

Radio and television interference

"Warning — This equipment has been verified to comply with the limits for a Class B computing device, pursuant to Subpart J, of Part 15, of FCC rules. Operation with non-certified or non-verified equipment is likely to result in interference to radio and TV reception."

The equipment described in this manual generates and uses radio-frequency energy. If it is not installed and used properly, that is, in strict accordance with our instructions, it may cause interference with radio and television reception.

This equipment has been tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J, of Part 15, of FCC Rules. These rules are designed to provide reasonable protection against such an interference in a residential installation.

However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by the following measure:

 Disconnect other devices and their input/output cables one at a time. If the interference stops, it is caused by either the other device or its I/O cable.

These devices usually require Roland designated shielded I/O cables. For Roland devices, you can obtain the proper shielded cable from your dealer. For non Roland devices, contact the manufacturer or dealer for assistance.

If your equipment does cause interference to radio or television reception, you can try to correct the interference by using one or more of the following measures:

- Turn the TV or radio antenna until the interference stops.
- Move the equipment to one side or the other of the TV or radio.
- Move the equipment farther away from the TV or radio
- Plug the equipment into an outlet that is on a different circuit than the TV or radio. (That is, make certain the equipment and the radio or television set are on circuits controlled by different circuit breakers or fuses.)
- Consider installing a rooftop television antenna with coaxial cable lead-in between the antenna and TV.

If necessary, you should consult your dealer or an experienced radio/television technician for additional suggestions. You may find helpful the following booklet prepared by the Federal Communications Commission:

"How to Identify and Resolve Radio-TV Interference Problems"

This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

Bescheinigung des Herstellers /Importeurs

Hiermit wird	l bescheinigt,	daß der/die/das
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ROLAND SUPER QUARTET MKS-7

(Gerät, Typ. Bezeichnung)

in Übereinstimmung mit den Bestimmungen der

Amtsbl. Vfg 1046 / 1984

(Amtsblattverfügung)

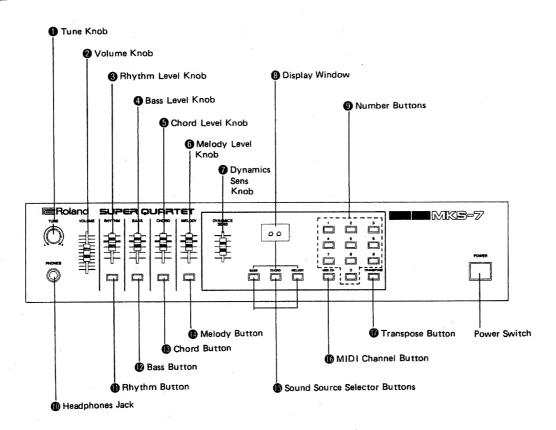
funk-entstört ist.

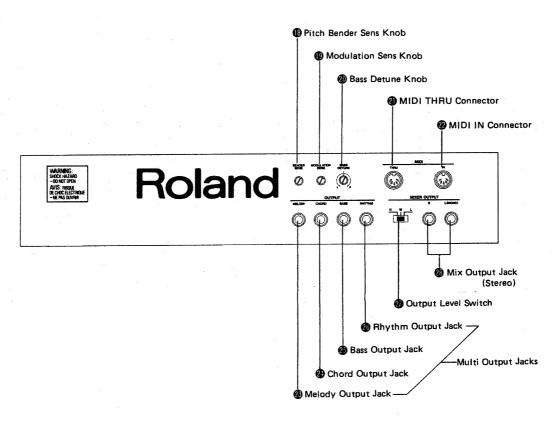
Der Deutschen Bundespost wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

Roland Corporation Osaka / Japan

Name des Herstellers/Importeurs

1 PANEL DESCRIPTION





IMPORTANT NOTES

Power Supply

- The appropriate voltage to be used is shown on the name plate of the rear panel. Be sure that it meets the line voltage system in your country.
- Do not use the same socket that is used for any noise generating device, such as a motor, or variable lighting system.
- When setting up the MKS-7, be sure that all the units are turned off.
- This unit might not work properly if turned on immediately after turned off, or if the power cable is plugged in with the unit turned on. If this happens, simply turn the unit off, and turn it on again after a few seconds.
- This unit might get hot while operating, but there is nothing to worry about it.

Cleaning

- Use a soft cloth and clean only with a mild detergent.
- Do not use solvent such as paint thinner.

Location

- Operating the MKS-7 near a neon or fluorescent lamp may cause noise interference. If so, change • the angle or position of the MKS-7.
- Avoid using the MKS-7 in extreme heat or humidity or where it may be affected by dust.

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OUTLINE

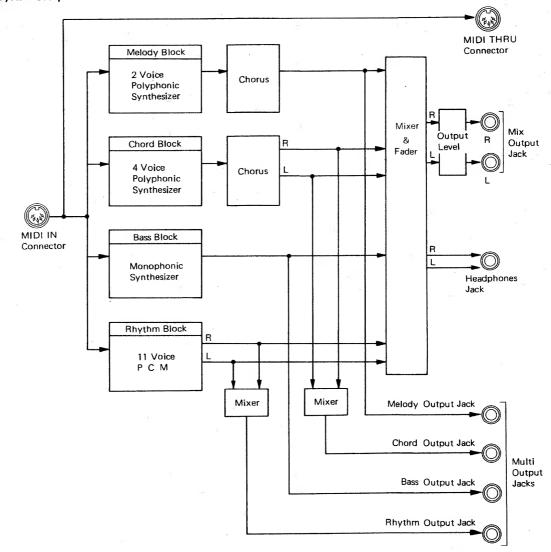
The Roland Super Quartet MKS-7 is a versatile sound module designed for MIDI devices.

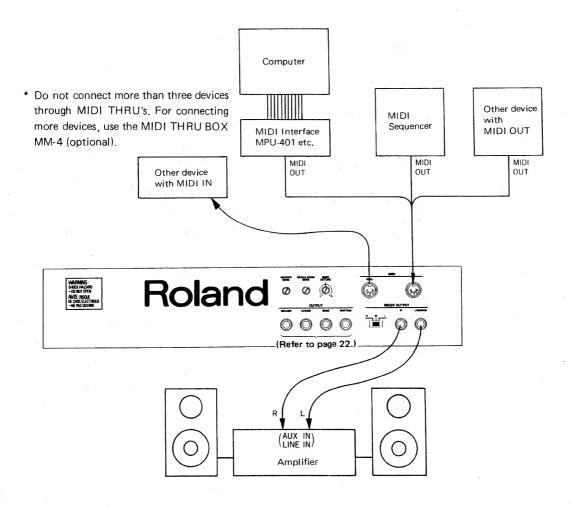
The MKS-7 consists of 4 Blocks, Melody, Chord, Bass and Rhythm. Each block can operate in a different MIDI channel.

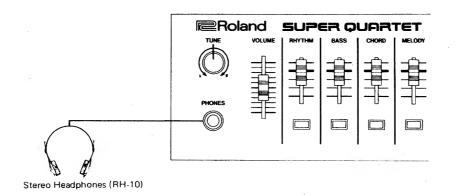
The Melody block is a 2 voice polyphonic synthesizer, the Chord is 4 voices, the Bass is monophonic, and the Rhythm, which is P C M sound module, is 11 voices.

The MKS-7 has 100 different preset tone colors for Melody and Chord Blocks and another 20 for Bass. You can select any of these just by flick of a switch.

System Setup







3 OPERATION

1. MIDI Channel Setting

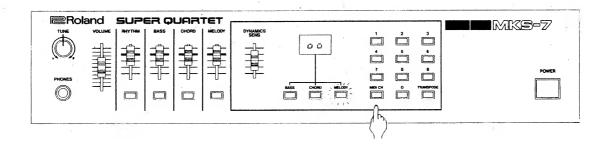
Each block can select a MIDI Channel of 1 to 16. To operate the MKS-7, it is essential to match the channel number of each block to that of the MIDI signal coming in the MKS-7.

When the power is applied, the MKS-7 defaults to the MIDI Channel numbers as shown in the right table.

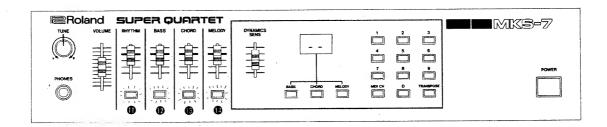
Block	MIDI
	Channel
Melody	1 .
Chord	3
Bass	2
Rhythm	10

Operation

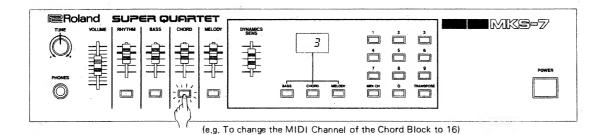
① Push the MIDI Channel Button .



The Display Window (1) shows ____, and the Rhythm Button (1), Bass Button (2), Chord Button (3), and the Melody Button (3) flash.

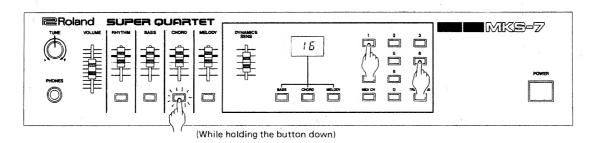


② Select the Block you like by pressing the corresponding button.



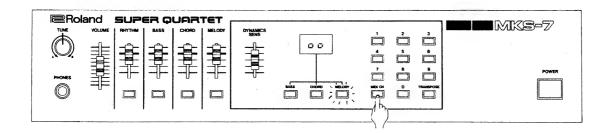
The Display Window **3** shows the current MID! Channel number of the selected block.

(3) While still holding the corresponding Button down, set the MIDI Channel you want by using the Number Buttons (9).



The Display **3** shows the MIDI Channel number you have set.

4 Press the MIDI Channel Button 16.



2. Tone Color Selection (1)

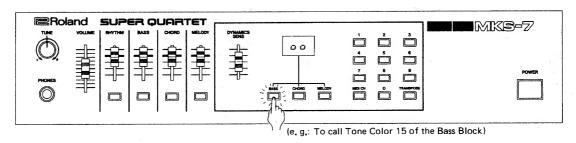
The MKS-7 has 100 different tone colors (00 to 99) for the Melody and Chord, and 20 (00 to 19) for the Bass. Any of these tone colors can be called easily by pushing buttons or externally with MIDI. (Refer to page 21.)

When power is applied, the MKS-7 defaults to the tone colors as shown in the right table.

Operation

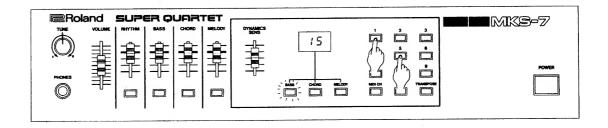
* The Melody and the Chord can take on a vibrato effect by using MIDI Control Change message (= Modulation message).

Block	Tone Color Number
Melody	00
Chord	00
Bass	00



The pressed button lights up, and the Display **3** shows the current tone color number.

② Call the tone color you like by using the Number Buttons ③.



The Display **1** now shows the tone color number you have called.





3. Tuning

The MKS-7 has the Bass Detune Knob ② as well as a usual Tune Knob ①.

a. Tune Knob (



Use this knob to tune the MKS-7 with other musical instrument. (This knob can simultaneously tune all the Blocks: Melody, Chord and Bass.)

* The Chord Block is set to 2 cent lower than the Melody, except when in the Whole mode (see page 19).

b. Base Detune Knob



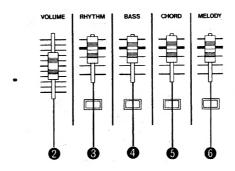


This knob can detune the pitch of the Bass Block by ±50 cent from the Chord and Melody.

* The pitch does not change while adjusting the Bass Detune Knob. First adjust the knob then play a key, and now the pitch of the sound is altered. You may need to repeat this procedure quite a few times to successfully complete tuning.

4. Level Setting

The MKS-7 has a separate level control for each Block of Melody, Chord, Bass and Rhythm enabling individual level setting.



a. Volume Knob 2

This adjusts the overall volume of the MKS-7.

b. Rhythm Level Knob 6

This adjusts the volume of Rhythm Block.

c. Bass Level Knob 4

This adjusts the volume of Bass Block.

d. Chord Level Knob 6

This adjusts the volume of Chord Block.

e, Melody Level Knob 6

This adjusts the volume of Melody Block.

f. Output Level Switch @



Select H (high), M (medium) or L (low) depending on the rated input level of the amplifier (or mixer) you use.

KEYBOARD AMP	M/H
AUDIO AMP	Н
P.A. MIXER	L/M/H
GUITAR AMP	L/M
	etc.

5. Setting the Dynamics Sensitivity

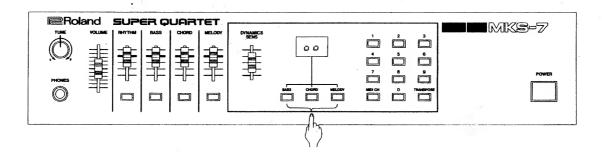
"Dynamics sensitivity" is the function that can alter the volume or tone color depending on how hard the key is attacked.

Each block of the Melody, Chord and Bass can be individually set the sensitivity of Dynamics effect.

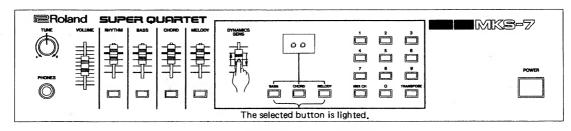
When the MKS-7 is turned on, the Dynamics sensitivity of each block is automatically set to a standard value.

Operation

① By pressing the Sound Source Selector Button **(3)**, call the Block whose Dynamics sensitivity you want to change from the standard value.



② Set the Dynamics Sens Knob to your taste. When the knob is moved even slightly, the previous setting will be deleted, and replaced with the current knob position.



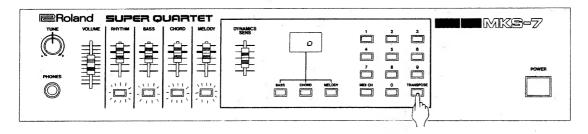
* Lowering the knob too low may decrease the volume.

6. Key Transpose

The MKS-7 features the Key Transpose function that allows transposition in semi-tone steps up to ± 1 octave.

Operation

① Press the Transpose Button 🕡 .



The Display **3** shows the number that represents how many semi-tones are currently transposed from the C key.

② By using the Number Buttons ③ and/or the MIDI Channel Button ⑥, enter a new number.

Transpose value 1 means a semi-tone transposition from the C key. To transpose to the key higher than C key, simply enter the appropriate number, but to transpose to lower than C, press the MIDI Channel Button first. For example, to transpose to the lower G, press the MIDI Channel Button \oplus , the Number Button 0, then 5.

③ Press the Transpose Button ①.

The Transpose function does not apply to the Rhythm Block.

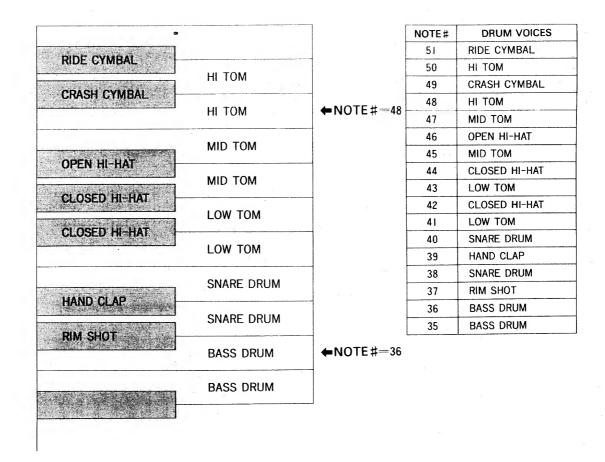
Key Transpose

Display 8	Transpose Value
12	+ 12
3 11	+ 11 + 10 + 9 + 8 + 7 + 6 + 5 + 4 + 3 + 2
ID	+ 10
9	+ 9
8	+ 8
87 - 65 S S S S S S S S S S S S S S S S S S	+ 7
5	+ 6
5	+ 5
4	+ 4
3	+ 3 + 2
2	+ 2
1	
ū	0
7. 7. 7. 6. 7. 6. 7. 6.	- 1
	- 2 - 3 - 4
3.	- 3
<i>Y</i> .	
5.	- 5
5.	- 6
7.	- 7
<u> </u>	- 8
9. ID. I I.	- 9
IU.	- 10
	- 11
₽.	- 12



b. Rhythm and Note Number

The Rhythm Block of the MKS-7 operates by Note ON/OFF message. The relation between the keys and drum voices is shown below.



c. The Display reaction at receiving Exclusive message

"Exclusive" is a kind of MIDI message. (Refer to the different volume "MIDI".) The MKS-7 uses this for editing the parameters of a tone color.

When the MKS-7 receives the Exclusive message, dots will be indicated in the Display (3) as shown right.

1. 7.

4 APPLICATIONS

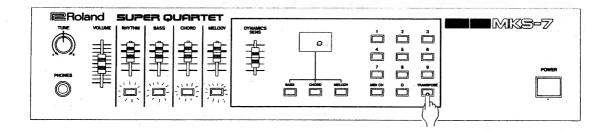
1. MIDI Functions

The MKS-7 can reject one or more than one of the following MIDI messages.

- 1 Hold
- 2 Program Change (Patch Selection message)
- 3 Pitch Bender, Modulation
- **4 Exclusive** (used for editing the parameters of tone color)

Operation

① Push the Transpose Button .

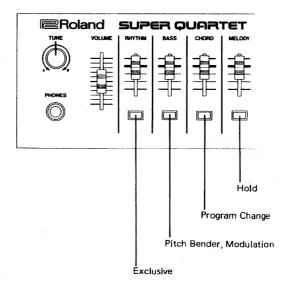


The Rhythm Button ①, Bass Button ②, Chord Button ③ and Melody Button ③ will all light up. These four buttons now serve as On/Off switches of the above 4 MIDI messages as shown right. When the button is lighted, the corresponding message will be received.

② Push the button that corresponds to the MIDI message that you want the MKS-7 to ignore.

The pushed button goes out.

3 Push the Transpose Button 1 .

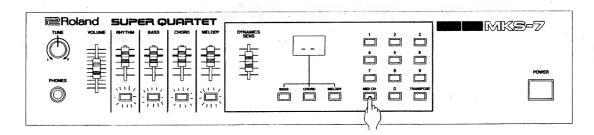


2. Whole Mode

With the MKS-7 set to the Whole mode, the Melody and Chord Blocks are united and act as a six voice synthesizer. That is, the Chord Block becomes six voices, and there is no sound from the Melody Block. To turn the MKS-7 to the Whole mode, take the following operation.

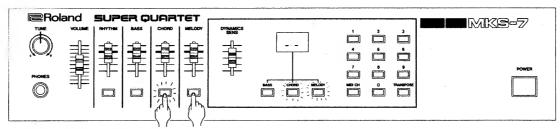
Operation

1) Press the MIDI Channel Button 10.



The Display **3** shows ___ and the Rhythm Button **4**, Bass Button **4**, Chord Button **4** and Melody Button **4** flash.

② While holding the Chord Button 🚯 , press the Melody Button 🚯 .



(While holding this button down.)

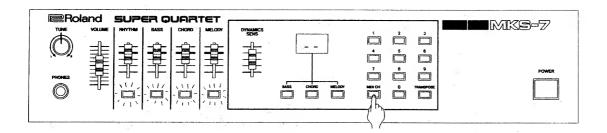
The both CHORD and MELODY of the Sound Selector Buttons **1** light, which shows that the MKS-7 is now in the Whole mode.

3 Press the MIDI Channel Button 6.

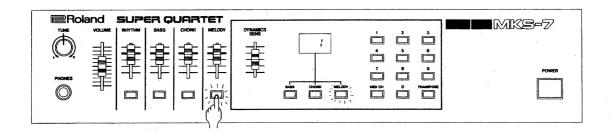
<Cancelling the Whole Mode>

Operation

① Press the MIDI Channel Button (1)



2 Press the Melody Button .



The MELODY of the Sound Selector Button (1) lights up.

3 Press the MIDI Channel Button .

- * It is also possible to turn the MKS-7 to the Whole mode or cancell it externally by using MIDI. (Refer to "MIDI Implimentation Chart".)
- * The MIDI Channel set in the Chord Block will be used in the Whole mode. So, when you want to change the Channel number in the Whole mode, change that of the Chord Block.

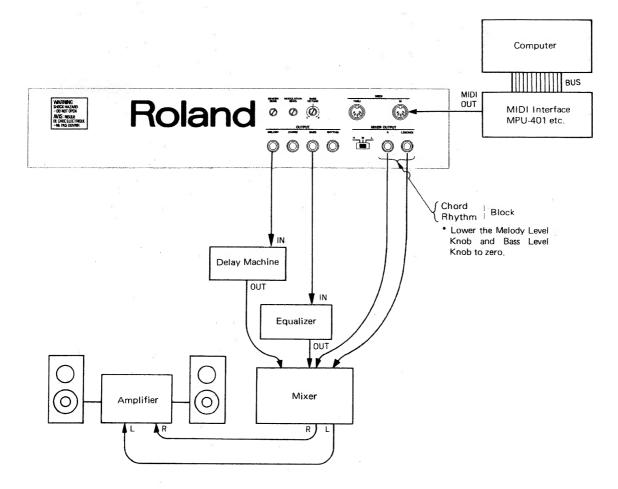


4. System Examples

a. Using the Multiple Outputs

The MKS-7 has a separate output jack (Multi Out) for each Block. The Multi Out Jack can be effectively used for attaining separate effect in each block.

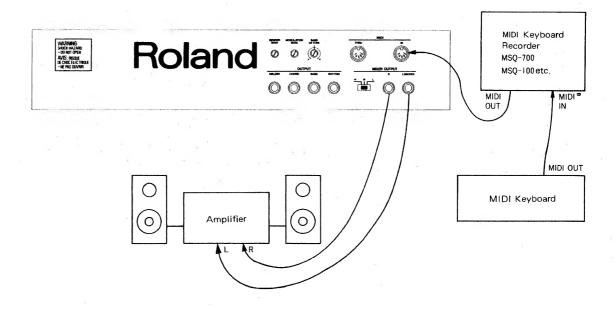
(e.g.) Delay Machine to Melody Block, Equalizer to Bass



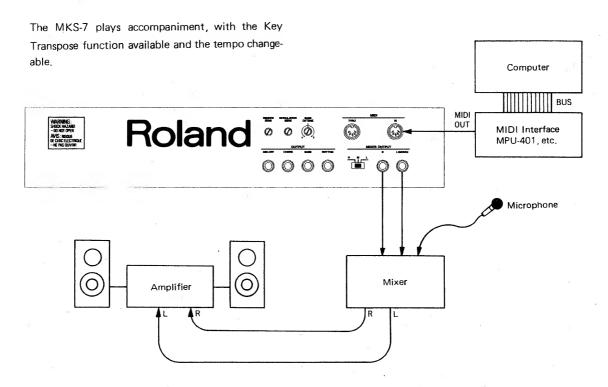
- * The signal sent through the Multi Out Jack is not affected at all by the position of the Level Knob or Volume Knob, that is, a signal of a certain level is always sent out.
- * Using the Multi Output does not affect the total output of the Mix Out. If you do not want to subtract the output of a certain block, lower the corresponding Level Knob to zero.
- * The output from the Multi Output has a phase of exact inversion of the Mix Out.

b. Using a Keyboard Recorder

The MKS-7 can be controlled by the keyboard recorder such as MSQ-100 or MSQ-700.



c. As a Minus-one Music



5 SPECIFICATIONS

MKS-7: Sound Module

Preset

Melody:

100 Tone Colors

Bass:

20 Tone Colors

Rhythm:

11 Drum Voices

. _

o Bass Drum

o Snare Drum

o Hi-Tom

o Mid-Tom

o Low-Tom

o Open/Closed Hi-Hat's

o Hand Clap

O Rim Shot

o Ride Cymbal

o Clash Cymbal

Front Panel

- Tune Knob
- Volume Knob
- Rhythm Level Knob
- Bass Level Knob
- Chord Level Knob
- Melody Level Knob
- Dynamics Sens Knob
- Display Window
- Rhythm Button
- Bass Button
- Chord Button
- Melody Button
- Sound Source Selector Buttons (Bass, Chord, Melody)
- Number Button (0 to 9)
- MIDI Channel Button
- Transpose Button
- Headphones Jack
- Power Switch

Rear Panel

- Pitch Bender Sens Knob
- Modulation Sens Knob
- Bass Detune Knob
- Output Level Switch
- MIDI IN Connector
- MIDI THRU Connector
- Melody Output Jack
- Chord Output Jack
- Bass Output Jack
- Rhythm Output Jack
- Mix Output Jacks (L, R)

Consumption 25W
Dimensions Black:

482(W) x 400(D) x 88(H) mm 18-15/16 x 15-3/4 x 3-7/16"

Ivory:

430(W) × 400(D) × 88(H) mm 16-15/16" × 15-3/4" × 3-7/16"

Weights Black:

7 kg / 15 lb 7 oz

lvory:

7.5 kg / 16 lb 9 oz

Accessories M

MIDI Cable (1m) x 1

Connection Cord (2.5m) x 2

OPTIONS

Carrying Case TB-2U

MIDI SYNC Cable MSC-25/50

Sound module

MODEL MKS-7 MIDI Implementation Chart

Melody Block

	Function	Transmitted	Recognized	Remarks
Basic Channel	Default Changed	×	1 1 - 16	
Mode	Default Messages Altered	× × ********	Mode 3 × ×	
Note Number	True voice	× *******	0 - 127 24 - 108	
Velocity	Note ON Note OFF	×	×	1
After Touch	Key's Ch's	×	×	
Pitch Bender		×	Ó ;	,
	1 64	×	00	Modulation Hold
Control		4° 4	*	
Change		* .		1
		e H		
Prog Change	True #	× *******	© (0–127) 0 – 99	
System Exclus	sive	× .	0 .	Tone parameters
System	Song Pos Song Sel Tune	× × ×	× × ×	*
-	Clock Commands	×	× · · · · · · · · · · · · · · · · · · ·	
All	al ON OFF Notes OFF ve Sense et	× × × ×	× (123–127)	
Notes		When the CHORD block is	in 6 voice mode, the MELOD	OY block cannot sound.

Mode 1 : OMNI ON, POLY
Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON, MONO Mode 4 : OMNI OFF, MONO ○ : Yes × : No

Chord Block

	Function	Transmitted	Recognized	Remarks
Basic Channel	Default Changed	× ×	3 1 – 16	
Mode	Default Messages Altered	× × *********	Mode 3 × ×	
Note Number	True voice	× *******	0 - 127 24 - 108	
Velocity	Note ON Note OFF	× ×	×	
After Touch	Key's Ch's	×	×	,
Pitch Bende	er	×	0	-
Control	1 64 121	× × ×		Modulation Hold Voice select (6/4 voices)
Change	* *	·		. 1
Prog Change	True #	× ******	○ (0–127) 0–99	
System Excl	usive	×	۵	Tone parameters
System	Song Pos Song Sel Tune	× × ×	× × ×	
System Real Time	Clock Commands	X X	×	
All Mes- Ac	ocal ON OFF I Notes OFF ctive Sense eset	× × × ×	× ○ (123–127) ○ ×	
lotes		·	*	

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO

Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO

O: Yes

× : No

Bass Block

	Function	Transmitted	Recognized	Remarks
Basic Channel	Default Changed	×	2	
Mode	Default Messages Altered	× × *********	Mode 4 × ×	
Note Number	True voice	× *******	0 - 127 31 - 96	The actual keys are I octave lower.
Velocity	Note ON Note OFF	× ×	×	
After Touch	Key's Ch's	×	×	
Pitch Bende	er	×	×	<i>P</i> ***
	. *	<i>X</i>		
Control			- ×	-
Change				
Prog Change	True #	× *******	(0–127) 0–19	
System Exc	usive	×	o	Tone parameters
System Common	Song Pos Song Sel Tune	×	×××××××××××××××××××××××××××××××××××××××	•
System Real Time	Clock Commands	×××	×	-
Mes- A	ocal ON OFF II Notes OFF ctive Sense eset	× × × ×	× ① (123–127) ③	
Notes	-			

Mode 1 : OMNI ON, POLY
Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON, MONO Mode 4 : OMNI OFF, MONO ○ : Yes× : No

Rhythm Block

	Function	Transmitted	Recognized	Remarks
Basic Channel	Default Changed	×	10 1 - 16	*
Mode	Default Messages Altered	× *******	Mode 3	-
Note Number	True voice	******	35 - 51 35 - 51	
Velocity	Note ON Note OFF	×	× .	
After Touch	Key's Ch's	×	×	
Pitch Bender	*	×	×	, a
Control	. 10	· .		
Change				· · · · · · · · · · · · · · · · · · ·
			* :	
Prog Change	True #	******	×	
System Exclus	sive	×	× .	
System Common	Song Pos Song Sel Tune	.X- × -X-	× × ×	
System Real Time	Clock Commands	×	× ×	
All	al ON OFF Notes OFF ve Sense et	× × ×	× × × ×	
Notes	-	38,40° - Snr Dr 37 41,43 - Low Tom 39	signment. - Hi Tom 46 - Opn H - Rim Sht 49 - Crsh C - Hnd Clp 51 - Ride C - Cls HH	ym

Mode 1 : OMNI ON, POLY Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON, MONO Mode 4 : OMNI OFF, MONO

: Yes

× : No

MODEL MKS-7 MIDI Implementation

1. REC							
	OGNIZED RECEI	VE DATA			1.3 BASS pa	rt	
1.1 MEL	ODY part				Status Seco	nd Third	Description
		s in 6 voice m	ode, the MELODY part is not avai	lable.	1000 nnnn Økkk	kkkk 0000 0000	Note OFF, velocity ignored Note OFF kkkkkk = 0 - 127 (19 - 96)
Status	Second	Third	Description		1001 nnnn Okkk	kkkk 8vvv vvvv	Note ON
1000 nnnn 1001 nnnn	Okkk kkkk Okkk kkkk	0000 0000	Note OFF, velocity ignored Note OFF kkkkkkk = 0 - 127 (24 - 108)	*1	1001 HHHH BAKK	ARRA WITT TITLE	kkkkkkk = 0 - 127 (19 - 96)
1901 nnnn	. Okkk kkkk	8vvv vvvv	Note ON kkkkkk = 0 - 127 (24 - 108) vvvvvvv = 1 - 127	*1	1011 nnnn 0111 1011 nnnn 0111 1011 nnnn 0111	1011 0000 0000 1100 0000 0000 1101 0000 0000 1110 0000 0000 1110 0000 0000	ALL NOTES OFF ALL NOTES OFF ALL NOTES OFF ALL NOTES OFF (m : ignored) ALL NOTES OFF
1011 nnnn	0000 0001	0vvv vvvv	Modulation vvvvvv = 0 - 127			PPPP	Program Change
1011 nnnn 1011 nnnn	0100 0000 0100 0000	0111 1111 0000 0000	Hold ON (1 - 126 ignored) Hold OFF		1111 0000		ppppppp = 0 - 127 (0 - 19) Exclusive EOX
1011 nnnn 1011 nnnn 1011 nnnn	0111 1011 0111 1100 0111 1101	0000 0000 0000 0000 0000 0000	ALL NOTES OFF ALL NOTES OFF ALL NOTES OFF	*2 *2 *2	1111 0111		Active Sensing
1011 nnnn 1011 nnnn	0111 1110 0111 1111	9999 mmmm 9999 9999	ALL NOTES OFF (m : ignored) ALL NOTES OFF	*2 *2	Notes: *1 Note n the ne	umbers outside of the	e range 19 - 96 are transposed to
1100 nnnn	Оррр рррр		Program Change ppppppp = 0 - 127 (0 - 99)	*3	*2 Mode M	lessages (123 - 127) a	are only recognized as ALL NOTES Of
1110 nnnn	0b00 0000	О ЬЬЬ ЬЬЬЬ	Pitch Bender LS 6 bits are ignored				ays OMNI OFF, MONO mode.
1111 0000			Exclusive	*4	*3 Progra	m Change assignments	tt ! Number
1111 0111			EOX Active Sensing				# Number
IIII III			ACTIVE SENSING			20 - 3	39
	Note numbers	outside of the ctave inside t	range 24 - 108 are transposed to his range.	0		60 - 6 80 - 9 100 - 1	79 0 - 19 39 0 - 19 19 0 - 19 19 0 - 19 27 0 - 7
*2	Mode Messages	(123 - 127) a	re only recognized as ALL NOTES	OFF.	#4 P-4		ZED EXCLUSIVE MESSAGES
*	The receiver'	s mode is alwa	ys OMNI OFF, POLY mode.			ASS part.	LED EXCEOSIVE MESSAGES
*3	Program Chang	e assignments					
		Prog	# ! Number		1.4 RHYTHM pa	irt	
			9 0 - 99 7 0 - 27				
			ED EXCLUSIVE MESSAGES		Status Seco	nd Third	Description
	2. 2 CHORD par	t.	·		1001 nnnn 8kkk	kkkk Ovvv vvvv	Note ON kkkkkk = 35 - 51 vvvvvv = 1 - 127
	ORD part				Notes :		
Status	Second		Description		* Receiv	ed note number are as	ssigned as follows:
	Second		Description			kkkkkk Instrume	on t
	arrr reek	Third	Note OFF velocity ignored				
1000 nnnn 1001 nnnn	0kkk kkkk 0kkk kkkk	Third 0vvv vvvv 0000 0000	Note OFF, velocity ignored Note OFF kkkkkk = 0 - 127 (24 - 108)	*1		35,36 Bass Dru 37 Rim Sho	t o
		0vvv vvvv	Note OFF kkkkkkk = 0 - 127 (24 - 108) Note ON kkkkkkk = 0 - 127 (24 - 108)	*1		37 Rim Sho 36,40 Snare Di 39 Hand Cla 41,43 Low Tem	t rum ap
1001 nnnn	0kkk kkkk	0000 0000	Note OFF kkkkkkk = 0 - 127 (24 - 108) Note ON			37 : Rim Sho: 38,40 : Snare Di 39 : Hand Cl: 41,43 : Low Tom 42,44 : Closed I 45,47 : Mid Tom 46 : Open H: 48,50 : HI Tom	t vum ap HI-Hat
1001 nnnn	0kkk kkkk 0kkk kkkk 0000 0001	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vvvvvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored)			37 ! Rim Sho 38, 40 ! Snare Di 39 ! Hand Cl: 41,43 ! Low Tem 42,44 ! Closed ! 45,47 ! Mid Tom 46 ! Open Hi	t rum Hi-Hat -Hat ymbal
1001 nnnn 1001 nnnn 1011 nnnn 1011 nnnn	0kk kkk 0kk kkk 0000 0001 0100 0000	8vv vvv 8111 1111 8888 8888	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vvvvvvv = 1 - 127 Modulation vvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF		Other	37	t vum Hi-Hat -Hat ymbal mbal
1001 nnnn 1001 nnnn 1011 nnnn	0kkk kkkk 0kkk kkkk 0000 0001	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vvvvvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored)			37 : Rim Sho 38,44 : Snare D 39 : Hand Cl: 41,43 : Low Tem 42,44 : Closed I 45,47 : Mid Tem 46 : Open Hi: 48,58 : Hi Tem 49 : Crash C; 51 : Ride Cyr	t vum Hi-Hat -Hat ymbal mbal
1001 nnnn 1001 nnnn 1011 nnnn 1011 nnnn 1011 nnnn	0kk kkk 0kk kkk 0000 0001 0100 0000 0100 0000	8000 0000 8000 0000 8000 0000 8111 1111 8888 8888 8111 1111	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vvvvvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF Voice select : 6 voice mode Voice select : 4 volce mode (1 - 126 ignored) ALL NOTES OFF			37 : Rim Sho 38,44 : Snare D 39 : Hand Cl: 41,43 : Low Tem 42,44 : Closed I 45,47 : Mid Tem 46 : Open Hi: 48,58 : Hi Tem 49 : Crash C; 51 : Ride Cyr	t vum Hi-Hat -Hat ymbal mbal ignored.
1001 nnnn 1001 nnnn 1011 nnnn 1011 nnnn 1011 nnnn	8kkk kkkk 8kkk kkkk 8888 8881 8188 8888 8111 1881 8111 1811 8111 188	0000 0000 0000 0000 0000 0000 0000 0000 0111 1111 0000 0000 0111 0111 0000 0000	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vvvvvvv = 1 - 127 Modulation vvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF Voice select : 6 voice mode Voice select : 4 volce mode (1 - 126 ignored)	*1		37 : Rim Sho 38,44 : Snare D 39 : Hand Cl: 41,43 : Low Tem 42,44 : Closed I 45,47 : Mid Tem 46 : Open Hi: 48,58 : Hi Tem 49 : Crash C; 51 : Ride Cyr	t vum Hi-Hat -Hat ymbal mbal ignored.
1001 nnnn 1001 nnnn 1011 nnnn 1011 nnnn 1011 nnnn 1011 nnnn 1011 nnnn 1011 nnnn	0kkk kkkk 0kkk kkkk 0000 0001 0100 0000 0111 1001 0111 1011 0111 1011	0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vvvvvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF Voice select : 6 voice mode Voice select : 4 volce mode (1 - 126 ignored) ALL NOTES OFF ALL NOTES OFF ALL NOTES OFF	*2 *2 *2 *2 *2 *2 *2	* The re	37 : Rim Sho 38,48 : Snare D: 39 : Hand Cl: 41,43 : Low Tom 42,44 : Closed I 45,47 : Mid Tom 46 : Open Hi- 48,56 : Hi Tom 49 : Crash C; 51 : The Cyr note on numbers are sceiver's mode is alway	trum HI-Hat HHat ymbal nbal ignored. ays OMNI OFF, POLY mode.
1001 nnnn 1001 nnnn 1011 nnnn	0kkk kkkk 0000 0001 0100 0000 0100 0000 0111 1001 0111 101 0111 1100 0111 1110 0111 1110	0000 0000 0000 0000 0000 0000 0111 1111 0000 0000 0111 1111 0000 0000 0000 0000 0000 0000 0000 0000	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vvvvvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF Voice select : 6 voice mode Voice select : 4 voice mode (1 - 126 ignored) ALL NOTES OFF F Program Change ppppppp = 0 - 127 (0 - 99)	*1 *2 *2 *2 *2 *2	* The re	37 : Rim Sho 38,48 : Snare D 39 : Hand Cl: 41,43 : Low Tom 42,44 : Closed I 45,47 : Mid Tom 46 : Open Hi 48,58 : Hi Tom 49 : Crash C; 51 : Ride Cy; note on numbers are sceiver's mode is alw;	trum HI-Hat HHat ymbal nbal ignored. ays OMNI OFF, POLY mode.
1001 nnnn 1001 nnnn 1011 nnnn	8kkk kkkk 8kkk kkkk 8888 8888 8198 8888 8111 1881 8111 1881 8111 1188 8111 1189 8111 1191	9000 0000 9000 0000 9000 0000 9000 0000 9111 1111 9000 9000 9111 1111 9000 0000 9000 0000 9000 0000	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vvvvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF Voice select : 6 voice mode Voice select : 4 voice mode (1 - 126 ignored) ALL NOTES OFF FORGERM Change pppppp = 0 - 127 (0 - 99) Pitch Bender LS 6 bits are ignored	*1 *2 *2 *2 *2 *2 *2 *2 *3	2. RECOGN1Z	37 : Rim Sho 38, 48 : Snare D. 39 : Hand Cli 41, 43 : Low Tom 42, 44 : Closed I 45, 47 : Mid Tom 46 : Open Hi 46, 56 : Hi Tom 49 : Crash C: 51 : Ride Cy; note on numbers are sceiver's mode is alw:	trum APP HI-Hat -Hat ymbal abal aignored. ays OMNI OFF, POLY mode.
1001 nnnn 1001 nnnn 1011 nnnn	0kkk kkkk 0000 0001 0100 0000 0100 0000 0111 1001 0111 101 0111 1100 0111 1110 0111 1110	0000 0000 0000 0000 0000 0000 0111 1111 0000 0000 0111 1111 0000 0000 0000 0000 0000 0000 0000 0000	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vovvvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF Voice select : 6 voice mode Voice select : 4 voice mode (1 - 126 ignored) ALL NOTES OFF CONTROL NOTES OFF ALL NOTES OFF Program Change pppppp = 0 - 127 (0 - 99) Pitch Bender	*2 *2 *2 *2 *2 *2 *2	* The re 2. RECOGNIZ 2.1 MELODY p * When By t	37 : Rim Sho 38, 48 : Snare D. 39 : Hand Cli 41, 43 : Low Tom 42, 44 : Closed I 45, 47 : Mid Tom 46 : Open Hi 46, 56 : Hi Tom 49 : Crash C; 51 : Ride Cy; note on numbers are sceiver's mode is alw:	trum HI-Hat HHat ymbal nbal ignored. ays OMNI OFF, POLY mode.
1001 nnnn 1001 nnnn 1011 nnnn 11110 nnnn	8kkk kkkk 8kkk kkkk 8888 8888 8188 8888 8111 1881 8111 181 8111 118 8111 118 8111 111 8ppp pppp 8888 8888	0000 0000 0000 0000 0000 0000 0111 1111 0000 0000 0111 1111 0000 0000 0000 0000 0000 0000 0000 0000	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vvvvvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF Voice select : 6 voice mode Voice select : 4 voice mode (1 - 126 ignored) ALL NOTES OFF CALL NOTES OFF ALL NOTES OFF ALL NOTES OFF LOW NOTES OFF ALL NOTES OFF LOW	*1 *2 *2 *2 *2 *2 *2 *2 *3	* The re 2. RECOGNIZ 2.1 MELODY p * When By t a 1111 b 8108 c 9811	37 : Rim Sho 38.48 : Snare D: 39 : Hand Cl: 41.43 : Low Tom 42.44 : Closed I 45.47 : Mid Tom 46 : Open Hi 48.56 : Hi Tom 49 : Crash C: 51 : Ride Cyr note on numbers are receiver's mode is alw: ED EXCLUSIVE MESSAGES art changing a tone. a Descr 9000 Exclusive sta 9001 Roland ID #	trum Hi-Hat Hat Hat whbai ignored. ays OMNI OFF, POLY mode.
1001 nnnn 1001 nnnn 1011 nnnn 1111 nnnn 1110 nnnn 1110 nnnn 1111 0nnn	0kkk kkkk 0000 0001 0100 0000 0111 1001 0111 1001 0111 101 0111 110 0111 111 0111 111 0111 111 0111 111 0110 0000	0000 0000 0000 0000 0000 0000 0000 0000 0111 1111 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vovvvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF Voice select : 6 voice mode Voice select : 4 voice mode (1 - 126 ignored) ALL NOTES OFF CALL NOTES OFF ALL NOTES OFF LOTES OFF ALL NOTES OFF CALL NOTES OFF LOTES OFF LOTES OFF CALL NOTES OFF LOTES OFF CALL NOTES OFF CALL NOTES OFF ALL NOTES OFF CALL NOTE	*1 *2 *2 *2 *2 *2 *2 *2 *3	* The re 2. RECOGN1Z 2.1 MELODY p * When Byt	37 : Rim Sho 38, 48 : Snare D. 39 : Hand Cli 41, 43 : Low Tom 42, 44 : Closed I 45, 47 : Mid Tom 46 : Open Hi 48, 58 : Hi Tom 49 : Crash C; 51 : Ride Cy; note on numbers are celver's mode is alw; ED EXCLUSIVE MESSAGES art changing a tone. e Descr 2008 Exclusive sta 9001 Roland ID # 9001 Roland ID # 9000 Operation cod 9001 Roland ID # 9000 Operation cod 9001 Roland ID # 9000 Operation cod 9001 Roland ID # 90001 Roland	trum APP HI-Hat Hat ymbal mbal ignored. Ays OMNI OFF, POLY mode. iption tus is = tone change mode basic channel, nnnn = 0 - 15 1 = channel #
1001 nnnn 1001 nnnn 1011 nnnn 1111 nnnn	8kkk kkkk 8kkk kkkk 0000 0001 0100 0000 0111 1001 0111 1001 0111 1101 0111 1111 0111 1111 0111 1111 0111 1111 0110 0000	0vv vvv 0000 0000 0vv vvv 0111 1111 0000 0000 0111 1111 0000 0000 0101 0000 0000 00	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vovvvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF Voice select : 6 voice mode Voice select : 4 voice mode (1 - 126 ignored) ALL NOTES OFF CALL NOTES OFF ALL NOTES OFF LOTES OFF ALL NOTES OFF CALL NOTES OFF LOTES OFF LOTES OFF CALL NOTES OFF LOTES OFF CALL NOTES OFF CALL NOTES OFF ALL NOTES OFF CALL NOTE	*2 *2 *2 *2 *2 *2 *2 *3	* The re 2. RECOGNIZ 2.1 MELODY P * When By t a 1111 b 8108 c 0811 d 8888	37 : Rim Sho 38, 48 : Snare D. 39 : Hand Cl: 41,43 : Low Tom 42,44 : Closed I 45,47 : Mid Tom 46 : Open Hi- 48,56 : Hi Tom 49 : Crash C; 51 : Ride Cy; note on numbers are sceiver's mode is alw: ED EXCLUSIVE MESSAGES art changing a tone. e	trum Al-Hat Hat Hat mbal ignored. ays ONNI OFF, POLY mode. iption tus ie = tone change mode basic channel, nnnn = 0 - 15 1 = channel # 127
1001 nnnn 1001 nnnn 1011 nnnn 1110 nnnn 1110 nnnn 1111 0000 1111 0111 Note: *1	0kkk kkkk 0000 0001 0100 0000 0101 1001 0111 1001 0111 1001 0111 1100 0111 1110 0111 1110 0111 1111 0ppp pppp 0b00 0000	0vv vvv 0000 0000 0000 0000 0000 0000	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vvvvvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF Voice select : 6 voice mode Voice select : 4 voice mode (1 - 125 ignored) ALL NOTES OFF CALL NOTES OFF ALL NOTES OFF LOTES OFF LOTES OFF ALL NOTES OFF LOTES OFF LOTES OFF LOTES OFF ALL NOTES	*2 *2 *2 *2 *2 *2 *2 *3	* The re * The re 2. RECOGNIZ 2.1 MELODY p * When By t a 1111 b 8100 c 9011 d 8000 e 9xxx f 9zzz	37 : Rim Sho 38,48 : Snare D 39 : Hand Cl: 41,43 : Low Tom 42,44 : Closed I 45,47 : Mid Tom 46 : Open Hi- 48,56 : HI Tom 49 : Crash C; 51 : Ride Cy; note on numbers are ceiver's mode is alw: ED EXCLUSIVE MESSAGES art changing a tone. e	trum Al-Hat Hat Hat mbal ignored. ays ONNI OFF, POLY mode. iption tus ie = tone change mode basic channel, nnnn = 0 - 15 1 = channel # 127 127 121 for values)
1001 nnnn 1001 nnnn 1011 nnnn 1110 nnnn 1110 nnnn 1111 0000 1111 0111 Notes *1 *2 *	8kkk kkkk 8kkk kkkk 8888 8888 8888 8108 8888 8111 1881 8111 1811 8111 1810 8111 111 8111 111 9ppp pppp 8b88 8688	0vv vvv 0000 0000 0000 0000 0000 0000	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vvvvvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF Voice select : 6 voice mode Voice select : 4 voice mode (1 - 125 ignored) ALL NOTES OFF L NOTES OFF ALL NOTES OFF ALL NOTES OFF L NOTES OFF L NOTES OFF ALL NOTES OFF ALL NOTES OFF ALL NOTES OFF ALL NOTES OFF C am Change ppppppp = 0 - 127 (0 - 99) Pitch Bender LS 6 bits are ignored Exclusive EOX Active Senring	*2 *2 *2 *2 *2 *2 *2 *3	* The re 2. RECOGNIZ 2.1 MELODY p * When By t a 1111 b 8100 c 0811 d 8800 e 8xxx	37 : Rim Sho 38,48 : Snare D 39 : Hand Cl: 41,43 : Low Tom 42,44 : Closed I 45,47 : Mid Tom 46 : Open Hi- 48,56 : HI Tom 49 : Crash C; 51 : Ride Cy; note on numbers are ceiver's mode is alw: ED EXCLUSIVE MESSAGES art changing a tone. e	trum Al-Hat Hat Hat mbal ignored. ays ONNI OFF, POLY mode. iption tus ie = tone change mode basic channel, nnnn = 0 - 15 1 = channel # 127 127 121 for values)
1001 nnnn 1001 nnnn 1011 nnnn 1110 nnnn 1110 nnnn 1111 0000 1111 0111 Notes *1 *2 *	8kkk kkkk 8kkk kkkk 8888 8888 8888 8108 8888 8111 1881 8111 1811 8111 1810 8111 111 8111 111 9ppp pppp 8b88 8688	0vv vvv 0000 0000 0000 0000 0000 0000	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) vvvvvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF Voice select : 6 voice mode Voice select : 4 voice mode (1 - 125 ignored) ALL NOTES OFF L NOTES OFF ALL NOTES OFF ALL NOTES OFF L NOTES OFF L NOTES OFF ALL NOTES OFF ALL NOTES OFF ALL NOTES OFF ALL NOTES OFF C am Change ppppppp = 0 - 127 (0 - 99) Pitch Bender LS 6 bits are ignored Exclusive EOX Active Senring	*2 *2 *2 *2 *2 *2 *2 *3	# The re 2. RECOGN1Z 2.1 MELODY p * When Byt 1111 b 8100 c 9811 d 8000 e 9xxx f 9zzz g 1111	37 : Rim Sho 38, 48 : Snare D. 38 : Hand Cli 41,43 : Low Tom 42,44 : Closed I 45,47 : Mid Tom 46 : Open Hi 46,56 : Hi Tom 49 : Crash C; 51 : Ride Cy; note on numbers are sceiver's mode is alw: ED EXCLUSIVE MESSAGES art	trum AP AII-Hat Hat Hat Whal alignored. Ays OMNI OFF, POLY mode. Lignored. Lignored. Ays OMNI OFF, POLY mode. Lignored. Ays OMNI OFF, POLY mode. Lignored. Lignore
1001 nnnn 1001 nnnn 1011 nnnn 1110 nnnn 1110 nnnn 1111 0000 1111 0111 Notes *1 *2 *	8kkk kkkk 8kkk kkkk 8888 8888 8888 8108 8888 8111 1881 8111 1811 8111 1810 8111 111 8111 111 9ppp pppp 8b88 8688	0000 0000 0000 0000 0000 0000 0000 0000 0111 1111 0000 0000 0111 1111 0000 0000 0100 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000	Note OFF kkkkkk = 0 - 127 (24 - 108) Note ON kkkkkk = 0 - 127 (24 - 108) Vovyvvv = 1 - 127 Modulation vvvvvvv = 0 - 127 Hold ON (1 - 126 ignored) Hold OFF Voice select : 6 voice mode Voice select : 4 volce mode (1 - 126 ignored) ALL NOTES OFF CALL NOTES OFF ALL NOTES OFF CALL NOTES OFF ALL NOTES OFF CALL NOTES OFF ALL NOTES OFF CALL NOTES CALL NOTES CALL NOTES C	*2 *2 *2 *2 *2 *2 *2 *3	# The re 2. RECOGN1Z 2.1 MELODY p * When Byt 1111 b 8100 c 9811 d 8000 e 9xxx f 9zzz g 1111	37 : Rim Sho 38, 48 : Snare D 39 : Hand Cli 41, 43 : Low Tom 42, 44 : Closed I 45, 47 : Mid Tom 46 : Open Hir 48, 56 : Hi Tom 49 : Crash C; 51 : Ride Cy; note on numbers are changing a tone. ED EXCLUSIVE MESSAGES art	trum AP AII-Hat Hat Hat Whal alignored. Ays OMNI OFF, POLY mode. Lignored. Lignored. Ays OMNI OFF, POLY mode. Lignored. Ays OMNI OFF, POLY mode. Lignored. Lignore

```
Byte
                                                    Description
                                                                                                                                                                                                 Function
                                                                                                                                                                                                                                                             Function
                                    Exclusive status
Roland ID #
Operation code = Tone parameter change
Unit # = MIDI basic channel, nnnn = 0 - 15
where nnnn + 1 = channel #
Parameter number
yyyyy = 0 - 17
Value
Zzzzzzz = 0 - 127
End of Exclusive
                                                                                                                                                                                                                                                             VCF LFO
VCF KYBD
VCA level
ENV attack
ENV decay
ENV sustain
ENV release
Sub level
     a 1111. 9060
b 6160 9061
c 6811 9610
d 6890 nnnn
                                                                                                                                                                                                 LFO rate
LFO delay
DCO LFO
DCO PWM
                                                                                                                                                                                                                                                    8
9
10
11
12
13
14
                                                                                                                                                                                                VCF cutoff freq
VCF resonance
VCF ENV
      e 888y yyyy
                                                                                                                                                                                        5
6
7
      f Ozzz zzzz
      g 1111 0111
                                                                                                                                                                                    For switches
                                                                                                                                                                                                                                                    3
Function
                 *** Example ***
a b c d e f g
F0 41 32 00 03 40 F7
                                                                                                                                                                                                   dynamics affection
VCF VCA
0=off 0=off
1=on 1=on
   * Parameter number table
                                                                                                                                                                                                                   chorus
1=off
0=on
                                                                                                                                                                                                                                                     pulse
1=on
0=off
                                                                                                                                                                                      16
      P # Function
                                                                    P #
                                                                                Function
                                                                                                                                                                                                                                                                                   190 : 4°
910 : 8°
981 : 16°
                                                                                VCF LFO
VCF KYBD
VCA level
ENV attack
ENV decay
ENV sustain
ENV release
Sub level
                   LFO rate
LFO delay
DCO LFO
DCO PWM
                                                                      8
9
10
11
12
13
14
                                                                                                                                                                                      17
                                                                                                                                                                                                                                                                        VCA
                                                                                                                                                                                                                                                                                         ENV
                                                                                                                                                                                                                                                                      1=gate 1= -
9=ENV 0= +
                  VCF cutoff freq
VCF resonance
VCF ENV
      For switches
                         6
                                          5
                                                                      3.
Function
                                                                                                                                                              2. 3
                     dynamics affection
VCF VCA
0=off 0=off
1=on 1=on
                                                                                                                                                                             BASS part
                                                                                                                                                                                       Byte
                                                                                                                                                                                                                               Description
                                                                                                      range
100 : 4'
010 : 8'
001 : 16'
        16
                                                                                                                                                                                                             Exclusive status
Roland ID #
Operation code = tone change mode
Unit # = MIDI basic channel, nnnn = 0 - 15
where nnnn + 1 = channel #
Tone number
xxxxxxx = 0 - 127
Value
zzzzzzz = 0 - 127
(10 bytes total for values)
                                                                                                                                                                              a 1111 0000
b 0100 0001
c 0011 0000
d 0000 nnnn
                                                                                                         ENV
1= -
0= +
                                                                                         VCA
1=gate
0=ENV
        17
                                                        1=0 f f
0=0n
                                       i=on
0=off
                                                                                                                                                                               f Ozzz zzzz
                                                                                                                                                                               g 1111 0111
                                                                                                                                                                                                              End of Exclusive
CHORD part
                                                                                                                                                                                          *** Example ***
                                                                                                                                                                                               Description
                                                                                                                                                                                                f . . . . . . . . . . . . . g
19 34 3B 20 56 28 00 1A 18 F7
        Byte
                               Exclusive status
Reland ID #
Operation code = tone change mode
Unit # = MIDI basic channel, nnnn = 0 - 15
Where nnnn + 1 = channel #
Tone number
xxxxxxx = 0 - 127
Yalue
zzzzzzz = 0 - 127
(18 bytes total for values)
 a 1111 0000
b 9100 0001
c 0011 0000
d 0000 nnnn
                                                                                                                                                                                                              Description
                                                                                                                                                                                      Byte
                                                                                                                                                                                                            Exclusive status
Reland ID #
Operation code = Tene parameter change
Unit # = MIDI basic channel, nnnn = 0 - 15
where nnnn + 1 = channel #
Parameter number
yyyyy = 0 - 17
Value
zzzzzz = 0 - 127
End of Exclusive
                                                                                                                                                                                  1111 9808
6100 9001
9011 9610
 e Øxxx xxxx
 f Ozzz zzzz
                                                                                                                                                                              c 9011 9010
d 9999 nnnn
                                                                                                                                                                              e 888y yyyy
 g 1111 0111 End of Exclusive
            g 1111 9111
                                                                                                                                                                                        *** Example ***
a b c d e f g
F0 41 32 01 03 40 F7
                 19 34 3B 20 56 28 00 1A 18 F7
* When changing a tone parameter.
                                                                                                                                                                              * Parameter number table
       Byte
                             Exclusive status
Reland ID #
Operation code = Tone parameter change
Unit # = MIDI basic channel, nnnn = 0 - 15
where nnnn + 1 = channel #
Parameter number
yyyyy = 0 - 17
Value
zzzzzyy - 0
                                                                                                                                                                                              Function
                                                                                                                                                                                                                                                            Function
a 1111 0000
b 0100 0001
c 8011 0010
d 0000 nnnn
                                                                                                                                                                                              x
x
DCO PWM
                                                                                                                                                                                              X
VCF cutoff freq
VCF resonance
VCF ENV
e 000y yyyy
1 Ozzz zzzz
                              zzzzzzz = 0 - 127
End of Exclusive
                                                                                                                                                                                  For switches
                                                                                                                                                                                                    6
                                                                                                                                                                                                                                                  Function
               a b c d e f g
F0 41 32 02 03 40 F7
                                                                                                                                                                                                                            wave select
l=saw
0=pulse
                                                                                                                                                                                    16
                                                                                                                                                                                    17
```

x : Ignored

2. 2