clap
52	SD	TR909 Snr 3	TR808 Snr 2	TR606 Snr 1	CR78 Snare	TR909 Snr 5
53	TOM/PERC	TR909 Tom	TR808 Tom	TR606 Tom	TR606 Tom	TR909 Tom
54	HH	TR909 CHH 1	TR808 CHH 1	TR606 CHH 1	DR55 CHH 1	TR909 CHH 1
55	TOM/PERC	TR909 Tom	TR808 Tom	TR606 Tom	TR606 Tom	TR909 Tom
56	HH	TR909 OHH 2	TR808 CHH 2	TR606 PHH 1	CR78 CHH	TR909 PHH 2
57	TOM/PERC	TR909 Tom	TR808 Tom	TR606 Tom	TR606 Tom	TR909 Tom
58	HH	TR909 OHH 2	TR808 OHH 1	TR606 OHH	CR78 OHH	TR909 OHH 3
59	TOM/PERC	TR909 Tom	TR808 Tom	TR606 Tom	TR606 Tom	TR909 Tom
C4 60	TOM/PERC	TR909 Tom	TR808 Tom	TR606 Tom	TR606 Tom	TR909 Tom
61	CYM	TR909 Crash	TR606 Cym 1	TR606 Cym 2	TR606 Cym 1	TR909 Crash
62	TOM/PERC	TR909 Tom	TR808 Tom	TR606 Tom	TR606 Tom	TR909 Tom
63	CYM	TR909 Ride	TR606 Cym 1	TR909 Ride	TR606 Cym 1	TR707 Ride
64	CYM	TR909 Crash	TR909 Crash	TR606 Cym 1	Cup Cym	TR909 Crash
65	CYM	TR909 Ride	TR909 Ride	TR707 Ride	TR909 Ride	Asian Gong
66	TOM/PERC	Tambourine 2	CR78 Tamb	CR78 Tamb	CR78 Tamb	Tambourine 3
67	CYM	NaturalCrash	TR909 Crash	TR909 Crash	TR909 Crash	TR909 Crash
68	TOM/PERC	TR808Cowbell	TR808Cowbell	TR808Cowbell	CR78 Cowbell	Cowbell
69	CYM	TR606 Cym 1	TR909 Crash	TR909 Crash	TR909 Ride	TR606 Cym 1
70	TOM/PERC	PC-2 Machine	CR78 Guiro	CR78 Guiro	TR808Cowbell	TR808Cowbell
71	CYM	Natural Ride	Natural Ride	Natural Ride	TR707 Ride	Natural Ride
C5 72	TOM/PERC	HiBongo Open	TR808 Conga	TR808 Conga	TR808 Conga	HiBongo LoFi
73	TOM/PERC	LoBongo Open	TR808 Conga	TR808 Conga	TR808 Conga	LoBongo LoFi
74	TOM/PERC	HiConga Mute	TR808 Conga	TR808 Conga	TR808 Conga	HiCnga Mt LF
75	TOM/PERC	HiConga Open	TR808 Conga	TR808 Conga	TR808 Conga	HiCnga Op LF
76	TOM/PERC	LoConga Open	TR808 Conga	TR808 Conga	TR808 Conga	LoConga LoFi
77	TOM/PERC	Hi Timbale	Hi Timbale	Hi Timbale	CR78 Beat	HiTimbale LF
78	TOM/PERC	Lo Timbale	Lo Timbale	Lo Timbale	CR78 Beat	LoTimbale LF
79	TOM/PERC	TR727 Agogo	TR727 Agogo	CR78 Beat	TR727 Agogo	CR78 Beat
80	TOM/PERC	TR727 Agogo	TR808 Claves	CR78 Beat	TR727 Agogo	CR78 Beat
81	TOM/PERC	Cabasa Up	Cabasa Up	Cabasa Up	CR78 Guiro	TechnoShaker
82	TOM/PERC	808 Maracas	808 Maracas	808 Maracas	808 Maracas	TR626 Shaker
83	HIT	Beam HiQ	Beam HiQ	Beam HiQ	Syn Hit	Wao!
C6 84	HIT	Air Blip	Air Blip	Buzzer	Beam HiQ	Come on!
85	HIT	MG Blip	Syn Hit	Air Blip	Analog Bird	Ooh! 1
86	HIT	Techno Scene	Techno Scene	Rezo Noise	MG Attack	MG White Nz
87	HIT	Air Gun	Beam HiQ	Hyoshigi	Tape Rewind	Bomb Noise
88	HIT	Tekno Hit	PC-2 Machine	Analog Bird	Air Blip	Wah Gtr 2b
89	OTHERS	Come on!	P5 Noise	Retro UFO	Reso FX	Toy Gun 3
90	OTHERS	Wao!	Toy Gun 1	PC-2 Machine	Ring Osc	Toy Gun 3
91	OTHERS	Ooh! 1	Syn Tom	Syn Hit	MG Blip	Buzzer
92	OTHERS	Canvas	Cup Cym	Retro UFO	MG White Nz	Bomb Noise
93	OTHERS	JP8000 FBK	TR808 OHH 1	Thrill	Rezo Noise	Sea
94	CLP	Funky Clap	Hip Clap	Comp Clap	Cheap Clap	Flange Snr
95	BD	TR808 Kick 1	TR808 Kick 2	TR808 Kick 1	TR808 Kick 1	TR909 Dst BD
C7 96	BD	Gabba Kick	TR909 Kick 4	Plastic BD 4	TR909 Kick 1	Plastic BD 4
97	SD	Synth Snare	CR78 Snare	TR909 Snr 3	TR909 Snr 1	Break Snare2
98	SD	TR808 Snr 2	TR808 Snr 3	CR78 Snare	Sim Snare	Ragga Rim 2

Note No.	Rhythm Group	P: A06 Techno 2	P: A07 Techno 3	P: A08 Hardcore	P: A09 Ambient	P: A10 House 1
35	BD	TR808 Kick 5	Plastic BD 3	TR909 Kick 5	TR909 Kick 5	TR808 Kick 5
C2 36	BD	TR707 Kick 1	Plastic BD 4	Gabba Kick	Wet Kick	TR909 Kick 2
37	TOM/PERC	TR909 Rim	Jungle Snr 2	SideStiker	Ragga Rim 1	TR808 Rim
38	SD	Real Snare	TR808 Snr 7	Jungle Snr 1	DJ Snare	SNR MENU 1
39	CLP	Down Clap	Comp Clap	Fuzzy Clap	Comp Clap	CLAP MENU 1
40	SD	Rap Snare	Indus Snare	TR909 Snr 4	SideStiker	TR909 Snr 6
41	TOM/PERC	TR808 Tom	Air Blip	TR606 CmpTom	TR707 Tom	TOM MENU
42	HH	TR808 CHH 2	CHH MENU 2	TR909 CHH 2	Closed Hat	TR707 OHH
43	TOM/PERC	TR808 Tom	MG Blip	TR606 CmpTom	TR707 Tom	TR909 Tom
44	HH	TR808 PHH 1	Jungle Rim 2	TR909 PHH 1	Pedal Hat 1	TR707 OHH
45	TOM/PERC	TR808 Tom	HIT MENU	TR606 CmpTom	TR707 Tom	TR909 Tom
46	HH	TR808 OHH 1	TR909 OHH 2	TR909 OHH 1	Real OHH	TR707 OHH
47	BD	TR909 Kick 2	KICK MENU 2	Amsterdam BD	Wet Kick	TR808 Kick 1
C3 48	BD	Plastic BD 4	West Kick	TR909 Dst BD	TR808 Kick 3	TR909 Kick 3
49	TOM/PERC	TR808 RimLng	Natural Rim	Lo-Fi Rim	TR808 RimLng	TR808 RimLng
50	SD	TR909 Snr 4	TR808 Snr 8	TR909 DstSnr	CR78 Snare	Break Snare2
51	CLP	Claptail	Comp Clap	Funk Clap 2	TR909 Clap 1	Claptail
52	SD	Funky Clap	MC Snare	TR909 DstSnr	Beam HiQ	TR909 Snr 4
53	TOM/PERC	TR707 Tom	Uuh Formant	TR909 DstTom	TR808 Tom	TR808 Tom
54	HH	Closed Hat	TR606 PHH 2	TR909 PHH 1	DR55 CHH 1	TR909 CHH 1
55	TOM/PERC	TR707 Tom	Ooh Formant	TR909 DstTom	TR808 Tom	TR808 Tom
56	HH	TR909 OHH 2	CR78 CHH	TR909 PHH 2	TR606 PHH 2	OHH MENU 1
57	TOM/PERC	TR707 Tom	Iih Formant	TR909 DstTom	TR808 Tom	TR808 Tom
58	HH	TR909 OHH 2	TR606 OHH	TR909 DstOHH	CR78 OHH	OHH MENU 1
59	TOM/PERC	TR707 Tom	Can Tom	TR909 DstTom	TR808 Tom	TR707 Tom
C4 60	TOM/PERC	TR707 Tom	ElectricDunk	TR909 DstTom	TR808 Tom	TR707 Tom
61	CYM	TR909 Crash	TR606 Cym 2	TR909 Crash	TR606 Cym 1	TR909 Crash
62	TOM/PERC	TR707 Tom	HiBongo LoFi	TR909 DstTom	TR808 Tom	TR707 Tom
63	CYM	TR707 Ride	CYMBAL MENU	TR707 Ride	TR909 Ride	TR909 Ride
64	CYM	TR909 Crash	Cup Cym	TR909 Crash	TR606 Cym 1	NaturalCrash
65	CYM	Asian Gong	TR909 Ride	Asian Gong	Asian Gong	Tambourine 2
66	TOM/PERC	Tambourine 2	Tambourine 4	CR78 Tamb	Tambourine 3	Tambourine 1
67	CYM	TR909 Crash	CYMBAL MENU	NaturalCrash	TR606 Cym 2	TR909 Crash
68	TOM/PERC	TR808Cowbell	CR78 Beat	TR808Cowbell	CR78 Cowbell	TR707Cowbell
69	CYM	TR606 Cym 2	Natural Ride	Jungle Crash	NaturalCrash	Cup Cym
70	TOM/PERC	CR78 Tamb	CR78 Beat	TR727Quijada	TR808Cowbell	TR808Cowbell
71	CYM	Cup Cym	Cup Cym	Natural Ride	Natural Ride	Natural Ride
C5 72	TOM/PERC	HiBongo Open	HiBongo LoFi	HiBongo LoFi	HiBongo Open	HiBongo LoFi
73	TOM/PERC	LoBongo Open	HiBongo LoFi	LoBongo LoFi	LoBongo Open	LoBongo LoFi
74	TOM/PERC	HiConga Mute	HiBongo LoFi	HiCnga Mt LF	HiConga Mute	HiConga Mute
75	TOM/PERC	HiConga Open	HiCnga Mt LF	HiCnga Op LF	HiConga Open	HiConga Open
76	TOM/PERC	LoConga Open	HiConga Mute	LoConga LoFi	LoConga Open	LoConga Open
77	TOM/PERC	Hi Timbale	Triangle 2	HiTimbale LF	Hi Timbale	HiTimbale LF
78	TOM/PERC	Lo Timbale	ElectricDunk	LoTimbale LF	Lo Timbale	LoTimbale LF
79	TOM/PERC	TR727 Agogo	Air Blip	TR727 Agogo	TR727 Agogo	TR727 Agogo
80	TOM/PERC	TR727 Agogo	MG Attack	TR727 Agogo	TR727 Agogo	TR727 Agogo
81	TOM/PERC	TechnoShaker	TechnoShaker	TechnoShaker	TechnoShaker	808 Maracas
82	TOM/PERC	Maracas	808 Maracas	Dance Shaker	808 Maracas	TR626 Shaker
83	HIT	Beam HiQ	Reso FX	Beam HiQ	Air Blip	TR606 CHH 1
C6 84	HIT	Techno Scene	Beam HiQ	Air Gun	Wind Chime	TR727Quijada
85	HIT	Thin Beef	Toy Gun 3	ElectricDunk	Thrill	Short Guiro
86	HIT	Come on!	MG Blip	Thin Beef	CR78 Beat	Long Guiro
87	HIT	Ooh! 1	Toy Gun 3	Drill Hit	Retro UFO	TR808 Claves
88	HIT	Wao!	Air Blip	TAO Hit	Hyoshigi	Hyoshigi
89	OTHERS	Analog Bird	Reso FX	Rezo Noise	Pizzy Techno	Bomb Noise
90	OTHERS	Retro UFO	Emergency	Toy Gun 1	Org Chord	Come on!
91	OTHERS	Metal Sweep	MG Blip	Toy Gun 3	Feedbackwave	Triangle 1
92	OTHERS	Emergency	MG Pink Nz	Gtr FX	Stream	Cup Cym
93	OTHERS	Tonality	Jet Plane	Dist Synth	Bird	TR808 OHH 1
94	CLP	TR909 Clap 1	Roll Snare	Funk Clap	Claptail	Hip Clap
95	BD	Wet Kick	TR808 Kick 1	TR909 Kick 2	TR808 Kick 1	TR808 Kick 2
C7 96	BD	Hip Kick	TR909 Kick 1	Turbo Kick	JungleKick 2	TR909 Kick 4
97	SD	TR909 Snr 5	TR909 Snr 1	Rage Snare	TR808 Snr 2	CR78 Snare
98	SD	Clap Snare 2	Urban RollSD	Big Trash SD	Jungle Snr 1	TR808 Snr 3

Preset Rhythm Set List

	Note No.	Rhythm Group	P: A11 House 2	P: A12 Jungle	P: A13 Drum'n'Bass1	P: A14 Drum'n'Bass2	P: A15 Hip-Hop 1
	35	BD	Wet Kick	TR909 Kick 3	Roll Kick	TR909 Kick 3	Lo-Fi Kick 1
C2	36	BD	Plastic BD 2	Lo-Fi Kick 2	Analog Kick	Lo-Fi Kick 2	TR808 Kick 3
	37	TOM/PERC	TR808 Rim	SideStiker	RaggaTightSD	SideStiker	Solid Snare
	38	SD	Clap Snare 2	Urban RollSD	Cross Snare	Urban RollSD	HipJazz Snr
	39	CLP	Group Clap	Down Clap	Roll Snare	Down Clap	Funk Clap 2
	40	SD	TR808 Snr 7	Jungle Rim 1	Headz Snare	Jungle Snr 1	R&B Snare
	41	TOM/PERC	TR808 Tom	Jungle Snr 2	TR606 Tom	Jungle Snr 2	TR808 Tom
	42	HH	TR707 CHH	Tight CHH	Pop CHH	Tight CHH	Pop CHH
	43	TOM/PERC	TR808 Tom	Jungle Snr 2	TR606 Tom	Jungle Snr 2	TR808 Tom
	44	HH	TR707 PHH	Tambourine 1	Tambourine 3	Tambourine 1	Pedal Hat 1
	45	TOM/PERC	TR808 Tom	Jungle Snr 2	TR606 Tom	Jungle Snr 2	TR808 Tom
	46	HH	TR707 OHH	Cym OHH	Pop Hat Open	Cym OHH	Pop Hat Open
	47	BD	TR909 Kick 2	TR909 Kick 5	Plastic BD 1	TR909 Kick 5	Break Kick
C3	48	BD	TR909 Kick 5	JungleKick 2	Hip Kick	JungleKick 2	Hip Kick
	49	TOM/PERC	TR909 Rim	Jungle Rim 2	Scratch SD r	Jungle Rim 2	Lo-Fi Rim
	50	SD	Break Snare2	Urban Snare	Break Snare2	Urban Snare	Jazz Snare
	51	CLP	TR909 Clap 1	Jungle Rim 3	Funky Clap	Jungle Rim 3	Funky Clap
	52	SD	TR909 Snr 4	Jungle Snr 1	Ragga Snr 2	Jungle Snr 1	East Snare
	53	TOM/PERC	TR707 Tom	TR606 CmpTom	Kick Tom	TR909 DstTom	Natural Tom
	54	HH	TR909 CHH 1	Real CHH	Real CHH	Real CHH	Tight CHH
	55	TOM/PERC	TR707 Tom	TR606 CmpTom	Kick Tom	TR909 DstTom	Natural Tom
	56	HH	TR909 PHH 1	Jungle Hat	TR808 PHH 1	Jungle Hat	Pedal Hat 2
	57	TOM/PERC	TR707 Tom	TR606 CmpTom	Kick Tom	TR909 DstTom	Natural Tom
	58	HH	TR909 OHH 3	Hip OHH	TR606 OHH	Hip OHH	Hip OHH
	59	TOM/PERC	TR707 Tom	TR606 CmpTom	Kick Tom	TR909 DstTom	Natural Tom
C4	60	TOM/PERC	TR707 Tom	TR606 CmpTom	Kick Tom	TR909 DstTom	Natural Tom
	61	CYM	TR909 Crash	Jungle Crash	TR909 Crash	Jungle Crash	TR909 Crash
	62	TOM/PERC	TR707 Tom	TR606 CmpTom	Kick Tom	TR606 CmpTom	Natural Tom
	63	CYM	TR909 Ride	Natural Ride	TR909 Ride	Natural Ride	TR707 Ride
	64	CYM	NaturalCrash	NaturalCrash	TR909 Crash	NaturalCrash	TR909 Crash
	65	CYM	Tambourine 3	Asian Gong	Asian Gong	Asian Gong	Cup Cym
	66	TOM/PERC	Tambourine 4	Tambourine 3	Tambourine 2	Tambourine 3	Tambourine 3
	67	CYM	TR909 Crash	TR606 Cym 1	TR909 Crash	TR606 Cym 1	Tambourine 4
	68	TOM/PERC	TR707Cowbell	Cowbell	CR78 Cowbell	Cowbell	TR808Cowbell
	69	CYM	Cup Cym	TR909 Crash	TR606 Cym 2	TR909 Crash	TR606 Cym 1
	70	TOM/PERC	TR808Cowbell	CR78 Tamb	TR808Cowbell	CR78 Tamb	CR78 Cowbell
	71	CYM	Natural Ride	TR707 Ride	Natural Ride	TR707 Ride	Natural Ride
C5	72	TOM/PERC	HiBongo LoFi	HiBongo LoFi	HiBongo Open	HiBongo LoFi	HiBongo LoFi
	73	TOM/PERC	LoBongo LoFi	LoBongo LoFi	LoBongo Open	LoBongo LoFi	LoBongo LoFi
	74	TOM/PERC	HiCnga Mt LF	HiCnga Mt LF	HiConga Mute	HiCnga Mt LF	HiCnga Mt LF
	75	TOM/PERC	HiCnga Op LF	HiCnga Op LF	HiConga Open	HiCnga Op LF	HiCnga Op LF
	76	TOM/PERC	LoConga LoFi	LoConga LoFi	LoConga Open	LoConga LoFi	LoConga LoFi
	77	TOM/PERC	HiTimbale LF	HiTimbale LF	Hi Timbale	HiTimbale LF	HiTimbale LF
	78	TOM/PERC	LoTimbale LF	LoTimbale LF	Lo Timbale	LoTimbale LF	LoTimbale LF
	79	TOM/PERC	TR727 Agogo	Open Surdo	TR727 Agogo	Open Surdo	TR727 Agogo
	80	TOM/PERC	TR727 Agogo	Mute Surdo	TR727 Agogo	Mute Surdo	TR727 Agogo
	81	TOM/PERC	Cabasa Up	TechnoShaker	Cabasa Up	Cabasa Up	Dance Shaker
	82	TOM/PERC	TR626 Shaker	TR626 Shaker	Maracas	Maracas	808 Maracas
	83	HIT	Belltree	Beam HiQ	MG Blip	Beam HiQ	Scratch BD f
C6	84	HIT	TR727Quijada	Air Blip	Air Blip	ElectricDunk	Scratch BD r
	85	HIT	Short Guiro	Thin Beef	Hyoshigi	Bomb	Scratch SD f
	86	HIT	Long Guiro	Analog Bird	CR78 Guiro	Analog Bird	Scratch SD r
	87	HIT	TR808 Claves	Tape Rewind	Mt Pandeiro	Tape Rewind	Scratch ALT
	88	HIT	Hyoshigi	Wao!	Chenchen	Wao!	Vinyl Stop
	89	OTHERS	Bomb Noise	Emergency	Thrill	Emergency	Vinyl Noise
	90	OTHERS	Come on!	Toy Gun 3	Retro UFO	Toy Gun 3	Kick it!
	91	OTHERS	Ooh! 1	Reso FX	Rezo Noise	Reso FX	Ooh! 2
	92	OTHERS	Wao!	Toy Gun 2	Feedbackwave	Toy Gun 2	Ooh! 1
	93	OTHERS	Laugh	Toy Gun 1	Space Noise	Toy Gun 1	Laugh
	94	CLP	Claptail	Big Clap	Little Clap	Big Clap	Funk Clap
	95	BD	TR808 Kick 1	TR808 Kick 2	TR808 Kick 2	TR808 Kick 2	TR808 Kick 1
C7	96	BD	Plastic BD 3	Roll Kick	TR909 Kick 1	Roll Kick	Dance Kick 1
	97	SD	TR808 Snr 6	Roll Snare	Solid Snare	Roll Snare	Break Snare2
	98	SD	TR909 Snr 7	Break Snare2	Flange Snr	Break Snare2	HH Soul Snr

Note No.	Rhythm Group	P: A16 Hip-Hop 2	P: A17 Funk	P: A18 Electro	P: A19 Jazz	P: A20 Brush
35	BD	TR707 Kick 1	TR707 Kick 2	TR808 Kick 1	Lo-Fi Kick 1	Video Kick
C2 36	BD	Optic Kick	West Kick	TR808 Kick 5	Hip Kick	West Kick
37	TOM/PERC	TR808 RimLng	Lo-Fi Rim	TR808 RimLng	SideStiker	Natural Rim
38	SD	Headz Snare	Deep Snare	TR808 Snr 8	Deep Snare	R&B Snare
39	CLP	Claptail	Funky Clap	Down Clap	Real Clap 1	Brush Slap 1
40	SD	TR808 Snr 7	Disco Snare	TR808 Snr 5	HH Soul Snr	MC Snare
41	TOM/PERC	TR808 Tom	TR707 Tom	TR808 Tom	Natural Tom	TR707 Tom
42	HH	TR808 CHH 1	Tight CHH	TR808 CHH 1	Real CHH	Pop CHH
43	TOM/PERC	TR808 Tom	TR707 Tom	TR808 Tom	Natural Tom	TR707 Tom
44	HH	TR808 PHH 1	Hip PHH	TR808 PHH 1	Pedal Hat 1	Room CHH
45	TOM/PERC	TR808 Tom	TR707 Tom	TR808 Tom	Natural Tom	TR707 Tom
46	HH	TR808 OHH 2	Funk OHH	TR808 OHH 1	Real OHH	Pop Hat Open
47	BD	TR909 Kick 3	Hazy Kick	Ele Kick	Optic Kick	Hip Kick
C3 48	BD	TR808 Kick 3	Turbo Kick	TR707 Kick 2	Video Kick	Optic Kick
49	TOM/PERC	Gate Rim	SideStiker	TR707 Rim	Gate Rim	R8 BrshSwill
50	SD	Tiny Snare 2	Whack Snare	ElectroSnr 2	Headz Snare	R8 Brush Tap
51	CLP	Little Clap	Funk Clap 2	TR707 Clap	Big Clap	Brush Slap 2
52	SD	R&B Snare	Macho Snare	Sim Snare	Cross Snare	R8 BrushRoll
53	TOM/PERC	Natural Tom	TR909 Tom	Deep Tom	TR707 Tom	Natural Tom
54	HH	Pop CHH	Real CHH	Closed Hat	Closed Hat	R8 Brush CHH
55	TOM/PERC	Natural Tom	TR909 Tom	Deep Tom	TR707 Tom	Natural Tom
56	HH	Pedal Hat 1	Pedal Hat 1	Pedal Hat 1	Bristol CHH	Pedal Hat 1
57	TOM/PERC	Natural Tom	TR909 Tom	Deep Tom	TR707 Tom	Natural Tom
58	HH	Pop Hat Open	Cym OHH	Open Hat	Cym OHH	R8 OHH
59	TOM/PERC	Natural Tom	TR909 Tom	Deep Tom	TR707 Tom	Natural Tom
C4 60	TOM/PERC	Natural Tom	TR909 Tom	Deep Tom	TR707 Tom	Natural Tom
61	CYM	NaturalCrash	NaturalCrash	TR909 Crash	NaturalCrash	NaturalCrash
62	TOM/PERC	Natural Tom	TR909 Tom	Deep Tom	TR707 Tom	Natural Tom
63	CYM	TR909 Ride	TR909 Ride	TR707 Ride	TR909 Ride	TR909 Ride
64	CYM	TR909 Crash	TR909 Crash	NaturalCrash	NaturalCrash	NaturalCrash
	CYM	Cup Cym	Cup Cym	Asian Gong	Cup Cym	Cup Cym
65	TOM/PERC	Tambourine 4	CR78 Tamb	Tambourine 2	Tambourine 2	Tambourine 2
66	CYM	TR909 Crash	TR909 Crash	TR909 Crash	TR909 Crash	TR606 Cym 1
67	TOM/PERC	Cowbell	TR707Cowbell	TR808Cowbell	Cowbell	Cowbell
68	CYM	TR606 Cym 1	TR606 Cym 1	TR606 Cym 1	TR606 Cym 1	TR909 Crash
69	TOM/PERC	TR808Cowbell	TR808Cowbell	TR727Quijada	TR808Cowbell	TR808Cowbell
70	CYM	Natural Ride	Natural Ride	Natural Ride	Natural Ride	Natural Ride
71	TOM/PERC	HiBongo Open	HiBongo Open	HiBongo Open	HiBongo Open	HiBongo Open
C5 72	TOM/PERC	LoBongo Open	LoBongo Open	LoBongo Open	LoBongo Open	LoBongo Open
73	TOM/PERC	HiConga Mute	HiConga Mute	HiConga Mute	HiConga Mute	HiConga Mute
74	TOM/PERC	HiConga Open	HiConga Open	HiConga Open	HiConga Open	HiConga Open
75	TOM/PERC	LoConga Open	LoConga Open	LoConga Open	LoConga Open	LoConga Open
76	TOM/PERC	Hi Timbale	Hi Timbale	Hi Timbale	Hi Timbale	Hi Timbale
77	TOM/PERC	Lo Timbale	Lo Timbale	Lo Timbale	Lo Timbale	Lo Timbale
78	TOM/PERC	TR727 Agogo	TR727 Agogo	TR727 Agogo	TR727 Agogo	TR727 Agogo
79	TOM/PERC	TR727 Agogo	TR727 Agogo	TR727 Agogo	TR727 Agogo	TR727 Agogo
80	TOM/PERC	TechnoShaker	TechnoShaker	Cabasa Up	Cabasa Up	Cabasa Up
81	TOM/PERC	808 Maracas	808 Maracas	808 Maracas	Maracas	Maracas
82	HIT	Scratch BD f	Scratch BD f	Air Blip	TR727Quijada	Whistle
83	HIT	Scratch BD r	Scratch BD r	Thin Beef	Jingle Bell	Whistle
C6 84	HIT	Scratch SD f	Scratch SD f	Back Hit	Short Guiro	Short Guiro
85	HIT	Scratch SD r	Scratch SD r	Analog Bird	Long Guiro	Long Guiro
86	HIT	Scratch ALT	Scratch ALT	Hoo	TR808 Claves	TR808 Claves
87	HIT	Funky Bass	Vinyl Stop	Metal Sweep	Hyoshigi	Hyoshigi
88	OTHERS	Vinyl Noise	Vinyl Noise	Emergency	Hyoshigi	Hyoshigi
89	OTHERS	Philly Hit	Philly Hit	Buzzer	Mute Cuica	Mute Cuica
90	OTHERS	Brass Fall	Brass Fall	Tonality	Open Cuica	Open Cuica
91	OTHERS	Ooh! 1	Kick it!	Ring Osc	Triangle 1	Triangle 1
92	OTHERS	Ooh! 2	Harmo Gtr	Toy Gun 3	Triangle 1	Triangle 1
93	CLP	Finger Snap	Big Clap	Hip Clap	Finger Snap	Real Clap 1
94	BD	TR808 Kick 1	Plastic BD 2	Plastic BD 1	TR808 Kick 1	TR909 Kick 2
95	BD	Hazy Kick	TR909 Kick 5	Lo-Fi Kick 1	TR909 Kick 1	TR707 Kick 1
C7 96	SD	TR606 Snr 2	DanceHall SD	Synth Snare	R8 BrshSwill	Real Snare
97	SD	Machine Snr	Machine Snr	TR808 Snr 6	R8 Brush Tap	Deep Snare
98						

Preset Rhythm Set List

Note No.	Rhythm Group	P: A21 Disco	P: A22 Ragga	P: A23 Rock	P: A24 Industrial	P: A25 Ethnic
35	BD	TR707 Kick 2	Analog Kick	Optic Kick	TR909 Dst BD	Open Surdo
C2 36	BD	TR808 Kick 3	TR707 Kick 2	TR909 Kick 4	Lo-Fi Kick 2	Mute Surdo
37	TOM/PERC	TR707 Rim	Gate Rim	TR808 RimLng	Drill Hit	Jungle Snap
38	SD	Real Snare	Jungle Rim 1	Hash Snare	Big Trash SD	Natural Rim
39	CLP	Real Clap 1	Hip Clap	Funk Clap 2	Dist Swish	Big Clap
40	SD	Fat Snare	Ragga Snr 2	DJ Snare	Rage Snare	Jungle Snr 1
41	TOM/PERC	TR707 Tom	TR808 Tom	Kick Tom	Can Tom	Jungle Snr 2
42	HH	Real CHH	Bristol CHH	TR909 CHH 2	Air Blip	Mt Pandeiro
43	TOM/PERC	TR707 Tom	TR808 Tom	Kick Tom	Can Tom	Jungle Snr 2
44	HH	Pedal Hat 1	Pedal Hat 1	TR909 PHH 1	Beam HiQ	R8 Brush CHH
45	TOM/PERC	TR707 Tom	TR808 Tom	Kick Tom	Can Tom	Jungle Snr 2
46	HH	Real OHH	Cym OHH	TR909 OHH 1	TR909 DstOHH	Metal Sweep
47	BD	Turbo Kick	Plastic BD 4	TR909 Kick 5	Bomb	Afro Feet
C3 48	BD	TR707 Kick 1	Video Kick	Turbo Kick	Iron Door	Mute Surdo
49	TOM/PERC	TR808 RimLng	Beam HiQ	SideStiker	Thrill	Jungle Snap
50	SD	Deep Snare	DanceHall SD	Lo-Fi Snare	PCM Press	Op Pandeiro
51	CLP	Big Clap	Little Clap	Claptail	Air Gun	Real Clap 2
52	SD	TR707 Snare	Ragga Rim 2	Macho Snare	PCM Press	Hi Timbale
53	TOM/PERC	Deep Tom	Deep Tom	TR707 Tom	TekRok Snare	TablaBaya
54	HH	TR808 CHH 1	TR707 CHH	TR909 PHH 1	Real PHH	Chenchen
55	TOM/PERC	Kick Tom	Deep Tom	TR707 Tom	TekRok Snare	TablaBaya
56	HH	Pop CHH	Pop CHH	TR909 OHH 3	TR909 PHH 1	Tambourine 1
57	TOM/PERC	Deep Tom	Deep Tom	TR707 Tom	TekRok Snare	TablaBaya
58	HH	TR707 OHH	TR707 OHH	Cym OHH	TR909 DstOHH	Tambourine 4
59	TOM/PERC	Kick Tom	Deep Tom	TR707 Tom	TekRok Snare	TablaBaya
C4 60	TOM/PERC	Deep Tom	Deep Tom	TR707 Tom	TekRok Snare	Udo
61	CYM	NaturalCrash	NaturalCrash	TR909 Crash	Bomb Noise	Asian Gong
62	TOM/PERC	Kick Tom	Deep Tom	TR707 Tom	TekRok Snare	Udo
63	CYM	TR909 Ride	TR909 Ride	TR909 Ride	TR909 Ride	Cup Cym
64	CYM	NaturalCrash	NaturalCrash	TR909 Crash	Drill Hit	NaturalCrash
65	CYM	Cup Cym	Asian Gong	Asian Gong	ElectricDunk	Cup Cym
66	TOM/PERC	Tambourine 2	Tambourine 3	Tambourine 3	Mt Pandeiro	Tambourine 2
67	CYM	TR909 Crash	TR909 Crash	TR909 Crash	TR606 Cym 1	TR606 Cym 1
68	TOM/PERC	Cowbell	Cowbell	Cowbell	PC-2 Machine	Cowbell
69	CYM	TR606 Cym 1	TR606 Cym 1	TR606 Cym 2	TR909 Crash	NaturalCrash
70	TOM/PERC	TR808Cowbell	TR808Cowbell	TR808Cowbell	Crash	CR78 Beat
71	CYM	Natural Ride	TR707 Ride	Natural Ride	Natural Ride	Natural Ride
C5 72	TOM/PERC	HiBongo Open	HiBongo Open	HiBongo LoFi	HiBongo LoFi	HiBongo LoFi
73	TOM/PERC	LoBongo Open	LoBongo Open	LoBongo LoFi	LoBongo LoFi	LoBongo LoFi
74	TOM/PERC	HiConga Mute	HiConga Mute	HiCnga Mt LF	HiCnga Mt LF	HiCnga Mt LF
75	TOM/PERC	HiConga Open	HiConga Open	HiCnga Op LF	HiCnga Op LF	HiCnga Op LF
76	TOM/PERC	LoConga Open	LoConga Open	LoConga LoFi	LoConga LoFi	LoConga LoFi
77	TOM/PERC	Hi Timbale	Hi Timbale	HiTimbale LF	HiTimbale LF	HiTimbale LF
78	TOM/PERC	Lo Timbale	Lo Timbale	LoTimbale LF	LoTimbale LF	LoTimbale LF
79	TOM/PERC	TR727 Agogo	TR727 Agogo	TR727 Agogo	Analog Bird	TR727 Agogo
80	TOM/PERC	TR727 Agogo	TR727 Agogo	TR727 Agogo	Analog Bird	TR727 Agogo
81	TOM/PERC	Cabasa Up	TechnoShaker	TR727Quijada	TechnoShaker	Cabasa Up
82	TOM/PERC	Maracas	808 Maracas	TR626 Shaker	TR626 Shaker	TR626 Shaker
83	HIT	Triangle 1	MG Attack	Bounce	One!	Whistle
C6 84	HIT	Triangle 1	Air Blip	ElectricDunk	Two!	Whistle
85	HIT	Beam HiQ	Syn Hit	Iron Door	Three!	Short Guiro
86	HIT	Back Hit	TAO Hit	Drill Hit	Kick it!	Long Guiro
87	HIT	Back Hit	Chiki!	Thrill	Wao!	TR808 Claves
88	HIT	Philly Hit	Hey!	PCM Press	Come on!	Hyoshigi
89	OTHERS	Brass Fall	Toy Gun 1	Dist TekGtr	Fuzzy Clap	AfroDrum Rat
90	OTHERS	Rezo Noise	Toy Gun 2	Dist TekGtr	Roll Kick	Mute Cuica
91	OTHERS	Iih Formant	Toy Gun 3	Dist TekGtr	Bomb	Open Cuica
92	OTHERS	Analog Bird	Reso FX	Dist TekGtr	LoTimbale LF	Triangle 2
93	OTHERS	Emergency	Emergency	Gtr FX	TR909 DstOHH	Triangle 1
94	CLP	Down Clap	Big Clap	Air Gun	Fuzzy Clap	Real Clap 1
95	BD	TR808 Kick 1	TR808 Kick 1	TR909 Kick 2	TR909 Kick 2	Boost Kick
C7 96	BD	TR909 Kick 1	TR909 Kick 1	Gabba Kick	Roll Kick	Kick Ghost
97	SD	TR909 Snr 3	HH Soul Snr	ElectroSnr 2	TR909 DstSnr	Voice loop
98	SD	TR808 Snr 5	TR909 Snr 4	Big Trash SD	Flange Snr	Chiki!

Note No.	Rhythm Group	P: A26 Reverse	P: B01 Trance	P: B02 House 3	P: B03 2step	P: B04 R&B
35	BD	Ele Kick	Plastic BD 4	TR909 Kick 3	TR909 Dst BD	TR606 Dst BD
C2 36	BD	Turbo Kick	Gabba Kick	Plastic BD 2	Break Kick	Dance Kick 1
37	TOM/PERC	TR909 Rim	Jungle Rim 3	TR808 RimLng	Natural Rim	Gate Rim
38	SD	TR606 Snr 2	Headz Snare	TR808 Snr 7	Cross Snare	HH Soul Snr
39	CLP	Comp Clap	Fuzzy Clap	Real Clap 1	Big Clap	Finger Snap
40	SD	Real Snare	TekRok Snare	TR909 Snr 5	Antigua Snr	DJ Snare
41	TOM/PERC	Can Tom	Deep Tom	TR909 Tom	TR909 Tom	TR606 Tom
42	HH	TR808 CHH 2	TR909 CHH 2	TR707 CHH	Real CHH	Pop CHH
43	TOM/PERC	Can Tom	Deep Tom	TR909 Tom	TR909 Tom	TR606 Tom
44	HH	TR808 PHH 1	TR909 PHH 2	TR707 PHH	Pedal Hat 1	Pedal Hat 1
45	TOM/PERC	Can Tom	Deep Tom	TR909 Tom	TR909 Tom	TR606 Tom
46	HH	TR808 OHH 1	TR909 DstOHH	TR707 OHH	Open Hat	Pop Hat Open
47	BD	TR707 Kick 1	Amsterdam BD	TR707 Kick 2	Hip Kick	Hip Kick
C3 48	BD	Plastic BD 3	Hip Kick	TR909 Kick 5	Hazy Kick	Wet Kick
49	TOM/PERC	TR707 Rim	Jungle Rim 1	Lo-Fi Rim	Scratch SD f	Natural Rim
50	SD	TR909 Snr 4	TR606 Snr 1	Tiny Snare 2	Hash Snare	Whack Snare
51	CLP	TR707 Clap	Clap Snare 1	TR909 Clap 1	Real Clap 1	Real Clap 2
52	SD	Comp Clap	Indus Snare	TR909 Snr 4	Cross Snare	Lo-Hard Snr
53	TOM/PERC	TR707 Tom	TR606 Tom	TR707 Tom	TR707 Tom	Natural Tom
54	HH	TR909 CHH 1	TR909 PHH 1	TR909 CHH 1	Real CHH	Tight CHH
55	TOM/PERC	TR707 Tom	TR606 Tom	TR707 Tom	TR707 Tom	Natural Tom
56	HH	TR909 PHH 1	TR909 PHH 2	TR909 PHH 1	TR808 PHH 1	Pedal Hat 2
57	TOM/PERC	TR707 Tom	TR606 Tom	TR707 Tom	TR707 Tom	Natural Tom
58	HH	TR909 DstOHH	TR909 DstOHH	TR909 OHH 3	TR606 OHH	Open Hat
59	TOM/PERC	TR707 Tom	TR606 CmpTom	TR707 Tom	TR707 Tom	Natural Tom
C4 60	TOM/PERC	TR707 Tom	TR606 CmpTom	TR707 Tom	TR707 Tom	Natural Tom
61	CYM	TR909 Crash	TR909 Crash	NaturalCrash	NaturalCrash	NaturalCrash
62	TOM/PERC	TR707 Tom	HiTimbale LF	TR707 Tom	TR707 Tom	Natural Tom
63	CYM	TR707 Ride	TR707 Ride	TR909 Ride	Natural Ride	Natural Ride
64	CYM	TR909 Crash	TR909 Crash	NaturalCrash	NaturalCrash	NaturalCrash
65	CYM	Asian Gong	Natural Ride	Tambourine 3	TR909 Crash	Cup Cym
66	TOM/PERC	Tambourine 2	TR707 Ride	Tambourine 1	Tambourine 3	Tambourine 3
67	CYM	TR909 Crash	NaturalCrash	TR909 Ride	TR707 Ride	Tambourine 4
68	TOM/PERC	TR808Cowbell	Cup Cym	CR78 Cowbell	TR808Cowbell	TR707Cowbell
69	CYM	TR606 Cym 2	TR909 Ride	Cup Cym	TR606 Cym 1	TR606 Cym 2
70	TOM/PERC	CR78 Tamb	Triangle 1	CR78 Beat	CR78 Beat	CR78 Cowbell
71	CYM	Cup Cym	Triangle 1	Natural Ride	Cup Cym	TR707 Ride
C5 72	TOM/PERC	HiBongo Open	HiBongo LoFi	HiBongo Open	HiBongo Open	HiBongo LoFi
73	TOM/PERC	LoBongo Open	LoBongo LoFi	LoBongo Open	LoBongo Open	LoBongo LoFi
74	TOM/PERC	HiConga Mute	HiCnga Mt LF	HiConga Mute	HiConga Mute	HiCnga Mt LF
75	TOM/PERC	HiConga Open	HiCnga Op LF	HiConga Open	HiConga Open	HiCnga Op LF
76	TOM/PERC	LoConga Open	LoConga LoFi	LoConga Open	LoConga Open	LoConga LoFi
77	TOM/PERC	Hi Timbale	HiTimbale LF	Hi Timbale	Hi Timbale	HiTimbale LF
78	TOM/PERC	Lo Timbale	LoTimbale LF	Lo Timbale	Lo Timbale	LoTimbale LF
79	TOM/PERC	TR727 Agogo	TR727 Agogo	TR727 Agogo	TR727 Agogo	TR727 Agogo
80	TOM/PERC	TR727 Agogo	TR727 Agogo	TR727 Agogo	TR727 Agogo	TR727 Agogo
81	TOM/PERC	TechnoShaker	TechnoShaker	Cabasa Up	Cabasa Up	TR626 Shaker
82	TOM/PERC	Maracas	Dance Shaker	TR626 Shaker	TR626 Shaker	Maracas
83	HIT	Beam HiQ	Beam HiQ	Wind Chime	Beam HiQ	Scratch BD f
C6 84	HIT	Tape Rewind	Dist Swish	TR727Quijada	Philly Hit	Scratch BD r
85	HIT	Vinyl Stop	PCM Press	Short Guiro	ElectricDunk	Scratch SD f
86	HIT	Come on!	Iron Door	Long Guiro	TablaBaya	Scratch SD r
87	HIT	One!	MG Attack	Wood Block	Tabla	Scratch ALT
88	HIT	Pa!	Air Blip	Whistle	Chenchen	MG Blip
89	OTHERS	Analog Bird	Rezo Noise	Beam HiQ	Metal Sweep	Philly Hit
90	OTHERS	Retro UFO	Toy Gun 2	Drill Hit	Analog Bird	Metal Sweep
91	OTHERS	Metal Sweep	Buzzer	Thin Beef	Wao!	Chiki!
92	OTHERS	Dst Solo Gtr	P5 Noise	Dist Swish	Mute Cuica	Chenchen
93	OTHERS	Emergency	Rezo Noise	Analog Bird	Toy Gun 3	Canvas
94	CLP	Down Clap	SNR MENU 6	Big Clap	Big Clap	Cheap Clap
95	BD	Wet Kick	TR808 Kick 2	TR808 Kick 1	TR909 Kick 3	TR808 Kick 1
C7 96	BD	Hip Kick	Turbo Kick	TR606 Dst BD	TR909 Kick 5	Turbo Kick
97	SD	TR909 Snr 5	ElectroSnr 2	TR606 Snr 1	Jungle Rim 2	Real Snare
98	SD	Jazz Snare	Synth Snare	Whack Snare	RaggaTightSD	HipJazz Snr

Preset Pattern List

No.	Pattern Name	BPM	Mes.	Programmer
A01	EuroTrance 1	140	8	Roland Corporation
A02	EuroTrance 2	140	8	Roland Corporation
A03	EuroTrance 3	140	8	Hans-Joerg Scheffler
A04	EuroTrance 4	140	4	B.U.S
A05	EuroTrance 5	138	4	B.U.S
A06	EuroTrance 6	135	8	Roland Corporation
A07	EuroTrance 7	138	8	Hans-Joerg Scheffler
A08	EuroTrance 8	150	8	Hans-Joerg Scheffler
A09	EuroTrance 9	144	8	Roland Europe S.p.A.
A10	EuroTrance 10	138	4	B.U.S
A11	Progressive 1	140	4	B.U.S
A12	Progressive 2	138	8	B.U.S
A13	Progressive 3	138	4	B.U.S
A14	Progressive 4	140	4	B.U.S
A15	Progressive 5	138	8	B.U.S
A16	Progressive 6	130	8	Hans-Joerg Scheffler
A17	Psy Trance 1	145	4	MASA
A18	Psy Trance 2	140	4	MASA
A19	Psy Trance 3	136	4	MASA
A20	Psy Trance 4	143	4	Roland Corporation U.S.
A21	Psy Trance 5	145	4	MASA
A22	HardTrance 1	145	4	MASA
A23	HardTrance 2	140	4	MASA
A24	HardTrance 3	139	4	MASA
A25	HardTrance 4	138	8	MASA
A26	HardTrance 5	141	4	B.U.S
A27	Trance 1	140	4	MASA
A28	Trance 2	138	4	MASA
A29	Trance 3	136	4	MASA
A30	Trance 4	137	4	MASA
A31	Trance 5	136	4	MASA
A32	Trance 6	140	8	Roland Corporation U.S.
A33	Trance 7	130	4	Hans-Joerg Scheffler
A34	DetroitTechno 1	132	4	HEIGO TANI
A35	DetroitTechno 2	134	4	Cappadocia Productions
A36	DetroitTechno 3	135	8	Cappadocia Productions
A37	DetroitTechno 4	130	4	HEIGO TANI
A38	DetroitTechno 5	132	4	HEIGO TANI
A39	DetroitTechno 6	140	4	Roland Corporation
A40	Minimal 1	140	4	HEIGO TANI
A41	Minimal 2	140	4	HEIGO TANI
A42	Minimal 3	140	4	HEIGO TANI
A43	Minimal 4	140	4	HEIGO TANI
A44	Minimal 5	130	4	Roland Corporation
A45	Minimal 6	141	4	Cappadocia Productions
A46	Minimal 7	141	4	Cappadocia Productions
A47	New Electro 1	128	4	Cappadocia Productions
A48	New Electro 2	128	4	Bjoern Bojahr
A49	New Electro 3	130	4	Roland Corporation
A50	New Electro 4	155	4	Cappadocia Productions

No.	Pattern Name	BPM	Mes.	Programmer
A51	Ambient 1	100	4	Cappadocia Productions
A52	Ambient 2	80	4	Cappadocia Productions
A53	Ambient 3	98	4	HEIGO TANI
A54	Ambient 4	93	8	Cappadocia Productions
A55	NU-NRG 1	145	8	Roland Corporation
A56	NU-NRG 2	155	8	Roland Corporation
A57	NU-NRG 3	150	8	Roland Corporation
A58	NU-NRG 4	145	8	Roland Corporation
A59	NU-NRG 5	150	4	Hans-Joerg Scheffler
A60	EuroBeat 1	159	4	Roland Europe S.p.A.
A61	EuroBeat 2	159	8	Roland Europe S.p.A.
A62	EuroBeat 3	159	8	Roland Europe S.p.A.
A63	HappyHardcore 1	175	8	Roland Corporation
A64	HappyHardcore 2	175	8	Roland Europe S.p.A.
A65	HappyHardcore 3	175	4	HEIGO TANI
A66	Gabba 1	190	8	Roland Corporation
A67	Gabba 2	180	4	Roland Corporation
A68	Gabba 3	170	4	HEIGO TANI
A69	UK HardHouse 1	140	8	Roland Corporation
A70	UK HardHouse 2	135	8	Roland Corporation
A71	UK HardHouse 3	138	4	B.U.S
A72	UK HardHouse 4	138	8	B.U.S
A73	UK HardHouse 5	138	4	B.U.S
A74	UK HardHouse 6	138	4	B.U.S
A75	UK HardHouse 7	138	4	B.U.S
A76	UK HardHouse 8	128	4	Bjoern Bojahr
A77	US HardHouse 1	120	8	Roland Corporation
A78	US HardHouse 2	125	8	Roland Corporation
A79	US HardHouse 3	127	4	Roland Corporation U.S.
A80	US HardHouse 4	128	4	Bjoern Bojahr
A81	US HardHouse 5	128	4	Roland Corporation U.S.
A82	US HardHouse 6	136	4	Roland Corporation U.S.
A83	US HardHouse 7	136	4	Roland Corporation U.S.
A84	US HardHouse 8	130	4	Hans-Joerg Scheffler
A85	Chicago House 1	130	4	HEIGO TANI
A86	Chicago House 2	130	4	HEIGO TANI
A87	Filter Disco 1	132	8	HEIGO TANI
A88	Filter Disco 2	132	4	HEIGO TANI
A89	House 1	132	4	Hans-Joerg Scheffler
A90	House 2	130	4	Hans-Joerg Scheffler
A91	House 3	125	8	Hans-Joerg Scheffler
A92	House 4	130	4	Roland Corporation U.S.
A93	House 5	133	8	Roland Corporation U.S.
A94	House 6	130	4	Hans-Joerg Scheffler
A95	House 7	128	4	Bjoern Bojahr
A96	House 8	134	8	Hans-Joerg Scheffler
A97	House 9	125	4	Roland Corporation U.S.
A98	House 10	127	8	Roland Corporation U.S.
A99	House 11	128	4	Bjoern Bojahr
A00	House 12	128	4	Bjoern Bojahr

No.	Pattern Name	BPM	Mes.	Programmer
B01	House 13	128	4	Bjoern Bojahr
B02	Garage House 1	130	4	Roland Corporation
B03	Garage House 2	125	8	Hans-Joerg Scheffler
B04	Garage House 3	120	4	Hans-Joerg Scheffler
B05	Garage House 4	125	8	Hans-Joerg Scheffler
B06	Garage House 5	135	4	B.U.S
B07	Garage House 6	133	8	Roland Corporation U.S.
B08	2step 1	130	8	presto
B09	2step 2	132	8	presto
B10	2step 3	136	8	presto
B11	2step 4	136	8	presto
B12	2step 5	126	8	presto
B13	2step 6	130	4	Roland Corporation
B14	R&B 1	100	8	presto
B15	R&B 2	100	8	presto
B16	R&B 3	111	4	Roland Corporation U.S.
B17	R&B 4	103	4	Roland Corporation U.S.
B18	R&B 5	102	4	Roland Corporation U.S.
B19	R&B 6	135	8	Roland Corporation U.S.
B20	R&B 7	104	4	Roland Corporation U.S.
B21	R&B 8	100	4	Roland Corporation
B22	R&B 9	82	4	presto
B23	R&B 10	80	8	presto
B24	R&B 11	93	4	Roland Corporation
B25	R&B 12	110	8	presto
B26	R&B 13	78	8	Roland Corporation U.S.
B27	R&B 14	78	4	Roland Corporation U.S.
B28	HipHopEast 1	88	4	Roland Corporation U.S.
B29	HipHopEast 2	91	4	Roland Corporation U.S.
B30	HipHopEast 3	90	4	Cappadocia Productions
B31	HipHopEast 4	94	4	Roland Corporation U.S.
B32	HipHopEast 5	89	4	Cappadocia Productions
B33	HipHopEast 6	100	4	Roland Corporation U.S.
B34	HipHopEast 7	93	4	Roland Corporation
B35	HipHopEast 8	90	4	Roland Corporation
B36	HipHopEast 9	90	4	Roland Corporation
B37	HipHopEast 10	90	4	Roland Corporation
B38	G-Funk 1	91	4	Roland Corporation U.S.
B39	G-Funk 2	92	4	Roland Corporation U.S.
B40	G-Funk 3	98	4	Cappadocia Productions
B41	G-Funk 4	92	4	Roland Corporation U.S.
B42	Abstruct 1	96	4	Roland Corporation U.S.
B43	Abstruct 2	90	4	Roland Corporation
B44	Abstruct 3	85	4	Roland Corporation
B45	Abstruct 4	93	4	Roland Corporation
B46	Abstruct 5	78	4	Roland Corporation
B47	Abstruct 6	97	4	Roland Corporation
B48	Drum'n'Bass 1	156	16	presto
B49	Drum'n'Bass 2	165	8	presto
B50	Drum'n'Bass 3	180	8	Roland Corporation
B51	Drum'n'Bass 4	160	4	HEIGO TANI
B52	Drum'n'Bass 5	180	8	presto
B53	Drum'n'Bass 6	170	8	Roland Corporation
B54	Drum'n'Bass 7	160	8	presto
B55	Drum'n'Bass 8	173	8	presto
B56	Drum'n'Bass 9	170	4	HEIGO TANI
B57	Drum'n'Bass 10	165	8	HEIGO TANI

No.: Pattern Number

Mes.: Measure Length

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RPS Pattern List

No.	Pattern Name
B58	Trance Drums 1
B59	Trance Drums 2
B60	Trance Drums 3
B61	Trance Drums 4
B62	Trance Drums 5
B63	Trance Drums 6
B64	Techno Drums 1
B65	Techno Drums 2
B66	Techno Drums 3
B67	Techno Drums 4
B68	Techno Drums 5
B69	Techno Drums 6
B70	Techno Drums 7
B71	Techno Drums 8
B72	Techno Drums 9
B73	House Drums 1
B74	House Drums 2
B75	House Drums 3
B76	House Drums 4
B77	House Drums 5
B78	House Drums 6
B79	House Drums 7
B80	2step Drums 1
B81	2step Drums 2
B82	R&B Drums 1
B83	R&B Drums 2
B84	R&B Drums 3
B85	R&B Drums 4
B86	HipHop Drums 1
B87	HipHop Drums 2
B88	HipHop Drums 3
B89	HipHop Drums 4
B90	DnB Drums
B91	Drums Fill 1
B92	Drums Fill 2
B93	Drums Fill 3
B94	Drums Fill 4
B95	Drums Fill 5
B96	Drums Fill 6
B97	Drums Fill 7
B98	Drums Fill 8
B99	Drums Fill 9
B00	Drums Fill 10
C01	Drums Fill 11
C02	Drums Fill 12
C03	Drums Fill 13
C04	Drums Fill 14
C05	Drums Fill 15
C06	Drums Fill 16
C07	Drums Fill 17
C08	Drums Fill 18
C09	Drums Fill 19
C10	Drums Fill 20
C11	Drums Fill 21
C12	Drums Fill 22
C13	Drums Fill 23
C14	Drums Fill 24
C15	Drums Fill 25

No.	Pattern Name
C16	Drums Fill 26
C17	Drums Fill 27
C18	Drums Fill 28
C19	Perc Fill 1
C20	Perc Fill 2
C21	Perc Fill 3
C22	Noise Fill 1
C23	Noise Fill 2
C24	Trance Bass 1
C25	Trance Bass 2
C26	Trance Bass 3
C27	Trance Bass 4
C28	Trance Bass 5
C29	Techno Bass 1
C30	Techno Bass 2
C31	Techno Bass 3
C32	Techno Bass 4
C33	Techno Bass 5
C34	Techno Bass 6
C35	Techno Bass 7
C36	Techno Bass 8
C37	House Bass 1
C38	House Bass 2
C39	House Bass 3
C40	House Bass 4
C41	House Bass 5
C42	House Bass 6
C43	2step Bass
C44	R&B Bass
C45	HipHop Bass 1
C46	HipHop Bass 2
C47	HipHop Bass 3
C48	DnB Bass
C49	Synth Seq 1
C50	Synth Seq 2
C51	Synth Seq 3
C52	Synth Seq 4
C53	Synth Seq 5
C54	Synth Seq 6
C55	Synth Seq 7
C56	Synth Seq 8
C57	Synth Seq 9
C58	Synth Seq 10
C59	Synth Seq 11
C60	Synth Seq 12
C61	Synth Seq 13
C62	Kalimba Seq
C63	Synth Riff 1
C64	Synth Riff 2
C65	Synth Riff 3
C66	Synth Riff 4
C67	Synth Riff 5
C68	Synth Riff 6
C69	Synth Riff 7
C70	Synth Riff 8
C71	Synth Riff 9
C72	Synth Riff 10
C73	Synth Riff 11

No.	Pattern Name
C74	Synth Riff 12
C75	Synth Riff 13
C76	Synth Riff 14
C77	Synth Riff 15
C78	Synth Riff 16
C79	Synth Riff 17
C80	Synth Riff 18
C81	Synth Riff 19
C82	Synth Riff 20
C83	Synth Riff 21
C84	Synth Riff 22
C85	Synth Riff 23
C86	Synth Riff 24
C87	Synth Riff 25
C88	Synth Riff 26
C89	Synth Riff 27
C90	Synth Riff 28
C91	Synth Riff 29
C92	Synth Riff 30
C93	Synth Riff 31
C94	Synth Riff 32
C95	Synth Riff 33
C96	Synth Riff 34
C97	Guitar Riff 1
C98	Guitar Riff 2
C99	Guitar Riff 3
C00	Organ Riff
D01	Hit Riff 1
D02	Hit Riff 2
D03	Hit Riff 3
D04	Hit Riff 4
D05	Hit Riff 5
D06	Hit Riff 6
D07	Perc Riff
D08	Synth Pad 1
D09	Synth Pad 2
D10	Synth Pad 3
D11	Synth Pad 4
D12	Synth Pad 5
D13	Synth Pad 6
D14	Synth Pad 7
D15	Synth Pad 8
D16	Synth Pad 9
D17	Synth Pad 10
D18	Synth Pad 11
D19	Synth Pad 12
D20	Synth Lead 1
D21	Synth Lead 2
D22	Synth Lead 3
D23	Synth Lead 4
D24	Synth Lead 5
D25	Synth Lead 6
D26	Synth Lead 7
D27	Synth Lead 8
D28	Synth Lead 9
D29	Synth Lead 10
D30	Synth Lead 11
D31	Synth Lead 12

No.	Pattern Name
D32	Synth Lead 13
D33	Piano 1
D34	Piano 2
D35	Piano 3
D36	E.Piano 1
D37	E.Piano 2
D38	E.Piano 3
D39	E.Piano 4
D40	E.Piano 5
D41	E.Piano 6
D42	Organ
D43	Guitar 1
D44	Guitar 2
D45	Brass 1
D46	Brass 2
D47	Brass 3
D48	Voice 1
D49	Voice 2
D50	Voice 3
D51	Voice 4
D52	Scratch 1
D53	Scratch 2
D54	SFX 1
D55	SFX 2
D56	SFX 3
D57	SFX 4
D58	SFX 5
D59	SFX 6
D60	SFX 7
D61	SFX 8
D62	SFX 9
D63	SFX 10
D64	SFX 11
D65	SFX 12
D66	SFX 13
D67	SFX 14
D68	SFX 15
D69	SFX 16
D70	SFX 17
D71	SFX 18
D72	SFX 19
D73	SFX 20
D74	SFX 21
D75	SFX 22
D76	SFX 23
D77	SFX 24
D78	SFX 25
D79	SFX 26
D80	SFX 27
D81	SFX 28
D82	SFX 29
D83	SFX 30
D84	SFX 31
D85	SFX 32
D86	SFX 33
D87	SFX 34
D88	SFX 35
D89	SFX 36

RPS Set List

D-FIELD	No.	Pattern Name
1. Euro Trance		
1	B58	Trance Drums 1
2	C24	Trance Bass 1
3	B91	Drums Fill 1
4	C63	Synth Riff 1
5	C70	Synth Riff 8
6	D20	Synth Lead 1
7	C60	Synth Seq 12
8	D54	SFX 1
2. Progressive		
1	B59	Trance Drums 2
2	C25	Trance Bass 2
3	B92	Drums Fill 2
4	D08	Synth Pad 1
5	C71	Synth Riff 9
6	D21	Synth Lead 2
7	D34	Piano 2
8	D55	SFX 2
3. Psy Trance		
1	B60	Trance Drums 3
2	C26	Trance Bass 3
3	B93	Drums Fill 3
4	D09	Synth Pad 2
5	C54	Synth Seq 6
6	D22	Synth Lead 3
7	C85	Synth Riff 23
8	D05	Hit Riff 5
4. Hard Trance		
1	B61	Trance Drums 4
2	C27	Trance Bass 4
3	B94	Drums Fill 4
4	D10	Synth Pad 3
5	C72	Synth Riff 10
6	C80	Synth Riff 18
7	C61	Synth Seq 13
8	D56	SFX 3
5. Trance		
1	B62	Trance Drums 5
2	C28	Trance Bass 5
3	B95	Drums Fill 5
4	C64	Synth Riff 2
5	D13	Synth Pad 6
6	C81	Synth Riff 19
7	C86	Synth Riff 24
8	D06	Hit Riff 6
6. Detroit Techno		
1	B64	Techno Drums 1
2	C29	Techno Bass 1
3	B96	Drums Fill 6
4	D11	Synth Pad 4
5	C73	Synth Riff 11
6	D23	Synth Lead 4
7	D30	Synth Lead 11
8	D57	SFX 4
7. Minimal		
1	B65	Techno Drums 2
2	C30	Techno Bass 2
3	B97	Drums Fill 7
4	C49	Synth Seq 1
5	C74	Synth Riff 12
6	C58	Synth Seq 10
7	C87	Synth Riff 25
8	D50	Voice 3
8. New Electro		
1	B66	Techno Drums 3
2	C31	Techno Bass 3
3	C22	Noise Fill 1
4	C65	Synth Riff 3
5	D14	Synth Pad 7
6	C59	Synth Seq 11
7	C88	Synth Riff 26
8	D58	SFX 5

D-FIELD	No.	Pattern Name
9. Ambient		
1	B67	Techno Drums 4
2	C32	Techno Bass 4
3	B98	Drums Fill 8
4	C50	Synth Seq 2
5	D15	Synth Pad 8
6	C82	Synth Riff 20
7	D45	Brass 1
8	D59	SFX 6
10. NU-NRG		
1	B68	Techno Drums 5
2	C33	Techno Bass 5
3	B99	Drums Fill 9
4	C66	Synth Riff 4
5	C75	Synth Riff 13
6	D24	Synth Lead 5
7	C89	Synth Riff 27
8	D60	SFX 7
11. Euro Beat		
1	B69	Techno Drums 6
2	C34	Techno Bass 6
3	B00	Drums Fill 10
4	C51	Synth Seq 3
5	C55	Synth Seq 7
6	C83	Synth Riff 21
7	D35	Piano 3
8	D61	SFX 8
12. HappyHardcore		
1	B70	Techno Drums 7
2	C35	Techno Bass 7
3	C01	Drums Fill 11
4	C52	Synth Seq 4
5	C76	Synth Riff 14
6	D25	Synth Lead 6
7	C90	Synth Riff 28
8	D62	SFX 9
13. Gabba		
1	B71	Techno Drums 8
2	C36	Techno Bass 8
3	C02	Drums Fill 12
4	C97	Guitar Riff 1
5	C56	Synth Seq 8
6	D26	Synth Lead 7
7	D49	Voice 2
8	D63	SFX 10
14. UK HardHouse		
1	B73	House Drums 1
2	C37	House Bass 1
3	C03	Drums Fill 13
4	C67	Synth Riff 5
5	C57	Synth Seq 9
6	D02	Hit Riff 2
7	D31	Synth Lead 12
8	D64	SFX 11
15. US HardHouse		
1	B74	House Drums 2
2	C38	House Bass 2
3	C19	Perc Fill 1
4	C68	Synth Riff 6
5	C00	Organ Riff
6	D27	Synth Lead 8
7	C91	Synth Riff 29
8	D65	SFX 12
16. Chicago House		
1	B75	House Drums 3
2	C39	House Bass 3
3	C04	Drums Fill 14
4	D48	Voice 1
5	C77	Synth Riff 15
6	D03	Hit Riff 3
7	D07	Perc Riff
8	D66	SFX 13

D-FIELD	No.	Pattern Name
17. Filter Disco		
1	B76	House Drums 4
2	C40	House Bass 4
3	C05	Drums Fill 15
4	C98	Guitar Riff 2
5	C78	Synth Riff 16
6	D04	Hit Riff 4
7	C92	Synth Riff 30
8	D67	SFX 14
18. House		
1	B77	House Drums 5
2	C41	House Bass 5
3	C20	Perc Fill 2
4	D33	Piano 1
5	C79	Synth Riff 17
6	D18	Synth Pad 11
7	C93	Synth Riff 31
8	D51	Voice 4
19. Garage House		
1	B78	House Drums 6
2	C42	House Bass 6
3	C06	Drums Fill 16
4	C53	Synth Seq 5
5	D40	E.Piano 5
6	D43	Guitar 1
7	D46	Brass 2
8	D68	SFX 15
20. 2step		
1	B80	2step Drums 1
2	C43	2step Bass
3	C07	Drums Fill 17
4	D36	E.Piano 1
5	C62	Kalimba Seq
6	D44	Guitar 2
7	D47	Brass 3
8	D69	SFX 16
21. R&B		
1	B82	R&B Drums 1
2	C44	R&B Bass
3	C23	Noise Fill 2
4	D37	E.Piano 2
5	C99	Guitar Riff 3
6	D42	Organ
7	C94	Synth Riff 32
8	D70	SFX 17
22. HipHop East		
1	B86	HipHop Drums 1
2	C45	HipHop Bass 1
3	C08	Drums Fill 18
4	D38	E.Piano 3
5	D01	Hit Riff 1
6	D28	Synth Lead 9
7	D52	Scratch 1
8	D71	SFX 18
23. G-Funk		
1	B87	HipHop Drums 2
2	C46	HipHop Bass 2
3	C09	Drums Fill 19
4	D39	E.Piano 4
5	D16	Synth Pad 9
6	D29	Synth Lead 10
7	C95	Synth Riff 33
8	D72	SFX 19
24. Abstruct		
1	B88	HipHop Drums 3
2	C47	HipHop Bass 3
3	C10	Drums Fill 20
4	C69	Synth Riff 7
5	D17	Synth Pad 10
6	D19	Synth Pad 12
7	C96	Synth Riff 34
8	D53	Scratch 2

D-FIELD	No.	Pattern Name
25. Drum'n'Bass		
1	B90	DnB Drums
2	C48	DnB Bass
3	C11	Drums Fill 21
4	D12	Synth Pad 5
5	D41	E.Piano 6
6	C84	Synth Riff 22
7	D32	Synth Lead 13
8	D73	SFX 20
26. BreakBeats Collection		
1	B83	R&B Drums 2
2	B72	Techno Drums 9
3	B89	HipHop Drums 4
4	B84	R&B Drums 3
5	B63	Trance Drums 6
6	B85	R&B Drums 4
7	B79	House Drums 7
8	B81	2step Drums 2
27. BreakBeats Collection2		
1	B58	Trance Drums 1
2	B68	Techno Drums 5
3	B65	Techno Drums 2
4	B76	House Drums 4
5	B90	DnB Drums
6	B86	HipHop Drums 1
7	B82	R&B Drums 1
8	B67	Techno Drums 4
28. Fill Collection		
1	C12	Drums Fill 22
2	C13	Drums Fill 23
3	C14	Drums Fill 24
4	C21	Perc Fill 3
5	C15	Drums Fill 25
6	C16	Drums Fill 26
7	C17	Drums Fill 27
8	C18	Drums Fill 28
29. FX Collection		
1	D74	SFX 21
2	D75	SFX 22
3	D76	SFX 23
4	D77	SFX 24
5	D78	SFX 25
6	D79	SFX 26
7	D80	SFX 27
8	D81	SFX 28
30. FX Collection 2		
1	D82	SFX 29
2	D83	SFX 30
3	D84	SFX 31
4	D85	SFX 32
5	D86	SFX 33
6	D87	SFX 34
7	D88	SFX 35
8	D89	SFX 36

No.: RPS Pattern Number

Profiles of Pattern Composers

B.U.S [Build Up Swing]

Okada Hideki, born in 1966, debuted in 1995 with a Japanese house garage unit named Swell Emotion [DOHB disk/Epic], and is a highly acclaimed creative talent of house music.
He has signed a contract with the Paratone label, and released an album as the solo project "B.U.S." His work has appeared in the radio and TV charts, and has been praised by DJ TOMO, YO-C, DJ Shinkawa and others.
He is also active as a producer for the YO-C solo album.
He is one of the most talked-about house creators in Japan today, partially due to his highly successful remixes in 1998 of Debra Morgan, and the group "Every Little Thing."

Bjoern Bojahr

Bjoern Bojahr is a germany based young sound designer and music producer.
He is also getting a reputation as one of the main reviewers of the german KEYBOARDS magazine. He has been into synthesizers for years and does lots of multimedia-projects in his studio. He can be reached at mail@bjoernbojahr.de

Hans-Joerg Scheffler

Born and raised in the Ruhrvalley, one of the largest industrial areas of europe, Hans interest in noise and rhythm came quite naturally.
Today he runs his own company Digital Audio Design and creates patches and patterns for Roland Synthesizers and Grooveboxes.

Visit him online at www.DigitalAudioDesign.de

HEIGO TANI

Active in the techno unit "Co-Fusion," a collaboration with Japan's well-known techno DJ "DJ WADA," and has also released an album from Sublime Records.

MASA

Psychedelic Trance DJ / Artist
Active since the beginning of the 90's in live and DJ performance at parties both in and outside of Japan.
Masa has also released numerous works as a creator, and collaborates frequently with artists around the world. He has also been responsible for music production and effects for commercials, events, and videos. In addition, he created internal patterns and preset sounds for the Roland MC-505 and 307. Listeners are captivated by his four-dimensional sound unbound by stereotypical ideas.

Naoki "GigBag" Matsuura

Naoki began musical activity in 1983 during his university days. As a bassist, he participated in numerous live and studio sessions. Subsequently, he took a break from his performance activities and began creating MIDI data and working as a producer. At present, he is the chairman and producer of Prest Ltd., which produces desktop music and other digital content.

Cappadocia Productions

Electronic sound tinkerers based in Japan.
Also active as an art performance unit named GIGAHERTZ.
Also involved in the development of products such as the Roland MC series.

E-mail:RXN00541@nifty.ne.jp

Waveform List

Group A

No	Name	No	Name	No	Name	No	Name	No	Name	No	Name
001	TB Dst Saw	044	Funky Bass	087	Balaphone	130	Emergency	173	Thrill	216	TR808 Conga
002	TB Dst Sqr 1	045	Poly Bass	088	Kalimba	131	Buzzer	174	PCM Press	217	HiBongo Open
003	TB Dst Sqr 2	046	MG Bass	089	Steel Gtr	132	Insect	175	Air Gun	218	LoBongo Open
004	TB Reso Sqr1	047	FM Super Bs	090	Clean TC	133	Tonality	176	VOICE MENU	219	HiConga Mute
005	TB Reso Sqr2	048	Solid Bass	091	Dst Solo Gtr	134	Ring Osc	177	One!	220	HiConga Open
006	TB Saw	049	Organ Bass	092	Dist TekGtr	135	Reso FX	178	Two!	221	LoConga Open
007	TB SolidSaw1	050	Dirty Bass	093	Gtr FX	136	SCRATCH MENU	179	Three!	222	HiBongo LoFi
008	TB SolidSaw2	051	Upright Bs	094	Harmo Gtr	137	Vinyl Noise	180	Kick it!	223	LoBongo LoFi
009	TB Square 1	052	Ac Bass	095	Wah Gtr 1	138	Scratch BD f	181	Come on!	224	HiCnga Mt LF
010	TB Square 2	053	Voco Bass	096	Wah Gtr 2	139	Scratch BD r	182	Wao!	225	HiCnga Op LF
011	TB Sqr Decay	054	Fingered Bs	097	Wah Gtr 2a	140	Scratch SD f	183	Shout	226	LoConga LoFi
012	TB Natural	055	Pick Bass	098	Wah Gtr 2b	141	Scratch SD r	184	Ooh! 1	227	Timpani
013	JP8000 Saw 1	056	Fretless Bs	099	Wah Gtr 2c	142	Scratch ALT	185	Ooh! 2	228	Mute Surdo
014	JP8000 Saw 2	057	Slap Bass	100	Wah Gtr 2d	143	Tape Rewind	186	Voice loop	229	Open Surdo
015	MG Saw	058	Juno Rave	101	Sitar	144	Vinyl Stop	187	Pa!	230	Hi Timbale
016	Synth Saw 1	059	Blaster	102	Brass	145	HIT MENU	188	Canvas	231	Lo Timbale
017	JP-8 Saw	060	Fat JP-6	103	Trumpet	146	MG Blip	189	Punch	232	HiTimbale LF
018	P5 Saw	061	OB Strings	104	Mute Trumpet	147	Beam HiQ	190	Chiki!	233	LoTimbale LF
019	Synth Saw 2	062	Orch Strings	105	Soprano Sax	148	MG Attack	191	Hey!	234	Tabla
020	OB Saw	063	Pizzy Techno	106	Solo Sax	149	Air Blip	192	Laugh	235	TablaBaya
021	D-50 Saw	064	Choir	107	Baritone Sax	150	Org Click	193	Aah Formant	236	Udo
022	JP-6 Square	065	Syn Vox 1	108	Brass Fall	151	Syn Hit	194	Eeh Formant	237	AfroDrum Rat
023	MG Square	066	Syn Vox 2	109	Flute	152	Techno Scene	195	Iih Formant	238	Chenchen
024	P5 Square	067	Syn Vox 3	110	Pan Flute	153	Techno Chord	196	Ooh Formant	239	Op Pandeiro
025	JP-8 Pulse	068	Ac Piano	111	Shakuhachi	154	Dist Hit	197	Uuh Formant	240	Mt Pandeiro
026	JP-6 Pulse	069	D-50 EP	112	Bagpipe	155	Thin Beef	198	Dist Ooh Vox	241	Tambourine 1
027	MG Pulse	070	E.Piano	113	Breath	156	Tekno Hit	199	Auh Voice	242	Tambourine 2
028	260 Pulse	071	Clavi	114	Feedbackwave	157	Back Hit	200	Stream	243	Tambourine 3
029	JU-2 Sub OSC	072	Full Stop	115	Atmosphere	158	TAO Hit	201	Bird	244	Tambourine 4
030	Frog wave	073	FM Club Org	116	Rezo Noise	159	Philly Hit	202	TOM MENU	245	CR78 Tamb
031	Digiwave	074	E.Organ 1	117	MG White Nz	160	INDUST. MENU	203	TR909 Tom	246	COWBELL MENU
032	FM Pulse	075	E.Organ 2	118	P5 Noise	161	Analog Bird	204	TR909 DstTom	247	TR808Cowbell
033	JP8000 PWM	076	Church Org	119	MG Pink Nz	162	Retro UFO	205	TR808 Tom	248	TR707Cowbell
034	JP8000 FBK	077	Power B 1st	120	Bomb Noise	163	PC-2 Machine	206	TR606 Tom	249	CR78 Cowbell
035	260 Sub OSC	078	Power B slw	121	Sea	164	Hoo	207	TR606 CmpTom	250	Cowbell
036	Dist Synth	079	Org Chord	122	Brush Noise	165	Metal Sweep	208	TR707 Tom	251	TR727 Agogo
037	Dist Square	080	Tubular	123	Space Noise	166	Afro Feet	209	Syn Tom	252	CR78 Beat
038	MG Triangle	081	Glockenspiel	124	Scream	167	Bomb	210	Deep Tom	253	Triangle 1
039	Jungle Bass	082	Vibraphone	125	Jet Plane	168	Bounce	211	Can Tom	254	Triangle 2
040	260 Sine Bs	083	FantabellSub	126	Toy Gun 1	169	ElectricDunk	212	Kick Tom		
041	MC-202 Bass	084	DIGI Bell	127	Crash	170	Iron Door	213	Natural Tom		
042	SH-101 Bass	085	Steel Drum	128	Toy Gun 2	171	Dist Swish	214	PERCUS MENU1		
043	Octa Bass	086	Marimba	129	Toy Gun 3	172	Drill Hit	215	PERCUS MENU2		

Group B

No	Name	No	Name	No	Name	No	Name	No	Name	No	Name
001	SHKR+ MENU	044	Closed Hat	087	CYMBAL MENU	130	TR909 Snr 5	173	Lo-Hard Snr	216	Plastic BD 2
002	808 Maracas	045	Pop CHH	088	TR606 Cym 1	131	TR909 Snr 6	174	Indus Snare	217	Plastic BD 3
003	Maracas	046	Real CHH	089	TR606 Cym 2	132	TR909 Snr 7	175	Rage Snare	218	Plastic BD 4
004	Cabasa Up	047	Bristol CHH	090	TR909 Ride	133	TR909 DstSnr	176	TekRok Snare	219	TR909 Kick 5
005	TechnoShaker	048	DR550 CHH 2	091	TR707 Ride	134	TR808 Snr 1	177	Big Trash SD	220	TR808 Kick 1
006	TR626 Shaker	049	Tight CHH	092	Natural Ride	135	TR808 Snr 2	178	Ragga Rim 2	221	TR808 Kick 2
007	Dance Shaker	050	Hip CHH	093	Cup Cym	136	TR808 Snr 3	179	Gate Rim	222	TR808 Kick 3
008	CR78 Guiro	051	Room CHH	094	TR909 Crash	137	TR808 Snr 4	180	SideStiker	223	TR808 Kick 4
009	Long Guiro	052	R8 Brush CHH	095	NaturalCrash	138	TR808 Snr 5	181	HipJazz Snr	224	TR808 Kick 5
010	Short Guiro	053	Jungle Hat	096	Jungle Crash	139	TR808 Snr 6	182	HH Soul Snr	225	TR606 Kick
011	Mute Cuica	054	PHH MENU	097	Asian Gong	140	TR808 Snr 7	183	Cross Snare	226	TR606 Dst BD
012	Open Cuica	055	TR909 PHH 1	098	CLAP MENU 1	141	TR808 Snr 8	184	Jungle Rim 1	227	TR707 Kick 1
013	Whistle	056	TR909 PHH 2	099	CLAP MENU 2	142	TR808 Snr 9	185	Ragga Snr 2	228	TR707 Kick 2
014	TR727Quijada	057	TR808 PHH 1	100	TR909 Clap 1	143	TR606 Snr 1	186	Upper Snare	229	Toy Kick
015	Jingle Bell	058	TR808 PHH 2	101	TR909 Clap 2	144	TR606 Snr 2	187	Lo-Fi Snare	230	Analog Kick
016	Belltree	059	TR606 PHH 1	102	TR808 Clap	145	TR606 Snr 3	188	RaggaTightSD	231	Boost Kick
017	Wind Chime	060	TR606 PHH 2	103	TR707 Clap	146	DanceHall SD	189	Flange Snr	232	West Kick
018	RIM MENU	061	TR707 PHH	104	Cheap Clap	147	TR707 Snare	190	Machine Snr	233	JungleKick 1
019	TR909 Rim	062	Hip PHH	105	Funk Clap	148	CR78 Snare	191	Clap Snare 3	234	Optic Kick
020	TR808 Rim	063	Tight PHH	106	Little Clap	149	Clap Snare 2	192	Solid Snare	235	Wet Kick
021	TR808 RimLng	064	Pedal Hat 1	107	Real Clap 1	150	Jngl Tiny SD	193	Funk Clap 2	236	Lo-Fi Kick 1
022	TR707 Rim	065	Real PHH	108	Real Clap 2	151	Jazz Snare	194	Jungle Rim 2	237	Hazy Kick
023	Analog Rim	066	Pedal Hat 2	109	Funky Clap	152	Headz Snare	195	Jungle Rim 3	238	Hip Kick
024	Natural Rim	067	OHH MENU 1	110	Comp Clap	153	Whack Snare	196	Jungle Snr 2	239	Video Kick
025	Ragga Rim 1	068	OHH MENU 2	111	Hip Clap	154	Rap Snare	197	Urban Snare	240	Tight Kick
026	Lo-Fi Rim	069	TR909 OHH 1	112	Down Clap	155	Jungle Snr 1	198	Urban RollSD	241	Break Kick
027	Wood Block	070	TR909 OHH 2	113	Group Clap	156	Antigua Snr	199	R&B Snare	242	Turbo Kick
028	Jungle Snap	071	TR909 OHH 3	114	Big Clap	157	Real Snare	200	R8 Brush Tap	243	Ele Kick
029	TR808 Claves	072	TR909 DstOHH	115	Claptail	158	Tiny Snare 1	201	R8 BrshSwill	244	Dance Kick 1
030	Hyoshigi	073	TR808 OHH 1	116	Clap Snare 1	159	Tiny Snare 2	202	R8 BrushRoll	245	Kick Ghost
031	CHH MENU 1	074	TR808 OHH 2	117	Fuzzy Clap	160	Break Snare1	203	Sim Snare	246	Lo-Fi Kick 2
032	CHH MENU 2	075	TR606 OHH	118	Snap	161	Break Snare2	204	ElectroSnr 1	247	JungleKick 2
033	TR909 CHH 1	076	TR606 DstOHH	119	Finger Snap	162	MC Snare	205	ElectroSnr 2	248	TR909 Dst BD
034	TR909 CHH 2	077	TR707 OHH	120	SNR MENU 1	163	East Snare	206	Synth Snare	249	Amsterdam BD
035	TR808 CHH 1	078	CR78 OHH	121	SNR MENU 2	164	Phat Snare	207	Roll Snare	250	Gabba Kick
036	TR808 CHH 2	079	Hip OHH	122	SNR MENU 3	165	Brush Slap 1	208	KICK MENU 1	251	Roll Kick
037	TR808 CHH 3	080	Pop Hat Open	123	SNR MENU 4	166	Brush Slap 2	209	KICK MENU 2		
038	TR606 CHH 1	081	Open Hat	124	SNR MENU 5	167	Deep Snare	210	KICK MENU 3		
039	TR606 CHH 2	082	Cym OHH	125	SNR MENU 6	168	Fat Snare	211	TR909 Kick 1		
040	TR606 DstCHH	083	DR550 OHH	126	TR909 Snr 1	169	Disco Snare	212	TR909 Kick 2		
041	TR707 CHH	084	Funk OHH	127	TR909 Snr 2	170	DJ Snare	213	TR909 Kick 3		
042	CR78 CHH	085	Real OHH	128	TR909 Snr 3	171	Macho Snare	214	TR909 Kick 4		
043	DR55 CHH 1	086	R8 OHH	129	TR909 Snr 4	172	Hash Snare	215	Plastic BD 1		

MIDI Implementation

Model: D2 (groovebox)
Date: Mar. 12, 2001
Version: 1.00

Symbol	Description	Range
n	MIDI Channel	0H–6H,9H (ch.1–ch.7,ch.10)
vv	Control value	00H–7FH (0–127)
kk	Note Number	00H–7FH (0–127)
xx	ON/OFF	00H–3FH (0–63:OFF), 40H–7FH (64–127:ON)

1. Data reception (sound source section)

■Channel voice messages

●Note Off

status	2nd byte	3rd byte
8nH	kkH	vvH
9nH	kkH	00H

vv=Note Off velocity: 00H - 7FH (0 - 127)

●Note On

status	2nd byte	3rd byte
9nH	kkH	vvH

vv=Note On velocity: 01H - 7FH (1 - 127)

●Polyphonic Aftertouch

status	2nd byte	3rd byte
AnH	kkH	vvH

vv=Polyphonic Aftertouch: 00 00H - 7FH (0 - 127)

●Control Change

* Not received when the Rx Switch parameter is OFF.

○Bank Select (Controller number 0,32)

status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	llH

mm,ll=Bank number: 00 00H–7F 7FH (bank.1–bank.16384)

* Not received when the Rx Program Change Switch or Rx Bank Select Switch parameter is OFF.
* The Patches corresponding to each Bank Select are as follows.

Bank Select MSB	LSB	Program No	Group	Patch No.
81	0	001 - 128	Preset A	001 - 128
81	1	001 - 128	Preset B	001 - 128
81	2	001 - 128	Preset C	001 - 128
81	3	001 - 128	Preset D	001 - 128
84	0	001 - 088	Preset E	001 - 088
85	0	001 - 128	User	001 - 128
85	1	001 - 128	User	129 - 256

* The Rhythm set corresponding to each Bank Select are as follows.

Bank Select MSB	LSB	Program No	Group	Patch No.
81	0	1 - 26	Preset A	01 - 26
84	0	1 - 4	Preset B	01 - 04
85	0	1 - 20	User	01 - 20

○Modulation (Controller number 1)

status	2nd byte	3rd byte
BnH	01H	vvH

* The effect will apply according to the Modulation Control setting.

○Data Entry (Controller number 6,38)

status	2nd byte	3rd byte
BnH	06H	mmH
BnH	26H	llH

mm,ll= the value of the parameter specified by RPNmm=MSB, ll=LSB

○Expression (Controller number 11)

status	2nd byte	3rd byte
BnH	0BH	vvH

* Expression messages are used to adjust the volume of each part.

○Hold 1 (Controller number 64)

status	2nd byte	3rd byte
BnH	40H	xxH

○Sostenuto (Controller number 66)

status	2nd byte	3rd byte
BnH	42H	xxH

○Soft (Controller number 67)

status	2nd byte	3rd byte
BnH	43H	xxH

○Hold 2 (Controller number 69)

status	2nd byte	3rd byte
BnH	45H	xxH

○Portamento Control (Controller number 84)

status	2nd byte	3rd byte
BnH	54H	kkH

* A Note On message received immediately after a Portamento control will be sounded with the pitch changing smoothly from the source note number. If a voice is already sounding at the same note number as the source note number, that voice will change pitch to the pitch of the newly received Note On, and continue sounding (i.e., will be played legato).
* The speed of the pitch change caused by Portamento is determined by the Portamento Time parameter.

○RPN MSB/LSB (Controller number 100,101)

status	2nd byte	3rd byte
BnH	65H	mmH
BnH	64H	llH

mm=MSB of the parameter number specified by RPN
ll=LSB of the parameter number specified by RPN

<< RPN >>
Control Changes include RPN (Registered Parameter Numbers), which are extended parameters whose function is defined in the MIDI specification.
When using RPNs, first the RPN (Controller numbers 100 and 101; they can be sent in any order) is transmitted to specify the parameter you wish to control. Then, Data Entry messages (Controller numbers 6 and 38) are used to set the value of the specified parameter. Once a RPN parameter has been specified, all further Data Entry messages on that channel are considered to apply to that specified parameter. In order to prevent accidents, when the desired setting has been made for the parameter, it is recommended that RPN be set to Null.

This device receives the following RPNs.

RPN MSB LSB	Data entry MSB LSB	Notes
00H 00H	mmH —	Pitch Bend Sensitivity mm : 00H–0CH (0–12 semitones) ll : ignored (processed as 00H) Up to 1 octave can be specified in semitone steps. *The Bend Range up parameter, Bend Range Down parameter will also be changed. *Not received by the Part R.
00H 01H	mmH llH	Master Fine Tuning mm, ll: 20 00H–40 00H–60 00H (-4096 x 100 / 8192–0–+4096 x 100 / 8192 cent) *The Fine Tune parameter of each Part will change.
00H 02H	mmH —	Master Coarse Tuning mm : 10H–40H–70H (-48–0–+48 semitones) ll : ignored (processed as 00H) *The Key Shift parameter of each Part will change.
7FH 7FH	— —	RPN null RPN will be set as "unspecified". Once this setting has been made, subsequent Data Entry messages will be ignored. (It is not necessary to transmit Data Entry for RPN Null settings.) Parameter values that were previously set will not change. mm, ll: ignored

* For the functions of other controller numbers, refer to "Table of Transmitted Data" (p. 76).

● Program Change

status	2nd byte
CnH	ppH

pp=Program number: 00H–7FH (prog.1–prog.128)

●Channel Aftertouch

status	2nd byte
DnH	vvH

* The effect will apply according to the Aftertouch Control setting.

●Pitch Bend Change

status	2nd byte	3rd byte
EnH	llH	mmH

mm,ll=Pitch Bend value:00 00H–40 00H–7F 7FH (-8192–0–+8191)

* The effect will apply according to the Pitch Bend Control setting.

■Channel Mode messages

●All Sound Off (Controller number 120)

status	2nd byte	3rd byte
BnH	78H	00H

* When this message is received, all notes currently sounding on the corresponding channel will be turned off.

●Reset All Controllers (Controller number 121)

status	2nd byte	3rd byte
BnH	79H	00H

* When this message is received, the following controllers will be set to their reset values.

Controller	Reset value
Pitch Bend Change	±0 (center)
Polyphonic Key Pressure	0 (off)
Channel Pressure	0 (off)
Modulation	0 (off)
Expression	127 (maximum)
Hold 1	0 (off)
Sostenuto	0 (off)
Soft	0 (off)
Hold 2	0 (off)
RPN	Unset. Previously set data will not change.

●All Note Off (Controller number 123)

status	2nd byte	3rd byte
BnH	7BH	00H

* When All Note Off is received, all currently sounding notes of the corresponding channel will be turned off. However if Hold 1 or Sostenuto are on, the sound will be held until these are turned off.

●Omni Off (Controller number 124)

status	2nd byte	3rd byte
BnH	7CH	00H

* The same processing as when All Note Off is received will be done.

●Omni On (Controller number 125)

status	2nd byte	3rd byte
BnH	7DH	00H

* The same processing as when All Note Off is received will be done. The instrument will not be set to OMNI ON.

●Mono (Controller number 126)

status	2nd byte	3rd byte
BnH	7EH	mmH

mm=Mono number: 00H–10H (0–16)

* The same processing as when All Note Off is received will be done, and the Solo Switch parameter will be set to ON.

●Poly (Controller number 127)

status	2nd byte	3rd byte
BnH	7FH	00H

* The same processing as when All Note Off is received will be done, and the Solo Switch parameter will be set to OFF.

■System Realtime messages

●Timing Clock

status
F8H

* Settings can be made to synchronize or the LFO rate or the effect rate.

●Active Sensing

status
FEH

* When an Active Sensing message is received, the unit will begin monitoring the interval at which MIDI messages are received. During monitoring, if more than 420 ms passes without a message being received, the same processing will be done as when All Sound Off, All Note Off, and Reset All Controllers messages are received. Then monitoring will be halted.

■ System Exclusive messages

status	data byte	status
F0H	iiH, ddH, ..., eeH	F7H

F0H:	System Exclusive message status
ii = ID number:	This is the ID number (manufacturer ID) that specifies the manufacturer whose exclusive message this is. Roland's manufacturer ID is 41H.ID numbers 7EH and 7FH are defined in an expansion of the MIDI standard as Universal Non-realtime messages (7EH) and Universal Realtime Messages (7FH).
dd,..., ee = data:	00H–7FH (0–127)
F7H:	EOX (End Of Exclusive) This is the last status of system exclusive message.

●Universal Non-realtime System Exclusive Messages

IdentityIdentity Request Message

Status	Data byte	Status
F0H	7EH, dev, 06H, 01H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (universal non-realtime message)
dev	Device ID (dev:10H(17)-1FH(32))
06H	Sub ID#1 (General Information)
01H	Sub ID#2 (Identity Request)
F7H	EOX (End Of Exclusive)

* The "dev" is own device number or 7FH (Broadcast)
* When Identity Request is received, Identity Reply message will be transmitted.

●Data Request 1 RQ1

This message requests the other device to transmit data. The address and size indicate the type and amount of data that is requested.
When a Data Request message is received, if the device is in a state in which it is able to transmit data, and if the address and size are appropriate, the requested data is transmitted as a Data Set 1 (DT1) message. If the conditions are not met, nothing is transmitted.
The model ID of the exclusive messages used by this instrument is 00 0BH.

status	data byte	status
F0H	41H, dev, 00H, 0BH, 11H, aaH, bbH, ccH, ddH, ssH, ttH, uuH, vvH, sum	F7H

Byte	Remarks
F0H	Exclusive status
41H	ID number (Roland)
dev	device ID (dev: 10H–1FH)
00H	model ID (D2)
0BH	model ID (D2)

11H	command ID (RQ1)
aaH	address MSB
bbH	address
ccH	address
ddH	address LSB
ssH	size MSB
ttH	size
uuH	size
vvH	size LSB
sum	checksum
F7H	EOX (End Of Exclusive)

* For the address, size, and checksum, refer to "Examples of system exclusive messages and calculating the checksum" (p. 107).
* This message is not received if the Rx.System Exclusive Switch Switch parameter is OFF.

●Data Set 1 DT1

This message transmits the actual data, and is used when you wish to set the data of the receiving device.

status	data byte	status
F0H	41H, dev, 00H, 0BH, 12H, aaH, bbH, ccH, ddH, eeH, ... ffH, sum	F7H

Byte	Remarks
F0H	Exclusive status
41H	ID number (Roland)
dev	device ID (dev: 10H–1FH)
00H	model ID (D2)
0BH	model ID (D2)
12H	command ID (DT1)
aaH	address MSB
bbH	address
ccH	address
ddH	address LSB
eeH	data: The actual data to be transmitted. Multi-byte data is transmitted in the order of the address.
:	:
ffH	data
sum	checksum
F7H	EOX (End Of Exclusive)

* For the address, size, and checksum, refer to "Examples of system exclusive messages and calculating the checksum" (p. 107).
* Data whose size is greater than 128 bytes should be divided into packets of 128 bytes or less and transmitted. Successive "Data Set 1" messages should have at least 20 ms of time interval between them.
* This message is not received if the Rx.System Exclusive Switch parameter is OFF.

The only GS exclusive messages received by the D2 are Scale Tune settings.

●Data Set 1 DT1

status	data byte	status
F0H	41H, dev, 42, 12H, aaH, bbH, ccH, ddH, ... eeH, sum	F7H

Byte	Remarks
F0H	Exclusive status
41H	ID number (Roland)
dev	device ID (dev: 10H–1FH)
42H	model ID (GS)
12H	command ID (DT1)
aaH	address MSB
bbH	address
ccH	address LSB
ddH	data: The actual data to be transmitted. Multi-byte data is transmitted in the order of the address.
:	:
eeH	data
sum	checksum
F7H	EOX (End Of Exclusive)

* This message is not received if the Rx.System Exclusive Switch parameter is OFF.

In addition to conventional system exclusive messages, the D2 also uses special system exclusive messages for operations which require realtime handling.

●Data Set 1 DT1

status	data byte	status
F0H	41H, dev, 3AH, 12H, aaH, bbH, ccH, ddH, sum	F7H

Byte	Remarks
F0H	Exclusive status
41H	ID number (Roland)
dev	device ID (dev: 10H–1FH)
3AH	model ID (D2 Quick)
12H	command ID (DT1)
aaH	address (Status/Channel)
bbH	address/Data H
ccH	Data L
ddH	Data E
sum	checksum
F7H	EOX (End Of Exclusive)

* For the address, size, and checksum, refer to "Examples of system exclusive messages and calculating the checksum" (p. 107).
* Transmission of consecutive addresses is not possible.
* This message is not received if the Rx.System Exclusive Switch parameter is OFF.

2. Data transmission (sound source section)

■Channel Voice messages

●Note Off

status	2nd byte	3rd byte
8nH	kkH	vvH

●Note On

status	2nd byte	3rd byte
9nH	kkH	vvH

vv=Note On velocity: 01H - 7FH (1 - 127)

●Control Change

* By selecting a controller number that corresponds to the setting of the Control Pedal Assign parameter, you can transmit any desired control change.

○Bank Select (Controller number 0,32)

status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	llH

mm,ll=Bank number: 00 00H - 7F 7FH (bank.1 - bank.16384)

* This message is not transmitted if Tx Program Change Switch parameter or Tx Bank Select Switch parameter is OFF.
* For the Bank Select that corresponds to each Patch, refer to section 1.

○Modulation (Controller number 1)

status	2nd byte	3rd byte
BnH	01H	vvH

○Expression (Controller number 11)

status	2nd byte	3rd byte
BnH	0BH	vvH

○Hold 1 (Controller number 64)

status	2nd byte	3rd byte
BnH	40H	xxH

○Sostenuto (Controller number 66)

status	2nd byte	3rd byte
BnH	42H	xxH

○Soft (Controller number 67)

status	2nd byte	3rd byte
BnH	43H	xxH

○Hold 2 (Controller number 69)

status	2nd byte	3rd byte
BnH	45H	vvH

○Portamento control (Controller number 84)

status	2nd byte	3rd byte
BnH	54H	kkH

* For the functions of other controller numbers, refer to "Table of Transmitted Data" (p. 76).

●Program Change

status	2nd byte
CnH	ppH

pp=Program number: 00H - 7FH (prog.1 - prog.128)

* This message is not transmitted when the Tx Program Change Switch parameter is OFF.

■System Realtime messages

●Active Sensing

status
FEH

* Transmitted at intervals of approximately 250ms.

■System Exclusive messages

●Universal Non-realtime System Exclusive Messages

Identity Reply

Status	Data byte	Status
F0H	7EH, dev, 06H, 02H, 41H, 0BH, 01H, 03H, 00H, 00H, 03H, 00H, 00H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (universal non-realtime message)
dev	Device ID (dev:10H(17)-1FH(32))
06H	Sub ID#1 (General Information)
02H	Sub ID#2 (Identity Reply)
41H	ID number (Roland)
0BH 01H	Device family code
03H 00H	Device family number code
00H 03H 00H 00H	Software revision level
F7H	EOX (End of Exclusive)

* When Identity Request is received, Identity Reply message will be transmitted.

●Data Set 1 DT1

status	data byte	status
F0H	41H, dev, 00H, 0BH, 12H, aaH, bbH, ccH, ddH, eeH, ... ffH, sum	F7H

Byte	Remarks
F0H	Exclusive status
41H	ID number (Roland)
dev	device ID (dev: 10H–1FH)
00H	model ID (D2)
0BH	model ID (D2)
12H	command ID (DT1)
aaH	address MSB
bbH	address
ccH	address
ddH	address LSB
eeH	data: The actual data to be transmitted. Multi-byte data is transmitted in the order of the address.
:	:
ffH	data
sum	checksum
F7H	EOX (End Of Exclusive)

* For the address, size, and checksum, refer to "Examples of system exclusive messages and calculating the checksum" (p. 107).
* Data whose size is greater than 128 bytes should be divided into packets of 128 bytes or less and transmitted. Successive "Data Set 1" messages should have at least 20 ms of time interval between them.

●Data Set 1 DT1

status	data byte	status
F0H	41H, dev, 3AH, 12H, aaH, bbH, ccH, ddH, sum	F7H

Byte	Remarks
F0H	Exclusive status
41H	ID number (Roland)
dev	device ID (dev: 10H–1FH)
3AH	model ID (D2 Quick)
12H	command ID (DT1)
aaH	address (Status/Channel)
bbH	address/Data H
ccH	Data L
ddH	Data E
sum	checksum
F7H	EOX (End Of Exclusive)

* For the address, size, and checksum, refer to "Examples of system exclusive messages and calculating the checksum" (p. 107).
* Transmission of consecutive addresses is not possible.

3. Data reception (Sequencer section)

3.1 Messages recorded during recording

■Channel voice messages

●Note Off

status	2nd byte	3rd byte
8nH	kkH	vvH
9nH	kkH	00H

●Note On

status	2nd byte	3rd byte
9nH	kkH	vvH

vv=Note On velocity: 01H - 7FH (1 - 127)

●Polyphonic Aftertouch

status	2nd byte	3rd byte
AnH	kkH	vvH

●Control Change

status	2nd byte	3rd byte
BnH	kkH	vvH

kk=control number: 00H–78H (0–120)

●Program Change

status	2nd byte
CnH	ppH

pp=Program number: 00H–7FH (prog.1–prog.128)

●Channel Aftertouch

status	2nd byte
DnH	vvH

●Pitch Bend Change

status	2nd byte	3rd byte
EnH	llH	mmH

mm,ll=Pitch Bend value: 00 00H–40 00H–7F 7FH (-8192–0–+8191)

■Channel Mode messages

●All Sound Off (Controller number 120)

status	2nd byte	3rd byte
BnH	78H	00H

●Reset All Controllers (Controller number 121)

status	2nd byte	3rd byte
BnH	79H	00H

●Omni Off (Controller number 124)

status	2nd byte	3rd byte
BnH	7CH	00H

* The same processing will be done as when an All Note Off message is received.

●Omni On (Controller number 125)

status	2nd byte	3rd byte
BnH	7DH	00H

* The same processing will be done as when an All Note Off message is received.

●Mono (Controller number 126)

status	2nd byte	3rd byte
BnH	7EH	mmH

mm=mono number: 00H–10H (0–16)

* The same processing will be done as when an All Note Off message is received.

●Poly (Controller number 127)

status	2nd byte	3rd byte
BnH	7FH	00H

* The same processing will be done as when an All Note Off message is received.

■System Exclusive messages

status	data byte	status
F0H	iiH, ddH, ..., eeH	F7H

F0H: System Exclusive message status
ii = ID number: This is the ID number (manufacturer ID) that specifies the manufacturer whose exclusive message this is. Roland's manufacturer ID is 41H.ID numbers 7EH and 7FH are defined in an expansion of the MIDI standard as Universal Non-realtime messages (7EH) and Universal Realtime Messages (7FH).
dd....., ee = data: 00H–7FH (0–127)
F7H: EOX (End Of Exclusive)

3.2 Messages not recorded during recording

■Channel Mode messages

●Local On/Off (Controller number 122)

status	2nd byte	3rd byte
BnH	7AH	00H

vv=value: 00H,7FH (Local off, Local on)

●All Note Off (Controller number 123)

status	2nd byte	3rd byte
BnH	7BH	00H

* When an All Note Off message is received, all notes of the corresponding channel that are on will be sent Note Off's, and the resulting Note Off messages will be recorded.

3.3 Messages acknowledged for synchronization

■System Common messages

●Song Position Pointer

status	2nd byte	3rd byte
F2H	mmH	llH

mm,ll=value: 00 00H–7F 7FH (0–16383)

■System Realtime messages

●Timing Clock

status
F8H

* This message will be received if the Sync Mode parameter is SLAVE.

●Start

status
FAH

* This message will be received if the Sync Mode parameter is SLAVE or REMOTE.

●Continue

status
FBH

* This message will be received if the Sync Mode parameter is SLAVE or REMOTE.

●Stop

status
FCH

* This message will be received if the Sync Mode parameter is SLAVE or REMOTE.

4. Data transmission (Sequencer section)

4.1 Recorded messages are transmitted during playback.

4.2 If the Through parameter is ON, messages received (except for System Common messages and System Realtime messages) will be transmitted.

4.3 Messages that are generated and transmitted

4.3.1 Messages automatically generated by the system

■Channel Mode messages

●Omni Off (Controller number 124)

status	2nd byte	3rd byte
BnH	7CH	00H

* At start-up, this message is transmitted to all channels.

●Poly (Controller number 127)

status	2nd byte	3rd byte
BnH	7FH	00H

* At start-up, this message is transmitted to all channels.

4.3.2 Messages generated and transmitted when the Sync Out is ON

■System Common messages

●Song Position Pointer

status	2nd byte	3rd byte
F2H	mmH	llH

mm,ll=value: 00 00H–7F 7FH (0–16383)

* This message is transmitted if the Sync out is ON. It is not transmitted when the D-FIELD is set to VINYL.

■System Realtime messages

●Timing Clock

status
F8H

* This message is transmitted if the Sync out is ON. It is not transmitted when the D-FIELD is set to VINYL.

●Start

status

FAH

* This message is transmitted if the Sync out is ON.

●Continue

status

FBH

* This message is transmitted if the Sync out is ON.

●Stop

status

FCH

* This message is transmitted if the Sync out is ON.

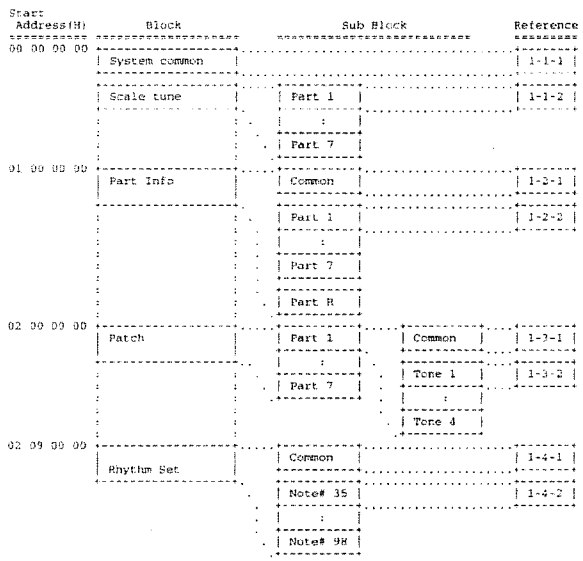
5. Parameter address map

* For addresses marked by #, the data is transmitted in two parts. For example, the hexadecimal data ABH would be divided into 0AH and 0BH, and transmitted in this order.
* Addresses for which the Description field is listed as "Reserved" have no meaning for the D2. They will be ignored.

■1. D2 (Model ID=00H 0BH)

■ Outline

The following is an outline of the address manp for Exclusive messages.



■1-1.System

Offset Address	Description	
00 00	System Common	1-1-1
10 00	Part 1 Scale Tune	1-1-2
11 00	Part 2 Scale Tune	
:	:	
16 00	Part 7 Scale Tune	

■1-1-1.System Common

Offset Address	Size	Description	Data (Value)
00 00-00 05	0aaa aaaa	Reserved	—
00 06	0aaa aaaa	Master Tune	0 - 126 *1
00 07	0000 000a	Scale Tune Switch	0 - 1 (OFF,ON)
00 08	0000 000a	MFX Switch	0 - 1 (OFF,ON)
00 09	0000 000a	Delay Switch	0 - 1 (OFF,ON)
00 0A	0000 000a	Reverb Switch	0 - 1 (OFF,ON)
00 0B	0000 000a	Patch Remain	0 - 1 (OFF,ON)
00 0C-00 13	0aaa aaaa	Reserved	—
00 14	0000 000a	Receive Program Change Switch	0 - 1 (OFF,ON)
00 15	0000 000a	Receive Bank Select Switch	0 - 1 (OFF,ON)
00 16-00 27	0aaa aaaa	Reserved	—
00 28	0000 000a	Transmit Program Change Switch	0 - 1 (OFF,ON)
00 29	0000 000a	Transmit Bank Select Switch	0 - 1 (OFF,ON)
00 2A-00 61	0aaa aaaa	Reserved	—
Total size	00 00 00 62		

* 1: 427.4 - 452.6

■1-1-2.Scale Tune

Offset Address	Size	Description	Data (Value)
00 00	0aaa aaaa	Scale Tune for C	0 - 127 (-64 - +63)
00 01	0aaa aaaa	Scale Tune for C#	0 - 127 (-64 - +63)
00 02	0aaa aaaa	Scale Tune for D	0 - 127 (-64 - +63)
00 03	0aaa aaaa	Scale Tune for D#	0 - 127 (-64 - +63)
00 04	0aaa aaaa	Scale Tune for E	0 - 127 (-64 - +63)
00 05	0aaa aaaa	Scale Tune for F	0 - 127 (-64 - +63)
00 06	0aaa aaaa	Scale Tune for F#	0 - 127 (-64 - +63)
00 07	0aaa aaaa	Scale Tune for G	0 - 127 (-64 - +63)
00 08	0aaa aaaa	Scale Tune for G#	0 - 127 (-64 - +63)
00 09	0aaa aaaa	Scale Tune for A	0 - 127 (-64 - +63)
00 0A	0aaa aaaa	Scale Tune for A#	0 - 127 (-64 - +63)
00 0B	0aaa aaaa	Scale Tune for B	0 - 127 (-64 - +63)
Total size	00 00 00 0C		

■1-2.Part Info

Offset Address	Description	
00 00	Part Info Common	1-2-1
10 00	Part Info Part 1	1-2-2
11 00	Part Info Part 2	
:	:	
16 00	Part Info Part 7	
18 00	Part Info Part 8	

■1-2-1.Part Info Common

Offset Address	Size	Description	Data (Value)
00 00-00 0C	0aaa aaaa	Reserved	—
00 0D	00aa aaaa	MFX Type	0 - 24 (1 - 25)
00 0E	0aaa aaaa	MFX CTRL 1	0 - 127
00 0F	0aaa aaaa	MFX CTRL 2	0 - 127
00 10	0aaa aaaa	MFX CTRL 3	0 - 127
00 11	0aaa aaaa	MFX CTRL 4	0 - 127
00 12	0aaa aaaa	MFX CTRL 5	0 - 127
00 13	0aaa aaaa	MFX CTRL 6	0 - 127
00 14	0aaa aaaa	MFX CTRL 7	0 - 127
00 15	0aaa aaaa	MFX CTRL 8	0 - 127
00 16	0aaa aaaa	MFX CTRL 9	0 - 127
00 17	0aaa aaaa	MFX CTRL 10	0 - 127
00 18	0aaa aaaa	MFX CTRL 11	0 - 127
00 19-00 1B	0aaa aaaa	Reserved	—
00 1C	0aaa aaaa	MFX Delay Send Level	0 - 127
00 1D	0aaa aaaa	MFX Reverb Send Level	0 - 127
00 1E-00 21	0aaa aaaa	Reserved	—
00 22	0aaa aaaa	Delay Level	0 - 127
00 23	0000 000a	Delay Type	0 - 1 *1
00 24	0aaa aaaa	Delay HF Damp	0 - 17 *4
00 25	0aaa aaaa	Delay Time	0 - 120
00 26	0aaa aaaa	Delay Feedback Level	0 - 98
00 27	0000 00aa	Delay Output Assign	0 - 2 *2
00 28	0000 0aaa	Reverb Type	0 - 5 *3
00 29	0aaa aaaa	Reverb Level	0 - 127
00 2A	0aaa aaaa	Reverb Time	0 - 127
00 2B	000a aaaa	Reverb HF Damp	0 - 17 *4
00 0C-00 2F	0aaa aaaa	Reserved	—
00 30	0aaa aaaa	Voice Reserve 1	0 - 64
00 31	0aaa aaaa	Voice Reserve 2	0 - 64
00 32	0aaa aaaa	Voice Reserve 3	0 - 64
00 33	0aaa aaaa	Voice Reserve 4	0 - 64
00 34	0aaa aaaa	Voice Reserve 5	0 - 64
00 35	0aaa aaaa	Voice Reserve 6	0 - 64
00 36	0aaa aaaa	Voice Reserve 7	0 - 64
00 37-00 38	0aaa aaaa	Reserved	—
00 39	0aaa aaaa	Voice Reserve 8	0 - 64
00 3A-00 43	0aaa aaaa	Reserved	—
Total size	00 00 00 44		

* 1: SHORT, LONG
* 2: LINE, REV, LINE+REV
* 3: ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2
* 4: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS

MFX CTRL	Value	Display
Type 0: 4 BAND EQ		
CTRL1 Low Freq	0 - 1	200,400
CTRL2 Low Gain	0 - 30	-15 - +15
CTRL3 High Freq	0 - 1	4000,8000
CTRL4 High Gain	0 - 30	-15 - +15
CTRL5 Peak1 Freq	0 - 16	*1
CTRL6 Peak1 Q	0 - 4	0.5,1.0,2.0,4.0,8.0
CTRL7 Peak1 Gain	0 - 30	-15 - +15
CTRL8 Peak2 Freq	0 - 16	*1
CTRL9 Peak2 Q	0 - 4	0.5,1.0,2.0,4.0,8.0
CTRL10 Peak2 Gain	0 - 30	-15 - +15
CTRL11 Output Level	0 - 127	
Type 1: SPECTRUM		
CTRL1 Low-High	0 - 30	-15 - +15
CTRL2 Middle Gain	0 - 30	-15 - +15
CTRL3 Width	0 - 4	1 - 5
CTRL4 Output Pan	0 - 127	L64 - 63R
CTRL5 Output Level	0 - 127	
Type 2: ENHANCER		
CTRL1 Sens	0 - 127	
CTRL2 Mix	0 - 127	
CTRL3 Low Gain	0 - 30	-15 - +15
CTRL4 High Gain	0 - 30	-15 - +15
CTRL5 Output Level	0 - 127	
Type 3: OVERDRIVE		
CTRL1 Input Level	0 - 127	

CTRL2 Drive	0 - 127	
CTRL3 AMP Type	0 - 3	SMALL,BUILTIN,2STACK,3STACK
CTRL4 Output Pan	0 - 127	L64 - 63R
CTRL5 Output Level	0 - 127	

Type 4: DISTORTION

CTRL1 Input Level	0 - 127	
CTRL2 Drive	0 - 127	
CTRL3 AMP Type	0 - 3	SMALL,BUILTIN,2STACK,3STACK
CTRL4 Output Pan	0 - 127	L64 - 63R
CTRL5 Output Level	0 - 127	

Type 5: Lo-Fi

CTRL1 BitDown	0 - 7	
CTRL2 S-Rate Down	0 - 3	32,16,8,4
CTRL3 Post Gain	0 - 3	0,+6,+12,+18
CTRL4 Low Gain	0 - 30	-15 - +15
CTRL5 High Gain	0 - 30	-15 - +15
CTRL6 Output	0 - 1	MONO,STEREO
CTRL7 Output Level	0 - 127	

Type 6: NOISE

CTRL1 Noise Type	0 - 17	1 - 18
CTRL2 Noise Level	0 - 127	
CTRL3 N Filter	0 - 17	*1,BYPASS
CTRL4 Lo-Fi Level	0 - 127	
CTRL5 Output Pan	0 - 127	L64 - 63R
CTRL6 Output Level	0 - 127	

Type 7: RADIO TUNG

CTRL1 Radio Detune	0 - 127	
CTRL2 Noise Level	0 - 127	
CTRL3 Low Gain	0 - 30	-15 - +15
CTRL4 High Gain	0 - 30	-15 - +15
CTRL5 Output	0 - 1	MONO,STEREO
CTRL6 Output Level	0 - 127	

Type 8: PHONOGRAPH

CTRL1 Disc Type	0 - 2	LP,EP,SP
CTRL2 D Noise Level	0 - 127	
CTRL3 Depth	0 - 20	0 - +20
CTRL4 Output Pan	0 - 127	L64 - 63R
CTRL5 Output Level	0 - 127	

Type 9: COMPRESSOR

CTRL1 Attack	0 - 127	
CTRL2 Sustain	0 - 127	
CTRL3 Post Gain	0 - 3	0,+6,+12,+18
CTRL4 Low Gain	0 - 30	-15 - +15
CTRL5 High Gain	0 - 30	-15 - +15
CTRL6 Output Level	0 - 127	

Type 10: LIMITER

CTRL1 Threshold	0 - 127	
CTRL2 Ratio	0 - 3	1.5:1,2.0:1,4.0:1,100:1
CTRL3 Release	0 - 127	
CTRL4 Post Gain	0 - 3	0,+6,+12,+18
CTRL5 Output Pan	0 - 127	L64 - 63R
CTRL6 Output Level	0 - 127	

Type 11: SLICER

CTRL1 Timing Pattern	0 - 33	
CTRL2 Rate	0 - 2	1/4,1/2,1/1
CTRL3 Accent Pattern	0 - 15	
CTRL4 Accent Level	0 - 127	
CTRL5 Attack	0 - 9	1 - 10
CTRL6 Output Level	0 - 127	

Type 12: CREMOLO

CTRL1 LFO Type	0 - 5	TRI,TRP,SIN,SAW1,SAW2,SQR
CTRL2 Rate	0 - 117	0.1 - 10.00,*2
CTRL3 Depth	0 - 127	
CTRL4 Low Gain	0 - 30	-15 - +15
CTRL5 High Gain	0 - 30	-15 - +15
CTRL6 Output Level	0 - 127	

Type 13: PHASER

CTRL1 Manual	0 - 125	100 - 8000
CTRL2 Rate	0 - 117	0.1 - 10.00,*2
CTRL3 Depth	0 - 127	
CTRL4 Resonance	0 - 127	
CTRL5 Mix	0 - 127	
CTRL6 Output Pan	0 - 127	L64 - 63R
CTRL7 Output Level	0 - 127	

Type 14: CHORUS

CTRL1 Pre Delay	0 - 125	0.0 - 100
CTRL2 Rate	0 - 117	0.1 - 10.00,*2
CTRL3 Depth	0 - 127	
CTRL4 Phase	0 - 90	0 - 180
CTRL5 Filter Type	0 - 2	OFF,LPF,HPF
CTRL6 Cutoff	0 - 16	*1
CTRL7 Balance	0 - 100	D100:0W - D0:100W
CTRL8 Output Level	0 - 127	

Type 15: SPACE-D

CTRL1 Pre Delay	0 - 125	0.0 - 100
CTRL2 Rate	0 - 117	0.1 - 10.00,*2
CTRL3 Depth	0 - 127	
CTRL4 Phase	0 - 90	0 - 180
CTRL5 Low Gain	0 - 30	-15 - +15
CTRL6 High Gain	0 - 30	-15 - +15
CTRL7 Balance	0 - 100	D100:0W - D0:100W
CTRL8 Output Level	0 - 127	

Type 16: TETRA CHORUS

CTRL1 Pre Delay	0 - 125	0.0 - 100
CTRL2 Rate	0 - 117	0.1 - 10.00,*2
CTRL3 Depth	0 - 127	
CTRL4 Pre Dly Devi	0 - 20	
CTRL5 Depth Devi	0 - 40	-20 - +20
CTRL6 Pan Devi	0 - 20	
CTRL7 Balance	0 - 100	D100:0W - D0:100W
CTRL8 Output Level	0 - 127	

Type 17: FLANGER

CTRL1 Pre Delay	0 - 125	0.0 - 100
CTRL2 Rate	0 - 117	0.1 - 10.00,*2
CTRL3 Depth	0 - 127	
CTRL4 Feedback	0 - 98	0 - +98
CTRL5 Phase	0 - 90	0 - 180
CTRL6 Filter Type	0 - 2	OFF,LPF,HPF
CTRL7 Cutoff	0 - 16	*1
CTRL8 Balance	0 - 100	D100:0W - D0:100W
CTRL9 Output Level	0 - 127	

Type 18: ST FLANGER

CTRL1 Pre Delay	0 - 125	0.0 - 100
CTRL2 Rate	0 - 117	0.1 - 10.00,*2
CTRL3 Depth	0 - 127	
CTRL4 Feedback	0 - 98	0 - +98
CTRL5 Phase	0 - 90	0 - 180
CTRL6 Step Rate	0 - 125	0.05 - 10.00,*3
CTRL7 Balance	0 - 100	D100:0W - D0:100W
CTRL8 Output Level	0 - 127	

Type 19: SHORT DELAY

CTRL1 Time 2	0 - 103	0.1 - 190
CTRL2 Time 1	0 - 103	0.1 - 190
CTRL3 HF Damp	0 - 17	*1,BYPASS
CTRL4 Feedback	0 - 98	0 - +98
CTRL5 Auto Pan	0 - 18	OFF,*2
CTRL6 Low Gain	0 - 30	-15 - +15
CTRL7 High Gain	0 - 30	-15 - +15
CTRL8 Balance	0 - 100	D100:0W - D0:100W
CTRL9 Output Level	0 - 127	

Type 20: AUTO PAN

CTRL1 LFO type	0 - 5	TRI,TRP,SIN,SAW1,SAW2,SQR
CTRL2 Rate	0 - 117	0.1 - 10.00,*2
CTRL3 Bass Sense	0 - 2	OFF,MODE1,MODE2
CTRL4 Depth	0 - 127	
CTRL5 Low Gain	0 - 30	-15 - +15
CTRL6 High Gain	0 - 30	-15 - +15
CTRL7 Output Level	0 - 127	

Type 21: PB PITCH SHIFTER

CTRL1 Coarse	0 - 36	-24 - +12
CTRL2 Fine	0 - 100	-100 - +100
CTRL3 Output Pan	0 - 127	
CTRL4 Pre Delay	0 - 125	0.0 - 100
CTRL5 Mode	0 - 4	1 - 5
CTRL6 Feedback	0 - 98	0 - +98
CTRL7 Low Gain	0 - 30	-15 - +15
CTRL8 High Gain	0 - 30	-15 - +15
CTRL9 Balance	0 - 100	D100:0W - D0:100W
CTRL10 Output Level	0 - 127	

Type 22: REVERB

CTRL1 Rev Type	0 - 5	ROOM1,ROOM2,STAGE1,STAGE2, HALL1,HALL2
CTRL2 Time	0 - 127	
CTRL3 HF Damp	0 - 17	*1,BYPASS
CTRL4 Balance	0 - 100	D100:0W - D0:100W
CTRL5 Output Level	0 - 127	

Type 23: GATE REVERB

CTRL1 Gate Type	0 - 3	NORMAL,REVERSE,SWEEP1,SWEEP2
CTRL2 Gate Time	0 - 65	5 - 330
CTRL3 Balance	0 - 100	D100:0W - D0:100W
CTRL4 Output Level	0 - 127	

Type 24: ISOLATOR

CTRL1 Low gain	0 - 127	
CTRL2 Mid gain	0 - 127	
CTRL3 High gain	0 - 127	
CTRL4 Output Pan	0 - 127	L64 - 63R
CTRL5 Output Level	0 - 127	

- 1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000
- 2: 1/16, 1/12, 3/32, 1/8, 1/6, 3/16, 1/4, 1/3, 3/8, 1/2, 2/3, 3/4, 1/1, 2MES, 3MES, 4MES, 8MES, 16MES
- 3: 1/16, 1/12, 3/32, 1/8, 1/6, 3/16, 1/4, 1/3, 3/8, 1/2

■1-2-2.Part Info Part

Offset Address	Size	Description	Data (Value)
00 00	0000 000a	Receive Switch	0 - 1 (OFF,ON)
00 01	0aaa aaaa	Reserved	--
00 02	0000 00aa	Patch Group Type	0 - 3 *2
00 03	0aaa aaaa	Patch Group ID	1 - 8 *2
# 00 04	0000 aaaa	Patch Number	0 - 127 *2
	0000 bbbb		(001 - 128)
00 06	0aaa aaaa	Part Level	0 - 127
00 07	0aaa aaaa	Part Pan	0 - 127 (L64 - 63R)
00 08	0aaa aaaa	Part Key Shift	0 - 96 (-48 - +48)
00 09	0aaa aaaa	Part Fine Tune	0 - 100 (-50 - +50)
00 0A	0000 0aaa	MFX Switch	0 - 4 *1
00 0B	0aaa aaaa	Reserved	--
00 0C	0aaa aaaa	Delay Send Level	0 - 127
00 0D	0aaa aaaa	Reverb Send Level	0 - 127
00 0E-00 19	0aaa aaaa	Reserved	--
Total size	00 00 00 1A		

- 1: OFF, ON, Reserved, Reserved, RHY
- 2: Refer to the chart below

[Patch]

Patch	Patch Group Type	Patch Group ID	Patch Number	Bank Select MSB	Bank Select LSB	Program No.
P-A001 - P-A128	0	1	0 - 127	81	0	1 - 128
P-B001 - P-B128	0	4	0 - 127	81	1	1 - 128
P-C001 - P-C128	0	5	0 - 127	81	2	1 - 128
P-D001 - P-D128	0	6	0 - 127	81	3	1 - 128
P-E001 - P-E096	0	7	0 - 95	84	0	1 - 96
P-F001 - P-F128	0	1	0 - 127	85	0	1 - 128
P-G129 - P-G256	0	2	0 - 127	85	1	1 - 128

[Rhythm set]

Rhythm set	Patch Group Type	Patch Group ID	Patch Number	Bank Select MSB	Bank Select LSB	Program No.
R-A01 - R-A02	0	3	0 - 25	81	0	1 - 26
R-B01 - R-B04	0	4	0 - 3	84	0	1 - 4
R-U01 - R-U20	0	1	0 - 19	86	0	1 - 20

■1-3.Patch

Offset Address	Description	
00 00	Patch Common	1-3-1
10 00	Patch Tone 1	1-3-2
12 00	Patch Tone 2	
14 00	Patch Tone 3	
16 00	Patch Tone 4	

■1-3-1.Patch Common

Offset Address	Size	Description	Data (Value)
00 00	0aaa aaaa	Patch Name 1	32 - 125
00 01	0aaa aaaa	Patch Name 2	32 - 125
00 02	0aaa aaaa	Patch Name 3	32 - 125
00 03	0aaa aaaa	Patch Name 4	32 - 125
00 04	0aaa aaaa	Patch Name 5	32 - 125
00 05	0aaa aaaa	Patch Name 6	32 - 125
00 06	0aaa aaaa	Patch Name 7	32 - 125
00 07	0aaa aaaa	Patch Name 8	32 - 125
00 08	0aaa aaaa	Patch Name 9	32 - 125
00 09	0aaa aaaa	Patch Name 10	32 - 125
00 0A	0aaa aaaa	Patch Name 11	32 - 125
00 0B	0aaa aaaa	Patch Name 12	32 - 125
00 0C-00 30	0aaa aaaa	Reserved	—
00 31	0000 aaaa	Bend Range Up	0 - 12
00 32	00aa aaaa	Bend Range Down	0 - 48 (0 - -48)
00 33	0000 000a	Solo Switch	0 - 1 (OFF,ON)
00 34	0000 000a	Solo Legato Switch	0 - 1 (OFF,ON)
00 35	0000 000a	Portamento Switch	0 - 1 (OFF,ON)
00 36	0000 000a	Portamento Mode	0 - 1 *1
00 37	0000 000a	Portamento Type	0 - 1 (RATE,TIME)
00 38	0000 000a	Portamento Start	0 - 1 (PITCH,NOTE)
00 39	0aaa aaaa	Portamento Time	0 - 127
00 3A-00 3F	0aaa aaaa	Reserved	—
00 40	0000 000a	Velocity Range Switch	0 - 1 (OFF,ON)
00 41	0aaa aaaa	Reserved	—
00 42	0000 00aa	Stretch Tune Depth	0 - 3 (OFF,1 - 3)
00 43	0000 000a	Voice Priority	0 - 1 *2
00 44	0000 aaaa	Structure Type 1/2	0 - 9 (1 - 10)
00 45	0000 00aa	Booster 1/2	0 - 3 *3
00 46	0000 aaaa	Structure Type 3/4	0 - 9 (1 - 10)
00 47	0000 00aa	Booster 3/4	0 - 3 *3
00 48-00 49	0aaa aaaa	Reserved	—
Total size	00 00 00 4A		

* 1: NORMAL, LEGATO
* 2: LAST, LOUDEST
* 3: 0, +6, +12, +18

■1-3-2.Patch Tone

Offset Address	Size	Description	Data (Value)
00 00	0000 000a	Tone Switch	0 - 1 (OFF,ON)
00 01	0000 0000	Wave Group Type	0 *1
00 02	0000 00aa	Wave Group ID	1 - 3 *1
# 00 03	0000 aaaa	Wave Number	0 - 253 *1
	0000 bbbb		
00 05	0000 00aa	Wave Gain	0 - 3 *2
00 06	0000 000a	FXM Switch	0 - 1 (OFF,ON)
00 07	0000 00aa	FXM Color	0 - 3 (1 - 4)
00 08	0000 aaaa	FXM Depth	0 - 15 (1 - 16)
00 09-00 0A	0aaa aaaa	Reserved	—
00 0B	0aaa aaaa	Velocity Cross Fade	0 - 127
00 0C	0aaa aaaa	Velocity Range Lower	1 - 127 *3
00 0D	0aaa aaaa	Velocity Range Upper	1 - 127 *4
00 0E	0aaa aaaa	Keyboard Range Lower	0 - 127 *5
00 0F	0aaa aaaa	Keyboard Range Upper	0 - 127 *6
00 10-00 14	0aaa aaaa	Reserved	—
00 15	000a aaaa	Modulation 1 Destination	0 - 15 *7
00 16	0aaa aaaa	Modulation 1 Depth	0 - 126 (-63 - +63)
00 17	000a aaaa	Modulation 2 Destination	0 - 15 *7
00 18	0aaa aaaa	Modulation 2 Depth	0 - 126 (-63 - +63)
00 19	000a aaaa	Modulation 3 Destination	0 - 15 *7
00 1A	0aaa aaaa	Modulation 3 Depth	0 - 126 (-63 - +63)
00 1B	000a aaaa	Modulation 4 Destination	0 - 15 *7
00 1C	0aaa aaaa	Modulation 4 Depth	0 - 126 (-63 - +63)
00 1D	000a aaaa	Pitch Bend 1 Destination	0 - 15 *7
00 1E	0aaa aaaa	Pitch Bend 1 Depth	0 - 126 (-63 - +63)
00 1F	000a aaaa	Pitch Bend 2 Destination	0 - 15 *7
00 20	0aaa aaaa	Pitch Bend 2 Depth	0 - 126 (-63 - +63)
00 21	000a aaaa	Pitch Bend 3 Destination	0 - 15 *7
00 22	0aaa aaaa	Pitch Bend 3 Depth	0 - 126 (-63 - +63)
00 23	000a aaaa	Pitch Bend 4 Destination	0 - 15 *7
00 24	0aaa aaaa	Pitch Bend 4 Depth	0 - 126 (-63 - +63)
00 25	000a aaaa	Aftertouch 1 Destination	0 - 15 *7
00 26	0aaa aaaa	Aftertouch 1 Depth	0 - 126 (-63 - +63)
00 27	000a aaaa	Aftertouch 2 Destination	0 - 15 *7
00 28	0aaa aaaa	Aftertouch 2 Depth	0 - 126 (-63 - +63)
00 29	000a aaaa	Aftertouch 3 Destination	0 - 15 *7
00 2A	0aaa aaaa	Aftertouch 3 Depth	0 - 126 (-63 - +63)
00 2B	000a aaaa	Aftertouch 4 Destination	0 - 15 *7
00 2C	0aaa aaaa	Aftertouch 4 Depth	0 - 126 (-63 - +63)
00 2D	0000 0aaa	LFO1 Waveform	0 - 7 *8
00 2E	0000 000a	LFO1 Key Sync	0 - 1 (OFF,ON)
00 2F	0aaa aaaa	LFO1 Rate	0 - 127
00 30	0000 0aaa	LFO1 Offset	0 - 4 *9
00 31	0aaa aaaa	LFO1 Delay Time	0 - 127
00 32	0000 00aa	LFO1 Fade Mode	0 - 3 *10
00 33	0aaa aaaa	LFO1 Fade Time	0 - 127
00 34	0000 000a	LFO1 Tempo Sync	0 - 1 (OFF,ON)
00 35	0000 0aaa	LFO2 Waveform	0 - 7 *8
00 36	0000 000a	LFO2 Key Sync	0 - 1 (OFF,ON)
00 37	0aaa aaaa	LFO2 Rate	0 - 127
00 38	0000 0aaa	LFO2 Offset	0 - 4 *9
00 39	0aaa aaaa	LFO2 Delay Time	0 - 127
00 3A	0000 00aa	LFO2 Fade Mode	0 - 3 *10
00 3B	0aaa aaaa	LFO2 Fade Time	0 - 127
00 3C	0000 000a	LFO2 Tempo Sync	0 - 1 (OFF,ON)
00 3D	0aaa aaaa	Coarse Tune	0 - 96 (-48 - +48)
00 3E	0aaa aaaa	Fine Tune	0 - 100 (-50 - +50)
00 3F	000a aaaa	Random Pitch Depth	0 - 30 *11
00 40	0000 aaaa	Pitch Key Follow	0 - 15 *12
00 41	000a aaaa	Pitch Envelope Depth	0 - 24 (-12 - +12)
00 42	0aaa aaaa	Pitch Envelope Velocity Sens	0 - 125 *13
00 43	0000 aaaa	Pitch Envelope Velocity Time1	0 - 14 *14
00 44	0000 aaaa	Pitch Envelope Velocity Time4	0 - 14 *14
00 45	0000 aaaa	Pitch Envelope Time Key Follow	0 - 14 *14
00 46	0aaa aaaa	Pitch Envelope Time 1	0 - 127
00 47	0aaa aaaa	Pitch Envelope Time 2	0 - 127
00 48	0aaa aaaa	Pitch Envelope Time 3	0 - 127
00 49	0aaa aaaa	Pitch Envelope Time 4	0 - 127
00 4A	0aaa aaaa	Pitch Envelope Level 1	0 - 126 (-63 - +63)
00 4B	0aaa aaaa	Pitch Envelope Level 2	0 - 126 (-63 - +63)
00 4C	0aaa aaaa	Pitch Envelope Level 3	0 - 126 (-63 - +63)
00 4D	0aaa aaaa	Pitch Envelope Level 4	0 - 126 (-63 - +63)
00 4E	0aaa aaaa	Pitch LFO1 Depth	0 - 126 (-63 - +63)
00 4F	0aaa aaaa	Pitch LFO2 Depth	0 - 126 (-63 - +63)
00 50	0000 0aaa	Filter Type	0 - 4 *15
00 51	0aaa aaaa	Cutoff Frequency	0 - 127
00 52	0000 aaaa	Cutoff Key Follow	0 - 15 *12
00 53	0aaa aaaa	Resonance	0 - 127
00 54	0aaa aaaa	Resonance Velocity Sens	0 - 125 *13
00 55	0aaa aaaa	Filter Envelope Depth	0 - 126 (-63 - +63)
00 56	0000 0aaa	Filter Envelope Velocity Curve	0 - 6 (1 - 7)
00 57	0aaa aaaa	Filter Envelope Velocity Sens	0 - 125 *13
00 58	0000 aaaa	Filter Envelope Velocity Time1	0 - 14 *14
00 59	0000 aaaa	Filter Envelope Velocity Time4	0 - 14 *14
00 5A	0000 aaaa	Filter Envelope Time Keyfollow	0 - 14 *14
00 5B	0aaa aaaa	Filter Envelope Time 1	0 - 127
00 5C	0aaa aaaa	Filter Envelope Time 2	0 - 127
00 5D	0aaa aaaa	Filter Envelope Time 3	0 - 127
00 5E	0aaa aaaa	Filter Envelope Time 4	0 - 127
00 5F	0aaa aaaa	Filter Envelope Level 1	0 - 127
00 60	0aaa aaaa	Filter Envelope Level 2	0 - 127
00 61	0aaa aaaa	Filter Envelope Level 3	0 - 127
00 62	0aaa aaaa	Filter Envelope Level 4	0 - 127
00 63	0aaa aaaa	Filter LFO1 Depth	0 - 126 (-63 - +63)
00 64	0aaa aaaa	Filter LFO2 Depth	0 - 126 (-63 - +63)
00 65	0aaa aaaa	Tone Level	0 - 127
00 66	0000 00aa	Bias Direction	0 - 3 *16
00 67	0aaa aaaa	Bias Point	0 - 127 (C-1 - G9)
00 68	0000 aaaa	Bias Level	0 - 14 *14
00 69	0000 0aaa	Amp Envelope Velocity Curve	0 - 6 (1 - 7)
00 6A	0aaa aaaa	Amp Envelope Velocity Sens	0 - 125 *13
00 6B	0000 aaaa	Amp Envelope Velocity Time1	0 - 14 *14
00 6C	0000 aaaa	Amp Envelope Velocity Time4	0 - 14 *14
00 6D	0000 aaaa	Amp Envelope Time Keyfollow	0 - 14 *14
00 6E	0aaa aaaa	Amp Envelope Time 1	0 - 127
00 6F	0aaa aaaa	Amp Envelope Time 2	0 - 127
00 70	0aaa aaaa	Amp Envelope Time 3	0 - 127
00 71	0aaa aaaa	Amp Envelope Time 4	0 - 127
00 72	0aaa aaaa	Amp Envelope Level 1	0 - 127
00 73	0aaa aaaa	Amp Envelope Level 2	0 - 127
00 74	0aaa aaaa	Amp Envelope Level 3	0 - 127
00 75	0aaa aaaa	Amp LFO1 Depth	0 - 126 (-63 - +63)
00 76	0aaa aaaa	Amp LFO2 Depth	0 - 126 (-63 - +63)
00 77	0aaa aaaa	Tone Pan	0 - 127 (L64 - 63R)
00 78	0000 aaaa	Pan Key follow	0 - 14 *14
00 79	00aa aaaa	Random Pan Switch	0, 63 (OFF,ON)
00 7A	0aaa aaaa	Alternate Pan Depth	1 - 127 (L63 - 63R)
00 7B	0aaa aaaa	Pan LFO1 Depth	0 - 126 (-63 - +63)
00 7C	0aaa aaaa	Pan LFO2 Depth	0 - 126 (-63 - +63)
00 7D-01 00	0aaa aaaa	Reserved	—
Total size	00 00 01 01		

* 1: Correspondence between the "Waveform List" and "Wave Group Type, Wave Group ID, Wave Number"

Wave	Wave Group Type	Wave Group ID	Wave Number
A001-254	0	1	0 - 253
B001-251	0	2	0 - 250

* 2: -6, 0, +6, +12
* 3: 1 - Upper
* 4: Lower - 127
* 5: C-1 - Upper
* 6: Lower - G9
* 7: OFF, PCH, CUT, RES, LEV, PAN, L1P, L2P, L1F, L2F, L1A, L2A, PL1, PL2, L1R, L2R
* 8: TRI, SIN, SAW, SQR, TRP, S&H, RND, CHS
* 9: -100, -50, 0, +50, +100
* 10: ON-IN, ON-OUT, OFF-IN, OFF-OUT
* 11: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200
* 12: -100, -70, -50, -30, -10, 0, +10, +20, +30, +40, +50, +70, +100, +120, +150, +200
* 13: -100 - +150
* 14: -100, -70, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +70, +100
* 15: OFF, LPF, BPF, HPF, PKG
* 16: LOWER, UPPER, LOW&UP, ALL

■1-4.Rhythm Set

Offset Address	Description	
00 00	Rhythm Common	1-4-1
23 00	Rhythm Note for Key# 35	1-4-2
24 00	Rhythm Note for Key# 36	
:	:	
62 00	Rhythm Note for Key# 98	

■1-4-1.Rhythm Common

Offset Address	Size	Description	Data (Value)
00 00	0aaa aaaa	Rhythm Name 1	32 - 125
00 01	0aaa aaaa	Rhythm Name 2	32 - 125
00 02	0aaa aaaa	Rhythm Name 3	32 - 125
00 03	0aaa aaaa	Rhythm Name 4	32 - 125
00 04	0aaa aaaa	Rhythm Name 5	32 - 125
00 05	0aaa aaaa	Rhythm Name 6	32 - 125
00 06	0aaa aaaa	Rhythm Name 7	32 - 125
00 07	0aaa aaaa	Rhythm Name 8	32 - 125
00 08	0aaa aaaa	Rhythm Name 9	32 - 125
00 09	0aaa aaaa	Rhythm Name 10	32 - 125
00 0A	0aaa aaaa	Rhythm Name 11	32 - 125
00 0B	0aaa aaaa	Rhythm Name 12	32 - 125
Total size	00 00 00 0C		

■1-4-2.Rhythm Note

Offset Address	Size	Description	Data (Value)
00 00	0000 000a	Tone Switch	0 - 1 (OFF,ON)
00 01	0000 0000	Wave Group Type	0 *1
00 02	0000 00aa	Wave Group ID	1 - 3 *1
# 00 03	0000 aaaa 0000 bbbb	Wave Number	0 - 252 *1
00 05	0000 00aa	Wave Gain	0 - 3 *2
00 06	0000 aaaa	Bend Range	0 - 12
00 07	000a aaaa	Mute Group	0 - 31 (OFF,1 - 31)
00 08	0000 000a	Envelope Mode	0 - 1 *3
00 09-00 0F	0aaa aaaa	Reserved	—
00 0C	0aaa aaaa	Coarse Tune	0 - 120 (-60 - +60)
00 0D	0aaa aaaa	Fine Tune	0 - 100 (-50 - +50)
00 0E	000a aaaa	Random Pitch Depth	0 - 30 *4
00 0F	000a aaaa	Pitch Envelope Depth	0 - 24 (-12 - +12)
00 10	0aaa aaaa	Pitch Envelope Velocity Sens	0 - 125 *5
00 11	0000 aaaa	Pitch Envelope Velocity Time	0 - 14 *6
00 12	0aaa aaaa	Pitch Envelope Time 1	0 - 127
00 13	0aaa aaaa	Pitch Envelope Time 2	0 - 127
00 14	0aaa aaaa	Pitch Envelope Time 3	0 - 127
00 15	0aaa aaaa	Pitch Envelope Time 4	0 - 127
00 16	0aaa aaaa	Pitch Envelope Level 1	0 - 126 (-63 - +63)
00 17	0aaa aaaa	Pitch Envelope Level 2	0 - 126 (-63 - +63)
00 18	0aaa aaaa	Pitch Envelope Level 3	0 - 126 (-63 - +63)
00 19	0aaa aaaa	Pitch Envelope Level 4	0 - 126 (-63 - +63)
00 1A	0000 0aaa	Filter Type	0 - 4 *7
00 1B	0aaa aaaa	Cutoff Frequency	0 - 127
00 1C	0aaa aaaa	Resonance	0 - 127
00 1D	0aaa aaaa	Resonance Velocity Sens	0 - 125 *5
00 1E	0aaa aaaa	Filter Envelope Depth	0 - 126 (-63 - +63)
00 1F	0aaa aaaa	Filter Envelope Velocity Sens	0 - 125 *5
00 20	0000 aaaa	Filter Envelope Velocity Time	0 - 14 *6
00 21	0aaa aaaa	Filter Envelope Time 1	0 - 127
00 22	0aaa aaaa	Filter Envelope Time 2	0 - 127
00 23	0aaa aaaa	Filter Envelope Time 3	0 - 127
00 24	0aaa aaaa	Filter Envelope Time 4	0 - 127
00 25	0aaa aaaa	Filter Envelope Level 1	0 - 127
00 26	0aaa aaaa	Filter Envelope Level 2	0 - 127
00 27	0aaa aaaa	Filter Envelope Level 3	0 - 127
00 28	0aaa aaaa	Filter Envelope Level 4	0 - 127
00 29	0aaa aaaa	Tone Level	0 - 127
00 2A	0aaa aaaa	Amp Envelope Velocity Sens	0 - 125 *5
00 2B	0000 aaaa	Amp Envelope Velocity Time	0 - 14 *6
00 2C	0aaa aaaa	Amp Envelope Time 1	0 - 127
00 2D	0aaa aaaa	Amp Envelope Time 2	0 - 127
00 2E	0aaa aaaa	Amp Envelope Time 3	0 - 127
00 2F	0aaa aaaa	Amp Envelope Time 4	0 - 127
00 30	0aaa aaaa	Amp Envelope Level 1	0 - 127
00 31	0aaa aaaa	Amp Envelope Level 2	0 - 127
00 32	0aaa aaaa	Amp Envelope Level 3	0 - 127
00 33	0aaa aaaa	Tone Pan	0 - 127 (L64 - 63R)
00 34	00aa aaaa	Random Pan Switch	0,63 (OFF,ON)
00 35	0aaa aaaa	Alternate Pan Depth	1 - 127 (L63 - 63R)
00 36	0000 00aa	MFX Switch	3 - 3 *8
00 37	0aaa aaaa	Reserved	—
00 38	0aaa aaaa	Delay Send Level	0 - 127
00 39	0aaa aaaa	Reverb Send Level	0 - 127
Total size	00 00 00 3A		

* 1: Correspondence between the "Waveform List" and "Wave Group Type, Wave Group ID, Wave Number"

Wave	Wave Group Type	Wave Group ID	Wave Number
A001-254	0	1	0 - 253
B001-251	0	2	0 - 250

* 2: -6, 0, +6, +12
* 3: NO-SUS, SUSTAIN
* 4: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80,
  90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200
* 5: -100 - +150
* 6: -100, -70, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40,
  +50, +70, +100
* 7: OFF, LPF, BPF, HPF, PKG
* 8: OFF, ON

■2. GS (Model ID=42H)

Start address	Description	
40 11 00	Scale Tune Part1	2-1
40 12 00	: Part2	
40 13 00	: Part3	
40 14 00	: Part4	
40 15 00	: Part5	
40 16 00	: Part6	
40 17 00	: Part7	

■2-1. Scale Tune

Offset Address	Size	Description	Data (Value)
40	0aaa aaaa	Scale Tune for C	0 - 127 (-64 - +63)
41	0aaa aaaa	Scale Tune for C#	0 - 127 (-64 - +63)
42	0aaa aaaa	Scale Tune for D	0 - 127 (-64 - +63)
43	0aaa aaaa	Scale Tune for D#	0 - 127 (-64 - +63)
44	0aaa aaaa	Scale Tune for E	0 - 127 (-64 - +63)
45	0aaa aaaa	Scale Tune for F	0 - 127 (-64 - +63)
46	0aaa aaaa	Scale Tune for F#	0 - 127 (-64 - +63)
47	0aaa aaaa	Scale Tune for G	0 - 127 (-64 - +63)
48	0aaa aaaa	Scale Tune for G#	0 - 127 (-64 - +63)
49	0aaa aaaa	Scale Tune for A	0 - 127 (-64 - +63)
4A	0aaa aaaa	Scale Tune for A#	0 - 127 (-64 - +63)
4B	0aaa aaaa	Scale Tune for B	0 - 127 (-64 - +63)
Total size	00 00 0C		

■3. Quick SysEx (Model ID=3AH)

Start address	Description	
30 00 31 00 : 36 00	Quick SysEx Part1 : Part2 : : Part7	3-1
39 00	: PartR	3-2
70 00	: Sequencer	3-3

■3-1. Quick SysEx Part

Offset Address	Size DataL	DataE	Description	Data (Value L)
0F	0000 aaaa	0000 0000	LFO1 Wave Form	0 - 7 *1
14	0aaa aaaa	0000 0000	LFO1 Fade Time	0 - 127
15	0aaa aaaa	0000 0000	Coarse Tune	16 - 112 (-48 - +48)
19	0aaa aaaa	0000 0000	Pitch Env Depth	52 - 76 (-12 - +12)
1A	0aaa aaaa	0000 0000	Pitch Env Attack	0 - 127
1B	0aaa aaaa	0000 0000	Pitch Env Decay	0 - 127
1C	0aaa aaaa	0000 0000	Filter Env Sustain	1 - 127 (-63 - +63)
1D	0aaa aaaa	0000 0000	Filter Env Release	0 - 127
1F	0aaa aaaa	0000 0000	Amp Env Sustain	0 - 127
22	0000 0aaa	0000 0000	Filter Type	0 - 4 *2
23	0aaa aaaa	0000 0000	Tone Pan	0 - 127 (L64 - 63R)
24	0aaa aaaa	0000 0000	Tone Level	0 - 127
25	00aa aaaa	0000 0000	Random Pan Switch	0,63 (OFF,ON)
27	0aaa aaaa	0000 0000	Pitch Env Sustain	1 - 127 (-63 - +63)
28	0aaa aaaa	0000 0000	Pitch Env Release	0 - 127
55	0aaa aaaa	0000 0000	Part Key Shift	16 - 112 (-48 - +48)
56	0000 00aa	0000 0000	Part MFX Switch	0 - 3 *3

* 1: TRI, SIN, SAW, SQR, TRP, S&H, RND, CHS
* 2: OFF, LPF, BPF, HPF, PKG
* 3: OFF, ON, Reserved, Reserved

■3-2. Quick SysEx Rhythm

Offset Address	Size DataL	DataE *1	Description	Data (Value L)
1b	0aaa aaaa	0000 aaaa	Coarse Tune	0 - 120(-60 - +60)
19	0aaa aaaa	0000 aaaa	Pitch Env Depth	52 - 76 (-12 - +12)
1A	0aaa aaaa	0000 aaaa	Pitch Env Attack	0 - 127
1B	0aaa aaaa	0000 aaaa	Pitch Env Decay	0 - 127
1C	0aaa aaaa	0000 aaaa	Filter Env Sustain	0 - 127
1D	0aaa aaaa	0000 aaaa	Filter Env Release	0 - 127
1F	0aaa aaaa	0000 aaaa	Amp Env Sustain	0 - 127
22	0000 0aaa	0000 aaaa	Filter Type	0 - 4 *2
23	0aaa aaaa	0000 aaaa	Tone Pan	0 - 127 (L64 - 63R)
24	0aaa aaaa	0000 aaaa	Tone Level	0 - 127
25	00aa aaaa	0000 aaaa	Random Pan Switch	0,1 (OFF,ON)
27	0aaa aaaa	0000 aaaa	Pitch Env Sustain	0 - 127
28	0aaa aaaa	0000 aaaa	Pitch Env Release	0 - 127
47	0aaa aaaa	0000 aaaa	Resonance	0 - 127
48	0aaa aaaa	0000 aaaa	Amp Env Release Time	0 - 127
49	0aaa aaaa	0000 aaaa	Amp Env Attack Time	0 - 127
4A	0aaa aaaa	0000 aaaa	Cutoff Frequency	0 - 127
4B	0aaa aaaa	0000 aaaa	Amp Env Decay	0 - 127
4D	0aaa aaaa	0000 aaaa	Fine Tune	14 - 114 (-50 - +50)
51	0aaa aaaa	0000 aaaa	Filter Env Depth	1 - 127 (-63 - +63)
52	0aaa aaaa	0000 aaaa	Filter Env Attack	0 - 127
53	0aaa aaaa	0000 aaaa	Filter Env Decay	0 - 127
55	0aaa aaaa	0000 aaaa	Part Key Shift	16 - 112 (-48 - +48)
56	0000 00aa	0000 aaaa	Part MFX Switch	0 - 4 *3

* 1:Use when transmitting to and from each Rhythm group in Part R.

Rhythm group	DataE	Rhythm group	DataE
BD	0	CYM	4
SD	1	TOM/PERC	5
HH	2	HIT	6
CLP	3	OTHERS	7
CYM	4	ALL	9

* 2: OFF, LPF, BPF, HPF, PKG
* 3: OFF, ON, Reserved, Reserved ,RHY

■3-3. Quick SysEx Sequencer

Offset Address	Size DataL	DataE	Description	Data(Value L/E)
01	0000 aaaa	0000 000a	Part Mute	0–6,9 / 0,1
02	0000 aaaa	0000 000a	Drum Mute	0–7*1 / 0,1

* 1. BD,SD,HH,CLP,CYM,TOM/PEC,HIT,OTHERS

6. Supplementary material

■Examples of MIDI messages

<Example 1> 92 3E 5F
9n is the Note On status and 'n' is the MIDI channel number. Since 2H = 2, 3EH = 62, and 5FH = 95, this is a Note On message of MIDI CH = 3, note number 62 (note name D4) and velocity 95.

<Example 2> C9 49
CnH is the Program Change status and 'n' is the MIDI channel number. Since 9H = 9, and 49H = 73, this is a Program Change message of MIDI CH = 10, Program number 74.

<Example 3> EA 00 28
EnH is the Pitch Bend Change status and 'n' is the MIDI channel number. The 2nd byte (00H=0) is the LSB of the Pitch Bend value, and the 3rd byte (28H=40) is the MSB. However since the Pitch Bend is a signed number with 0 at 40 00H (= 64 x 128 + 0 = 8192), the Pitch Bend value in this case is
28 00H - 40 00H = 40 x 128 + 0 - (64 x 128 + 0) = 5120 - 8192 = -3072

If we assume that the Pitch Bend Sensitivity is set to two semitones, the pitch will change only -200 cents for a Pitch Bend value of -8192 (00 00H). Thus, this message is specifying a Pitch Bend of -200 x (-3072) ÷ (-8192) = -75 cents on MIDI CH = 7.

<Example 4> B3 64 00 65 00 06 0C 26 00 64 7F 65 7F
BnH is the Control Change status, and 'n' is the MIDI channel number. In Control Change messages, the 2nd byte is the controller number, and the 3rd byte is the parameter value. MIDI allows what is known as "running status," when if messages of the the same status follow each other, it is permitted to omit the second and following status bytes. In the message above, running status is being used, meaning that the message has the following content.

B3 64 00	MIDI CH = 4, RPN parameter number LSB: 00H
(B3) 65 00	MIDI CH = 4, RPN parameter number MSB: 00H
(B3) 06 0C	MIDI CH = 4, parameter value MSB: 0CH
(B3) 26 00	MIDI CH = 4, parameter value LSB: 00H
(B3) 64 7F	MIDI CH = 4, RPN parameter number LSB: 7FH
(B3) 65 7F	MIDI CH = 4, RPN parameter number MSB: 7FH

■Examples of system exclusive messages and calculating the checksum

Roland exclusive messages (RQ1, DT1) are transmitted with a checksum at the end of the data (before F7) to check that the data was received correctly. The value of the checksum is determined by the address and data (or size) of the exclusive message.

●How to calculate the checksum

The checksum consists of a value whose lower 7 bits are 0 when the address, size and checksum itself are added.
The following formula shows how to calculate the checksum when the exclusive message to be transmitted has an address of aa bb cc ddH, and data or size of ee ffH.

aa + bb + cc + dd + ee + ff = total
total ÷ 128 = quotient ... remainder
128 - remainder = checksum

<Example 1> Setting the REVERB TYPE to HALL2 (DT1)
Referring to "3. Parameter address map," the starting address for Part Information is 01 00 00 00H, and offset address of Part Information Common is 00 00H, and the REVERB TYPE address is 00 28H. Therefore, the address will be

```
   01 00 00 00H
      00 00H
+)    00 28H
   01 00 00 28H
```

Since HALL2 is parameter value 05H,

F0	41	10	00H	0BH	12	01 00 00 28	05	??	F7
(1)	(2)	(3)	(4)	(5)	(6)	address	data	checksum	(7)

(1) Exclusive status (2) ID number (Roland) (3) device ID (17)
(4), (5) model ID (D2) (6)command ID (DT1) (7) EOX

Next we calculate the checksum.

01H + 00H + 00H + 28H + 05H = 1 + 0 + 0 + 40 + 5 = 46(sum)

46 (total) ÷ 128 = 0 (quotient)...46 (remainder)
checksum = 128 - 46 (quotient) = 82 = 52H

This means that the message transmitted will be F0 41 10 00 0B 12 01 00 00 28 05 52 F7.

<Example 2> Obtaining part information data (RQ1)
Referring to "3. Parameter address map," the starting addresses for Part Information are assigned as follows.

```
01 00 00 00H    Part Info Common
01 00 10 00H    Part Info Part 1
01 00 11 00H    Part Info Part 2

01 00 16 00H    Part Info Part 7
01 00 19 00H    Part Info Part R
```

Since the size of Part Information Part is 00 00 00 1AH, this size is added to the starting address of Part Information Part R, to obtain

```
   01 00 19 00H
+) 00 00 00 1AH
   01 00 19 1AH
```

Therefore, the size of the data to be obtained is

```
   01 00 19 1AH
-) 01 00 00 00H
   00 00 19 1AH
```

F0	41	10	00	0B	11	01 00 00 00	00 00 19 1A	??	F7
(1)	(2)	(3)	(4)	(5)	(6)	address	data	checksum	(7)

(1) Exclusive status (2) ID number (Roland) (3) Device ID (17)
(4), (5) Model ID (D2D2) (6) Command ID (RQ1) (7) EOX

When the checksum is calculated in the same way as in <Example 2>, we have the following message to be transmitted: F0 41 10 00 0B 11 01 00 00 00 00 00 19 1A 4C F7.

●Scale Tune function (Model ID : 42H (GS), address: 40 1x 40H)

Scale Tune is a function that makes fine adjustments to the pitch of each note C-B. Settings are made for one octave, and applied to the notes of all octaves. By making Scale Tune settings you can use tunings and temperaments other than the standard Equal Temperament. Here we give three types of settings as examples.

○Equal temperament

This temperament divides the octave into 12 equal steps, and is the temperament most frequently used today, especially in western music. Initially, the Scale Tune function of this instrument is set to Equal Temperament.

○Just intonation (tonic of C)

The primary triads sound more beautiful in just intonation than in equal temperament. However, this applies only in one key, and chords will be discordant if you play in a different key. The settings here are for a tonic of C.

○Arabian-type scale

The Scale Tune function allow you to use various tunings of ethnic music. Here is one of the Arabian scales.

Setting examples

Note	Equal Temp.	Just (in C)	Arabian-type scale
C	0	0	-6
C#	0	-8	+45
D	0	+4	-2
Eb	0	+16	-12
E	0	-14	-51
F	0	-2	-8
F#	0	-10	+43
G	0	+2	-4
G#	0	+14	+47
A	0	-16	0
Bb	0	+14	-10
B	0	-12	-49

The values in the above table are in units of 1 cent. Convert these values to hexadecimal, and transmit them as exclusive data. For example to set the Scale Tune of Part 1 to an Arabian-type scale, transmit the following data.
F0 41 10 42 12 40 11 40 3A 6D 3E 34 0D 38 6B 3C 6F 40 36 0F 76 F7

groovebox (Sound Generator Section)
Model D2

MIDI Implementation Chart

Date : Mar. 8, 2001
Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic	Default	X	1–7, 10	
Channel	Changed	X	1–7, 10	
Mode	Default	X	Mode 3	
	Messages	X	Mode 3, 4 (M = 1)	* 1
	Altered	**********		
Note Number :	True Voice	0–127 **********	0–127 0–127	
Velocity	Note On	O	O	
	Note Off	X	O	
After Touch	Key's	X	O	
	Channel's	X	O	
Pitch Bend		O	O	
Control Change	0, 1	O	O	
	2–4	O	X	
	5	O	O	
	6	X	O	
	7	O	O	
	8, 9	O	X	
	10, 11	O	O	
	12–14	O	X	
	15, 16	O	O	
	17	O	X	
	18, 19	O	O	
	20	O	X	
	21	O	O	
	22–24	O	X	
	25–29	O	O	
	30	O	X	* 2
	31, 32, 34–37	O	O	
	38	X	O	
	39, 40, 64–67	O	O	
	68	O	X	
	69	O	O	
	70	O	X	
	71–75	O	O	
	76	O	X	
	77	O	O	
	78, 79	O	X	
	80–86	O	O	
	87–90	O	X	
	91	O	O	
	92, 93	O	X	
	94	O	O	
	95	O	X	
	100, 101	O	O	
Program Change	: True Number	O **********	O 0–127	Program No. 1–128
System Exclusive		O	O	
System Common	: Song Position	X	X	
	: Song Select	X	X	
	: Tune Request	X	X	
System Real Time	: Clock	X	O	
	: Commands	X	X	
Aux Messages	: All Sound Off	X	O (120, 126, 127)	
	: Reset All Controllers	X	O	
	: Local On/Off	X	X	
	: All Notes Off	X	O (123–127)	
	: Active Sensing	O	O	
	: System Reset	X	X	
Notes		* 1 Recognized as M=1 even if M≠1. * 2 Refer to "Table of Transmitted Data" (p. 76) about function of each controller number.		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

goovebox (Sequencer Section) Date : Mar. 8, 2001

Model D2

MIDI Implementation Chart

Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic	Default	1–7, 10	1–7, 10	There is no basic channel.
Channel	Changed	X	X	
Mode	Default	Mode 3	X	
	Messages	OMINI OFF, POLY *1	X	
	Altered	**********		
Note Number :	True Voice	0–127 **********	0–127 0–127	
Velocity	Note On	O	O	
	Note Off	O	O	
After Touch	Key's	O	O	
	Channel's	O	O	
Pitch Bend		O	O	
Control Change	0–119	O	O	
Program Change	: True Number	O **********	O 0–127	
System Exclusive		O	O	
System Common	: Song Position	O *4	O *2	
	: Song Select	X	X	
	: Tune Request	X	X	
System Real Time	: Clock	O *4	O *3	
	: Commands	O *5	O *2	
Aux Messages	: All Sound Off	O	O	
	: Reset All Controllers	O	O	
	: Local On/Off	X	X	
	: All Notes Off	O *6	O (123–127) *6	
	: Active Sensing	X	O	
	: System Reset	X	X	
Notes		*1 Omni Off, Poly is transmitted to all channels at starting up. *2 Recognized only when Sync Mode is SLAVE or REMOTE. *3 Recognized only when Sync Mode is SLAVE. *4 Transmitted only when Sync Out is ON and D-FIELD mode is not VINYL. *5 Transmitted only when Sync Out is ON. *6 Mode messages (123–127) are stored/transmitted after All Note Off processing is performed. The All Note Off message itself is not stored/transmitted.		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

Specifications

D2 (GROOVEBOX)

Sound generator:

Maximum Polyphony	64 voices
Parts	16 (Main: 8 + RPS: 8)
Patches	
Preset	600
User	256
Rhythm set	
Preset	30
User	20
Effects	
Reverb	6
Delay	2
MFX	25

Sequencer:

Tracks	8
Resolution	96 TPQN
Tempo	20.0 – 240.0 (max.)
Maximum Note Storage	approx. 40,000 notes
Patterns	
Preset	157
RPS	232
User	100
Songs	25
Recording Method	New Step REC
	D-Field REC
Arpeggiator	
Preset	43
User	10
Real-time Quantize	GRID/SHUFFLE/
	GROOVE
RPS Set	30
Pattern Set	20
MEGAMIX Set	20

Controller

D-FIELD Controller

Connectors

Headphones Jack (Stereo miniature phone type)

Output Jacks (L, R) (RCA phono type)

MIDI Connectors (IN/OUT)

DC IN Jack

Power Supply

AC Adaptor (DC9V)

Current Draw

1000 mA

Dimensions

325 (W) x 256 (D) x 55 (H) mm

12-13/16 (W) x 10-1/8 (D) x 2-3/16 (H) inches

Weight

1.4 kg / 3 lb 2 oz (excluding AC Adaptor)

Accessories

Owner's Manual

AC Adaptor (ACI series or PSB-1U)

* *In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.*

Index

MEMO

MEMO

For EU Countries

CE This product complies with the requirements of European Directive 89/336/EEC.

For the USA

FEDERAL COMMUNICATIONS COMMISSION
RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Information

When you need repair service, call your nearest Roland Service Center or authorized Roland distributor in your country as shown below.

AFRICA

EGYPT
Al Fanny Trading Office
P.O. Box 2904,
El Horrieh Heliopolos, Cairo,
EGYPT
TEL: (02) 4185531

REUNION
Maison FO - YAM Marcel
25 Rue Jules Hermann,
Chaudron - BP79 97 491
Ste Clotilde Cedex,
REUNION ISLAND
TEL: 28 29 16

SOUTH AFRICA
That Other Music Shop (PTY) Ltd.
11 Melle St., Braamfontein,
Johannesbourg
Republic of SOUTH AFRICA

P.O.Box 32918, Braamfontein 2017
Republic of SOUTH AFRICA
TEL: (011) 403 4105

Paul Bothner (PTY) Ltd.
17 Werdmuller Centre Claremont
7700
Republic of SOUTH AFRICA

P.O. Box 23032
Claremont, Cape Town
SOUTH AFRICA, 7735
TEL: (021) 674 4030

ASIA

CHINA
Beijing Xinghai Musical Instruments Co., Ltd.
6 Huangmuchang Chao Yang
District, Beijing, CHINA
TEL: (010) 6774 7491

HONG KONG
Tom Lee Music Co., Ltd.
Service Division
22-32 Pun Shan Street, Tsuen
Wan, New Territories,
HONG KONG
TEL: 2415 0911

INDIA
Rivera Digitec (India) Pvt. Ltd.
409, Nirman Kendra Mahalaxmi
Flats Compound Off. Dr. Edwin
Moses Road, Mumbai-400011,
INDIA
TEL: (022) 498 3079

INDONESIA
PT Citra IntiRama
Jl. Cideng Timur No. 15J-150
Jakarta Pusat
INDONESIA
TEL: (021) 6324170

KOREA
Cosmos Corporation
1461-9, Seocho-Dong,
Seocho Ku, Seoul, KOREA
TEL: (02) 3486-8855

MALAYSIA
Bentley Music SDN BHD
140 & 142, Jalan Bukit Bintang
55100 Kuala Lumpur, MALAYSIA
TEL: (03) 2443333

PHILIPPINES
G.A. Yupangco & Co. Inc.
339 Gil J. Puyat Avenue
Makati, Metro Manila 1200,
PHILIPPINES
TEL: (02) 899 9801

SINGAPORE
Swee Lee Company
150 Sims Drive,
SINGAPORE 387381
TEL: 748-1669

CRISTOFORI MUSIC PTE LTD
Blk 3014, Bedok Industrial Park E,
#02-2148, SINGAPORE 489980
TEL: 243 9555

TAIWAN
ROLAND TAIWAN ENTERPRISE CO., LTD.
Room 5, 9fl. No. 112 Chung Shan
N.Road Sec.2, Taipei, TAIWAN,
R.O.C.
TEL: (02) 2561 3339

THAILAND
Theera Music Co. , Ltd.
330 Verng NakornKasem, Soi 2,
Bangkok 10100, THAILAND
TEL: (02) 2248821

VIETNAM
Saigon Music
138 Tran Quang Khai St.,
District 1
Ho Chi Minh City
VIETNAM
TEL: (08) 844-4068

AUSTRALIA/ NEW ZEALAND

AUSTRALIA
Roland Corporation Australia Pty., Ltd.
38 Campbell Avenue
Dee Why West. NSW 2099
AUSTRALIA
TEL: (02) 9982 8266

NEW ZEALAND
Roland Corporation (NZ) Ltd.
97 Mt. Eden Road, Mt. Eden,
Auckland 3, NEW ZEALAND
TEL: (09) 3098 715

CENTRAL/LATIN AMERICA

ARGENTINA
Instrumentos Musicales S.A.
Florida 656 2nd Floor
Office Number 206A
Buenos Aires
ARGENTINA, CP1005
TEL: (54-11) 4- 393-6057

BRAZIL
Roland Brasil Ltda
Rua San Jose, 780 Sala B
Parque Industrial San Jose
Cotia - Sao Paulo - SP, BRAZIL
TEL: (011) 4615 5666

COSTA RICA
JUAN Bansbach Instrumentos Musicales
Ave.1, Calle 11, Apartado 10237,
San Jose, COSTA RICA
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CHILE
Comercial Fancy II S.A.
Avenida Rancagua #0330
Providencia Santiago, CHILE
TEL: 56-2-373-9100

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OMNI MUSIC
75 Avenida Notre YY Alameda,
Juan Pablo 2, No. 4010
San Salvador, EL SALVADOR
TEL: (503) 262-0788

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Av. Toluca No. 323, Col. Olivar
de los Padres 01780 Mexico D.F.
MEXICO
TEL: (525) 668 04 80

La Casa Wagner de Guadalajara s.a. de c.v.
Av. Corona No. 202 S.J.
Guadalajara, Jalisco Mexico
C.P.44100 MEXICO
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San Borja, Lima 41,
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URUGUAY
Todo Musica S.A.
Cuareim 1844, Montevideo,
URUGUAY, CP11200
TEL: 5982-924-2335

VENEZUELA
Musicland Digital C.A.
Av. Francisco de Miranda,
Centro Parque de Cristal, Nivel
C2 Local 20 Caracas
VENEZUELA
TEL: (02) 285 9218

EUROPE

AUSTRIA
Roland Austria GES.M.B.H.
Siemensstrasse 4, P.O. Box 74,
A-6063 RUM, AUSTRIA
TEL: (0512) 26 44 260

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(Westerlo) BELGIUM
TEL: (014) 575811

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Roland Scandinavia A/S
Nordhavnsvej 7, Postbox 880,
DK-2100 Copenhagen
DENMARK
TEL: (039)16 6200

FRANCE
Roland France SA
4, Rue Paul Henri SPAAK,
Parc de l'Esplanade, F 77 462 St.
Thibault, Lagny Cedex FRANCE
TEL: 01 600 73 500

FINLAND
Roland Scandinavia As, Filial Finland
Lauttasaarentie 54 B
Fin-00201 Helsinki, FINLAND
TEL: (9) 682 4020

GERMANY
Roland Elektronische Musikinstrumente HmbH.
Oststrasse 96, 22844 Norderstedt,
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Music Sound Light
155, New National Road
26422 Patras, GREECE
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Warehouse Area 'DEPO' Pf.83
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TEL: (23) 511011

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Audio House, Belmont Court,
Donnybrook, Dublin 4.
Republic of IRELAND
TEL: (01) 2603501

ITALY
Roland Italy S. p. A.
Viale delle Industrie 8,
20020 Arese, Milano, ITALY
TEL: (02) 937-78300

NORWAY
Roland Scandinavia Avd. Kontor Norge
Lilleakerveien 2 Postboks 95
Lilleaker N-0216 Oslo
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P. P. H. Brzostowicz
UL. Gibraltarska 4.
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PORTUGAL
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Cais Das Pedras, 8/9-1 Dto
4050-465 PORTO
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TEL: (022) 608 00 60

ROMANIA
FBS LINES
Piata Libertatii 1,
RO-4200 Gheorghehi
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RUSSIA
Slami Music Company
Sadojava-Triumfalnaja st., 16
103006 Moscow, RUSSIA
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SPAIN
Roland Electronics de España, S. A.
Calle Bolivia 239, 08020
Barcelona, SPAIN
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Roland Scandinavia A/S SWEDISH SALES OFFICE
Danvik Center 28, 2 tr.
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Gerberstrasse 5, Postfach,
CH-4410 Liestal, SWITZERLAND
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Nicosia CYPRUS
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TEL: 4423-554

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aDawliah Universal Electronics APL
Corniche Road, Aldossary Bldg.,
1st Floor
SAUDI ARABIA

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SAUDI ARABIA
TEL: (03) 898 2081

SYRIA
Technical Light & Sound Center
Khaled Ibn Al Walid St.
P.O. Box 13520
Damascus - SYRIA
TEL: (011) 2235 384

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Barkat muzik aletleri ithalat ve ihracat Ltd Sti
Siraselviler cad.Guney is hani 84-86/6, Taksim. Istanbul. TURKEY
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