

New Functions in RS7000 Version 1.2

Several new features have been added in this RS7000 firmware update. This document lists the appropriate changes and additions to the owner's manual supplied with the RS7000.

■ **Switching to the Edit (Owner's Manual pages 154 & 225), Step Record (Owner's Manual pages 80 & 187), and Grid Step Record (Owner's Manual pages 83 & 189) modes during playback.**

It is now possible to switch directly to the Edit (Phrase Edit, Song Edit), Step Record (Phrase Record, Song Record), and Grid Step Record (Phrase Record, Song Record) modes during playback: simply press the [EDIT] button to enter the Edit mode, or the [REC] button to enter the Step record or Grid Step Record mode. Press [PLAY] to return to the normal playback mode.

■ **Keyboard Pad LED Note Display**

When the keyboard pads are being used as a music keyboard (Owner's Manual page 18 - [KEYBOARD] Button), the LEDs of the keyboard pads corresponding to the notes listed below will light.

- The note at the cursor location on the STEP RECORD display.
- The note at the cursor location on the EDIT display.
- The note currently playing in the currently selected track.

■ **Switching Sections via the Keyboard Pads (Owner's Manual page 72)**

In addition to sections A ~ J, it is now possible to select sections K ~ P via the keyboard pads. To select sections K ~ P use the black keyboard pads (A ~ F) while holding the [SHIFT] button.

■ **Real-time Record (Owner's Manual pages 80, 162, & 187)**

It is now possible to temporarily disengage the record mode while playback continues so you can try out ideas on the keyboard pads without actually recording.

To temporarily disengage the record mode simply press the [REC] button during REPLACE, OVERDUB, or PUNCH realtime recording – the [REC] LED will flash and playback will continue uninterrupted but no data will be recorded. To return to the record mode press the [REC] button again – the [REC] LED will light continuously. This can be repeated to disengage/resume recording as many times as necessary until the [STOP] button is pressed. The [REC] LED indicates the current record status – continuously lit = recording, flashing = record disengaged.

■ **Grid Step Record (Owner's Manual pages 83 & 189)**

Changes and additions to the Grid Step Record mode are listed below.

● **Track selection**

Press the appropriate white keyboard pad while holding the [TRACK SELECT] button.

● **Move to a different measure during playback.**

Use the ◀◀ and ▶▶ buttons.

● **Play other selected tracks while recording.**

All other tracks will play back simultaneously. Use the [MUTE] button and the white keyboard pads to selectively mute/un-mute tracks as required. Press [SHIFT] and [MUTE] simultaneously to monitor only the record track.

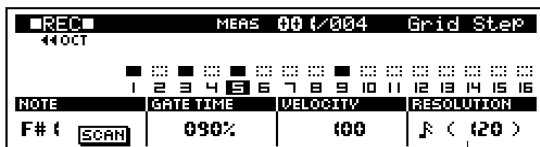
● **Note Scan**

This function provides a convenient way to locate a specific instrument in a recorded rhythm track. Press [F1] to move to the nearest recorded note that is higher than the current note.

- **Set grid resolution.**

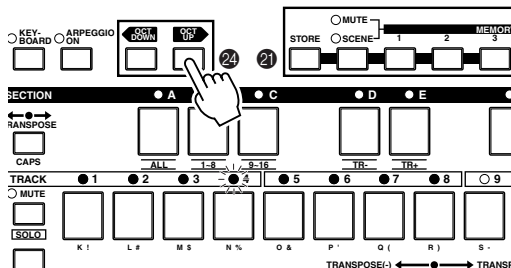
It is now possible to specify the grid resolution.

4 RESOLUTION [DIAL 4]



[Settings] Range: 15 (128th-notes), 20 (64th-note triplets), 30 (64th notes), 40 (32nd-note triplets), 60 (32nd notes), 80 (16th-note triplets), 120 (16th notes), 160 (8th-note triplets).

When the number of grid units per measure is greater than 16 the keyboard pad edit location with the measure is set via the [OCT DOWN] and [OCT UP] buttons. The keyboard pad LEDs indicate the current edit location while the [OCT DOWN] or [OCT UP] button is held. When a triplet resolution is selected only keyboard pads 1 ~ 12 are used.

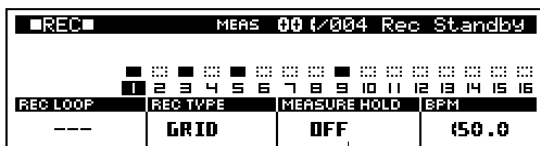


In this example the fourth of a possible eight locations is selected for editing.

- **Measure Hold**

The Measure Hold can now be selected from the Grid Step record standby mode (Owner's Manual page 78).

7 MEASURE HOLD [DIAL 3]



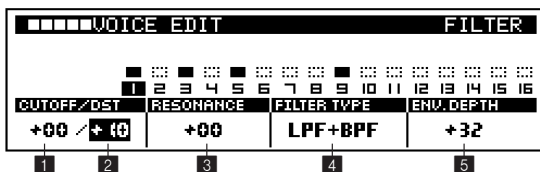
Can be set when the Grid Step record type is selected.

[Settings] Range: ON, OFF

1-measure monitoring is selected when ON, full-pattern monitoring when OFF.

Changes to the Voice Edit Filter Page (Owner's Manual page 102)

12 new Voice Edit filter types are provided in addition to a new "Distance" parameter.



1 CUTOFF FREQUENCY (CUTOFF) (Refer to Owner's Manual page 103)

2 DISTANCE (DST) [F1] → [DIAL 1] Relative

[Settings] Range: -32 ~ +31

Specifies the distance between the two frequencies for the dual-type filters (Dual LPF, Dual HPF, Dual BPF, Dual BEF) and LPF+BPF combined filter. When set to "0" the two cutoff frequencies are equal.

3 RESONANCE

(Refer to Owner's Manual page 103)

4 FILTER TYPE [DIAL 3]

Absolute

[Settings] Range: **BYPASS, LPF24D, LPF18, LPF12, HPF24D, BPF12D, BEF12, LPF24A, LPF18s, LPF6, HPF12, BPFw, BPF6, BEF6, Dual LPF, Dual HPF, Dual BPF, Dual BEF, LPF+BPF**

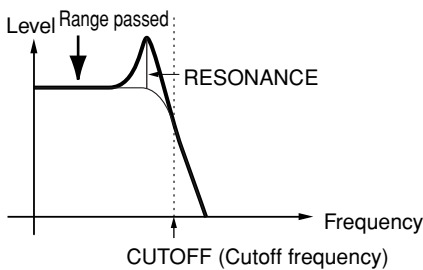
NOTE

Please note that data created using the new filter types added in this firmware update will not work properly on previous versions.

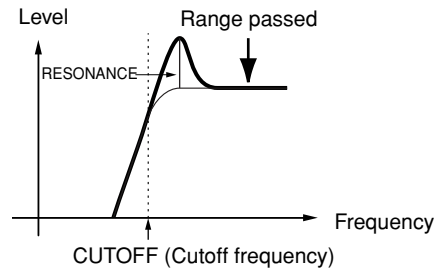
Filter Name	Old Name	Characteristics
BYBASS	BYPASS	Direct throughput with no filter effect.
LPF24D (24dB/oct Digital Low Pass Filter)	LPF24	A dynamic 24dB/oct low-pass filter with the characteristic digital sound. Compared to the LPF24A type this filter can produce a more pronounced resonance effect.
LPF18 (18dB/oct Low Pass Filter)	LPF18	3-pole 18dB/oct low-pass filter.
LPF12 (12dB/oct Low Pass Filter)	LPF12	12dB/oct low-pass filter. This filter is designed to be used in conjunction with a high-pass filter.
HPF24D (24dB/oct Digital High Pass Filter)	HPF24	A dynamic 24dB/oct high-pass filter with the characteristic digital sound. This filter can produce a pronounced resonance effect.
BPF12D (12dB/oct Digital Band Pass Filter)	BPF	12dB/oct band-pass filter.
BEF12 (12dB/oct Band Elimination Filter)	BEF	12dB/oct band-elimination filter.
LPF24A (24dB/oct Analog Low Pass Filter)	(New)	A digital dynamic low-pass filter with characteristics similar to 4-pole analog synth filter.
LPF18s (18dB/oct Staggered Low Pass Filter)	(New)	3-pole 18dB/oct low-pass filter. This filter has a smoother cutoff slope than the LPF18 type.
LPF6 (6dB/oct low-pass Filter)	(New)	1-pole 6dB/oct low-pass filter. No resonance. This filter is designed to be used in conjunction with a high-pass filter.
HPF12 (12dB/oct High Pass Filter)	(New)	12dB/oct dynamic high-pass filter.
BPFw (Wide Band Pass Filter)	(New)	A 12dB/oct BPF that combines HPF and LPF filters to allow wider bandwidth settings.
BPF6 (6dB/oct Band Pass Filter)	(New)	6dB/oct band-pass filter.
BEF6 (6dB/oct Band Elimination Filter)	(New)	6dB/oct band-elimination filter.
Dual LPF (Dual Low Pass Filter)	(New)	Two 12dB/oct low-pass filters connected in parallel.
Dual HPF (Dual High Pass Filter)	(New)	Two 12dB/oct high-pass filters connected in parallel.
Dual BPF (Dual Band Pass Filter)	(New)	Two 6dB/oct band-pass filters connected in parallel.
Dual BEF (Dual Band Elimination Filter)	(New)	Two 6dB/oct band-elimination filters connected in serial.
LPF+BPF (Low Pass Filter + Band Pass Filter)	(New)	A combined low-pass and high-pass filter.

Filter Characteristics

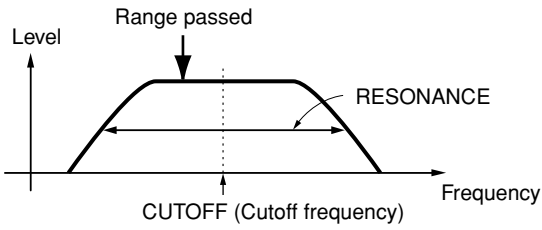
LPF24D, LPF18, LPF12, LPF24A, LPF18s, LPF6



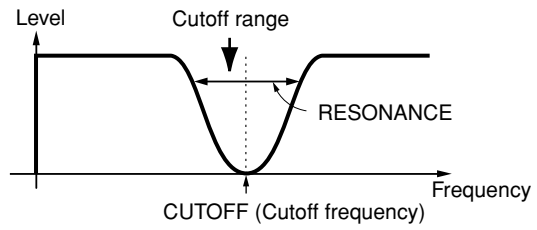
HPF24D, HPF12



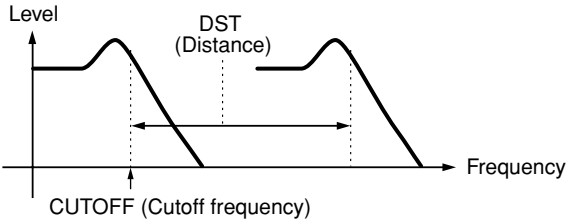
BPF12D, BPFw, BPF6



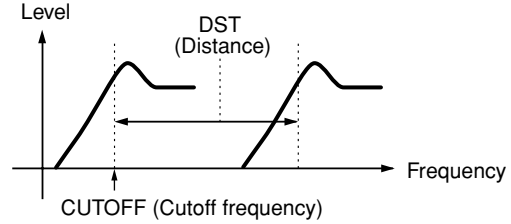
BEF12, BEF6



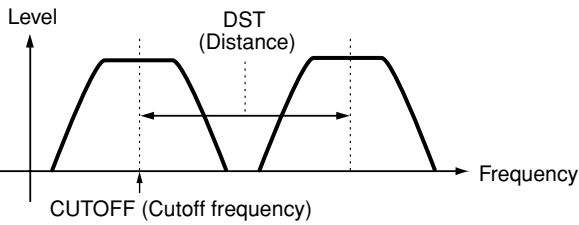
Dual LPF



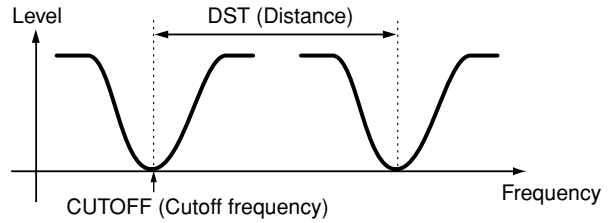
Dual HPF



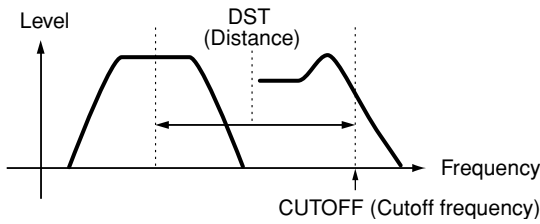
Dual BPF



Dual BEF



LPF+BPF



5 FILTER ENVELOPE DEPTH (ENV.DEPTH)

(Refer to Owner's Manual page 103)

■ MIDI Data Format Addition (Owner's Manual pages 325 & 330)

● "DISTANCE" Parameter Addition

- Tone generator block (Voice part) (3-1-5) CONTROL CHANGE (Owner's Manual page 325)

C=79 DISTANCE ;v = 32:-32 - 64:0 - 95:+31

- <Table 1-4> Midi Parameter Change Table (MULTI PART) MULTI PART GROUP 1 (Owner's Manual page 330)

Address			Size	Data (H)	Parameter	Description	Default Value (H)
H	M	L					
10	pp	00	1	20 - 5F	DISTANCE	-32 - +31	40

pp: Part Number (00H-0FH)

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