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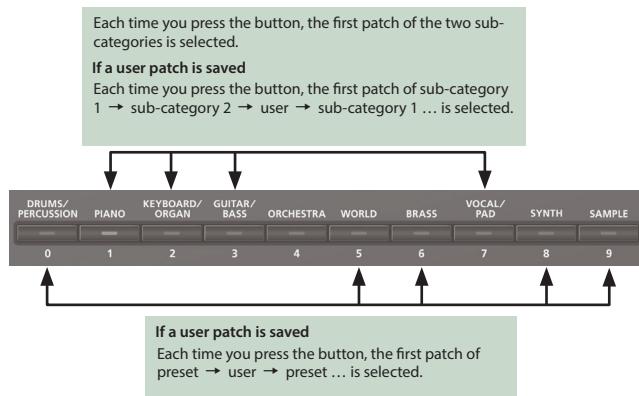
Additional Explanation

Panel Descriptions

[NUMERIC] button	When this button is on (lit), you can use the [0]–[9] buttons to enter numeric values. * You can use this button only in the PATCH screen and PERFORM screen.
[ENTER] button	Used to execute an operation. List display You can move the cursor to a parameter and press the [ENTER] button to see a list of that parameter's values. You can select a value from the list that's shown. (Example) In the PATCH screen, move the cursor to the patch number and press the [ENTER] button to see the patch list. Press the [EXIT] button to return to the previous screen.

Patch Mode

- If you press the same category button in succession, the patch changes as follows each time you press the button.

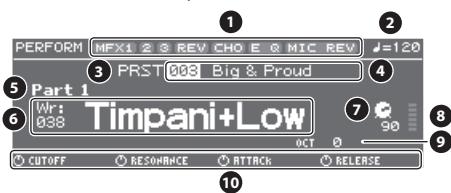


Performance Mode

- You can use pads [1]–[8] to select the applicable part (current part).
- Pressing a pad [1]–[8] selects part 1–8.
- Hold down the [SHIFT] button and press pad [1]–[8] to select part 9–16.

16-part mode

- Within Performance mode, the state in which neither split, dual, nor super layer is selected is called "16-part mode."



No.	Explanation
1	Effect on (lit)/off (unlit)
2	Tempo
3	Performance bank
4	Performance number/name
5	Current part
6	Category number/Patch name
7	Level of the current part
8	Level meter
9	Octave Shift setting
10	Parameters that can currently be adjusted by the control knobs

When you play the keyboard, you'll hear the current part and the parts whose keyboard switch (p. 19, p. 20, p. 22) is on.

Adjusting the volume

You can use the [UPPER] LEVEL slider and [LOWER] LEVEL slider to adjust the part 1 and part 2 volume (LEVEL).

Key Touch

- Depending on the KEY TOUCH setting, the [KEY TOUCH] button is lit or unlit.

Lit	When the Velocity setting is "REAL"
Unlit	When the Velocity setting is "1–127"

Sample Import

- When importing a sample, the OPTIMIZE window might appear depending on the user memory usage status.

OK	Memory is optimized, and then the sample import is executed.
CANCEL	Sample import is cancelled.

Editing a Patch/Drum Kit

PATCH EDIT

- In the PATCH EDIT screen when editing each tone, you can use pads [1]–[8] to perform the following operations.

Pads [5]–[8]	Turn each tone on (pad lit) or off. When a tone is on, a "✓" symbol appears.
Pads [1]–[4]	Make the pad(s) light to specify the tone(s) that you want to edit. You can also make multiple pads light to select multiple tones.

- In the PATCH EDIT screen, press the [MENU] button to open the INIT MENU window. Select "PATCH" or "TONE" and then press the [ENTER] button to initialize the selected patch or tone.

DRUM KIT EDIT

- A drum kit consists of a percussion instrument sound (tone) assigned to each key. The tone that's assigned to each key consists of a combination of up to four waves. Drum Kit Edit lets you edit the settings of the tone that's assigned to each key.
- In the DRUM KIT EDIT screen, when editing the four waves that make up the tone assigned to the selected key, you can use pads [1]–[8] to perform the following operations.

Pads [5]–[8]	Turn each wave on (pad lit) or off. When a wave is on, a "✓" symbol appears.
Pads [1]–[4]	Make the pad(s) light to specify the wave(s) that you want to edit. You can also make multiple pads light to select multiple waves.

- In the DRUM KIT EDIT screen, press the [MENU] button to open the INIT MENU window. Select "DRUM" or "TONE" and then press the [ENTER] button to initialize the selected drum kit or the tone of the selected key.

Editing a Performance

- "PERFORMANCE EDIT" lets you edit while viewing a list of the settings of all parts, and "PART EDIT" lets you edit each part of the performance individually.
* PERFORMANCE EDIT and PART EDIT have the same parameters in common.

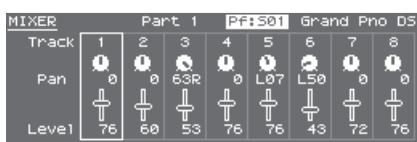
- In the PERFORM EDIT or PART EDIT screen, you can use pads [1]–[8] to select the part that you want to edit. If you hold down the [SHIFT] button and press a pad [1]–[8], a part 9–16 is selected.
- In the PERFORM EDIT screen, press the [MENU] button to open the INIT MENU window. Select "PERFORM" or "PART" and press the [ENTER] button to initialize the selected performance or part.

Pattern Sequencer

- In the PATTERN SEQUENCER screen, you can long-press the [LOOP] button to open the LOOP window, where you can make loop-related settings. Press the [EXIT] button to close the LOOP window.

Parameter	Explanation
Loop Switch	Specifies whether playback will loop (ON) or not loop (OFF). * You can also switch this by pressing the [LOOP] button. OFF, ON
Loop Rec	Specifies whether to loop-record (ON) or not loop-record (OFF). * You can also switch this by pressing the [LOOP] button while holding down the [SHIFT] button. OFF, ON

- Use the [UPPER] slider to adjust the level of track 1, and the [LOWER] slider to adjust the level of track 2.
- Use the [PHRASE PAD] slider to increase or decrease the level that's specified for tracks 3–8 while maintaining the balance between these tracks.
- Press the [MIXER] button to open the MIXER screen. Here you can set the pan and level of each track.



You can use pads [1]–[8] to select a track to edit.
Use the [UPPER]/[LOWER]/[PHRASE PAD] sliders to adjust the level.

MEMO

Tracks 1–7 are assigned to parts 1–7, and track 8 is assigned to part 10.

Realtime Erase

Erasing only specified notes during recording or playback (REALTIME NOTE ERASE)

- During recording or playback, hold down the [RHYTHM PATTERN] button and press the [ERASE] button.
The REALTIME NOTE ERASE window appears.
- Press a key on the keyboard to specify the note that you want to erase.
- Press the [ERASE] button.
While you continue holding down the key, only the note you specify is erased from the selected track.

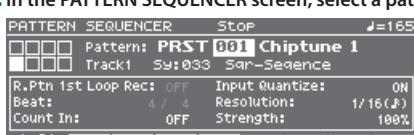
Erasing only movements of knobs or the bender/modulation lever during recording or playback

- During recording or playback, hold down the [MUTE] button and press the [ERASE] button.
Only while you continue holding down these buttons, movements of the knobs and the bender/modulation lever are erased from the selected track.

Saving a Pattern As a "Performance" (SAVE AS PERFORM)

Settings related to the sound of the pattern (preset/user) used in the pattern sequencer can be saved as a performance. For example, if you want to export a pattern to SMF, use your DAW to edit it into a complete song, and then use the JUNO-DS to play this song data, the performance saved by the "SAVE AS PERFORMANCE" function can be recalled to play the data using the original sound.

- In the PATTERN SEQUENCER screen, select a pattern.



- Press the [MENU] button.
The MENU screen appears.
- Move the cursor to "PATTERN UTILITY," and press the [ENTER] button.

- Move the cursor to "SAVE AS PERFORMANCE," and press the [ENTER] button.
The SAVE AS PERFORMANCE screen appears.

- Use the value dial to select the write destination performance, and press the [ENTER] button.

A confirmation message appears.

If you decide to cancel, press the [EXIT] button.

- Move the cursor to "OK," and press the [ENTER] button.
Writing is complete when the screen indicates "Completed!"

NOTE

Never turn off the power while the screen indicates "Writing..."

Turning the Display Backlight On/Off

To reduce battery consumption, you can turn off the display backlight when it's not required.

- Hold down the [SHIFT] button and press the [EXIT] button.
The display backlight will turn off.

Turning the display backlight on

- Hold down the [SHIFT] button and press the [ENTER] button.
The display backlight will turn on.

Demo Songs

1	Wonder	Copyright © 2015 Roland Corporation
2	There There There	

Patch Mode

Patch/Drum Kit Edit

Procedure

- Select a patch or drum kit that you want to edit.
- Press the [SAMPLE IMPORT] button and [DAW CONTROL] button simultaneously.
The EDIT MENU screen appears.
- Move the cursor to "PATCH EDIT" or "DRUM KIT EDIT," and press the [ENTER] button.
The PATCH EDIT or DRUM KIT EDIT screen appears.

MEMO

- In the PATCH EDIT screen when editing each tone, you can use pads [1]–[8] to perform the following operations.

Pads [5]–[8]	Turn each tone on (pad lit) or off. When a tone is on, a "✓" symbol appears.
Pads [1]–[4]	Make the pad(s) light to specify the tone(s) that you want to edit. You can also make multiple pads light to select multiple tones.

- In the PATCH EDIT screen, press the [MENU] button to open the INIT MENU window. Select "PATCH" or "TONE" and then press the [ENTER] button to initialize the selected patch or tone.

MEMO

- In the DRUM KIT EDIT screen, when editing the four waves that make up the tone assigned to the selected key, you can use pads [1]–[8] to perform the following operations.

Pads [5]–[8]	Turn each wave on (pad lit) or off. When a wave is on, a "✓" symbol appears.
Pads [1]–[4]	Make the pad(s) light to specify the wave(s) that you want to edit. You can also make multiple pads light to select multiple waves.

- In the DRUM KIT EDIT screen, press the [MENU] button to open the INIT MENU window. Select "DRUM" or "TONE" and then press the [ENTER] button to initialize the selected drum kit or the tone of the selected key.

4. Move the cursor to tab, and use the [\blacktriangleleft] [\triangleright] buttons to switch the pages.

5. Move the cursor to the parameter that you want to edit, and use the value dial to change the value.

6. To save the edited settings, perform the operation "Saving Your Settings (Write)" (refer to owner's manual).

About the Parameters

- Parameters marked with a "★" can be controlled using Matrix control (p. 12).
- Some parameters (such as Rate or Delay Time) can be set in terms of a note value.

$\frac{1}{3}$	Sixty-fourth-note triplet	$\frac{1}{2}$	Sixty-fourth note	$\frac{1}{3}$	Thirty-second-note triplet	$\frac{1}{4}$	Thirty-second note
$\frac{1}{3}$	Sixteenth-note triplet	$\frac{1}{4}$	Dotted thirty-second note	$\frac{1}{4}$	Sixteenth note	$\frac{1}{3}$	Eighth-note triplet
$\frac{1}{4}$	Dotted sixteenth note	$\frac{1}{8}$	Eighth note	$\frac{1}{8}$	Quarter-note triplet	$\frac{1}{6}$	Dotted eighth note
$\frac{1}{8}$	Quarter note	$\frac{1}{16}$	Half-note triplet	$\frac{1}{16}$	Dotted quarter note	$\frac{1}{12}$	Half note
$\frac{1}{16}$	Whole-note triplet	$\frac{1}{32}$	Dotted half note	$\frac{1}{32}$	Whole note	$\frac{1}{48}$	Double-note triplet
$\frac{1}{32}$	Dotted whole note	$\frac{1}{96}$	Double note				

NOTE

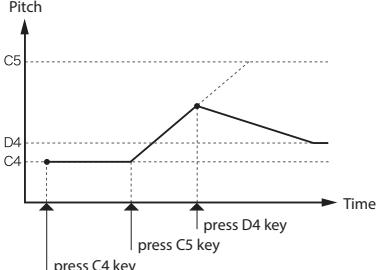
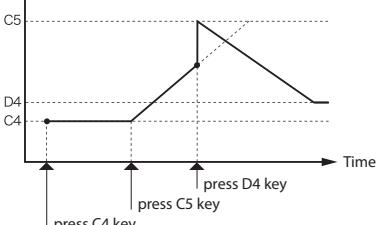
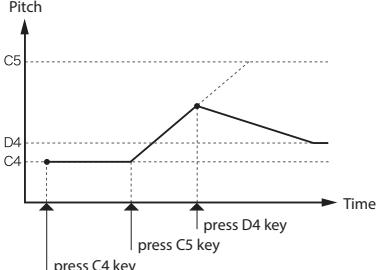
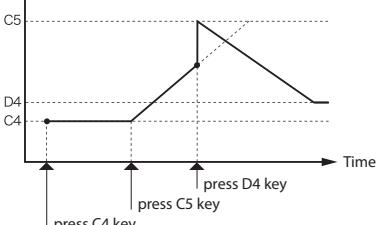
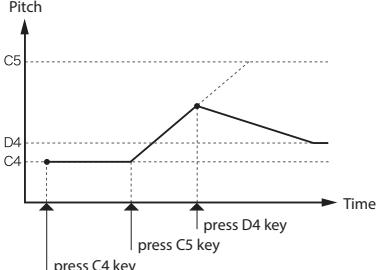
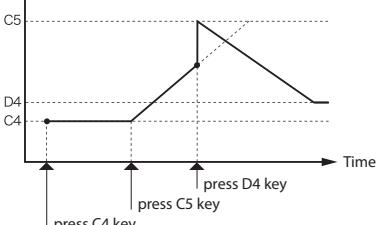
If you specify the delay time as a note value, slowing down the tempo will not change the delay time beyond a certain length.

This is because there is an upper limit for the delay time; if the delay time is specified as a note value and you slow down the tempo until this upper limit is reached, the delay time cannot change any further. This upper limit is the maximum value that can be specified when setting the delay time as a numerical value.

Patch Parameters

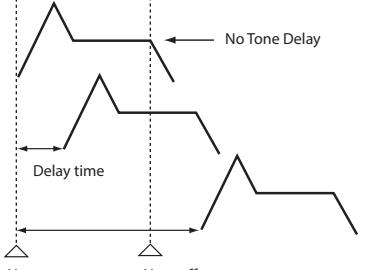
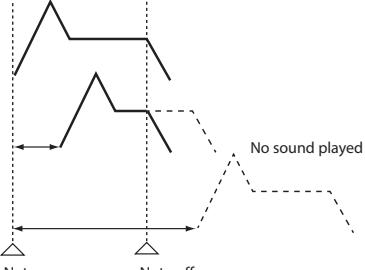
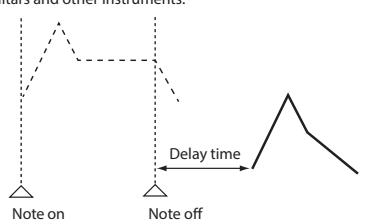
COMMON

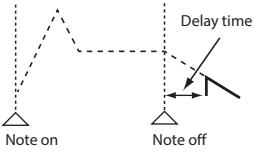
Parameter	Value/Explanation	
Patch Category	Specifies the type (category) of the patch. * If you select "NO ASSIGN" as the category, it won't be possible to select the patch on the JUNO-DS itself.	Refer to "Category List" (p. 5).
Patch Level	Specifies the volume of the patch.	0–127
Patch Pan	Specifies the pan of the patch. "L64" is far left, "0" is center, and "63R" is far right.	L64–0–63R
Patch Priority	This determines how notes will be managed when the maximum polyphony is exceeded (128 voices).	LAST LOUDEST
Octave Shift	Adjusts the pitch of the patch's sound up or down in units of an octave (± 3 octaves).	-3–3
Patch Coarse Tune	Adjusts the pitch of the patch's sound up or down in semitone steps (± 4 octaves).	-48–48
Patch Fine Tune	Adjusts the pitch of the patch's sound up or down in 1-cent steps (± 50 cents).	-50–50
Stretch Tune Depth	Stretched tuning (a system by which acoustic pianos are normally tuned, causing the lower range to be lower and the higher range to be higher than the mathematical tuning ratios would otherwise dictate)	OFF 1–3
Analog Feel	Specifies the depth of 1/f modulation that is to be applied to the patch. By adding this "1/f modulation," you can simulate the natural instability characteristic of an analog synthesizer.	0–127
Cutoff Offset	Cutoff Frequency Offset alters the cutoff frequency of the overall patch, while preserving the relative differences between the cutoff frequency values set for each tone in the Cutoff Frequency (p. 8). * This value is added to the cutoff frequency value of a tone, so if the cutoff frequency value of any tone is already set to "127" (maximum), positive "+" settings here will not produce any change.	-63–+63
Resonance Offset	Resonance Offset alters the resonance of the overall patch, while preserving the relative differences between the resonance values set for each tone in the Resonance (p. 8). * This value is added to the resonance value of a tone, so if the resonance value of any tone is already set to "127" (maximum), positive "+" settings here will not produce any change.	-63–+63
Attack Time Offset	Attack Time Offset alters the attack time of the overall patch, while preserving the relative differences between the attack time values set for each tone in the TVA-Env Time 1 (p. 10), TVF-Env Time 1 (p. 9). * This value is added to the attack time value of a tone, so if the attack time value of any tone is already set to "127" (maximum), positive "+" settings here will not produce any change.	-63–+63
Release Time Offset	Release Time Offset alters the release time of the overall patch, while preserving the relative differences between the release time values set for each tone in the TVA-Env Time 4 (p. 10), TVF-Env Time 4 (p. 9). * This value is added to the release time value of a tone, so if the release time value of any tone is already set to "127" (maximum), positive "+" settings here will not produce any change.	-63–+63

Parameter	Value/Explanation				
Velocity Sens Offset	<p>Velocity Sens Offset alters the Velocity Sensitivity of the overall patch while preserving the relative differences between the Velocity Sensitivity values set for each tone in the parameters below.</p> <p>Cutoff V-Sens (p. 9) Level V-Sens (p. 10)</p> <p>* This value is added to the velocity sensitivity value of a tone, so if the velocity sensitivity value of any tone is already set to "+63" (maximum), positive "+" settings here will not produce any change.</p> <p>-63 ~ +63</p>				
Mono/Poly	<p>Specifies whether the patch will play polyphonically (POLY) or monophonically (MONO).</p> <p>The "MONO" setting is effective when playing a solo instrument patch such as sax or flute.</p> <table border="1"> <tr> <td>MONO</td> <td>Only the last-played note will sound.</td> </tr> <tr> <td>POLY</td> <td>Two or more notes can be played simultaneously.</td> </tr> </table>	MONO	Only the last-played note will sound.	POLY	Two or more notes can be played simultaneously.
MONO	Only the last-played note will sound.				
POLY	Two or more notes can be played simultaneously.				
Legato Switch	<p>Specifies whether the Legato Switch will be used (ON) or not (OFF). With the Legato Switch parameter "ON," pressing a key while continuing to press a previous key causes the note to change pitch to the pitch of the most recently pressed key, sounding all the while. This creates a smooth transition between notes, which is effective when you wish to simulate the hammering-on and pulling-off techniques used by a guitarist.</p> <p>* Legato Switch is valid when the Mono/Poly is set to "MONO."</p> <p>OFF, ON</p>				
Legato Retrigger	<p>The setting determines whether sounds are replayed (ON) or not (OFF) when performing legato. Normally you will leave this parameter "ON." When "OFF," when one key is held down and another key is then pressed, only the pitch changes, without the attack of the latter key being played. Set this to "OFF" when performing wind and string phrases or when using modulation with the mono synth keyboard sound.</p> <p>* Legato Retrigger is valid when the Mono/Poly is set to "MONO" and the Legato Switch is set to "ON."</p> <p>OFF, ON</p>				
MEMO					
Let's say you have the Legato Switch set to "ON," and the Legato Retrigger set to "OFF." When you try to sound a legato (by pressing a higher key while a lower key is held down), the pitch may sometimes not be able to rise all the way to the intended pitch (stopping instead at an intermediate pitch). This can occur because the limit of pitch rise, as determined at the wave level, has been exceeded. Additionally, if differing upper pitch limits are used for the waves of a Patch that uses multiple tones, it may stop being heard in MONO. When making large pitch changes, set the Legato Retrigger to "ON."					
Portamento Switch	<p>Specifies whether the portamento effect will be applied (ON) or not (OFF).</p> <p>OFF, ON</p>				
Portamento Mode	<p>Specifies the performance conditions for which portamento will be applied.</p> <table border="1"> <tr> <td>NORMAL</td> <td>Portamento will always be applied.</td> </tr> <tr> <td>LEGATO</td> <td>Portamento will be applied only when you play legato (i.e., when you press the next key before releasing the previous key).</td> </tr> </table>	NORMAL	Portamento will always be applied.	LEGATO	Portamento will be applied only when you play legato (i.e., when you press the next key before releasing the previous key).
NORMAL	Portamento will always be applied.				
LEGATO	Portamento will be applied only when you play legato (i.e., when you press the next key before releasing the previous key).				
Portamento Type	<p>Specifies the type of portamento effect.</p> <table border="1"> <tr> <td>RATE</td> <td>The time it takes will depend on the distance between the two pitches.</td> </tr> <tr> <td>TIME</td> <td>The time it takes will be constant, regardless of how far apart in pitch the notes are.</td> </tr> </table>	RATE	The time it takes will depend on the distance between the two pitches.	TIME	The time it takes will be constant, regardless of how far apart in pitch the notes are.
RATE	The time it takes will depend on the distance between the two pitches.				
TIME	The time it takes will be constant, regardless of how far apart in pitch the notes are.				
Portamento Start	<p>When another key is pressed during a pitch change produced by portamento, a new pitch change will begin. This setting specifies the pitch at which the change will begin.</p> <table border="1"> <tr> <td>PITCH</td> <td> <p>Starts a new portamento when another key is pressed while the pitch is changing.</p>  </td> </tr> <tr> <td>NOTE</td> <td> <p>Portamento will begin anew from the pitch where the current change would end.</p>  </td> </tr> </table>	PITCH	<p>Starts a new portamento when another key is pressed while the pitch is changing.</p> 	NOTE	<p>Portamento will begin anew from the pitch where the current change would end.</p> 
PITCH	<p>Starts a new portamento when another key is pressed while the pitch is changing.</p> 				
NOTE	<p>Portamento will begin anew from the pitch where the current change would end.</p> 				

Parameter	Value/Explanation
Portamento Time	<p>When portamento is used, this specifies the time over which the pitch will change. Higher settings will cause the pitch change to the next note to take more time.</p> <p>0~127</p>
Category List	
Category	Contents
---	No assign
PNO	AC. Piano
EP	EL. Piano
KEY	Keyboards
BEL	Bell
MLT	Mallet
ORG	Organ
ACD	Accordion
HRM	Harmonica
AGT	AC.Guitar
EGT	EL.Guitar
DGT	DIST. Guitar
BS	Bass
SBS	Synth Bass
STR	Strings
ORC	Orchestra
HIT	Hit&Stab
WND	Wind
FLT	Flute, Piccolo
BRS	AC. Brass
SBR	Synth Brass
SAX	Sax
HLD	Hard Lead
SLD	Soft Lead
TEK	Techno Synth
PLS	Pulsating
FX	Synth FX
SYN	Other Synth
BPD	Bright Pad
SPD	Soft Pad
VOX	Vox, Choir
PLK	Plucked
ETH	Ethnic
FRT	Fretted
PRC	Percussion
SFX	Sound FX
BTS	Beat&Groove
DRM	Drums
CMB	Combination

WAVE

Parameter	Value/Explanation
□1-□4	Specify the on/off status of tones 1–4. If a tone is on, a “✓” mark is shown. OFF, ON
Wave Group	Selects the group for the waveform that is to be the basis of the tone. INTA, B Waveforms stored in internal EXP Waveforms for expansion sounds SAMP Imported user sample waveforms MSAM Multisamples created by JUNO-DS Tone Manager (PC software)
	Wave No. L (Mono) Selects the basic waveform for a tone. Along with the Wave number, the Wave name appears at the lower part of the display. When in mono, only the left side (L) is specified. When in stereo, the right side (R) is also specified.
	Wave No. R OFF, 1–2402 (The upper limit will depend on the wave group.)
	Wave Gain Sets the gain (amplification) of the waveform. The value changes in 6 dB (decibel) steps—an increase of 6 dB doubles the waveform's gain. If you intend to use the Booster to distort the waveform's sound, set this parameter to its maximum value (p. 7). -6, 0, +6, +12
Wave Tempo Sync	When you wish to synchronize a Phrase Loop to the clock (tempo), set this to “ON.” OFF, ON
	MEMO Phrase loop refers to the repeated playback of a phrase that's been pulled out of a song (e.g., by using a sampler).
Wave FXM Switch	Sets whether FXM will be used (ON) or not (OFF). OFF, ON
	MEMO FXM (Frequency Cross Modulation) uses a specified waveform to apply frequency modulation to the currently selected waveform, creating complex overtones. This is useful for creating dramatic sounds or sound effects.
Wave FXM Color	Specifies how FXM will perform frequency modulation. Higher settings result in a grainier sound, while lower settings result in a more metallic sound. 1–4
	★ Wave FXM Depth Specifies the depth of the modulation produced by FXM. 0–16
Tone Delay Mode	Selects the type of tone delay. NORM The tone begins to play after the time specified in the Tone Delay Time has elapsed. 
	HOLD Although the tone begins to play after the time specified in the Tone Delay Time has elapsed, if the key is released before the time specified in the Tone Delay Time has elapsed, the tone is not played. 
	OFF-N Rather than being played while the key is pressed, the tone begins to play once the period of time specified in the Tone Delay Time has elapsed after release of the key. This is effective in situations such as when simulating noises from guitars and other instruments. 

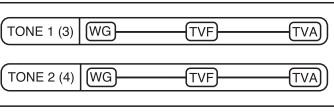
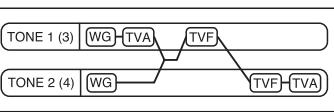
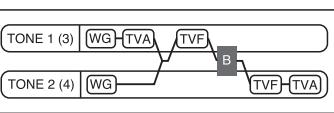
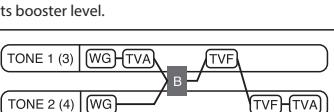
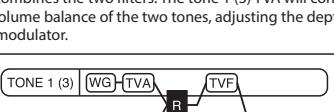
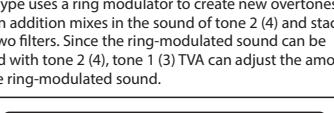
Parameter	Value/Explanation
OFF-D	Rather than being played while the key is pressed, the tone begins to play once the period of time specified in the Tone Delay Time has elapsed after release of the key. Here, however, changes in the TVA Envelope begin while the key is pressed, which in many cases means that only the sound from the release portion of the envelope is heard. 

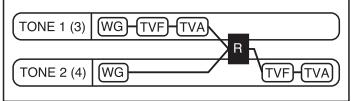
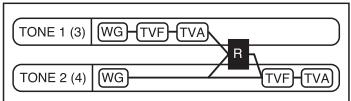
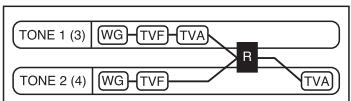
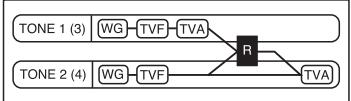
MEMO

If you have selected a waveform that is a decay-type sound (i.e., a sound that fades away naturally even if the key is not released), selecting “OFF-N” or “OFF-D” may result in no sound being heard.

Tone Delay Time	Specifies the time from when the key is pressed (or if the Delay Mode is set to “OFF-N” or “OFF-D,” the time from when the key is released) until when the tone will sound. 0–127, note
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TMT

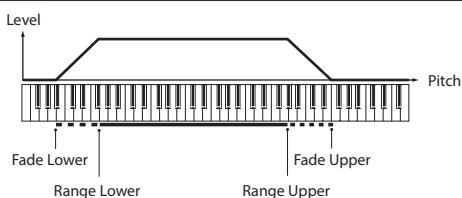
Parameter	Value/Explanation
Structure Type 1 & 2, 3 & 4	Determines how tone 1 and 2, or tone 3 and 4 are connected. The following 10 different Types of combination are available.
	1 With this type, tones 1 and 2 (or 3 and 4) are independent. Use this type when you want to preserve PCM sounds or create and combine sounds for each tone. 
	2 This type stacks the two filters together to intensify the characteristics of the filters. The TVA for tone 1 (or 3) controls the volume balance between the two tones. 
	3 This type mixes the sound of tone 1 (3) and tone 2 (4), applies a filter, and then applies a booster to distort the waveform. 
	4 This type applies a booster to distort the waveform, and then combines the two filters. The TVA for tone 1 (or 3) controls the volume balance between the two tones and adjusts booster level. 
	5 This type uses a ring modulator to create new overtones, and combines the two filters. The tone 1 (3) TVA will control the volume balance of the two tones, adjusting the depth of ring modulator. 
	6 This type uses a ring modulator to create new overtones, and in addition mixes in the sound of tone 2 (4) and stacks the two filters. Since the ring-modulated sound can be mixed with tone 2 (4), tone 1 (3) TVA can adjust the amount of the ring-modulated sound. 

Parameter	Value/Explanation
	7 This type applies a filter to tone 1 (3) and ring-modulates it with tone 2 (4) to create new overtones. 
	8 This type sends the filtered tone 1 (3) and tone 2 (4) through a ring modulator, and then mixes in the sound of tone 2 (4) and applies a filter to the result. 
	9 This type passes the filtered sound of each tone through a ring modulator to create new overtones. The tone 1 (3) TVA will control the volume balance of the two tones, adjusting the depth of ring modulator. 
	10 This type passes the filtered sound of each tone through a ring modulator to create new overtones, and also mixes in the sound of tone 2 (4). Since the ring-modulated sound can be mixed with tone 2 (4), tone 1 (3) TVA can adjust the amount of the ring-modulated sound. 

MEMO

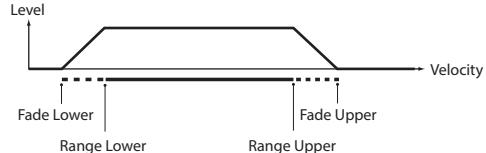
- When type 2–10 is selected and one tone of a pair is turned off, the other tone will be sounded as type 1 regardless of the displayed setting.
- If you limit the keyboard area in which a tone will sound (Key Range Upper, Lower) or limit the range of velocities for which it will sound (Velo Range Upper, Lower), the result in areas or ranges where the tone does not sound is just as if the tone had been turned off. This means that if type 2–10 is selected and you create a keyboard area or velocity range in which one tone of a pair does not sound, notes played in that area or range will be sounded by the other tone as TYPE 1 regardless of the displayed setting.

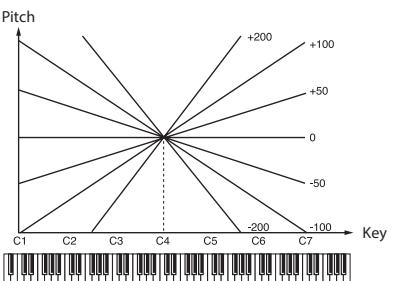
Booster 1 & 2, 3 & 4	When a Structure Type of 3 or 4 is selected, you can adjust the depth of the booster. The booster increases the input signal in order to distort the sound. This creates the distortion effect frequently used with electric guitars. Higher settings will produce more distortion. 0, +6, +12, +18
Key Fade Upper, Lower	This determines what will happen to the tone's level when a note that's higher/lower than the tone's specified keyboard range is played. Higher settings produce a more gradual change in volume. If you don't want the tone to sound at all when a note below the keyboard range is played, set this parameter to "0." 0–127
Key Range Upper, Lower	Specifies the highest/lowest note that the tone will sound for each tone. * If you attempt to raise the lower key higher than the upper key, or to lower the upper key below the lower key, the other value will be automatically modified to the same setting. (Upper) LOWER–G9, (Lower) C1–UPPER



TMT Velocity Control	TMT Velocity Control determines whether a different tone is played or not depending on the force with which the key is played (velocity). * Instead of using Velocity, you can also have tones substituted using the Matrix control (p. 12). However, the keyboard velocity and the Matrix control cannot be used simultaneously to make different tones to sound. When using the Matrix control to switch tones, set the Velocity Control to "OFF." <table border="1"> <tr> <td>OFF</td><td>Tones are not velocity-switched.</td></tr> <tr> <td>ON</td><td>Tones are switched according to the keyboard playing velocity.</td></tr> <tr> <td>RANDOM</td><td>The patch's constituent tones will sound randomly, regardless of the velocity.</td></tr> <tr> <td>CYCLE</td><td>The patch's constituent tones will sound consecutively, regardless of the velocity.</td></tr> </table>	OFF	Tones are not velocity-switched.	ON	Tones are switched according to the keyboard playing velocity.	RANDOM	The patch's constituent tones will sound randomly, regardless of the velocity.	CYCLE	The patch's constituent tones will sound consecutively, regardless of the velocity.
OFF	Tones are not velocity-switched.								
ON	Tones are switched according to the keyboard playing velocity.								
RANDOM	The patch's constituent tones will sound randomly, regardless of the velocity.								
CYCLE	The patch's constituent tones will sound consecutively, regardless of the velocity.								
Velo Fade Upper, Lower	This determines what will happen to the tone's level when the tone is played at a velocity Upper/lower than its specified velocity range. Higher settings produce a more gradual change in volume. If you want notes played outside the specified key velocity range to not be sounded at all, set this to "0." 0–127								

Parameter	Value/Explanation
Velo Range Upper, Lower	Sets the highest/lowest velocity at which the tone will sound. * If you attempt to set the Lower velocity limit above the Upper, or the Upper below the Lower, the other value will automatically be adjusted to the same setting. (Upper) LOWER–127, (Lower) 1–UPPER
MEMO	When using the Matrix Control to have different tones played, set the lowest value (Lower) and highest value (Upper) of the value of the MIDI message used.

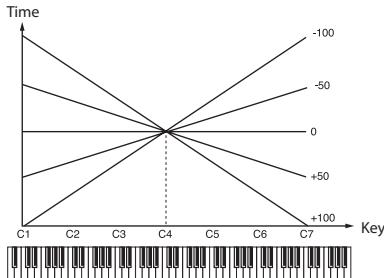
**PITCH**

Parameter	Value/Explanation
Tone Coarse Tune	Adjusts the pitch of the tone's sound up or down in semitone steps (± 4 octaves). -48–+48
Tone Fine Tune	Adjusts the pitch of the tone's sound up or down in 1-cent steps (± 50 cents). -50–+50
Random Pitch Depth	Specifies the width of random pitch deviation that will occur each time a key is pressed. If you do not want the pitch to change randomly, set this to "0." These values are in units of cents (1/100 of a semitone). 0–1200
Pitch Keyfollow	Specifies the amount of pitch change that will occur when you play a key one octave higher (i.e., 12 keys upward on the keyboard). If you want the pitch to rise one octave as on a conventional keyboard, set this to "+100." If you want the pitch to rise two octaves, set this to "+200." Conversely, set this to a negative value if you want the pitch to fall. With a setting of "0," all keys will produce the same pitch. -200–+200
	
Pitch Bend Range Up, Down	Specifies the degree of pitch change in semitones when the Pitch Bend lever is all the way right (left). For example if this is set to "+48 (-48)" and you move the pitch bend lever all the way to the right (left), the pitch will rise (fall) 4 octaves. (Up) 0–+48, (Down) 0–-48

Patch Mode

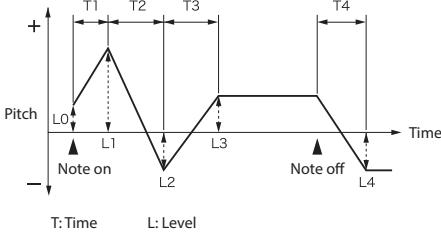
PITCH ENV

Parameter	Value/Explanation
Pitch Env Depth	Adjusts the effect of the Pitch Envelope. Higher settings will cause the pitch envelope to produce greater change. Negative (-) settings will invert the shape of the envelope. -12~+12
Pitch Env V-Sens	Keyboard playing dynamics can be used to control the depth of the pitch envelope. If you want the pitch envelope to have more effect for strongly played notes, set this parameter to a positive (+) value. If you want the pitch envelope to have less effect for strongly played notes, set this to a negative (-) value. -63~+63
Pitch Env T1 V-Sens	This allows keyboard dynamics to affect the Time 1 of the Pitch envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63~+63
Pitch Env T4 V-Sens	Use this parameter when you want key release speed to affect the Time 4 value of the pitch envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63~+63
Pitch Env Time KF	Use this setting if you want the pitch envelope times (Time 2~Time 4) to be affected by the keyboard location. Based on the pitch envelope times for the C4 key, positive (+) settings will cause notes higher than C4 to have increasingly shorter times, and negative (-) settings will cause them to have increasingly longer times. Larger settings will produce greater change. -100~+100



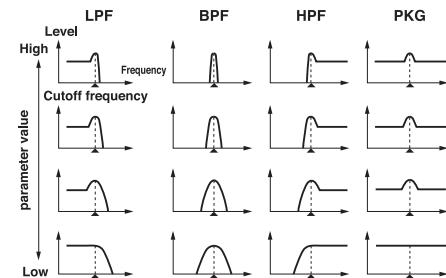
★ Pitch Env Time 1~4	Specify the pitch envelope times (Time 1~Time 4). Higher settings will result in a longer time until the next pitch is reached. (For example, Time 2 is the time over which the pitch changes from Level 1 to Level 2.) 0~127
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Pitch Env Level 0~4	Specify the pitch envelope levels (Level 0~Level 4). It determines how much the pitch changes from the reference pitch (the value set with Coarse Tune or Fine Tune on the Pitch screen) at each point. Positive (+) settings will cause the pitch to be higher than the standard pitch, and negative (-) settings will cause it to be lower. -63~+63
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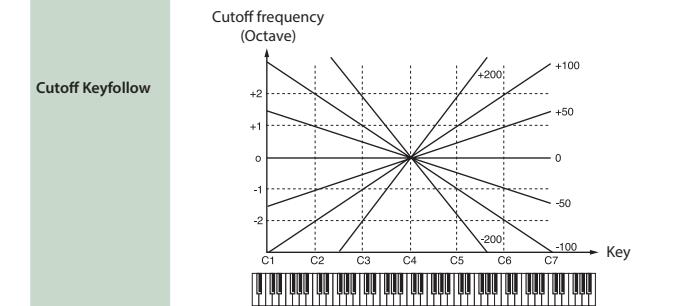
TVF

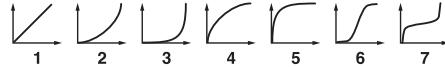
Parameter	Value/Explanation
Filter Type	Selects the type of filter. A filter cuts or boosts a specific frequency region to change a sound's brightness, thickness, or other qualities. * If you set "LPF2" or "LPF3," the setting for the Resonance (p. 8) will be ignored.
OFF	No filter is used.
LPF	Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency in order to round off, or un-brighten the sound. This is the most common filter used in synthesizers.
BPF	Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency, and cuts the rest. This can be useful when creating distinctive sounds.
HPF	High Pass Filter. This cuts the frequencies in the region below the cutoff frequency. This is suitable for creating percussive sounds emphasizing their higher tones.
PKG	Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency. You can use this to create wah-wah effects by employing an LFO to change the cutoff frequency cyclically.
LPF2	Low Pass Filter 2. Although frequency components above the cutoff frequency are cut, the sensitivity of this filter is half that of the LPF. This makes it a comparatively warmer low pass filter. This filter is good for use with simulated instrument sounds such as the acoustic piano.
LPF3	Low Pass Filter 3. Although frequency components above the cutoff frequency are cut, the sensitivity of this filter changes according to the cutoff frequency. While this filter is also good for use with simulated acoustic instrument sounds, the nuance it exhibits differs from that of the LPF2, even with the same TVF Envelope settings.



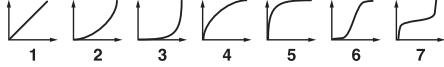
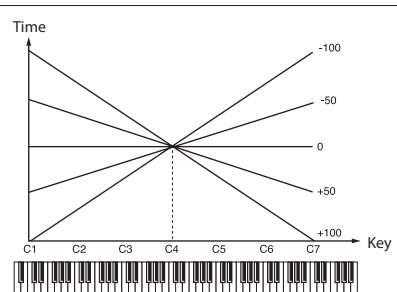
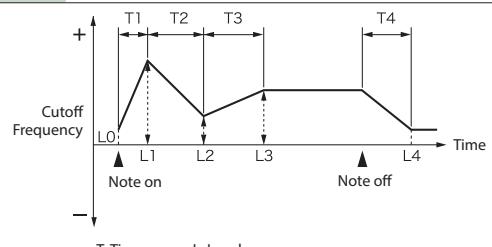
★ Cutoff Frequency	Selects the frequency at which the filter begins to have an effect on the waveform's frequency components. "LPF/LPF2/LPF3" selected for the Filter Type Lower cutoff frequency settings reduce a tone's upper harmonics for a more rounded, warmer sound. Higher settings make it sound brighter. "BPF" selected for the Filter Type Harmonic components will change depending on the TVF Cutoff Frequency setting. This can be useful when creating distinctive sounds. "HPF" selected for the Filter Type Higher Cutoff Frequency settings will reduce lower harmonics to emphasize just the brighter components of the sound. "PKG" selected for the Filter Type The harmonics to be emphasized will vary depending on Cutoff Frequency setting.
★ Resonance	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort. 0~127

Cutoff Keyfollow	Use this parameter if you want the cutoff frequency to change according to the key that is pressed. Relative to the cutoff frequency at the C4 key (center C), positive (+) settings will cause the cutoff frequency to rise for notes higher than C4, and negative (-) settings will cause the cutoff frequency to fall for notes higher than C4. Larger settings will produce greater change. -200~+200
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Parameter	Value/Explanation
Cutoff V-Curve	Selects one of the following seven curves that determine how keyboard playing dynamics (velocity) influence the cutoff frequency. Set this to "FIXED" if you don't want the Cutoff frequency to be affected by the keyboard velocity. FIXED, 1–7 
Cutoff V-Sens	Use this parameter when changing the cutoff frequency to be applied as a result of changes in playing velocity. If you want strongly played notes to raise the cutoff frequency, set this parameter to positive (+) settings. If you want strongly played notes to lower the cutoff frequency, use negative (-) settings. MEMO To edit the overall patch while preserving the relative differences in the Cutoff V-Sens values set for each tone, set the Velocity Sens Offset (p. 5). However, this setting is shared by the Level V-Sens (p. 10). -63–+63
Resonance V-Sens	This allows keyboard velocity to modify the amount of Resonance. If you want strongly played notes to have a greater Resonance effect, set this parameter to positive (+) settings. If you want strongly played notes to have less Resonance, use negative (-) settings. -63–+63

TVF ENV

Parameter	Value/Explanation
TVF Env Depth	Specifies the depth of the TVF envelope. Higher settings will cause the TVF envelope to produce greater change. Negative (-) settings will invert the shape of the envelope. -63–+63
TVF Env V-Curve	Selects one of the following 7 curves that will determine how keyboard playing dynamics will affect the TVF envelope. Set this to "FIXED" if you don't want the TVF Envelope to be affected by the keyboard velocity. FIXED, 1–7 
TVF Env V-Sens	Specifies how keyboard playing dynamics will affect the depth of the TVF envelope. Positive (+) settings will cause the TVF envelope to have a greater effect for strongly played notes, and negative (-) settings will cause the effect to be less. -63–+63
TVF Env T1 V-Sens	This allows keyboard dynamics to affect the Time 1 of the TVF envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63–+63
TVF Env T4 V-Sens	The parameter to use when you want key release speed to control the Time 4 value of the TVF envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63–+63
TVF Env Time Keyfollow	Use this setting if you want the TVA envelope times (Time 2–Time 4) to be affected by the keyboard location. Based on the TVF envelope times for the C4 key (center C), positive (+) settings will cause notes higher than C4 to have increasingly shorter times, and negative (-) settings will cause them to have increasingly longer times. Larger settings will produce greater change. -100–+100 
★ TVF Env Time 1–4	Specify the TVF envelope times (Time 1–Time 4). Higher settings will lengthen the time until the next cutoff frequency level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2). 0–127
TVF Env Level 0–4	Specify the TVF envelope levels (Level 0–Level 4). These settings specify how the cutoff frequency will change at each point, relative to the standard cutoff frequency (the cutoff frequency value specified in the TVF screen). 0–127
	

Patch Mode

TVA

Parameter	Value/Explanation
★ Tone Level	Sets the volume of the tone. This setting is useful primarily for adjusting the volume balance between tones. 0–127
Level V-Curve	You can select from seven curves that determine how keyboard playing strength will affect the volume. If you do not want the volume of the tone to be affected by the force with which you play the key, set this to "FIXED." FIXED, 1–7
Level V-Sens	Set this when you want the volume of the tone to change depending on the force with which you press the keys. Set this to a positive (+) value to have the changes in tone volume increase the more forcefully the keys are played; to make the tone play more softly as you play harder, set this to a negative (-) value. MEMO If you wish to make adjustments to the entire patch while maintaining the relative values of Level V-Sens among tones, adjust the Velocity Sens Offset (p. 5). However, this setting is shared by the Cutoff V-Sens (p. 9). -63–+63
Bias Level	Adjusts the angle of the volume change that will occur in the selected Bias Direction. Larger settings will produce greater change. Negative (-) values will invert the change direction. -100–+100
Bias Position	Specifies the key relative to which the volume will be modified. C–G9
Bias Direction	Selects the direction in which change will occur starting from the Bias Position. LWR The volume will be modified for the keyboard area below the Bias Point. UPR The volume will be modified for the keyboard area above the Bias Point. L&U The volume will be modified symmetrically toward the left and right of the Bias Point. ALL The volume changes linearly with the bias point at the center.
Bias	Bias causes the volume to be affected by the keyboard position. This is useful for changing volume through keyboard position (pitch) when playing acoustic instruments.
★ Tone Pan	Sets the pan of the tone. "L64" is far left, "0" is center, and "63R" is far right. L64–0–63R
Pan Keyfollow	Use this parameter if you want key position to affect panning. Positive (+) settings will cause notes higher than C4 key (center C) to be panned increasingly further toward the right, and negative (-) settings will cause notes higher than C4 to be panned toward the left. Larger settings will produce greater change. -100–+100
Random Pan Depth	Use this parameter when you want the stereo location to change randomly each time you press a key. Higher settings will produce a greater amount of change. 0–63

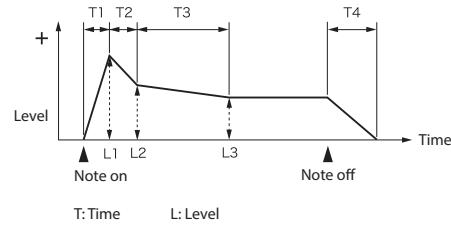
Parameter	Value/Explanation
Alternate Pan Depth	This setting causes panning to be alternated between left and right each time a key is pressed. Higher settings will produce a greater amount of change. "L" or "R" settings will reverse the order in which the pan will alternate between left and right. For example if two tones are set to "L" and "R" respectively, the panning of the two tones will alternate each time they are played. L63–0–63R

MEMO

When any value from Type "2"–"10" is selected for the Structure Type (p. 6) in the Pan Keyfollow, Random Pan Depth, Alternate Pan Depth settings, the output of tones 1 and 2 are joined in tone 2, and the output of tones 3 and 4 are joined in tone 4. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4.

TVA ENV

Parameter	Value/Explanation
TVA-Env T1 V-Sens	This allows keyboard dynamics to affect the Time 1 of the TVA envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63–+63
TVA-Env T4 V-Sens	The parameter to use when you want key release speed to control the Time 4 value of the TVA envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63–+63
TVA-Env Time KF	Use this setting if you want the TVA envelope times (Time 2–Time 4) to be affected by the keyboard location. Based on the TVA envelope times for the C4 key (center C), positive (+) settings will cause notes higher than C4 to have increasingly shorter times, and negative (-) settings will cause them to have increasingly longer times. Larger settings will produce greater change. -100–+100
★ TVA-Env Time 1–4	Specify the TVA envelope times (Time 1–Time 4). Higher settings will lengthen the time until the next volume level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.) 0–127
TVA-Env Level 1–3	Specify the TVA envelope levels (Level 1–Level 3). These settings specify how the volume will change at each point, relative to the standard volume (the Tone Level value specified in the TVA screen). 0–127

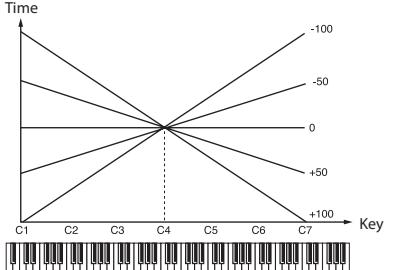


OUTPUT

Parameter	Value/Explanation
Patch Output Assign	Specifies how the direct sound of each patch will be output.
	MFX Output in stereo through MFX. You can also apply chorus or reverb to the sound that passes through MFX.
	L+R Output to the OUTPUT L (MONO) jack and OUTPUT R jack in stereo without passing through MFX.
	L, R Output to the OUTPUT L (MONO) jack or OUTPUT R jack in mono without passing through MFX.
Tone Output Assign	TONE Outputs according to the settings for each tone.
	Specifies how the direct sound of each tone will be output.
	* If the Patch Output Assign is set to anything other than "TONE," these settings will be ignored.
	* When the Structure Type (p. 6) has a setting of "2"~"10," the outputs of tones 1 and 2 will be combined with tone 2, and the outputs of tones 3 and 4 will be combined with tone 4. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4.
Tone Output Level	* Chorus and reverb are output in mono at all times.
	MFX Output in stereo through MFX. You can also apply chorus or reverb to the sound that passes through MFX.
	L+R Output to the OUTPUT L (MONO) jack and OUTPUT R jack in stereo without passing through MFX.
	L, R Output to the OUTPUT L (MONO) jack or OUTPUT R jack in mono without passing through MFX.
Tone Chorus Send	Set the level of the signal that is sent to the output destination specified by Patch Output Assign or Tone Output Assign.
	0~127
Tone Reverb Send	Specifies the level of the signal sent to the reverb for each tone.
	0~127

LFO1, 2

Parameter	Value/Explanation
Waveform	Selects the waveform of the LFO.
	* If you set this to "BD-U" or "BD-D," you must turn the Key Trigger parameter to "ON." If this is "OFF," it will have no effect.
	SIN Sine wave
	TRI Triangle wave
	SAWU Sawtooth wave
	SAWD Sawtooth wave (negative polarity)
	SQR Square wave
	RND Random wave
	BD-U Once the attack of the waveform output by the LFO is allowed to develop in standard fashion, the waveform then continues without further change.
	BD-D Once the decay of the waveform output by the LFO is allowed to develop in standard fashion, the waveform then continues without further change.
	TRP Trapezoidal wave
	S&H Sample & Hold wave (one time per cycle, LFO value is changed)
	CHS Chaos wave
	VSIN Modified sine wave. The amplitude of a sine wave is randomly varied once each cycle.
	STEP A waveform generated by the data specified by LFO Step 1~16. This produces stepped change with a fixed pattern similar to a step modulator.
★ Rate	Adjusts the modulation rate, or speed, of the LFO.
	* This setting will be ignored if the Waveform parameter is set to "CHS."
	0~127, note
Rate Detune	LFO Rate Detune makes subtle changes in the LFO cycle rate (Rate) each time a key is pressed. Higher settings will cause greater change.
	* This parameter is invalid when Rate is set to "note."
	0~127
Offset	Raises or lowers the LFO waveform relative to the central value (pitch or cutoff frequency). Positive (+) settings will move the waveform so that modulation will occur from the central value upward. Negative (-) settings will move the waveform so that modulation will occur from the central value downward.
	-100, -50, 0, +50, +100
Delay Time	Delay Time (LFO Delay Time) specifies the time elapsed before the LFO effect is applied (the effect continues) after the key is pressed (or released).
	* After referring to "How to Apply the LFO" (p. 12), change the setting until the desired effect is achieved.
	0~127

Parameter	Value/Explanation
Delay Time KF	Adjusts the value for the Delay Time depending on the key position, relative to the C4 key (center C). To decrease the time that elapses before the LFO effect is applied (the effect is continuous) with each higher key that is pressed in the upper registers, select a positive value; to increase the elapsed time, select a negative value. Larger settings will produce greater change. If you do not want the elapsed time before the LFO effect is applied (the effect is continuous) to change according to the key pressed, set this to "0." -100~+100
	
Fade Mode	Specifies how the LFO will be applied. * After referring to "How to Apply the LFO" (p. 12), change the setting until the desired effect is achieved.
	ON <, ON >, OFF <, OFF >
Fade Time	Specifies the time over which the LFO amplitude will reach the maximum (minimum). * After referring to "How to Apply the LFO" (p. 12), change the setting until the desired effect is achieved.
	0~127
Key Trigger	Specifies whether the LFO cycle will be synchronized to begin when the key is pressed (ON) or not (OFF). OFF, ON
★ Pitch Depth	Specifies how deeply the LFO will affect pitch. -63~+63
★ TVF Depth	Specifies how deeply the LFO will affect the cutoff frequency. -63~+63
★ TVA Depth	Specifies how deeply the LFO will affect the volume. -63~+63
★ Pan Depth	Specifies how deeply the LFO will affect the pan. MEMO When the Structure Type (p. 6) is set to any value from "2" through "10," the output of tones 1 and 2 will be combined into tone 2, and the output of tones 3 and 4 will be combined into tone 4. This applies to the Pan Depth settings. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4. -63~+63

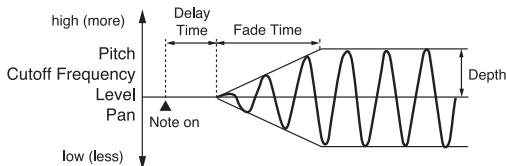
STEP LFO

Parameter	Value/Explanation
Step Type	When generating an LFO waveform from the data specified in LFO Step 1~16, specify whether the level will change abruptly at each step (TYP1) or will be connected linearly (TYP2). TYP1, TYP2
LFO Step 1~16	Specifies the data for the Step LFO. If the LFO Pitch Depth is +63, each +1 unit of the step data corresponds to a pitch of +50 cents. -36~+36

Patch Mode

How to Apply the LFO

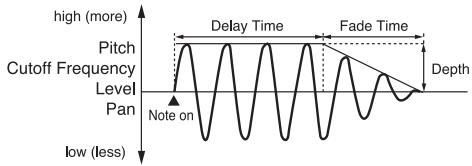
Apply the LFO gradually after the key is pressed



Parameter Value/Explanation

Parameter	Value/Explanation
Fade Mode	ON <
Delay Time	The time from when the keyboard is played until the LFO begins to be applied.
Fade Time	The time over which the LFO amplitude will reach the maximum after the Delay Time has elapsed.

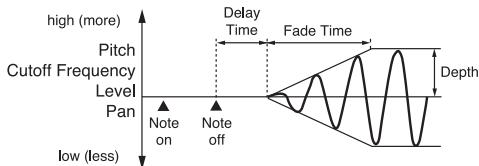
Apply the LFO immediately when the key is pressed, and then gradually begin to decrease the effect



Parameter Value/Explanation

Parameter	Value/Explanation
Fade Mode	ON >
Delay Time	The time that the LFO will continue after the keyboard is played.
Fade Time	The time over which the LFO amplitude will reach the minimum after the Delay Time has elapsed.

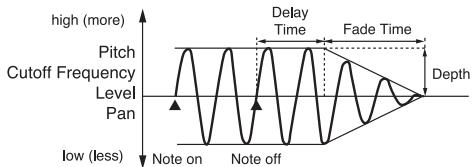
Apply the LFO gradually after the key is released



Parameter Value/Explanation

Parameter	Value/Explanation
Fade Mode	OFF <
Delay Time	The time from when the keyboard is released until the LFO begins to be applied.
Fade Time	The time over which the LFO amplitude will reach the maximum after the Delay Time has elapsed.

Apply the LFO from when the key is pressed until it is released, and gradually begin to decrease the effect when the key is released



Parameter Value/Explanation

Parameter	Value/Explanation
Fade Mode	OFF >
Delay Time	The time that the LFO will continue after the keyboard is released.
Fade Time	The time over which the LFO amplitude will reach the minimum after the Delay Time has elapsed.

CTRL

Parameter	Value/Explanation
	When a loop waveform is selected, the sound will normally continue as long as the key is pressed. If you want the sound to decay naturally even if the key remains pressed, set this to "NOSUS." * If a one-shot type waveform is selected, it will not sustain even if this parameter is set to "SUST."
	NOSUS, SUST
Env Mode	<p>MEMO</p> <ul style="list-style-type: none"> One-shot: These waveforms contain sounds that have short decays. A one-shot waveform records the initial rise and fall of the sound. Some of the JUNO-DS's one-shot waveforms are sounds that are complete in themselves, such as percussive instrument sounds. The JUNO-DS also contains many other one-shot waveforms that are elements of other sounds. These include attack components such as piano-hammer sounds and guitar fret noises. Looped: These waveforms include sounds with long decays as well as sustained sounds. Loop waveforms repeatedly play back (loop) the portion of the waveform after the sound has reached a relatively steady state. The JUNO-DS's looped waveforms also include components of other sounds, such as piano-string resonant vibrations and the hollow sounds of brass instruments.
Rx Bender	For each tone, specify whether MIDI Pitch Bend messages will be received (ON), or not (OFF). OFF, ON
Rx Expression	For each tone, specify whether MIDI Expression messages will be received (ON), or not (OFF). OFF, ON
Rx Hold-1	For each tone, specify whether MIDI Hold-1 messages will be received (ON), or not (OFF). * If "NOSUS" is selected for Env Mode parameter, this setting will have no effect. OFF, ON
Rx Pan Mode	For each tone, specify how pan messages will be received. * The channels cannot be set so as not to receive Pan messages. CONT Whenever Pan messages are received, the stereo position of the tone will be changed. K-ON The pan of the tone will be changed only when the next note is played. If a pan message is received while a note is sounding, the panning will not change until the next key is pressed.
Redamper Sw	You can specify, on an individual tone basis, whether or not the sound will be held when a Hold 1 message is received after a key is released, but before the sound has decayed to silence. If you want to sustain the sound, set this "ON." When using this function, also set the Rx Hold-1 "ON." This function is effective for piano sounds. OFF, ON

Matrix control

Ordinarily, if you wanted to change tone parameters using an external MIDI device, you would need to send System Exclusive messages—MIDI messages designed exclusively for the JUNO-DS. However, System Exclusive messages tend to be complicated, and the amount of data that needs to be transmitted can get quite large.

For that reason, a number of the more typical of the JUNO-DS's tone parameters have been designed so they accept the use of Control Change (or other) MIDI messages for the purpose of making changes in their values. This provides you with a variety of means of changing the way patches are played. For example, you can use the Pitch Bend lever to change the LFO cycle rate, or use the keyboard's touch to open and close a filter.

The function which allows you to use MIDI messages to make these changes in realtime to the tone parameters is called the Matrix control. Up to four Matrix Controls can be used in a single patch.

To use the Matrix control, specify which MIDI message (Source) will be used to control which parameter (Dest), and how greatly (Sens), and the tone to which the effect is applied (Switch).

MTRX CTRL1–4

Parameter	Value/Explanation
Control 1–4 Source	Sets the MIDI message used to change the tone parameter with the Matrix Control.
	OFF Matrix control will not be used.
	CC01–32, 33–95 Controller numbers 1–32, 33–95
	PITCH BEND Pitch Bend
	AFTERTOUCH Aftertouch
	SYS CTRL1–SYS CTRL4 MIDI messages used as common matrix controls.
	VELOCITY Velocity (pressure you press a key with)
	KEY FOLLOW Key follow (keyboard position with C4 as 0)
	* Velocity and Key follow correspond to Note messages.
	TEMPO The specified tempo (sequencer tempo) or the tempo of an external MIDI sequencer.
	LFO1, 2 LFO1, 2
	PITCH ENV Pitch envelope
	TVF ENV TVF envelope
	TVA ENV TVA envelope

- Although there are no MIDI messages for LFO 1 through TVA Envelope, they can be used as Matrix Control. In this case, you can change the tone settings in realtime by playing patches.
- If you want to use common controllers for the entire JUNO-DS, select "SYS CTRL1"–"SYS CTRL4." MIDI messages used as System Control 1–4 are set with the System Ctrl 1–4 Source (p. 34).

MEMO

- There are parameters that determine whether or not Pitch bend, Controller number 11 (Expression) and Controller number 64 (Hold 1) are received (p. 12). When these settings are "ON," and the MIDI messages are received, then when any change is made in the settings of the desired parameter, the Pitch bend, Expression, and Hold 1 settings also change simultaneously. If you want to change the targeted parameters only, then set these to "OFF."
- There are parameters that let you specify whether specific MIDI messages will be received for each channel in a performance (p. 20). When a patch with Matrix control settings is assigned to a part, confirm that any MIDI messages used for the Matrix control will be received. If the JUNO-DS is set up such that reception of MIDI messages is disabled, then the Matrix control will not function.

Control Dest1–4	<p>Matrix control destination selects the tone parameter that is to be controlled when using the Matrix control. The following parameters can be controlled. When not controlling parameters with the Matrix Control, set this to "OFF." Up to four parameters can be specified for each Matrix Control, and controlled simultaneously.</p> <table border="1"> <tr> <td>OFF</td><td>Matrix control will not be used.</td></tr> </table> <p>Changing the pitch</p> <table border="1"> <tr> <td>PCH</td><td>Changes the pitch.</td></tr> </table> <p>Opening and closing the filter</p> <table border="1"> <tr> <td>CUT</td><td>Changes the cutoff frequency.</td></tr> <tr> <td>RES</td><td>Emphasizes the overtones in the region of the cutoff frequency, adding character to the sound.</td></tr> </table> <p>Changing the volume and pan</p> <table border="1"> <tr> <td>LEV</td><td>Changes the volume level.</td></tr> <tr> <td>PAN</td><td>Changes the pan.</td></tr> </table> <p>Changing how the effects are applied</p> <table border="1"> <tr> <td>DRY</td><td>Changes the volume of the original sound.</td></tr> <tr> <td>CHO</td><td>Changes the amount of chorus.</td></tr> <tr> <td>REV</td><td>Changes the amount of reverb.</td></tr> </table> <p>Applying LFO to modulate sounds</p> <table border="1"> <tr> <td>PIT-LFO1, 2</td><td>Changes the vibrato depth.</td></tr> <tr> <td>TVF-LFO1, 2</td><td>Changes the wah depth.</td></tr> <tr> <td>TVF-LFO1, 2</td><td>Changes the tremolo depth.</td></tr> <tr> <td>PAN-LFO1, 2</td><td>Changes the effect that the LFO will have on pan.</td></tr> <tr> <td>LFO-RATE</td><td>Changes the speed of the LFO cycles. The speed will not change if LFO Rate is set to "note."</td></tr> </table> <p>Changing the Pitch Envelope</p> <table border="1"> <tr> <td>PIT-ATK</td><td>Changes the Env Time 1 of the pitch envelope.</td></tr> <tr> <td>PIT-DCY</td><td>Changes the Env Time 2 and Env Time 3 of the pitch envelope.</td></tr> <tr> <td>PIT-REL</td><td>Changes the Env Time 4 of the pitch envelope.</td></tr> </table> <p>Changing the TVF Envelope</p> <table border="1"> <tr> <td>TVF-ATK</td><td>Changes the Env Time 1 of the TVF envelope.</td></tr> <tr> <td>TVF-DCY</td><td>Changes the Env Time 2 and Env Time 3 of the TVF envelope.</td></tr> <tr> <td>TVF-REL</td><td>Changes the Env Time 4 of the TVF envelope.</td></tr> </table> <p>Changing the TVA Envelope</p> <table border="1"> <tr> <td>TVA-ATK</td><td>Changes the Env Time 1 of the TVA envelope.</td></tr> <tr> <td>TVA-DCY</td><td>Changes the Env Time 2 and Env Time 3 of the TVA envelope.</td></tr> <tr> <td>TVA-REL</td><td>Changes the Env Time 4 of the TVA envelope.</td></tr> </table> <p>Splitting tones that are played</p> <table border="1"> <tr> <td>TMT</td><td> <ul style="list-style-type: none"> If the Matrix control is used to split tones, set the TMT Velocity Control to "OFF," and the TMT Control Switch to "ON" (p. 7). If the Matrix control is used to split tones, we recommend setting the Matrix control Sens to "+63." Selecting a lower value may prevent switching of the tones. Furthermore, if you want to reverse the effect, set the value to "-63." If you want to use matrix control to switch smoothly between tones, use the Velo Fade Lower and Velo Fade Upper (p. 7). The higher the values set, the smoother the switch is between the tones. </td></tr> </table>	OFF	Matrix control will not be used.	PCH	Changes the pitch.	CUT	Changes the cutoff frequency.	RES	Emphasizes the overtones in the region of the cutoff frequency, adding character to the sound.	LEV	Changes the volume level.	PAN	Changes the pan.	DRY	Changes the volume of the original sound.	CHO	Changes the amount of chorus.	REV	Changes the amount of reverb.	PIT-LFO1, 2	Changes the vibrato depth.	TVF-LFO1, 2	Changes the wah depth.	TVF-LFO1, 2	Changes the tremolo depth.	PAN-LFO1, 2	Changes the effect that the LFO will have on pan.	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Parameter	Value/Explanation
	Changing the depth of frequency modulation for FXM
	FXM
	Changing specific MFX parameters
MFX1–4	Change the parameter that was specified by MFX Control 1–4 Assign. * If you have not made the necessary settings for using the MFX, the MFX will not be applied even if you attempt to control it as a Matrix control destination.
Control Sens1–4	Sets the amount of the Matrix Control's effect that is applied. If you wish to modify the selected parameter in a positive (+) direction—i.e., a higher value, toward the right, or faster etc.—from its current setting, select a positive (+) value. If you wish to modify the selected parameter in a negative (-) direction—i.e., a lower value, toward the left, or slower etc.—from its current setting, select a negative (-) value. For either positive or negative settings, greater absolute values will allow greater amounts of change. Set this to "0" if you don't want to apply the effect. -63–+63
Control Switch1–4	Selects the tone to which the effect is applied when using the Matrix Control. OFF The effect will not be applied. ON The effect will be applied. REVS The effect will be applied in reverse.

Drum Kit Parameters

MEMO

A drum kit consists of a percussion instrument sound (tone) assigned to each key. The tone that's assigned to each key consists of a combination of up to four waves. Drum Kit Edit lets you edit the settings of the tone that's assigned to each key.

COMMON

Parameter	Value/Explanation
A0-C8 (Tone name)	Specifies the key to which the tone you want to edit is assigned. * You can also press a key to select this.
Drum Kit Level	Sets the volume of the drum kit. 0-127
Tone Name	Changes the name (tone name) of the tone that's assigned to the specified key. Refer to "Editing the tone name" (p. 14).
Assign Type	Sets the way sounds are played when the same key is pressed a number of times. MULTI Layer the sound of the same keys. Even with continuous sounds where the sound plays for an extended time, such as with crash cymbals, the sounds are layered, without previously played sounds being eliminated. SINGLE Only one sound can be played at a time when the same key is pressed. With continuous sounds where the sound plays for an extended time, the previous sound is stopped when the following sound is played.
Mute Group	On an actual acoustic drum set, an open hi-hat and a closed hi-hat sound can never occur simultaneously. To reproduce the reality of this situation, you can set up a Mute Group. The Mute Group function allows you to designate two or more tones that are not allowed to sound simultaneously. Up to 31 Mute Groups can be used. Tones that are not belong to any such group should be set to "OFF." OFF, 1-31
Tone Env Mode	When a loop waveform (p. 12) is selected, the sound will normally continue as long as the key is pressed. If you want the sound to decay naturally even if the key remains pressed, set this to "NO-SUS." * If a one-shot type waveform (p. 12) is selected, it will not sustain even if this parameter is set to "SUSTAIN." NO-SUS, SUSTAIN
Tone Pitch Bend Range	Specifies the amount of pitch change in semitones (4 octaves) that will occur when the pitch bend lever is moved. The amount of change when the lever is tilted is set to the same value for both left and right sides. 0-48
Tone Rx Expression	For each tone, specify whether MIDI Expression messages will be received (ON), or not (OFF). OFF, ON
Tone Rx Hold-1	For each tone, specify whether MIDI Hold-1 messages will be received (ON), or not (OFF). * If "NO-SUS" is selected for Tone Env Mode (p. 14), this setting will have no effect. OFF, ON
Rx Pan Mode	For each tone, specify how pan messages will be received. * The channels cannot be set so as not to receive Pan messages. CONT Whenever Pan messages are received, the stereo position of the tone will be changed. K-ON The pan of the tone will be changed only when the next note is played. If a pan message is received while a note is sounding, the panning will not change until the next key is pressed.
One Shot Mode	The sound will play back until the end of the waveform (or the end of the envelope, whichever comes first). The result will be the same as when the envelope's Tone Env Mode (p. 14) is set to "NO-SUS." OFF, ON

Editing the tone name

1. Move the cursor to "Tone Name," and press the [ENTER] button.

The DRUM KIT TONE NAME screen appears.

2. Assign a tone name

Operation	Explanation
[◀] [▶] buttons	Move the cursor.
Value dial, [-] [+]	Select the character.
[▼] [▲] buttons	Switch between uppercase and lowercase.

Inserting/ Deleting Characters

1. While entering a name, press the [MENU] button.

The NAME MENU window appears. The window closes if you press the button once again.

2. Move the cursor to "INSERT" or "DELETE," and press the [ENTER] button.

Function	Explanation
INSERT	Press the [ENTER] button to insert a space (blank) at the cursor location.
DELETE	Press the [ENTER] button to delete the character at the cursor location; subsequent characters will be moved forward to fill the gap.

3. When you've specified the name, press the [ENTER] button.

WAVE

Parameter	Value/Explanation
□1- □4	Specify the on/off status of tones 1-4. If a tone is on, a "✓" mark is shown. OFF, ON
Wave Group	Select the groups containing the Waves comprising the tone. INTA, B Waveforms stored in internal EXP Waveforms for expansion sounds SAMP Imported user sample waveforms MSAM Multisamples created by JUNO-DS Tone Manager (PC software)
Wave No. L (Mono) Wave No. R	Selects the Waves comprising the tone. Along with the Wave number, the Wave name appears at the lower part of the display. When in mono, only the left side (L) is specified. When in stereo, the right side (R) is also specified. OFF, 1-2402 (The upper limit will depend on the wave group.)
Wave Gain	Sets the gain (amplification) of the waveform. The value changes in 6 dB (decibel) steps—an increase of 6 dB doubles the waveform's gain. -6, 0, +6, +12
Wave Tempo Sync	When you wish to synchronize a Phrase Loop to the clock (tempo), set this to "ON." OFF, ON
Wave FXM Switch	Sets whether FXM will be used (ON) or not (OFF). OFF, ON
Wave FXM Color	Specifies how FXM will perform frequency modulation. Higher settings result in a grainier sound, while lower settings result in a more metallic sound. 1-4
Wave FXM Depth	Specifies the depth of the modulation produced by FXM. 0-16
Wave Coarse Tune	Adjusts the pitch of the waveform's sound up or down in semitone steps (± 4 octaves). -48-+48
Wave Fine Tune	Adjusts the pitch of the waveform's sound up or down in 1-cent steps (± 50 cents). -50-+50
Wave Level	Sets the volume of the waveform. 0-127
Wave Pan	Specifies the pan of the waveform. "L64" is far left, "0" is center, and "63R" is far right. L64-0-63R
Wave Random Pan Sw	Use this setting to cause the waveform's panning to change randomly each time a key is pressed. * The range of the panning change is set by the Random Pan Depth (p. 16). OFF, ON
Wave Alter Pan Sw	This setting causes panning of the waveform to be alternated between left and right each time a key is pressed. OFF Pan does not change. ON The waveform is panned according to the Alternate Pan Depth (p. 16) setting. REVS The waveform is panned in reverse.

WMT

Parameter	Value/Explanation
WMT Velocity Control	WMT Velocity Control determines whether a different tone is played or not depending on the force with which the key is played (velocity). OFF Waveforms are not velocity-switched. ON Waveforms are switched according to the keyboard playing velocity. RANDOM The waveform's constituent tones will sound randomly, regardless of the velocity.
Velo Fade Upper, Lower	This determines what will happen to the tone's level when the tone is played at a velocity Upper/lower than its specified velocity range. Higher settings produce a more gradual change in volume. If you want notes played outside the specified key velocity range to not be sounded at all, set this to "0." 0-127
Velo Range Upper, Lower	This sets the highest/lowest velocity at which the waveform will sound. Make these settings when you want different waveforms to sound in response to notes played at different strengths. * If you attempt to set the Lower velocity limit above the Upper, or the Upper below the Lower, the other value will automatically be adjusted to the same setting. (Upper) LOWER-127, (Lower) 1-UPPER

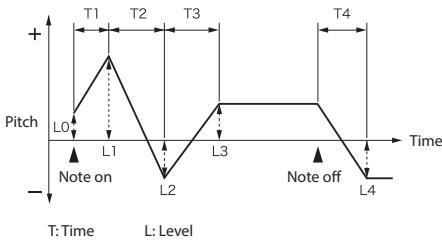
Parameter	Value/Explanation

PITCH

Parameter	Value/Explanation
Tone Coarse Tune	Selects the pitch at which a tone sounds. C- G9
Tone Fine Tune	Adjusts the pitch of the tone's sound up or down in 1-cent steps (± 50 cents). -50 +50
Tone Random Pitch Depth	Specifies the width of random pitch deviation that will occur each time a key is pressed. If you do not want the pitch to change randomly, set this to "0." These values are in units of cents (1/100th of a semitone). 0-1200

PITCH ENV

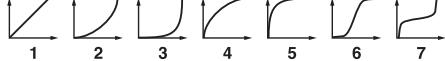
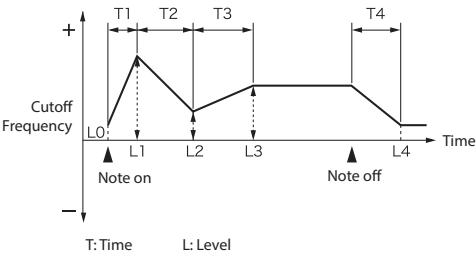
Parameter	Value/Explanation
Pitch Env Depth	Adjusts the effect of the Pitch Envelope. Higher settings will cause the pitch envelope to produce greater change. Negative (-) settings will invert the shape of the envelope. -12 +12
Pitch Env V-Sens	Keyboard playing dynamics can be used to control the depth of the pitch envelope. If you want the pitch envelope to have more effect for strongly played notes, set this parameter to a positive (+) value. If you want the pitch envelope to have less effect for strongly played notes, set this to a negative (-) value. -63 +63
Pitch Env T1 V-Sens	This allows keyboard dynamics to affect the Time 1 of the Pitch envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63 +63
Pitch Env T4 V-Sens	Use this parameter when you want key release speed to affect the Time 4 value of the pitch envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63 +63
Pitch Env Time 1-4	Specify the pitch envelope times (Time 1-Time 4). Higher settings will result in a longer time until the next pitch is reached. (For example, Time 2 is the time over which the pitch changes from Level 1 to Level 2) 0-127
Pitch Env Level 0-4	Specify the pitch envelope levels (Level 0-Level 4). It determines how much the pitch changes from the reference pitch (the value set with Coarse Tune or Fine Tune on the Pitch screen) at each point. Positive (+) settings will cause the pitch to be higher than the standard pitch, and negative (-) settings will cause it to be lower. -63 +63

**TVF**

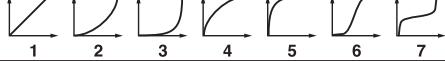
Parameter	Value/Explanation
	Selects the type of filter. A filter cuts or boosts a specific frequency region to change a sound's brightness, thickness, or other qualities. * If you set "LPF2" or "LPF3," the setting for the Resonance will be ignored (p. 15).
OFF	No filter is used.
LPF	Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency in order to round off, or un-brighten the sound. This is the most common filter used in synthesizers.
BPF	Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency, and cuts the rest. This can be useful when creating distinctive sounds.
HPF	High Pass Filter. This cuts the frequencies in the region below the cutoff frequency. This is suitable for creating percussive sounds emphasizing their higher tones.
PKG	Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency. You can use this to create wah-wah effects by employing an LFO to change the cutoff frequency cyclically.
LPF2	Low Pass Filter 2. Although frequency components above the cutoff frequency are cut, the sensitivity of this filter is half that of the LPF. This makes it a comparatively warmer low pass filter. This filter is good for use with simulated instrument sounds such as the acoustic piano.
LPF3	Low Pass Filter 3. Although frequency components above the cutoff frequency are cut, the sensitivity of this filter changes according to the cutoff frequency. While this filter is also good for use with simulated acoustic instrument sounds, the nuance it exhibits differs from that of the LPF2, even with the same TVF Envelope settings.
Filter Type	
Cutoff Frequency	<p>Selects the frequency at which the filter begins to have an effect on the waveform's frequency components. "LPF/LPF2/LPF3" selected for the Filter Type Lower cutoff frequency settings reduce a tone's upper harmonics for a more rounded, warmer sound. Higher settings make it sound brighter. "BPF" selected for the Filter Type Harmonic components will change depending on the TVF Cutoff Frequency setting. This can be useful when creating distinctive sounds. "HPF" selected for the Filter Type Higher Cutoff Frequency settings will reduce lower harmonics to emphasize just the brighter components of the sound. "PKG" selected for the Filter Type The harmonics to be emphasized will vary depending on Cutoff Frequency setting. 0-127</p>
Resonance	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort. 0-127
Cutoff V-Curve	<p>Selects one of the following seven curves that determine how keyboard playing dynamics (velocity) influence the cutoff frequency. Set this to "FIXED" if you don't want the Cutoff frequency to be affected by the keyboard velocity. FIXED, 1-7</p>
Cutoff V-Sens	Use this parameter when changing the cutoff frequency to be applied as a result of changes in playing velocity. If you want strongly played notes to raise the cutoff frequency, set this parameter to positive (+) settings. If you want strongly played notes to lower the cutoff frequency, use negative (-) settings. -63 +63
Resonance V-Sens	This allows keyboard velocity to modify the amount of Resonance. If you want strongly played notes to have a greater Resonance effect, set this parameter to positive (+) settings. If you want strongly played notes to have less Resonance, use negative (-) settings. -63 +63

Patch Mode

TVF ENV

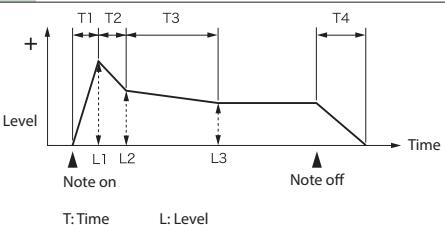
Parameter	Value/Explanation
TVF Env Depth	Specifies the depth of the TVF envelope. Higher settings will cause the TVF envelope to produce greater change. Negative (-) settings will invert the shape of the envelope. -63–+63
TVF Env V-Curve	Selects one of the following 7 curves that will determine how keyboard playing dynamics will affect the TVF envelope. Set this to "FIXED" if you don't want the TVF Envelope to be affected by the keyboard velocity. FIXED, 1–7 
TVF Env V-Sens	Specifies how keyboard playing dynamics will affect the depth of the TVF envelope. Positive (+) settings will cause the TVF envelope to have a greater effect for strongly played notes, and negative (-) settings will cause the effect to be less. -63–+63
TVF Env T1 V-Sens	This allows keyboard dynamics to affect the Time 1 of the TVF envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63–+63
TVF Env T4 V-Sens	The parameter to use when you want key release speed to control the Time 4 value of the TVF envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63–+63
TVF Env Time 1–4	Specify the TVF envelope times (Time 1–Time 4). Higher settings will lengthen the time until the next cutoff frequency level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.) 0–127
TVF Env Level 0–4	Specify the TVF envelope levels (Level 0–Level 4). These settings specify how the cutoff frequency will change at each point, relative to the standard cutoff frequency (the cutoff frequency value specified in the TVF screen). 0–127 

TVA

Parameter	Value/Explanation
Tone Level	Sets the volume of the tone. Use this parameter to adjust the volume balance between tones. 0–127
Level V-Curve	You can select from seven curves that determine how keyboard playing strength will affect the volume. If you do not want the volume of the tone to be affected by the force with which you press the key, select "FIXED." FIXED, 1–7 
Level V-Sens	Set this when you want the volume of the tone to change depending on the force with which you press the keys. Set this to a positive (+) value to have the changes in tone volume increase the more forcefully the keys are played; to make the tone play more softly as you play harder, set this to a negative (-) value. -63–+63
Tone Pan	Sets the pan for the tone. "L64" is far left, "0" is center, and "63R" is far right. L64–0–63R
Random Pan Depth	Use this parameter when you want the stereo location to change randomly each time you press a key. Higher settings will produce a greater amount of change. * This will affect only waves whose Wave Random Pan Sw (p. 14) is "ON." 0–63
Alternate Pan Depth	This setting causes panning to be alternated between left and right each time a key is pressed. Higher settings will produce a greater amount of change. "L" or "R" settings will reverse the order in which the pan will alternate between left and right. For example if two tones are set to "L" and "R" respectively, the panning of the two tones will alternate each time they are played. * This will affect only waves whose Wave Alter Pan Sw (p. 14) is "ON" or "REVS." L63–0–63R

Parameter	Value/Explanation
Relative Level	Corrects for the volume of the tone. This parameter is set by the key-based controller system exclusive message. Normally, you should leave it set to 0. * If the Tone Level is set to 127, the volume will not increase beyond that point. -64–+63

TVA-ENV

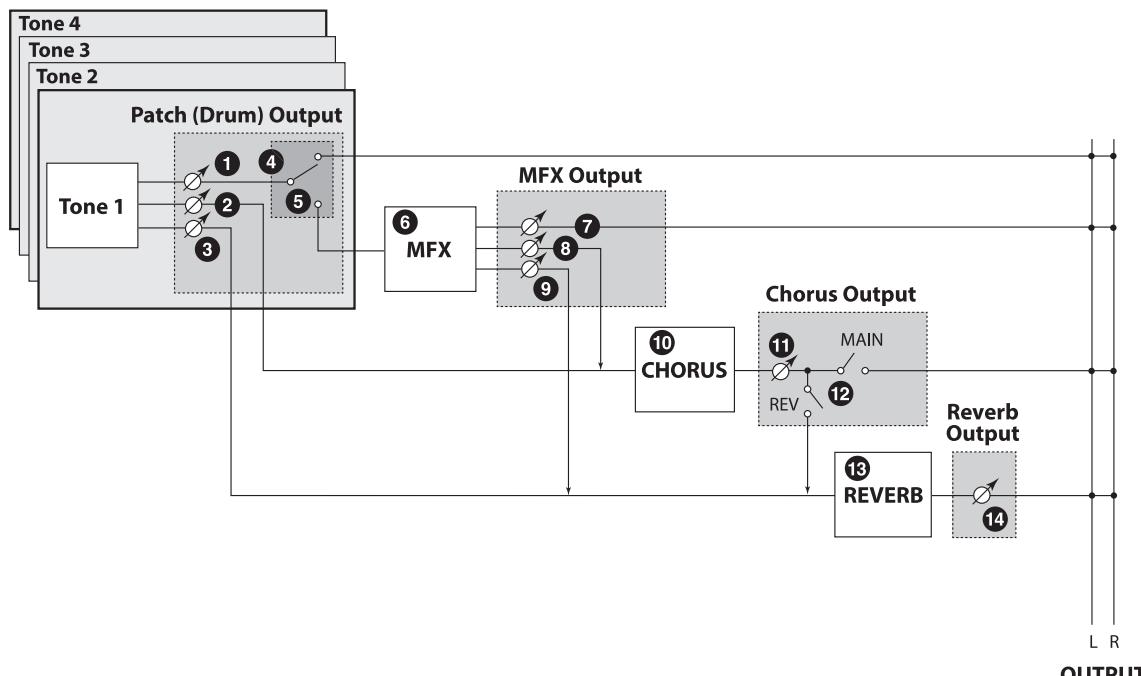
Parameter	Value/Explanation
TVA-Env T1 V-Sens	This allows keyboard dynamics to affect the Time 1 of the TVA envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63–+63
TVA-Env T4 V-Sens	The parameter to use when you want key release speed to control the Time 4 value of the TVA envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63–+63
TVA-Env Time 1–4	Specify the TVA envelope times (Time 1–Time 4). Higher settings will lengthen the time until the next volume level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.) 0–127
TVA-Env Level 1–3	Specify the TVA envelope levels (Level 1–Level 3). These settings specify how the volume will change at each point, relative to the standard volume (the Tone Level value specified in the TVA screen). 0–127 

OUTPUT

Parameter	Value/Explanation
Rhythm Output Assign	Specifies for each drum kit how the direct sound will be output.
	MFX Output in stereo through MFX. You can also apply chorus or reverb to the sound that passes through MFX.
	L+R Output to the OUTPUT L (MONO) jack and OUTPUT R jack in stereo without passing through MFX.
	L, R Output to the OUTPUT L (MONO) jack or OUTPUT R jack in mono without passing through MFX.
TONE	Outputs according to the settings for each tone.
Tone Output Assign	Specifies how the direct sound of each tone will be output.
	* If the Rhythm Output Assign is set to anything other than "TONE," these settings will be ignored.
	* Chorus and reverb are output in mono at all times.
	MFX Output in stereo through MFX. You can also apply chorus or reverb to the sound that passes through MFX.
L+R	Output to the OUTPUT L (MONO) jack and OUTPUT R jack in stereo without passing through MFX.
	L, R Output to the OUTPUT L (MONO) jack or OUTPUT R jack in mono without passing through MFX.
Tone Output Level	Set the level of the signal that is sent to the output destination specified by Patch Output Assign or Tone Output Assign.
0–127	
Tone Chorus Send	Specifies the level of the signal sent to the chorus for each tone.
0–127	
Tone Reverb Send	Specifies the level of the signal sent to the reverb for each tone.
0–127	

Effects Edit

In Patch mode you can use multi effects (MFX), chorus, and reverb.

Signal Flow

When a patch is selected Make these settings in the "OUTPUT" tab of the PATCH EDIT screen.	1 Tone Output Level 2 Tone Chorus Send 3 Tone Reverb Send 4 Patch Output Assign 5 Tone Output Assign	p. 11
When a drum kit is selected Make these settings in the "OUTPUT" tab of the DRUM KIT EDIT screen.	1 Tone Output Level 2 Tone Chorus Send 3 Tone Reverb Send 4 Rhythm Output Assign 5 Tone Output Assign	

Make these settings in the "MFX" tab of the EFFECTS EDIT screen.	6 MFX Type 7 Output Level 8 Chorus Send Level 9 Reverb Send Level	p. 18
Make these settings in the "CHORUS" tab of the EFFECTS EDIT screen.	10 Chorus Type 11 Chorus Level 12 Output Select	
Make these settings in the "REVERB" tab of the EFFECTS EDIT screen.	13 Reverb Type 14 Reverb Level	

Procedure

1. Press the [SAMPLE IMPORT] button and [DAW CONTROL] button simultaneously.
The EDIT MENU screen appears.
2. Move the cursor to "EFFECTS EDIT," and press the [ENTER] button.
The EFFECTS EDIT screen appears.
3. Move the cursor to tab, and use the [\blacktriangleleft] [\triangleright] buttons to switch the pages.
4. Move the cursor to the parameter that you want to edit, and use the value dial to change the value.
5. To save the edited settings, perform the operation "Saving Your Settings (Write)" (refer to owner's manual).

Effects Parameters

MFX

Parameter	Value/Explanation
MFX Type	Turns MFX on/off, and specifies the type of MFX that is used. If MFX is on, <input checked="" type="checkbox"/> shows a “✓” mark. * For details on MFX, refer to “MFX Parameters (MFX, MFX1–3)” (p. 40).
00: THRU-80: BIT CRUSHER	
Parameters for each MFX type	Edit the parameters of the MFX type you've selected. * Refer to “MFX Parameters (MFX, MFX1–3)” (p. 40).
Output Level	Adjusts the volume of the sound that has passed through the MFX. If you're applying a MFX, this specifies the depth of the MFX. If you're not applying a MFX, this specifies the volume of the original sound. 0–127
Chorus Send Level	Specifies the level of the signal sent to the chorus. 0–127
Reverb Send Level	Specifies the level of the signal sent to the reverb. 0–127

MFX control

If you wanted to change the volume of MFX sounds, the delay time of Delay, and the like, using an external MIDI device, you would need to send System Exclusive messages—MIDI messages designed exclusively for the JUNO-DS. However, System Exclusive messages tend to be complicated, and the amount of data that needs to be transmitted can get quite large.

For that reason, a number of the more typical of the JUNO-DS's MFX parameters have been designed so they accept the use of Control Change (or other) MIDI messages for the purpose of making changes in their values. For example, you can use the Pitch Bend lever to change the amount of distortion, or use the keyboard's touch to change the delay time of Delay.

The parameters that can be changed are predetermined for each type of MFX; among the parameters described in “MFX parameters” (p. 40), these are indicated by a “#”.

The function that allows you use MIDI messages to make these changes in realtime to the MFX parameters is called the MFX control. Up to four MFX controls can be used in a single patch/drum kit/performance.

When the MFX control is used, you can select the amount of control (Sens) applied, the parameter selected (Destination), and the MIDI message used (Source).

MEMO

By using the Matrix control instead of the MFX control, you can also change the parameters of some popular MFX in realtime (p. 12).

MFX CTRL

Parameter	Value/Explanation
	Sets the MIDI message used to change the MFX parameter with the MFX control.
Source 1–4	OFF MFX control will not be used. CC01–31, 33–95 Controller numbers 1–31, 33–95 PITCH BEND Pitch bend AFTERTOUCH Aftertouch SYS CTRL1–4 Use the System Control 1–4 Source setting (p. 34).
Destination 1–4	Sets the MFX parameters to be controlled with the Source 1–4. The MFX parameters available for control will depend on the MFXType. * Refer to “MFX Parameters (MFX, MFX1–3)” (p. 40).
Sens 1–4	Specifies the depth of MFX control. Specify a positive (+) value if you want to change the value of the assigned destination in a positive direction (larger, toward the right, faster, etc.), or specify a negative value (-) if you want to change the value in a negative direction (smaller, toward the left, slower, etc.). Larger values will allow a greater amount of control. -63–+63

CHORUS

Parameter	Value/Explanation
Chorus Type	Turns Chorus on/off, and specifies the type of chorus that is used. If Chorus is on, <input checked="" type="checkbox"/> shows a “✓” mark. 00: OFF Neither chorus or delay is used. 01: CHORUS Chorus is used. 02: DELAY Delay is used. 03: GM2 CHORUS GM2 chorus
Parameters for each chorus type	Set the parameters of the selected chorus type. * Refer to “Chorus Parameters” (p. 58).
Output Select	Specifies how the sound routed through chorus will be output. MAIN Output to the OUTPUT jacks in stereo. REV Output to reverb in mono. M+R Output to the OUTPUT jacks in stereo, and to reverb in mono.
Chorus Level	Adjusts the volume of the sound that has passed through chorus. 0–127

REVERB

Parameter	Value/Explanation
Reverb Type	Turns Reverb on/off, and specifies the type of reverb that is used. If Reverb is on, <input checked="" type="checkbox"/> shows a “✓” mark. 00: OFF Reverb is not used. 01: REVERB Normal reverb 02: SRV ROOM This reverb simulates typical room acoustic reflections. 03: SRV HALL This reverb simulates typical concert hall acoustic reflections. 04: SRV PLATE This reverb simulates a reverb plate, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate. 05: GM2 REVERB GM2 reverb
Parameters for each reverb type	Set the parameters of the selected reverb type. * Refer to “Reverb Parameters” (p. 58).
Reverb Level	Adjusts the volume of the sound that has passed through reverb. 0–127

Performance Mode

Performance Edit

MEMO

PERFORMANCE EDIT and PART EDIT have the same parameters in common.

Procedure

1. Press the [PATCH/PERFORM] button to make it light.
2. Select a performance that you want to edit.
3. Press the [SAMPLE IMPORT] button and [DAW CONTROL] button simultaneously.
The EDIT MENU screen appears.
4. Move the cursor to "PERFORMANCE EDIT," and press the [ENTER] button.
The PERFORMANCE EDIT screen appears.
5. Move the cursor to tab, and use the [\blacktriangleleft] [\triangleright] buttons to switch the pages.
6. Move the cursor to the parameter that you want to edit, and use the value dial to change the value.
7. To save the edited settings, perform the operation "Saving Your Settings (Write)" (refer to owner's manual).

MEMO

- In the PERFORMANCE EDIT screen, you can use pads [1]–[8] to select the part that you want to edit. If you hold down the [SHIFT] button and press a pad [1]–[8], a part 9–16 is selected.
- In the PERFORMANCE EDIT screen, press the [MENU] button to open the INIT MENU window. Select "PERFORM" or "PART" and press the [ENTER] button to initialize the selected performance or part.

Performance Parameters

PATCH

Parameter	Value/Explanation
Type	Sets the assignment of a patch (Pat) or drum kit (Drm) to each of the parts. Pat, Drm
Bank	Selects the group to which the desired patch or drum kit belongs. DS (DS tone), PRST (Preset), GM (GM2 tone), EXP (expansion sounds), USER
Number	Selects the desired patch or drum kit by its number. 0001–
Kbd	Specifies, for each part, whether or not the keyboard controller section will be connected to the internal sound generator. OFF, ON

LEVEL/CH

Parameter	Value/Explanation
Solo	Turns on the part that you want to solo. Parts other than the soloed part are not heard. OFF, ON
Mute	Specifies whether each part's performance is temporarily muted (ON) or not muted (OFF). * The Mute parameter does not turn the part off; it mutes the sound by minimizing the volume. Therefore, the part still receives MIDI messages. OFF, ON
Level	Adjust the volume of each part. This setting's main purpose is to adjust the volume balance between parts. 0–127
Pan	Adjust the pan of each part. "L64" is far left, "0" is center, and "63R" is far right. L64–0–63R
RxCh	Specifies the MIDI receive channel for each part. 1–16
RxSw	For each part, specify whether MIDI messages will be received (ON), or not (OFF). If this is "OFF," the part will not respond. Normally, you should leave this "ON," but you can turn it "OFF" when you do not want a specific part to be playing during song playback. OFF, ON

OUTPUT

Parameter	Value/Explanation
Out	Specifies for each part how the direct sound will be output. MFX Output in stereo through MFX. You can also apply chorus or reverb to the sound that passes through MFX.
	L+R Output to the OUTPUT L (MONO) jack and OUTPUT R jack in stereo without passing through MFX.
	L, R Output to the OUTPUT L (MONO) jack or OUTPUT R jack in mono without passing through MFX.
	PATCH Outputs according to the settings for patch.
Sel	Of the three types of MFX that can be used simultaneously, specify which MFX will be used. 1–3 (MFX1–MFX3)
Lev	Set the level of the signal that is sent to the output destination specified by Part Output Assign. 0–127
Cho	Sets the level of the signal sent to chorus for each part. 0–127

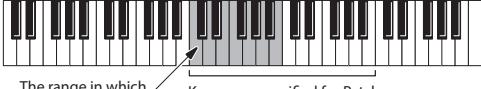
Parameter	Value/Explanation
Rev	Sets the level of the signal sent to reverb for each part. 0–127
1–3	Turn MFX 1–3 on/off for each part. If turned on, a "✓" mark appears. Off (–), On (✓)
C	Turn Chorus on/off for each part. If turned on, a "✓" mark appears. Off (–), On (✓)
R	Turn Reverb on/off for each part. If turned on, a "✓" mark appears. Off (–), On (✓)

PITCH

Parameter	Value/Explanation
Oct	Adjusts the pitch of the part's sound up or down in units of an octave (± 3 octaves). * Note that when a rhythm set is assigned to a part, you cannot modify the Octave Shift. -3–+3
Crs	Adjusts the pitch of the part's sound up or down in semitone steps (± 4 octaves). -48–+48
Fine	Adjusts the pitch of the part's sound up or down in 1-cent steps (± 50 cents). -50–+50
Mono	Set this parameter to "MONO" when the patch assigned to the part is to be played monophonically, or to "POLY" when the patch is to be played polyphonically. If you want to use the Mono/Poly setting of the patch assigned to the part (p. 5), set this to "PAT." * This setting is ignored for parts to which a drum kit is assigned. MONO, POLY, PAT
Legt	Turn this parameter "ON" when you want to use the Legato feature and "OFF" when you don't. If you want to use the Legato Switch setting of the patch assigned to the part (p. 5), set this to "PAT." * This setting is ignored for parts to which a drum kit is assigned. OFF, ON, PAT
Bend	Specifies the amount of pitch change in semitones (2 octaves) that will occur when the Pitch Bend Lever is moved. The amount of change when the lever is tilted is set to the same value for both left and right sides. If you want to use the Pitch Bend Range setting of the patch assigned to the part (p. 7), set this to "PAT." 0–24, PAT
Port	Turn this parameter "ON" when you want to apply Portamento and "OFF" when you don't. If you want to use the Portamento Switch setting of the patch assigned to the part (p. 5), set this to "PAT." OFF, ON, PAT
Time	When portamento is used, this specifies the time over which the pitch will change. Higher settings will cause the pitch change to the next note to take more time. If you want to use the Portamento Time setting of the patch assigned to the part (p. 5), set this to "PAT." * This setting is ignored for parts to which a drum kit is assigned. 0–127, PAT

Performance Mode

KBD

Parameter	Value/Explanation
Kbd	Specifies, for each part, whether or not the keyboard controller section will be connected to the internal sound generator and MIDI OUT. Normally you will leave this off; you can turn it on if you want to layer sounds. OFF, ON
RngLo, RngUp	Specifies the lowest/highest note that the tone will sound for each part. * When the Key Range (p. 7) is set for each individual tone in a patch, sounds are produced in the range where the Key Range of each tone and the Key Range for the part overlap. C–G9 Key range specified for Performance  The range in which notes will play Key range specified for Patch
V-Sens (Velocity Sensitivity Offset)	This changes the volume and cutoff frequency for each part according to the velocity with which the keys are pressed. If you want strongly played notes to raise the volume/cutoff frequency, set this parameter to positive (+) settings. If you want strongly played notes to lower the volume/cutoff frequency, use negative (-) settings. Set Velocity Sensitivity to "0" when you want sounds played at a fixed volume and cutoff frequency, regardless of the force with which the keys are played. * Patches also contain a Velocity Sensitivity Offset setting (p. 5). The ultimate Velocity Sensitivity Offset value is the sum of the part's and the patch's Velocity Sensitivity Offsets. Accordingly, if the patch's Velocity Sensitivity Offset is set to "127" (maximum), there will be no change in the part's Velocity Sensitivity Offset, even when this is set to a positive value. -63–+63
V-Rsv	Specifies the number of voices that will be reserved for each part when more than 128 voices are played simultaneously. * It is not possible for the settings of all parts to total an amount greater than 128. 0–63, FULL
Oct	Adjusts the pitch of the part's sound up or down in units of an octave (± 3 octaves). * Note that when a drum kit is assigned to a part, you cannot modify the Octave Shift. -3–+3

Calculating the number of voices being used

The JUNO-DS is able to play up to 128 notes simultaneously. The polyphony, or the number of voices (sounds) does not refer only to the number of sounds actually being played, but changes according to the number of tones used in the patches, and the number of Waves used in the tones. The following method is used to calculate the number of sounds used for one patch being played. (number of sounds being played) x (number of tones used by patches being played) x (number of waves used in the tones) Realtime Stretch requires twice the normal polyphony.

OFFSET

Parameter	Value/Explanation
Cutoff (Cutoff Offset)	Adjusts the cutoff frequency for the patch or drum kit assigned to a part. * Patches also have a Cutoff Offset setting (p. 4). The final cutoff frequency value is the sum of the tone Cutoff Frequency value and the patch and part Cutoff Offset values. If the tone's cutoff frequency is already set to "127" (maximum), there will be no change produced by setting the Cutoff Offset to a positive value. -64–+63
Reso (Resonance Offset)	Adjusts the Resonance for the patch or rhythm set assigned to a part. * Patches also have a Resonance Offset setting (p. 4). The final Resonance value is the sum of the tone Resonance value and the patch and part Resonance Offset values. If the tone's resonance is already set to "127" (maximum), there will be no change produced by setting the resonance offset to a positive value. -64–+63
Attack (Attack Time Offset)	Adjusts the TVA/TVF Envelope Attack Time for the patch or drum kit assigned to a part. * Patches also contain the Attack Time Offset setting (p. 4). The final TVA Envelope attack time value is therefore the sum of the tone's TVA Envelope Time 1 setting, the patch's Attack Time Offset, and the part's Attack Time Offset. If the tone's Time 1 is already set to "127" (maximum), there will be no change produced by setting the Attack Time Offset to a positive value. The same applies to the TVF envelope. -64–+63
Decay	Adjusts the TVA/TVF Envelope Decay Time for the patch or drum kit assigned to a part. -64–+63
Release (Release Time Offset)	Adjusts the TVA/TVF Envelope Release Time for the patch or drum kit assigned to a part. * Patches also contain a Release Time Offset setting (p. 4). The final TVA Envelope release time value is therefore the sum of the tone's TVA Envelope Time 4 setting, the patch's Release Time Offset, and the part's Release Time Offset. If the tone's Time 4 is set to "127" (maximum), there will be no change in the Release Time Offset, even when this is set to a positive value. The same applies to the TVF envelope. -64–+63

VIBRATO

Parameter	Value/Explanation
Rate	For each part, adjust the vibrato speed (the rate at which the pitch is modulated). The pitch will be modulated more rapidly for higher settings, and more slowly with lower settings. -64–+63
Depth	For each part, this adjusts the depth of the vibrato effect (the depth at which the pitch is modulated). The pitch will be modulated more greatly for higher settings, and less with lower settings. -64–+63
Delay	For each part, this adjusts the time delay until the vibrato (pitch modulation) effect begins. Higher settings will produce a longer delay time before vibrato begins, while lower settings produce a shorter time. -64–+63

SCALE

Parameter	Value/Explanation
C–B	Make scale tune settings for each part. -64–+63

Equal Temperament

This tuning divides the octave into 12 equal parts, and is the most widely used method of temperament used in Western music.

Just Temperament (Tonic of C)

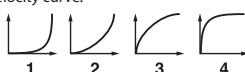
Compared with equal temperament, the principle triads sound pure in this tuning. However, this effect is achieved only in one key, and the triads will become ambiguous if you transpose.

Arabian Scale

In this scale, E and B are a quarter note lower and C \sharp , F \sharp and G \sharp are a quarter-note higher compared to equal temperament. The intervals between G and B, C and E, F and G \sharp , B \flat and C \sharp , and E \flat and F \sharp have a natural third—the interval between a major third and a minor third. On the JUNO-DS, you can use Arabian temperament in the three keys of G, C and F.

Note name	Equal temperament	Just Temperament (tonic C)	Arabian Scale
C	0	0	-6
C \sharp	0	-8	+45
D	0	+4	-2
E \flat	0	+16	-12
E	0	-14	-51
F	0	-2	-8
F \sharp	0	-10	+43
G	0	+2	-4
G \sharp	0	+14	+47
A	0	-16	0
B \flat	0	+14	-10
B	0	-12	-49

MIDI

Parameter	Value/Explanation
PC	For each MIDI channel, specify whether MIDI messages will be received (ON), or not (OFF). Assigning a check mark (✓) will enable reception.
BS	Program Change
PB	Bank Select
PA	Pitch Bend
CA	Polyphonic Aftertouch
MD	Channel Aftertouch
VO	Modulation
PN	Volume
EX	Pan
HD	Expression
PL	Hold 1
PC-VC	Set PL (phase lock) to "✓" (ON) when you want to suppress discrepancies in timing of parts played on the same MIDI channel. * When the PL (phase lock) is set to "ON," parts on the same MIDI channel are put in a condition in which their timing is matched, enabling them to be played at the same time. Accordingly, a certain amount of time may elapse between reception of the Note messages and playing of the sounds. Turn this setting to "ON" only as needed.
VC	Selects Velocity Curve for each MIDI channel one of the four following Velocity Curve types that best matches the touch of the connected MIDI keyboard. Set this to "—" (OFF) if you are using the MIDI keyboard's own velocity curve. 

Part Edit

MEMO

- PART EDIT and PERFORMANCE EDIT have the same parameters in common.
- If you're using the pattern sequencer, the part edit settings are saved as a "pattern."

Procedure

- Press the [PATCH/PERFORM] button to make it light.
- Select a performance that you want to edit.
- Press the [SAMPLE IMPORT] button and [DAW CONTROL] button simultaneously.
The EDIT MENU screen appears.
- Move the cursor to "PART EDIT" and press the [ENTER] button.
The PART EDIT screen appears.
- Move the cursor to tab, and use the [\blacktriangleleft] [\triangleright] buttons to switch the pages.
- Move the cursor to the parameter that you want to edit, and use the value dial to change the value.
- To save the edited settings, perform the operation "Saving Your Settings (Write)" (refer to owner's manual).

MEMO

- In the PART EDIT screen, you can use pads [1]–[8] to select the part that you want to edit. If you hold down the [SHIFT] button and press a pad [1]–[8], a part 9–16 is selected.

Performance Parameters

PATCH

Parameter	Value/Explanation
TYPE	Sets the assignment of a patch (Patch) or drum kit (Drum) to each of the parts. Patch, Drum
BANK	Selects the group to which the desired patch or drum kit belongs. DS (DS tone), PRST (Preset), GM (GM2 tone), EXP (expansion sounds), USER
Category number	Selects the desired patch or drum kit by its number. 0001–

LEVEL/CH

Parameter	Value/Explanation
Solo Switch	Turns on the part that you want to solo. Parts other than the soloed part are not heard. OFF, ON
Mute Switch	Specifies whether each part's performance is temporarily muted (ON) or not muted (OFF). * The Mute parameter does not turn the part off; it mutes the sound by minimizing the volume. Therefore, the part still receives MIDI messages. OFF, ON
Level	Adjust the volume of each part. This setting's main purpose is to adjust the volume balance between parts. 0–127
Pan	Adjust the pan of each part. "L64" is far left, "0" is center, and "63R" is far right. L64–0–63R
Rx Switch	For each part, specify whether MIDI messages will be received (ON), or not (OFF). If this is "OFF," the part will not respond. Normally, you should leave this "ON," but you can turn it "OFF" when you do not want a specific part to be playing during song playback. OFF, ON
Rx Channel	Specifies the MIDI receive channel for each part. * You can't edit this parameter if the [PATTERN SEQUENCER] button is lit. 1–16

OUTPUT

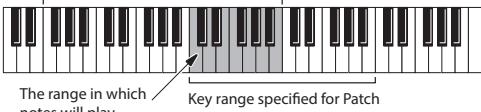
Parameter	Value/Explanation
Output Assign	Specifies for each part how the direct sound will be output.
	MFX Output in stereo through MFX. You can also apply chorus or reverb to the sound that passes through MFX.
	L+R Output to the OUTPUT L (MONO) jack and OUTPUT R jack in stereo without passing through MFX.
	L, R Output to the OUTPUT L (MONO) jack or OUTPUT R jack in mono without passing through MFX.
PAT	Outputs according to the settings for patch.
Output MFX Sel	Of the three types of MFX that can be used simultaneously, specify which MFX will be used. 1–3 (MFX1–MFX3)
Output Level	Set the level of the signal that is sent to the output destination specified by Part Output Assign. 0–127
Cho Send Level	Sets the level of the signal sent to chorus for each part. 0–127
Rev Send level	Sets the level of the signal sent to reverb for each part. 0–127

PITCH

Parameter	Value/Explanation
Octave Shift	Adjusts the pitch of the part's sound up or down in units of an octave (± 3 octaves). * Note that when a rhythm set is assigned to a part, you cannot modify the Octave Shift. -3–+3
Coarse Tune	Adjusts the pitch of the part's sound up or down in semitone steps (± 4 octaves). -48–+48
Fine Tune	Adjusts the pitch of the part's sound up or down in 1-cent steps (± 50 cents). -50–+50
Mono/Poly	Set this parameter to "MONO" when the patch assigned to the part is to be played monophonically, or to "POLY" when the patch is to be played polyphonically. If you want to use the Mono/Poly setting of the patch assigned to the part (p. 5), set this to "PAT." * This setting is ignored for parts to which a drum kit is assigned. MONO, POLY, PAT
Legato Switch	Turn this parameter "ON" when you want to use the Legato feature and "OFF" when you don't. If you want to use the Legato Switch setting of the patch assigned to the part (p. 5), set this to "PAT." * This setting is ignored for parts to which a drum kit is assigned. OFF, ON, PAT
Bend Range	Specifies the amount of pitch change in semitones (2 octaves) that will occur when the Pitch Bend Lever is moved. The amount of change when the lever is tilted is set to the same value for both left and right sides. If you want to use the Pitch Bend Range setting of the patch assigned to the part (p. 7), set this to "PAT." 0–24, PAT
Porta Switch	Turn this parameter "ON" when you want to apply Portamento and "OFF" when you don't. If you want to use the Portamento Switch setting of the patch assigned to the part (p. 5), set this to "PAT." OFF, ON, PAT
Porta Time	When portamento is used, this specifies the time over which the pitch will change. Higher settings will cause the pitch change to the next note to take more time. If you want to use the Portamento Time setting of the patch assigned to the part (p. 5), set this to "PAT." * This setting is ignored for parts to which a drum kit is assigned. 0–127, PAT

Performance Mode

KBD

Parameter	Value/Explanation
Kbd Switch	Specifies, for each part, whether or not the keyboard controller section will be connected to the internal sound generator and MIDI OUT. Normally you will leave this off; you can turn it on if you want to layer sounds. OFF, ON
Key Range Lower, Upper	Specifies the lowest/highest note that the tone will sound for each part. * When the Key Range (p. 7) is set for each individual tone in a patch, sounds are produced in the range where the Key Range of each tone and the Key Range for the part overlap. 1–16 
Velo Sens Offset (Velocity Sensitivity Offset)	This changes the volume and cutoff frequency for each part according to the velocity with which the keys are pressed. If you want strongly played notes to raise the volume/cutoff frequency, set this parameter to positive (+) settings. If you want strongly played notes to lower the volume/cutoff frequency, use negative (-) settings. Set Velocity Sensitivity to "0" when you want sounds played at a fixed volume and cutoff frequency, regardless of the force with which the keys are played. * Patches also contain a Velocity Sensitivity Offset setting (p. 5). The ultimate Velocity Sensitivity Offset value is the sum of the part's and the patch's Velocity Sensitivity Offsets. Accordingly, if the patch's Velocity Sensitivity Offset is set to "127" (maximum), there will be no change in the part's Velocity Sensitivity Offset, even when this is set to a positive value. -63–+63
Voice Reserve	Specifies the number of voices that will be reserved for each part when more than 128 voices are played simultaneously. * It is not possible for the settings of all parts to total an amount greater than 128. 0–63, FULL
Octave Shift	Adjusts the pitch of the part's sound up or down in units of an octave (± 3 octaves). * Note that when a rhythm set is assigned to a part, you cannot modify the Octave Shift. -3–+3

Calculating the number of voices being used

The JUNO-DS is able to play up to 128 notes simultaneously. The polyphony, or the number of voices (sounds) does not refer only to the number of sounds actually being played, but changes according to the number of tones used in the patches, and the number of Waves used in the tones. The following method is used to calculate the number of sounds used for one patch being played.
(number of sounds being Played) x (number of tones used by patches being played) x (number of waves used in the tones) Realtime Stretch requires twice the normal polyphony.

OFFSET

Parameter	Value/Explanation
Cutoff Offset	Adjusts the cutoff frequency for the patch or rhythm set assigned to a part. * Patches also have a Cutoff Offset setting (p. 4). The final Cutoff frequency value is the sum of the tone Cutoff Frequency value and the patch and part Cutoff Offset values. If the tone's cutoff frequency is already set to "127" (maximum), there will be no change produced by setting the Cutoff Offset to a positive value. -64–+63
Reso Offset (Resonance Offset)	Adjusts the Resonance for the patch or rhythm set assigned to a part. * Patches also have a Resonance Offset setting (p. 4). The final Resonance value is the sum of the tone Resonance value and the patch and part Resonance Offset values. If the tone's resonance is already set to "127" (maximum), there will be no change produced by setting the resonance offset to a positive value. -64–+63
Attack Offset (Attack Time Offset)	Adjusts the TVA/TVF Envelope Attack Time for the patch or drum kit assigned to a part. * Patches also contain the Attack Time Offset setting (p. 4). The final TVA Envelope attack time value is therefore the sum of the tone's TVA Envelope Time 1 setting, the patch's Attack Time Offset, and the part's Attack Time Offset. If the tone's Time 1 is already set to "127" (maximum), there will be no change produced by setting the Attack Time Offset to a positive value. The same applies to the TVF envelope. -64–+63
Decay Offset	Adjusts the TVA/TVF Envelope Decay Time for the patch or drum kit assigned to a part. -64–+63
Release Offset (Release Time Offset)	Adjusts the TVA/TVF Envelope Release Time for the patch or drum kit assigned to a part. * Patches also contain a Release Time Offset setting (p. 4). The final TVA Envelope release time value is therefore the sum of the tone's TVA Envelope Time 4 setting, the patch's Release Time Offset, and the part's Release Time Offset. If the tone's Time 4 is set to "127" (maximum), there will be no change in the Release Time Offset, even when this is set to a positive value. The same applies to the TVF envelope. -64–+63

VIBRATO

Parameter	Value/Explanation
Vibrato Rate	For each part, adjust the vibrato speed (the rate at which the pitch is modulated). The pitch will be modulated more rapidly for higher settings, and more slowly with lower settings. -64–+63
Vibrato Depth	For each part, this adjusts the depth of the vibrato effect (the depth at which the pitch is modulated). The pitch will be modulated more greatly for higher settings, and less with lower settings. -64–+63
Vibrato Delay	For each part, this adjusts the time delay until the vibrato (pitch modulation) effect begins. Higher settings will produce a longer delay time before vibrato begins, while lower settings produce a shorter time. -64–+63

SCALE

Parameter	Value/Explanation
C–B	Make scale tune settings for each part. -64–+63

Equal Temperament

This tuning divides the octave into 12 equal parts, and is the most widely used method of temperament used in Western music.

Just Temperament (Tonic of C)

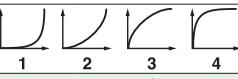
Compared with equal temperament, the principle triads sound pure in this tuning. However, this effect is achieved only in one key, and the triads will become ambiguous if you transpose.

Arabian Scale

In this scale, E and B are a quarter note lower and C \sharp , F \sharp and G \sharp are a quarter-note higher compared to equal temperament. The intervals between G and B, C and E, F and G \sharp , B \flat and C \sharp , and E \flat and F \sharp have a natural third—the interval between a major third and a minor third. On the JUNO-DS, you can use Arabian temperament in the three keys of G, C and F.

Note name	Equal temperament	Just Temperament (tonic C)	Arabian Scale
C	0	0	-6
C \sharp	0	-8	+45
D	0	+4	-2
E \flat	0	+16	-12
E	0	-14	-51
F	0	-2	-8
F \sharp	0	-10	+43
G	0	+2	-4
G \sharp	0	+14	+47
A	0	-16	0
B \flat	0	+14	-10
B	0	-12	-49

MIDI

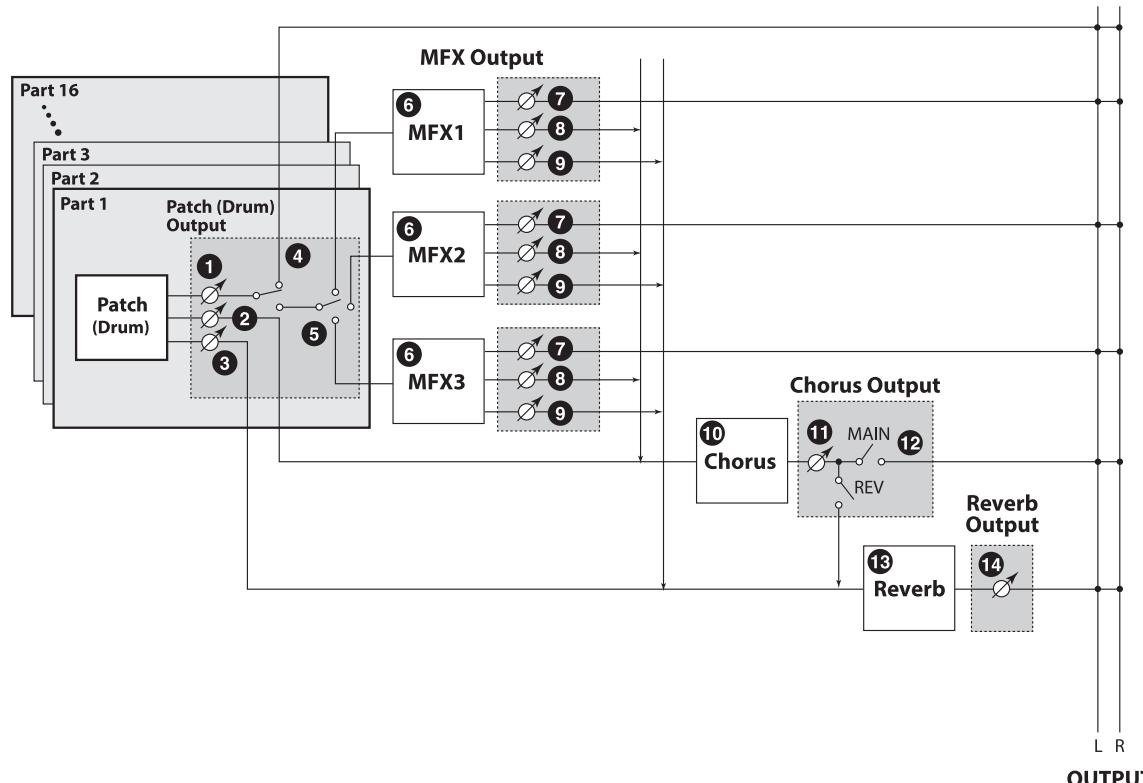
Parameter	Value/Explanation
PC-HOLD	For each MIDI channel, specify whether MIDI messages will be received (ON), or not (OFF). Assigning a check mark (✓) will enable reception. PC Program Change BS Bank Select BEND Pitch Bend PAFT Polyphonic Aftertouch CAFT Channel Aftertouch MOD Modulation VOL Volume PAN Pan EXP Expression HOLD Hold 1
VERO CRV	Selects Velocity Curve for each MIDI channel one of the four following Velocity Curve types that best matches the touch of the connected MIDI keyboard. Set this to "OFF" if you are using the MIDI keyboard's own velocity curve. OFF, 1–4 
PHASELOCK	Set PHASELOCK to "ON" when you want to suppress discrepancies in timing of parts played on the same MIDI channel. * When the PHASELOCK is set to "ON," parts on the same MIDI channel are put in a condition in which their timing is matched, enabling them to be played at the same time. Accordingly, a certain amount of time may elapse between reception of the Note messages and playing of the sounds. Turn this setting to "ON" only as needed. OFF, ON

Effects Edit

In Performance mode you can use three multi effects (MFX1–3), one chorus, and one reverb. For each of the three MFX, the chorus, and the reverb, you can specify whether it will operate according to the effect settings of the performance, or according to the effect settings of the patch or drum kit assigned to the part you specify.

The three MFX can be used independently, or you can connect two or three of them in series.

Signal Flow



Make these settings in the "OUTPUT" tab of the PART EDIT screen.	<p>① Output Level ② Cho Send Level ③ Rev Send Send ④ Output Assign ⑤ Output MFX Sel ⑥ MFX Type ⑦ Output Level ⑧ Chorus Send Level ⑨ Reverb Send level</p>	p. 21
Make these settings in the "MFX1–3" tab of the EFFECTS EDIT screen.		p. 24

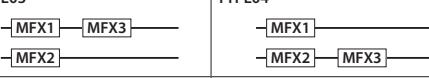
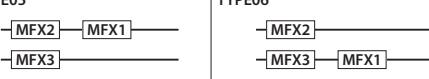
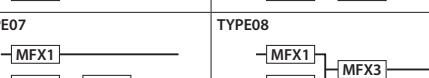
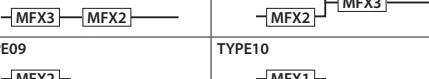
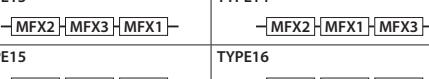
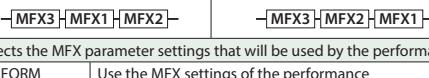
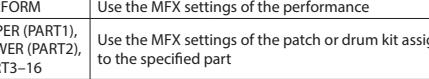
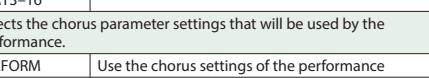
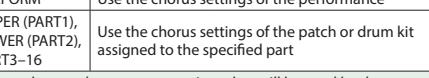
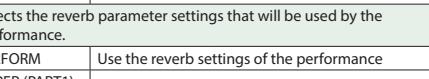
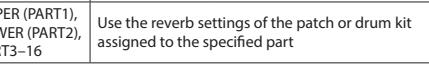
Make these settings in the "CHORUS" tab of the EFFECTS EDIT screen.	<p>⑩ ChorusType ⑪ Chorus Level ⑫ Output Select</p>	p. 24
Make these settings in the "REVERB" tab of the EFFECTS EDIT screen.	<p>⑬ Reverb Type ⑭ Reverb Level</p>	

Procedure

1. Press the [SAMPLE IMPORT] button and [DAW CONTROL] button simultaneously.
The EDIT MENU screen appears.
2. Move the cursor to "EFFECTS EDIT," and press the [ENTER] button.
The EFFECTS EDIT screen appears.
3. Move the cursor to tab, and use the [\blacktriangleleft] [\triangleright] buttons to switch the pages.
4. Move the cursor to the parameter that you want to edit, and use the value dial to change the value.
5. To save the edited settings, perform the operation "Saving Your Settings (Write)" (refer to owner's manual).

Effects Parameters

COMMON

Parameter	Value/Explanation
Specify how MFX1–3 will be connected.	
TYPE01	TYPE02 
TYPE02	TYPE03 
TYPE03	TYPE04 
TYPE04	TYPE05 
TYPE05	TYPE06 
TYPE06	TYPE07 
TYPE07	TYPE08 
TYPE08	TYPE09 
TYPE09	TYPE10 
TYPE10	TYPE11 
TYPE11	TYPE12 
TYPE12	TYPE13 
TYPE13	TYPE14 
TYPE14	TYPE15 
TYPE15	TYPE16 
TYPE16	
Selects the MFX parameter settings that will be used by the performance.	
MFX1–3 Source	PERFORM Use the MFX settings of the performance
	UPPER (PART1), LOWER (PART2), PART3–16 Use the MFX settings of the patch or drum kit assigned to the specified part
Selects the chorus parameter settings that will be used by the performance.	
Chorus Source	PERFORM Use the chorus settings of the performance
	UPPER (PART1), LOWER (PART2), PART3–16 Use the chorus settings of the patch or drum kit assigned to the specified part
Selects the reverb parameter settings that will be used by the performance.	
Reverb Source	PERFORM Use the reverb settings of the performance
	UPPER (PART1), LOWER (PART2), PART3–16 Use the reverb settings of the patch or drum kit assigned to the specified part

MFX1–3

Parameter	Value/Explanation
MFX Type	Turns MFX on/off, and specifies the type of MFX that is used. If MFX is on, <input checked="" type="checkbox"/> shows a “✓” mark. * For details on MFX parameters, refer to “MFX Parameters (MFX, MFX1–3)” (p. 40).
	00: THRU–80: BIT CRUSHER
Parameters for each MFX type	Edit the parameters of the MFX type you've selected. * Refer to “MFX Parameters (MFX, MFX1–3)” (p. 40).
Chorus Send Level	Specifies the level of the signal sent to the chorus. 0–127
Reverb Send Level	Specifies the level of the signal sent to the reverb. 0–127

MFX1–3 CTRL

Parameter	Value/Explanation
Source 1–4	Sets the MIDI message used to change the MFX parameter with the MFX control.
	OFF MFX control will not be used.
	CC01–31, 33–95 Controller numbers 1–31, 33–95
	PITCH BEND Pitch bend
Destination 1–4	AFTERTOUCH Aftertouch
	SYS CTRL1–4 Use the System Control 1–4 Source setting (p. 34).
Sens 1–4	Sets the MFX parameters to be controlled with the Source1–4. The MFX parameters available for control will depend on the MFX Type.
	* Refer to “MFX Parameters (MFX, MFX1–3)” (p. 40).
	Specifies the depth of MFX control.
	Specify a positive (+) value if you want to change the value of the assigned destination in a positive direction (larger, toward the right, faster, etc.), or specify a negative value (-) if you want to change the value in a negative direction (smaller, toward the left, slower, etc.). Larger values will allow a greater amount of control.
	-63+63

CHORUS

Parameter	Value/Explanation
Chorus Type	Turns Chorus on/off, and specifies the type of chorus that is used. If Chorus is on, <input checked="" type="checkbox"/> shows a “✓” mark.
	00: OFF Neither chorus or delay is used.
	01: CHORUS Chorus is used.
	02: DELAY Delay is used.
Parameters for each chorus type	Set the parameters of the selected chorus type. The chorus parameters available for control will depend on the Chorus Type.
	* Refer to “Chorus Parameters” (p. 58).
Output Select	Specifies how the sound routed through chorus will be output.
	MAIN Output to the OUTPUT jacks in stereo.
	REV Output to reverb in mono.
M+R	Output to the OUTPUT jacks in stereo, and to reverb in mono.
Chorus Level	Adjusts the volume of the sound that has passed through chorus.
	0–127

REVERB

Parameter	Value/Explanation
Reverb Type	Turns Reverb on/off, and specifies the type of reverb that is used. If Reverb is on, <input checked="" type="checkbox"/> shows a “✓” mark.
	00: OFF Reverb is not used.
	01: REVERB Normal reverb
	02: SRV ROOM This reverb simulates typical room acoustic reflections.
	03: SRV HALL This reverb simulates typical concert hall acoustic reflections.
	04: SRV PLATE This reverb simulates a reverb plate, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate.
Parameters for each reverb type	Set the parameters of the selected reverb type. The reverb parameters available for control will depend on the Reverb Type.
	* Refer to “Reverb Parameters” (p. 58).
Reverb Level	Adjusts the volume of the sound that has passed through reverb.
	0–127

Sample Edit

Procedure

1. Press the [SAMPLE IMPORT] button.
The SAMPLE MENU screen appears.
2. Move the cursor to "SAMPLE EDIT" and press the [ENTER] button.
The SAMPLE EDIT screen appears.
3. Move the cursor to tab, and use the [\blacktriangleleft] [\triangleright] buttons to switch the pages.
4. Move the cursor to the parameter that you want to edit, and use the value dial to change the value.
5. To save the edited settings, perform the operation "Saving Your Settings (Write)" (refer to owner's manual).

Sample Parameters

SAMPLE

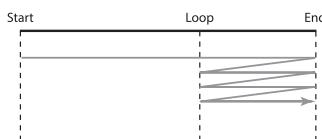
NOTE

The following parameters cannot be edited for samples Sp:001–006 in the PRST bank.

Parameter	Value/Explanation
Original Key	Specifies the note number that plays the sample at the pitch at which it was imported. C-1–G9
Loop Switch	Turns loop playback on/off. OFF, ON
Start	Playback start point (Start Point) (*1) This lets you skip an unwanted portion of the waveform at the beginning of the sample so that the sample plays with the desired timing. 0–
Loop	Point at which the repeated portion starts on the second and subsequent plays (Loop Point) (*1) Specify this if you want to loop from a location other than Start After the Sample played back from Start to End, it will then be repeatedly played back in the forward direction, from the Loop to End. 0–
End	Playback end point (End Point) (*1) This lets you omit an unwanted portion of the waveform at the end of the sample. 0–

(*1)
The length of the imported sample is calculated, and the position of each point is shown as a time (units: milliseconds).

The displayed value (time) is the value when the sample is played at the key specified by Original Key. The playback time is shorter than displayed if you play a key that is higher than the Original Key, and longer than displayed if you play a key that is lower.



TVF

Parameter	Value/Explanation
	Selects the type of filter. A filter cuts or boosts a specific frequency region to change a sound's brightness, thickness, or other qualities. * If you set "LPF2" or "LPF3," the setting for the Resonance will be ignored (p. 25).
OFF	No filter is used.
LPF	Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency (Cutoff Freq) in order to round off, or un-brighten the sound. This is the most common filter used in synthesizers.
BPF	Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency (Cutoff Freq), and cuts the rest. This can be useful when creating distinctive sounds.
HPF	High Pass Filter. This cuts the frequencies in the region below the cutoff frequency (Cutoff Freq). This is suitable for creating percussive sounds emphasizing their higher tones.
PKG	Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency (Cutoff Freq). You can use this to create wah-wah effects by employing an LFO to change the cutoff frequency cyclically.
LPF2	Low Pass Filter 2. Although frequency components above the Cutoff frequency (Cutoff Freq) are cut, the sensitivity of this filter is half that of the LPF. This makes it a comparatively warmer low pass filter. This filter is good for use with simulated instrument sounds such as the acoustic piano.
LPF3	Low Pass Filter 3. Although frequency components above the Cutoff frequency (Cutoff Freq) are cut, the sensitivity of this filter changes according to the Cutoff frequency. While this filter is also good for use with simulated acoustic instrument sounds, the nuance it exhibits differs from that of the LPF2, even with the same TVF Envelope settings.
Filter Type	
Cutoff Frequency	Selects the frequency at which the filter begins to have an effect on the waveform's frequency components. "LPF/LPF2/LPF3" selected for the Filter Type Lower cutoff frequency settings reduce a tone's upper harmonics for a more rounded, warmer sound. Higher settings make it sound brighter. "BPF" selected for the Filter Type Harmonic components will change depending on the TVF Cutoff Frequency setting. This can be useful when creating distinctive sounds. "HPF" selected for the Filter Type Higher Cutoff Frequency settings will reduce lower harmonics to emphasize just the brighter components of the sound. "PKG" selected for the Filter Type The harmonics to be emphasized will vary depending on Cutoff Frequency setting. 0–127
Resonance	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort. 0–127

Parameter	Value/Explanation
Cutoff Keyfollow	<p>Use this parameter if you want the cutoff frequency to change according to the key that is pressed. Relative to the cutoff frequency at the C4 key (center C), positive (+) settings will cause the cutoff frequency to rise for notes higher than C4, and negative (-) settings will cause the cutoff frequency to fall for notes higher than C4. Larger settings will produce greater change.</p> <p>-200–+200</p>
Cutoff V-Curve	<p>Selects one of the following seven curves that determine how keyboard playing dynamics (velocity) influence the cutoff frequency. Set this to "FIXED" if you don't want the Cutoff frequency to be affected by the keyboard velocity.</p> <p>FIXED, 1–7</p>
Cutoff V-Sens	<p>Use this parameter when changing the cutoff frequency to be applied as a result of changes in playing velocity. If you want strongly played notes to raise the cutoff frequency, set this parameter to positive (+) settings. If you want strongly played notes to lower the cutoff frequency, use negative (-) settings.</p> <p>-63–+63</p>
Resonance V-Sens	<p>This allows keyboard velocity to modify the amount of Resonance. If you want strongly played notes to have a greater Resonance effect, set this parameter to positive (+) settings. If you want strongly played notes to have less Resonance, use negative (-) settings.</p> <p>-63–+63</p>

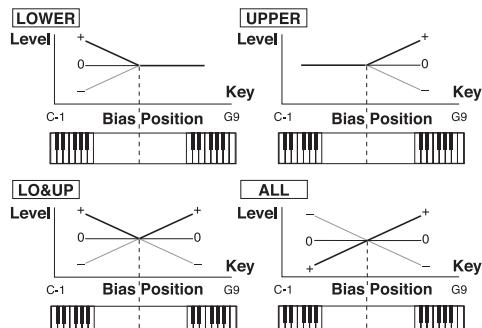
TVF ENV	
Parameter	Value/Explanation
TVF Env Depth	<p>Specifies the depth of the TVF envelope. Higher settings will cause the TVF envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.</p> <p>-63–+63</p>
TVF Env V-Curve	<p>Selects one of the following 7 curves that will determine how keyboard playing dynamics will affect the TVF envelope. Set this to "FIXED" if you don't want the TVF Envelope to be affected by the keyboard velocity.</p> <p>FIXED, 1–7</p>
TVF Env V-Sens	<p>Specifies how keyboard playing dynamics will affect the depth of the TVF envelope. Positive (+) settings will cause the TVF envelope to have a greater effect for strongly played notes, and negative (-) settings will cause the effect to be less.</p> <p>-63–+63</p>
TVF Env T1 V-Sens	<p>This allows keyboard dynamics to affect the Time 1 of the TVF envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.</p> <p>-63–+63</p>
TVF Env T4 V-Sens	<p>The parameter to use when you want key release speed to control the Time 4 value of the TVF envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.</p> <p>-63–+63</p>
TVF Env Time Keyfollow	<p>Use this setting if you want the TVF envelope times (Time 2–Time 4) to be affected by the keyboard location. Based on the TVF envelope times for the C4 key (center C), positive (+) settings will cause notes higher than C4 to have increasingly shorter times, and negative (-) settings will cause them to have increasingly longer times. Larger settings will produce greater change.</p> <p>-100–+100</p>
TVF Env Time 1–4	<p>Specify the TVF envelope times (Time 1–Time 4). Higher settings will lengthen the time until the next cutoff frequency level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.)</p> <p>0–127</p>
TVF Env Level 0–4	<p>Specify the TVF envelope levels (Level 0–Level 4). These settings specify how the cutoff frequency will change at each point, relative to the standard cutoff frequency (the cutoff frequency value specified in the TVF screen).</p> <p>0–127</p>

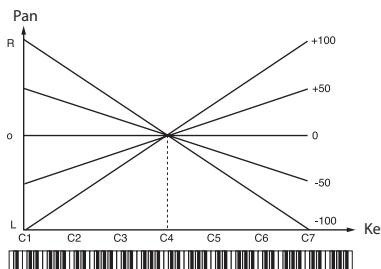
TVA

Parameter	Value/Explanation
Tone Level	Sets the volume of the tone. 0–127
Level V-Curve	You can select from seven curves that determine how keyboard playing strength will affect the volume. If you do not want the volume of the tone to be affected by the force with which you play the key, set this to "FIXED." FIXED, 1–7
Level V-Sens	Set this when you want the volume of the tone to change depending on the force with which you press the keys. Set this to a positive (+) value to have the changes in tone volume increase the more forcefully the keys are played; to make the tone play more softly as you play harder, set this to a negative (-) value. -63–+63
Bias Level	Adjusts the angle of the volume change that will occur in the selected Bias Direction. Larger settings will produce greater change. Negative (-) values will invert the change direction. -100–+100
Bias Position	Specifies the key relative to which the volume will be modified. C-1–G9
Bias Direction	Selects the direction in which change will occur starting from the Bias Position. LWR The volume will be modified for the keyboard area below the Bias Position. UPR The volume will be modified for the keyboard area above the Bias Position. L&U The volume will be modified symmetrically toward the left and right of the Bias Position. ALL The volume changes linearly with the Bias Position at the center.

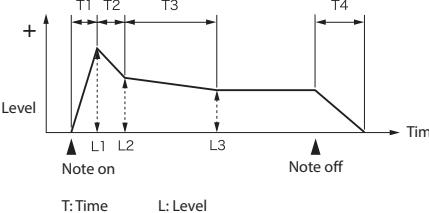
Bias

Bias causes the volume to be affected by the keyboard position. This is useful for changing volume through keyboard position (pitch) when playing acoustic instruments.



Tone Pan	Sets the pan of the tone. "L64" is far left, "0" is center, and "63R" is far right. L64–0–63R
	Use this parameter if you want key position to affect panning. Positive (+) settings will cause notes higher than C4 key (center C) to be panned increasingly further toward the right, and negative (-) settings will cause notes higher than C4 key (center C) to be panned toward the left. Larger settings will produce greater change. -100–+100
Pan Keyfollow	
Random Pan Depth	Use this parameter when you want the stereo location to change randomly each time you press a key. Higher settings will produce a greater amount of change. 0–63
Alternate Pan Depth	This setting causes panning to be alternated between left and right each time a key is pressed. Higher settings will produce a greater amount of change. "L" or "R" settings will reverse the order in which the pan will alternate between left and right. L63–0–63R

TVA ENV

Parameter	Value/Explanation
TVA-Env T1 V-Sens	This allows keyboard dynamics to affect the Time 1 of the TVA envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63–+63
TVA-Env T4 V-Sens	The parameter to use when you want key release speed to control the Time 4 value of the TVA envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value. -63–+63
TVA-Env Time KF	Use this setting if you want the TVA envelope times (Time 2–Time 4) to be affected by the keyboard location. Based on the TVA envelope times for the C4 key (center C), positive (+) settings will cause notes higher than C4 to have increasingly shorter times, and negative (-) settings will cause them to have increasingly longer times. Larger settings will produce greater change.
TVA-Env Time 1–4	Specify the TVA envelope times (Time 1–Time 4). Higher settings will lengthen the time until the next volume level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.) 0–127
TVA-Env Level 1–3	Specify the TVA envelope levels (Level 1–Level 3). These settings specify how the volume will change at each point, relative to the standard volume (the Tone Level value specified in the TVA screen). 0–127 

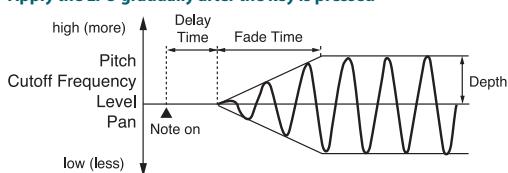
LFO1

Parameter	Value/Explanation
Waveform	Selects the waveform of the LFO. * If you set this to "BD-U" or "BD-D," you must turn the Key Trigger parameter to "ON." If this is "OFF," it will have no effect.
SIN	Sine wave
TRI	Triangle wave
SAWU	Sawtooth wave
SAWD	Sawtooth wave (negative polarity)
SQR	Square wave
RND	Random wave
BD-U	Once the attack of the waveform output by the LFO is allowed to develop in standard fashion, the waveform then continues without further change.
BD-D	Once the decay of the waveform output by the LFO is allowed to develop in standard fashion, the waveform then continues without further change.
TRP	Trapezoidal wave
S&H	Sample & Hold wave (one time per cycle, LFO value is changed)
CHS	Chaos wave
VSIN	Modified sine wave. The amplitude of a sine wave is randomly varied once each cycle.
STEP	A waveform generated by the data specified by LFO Step 1–16. This produces stepped change with a fixed pattern similar to a step modulator.
Rate	Adjusts the modulation rate, or speed, of the LFO. * This setting will be ignored if the Waveform is set to "CHS." 0–127, note
Rate Detune	LFO Rate Detune makes subtle changes in the LFO cycle rate (Rate) each time a key is pressed. Higher settings will cause greater change. * This parameter is invalid when Rate is set to "note." 0–127

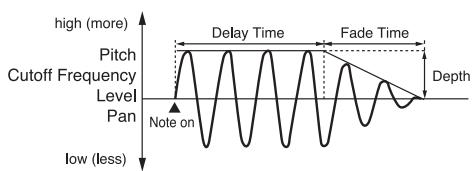
Parameter	Value/Explanation
Offset	Raises or lowers the LFO waveform relative to the central value (pitch or cutoff frequency). Positive (+) settings will move the waveform so that modulation will occur from the central value upward. Negative (-) settings will move the waveform so that modulation will occur from the central value downward. -100, -50, 0, +50, +100
Delay Time	Delay Time (LFO Delay Time) specifies the time elapsed before the LFO effect is applied (the effect continues) after the key is pressed (or released). * After referring to "How to Apply the LFO" (p. 28), change the setting until the desired effect is achieved. 0-127
	Adjusts the value for the Delay Time depending on the key position, relative to the C4 key (center C). To decrease the time that elapses before the LFO effect is applied (the effect is continuous) with each higher key that is pressed in the upper registers, select a positive value; to increase the elapsed time, select a negative value. Larger settings will produce greater change. If you do not want the elapsed time before the LFO effect is applied (the effect is continuous) to change according to the key pressed, set this to "0." -100-+100
Delay Time KF	
Fade Mode	Specifies how the LFO will be applied. * After referring to "How to Apply the LFO" (p. 28), change the setting until the desired effect is achieved. ON <, ON >, OFF <, OFF >
Fade Time	Specifies the time over which the LFO amplitude will reach the maximum (minimum). * After referring to "How to Apply the LFO" (p. 28), change the setting until the desired effect is achieved. 0-127
Key Trigger	Specifies whether the LFO cycle will be synchronized to begin when the key is pressed (ON) or not (OFF). OFF, ON
Pitch Depth	Specifies how deeply the LFO will affect pitch. -63-+63
TVF Depth	Specifies how deeply the LFO will affect the cutoff frequency. -63-+63
TVA Depth	Specifies how deeply the LFO will affect the volume. -63-+63
Pan Depth	Specifies how deeply the LFO will affect the pan. -63-+63

STEP LFO

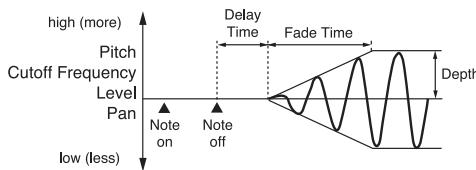
Parameter	Value/Explanation
Step Type	When generating an LFO waveform from the data specified in LFO Step 1-16, specify whether the level will change abruptly at each step (TYPE 1) or will be connected linearly (TYPE 2). TYPE 1, TYPE 2
LFO Step 1-16	Specifies the data for the Step LFO. If the LFO Pitch Depth is +63, each +1 unit of the step data corresponds to a pitch of +50 cents. -36-+36

How to Apply the LFO**Apply the LFO gradually after the key is pressed**

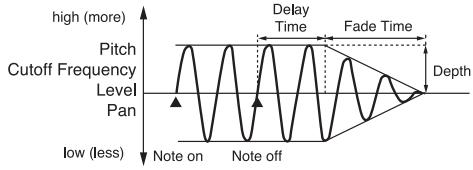
Parameter	Value/Explanation
Fade Mode	ON <
Delay Time	The time from when the keyboard is played until the LFO begins to be applied.
Fade Time	The time over which the LFO amplitude will reach the maximum after the Delay Time has elapsed.

Apply the LFO immediately when the key is pressed, and then gradually begin to decrease the effect

Parameter	Value/Explanation
Fade Mode	ON >
Delay Time	The time that the LFO will continue after the keyboard is played.
Fade Time	The time over which the LFO amplitude will reach the minimum after the Delay Time has elapsed.

Apply the LFO gradually after the key is released

Parameter	Value/Explanation
Fade Mode	OFF <
Delay Time	The time from when the keyboard is released until the LFO begins to be applied.
Fade Time	The time over which the LFO amplitude will reach the maximum after the Delay Time has elapsed.

Apply the LFO from when the key is pressed until it is released, and gradually begin to decrease the effect when the key is released

Parameter	Value/Explanation
Fade Mode	OFF >
Delay Time	The time that the LFO will continue after the keyboard is released.
Fade Time	The time over which the LFO amplitude will reach the minimum after the Delay Time has elapsed.

OUTPUT

Parameter	Value/Explanation
Tone Chorus Send	Specifies the level of the signal sent to the chorus. 0-127
Tone Reverb Send	Specifies the level of the signal sent to the reverb. 0-127

Editing Arpeggios

1. Press the [ARPEGGIO] button to make it light.

The ARPEGGIO screen appears.

2. Move the cursor to the item that you want to edit, and use the value dial to edit the setting.

3. Press the [EXIT] button to exit the ARPEGGIO screen.

Parameter	Value/Explanation	
STYLE	Selects the arpeggio's basic performance style. 001–128	
Part	In performance mode, this selects the part (only one part) that will be played by the arpeggio. If a drum kit is assigned to a part, you can play a drum kit along with the arpeggios. * This parameter is not shown if the patch mode is selected or the [SUPER LAYER] button is on.	
Arp Hold	Part1 (Upper), Part2 (Lower), Part3–16 You can produce arpeggios even without continuing to press the keyboard. OFF, ON	
Grid	Sets the particular note division and resolution in a "single grid" used in creating the arpeggio in an Arpeggio Style, and how much of a "shuffle" syncopation is to be applied (none/weak/strong) to it (grid type). * Grid settings are shared with the rhythm pattern. 1/4 (♩) Quarter note (one grid section = one beat) 1/8 (♩) Eighth note (two grid sections = one beat) 1/8 (♩) L Eighth note shuffle Light (two grid sections = one beat, with a light shuffle) 1/8 (♩) H Eighth note shuffle Heavy (two grid sections = one beat, with a heavy shuffle) 1/12 (♩) Eighth note triplet (three grid sections = one beat) 1/16 (♩) Sixteenth note (four grid sections = one beat) 1/16 (♩) L Sixteenth note shuffle Light (four grid sections = one beat, with a light shuffle) 1/16 (♩) H Sixteenth note shuffle Heavy (four grid sections = one beat, with a heavy shuffle) 1/24 (♩) Sixteenth note triplet (six grid sections = one beat)	
Duration	This determines whether the sounds are played staccato (short and clipped), or tenuto (fully drawn out). * Duration settings are shared with the rhythm pattern.	
Motif	Refer to "Selecting Ascending/Descending Variations (Motif)" (p. 29).	
Velocity	Specifies the loudness of the notes that you play. REAL 1–127 The velocity will change according to how strongly you strike the key.	
Oct Range	Adds an effect that shifts arpeggios one cycle at a time in octave units (octave range). You can set the shift range upwards or downwards (up to three octaves up or down). -3→+3	
Accent	Adjust the amount ("spread") of this dynamic variation. With a setting of "100," the arpeggiated notes will have the velocities that are programmed by the arpeggio style. With a setting of "0," all arpeggiated notes will be sounded at a fixed velocity. 0–100	

Selecting Ascending/Descending Variations (Motif)

Selects the method used to play sounds (motif) when you have a greater number of notes than programmed for the Arpeggio Style.

* When the number of keys played is less than the number of notes in the Style, the highest-pitched of the pressed keys is played by default.

Value	Explanation
Up (L)	Only the lowest of the keys pressed is sounded each time, and the notes play in order from the lowest of the pressed keys.
Up (L&H)	Notes from both the lowest and highest pressed keys are sounded each time, and the notes play in order from the lowest of the pressed keys.
Up ()	The notes play in order from the lowest of the pressed keys. No note is played every time.
Down (L)	Only the lowest of the keys pressed is sounded each time, and the notes play in order from the highest of the pressed keys.
Down (L&H)	Notes from both the lowest and highest pressed keys are sounded each time, and the notes play in order from the highest of the pressed keys.
Down ()	The notes play in order from the highest of the pressed keys. No note is played every time.
U/D (L)	Notes will be sounded from the lowest to the highest key you press and then back down to the lowest key, with only the lowest key sounded each time.
U/D (L&H)	Notes from both the lowest and highest pressed keys are sounded each time, and the notes play in order from the lowest of the pressed keys and then back again in the reverse order.
U/D ()	The notes play in order from the lowest of the pressed keys, and then back again in the reverse order. No note is played every time.
Rand (L)	Notes will be sounded randomly for the keys you press, with only the lowest key sounded each time.
Rand ()	Only the lowest of the keys pressed is sounded each time, the notes you press will be sounded randomly. No note is played every time.
Phrase	Pressing just one key will play a phrase based on the pitch of that key. If you press more than one key, the key you press last will be used.

Editing the Vocoder/Auto Pitch

1. Press the [VOCODER/AUTO PITCH] button to make it light.

The VOCODER/AUTO-PITCH screen appears.



2. Move the cursor to the parameter that you want to edit, and use the value dial to change the value.

3. To save the edited settings, perform the operation "Saving the Vocoder/Auto Pitch Settings (Write)."

Parameter	Value/Explanation
Mode	Selects the vocoder or auto-pitch. Vocoder, Auto-Pitch
Bank, Number	Selects the vocoder or auto-pitch setting. PRST 001–010 Vocoder settings PRST 011–020 Auto-pitch settings USER 501–520 User settings
Mode: Vocoder	
Carrier	Selects the sound that will be the basic waveform of the vocoder sound.
Level	Adjusts the output level of the sound that passes through the vocoder. 0–127
Pan	Adjusts the stereo position of the sound that passes through the vocoder. L64–63R
Mic Sens	Specifies the input sensitivity of the mic. 0–127
Envelope	Selects the character of the sound. SHARP Emphasizes the human voice. SOFT Emphasizes the sound of the instrument. LONG Produces a vintage sound with a long decay.
Synth Level	Specifies the input level of the instrumental sound. 0–127
Mic Mix Level	Specifies the amount of the mic audio passing through the Mic HPF (Mic High Pass Filter) that is added to the output of the vocoder. 0–127
Mic HPF	Specifies the frequency at which the high pass filter (HPF) applied to the mic audio starts to take effect. If this is set to "BYPASS," no filter is applied. BYPASS, 1000–16000Hz
Mode: Auto-Pitch	
Keyboard Part	Selects the sound that is played on the keyboard when using Auto-Pitch. Selects how Auto-Pitch correction is performed. SOFT Corrects the pitch smoothly. HARD Corrects the pitch quickly. TypeELECTRIC1 Corrects the pitch in a stepwise manner. ELECTRIC2 Corrects the pitch more strongly than ELECTRIC1. This reproduces the mechanical, step-wise pitch correction used in pop music. ROBOT Corrects the pitch to the specified note.
Level	Adjusts the output level of the sound that passes through the auto-pitch. 0–127
Pan	Adjusts the stereo position of the sound that passes through auto-pitch. L64–63R
Scale	Selects the scale to which Auto-Pitch corrects the pitch. CHROMATIC Corrects the pitch in semitone steps. Maj (Min) Corrects the pitch to the notes of the scale (Key) you specify. If the Scale parameter is set to "Maj (Min)," specify the key of the song you're singing. For example if the song is in C major, specify "C"; if the song is in A minor, specify "Am." C-Bm Relationship between the key of the song and the key signature (and) of the score
Key	Major keys C F B [♭] E [♭] A [♭] D [♭] Minor keys Am Dm Gm Cm Fm B [♭] m Major keys C G D A E B F [#] Minor keys Am Em Bm F [#] m C [#] m G [#] m D [#] m
Octave	Makes the pitch one octave higher/lower. -1, 0, +1
Gender	Settings in the "-" direction give the voice an increasingly masculine character; settings in the "+" direction give the voice an increasingly feminine character. -10–+10
Balance	Specifies the volume balance between the direct sound (D) and the effect sound (W). D100:0W–D0:100W
Note	Fixes the pitch. * Available if Type is set to "Robot." C–B

Saving the Vocoder/Auto Pitch Settings (Write)

1. Press the [WRITE] button to make it light.

The VOCODER/AUTO-PITCH NAME screen appears.

2. Assign a name to the data that you're saving.

Operation	Explanation
[◀] [▶] buttons	Move the cursor.
Value dial, [-] [+]-buttons	Select the character.
[▼] [▲] buttons	Switch between uppercase and lowercase.

Inserting/ Deleting Characters

1. While entering a name, press the [MENU] button.

The NAME MENU window appears. The window closes if you press the button once again.

2. Move the cursor to "INSERT" or "DELETE" and press the [ENTER] button.

Function	Explanation
INSERT	Press the [ENTER] button to insert a space (blank) at the cursor location.
DELETE	Press the [ENTER] button to delete the character at the cursor location; subsequent characters will be moved forward to fill the gap.

3. When you've specified the name, press the [ENTER] button.

4. Use the value dial to specify the save-destination.

5. Press the [ENTER] button.

A confirmation message appears.
If you decide to cancel, press the [EXIT] button.

6. Move the cursor to "OK," and press the [ENTER] button.

Saving is complete when the screen indicates "Completed!"

NOTE

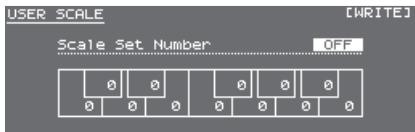
Never turn off the power while the screen indicates "Writing..."

Creating an Original Scale (USER SCALE)

You can adjust the pitch of each note from C through B in units of one cent.
The pitch you specify for each note is applied to that note for all octaves.
You can create and save nine different "user scales" for later recall.

Setting a User Scale

1. Press [MENU] button.
The MENU screen appears.
2. Move the cursor to "USER SCALE," and press the [ENTER] button.
The USER SCALE screen appears.



3. Select each of the 12 notes from C to B, and use the value dial to edit their pitch.

* You can also use the keyboard to select a note to edit.

Value -64--+63

Quarter Tone settings

1. In the USER SCALE screen, hold down the OCTAVE [DOWN] button and play a note on the keyboard.

The pitch of the note you played is flattened by 1/4 semitone (-50 cents). Once again hold down the OCTAVE [DOWN] button and play the same note to restore it to its original pitch.

2. In the SCALE EDIT screen, hold down the OCTAVE [UP] button and play a note on the keyboard.

The pitch of the note you played is sharpened by 1/4 semitone (+50 cents). Once again hold down the OCTAVE [UP] button and play the same note to restore it to its original pitch.

4. When you've finished making settings, press the [WRITE] button.

The USER SCALE WRITE screen appears.

* If you press the [EXIT] button to exit the USER SCALE screen without performing the Write operation, the unsaved settings revert to their previous state.

5. Select the write destination number (USER 1–9), and press the [ENTER] button.

A confirmation message appears.

If you decide to cancel, press the [EXIT] button.

6. Move the cursor to "OK," and press the [ENTER] button.

Writing is complete when the screen indicates "User Scale Write Completed."

Recalling a User Scale

1. Press [MENU] button.
The MENU screen appears.
2. Move the cursor to "USER SCALE," and press the [ENTER] button.
The USER SCALE screen appears.
The currently selected user scale number is shown.
When the instrument starts up, this always indicates "OFF."
3. Press the [1]–[9] button to select a user scale.
To return to the normal state (OFF), press the [0] button.

MEMO

- If a user scale is selected, the user scale does not change even if you switch patches or performances.
- User scale returns to OFF when you turn off the power.
- If no user scale is registered to the button that you press, equal temperament is selected.
- If you use the shortcut ([KEY TOUCH]+[TRANSPOSE]) to access the USER SCALE screen, you can press a [0]–[9] button to select a user scale and immediately exit the USER SCALE screen. This is convenient when you want to recall a user scale while performing.

System Settings

Procedure

1. Press the [MENU] button.
The MENU screen appears.
2. Move the cursor to "SYSTEM" and press the [ENTER] button.
3. Move the cursor to tab, and use the [\blacktriangleleft] [\triangleright] buttons to switch the pages.
4. Move the cursor to the parameter that you want to edit, and use the value dial to change the value.
5. Press the [EXIT] button to exit the screen.

MEMO

The parameters you edit are saved when you press the [WRITE] button in the SYSTEM screen, or when you exit the SYSTEM screen.

System Parameters

GENERAL

Parameter	Value/Explanation
LCD Contrast	Adjusting the display contrast. 1–20
LCD Brightness	Adjusting the display brightness. 1–20
Auto Off	Specifies whether the unit will turn off automatically after a certain time has elapsed. If you don't want the unit to turn off automatically, choose "OFF" setting. OFF, 30, 240[min]
Power Save Time	Amount of idle time that is to pass before the JUNO-DS enters power-save mode. When the JUNO-DS enters power-save mode, it will reduce its power consumption by turning off the display backlight and minimizing button illumination. OFF, 1, 3, 5, 10, 15, 20, 30, 60[min]
Illumination	Specifies whether the buttons illuminate when they are waiting for an operation. OFF, ON

PAD COLOR

Parameter	Value/Explanation
Pad Brightness	Adjusts the brightness of pads [1]–[8]. 1–127
COLOR	The illumination color of pads [1]–[8] can be specified for each function.
Back Ground	Specifies the basic illumination color of the pads.
Level Meter	OFF, 1–13 Specifies the illumination color of the level meter that indicates the volume when you play the keyboard.
Part Select	1–13 Specifies the pad illumination color that indicates the selected part when you use the pads to select a part.
Track Select	Specifies the pad illumination color that indicates the selected track when you use the pads to select a track.
Track Data	Specifies the pad illumination color that indicates a track already containing performance data.
Track Mute	Specifies the pad illumination color that indicates a muted track.
Rhythm Pattern	Specifies the pad illumination color when the RHYTHM PATTERN screen is displayed.
Audio Player	Specifies the pad illumination color when the AUDIO PLAYER screen is displayed.
Tone Switch	Specifies the pad illumination color for pads [5]–[8] that indicate tones turned on in the PATCH EDIT screen.
Tone Select	Specifies the pad illumination color for the pad that indicates the selected tone in the PATCH EDIT screen.

PAD NOTE

Parameter	Value/Explanation
Pad Note Switch	Specifies the mode in which MIDI note messages are transmitted. OFF Messages are not transmitted. PATCH Only in patch mode. PERFORM Only in performance mode. BOTH In patch mode and in performance mode.
Pad 1–8 Note Number	Specifies the note that is transmitted. C–G9
Pad 1–8 Velocity	Specifies the velocity of the note that is transmitted. OFF, 1–127
Pad 1–8 Channel	Specifies the MIDI channel of the note that is transmitted. 1–16

KEY TOUCH

Parameter	Value/Explanation
Velo Curve	Sets the keyboard's touch. LIGHT, MEDIUM, HEAVY
Curve Offset	Adjusts the Velo Curve. Lower values make the keyboard feel lighter. Higher values make the keyboard feel heavier. -10→+9
Velocity	Specifies the velocity transmitted when a key is played. REAL The transmitted velocity value will correspond to the force with which you strike the key. 1–127 The transmitted velocity value will be fixed, regardless of the force with which you strike the key.

SOUND

Parameter	Value/Explanation
Master Tune	Adjusts the overall tuning of the JUNO-DS. The display shows the frequency of the A4 note (center A). 415.3–466.2[Hz]
Master Key Shift	Shifts the JUNO-DS's overall pitch range in semitone steps. -24→+24
Master Level	Sets the JUNO-DS's overall volume. 0–127
Output Gain	Adjusts the output gain from the JUNO-DS's output. -12→+12[dB]
Audio Level	Specifies the volume when playing audio file from the Audio Player. 0–127

MASTER EQ

Parameter	Value/Explanation
Master EQ Switch	Turn the master EQ (this is an equalizer that is applied to the overall sound of the entire JUNO-DS) on/off. OFF, ON
EQ Low Freq	Frequency of the low range. 200, 400[Hz]
EQ Low Gain	Gain of the low frequency range. -15→+15[dB]
EQ Mid Freq	Frequency of the middle range. 200–8000[Hz]
EQ Mid Gain	Gain of the middle frequency range. -15→+15[dB]
EQ Mid Q	Width of the middle frequency range. Set a higher value for Q to narrow the range to be affected. 0.5, 1.0, 2.0, 4.0, 8.0
EQ High Freq	Frequency of the high range. 2000, 4000, 8000[Hz]
EQ High Gain	Gain of the high frequency range. -15→+15[dB]
EQ Total Gain	Gain of the overall Master EQ. -15→+15[dB]

MIC IN SETTINGS

Parameter	Value/Explanation
Mic In Level	Adjusts the input level of the MIC INPUT jack. 0–127
Mic In Reverb Switch	Specifies whether reverb is applied (ON) to the mic input or not applied (OFF). OFF, ON
Mic In Reverb Level	Adjust the amount of reverb that is applied to the sound of the microphone. 0–127
Mic In Reverb Type	Select the type of reverb/delay that is applied to the sound of the microphone. ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2, DELAY, PAN-DELAY
Mic In Reverb Time	Adjusts the length of the reverberation (when Reverb Type is ROOM1–HALL2) or the delay time of the delay (when Reverb Type is DELAY or PAN-DELAY). 0–127
Noise Suppressor Switch	Switches the noise suppressor on/off. The noise suppressor is a function that suppresses noise during periods of silence. OFF, ON
Noise Suppressor Threshold	Adjusts the volume at which noise suppression starts to be applied. 0–127
Noise Suppressor Release	Adjusts the time from when noise suppression starts until the volume reaches 0. 0–127
Mic Mode	Specifies the mic input mode. ALL Sound is input from the mic at all times. VOCAL FX Sound is input from the mic only when the [VOCODER/ AUTO PITCH] button is lit, or when the effect type is set to "79: Di VOCODER" (p. 57).

PEDAL

Parameter	Value/Explanation
Control Pedal	
Control Pedal Assign	Specifies the function of the pedal that is connected to the PEDAL CONTROL jack. The number in parentheses () is the controller number of the control change message produced by the pedal when the corresponding function is assigned. MODULATION (CC01) Vibrato PORTA-TIME (CC05) Portamento time VOLUME (CC07) Level PAN (CC10) Pan EXPRESSION (CC11) Level HOLD (CC64) The sound will be sustained for keys that are played or were already held down while holding down the pedal. PORTAMENTO (CC65) Portamento switch SOSTENUTO (CC66) The sound will be sustained only for keys that were already pressed when you pressed the pedal. RESONANCE (CC71) Resonance RELEASE-TIME (CC72) Release time ATTACK-TIME (CC73) Attack time CUTOFF (CC74) Cutoff DECAY-TIME (CC75) Decay time VIB-RATE (CC76) Vibrato speed VIB-DEPTH (CC77) Vibrato depth VIB-DELAY (CC78) Vibrato delay time CHORUS-SEND (CC93) The amount of the chorus REVERB-SEND (CC91) The amount of the reverb AFTERTOUCH Channel aftertouch * In Patch mode, the effect of the above functions applies to the currently selected sound. In Performance mode, the effect applies to the current part or to parts whose keyboard switch (p. 19, p. 20, p. 22) is on.
Control Pedal Polarity	Selects the polarity of the pedal connected to the PEDAL CONTROL jack. STANDARD, REVERSE
Hold Pedal	
Continuous Hold Pedal	If this is ON, the PEDAL HOLD jack will support half-pedaling. OFF, ON
Hold Pedal Polarity	Selects the polarity of the pedal connected to the PEDAL HOLD jack. STANDARD, REVERSE

KNOB

Parameter	Value/Explanation
Knob 1–4 Assign	Specifies the function that is assigned to each knob when the parameter controlled by the control knobs is set to ASSIGN 1–4. OFF No function is assigned. CC01–31, 32 (OFF), 33–95 Controller number 1–31, 32, 33–95 Pitch Bend The same effect as moving the pitch bend. Aftertouch Aftertouch * In Patch mode, the effect of the above functions applies to the currently selected sound. In Performance mode, the effect applies to the selected part. EQ Low Freq Frequency of the low range. EQ Low Gain Gain of the low frequency range. EQ Mid Freq Frequency of the middle range. EQ Mid Gain Gain of the middle frequency range. EQ Mid Q Width of the middle frequency range. EQ High Freq Frequency of the high range. EQ High Gain Gain of the high frequency range.

SYNC/TEMPO

Parameter	Value/Explanation
Sync Mode	Specifies the synchronization message that the JUNO-DS will use for operation. MASTER The JUNO-DS will be the master. Choose this setting when using the JUNO-DS by itself without synchronizing to another device. SLAVE The JUNO-DS will be the slave. Choose this setting when you want the JUNO-DS to synchronize to MIDI Clock messages received from another MIDI device.
Clock Source	When the Sync Mode is "SLAVE," this setting specifies whether the JUNO-DS will synchronize to synchronization messages from the MIDI IN connector or from the USB COMPUTER port. MIDI, USB
Startup Tempo	Specifies the tempo when the JUNO-DS starts. 20–250
Tempo Lock	When you switch performances or patterns, this specifies whether the tempo of the newly selected performance/pattern is used, or the current tempo is maintained. OFF, ON (maintain)

METRONOME

Parameter	Value/Explanation
Metronome Mode	Specifies how the metronome will be sounded. OFF No metronome is sounded. PLAY-ONLY The metronome sounds when a pattern is playing. REC-ONLY The metronome sounds when a pattern is being recorded. PLAY&REC The metronome sounds when a pattern is playing or being recorded. ALWAYS The metronome sounds at all times.
Metronome Level	Adjusts the metronome volume. 0–10
Metronome Sound	Selects the metronome sound. TYPE1 Conventional metronome sound (first beat is a bell) TYPE2 Click sound TYPE3 Beep sound TYPE4 Cowbell sound
Metronome Accent Switch	Adds an accent to the metronome sound. OFF, ON

System Settings

MIDI

Parameter	Value/Explanation				
Local Switch	Determines whether the internal sound generator is disconnected (OFF) from the controller section (keyboard, pitch bend/modulation lever, buttons, sliders, pedal, and so on); or not disconnected (ON). Normally you'll leave this "ON." Choose the "OFF" setting if you want operations on the JUNO-DS to only control DAW software on your computer. OFF, ON				
Patch Rx/Tx Ch	In patch mode, specifies the MIDI message transmit/receive channel for the keyboard part. 1–16				
Performance Control Channel	Specifies the MIDI receive channel on which MIDI messages (program change/bank select) from an external MIDI device will be received by the JUNO-DS to switch performances. Choose "OFF" setting if you don't want performances to be switched from a connected MIDI device. 1–16, OFF				
Transmit Program Change, Bank Select, Active Sensing	Specifies whether program change messages/bank select messages/active sensing messages will be transmitted (ON) or not be transmitted (OFF). OFF, ON				
Transmit Edit Data	Specifies whether changes you make in the settings of a patch or performance will be transmitted as system exclusive messages (ON), or will not be transmitted (OFF). OFF, ON				
Receive Program Change, Bank Select	Specifies whether program change messages/bank select messages will be received (ON) or not be received (OFF). OFF, ON				
Soft Through	If this is "ON," incoming MIDI messages from the MIDI IN connector will be re-transmitted without change from the MIDI OUT connector. OFF, ON				
USB Driver	Sets the USB driver. * This setting will take effect when you turn the power off, then on again. <table border="1"><tr><td>GENERIC</td><td>Choose this if you want to use the generic USB driver provided by your computer's operating system.</td></tr><tr><td>VENDOR</td><td>Choose this if you want to use a USB driver downloaded from the Roland website. (*1)</td></tr></table>	GENERIC	Choose this if you want to use the generic USB driver provided by your computer's operating system.	VENDOR	Choose this if you want to use a USB driver downloaded from the Roland website. (*1)
GENERIC	Choose this if you want to use the generic USB driver provided by your computer's operating system.				
VENDOR	Choose this if you want to use a USB driver downloaded from the Roland website. (*1)				

*1: Download the Driver

In order to use the JUNO-DS with the "VENDOR" setting, you must download the driver from the following URL and install it on your computer.

For details on installation, refer to the following URL.

→ <http://www.roland.com/support/>

CONTROL

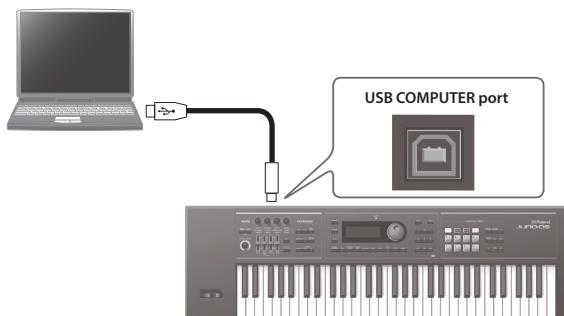
Parameter	Value/Explanation								
Sys Ctrl 1–4 Source	Specify the MIDI messages that will be used as system controls. System Control settings allow you to specify MIDI messages that will apply in common to the entire JUNO-DS, and can be used for controlling volume, tone, etc. You can assign up to four MIDI messages for this type of control. * If you want to make assignments for realtime control of the sound and effects for each tone independently, use "Matrix control" (p. 12) or "MFX control" (p. 18). <table border="1"><tr><td>OFF</td><td>No function is assigned.</td></tr><tr><td>CC01–31, 32 (OFF), 33–95</td><td>Controller number 1–31, 32, 33–95</td></tr><tr><td>PITCH BEND</td><td>The same effect as moving the pitch bend.</td></tr><tr><td>AFTERTOUCH</td><td>Aftertouch</td></tr></table>	OFF	No function is assigned.	CC01–31, 32 (OFF), 33–95	Controller number 1–31, 32, 33–95	PITCH BEND	The same effect as moving the pitch bend.	AFTERTOUCH	Aftertouch
OFF	No function is assigned.								
CC01–31, 32 (OFF), 33–95	Controller number 1–31, 32, 33–95								
PITCH BEND	The same effect as moving the pitch bend.								
AFTERTOUCH	Aftertouch								

INFORMATION

Parameter	Value/Explanation
Version	View the software version.
Expansion	Displays information about expansion sounds.

Connecting to a Computer via USB

If you use a commercially available USB cable to connect a USB port of your computer to the USB COMPUTER port located on the rear panel of the JUNO-DS, you can use MIDI-compatible software (DAW software) to play back audio and MIDI data on the JUNO-DS.



For details on operating requirements, refer to the Roland website.
<http://www.roland.com/support/>

NOTE

- For some types of computer, this might not work correctly. Refer to the Roland website for details on the operating systems that are supported.
- A USB cable is not included. You can purchase one from the dealer where you purchased the JUNO-DS.
- Use a USB 2.0 cable.
- Your computer's USB port must support USB 2.0 Hi-Speed.
- Turn on the power of the JUNO-DS before you start the DAW software on your computer. Don't turn the JUNO-DS's power on/off while your DAW software is running.

USB audio

JUNO-DS → Computer

If the JUNO-DS is connected to your computer via a USB cable, the audio output you've chosen in the JUNO-DS can be recorded into your computer's DAW software.

Computer → JUNO-DS

If the JUNO-DS is connected to your computer via a USB cable, the sound of your computer can be reproduced from an audio system connected to the JUNO-DS's jacks.

USB MIDI

If the JUNO-DS is connected to your computer via a USB cable, the JUNO-DS's performance data (MIDI data) can be recorded into your DAW software, and performance data (MIDI data) played back by your DAW software can be sounded by the JUNO-DS's sound engine.

Installing the USB Driver

The USB driver is software that exchanges data between the JUNO-DS and your computer software.

In order to use the JUNO-DS's dedicated USB driver, you must install the USB driver.

MEMO

For details on downloading and installing the USB driver, refer to the Roland website.

<http://www.roland.com/support/>

Making USB Driver Settings

Here's how to switch between the JUNO-DS's dedicated USB driver and the generic driver provided by your operating system.

1. Press the [MENU] button.

The MENU screen appears.

2. Move the cursor to "SYSTEM," and press the [ENTER] button.

The SYSTEM screen appears.

3. Move the cursor to "MIDI" tab – "USB Driver," and use the value dial to select the driver.

Driver	Explanation
VENDOR	The dedicated driver provided by Roland specifically for the JUNO-DS is used. Both MIDI and audio are available.
GENERIC	The generic driver of the operating system is used. Only MIDI is available.

When you switch the driver, a confirmation screen appears.
If you decide to cancel, press the [EXIT] button.

4. Move the cursor to "WRITE," and press the [ENTER] button.

Setting is complete when the screen indicates "Completed."

MEMO

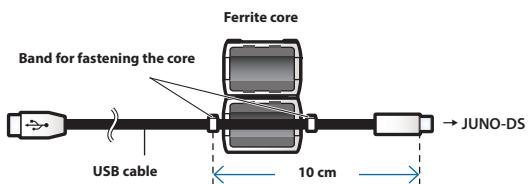
This system takes effect when the JUNO-DS is powered-on.

5. Turn the power off, and then on again.

Attaching the Ferrite Core (76-key model only)

If you use a USB cable to connect the JUNO-DS to your computer, you must attach the included ferrite core. This is for the purpose of preventing electromagnetic interference; do not remove it.

1. Attach the ferrite core to the USB cable.



2. Press the halves together until they click shut.



* Be careful not to pinch your fingers when attaching the ferrite core.

* Do not damage the cable by pinching it excessively with the ferrite core.

Using the JUNO-DS with DAW Software

Using the JUNO-DS As a DAW Controller

You can use the JUNO-DS as a controller for your DAW software. The JUNO-DS provides various DAW control maps. Simply select the appropriate control map to apply the appropriate settings for the DAW software that you're using.

MEMO

If you want to use the JUNO-DS as a controller for your DAW software, set the USB Driver setting to "VENDOR."

Using the JUNO-DS to Control DAW Software

1. Use a USB cable to connect the JUNO-DS to your computer.

A confirmation message appears.

* This message is not shown if you power-on the JUNO-DS with it already connected to the computer.

2. Move the cursor to "YES," and press the [ENTER] button.

DAW Control mode is on, and the DAW CONTROL screen appears.

3. Move the cursor to "Control Map," and use the value dial to select the DAW software that you're using.

Value	Explanation
LOGIC PRO	When controlling Logic Pro.
SONAR	When controlling SONAR.
CUBASE	When controlling Cubase.
USER	Choose "USER" if your system cannot use the Mackie Control control surface. You'll be able to choose the MIDI messages that are transmitted when you press pads [1]–[8].

4. As necessary, move the cursor to "Sync Output" or "Sync Mode," and use the value dial to change the setting.

Parameter	Value/Explanation
Sync Output	Specifies whether clock, start, continue, stop, and song position pointer messages are transmitted to another device (ON) or are not transmitted (OFF). * When the DAW CONTROL screen is not shown, this parameter is forcibly turned OFF.
	OFF, ON
Sync Mode	Specifies the synchronization message that the JUNO-DS will use for operation.
	MASTER The JUNO-DS will be the master. Choose this setting when using the JUNO-DS by itself without synchronizing to another device.
	SLAVE The JUNO-DS will be the slave. Choose this setting when you want the JUNO-DS to synchronize to MIDI Clock messages received from another MIDI device.

5. Turn the Local Switch "OFF" in the "Controller" tab (p. 37).

6. In your DAW software, open the project file that you want to control.

MEMO

Before you continue, select "JUNO-DS" as the MIDI input device and output device.

For details on how to do this, refer to the owner's manual of your DAW software.

7. Make the appropriate control surface settings for the DAW software you selected.

Settings in LOGIC PRO

This explanation describes the procedure when using Logic Pro X. The procedure may differ for other versions.

- From the Logic Pro X menu, choose [Logic Pro X] → [Control Surfaces] → [Setup] to open the setting screen.
- From the menu, choose [New] → [Install].
- From the list of Model, choose "Mackie Control" and press "Add."
- As the input port and the output port, specify "JUNO-DS DAW CTRL."

Settings in SONAR

This explanation describes the procedure when using SONAR X2 Producer. The procedure may differ for other versions.

- From the SONAR menu, choose [Edit] → [Preferences] → [MIDI Devices] to open the input/ output device selection.
- To the input devices and output devices, add "JUNO-DS DAW CTRL."
- In [Preferences], choose [MIDI Control Surfaces].
- Press "Add new Controller/Surface" to access the control surface settings dialog box.
- Choose "Mackie Control" as the control surface, choose "JUNO-DS DAW CTRL" as the input port and output port, and then press "OK."

Settings in CUBASE

This explanation describes the procedure when using the Mac OS X version of Cubase 7. The procedure may differ for other versions.

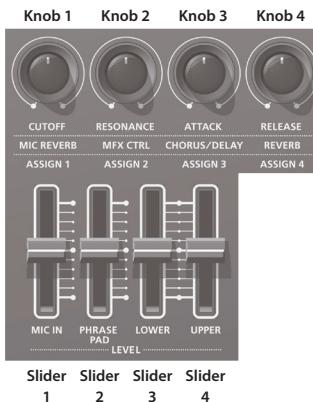
- From the Cubase [Devices] menu, choose [Device Setup].
- Press the [+] button located in the upper left of the dialog box, and choose "Mackie Control" from the pulldown menu.
- As the MIDI input and MIDI output for Mackie Control, specify "JUNO-DS DAW CTRL."
- In the left side of the dialog box, choose "MIDI Port Setup" to access the setting screen.
- In "JUNO-DS DAW CTRL," clear the check box from "In 'ALL MIDI Inputs'"

8. Operate the JUNO-DS to control your DAW software.

Available controllers	Explanation
[▶/■] button	Playback/Stop
[●] button	Start recording on record-standby tracks.
[◀] button	Return the current position to the beginning.
[SHIFT]+Pad [2]	Rewind
[SHIFT]+Pad [3]	Fast forward
The [▶/■] through [◀] buttons	emulate the Mackie Control control surface.
Pad [1]–[8]	Emulate the Mackie Control control surface Function buttons (F1–F8).
Control knobs	You can control the functions that are assigned (p. 33) to Assign 1–4 (p. 37).
[LEVEL] sliders	You can control the functions that are assigned to the four sliders (p. 37).

Assigning Functions to Knobs and Sliders

You can assign functions to the control knobs (1–4) and the [LEVEL] sliders (1–4).



You can store sixteen sets of these assignments, with each set containing the assignments of the control knobs (1–4) and the [LEVEL] sliders (1–4).

1. In the DAW CONTROL screen, select the “Controller” tab.

2. Select the set of assignments that you want to edit.

MEMO

You can press the [ENTER] button and rename the set.

3. Move the cursor to the parameter that you want to edit, and use the value dial to change the value.

Parameter	Explanation
Local Switch	Turns the Local switch on/off when in DAW Control mode. If you're using a DAW software with the JUNO-DS's keyboard controller section and sound generator section, you should turn the Local Switch “OFF”. Here's why. We need to connect these sections in the following order: the JUNO-DS's keyboard → a DAW software → the JUNO-DS's sound generator. Since the JUNO-DS's keyboard section and sound generator section are connected internally, such a connection order would normally be impossible. However, if the Local Switch is “OFF,” the JUNO-DS's keyboard section and its sound generator section will be independent, allowing you to use a DAW software as shown here in the illustration.
Tx Channel	Specifies the MIDI transmit channel used when in DAW Control mode. Set this as desired.
Knob 1–4	Select the MIDI messages that are transmitted when you turn the control knobs (1–4).
Slider 1–4	Select the MIDI messages that are transmitted when you control the [LEVEL] sliders (1–4).

MEMO

If you want your settings to be remembered, save the DAW CONTROL settings (p. 38).

Using the JUNO-DS As a MIDI Keyboard

Your playing on the JUNO-DS's keyboard (MIDI data) can be recorded into your DAW software, or used to play software instruments.

1. Connect the JUNO-DS to your computer.
2. Press the [DAW CONTROL] button to make it light.
The DAW CONTROL screen appears.
3. In the DAW CONTROL screen, select the “Controller” tab.
4. Turn the Local Switch “OFF.”

MEMO

Set the MIDI transmit channel as necessary (Tx Channel: p. 37).

Playing the JUNO-DS's Sound Generator from DAW Software

Performance data (MIDI data) played back by your DAW software can make the JUNO-DS's sound generator produce sound.

1. Connect the JUNO-DS to your computer.
2. Press the [DAW CONTROL] button to make it light.
3. Start your DAW software, and open the project file that you want to play.

MEMO

Before you continue, select “JUNO-DS” as the MIDI input device and output device.

For details on how to make this setting, refer to the owner's manual of your DAW software.

4. In the DAW CONTROL screen, select the “Part Edit” tab.



No.	Explanation
1	Performance
2	Patches that are assigned to each part
3	Receive switch for each part If you set to “OFF,” MIDI messages are not received.
4	Receive channel for each part

* Depending on the channel settings of your DAW, messages that switch studio sets may be transmitted on the channel of a part, causing the tone to switch. If this occurs, check the channel settings of your DAW.

5. Change the settings as necessary.

MEMO

It is convenient to turn receive switch on/off if you temporarily want to stop receiving MIDI messages.

6. In your DAW software, set the transmit channels of the tracks that you're playing back to match the receive channel settings of the JUNO-DS.
For details on how to make this setting, refer to the owner's manual of your DAW software.

7. Play back your DAW software.

You hear the playback sounded by the JUNO-DS's patches.

Using the JUNO-DS As an Audio Interface

The JUNO-DS's audio output you've specified can be recorded into DAW software on your computer.
Sound from your computer can also be reproduced from a device that's connected to the JUNO-DS's OUTPUT jacks.

- 1. Connect the JUNO-DS to your computer.**
- 2. Start up your DAW software, and choose "JUNO-DS" as the audio input device and output device.**
For details on how to make this setting, refer to the owner's manual of your DAW software.

Saving the DAW CONTROL Settings

The DAW CONTROL settings revert to their previous state when you turn off the power. If you want the DAW CONTROL settings to be remembered even after power-off, save them.

- 1. In the DAW CONTROL screen (except in the "Part Edit" tab), press the [WRITE] button.**
* If you press the [WRITE] button when the "Part Edit" tab is selected, PERFORMANCE WRITE is executed.

A confirmation message appears.
If you decide to cancel, press the [EXIT] button.

- 2. Move the cursor to "OK," and press the [ENTER] button.**
Saving is complete when the screen indicates "Completed!"

NOTE

Never turn off the power while the screen indicates "Writing..."

MEMO

When you save the DAW CONTROL settings, the system settings are also saved.

Error Messages

If an incorrect operation is performed, or if processing could not be performed as you specified, an error message appears. Refer to the explanation for the error message that appears, and take the appropriate action.

Message	Meaning	Action
Battery Low!	The battery has run down.	Replace the batteries, or use an AC adaptor.
Cannot Read!	Failed to load the audio file from the USB flash drive.	Make sure that USB flash drive is correctly connected. Use USB Flash Memory sold by Roland.
Duplicate File Name! Overwrite it?	A file of the same name already exists.	If you want to overwrite it, proceed with the operation. If you don't want to delete the identically-named file, save using a different file name.
Duplicate File Name!	A file of the same name already exists.	Check the name.
Format USB Memory Error!	An error occurred when formatting the USB flash drive.	Use USB Flash Memory sold by Roland. We cannot guarantee operation if other products are used.
Incorrect File!	This is a file that the JUNO-DS is unable to play/import.	Do not use this file.
Incorrect File Name!	A “.”(period) cannot be used at the beginning of a file name.	Specify a different character.
Int Memory Full!	There is insufficient memory capacity in the internal pattern writing destination.	Delete unneeded pattern.
Memory Damaged!	Failed when reading from the waveform memory file system.	Please execute a Factory Reset. If this does not resolve the problem, contact your dealer or a nearby Roland service center.
Memory Full!	There is insufficient free capacity to store the sample.	Delete unneeded sample.
Memory Full! Optimize?	There is insufficient free capacity to store the sample. Do you want to execute Optimize?	You can obtain free capacity by optimizing the memory area (p. 2).
MIDI Buffer Full!	An unusually large amount of MIDI data was received, and could not be processed.	Reduce the amount of MIDI messages that are being transmitted.
MIDI Offline!	The MIDI IN connection was broken.	Check that there is no problem with the MIDI cable connected to the JUNO-DS's MIDI IN, and that the MIDI cable was not disconnected.
No more Registered Favorites!	No more favorites have been registered.	Check the currently selected favorite number and the direction (“FAV-UP” or “FAV-DOWN”) that's assigned to the pedal (p. 33).
No Room!	The number of stored waveforms has reached the maximum (256).	Delete unneeded sample.
Not Found!	The file was not found on the USB flash drive.	Make sure that the file exists on the USB flash drive.
Now Playing!	Since the JUNO-DS is playing, this operation cannot be executed.	Stop playback before you execute the operation.
Now Recording!	Since the JUNO-DS is recording, this operation cannot be executed.	Stop recording before you execute the operation.
Pattern Full!	The maximum number of notes that can be recorded in one pattern has been exceeded; the pattern cannot be recorded any further.	
	This indication may appear if a large amount of data, such as movements of the Control knobs, is being recorded. No further pattern recording is possible.	Delete unneeded data from the pattern that you're recording.
Permission Denied!	The operation cannot be performed because the USB flash drive, file, or folder is write-protected.	Disable the write-protect setting of the USB flash drive. Using your computer, disable the write-protect setting of the file or folder.
Read Error!	Failed to load data from USB flash drive.	Make sure that USB flash drive is correctly connected.
	It may be that the file is damaged. This file cannot be loaded since its format is incorrect.	Do not use this file.
Rec Overflow!	Since a large amount of recorded data was input all at once, it could not be processed correctly.	Reduce the amount of recorded data.
Sample Length Too Long!	The audio file cannot be imported because it is too long.	An audio file that exceeds 64 MB stereo or 32 MB mono cannot be imported.
Sample Length Too Short!	The audio file cannot be imported because it is too short.	Extremely short audio files cannot be imported.
Sys Mem Damaged!	It is possible that the contents of system memory have been damaged.	Please execute a Factory Reset. If this does not resolve the problem, contact your dealer or a nearby Roland service center.
USB Mem NotReady!	USB flash drive is not connected.	Connect USB flash drive.
Write Error!	Failed to write data to USB flash drive.	Make sure that USB flash drive is correctly connected.
	Data cannot be written because the USB flash drive has no more free space. The file or the USB flash drive itself is write protected.	Delete unneeded files from the USB flash drive. Alternatively, use a different USB flash drive device, one that has more free space available. Make sure that the file or the USB flash drive is not write protected.

MFX/Chorus/Reverb Parameters

MFX Parameters (MFX, MFX1–3)

The MFX feature 80 different kinds of effects. Some of the effects consist of two or more different effects connected in series.

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Filter	00 THRU	–
	01 EQUALIZER	p. 41
	02 SPECTRUM	
	03 ISOLATOR	
	04 LOW BOOST	
	05 SUPER FILTER	
	06 STEP FILTER	p. 42
	07 ENHANCER	
	08 AUTO WAH	
	09 HUMANIZER	
Modulation	10 SPEAKER SIMULATOR	p. 43
	11 PHASER	
	12 STEP PHASER	
	13 MLT STAGE PHASER	
	14 INFINITE PHASER	
	15 RING MODULATOR	
	16 STEP RING MOD	p. 44
	17 TREMOLO	
	18 AUTO PAN	
	19 STEP PAN	
Chorus	20 SLICER	p. 45
	21 ROTARY	
	22 VK ROTARY	
	23 CHORUS	
	24 FLANGER	
	25 STEP FLANGER	p. 46
	26 HEXA-CHORUS	
	27 TREMOLO CHORUS	
	28 SPACE-D	
	29 3D CHORUS	p. 47
Dynamics	30 3D FLANGER	
	31 3D STEP FLANGER	
	32 2BAND CHORUS	
	33 2BAND FLANGER	
	34 2BAND STEP FLANGR	p. 48
	35 OVERDRIVE	
	36 DISTORTION	
	37 VS OVERDRIVE	
	38 VS DISTORTION	
	39 GUITAR AMP SIM	p. 49
Delay	40 COMPRESSOR	
	41 LIMITER	
	42 GATE	
	43 DELAY	p. 50
	44 LONG DELAY	
	45 SERIAL DELAY	
	46 MODULATION DELAY	
	47 3TAP PAN DELAY	
	48 4TAP PAN DELAY	p. 51
	49 MULTI TAP DELAY	
Lo-Fi 1	50 REVERSE DELAY	
	51 SHUFFLE DELAY	
	52 3D DELAY	p. 52
	53 ANALOG DELAY	
	54 ANALOG LONG DELAY	
Pitch	55 TAPE ECHO	p. 53
	56 LOFI NOISE	
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	58 LOFI RADIO	
Reverb	59 TELEPHONE	
	60 PHONOGRAPH	p. 54
	61 PITCH SHIFTER	
Pitch	62 2VOI PCH SHIFTER	
	63 STEP PCH SHIFTER	
Reverb	64 REVERB	p. 55
	65 GATED REVERB	

Type	MFX	Page
Combination	66 OD → CHORUS	p. 55
	67 OD → FLANGER	
	68 OD → DELAY	
	69 DST → CHORUS	
	70 DST → FLANGER	
	71 DST → DELAY	p. 56
	72 ENH → CHORUS	
	73 ENH → FLANGER	
	74 ENH → DELAY	
	75 CHORUS → DELAY	
Piano	76 FLANGER → DELAY	
	77 CHORUS → FLANGER	
	78 SYMPATHETIC RESO	p. 57
Vocoder	79 Di VOCODER	
	80 BIT CRUSHER	

MEMO

- Parameters marked with a can be controlled using the control knob to which "MFX CTRL" is assigned.
- Parameters marked with a sharp "#" can be controlled using a MFX control (p. 18, p. 24) or Matrix control (p. 12). (Two setting items will change simultaneously for "#1" and "#2").

Note

Some effect parameters (such as Rate or Delay Time) can be set in terms of a note value.

	Sixty-fourth-note triplet		Sixty-fourth note		Thirty-second-note triplet		Thirty-second note
	Sixteenth-note triplet		Dotted thirty-second note		Sixteenth note		Eighth-note triplet
	Dotted sixteenth note		Eighth note		Quarter-note triplet		Dotted eighth note
	Quarter note		Half-note triplet		Dotted quarter note		Half note
	Whole-note triplet		Dotted half note		Whole note		Double-note triplet
	Dotted whole note		Double note				

NOTE

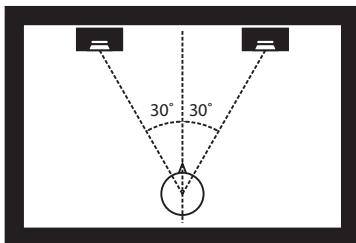
- If you specify the delay time as a note value, slowing down the tempo will not change the delay time beyond a certain length. This is because there is an upper limit for the delay time; if the delay time is specified as a note value and you slow down the tempo until this upper limit is reached, the delay time cannot change any further. This upper limit is the maximum value that can be specified when setting the delay time as a numerical value.
- If you specify a parameter for which a note value is assigned as the MFX control Destination, you can't use MFX control to control that parameter.

When Using 3D Effects

The following 3D effects utilize RSS (Roland Sound Space) technology to create a spaciousness that cannot be produced by delay, reverb, chorus, etc.

- 52: 3D DELAY
- 29: 3D CHORUS
- 30: 3D FLANGER
- 31: 3D STEP FLANGER

When using these effects, we recommend that you place your speakers as follows. Also, make sure that the speakers are at a sufficient distance from the walls on either side.



If the left and right speakers are too far apart, or if there is too much reverberation, the full 3D effect may not appear. Each of these effects has an "Output Mode" parameter. If the sound from the OUTPUT jacks is to be heard through speakers, set this parameter to "SPEAKER." If the sound is to be heard through headphones, set it to "PHONES." This will ensure that the optimal 3D effect will be heard. If this parameter is not set correctly, the full 3D effect may not appear.

About the Step Reset function

- 06: STEP FILTER
- 16: STEP RING MOD
- 19: STEP PAN
- 20: SLICER
- 63: STEP PCH SHIFTER

The above types contain a sixteen-step sequencer. For these types, you can use a MFX control to reset the sequence to play from the first step. To do this, set the MFX control Destination to "Step Reset."

For example if you are using the modulation lever to control the effect, you would make the following settings.

Parameter	Value
Source	CC01: Modulation
Destination	Step Reset
Sens	+63

With these settings, the sequence will play back from the first step whenever you operate the modulation lever.

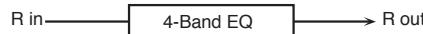
Rotary effect

- 21: ROTARY
- 22: VK ROTARY

When performing sounds that use these effects, you can change the speed of the rotary effect by moving the modulation lever away from yourself.

01: EQUALIZER

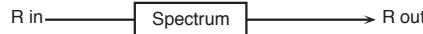
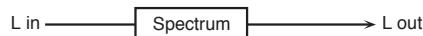
This is a four-band stereo equalizer (low, mid x 2, high).



Parameter	Value	Explanation
Low Freq	200, 400[Hz]	Frequency of the low range
Low Gain #	-15~+15[dB]	Gain of the low range
Mid1 Freq	200~8000[Hz]	Frequency of the middle range 1
Mid1 Gain	-15~+15[dB]	Gain of the middle range 1
Mid1 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 1 Set a higher value for Q to narrow the range to be affected.
Mid2 Freq	200~8000[Hz]	Frequency of the middle range 2
Mid2 Gain	-15~+15[dB]	Gain of the middle range 2
Mid2 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 2 Set a higher value for Q to narrow the range to be affected.
High Freq	2000, 4000, 8000[Hz]	Frequency of the high range
High Gain #	-15~+15[dB]	Gain of the high range
Level #	0~127	Output level

02: SPECTRUM

This is a stereo spectrum. Spectrum is a type of filter which modifies the timbre by boosting or cutting the level at specific frequencies.



Parameter	Value	Explanation
Band1 (250[Hz])		
Band2 (500[Hz])		
Band3 (1000[Hz])		
Band4 (1250[Hz])		
Band5 (2000[Hz])		
Band6 (3150[Hz])		
Band7 (4000[Hz])		
Band8 (8000[Hz])		
Q	0.5, 1.0, 2.0, 4.0, 8.0	Simultaneously adjusts the width of the adjusted ranges for all the frequency bands.
Level #	0~127	Output level

03: ISOLATOR

This is an equalizer which cuts the volume greatly, allowing you to add a special effect to the sound by cutting the volume in varying ranges.



Parameter	Value	Explanation
Boost/Cut Low #		
Boost/Cut Mid #	-60~+4[dB]	These boost and cut each of the High, Middle, and Low frequency ranges. At -60 dB, the sound becomes inaudible. 0 dB is equivalent to the input level of the sound.
Boost/Cut High #		
Anti Phase Low Sw	OFF, ON	Turns the Anti-Phase function on and off for the Low frequency ranges. When turned on, the counter-channel of stereo sound is inverted and added to the signal.
Anti Phase Low Level	0~127	Adjusts the level settings for the Low frequency ranges. Adjusting this level for certain frequencies allows you to lend emphasis to specific parts (This is effective only for stereo source.).
Anti Phase Mid Sw	OFF, ON	Settings of the Anti-Phase function for the Middle frequency ranges.
Anti Phase Mid Level	0~127	The parameters are the same as for the Low frequency ranges.
Low Boost Sw	OFF, ON	Turns Low Booster on/off. This emphasizes the bottom to create a heavy bass sound.
Low Boost Level	0~127	Increasing this value gives you a heavier low end. * Depending on the Isolator and filter settings this effect may be hard to distinguish.
Level	0~127	Output level

04: LOW BOOST

Boosts the volume of the lower range, creating powerful lows.



Parameter	Value	Explanation
Boost Frequency #	50–125[Hz]	Center frequency at which the lower range will be boosted
Boost Gain #	0–+12[dB]	Amount by which the lower range will be boosted
Boost Width	WIDE, MID, NARROW	Width of the lower range that will be boosted
Low Gain	-15–+15[dB]	Gain of the low frequency range
High Gain	-15–+15[dB]	Gain of the high frequency range
Level	0–127	Output level

05: SUPER FILTER

This is a filter with an extremely sharp slope. The cutoff frequency can be varied cyclically.



Parameter	Value	Explanation
Filter Type	LPF, BPF, HPF, NOTCH	Filter type Frequency range that will pass through each filter
Filter Slope	-12[dB], -24[dB], -36[dB]	Amount of attenuation per octave Gentle, Steep, Extremely steep
Filter Cutoff #	0–127	Cutoff frequency of the filter Increasing this value will raise the cutoff frequency.
Filter Resonance #	0–127	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.
Filter Gain	0–+12[dB]	Amount of boost for the filter output
Modulation Sw	OFF, ON	On/off switch for cyclic change
Modulation Wave	TRI, SQR, SIN, SAW1, SAW2	How the cutoff frequency will be modulated Triangle wave, Square wave, Sine wave, Sawtooth wave (upward), Sawtooth wave (downward)
Rate #	0.05–10.00[Hz], note	Rate of modulation
Depth	0–127	Depth of modulation
Attack #	0–127	Speed at which the cutoff frequency will change This is effective if Modulation Wave is SQR, SAW1, or SAW2.
Level	0–127	Output level

**06: STEP FILTER**

This is a filter whose cutoff frequency can be modulated in steps. You can specify the pattern by which the cutoff frequency will change.



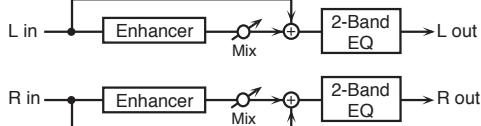
Parameter	Value	Explanation
Step 01–16	0–127	Cutoff frequency at each step
Rate #	0.05–10.00[Hz], note	Rate of modulation
Attack #	0–127	Speed at which the cutoff frequency changes between steps
Filter Type	LPF, BPF, HPF, NOTCH	Filter type Frequency range that will pass through each filter
Filter Slope	-12[dB], -24[dB], -36[dB]	Amount of attenuation per octave gentle, steep, extremely steep
Filter Resonance #	0–127	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.
Filter Gain	0–+12[dB]	Amount of boost for the filter output
Level	0–127	Output level

MEMO

You can use MFX control to restart the step sequence from the beginning (p. 18, p. 24).

07: ENHANCER

Controls the overtone structure of the high frequencies, adding sparkle and tightness to the sound.



Parameter	Value	Explanation
Sens #	0–127	Sensitivity of the enhancer
Mix #	0–127	Level of the overtones generated by the enhancer
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Level	0–127	Output Level

08: AUTO WAH

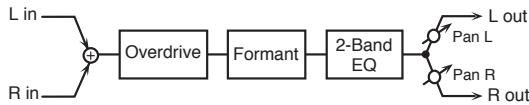
Cyclically controls a filter to create cyclic change in timbre.



Parameter	Value	Explanation
Filter Type	LPF, BPF	Type of filter The wah effect will be applied over a wide frequency range. The wah effect will be applied over a narrow frequency range.
Manual #	0–127	Adjusts the center frequency at which the effect is applied.
Peak	0–127	Adjusts the amount of the wah effect that will occur in the range of the center frequency. Set a higher value for Q to narrow the range to be affected.
Sens #	0–127	Adjusts the sensitivity with which the filter is controlled.
Polarity	UP, DOWN	Sets the direction in which the frequency will change when the auto-wah filter is modulated. The filter will change toward a higher frequency. The filter will change toward a lower frequency.
Rate #	0.05–10.00[Hz], note	Frequency of modulation
Depth #	0–127	Depth of modulation
Phase #	0–180[deg]	Adjusts the degree of phase shift of the left and right sounds when the wah effect is applied.
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Level	0–127	Output level

09: HUMANIZER

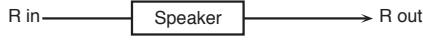
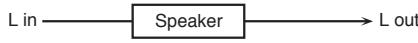
Adds a vowel character to the sound, making it similar to a human voice.



Parameter	Value	Explanation
Drive Sw	OFF, ON	Turns Drive on/off.
Drive #	0–127	Degree of distortion Also changes the volume.
Vowel1	a, e, i, o, u	Selects the vowel.
Vowel2	a, e, i, o, u	
Rate #	0.05–10.00[Hz], note	Frequency at which the two vowels switch
Depth #	0–127	Effect depth
Input Sync Sw	OFF, ON	LFO reset on/off Determines whether the LFO for switching the vowels is reset by the input signal (ON) or not (OFF).
Input Sync Threshold	0–127	Volume level at which reset is applied
Manual #	Point at which Vowel 1/2 switch 49 or less 50 51 or more	Vowel 1 will have a longer duration. Vowel 1 and 2 will be of equal duration. Vowel 2 will have a longer duration.
Low Gain	-15–+15[dB]	Gain of the low frequency range
High Gain	-15–+15[dB]	Gain of the high frequency range
Pan #	L64–63R	Stereo location of the output
Level	0–127	Output level

10: SPEAKER SIMULATOR

Simulates the speaker type and microphone settings used to record the speaker sound.



Parameter	Value	Explanation
Speaker Type	(See the following table)	Type of speaker
Mic Setting	1, 2, 3	Adjusts the location of the microphone that is recording the sound of the speaker. This can be adjusted in three steps, with the microphone becoming more distant in the order of 1, 2, and 3.
Mic Level #	0–127	Volume of the microphone
Direct Level #	0–127	Volume of the direct sound
Level #	0–127	Output level

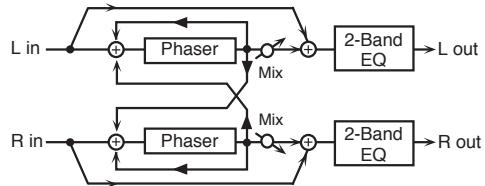
Specifications of each Speaker Type

The speaker column indicates the diameter of each speaker unit (in inches) and the number of units.

Type	Cabinet	Speaker	Microphone
SMALL 1	small open-back enclosure	10	dynamic
SMALL 2	small open-back enclosure	10	dynamic
MIDDLE	open back enclosure	12 x 1	dynamic
JC-120	open back enclosure	12 x 2	dynamic
BUILT-IN 1	open back enclosure	12 x 2	dynamic
BUILT-IN 2	open back enclosure	12 x 2	condenser
BUILT-IN 3	open back enclosure	12 x 2	condenser
BUILT-IN 4	open back enclosure	12 x 2	condenser
BUILT-IN 5	open back enclosure	12 x 2	condenser
BG STACK 1	sealed enclosure	12 x 2	condenser
BG STACK 2	large sealed enclosure	12 x 2	condenser
MS STACK 1	large sealed enclosure	12 x 4	condenser
MS STACK 2	large sealed enclosure	12 x 4	condenser
METAL STACK	large double stack	12 x 4	condenser
2-STACK	large double stack	12 x 4	condenser
3-STACK	large triple stack	12 x 4	condenser

11: PHASER

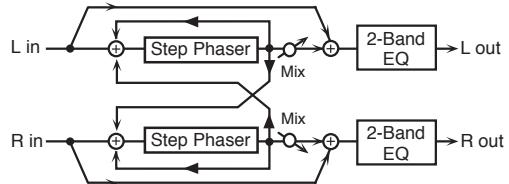
This is a stereo phaser. A phase-shifted sound is added to the original sound and modulated.



Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual #	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate	0.05–10.00[Hz], note	Frequency of modulation
Depth	0–127	Depth of modulation
Polarity	INVERSE SYNCHRO	Selects whether the left and right phase of the modulation will be the same or the opposite.
Resonance #	0–127	Amount of feedback
Cross Feedback	-98–+98[%]	Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase.
Mix #	0–127	Level of the phase-shifted sound
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Level	0–127	Output level

12: STEP PHASER

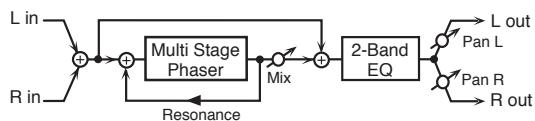
This is a stereo phaser. The phaser effect will be varied gradually.



Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual #	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate #	0.05–10.00[Hz], note	Frequency of modulation
Depth	0–127	Depth of modulation
Polarity	INVERSE SYNCHRO	Selects whether the left and right phase of the modulation will be the same or the opposite.
Resonance #	0–127	Amount of feedback
Cross Feedback	-98–+98[%]	Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate #	0.10–20.00[Hz], note	Rate of the step-wise change in the phaser effect
Mix #	0–127	Level of the phase-shifted sound
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Level	0–127	Output level

13: MLT STAGE PHASER

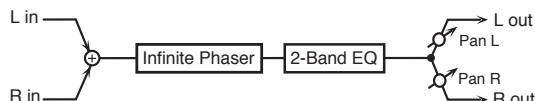
Extremely high settings of the phase difference produce a deep phaser effect.



Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE, 16-STAGE, 20-STAGE, 24-STAGE	Number of phaser stages
Manual #	0-127	Adjusts the basic frequency from which the sound will be modulated.
Rate #	0.05-10.00[Hz], note	Frequency of modulation
Depth	0-127	Depth of modulation
Resonance #	0-127	Amount of feedback
Mix #	0-127	Level of the phase-shifted sound
Pan #	L64-63R	Stereo location of the output sound
Low Gain	-15-+15[dB]	Gain of the low range
High Gain	-15-+15[dB]	Gain of the high range
Level	0-127	Output level

14: INFINITE PHASER

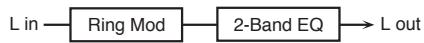
A phaser that continues raising/lowering the frequency at which the sound is modulated.



Parameter	Value	Explanation
Mode	1-4	Higher values will produce a deeper phaser effect.
Speed #	-100-+100	Speed at which to raise or lower the frequency at which the sound is modulated (+: upward / -: downward)
Resonance #	0-127	Amount of feedback
Mix #	0-127	Volume of the phase-shifted sound
Pan #	L64-63R	Panning of the output sound
Low Gain	-15-+15[dB]	Amount of boost/cut for the low-frequency range
High Gain	-15-+15[dB]	Amount of boost/cut for the high-frequency range
Level	0-127	Output level

15: RING MODULATOR

This is an effect that applies amplitude modulation (AM) to the input signal, producing bell-like sounds. You can also change the modulation frequency in response to changes in the volume of the sound sent into the effect.



Parameter	Value	Explanation
Frequency #	0-127	Adjusts the frequency at which modulation is applied.
Sens #	0-127	Adjusts the amount of frequency modulation applied.
Polarity	UP DOWN	Determines whether the frequency modulation moves towards higher frequencies or lower frequencies.
Low Gain	-15-+15[dB]	Gain of the low frequency range
High Gain	-15-+15[dB]	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level

16: STEP RING MOD

This is a ring modulator that uses a 16-step sequence to vary the frequency at which modulation is applied.



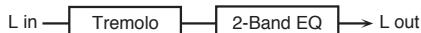
Parameter	Value	Explanation
Step 01-16	0-127	Frequency of ring modulation at each step
Rate #	0.05-10.00[Hz], note	Rate at which the 16-step sequence will cycle
Attack #	0-127	Speed at which the modulation frequency changes between steps
Low Gain	-15-+15[dB]	Amount of boost/cut for the low-frequency range
High Gain	-15-+15[dB]	Amount of boost/cut for the high-frequency range
Balance #	D100:0W-D0:100W	Volume balance of the original sound (D) and effect sound (W)
Level	0-127	Output level

MEMO

You can use MFX control to restart the step sequence from the beginning (p. 18, p. 24).

17: TREMOLO

Cyclically modulates the volume to add tremolo effect to the sound.



Parameter	Value	Explanation
Modulation Wave		
TRI	Triangle wave	
SQR	Square wave	
SIN	Sine wave	
SAW1, 2	Sawtooth wave	
SAW1		
SAW2		
Rate #	0.05-10.00[Hz], note	Frequency of the change
Depth #	0-127	Depth to which the effect is applied
Low Gain	-15-+15[dB]	Gain of the low range
High Gain	-15-+15[dB]	Gain of the high range
Level	0-127	Output level

18: AUTO PAN

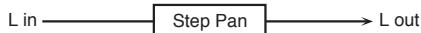
Cyclically modulates the stereo location of the sound.



Parameter	Value	Explanation
Modulation Wave		
TRI	Triangle wave	
SQR	Square wave	
SIN	Sine wave	
SAW1, 2	Sawtooth wave	
SAW1		
SAW2		
Rate #	0.05-10.00[Hz], note	Frequency of the change
Depth #	0-127	Depth to which the effect is applied
Low Gain	-15-+15[dB]	Gain of the low range
High Gain	-15-+15[dB]	Gain of the high range
Level	0-127	Output level

19: STEP PAN

This uses a 16-step sequence to vary the panning of the sound.



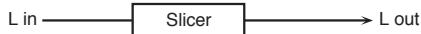
Parameter	Value	Explanation
Step 01–16	L64–63R	Pan at each step
Rate #	0.05–10.00[Hz], note	Rate at which the 16-step sequence will cycle
Attack #	0–127	Speed at which the pan changes between steps
Input Sync Sw	OFF, ON	Specifies whether an input note will cause the sequence to resume from the first step of the sequence (ON) or not (OFF)
Input Sync Threshold	0–127	Volume at which an input note will be detected
Level	0–127	Output level

MEMO

You can use MFX control to restart the step sequence from the beginning (p. 18, p. 24).

20: SLICER

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.



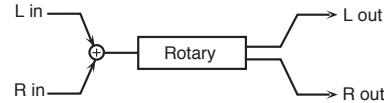
Parameter	Value	Explanation
Step 01–16	0–127	Level at each step
Rate #	0.05–10.00[Hz], note	Rate at which the 16-step sequence will cycle
Attack #	0–127	Speed at which the level changes between steps
Input Sync Sw	OFF, ON	Specifies whether an input note will cause the sequence to resume from the first step of the sequence (ON) or not (OFF)
Input Sync Threshold	0–127	Volume at which an input note will be detected
Mode	LEGATO	The change in volume from one step's level to the next remains unaltered. If the level of a following step is the same as the one preceding it, there is no change in volume.
	SLASH	The level is momentarily set to 0 before progressing to the level of the next step. This change in volume occurs even if the level of the following step is the same as the preceding step.
Shuffle #	0–127	Timing of volume changes in levels for even-numbered steps (step 2, step 4, step 6...). The higher the value, the later the beat progresses.
Level	0–127	Output level

MEMO

You can use MFX control to restart the step sequence from the beginning (p. 18, p. 24).

21: ROTARY

The Rotary effect simulates the sound of the rotary speakers often used with the electric organs of the past. Since the movement of the high range and low range rotors can be set independently, the unique type of modulation characteristic of these speakers can be simulated quite closely. This effect is most suitable for electric organ Tones.

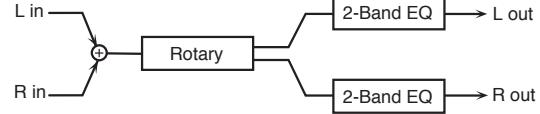


Parameter	Value	Explanation
Speed #	SLOW, FAST	Simultaneously switch the rotational speed of the low frequency rotor and high frequency rotor.
Woofer Slow Speed	0.05–10.00[Hz]	Slow speed (SLOW) of the low frequency rotor
Woofer Fast Speed	0.05–10.00[Hz]	Fast speed (FAST) of the low frequency rotor
Woofer Acceleration	0–15	Adjusts the time it takes the low frequency rotor to reach the newly selected speed when switching from fast to slow (or slow to fast) speed.
Woofer Level	0–127	Volume of the low frequency rotor
Tweeter Slow Speed	0.05–10.00[Hz]	Settings of the high frequency rotor
Tweeter Fast Speed	0.05–10.00[Hz]	The parameters are the same as for the low frequency rotor.
Tweeter Acceleration	0–15	
Tweeter Level	0–127	
Separation	0–127	Spatial dispersion of the sound
Level #	0–127	Output level

22: VK ROTARY

This type provides modified response for the rotary speaker, with the low end boosted further.

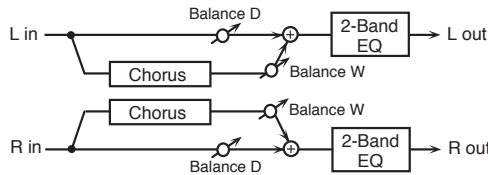
This effect features the same specifications as the VK-7's built-in rotary speaker.



Parameter	Value	Explanation
Speed #	SLOW, FAST	Rotational speed of the rotating speaker
Brake #	OFF, ON	Switches the rotation of the rotary speaker. When this is turned on, the rotation will gradually stop. When it is turned off, the rotation will gradually resume.
Woofer Slow Speed	0.05–10.00[Hz]	Low-speed rotation speed of the woofer
Woofer Fast Speed	0.05–10.00[Hz]	High-speed rotation speed of the woofer
Woofer Trans Up	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from SLOW to FAST.
Woofer Trans Down	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from FAST to SLOW.
Woofer Level	0–127	Volume of the woofer
Tweeter Slow Speed	0.05–10.00[Hz]	Settings of the tweeter
Tweeter Fast Speed	0.05–10.00[Hz]	The parameters are the same as for the woofer.
Tweeter Trans Up	0–127	
Tweeter Trans Down	0–127	
Tweeter Level	0–127	
Spread	0–10	Sets the rotary speaker stereo image.
Low Gain	-15~+15[dB]	Gain of the low range
High Gain	-15~+15[dB]	Gain of the high range
Level #	0–127	Output level
Type	STANDARD, STACK, CLEAN	Type of speaker

23: CHORUS

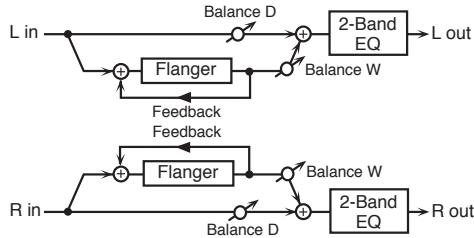
This is a stereo chorus. A filter is provided so that you can adjust the timbre of the chorus sound.



Parameter	Value	Explanation
Filter Type	Type of filter	
	OFF	No filter is used
	LPF	Cuts the frequency range above the Cutoff Freq
	HPF	Cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000[Hz]	Center frequency when using the filter to cut a specific frequency range
Pre Delay	0.0–100[msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00[Hz], note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180[deg]	Spatial spread of the sound
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output level

24: FLANGER

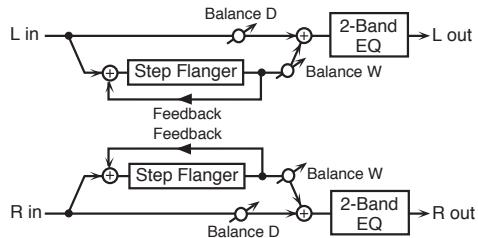
This is a stereo flanger (The LFO has the same phase for left and right.). It produces a metallic resonance that rises and falls like a jet airplane taking off or landing. A filter is provided so that you can adjust the timbre of the flanged sound.



Parameter	Value	Explanation
Filter Type	Type of filter	
	OFF	No filter is used
	LPF	Cuts the frequency range above the Cutoff Freq
	HPF	Cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000[Hz]	Center frequency when using the filter to cut a specific frequency range
Pre Delay	0.0–100[msec]	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Rate #	0.05–10.00[Hz], note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180[deg]	Spatial spread of the sound
Feedback #	-98–+98[%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output level

25: STEP FLANGER

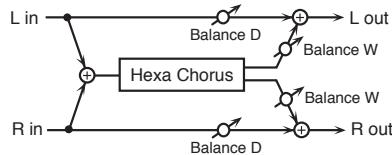
This is a flanger in which the flanger pitch changes in steps. The speed at which the pitch changes can also be specified in terms of a note-value of a specified tempo.



Parameter	Value	Explanation
Filter Type	Type of filter	
	OFF	No filter is used
	LPF	Cuts the frequency range above the Cutoff Freq
	HPF	Cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000[Hz]	Center frequency when using the filter to cut a specific frequency range
Pre Delay	0.0–100[msec]	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Rate #	0.05–10.00[Hz], note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180[deg]	Spatial spread of the sound
Feedback #	-98–+98[%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate #	0.10–20.00[Hz], note	Rate (period) of pitch change
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output level

26: HEXA-CHORUS

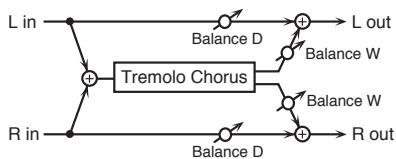
Uses a six-phase chorus (six layers of chorused sound) to give richness and spatial spread to the sound.



Parameter	Value	Explanation
Pre Delay	0.0–100[msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00[Hz], note	Frequency of modulation
Depth	0–127	Depth of modulation
Pre Delay Deviation	0–20	Adjusts the differences in Pre Delay between each chorus sound.
Depth Deviation	-20–+20	Adjusts the difference in modulation depth between each chorus sound.
	0–20	Adjusts the difference in stereo location between each chorus sound.
Pan Deviation	0	All chorus sounds will be in the center.
	20	Each chorus sound will be spaced at 60 degree intervals relative to the center.
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output level

27: TREMOLO CHORUS

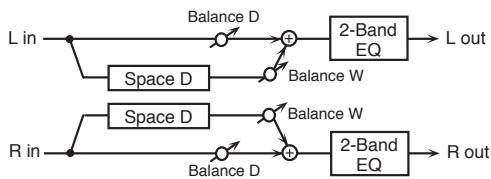
This is a chorus effect with added Tremolo (cyclic modulation of volume).



Parameter	Value	Explanation
Pre Delay	0.0–100[msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05–10.00[Hz], note	Modulation frequency of the chorus effect
Chorus Depth	0–127	Modulation depth of the chorus effect
Tremolo Rate #	0.05–10.00[Hz], note	Modulation frequency of the tremolo effect
Tremolo Separation	0–127	Spread of the tremolo effect
Tremolo Phase	0–180[deg]	Spread of the tremolo effect
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the tremolo chorus sound (W)
Level	0–127	Output level

28: SPACE-D

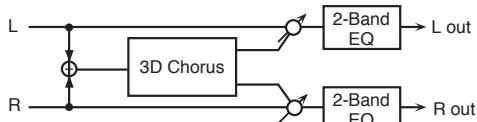
This is a multiple chorus that applies two-phase modulation in stereo. It gives no impression of modulation, but produces a transparent chorus effect.



Parameter	Value	Explanation
Pre Delay	0.0–100[msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00[Hz], note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180[deg]	Spatial spread of the sound
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output level

29: 3D CHORUS

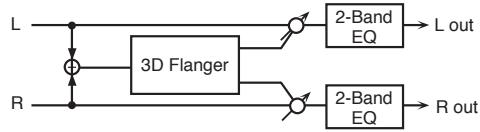
This applies a 3D effect to the chorus sound. The chorus sound will be positioned 90 degrees left and 90 degrees right.



Parameter	Value	Explanation
Filter Type	Type of filter	
OFF	No filter is used	
LPF	Cuts the frequency range above the Cutoff Freq	
HPF	Cuts the frequency range below the Cutoff Freq	
Cutoff Freq	200–8000[Hz]	Center frequency when using the filter to cut a specific frequency range
Pre Delay	0.0–100[msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00[Hz], note	Frequency of modulation
Depth	0–127	Modulation depth of the chorus effect
Phase	0–180[deg]	Spatial spread of the sound
Output Mode	The optimal 3D effect will be achieved.	
SPEAKER	When using speakers	
PHONES	When using headphones	
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output level

30: 3D FLANGER

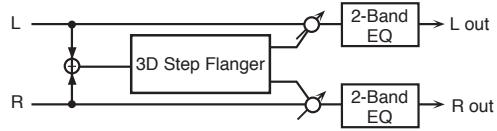
This applies a 3D effect to the flanger sound. The flanger sound will be positioned 90 degrees left and 90 degrees right.



Parameter	Value	Explanation
Filter Type	Type of filter	
OFF	No filter is used	
LPF	Cuts the frequency range above the Cutoff Freq	
HPF	Cuts the frequency range below the Cutoff Freq	
Cutoff Freq	200–8000[Hz]	Center frequency when using the filter to cut a specific frequency range
Pre Delay	0.0–100[msec]	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Rate #	0.05–10.00[Hz], note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180[deg]	Spatial spread of the sound
Feedback #	-98–+98[%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Output Mode	The optimal 3D effect will be achieved.	
SPEAKER	When using speakers	
PHONES	When using headphones	
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output level

31: 3D STEP FLANGER

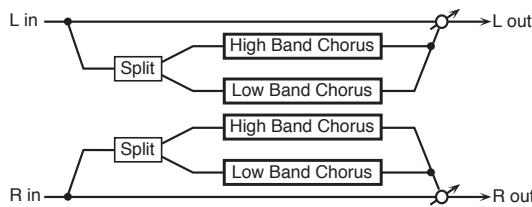
This applies a 3D effect to the step flanger sound. The flanger sound will be positioned 90 degrees left and 90 degrees right.



Parameter	Value	Explanation
Filter Type	Type of filter	
OFF	No filter is used	
LPF	Cuts the frequency range above the Cutoff Freq	
HPF	Cuts the frequency range below the Cutoff Freq	
Cutoff Freq	200–8000[Hz]	Center frequency when using the filter to cut a specific frequency range
Pre Delay	0.0–100[msec]	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Rate #	0.05–10.00[Hz], note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180[deg]	Spatial spread of the sound
Feedback #	-98–+98[%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate #	0.10–20.00[Hz], note	Rate (period) of pitch change
Output Mode	The optimal 3D effect will be achieved.	
SPEAKER	When using speakers	
PHONES	When using headphones	
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output level

32: 2BAND CHORUS

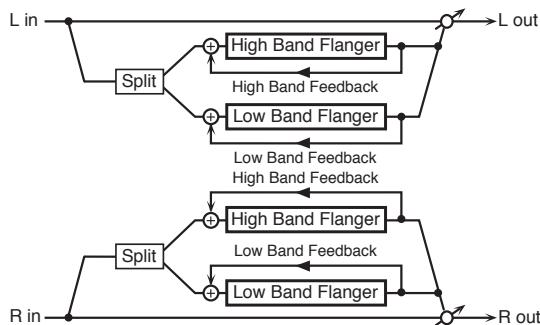
A chorus effect that lets you apply an effect independently to the low-frequency and high-frequency ranges.



Parameter	Value	Explanation
Split Freq	200–8000[Hz]	Frequency at which the low and high ranges will be divided
Low Pre Delay	0.0–100[msec]	Delay time from when the original sound is heard to when the low-range chorus sound is heard
Low Rate #	0.05–10.00[Hz], note	Rate at which the low-range chorus sound is modulated
Low Depth	0–127	Modulation depth for the low-range chorus sound
Low Phase	0–180[deg]	Spaciousness of the low-range chorus sound
High Pre Delay	0.0–100[msec]	Delay time from when the original sound is heard to when the high-range chorus sound is heard
★ High Rate #	0.05–10.00[Hz], note	Rate at which the high-range chorus sound is modulated
High Depth	0–127	Modulation depth for the high-range chorus sound
High Phase	0–180[deg]	Spaciousness of the high-range chorus sound
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and chorus sound (W)
Level	0–127	Output level

33: 2BAND FLANGER

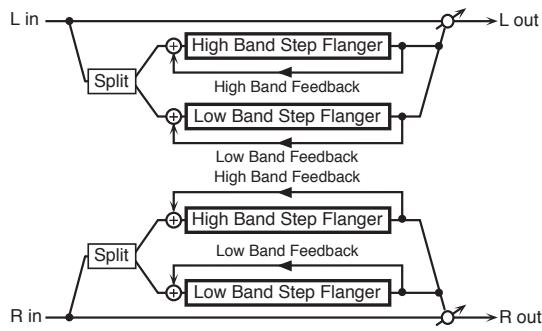
A flanger that lets you apply an effect independently to the low-frequency and high-frequency ranges.



Parameter	Value	Explanation
Split Freq	200–8000[Hz]	Frequency at which the low and high ranges will be divided
Low Pre Delay	0.0–100[msec]	Delay time from when the original sound is heard to when the low-range flanger sound is heard
Low Rate #	0.05–10.00[Hz], note	Rate at which the low-range flanger sound is modulated
Low Depth	0–127	Modulation depth for the low-range flanger sound
Low Phase	0–180[deg]	Spaciousness of the low-range flanger sound
Low Feedback #	-98–+98[%]	Proportion of the low-range flanger sound that is to be returned to the input (negative (-) values invert the phase)
High Pre Delay	0.0–100[msec]	Delay time from when the original sound is heard to when the high-range flanger sound is heard
★ High Rate #	0.05–10.00[Hz], note	Rate at which the high-range flanger sound is modulated
High Depth	0–127	Modulation depth for the high-range flanger sound
High Phase	0–180[deg]	Spaciousness of the high-range flanger sound
High Feedback #	-98–+98[%]	Proportion of the high-range flanger sound that is to be returned to the input (negative (-) values invert the phase)
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and flanger sound (W)
Level	0–127	Output level

34: 2BAND STEP FLNGR

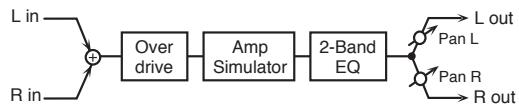
A step flanger that lets you apply an effect independently to the low-frequency and high-frequency ranges.



Parameter	Value	Explanation
Split Freq	200–8000[Hz]	Frequency at which the low and high ranges will be divided
Low Pre Delay	0.0–100[msec]	Delay time from when the original sound is heard to when the low-range flanger sound is heard
Low Rate #	0.05–10.00[Hz], note	Rate at which the low-range flanger sound is modulated
Low Depth	0–127	Modulation depth for the low-range flanger sound
Low Phase	0–180[deg]	Spaciousness of the low-range flanger sound
Low Feedback #	-98–+98[%]	Proportion of the low-range flanger sound that is to be returned to the input (negative (-) values invert the phase)
Low Step Rate #	0.10–20.00[Hz], note	Rate at which the steps will cycle for the low-range flanger sound
High Pre Delay	0.0–100[msec]	Delay time from when the original sound is heard to when the high-range flanger sound is heard
High Rate #	0.05–10.00[Hz], note	Rate at which the high-range flanger sound is modulated
High Depth	0–127	Modulation depth for the high-range flanger sound
High Phase	0–180[deg]	Spaciousness of the high-range flanger sound
High Feedback #	-98–+98[%]	Proportion of the high-range flanger sound that is to be returned to the input (negative (-) values invert the phase)
★ High Step Rate #	0.10–20.00[Hz], note	Rate at which the steps will cycle for the high-range flanger sound
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and flanger sound (W)
Level	0–127	Output level

35: OVERDRIVE

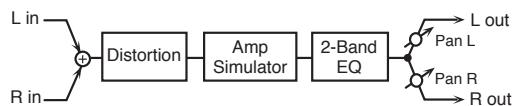
Creates a soft distortion similar to that produced by vacuum tube amplifiers.



Parameter	Value	Explanation
★ Drive #	0–127	Degree of distortion Also changes the volume.
Type		Type of guitar amp
SMALL		Small amp
Amp Type	BUILT-IN	Single-unit type amp
	2-STACK	Large double stack amp
	3-STACK	Large triple stack amp
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Pan #	L64–63R	Stereo location of the output sound
Level	0–127	Output level

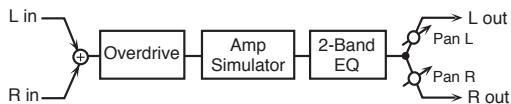
36: DISTORTION

Produces a more intense distortion than Overdrive. The parameters are the same as for "35: OVERDRIVE."



37: VS OVERDRIVE

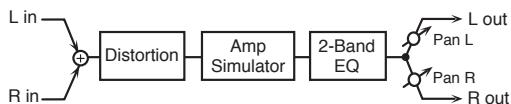
This is an overdrive that provides heavy distortion.



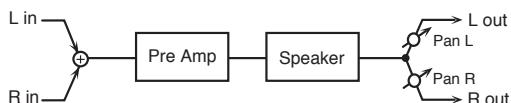
Parameter	Value	Explanation
Drive #	0-127	Degree of distortion Also changes the volume.
Tone #	0-127	Sound quality of the Overdrive effect
Amp Sw	OFF, ON	Turns the Amp Simulator on/off.
Amp Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp SMALL: Small amp BUILT-IN: Single-unit type amp 2-STACK: Large double stack amp 3-STACK: Large triple stack amp
Low Gain	-15~+15[dB]	Gain of the low range
High Gain	-15~+15[dB]	Gain of the high range
Pan #	L64-63R	Stereo location of the output sound
Level	0-127	Output level

38: VS DISTORTION

This is a distortion effect that provides heavy distortion. The parameters are the same as for "37: VS OVERDRIVE."

**39: GUITAR AMP SIM**

This is an effect that simulates the sound of a guitar amplifier.



Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
Pre Amp Type	JC-120, CLEAN TWIN, MATCH DRIVE, BG LEAD, MS1959I, MS1959II, MS1959I+II, SLDN LEAD, METAL 5150, METAL LEAD, OD-1, OD-2 TURBO, DISTORTION, FUZZ	Type of guitar amp
Pre Amp Volume #	0-127	Volume and amount of distortion of the amp
Pre Amp Master #	0-127	Volume of the entire pre-amp
Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Pre Amp Bass		Tone of the bass/mid/treble frequency range
Pre Amp Middle	0-127	Middle cannot be set if "MATCH DRIVE" is selected as the Pre Amp Type.
Pre Amp Treble		
Pre Amp Presence	0-127	Tone for the ultra-high frequency range
Pre Amp Bright	OFF, ON	Turning this "On" produces a sharper and brighter sound. This parameter applies to the "JC-120," "CLEAN TWIN," and "BG LEAD" Pre Amp Types.
Speaker Sw	OFF, ON	Determines whether the signal passes through the speaker (ON), or not (OFF).
Speaker Type	(See the following table)	Type of speaker
Mic Setting	1-3	Adjusts the location of the microphone that's capturing the sound of the speaker. This can be adjusted in three steps, from 1 to 3, with the microphone becoming more distant as the value increases.
Mic Level	0-127	Volume of the microphone
Direct Level	0-127	Volume of the direct sound
Pan #	L64-63R	Stereo location of the output sound
Level #	0-127	Output level

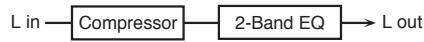
Specifications of each Speaker Type

The speaker column indicates the diameter of each speaker unit (in inches) and the number of units.

Type	Cabinet	Speaker	Microphone
SMALL 1	small open-back enclosure	10	dynamic
SMALL 2	small open-back enclosure	10	dynamic
MIDDLE	open back enclosure	12 x 1	dynamic
JC-120	open back enclosure	12 x 2	dynamic
BUILT-IN 1	open back enclosure	12 x 2	dynamic
BUILT-IN 2	open back enclosure	12 x 2	condenser
BUILT-IN 3	open back enclosure	12 x 2	condenser
BUILT-IN 4	open back enclosure	12 x 2	condenser
BUILT-IN 5	open back enclosure	12 x 2	condenser
BG STACK 1	sealed enclosure	12 x 2	condenser
BG STACK 2	large sealed enclosure	12 x 2	condenser
MS STACK 1	large sealed enclosure	12 x 4	condenser
MS STACK 2	large sealed enclosure	12 x 4	condenser
METAL STACK	large double stack	12 x 4	condenser
2-STACK	large double stack	12 x 4	condenser
3-STACK	large triple stack	12 x 4	condenser

40: COMPRESSOR

Flattens out high levels and boosts low levels, smoothing out fluctuations in volume.



Parameter	Value	Explanation
Attack #	0-127	Sets the time from when the input exceeds the Threshold until the volume starts being compressed
Threshold #	0-127	Adjusts the volume at which compression begins
Post Gain	0~+18[dB]	Adjusts the output gain.
Low Gain	-15~+15[dB]	Gain of the low range
High Gain	-15~+15[dB]	Gain of the high range
Level #	0-127	Output level

41: LIMITER

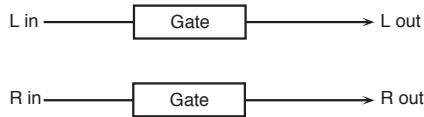
Compresses signals that exceed a specified volume level, preventing distortion from occurring.



Parameter	Value	Explanation
Release #	0-127	Adjusts the time after the signal volume falls below the Threshold Level until compression is no longer applied.
Threshold #	0-127	Adjusts the volume at which compression begins
Ratio	1.5:1, 2:1, 4:1, 100:1	Compression ratio
Post Gain	0~+18[dB]	Adjusts the output gain.
Low Gain	-15~+15[dB]	Gain of the low range
High Gain	-15~+15[dB]	Gain of the high range
Level #	0-127	Output level

42: GATE

Cuts the reverb's delay according to the volume of the sound sent into the effect. Use this when you want to create an artificial-sounding decrease in the reverb's decay.

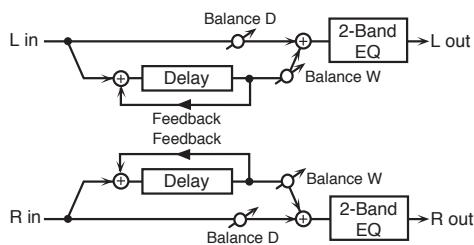


Parameter	Value	Explanation
Threshold #	0-127	Volume level at which the gate begins to close
Type of gate		
Mode	GATE DUCK (Ducking)	The gate will close when the volume of the original sound decreases, cutting the original sound. The gate will close when the volume of the original sound increases, cutting the original sound.
Attack	0-127	Adjusts the time it takes for the gate to fully open after being triggered.
Hold	0-127	Adjusts the time it takes for the gate to start closing after the source sound falls beneath the Threshold.
Release	0-127	Adjusts the time it takes the gate to fully close after the hold time.
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level

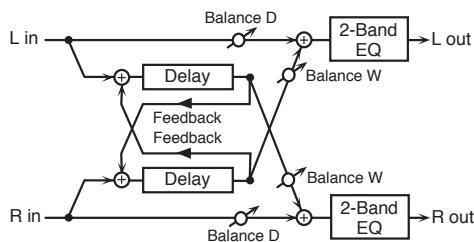
43: DELAY

This is a stereo delay.

When Feedback Mode is NORMAL:



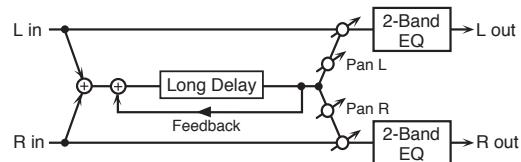
When Feedback Mode is CROSS:



Parameter	Value	Explanation
Delay Left	0-1300[msec], note	Adjusts the time until the delay sound is heard.
Delay Right		
Phase Left	NORMAL INVERT	Phase of the left delay sound Non-inverted Inverted
Phase Right	NORMAL INVERT	Phase of the right delay sound Non-inverted Inverted
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect (See the figures.).
Feedback #	-98-+98[%]	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200-8000[Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Low Gain	-15-+15[dB]	Gain of the low range
High Gain	-15-+15[dB]	Gain of the high range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0-127	Output level

44: LONG DELAY

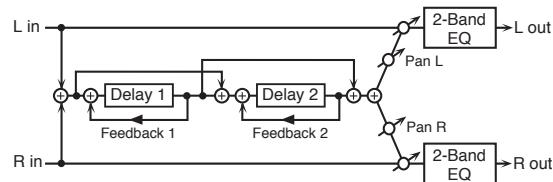
A delay that provides a long delay time.



Parameter	Value	Explanation
Delay Time	0-2600[msec], note	Delay time from when the original sound is heard to when the delay sound is heard
Phase	NORMAL, INVERSE	Phase of the delay (NORMAL: non-inverted, INVERT: inverted)
Feedback #	-98-+98[%]	Proportion of the delay sound that is to be returned to the input (negative (-) values invert the phase)
HF Damp	200-8000[Hz], BYPASS	Frequency at which the high-frequency content of the delayed sound will be cut (BYPASS: no cut)
Pan #	L64-63R	Panning of the delay sound
Low Gain	-15-+15[dB]	Gain of the low range
High Gain	-15-+15[dB]	Gain of the high range
Balance #	D100:0W-D0:100W	Volume balance of the original sound (D) and delay sound (W)
Level	0-127	Output level

45: SERIAL DELAY

This delay connects two delay units in series. Feedback can be applied independently to each delay unit, allowing you to produce complex delay sounds.

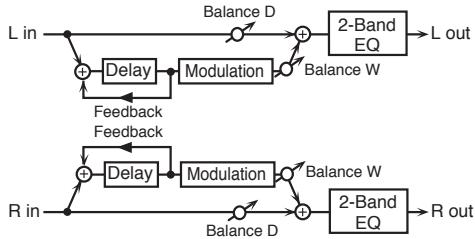


Parameter	Value	Explanation
Delay 1 Time	0-1300[msec], note	Delay time from when sound is input to delay 1 until the delay sound is heard
Delay 1 Feedback #	-98-+98[%]	Proportion of the delay sound that is to be returned to the input of delay 1 (negative (-) values invert the phase)
Delay 1 HF Damp	200-8000[Hz], BYPASS	Frequency at which the high-frequency content of the delayed sound of delay 1 will be cut (BYPASS: no cut)
Delay 2 Time	0-1300[msec], note	Delay time from when sound is input to delay 2 until the delay sound is heard
Delay 2 Feedback #	-98-+98[%]	Proportion of the delay sound that is to be returned to the input of delay 2 (negative (-) values invert the phase)
Delay 2 HF Damp	200-8000[Hz], BYPASS	Frequency at which the high-frequency content of the delayed sound of delay 2 will be cut (BYPASS: no cut)
Pan #	L64-63R	Panning of the delay sound
Low Gain	-15-+15[dB]	Gain of the low range
High Gain	-15-+15[dB]	Gain of the high range
Balance #	D100:0W-D0:100W	Volume balance of the original sound (D) and delay sound (W)
Level	0-127	Output level

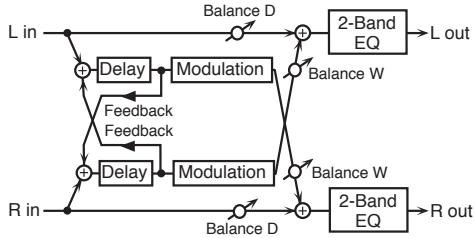
46: MODULATION DELAY

Adds modulation to the delayed sound.

When Feedback Mode is NORMAL:



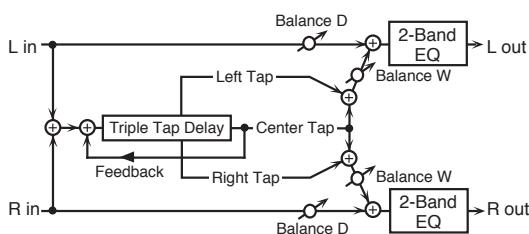
When Feedback Mode is CROSS:



Parameter	Value	Explanation
Delay Left	0–1300[msec], note	Adjusts the time until the delay sound is heard.
Delay Right	0–1300[msec], note	Adjusts the time until the delay sound is heard.
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect (See the figures.)
Feedback #	-98–+98[%]	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000[Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Rate #	0.05–10.00[Hz], note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180[deg]	Spatial spread of the sound
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

47: 3TAP PAN DELAY

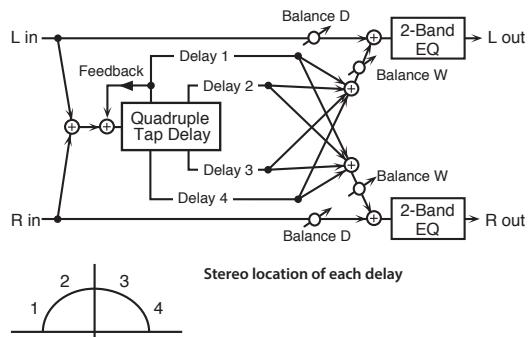
Produces three delay sounds; center, left and right.



Parameter	Value	Explanation
Delay Left, Right, Center	0–2600[msec], note	Adjusts the time from the original sound until the left, right, and center delayed sounds are heard
Center Feedback #	-98–+98[%]	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000[Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Left, Right, Center Level	0–127	Volume of each delay
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

48: 4TAP PAN DELAY

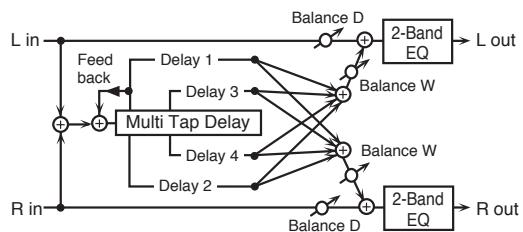
This effect has four delays.



Parameter	Value	Explanation
Delay 1–4 Time	0–2600[msec], note	Adjusts the time from the original sound until delay sounds 1–4 are heard
Delay 1 Feedback #	-98–+98[%]	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000[Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Delay 1–4 Level	0–127	Volume of each delay
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

49: MULTI TAP DELAY

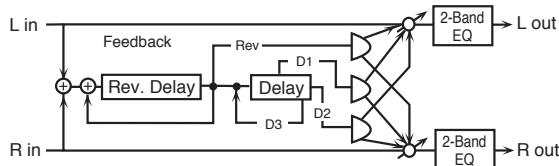
This effect provides four delays. Each of the Delay Time parameters can be set to a note length based on the selected tempo. You can also set the panning and level of each delay sound.



Parameter	Value	Explanation
Delay 1–4 Time	0–2600[msec], note	Adjusts the time until Delays 1–4 are heard.
Delay 1 Feedback #	-98–+98[%]	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000[Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Delay 1–4 Pan	L64–63R	Stereo location of Delays 1–4
Delay 1–4 Level	0–127	Output level of Delays 1–4
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

50: REVERSE DELAY

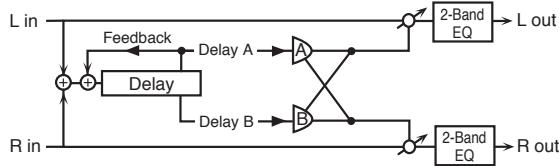
This is a reverse delay that adds a reversed and delayed sound to the input sound. A tap delay is connected immediately after the reverse delay.



Parameter	Value	Explanation
Threshold	0–127	Volume at which the reverse delay will begin to be applied
Rev Delay Time	0–1300[msec], note	Delay time from when sound is input into the reverse delay until the delay sound is heard
Rev Delay Feedback #	-98–+98[%]	Proportion of the delay sound that is to be returned to the input of the reverse delay (negative (-) values invert the phase)
Rev Delay HF Damp	200–8000[Hz], BYPASS	Frequency at which the high-frequency content of the reverse-delayed sound will be cut (BYPASS: no cut)
Rev Delay Pan	L64–63R	Panning of the reverse delay sound
Rev Delay Level	0–127	Volume of the reverse delay sound
Delay 1–3 Time	0–1300[msec], note	Delay time from when sound is input into the tap delay until the delay sound is heard
Delay 3 Feedback #	-98–+98[%]	Proportion of the delay sound that is to be returned to the input of the tap delay (negative (-) values invert the phase)
Delay HF Damp	200–8000[Hz], BYPASS	Frequency at which the hi-frequency content of the tap delay sound will be cut (BYPASS: no cut)
Delay 1 Pan, Delay 2 Pan	L64–63R	Panning of the tap delay sounds
Delay 1 Level, Delay 2 Level	0–127	Volume of the tap delay sounds
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and delay sound (W)
Level	0–127	Output level

51: SHUFFLE DELAY

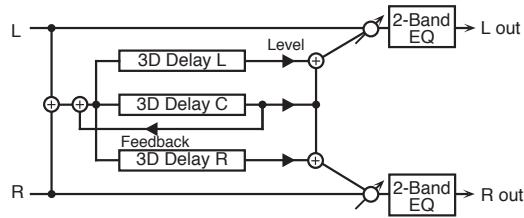
Adds a shuffle to the delay sound, giving the sound a bouncy delay effect with a swing feel.



Parameter	Value	Explanation
Delay Time #	0–2600[msec], note	Adjusts the time until the delay sound is heard.
Shuffle Rate #	0–100	Adjusts the ratio (as a percentage) of the time that elapses before Delay B sounds relative to the time that elapses before the Delay A sounds. When set to 100, the delay times are the same.
Acceleration	0–15	Adjusts the speed which the Delay Time changes from the current setting to its specified new setting.
Feedback #	-98–+98[%]	Adjusts the amount of the delay that's feedback into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000[Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Pan A, B	L64–63R	Stereo location of Delay A/B
Level A, B	0–127	Volume of delay A/B
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

52: 3D DELAY

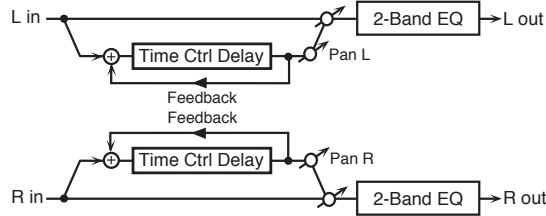
This applies a 3D effect to the delay sound. The delay sound will be positioned 90 degrees left and 90 degrees right.



Parameter	Value	Explanation
Delay Left	0–2600[msec], note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Right	0–2600[msec], note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Center	0–2600[msec], note	Adjusts the delay time from the direct sound until the delay sound is heard.
Center Feedback #	-98–+98[%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000[Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Left Level	0–127	Output level of the delay sound
Right Level	0–127	Output level of the delay sound
Center Level	0–127	The optimal 3D effect will be achieved.
Output Mode	SPEAKER PHONES	When using speakers When using headphones
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

53: ANALOG DELAY

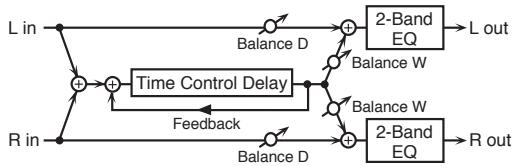
A stereo delay in which the delay time can be varied smoothly.



Parameter	Value	Explanation
Delay Time #	0–1300[msec], note	Adjusts the time until the delay is heard.
Acceleration	0–15	Adjusts the speed which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change.
Feedback #	-98–+98[%]	Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000[Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

54: ANALOG LONG DELAY

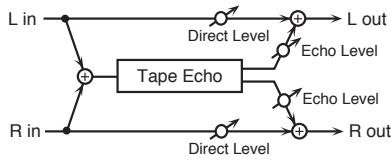
A delay in which the delay time can be varied smoothly, and allowing an extended delay to be produced.



Parameter	Value	Explanation
Delay Time #	0–2600[msec], note	Adjusts the time until the delay is heard.
Acceleration	0–15	Adjusts the speed which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change.
Feedback #	-98–+98[%]	Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000[Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Pan #	L64–63R	Stereo location of the delay
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

55: TAPE ECHO

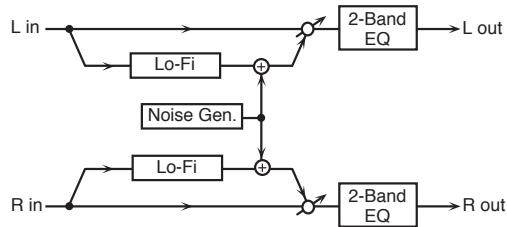
A virtual tape echo that produces a realistic tape delay sound. This simulates the tape echo section of a Roland RE-201 Space Echo.



Parameter	Value	Explanation
Mode	S, M, L, S+M, S+L, M+L, S+M+L	Combination of playback heads to use Select from three different heads with different delay times. S: short, M: middle, L: long
Repeat Rate #	0–127	Tape speed Increasing this value will shorten the spacing of the delayed sounds.
Intensity #	0–127	Amount of delay repeats
Bass	-15–+15[dB]	Boost/cut for the lower range of the echo sound
Treble	-15–+15[dB]	Boost/cut for the upper range of the echo sound
Head S Pan		
Head M Pan	L64–63R	Independent panning for the short, middle, and long playback heads
Head L Pan		
Tape Distortion	0–5	Amount of tape-dependent distortion to be added This simulates the slight tonal changes that can be detected by signal-analysis equipment. Increasing this value will increase the distortion.
Wow/Flutter Rate	0–127	Speed of wow/flutter (complex variation in pitch caused by tape wear and rotational irregularity)
Wow/Flutter Depth	0–127	Depth of wow/flutter
Echo Level #	0–127	Volume of the echo sound
Direct Level #	0–127	Volume of the original sound
Level	0–127	Output level

56: LOFI NOISE

In addition to a lo-fi effect, this adds various types of noise such as white noise and disc noise.



Parameter	Value	Explanation
LoFi Type	1–9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter Type	Type of filter that follows the LoFi effect	
OFF	No filter is used	
LPF	Cuts the frequency range above the Cutoff.	
HPF	Cuts the frequency range below the Cutoff.	
Post Filter Cutoff	200–8000[Hz]	Center frequency of the filter
W/P Noise Type	WHITE, PINK	Switch between white noise and pink noise.
W/P Noise LPF	200–8000[Hz], BYPASS	Center frequency of the low pass filter applied to the white/pink noise (BYPASS: no cut)
W/P Noise Level #	0–127	Volume of the white/pink noise
Disc Noise Type	LP, EP, SP, RND	Type of record noise The frequency at which the noise is heard depends on the selected type.
Disc Noise LPF	200–8000[Hz], BYPASS	Adjusts the cutoff frequency of the low pass filter applied to the record noise. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Disc Noise Level #	0–127	Volume of the record noise
Hum Noise Type	50, 60[Hz]	Frequency of the hum noise
Hum Noise LPF	200–8000[Hz], BYPASS	Center frequency of the low pass filter applied to the hum noise (BYPASS: no cut)
Hum Noise Level #	0–127	Volume of the hum noise
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

57: LOFI COMPRESS

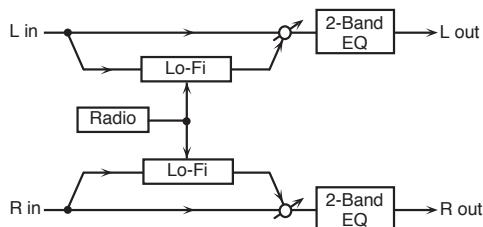
This is an effect that intentionally degrades the sound quality for creative purposes.



Parameter	Value	Explanation
Pre Filter Type	Selects the type of filter applied to the sound before it passes through the Lo-Fi effect.	
1	Compressor off	
2–6	Compressor on	
LoFi Type	1–9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter Type	Type of filter	
OFF	No filter is used	
LPF	Cuts the frequency range above the Cutoff	
HPF	Cuts the frequency range below the Cutoff	
Post Filter Cutoff	200–8000[Hz]	Basic frequency of the Post Filter
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level #	0–127	Output level

58: LOFI RADIO

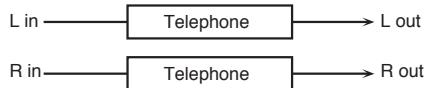
In addition to a Lo-Fi effect, this effect also generates radio noise.



Parameter	Value	Explanation
LoFi Type	1–9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter Type	Type of filter	
OFF	No filter is used	
LPF	Cuts the frequency range above the Cutoff.	
HPF	Cuts the frequency range below the Cutoff.	
Post Filter Cutoff	200–8000[Hz]	Basic frequency of the Post Filter
Radio Detune #	0–127	Simulates the tuning noise of a radio. As this value is raised, the tuning drifts further.
Radio Noise Level #	0–127	Volume of the radio noise
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

59: TELEPHONE

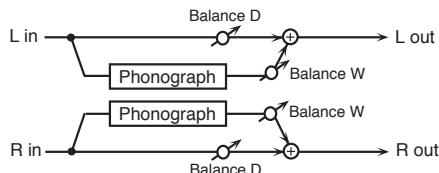
This effect produces a muffled sound, like that heard through a telephone.



Parameter	Value	Explanation
Voice Quality #	0–15	Audio quality of the telephone voice
Treble	-15–+15[dB]	Bandwidth of the telephone voice
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

60: PHONOGRAPH

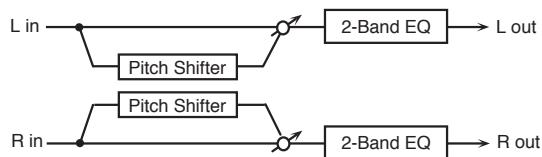
Simulates a sound recorded on an analog record and played back on a record player. This effect also simulates the various types of noise that are typical of a record, and even the rotational irregularities of an old turntable.



Parameter	Value	Explanation
Signal Distortion	0–127	Depth of distortion
Frequency Range	0–127	Frequency response of the playback system Decreasing this value will produce the impression of an old system with a poor frequency response.
Disc Type	LP, EP, SP	Rotational speed of the turntable This will affect the frequency of the scratch noise.
Scratch Noise Level	0–127	Amount of noise due to scratches on the record
Dust Noise Level	0–127	Volume of noise due to dust on the record
Hiss Noise Level	0–127	Volume of continuous "hiss"
Total Noise Level #	0–127	Volume of overall noise
Wow	0–127	Depth of long-cycle rotational irregularity
Flutter	0–127	Depth of short-cycle rotational irregularity
Random	0–127	Depth of indefinite-cycle rotational irregularity
Total Wow/Flutter #	0–127	Depth of overall rotational irregularity
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

61: PITCH SHIFTER

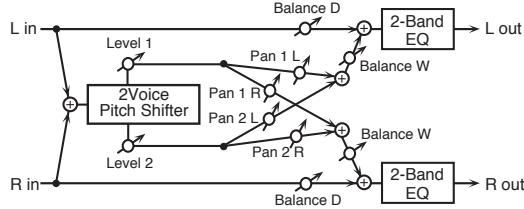
A stereo pitch shifter.



Parameter	Value	Explanation
Coarse #1	-24–+12[semi]	Adjusts the pitch of the pitch shifted sound in semitone steps.
Fine #1	-100–+100[cent]	Adjusts the pitch of the pitch shifted sound in 2-cent steps.
Delay Time	0–1300[msec], note	Adjusts the delay time from the direct sound until the pitch shifted sound is heard.
Feedback #	-98–+98[%]	Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase.
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0–127	Output level

62: 2VOI PCH SHIFTER

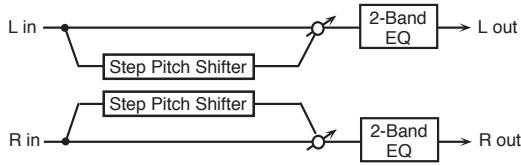
Shifts the pitch of the original sound. This 2-voice pitch shifter has two pitch shifters, and can add two pitch shifted sounds to the original sound.



Parameter	Value	Explanation
Pitch1 Coarse #1	-24–+12[semi]	Adjusts the pitch of Pitch Shift 1 in semitone steps.
Pitch1 Fine #1	-100–+100[cent]	Adjusts the pitch of Pitch Shift 1 in 2-cent steps.
Pitch1 Delay	0–1300[msec], note	Adjusts the delay time from the direct sound until the Pitch Shift 1 sound is heard.
Pitch1 Feedback #	-98–+98[%]	Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase.
Pitch1 Pan #	L64–63R	Stereo location of the Pitch Shift 1 sound
Pitch1 Level	0–127	Volume of the Pitch Shift 1 sound
Pitch2 Coarse #2	-24–+12[semi]	
Pitch2 Fine #2	-100–+100[cent]	
Pitch2 Delay	0–1300[msec], note	Settings of the Pitch Shift 2 sound. The parameters are the same as for the Pitch Shift 1 sound.
Pitch2 Feedback #	-98–+98[%]	
Pitch2 Pan #	L64–63R	
Pitch2 Level	0–127	
Low Gain	-15–+15[dB]	Gain of the low range
High Gain	-15–+15[dB]	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0–127	Output level

63: STEP PCH SHIFTER

A pitch shifter in which the amount of pitch shift is varied by a 16-step sequence.



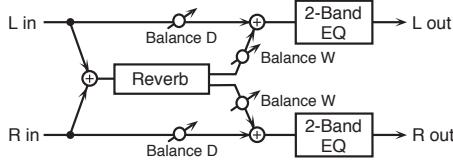
Parameter	Value	Explanation
Step 01–16	-24~+12[semi]	Amount of pitch shift at each step (semitone units)
Rate #	0.05~10.0[Hz], note	Rate at which the 16-step sequence will cycle
Attack #	0~127	Speed at which the amount of pitch shift changes between steps
Gate Time #	0~127	Duration of the pitch shifted sound at each step
Fine	-100~+100[cent]	Pitch shift adjustment for all steps (2-cent units)
Delay Time	0~1300[msec], note	Delay time from the original sound until the pitch-shifted sound is heard
Feedback #	-98~+98[%]	Proportion of the pitch-shifted sound that is to be returned to the input (negative (-) values invert the phase)
Low Gain	-15~+15[dB]	Gain of the low range
High Gain	-15~+15[dB]	Gain of the high range
Balance #	D100:0W~D0:100W	Volume balance between the direct sound (D) and the reverb sound (W)
Level	0~127	Output level

MEMO

You can use MFx control to restart the step sequence from the beginning (p. 18, p. 24).

64: REVERB

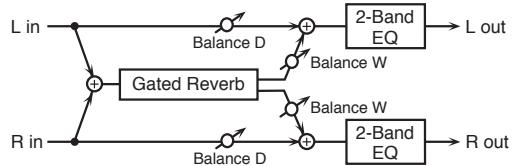
Adds reverberation to the sound, simulating an acoustic space.



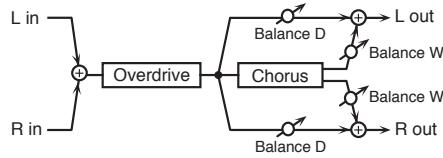
Parameter	Value	Explanation
Type	Type of reverb	
	ROOM1	Dense reverb with short decay
	ROOM2	Sparse reverb with short decay
	STAGE1	Reverb with greater late reverberation
	STAGE2	Reverb with strong early reflections
	HALL1	Reverb with clear reverberance
	HALL2	Reverb with rich reverberance
Pre Delay	0.0~100[msec]	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time #	0~127	Time length of reverberation
HF Damp	200~8000[Hz], BYPASS	Adjusts the frequency above which the reverberant sound will be cut. As the frequency is set lower, more of the high frequencies will be cut, resulting in a softer and more muted reverberance. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Low Gain	-15~+15[dB]	Gain of the low range
High Gain	-15~+15[dB]	Gain of the high range
Balance #	D100:0W~D0:100W	Volume balance between the direct sound (D) and the reverb sound (W)
Level	0~127	Output level

65: GATED REVERB

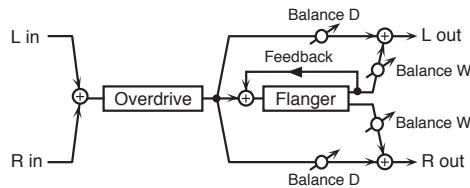
This is a special type of reverb in which the reverberant sound is cut off before its natural length.



Parameter	Value	Explanation
Type	Type of reverb	
	NORMAL	Conventional gated reverb
	REVERSE	Backwards reverb
	SWEET1	The reverberant sound moves from right to left
	SWEET2	The reverberant sound moves from left to right
Pre Delay	0.0~100[msec]	Adjusts the delay time from the direct sound until the reverb sound is heard.
Gate Time	5~500[msec]	Adjusts the time from when the reverb is heard until it disappears.
Low Gain	-15~+15[dB]	Gain of the low range
High Gain	-15~+15[dB]	Gain of the high range
Balance #	D100:0W~D0:100W	Volume balance between the direct sound (D) and the reverb sound (W)
Level #	0~127	Output level

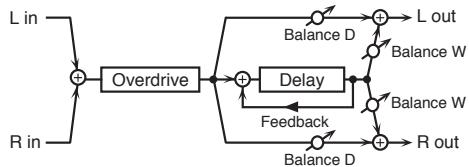
66: OD → CHORUS

Parameter	Value	Explanation
Overdrive Drive #	0~127	Degree of distortion. Also changes the volume.
Overdrive Pan #	L64~G3R	Stereo location of the overdrive sound
Chorus Pre Delay	0.0~100[msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05~10.00[Hz], note	Frequency of modulation
Chorus Depth	0~127	Depth of modulation
Chorus Balance #	D100:0W~D0:100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Level	0~127	Output level

67: OD → FLANGER

Parameter	Value	Explanation
Overdrive Drive #	0~127	Degree of distortion. Also changes the volume.
Overdrive Pan #	L64~G3R	Stereo location of the overdrive sound
Flanger Pre Delay	0.0~100[msec]	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05~10.00[Hz], note	Frequency of modulation
Flanger Depth	0~127	Depth of modulation
Flanger Feedback #	-98~+98[%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W~D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0~127	Output level

68: OD → DELAY

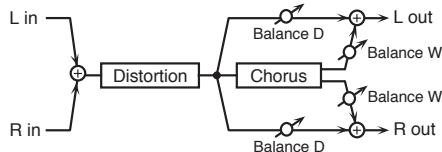


Parameter	Value	Explanation
Overdrive Drive #	0-127	Degree of distortion Also changes the volume.
Overdrive Pan #	L64-63R	Stereo location of the overdrive sound
Delay Time	0-2600[msec], note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98-+98[%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200-8000[Hz], note	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0-127	Output level

69: DST → CHORUS

The parameters are essentially the same as in "66: OD → CHORUS" with the exception of the following two.

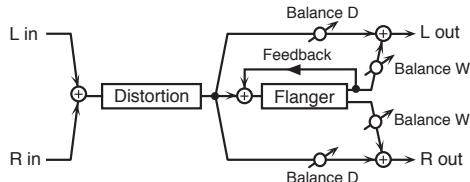
Overdrive Drive → Distortion Drive,
Overdrive Pan → Distortion Pan



70: DST → FLANGER

The parameters are essentially the same as in "67: OD → FLANGER," with the exception of the following two.

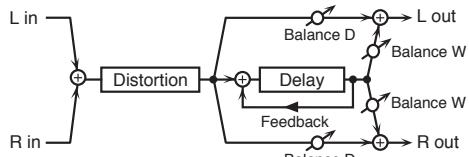
Overdrive Drive → Distortion Drive,
Overdrive Pan → Distortion Pan



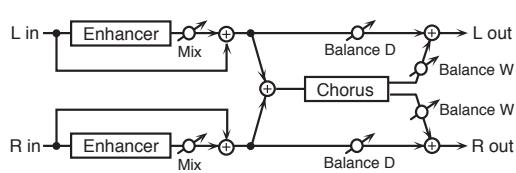
71: DST → DELAY

The parameters are essentially the same as in "68: OD → DELAY," with the exception of the following two.

Overdrive Drive → Distortion Drive,
Overdrive Pan → Distortion Pan

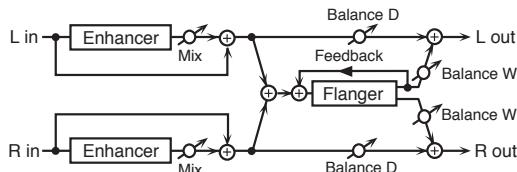


72: ENH → CHORUS



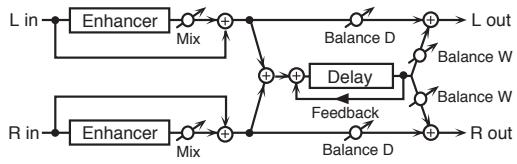
Parameter	Value	Explanation
Enhancer Sens #	0-127	Sensitivity of the enhancer
Enhancer Mix #	0-127	Level of the overtones generated by the enhancer
Chorus Pre Delay	0.0-100[msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05-10.00[Hz], note	Frequency of modulation
Chorus Depth	0-127	Depth of modulation
Chorus Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Level	0-127	Output level

73: ENH → FLANGER



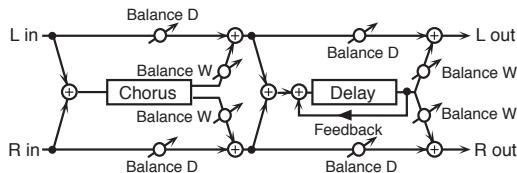
Parameter	Value	Explanation
Enhancer Sens #	0-127	Sensitivity of the enhancer
Enhancer Mix #	0-127	Level of the overtones generated by the enhancer
Flanger Pre Delay	0.0-100[msec]	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05-10.00[Hz], note	Frequency of modulation
Flanger Depth	0-127	Depth of modulation
Flanger Feedback #	-98-+98[%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0-127	Output level

74: ENH → DELAY



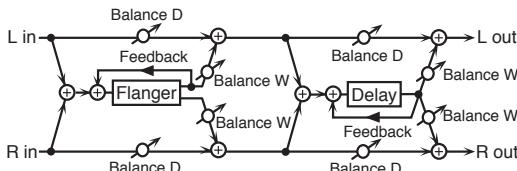
Parameter	Value	Explanation
Enhancer Sens #	0-127	Sensitivity of the enhancer
Enhancer Mix #	0-127	Level of the overtones generated by the enhancer
Delay Time	0-2600[msec], note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98-+98[%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200-8000[Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0-127	Output level

75: CHORUS → DELAY

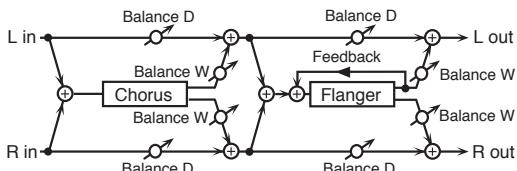


Parameter	Value	Explanation
Chorus Pre Delay	0.0-100[msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05-10.00[Hz], note	Frequency of modulation
Chorus Depth	0-127	Depth of modulation
Chorus Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Delay Time	0-2600[msec], note	Adjusts the delay time from the direct sound until the delay sound is heard.

Parameter	Value	Explanation
Delay Feedback #	-98+98[%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200-8000[Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0-127	Output level

76: FLANGER → DELAY

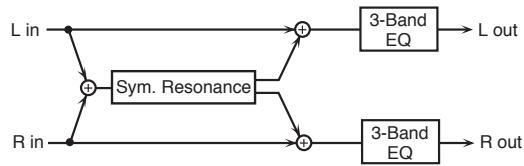
Parameter	Value	Explanation
Flanger Pre Delay	0.0-100[msec]	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05-10.00[Hz], note	Frequency of modulation
Flanger Depth	0-127	Depth of modulation
Flanger Feedback #	-98+98[%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Delay Time	0-2600[msec], note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98+98[%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200-8000[Hz], note	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0-127	Output level

77: CHORUS → FLANGER

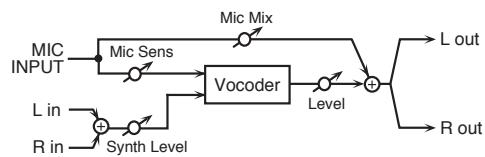
Parameter	Value	Explanation
Chorus Pre Delay	0.0-100[msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05-10.00[Hz], note	Modulation frequency of the chorus effect
Chorus Depth	0-127	Modulation depth of the chorus effect
Chorus Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Flanger Pre Delay	0.0-100[msec]	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05-10.00[Hz], note	Modulation frequency of the flanger effect
Flanger Depth	0-127	Modulation depth of the flanger effect
Flanger Feedback #	-98+98[%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0-127	Output level

78: SYMPATHETIC RESO

On an acoustic piano, holding down the damper pedal allows other strings to resonate in sympathy with the notes you play, creating rich and spacious resonances. This effect simulates these sympathetic resonances.



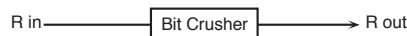
Parameter	Value	Explanation
Depth #	0-127	Depth of the effect
Damper #	0-127	Depth to which the damper pedal is pressed (controls the resonant sound)
Pre LPF	16-15000[Hz], BYPASS	Frequency of the filter that cuts the high-frequency content of the input sound (BYPASS: no cut)
Pre HPF	BYPASS, 16-15000[Hz]	Frequency of the filter that cuts the low-frequency content of the input sound (BYPASS: no cut)
Peaking Freq	200-8000[Hz]	Frequency of the filter that boosts/cuts a specific frequency region of the input sound
Peaking Gain	-15+15[dB]	Amount of boost/cut produced by the filter at the specified frequency region of the input sound
Peaking Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the frequency region boosted/cut by the Peaking Gain parameter (larger values make the region narrower)
HF Damp	16-15000[Hz], BYPASS	Frequency at which the high-frequency content of the resonant sound will be cut (BYPASS: no cut)
LF Damp	BYPASS, 16-15000[Hz]	Frequency at which the low-frequency content of the resonant sound will be cut (BYPASS: no cut)
Lid	1-6	This simulates the actual changes in sound that occur when the lid of a grand piano is set at different heights.
EQ Low Freq	200, 400[Hz]	Frequency of the low-range EQ
EQ Low Gain	-15+15[dB]	Amount of low-range boost/cut
EQ Mid Freq	200-8000[Hz]	Frequency of the midrange EQ
EQ Mid Gain	-15+15[dB]	Amount of midrange boost/cut
EQ Mid Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of midrange (larger values make the region narrower)
EQ High Freq	2000, 4000, 8000[Hz]	Frequency of the high-range EQ
EQ High Gain	-15+15[dB]	Amount of high-range boost/cut
Level	0-127	Output level

79: Di VOCODER

Parameter	Value	Explanation
Mic Sens #	0-127	Input sensitivity of the microphone
Synth Level #	0-127	Input level of the instrument
Mic Mix #	0-127	Amount of microphone audio added to the output of the vocoder
Level	0-127	Volume level after passing through the vocoder

80: BIT CRUSHER

This creates a lo-fi sound.



Parameter	Value	Explanation
Sample Rate #	0-127	Adjusts the sample rate.
Bit Down #	0-20	Adjusts the bit depth.
Filter #	0-127	Adjusts the filter depth.
Level	0-127	Output level

Chorus Parameters

Parameter	Explanation
01: CHORUS	
Filter Type	Type of filter
OFF	No filter is used
LPF	Cuts the frequency range above the Cutoff Freq
HPF	Cuts the frequency range below the Cutoff Freq
Cutoff Freq	Basic frequency of the filter 200–8000[Hz]
Pre Delay	Adjusts the delay time from the direct sound until the chorus sound is heard. 0.0–100.0[msec]
Rate	Frequency of modulation 0.05–10.00Hz, note
Depth	Depth of modulation 0–127
Phase	Spatial spread of the sound 0–180[deg]
Feedback	Adjusts the amount of the chorus sound that is fed back into the effect. 0–127
02: DELAY	
Delay Left, Right, Center	Adjusts the delay time from the direct sound until the delay sound is heard. 0–1000ms, note
Center Feedback	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase. -98–+98[%]
HF Damp	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS. 200–8000[Hz], BYPASS
Left, Right, Center Level	Volume of each delay sound 0–127
03: GM2 CHORUS	
Pre-LPF	Cuts the high frequency range of the sound coming into the chorus. 0–7
Level	Volume of the chorus sound 0–127
Feedback	Adjusts the amount of the chorus sound that is fed back into the effect. 0–127
Rate	Frequency of modulation 0–127
Depth	Depth of modulation 0–127
Send Level To Rev	Adjusts the amount of chorus sound that will be sent to the reverb. 0–127

Reverb Parameters

Parameter	Explanation
01: REVERB	
Type	Type of reverb/delay
ROOM1	Short reverb with high density
ROOM2	Short reverb with low density
STAGE1	Reverb with greater late reverberation
STAGE2	Reverb with strong early reflections
HALL1	Very clear-sounding reverb
HALL2	Rich reverb
DELAY	Conventional delay effect
PAN-DELAY	Delay effect with echoes that pan left and right
Time	Time length of reverberation (Type: ROOM1–HALL2) Delay time (Type: DELAY, PAN-DELAY) 0–127
HF Damp	Adjusts the frequency above which the high-frequency content of the reverb sound will be cut, or "damped." If you do not want to cut the high frequencies, set this parameter to BYPASS. 200–8000[Hz], BYPASS
Delay Feedback	Adjusts the amount of delay feedback when the Type setting is DELAY or PAN-DELAY. Amount of delay sound returned to the input (this setting is valid only if Type is DELAY or PAN-DELAY) 0–127
02: SRV ROOM / 03: SRV HALL / 04: SRV PLATE	
Pre Delay	Adjusts the delay time from the direct sound until the reverb sound is heard. 0.0–100.0[msec]
Time	Time length of reverberation 0–127
Size	Size of the simulated room or hall 1–8
High Cut	Adjusts the frequency above which the high-frequency content of the reverb will be reduced. If you do not want to reduce the high frequencies, set this parameter to BYPASS. 160–12500[Hz], BYPASS
Density	Density of reverb 0–127
Diffusion	Adjusts the change in the density of the reverb over time. The higher the value, the more the density increases with time. (The effect of this setting is most pronounced with long reverb times.) 0–127
LF Damp Freq	Adjusts the frequency below which the low-frequency content of the reverb sound will be reduced, or "damped." 50–4000[Hz]
LF Damp Gain	Adjusts the amount of damping applied to the frequency range selected with LF Damp. With a setting of "0," there will be no reduction of the reverb's low-frequency content. -36–0[dB]
HF Damp Freq	Adjusts the frequency above which the high-frequency content of the reverb sound will be reduced, or "damped." 4000–12500[Hz]
HF Damp Gain	Adjusts the amount of damping applied to the frequency range selected with HF Damp. With a setting of "0," there will be no reduction of the reverb's high-frequency content. -36–0[dB]
05: GM2 REVERB	
Character	Type of reverb
0–5	Reverb
6, 7	Delay
Pre-LPF	Cuts the high frequency range of the sound coming into the reverb. 0–7
Level	Output level of reverberation 0–127
Time	Time length of reverberation 0–127
Delay Feedback	Adjusts the amount of the delay sound that is fed back into the effect when the Reverb Character setting is 6 or 7. 0–127

Waveform List

INTA

No.	Name
0001	Ult.P*mp A L
0002	Ult.P*mp A R
0003	Ult.P*mp A M
0004	Ult.P*mp B L
0005	Ult.P*mp B R
0006	Ult.P*mp B M
0007	Ult.P*mp C L
0008	Ult.P*mp C R
0009	Ult.P*mp C M
0010	Ult.P*ff A L
0011	Ult.P*ff A R
0012	Ult.P*ff A M
0013	Ult.P*ff B L
0014	Ult.P*ff B R
0015	Ult.P*ff B M
0016	Ult.P*ff C L
0017	Ult.P*ff C R
0018	Ult.P*ff C M
0019	Ult.P mp A L
0020	Ult.P mp A R
0021	Ult.P mp A M
0022	Ult.P mp B L
0023	Ult.P mp B R
0024	Ult.P mp B M
0025	Ult.P mp C L
0026	Ult.P mp C R
0027	Ult.P mp C M
0028	Ult.P ff A L
0029	Ult.P ff A R
0030	Ult.P ff A M
0031	Ult.P ff B L
0032	Ult.P ff B R
0033	Ult.P ff B M
0034	Ult.P ff C L
0035	Ult.P ff C R
0036	Ult.P ff C M
0037	XPr.P*mp A L
0038	XPr.P*mp A R
0039	XPr.P*mp A M
0040	XPr.P*mp B L
0041	XPr.P*mp B R
0042	XPr.P*mp B M
0043	XPr.P*mp C L
0044	XPr.P*mp C R
0045	XPr.P*mp C M
0046	XPr.P*ff A L
0047	XPr.P*ff A R
0048	XPr.P*ff A M
0049	XPr.P*ff B L
0050	XPr.P*ff B R
0051	XPr.P*ff B M
0052	XPr.P*ff C L
0053	XPr.P*ff C R
0054	XPr.P*ff C M
0055	XPr.P mp A L
0056	XPr.P mp A R
0057	XPr.P mp A M
0058	XPr.P mp B L
0059	XPr.P mp B R
0060	XPr.P mp B M
0061	XPr.P mp C L
0062	XPr.P mp C R
0063	XPr.P mp C M
0064	XPr.P ff A L
0065	XPr.P ff A R
0066	XPr.P ff A M
0067	XPr.P ff B L
0068	XPr.P ff B R
0069	XPr.P ff B M
0070	XPr.P ff C L
0071	XPr.P ff C R
0072	XPr.P ff C M
0073	HM-Pno* A L
0074	HM-Pno* A R
0075	HM-Pno* A M
0076	HM-Pno* B L
0077	HM-Pno* B R
0078	HM-Pno* B M
0079	HM-Pno* C L

No.	Name
0080	HM-Pno* C R
0081	HM-Pno* C M
0082	HM-Pno A L
0083	HM-Pno A R
0084	HM-Pno A M
0085	HM-Pno B L
0086	HM-Pno B R
0087	HM-Pno B M
0088	HM-Pno C L
0089	HM-Pno C R
0090	HM-Pno C M
0091	HM-Pno L+
0092	HM-Pno R+
0093	JD Piano 1 A
0094	JD Piano 1 B
0095	JD Piano 1 C
0096	Piano Atk Nz
0097	MKS Piano1 A
0098	MKS Piano1 B
0099	MKS Piano1 C
0100	Vint.EP mp A
0101	Vint.EP mp B
0102	Vint.EP mp C
0103	Vint.EP f A
0104	Vint.EP f B
0105	Vint.EP f C
0106	Vint.EP ff A
0107	Vint.EP ff B
0108	Vint.EP ff C
0109	Stage EP p A
0110	Stage EP p B
0111	Stage EP p C
0112	Stage EP f A
0113	Stage EP f B
0114	Stage EP f C
0115	Tine EP p A
0116	Tine EP p B
0117	Tine EP p C
0118	Tine EP mf A
0119	Tine EP mf B
0120	Tine EP mf C
0121	Tine EP ff A
0122	Tine EP ff B
0123	Tine EP ff C
0124	Dyno EP mp A
0125	Dyno EP mp B
0126	Dyno EP mp C
0127	Dyno EP mf A
0128	Dyno EP mf B
0129	Dyno EP mf C
0130	Wurly DI p A
0131	Wurly DI p B
0132	Wurly DI p C
0133	Wurly DI f A
0134	Wurly DI f B
0135	Wurly DI f C
0136	Wurly DI ffa
0137	Wurly DI ffb
0138	Wurly DI ffc
0139	Soft SA EP A
0140	Soft SA EP B
0141	Soft SA EP C
0142	Hard SA EP A
0143	Hard SA EP B
0144	Hard SA EP C
0145	SA E.Piano A
0146	SA E.Piano B
0147	SA E.Piano C
0148	80's E.Pno 1
0149	80's E.Pno 2
0150	80's E.Pno 3
0151	80's E.Pno 4
0152	Hard E.Pno
0153	Celesta
0154	Music Box
0155	ClavDB Brt A
0156	ClavDB Brt B
0157	ClavDB Brt C
0158	Reg.Clav A

No.	Name
0159	Reg.Clav B
0160	Reg.Clav C
0161	Retro Clav A
0162	Retro Clav B
0163	Retro Clav C
0164	Tight Clav A
0165	Tight Clav B
0166	Tight Clav C
0167	Hard Clav A
0168	Hard Clav B
0169	Hard Clav C
0170	ClavMtrls DB
0171	Harpsi A
0172	Harpsi B
0173	Harpsi C
0174	JLOrg Slow L
0175	JLOrg Slow R
0176	JLOrg Fast L
0177	JLOrg Fast R
0178	GT Organ
0179	JD Full Draw
0180	Org Basic 1
0181	Org Basic 2
0182	Ballad Org
0183	3rd Perc Org
0184	Perc Organ
0185	RockOrgan1 A
0186	RockOrgan1 B
0187	RockOrgan1 C
0188	Rtry Org A L
0189	Rtry Org A R
0190	Rtry Org B L
0191	Rtry Org B R
0192	Rtry Org C L
0193	Rtry Org C R
0194	LoFi RtryOrg
0195	Vint.Org 1
0196	Vint.Org 2
0197	Vint.Org 3
0198	Vint.Org 4
0199	Positive '8
0200	Pipe Organ 1
0201	Cathedral Org
0202	BrtNyl.Gtr A
0203	BrtNyl.Gtr B
0204	BrtNyl.Gtr C
0205	Nylon Gtr1 A
0206	Nylon Gtr1 B
0207	Nylon Gtr1 C
0208	Nylon Gtr2 A
0209	Nylon Gtr2 B
0210	Nylon Gtr2 C
0211	Bright Gtr A
0212	Bright Gtr B
0213	Bright Gtr C
0214	Ac.Guitar1 A
0215	Ac.Guitar1 B
0216	Ac.Guitar1 C
0217	Ac.Gtr Hrm1A
0218	Ac.Gtr Hrm1B
0219	Ac.Gtr Hrm1C
0220	Jazz Gtr A
0221	Jazz Gtr B
0222	Jazz Gtr C
0223	Clean Gtr1 A
0224	Clean Gtr1 B
0225	Clean Gtr1 C
0226	Clr Mt Gtr A
0227	Clr Mt Gtr B
0228	Clr Mt Gtr C
0229	E.Gtr Ld
0230	Brt Strat1 A
0231	Brt Strat1 B
0232	Brt Strat1 C
0233	FstPick70s1A
0234	FstPick70s1B
0235	FstPick70s1C
0236	Funk Gtr A
0237	Funk Gtr B

No.	Name
0238	Funk Gtr C
0239	Funk MtGtr A
0240	Funk MtGtr B
0241	Funk MtGtr C
0242	Nasty Gtr
0243	Overdrive1 A
0244	Overdrive1 C
0245	Distortion1A
0246	Distortion1B
0247	Distortion1C
0248	Dist Chord A
0249	Dist Chord B
0250	Dist Chord C
0251	E.Gtr Harm
0252	Harp A
0253	Harp B
0254	Harp C
0255	Banjo A
0256	Banjo 1 B
0257	Banjo 1 C
0258	Sitar 1 A
0259	Sitar 1 B
0260	Sitar 1 C
0261	Sitar Drn A
0262	Sitar Drn B
0263	Sitar Drn C
0264	E.Sitar A
0265	E.Sitar 1 B
0266	E.Sitar 1 C
0267	Santur 1 A
0268	Santur 1 B
0269	Santur 1 C
0270	Shamisen A
0271	Shamisen B
0272	Shamisen C
0273	Koto A
0274	Koto B
0275	Koto C
0276	FatAcBs p HA
0277	FatAcBs p HB
0278	FatAcBs p HC
0279	FatAcBs p NA
0280	FatAcBs p NB
0281	FatAcBs p NC
0282	FatAcBs f HA
0283	FatAcBs f HB
0284	FatAcBs f HC
0285	FatAcBs f NA
0286	FatAcBs f NB
0287	FatAcBs f NC
0288	Ac.Bass A
0289	Ac.Bass B
0290	Ac.Bass C
0291	Fng.EB1 mf A
0292	Fng.EB1 mf B
0293	Fng.EB1 mf C
0294	Fng.EB1 ff A
0295	Fng.EB1 ff B
0296	Fng.EB1 ff C
0297	Fng.EB2 A
0298	Fng.EB2 B
0299	Fng.EB2 C
0300	Finger Bs A
0301	Finger Bs B
0302	Finger Bs C
0303	P.Bass
0304	Thumb MtBs A
0305	Thumb MtBs B
0306	Thumb MtBs C
0307	Fretlss Bs A
0308	Fretlss Bs B
0309	Fretlss Bs C
0310	Fretlss SftA
0311	Fretlss SftB
0312	Fretlss SftC
0313	Pick EB 1 A
0314	Pick EB 1 B
0315	Pick EB 1 C
0316	Pick EB 2

No.	Name
0317	Slp.E.BassA
0318	Slp.E.BassB
0319	Slp.E.BassC
0320	Pul.E.BassA
0321	Pul.E.BassB
0322	Pul.E.BassC
0323	Jungle Bass
0324	Garage Bass
0325	SH-101 Bs A
0326	SH-101 Bs B
0327	SH-101 Bs C
0328	MG Bass 1 A
0329	MG Bass 1 B
0330	MG Bass 1 C
0331	MG Bass 2
0332	MG Bass 3
0333	MC Bass A
0334	MC Bass B
0335	MC Bass C
0336	Atk Syn Bass
0337	Flute 1 A
0338	Flute 1 B
0339	Flute 1 C
0340	Piccolo A
0341	Piccolo B
0342	Piccolo C
0343	Pan Flute
0344	Shakuhachi 1
0345	JD Fl Push
0346	Clarinet A
0347	Clarinet B
0348	Clarinet C
0349	Oboe A
0350	Oboe B
0351	Oboe C
0352	E.Horn A
0353	E.Horn B
0354	E.Horn C
0355	Bassoon A
0356	Bassoon B
0357	Bassoon C
0358	Recorder A
0359	Recorder B
0360	Recorder C
0361	SopranoSax A
0362	SopranoSax B
0363	SopranoSax C
0364	Soft Alto A
0365	Soft Alto B
0366	Soft Alto C
0367	Wide Sax A
0368	Wide Sax B
0369	Wide Sax C
0370	BreathySax A
0371	BreathySax B
0372	BreathySax C
0373	TenorBreathy
0374	Tenor Sax A
0375	Tenor Sax B
0376	Tenor Sax C
0377	Bari.Sax 1 A
0378	Bari.Sax 1 B
0379	Bari.Sax 1 C
0380	Musette
0381	Harmonica A
0382	Harmonica B
0383	Harmonica C
0384	Blues G-harp
0385	Flugel A
0386	Flugel B
0387	Flugel C
0388	Trumpet 1 A
0389	Trumpet 1 B
0390	Trumpet 1 C
0391	Wide Tp A
0392	Wide Tp B
0393	Wide Tp C
0394	Mute Tp A
0395	Mute Tp B

Waveform List

No.	Name	No.	Name	No.	Name	No.	Name	No.	Name
0396	Mute Tp C	0478	ChmbrStrRevB	0560	Church Bell	0642	Uuh Formant	0724	MG Zap 1
0397	Trombone 1 A	0479	ChmbrStrRevC	0561	Mild CanWave	0643	Metal Vox W1	0725	MG Zap 2
0398	Trombone 1 B	0480	Vls Pizz 1 A	0562	JD Crystal	0644	Metal Vox W2	0726	MG Zap 3
0399	Trombone 1 C	0481	Vls Pizz 1 B	0563	Bell Organ	0645	Metal Vox L	0727	MG Attack
0400	Trombone 2 A	0482	Vls Pizz 1 C	0564	Old DigiBell	0646	Metal Vox W3	0728	Syn Hrd Atk1
0401	Trombone 2 B	0483	VlsPizzRev A	0565	JD Bell Wave	0647	JD Rattles	0729	Syn Hrd Atk2
0402	Trombone 2 C	0484	VlsPizzRev B	0566	TinyBellWave	0648	Xylo Seq.	0730	Syn Swt Atk1
0403	Tuba A	0485	VlsPizzRev C	0567	Vib Wave	0649	JD Ankluings	0731	Syn Swt Atk2
0404	Tuba B	0486	Vcs Pizz 1 A	0568	JD Brt Digi	0650	JD Shami	0732	Syn Swt Atk3
0405	Tuba C	0487	Vcs Pizz 1 B	0569	Bagpipe	0651	SynBassClick	0733	Syn Swt Atk4
0406	Sft F.Horn A	0488	Vcs Pizz 1 C	0570	Digital Vox	0652	JD EP Atk	0734	SF Kick 1 L
0407	Sft F.Horn B	0489	UnisonSaw1 A	0571	JD WallyWave	0653	Key On Click	0735	SF Kick 1 R
0408	Sft F.Horn C	0490	UnisonSaw1 B	0572	JD Brusky Lp	0654	Org Click 1	0736	Reg.Kick L
0409	French Hrn A	0491	UnisonSaw1 C	0573	Bright Form	0655	Org Click 2	0737	Reg.Kick R
0410	French Hrn C	0492	Super Saw1 A	0574	JD Nasty	0656	JD Switch	0738	Jazz Kick
0411	XP Horn A	0493	Super Saw1 B	0575	JD Spark Vox	0657	JD Tuba Slap	0739	Jz Dry Kick
0412	XP Horn B	0494	Super Saw1 C	0576	JD Cutters	0658	TVF Trigger	0740	TR909 Kick 1
0413	F.HornSect A	0495	TranceSaw1 A	0577	SBF Hrd Ld	0659	Hi Q 1	0741	TR909 Kick 2
0414	F.HornSect B	0496	TranceSaw1 B	0578	JD EML 5th	0660	Slap 1	0742	AnalogKick 1
0415	F.HornSect C	0497	TranceSaw1 C	0579	Juno Saw HD	0661	Stick 1	0743	TR808 Kick
0416	Tp Section A	0498	Warm Pad A	0580	TB303 Saw HD	0662	Click	0744	SH32 Kick
0417	Tp Section B	0499	Warm Pad B	0581	Custm Saw HD	0663	Cutting Nz	0745	SF Snr L
0418	Tp Section C	0500	Warm Pad C	0582	MG Saw HD	0664	Ac.Bass Body	0746	SF Snr R
0419	OctBrass A L	0501	OB2 Pad 1 A	0583	Real MG Saw	0665	Flute Pad Nz	0747	SF Rim L
0420	OctBrass A R	0502	OB2 Pad 1 B	0584	DigitalSawHD	0666	Applause 1	0748	SF Rim R
0421	OctBrass B L	0503	OB2 Pad 1 C	0585	P5 Saw HD	0667	River	0749	Reg.Snr L
0422	OctBrass B R	0504	OB2 Pad 2 A	0586	Calc.Saw	0668	Thunder 1	0750	Reg.Snr R
0423	OctBrass C L	0505	OB2 Pad 2 B	0587	Calc.Saw inv	0669	Monsoon	0751	Reg.SnrGst L
0424	OctBrass C R	0506	OB2 Pad 2 C	0588	Synth Saw 1	0670	Stream	0752	Reg.SnrGst R
0425	XP Brass	0507	D-50 Heavn1A	0589	JD Syn Saw	0671	Bubble	0753	Sft Snr Gst
0426	OrchUnis A L	0508	D-50 Heavn1B	0590	JD Fat Saw	0672	Bird Song	0754	Jz Brsh Slap
0427	OrchUnis A R	0509	D-50 Heavn1C	0591	JP-8 Saw	0673	Dog Bark	0755	Jz Brsh Swsh
0428	OrchUnis1 BL	0510	SBF Vox A	0592	OB2 Saw HD	0674	Gallop	0756	Swish&Turn
0429	OrchUnis1 BR	0511	SBF Vox B	0593	700 Saw A	0675	Vint.Phone	0757	Concert SD 1
0430	OrchUnis1 CL	0512	SBF Vox C	0594	700 Saw B	0676	Office Phone	0758	Analog Snr 1
0431	OrchUnis1 CR	0513	Syn Vox 1 A	0595	700 Saw C	0677	Mobile Phone	0759	TR909 Snr 1
0432	Violin 1 A	0514	Syn Vox 1 B	0596	D-50 Saw	0678	Door Creak	0760	TR909 Snr 2
0433	Violin 1 B	0515	Syn Vox 1 C	0597	LA-Saw	0679	Door Slam	0761	TR808 Snr 1
0434	Violin 1 C	0516	Female Ahs A	0598	Air Wave	0680	Car Engine	0762	TR808 Snr 2
0435	Cello 1 A	0517	Female Ahs B	0599	GR-300 Saw	0681	Car Slip	0763	SF Crs Stk L
0436	Cello 1 B	0518	Female Ahs C	0600	Juno Sqrd HD	0682	Car Pass	0764	SF Crs Stk R
0437	Cello 1 C	0519	Female Oos A	0601	P5 Sqr HD	0683	Crash Seq.	0765	Soft Stick
0438	VI Sect. A L	0520	Female Oos B	0602	Fat Square	0684	Gun Shot 1	0766	TR808 Rim
0439	VI Sect. A R	0521	Female Oos C	0603	JP-8 Square	0685	Siren	0767	LD L.Tom
0440	VI Sect.1 BL	0522	Male Aahs A	0604	SH-2 Square	0686	Train 1	0768	LD M.Tom
0441	VI Sect.1 BR	0523	Male Aahs B	0605	TB303 Sqr HD	0687	Airplane	0769	LD H.Tom
0442	VI Sect.1 CL	0524	Male Aahs C	0606	TB Dst Sqr A	0688	Helicopter 1	0770	RR F.Tom
0443	VI Sect.1 CR	0525	Jz Doos 1 A	0607	TB Dst Sqr B	0689	Space Voyage	0771	SF M.Tom
0444	Vc Sect.1 AL	0526	Jz Doos 1 B	0608	TB Dst Sqr C	0690	Blow Loop	0772	SF H.Tom
0445	Vc Sect.1 AR	0527	Jz Doos 1 C	0609	Dist SquareA	0691	Laugh	0773	Reg.F.Tom
0446	Vc Sect.1 BL	0528	JzDoos1 Lp A	0610	Dist SquareB	0692	Scream	0774	Reg.M.Tom
0447	Vc Sect.1 BR	0529	JzDoos1 Lp B	0611	Dist SquareC	0693	Punch	0775	Reg.H.Tom
0448	Vc Sect.1 CL	0530	JzDoos1 Lp C	0612	JP8 Pls 10HD	0694	Heartbeat	0776	TR808 Tom
0449	Vc Sect.1 CR	0531	Jz Doos 2 A	0613	JP8 Pls 15HD	0695	Footsteps	0777	Deep Tom
0450	Full Str A L	0532	Jz Doos 2 B	0614	JP8 Pls 25HD	0696	Machine Gun 1	0778	Reg.CHH p
0451	Full Str A R	0533	Jz Doos 2 C	0615	JP8 Pls 30HD	0697	Laser	0779	Reg.CHH ff
0452	Full Str1 BL	0534	Jz Doos 2 lp	0616	JP8 Pls 40HD	0698	Thunder Lp	0780	Reg.PHH mf
0453	Full Str1 BR	0535	JzVoiceDat A	0617	JP8 Pls 45HD	0699	Ac.Bass Nz	0781	Reg.PHH f
0454	Full Str1 CL	0536	JzVoiceDat B	0618	Syn Pulse 1	0700	E.Bass Nz 1	0782	Reg.OHH 1 mf
0455	Full Str1 CR	0537	JzVoiceDat C	0619	Syn Pulse 2	0701	E.Bass Nz 2	0783	Reg.OHH 1 ff
0456	JV Strings L	0538	Gospel Hum A	0620	700 Triangle	0702	E.Bass Slide	0784	TR808 CHH 1
0457	JV Strings R	0539	Gospel Hum B	0621	Syn Triangle	0703	Fng.EB Sld	0785	Noise CHH
0458	JV Strings A	0540	Gospel Hum C	0622	JD Triangle	0704	DistGtr Nz 1	0786	TR808 OHH 1
0459	JV Strings C	0541	Soprano Vox	0623	VS-Ramp	0705	DistGtr Nz 2	0787	TR606 OHH
0460	F.Str A L	0542	Kalimba 1	0624	Sync Sweep	0706	Gtr Fret Nz1	0788	Rock Crash 1
0461	F.Str A R	0543	JD Klimba Atk	0625	Sine	0707	Gtr Fret Nz2	0789	Splash Cym
0462	F.Str B L	0544	JD Wood Crak	0626	JD Fine Wine	0708	ClassicHseHt	0790	TR808 Cym
0463	F.Str B R	0545	JD Gamelan 1	0627	Digi Loop	0709	Narrow Hit	0791	Ride Cymbal
0464	F.Str C L	0546	JD Gamelan 2	0628	JD MetalWind	0710	Dist Hit	0792	Rock Rd Cup
0465	F.Str C R	0547	JD Log Drum	0629	Atmosphere	0711	Thin Beef	0793	Rock Rd Edge
0466	F.Str LpL	0548	JD Xylo	0630	DigiSpectrum	0712	Smear Hit	0794	China Cym 1
0467	F.Str LpR	0549	Marimba 1	0631	JD Vox Noise	0713	LoFi Min Hit	0795	Concert Cym1
0468	F.StrStacA L	0550	Vibraphone 1	0632	SynVox Noise	0714	Orch. Hit	0796	Gospel Clap
0469	F.StrStacA R	0551	Glocken	0633	Shaku Noise	0715	Punch Hit	0797	TR808 Clap 1
0470	F.StrStacB L	0552	Steel Drums	0634	Digi Breath	0716	O'Skool Hit	0798	TR808 Clap 2
0471	F.StrStacB R	0553	D50 Bell A	0635	Agogo Noise	0717	Philly Hit	0799	Cowbell 1
0472	F.StrStacC L	0554	D50 Bell B	0636	White Noise	0718	Scratch 1	0800	TR808Cowbell
0473	F.StrStacC R	0555	D50 Bell C	0637	Pink Noise	0719	Scratch 2	0801	Wood Block1H
0474	ChmbrStrAt1A	0556	D50 Bell Lp	0638	Aah Formant	0720	Scratch 3	0802	Wood Block1L
0475	ChmbrStrAt1B	0557	Agogo Bell	0639	Eeh Formant	0721	Scratch 4	0803	Claves 1
0476	ChmbrStrAt1C	0558	Finger Bell	0640	Iih Formant	0722	Scratch Push	0804	TR808 Claves
0477	ChmbrStrRevA	0559	Tubular Bell	0641	Ooh Formant	0723	Scratch Pull	0805	Castanet 1

No.	Name
0806	Whistle 1
0807	Bongo High
0808	Bongo Low
0809	Conga1 Hi Mt
0810	Conga1 Slap
0811	Conga1 Hi Op
0812	Conga1 LowOp
0813	TR808 Conga1
0814	TR808 Conga2
0815	Timbale High
0816	Timbale Low
0817	Cabasa Cut 1
0818	Maracas 1
0819	808 Maracas1
0820	R8 Shaker
0821	Guiro Short
0822	Guiro Long
0823	Vibraslap 1
0824	Tambourine 1
0825	Cuica Mute
0826	Cuica Open
0827	Timpani p
0828	Timpani f
0829	Timpani Roll
0830	Timpani Lp
0831	ConcertBD p
0832	ConcertBD f
0833	ConcertBD ff
0834	ConcertBD Lp
0835	Triangle 1
0836	JingleBell 1
0837	Wind Chime 1
0838	Crotale
0839	R8 Click
0840	Metro Bell
0841	Metro Click
0842	DR202 Beep
0843	Low Sine
0844	DC
0845	Reverse Cym1
0846	MC500 Beep 1
0847	MC500 Beep 2
0848	TB Dst Saw A
0849	TB Dst Saw B
0850	TB Dst Saw C
0851	Ac Piano 1 B
0852	Ac Piano 1 C
0853	Ac Piano2 pA
0854	Ac Piano2 pB
0855	Ac Piano2 pC
0856	Ac Piano2 fA
0857	Ac Piano2 fB
0858	Ac Piano2 fC
0859	Piano Up TH
0860	JD Piano 2 B
0861	JD Piano 2 C
0862	MKS Piano2 B
0863	MKS Piano2 C
0864	SA EP 1B
0865	SA EP 1C
0866	SA EP 2B
0867	SA EP 2C
0868	Dyn EP mp A
0869	Dyn EP mp B
0870	Dyn EP mp C
0871	Wurly mp A
0872	Wurly mp B
0873	Wurly mp C
0874	Wurly mf A
0875	Wurly mf B
0876	Wurly mf C
0877	Wurly ff A
0878	Wurly ff B
0879	Wurly ff C
0880	D-50 EP
0881	E.Piano 1 A
0882	E.Piano 1 B
0883	E.Piano 1 C
0884	E.Piano 2 A
0885	E.Piano 2 B
0886	E.Piano 2 C
0887	EP Hard
0888	ClvMtRs DB f
0889	RtryOrg2 A L
0890	RtryOrg2 A R
0891	RtryOrg2 B L
0892	RtryOrg2 B R
0893	RtryOrg2 C L
0894	RtryOrg2 C R
0895	E.Organ Slw
0896	E.Organ Fst
0897	B3 1 FL A
0898	B3 1 FL B
0899	B3 1 FL C
0900	B3 2 FL A
0901	B3 2 FL B
0902	B3 2 FL C
0903	B3 Perc 1 A
0904	B3 Perc 1 B
0905	B3 Perc 1 C
0906	B3 3 A
0907	B3 3 B
0908	B3 3 C
0909	B3 Perc 2 A
0910	B3 Perc 2 B
0911	B3 Perc 3 C
0912	B3 1 Ch A
0913	B3 1 Ch B
0914	B3 1 Ch C
0915	RockOrgan2 B
0916	Power B fstA
0917	Power B fstB
0918	Power B fstC
0919	B3 Click
0920	Org Click 3
0921	Vint.Organ
0922	Pipe Organ 2
0923	Nylon Gtr 3A
0924	Nylon Gtr 3B
0925	Nylon Gtr 3C
0926	RequintGt mf
0927	AcGtr Pick A
0928	AcGtr Pick B
0929	AcGtr Pick C
0930	Ac.Guitar2 A
0931	Ac.Guitar2 B
0932	Ac.Guitar2 C
0933	JC Strat Nz
0934	Strt Gtr
0935	FstPick70s
0936	Clean TC pA
0937	ClnGtr Mt Nz
0938	PdISteel A
0939	PdISteel B
0940	PdISteel C
0941	Oud A
0942	Oud B
0943	Oud C
0944	Oud
0945	Pipa mp 1
0946	Pipa mp 2
0947	Pipa Trem
0948	Pipa Chord
0949	Pi Pa A
0950	Pi Pa B
0951	Pi Pa C
0952	Chung Ruan A
0953	Chung Ruan B
0954	Chung Ruan C
0955	Dumbra mp
0956	Dumbra Strum
0957	UD
0958	UD Body
0959	Baglama L
0960	Baglama H
0961	Elk Baglama
0962	Kanun
0963	Sitar/Drone
0964	Sitar 2 A
0965	Sitar 2 C
0966	Sitar 3 A
0967	Sitar 3 C
0968	Sitar 4 A
0969	Sitar 4 B
0970	Sitar 4 C
0971	XV Sitar A
0972	XV Sitar C
0973	Sitar Gliss
0974	Guzheng f
0975	Guzheng Trem
0976	Gu Zheng A
0977	Gu Zheng B
0978	Gu Zheng C
0979	Santur 2 B
0980	Santur 2 C
0981	Santur 3 A
0982	Santur 3 B
0983	Santur 3 C
0984	Santur 4 A
0985	Santur 4 B
0986	Santur 4 C
0987	Santur Trm A
0988	Santur Trm B
0989	Santur Trm C
0990	HmrDulcimer
0991	Dulcimer A
0992	Dulcimer B
0993	Dulcimer C
0994	Yangqin
0995	Yangqin 1 mf
0996	Yangqin1Trem
0997	Oygur f
0998	Oygur Trem
0999	Upright Bs
1000	Fingerd Bs A
1001	Fingerd Bs B
1002	Fingerd Bs C
1003	Fretless
1004	Slap Bass
1005	SlapBs Wave1
1006	SlapBs Wave2
1007	JUNO-60 Bass
1008	JP-4 Bass
1009	SH-101 Bs
1010	KG Poly Bs
1011	Solid Bass
1012	Mini Bs A
1013	Mini Bs B
1014	Mini Bs C
1015	Flute Vib A
1016	Flute Vib B
1017	Flute Vib C
1018	Flute 2 B
1019	Flute 2 C
1020	Atk Flute A
1021	Atk Flute B
1022	Atk Flute C
1023	BlwAltoVibPL
1024	BlwAltoVibPR
1025	BlwAltoVibFL
1026	BlwAltoVibFR
1027	Alto Sax Vib
1028	Alto mp B
1029	Alto mp C
1030	Blow Sax
1031	Blow Sax A
1032	Blow Sax C
1033	Blowed Sax
1034	T.Sax hrd
1035	T.Sax hrd A
1036	T.Sax hrd B
1037	T.Sax hrd C
1038	Blow Pipe
1039	Sicu 1
1040	Sicu 2
1041	BottleBlow
1042	Shakuhachi 2
1043	FolkClaVibFL
1044	FolkClaVibFR
1045	FolkClaMarcL
1046	FolkClaMarcR
1047	Tr.Klarinet
1048	Qudi mp 1
1049	Qudi Orna 1
1050	Qu Di A
1051	Qu Di B
1052	Qu Di C
1053	QuDi 1 Vib A
1054	QuDi 1 Vib B
1055	QuDi 1 Vib C
1056	QuDi 2 Vib A
1057	QuDi 2 Vib B
1058	QuDi 2 Vib C
1059	Xiao 1 f
1060	Xiao Trill
1061	Bawu f
1062	BawuVibFingr
1063	Bawu Trill
1064	Xun mp
1065	Xun Orna
1066	Hulusi 1 mf
1067	Sheng A
1068	Sheng B
1069	Sheng C
1070	Suona 1 A
1071	Suona 1 B
1072	Suona 1 C
1073	Suona 2 mf
1074	Suona 2 ff
1075	Suona 2 Grwl
1076	Zurna-A
1077	F.AccordionA
1078	F.AccordionB
1079	F.AccordionC
1080	D.AccordionA
1081	D.AccordionB
1082	D.AccordionC
1083	ACD Bltn R8
1084	ACD Bltn R8s
1085	ACD Bltn R16
1086	ACD Bltn R4
1087	ACD Str R8
1088	ACD Str Nz
1089	ACD Str R8s
1090	Accord 4' A
1091	Accord 4' B
1092	Accord 4' C
1093	Accord 8' A
1094	Accord 8' B
1095	Accord 8' C
1096	Accord PadNz
1097	Musette 1 A
1098	Musette 1 B
1099	Musette 1 C
1100	Musette 2 A
1101	Musette 2 B
1102	Musette 2 C
1103	Musette 3 A
1104	Musette 3 B
1105	Musette 3 C
1106	Master A
1107	Master B
1108	Master C
1109	Single A
1110	Single B
1111	Single C
1112	Bandoneon 1A
1113	Bandoneon 1B
1114	Bandoneon 1C
1115	Bandoneon 2A
1116	Bandoneon 2B
1117	Bandoneon 2C
1118	Bs/Musette 1
1119	Bs/Musette 2
1120	Bs/Musette 3
1121	Bs/Master
1122	Bs/Single
1123	Bs/Bandoneon1
1124	Bs/Bandoneon2
1125	Bandneon RHL
1126	Bandneon RHR
1127	Bandneon Nz
1128	Solo Tpt. A
1129	Solo Tpt. B
1130	Solo Tpt. C
1131	Trumpet 2 B
1132	Trumpet 2 C
1133	Tp_Mari Vb

Waveform List

No.	Name	No.	Name	No.	Name	No.	Name	No.	Name
1216	JP Strings1A	1298	Angklung	1380	Br.Snr ff L	1462	Reg.CHH 1 p	1544	Claves 3
1217	JP Strings1B	1299	Bonang	1381	IronSnrFlm L	1463	Reg.CHH 1 mf	1545	Ban Gu 1
1218	JP Strings1C	1300	Pemade A	1382	WoodSnr mf L	1464	Reg.CHH 1 f	1546	Ban Gu 2
1219	JP StringsU2	1301	Pemade B	1383	WoodSnr ff L	1465	Reg.CHH 1 ff	1547	Castanet 2
1220	Syn Strings	1302	Pemade C	1384	Maple Lo Snr	1466	Reg.CHH 2 mf	1548	Whistle Long
1221	JP Hollo A	1303	DIGI Bell	1385	MapleSoft SN	1467	Reg.CHH 2 f	1549	Whistle Shrt
1222	JP Hollo B	1304	JP-8 Saw C	1386	PopSnr Gst 1	1468	Reg.CHH 2 ff	1550	ApitoHiShort
1223	JP Hollo C	1305	JP-6 Saw	1387	PopSnr Gst 2	1469	Reg.OHH 2 mf	1551	ApitoLoShort
1224	Hollo Wave	1306	P5 Saw 1 A	1388	PopSnr Gst 3	1470	Reg.OHH 2 f	1552	SambaWhistle
1225	Fantasyth A	1307	P5 Saw 2 A	1389	Jz Snare 1	1471	PopHHUPLo	1553	Whistle 2
1226	Fantasyth B	1308	P5 Saw 3 A	1390	Jz Snare 2	1472	PopHHUPMd	1554	ID Whistle 1
1227	Fantasyth C	1309	P5 Saw 3 B	1391	Jz Snare 3	1473	PopHHUPHi	1555	ID Whistle 2
1228	D-50 Heavn2A	1310	P5 Saw 3 C	1392	PopSnr Lo_L	1474	PopHHSideLo	1556	ID Whistle 3
1229	D-50 Heavn2B	1311	MG Saw	1393	PopSnr Md_L	1475	PopHHSideMd	1557	Shankh
1230	D-50 Heavn3A	1312	Saw	1394	PopSnr VH_L	1476	PopHHSideHi	1558	Bongo HM
1231	D-50 Heavn3B	1313	Synth Saw 2	1395	PopSnr Lo_R	1477	PopHHSideOp	1559	Bongo LM 1
1232	D-50 Heavn3C	1314	TB Dst Saw	1396	PopSnr Md_R	1478	PHHsdOpLg	1560	Bongo LM 2
1233	D50 Fantas 1	1315	Juno Saw+Sub	1397	PopSnr VH_R	1479	707 CHH	1561	Bongo Hi Hrd
1234	D50 Fantas 2	1316	MG Sqr HD	1398	PopSnr Ph	1480	Dixie HH Pdl	1562	Bongo HiOp f
1235	D50FuturePd1	1317	TB303 SqrFHD	1399	PopSnr ShRl	1481	Dixie HH Cls	1563	BongoHiSlap1
1236	D50FuturePd2	1318	TB Dst Sqr	1400	Fish Snare	1482	Dixie HH Hlf	1564	BongoHiSlap2
1237	D50 DNDance1	1319	TB Square	1401	Hibrid Snare	1483	Dixie HH Open	1565	Bongo 1 Hi
1238	D50 DNDance2	1320	260 Sub OSC	1402	Cross Snare	1484	Crash Cym1 p	1566	Bongo 2 Hi
1239	D50 DNDance3	1321	VS-Triangle	1403	Rim Shot 1	1485	Crash Cym1 f	1567	Bongo 1 Lo
1240	D50 DNDance4	1322	ARP Sine HD	1404	Real Snare	1486	Crash Cym 2	1568	Bongo 2 Lo
1241	D50Pizzagogo	1323	JP-8 Pulse	1405	Std Snare	1487	Rock Crash 2	1569	Bongo Lo Hrd
1242	D50 StacHvn	1324	MG Pulse A	1406	Sol Snare	1488	PopCrashLo	1570	Bongo Lo Sft
1243	D50NylnAtms1	1325	JP8 Pls 30	1407	Id Snare 1	1489	PopCrashMd	1571	Bongo LoOp mf
1244	D50NylnAtms2	1326	PWM Wave A	1408	Id Snare 2	1490	PopCrashHi	1572	Bongo LoOp f
1245	Syn Vox 2	1327	PWM Wave B	1409	Rock Snare	1491	RkCrash1Lo	1573	Bongo LoSlap
1246	Syn Vox 3 A	1328	PWM Wave C	1410	GS Fat SD	1492	RkCrash1Md	1574	Bongo slide
1247	Syn Vox 3 B	1329	PWM Wave	1411	Rim Shot 2	1493	RkCrash1Hi	1575	Conga 2H Op
1248	Syn Vox 3 C	1330	Lead Wave 1	1412	Rap Snare	1494	RkCrash2Lo	1576	Conga 2H Mt
1249	Vox Noise	1331	Lead Wave 2	1413	Dance Snare	1495	RkCrash2Md	1577	Conga 2H Slp
1250	Syn Vox 4	1332	Wire String	1414	TR909 Snr 3	1496	RkCrash2Hi	1578	Conga 2L Op
1251	MMM VOX	1333	Hard Sths A	1415	IronSnrGst L	1497	China Cym 2	1579	Conga 2L Mt
1252	Choir Aah A	1334	Hard 5ths B	1416	Concert SD 2	1498	RkSplashLo	1580	Conga Mt Lo
1253	Choir Aah B	1335	Hard 5ths C	1417	Snare Roll	1499	RkSplashMd	1581	Conga Thumb
1254	Choir Aah C	1336	Cold Dress	1418	Cross Stick	1500	RkSplashHi	1582	Conga Link
1255	Choir Mmh A	1337	FX Bomb	1419	Br.SideStk L	1501	Splash	1583	Conga Roll
1256	Choir Mmh B	1338	FX Bell 1 fw	1420	WoodSideStkL	1502	PopRide BILo	1584	Conga HM
1257	Choir Mmh C	1339	FX Bell 2 fw	1421	707 Rim	1503	PopRide BIMd	1585	Conga 1H Mt
1258	Pop Voice	1340	Hi Q 2	1422	StudioLo Tom	1504	PopRide BIHi	1586	Conga M
1259	Voice Aahs A	1341	Slap 2	1423	StudioMidTom	1505	PopRideLo	1587	Conga 1L Mt
1260	Voice Aahs B	1342	Stick 2	1424	StudioHi Tom	1506	PopRideMd	1588	Conga LM
1261	Voice Aahs C	1343	Applause 2	1425	Jz Tom Lo	1507	PopRideHi	1589	Conga 1 Slap
1262	LargeChrF AL	1344	Applause 3	1426	Jz Tom Md 1	1508	RkRide1Lo	1590	Conga 1H Op
1263	LargeChrF AR	1345	Applause 4	1427	Jz Tom Md 2	1509	RkRide1Hi	1591	CongaLoOp f
1264	LargeChrF BL	1346	Sea	1428	Jz Tom Hi 1	1510	Concert Cym2	1592	CongaLoOp mf
1265	LargeChrF BR	1347	Thunder 2	1429	Jz Tom Hi 2	1511	808 Clps	1593	Timbales L
1266	LargeChrF CL	1348	Bird	1430	PopFrTmLoRC	1512	Hand Clap 1	1594	Timbales H
1267	LargeChrF CR	1349	Horse	1431	PopFrTmMdRC	1513	TR-909 HC	1595	Timbale 1
1268	Hey Brazil	1350	Gun Shot 2	1432	PopFrTmHIRC	1514	Hand Clap 2	1596	Timbale 2
1269	Sabor!	1351	Train 2	1433	Stdio T4 sft	1515	OR Clap 1	1597	Timbale 3 Lo
1270	Arriba!	1352	Helicopter 2	1434	Stdio T4 med	1516	OR Clap 2	1598	Timbale 3 Hi
1271	Ole!	1353	Machine Gun2	1435	Stdio T4 hrд	1517	FingerSnaps1	1599	Timbale 3 Sd
1272	Uno!	1354	Tao Hit	1436	Stdio T3 sft	1518	FingerSnaps2	1600	Timbales LoOp
1273	Dos!	1355	S Push	1437	Stdio T3 med	1519	Cowbell Lng	1601	Timbales LoMt
1274	Tres!	1356	S Pull	1438	Stdio T3 hrд	1520	Cowbell Edg	1602	Timbales HiOp
1275	Quatro!	1357	HM-Dummy	1439	Stdio T2 sft	1521	Cowbell mf	1603	Timbales HiMt
1276	Grito-Hahaha	1358	PopKickLo	1440	Stdio T2 med	1522	Cowbell f	1604	TimbalesHand
1277	Grito-Ahaha!	1359	PopKickMd	1441	Stdio T2 hrд	1523	Cowbell 2	1605	Timbales Rim
1278	Grito-Haahai	1360	PopKickHi	1442	Stdio T1 sft	1524	Cowbell 3	1606	TmbSideStick
1279	Grito-Rrrrr!	1361	Warm Kick p	1443	Stdio T1 med	1525	Cowbell 4	1607	TimbalesFil1
1280	Tiquitito!	1362	Warm Kick f	1444	Stdio T1 hrд	1526	Cowbell Op 1	1608	TimbalesFil2
1281	Grito-Oa Oa!	1363	Hush Kick p	1445	PopTom1LoRC	1527	Cowbell Mt 1	1609	TimbalesFil3
1282	Grito-Eh Eh!	1364	Hush Kick f	1446	PopTom1MdRC	1528	Cowbell Op 2	1610	TimbalesFil4
1283	Ama ya ahi!	1365	Jz Kick 1	1447	PopTom1HIRC	1529	Cowbell Mt 2	1611	SambaBateria
1284	Fuego!	1366	Jz Kick 2	1448	PopTom2LoRC	1530	BongoBell Op	1612	Cabasa Down1
1285	One	1367	Fat BD	1449	PopTom2MdRC	1531	BongoBell Mt	1613	Cabasa Down2
1286	Two	1368	Room Kick	1450	PopTom2HIRC	1532	MamboBell Op	1614	Cabasa Up 1
1287	Three	1369	Techno BD1	1451	PopFrTmFilO	1533	MamboBell Mt	1615	Cabasa Up 2
1288	ZaghritaLoop	1370	909 CompKick	1452	PopFrTmFIMd	1534	Cowbell Low	1616	Real Cabasa1
1289	ZaghritaStop	1371	HipHop BD	1453	PopFrTmFIHi	1535	Cowbell Hi	1617	Real Cabasa2
1290	Vibes	1372	707 BD	1454	RkTom1Lo_Fl	1536	Cow Bell	1618	Cabasa
1291	Vibrphone 2	1373	TightSnr p L	1455	RkTom1Md_Fl	1537	808 Cows	1619	Cabasa Cut 2
1292	Glockenspiel	1374	TightSnr f L	1456	RkTom1Hi_Fl	1538	Wood Block2H	1620	Maracas 2
1293	Marimba Wave	1375	T.Snr Ghst L	1457	RkTom1VH_Fl	1539	Wood Block2L	1621	Maracas 3
1294	Marimba 2	1376	TightSnr ffl	1458	RkTom2Lo_Fl	1540	Wood Block 3	1622	Maracas3UpDw
1295	Kalimba 2	1377	T.Snr RS p L	1459	RkTom2Md_Fl	1541	Claves 2	1623	Shaker 1
1296	Balaphone 1	1378	Br.Snr p L	1460	RkTom2Hi_Fl	1542	Clave!	1624	Shaker 2
1297	Balaphone 2	1379	Br.Snr mf L	1461	RkTom2VH_Fl	1543	Claves Lo	1625	Shaker 3

No.	Name
1626	Shaker 4
1627	Shaker Long
1628	Shaker Short
1629	Cabasa Roll
1630	Caxixi
1631	Ganza Soft
1632	Ganza Hard
1633	808 Maracas2
1634	808 Maracas3
1635	Chekere 1
1636	Chekere 2
1637	Chekere 3
1638	Guiro 2 Long
1639	Guiro 2 Shrt
1640	Quide Long
1641	Quide Short
1642	Guiro 3 Long
1643	Guiro 3 Shrt
1644	Long Guiro
1645	Short Guiro
1646	Guiro 4 Up
1647	Guiro 4 Down
1648	Guiro 4 Fast
1649	RecoRecoLng
1650	RecoRecoSht
1651	MtlGuiroLng
1652	MtlGuiroSht
1653	Vibraslap 2
1654	Vibraslap 3
1655	Quijada
1656	Rainstick
1657	Tambarin 1
1658	Tambarin 2
1659	Tambarin 3
1660	Tamborine p
1661	Tamborine f
1662	PandeiroCrsh
1663	PandeiroHit
1664	PandeiroMute
1665	PandeiroL Lo
1666	PandeiroL Hi
1667	PandeiroL Sp
1668	PandeiroL Rm
1669	PandeiroS Op
1670	PandeiroS Sp
1671	PandeiroS Rm
1672	PandeiroOpen
1673	PandeiroRim
1674	PandeiroRoll
1675	Tamborim Opn
1676	Tamborim Mut
1677	Tamborim Slp
1678	TamborimOpen
1679	TamborimRim
1680	TamborimMute
1681	TamborimRoll
1682	Tambrin Hit
1683	TambrinShake
1684	Riq Open
1685	Riq Mute
1686	Rek Open
1687	Rek Dom
1688	Rek Tek
1689	Rek BRS
1690	Rek ROL
1691	Rek KNA
1692	Rek KNB
1693	Doira Dun
1694	Doira Tik
1695	Tabla Baya 2
1696	Tabla Baya 3
1697	TablaBay Ka
1698	TablaBay Ge
1699	Tabla Baya 1
1700	TablaBaySld
1701	Baya Sld
1702	Baya Long
1703	TablaBayGin
1704	TablaBay Na
1705	TablaBayTin
1706	TablaBayTun
1707	TablaBay Ti
1708	TablaBay Te
1709	Tabla Baya 4
1710	Tbl Tak
1711	Tbl Dom
1712	Tabla Fx
1713	Tbl Sak
1714	Tbl Rim
1715	Tbl NurRim
1716	Duff Dish
1717	Duff T
1718	Ceng Ceng 1
1719	Udu Pot1 Hi
1720	Udu Pot1 Lo
1721	Udu Pot2 Lng
1722	Udu Pot2 Sht
1723	Udo Low
1724	Udo Slap
1725	Cajon
1726	Cajon Lo
1727	Cajon Hi
1728	Cajon Rol Hi
1729	Cajon Rol Lo
1730	Cuica 1 Hi
1731	Cuica 1 Low
1732	Cuica 2
1733	Cuica Lo 1
1734	Cuica Lo 2
1735	Cuica Hi 1
1736	Cuica Hi 2
1737	Mute Cuica
1738	Open Cuica
1739	Wadon 1
1740	Wadon 2
1741	Wadon 3
1742	Wadon 4
1743	Wadon 5
1744	Wadon 6
1745	Wadon 7
1746	Madal Da
1747	Madal Dun
1748	Madal Ta
1749	Dhol Beater
1750	Dhol Stick
1751	Dhol Hand
1752	Dhol Body
1753	Dhol 1
1754	Dhol 2
1755	Doholla Dom
1756	Doholla Sak
1757	Doholla Tak
1758	Dla Rim
1759	Dla Sak
1760	Dof 2 Dmo
1761	Dof 1 Rim
1762	Dof 1 Dom
1763	Dof 1 Sak
1764	Hager
1765	Zir
1766	Nakrazn
1767	Dholak 1
1768	Dholak 2
1769	Dholak 3
1770	Dholak 4
1771	Dholak 5
1772	Dholak Ga
1773	Dholak 6
1774	Dholak 7
1775	Dholak 8
1776	Dholak Na
1777	Dholak Tun
1778	Tabel H Dom
1779	Tabel H Sak2
1780	Tabel H Sak1
1781	Tabel H Tac
1782	Tabel L Dom
1783	Tabel L Sak1
1784	Tabel L Sak2
1785	Tabel L Tac
1786	Merjaf Dom
1787	Merjaf Tac
1788	Merjaf Sak
1789	Surdo
1790	Surdo Open L
1791	Surdo Open H
1792	Surdo Mute 1
1793	Surdo Rim 1
1794	Surdo Hard
1795	Surdo Open 1
1796	Surdo Open 2
1797	Surdo Mute 2
1798	Surdo Rim 2
1799	Surdo Soft
1800	Caixa Open1
1801	Caixa Open2
1802	Caixa Roll
1803	Caixa Mute
1804	Caixa Open3
1805	Caixa Mute2
1806	Caixa Roll 2
1807	Caixa Rim
1808	RepiniqueHrd
1809	RepiniqueSft
1810	Repinique1
1811	Repinique2
1812	Repique Open
1813	Repique Rim
1814	Repique Roll
1815	Timpani
1816	Open Triangl
1817	Triangle 2
1818	Triangle 3
1819	Sagat Mid
1820	Sagat Hi
1821	Sagat Sak
1822	Sagat Open 1
1823	Sagat Close1
1824	Twesat 1
1825	Twesat Prc
1826	Twesat 2
1827	Zil Open
1828	Zil Close
1829	Clapstick
1830	Agogo 1
1831	Agogo 2 Lo
1832	Agogo 2 Hi
1833	Agogo 3 Lo
1834	Agogo 3 Hi
1835	Asian Gong 1
1836	GamelanGong1
1837	Wind Bell 1
1838	Kane 1
1839	JingleBell 2
1840	Wind Chime 2
1841	Sarna Bell
1842	Berimbau Open
1843	Berimbau Up
1844	Berimbau Dn
1845	Berimbau Mut
1846	180:LatinPtn
1847	160:CgMambo
1848	132:TmbI Ptn
1849	104:Shakin'
1850	132:AgogoPtn
1851	118:TablaBy1
1852	118:TablaBy2
1853	92:DholakPh1
1854	92:DholakPh2
1855	120:Dhol Ph
1856	SectChd 13th
1857	SectChd m9
1858	SectChd Mj9
1859	MC500 Beep 3
1860	Boing
1861	G-Accord 1 L
1862	G-Accord 1 R
1863	G-Accord 2 L
1864	G-Accord 2 R
1865	G-Accord 3 L
1866	G-Accord 3 R
1867	C-Accord A1L
1868	C-Accord A1R
1869	C-Accord A2R
1870	C-Accord A2L
1871	C-Accord A3L
1872	C-Accord A3R
1873	C-Accord N1L
1874	C-Accord N1R
1875	C-Accord N2
1876	E-Accord 1
1877	E-Accord 2
1878	BajoSxt mf
1879	BajoSxt f
1880	BajoSxtMute1
1881	BajoSxtMute2
1882	CharangUp mf
1883	CharangUp f
1884	ChrngOctUpmf
1885	ChrngOctUp f
1886	Guitarrr p
1887	Guitarrr mf
1888	MariTp Vb mf
1889	MariTp Vb f
1890	MariTpVbwAtk
1891	MariTp Ste f
1892	Banda Tp Vib
1893	Banda Tp Stc
1894	Banda TbnVib
1895	Banda TbnStc
1896	Banda Tuba
1897	BandaTubaStc
1898	Banda ClaVib
1899	Banda ClaStc
1900	CharangDw mf
1901	CharangDw f
1902	ChrngOctDwmf
1903	ChrngOctDw f
1904	Ac.Pno p A L
1905	Ac.Pno p A R
1906	Ac.Pno p B L
1907	Ac.Pno p B R
1908	Ac.Pno p C L
1909	Ac.Pno p C R
1910	Ac.Pno f A L
1911	Ac.Pno f A R
1912	Ac.Pno f B L
1913	Ac.Pno f B R
1914	Ac.Pno f C L
1915	Ac.Pno f C R
1916	Dyno EP ff A
1917	Dyno EP ff B
1918	Dyno EP ff C
1919	RtryOrg1 A L
1920	RtryOrg1 A R
1921	RtryOrg1 B L
1922	RtryOrg1 B R
1923	RtryOrg1 C L
1924	RtryOrg1 C R
1925	Nylon Gtr3 B
1926	Ac.Gtr ff A
1927	Ac.Gtr ff B
1928	Ac.Gtr ff C
1929	Ac.Gtr Sld A
1930	Ac.Gtr Sld B
1931	Ac.Gtr Sld C
1932	Ac.Gtr Hrm2B
1933	Clean Gtr2 B
1934	Clean Gtr2 C
1935	Brt Strat2 B
1936	Brt Strat2 C
1937	FstPick70s2B
1938	FstPick70s2C
1939	Overdrive2 C
1940	Distortion2B
1941	Distortion2C
1942	Banjo 2 B
1943	Sitar 5 B
1944	Sitar 5 C
1945	E.Sitar 2 B
1946	E.Sitar 2 C
1947	FngrCmp Bs A
1948	FngrCmp Bs B
1949	FngrCmp Bs C
1950	ThumbMtBs p A
1951	ThumbMtBs p B
1952	ThumbMtBs p C
1953	ThumbMtBs f A

Waveform List

No.	Name	No.	Name	No.	Name	No.	Name	No.	Name
2036	R&B Kick L	2118	TR909 Ride	2200	Acd-Basson1f	2282	EEU-LTom2 f	2364	EM.Rek Trill
2037	Rk CmpKick L	2119	Hand Clap	2201	Acd-Basson2p	2283	EEU-LTom2 ff	2365	EM.Rek Tak 1
2038	Rk CmpKick R	2120	Bright Clap	2202	Acd-Basson2f	2284	EEU-MTom2 p	2366	EM.Rek Rim 1
2039	70's Kick	2121	Disc Clap	2203	Acd-Sop 1 p	2285	EEU-MTom2 f	2367	EM.Rek Rim 2
2040	Dance Kick	2122	TR909 Clap 1	2204	Acd-Sop 1 f	2286	EEU-MTom2 ff	2368	EM.Rek Brs 1
2041	HipHop Kick	2123	TR909 Clap 2	2205	Acd-Sop 2 p	2287	EEU-HTom2 p	2369	EM.Rek Brs 2
2042	Plastic Kick	2124	Cheap Clap	2206	Acd-Sop 2 f	2288	EEU-HTom2 f	2370	EM.Rek Tok
2043	AnalogKick 2	2125	Snap	2207	Acd-Violin p	2289	EEU-HTom2 ff	2371	EM.Rek Brs 3
2044	TR909 Kick 3	2126	Cowbell Mute	2208	Acd-Violin f	2290	EEU-CrsStk p	2372	EM.Rek Tak 2
2045	TR909 Kick 4	2127	Wood Block 4	2209	Acd-Clari1 p	2291	EEU-CrsStkmp	2373	EM.REK Sak
2046	TR707 Kick	2128	Bongo Hi Op	2210	Acd-Clari1 f	2292	EEU-CrsStkmf	2374	EM.Rek Tik
2047	TR909 Kick 5	2129	Bongo Lo Op	2211	Acd-Clari2 p	2293	EEU-CrsStk f	2375	EM.MazharDom
2048	Reg.SnrFlm L	2130	Conga2 Hi Mt	2212	Acd-Clari2 f	2294	EEUSplashCym	2376	EM.MazharTak
2049	Amb.Snr 1 p	2131	Conga2 HiSlp	2213	Acd-Musete p	2295	EEU-Ride mp	2377	EM.MazharSak
2050	Amb.Snr2 p L	2132	Conga2 Hi Op	2214	Acd-Musete f	2296	EEU-Ride mf	2378	EM.MazharBrs
2051	Amb.Snr2 p R	2133	Conga2 LowOp	2215	Acd-Accord p	2297	EEU-Ride Cup	2379	EM.Dofs Tak
2052	Maple Snr	2134	Timbale 4	2216	Acd-Accord f	2298	EEU-HH Op p	2380	EM.Dofs Dom
2053	Light Snr ff	2135	Cabasa Up 3	2217	Acd-Harmon p	2299	EEU-HH Op mp	2381	EM.Dofs Sak
2054	Snr Roll Lp	2136	Guiro 1	2218	Acd-Harmon f	2300	EEU-HH Op mf	2382	EM.Dofs Rim1
2055	Soft Jz Roll	2137	Tambourine 2	2219	Acd-Piccolo	2301	EEU-HH Op f	2383	EM.Dofs Rim2
2056	BrushRoll Lp	2138	Tambourine 3	2220	Acd-Oboe 1 p	2302	EEU-HH Cl1 p	2384	EM.Tbl2 Tak1
2057	Dirty Snr	2139	Tambourine 4	2221	Acd-Oboe 1 f	2303	EEU-HH Cl1mp	2385	EM.Tbl2 Rim1
2058	Lo-Bit Snr	2140	Cuica 3	2222	Acd-Oboe 2 p	2304	EEU-HH Cl1mf	2386	EM.Tbl2 Dom
2059	Jngl pkt Snr	2141	Triangle 4	2223	Acd-Oboe 2 f	2305	EEU-HH Cl1 f	2387	SC.TR909 BD2
2060	Flange Snr	2142	Reverse Cym2	2224	Acd-Organ1 p	2306	EEU-HH Cl2 p	2388	EEU-BsDrm mf
2061	Analog Snr 2	2143	F.Str mp A L	2225	Acd-Organ1 f	2307	EEU-HH Cl2mp	2389	EEU-BsDrm f
2062	TR909 Snr 4	2144	F.Str mp A R	2226	Acd-Organ2 p	2308	EEU-HH Cl2mf	2390	EEU-BsDrm ff
2063	TR909 Snr 5	2145	Mrct A L	2227	Acd-Organ2 f	2309	EEU-HH Cl2 f	2391	EEU-Snare1 p
2064	TR909 Snr 6	2146	Mrct A R	2228	Acd-RegistS1	2310	EEU-ChnCym p	2392	EEU-Snare1mp
2065	Urbn Sn Roll	2147	RR F.Tom mp	2229	Acd-RegistS2	2311	EEU-ChnCym f	2393	EEU-Snare1mf
2066	Hard Stick	2148	RR F.Tom ff	2230	Acd-RegistS3	2312	EEU-Cr.Cym1p	2394	EEU-Snare1 f
2067	Dry Stick	2149	SF Kick 2 L	2231	Acd-KeyOff 1	2313	EEU-Cr.Cym1f	2395	EEU-Snare2mp
2068	R8 Comp Rim	2150	SF Kick 2 R	2232	Acd-KeyOff 2	2314	EEU-Cr.Cym2p	2396	EEU-Snare2mf
2069	TR909 Rim	2151	SF Snr p L	2233	EEU-PickBs1p	2315	EEU-Cr.Cym2f	2397	EEU-Snare2 f
2070	Reg.L.Tom p	2152	SF Snr p R	2234	EEU-PickBs1f	2316	EEUbngL RM p	2398	EEU-Snare2ff
2071	Reg.L.Tom f	2153	SF Snr f L	2235	EEU-PickBs2p	2317	EEUbngL RMmf	2399	EEU-ViolnSl1
2072	Reg.M.Tom p	2154	SF Snr f R	2236	EEU-PickBs2f	2318	EEUbngL RM f	2400	EEU-ViolnSl2
2073	Reg.M.Tom f	2155	SF Snr ff L	2237	EEU-SlideBs1	2319	EEUbngH RM p	2401	EEU-E.VlnSl1
2074	Reg.H.Tom p	2156	SF Snr ff R	2238	EEU-SlideBs2	2320	EEUbngH RMmp	2402	EEU-E.VlnSl2
2075	Reg.H.Tom f	2157	SF Rim p L	2239	EEU-SlideBs3	2321	EEUbngH RMmf		
2076	Reg.L.TomFlm	2158	SF Rim p R	2240	BB2-SlideBs1	2322	EEUbngH RM f		
2077	Reg.M.TomFlm	2159	SF Rim mf L	2241	BB2-SlideBs2	2323	EEUbngL OP p		
2078	Reg.H.TomFlm	2160	SF Rim mf R	2242	EEU-E.Gtr p	2324	EEUbngL OPmp		
2079	Jazz Lo Tom	2161	SF Rim f L	2243	EEU-E.Gtr f	2325	EEUbngL OP f		
2080	Jazz Mid Tom	2162	SF Rim f R	2244	EEU-E.GtrTrm	2326	EEUbngL OPrmf		
2081	Jazz Hi Tom	2163	SF SnrGst1 L	2245	EEU-BozkGlid	2327	EEUbngH OP p		
2082	Jazz Lo Flm	2164	SF SnrGst1 R	2246	EEU-Bozuki p	2328	EEUbngH OPrmf		
2083	Jazz Mid Flm	2165	SF SnrGst2 L	2247	EEU-Bozuki f	2329	EEUbngH OP f		
2084	Jazz Hi Flm	2166	SF SnrGst2 R	2248	EEU-Bozuk ff	2330	FG.TR909Clap		
2085	Dry Lo Tom	2167	R&B ShrtSnr1	2249	EEU-BozkTrem	2331	VA.Cha2Bell1		
2086	TR909 Tom	2168	Vint Snr	2250	EEU-Violin	2332	VA.Cha2Bell2		
2087	TR909 DstTom	2169	Short Snr	2251	EEU-E.Violin	2333	SC.Elec Kick		
2088	Rock CHH1 mf	2170	SF CSkt p L	2252	EEU-Sax p	2334	EM.DholaRaka		
2089	Rock CHH1 f	2171	SF CSkt p R	2253	EEU-Sax f	2335	EM.DholaTak1		
2090	Rock CHH2 mf	2172	SF L.Tom mf	2254	EEU-SaxKyOff	2336	EM.DholaTak2		
2091	Rock CHH2 f	2173	SF L.Tom ff	2255	EEU-Or.Sax p	2337	EM.DofDom 1		
2092	Rock OHH	2174	SF M.Tom mf	2256	EEU-Or.Sax f	2338	EM.DofDom 2		
2093	HipHop CHH	2175	SF M.Tom ff	2257	EEU-Clari p	2339	EM.DofDom 3		
2094	TR909 CHH 1	2176	SF H.Tom mf	2258	EEU-Clari f	2340	EM.DofTak 1		
2095	TR909 CHH 2	2177	SF H.Tom f	2259	EEU-ClakyOff	2341	EM.DofSak 1		
2096	TR808 CHH 2	2178	RR FT Flm ff	2260	EEU-Gajde	2342	EM.DofSak 2		
2097	TR808 CHH 3	2179	SF LT Flm ff	2261	EEU-Tp p	2343	EM.DofSak 3		
2098	TR606 CHH	2180	SF MT Flm f	2262	EEU-Tp f	2344	EM.DofFingr2		
2099	TR606 DstCHH	2181	SF HT Flm p	2263	EEU-Tp Noise	2345	EM.Tbl Raka1		
2100	Dance CHH	2182	SF HT Flm f	2264	EEU-Tapan Fx	2346	EM.Tbl Tak 1		
2101	TR909 PHH 1	2183	SF HT Flm ff	2265	EEU-TapanM p	2347	EM.Tbl Tik 1		
2102	TR909 PHH 2	2184	808 Kick 1 P	2266	EEU-TapanM f	2348	EM.Tbl Dom 1		
2103	TR808 PHH	2185	808 Kick 2 P	2267	EEU-TapanH p	2349	EM.Tbl Dom 2		
2104	TR606 PHH	2186	909 Kick 1 P	2268	EEU-TapanHmf	2350	EM.Tbl Sak 1		
2105	Lo-Bit OHH	2187	909 Kick 2 P	2269	EEU-TapanH f	2351	EM.Tbl Sak 2		
2106	HipHop OHH	2188	909 Kick 3 P	2270	EEU-TapanL p	2352	EM.Tbl Roll		
2107	TR909 OHH 1	2189	JungleKick P	2271	EEU-TapanL f	2353	EM.Tbl Tak 2		
2108	TR909 OHH 2	2190	808 Snr 1 P	2272	EEU-LTom1 p	2354	EM.Tbl Raka2		
2109	TR808 OHH 2	2191	808 Snr 2 P	2273	EEU-LTom1 f	2355	EM.Tbl Rim 1		
2110	TR808 OHH 3	2192	909 Snr 1 P	2274	EEU-LTom1 ff	2356	EM.Tbl Toks1		
2111	Lite OHH	2193	909 Snr 2 P	2275	EEU-MTom1 p	2357	EM.Tbl Toks2		
2112	Rock Crash 3	2194	626 Snr P	2276	EEU-MTom1 f	2358	EM.Tbl Toks3		
2113	Jazz Crash	2195	106 Snr	2277	EEU-MTom1 ff	2359	EM.Tbl Toks4		
2114	TR909 Crash	2196	Jungle Snr P	2278	EEU-HTom1 p	2360	EM.Tbl Rim 2		
2115	Ride Bell	2197	Claptail	2279	EEU-HTom1 f	2361	EM.Tbl Tik 2		
2116	Jazz Ride p	2198	Dist Clap	2280	EEU-HTom1 ff	2362	EM.Rek Raka		
2117	Jazz Ride mf	2199	Acd-Basson1p	2281	EEU-LTom2 p	2363	EM.Rek Dom		

INTB

No.	Name
0001	GrandP* 1 mp
0002	GrandP* 1 f
0003	GrandP* 1 ff
0004	GrandP* 2 mp
0005	GrandP* 2 f
0006	GrandP* 2 ff
0007	GrandP*mp CL
0008	GrandP*mp CR
0009	GrandP* f CL
0010	GrandP* f CR
0011	GrandP*ff CL
0012	GrandP*ff CR
0013	Erhu 4 mp
0014	Erhu 4 f
0015	Erhu 4 Vib
0016	Erhu 4 Harm
0017	Banhu mf
0018	Banhu Vib
0019	Banhu Harm
0020	Banhu Orna
0021	Jinghu mf
0022	Jinghu f
0023	Sihu mp
0024	Sihu mf
0025	Sihu w/Atk
0026	Sihu Harm
0027	Matouqin2 mp
0028	Matouqin2Vib
0029	Yangqin 2 mp
0030	Yangqin 2 mf
0031	Yangqin 2Hrd
0032	Yangqin2Trem
0033	Zhongruan mp
0034	Zhongruan mf
0035	Zhngruan Hrm
0036	ZhngruanStrm
0037	Guqin mp
0038	Guqin mf
0039	Guqin Harm
0040	Qudi 2 mp
0041	Qudi 2 f
0042	Qudi 2 Orna
0043	Xiao 2 f
0044	Xiao2 Vib f
0045	Hulusi 2 mf
0046	Hulusi Atk
0047	Gu Roll
0048	Gu Hi
0049	Changgo
0050	Tang Gu Mt
0051	Tang Gu Op
0052	Shu Gu Rim
0053	Shu Gu
0054	Shu Ban
0055	Dholak 9
0056	Dholak 10
0057	Dhol 3
0058	Wadon 8
0059	Wadon 9
0060	Wadon 10
0061	Wadon 11
0062	Wadon 12
0063	Wadon 13
0064	Wadon 14
0065	Wadaiko
0066	Shimedaiko
0067	Wadaiko Rim
0068	Naggra 1 p
0069	Naggra 1 mf
0070	Naggra 1 f
0071	Naggra 1 ff
0072	Naggra 2 p
0073	Naggra 2 mf
0074	Naggra 2 f
0075	Naggra 2 ff
0076	Naggra 3 p
0077	Naggra 3 mf
0078	Naggra 3 f
0079	Naggra 3 ff
0080	Naggra 4 p
0081	Naggra 4 mf
0082	Naggra 4 f
0083	Naggra 4 ff
0084	Nggr Flam 1
0085	Nggr Flam 2
0086	Nggr Flam 3
0087	Nggr Flam 4
0088	Nggr Mute p
0089	Nggr Mute mf
0090	Nggr Mute f
0091	Nggr Mute ff
0092	Nggr Roll 1
0093	Nggr Roll 2
0094	Nggr Roll 3
0095	Nggr Roll 4
0096	Nggr Side p
0097	Nggr Side mf
0098	Nggr Side f
0099	Nggr Side ff
0100	Dap 1 p
0101	Dap 1 f
0102	Dap 2 p
0103	Dap 2 mf
0104	Dap 2 f
0105	Dap 2 ff
0106	Dap 3
0107	Dap 4
0108	Dap 5
0109	Dap 6
0110	Dap 7
0111	Dap 8
0112	Dap 9
0113	Dap 10
0114	Dap 11
0115	Dap 12
0116	Dap 13
0117	Dap 14
0118	Dap 15
0119	Dap 16
0120	Dap Roll 1
0121	Dap Roll 2
0122	Dap Roll 3
0123	Dap Roll 4
0124	Dap Roll 5
0125	Dap Roll 6
0126	Dap Roll 7
0127	Tabla 1
0128	Tabla 2
0129	Tabla 3
0130	Tabla 4
0131	Tabla 5
0132	Tabla 6
0133	Tabla 7
0134	Tabla 8
0135	Tabla 9
0136	Tabla 10
0137	Tabla 11
0138	TablaRoll 1
0139	TablaRoll 2
0140	TablaRoll 3
0141	TablaRoll 4
0142	TablaRoll 5
0143	TablaRoll 6
0144	TablaRoll 7
0145	TablaRoll 8
0146	TablaRoll 9
0147	Cga Mute Hi
0148	Cga Mute Lo
0149	Mokugyo 1
0150	Mokugyo 2
0151	Ban Gu 3
0152	Ban Gu 4
0153	Ban Gu 5
0154	Ohkawa
0155	Nao Bo
0156	Xiao Bo
0157	Kopyak Mt
0158	Kopyak Op

Patch List

Bank: DS

No.	Name	Sub-category	MSB	LSB	PC
0001	Pf:S01	Grand Pno DS	PNO	087	073 001
0002	Pf:S02	Rock Pno DS	PNO	087	073 002
0003	Pf:S03	Nice Piano	PNO	087	073 003
0004	Pf:S04	WarmVoxPiano	PNO	087	073 004
0005	Pf:S05	MIDled Grand	PNO	087	073 005
0006	Pf:S06	West Coast	PNO	087	073 006
0007	Pf:S07	JV EP+	EP	087	073 007
0008	Pf:S08	80's FM	EP	087	073 008
0009	Pf:S09	Player's EP	EP	087	073 009
0010	Pf:S10	EP Mix	EP	087	073 010
0011	Pf:S11	Super Wurly	EP	087	073 011
0012	Ky:S01	Fantasia JV	BEL	087	073 012
0013	Ky:S02	D50 Fantasia	BEL	087	073 013
0014	Ky:S03	Wave Bells	BEL	087	073 014
0015	Ky:S04	Prefab Chime	BEL	087	073 015
0016	Ky:S05	Warm VibesLS	MLT	087	073 016
0017	Ky:S06	Acc.Master	ACD	087	073 017
0018	Ky:S07	Acd-Basson1	ACD	087	073 018
0019	Ky:S08	Acd-Clarin1	ACD	087	073 019
0020	Ky:S09	Acd-Harmonm	ACD	087	073 020
0021	Ky:S10	Acd-Musette	ACD	087	073 021
0022	Ky:S11	Acd-Oboe 1	ACD	087	073 022
0023	Ky:S12	Acd-Organ 1	ACD	087	073 023
0024	Ky:S13	Acd-Piccolo	ACD	087	073 024
0025	Ky:S14	Acd-Soprano1	ACD	087	073 025
0026	Ky:S15	Acd-Violin	ACD	087	073 026
0027	Ky:S16	Acd-Accord	ACD	087	073 027
0028	Ky:S17	Acd-Basson2	ACD	087	073 028
0029	Ky:S18	Acd-Clarin2	ACD	087	073 029
0030	Ky:S19	Acd-Oboe 2	ACD	087	073 030
0031	Ky:S20	Acd-Organ 2	ACD	087	073 031
0032	Ky:S21	Acd-Soprano2	ACD	087	073 032
0033	Ky:S22	Acd-ResistS1	ACD	087	073 033
0034	Ky:S23	Acd-ResistS2	ACD	087	073 034
0035	Ky:S24	Acd-ResistS3	ACD	087	073 035
0036	Ky:S25	Perky Twin B	ORG	087	073 036
0037	Ky:S26	Perc OrganJU	ORG	087	073 037
0038	Ky:S27	Blues Perc	ORG	087	073 038
0039	Ky:S28	AllSkate!SRX	ORG	087	073 039
0040	Ky:S29	D-50 Organ 1	ORG	087	073 040
0041	Ky:S30	D-50 Organ 2	ORG	087	073 041
0042	Ky:S31	ChurchOrg XP	ORG	087	073 042
0043	Gt:S01	Ac.Gtrs SRX	AGT	087	073 043
0044	Gt:S02	Bouzuki /Gld	AGT	087	073 044
0045	Gt:S03	Bouzuki Glid	AGT	087	073 045
0046	Gt:S04	Bouzuki /Trm	AGT	087	073 046
0047	Gt:S05	Bouzuki Trem	AGT	087	073 047
0048	Gt:S06	Bouzuki /3	AGT	087	073 048
0049	Gt:S07	E.Guitar/Trm	EGT	087	073 049
0050	Gt:S08	E.Guitar /2	EGT	087	073 050
0051	Gt:S09	E.Guitar 1	EGT	087	073 051
0052	Gt:S10	E.Guitar 2	EGT	087	073 052
0053	Gt:S11	E.Guitar Trm	EGT	087	073 053
0054	Gt:S12	Guitar Rock	DGT	087	073 054
0055	Gt:S13	Pick Bs DI	BS	087	073 055
0056	Gt:S14	Pick Bs Line	BS	087	073 056
0057	Gt:S15	Slap Bass JP	BS	087	073 057
0058	Gt:S16	GAIA A-1 Bs	SBS	087	073 058
0059	Gt:S17	Short Bs 1	SBS	087	073 059
0060	Gt:S18	Short Bs 2	SBS	087	073 060
0061	Gt:S19	5th Stac Bs	SBS	087	073 061
0062	Gt:S20	ElectroBass	SBS	087	073 062
0063	Gt:S21	SideChain Bs	SBS	087	073 063
0064	Gt:S22	Wobble Bass	SBS	087	073 064
0065	Gt:S23	WobbleBs/Mod	SBS	087	073 065
0066	Gt:S24	AutoWobble	SBS	087	073 066
0067	Gt:S25	Growl Bass	SBS	087	073 067
0068	Gt:S26	Monster Bass	SBS	087	073 068
0069	Gt:S27	E.Bs Slide 1	BS	087	073 069
0070	Gt:S28	E.Bs Slide 2	BS	087	073 070
0071	Gt:S29	E.Bs Slide 3	BS	087	073 071
0072	Gt:S30	E.Bs Slide 4	BS	087	073 072
0073	Gt:S31	E.Bs Slide 5	BS	087	073 073
0074	Oc:S01	Strings LS	STR	087	073 074
0075	Oc:S02	Stage Str LS	STR	087	073 075
0076	Oc:S03	St.Strings	STR	087	073 076
0077	Oc:S04	Strings	STR	087	073 077
0078	Oc:S05	FullStrings2	STR	087	073 078
0079	Oc:S06	Film Octaves	STR	087	073 079

No.	Name	Sub-category	MSB	LSB	PC
0080	Oc:S07	GX Strings	STR	087	073 080
0081	Oc:S08	Slow Str XP	STR	087	073 081
0082	Oc:S09	Mood Strings	STR	087	073 082
0083	Oc:S10	Str+Choir	STR	087	073 083
0084	Oc:S11	JP8.Strings	STR	087	073 084
0085	Oc:S12	Violin 1	STR	087	073 085
0086	Oc:S13	Violin 2	STR	087	073 086
0087	Oc:S14	Vln Silde 1	STR	087	073 087
0088	Oc:S15	Vln Silde 2	STR	087	073 088
0089	Oc:S16	E.Violin 1	STR	087	073 089
0090	Oc:S17	E.Violin 2	STR	087	073 090
0091	Oc:S18	El Vln Sld 1	STR	087	073 091
0092	Oc:S19	El Vln Sld 2	STR	087	073 092
0093	Br:S01	X Brs Sect	BRS	087	073 093
0094	Br:S02	Brass RD	BRS	087	073 094
0095	Br:S03	R&R Brass	BRS	087	073 095
0096	Br:S04	SessionBrass	BRS	087	073 096
0097	Br:S05	Trumpet /2	BRS	087	073 097
0098	Br:S06	Trumpet /2wP	BRS	087	073 098
0099	Br:S07	TrumpetSftwP	BRS	087	073 099
0100	Br:S08	TrumpetLudwP	BRS	087	073 100
0101	Br:S09	Trumpet RD	BRS	087	073 101
0102	Br:S10	Trumpet	BRS	087	073 102
0103	Br:S11	Jump BrassFG	SBR	087	073 103
0104	Br:S12	JP8000 BrsFS	SBR	087	073 104
0105	Br:S13	Sax /2	SAX	087	073 105
0106	Br:S14	Sax /2 wPad	SAX	087	073 106
0107	Br:S15	Sax Sft wPad	SAX	087	073 107
0108	Br:S16	Sax Lud wPad	SAX	087	073 108
0109	Br:S17	Or Sax /2	SAX	087	073 109
0110	Br:S18	Or Sax/2wPad	SAX	087	073 110
0111	Br:S19	Alto mp	SAX	087	073 111
0112	Br:S20	Alto Sax LS	SAX	087	073 112
0113	Br:S21	Alto Sax GW	SAX	087	073 113
0114	Br:S22	BlowAltoVib	SAX	087	073 114
0115	Br:S23	Blow Tenor	SAX	087	073 115
0116	Br:S24	Solo Tenor	SAX	087	073 116
0117	Br:S25	Soft Sax	SAX	087	073 117
0118	Br:S26	Flute+OctLS	FLT	087	073 118
0119	Br:S27	Atk Flute	FLT	087	073 119
0120	Br:S28	SL LivingCal	FLT	087	073 120
0121	Br:S29	Clarinet /2	WND	087	073 121
0122	Sy:S01	Analog Lead	HLD	087	073 122
0123	Sy:S02	Synth Solo	HLD	087	073 123
0124	Sy:S03	JP8 PulseLd	HLD	087	073 124
0125	Sy:S04	EDM Saw Lead	HLD	087	073 125
0126	Sy:S05	EDM Sqz Lead	HLD	087	073 126
0127	Sy:S06	TB Dist Sqz	HLD	087	073 127
0128	Sy:S07	Trap Sqz Ld	HLD	087	073 128
0129	Sy:S08	P5 Sync Lead	HLD	087	074 001
0130	Sy:S09	RajasthaniLS	HLD	087	074 002
0131	Sy:S10	Edye Boost	HLD	087	074 003
0132	Sy:S11	Pure Sine Ld	SLD	087	074 004
0133	Sy:S12	Tri Stack Ld	SLD	087	074 005
0134	Sy:S13	D-50 Stack	SYN	087	074 006
0135	Sy:S14	Stacc.Heaven	SYN	087	074 007
0136	Sy:S15	D50 Stac Hvn	SYN	087	074 008
0137	Sy:S16	Pluck Synth	SYN	087	074 009
0138	Sy:S17	Solid Pluck	SYN	087	074 010
0139	Sy:S18	D50 DigiNDnc	SYN	087	074 011
0140	Sy:S19	D50 FuturePd	SYN	087	074 012
0141	Sy:S20	Sugar Keys	SYN	087	074 013
0142	Sy:S21	260 & JUNO	SYN	087	074 014
0143	Sy:S22	GAIA F-3Trns	SYN	087	074 015
0144	Sy:S23	S-SawStacSyn	SYN	087	074 016
0145	Sy:S24	SuperSaws	SYN	087	074 017
0146	Sy:S25	Bustranza JU	SYN	087	074 018
0147	Sy:S26	80s Poly	SYN	087	074 019
0148	Sy:S27	Fat Analog	SYN	087	074 020
0149	Sy:S28	Strobot 2	SYN	087	074 021
0150	Sy:S29	StepTrance 2	SYN	087	074 022
0151	Sy:S30	Growl Synth	SYN	087	074 023
0152	Sy:S31	Hover Lead	TEK	087	074 024
0153	Sy:S32	Tech Rave	TEK	087	074 025
0154	Sy:S33	Electrostrs2	TEK	087	074 026
0155	Sy:S34	SideChainPad	PLS	087	074 027
0156	Sy:S35	Blade Racer	PLS	087	074 028
0157	Sy:S36	Throbulax 2	PLS	087	074 029
0158	Sy:S37	Step In 2	PLS	087	074 030
0159	Sy:S38	Cross Talk 2	PLS	087	074 031
0160	Sy:S39	Chop Synth 2	PLS	087	074 032

No.	Name	Sub-category	MSB	LSB	PC
0161	Sy:S40	AutoTrance 3	PLS	087	074 033
0162	Sy:S41	Poly Gate	PLS	087	074 034
0163	Sy:S42	Rise Up	FX	087	074 035
0164	Sy:S43	Sci-Fi FX x4	FX	087	074 036
0165	Sy:S44	LazerPoints2	FX	087	074 037
0166	Sy:S45	EDM Kick	FX	087	074 038
0167	Vo:S01	Chorus LS	VOX	087	074 039
0168	Vo:S02	Mmmms	VOX	087	074 040
0169	Vo:S03	Voc:Ensemble	VOX	087	074 041
0170	Vo:S04	Voc:5thStack	VOX	087	074 042
0171	Vo:S05	Voc:Robot	VOX	087	074 043
0172	Vo:S06	Voc:Saw	VOX	087	074 044
0173	Vo:S07	Voc:Sqr	VOX	087	074 045
0174	Vo:S08	Voc:Rise Up	VOX	087	074 046
0175	Vo:S09	Voc:Auto Vib	VOX	087	074 047
0176	Vo:S10	Voc:PitchEnv	VOX	087	074 048
0177	Vo:S11	Voc:Choir	VOX	087	074 049
0178	Vo:S12	Voc:Noise	VOX	087	074 050
0179	Vo:S13	SLSoundTrack	SPD	087	074 051
0180	Vo:S14	ORBit Pad	SPD	087	074 052
0181	Vo:S15	Soft Pad 2	SPD	087	074 053
0182	Vo:S16	Far East XP	SPD	087	074 054
0183	Vo:S17	JupiterMv JU	SPD	087	074 055
0184	Wr:S01	Gajde	ETH	087	074 056

Bank: PRST

No.	Name	Sub-category	MSB	LSB	PC
0001	Pf:001	88StageGrand	PNO	087	064 001
0002	Pf:002	88StgGrand 2	PNO	087	064 002
0003	Pf:003	88StgGrand 3	PNO	087	064 003
0004	Pf:004	JUNO Piano 1	PNO	087	064 004
0005	Pf:005	JUNO Piano 2	PNO	087	064 005
0006	Pf:006	Rich Grand 1	PNO	087	064 006
0007	Pf:007	Rich Grand 2	PNO	087	064 007
0008	Pf:008	Piano+Str 1	PNO	087	064 008
0009	Pf:009	Fairy Piano	PNO	087	064 009
0010	Pf:010	Pop Piano 1	PNO	087	064 010
0011	Pf:011	Pop Piano 2	PNO	087	064 011
0012	Pf:012	ConcertGrand	PNO	087	064 012
0013	Pf:013	Warm Tune	PNO	087	064 013
0014	Pf:014	Hall Concert	PNO	087	064 014
0015	Pf:015	Mellow Tune	PNO	087	064 015
0016	Pf:016	Mono Piano 1	PNO	087	064 016
0017	Pf:017	Mono Piano 2	PNO	087	064 017
0018	Pf:018	Mono Piano 3	PNO	087	064 018
0019	Pf:019	Piano+Pad 1	PNO	087	064 019
0020	Pf:020	Piano+Pad 2	PNO	087	064 020
0021	Pf:021	Piano+Vox	PNO	087	064 021
0022	Pf:022	Piano+Str 2	PNO	087	064 022
0023	Pf:023	Layers	PNO	087	064 023
0024	Pf:024	Grand Hall	PNO	087	064 024
0025	Pf:025	Cicada Piano	PNO	087	064 025
0026	Pf:026	Rhapsody	PNO	087	064 026
0027	Pf:027	Pop Piano 3	PNO	087	064 027
0028	Pf:028	Pop Piano 4	PNO	087	064 028
0029	Pf:029	Radio Piano	PNO	087	064 029
0030	Pf:030	Rokkin' pF	PNO	087	064 030
0031	Pf:031	JD Piano 1	PNO	087	064 031
0032	Pf:032	JD Piano 2	PNO	087	064 032
0033	Pf:033	JD Piano&Str	PNO	087	064 033
0034	Pf:034	SA Dance Pno	PNO	087	064 034
0035	Pf:035	E-Grand	PNO	087	064 035
0036	Pf:036	Back E-Grand	PNO	087	064 036
0037	Pf:037	Dark Grand	PNO	087	064 037
0038	Pf:038	Grand+FM	PNO	087	064 038
0039	Pf:039	Blend Piano	PNO	087	064 039
0040	Pf:040	Piano Oz	PNO	087	064 040
0041	Pf:041	Meditate Pno	PNO	087	064 041
0042	Pf:042	FX Piano	PNO	087	064 042
0043	Pf:043	AmbientPiano	PNO	087	064 043
0044	Pf:044	Pure EP	EP	087	064 044
0045	Pf:045	Pure EP Trem	EP	087	064 045
0046	Pf:046	Stage Phazer	EP	087	064 046
0047	Pf:047	SA EPiano 1	EP	087	064 047
0048	Pf:048	FM EP 1	EP	087	064 048
0049	Pf:049	Pure Wurly 1	EP	087	064 049
0050	Pf:050	Wurly Trem 1	EP	087	064 050
0051	Pf:051	VelSpdWurly	EP	087	064 051
0052	Pf:052	Phase EP 1	EP	087	064 052

No.	Name	Sub-category	MSB	LSB	PC
0053	Pf:053	Phase Stg EP	EP	087	064 053
0054	Pf:054	Flanger EP	EP	087	064 054
0055	Pf:055	TEL Stage EP	EP	087	064 055
0056	Pf:056	Vintage EP 1	EP	087	064 056
0057	Pf:057	Vintage EP 2	EP	087	064 057
0058	Pf:058	Vintage EP 3	EP	087	064 058
0059	Pf:059	Stage EP 1	EP	087	064 059
0060	Pf:060	Stage EP 2	EP	087	064 060
0061	Pf:061	StageCabinet	EP	087	064 061
0062	Pf:062	StageEP Trem	EP	087	064 062
0063	Pf:063	EP Trem 1	EP	087	064 063
0064	Pf:064	EP Trem 2	EP	087	064 064
0065	Pf:065	EP Trem 3	EP	087	064 065
0066	Pf:066	EP Chorus 1	EP	087	064 066
0067	Pf:067	EP Chorus 2	EP	087	064 067
0068	Pf:068	EP Chorus 3	EP	087	064 068
0069	Pf:069	Phase EP 2	EP	087	064 069
0070	Pf:070	80s EP 1	EP	087	064 070
0071	Pf:071	Dyno EP	EP	087	064 071
0072	Pf:072	E.Piano	EP	087	064 072
0073	Pf:073	Back2the60s	EP	087	064 073
0074	Pf:074	Tine EP	EP	087	064 074
0075	Pf:075	LEO EP	EP	087	064 075
0076	Pf:076	SA EPiano 2	EP	087	064 076
0077	Pf:077	SA EP Trem	EP	087	064 077
0078	Pf:078	FM EP mix	EP	087	064 078
0079	Pf:079	FM-777	EP	087	064 079
0080	Pf:080	FM EP 2	EP	087	064 080
0081	Pf:081	FM EP 3	EP	087	064 081
0082	Pf:082	FM EP 4	EP	087	064 082
0083	Pf:083	Pure Wurly 2	EP	087	064 083
0084	Pf:084	Pure Wurly 3	EP	087	064 084
0085	Pf:085	Wurly Trem 2	EP	087	064 085
0086	Pf:086	Wurly Trem 3	EP	087	064 086
0087	Pf:087	EP Layer	EP	087	064 087
0088	Pf:088	80s EP 2	EP	087	064 088
0089	Pf:089	Pop EP	EP	087	064 089
0090	Pf:090	EP Bell 1	EP	087	064 090
0091	Pf:091	EP Bell 2	EP	087	064 091
0092	Pf:092	LonesomeRoad	EP	087	064 092
0093	Pf:093	Age'n'Tines	EP	087	064 093
0094	Pf:094	Brill TremEP	EP	087	064 094
0095	Pf:095	Crystal EP	EP	087	064 095
0096	Pf:096	Vintage Tine	EP	087	064 096
0097	Pf:097	Mk2 Stg phsr	EP	087	064 097
0098	Pf:098	Celestial EP	EP	087	064 098
0099	Pf:099	Psycho EP 1	EP	087	064 099
0100	Pf:100	Psycho EP 2	EP	087	064 100
0101	Pf:101	TineEP+Pad	EP	087	064 101
0102	Pf:102	Wurly+Pad	EP	087	064 102
0103	Pf:103	Dreaming EP	EP	087	064 103
0104	Pf:104	Balladeer	EP	087	064 104
0105	Pf:105	Remember	EP	087	064 105
0106	Pf:106	Vibe EP	EP	087	064 106
0107	Pf:107	sin(EP)	EP	087	064 107
0108	Pf:108	Fonky Fonky	EP	087	064 108
0109	Pf:109	FM EPad	EP	087	064 109
0110	Pf:110	EP Stack	EP	087	064 110
0111	Ky:001	HardRockORG1	ORG	087	064 111
0112	Ky:002	HardRockORG2	ORG	087	064 112
0113	Ky:003	GT Org Stack	ORG	087	064 113
0114	Ky:004	GT Org Std	ORG	087	064 114
0115	Ky:005	GT Org Clean	ORG	087	064 115
0116	Ky:006	Perc Organ 1	ORG	087	064 116
0117	Ky:007	FullStop Org	ORG	087	064 117
0118	Ky:008	FullDraw Org	ORG	087	064 118
0119	Ky:009	StakDraw Org	ORG	087	064 119
0120	Ky:010	JUNO PercOrg	ORG	087	064 120
0121	Ky:011	VKHold4Speed	ORG	087	064 121
0122	Ky:012	Pop Organ 1	ORG	087	064 122
0123	Ky:013	Pop Organ 2	ORG	087	064 123
0124	Ky:014	Pop Organ 3	ORG	087	064 124
0125	Ky:015	B.Org 1	ORG	087	064 125
0126	Ky:016	B.Org 2	ORG	087	064 126
0127	Ky:017	B.Org 3	ORG	087	064 127
0128	Ky:018	B.Org 4	ORG	087	064 128
0129	Ky:019	D.Bar.Org 1	ORG	087	065 001
0130	Ky:020	D.Bar.Org 2	ORG	087	065 002
0131	Ky:021	D.Bar.Org 3	ORG	087	065 003
0132	Ky:022	D.Bar.Org 4	ORG	087	065 004
0133	Ky:023	D.Bar.Org 5	ORG	087	065 005

Patch List

No.	Name	Sub-category	MSB	LSB	PC
0134	Ky:024	D.Bar Org 6	ORG	087	065 006
0135	Ky:025	D.Bar Org 7	ORG	087	065 007
0136	Ky:026	D.Bar Org 8	ORG	087	065 008
0137	Ky:027	Perc Organ 2	ORG	087	065 009
0138	Ky:028	X Perc Organ	ORG	087	065 010
0139	Ky:029	Rhythm'n'B	ORG	087	065 011
0140	Ky:030	Phono Organ	ORG	087	065 012
0141	Ky:031	Rochno Org	ORG	087	065 013
0142	Ky:032	R&B Organ 1	ORG	087	065 014
0143	Ky:033	R&B Organ 2	ORG	087	065 015
0144	Ky:034	SuperDistOrg	ORG	087	065 016
0145	Ky:035	SuperDist Ld	ORG	087	065 017
0146	Ky:036	Dist Bee	ORG	087	065 018
0147	Ky:037	LoFi PercOrg	ORG	087	065 019
0148	Ky:038	60's Org 1	ORG	087	065 020
0149	Ky:039	60's Org 2	ORG	087	065 021
0150	Ky:040	Smoky Organ	ORG	087	065 022
0151	Ky:041	Soap Opera	ORG	087	065 023
0152	Ky:042	Crummy Organ	ORG	087	065 024
0153	Ky:043	Aqua Org/Pno	ORG	087	065 025
0154	Ky:044	Positive Org	ORG	087	065 026
0155	Ky:045	Chapel Organ	ORG	087	065 027
0156	Ky:046	Cathedral	ORG	087	065 028
0157	Ky:047	Grand Pipe	ORG	087	065 029
0158	Ky:048	Pipe Organ 1	ORG	087	065 030
0159	Ky:049	Pipe Organ 2	ORG	087	065 031
0160	Ky:050	Masked Opera	ORG	087	065 032
0161	Ky:051	Clavi 1	KEY	087	065 033
0162	Ky:052	Clavi 2	KEY	087	065 034
0163	Ky:053	Phase Clavi1	KEY	087	065 035
0164	Ky:054	Phase Clavi2	KEY	087	065 036
0165	Ky:055	AnalogClavi1	KEY	087	065 037
0166	Ky:056	Pulse Clavi	KEY	087	065 038
0167	Ky:057	VintageClavi	KEY	087	065 039
0168	Ky:058	Cutter Clavi	KEY	087	065 040
0169	Ky:059	Over-D6	KEY	087	065 041
0170	Ky:060	Cell Clavi	KEY	087	065 042
0171	Ky:061	Clavi 3	KEY	087	065 043
0172	Ky:062	Clavi 4	KEY	087	065 044
0173	Ky:063	Clavi 5	KEY	087	065 045
0174	Ky:064	Funky D	KEY	087	065 046
0175	Ky:065	Funky Line	KEY	087	065 047
0176	Ky:066	AnalogClavi2	KEY	087	065 048
0177	Ky:067	PWM Clavi	KEY	087	065 049
0178	Ky:068	Biting Clavi	KEY	087	065 050
0179	Ky:069	Reso Clavi	KEY	087	065 051
0180	Ky:070	BPF Clavi Ph	KEY	087	065 052
0181	Ky:071	Snappy Clavi	KEY	087	065 053
0182	Ky:072	Harpsy Clavi	KEY	087	065 054
0183	Ky:073	JUNO Harpsi	KEY	087	065 055
0184	Ky:074	Amadeus	KEY	087	065 056
0185	Ky:075	Music Bells	BEL	087	065 057
0186	Ky:076	D50Fantasia1	BEL	087	065 058
0187	Ky:077	D50Fantasia2	BEL	087	065 059
0188	Ky:078	Frends Bell	BEL	087	065 060
0189	Ky:079	FM Syn Bell	BEL	087	065 061
0190	Ky:080	Dreaming Box	BEL	087	065 062
0191	Ky:081	Himalaya Ice	BEL	087	065 063
0192	Ky:082	Wine Glass	BEL	087	065 064
0193	Ky:083	MuBox Pad	BEL	087	065 065
0194	Ky:084	Pop Bell	BEL	087	065 066
0195	Ky:085	Candy Bell	BEL	087	065 067
0196	Ky:086	FM Heaven	BEL	087	065 068
0197	Ky:087	JUNO Celesta	BEL	087	065 069
0198	Ky:088	Celesta Trem	BEL	087	065 070
0199	Ky:089	Glocken	BEL	087	065 071
0200	Ky:090	Music Box 1	BEL	087	065 072
0201	Ky:091	Music Box 2	BEL	087	065 073
0202	Ky:092	Kalimbells	BEL	087	065 074
0203	Ky:093	JUNO Bell	BEL	087	065 075
0204	Ky:094	Grained Bell	BEL	087	065 076
0205	Ky:095	Chime	BEL	087	065 077
0206	Ky:096	Bell Ring	BEL	087	065 078
0207	Ky:097	Tubular Bell	BEL	087	065 079
0208	Ky:098	5th Key	BEL	087	065 080
0209	Ky:099	Bell Monitor	BEL	087	065 081
0210	Ky:100	TubyTuesday	BEL	087	065 082
0211	Ky:101	Step Ice	BEL	087	065 083
0212	Ky:102	Vibe Trem 1	MLT	087	065 084
0213	Ky:103	Vibe Trem 2	MLT	087	065 085
0214	Ky:104	Pure Vibe	MLT	087	065 086

No.	Name	Sub-category	MSB	LSB	PC
0215	Ky:105	Ringy Vibes	MLT	087	065 087
0216	Ky:106	Airie Vibez	MLT	087	065 088
0217	Ky:107	JUNO Marimba	MLT	087	065 089
0218	Ky:108	Soft Marimba	MLT	087	065 090
0219	Ky:109	FM Wood	MLT	087	065 091
0220	Ky:110	Xylo	MLT	087	065 092
0221	Ky:111	Ethno Keys	MLT	087	065 093
0222	Ky:112	Synergy MLT	MLT	087	065 094
0223	Ky:113	JUNO SteelDr	MLT	087	065 095
0224	Ky:114	50' SteelDrms	MLT	087	065 096
0225	Ky:115	Xylosizer	MLT	087	065 097
0226	Ky:116	AirPluck	MLT	087	065 098
0227	Ky:117	Toy Box	MLT	087	065 099
0228	Ky:118	Icy Keys	MLT	087	065 100
0229	Ky:119	Squeeze Me!	ACD	087	065 101
0230	Ky:120	Vodkardon	ACD	087	065 102
0231	Ky:121	Guinguette	ACD	087	065 103
0232	Ky:122	JUNO Harm	HRM	087	065 104
0233	Ky:123	Blues harp	HRM	087	065 105
0234	Ky:124	Green Bullet	HRM	087	065 106
0235	Gt:001	JUNO Nylon	AGT	087	065 107
0236	Gt:002	Comp Stl Gtr	AGT	087	065 108
0237	Gt:003	Pre Mass Hum	AGT	087	065 109
0238	Gt:004	Uncle Martin	AGT	087	065 110
0239	Gt:005	12str Guitar	AGT	087	065 111
0240	Gt:006	Nylon Gtr	AGT	087	065 112
0241	Gt:007	SoftNyl Gtr	AGT	087	065 113
0242	Gt:008	Wet Nyl Gtr	AGT	087	065 114
0243	Gt:009	Bright Nylon	AGT	087	065 115
0244	Gt:010	Pure Nylon	AGT	087	065 116
0245	Gt:011	Nylon Delay	AGT	087	065 117
0246	Gt:012	Thick Steel	AGT	087	065 118
0247	Gt:013	Wide Ac Gtr	AGT	087	065 119
0248	Gt:014	So good !	AGT	087	065 120
0249	Gt:015	Jazz Guitar1	EGT	087	065 121
0250	Gt:016	Jazz Guitar2	EGT	087	065 122
0251	Gt:017	DynoJazz Gtr	EGT	087	065 123
0252	Gt:018	Clean Gtr 1	EGT	087	065 124
0253	Gt:019	Clean Gtr 2	EGT	087	065 125
0254	Gt:020	Pick Gtr	EGT	087	065 126
0255	Gt:021	Strat Gtr 1	EGT	087	065 127
0256	Gt:022	Strat Gtr 2	EGT	087	065 128
0257	Gt:023	Funk Gtr	EGT	087	066 001
0258	Gt:024	StratSeq'nce	EGT	087	066 002
0259	Gt:025	Plug n' Gig1	EGT	087	066 003
0260	Gt:026	Plug n' Gig2	EGT	087	066 004
0261	Gt:027	Kinda Kurt	EGT	087	066 005
0262	Gt:028	Nice Oct Gtr	EGT	087	066 006
0263	Gt:029	Crimson Gtr	EGT	087	066 007
0264	Gt:030	Plugged!!	DGT	087	066 008
0265	Gt:031	Punker 1	DGT	087	066 009
0266	Gt:032	Rockin' Dly	DGT	087	066 010
0267	Gt:033	Loud Gtr	DGT	087	066 011
0268	Gt:034	Searing Gtr	DGT	087	066 012
0269	Gt:035	Searing COSM	DGT	087	066 013
0270	Gt:036	OctSearingGt	DGT	087	066 014
0271	Gt:037	Dist.Fingerz	DGT	087	066 015
0272	Gt:038	Fuzz Gtr	DGT	087	066 016
0273	Gt:039	Crunch Twin	DGT	087	066 017
0274	Gt:040	Larsen	DGT	087	066 018
0275	Gt:041	Trem-o-Vibe	DGT	087	066 019
0276	Gt:042	Touch Drive	DGT	087	066 020
0277	Gt:043	Chunk Atk	DGT	087	066 021
0278	Gt:044	LP Dist	DGT	087	066 022
0279	Gt:045	Hurtling Gtr	DGT	087	066 023
0280	Gt:046	Power Chord	DGT	087	066 024
0281	Gt:047	Punker 2	DGT	087	066 025
0282	Gt:048	Ac Bass 1	BS	087	066 026
0283	Gt:049	Ac Bass 2	BS	087	066 027
0284	Gt:050	Ac Bass 3	BS	087	066 028
0285	Gt:051	Ulti Ac Bass	BS	087	066 029
0286	Gt:052	Downright Bs	BS	087	066 030
0287	Gt:053	Cmp'd Fng Bs	BS	087	066 031
0288	Gt:054	FingerMaster	BS	087	066 032
0289	Gt:055	Return2Base!	BS	087	066 033
0290	Gt:056	Finger Bs 1	BS	087	066 034
0291	Gt:057	Finger Bs 2	BS	087	066 035
0292	Gt:058	Finger Bs 3	BS	087	066 036
0293	Gt:059	Fretless Bs1	BS	087	066 037
0294	Gt:060	Fretless Bs2	BS	087	066 038
0295	Gt:061	Fretless Bs3	BS	087	066 039

No.	Name	Sub-category	MSB	LSB	PC
0296	Gt:062	RichFretless	BS	087	066 040
0297	Gt:063	NewAge Frts	BS	087	066 041
0298	Gt:064	P-Bass	BS	087	066 042
0299	Gt:065	Roomy Bass	BS	087	066 043
0300	Gt:066	All Round Bs	BS	087	066 044
0301	Gt:067	Pick Bass 1	BS	087	066 045
0302	Gt:068	Pick Bass 2	BS	087	066 046
0303	Gt:069	Thumb Up!	BS	087	066 047
0304	Gt:070	Tubby Mute	BS	087	066 048
0305	Gt:071	Chicken Bass	BS	087	066 049
0306	Gt:072	Snug Bass	BS	087	066 050
0307	Gt:073	Chorus Bass	BS	087	066 051
0308	Gt:074	A Big Pick	BS	087	066 052
0309	Gt:075	Slap Bass	BS	087	066 053
0310	Gt:076	Slap w/Fx	BS	087	066 054
0311	Gt:077	Basement	BS	087	066 055
0312	Gt:078	Low Bass	SBS	087	066 056
0313	Gt:079	Foundation	SBS	087	066 057
0314	Gt:080	SH Sawtooth	SBS	087	066 058
0315	Gt:081	Fat RubberBs	SBS	087	066 059
0316	Gt:082	Garage Bass1	SBS	087	066 060
0317	Gt:083	Reso SynBs 1	SBS	087	066 061
0318	Gt:084	TB Dist Bs	SBS	087	066 062
0319	Gt:085	JUNO Acid Bs	SBS	087	066 063
0320	Gt:086	Monster Bass	SBS	087	066 064
0321	Gt:087	Oil Can Bass	SBS	087	066 065
0322	Gt:088	Pedal Syn Bs	SBS	087	066 066
0323	Gt:089	Big Mini 1	SBS	087	066 067
0324	Gt:090	Big Mini 2	SBS	087	066 068
0325	Gt:091	SH-2 Bs	SBS	087	066 069
0326	Gt:092	SH-101 Bs 1	SBS	087	066 070
0327	Gt:093	R&B Bass 1	SBS	087	066 071
0328	Gt:094	R&B Bass 2	SBS	087	066 072
0329	Gt:095	R&B Bass 3	SBS	087	066 073
0330	Gt:096	Moogy Bass 1	SBS	087	066 074
0331	Gt:097	Moogy Bass 2	SBS	087	066 075
0332	Gt:098	JUNO Reso	SBS	087	066 076
0333	Gt:099	Alpha SynBs1	SBS	087	066 077
0334	Gt:100	Alpha SynBs2	SBS	087	066 078
0335	Gt:101	SH Square	SBS	087	066 079
0336	Gt:102	Pedal Square	SBS	087	066 080
0337	Gt:103	Doze Bass 1	SBS	087	066 081
0338	Gt:104	VirtualRnBs1	SBS	087	066 082
0339	Gt:105	Saw&MG Bass1	SBS	087	066 083
0340	Gt:106	Square Bass	SBS	087	066 084
0341	Gt:107	Bs MG	SBS	087	066 085
0342	Gt:108	Bs Reso	SBS	087	066 086
0343	Gt:109	Bs SH	SBS	087	066 087
0344	Gt:110	Bs TB	SBS	087	066 088
0345	Gt:111	Bs MC	SBS	087	066 089
0346	Gt:112	Bs Pedal	SBS	087	066 090
0347	Gt:113	Bs Release	SBS	087	066 091
0348	Gt:114	Bs Cheeze	SBS	087	066 092
0349	Gt:115	Mini Like!	SBS	087	066 093
0350	Gt:116	MC-404 Bass	SBS	087	066 094
0351	Gt:117	Soft SynBass	SBS	087	066 095
0352	Gt:118	JUNO-106 Bs	SBS	087	066 096
0353	Gt:119	Smooth Bass	SBS	087	066 097
0354	Gt:120	Flat Bass	SBS	087	066 098
0355	Gt:121	Punch MG 2	SBS	087	066 099
0356	Gt:122	Electro Rubb	SBS	087	066 100
0357	Gt:123	R&B Bass 4	SBS	087	066 101
0358	Gt:124	Enorjizor	SBS	087	066 102
0359	Gt:125	LowFat Bass	SBS	087	066 103
0360	Gt:126	Doze Bass 2	SBS	087	066 104
0361	Gt:127	DCO Bass	SBS	087	066 105
0362	Gt:128	VirtualRnBs2	SBS	087	066 106
0363	Gt:129	Saw&MG Bass2	SBS	087	066 107
0364	Gt:130	MG+SubOsc Bs	SBS	087	066 108
0365	Gt:131	R&B Bass 5	SBS	087	066 109
0366	Gt:132	R&B Bass 6	SBS	087	066 110
0367	Gt:133	Not a Bass	SBS	087	066 111
0368	Gt:134	Reso SynBs 2	SBS	087	066 112
0369	Gt:135	SH-1 Bass	SBS	087	066 113
0370	Gt:136	SH-101 Bs 2	SBS	087	066 114
0371	Gt:137	Punch MG 1	SBS	087	066 115
0372	Gt:138	MKS-50 SynBs	SBS	087	066 116
0373	Gt:139	Gashed Bass	SBS	087	066 117
0374	Gt:140	Q Bass	SBS	087	066 118
0375	Gt:141	Super-G DX	SBS	087	066 119
0376	Gt:142	Kickin' Bass	SBS	087	066 120

No.	Name	Sub-category	MSB	LSB	PC
0377	Gt:143	OilDrum Bass	SBS	087	066 121
0378	Gt:144	Dust Bass	SBS	087	066 122
0379	Gt:145	Glide-iator	SBS	087	066 123
0380	Gt:146	Acid Punch	SBS	087	066 124
0381	Gt:147	Unison Bass	SBS	087	066 125
0382	Gt:148	Detune Bass	SBS	087	066 126
0383	Gt:149	Lo Bass	SBS	087	066 127
0384	Gt:150	Garage Bass2	SBS	087	066 128
0385	Gt:151	Sub Sonic	SBS	087	067 001
0386	Gt:152	Jungle Bass	SBS	087	067 002
0387	Gt:153	R&B Bass 7	SBS	087	067 003
0388	Gt:154	Simply Basic	SBS	087	067 004
0389	Gt:155	Beepin Bass	SBS	087	067 005
0390	Gt:156	MC-TB Bass	SBS	087	067 006
0391	Gt:157	Acdg Bass	SBS	087	067 007
0392	Gt:158	Loco Voco	SBS	087	067 008
0393	Gt:159	Unplug it!	SBS	087	067 009
0394	Gt:160	S&H Bass	SBS	087	067 010
0395	Gt:161	Destroyed Bs	SBS	087	067 011
0396	Gt:162	Lo-Fi TB	SBS	087	067 012
0397	Gt:163	Drop Bass	SBS	087	067 013
0398	Gt:164	Big Mini 3	SBS	087	067 014
0399	Gt:165	Muffled MG	SBS	087	067 015
0400	Gt:166	Intrusive Bs	SBS	087	067 016
0401	Gt:167	Alpha SynBs3	SBS	087	067 017
0402	Gt:168	TransistorBs	SBS	087	067 018
0403	Gt:169	JUNO-60 Bass	SBS	087	067 019
0404	Gt:170	Storm Bass	SBS	087	067 020
0405	Gt:171	Alpha ResoBs	SBS	087	067 021
0406	Gt:172	SH-101 Vibe	SBS	087	067 022
0407	Gt:173	Fazee Bass	SBS	087	067 023
0408	Gt:174	Hi-Energy Bs	SBS	087	067 024
0409	Gt:175	Low Nz Bass	SBS	087	067 025
0410	Oc:001	String Ens	STR	087	067 026
0411	Oc:002	JUNO Strings	STR	087	067 027
0412	Oc:003	Chamber Str1	STR	087	067 028
0413	Oc:004	Chamber Str2	STR	087	067 029
0414	Oc:005	Staccato	STR	087	067 030
0415	Oc:006	Pizzicato	STR	087	067 031
0416	Oc:007	Pizz/Stacc	STR	087	067 032
0417	Oc:008	Sahara Str	STR	087	067 033
0418	Oc:009	Random Mood	STR	087	067 034
0419	Oc:010	X Hall Str	STR	087	067 035
0420	Oc:011	DelayQuartet	STR	087	067 036
0421	Oc:012	Pop Str 1	STR	087	067 037
0422	Oc:013	Pop Str 2	STR	087	067 038
0423	Oc:014	Pop Str 3	STR	087	067 039
0424	Oc:015	WhiteStrings	STR	087	067 040
0425	Oc:016	JV Strings	STR	087	067 041
0426	Oc:017	Marcato	STR	087	067 042
0427	Oc:018	Strings 1	STR	087	067 043
0428	Oc:019	Strings 2	STR	087	067 044
0429	Oc:020	Stringz 101	STR	087	067 045
0430	Oc:021	Crossed Bows	STR	087	067 046
0431	Oc:022	Small Str	STR	087	067 047
0432	Oc:023	Warm Strings	STR	087	067 048
0433	Oc:024	DynaStrSect1	STR	087	067 049
0434	Oc:025	DynaStrSect2	STR	087	067 050
0435	Oc:026	Full Strings	STR	087	067 051
0436	Oc:027	X StrSection	STR	087	067 052
0437	Oc:028	Oct Strings	STR	087	067 053
0438	Oc:029	Strings 3	STR	087	067 054
0439	Oc:030	Monkey Str	STR	087	067 055
0440	Oc:031	Hybrid Str 1	STR	087	067 056
0441	Oc:032	Hybrid Str 2	STR	087	067 057
0442	Oc:033	Biggie Bows	STR	087	067 058
0443	Oc:034	Str Stacc mp	STR	087	067 059
0444	Oc:035	So Staccato	STR	087	067 060
0445	Oc:036	Long/Stacc	STR	087	067 061
0446	Oc:037	Pizz/Long	STR	087	067 062
0447	Oc:038	Vls PizzHall	STR	087	067 063
0448	Oc:039	DelicatePizz	STR	087	067 064
0449	Oc:040	Orch Pizz	STR	087	067 065
0450	Oc:041	BrightViolin	STR	087	067 066
0451	Oc:042	Bright Cello	STR	087	067 067
0452	Oc:043	Gang Strangs	STR	087	067 068
0453	Oc:044	Clustered!?	STR	087	067 069
0454	Oc:045	Movie Scene	STR	087	067 070
0455	Oc:046	Mellow Tron	STR	087	067 071
0456	Oc:047	Tronic Str	STR	087	067 072
0457	Oc:048	Wind & Str 1	ORC	087	067 073

Patch List

No.	Name	Sub-category	MSB	LSB	PC
0458	Oc:049	Wind & Str 2	ORC	087	067 074
0459	Oc:050	Farewell	ORC	087	067 075
0460	Oc:051	Orch & Horns	ORC	087	067 076
0461	Oc:052	Soft Orch 1	ORC	087	067 077
0462	Oc:053	Soft Orch 2	ORC	087	067 078
0463	Oc:054	Henry IX	ORC	087	067 079
0464	Oc:055	Ending Scene	ORC	087	067 080
0465	Oc:056	Symphonika	ORC	087	067 081
0466	Oc:057	Cheesy Movie	HIT	087	067 082
0467	Oc:058	Philly Hit	HIT	087	067 083
0468	Oc:059	Smear Hit 1	HIT	087	067 084
0469	Oc:060	Smear Hit 2	HIT	087	067 085
0470	Oc:061	Good Old Hit	HIT	087	067 086
0471	Oc:062	Mix Hit 1	HIT	087	067 087
0472	Oc:063	Mix Hit 2	HIT	087	067 088
0473	Oc:064	Lo-Fi Hit	HIT	087	067 089
0474	Oc:065	2ble Action	HIT	087	067 090
0475	Oc:066	In da Cave	HIT	087	067 091
0476	Oc:067	Housechord	HIT	087	067 092
0477	Oc:068	Mod Chord	HIT	087	067 093
0478	Oc:069	Dance Steam	HIT	087	067 094
0479	Br:001	Bright Brass	BRS	087	067 095
0480	Br:002	BreakOut Brs	BRS	087	067 096
0481	Br:003	StackTp Sect	BRS	087	067 097
0482	Br:004	Tb Section	BRS	087	067 098
0483	Br:005	TpTb Sect.	BRS	087	067 099
0484	Br:006	Brass Sect 1	BRS	087	067 100
0485	Br:007	Brass Sect 2	BRS	087	067 101
0486	Br:008	Brass & Sax	BRS	087	067 102
0487	Br:009	Simple Tutti	BRS	087	067 103
0488	Br:010	Tpts & Tmbs	BRS	087	067 104
0489	Br:011	BrassPartOut	BRS	087	067 105
0490	Br:012	Full sForza	BRS	087	067 106
0491	Br:013	Stereo Brass	BRS	087	067 107
0492	Br:014	F.Horns Sect	BRS	087	067 108
0493	Br:015	Solo Tp	BRS	087	067 109
0494	Br:016	Ambi Tp	BRS	087	067 110
0495	Br:017	Horn Chops	BRS	087	067 111
0496	Br:018	Mute Tp	BRS	087	067 112
0497	Br:019	Harmon Mute	BRS	087	067 113
0498	Br:020	Soft Tb	BRS	087	067 114
0499	Br:021	Solo Tb	BRS	087	067 115
0500	Br:022	Solo Bone	BRS	087	067 116
0501	Br:023	Flugel Horn	BRS	087	067 117
0502	Br:024	Spit Flugel	BRS	087	067 118
0503	Br:025	XP Horn	BRS	087	067 119
0504	Br:026	Grande Tuba	BRS	087	067 120
0505	Br:027	JUNO Tuba	BRS	087	067 121
0506	Br:028	80s Brass 1	SBR	087	067 122
0507	Br:029	Wide Syn Brs	SBR	087	067 123
0508	Br:030	Poly Brass	SBR	087	067 124
0509	Br:031	JP8000 Brass	SBR	087	067 125
0510	Br:032	JUNO Brass	SBR	087	067 126
0511	Br:033	DetuneSawBrs	SBR	087	067 127
0512	Br:034	J-Pop Brass	SBR	087	067 128
0513	Br:035	80s Brass 2	SBR	087	068 001
0514	Br:036	80s Brass 3	SBR	087	068 002
0515	Br:037	80s Brass 4	SBR	087	068 003
0516	Br:038	80s Brass 5	SBR	087	068 004
0517	Br:039	Ana Brass	SBR	087	068 005
0518	Br:040	Soft Brass	SBR	087	068 006
0519	Br:041	Ox Brass	SBR	087	068 007
0520	Br:042	Syn Brass 1	SBR	087	068 008
0521	Br:043	Syn Brass 2	SBR	087	068 009
0522	Br:044	Xpand Brass1	SBR	087	068 010
0523	Br:045	Xpand Brass2	SBR	087	068 011
0524	Br:046	Super Saw	SBR	087	068 012
0525	Br:047	SoftSynBrass	SBR	087	068 013
0526	Br:048	Windy Synth	SBR	087	068 014
0527	Br:049	Silky JP	SBR	087	068 015
0528	Br:050	Silk Brs Pad	SBR	087	068 016
0529	Br:051	X-Saw Brass	SBR	087	068 017
0530	Br:052	Cheesy Brass	SBR	087	068 018
0531	Br:053	Dual Saw Brs	SBR	087	068 019
0532	Br:054	JUNO-106 Brs	SBR	087	068 020
0533	Br:055	BreakOut Key	SBR	087	068 021
0534	Br:056	Stacked Brs	SBR	087	068 022
0535	Br:057	Sax Sect. 1	SAX	087	068 023
0536	Br:058	Sax Sect. 2	SAX	087	068 024
0537	Br:059	Horny Sax	SAX	087	068 025
0538	Br:060	JUNO Sop Sax	SAX	087	068 026

No.	Name	Sub-category	MSB	LSB	PC
0539	Br:061	Solo Sop Sax	SAX	087	068 027
0540	Br:062	JUNO AltoSax	SAX	087	068 028
0541	Br:063	AltoLead Sax	SAX	087	068 029
0542	Br:064	FXM Alto Sax	SAX	087	068 030
0543	Br:065	XP TrnBrethy	SAX	087	068 031
0544	Br:066	JUNO Tnr Sax	SAX	087	068 032
0545	Br:067	Fat TenorSax	SAX	087	068 033
0546	Br:068	JUNO BariSax	SAX	087	068 034
0547	Br:069	JUNO Flute	FLT	087	068 035
0548	Br:070	JUNO Piccolo	FLT	087	068 036
0549	Br:071	Clarence.net	WND	087	068 037
0550	Br:072	JUNO Oboe	WND	087	068 038
0551	Br:073	JUNO E.Horn	WND	087	068 039
0552	Br:074	JUNO Bassoon	WND	087	068 040
0553	Br:075	Good Old Day	WND	087	068 041
0554	Br:076	WindWood	WND	087	068 042
0555	Sy:001	Porta Lead 1	HLD	087	068 043
0556	Sy:002	Porta Lead 2	HLD	087	068 044
0557	Sy:003	Solo Saw Ld	HLD	087	068 045
0558	Sy:004	Wind Syn Ld	HLD	087	068 046
0559	Sy:005	GR Lead 1	HLD	087	068 047
0560	Sy:006	Sync Lead	HLD	087	068 048
0561	Sy:007	JupiterLead1	HLD	087	068 049
0562	Sy:008	Alpha Spit 1	HLD	087	068 050
0563	Sy:009	Pro Fat Ld	HLD	087	068 051
0564	Sy:010	Saw Lead 1	HLD	087	068 052
0565	Sy:011	Saw Lead 2	HLD	087	068 053
0566	Sy:012	Saw Lead 3	HLD	087	068 054
0567	Sy:013	Saw Lead 4	HLD	087	068 055
0568	Sy:014	Saw Lead 5	HLD	087	068 056
0569	Sy:015	Saw Lead 6	HLD	087	068 057
0570	Sy:016	JUNO Lead	HLD	087	068 058
0571	Sy:017	Jump Poly	HLD	087	068 059
0572	Sy:018	Octa Juice	HLD	087	068 060
0573	Sy:019	Octa Saw	HLD	087	068 061
0574	Sy:020	Octa Sync 1	HLD	087	068 062
0575	Sy:021	Octa Sync 2	HLD	087	068 063
0576	Sy:022	Hot Sync	HLD	087	068 064
0577	Sy:023	Hot Coffee	HLD	087	068 065
0578	Sy:024	Phase Lead	HLD	087	068 066
0579	Sy:025	Waxy Lead 1	HLD	087	068 067
0580	Sy:026	Follow Me 1	HLD	087	068 068
0581	Sy:027	Follow Me 2	HLD	087	068 069
0582	Sy:028	Classic Ld 1	HLD	087	068 070
0583	Sy:029	Classic Ld 2	HLD	087	068 071
0584	Sy:030	Digi Lead 1	HLD	087	068 072
0585	Sy:031	Digi Lead 2	HLD	087	068 073
0586	Sy:032	DC Triangle	HLD	087	068 074
0587	Sy:033	Sqr-Sequene	HLD	087	068 075
0588	Sy:034	Pure Square	HLD	087	068 076
0589	Sy:035	Griggle	HLD	087	068 077
0590	Sy:036	Legato Saw	HLD	087	068 078
0591	Sy:037	Dual Profs	HLD	087	068 079
0592	Sy:038	Gwyo Press	HLD	087	068 080
0593	Sy:039	Q DualSaws	HLD	087	068 081
0594	Sy:040	Mogulator Ld	HLD	087	068 082
0595	Sy:041	DirtyVoltage	HLD	087	068 083
0596	Sy:042	Clean?	HLD	087	068 084
0597	Sy:043	Distortion	HLD	087	068 085
0598	Sy:044	Syn Lead 1	HLD	087	068 086
0599	Sy:045	Syn Lead 2	HLD	087	068 087
0600	Sy:046	X-Sink Delay	HLD	087	068 088
0601	Sy:047	Destroyed Ld	HLD	087	068 089
0602	Sy:048	Synchro Lead	HLD	087	068 090
0603	Sy:049	Sync Tank	HLD	087	068 091
0604	Sy:050	Sync Ld Mono	HLD	087	068 092
0605	Sy:051	SyncModulate	HLD	087	068 093
0606	Sy:052	2krazy Brite	HLD	087	068 094
0607	Sy:053	Distorted MG	HLD	087	068 095
0608	Sy:054	Dist Lead	HLD	087	068 096
0609	Sy:055	Ringmod Lead	HLD	087	068 097
0610	Sy:056	BodyElectric	HLD	087	068 098
0611	Sy:057	SonicVampire	HLD	087	068 099
0612	Sy:058	Stimulation	HLD	087	068 100
0613	Sy:059	Wire Sync	HLD	087	068 101
0614	Sy:060	Epic Lead	HLD	087	068 102
0615	Sy:061	Bag Lead	HLD	087	068 103
0616	Sy:062	Wezcoast	HLD	087	068 104
0617	Sy:063	HyperJupiter	HLD	087	068 105
0618	Sy:064	Vintagolizer	HLD	087	068 106
0619	Sy:065	C64 Lead	HLD	087	068 107

No.	Name	Sub-category	MSB	LSB	PC	
0620	Sy:066	303 NRG	HLD	087	068	108
0621	Sy:067	Feat Lead	HLD	087	068	109
0622	Sy:068	Cell SquLead	SLD	087	068	110
0623	Sy:069	Theramax 1	SLD	087	068	111
0624	Sy:070	Pulse Lead 1	SLD	087	068	112
0625	Sy:071	Pulse Lead 2	SLD	087	068	113
0626	Sy:072	Mid Saw Ld	SLD	087	068	114
0627	Sy:073	On Air	SLD	087	068	115
0628	Sy:074	Tri Lead 1	SLD	087	068	116
0629	Sy:075	Tri Lead 2	SLD	087	068	117
0630	Sy:076	Sine Lead 1	SLD	087	068	118
0631	Sy:077	Sine Lead 2	SLD	087	068	119
0632	Sy:078	Sqr Lead 1	SLD	087	068	120
0633	Sy:079	Sqr Lead 2	SLD	087	068	121
0634	Sy:080	SH Sqr Lead	SLD	087	068	122
0635	Sy:081	Sinetic	SLD	087	068	123
0636	Sy:082	JUNO Soft Ld	SLD	087	068	124
0637	Sy:083	Spooky Lead	SLD	087	068	125
0638	Sy:084	PeakAwpSine	SLD	087	068	126
0639	Sy:085	Howards Lead	SLD	087	068	127
0640	Sy:086	SoloNzPeaker	SLD	087	068	128
0641	Sy:087	R&B Tri Ld 1	SLD	087	069	001
0642	Sy:088	R&B Tri Ld 2	SLD	087	069	002
0643	Sy:089	JupiterLead2	SLD	087	069	003
0644	Sy:090	JupiterLead3	SLD	087	069	004
0645	Sy:091	Dig-n-Duke	SLD	087	069	005
0646	Sy:092	Sqr Diamond	SLD	087	069	006
0647	Sy:093	Soft Lead	SLD	087	069	007
0648	Sy:094	Soft Saw Ld	SLD	087	069	008
0649	Sy:095	X-Pulse Lead	SLD	087	069	009
0650	Sy:096	Mild 2-SawLd	SLD	087	069	010
0651	Sy:097	Mew Lead	SLD	087	069	011
0652	Sy:098	Shy Soloist	SLD	087	069	012
0653	Sy:099	Theramax 2	SLD	087	069	013
0654	Sy:100	Therasqu	SLD	087	069	014
0655	Sy:101	GR Lead 2	SLD	087	069	015
0656	Sy:102	SH-2 Lead	SLD	087	069	016
0657	Sy:103	Jucy Saw	SLD	087	069	017
0658	Sy:104	Reso Lead	SLD	087	069	018
0659	Sy:105	Modulated Ld	SLD	087	069	019
0660	Sy:106	Synthi Fizz	SLD	087	069	020
0661	Sy:107	Waspy Lead 2	SLD	087	069	021
0662	Sy:108	Pulstar Ld	SLD	087	069	022
0663	Sy:109	Naked Lead	SLD	087	069	023
0664	Sy:110	Alpha Spit 2	SLD	087	069	024
0665	Sy:111	JP Saw Lead	SLD	087	069	025
0666	Sy:112	Violin Lead	SLD	087	069	026
0667	Sy:113	Mod Lead	SLD	087	069	027
0668	Sy:114	Tristar	SLD	087	069	028
0669	Sy:115	Chubby Lead	SLD	087	069	029
0670	Sy:116	Sneaky Leady	SLD	087	069	030
0671	Sy:117	Shaku Lead	SLD	087	069	031
0672	Sy:118	Legato Tkno	SLD	087	069	032
0673	Sy:119	Reso Saw Ld	SLD	087	069	033
0674	Sy:120	SliCed Lead	SLD	087	069	034
0675	Sy:121	Mini Growl	SLD	087	069	035
0676	Sy:122	Evangelized	SLD	087	069	036
0677	Sy:123	Air Lead	SLD	087	069	037
0678	Sy:124	Stacc Heaven	SYN	087	069	038
0679	Sy:125	Sugar Synth	SYN	087	069	039
0680	Sy:126	Synth Key	SYN	087	069	040
0681	Sy:127	Frontier Syn	SYN	087	069	041
0682	Sy:128	Summer Str	SYN	087	069	042
0683	Sy:129	JUNO Poly	SYN	087	069	043
0684	Sy:130	SuperSawSlow	SYN	087	069	044
0685	Sy:131	Cue Tip	SYN	087	069	045
0686	Sy:132	Waspy Synth	SYN	087	069	046
0687	Sy:133	Europe Xpres	SYN	087	069	047
0688	Sy:134	Squeepy	SYN	087	069	048
0689	Sy:135	DOC Stack	SYN	087	069	049
0690	Sy:136	Sweep Lead	SYN	087	069	050
0691	Sy:137	80s Saws 1	SYN	087	069	051
0692	Sy:138	80s Saws 2	SYN	087	069	052
0693	Sy:139	80s Saws 3	SYN	087	069	053
0694	Sy:140	Digitalless	SYN	087	069	054
0695	Sy:141	Flip Pad	SYN	087	069	055
0696	Sy:142	Short Detune	SYN	087	069	056
0697	Sy:143	forSequence	SYN	087	069	057
0698	Sy:144	Memory Pluck	SYN	087	069	058
0699	Sy:145	Metalic Bass	SYN	087	069	059
0700	Sy:146	Aqua	SYN	087	069	060

No.	Name	Sub-category	MSB	LSB	PC	
0701	Sy:147	Round SQR	SYN	087	069	061
0702	Sy:148	Big Planet	SYN	087	069	062
0703	Sy:149	Wet Atax	SYN	087	069	063
0704	Sy:150	Houze Clavi	SYN	087	069	064
0705	Sy:151	Saw Stack	SYN	087	069	065
0706	Sy:152	Frgile Saws	SYN	087	069	066
0707	Sy:153	Steamed Sawz	SYN	087	069	067
0708	Sy:154	RAVtune	SYN	087	069	068
0709	Sy:155	Bustranza	SYN	087	069	069
0710	Sy:156	Digi Saw Syn	SYN	087	069	070
0711	Sy:157	JP OctAttack	SYN	087	069	071
0712	Sy:158	Oct Unison	SYN	087	069	072
0713	Sy:159	Xstatic	SYN	087	069	073
0714	Sy:160	Dirty Combo	SYN	087	069	074
0715	Sy:161	FM's Attack	SYN	087	069	075
0716	Sy:162	Digi-vox Syn	SYN	087	069	076
0717	Sy:163	Fairy Factor	SYN	087	069	077
0718	Sy:164	Tempest	SYN	087	069	078
0719	Sy:165	X-Racer	SYN	087	069	079
0720	Sy:166	TB Booster	SYN	087	069	080
0721	Sy:167	Syn-Orch/Mod	SYN	087	069	081
0722	Sy:168	Pressyn	SYN	087	069	082
0723	Sy:169	High Five	SYN	087	069	083
0724	Sy:170	Magnetic 5th	SYN	087	069	084
0725	Sy:171	DigimaX	SYN	087	069	085
0726	Sy:172	Exhale	SYN	087	069	086
0727	Sy:173	X-panda	SYN	087	069	087
0728	Sy:174	Saw Keystep	SYN	087	069	088
0729	Sy:175	Blue Meanie	SYN	087	069	089
0730	Sy:176	4mant Cycle	SYN	087	069	090
0731	Sy:177	Modular	SYN	087	069	091
0732	Sy:178	Analog Dream	SYN	087	069	092
0733	Sy:179	DCO Bell Pad	SYN	087	069	093
0734	Sy:180	Cell Fanta	SYN	087	069	094
0735	Sy:181	JUNO 5th	SYN	087	069	095
0736	Sy:182	DoubleBubble	SYN	087	069	096
0737	Sy:183	JUNO-D Maj7	TEK	087	069	097
0738	Sy:184	Sweet House	TEK	087	069	098
0739	Sy:185	Periscope	TEK	087	069	099
0740	Sy:186	5th Voice	TEK	087	069	100
0741	Sy:187	HPF Sweep	TEK	087	069	101
0742	Sy:188	BPF Saw	TEK	087	069	102
0743	Sy:189	Moon Synth	TEK	087	069	103
0744	Sy:190	DelyResoSaws	TEK	087	069	104
0745	Sy:191	JUNO Trance1	TEK	087	069	105
0746	Sy:192	Trancy Synth	TEK	087	069	106
0747	Sy:193	Cell Trance	TEK	087	069	107
0748	Sy:194	Trancy X	TEK	087	069	108
0749	Sy:195	JUNO Trance2	TEK	087	069	109
0750	Sy:196	R-Trance	TEK	087	069	110
0751	Sy:197	Braatz...	TEK	087	069	111
0752	Sy:198	AllinOneRiff	TEK	087	069	112
0753	Sy:199	YZ Again	TEK	087	069	113
0754	Sy:200	Flazzzy Lead	TEK	087	069	114
0755	Sy:201	Coffee Bee	TEK	087	069	115
0756	Sy:202	TB-Sequence	TEK	087	069	116
0757	Sy:203	SC-303	TEK	087	069	117
0758	Sy:204	Dance Saws	TEK	087	069	118
0759	Sy:205	AluminmWires	TEK	087	069	119
0760	Sy:206	Fred&Barney	TEK	087	069	120
0761	Sy:207	Electrostars	TEK	087	069	121
0762	Sy:208	LoFiSequence	TEK	087	069	122
0763	Sy:209	MelodicDrums	TEK	087	069	123
0764	Sy:210	Monkey Arpg	TEK	087	069	124
0765	Sy:211	TB Wah	TEK	087	069	125
0766	Sy:212	Waving TB303	TEK	087	069	126
0767	Sy:213	Digi Seq	TEK	087	069	127
0768	Sy:214	Seq Saw	TEK	087	069	128
0769	Sy:215	Reso Seq Saw	TEK	087	070	001
0770	Sy:216	DetuneSeqSaw	TEK	087	070	002
0771	Sy:217	Technotribe	TEK	087	070	003
0772	Sy:218	Teethy Grit	TEK	087	070	004
0773	Sy:219	Repetition	TEK	087	070	005
0774	Sy:220	Killerbeez	TEK	087	070	006
0775	Sy:221	Acid Lead	TEK	087	070	007
0776	Sy:222	Tranceformer	TEK	087	070	008
0777	Sy:223	Anandroid	TEK	087	070	009
0778	Sy:224	Shroomy	TEK	087	070	010
0779	Sy:225	Noize R us	TEK	087	070	011
0780	Sy:226	Beep Melodie	TEK	087	070	012
0781	Sy:227	Morpher	TEK	087	070	013

Patch List

No.	Name	Sub-category	MSB	LSB	PC
0782	Sy:228	Power Synth	TEK	087	070 014
0783	Sy:229	Hoover Again	TEK	087	070 015
0784	Sy:230	Alpha Said..	TEK	087	070 016
0785	Sy:231	Ravers Awake	TEK	087	070 017
0786	Sy:232	Tekno Gargle	TEK	087	070 018
0787	Sy:233	Tranceiver	TEK	087	070 019
0788	Sy:234	Techno Dream	TEK	087	070 020
0789	Sy:235	Techno Pizz	TEK	087	070 021
0790	Sy:236	VirtualHuman	PLS	087	070 022
0791	Sy:237	Strobot	PLS	087	070 023
0792	Sy:238	Strobe	PLS	087	070 024
0793	Sy:239	Strobe X	PLS	087	070 025
0794	Sy:240	Mr. Fourier	PLS	087	070 026
0795	Sy:241	Rhythmic 5th	PLS	087	070 027
0796	Sy:242	Sorry4theDLY	PLS	087	070 028
0797	Sy:243	Cell Pad	PLS	087	070 029
0798	Sy:244	Shape of X	PLS	087	070 030
0799	Sy:245	ShapeURMusic	PLS	087	070 031
0800	Sy:246	Synth Force	PLS	087	070 032
0801	Sy:247	Trance Split	PLS	087	070 033
0802	Sy:248	Step Trance	PLS	087	070 034
0803	Sy:249	Chop Synth	PLS	087	070 035
0804	Sy:250	Euro Teuro	PLS	087	070 036
0805	Sy:251	Auto Trance1	PLS	087	070 037
0806	Sy:252	Eureggae	PLS	087	070 038
0807	Sy:253	Beat Pad	PLS	087	070 039
0808	Sy:254	TMT Seq Pad	PLS	087	070 040
0809	Sy:255	ForYourBreak	PLS	087	070 041
0810	Sy:256	HPF Slicer	PLS	087	070 042
0811	Sy:257	Sliced Choir	PLS	087	070 043
0812	Sy:258	Digi-Doo	PLS	087	070 044
0813	Sy:259	PanningFrmnt	PLS	087	070 045
0814	Sy:260	Dirty Beat	PLS	087	070 046
0815	Sy:261	Electrons	PLS	087	070 047
0816	Sy:262	Protons	PLS	087	070 048
0817	Sy:263	Brisk Vortex	PLS	087	070 049
0818	Sy:264	Throbulax	PLS	087	070 050
0819	Sy:265	Lonizer	PLS	087	070 051
0820	Sy:266	diGital Pad	PLS	087	070 052
0821	Sy:267	StepPitShift	PLS	087	070 053
0822	Sy:268	Pad Pulses	PLS	087	070 054
0823	Sy:269	Seq-Pad 1	PLS	087	070 055
0824	Sy:270	DSP Chaos	PLS	087	070 056
0825	Sy:271	Dance floor	PLS	087	070 057
0826	Sy:272	Minor Thirds	PLS	087	070 058
0827	Sy:273	FX World	PLS	087	070 059
0828	Sy:274	Nu Trance X	PLS	087	070 060
0829	Sy:275	Auto 5thSaws	PLS	087	070 061
0830	Sy:276	Cross Talk	PLS	087	070 062
0831	Sy:277	Reanimation	PLS	087	070 063
0832	Sy:278	VoX Chopper	PLS	087	070 064
0833	Sy:279	Trevor's Pad	PLS	087	070 065
0834	Sy:280	Fantomas Pad	PLS	087	070 066
0835	Sy:281	Jazzy Arps	PLS	087	070 067
0836	Sy:282	Keep Running	PLS	087	070 068
0837	Sy:283	Step In	PLS	087	070 069
0838	Sy:284	Echo Echo	PLS	087	070 070
0839	Sy:285	Keep going	PLS	087	070 071
0840	Sy:286	Arposphere	PLS	087	070 072
0841	Sy:287	Voco Riff	PLS	087	070 073
0842	Sy:288	Pulsator	PLS	087	070 074
0843	Sy:289	Motion Bass	PLS	087	070 075
0844	Sy:290	Sine Magic	PLS	087	070 076
0845	Sy:291	JUNO-D Slice	PLS	087	070 077
0846	Sy:292	Pulsatron	PLS	087	070 078
0847	Sy:293	Mega Sync	PLS	087	070 079
0848	Sy:294	Passing by	FX	087	070 080
0849	Sy:295	Lazer Points	FX	087	070 081
0850	Sy:296	Retro Sci-Fi	FX	087	070 082
0851	Sy:297	Magic Chime	FX	087	070 083
0852	Sy:298	Try This!	FX	087	070 084
0853	Sy:299	New Planetz	FX	087	070 085
0854	Sy:300	Jet Noise	FX	087	070 086
0855	Sy:301	Chaos 2003	FX	087	070 087
0856	Sy:302	Control Room	FX	087	070 088
0857	Sy:303	OutOf sortz	FX	087	070 089
0858	Sy:304	Scatter	FX	087	070 090
0859	Sy:305	Low Beat-S	FX	087	070 091
0860	Sy:306	WaitnOutside	FX	087	070 092
0861	Sy:307	Breath Echo	FX	087	070 093
0862	Sy:308	SoundStrange	FX	087	070 094

No.	Name	Sub-category	MSB	LSB	PC
0863	Sy:309	Cosmic Pulse	FX	087	070 095
0864	Sy:310	Faked Piano	FX	087	070 096
0865	Sy:311	JUNO Crystal	FX	087	070 097
0866	Sy:312	ResoSweep Dn	FX	087	070 098
0867	Sy:313	Zap B3 & C4	FX	087	070 099
0868	Sy:314	PolySweep Nz	FX	087	070 100
0869	Sy:315	Strange Land	FX	087	070 101
0870	Sy:316	S&H Voc	FX	087	070 102
0871	Sy:317	12th Planet	FX	087	070 103
0872	Sy:318	Scare	FX	087	070 104
0873	Sy:319	Hillside	FX	087	070 105
0874	Sy:320	Mod Scanner	FX	087	070 106
0875	Sy:321	SoundOnSound	FX	087	070 107
0876	Sy:322	Gasp	FX	087	070 108
0877	Sy:323	ResoSweep Up	FX	087	070 109
0878	Sy:324	Magic Wave	FX	087	070 110
0879	Sy:325	Shangri-La	FX	087	070 111
0880	Sy:326	CerealKiller	FX	087	070 112
0881	Sy:327	Cosmic Drops	FX	087	070 113
0882	Sy:328	Space Echo	FX	087	070 114
0883	Sy:329	Robot Sci-Fi	FX	087	070 115
0884	Vo:001	Jazz Scat	VOX	087	070 116
0885	Vo:002	Jazz Doos	VOX	087	070 117
0886	Vo:003	Choir Ahhs 1	VOX	087	070 118
0887	Vo:004	Choir Ahhs 2	VOX	087	070 119
0888	Vo:005	Choir Oohs	VOX	087	070 120
0889	Vo:006	AngelsChoir1	VOX	087	070 121
0890	Vo:007	AngelsChoir2	VOX	087	070 122
0891	Vo:008	Syn Opera	VOX	087	070 123
0892	Vo:009	Angelique	VOX	087	070 124
0893	Vo:010	Vox Pad 1	VOX	087	070 125
0894	Vo:011	Vox Pad 2	VOX	087	070 126
0895	Vo:012	Gospel Oohs	VOX	087	070 127
0896	Vo:013	Choir&Str	VOX	087	070 128
0897	Vo:014	SynVox 1	VOX	087	071 001
0898	Vo:015	SynVox 2	VOX	087	071 002
0899	Vo:016	Aah Vox	VOX	087	071 003
0900	Vo:017	Sweet Keys	VOX	087	071 004
0901	Vo:018	JUNO Synvox	VOX	087	071 005
0902	Vo:019	Uhmm	VOX	087	071 006
0903	Vo:020	Morning Star	VOX	087	071 007
0904	Vo:021	BeautifulOne	VOX	087	071 008
0905	Vo:022	Ooze	VOX	087	071 009
0906	Vo:023	Aerial Choir	VOX	087	071 010
0907	Vo:024	3D Vox	VOX	087	071 011
0908	Vo:025	Sample Opera	VOX	087	071 012
0909	Vo:026	Film Cue	VOX	087	071 013
0910	Vo:027	Paradise	VOX	087	071 014
0911	Vo:028	Sad ceremony	VOX	087	071 015
0912	Vo:029	Lost Voices	VOX	087	071 016
0913	Vo:030	Beat Vox	VOX	087	071 017
0914	Vo:031	Talk 2 Me	VOX	087	071 018
0915	Vo:032	FM Vox	VOX	087	071 019
0916	Vo:033	Let's Talk!	VOX	087	071 020
0917	Vo:034	Voc:Di Robt	VOX	087	071 021
0918	Vo:035	Voc:Di Chr	VOX	087	071 022
0919	Vo:036	Voc:Di Ens	VOX	087	071 023
0920	Vo:037	Cosmic Rays	BPD	087	071 024
0921	Vo:038	Phaser Pad 1	BPD	087	071 025
0922	Vo:039	PhaseStrings	BPD	087	071 026
0923	Vo:040	Super SynStr	BPD	087	071 027
0924	Vo:041	80s Str 1	BPD	087	071 028
0925	Vo:042	80s Str 2	BPD	087	071 029
0926	Vo:043	BreakOut Str	BPD	087	071 030
0927	Vo:044	Frends Syn	BPD	087	071 031
0928	Vo:045	Comb	BPD	087	071 032
0929	Vo:046	Voyager	BPD	087	071 033
0930	Vo:047	Stringship	BPD	087	071 034
0931	Vo:048	DarknessSide	BPD	087	071 035
0932	Vo:049	Fat Stacks	BPD	087	071 036
0933	Vo:050	Strings R Us	BPD	087	071 037
0934	Vo:051	Electric Pad	BPD	087	071 038
0935	Vo:052	Neo RS-202	BPD	087	071 039
0936	Vo:053	OB Rezo Pad	BPD	087	071 040
0937	Vo:054	Synthi Ens	BPD	087	071 041
0938	Vo:055	Giant Sweep	BPD	087	071 042
0939	Vo:056	Mod Dare	BPD	087	071 043
0940	Vo:057	Cell Space	BPD	087	071 044
0941	Vo:058	Digi-Swell	BPD	087	071 045
0942	Vo:059	New Year Day	BPD	087	071 046
0943	Vo:060	Polar Morn	BPD	087	071 047

No.	Name	Sub-category	MSB	LSB	PC
0944	Vo:061	Distant Sun	BPD	087	071 048
0945	Vo:062	PG Chimes	BPD	087	071 049
0946	Vo:063	Saturn Rings	BPD	087	071 050
0947	Vo:064	Brusky	BPD	087	071 051
0948	Vo:065	2.2 Pad 1	BPD	087	071 052
0949	Vo:066	2.2 Pad 2	BPD	087	071 053
0950	Vo:067	2.2 Pad 3	BPD	087	071 054
0951	Vo:068	SaturnHolida	BPD	087	071 055
0952	Vo:069	Neuro-Drone	BPD	087	071 056
0953	Vo:070	In The Pass	BPD	087	071 057
0954	Vo:071	Polar Night	BPD	087	071 058
0955	Vo:072	Cell 5th	BPD	087	071 059
0956	Vo:073	MistOver5ths	BPD	087	071 060
0957	Vo:074	Gritty Pad	BPD	087	071 061
0958	Vo:075	India Garden	BPD	087	071 062
0959	Vo:076	BillionStars	BPD	087	071 063
0960	Vo:077	Sand Pad	BPD	087	071 064
0961	Vo:078	ReverseSweep	BPD	087	071 065
0962	Vo:079	HugeSoundMod	BPD	087	071 066
0963	Vo:080	Metal Swell	BPD	087	071 067
0964	Vo:081	NuSoundtrack	BPD	087	071 068
0965	Vo:082	Phat Strings	BPD	087	071 069
0966	Vo:083	Hollow	SPD	087	071 070
0967	Vo:084	Heaven Pad	SPD	087	071 071
0968	Vo:085	Soft OB Pad	SPD	087	071 072
0969	Vo:086	Reso Pad	SPD	087	071 073
0970	Vo:087	Slow Saw Str	SPD	087	071 074
0971	Vo:088	Terra Nostra	SPD	087	071 075
0972	Vo:089	Summer Pad	SPD	087	071 076
0973	Vo:090	Frends Pad	SPD	087	071 077
0974	Vo:091	Pop Pad	SPD	087	071 078
0975	Vo:092	Sqr Pad	SPD	087	071 079
0976	Vo:093	Silk Pad	SPD	087	071 080
0977	Vo:094	WarmReso Pad	SPD	087	071 081
0978	Vo:095	Soft Pad	SPD	087	071 082
0979	Vo:096	Air Pad	SPD	087	071 083
0980	Vo:097	Soft Breeze	SPD	087	071 084
0981	Vo:098	JP Strings 1	SPD	087	071 085
0982	Vo:099	JP Strings 2	SPD	087	071 086
0983	Vo:100	DelayStrings	SPD	087	071 087
0984	Vo:101	NorthStrings	SPD	087	071 088
0985	Vo:102	Syn Strings1	SPD	087	071 089
0986	Vo:103	Syn Strings2	SPD	087	071 090
0987	Vo:104	OB Strings 1	SPD	087	071 091
0988	Vo:105	OB Strings 2	SPD	087	071 092
0989	Vo:106	Strings Pad	SPD	087	071 093
0990	Vo:107	R&B SoftPad	SPD	087	071 094
0991	Vo:108	Phat Pad	SPD	087	071 095
0992	Vo:109	Phaser Pad 2	SPD	087	071 096
0993	Vo:110	Mystic Str	SPD	087	071 097
0994	Vo:111	Glass Organ	SPD	087	071 098
0995	Vo:112	Wind Pad	SPD	087	071 099
0996	Vo:113	Combination	SPD	087	071 100
0997	Vo:114	HumanKindnes	SPD	087	071 101
0998	Vo:115	Beauty Pad	SPD	087	071 102
0999	Vo:116	Atmospherics	SPD	087	071 103
1000	Vo:117	OB Aahs	SPD	087	071 104
1001	Vo:118	Vulcano Pad	SPD	087	071 105
1002	Vo:119	Cloud #9	SPD	087	071 106
1003	Vo:120	Organic Pad	SPD	087	071 107
1004	Vo:121	Hum Pad	SPD	087	071 108
1005	Vo:122	Vox Pad	SPD	087	071 109
1006	Vo:123	Digital Aahs	SPD	087	071 110
1007	Vo:124	Tri 5th Pad	SPD	087	071 111
1008	Vo:125	Movin Pad	SPD	087	071 112
1009	Vo:126	Seq-Pad 2	SPD	087	071 113
1010	Vo:127	Follow	SPD	087	071 114
1011	Vo:128	Consolament	SPD	087	071 115
1012	Vo:129	Spacious Pad	SPD	087	071 116
1013	Vo:130	JD Pop Pad	SPD	087	071 117
1014	Vo:131	JP-8 Phase	SPD	087	071 118
1015	Vo:132	Nu Epic Pad	SPD	087	071 119
1016	Vo:133	Flange Dream	SPD	087	071 120
1017	Vo:134	Evolution X	SPD	087	071 121
1018	Vo:135	Angelis Pad	SPD	087	071 122
1019	Vo:136	JUNO-106 Str	SPD	087	071 123
1020	Vo:137	JupiterMoves	SPD	087	071 124
1021	Vo:138	Oceanic Pad	SPD	087	071 125
1022	Vo:139	Fairy's Song	SPD	087	071 126
1023	Vo:140	Borealis	SPD	087	071 127
1024	Vo:141	JX Warm Pad	SPD	087	071 128

No.	Name	Sub-category	MSB	LSB	PC
1025	Vo:142	Analog Bgrnd	SPD	087	072 001
1026	Wr:001	Sitar on C	PLK	087	072 002
1027	Wr:002	JUNO Sitar 1	PLK	087	072 003
1028	Wr:003	JUNO Sitar 2	PLK	087	072 004
1029	Wr:004	Sitar Baby	PLK	087	072 005
1030	Wr:005	Neo Sitar	PLK	087	072 006
1031	Wr:006	SaraswatiRvr	PLK	087	072 007
1032	Wr:007	Teky Drop	PLK	087	072 008
1033	Wr:008	TroubadorEns	PLK	087	072 009
1034	Wr:009	Elec Sitar	PLK	087	072 010
1035	Wr:010	Pat is away	PLK	087	072 011
1036	Wr:011	Nice Kalimba	PLK	087	072 012
1037	Wr:012	Quiet River	PLK	087	072 013
1038	Wr:013	Aerial Harp	PLK	087	072 014
1039	Wr:014	Happiness	PLK	087	072 015
1040	Wr:015	Skydiver	PLK	087	072 016
1041	Wr:016	Jamisen	PLK	087	072 017
1042	Wr:017	JUNO Koto	PLK	087	072 018
1043	Wr:018	Monsoon	PLK	087	072 019
1044	Wr:019	Bend Koto	PLK	087	072 020
1045	Wr:020	JUNO Banjo	FRT	087	072 021
1046	Wr:021	Pan Pipes	ETH	087	072 022
1047	Wr:022	Andes Mood	ETH	087	072 023
1048	Wr:023	LongDistance	ETH	087	072 024
1049	Wr:024	Ambi Shaku	ETH	087	072 025
1050	Wr:025	HimalayaPipe	ETH	087	072 026
1051	Wr:026	Ethnic Lead	ETH	087	072 027
1052	Wr:027	Lochscape	ETH	087	072 028
1053	Wr:028	PipeDream	ETH	087	072 029
1054	Wr:029	Angel Pipes	ETH	087	072 030
1055	Wr:030	Far East	ETH	087	072 031
1056	Wr:031	Wired Synth	ETH	087	072 032
1057	Wr:032	4DaCommonMan	ETH	087	072 033
1058	Wr:033	Orgaenia	ETH	087	072 034
1059	Wr:034	Sleeper	ETH	087	072 035
1060	Wr:035	Ice Palace	ETH	087	072 036
1061	Wr:036	Story Harp	ETH	087	072 037
1062	Wr:037	LostParadise	ETH	087	072 038
1063	Wr:038	Timpani+Low	PRC	087	072 039
1064	Wr:039	Timpani Roll	PRC	087	072 040
1065	Wr:040	Bass Drum	PRC	087	072 041
1066	Wr:041	Ambidextrous	SFX	087	072 042
1067	Wr:042	Er-co-re	SFX	087	072 043
1068	Wr:043	Mobile Phone	SFX	087	072 044
1069	Wr:044	ElectroDisco	BTS	087	072 045
1070	Wr:045	Groove 007	BTS	087	072 046
1071	Wr:046	In Da Groove	BTS	087	072 047
1072	Wr:047	Sweet 80s	BTS	087	072 048
1073	Wr:048	Auto Trance2	BTS	087	072 049
1074	Wr:049	JUNO Pop	BTS	087	072 050
1075	Wr:050	Compusonic 1	BTS	087	072 051
1076	Wr:051	Compusonic 2	BTS	087	072 052
1077	Wr:052	Mix Drum 1	DRM	087	072 053
1078	Wr:053	Mix Drum 2	DRM	087	072 054
1079	Wr:054	Lounge Kit	CMB	087	072 055
1080	Wr:055	80s Combo	CMB	087	072 056
1081	Wr:056	Analog Days	CMB	087	072 057
1082	Wr:057	Techno Craft	CMB	087	072 058
1083	Sp:001	NylonGtr E4	SMP	087	072 059
1084	Sp:002	Pemade C5	SMP	087	072 060
1085	Sp:003	Shankh G#4	SMP	087	072 061
1086	Sp:004	RSS SpinnrC4	SMP	087	072 062
1087	SP:005	Come On! C4	SMP	087	072 063
1088	Sp:006	102:PhraseC4	SMP	087	072 064

Bank: GM

No.	Name	Sub-category	MSB	LSB	PC
0001 Pf:111	Piano 1	PNO	121	0	1
0002 Pf:112	Piano 1w	PNO	121	1	
0003 Pf:113	European Pf	PNO	121	2	
0004 Pf:114	Piano 2	PNO	121	0	2
0005 Pf:115	Piano 2w	PNO	121	1	
0006 Pf:116	Piano 3	EP	121	0	3
0007 Pf:117	Piano 3w	EP	121	1	
0008 Pf:118	Honky-tonk	PNO	121	0	4
0009 Pf:119	Honky-tonk 2	PNO	121	1	
0010 Pf:120	E.Piano 1	EP	121	0	5
0011 Pf:121	St.Soft EP	EP	121	1	
0012 Pf:122	FM+SA EP	EP	121	2	
0013 Pf:123	Wurly	EP	121	3	
0014 Pf:124	E.Piano 2	EP	121	0	6
0015 Pf:125	Detuned EP 2	EP	121	1	
0016 Pf:126	St.FM EP	EP	121	2	
0017 Pf:127	EP Legend	EP	121	3	
0018 Pf:128	EP Phase	EP	121	4	
0019 Ky:125	Harpsichord	KEY	121	0	7
0020 Ky:126	Coupled Hps.	KEY	121	1	
0021 Ky:127	Harpsi.w	KEY	121	2	
0022 Ky:128	Harpsi.o	KEY	121	3	
0023 Ky:129	Clav.	KEY	121	0	8
0024 Ky:130	Pulse Clav	KEY	121	1	
0025 Ky:131	Celesta	KEY	121	0	9
0026 Ky:132	Glockenspiel	BEL	121	0	10
0027 Ky:133	Music Box	BEL	121	0	11
0028 Ky:134	Vibraphone	MLT	121	0	12
0029 Ky:135	Vibraphone w	MLT	121	1	
0030 Ky:136	Marimba	MLT	121	0	13
0031 Ky:137	Marimba w	MLT	121	1	
0032 Ky:138	Xylophone	MLT	121	0	14
0033 Ky:139	Tubular-bell	BEL	121	0	15
0034 Ky:140	Church Bell	BEL	121	1	
0035 Ky:141	Carillon	BEL	121	2	
0036 Wr:058	Santur	PLK	121	0	16
0037 Ky:142	Organ 1	ORG	121	0	17
0038 Ky:143	Trem. Organ	ORG	121	1	
0039 Ky:144	60's Organ 1	ORG	121	2	
0040 Ky:145	70's E.Organ	ORG	121	3	
0041 Ky:146	Organ 2	ORG	121	0	18
0042 Ky:147	Chorus Or.2	ORG	121	1	
0043 Ky:148	Perc. Organ	ORG	121	2	
0044 Ky:149	Organ 3	ORG	121	0	19
0045 Ky:150	Church Org.1	ORG	121	0	20
0046 Ky:151	Church Org.2	ORG	121	1	
0047 Ky:152	Church Org.3	ORG	121	2	
0048 Ky:153	Reed Organ	ORG	121	0	21
0049 Ky:154	Puff Organ	ORG	121	1	
0050 Ky:155	Accordion Fr	ACD	121	0	22
0051 Ky:156	Accordion It	ACD	121	1	
0052 Ky:157	Harmonica	HRM	121	0	23
0053 Ky:158	Bandoneon	ACD	121	0	24
0054 Gt:176	Nylon-str.Gt	AGT	121	0	25
0055 Gt:177	Ukulele	AGT	121	1	
0056 Gt:178	Nylon Gt.o	AGT	121	2	
0057 Gt:179	Nylon Gt.2	AGT	121	3	
0058 Gt:180	Steel-str.Gt	AGT	121	0	26
0059 Gt:181	12-str.Gt	AGT	121	1	
0060 Gt:182	Mandolin	AGT	121	2	
0061 Gt:183	Steel + Body	AGT	121	3	
0062 Gt:184	Jazz Gt.	EGT	121	0	27
0063 Gt:185	Pedal Steel	EGT	121	1	
0064 Gt:186	Clean Gt.	EGT	121	0	28
0065 Gt:187	Chorus Gt.	EGT	121	1	
0066 Gt:188	Mid Tone GTR	EGT	121	2	
0067 Gt:189	Muted Gt.	EGT	121	0	29
0068 Gt:190	Funk Pop	EGT	121	1	
0069 Gt:191	Funk Gt.2	EGT	121	2	
0070 Gt:192	Jazz Man	EGT	121	3	
0071 Gt:193	Overdrive Gt	DGT	121	0	30
0072 Gt:194	Guitar Pinch	DGT	121	1	
0073 Gt:195	DistortionGt	DGT	121	0	31
0074 Gt:196	Feedback Gt.	DGT	121	1	
0075 Gt:197	Dist Rtm GTR	DGT	121	2	
0076 Gt:198	Gt.Harmonics	EGT	121	0	32
0077 Gt:199	Gt. Feedback	EGT	121	1	
0078 Gt:200	Acoustic Bs.	BS	121	0	33
0079 Gt:201	Fingered Bs.	BS	121	0	34

No.	Name	Sub-category	MSB	LSB	PC
0080 Gt:202	Finger Slap	BS	121	1	
0081 Gt:203	Picked Bass	BS	121	0	35
0082 Gt:204	Fretless Bs.	BS	121	0	36
0083 Gt:205	Slap Bass 1	BS	121	0	37
0084 Gt:206	Slap Bass 2	BS	121	0	38
0085 Gt:207	Synth Bass 1	SBS	121	0	39
0086 Gt:208	SynthBass101	SBS	121	1	
0087 Gt:209	Acid Bass	SBS	121	2	
0088 Gt:210	Clavi Bass	SBS	121	3	
0089 Gt:211	Hammer	SBS	121	4	
0090 Gt:212	Synth Bass 2	SBS	121	0	40
0091 Gt:213	Beef FM Bass	SBS	121	1	
0092 Gt:214	RubberBass 2	SBS	121	2	
0093 Gt:215	Attack Pulse	SBS	121	3	
0094 Oc:070	Violin	STR	121	0	41
0095 Oc:071	Slow Violin	STR	121	1	
0096 Oc:072	Viola	STR	121	0	42
0097 Oc:073	Cello	STR	121	0	43
0098 Oc:074	Contrabass	STR	121	0	44
0099 Oc:075	Tremolo Str	STR	121	0	45
0100 Oc:076	PizzicatoStr	STR	121	0	46
0101 Wr:059	Harp	PLK	121	0	47
0102 Wr:060	Yang Qin	PLK	121	1	
0103 Wr:061	Timpani	PRC	121	0	48
0104 Oc:077	Strings	STR	121	0	49
0105 Oc:078	Orchestra	ORC	121	1	
0106 Oc:079	60s Strings	STR	121	2	
0107 Oc:080	Slow Strings	STR	121	0	50
0108 Oc:081	Syn.Strings1	STR	121	0	51
0109 Oc:082	Syn.Strings3	STR	121	1	
0110 Vo:143	Syn.Strings2	SPD	121	0	52
0111 Vo:144	Choir Aahs	VOX	121	0	53
0112 Vo:145	Chorus Aahs	VOX	121	1	
0113 Vo:146	Voice Ooohs	VOX	121	0	54
0114 Vo:147	Humming	VOX	121	1	
0115 Vo:148	SynVox	VOX	121	0	55
0116 Vo:149	Analog Voice	VOX	121	1	
0117 Oc:083	OrchestraHit	HIT	121	0	56
0118 Oc:084	Bass Hit	HIT	121	1	
0119 Oc:085	6th Hit	HIT	121	2	
0120 Oc:086	Euro Hit	HIT	121	3	
0121 Br:077	Trumpet	BRS	121	0	57
0122 Br:078	Dark Trumpet	BRS	121	1	
0123 Br:079	Trombone	BRS	121	0	58
0124 Br:080	Trombone 2	BRS	121	1	
0125 Br:081	Bright Tb	BRS	121	2	
0126 Br:082	Tuba	BRS	121	0	59
0127 Br:083	MutedTrumpet	BRS	121	0	60
0128 Br:084	MuteTrumpet2	BRS	121	1	
0129 Br:085	French Horns	BRS	121	0	61
0130 Br:086	Fr.Horn 2	BRS	121	1	
0131 Br:087	Brass 1	BRS	121	0	62
0132 Br:088	Brass 2	BRS	121	1	
0133 Br:089	Synth Brass1	SBR	121	0	63
0134 Br:090	Pro Brass	SBR	121	1	
0135 Br:091	Oct SynBrass	SBR	121	2	
0136 Br:092	Jump Brass	SBR	121	3	
0137 Br:093	Synth Brass2	SBR	121	0	64
0138 Br:094	SynBrass sfz	SBR	121	1	
0139 Br:095	Velo Brass 1	SBR	121	2	
0140 Br:096	Soprano Sax	SAX	121	0	65
0141 Br:097	Alto Sax	SAX	121	0	66
0142 Br:098	Tenor Sax	SAX	121	0	67
0143 Br:099	Baritone Sax	SAX	121	0	68
0144 Br:100	Oboe	WND	121	0	69
0145 Br:101	English Horn	WND	121	0	70
0146 Br:102	Bassoon	WND	121	0	71
0147 Br:103	Clarinet	WND	121	0	72
0148 Br:104	Piccolo	FLT	121	0	73
0149 Br:105	Flute	FLT	121	0	74
0150 Br:106	Recorder	FLT	121	0	75
0151 Br:107	Pan Flute	FLT	121	0	76
0152 Br:108	Bottle Blow	FLT	121	0	77
0153 Wr:062	Shakuhachi	ETH	121	0	78
0154 Br:109	Whistle	FLT	121	0	79
0155 Br:110	Ocarina	FLT	121	0	80
0156 Sy:330	Square Wave	HLD	121	0	81
0157 Sy:331	MG Square	HLD	121	1	
0158 Sy:332	2600 Sine	HLD	121	2	
0159 Sy:333	Saw Wave	HLD	121	0	82
0160 Sy:334	OB2 Saw	HLD	121	1	

No.	Name	Sub-category	MSB	LSB	PC
0161	Sy:335	Doctor Solo	HLD	121	2
0162	Sy:336	Natural Lead	HLD	121	3
0163	Sy:337	SequencedSaw	HLD	121	4
0164	Sy:338	Syn.Caliope	SLD	121	0
0165	Sy:339	Chifffer Lead	SLD	121	0
0166	Sy:340	Charang	HLD	121	0
0167	Sy:341	Wire Lead	HLD	121	1
0168	Sy:342	Solo Vox	SLD	121	0
0169	Sy:343	5th Saw Wave	HLD	121	0
0170	Sy:344	Bass & Lead	HLD	121	0
0171	Sy:345	Delayed Lead	HLD	121	1
0172	Sy:346	Fantasia	SYN	121	0
0173	Vo:150	Warm Pad	SPD	121	0
0174	Vo:151	Sine Pad	SPD	121	1
0175	Sy:347	Polysynth	SYN	121	0
0176	Vo:152	Space Voice	VOX	121	0
0177	Vo:153	Itopia	VOX	121	1
0178	Vo:154	Bowed Glass	SPD	121	0
0179	Vo:155	Metal Pad	BPD	121	0
0180	Vo:156	Halo Pad	BPD	121	0
0181	Vo:157	Sweep Pad	SPD	121	0
0182	Sy:348	Ice Rain	SYN	121	0
0183	Vo:158	Soundtrack	SPD	121	0
0184	Ky:159	Crystal	BEL	121	0
0185	Ky:160	Syn Mallet	BEL	121	1
0186	Gt:216	Atmosphere	AGT	121	0
0187	Sy:349	Brightness	SYN	121	0
0188	Sy:350	Goblin	PLS	121	0
0189	Vo:159	Echo Drops	BPD	121	0
0190	Vo:160	Echo Bell	BPD	121	1
0191	Vo:161	Echo Pan	BPD	121	2
0192	Vo:162	Star Theme	BPD	121	0
0193	Wr:063	Sitar	PLK	121	0
0194	Wr:064	Sitar 2	PLK	121	1
0195	Wr:065	Banjo	FRT	121	0
0196	Wr:066	Shamisen	PLK	121	0
0197	Wr:067	Koto	PLK	121	0
0198	Wr:068	Taisho Koto	PLK	121	1
0199	Wr:069	Kalimba	PLK	121	0
0200	Wr:070	Bagpipe	ETH	121	0
0201	Oc:087	Fiddle	STR	121	0
0202	Wr:071	Shanai	ETH	121	0
0203	Ky:161	Tinkle Bell	BEL	121	0
0204	Wr:072	Agogo	PRC	121	0
0205	Ky:162	Steel Drums	MLT	121	0
0206	Wr:073	Woodblock	PRC	121	0
0207	Wr:074	Castanets	PRC	121	1
0208	Wr:075	Taiko	PRC	121	0
0209	Wr:076	Concert BD	PRC	121	1
0210	Wr:077	Melo.Tom 1	PRC	121	0
0211	Wr:078	Melo.Tom 2	PRC	121	1
0212	Wr:079	Synth Drum	PRC	121	0
0213	Wr:080	808 Tom	PRC	121	1
0214	Wr:081	Elec Perc	PRC	121	2
0215	Wr:082	Reverse Cym.	PRC	121	0
0216	Gt:217	Gt.FretNoise	AGT	121	0
0217	Gt:218	Gt.Cut Noise	AGT	121	1
0218	Gt:219	String Slap	AGT	121	2
0219	Sy:351	Breath Noise	FX	121	0
0220	Sy:352	Fl.Key Click	FX	121	1
0221	Wr:083	Seashore	SFX	121	0
0222	Wr:084	Rain	SFX	121	1
0223	Wr:085	Thunder	SFX	121	2
0224	Wr:086	Wind	SFX	121	3
0225	Wr:087	Stream	SFX	121	4
0226	Wr:088	Bubble	SFX	121	5
0227	Wr:089	Bird	SFX	121	0
0228	Wr:090	Dog	SFX	121	1
0229	Wr:091	Horse-Gallop	SFX	121	2
0230	Wr:092	Bird 2	SFX	121	3
0231	Wr:093	Telephone 1	SFX	121	0
0232	Wr:094	Telephone 2	SFX	121	1
0233	Wr:095	DoorCreaking	SFX	121	2
0234	Wr:096	Door	SFX	121	3
0235	Wr:097	Scratch	SFX	121	4
0236	Wr:098	Wind Chimes	SFX	121	5
0237	Wr:099	Helicopter	SFX	121	0
0238	Wr:100	Car-Engine	SFX	121	1
0239	Wr:101	Car-Stop	SFX	121	2
0240	Wr:102	Car-Pass	SFX	121	3
0241	Wr:103	Car-Crash	SFX	121	4

No.	Name	Sub-category	MSB	LSB	PC
0242	Wr:104	Siren	SFX	121	5
0243	Wr:105	Train	SFX	121	6
0244	Wr:106	Jetplane	SFX	121	7
0245	Wr:107	Starship	SFX	121	8
0246	Wr:108	Burst Noise	SFX	121	9
0247	Wr:109	Applause	SFX	121	0
0248	Wr:110	Laughing	SFX	121	1
0249	Wr:111	Screaming	SFX	121	2
0250	Wr:112	Punch	SFX	121	3
0251	Wr:113	Heart Beat	SFX	121	4
0252	Wr:114	Footsteps	SFX	121	5
0253	Wr:115	Gun Shot	SFX	121	0
0254	Wr:116	Machine Gun	SFX	121	1
0255	Wr:117	Lasergun	SFX	121	2
0256	Wr:118	Explosion	SFX	121	3

Performance List

No.	Name
001	Bass / Piano
002	Piano & Str
003	Big & Proud
004	Whale Pad
005	Dual Rotary
006	Mission DS
007	JUNO DS Lead
008	Choir Orche
009	Delicate
010	Asian Temple
011	The Leader
012	SolarEclipse
013	Proud Brass
014	Air Garden
015	Winter Bell

No.	Name
016	D-50Memories
017	Ambi Lead
018	Rock Organ
019	Notre-Dame
020	SuperSawStk
021	SatelliteGtr
022	Bright Pad
023	Pad/Sine Ld
024	Rock Unison
025	Super SynBrs
026	St Echo Lead
027	Flux Pad
028	Sweet Tekno
029	Twilight Pad
030	SonicVoyager

No.	Name
031	St Oct Lead
032	Personal Pad
033	Eden Gardens
034	Space Tale
035	SeqBs/Sft Ld
036	Gtr Heaven
037	Concert Str
038	Dual D-50
039	Wstmin Abbey
040	Choir & Orch
041	World Lead
042	CrystalGrand
043	Orchestral
044	80s Stack
045	Grand Ocean

No.	Name
046	Baby's Hand
047	Leading D/A
048	Horizon
049	TripTo 80s
050	Blizzard
051	WoodyFlt Ld
052	3AM
053	Synchronize
054	Additive Pad
055	The Pipes
056	Space Walk
057	Tibet Pad
058	XyloSaw Ld
059	Jupiters
060	Voc:Di + Bs

No.	Name
061	Voc:Di + Org
062	Voc:Di + Pad
063	Seq:Template
064	GM2 Template

Drum Kit List

Bank: DS

No.	Name	MSB	LSB	PC
0001	Dr:S01	StudioKt DS1	086	065
0002	Dr:S02	StudioKt DS2	086	065
0003	Dr:S03	EEU-Oriental	086	065
0004	Dr:S04	808 Kit	086	065
0005	Dr:S05	909 Kit	086	065
0006	Dr:S06	EDM Kit 1	086	065
0007	Dr:S07	EDM Kit 2	086	065
0008	Dr:S08	Drum&Bs Kit	086	065
0009	Dr:S09	DanceMixKit	086	065

Bank: GM

No.	Name	MSB	LSB	PC
0001	Dr:022	GM2 STANDARD	120	0
0002	Dr:023	GM2 ROOM	120	0
0003	Dr:024	GM2 POWER	120	0
0004	Dr:025	GM2 ELECTRIC	120	0
0005	Dr:026	GM2 ANALOG	120	0
0006	Dr:027	GM2 JAZZ	120	0
0007	Dr:028	GM2 BRUSH	120	0
0008	Dr:029	GM2 ORCHSTRA	120	0
0009	Dr:030	GM2 SFX	120	0

Bank: PRST

No.	Name	MSB	LSB	PC
0001	Dr:001	Pop Kit 1	086	064
0002	Dr:002	Rock Kit	086	064
0003	Dr:003	Brush Jz Kit	086	064
0004	Dr:004	HipHop Kit	086	064
0005	Dr:005	R&B Kit	086	064
0006	Dr:006	Dance Kit 1	086	064
0007	Dr:007	Dance Kit 2	086	064
0008	Dr:008	Dance Kit 3	086	064
0009	Dr:009	Pop Kit 2	086	064
0010	Dr:010	Dance Kit 4	086	064
0011	Dr:011	Ambi Pop 1	086	064
0012	Dr:012	Ambi Rock	086	064
0013	Dr:013	Ambi BrushJz	086	064
0014	Dr:014	Ambi HipHop	086	064
0015	Dr:015	Ambi R&B	086	064
0016	Dr:016	Ambi Dance 1	086	064
0017	Dr:017	Ambi Dance 2	086	064
0018	Dr:018	Ambi Dance 3	086	064
0019	Dr:019	Ambi Pop 2	086	064
0020	Dr:020	Ambi Dance 4	086	064
0021	Dr:021	Latin Menu	086	064

Drum Kit Assign List

	DS: 0001. StudioKt DS1	DS: 0002. StudioKt DS2	DS: 0003. EEU-Oriental	DS: 0004. 808 Kit	DS: 0005. 909 Kit
21	---	---	BB2-SlideBs1	---	----
22	MC-500 Beep1	MC-500 Beep1	BB2-SlideBs2	---	----
23	MC-500 Beep2	MC-500 Beep2	FG.TR909Clap	---	----
C1					
24	Concert SD	Concert SD	Tambarin 2	---	----
25	Snare Roll 1	Snare Roll 1	VA.Cha2Bell1	---	----
26	Finger Snap2	Finger Snap2	EEU-ViolnSI1	---	----
27	High Q	High Q	EEU-ViolnSI2	---	----
28	Slap	Slap	EEU-E.VlnSI1	---	----
29	Scratch Push	Scratch Push	EEU-E.VlnSI2	---	----
30	Scratch Pull	Scratch Pull	EM.Tbl2 Dom	---	----
31	Sticks	Sticks	EM.Tbl2 Tak1	Kick1	Kick1
32	Reg.PHH [M1]	Reg.PHH [M1]	EM.Tbl2 Rim1	Snare Ghost1	Snare Ghost1
33	Hand Clap	Hand Clap	TR909 Clap 1	Kick2	909 Kick 1
34	Snare Roll 2	Snare Roll 2	Reg.PHH [M1]	Pedal Hihat	Pedal Hihat [M1]
35	Warm Kick	Warm Kick	SC.TR909 BD2	808 Kick 1	909 Kick 3
C2					
36	Hush Kick	Hush Kick	EEU-BsDrm	808 Kick 2	909 Kick 2
37	WoodSideStk	Br.SideStk	EEU-CrsStk	808 Rim	909 Rimshot
38	TitanSnr	Br.Snr 1	EEU-Snare1	808 Snare 1	909 Snare 1
39	T.Snr Ghst	IronSnrGst	Reg.SnrGst	808 Clap	909 Clap
40	T.Snr RS	Br.Snr 2	EEU-Snare2	808 Snare 2	909 Snare 2
	StudioT4	StudioT4	EEU-LTom2	808 Low Tom	909 Low Tom
41	Reg.CHH 1 [M1]	Reg.CHH 1 [M1]	EEU-HH Cl1	808 Cl HH [M1]	909 Cl HH [M1]
42	StudioT3	StudioT3	EEU-LTom1	808 Low Tom	909 L DstTom
43	Reg.CHH 2 [M1]	Reg.CHH 2 [M1]	EEU-HH Cl2	808 Pedal HH [M1]	909 Pedal HH [M1]
44	StudioT3	StudioT3	EEU-MTom2	808 Mid Tom	909 Mid Tom
45	Reg.OHH [M1]	Reg.OHH [M1]	EEU-HH Op	808 Open HH [M1]	909 Open HH [M1]
46	StudioT2	StudioT2	EEU-MTom1	808 Mid Tom	909 M DstTom
C3					
48	StudioT2	StudioT2	EEU-HTom2	808 Hi Tom	909 Hi Tom
49	Crash Cym	Crash Cym	EEU-Cr.Cym2	808 Cymbal	909 CrashCym
50	StudioT1	StudioT1	EEU-HTom1	808 Hi Tom	909 H DstTom
51	Rock Ride	Rock Ride	EEU-Ride	Ride Cymbal1	909 Ride Cym
52	Chinese Cym	Chinese Cym	EEU-ChnCym	China Cymbal	China Cymbal
	Rock Ride	Rock Ride	EEU-Ride Cup	Ride Cymbal2	Ride Cymbal2
53	Tambourine	Tambourine	Tambourine 3	Tambourine	Tambourine
54	Splash Cym	Splash Cym	EEUsplashCym	SplashCymbal	SplashCymbal
55	Cowbell	Cowbell	Cowbell Mute	808 Cowbell	Cowbell
56	Crash Cym	Crash Cym	EEU-Cr.Cym1	Crash Cymbal	CrashCymbal2
57	Vibra-slap	Vibra-slap	EM.DholakRaka	Vibraslap	Vibraslap
58	Rock Ride	Rock Ride	EM.DholakTak1	Ride Cymbal3	Ride Cymbal3
C4					
60	StudioT4	High Bongo	EM.DholakTak2	High Bongo1	High Bongo1
61	Low Bongo	Low Bongo	EM.DofDom 1	Low Bongo1	Low Bongo1
62	Mute HiConga	Mute HiConga	EM.DofDom 2	808 LowConga	Conga Slap
63	Open HiConga	Open HiConga	EM.DofDom 3	808 MidConga	OpenHi Conga
64	Open LoConga	Open LoConga	EM.DofTak 1	808 Hi Conga	Low Conga1
	High Timbale	High Timbale	EEU-TapanL	High Timbale	High Timbale
65	Low Timbale	Low Timbale	EM.DofSak 1	Low Timbale	Low Timbale
66	High Agogo	High Agogo	EEU-TapanH	High Agogo	High Agogo
67	Low Agogo	Low Agogo	EM.DofSak 2	Low Agogo	Low Agogo
68	Cabasa	Cabasa	EEU-TapanM	Cabasa	Cabasa
69	Maracas	Maracas	EM.DofSak 3	808 Maracas	Maracas
70	ShortWhistle	ShortWhistle	EEU-Tapan Fx	ShortWhistle [M2]	ShortWhistle [M2]
C5					
72	Long Whistle	Long Whistle	EM.DofFingr2	Long Whistle [M2]	Long Whistle [M2]
73	Short Guiro [M2]	Short Guiro [M2]	EM.Tbl Raka1	Short Guiro [M3]	Short Guiro [M3]
74	Long Guiro [M2]	Long Guiro [M2]	EM.Tbl Tak 1	Long Guiro [M3]	Long Guiro [M3]
75	Claves	Claves	EM.Tbl Tik 1	808 Claves	Claves
76	Hi Wood Blck	Hi Wood Blck	EM.Tbl Dom 1	Hi WoodBlock	Hi WoodBlock
	Lo Wood Blck	Lo Wood Blck	EM.Tbl Sak 1 [M2]	LowWoodBlock	LowWoodBlock
77	Mute Cuica [M5]	Mute Cuica [M5]	EM.Tbl Roll [M2]	Mute Cuica [M4]	Mute Cuica [M4]
78	Open Cuica [M5]	Open Cuica [M5]	EM.Tbl Tak 2 [M2]	Open Cuica [M4]	Open Cuica [M4]
79	MuteTriangle [M3]	MuteTriangle [M3]	EM.Tbl Raka2 [M2]	MuteTriangle [M5]	MuteTriangle [M5]
80	OpenTriangle [M3]	OpenTriangle [M3]	EM.Tbl Rim 1 [M2]	OpenTriangle [M5]	OpenTriangle [M5]
81	Shaker	Shaker	EM.Tbl Toks1	Shaker	Shaker
82	Jingle Bell	Jingle Bell	EM.Tbl Rim 2	Castanet	Castanet
C6					
84	Wind Chime	Wind Chime	EM.Tbl Tik 2	High Bongo2	High Bongo2
85	Castanets	Castanets	EM.Rek Raka	MtHigh Conga	MtHigh Conga
86	Mute Surdo [M4]	Mute Surdo [M4]	EM.Rek Dom	Low Bongo2	Low Bongo2
87	Open Surdo [M4]	Open Surdo [M4]	EM.Rek Trill	Low Bongo3	Low Bongo3
88	Applause 2	Applause 2	EM.Rek Tak 1	Low Conga2	Low Conga2
	----	----	EM.Rek Rim 1	Low Tom3	Low Tom3
89	----	----	EM.Rek Brs 1	Low Tom4	Low Tom4
90	----	----	EM.Rek Tok	Mix Kick1	Mix Kick1
91	----	----	EM.Rek Brs 3	Mix Kick2	Mix Kick2
92	----	----	EM.Rek Tak 2	Mix Kick3	Mix Kick3
93	----	----	EM.REK Sak	Mix Kick4	Mix Kick4
94	----	----	EM.Rek Tik	Mix Nz1	Mix Nz1
C7					
96	Std.1 Snare1	Std.1 Snare1	EM.MazharDom	Mix Nz2	Mix Nz2
97	Std.1 Snare2	Std.1 Snare2	EM.MazharTak	Mix Nz3	Mix Nz3
98	Std 2 Snare1	Std 2 Snare1	EM.MazharSak	Wind Chime	Wind Chime
99	Std 2 Snare2	Std 2 Snare1	EM.MazharBrs	Hand Clap1	Hand Clap1
100	Snare Drum 2	Snare Drum 2	EEUbngL OP	Hand Clap2	Hand Clap2
101	Std 1 Snare1	Std 1 Snare1	EEUbngL RM	----	----
102	Std 1 Snare2	Std 1 Snare2	EEUbngH OP	----	----
103	Std Snare 3	Std Snare 3	EEUbngH RM	----	----
104	Jazz Snare 1	Jazz Snare 1	EM.Dofs Tak	----	----
105	Jazz Snare 2	Jazz Snare 2	EM.Dofs Dom	----	----
106	Room Snare 1	Room Snare 1	EM.Dofs Sak	----	----
107	Room Snare 2	Room Snare 2	EM.Dofs Rim1	----	----
108	Room Snare 2	Room Snare 2	EM.Dofs Rim2	----	----

---- : no sound

[M] : will not sound simultaneously with other percussion instruments of the same number

Performance List

	DS: 0006. StudioKt DS1	DS: 0007. StudioKt DS2	DS: 0008. EEU-Oriental	DS: 0009. 808 Kit
21	---	---	---	909 Kick FingerSnaps Id Snare
22	22			
23	---	---	---	
C1				
24	---	---	---	Fat Kick Gospel Clap HipHop Kick Uno!
25	25			
26	---	---	---	
27	27			
28	TR808 Kick	SH32 Kick1	TR909 Kick1	Dos!
29	Mix Kick1	TR909 Kick1	SH32 Kick1	Tres!
30	Mix Snare1	AnalogSnare1	Snare Ghost1	Quatro!
31	Mix Kick2	Analog Kick1	Analog Kick	Hey Brazil
32	Mix Snare2	TR808 Snare	TR909 Snare1	Reg.CHH
33	Mix Kick3	SH32 Kick2	SH32 Kick2	Sol Snare
34	Thin CIHH	Pedal Hihat	Pedal Hihat	Gospel Clap
35	Mix Kick4	TR909 Kick2	Reg.Kick	Id Snare
C2				
36	909 Kick 1	Analog Kick2	DnB Kick	Plastic Kick
37	Mix Rim1	Synth Rim	TR808 Rim1	808 Rim
38	626 Snare	Clap&Snare 1	SF Snare	626 Snare
39	TR808 Clap	TR808 Clap1	TR808 Clap	Hand Clap
40	106 Snare	Clap&Snare 2	DnB Snare	Gospel Clap
41	Mix Tom1	Deep Tom1	Reg.F.Tom	Gospel Clap
42	Mix CIHH1	Reg.CHH	[M1] CI Hihat1	[M1] 808 CHH
43	Mix Tom2	Deep Tom1	Reg.F.Tom	[M1] 808 Low Tom
44	Mix CIHH2	Reg.PHH	[M1] CI Hihat2	[M1] 808 PHH
45	Mix Tom3	Deep Tom2	Reg.M.Tom	808 Mid Tom
46	Op Hihat	Reg.OHH	[M1] Op Hihat1	[M1] 909 OHH
47	Mix Tom3	Deep Tom2	Reg.M.Tom	[M1] 808 Mid Tom
C3				
48	Mix Tom4	Deep Tom3	Reg.H.Tom	808 Hi Tom
49	Crash Cymbal	Rock Crash	CrashCymbal1	909 CrashCym
50	Mix Tom4	Deep Tom3	Reg.H.Tom	808 Hi Tom
51	TR909 Ride	Wide Syn Cym	Ride Cymbal1	Ride Cymbal
52	China Cymbal	TR808 Cym2	Rock Crash	China Cymbal
53	Ride Cymbal	China Cym1	Ride Cup	909 Ride Cym
54	Tambourine	Castanet	Tambourine1	Tambourine
55	Rock Crash	TR808 Cym3	Syn Swt Atk1	SplashCymbal
56	Cowbell	Syn Cowbell	Agogo Noise	808 Cowbell
57	Concert Cym	China Cym2	MG Zap1	Crash Cymbal
58	Vibraslap	Syn Swt Atk1	Syn Swt Atk2	Vibraslap
59	TR808 Cym	TR909 Kick3	TR909 Kick4	Ride Cymbal
C4				
60	Bongo1	Analog Kick3	SH32 Kick3	High Bongo1
61	Bongo2	Syn Stick	TR808 Rim2	Low Bongo1
62	Bongo&Conga1	AnalogSnare2	TR808 Snare1	808 LowConga
63	Conga	TR808 Clap2	TR808 Clap1	808 MidConga
64	Bongo&Conga2	AnalogSnare3	Analog Snare	808 Hi Conga
65	TR808 Conga	Shaker1	Mid Tom1	High Timbale
66	Maracas	Syn CIHH1	[M1] Noise CIHH	[M1] Low Timbale
67	Shaker	Shaker2	Mid Tom2	High Agogo
68	Triangle1	Syn CIHH2	[M1] CI Hihat3	[M1] Low Agogo
69	Cabasa	Atmosphere1	Mid Tom3	Cabasa
70	Guiro	Syn OpHH	[M1] Op Hihat2	[M1] 808 Maracas
71	Street OpHH	Atmosphere2	Mid Tom4	ShortWhistle [M2]
C5				
72	Scratch	Atmosphere3	Mid Tom5	Long Whistle [M2]
73	Mix Atk1	TR808 Cym4	Rock Crash2	Short Guiro [M3]
74	MG Zap	Atmosphere4	Mid Tom6	Long Guiro [M3]
75	Syn Swt Atk1	Mix Ride	SplashCymbal	808 Claves
76	Syn Swt Atk2	China Cym3	Rock Crash3	Hi WoodBlock
77	Cuica Low	Rock Rd Edge	Rock Rd Edge	LowWoodBlock
78	Triangle2	Syn Slap	Tambourine2	Mute Cuica [M4]
79	Triangle3	MG Zap1	Syn Swt Atk3	Open Cuica [M4]
80	Triangle4	SynVox Noise	Cowbell1	MuteTriangle [M5]
81	Mix Hit1	MG Zap2	Syn Swt Atk4	OpenTriangle [M5]
82	Mix Hit2	Syn Swt Atk2	Cowbell2	Shaker
83	Mix Hit3	MG Zap3	MG Zap2	Castanet
C6				
84	Wind Chime	808 Maracas	Low Bongo	High Bongo
85	Timpani Roll	TR808 Claves	MtHigh Conga	MtHigh Conga
86	Crotale	MuteTriangle	[M2] Conga Slap	Low Bongo
87	R8 Click	OpenTriangle	[M2] OpHigh Conga	Low Bongo
88	Metro Bell	Mix Hit	Op Low Conga	Low Conga
89	DR202 Beep 1	Scratch	High Timbale	Fuego!
90	DR202 Beep 2	Easy Gtr	Low Timbale	Tiquitito!
91	Sweep Down1	Syn Bel Atk	High Agogo	Grito-Oa Oa!
92	Sweep Up	MG Attack	Low Agogo	Mix Kick
93	Sweep Down2	SynSnareRoll	Cabasa	MG Zap
94	Light Wood	Syn Burst Nz	Maracas	808 Snare
95	Laser	White Noise	Short Guiro	[M2] Reverse Cym
C7				
96	Low Atk	Polishing Nz	Long Guiro	Mix Noise
97	Analog Kick	Long Guiro	Claves	909 Crash
98	Old Kick	Light Wood	LowWoodBlock	ReverseClap
99	Mix Kick6	Light Box	Hi WoodBlock	Reg.Kick
100	TR909 Snare	Syn Swt Atk3	MuteTriangle	[M3] 909 Ride
101	TR808 Snare	Laugh	OpenTriangle	Deep Tom
102	Mix Snare4	Office Phone	Castanet	Id Snare
103	Mix Snare5	Polish Kick	Whistle	Deep Tom
104	----	----	----	808 Kick
105	----	----	----	808 CHH [M2]
106	----	----	----	Analog Snr
107	----	----	----	808 OHH [M2]
C8				
108	----	----	----	Deep Tom

---- : no sound

[M] : will not sound simultaneously with other percussion instruments of the same number

	PRST: 0001. Pop Kit 1	PRST: 0002. Rock Kit	PRST: 0003. Brush Jz Kit	PRST: 0004. HipHop Kit	PRST: 0005. R&B Kit		
21	---	---	---	---	---		
22	---	---	---	---	---		
23	---	---	---	---	---		
C1	24 25 26 27 28 29 30 31 Kick1 32 Snare Ghost1 33 Kick2 34 Pedal Hihat 35 Kick3	32 33 34 35 36 Kick4 37 Side Stick 38 Snare1 39 Snare Ghost2 40 Snare2 41 Low Tom1 42 CI Hihat1 43 Low Tom2 44 CI Hihat2 45 Mid Tom1 46 Op Hihat 47 Mid Tom2	[M1] 31 Kick1 Snare Ghost1 32 Kick2 Pedal Hihat Power Kick1	[M1] 31 Kick1 Snare Ghost1 32 Kick2 Pedal Hihat Power Kick1	[M1] 31 Kick1 Snare Ghost 32 Kick2 Pedal Hi-hat Jazz Kick 1	[M1] 31 Analog Kick1 Analog Kick2 Mix Kick1 Mix Kick2 Analog Kick3	[M1] 31 Mix Kick1 Mix Kick2 Mix Kick3 Mix Kick4 Mix Kick5
C2	36 Kick4 37 Side Stick 38 Snare1 39 Snare Ghost2 40 Snare2 41 Low Tom1 42 CI Hihat1 43 Low Tom2 44 CI Hihat2 45 Mid Tom1 46 Op Hihat 47 Mid Tom2	[M1] 36 Power Kick2 Side Stick 38 Power Snare1 Snare Ghost2 40 Power Snare2 41 Low Tom1 42 CI Hihat1 43 Low Tom2 44 CI Hihat2 45 Mid Tom1 46 Op Hihat 47 Mid Tom2	[M1] 36 Power Kick2 Side Stick 38 Power Snare1 Snare Ghost2 40 Power Snare2 41 Low Tom1 42 CI Hihat1 43 Low Tom2 44 CI Hihat2 45 Mid Tom1 46 Op Hihat 47 Mid Tom2	[M1] 36 Jazz Kick 2 Side Stick 38 Brush Slap1 Snare Ghost 40 Brush Slap2 Low Tom 41 Brush CIHH1 Brush MidTom1 42 Brush CIHH2 Brush MidTom2 43 Brush OpHH Brush MidTom2	[M1] 36 Jazz Kick 2 Side Stick 38 Brush Slap1 Snare Ghost 40 Brush Slap2 Low Tom 41 Brush CIHH1 Brush MidTom1 42 Brush CIHH2 Brush MidTom2 43 Brush OpHH Brush MidTom2	[M1] 36 Mix Kick3 TR808 Rim1 Mix Snare1 Mix Clap1 Mix Snare2 Mix Snare3 41 TR808 CIHH Mix Snare4 Noise CIHH Mix Snare5 TR808 OpHH Mix Snare6	[M1] 36 Mix Kick6 Soft Stick Short Snare1 Mix Stick Short Snare2 Short Snare3 41 CI Hihat1 Short Snare4 CI Hihat2 Mix Snare1 Op Hihat Mix Snare2
C3	48 High Tom1 49 CrashCymbal1 50 High Tom2 51 Ride Cymbal1 52 China Cymbal 53 Ride Cymbal2 54 Tambourine 55 SplashCymbal 56 Cowbell 57 CrashCymbal2 58 Vibraslap 59 Ride Cymbal3	[M1] 48 High Tom1 CrashCymbal1 50 High Tom2 51 Ride Cymbal1 52 China Cymbal 53 Ride Cymbal2 54 Tambourine 55 SplashCymbal 56 Cowbell 57 CrashCymbal2 58 Vibraslap 59 Ride Cymbal3	[M1] 48 High Tom1 CrashCymbal1 50 High Tom2 51 Ride Cymbal1 52 China Cymbal 53 Ride Cymbal2 54 Tambourine 55 SplashCymbal 56 Cowbell 57 CrashCymbal2 58 Vibraslap 59 Ride Cymbal3	[M1] 48 Brush HiTom CrashCymbal1 50 Brush HiTom Ride Cymbal1 52 China Cymbal 53 Ride Cymbal2 54 Tambourine 55 SplashCymbal 56 Cowbell 57 CrashCymbal2 58 Vibraslap 59 Ride Cymbal3	[M1] 48 Brush HiTom CrashCymbal1 50 Brush HiTom Ride Cymbal1 52 China Cymbal 53 Ride Cymbal2 54 Tambourine 55 SplashCymbal 56 Cowbell 57 CrashCymbal2 58 Vibraslap 59 Ride Cymbal3	[M1] 48 Syn Swt Atk1 TR808 Cym1 MG Attack TR808 Cym2 China Cymbal Rock Rd Edge Tambourine1 Mix Crash1 Mix Hat Mix Crash2 Syn Swt Atk2 TR808 Kick1	[M1] 48 Mix Snare3 TR808 Cym1 Mix Snare4 TR808 Cym2 China Cymbal Rock Rd Edge Tambourine1 Mix Crash1 Mix Hat Mix Crash2 Syn Swt Atk TR808 Kick1
C4	60 High Bongo1 61 Low Bongo1 62 Conga Slap 63 OpenHi Conga 64 Low Conga1 65 High Timbale 66 Low Timbale 67 High Agogo 68 Low Agogo 69 Cabasa 70 Maracas 71 ShortWhistle	[M2] 60 High Bongo1 61 Low Bongo1 62 Conga Slap 63 OpenHi Conga 64 Low Conga1 65 High Timbale 66 Low Timbale 67 High Agogo 68 Low Agogo 69 Cabasa 70 Maracas 71 ShortWhistle	[M2] 60 High Bongo1 61 Low Bongo1 62 Conga Slap 63 OpenHi Conga 64 Low Conga1 65 High Timbale 66 Low Timbale 67 High Agogo 68 Low Agogo 69 Cabasa 70 Maracas 71 ShortWhistle	[M2] 60 High Bongo 61 Low Bongo 62 Conga Slap 63 OpenHi Conga 64 Low Conga1 65 High Timbale 66 Low Timbale 67 High Agogo 68 Low Agogo 69 Cabasa 70 Maracas 71 ShortWhistle	[M2] 60 High Bongo 61 Low Bongo 62 Conga Slap 63 OpenHi Conga 64 Low Conga1 65 High Timbale 66 Low Timbale 67 High Agogo 68 Low Agogo 69 Cabasa 70 Maracas 71 ShortWhistle	[M2] 60 TR808 Kick2 61 TR808 Rim 62 TR808 Snare1 63 TR808 Clap1 64 TR808 Snare2 65 TR808 Tom1 66 TR808 CIHH 67 TR808 Tom2 68 Noise CIHH 69 TR808 Tom3 70 TR808 OpHH 71 TR808 Tom4	[M2] 60 TR808 Kick2 61 TR808 Rim 62 TR808 Snare1 63 TR808 Clap1 64 TR808 Snare2 65 TR808 Tom1 66 TR808 Tom2 67 TR808 Tom3 68 Noise CIHH 69 TR808 Tom4 70 TR808 OpHH 71 TR808 Tom4
C5	72 Long Whistle 73 Short Guiro 74 Long Guiro 75 Claves 76 Hi WoodBlock 77 LowWoodBlock 78 Mute Cuica 79 Open Cuica 80 MuteTriangle 81 OpenTriangle 82 Shaker 83 Castanet	[M2] 72 Long Whistle 73 Short Guiro 74 Long Guiro 75 Claves 76 Hi WoodBlock 77 LowWoodBlock 78 Mute Cuica 79 Open Cuica 80 MuteTriangle 81 OpenTriangle 82 Shaker 83 Castanet	[M2] 72 Long Whistle 73 Short Guiro 74 Long Guiro 75 Claves 76 Hi WoodBlock 77 LowWoodBlock 78 Mute Cuica 79 Open Cuica 80 MuteTriangle 81 OpenTriangle 82 Shaker 83 Castanet	[M2] 72 Long Whistle 73 Short Guiro 74 Long Guiro 75 Claves 76 Hi WoodBlock 77 LowWoodBlock 78 Mute Cuica 79 Open Cuica 80 MuteTriangle 81 OpenTriangle 82 Shaker 83 Castanet	[M2] 72 Long Whistle 73 Short Guiro 74 Long Guiro 75 Claves 76 Hi WoodBlock 77 LowWoodBlock 78 Mute Cuica 79 Open Cuica 80 MuteTriangle 81 OpenTriangle 82 Shaker 83 Castanet	[M2] 72 Jazz Kick 2 73 Side Stick 74 Jazz Snare1 75 Sft Snr Gst 76 Jazz Snare2 77 Low Tom 78 CI Hihat1 79 Mid Tom1 80 CI Hihat2 81 Mid Tom2 82 Op Hihat 83 Mid Tom2	[M2] 72 TR808 Tom5 73 Scratch1 74 TR808 Tom6 75 Scratch2 76 Hand Clap1 77 Hand Clap2 78 Hand Clap1 79 Cabasa 80 Shaker1 81 Tambourine2 82 Shaker2 83 Castanet
C6	84 High Bongo2 85 MtHigh Conga 86 Low Bongo2 87 Low Bongo3 88 Low Conga2 89 Low Tom3 90 Low Tom4 91 Mix Kick1 92 Mix Kick2 93 Mix Kick3 94 Mix Kick4 95 Mix Nz1	[M2] 84 High Bongo2 85 MtHigh Conga 86 Low Bongo2 87 Low Bongo3 88 Low Conga2 89 Low Tom3 90 Low Tom4 91 Mix Kick1 92 Mix Kick2 93 Mix Kick3 94 Mix Kick4 95 Mix Nz1	[M2] 84 High Bongo2 85 MtHigh Conga 86 Low Bongo2 87 Low Bongo3 88 Low Conga2 89 Low Tom3 90 Low Tom4 91 Mix Kick1 92 Mix Kick2 93 Mix Kick3 94 Mix Kick4 95 Mix Nz1	[M2] 84 High Bongo 85 MtHigh Conga 86 Low Bongo1 87 Low Bongo2 88 Low Conga1 89 Low Tom3 90 Low Tom4 91 Mix Kick1 92 Mix Kick2 93 Mix Kick3 94 Mix Kick4 95 Mix Nz1	[M2] 84 High Bongo 85 MtHigh Conga 86 Low Bongo1 87 Low Bongo2 88 Low Conga1 89 Low Tom3 90 Low Tom4 91 Mix Kick1 92 Mix Kick2 93 Mix Kick3 94 Mix Kick4 95 Mix Nz1	[M2] 84 High Bongo 85 MtHigh Conga 86 Low Bongo1 87 Low Bongo2 88 Low Conga1 89 Low Tom1 90 Low Tom2 91 Low Tom3 92 Low Tom4 93 Mix Kick4 94 Mix Kick5 95 TR909 Snare 96 Syn Burst Nz 97 Digi Breath	[M2] 84 High Bongo 85 MtHigh Conga 86 Low Bongo1 87 Low Bongo2 88 Low Conga1 89 Low Tom1 90 Low Tom2 91 Low Tom3 92 Low Tom4 93 Mix Kick7 94 Mix Kick8 95 Stream 96 Bubble 97 Train
C7	96 Mix Nz2 97 Mix Nz3 98 Wind Chime 99 Hand Clap1 100 Hand Clap2 101 ---- 102 ---- 103 ---- 104 ---- 105 ---- 106 ---- 107 ---- 108 ----	[M2] 96 Mix Nz2 97 Mix Nz3 98 Wind Chime 99 Hand Clap1 100 Hand Clap2 101 ---- 102 ---- 103 ---- 104 ---- 105 ---- 106 ---- 107 ---- 108 ----	[M2] 96 Mix Nz2 97 Mix Nz3 98 Wind Chime 99 Hand Clap1 100 Hand Clap2 101 ---- 102 ---- 103 ---- 104 ---- 105 ---- 106 ---- 107 ---- 108 ----	[M2] 96 Mix Nz2 97 Mix Nz3 98 Wind Chime 99 Hand Clap1 100 Hand Clap2 101 ---- 102 ---- 103 ---- 104 ---- 105 ---- 106 ---- 107 ---- 108 ----	[M2] 96 Mix Nz2 97 Mix Nz3 98 Wind Chime 99 Hand Clap1 100 Hand Clap2 101 ---- 102 ---- 103 ---- 104 ---- 105 ---- 106 ---- 107 ---- 108 ----	[M2] 96 Mix Breath 97 Wide Shaker 98 Wind Chime 99 Hand Clap1 100 Hand Clap2 101 ---- 102 ---- 103 ---- 104 ---- 105 ---- 106 ---- 107 ---- 108 ----	[M2] 96 Wind Chime 97 Syn Back Nz1 98 Syn Back Nz2 99 Hand Clap3 100 Hand Clap4 101 ---- 102 ---- 103 ---- 104 ---- 105 ---- 106 ---- 107 ---- 108 ----

---- : no sound

[M] : will not sound simultaneously with other percussion instruments of the same number

Performance List

	PRST: 0006. Dance Kit 1	PRST: 0007. Dance Kit 2	PRST: 0008. Dance Kit 3	PRST: 0009. Pop Kit 2	PRST: 0010. Dance Kit 4
21	---	---	---	---	---
22	---	---	---	---	---
23	---	---	---	---	---
C1	---	---	---	---	---
24	---	---	---	---	---
25	---	---	---	---	---
26	---	---	---	---	---
27	---	---	---	---	---
28	TR808 Kick	SH32 Kick1	TR909 Kick1	---	TR808 Kick
29	Mix Kick1	TR909 Kick1	SH32 Kick1	---	Mix Kick1
30	Mix Snare1	AnalogSnare1	Snare Ghost1	---	Mix Snare1
31	Mix Kick2	Analog Kick1	Analog Kick	Kick1	Mix Kick2
32	Mix Snare2	TR808 Snare	TR909 Snare1	Snare Ghost1	Mix Snare2
33	Mix Kick3	SH32 Kick2	SH32 Kick2	Kick2	Mix Kick3
34	Thin ClHH	Pedal Hihat	Pedal Hihat	Pedal Hihat	Thin ClHH
35	Mix Kick4	TR909 Kick2	TR909 Kick2	Kick3	Mix Kick4
C2	Mix Kick5	Analog Kick2	TR909 Kick3	Kick4	Mix Kick5
36	Mix Rim1	Synth Rim	TR808 Rim1	Side Stick	Mix Rim1
37	Analog Snare	TR909 Snare	TR909 Snare2	Snare1	Mix Snare3
38	TR808 Clap	TR808 Clap1	TR808 Clap	Snare Ghost2	TR808 Clap
39	Mix Snare3	DistNz Snare	TR909 Snare3	Snare2	Mix Snare4
40	Mix Tom1	Deep Tom1	TR808 Tom1	Low Tom1	Mix Tom1
41	Mix ClHH1	TR808 ClHH	CI Hihat1	CI Hihat1	Mix ClHH1
42	Mix Tom2	Deep Tom1	TR808 Tom2	Low Tom2	Mix Tom2
43	Mix ClHH2	TR606 OpHH	CI Hihat2	CI Hihat2	Mix ClHH2
44	Mix Tom3	Deep Tom2	TR808 Tom3	Mid Tom1	Mix Tom3
45	Op Hihat	TR808 Cym1	Op Hihat1	Op Hihat	Op Hihat
46	Mix Tom3	Deep Tom2	TR808 Tom4	Mid Tom2	Mix Tom3
C3	Mix Tom4	Deep Tom3	TR808 Tom5	High Tom1	Mix Tom4
48	Crash Cymbal	TR808 OpHH	CrashCymbal1	CrashCymbal1	Crash Cymbal
49	Mix Tom4	Deep Tom3	TR808 Tom6	High Tom2	Mix Tom4
50	Rock Rd Edge	Wide Syn Cym	Ride Cymbal1	Ride Cymbal1	Rock Rd Edge
51	China Cymbal	TR808 Cym2	Rock Crash	China Cymbal	China Cymbal
52	Ride Cymbal	China Cym1	Ride Cup	Ride Cymbal2	Ride Cymbal
53	Tambourine	Castanet	Tambourine1	Tambourine	Tambourine
54	Rock Crash	TR808 Cym3	Syn Swt Atk1	SplashCymbal	Rock Crash
55	Cowbell	Syn Cowbell	Agogo Noise	Cowbell	Cowbell
56	Concert Cym	China Cym2	MG Zap1	CrashCymbal2	Concert Cym
57	Vibraslap	Syn Swt Atk1	Syn Swt Atk2	Vibraslap	Vibraslap
58	TR808 Cym	TR909 Kick3	TR909 Kick4	Ride Cymbal3	TR808 Cym
C4	Bongo1	Analog Kick3	SH32 Kick3	High Bongo1	Bongo1
60	Bongo2	Syn Stick	TR808 Rim2	Low Bongo1	Bongo2
61	Bongo&Conga1	AnalogSnare2	TR808 Snare1	Conga Slap	Bongo&Conga1
62	Conga	TR808 Clap2	TR808 Clap1	OpenHi Conga	Conga
63	Bongo&Conga2	AnalogSnare3	Analog Snare	Low Conga1	Bongo&Conga2
64	TR808 Conga	Shaker1	Mid Tom1	Mid Tom1	TR808 Conga
65	Maracas	Syn ClHH1	Noise ClHH	High Timbale	Maracas
66	Shaker	Shaker2	Mid Tom2	Mid Tom2	Shaker
67	Triangle1	Syn ClHH2	CI Hihat3	High Agogo	Triangle1
68	Cabasa	Atmosphere1	Atmosphere1	Low Agogo	Cabasa
69	Guiro	Syn OpHH	Op Hihat2	Mid Tom3	Guiro 1
70	Street OpHH	Atmosphere2	Atmosphere2	Maracas	Street OpHH
71			Mid Tom4	ShortWhistle	[M2]
C5	Scratch	Atmosphere3	Mid Tom5	Long Whistle	Scratch
72	Mix Atk1	TR808 Cym4	Rock Crash2	Short Guiro	Mix Atk1
73	MG Zap	Atmosphere4	Mid Tom6	Mid Tom6	MG Zap
74	Syn Swt Atk1	Mix Ride	SplashCymbal	Claves	Syn Swt Atk1
75	Syn Swt Atk2	China Cym3	Rock Crash3	Hi WoodBlock	Syn Swt Atk2
76	Cuica Low	Cuica Low	Rock Rd Edge	Rock Rd Edge	Cuica Low
77	Triangle2	Rock Rd Edge	Tambourine2	LowWoodBlock	Triangle2
78	Triangle3	Syn Slap	MG Zap1	Mute Cuica	Triangle3
79	Triangle4	Syn Vox Noise	Syn Swt Atk3	Open Cuica	Triangle4
80	Mix Hit1	MG Zap2	Cowbell1	MuteTriangle	Guiro 2
81	Mix Hit2	Syn Swt Atk2	Syn Swt Atk4	OpenTriangle	Mix Hit2
82	Mix Hit3	MG Zap3	Cowbell2	Shaker	Mix Hit3
83			MG Zap2	Castanet	
C6	Wind Chime	808 Maracas	Low Bongo	High Bongo2	Wind Chime
84	Timpani Roll	TR808 Claves	MtHigh Conga	MtHigh Conga	Timpani Roll
85	Crotale	MuteTriangle	[M2]	Conga Slap	Crotale
86	R8 Click	OpenTriangle	[M2]	OpHigh Conga	R8 Click
87	Metro Bell	Mix Hit	Op Low Conga	Low Bongo3	[M2]
88	DR202 Beep 1	Scratch	High Timbale	Low Conga2	Metro Bell
89	DR202 Beep 2	Easy Gtr	Low Timbale	Low Tom3	MC500 Beep 1
90	Sweep Down1	Syn Bel Atk	High Agogo	Low Tom4	MC500 Beep 2
91	Sweep Up	MG Attack	Low Agogo	Mix Kick1	Sweep Down1
92	Sweep Down2	Syn SnareRoll	Cabasa	Mix Kick2	Sweep Up
93	Light Wood	Syn Burst Nz	Maracas	Mix Kick3	Sweep Down2
94	Laser	White Noise	Short Guiro	Mix Kick4	Light Wood
95			[M2]	Mix Nz1	Laser
C7	Low Atk	Polishing Nz	Long Guiro	Mix Nz2	Low Atk
96	Analog Kick	Long Guiro	Claves	Mix Nz3	Analog Kick
97	Old Kick	Light Wood	LowWoodBlock	Wind Chime	Old Kick
98	Mix Kick6	Light Box	Hi WoodBlock	Hand Clap1	Mix Kick6
99	TR909 Snare	Syn Swt Atk3	MuteTriangle	Hand Clap2	TR909 Snare
100	TR808 Snare	Laugh	OpenTriangle	----	TR808 Snare
101	Mix Snare4	Office Phone	Castanet	----	Mix Snare5
102	Mix Snare5	Polish Kick	Whistle	----	Mix Snare6
103	----	----	----	----	----
104	----	----	----	----	----
105	----	----	----	----	----
106	----	----	----	----	----
107	----	----	----	----	----
C8	108	----	----	----	----

---- : no sound

[M] : will not sound simultaneously with other percussion instruments of the same number

	PRST: 0011. Ambi Pop 1	PRST: 0012. Ambi Rock	PRST: 0013. Ambi BrushJz	PRST: 0014. Ambi HipHop	PRST: 0015. Ambi R&B
21	---	---	---	---	---
22	---	---	---	---	---
23	---	---	---	---	---
C1	---	---	---	---	---
24	---	---	---	---	---
25	---	---	---	---	---
26	---	---	---	---	---
27	---	---	---	---	---
28	---	---	---	---	---
29	---	---	---	---	---
30	---	---	---	---	---
31	Kick1	Kick1	Kick1	Analog Kick1	Mix Kick1
32	Snare Ghost1	Snare Ghost1	Snare Ghost	Analog Kick2	Mix Kick2
33	Kick2	Kick2	Kick2	Mix Kick1	Mix Kick3
34	Pedal Hihat	Pedal Hihat	Pedal Hi-hat	Mix Kick2	Mix Kick4
35	Kick3	Power Kick1	Jazz Kick 1	Analog Kick3	Mix Kick5
C2	---	---	---	---	---
36	Kick4	Power Kick2	Jazz Kick 2	Mix Kick3	Mix Kick6
37	Side Stick	Side Stick	Side Stick	TR808 Rim1	Soft Stick
38	Snare1	Power Snare1	Brush Slap1	Mix Snare1	Short Snare1
39	Snare Ghost2	Snare Ghost2	Jz Brsh Swsh	Mix Clap1	Mix Stick
40	Snare2	Power Snare2	Brush Slap2	Mix Snare2	Short Snare2
41	Low Tom1	Low Tom1	BrushLowTom	Mix Snare3	Short Snare3
42	Cl Hihat1	[M1]	Brush CIHH1	TR808 CIHH	[M1]
43	Low Tom2	Low Tom2	BrushMidTom1	Mix Snare4	Cl Hihat1 [M1]
44	Cl Hihat2	[M1]	Brush CIHH2	Noise CIHH	[M1]
45	Mid Tom1	Mid Tom1	BrushMidTom2	Mix Snare5	Mix Snare1
46	Op Hihat	[M1]	Brush OpHH	TR808 OpHH	[M1]
47	Mid Tom2	Mid Tom2	BrushMidTom2	Mix Snare6	Mix Snare2
C3	---	---	---	---	---
48	High Tom1	High Tom1	Brush HiTom	Syn Swt Atk1	Mix Snare3
49	CrashCymbal1	CrashCymbal1	CrashCymbal1	TR808 Cym1	TR808 Cym1
50	High Tom2	High Tom2	Brush HiTom	MG Attack	Mix Snare4
51	Ride Cymbal1	Ride Cymbal1	Ride Cymbal1	TR808 Cym2	TR808 Cym2
52	China Cymbal	China Cymbal	China Cymbal	China Cymbal	China Cymbal
53	Ride Cymbal2	Ride Cymbal2	Ride Cymbal2	Rock Rd Edge	Rock Rd Edge
54	Tambourine	Tambourine	Tambourine	Tambourine1	Tambourine1
55	SplashCymbal	SplashCymbal	SplashCymbal	Mix Crash1	Mix Crash1
56	Cowbell	Cowbell	Cowbell	Mix Hat	Mix Hat
57	CrashCymbal2	CrashCymbal2	CrashCymbal2	Mix Crash2	Mix Crash2
58	Vibraslap	Vibraslap	Vibraslap	Syn Swt Atk2	Syn Swt Atk
59	Ride Cymbal3	Ride Cymbal3	Ride Cymbal3	TR808 Kick1	TR808 Kick1
C4	---	---	---	---	---
60	High Bongo1	High Bongo1	High Bongo	TR808 Kick2	TR808 Kick2
61	Low Bongo1	Low Bongo1	Low Bongo	TR808 Rim2	TR808 Rim
62	Conga Slap	Conga Slap	MtHigh Conga	TR808 Snare1	TR808 Snare1
63	OpenHi Conga	OpenHi Conga	OpenHi Conga	TR808 Clap1	TR808 Clap1
64	Low Conga1	Low Conga1	Low Conga	TR808 Snare2	TR808 Snare2
65	High Timbale	High Timbale	High Timbale	TR808 Tom1	TR808 Tom1
66	Low Timbale	Low Timbale	Low Timbale	TR808 CIHH	[M1]
67	High Agogo	High Agogo	High Agogo	TR808 Tom2	TR808 Tom2
68	Low Agogo	Low Agogo	Low Agogo	Noise CIHH	[M1]
69	Cabasa	Cabasa	Cabasa	TR808 Tom3	TR808 Tom3
70	Maracas	Maracas	Maracas	TR808 OpHH	[M1]
71	ShortWhistle	[M2]	Jazz Kick 1	TR808 Tom4	TR808 Tom4
C5	---	---	---	---	---
72	Long Whistle	[M2]	Long Whistle	TR808 Tom5	TR808 Tom5
73	Short Guiro	[M3]	Short Guiro	Scratch1	Scratch1
74	Long Guiro	[M3]	Long Guiro	TR808 Tom6	TR808 Tom6
75	Claves	Claves	Sft Snr Gst	Scratch2	Scratch2
76	Hi WoodBlock	Hi WoodBlock	Jazz Snare2	Hand Clap1	Hand Clap1
77	LowWoodBlock	LowWoodBlock	Low Tom	Hand Clap2	Hand Clap2
78	Mute Cuica	[M4]	CI Hihat1	TR808 Clap2	TR808 Clap2
79	Open Cuica	[M4]	Mid Tom1	Cabasa	Cabasa
80	MuteTriangle	[M5]	CI Hihat2	Shaker1	Shaker1
81	OpenTriangle	[M5]	Mid Tom2	Tambourine2	Tambourine2
82	Shaker	Shaker	Op Hihat	Shaker2	Shaker2
83	Castanet	Castanet	Mid Tom2	Castanet	Castanet
C6	---	---	---	---	---
84	High Bongo2	High Bongo2	High Tom	High Bongo	High Bongo
85	MtHigh Conga	MtHigh Conga	CrashCymbal1	MtHigh Conga	MtHigh Conga
86	Low Bongo2	Low Bongo2	High Tom	Low Bongo1	Low Bongo1
87	Low Bongo3	Low Bongo3	Ride Cymbal1	Low Bongo2	Low Bongo2
88	Low Conga2	Low Conga2	China Cymbal	Op Low Conga	Op Low Conga
89	Low Tom3	Low Tom3	Low Tom3	Low Tom1	Low Tom1
90	Low Tom4	Low Tom4	Low Tom4	Low Tom2	Low Tom2
91	Mix Kick1	Mix Kick1	Claves	Mix Kick4	Mix Kick7
92	Mix Kick2	Mix Kick2	Hi WoodBlock	Mix Kick5	Mix Kick8
93	Mix Kick3	Mix Kick3	LowWoodBlock	TR909 Snare	Stream
94	Mix Kick4	Mix Kick4	MuteTriangle	Syn Burst Nz	Bubble
95	Mix Nz1	Mix Nz1	OpenTriangle	Digi Breath	Train
C7	---	---	---	---	---
96	Mix Nz2	Mix Nz2	Shaker	Mix Breath	Wind Chime
97	Mix Nz3	Mix Nz3	Castanet	Wide Shaker	Syn Back Nz1
98	Wind Chime	Wind Chime	Wind Chime	JD Tuba Slap	Syn Back Nz2
99	Hand Clap1	Hand Clap1	Hand Clap 1	Hand Clap3	Hand Clap3
100	Hand Clap2	Hand Clap2	Hand Clap 2	Hand Clap4	Hand Clap4
101	---	---	---	Door Creak	---
102	---	---	---	Vint.Phone	---
103	---	---	---	Polish Kick	---
104	---	---	---	---	---
105	---	---	---	---	---
106	---	---	---	---	---
107	---	---	---	---	---
108	---	---	---	---	---

---- : no sound

[M] : will not sound simultaneously with other percussion instruments of the same number

Performance List

	PRST: 0016. Ambi Dance 1	PRST: 0017. Ambi Dance 2	PRST: 0018. Ambi Dance 3	PRST: 0019. Ambi Pop 2	PRST: 0020. Ambi Dance 4
21	---	---	---	---	---
22	---	---	---	---	---
23	---	---	---	---	---
C1	---	---	---	---	---
24	---	---	---	---	---
25	---	---	---	---	---
26	---	---	---	---	---
27	---	---	---	---	---
28	TR808 Kick	SH32 Kick1	TR909 Kick1	---	TR808 Kick
29	Mix Kick1	TR909 Kick1	SH32 Kick1	---	Mix Kick1
30	Mix Snare1	AnalogSnare1	Snare Ghost1	---	Mix Snare1
31	Mix Kick2	Analog Kick1	Analog Kick	Kick1	Mix Kick2
32	Mix Snare2	TR808 Snare	TR909 Snare1	Snare Ghost1	Mix Snare2
33	Mix Kick3	SH32 Kick2	SH32 Kick2	Kick2	Mix Kick3
34	Thin ClHH	Pedal Hihat	Pedal Hihat	Pedal Hihat	Thin ClHH
35	Mix Kick4	TR909 Kick2	TR909 Kick2	Kick3	Mix Kick4
C2	Mix Kick5	Analog Kick2	TR909 Kick3	Kick4	Mix Kick5
36	Mix Rim1	Synth Rim	TR808 Rim1	Side Stick	Mix Rim1
37	Analog Snare	TR909 Snare	TR909 Snare2	Snare1	Mix Snare3
38	TR808 Clap	TR808 Clap1	TR808 Clap	Snare Ghost2	TR808 Clap
39	Mix Snare3	DistNz Snare	TR909 Snare3	Snare2	Mix Snare4
40	Mix Tom1	Deep Tom1	TR808 Tom1	Low Tom1	Mix Tom1
41	Mix ClHH1	TR808 ClHH	CI Hihat1	CI Hihat1	Mix ClHH1
42	Mix Tom2	Deep Tom1	TR808 Tom2	Low Tom2	Mix Tom2
43	Mix ClHH2	TR606 OpHH	CI Hihat2	CI Hihat2	Mix ClHH2
44	Mix Tom3	Deep Tom2	TR808 Tom3	Mid Tom1	Mix Tom3
45	Op Hihat	TR808 Cym1	Op Hihat1	Op Hihat	Op Hihat
46	Mix Tom3	Deep Tom2	TR808 Tom4	Mid Tom2	Mix Tom3
C3	Mix Tom4	Deep Tom3	TR808 Tom5	High Tom1	Mix Tom4
48	Crash Cymbal	TR808 OpHH	CrashCymbal1	CrashCymbal1	Crash Cymbal
49	Mix Tom4	Deep Tom3	TR808 Tom6	High Tom2	Mix Tom4
50	Rock Rd Edge	Wide Syn Cym	Ride Cymbal1	Ride Cymbal1	Rock Rd Edge
51	China Cymbal	TR808 Cym2	Rock Crash	China Cymbal	China Cymbal
52	Ride Cymbal	China Cym1	Ride Cup	Ride Cymbal2	Ride Cymbal
53	Tambourine	Castanet	Tambourine1	Tambourine	Tambourine
54	Rock Crash	TR808 Cym3	Syn Swt Atk1	SplashCymbal	Rock Crash
55	Cowbell	Syn Cowbell	Agogo Noise	Cowbell	Cowbell
56	Concert Cym	China Cym2	MG Zap1	CrashCymbal2	Concert Cym
57	Vibraslap	Syn Swt Atk1	Syn Swt Atk2	Vibraslap	Vibraslap
58	TR808 Cym	TR909 Kick3	TR909 Kick4	Ride Cymbal3	TR808 Cym
C4	Bongo1	Analog Kick3	SH32 Kick3	High Bongo1	Bongo1
60	Bongo2	Syn Stick	TR808 Rim2	Low Bongo1	Bongo2
61	Bongo&Conga1	AnalogSnare2	TR808 Snare1	Conga Slap	Bongo&Conga1
62	Conga	TR808 Clap2	TR808 Clap1	OpenHi Conga	Conga
63	Bongo&Conga2	AnalogSnare3	Analog Snare	Low Conga1	Bongo&Conga2
64	TR808 Conga	Shaker1	Mid Tom1	Mid Tom1	TR808 Conga
65	Maracas	Syn ClHH1	[M1]	High Timbale	Maracas
66	Shaker	Shaker2	Mid Tom2	Mid Tom2	Shaker
67	Triangle1	Syn ClHH2	[M1]	CI Hihat3	Triangle1
68	Cabasa	Atmosphere1	MG Zap1	Low Agogo	Cabasa
69	Guiro	Syn OpHH	[M1]	Mid Tom3	Guiro 1
70	Street OpHH	Atmosphere2	Op Hihat2	Op Hihat	Street OpHH
71			Mid Tom4	Short Whistle	[M2]
C5	Scratch	Atmosphere3	Mid Tom5	Long Whistle	Scratch
72	Mix Atk1	TR808 Cym4	Rock Crash2	Short Guiro	Mix Atk1
73	MG Zap	Atmosphere4	Mid Tom6	Mid Tom6	MG Zap
74	Syn Swt Atk1	Mix Ride	SplashCymbal	Claves	Syn Swt Atk1
75	Syn Swt Atk2	China Cym3	Rock Crash3	Hi WoodBlock	Syn Swt Atk2
76	Cuica Low	Rock Rd Edge	Rock Rd Edge	Low WoodBlock	Cuica Low
77	Triangle2	Syn Slap	Tambourine2	Mute Cuica	Triangle2
78	Triangle3	MG Zap1	Syn Swt Atk3	Open Cuica	Triangle3
79	Triangle4	SynVox Noise	Cowbell1	Mute Triangle	Triangle4
80	Mix Hit1	MG Zap2	Syn Swt Atk4	Open Triangle	Guiro 2
81	Mix Hit2	Syn Swt Atk2	Cowbell2	Shaker	Mix Hit2
82	Mix Hit3	MG Zap3	MG Zap2	Castanet	Mix Hit3
C6	Wind Chime	808 Maracas	Low Bongo	High Bongo2	Wind Chime
84	Timpani Roll	TR808 Claves	MtHigh Conga	MtHigh Conga	Timpani Roll
85	Crotale	MuteTriangle	[M2]	Conga Slap	Crotale
86	R8 Click	OpenTriangle	[M2]	OpHigh Conga	R8 Click
87	Metro Bell	Mix Hit	Op Low Conga	Low Bongo3	[M2]
88	DR202 Beep 1	Scratch	High Timbale	Low Conga2	Metro Bell
89	DR202 Beep 2	Easy Gtr	Low Timbale	Low Tom3	MC500 Beep 1
90	Sweep Down1	Syn Bel Atk	High Agogo	Low Tom4	MC500 Beep 2
91	Sweep Up	MG Attack	Low Agogo	Mix Kick1	Sweep Down1
92	Sweep Down2	SynSnareRoll	Cabasa	Mix Kick2	Sweep Up
93	Light Wood	Syn Burst Nz	Maracas	Mix Kick3	Sweep Down2
94	Laser	White Noise	Short Guiro	Mix Kick4	Light Wood
95				Castanet	Laser
C7	Low Atk	Polishing Nz	Long Guiro	[M2]	Low Atk
96	Analog Kick	Long Guiro	Claves	Mix Nz3	Analog Kick
97	Old Kick	Light Wood	LowWoodBlock	Wind Chime	Old Kick
98	Mix Kick6	Light Box	Hi WoodBlock	Hand Clap1	Mix Kick6
99	TR909 Snare	Syn Swt Atk3	MuteTriangle	Hand Clap2	TR909 Snare
100	TR808 Snare	Laugh	OpenTriangle	----	TR808 Snare
101	Mix Snare4	Office Phone	Castanet	----	Mix Snare5
102	Mix Snare5	Polish Kick	Whistle	----	Mix Snare6
103	----	----	----	----	----
104	----	----	----	----	----
105	----	----	----	----	----
106	----	----	----	----	----
107	----	----	----	----	----
C8	108	----	----	----	----

---- : no sound

[M] : will not sound simultaneously with other percussion instruments of the same number

	PRST: 0021. Latin Menu	GM: 0001. GM2 STANDARD	GM: 0002. GM2 ROOM	GM: 0003. GM2 POWER	GM: 0004. GM2 ELECTRIC	
21	---	----	----	----	----	
22	---	----	----	----	----	
23	---	----	----	----	----	
C1	24 25 26 27 28 29 30 31 32 33 34 35	High Q Slap Scratch Push [M7] Scratch Pull [M7] Sticks Square Click Metron Click Metron Bell Kick Drum 2	High Q Slap Scratch Push [M7] Scratch Pull [M7] Sticks Square Click Metron Click Metron Bell Kick Drum 2	High Q Slap Scratch Push [M7] Scratch Pull [M7] Sticks Square Click Metron Click Metron Bell Power Kick 2	High Q Slap Scratch Push [M7] Scratch Pull [M7] Sticks Square Click Metron Click Metron Bell Kick Drum 2	
C2	36 37 38 39 40 41 42 43 44 45 46 47	Agogo 2 Hi Agogo 2 Lo Agogo 3 Hi Agogo 3 Lo ApitoHiShort ApitoLoShort Berimbau Dn Berimbau Mut Berimbau Opn Berimbau Up Bongo 1 Hi Bongo 1 Lo	Kick Drum 1 Side Stick Aco.Snare Hand Clap Elec.Snare Low Tom 2 ClosedHi-hat [M1] Low Tom 1 Pedal Hi-hat [M1] Mid Tom 2 Open Hi-hat [M1] Mid Tom 1	Kick Drum 1 Side Stick Aco.Snare Hand Clap Elec.Snare Room LowTom2 ClosedHi-hat [M1] Room LowTom1 Pedal Hi-hat [M1] Room MidTom2 Open Hi-hat [M1] Room MidTom1	Power Kick 1 Side Stick PowerSnareDr Hand Clap Elec.Snare PowerLowTom2 ClosedHi-hat [M1] PowerLowTom1 Pedal Hi-hat [M1] PowerMidTom2 Open Hi-hat [M1] PowerMidTom1	Elec.Kick 1 Side Stick E.SnareDrum1 Hand Clap E.SnareDrum2 E.Low Tom 2 ClosedHi-hat [M1] E.Low Tom 1 Pedal Hi-hat [M1] E.Mid Tom 2 Open Hi-hat [M1] E.Mid Tom 1
C3	48 49 50 51 52 53 54 55 56 57 58 59	Bongo 2 Hi Bongo 2 Lo Bongo Hi Hrd Bongo HiOp f Bongo Lo Hrd Bongo Lo Sft Bongo LoOp f Bongo LoOpnf Bongo LoSlap BongoBell Mt BongoBell Op BongoHiSlap1	High Tom 2 CrashCymbal1 High Tom 1 Ride Cymbal1 China Cymbal Ride Bell Tambourine SplashCymbal Cowbell CrashCymbal2 Vibra-slap Ride Cymbal2	Room Hi Tom2 CrashCymbal1 Room Hi Tom1 Ride Cymbal1 China Cymbal Ride Bell Tambourine SplashCymbal Cowbell CrashCymbal2 Vibra-slap Ride Cymbal2	Power HiTom2 CrashCymbal1 Power HiTom1 Ride Cymbal1 China Cymbal Ride Bell Tambourine SplashCymbal Cowbell CrashCymbal2 Vibra-slap Ride Cymbal2	E.Hi Tom 2 CrashCymbal1 E.Hi Tom 1 Ride Cymbal1 Reverse Cym. Ride Bell Tambourine SplashCymbal Cowbell CrashCymbal2 Vibra-slap Ride Cymbal2
C4	60 61 62 63 64 65 66 67 68 69 70 71	BongoHiSlap2 Cabasa Roll Caixa Mute Caixa Mute2 Caixa Open1 Caixa Open2 Caixa Open3 Caixa Rim Caixa Roll Caixa Roll2 Cajon Hi Cajon Lo	High Bongo Low Bongo MuteHi Conga OpenHi Conga Low Conga High Timbale Low Timbale High Agogo Low Agogo Cabasa Maracas ShortWhistle [M2]	High Bongo Low Bongo MuteHi Conga OpenHi Conga Low Conga High Timbale Low Timbale High Agogo Low Agogo Cabasa Maracas ShortWhistle [M2]	High Bongo Low Bongo MuteHi Conga OpenHi Conga Low Conga High Timbale Low Timbale High Agogo Low Agogo Cabasa Maracas ShortWhistle [M2]	High Bongo Low Bongo MuteHi Conga OpenHi Conga Low Conga High Timbale Low Timbale High Agogo Low Agogo Cabasa Maracas ShortWhistle [M2]
C5	72 73 74 75 76 77 78 79 80 81 82 83	Cajon Rol Hi Cajon Rol Lo Caxixi Chekere 1 Chekere 2 Chekere 3 Clave! Claves Lo 2 Conga Hi Mt Conga Hi Op Conga Link Conga Lo Mt	Long Whistle [M2] Short Guiro [M3] Long Guiro [M3] Claves Hi WoodBlock LowWoodBlock Mute Cuica [M4] Open Cuica [M4] MuteTriangle [M5] OpenTriangle [M5] Shaker Jingle Bell	Long Whistle [M2] Short Guiro [M3] Long Guiro [M3] Claves Hi WoodBlock LowWoodBlock Mute Cuica [M4] Open Cuica [M4] MuteTriangle [M5] OpenTriangle [M5] Shaker Jingle Bell	Long Whistle [M2] Short Guiro [M3] Long Guiro [M3] Claves Hi WoodBlock LowWoodBlock Mute Cuica [M4] Open Cuica [M4] MuteTriangle [M5] OpenTriangle [M5] Shaker Jingle Bell	Long Whistle [M2] Short Guiro [M3] Long Guiro [M3] Claves Hi WoodBlock LowWoodBlock Mute Cuica [M4] Open Cuica [M4] MuteTriangle [M5] OpenTriangle [M5] Shaker Jingle Bell
C6	84 85 86 87 88 89 90 91 92 93 94 95	Conga Roll Conga Slap Conga Thumb CongaLoOp f CongaLoOp mf Cowbell 1 Cowbell 2 Cowbell 3 Cowbell Mt 1 Cowbell Mt 2 Cowbell Op 1 Cowbell Op 2	Bell Tree Castanets Mute Surdo [M6] Open Surdo [M6] ---- ---- ---- ---- ---- ---- ---- ---- ---- ----			
C7	96 97 98 99 100 101 102 103 104 105 106 107	---	---	---	---	
C8	108	---	---	---	---	

---- : no sound

[M] : will not sound simultaneously with other percussion instruments of the same number

Performance List

	GM: 0005. GM2 ANALOG	GM: 0006. GM2 JAZZ	GM: 0007. GM2 BRUSH	GM: 0008. GM2 ORCHSTRA	GM: 0009. GM2 SFX
21	---	---	---	---	---
22	---	---	---	---	---
23	---	---	---	---	---
C1	---	---	---	---	---
24	---	---	---	---	---
25	---	---	---	---	---
26	---	---	---	---	---
27	High Q	High Q	High Q	ClosedHi-hat [M1]	---
28	Slap	Slap	Slap	Pedal Hi-hat [M1]	---
29	Scratch Push [M7]	Scratch Push [M7]	Scratch Push [M7]	Open Hi-hat [M1]	---
30	Scratch Pull [M7]	Scratch Pull [M7]	Scratch Pull [M7]	Ride Cymbal1	---
31	Sticks	Sticks	Sticks	Sticks	---
32	Square Click	Square Click	Square Click	Square Click	---
33	Metron Click	Metron Click	Metron Click	Metron Click	---
34	Metron Bell	Metron Bell	Metron Bell	Metron Bell	---
35	Kick Drum 2	Jazz Kick 2	Jazz Kick 2	Concert BD 2	---
C2	Ana.Kick 1	Jazz Kick 1	Jazz Kick 1	Concert BD 1	---
36	Ana.Rim Sho	Side Stick	Side Stick	Side Stick	---
37	Ana.Snare 1	Aco.Snare	Brush Tap	Concert SD	---
38	Hand Clap	Hand Clap	Brush Slap	Castanets	High Q
39	Elec.Snare	Elec.Snare	Brush Swirl	Concert SD	Slap
40	Ana.Low Tom2	Low Tom 2	BrushLowTom2	Timpani F	Scratch Push [M7]
41	Ana.ClosedHH [M1]	ClosedHi-hat	[M1]	ClosedHi-hat [M1]	Scratch Pull [M7]
42	Ana.Low Tom1	Low Tom 1	BrushLowTom1	Timpani F#	Sticks
43	Ana.ClosedHH [M1]	Pedal Hi-hat	[M1]	Pedal Hi-hat [M1]	Square Click
44	Ana.Mid Tom2	Mid Tom 2	BrushMidTom2	Timpani G	Metron Click
45	Ana.Open HH [M1]	Open Hi-hat	[M1]	Open Hi-hat [M1]	Metron Bell
46	Ana.Mid Tom1	Mid Tom 1	BrushMidTom1	Timpani A#	GtFret Noise
47				Timpani B	
C3	Ana.Hi Tom2	High Tom 2	Brush HiTom2	Timpani c	Cut Noise Up
48	Ana.Cymbal	CrashCymbal1	CrashCymbal1	Timpani c#	Cut Noise Dw
49	Ana.Hi Tom1	High Tom 1	Brush HiTom1	Timpani d	Slap_St.Bass
50	Ride Cymbal1	Ride Cymbal1	Ride Cymbal1	Timpani d#	Fl.Key Click
51	China Cymbal	China Cymbal	China Cymbal	Timpani e	Laughing
52	Ride Bell	Ride Bell	Ride Bell	Timpani f	Scream
53	Tambourine	Tambourine	Tambourine	Tambourine	Punch
54	SplashCymbal	SplashCymbal	SplashCymbal	SplashCymbal	Heart Beat
55	Ana.Cowbell	Cowbell	Cowbell	Cowbell	Footsteps 1
56	CrashCymbal2	CrashCymbal2	CrashCymbal2	Concert Cym2	Footsteps 2
57	Vibra-slap	Vibra-slap	Vibra-slap	Vibra-slap	Applause
58	Ride Cymbal2	Ride Cymbal2	Ride Cymbal2	Concert Cym1	Door Creak
59					
C4	High Bongo	High Bongo	High Bongo	High Bongo	Door
60	Low Bongo	Low Bongo	Low Bongo	Low Bongo	Scratch
61	Ana.Hi Conga	MuteHi Conga	MuteHi Conga	MuteHi Conga	Wind Chimes
62	Ana.MidConga	OpenHi Conga	OpenHi Conga	OpenHi Conga	Car-Engine
63	Ana.LowConga	Low Conga	Low Conga	Low Conga	Car-Stop
64	High Timbale	High Timbale	High Timbale	High Timbale	Car-Pass
65	Low Timbale	Low Timbale	Low Timbale	Low Timbale	Car-Crash
66	High Agogo	High Agogo	High Agogo	High Agogo	Siren
67	Low Agogo	Low Agogo	Low Agogo	Low Agogo	Train
68	Cabasa	Cabasa	Cabasa	Cabasa	Jetplane
69	Ana.Maracas	Maracas	Maracas	Maracas	Helicopter
70	ShortWhistle [M2]	ShortWhistle	[M2]	ShortWhistle [M2]	Starship
71					
C5	Long Whistle [M2]	Long Whistle	[M2]	Long Whistle [M2]	Gun Shot
72	Short Guiro [M3]	Short Guiro	[M3]	Short Guiro [M3]	Machine Gun
73	Long Guiro [M3]	Long Guiro	[M3]	Long Guiro [M3]	Lasergun
74	Ana.Claves	Claves	Claves	Claves	Explosion
75	Hi WoodBlock	Hi WoodBlock	Hi WoodBlock	Hi WoodBlock	Dog
76	LowWoodBlock	LowWoodBlock	LowWoodBlock	LowWoodBlock	Horse-Gallop
77	Mute Cuica [M4]	Mute Cuica	[M4]	Mute Cuica [M4]	Birds
78	Open Cuica [M4]	Open Cuica	[M4]	Open Cuica [M4]	Rain
79	MuteTriangle [M5]	MuteTriangle	[M5]	MuteTriangle [M5]	Thunder
80	OpenTriangle [M5]	OpenTriangle	[M5]	OpenTriangle [M5]	Wind
81	Shaker	Shaker	Shaker	Shaker	Seashore
82	Jingle Bell	Jingle Bell	Jingle Bell	Jingle Bell	Stream
83					
C6	Bell Tree	Bell Tree	Bell Tree	Bell Tree	Bubble
84	Castanets	Castanets	Castanets	Castanets	---
85	Mute Surdo [M6]	Mute Surdo	[M6]	Mute Surdo [M6]	---
86	Open Surdo [M6]	Open Surdo	[M6]	Open Surdo [M6]	---
87	---	---	---	Applause	---
88	---	---	---	---	---
89	---	---	---	---	---
90	---	---	---	---	---
91	---	---	---	---	---
92	---	---	---	---	---
93	---	---	---	---	---
94	---	---	---	---	---
95	---	---	---	---	---
C7	---	---	---	---	---
96	---	---	---	---	---
97	---	---	---	---	---
98	---	---	---	---	---
99	---	---	---	---	---
100	---	---	---	---	---
101	---	---	---	---	---
102	---	---	---	---	---
103	---	---	---	---	---
104	---	---	---	---	---
105	---	---	---	---	---
106	---	---	---	---	---
107	---	---	---	---	---
C8	108	---	---	---	---

---- : no sound

[M] : will not sound simultaneously with other percussion instruments of the same number

Rhythm Pattern List

No.	Group	Pattern	No.	Group	Pattern	No.	Group	Pattern	No.	Group	Pattern
001	Pop 1	1-a (120)	009	Pop 8	9-a (125)	017	R&B	1 (140)	025	6/8 SlwJazzWaltz	1-a (80)
		1-b (120)			9-b (125)			2 (140)			1-b (80)
		1-c (120)			9-c (125)			3 (140)			1-c (80)
		1-d (120)			9-d (125)			4 (140)			1-d (80)
		1-e (120)			9-e (125)			5 (140)			2-a (80)
		1-f (120)			9-f (125)			6 (140)			2-b (80)
		1-g (120)			9-g (125)			7 (140)			2-c (80)
		1-h (120)			9-h (125)			8 (140)			2-d (80)
002	Pop 2	2-a (120)	010	Rock 1	1-a (120)	018	Reggae	1 (105)	026	6/8 Shuffle	1-a (90)
		2-b (120)			1-b (120)			2 (94)			1-b (90)
		2-c (120)			1-c (120)			3 (94)			1-c (90)
		2-d (120)			1-d (120)			4 (90)			1-d (90)
		2-e (120)			1-e (120)			5 (89)			2-a (90)
		2-f (120)			1-f (120)			6 (105)			2-b (90)
		2-g (120)			1-g (120)			7 (105)			2-c (90)
		2-h (120)			1-h (120)			8 (100)			2-d (90)
003	Pop 3	3-a (150)	011	Rock 2	2-a (114)	019	Trance 1	1 (140)	027	6/8 Pop 2	1-a (64)
		3-b (150)			2-b (114)			2 (138)			1-b (64)
		3-c (150)			2-c (114)			3 (142)			1-c (64)
		3-d (150)			2-d (114)			4 (142)			1-d (64)
		3-e (150)			2-e (114)			5 (142)			2-a (64)
		3-f (150)			2-f (114)			6 (142)			2-b (64)
		3-g (150)			2-g (114)			7 (138)			2-c (64)
		3-h (150)			2-h (114)			8 (138)			2-d (64)
004	Pop 4	4-a (120)	012	Funk	1 (115)	020	Trance 2	1 (143)	028	Machine Beat 1	1 (100)
		4-b (120)			2 (115)			2 (142)			2 (100)
		4-c (120)			3 (115)			3 (135)			3 (140)
		4-d (120)			4 (115)			4 (140)			4 (140)
		4-e (120)			5 (115)			5 (130)			5 (160)
		4-f (120)			6 (115)			6 (154)			6 (160)
		4-g (120)			7 (115)			7 (140)			7 (136)
		4-h (120)			8 (115)			8 (138)			8 (160)
005	Pop 5	5-a (103)	013	Fusion	1 (100)	021	House 1	1 (126)	029	Machine Beat 2	1 (130)
		5-b (103)			2 (100)			2 (126)			2 (130)
		5-c (103)			3 (100)			3 (124)			3 (130)
		5-d (103)			4 (100)			4 (128)			4 (140)
		5-e (103)			5 (100)			5 (125)			5 (140)
		5-f (103)			6 (100)			6 (128)			6 (140)
		5-g (103)			7 (100)			7 (126)			7 (175)
		5-h (103)			8 (100)			8 (126)			8 (160)
006	Pop 6	6-a (96)	014	6/8 Jazz	1 (136)	022	House 2	1 (125)	030	Machine Beat 3	1 (130)
		6-b (96)			2 (136)			2 (130)			2 (130)
		6-c (96)			3 (136)			3 (134)			3 (130)
		6-d (96)			4 (136)			4 (127)			4 (130)
		6-e (96)			5 (136)			5 (128)			5 (130)
		6-f (96)			6 (136)			6 (128)			6 (130)
		6-g (96)			7 (136)			7 (128)			7 (130)
		6-h (96)			8 (136)			8 (128)			8 (130)
007	Pop 7	7-a (104)	015	Bossa	1 (160)	023	Drum'n Bs	1 (170)			() : Recommended tempo
		7-b (104)			2 (160)			2 (160)			
		7-c (104)			3 (160)			3 (180)			
		7-d (104)			4 (160)			4 (160)			
		7-e (104)			5 (160)			5 (170)			
		7-f (104)			6 (160)			6 (170)			
		7-g (104)			7 (160)			7 (170)			
		7-h (104)			8 (160)			8 (170)			
008	6/8 Pop 1	8-a (110)	016	Hip Hop	1 (95)	024	Disco	1 (125)			
		8-b (110)			2 (95)			2 (125)			
		8-c (110)			3 (95)			3 (125)			
		8-d (110)			4 (95)			4 (120)			
		8-e (110)			5 (95)			5 (130)			
		8-f (110)			6 (95)			6 (124)			
		8-g (110)			7 (95)			7 (125)			
		8-h (110)			8 (95)			8 (125)			

Pattern List

No.	Name
001	Chiptune 1
002	Chiptune 2
003	Synth Pop 1
004	Synth Pop 2
005	Pop EDM 1
006	Pop EDM 2
007	Pop EDM 3
008	Pop EDM 4

No.	Name
009	Pop EDM 5
010	Pop EDM 6
011	Pop EDM 7
012	Drum&Bass 1
013	Drum&Bass 2
014	Electro.H 1
015	Electro.H 2
016	ProgTrance

No.	Name
017	Electro 1
018	Electro 2
019	TechHouse 1
020	TechHouse 2
021	Trap 1
022	Trap 2
023	Trap 3
024	Trap 4

No.	Name
025	Trap 5
026	Trap 6
027	House 1
028	House 2
029	EDM 1
030	EDM 2
031	EDM 3
032	EDM 4

Arpeggio Style List

No.	Name
001	Basic 1 (a)
002	Basic 2 (a)
003	Basic 3 (a)
004	Basic 4 (a)
005	Basic 5 (a)
006	Basic 6 (a)
007	Seq Ptn 1 (2)
008	Seq Ptn 2 (2)
009	Seq Ptn 3 (2)
010	Seq Ptn 4 (2)
011	Seq Ptn 5 (2)
012	Seq Ptn 6 (3)
013	Seq Ptn 7 (3)
014	Seq Ptn 8 (3)
015	Seq Ptn 9 (3)
016	Seq Ptn 10 (3)
017	Seq Ptn 11 (3)
018	Seq Ptn 12 (3)
019	Seq Ptn 13 (3)
020	Seq Ptn 14 (3)
021	Seq Ptn 15 (3)
022	Seq Ptn 16 (3)
023	Seq Ptn 17 (3)
024	Seq Ptn 18 (4)
025	Seq Ptn 19 (4)
026	Seq Ptn 20 (4)

No.	Name
027	Seq Ptn 21 (4)
028	Seq Ptn 22 (4)
029	Seq Ptn 23 (4)
030	Seq Ptn 24 (4)
031	Seq Ptn 25 (4)
032	Seq Ptn 26 (4)
033	Seq Ptn 27 (4)
034	Seq Ptn 28 (4)
035	Seq Ptn 29 (4)
036	Seq Ptn 30 (5)
037	Seq Ptn 31 (5)
038	Seq Ptn 32 (6)
039	Seq Ptn 33 (p)
040	Seq Ptn 34 (p)
041	Seq Ptn 35 (p)
042	Seq Ptn 36 (p)
043	Seq Ptn 37 (p)
044	Seq Ptn 38 (p)
045	Seq Ptn 39 (p)
046	Seq Ptn 40 (p)
047	Seq Ptn 41 (p)
048	Seq Ptn 42 (p)
049	Seq Ptn 43 (p)
050	Seq Ptn 44 (p)
051	Seq Ptn 45 (p)
052	Seq Ptn 46 (p)

No.	Name
053	Seq Ptn 47 (p)
054	Seq Ptn 48 (p)
055	Seq Ptn 49 (p)
056	Seq Ptn 50 (p)
057	Seq Ptn 51 (p)
058	Seq Ptn 52 (p)
059	Seq Ptn 53 (p)
060	Seq Ptn 54 (p)
061	Seq Ptn 55 (p)
062	Seq Ptn 56 (p)
063	Seq Ptn 57 (p)
064	Seq Ptn 58 (p)
065	Seq Ptn 59 (p)
066	Seq Ptn 60 (p)
067	Bassline 1 (1)
068	Bassline 2 (1)
069	Bassline 3 (1)
070	Bassline 4 (1)
071	Bassline 5 (1)
072	Bassline 6 (1)
073	Bassline 7 (1)
074	Bassline 8 (1)
075	Bassline 9 (1)
076	Bassline 10 (2)
077	Bassline 11 (2)
078	Bassline 12 (2)

No.	Name
079	Bassline 13 (2)
080	Bassline 14 (2)
081	Bassline 15 (2)
082	Bassline 16 (3)
083	Bassline 17 (3)
084	Bassline 18 (3)
085	Bassline 19 (3)
086	Bassline 20 (3)
087	Bassline 21 (3)
088	Bassline 22 (p)
089	Bassline 23 (p)
090	Bassline 24 (p)
091	Bassline 25 (p)
092	Bassline 26 (p)
093	Bassline 27 (p)
094	Bassline 28 (p)
095	Bassline 29 (p)
096	Bassline 30 (p)
097	Bassline 31 (p)
098	Bassline 32 (p)
099	Bassline 33 (p)
100	Bassline 34 (p)
101	Bassline 35 (p)
102	Bassline 36 (p)
103	Bassline 37 (p)
104	Bassline 38 (p)

No.	Name
105	Bassline 39 (p)
106	Bassline 40 (p)
107	Bassline 41 (p)
108	Sliced 2 (a)
109	Sliced 2 (a)
110	Sliced 3 (a)
111	Sliced 4 (a)
112	Sliced 5 (a)
113	Sliced 6 (a)
114	Sliced 7 (a)
115	Sliced 8 (a)
116	Sliced 9 (a)
117	Sliced 10 (a)
118	Gtr Arp 1 (4)
119	Gtr Arp 2 (5)
120	Gtr Arp 3 (6)
121	Gtr Backing 1(a)
122	Gtr Backing 2(a)
123	Key Bckng1 (a)
124	Key Bckng2 (a)
125	Key Bckng3 (1-3)
126	1/1 Note Trg (1)
127	1/2 Note Trg (1)
128	1/4 Note Trg (1)

Recommended number of notes to press

- (1)–(6) : One to six notes
 (1–3) : One bass note + three-note chord
 (a) : As desired
 (p) : One note, with Motif (p. 29) set to "Phrase"

Vocoder/Auto Pitch List

No.	Name
Mode: Vocoder	
001	Voc:Ensmble
002	Voc:5thStack
003	Voc:Robot
004	Voc:Saw
005	Voc:Sqr
006	Voc:RiseUp
007	Voc:AutoVib
008	Voc:PitchEnv
009	Voc:Choir
010	Voc:Noise

No.	Name
Mode: Auto-Pitch	
011	AP:Elct Pch1
012	AP:Elct Pch2
013	AP:Hard Pch
014	AP:Soft Pch1
015	AP:Formant +
016	AP:Formant -
017	AP:Octave +
018	AP:Octave -
019	AP:toSoprano
020	AP:to Bass

Placing This Unit on a Stand

Be careful not to pinch your fingers when setting up the stand.

* When using the KS-18Z and KS-J8, ensure that the height of the unit is one meter or lower.

If you're using the 61-key model or 76-key model

If you want to place the 61-key model or 76-key model on a stand, please use the KS-12 or KS-18Z stands manufactured by Roland.

KS-12

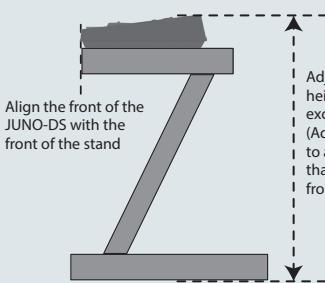


Adjust the width of the stand so that the rubber feet on the keyboard side of the bottom of the keyboard fit into the rubber foot receptacles



Top view

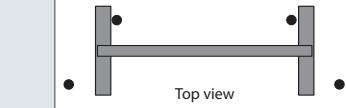
KS-18Z



Align the front of the JUNO-DS with the front of the stand



Adjust the width of the stand so that the rubber feet of the JUNO-DS straddle the stand



Top view

If you're using the 88-key model

If you want to place the 88-key model on a stand, please use the KS-12, KS-18Z, KS-J8, or KS-G8B stands manufactured by Roland.

KS-12

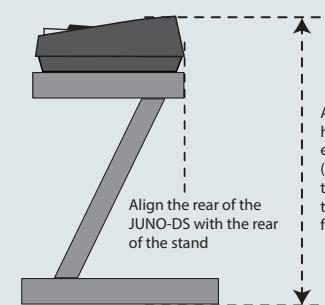


Adjust the width of the stand so that the rubber feet of the JUNO-DS fit into the rubber foot receptacles

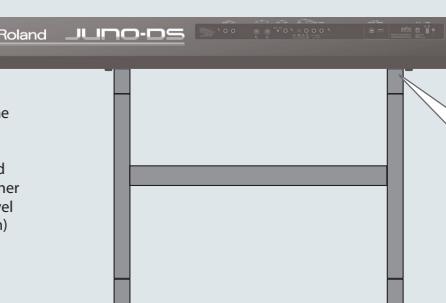


Top view

KS-18Z



Align the rear of the JUNO-DS with the rear of the stand



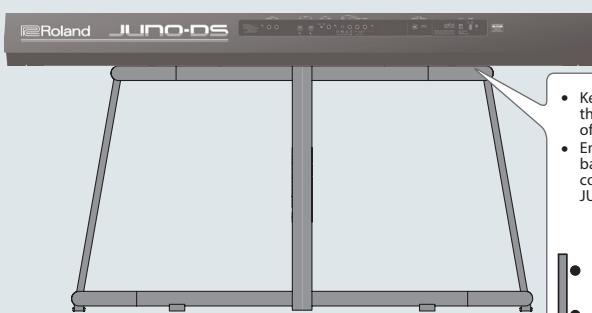
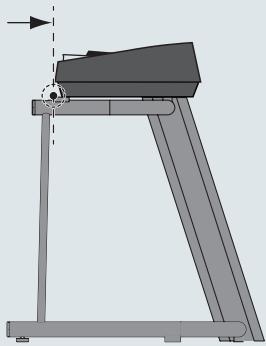
Adjust the width of the stand so that the rubber feet of the JUNO-DS straddle the stand



Top view

KS-G8B

Align the front of
the JUNO-DS with
the rubber base of
the stand



- Keep the rubber feet of the JUNO-DS on the inside of the stand
- Ensure that the rubber base of the stand does not contact the screws of the JUNO-DS

Top view