K11

SYNTHESIZER

OWNER'S MANUAL

KAWAI

Welcome

We'd like to take this opportunity to thank you for purchasing the KAWAI K11 Synthesizer.
The K11 is a top quality GM-compatible synthesizer that built around the KAWAI proprietary DMS2 "Digital Multi Spectrum" tone generator.

The K11 uses the proprietary Kawai DMS2 (Digital Multi Spectrum) system as its sound source, with a synthesizer (or module) supporting General MIDI for high-fidelity sound, and a hybrid keyboard providing a natural key touch and high response through Kawai's traditional technology. With a wide range of functions for everything from desktop music through live performances, here is the friendly unit that combines excellent sound with superb performance for fun everywhere.

We hope you'll thoroughly read this manual before using the K11. It will help you get the most out of its great features for many years to come.

Macintosh is a registered trademark of Apple Computer, Inc.
GM is an abbreviation for General MIDI, a recommended standard format to be followed by all manufactures, which specifies how MIDI functions are to be implemented in tone generators.

Features of the K11

The K11 is a synthesizer built around the DMS2 tone module and compatible with the new GM System for standardizing certain MIDI functions on electronic musical instruments, regardless of manufacturer or country of origin.

This state-of-the-art synthesizer has lots of features that make it easy to synthesize high-quality original sounds. Add to that digital effects and built-in rhythm functions, and the ability to grow as you and your system grow.

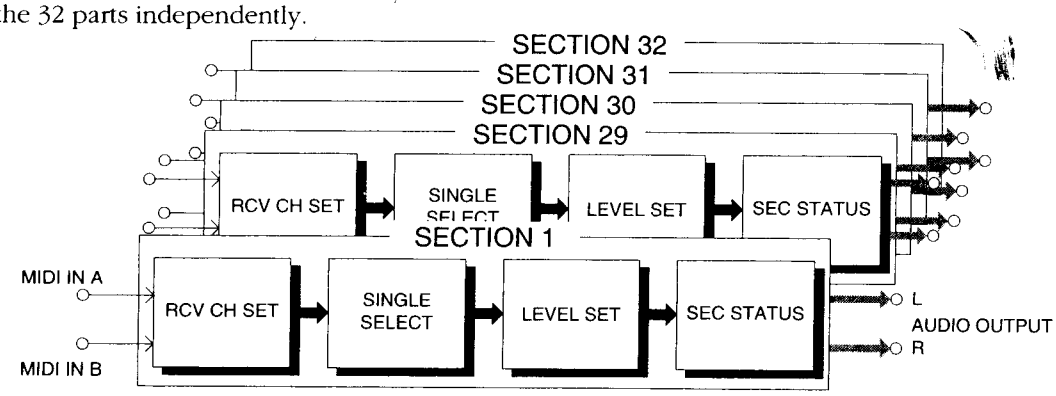
1. **COMPOSE/PERFORMANCE mode**

   For composing and arranging we offer the COMPOSE mode with precise sound mixing control, and for the live performer we have the PERFORMANCE mode with accurate sound handling.

   For everything from desktops to live performances, the K11 supports a wide range of music styles flexibly and powerfully.

2. **32 Parts Using 2 MIDI INs**

   The K11 has a maximum 32-voice polyphony, or 32 sections (16 channels x two MIDI INs, A and B) that can be played simultaneously, drums included, for a rich ensemble sound. This makes it eminently possible to play complex music with many parts, such as a classical piece, using the variable multi-timbral system to play each of the 32 parts independently.



3. **Internal computer interface**

   Comes with a serial interface supporting direct connection to the Macintosh, without the need for a MIDI interface card. With the K11 all by itself you can enjoy the power of a state-of-the-art desktop music system.

4. **Temperaments**

   The K11 has 55 preset temperaments. Each of the 32 sections can play with a different preset, which makes possible uncanny simulation of the slightly different temperaments of all the instruments gathered to create the sound of a real orchestra.

5. **High Quality Sounds**

   The K11 comes with 128 percussion sounds and 128 tones specially programmed to make the most of the features of the new DMS2 tone generator. So if you have no experience or interest in synthesizing new tones, you can simply select and enjoy incredible sounds from the wide variety already available to you.

6. **Sounds**

   As a MultiMedia accessory, 256 new looping tone waveforms and 256 new drum waveforms have been recorded in 48Mbit or WAVE data, and you can create some really high-quality sounds from these using the latest in waveform processing technology.

7. **Quality**

   The DMS2 tone generator has been redesigned with an 18-bit DAC (digital-to-analog converter) for 16-bit linear 44.1 kHz sampled waveform playback, giving CD-like audio quality to your sounds.

Reading This Manual

How the Manual is Organized

The manual for the K11 is divided into seven sections, organized as follows:

Section 1: Introduction
This section gives a brief overview of the K11 functions and how to hook it up with other devices.

Section 2: Play it for yourself
Describes how to play in the two modes: the PERFORMANCE mode and the COMPOSE mode.

Section 3: Section Parameters That Control Timbre and Volume
How to make the settings you need to control certain important Section parameters.

Section 4: Creating New Sounds
How to create a Single Patch.

Section 5: Creating Drum Tones
How to edit a Drum Patch.

Section 6: System Settings
How to make settings relating to the way the K11 works overall.

Section 7: About QUICK MIDI
Describes the QUICK MIDI functions, which provide realtime control of external MIDI equipment.

Table of Contents

- Welcome 1
- Features of the K11 2
- Reading This Manual 5
- Table of Contents 6
- Before You Try Out the K11 (Some Precautions for Use) 9
- Part Names 11

SECTION 1 Introduction 14

1.1 The Stuff That Comes With Your K11 14
1.2 Let's Get It Together 14
1) Connections to a Audio System 14
2) Hooking Up to a Digital Sequencer 15
3) Hooking Up to a Macintosh Series Computer 15
4) Connecting to a Personal Computer 16
5) Connecting the GMega or another K11 16
1.3 Sound source and internal keyboard 17
1.4 The concept of modes 18
1.5 Overview of the K11 19
1) Modes 19
2) K11 Functions 20
1.6 Power Up! 23
1.7 Play the Demo Song 23

SECTION 2 Let's Play Some Music! 24

2.1 Play Mode 24
2.2 PERFORMANCE mode functions 24
2.3 About the COMPOSE Play Mode Functions 24
2.4 Try to Play a Few Notes 25
1) Using the internal keyboard in the PERFOMRNACE mode 25
2) Using sequencer or computer in PERFORMANCE mode 25
2.5 PERFORMANCE patch selection and editing 25
1) PERFORMANCE patch selection 25
2) PERFORMANCE patch editing 25
3) Name/Single Select/Sec Select 26
4) Level Set/Section Status 27
2.6 Using Some of the Functions and Listening to the Results 28
1) Section Select 28
2) Single Select 29
3) Receive Channel Set 30
4) Level Set/Section Status 31
2.7 Monitor Mode 32
2.8 About MIDI 32
1) What is MIDI? 32
2) MIDI Message 33
3) Implementation Charts 34
4) Drum Kits 34

SECTION 3 Section Parameters That Control Timbre and Volume 35

3.1 Section Parameters 35
1) How Section Parameters are Organized 35
2) How to Select a Section 35
3.2 How to Edit 36
1) Entering Section Edit Mode 36
2) Calling Up Functions and Value Settings 36
3) Changing the Section You Are Editing 36
3.3 Editing Section Parameters 37
1) PAN/TRANSPOSE 38
2) TUNE/EFFECT LEVEL 39
3) BEND DEPTH/CUTOFF OFFSET 40
4) DCA ATTACK OFFSET/DCA RELEASE OFFSET 41
5) ZONE LO/HI 42
6) MOD WHEEL VIB/PRESS VIB 44
7) RECEIVE HOLD/TEMPERMENT TYPE 45
8) TEMPERAMENT KEY 46

SECTION 4 Creating New Sounds 47

4.1 Creating a Single Patch 47
1) General Procedure for Creating New Sounds 47
2) Before the Sound is Output 48
3) Envelopes 49
4) The Tone Generator: How It Works 50
4.2 Single Edit Procedures 51
1) Getting Into Single Edit Mode 51
2) How to Call Up Parameters and Change Their Values 51
3) Single Copy 53
4) Exchanging Sources 54
4.3 Single Patch Editing 55
1) NAME 1 to 8/SOURCE MONITOR 55
2) DCO WAVE SELECT/DCO KEY TRACK 56
3) FIXED KEY/DCO COARSE 57
4) DCO FINE/KEY ON DELAY 58
5) VIB DEPTH 59
6) VIB SHAPE/VIB SPEED 60
7) AM 61
8) DCF LINK 62
9) DCF TYPE 63
10) DCF CUTOFF/DCF RESO DEPTH 64
11) DCF KEY TRACK/DCF VEL CURVE 65
12) DCF VEL DEPTH/DCF VEL ASSIGN 66
13) DCF ENV DEPTH 67
14) DCF ATTACK LEVEL/DCF ATTACK TIME/DCF DECAY TIME 68
15) DCF SUSTAIN 1 LEVEL/DCF MOD TIME/DCF SUSTAIN 2 LEVEL 69
16) DCF RELEASE TIME/DCA ATTACK LEVEL 70
17) DCA VEL CURVE/DCA VEL DEPTH 71
18) DCA ATTACK TIME/DCA DECAY TIME 72

19) DCA SUSTAIN 1 LEVEL/DCA MOD TIME 73
20) DCA SUSTAIN 2 LEVEL/DCA RELEASE TIME 74

SECTION 5 Editing Percussion Voices 75

5.1 Editing 75
1) The Drum Patches 75
2) Getting into Drum Edit Mode 75
3) Drum Copy 76
4) Calling Up Functions and Value Settings 77

5.2 Editing a Percussion 78
1) PC ASSIGN/KEY SELECT/PC NAME 78
2) DCA LEVEL/PAN 79
3) PC EFFECT LEVEL/WAVE SELECT 80
4) DCO PITCH/DCO FINE/DCF CUTOFF 81
5) DCF RESO DEPTH/DCF VEL CURVE 82
6) DCF VEL DEPTH/DCF VEL ASSIGN 83
7) DCF ATTACK TIME/DCF DECAY TIME 84
8) DCA VEL CURVE/DCA VEL DEPTH 85
9) DCA ATTACK TIME/DCA DECAY TIME 86
10) GATE TIME/DCF ATK LEVEL/DCF SUS LEVEL 87
11) DCF ENV DEPTH/DCF TYPE 88

SECTION 6 System Settings 89

1) BANK SELECT 89
2) SYS EFFECT TYPE 90
3) EFFECT PARAMETER 1 to 6/UNIT TUNE 91
4) UNIT CH/UNIT RCV PGM 92
5) UNIT RCV EXCL/UNIT RCV MODE 93
6) Ser. I/F MODE 94
7) DUMP ALL 96
8) DUMP SEC+SYS DATA 97
9) FACTORY RESET 98
10) LOCAL/KYBD SHIFT 99
11) KYBD TRS CH 100

SECTION 7 About QUICK MIDI 101

QUICK MIDI Program Change 101
QUICK MIDI Volume Control/QUICK MIDI Pan Control 102
QUICK MIDI Effect Control 103

APPENDIX 104

K11 SINGLE PATCH Summary 104
Drum key Assign 105
PERFORMANCE PATCH Summary 107
Specifications 108
K11 GM RESET DATA 109
Table of Temperaments 110
INDEX 111
MIDI Implementation Chart 114

Before You Try Out the K11 (Some Precautions for Use)

To get years of service from your K11, please read and follow the following important instructions.

Location:

Avoid

- Direct sunlight, such as near a window;
- Temperature extremes, such as directly in front of a heater or out-of-doors;
- High humidity;
- Sandy or dusty locations; and
- Places that are subject to high vibration levels.

Power Supply:

- Make sure you are using the K11 with proper power supply, and with the AC adapter that came with it. Do not even think of using it with other adapters or at other voltages.
- Make sure that everything is properly hooked up before turning on the power. And, make sure that the power is turned off before hooking new things into the system.
- Try to plug into an outlet that is not also being used by devices that draw a lot of current or generate electrical noise.
- Unplug the K11 if you are not going to be using it for an extended period of time.
- Unplug the K11 when there's a danger of lightning strikes or other electrical disturbance.

Proper Procedure for Turning On the Power

- When connected to a computer and/or MIDI sequencer, turn on that device first; then turn on the K11, then any audio devices (instrument amp, stereo system, etc.). Turn the power off in the reverse order.

Hooking Up

- When hooking up external devices to the K11, turn off the power first on both sides to prevent damage to speakers or amps in the devices.

Effects from Other Devices

- The K11 is a high-speed, precision microprocessor devices. As such, it is very susceptible to malfunctions due to line noise or voltage spikes and fluctuations. If this occurs, try turning the K11 off, waiting a few seconds, then turning it on again.

MIDI Cables

- Be sure to use only standard MIDI cables.
- MIDI cables are limited to 15m in length. Using cables that are longer than this can induce errors in data transmission and faulty operation.

Handling and Transporting

- Make sure all cables are disconnected during transport.
- Be sure to pull on the end of the plug and not the cable itself when unplugging.
- Use only as much force as is needed with switches and plugs.

Keeping the K11 in Good Shape

- For regular cleaning, use a soft, dry cloth.
- If the K11 gets especially dirty, clean it with a mild, neutral detergent and wipe it down with a soft cloth immediately after.
- Whatever you do, don't use benzene-based cleaning solutions or thinners.

Data Backup Batteries

- The K11 is equipped with a special lithium backup battery to maintain data in memory even when the power is turned off. These batteries have a lifetime of five years or more, although this can depend somewhat on operating conditions. We recommend you replace them at about the five-year mark as a precaution. When it comes time to do this, ask at the store where you made your purchase about the nearest KAWAI Service Center.

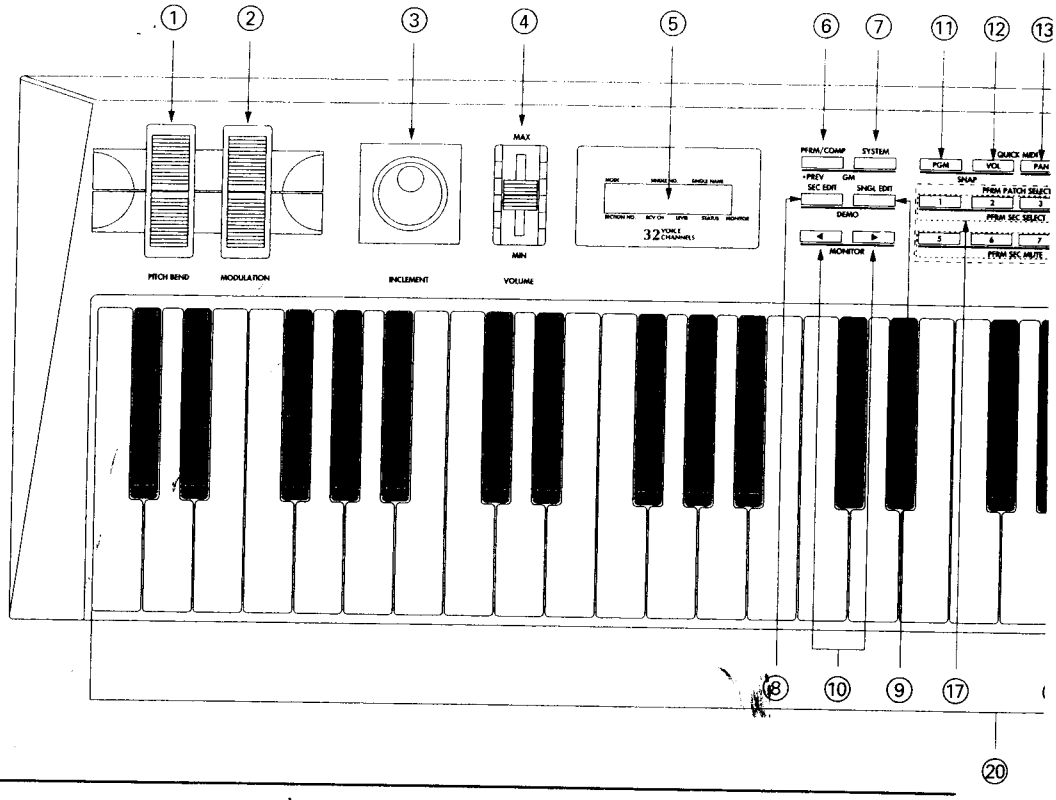
Protecting Your Data During Repairs

If you have to send out your K11 for repairs, we recommend you dump all your most important data into another MIDI device ahead of time. Try as we might, there is always the chance that this data could be lost during the repair process.

Modifications

Don't open up the case and internals, or otherwise try to modify the K11; you might wind up hurting either yourself or the machine. And you'll void the warranty.

Part Names



Front Panel

① PITCH BEND (Pitch bend wheel)

This controller modifies the sound being output. Rolling it away from you will cause the pitch to rise, and toward you will cause it to fall. When you let go the output sound will return to normal.

② MODULATION (Modulation wheel)

This controller is used to adjust the degree and rate of change in sound quality, tone and volume. Can also be used in QUICK MIDI.

③ INCREMENT DIAL

Lets you set parameter values at the current cursor location or select options. Turning it to the right means YES, to the left NO. When controlling values, the numbers increase as you turn it to the right (clockwise), and decrease as you turn it to the left (counter-clockwise).

④ VOLUME

Adjusts the volume at the headphone jack and output jacks.

⑤ DISPLAY

A 16-character, 2-line LCD display showing settings and operations on the K11.

⑥ PFRM/COMP (PERFORMANCE/COMPOSE select button)

This button switches between the PERFORMANCE mode and the COMPOSE mode. In the edit mode it is possible to select the previous function.

⑦ SYSTEM

Puts you in System Edit mode.

Press the ⑥ and the ⑦ at the same time to perform a GM Reset.

⑧ SEC EDIT

Puts you in Section Edit mode.

Pressing ⑧ and ⑨ at the same time plays the Demo song.

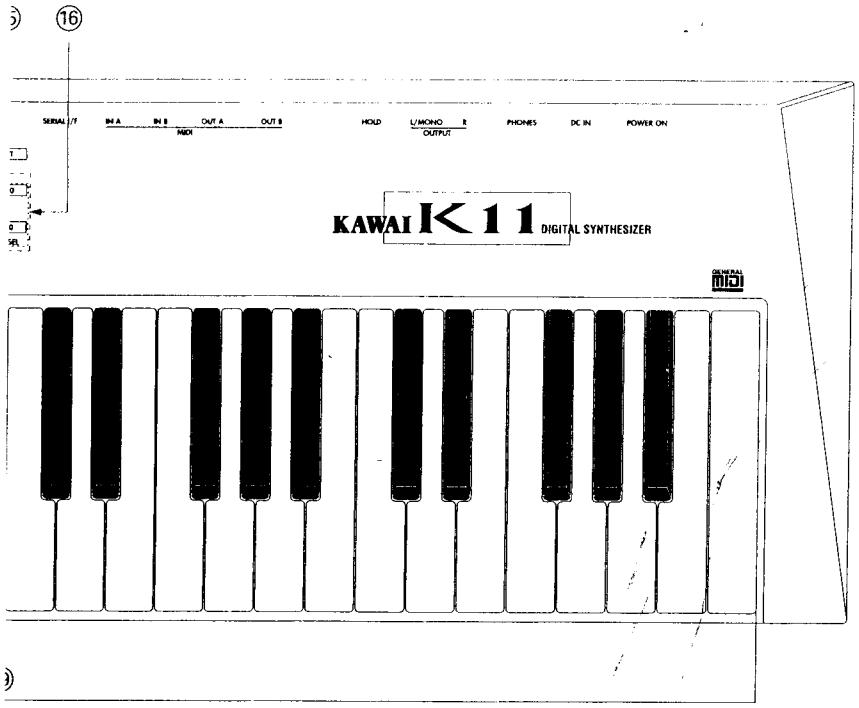
⑨ SNGL EDIT

Puts you in Single Edit/Drum Edit mode.

⑩ CURSOR

These buttons move the cursor in the display.

Pressing the ◁ button moves the cursor toward the left, and ▷ to the right. Pressing both at once puts you into the MIDI Monitor mode.



⑪ **QUICK MIDI/PROG**

This button is used to enter the QUICK MIDI system (PGM mode) for external MIDI equipment program changes.

⑫ **QUICK MIDI/VOL**

This button is used to enter the QUICK MIDI system (VOL mode) for external MIDI equipment volume changes.

If buttons ⑪ and ⑫ are depressed simultaneously, the K11 will output the current bank select information (SysEx) and the section program numbers, volume and pan settings for MIDI receive channels 1A through 16A through the MIDI OUT terminal. This is called the SNAP function.

⑬ **QUICK MIDI/PAN**

This button is used to enter the QUICK MIDI system (PAN mode) for external MIDI equipment pan control.

⑭ **QUICK MIDI/EFFECT**

This button is used to enter the QUICK MIDI system (EFFECT mode) for external MIDI equipment effect control.

If buttons ⑬ and ⑭ are depressed simultaneously, the ALL NOTE OFF, ALL SOUND OFF, and HOLD OFF messages are output for MIDI IN channels 1A through 16A. This is called the PANIC function.

⑮ **EXIT**

This button is used to return to the PERFORMANCE/COMPOSE mode from an edit mode.

⑯ **PFRM PATCH SELECT (PERFORMANCE patch select button)**

When in the PERFORMANCE play mode, this button is used to select one of the 64 PERFORMANCE patches (11 to 88). The 1~8 buttons and the +10/-10 buttons are used.

⑰ **PFRM SEC SELECT (PERFORMANCE section select button)**

When in the PERFORMANCE edit mode, this button is used to directly select one of the four PERFORMANCE sections.

⑱ **PFRM SEC MUTE (PERFORMANCE section mute button)**

When in the PERFORMANCE edit mode, this button is used to directly mute (turn off) one of the four PERFORMANCE sections.

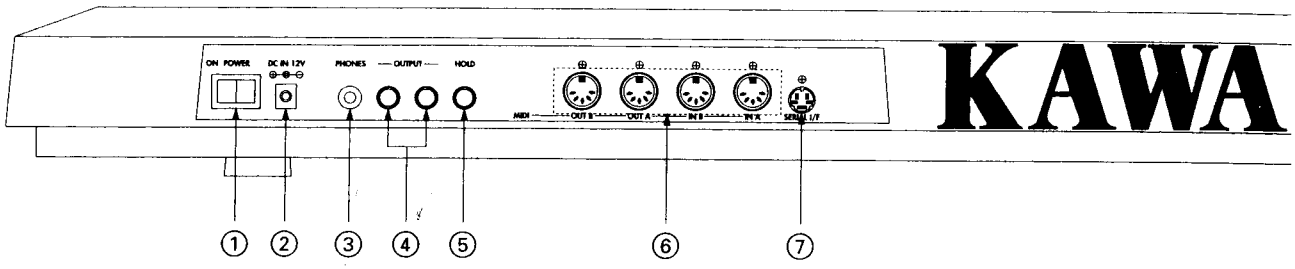
Note: Buttons ⑰ and ⑱ only function in the PERFORMANCE edit mode.

⑲ **SEC SELECT (section select button)**

This button is used to directly select the section.

⑳ **Keyboard**

A 61-key keyboard with velocity, pressure, rear panel, and weights.



Rear Panel

① POWER

Switches the power on and off with each press of the button.

② DC-IN

This is where you plug in the AC adapter that came with the K11.

③ PHONES

A stereo mini plug for headphones. The Volume knob controls headphone volume.

④ OUTPUT

K11 audio output is sent to an instrument amp or audio system via these jacks.

⑤ HOLD Jacks

A foot switch (F1 etc.) can be connected via this jack.

⑥ MIDI Jacks

Jacks for hooking up external MIDI devices using MIDI cables.

MIDI IN A,B

For receiving MIDI data from other MIDI devices.

MIDI OUT A, B

Transmits K11 keyboard information and exclusives. The same information is sent on both A and B ports.

⑦ SERIAL INTERFACE

A Macintosh series computer can be connected via this jack.

SECTION 1 Introduction

1.1 The Stuff That Comes With Your K11

All the following neat stuff comes with your K11. Check the box after opening to make sure you got it all.

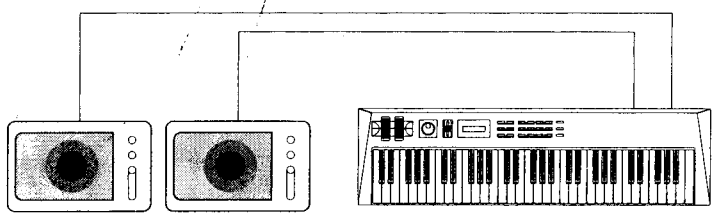
- ◆ One (1) AC adapter
- ◆ One (1) stereo audio cable
- ◆ Owner's Manual (what you're reading now)
- ◆ Wave List

1.2 Let's Get It Together

1) Connections to Audio System

(1) **OUTPUT Jacks**

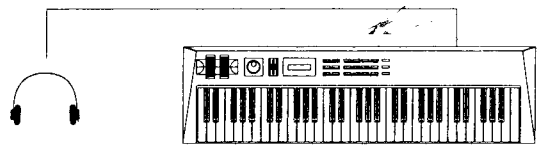
Connect the LINE OUT jacks (L/R) on the rear panel to the appropriate inputs of an instrument amp or audio system.



Speaker amps

(2) **Headphones**

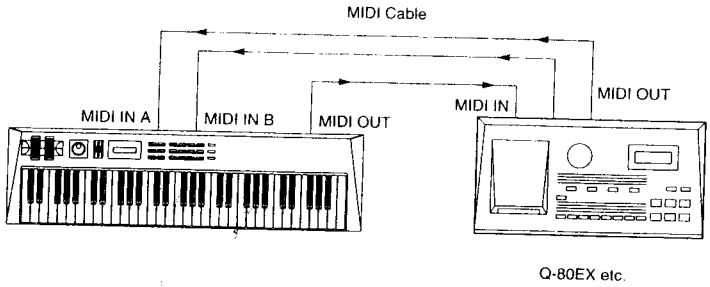
Just plug your headphones directly into the PHONE jack to monitor the sounds coming out of the K11.



Headphones

2) Hooking Up to a Digital Sequencer

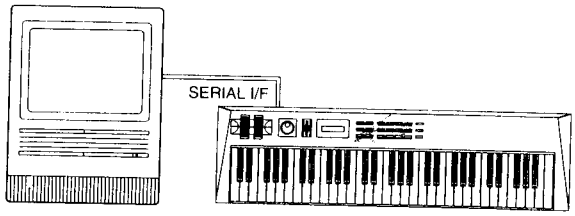
Just run the MIDI cable from the MIDI OUT of the sequencer to the MIDI IN, either A or B, of the K11. If you're using a KAWAI Q-80EX (a 32-track sequencer with 2 MIDI OUTs), you can plug one MIDI OUT into MIDI IN A or the K11, and the other into MIDI IN B. This will let you control up to 32 sections simultaneously on the K11.



3) Hooking Up to a Macintosh Series Computer

You can hook up the K11 directly to the modem or printer serial port of a Macintosh series computer. You'll need a DIN 8-pin cable (usually sold for use with printers) to make the connection. It's a good idea to take this manual or the K11 with you when you purchase the cable, so you can check the pin pattern and make sure you're buying the right thing.

When you have the right cord, just run it directly from the modem or printer serial port of your Mac to the SERIAL I/F port of the K11. This eliminates the need for a separate MIDI interface card or module!

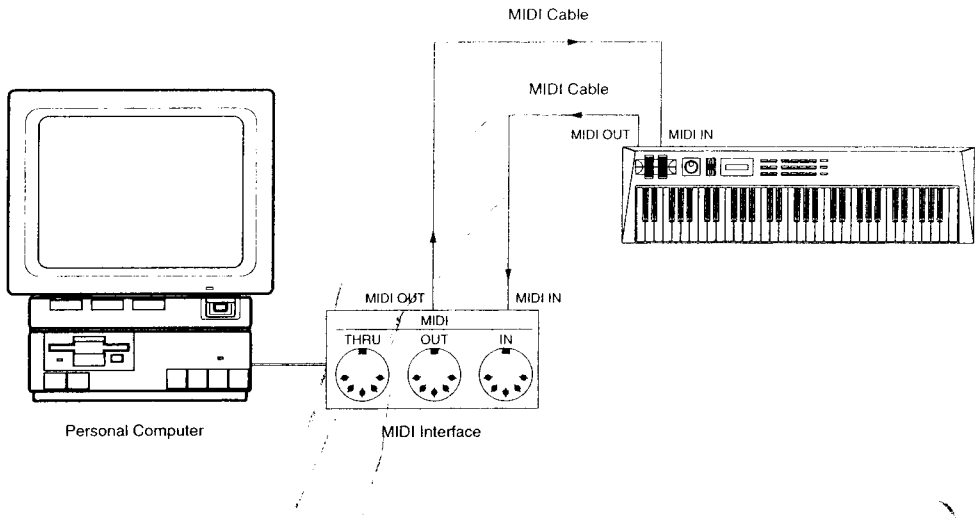


[Note]

- Set the MIDI port clock speed to 1MHz using the application software (sequencer, etc.) on your Mac.
- You can change the MIDI signal routing using the Ser. I/F Mode setting (OFF/OUT/SEQ/EDIT). For more about this, see the part about the MODE menu in "SECTION 6. System Settings" on page 94.

4) Connecting to a Personal Computer

You can connect the K11 to other kinds of personal computers too, you will just need to purchase a separate MIDI interface: either a card or external module.



[Note]

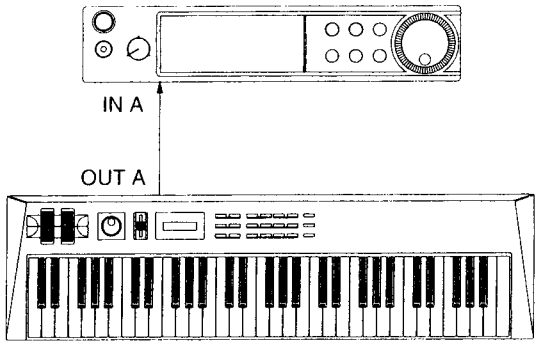
Refer to the manual for the particular MIDI interface you buy to find out how to mount it and hook up to other MIDI devices.

[Hint]

Almost all the button-pressing you do on the K11 panels can also be transmitted from the MIDI OUT using SysEx messages.

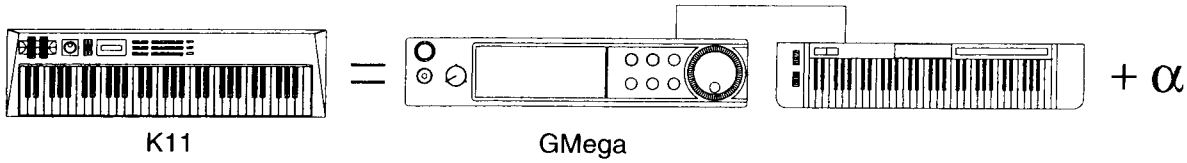
5) Connecting the GMega or another K11

Use MIDI cables to connect the Kawai GMega or another K11 unit. Connect the MIDI OUT connector of the new unit to the MIDI IN A or MIDI IN B connector of the K11. In this case, all system exclusives can be used to create an even more powerful system.



1.3 Sound source and internal keyboard

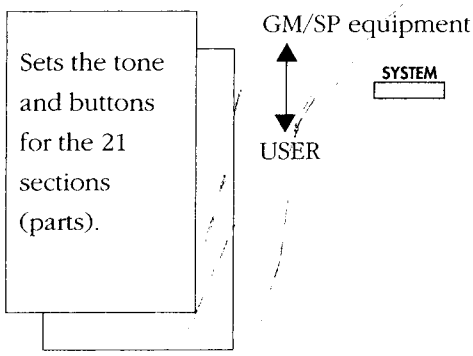
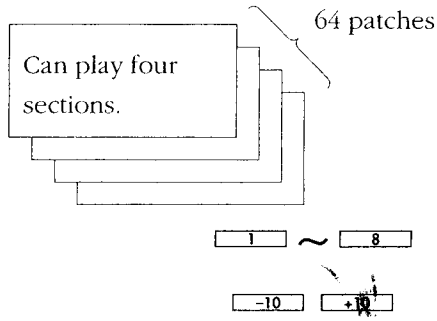
The K11 has the same composition as a sound source (GMega) and MIDI master keyboard (COMPOSE mode), coupled with functions designed to maximize master keyboard performance (PERFORMANCE mode and QUICK MIDI mode).



- When in the COMPOSE mode the internal keyboard handles either the currently displayed section receive channel or the unit channel (set with the KYBD TRS CH (page 100) setting under SYSTEM EDIT).
- When in the PERFORMANCE mode, because sections do not incorporate the concept of channels, the unit channel is always used.
- If you want to control all channels through the external controller, use LOCAL OFF to disengage the internal keyboard. Play information from the keyboard will be output to MIDI OUT, allowing control of external sound sources.

1.4 The concept of modes

The K11 stores the current mode to memory when the power is turned off.

<table>
<tr><td>Play mode</td><td colspan="2">COMPOSE mode
PFRM/COMP
PERFORMANCE mode</td></tr>
<tr><td></td><td>This mode is handy when using a sequencer.

</td><td>This mode is handy on stage, and for ad-lib playing. Common to GM, SP and USER banks.

</td></tr>
<tr><td>Section edit mode</td><td>SEC EDIT
This mode is used to set the MIDI RCV CH, PAN, transpose and temperament for each section (part).</td><td>SEC EDIT
Sets the tone, volume, PAN, transpose and temperament for each section.</td></tr>
<tr><td>Single (Drum edit)</td><td colspan="2">SNGL EDIT
(Only supported in USER BANK)
Edits the drum tones and tones assigned to sections (parts).</td></tr>
<tr><td>System</td><td colspan="2">SYSTEM
This mode is used to set effects and keyboard assignments for the entire K11 system, and for dumps. It can be entered from any mode.</td></tr>
<tr><td>QUICK MIDI</td><td colspan="2">PGM VOL PAN EFFECT
The modulation wheel and increment dial can be used for program change and control change through MIDI OUT (A,B) regardless of the K11 settings. This feature is supported in the play mode and SYSTEM.</td></tr>
</table>

1.5 Overview of the K11

1) Modes

The K11 is always in one of four modes.

PERFORMANCE PLAY MODE	This is the play mode used with the PERFORMANCE mode. up to 64 PERFORMANCE patches in four sections can be selected.
COMPOSE PLAY MODE	Play mode in the COMPOSE mode. You can make full use of the K11's 32 Section multi-timbral capabilities using both A and B MIDI IN ports. By "Section," we mean the combination of the various settings defining the tone, effects applied, etc. In this mode you can select a Single Patch for each Section, MIDI receive channel, volume level, and Section status (ON, OFF, SOLO).
PERFORMANCE EDIT MODE	This mode is used to edit PERFORMANCE patches. For each section the single patch (tone), sound level and section status (ON, OFF, SOLO) can be set or edited.
SECTION EDIT MODE	This mode is where you can select the pan, effects, attack, release, and a dozen more features for editing or changing the sound of a section. As with all data, you should make frequent backups after making editing changes to these sections. In the COMPOSE mode the ROM bank (GM/SP) can be edited, but it will be reset if the bank is switched. Backup is possible by executing a bulk dump to an external MIDI device.
SINGLE/DRUM EDIT MODE	In this mode you can edit (change the settings on) a User Bank Single Patch or Percussion patch. Create a sound for any image here with the 32 editing commands, including WAVE Select, Filter, and Envelope Generator. (However, you can't edit the GM/SP banks.)
SYSTEM MODE	This is where you make settings like Effect Type/Parameter and Unit Tune that effect the K11 itself, and others like Receive Channel, Program Change, System Exclusive Change Receive ON/OFF, etc. From this mode, you can also send these internal K11 settings via MIDI to be stored in an external MIDI device, or reinitialize the K11 from that device.
QUICK MIDI MODE	This mode controls QUICK MIDI systems, providing realtime control of external MIDI equipment. Four functions are supported: program change, volume control, pan control, and effect control.

2) K11 Functions

Each mode on the K11 has the following functions associated with it.

PERFORMANCE PLAY	PATCH SELECT	Selects the PERFORMANCE patch.

COMPOSE PLAY	SINGLE SELECT	Select a tone
	SEC SELECT	Select a Section (part)
	RCV CH SET	Select MIDI Receive channel
	LEVEL SET	Set audio output level
	SEC STATUS	Select ON/OFF/SOLO

PERFORMANCE EDIT	NAME 1st~8th	Changes the PERFORMANCE patch name.
	SINGLE SELECT	Select a tone
	SEC SELECT	Select a Section (part)
	LEVEL SET	Set audio output level
	SEC STATUS	Select ON/OFF/SOLO

SEC EDIT	PAN	Adjust Pan
	TRANSPOSE	Set Transpose interval
	TUNE	Adjust pitch
	EFFECT LEVEL	Set Effects level
	BEND DEPTH	Set amount of Pitch Bend variation
	CUTOFF OFFSET	Set harmonics Cutoff point
	DCA ATTACK OFFSET	Set Attack Time
	DCA RELEASE OFFSET	Set Release Offset
	ZONE LO/ZONE HI	Set voicing range
	MOD WHEEL VIB	Set amount of Modulation Wheel vibrato
	PRESS VIB	Set amount of Aftertouch vibrato
	RCV HOLD	Turn Hold ON/OFF
	TEMPERAMENT TYPE	Select Temperament type
	TEMPERAMENT KEY	Select tonic note for the Temperament

SINGLE EDIT	NAME 1st to 8th	Edit a Single Patch name
	MONITOR SOURCE	Set ON/MUTE for Source 1 or 2
	DCO WAVE SELECT	Select a Waveform
	KEY TRACK	Set the tone to follow pitch changes
	FIXED KEY	Set the pitch of a fixed note
	COARSE	Coarse tuning adjustment
	FINE	Fine tuning adjustment
	KEY ON DELAY	Set time between keypress and start of sound
	VIB DEPTH/SHAPE/SPEED	Set depth/waveform/speed of vibrato
	AM	Turn Ring Modulation ON/OFF
	DCF LINK	Select filter configuration
	DCF TYPE	Select filter
	CUTOFF	Set the Cutoff Frequency

	RESO DEPTH	Set Resonance Depth
	DCF KEY TRACK	Set filter action to follow Note Number
	DCF VEL CURVE/DEPTH/ASSIGN	Set filter curve/depth/assign to follow velocity
	DCF ENV DEPTH	Set filter envelope depth
	DCF ATTACK LEVEL/TIME	Set amount and rate of filter envelope attack
	DCF DECAY TIME	Sets Decay Time of filter envelope
	DCF SUS 1 LEVEL	Set Sustain 1 level
	DCF MOD TIME	Set time until EG reaches Sustain 2 level
	DCF SUS 2 LEVEL	Set Sustain 2 level
	DCF RELEASE TIME	Set Release Time
	DCA ATTACK LEVEL	Set attack of Source
	DCA VEL CURVE/DEPTH	Select velocity/volume curve and set depth of effect
	DCA ATTACK TIME	Set Attack Time
	DCA DECAY TIME	Set Decay Time
	DCA SUS 1 LEVEL	Set Sustain 1 level
	DCA MOD TIME	Set time until EG reaches Sustain 2 level
	DCA SUS 2 LEVEL	Set Sustain 2 level
	DCA RELEASE TIME	Set Release Time

DRUM EDIT	PC ASSIGN	Select key to edit and a percussion sound for that key
	PC NAME	Adjust Percussion Name
	DCA LEVEL	Adjust Volume
	PAN	Adjust Pan
	PC EFFECT LEVEL	Adjust Effects for each percussion sound
	WAVE SELECT	Select Waveform
	DCO PITCH	Modify Source pitch
	DCO FINE	Fine tuning adjustment
	DCF CUTOFF/RESO DEPTH	Set Filter Cutoff Frequency and Resonance
	DCF VEL CURVE/DEPTH/ASSIGN	Set filter curve/depth/assign to follow velocity
	DCF ATTACK TIME/DECAY TIME	Set attack rate and decay time of filter envelope
	DCA VEL CURVE/DEPTH	Select velocity/volume curve and set depth of effect
	DCA ATTACK TIME/DECAY TIME	Set attack and decay times
	GATE TIME	Set gate time for percussion sound
	DCF SUSTAIN LEVEL	Set sustain level
	DCF ENV DEPTH	Set depth of filter envelope

SYSTEM EDIT	SINGLE BANK SELECT	Select Bank (USER/GM/SP)
	EFFECT TYPE	Select Effect
	PARAMETER 1/2/3/4	Edit parameters of selected Effect
	UNIT TUNE	Fine tune overall pitch of K11
	UNIT RCV CH	Set MIDI Receive channel
	UNIT RCV PGM	Turn Program Change Receive ON/OFF
	UNIT RCV EXCL	Turn SysEx Receive ON/OFF
	UNIT RCV MODE	Set Receive mode
	Ser. I/F MODE	Select SERIAL I/F mode
	DUMP ALL EXEC?	Dump all data to external device
	DUMP SEC/SYS EXEC?	Dump all SEC or System data to external device
	FACTORY RESET EXEC?	Reset to factory defaults
	LOCAL	Enables/disables the connection between the internal keyboard and sound source.
	KYBD TRS CH	Sets the SEC CH/UNIT CH transmit channels for the internal keyboard.
	KYBD SHIFT	Sets the shift (offset) for the keyboard range.

1.6 Power Up!

(1) Check all the connections between the K11 and peripheral devices. Turn down the volume on all playback devices (instrument amp, stereo).

(2) Turn on MIDI keyboard, then K11, then computer, in that order.

(3) When you press the K11 POWER button to turn it on, you'll see a screen like the one to the right.

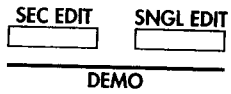


(4) After you've turned on the playback devices, adjust the K11 volume and the playback device volume to get the proper volume level.

1.7 Play the Demo Song

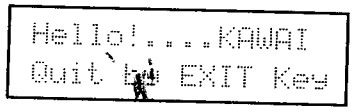
The K11 comes with a song already in memory that shows off the sparkling sounds of the DMS2 tone generator.

(1) In Play mode, press the SEC EDIT and SINGLE EDIT buttons at the same time to start the Demo song.



(2) You'll see a message from KAWAI in the display.

(3) Press the EXIT button to quit the Demo, after which you'll be returned to Play mode.



[Note]

When you leave the demonstration piece the mode will be the same as it was before you started playing it. The effect settings, however, may have been changed.

SECTION 2 Let's Play Some Music!

2.1 Play mode

The K11 has two play modes: the PERFORMANCE mode, stressing functions needed for live performance, and the COMPOSE mode, designed for the tight control of desktop music applications. The play mode can be switched by pressing the PFRM/COMP button. The current mode is stored to memory when the system power is turned off, and the system boots in that mode the next time it is turned on.

2.2 PERFORMANCE mode functions

The PERFORMANCE mode has four sections, with 64 PERFORMANCE patches (11 through 88). Single patches, level and status can be set for each section in the PERFORMANCE edit mode. The PERFORMANCE edit mode has four functions for play.

PE: PERFORMANCE edit mode

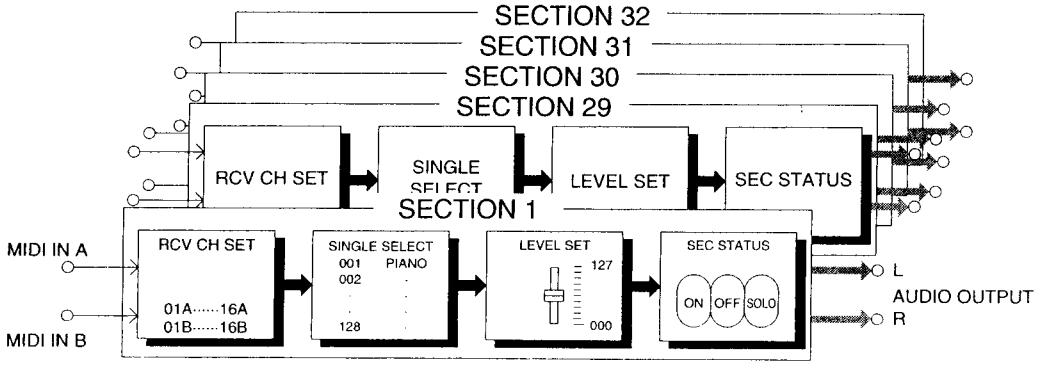
NAME	
SINGLE SELECT	Select a Single Patch
SEC SELECT	Select a Section (part)
LEVEL SET	Set the PERFORMANCE patch volume
SEC STATUS	Set the OFF/ON/SOLO status for the Section

2.3 About the COMPOSE Play Mode Functions

COMPOSE Play mode is, as the name implies, the mode you'll use when playing the K11. From here you can set the Single Patch, MIDI receive channel, level, and status for each of the 32 Sections.

PL: COMPOSE (Play) mode

SEC SELECT	Select a Section (part)
SINGLE SELECT	Select a Single Patch
RCV CH SET	Set the MIDI receive channel. (See keyboard transmit channel (p.100))
LEVEL SET	Sets the PERFORMANCE patch volume.
SEC STATUS	Set the OFF/ON/SOLO status for the Section



2.4 Try to Play a Few Notes

Check all equipment connections, and then turn on the power for the external controller (sequencer, etc.), K11, and output devices, in that order.

1) Using the internal keyboard in the PERFORMANCE mode

When the internal keyboard is played, the currently selected PERFORMANCE patch sounds. A maximum of four sections which are currently ON in that PERFORMANCE patch can be sounded.

2) Using sequencer or computer in PERFORMANCE mode

By using the sequencer or computer, play data with differing MIDI channels for each section can be played: up to 32 sections in all, 16 for MIDI IN A and 16 for MIDI IN B.

[Hint]

You should select a Tone Bank (page 104) that is appropriate for the performance data you are playing back.

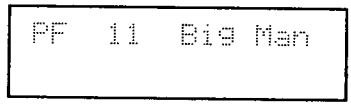
PLAY

2.5 PERFORMANCE patch selection and editing

1) PERFORMANCE patch selection

(1) Press the PFRM/COMP button to enter the PERFORMANCE mode. (The factory setting is the PERFORMANCE mode.)

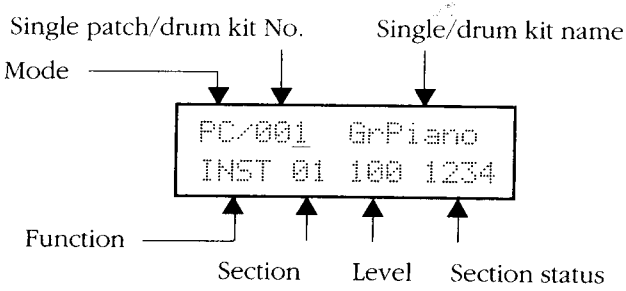
(2) Use the PFRM PATCH SELECT buttons 1~8 and the +10 and -10 buttons to select one PERFORMANCE patch to edit.



2) PERFORMANCE patch editing

(1) Select the PERFORMANCE patch to edit, then press the SEC EDIT button. The K11 will enter the PERFORMANCE edit mode. The display will show the name of the selected PERFORMANCE patch.

(2) Press the SEC EDIT button again, or rotate the dial to the right. The display will show the function parameters for that PERFORMANCE patch.



(3) Press the ◁ button to move the cursor to mode select (in this example, PC).
Press the ▷ button to move the cursor to function select (in this example, INST).

(4) Press the cursor button to move the cursor to a desired parameter.

(5) Rotate the increment dial to set the desired values.

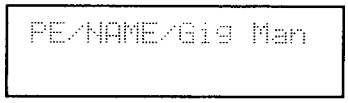
(6) Press the EXIT button to return to the PERFORMANCE mode.

* If the SEC EDIT button is pressed during steps 2 through 5 above while the PERFORMANCE patch function parameters are being displayed, the system will enter the section edit mode (see p.37).

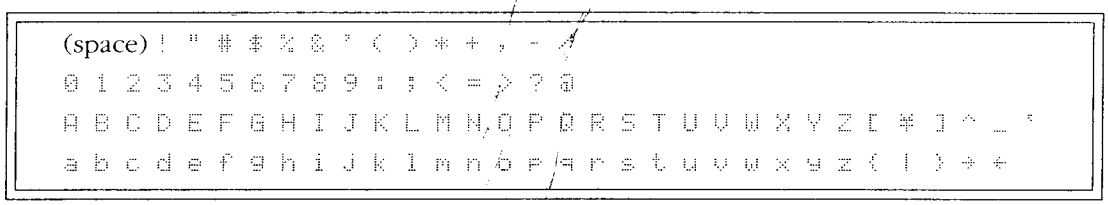
Name

(Current name)	
Function	Sets the name of the PERFORMANCE patch being edited.
Value	Letters and numerals
Notes	The name can have a maximum of eight characters.

(1) Move the cursor to the PERFORMANCE patch name item, and select the letters and numbers with the dial. Press the cursor button to set one character and move to the next.



These are the letters, numbers, and symbols you can use.

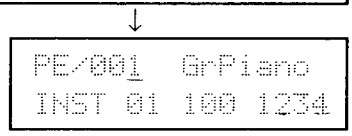


PLAY

Single Select

(Value)	
Function	Selects a Single Patch or Drum Kit
Values	001 ~ 128 or DR1 ~ DR7
Notes	The K11 has a bank of 128 Single Patches and 7 Drum Kits available. See page 105 for a listing of these. When a single patch is selected it is selected for a section. Select the section that you wish to assign (edit) the single patch for in advance.

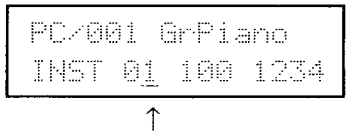
(1) Move the cursor to the single No. item and select single/drum with the dial.



Sec Select

(Value)	
Function	Selects the Section for which you want to make settings
Values	01 ~ 32
Notes	Functions like level set and status are set for each section.

(1) Move the cursor to the section No. item and select the section with the dial.

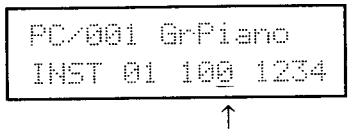


* Press the 1~4 (PFRM SEC SELECT) buttons to directly select sections 1 through 4.
* Sections can also be selected by pressing the +10 and -10 buttons. The +10 button will increment the section by one, and the -10 button will decrement it by one.

Level Set

(Value)	
Function	Sets the Volume of a Section
Values	000 ~ 127
Note	This changes the volume of a Section and, of course, its balance with the other parts. The volume set here is in fact multiplied by the Expression pedal volume before output, although this won't change the value in the display when Expression is applied: the display will continue to show the set volume only. This level can however be changed by Control Change #7 messages (see MIDI Implementation Chart).

(1) Move the cursor to the level set item and set the volume with the dial.



PLAY

Section Status

(Value)	
Function	Sets whether a given Section will play or not.
Values	OFF/ON/SOLO
Notes	SOLO means only one Section will play. The SOLOing section will have a * at the top of its Status display, and the other 31 Sections will be Muted, i.e., not sound.

(1) Move the cursor to the status item and set ON/OFF/SOLO with the dial.

* Press the 5~8 (PFRM SEC MUTE) button to directly mute (turn off) sections 1~4.

SEC1, 2 OFF



SEC 3 SOLO

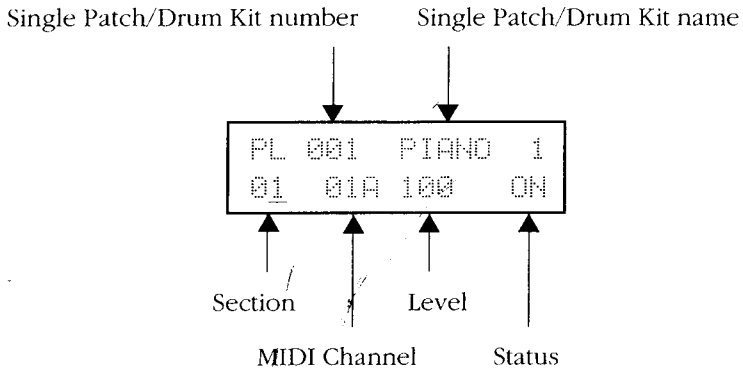


[Hint]

Multi-packet data can only be received for four sections in the PERFORMANCE mode so operation is impossible on the K11. It is possible if an exclusive from an external MIDI equipment is used to turn status ON for sections 5~32. Single-packet data can be sent and received. The system also supports patch selection and COMPOSE mode select exclusives. Program change and control change are received but the original data is not lost until the system executes an EXIT.

2.6 Using Some of the Functions and Listening to the Results

Move the cursor to the "Single Patch No." entry in the display and select the patch number you want by turning the Increment Dial. As you do so, the name in the display will change and you'll hear the instrument sound change as well.

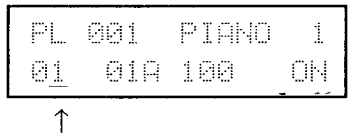


You can change any one of the parameters (entries) in this Play mode screen, like Section and Tone, by moving the cursor to that location and changing the value with the Increment Dial. Turning the Increment Dial either way works to change the values, it just depends whether you want them to increase or decrease.

Section Select

(Value)	
Function	Selects the Section for which you want to make settings
Values	01 ~ 32
Notes	A different Single Patch and MIDI channel, for example, can be set for each Section.

(1) Move the cursor to the Section location in the display, and select the desired Section with the Increment Dial.



Sections can also be selected by pressing the +10 and -10 buttons. The +10 button will increment the section by one, and the -10 button will decrement it by one.

What is a Section?

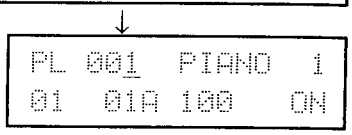
You could think of a Section on the K11 as basically the same thing as a channel on a mixing board. That is to say, each channel has a different instrument on it, and you can do various things to the sound of that instrument in that channel: control volume, pan, amount of effects, etc. On a mixer you would make these changes by twiddling a knob or moving a slider; on the K11 you do it by selecting and changing ("editing") the appropriate parameter in the Section Edit screen.

The "instrument," in the case of the K11, is called a "Single" for a looped melody/chord sound, or a "Drum Kit" for a one-shot percussion/rhythm sound.

Single Select

(Value)	
Function	Selects a Single Patch or Drum Kit
Values	001 ~ 128 or DR1 ~ DR7
Notes	The K11 has a bank of 128 Single Patches and 7 Drum Kits available. See page 106 for a listing of these.

(1) Move the cursor to the Single Section location in the display, and select the desired Single or Drum Kit with the dial.



Program Changes

A Program Change is another way of changing the tones being played on the K11. It is all accomplished using special MIDI-standard signals from a sequencer or other MIDI device, rather than using the knobs on the front panel. This can be done on any or all of the 32 channels. The received Program Change No. corresponds to a Single Patch number or Drum Kit number as shown below:

Single Patch

Program Change No.	0	1	2	3	4	–	–	–	–	–	–	127
Single Patch No.	1	2	3	4	5	–	–	–	–	–	–	128

Drum Kit

Kit No.	DR1	DR2	DR3	DR4	DR5	DR6	DR7
Program Change No.	0	1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31	–	–	–
	32	–	–	–	–	33	34
	35	36	37	38	39	40	41
	–	–	–	–	–	–	–

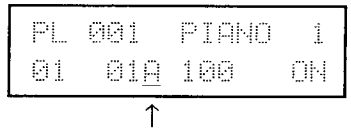
[Note]

Double Tones (with two Sources) have a * next to the Single tone numbers. These use up twice as many voices, naturally, so you can have only 16 of these playing at one time (maximum polyphony of 16).

Receive Channel Set

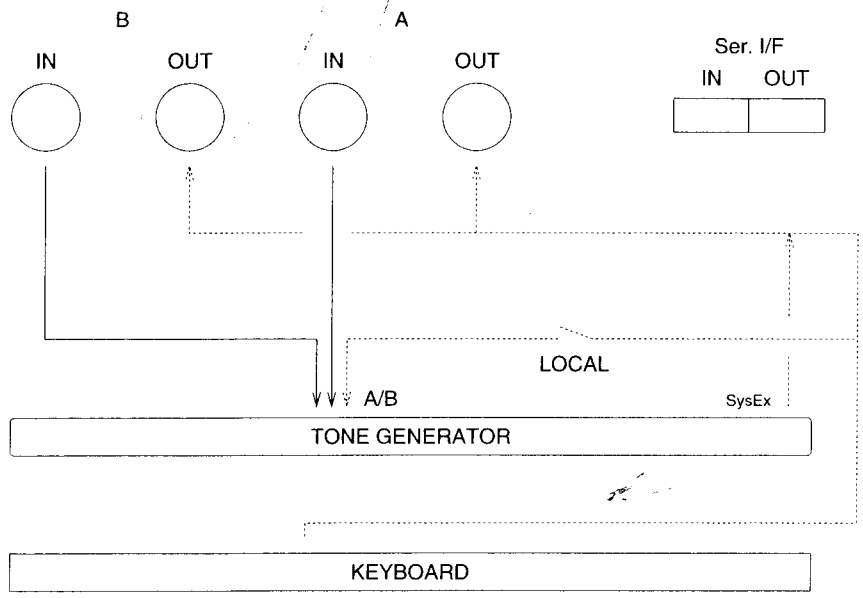
(Value)	
Function	Set the MIDI receive channel for a Section.
Values	01A ~ 16B, 01B ~ 16B (looping)
Notes	MIDI INs A and B each have 16 independent channels available. If you have a MIDI keyboard set to transmit over channel 1 connected to MIDI IN B, for example, then this should be set to 01B.

(1) Move the cursor to the Receive Channel location in the display, and select the desired channel with the dial.



PLAY

K11 Internal MIDI Signal Routing



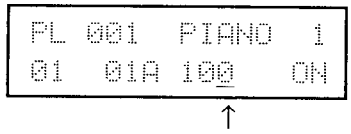
[Note]

This routing can be changed using the Ser I/F (Serial Interface) Mode setting. For more details about this, see the "I/F MODE" entry in SECTION 6 "System Settings" on page 94.

Level Set

(Value)	
Function	Sets the Volume of a Section.
Values	000 ~ 127
Notes	This changes the volume of a Section and, of course, its balance with the other parts. The volume set here is in fact multiplied by the Expression pedal volume before output, although this won't change the value in the display when Expression is applied: the display will continue to show the set volume only. This level can however be changed by Control Change #7 messages (see MIDI Implementation Chart).

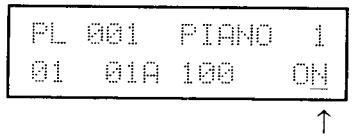
(1) Move the cursor to the Level Set location in the display, and set the level as desired with the dial.



Section Status

(Value)	
Function	Sets whether a given Section will play or not.
Values	OFF/ON/SOLO
Notes	SOLO means only one Section will play. The SOLOing section will have a * at the top of its Status display, and the other 31 Sections will be Muted, i.e., not sound.

(1) Move the cursor to the Status location in the display and select OFF, ON or SOLO.



2.7 Monitor Mode

The K11 is able to handle MIDI signals over 32 channels because it is equipped with two MIDI ports, A and B. In Monitor mode, you can see in the display what channels of the A and B port are ready to receive MIDI data.

(1) In Play mode, press both the Cursor buttons ( ) at the same time.

(2) This puts you in Monitor mode, and the display will change to the following.



(3) In this example, channels 1,2,3,6,8, and 10 of port A and channels 2,4,7,12, and 16 of port B are able to receive MIDI data.

(4) Press the button to return to Play mode.

2.8 About MIDI

In order to make the most of the K11's potential, there are a few basic things you should know about MIDI.

1) What is MIDI?

MIDI (pronounced "middy") stands for Musical Instrument Digital Interface. It is a standard for interfaces that control electronic musical instruments such as synthesizers and sound modules. Most electronic instruments today are equipped with MIDI ports, and the standard is being applied around the world.

In the MIDI standard, all the actions that are used in a synthesizer performance are translated into standard digital signals that describe what note was played on the keyboard, for how long, when bender was applied and released, and so on. These messages are sent along a MIDI cable to other MIDI devices that can read and play back these messages. You might say MIDI instruments can "talk" to one another.

Instruments that conform to the MIDI standard typically have two kinds of ports: IN and OUT.

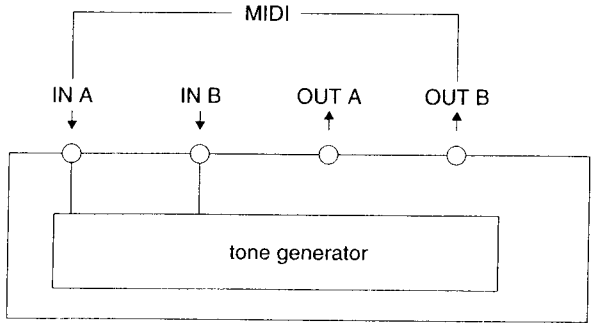
MIDI IN

Receives MIDI signals transmitted by external MIDI devices.

MIDI OUT

Sends MIDI signals to external MIDI devices.

In fact, the K11 has two MIDI IN ports, with a signal routing as shown below.



[Note]

The MIDI signal sent from the MIDI OUT/THRU A can be changed by setting the Ser.I/F MODE. For more about this, see the entry for "Ser.I/F MODE" in SECTION 6 "System Setting" on page 94.

PLAY

2) MIDI Messages

- **MIDI Channel**

  You can link and control many MIDI-capable instruments at once with MIDI messages. To keep them all straight, each instrument is given a number from 1 to 16. This number is added to the front of every MIDI message that gets sent, so that it's readily apparent what instrument is supposed to play that message, and it's called the "MIDI channel number."
  There are also "multi-timbral" instruments (like the K11) that can assign one Section (part) to each channel, and so play each Section like an independent instrument.

- **Mode**

  Mode is important when you are transmitting or receiving MIDI data. There are two modes, Poly and Mono, that control whether performance massages sent to the MIDI receive channels are received polyphonically or monophonically. There is also an indicator for Omni On/Off, If it's On, the K11 will play all MIDI messages on all channels, regardless of what the actual receive channel setting is.

- **Note Messages**

  This is the most basic of the messages by which MIDI transmits musical performance data. Each message contains information about which key was pressed (Note Number), how hard (Velocity), and exactly when it was pressed (Note On) and released (Note Off).

- **Note Number**

  Each key on the keyboard has been assigned a number, called its "Note Number." Middle C (C3) has a note number of 60, and this increases by one for every half-step up the scale, or decreases by one for every half-step down. Note Number 1-127 correspond then to all the notes from C2 to G8 on the keyboard, in that order.

- **Velocity**

  This message transmits how hard the key was struck.

- **Release Velocity**

  This message transmits how sharply you let up on the key. It's also sometimes called the "Off Velocity."

- **Pressure**

  After you have struck a key, but before you release it, you can add interesting effects that are controlled by the amount of pressure applied to that key. This message transmits that information. It's also called "Aftertouch."

- **Program Change**

  Most MIDI devices these days, complicated as they are, come equipped with "programs" that store and remember for later use a certain set up, certain tones, and certain parameter settings. A controlling device can send a message to switch between these programs on a controlled device. Naturally enough, this is called a "Program Change" message.
  Since the MIDI standard is not very explicit about Program Change numbers (except to say that they are numbered from 0 to 127), the way these numbers correspond to tones stored in memory will be different for different MIDI instruments.

- **Control Change**

  MIDI devices can deal with a lot more than just Note On and Off messages; there's also Volume and Vibrato, Hold, Damper Pedal and Soft Pedal On/Off, and Pressure, just to name a few. These are encoded in the form of Control Change messages. (Pitch Bend messages make for very dense streams of data, and so there is a separate message type just for pitch bend data.)

- **Pitch Bend**

  This message describes how far the pitch bend wheel is moved. The effect of a pitch bend wheel movement can be set differently on every synthesizer (usually with an adjustment called "Pitch Bend Range" or something similar). So the effect of a Pitch Bend message will also be different on different synths, and will depend on this setting.

- **System Exclusive Messages**

  MIDI is a unified world standard, true, but each instrument manufacturer also has their own special features they would like to implement within the MIDI specification to give their instruments new capabilities. This kind of proprietary, outside-of-the-MIDI-standard data (called "System Exclusive messages") makes it possible to swap tones between instruments of the same type or manage tone data with a computer.

- **Local Control On/Off**

  Local Control means the messages sent from the keyboard to control the sound module within the MIDI instrument itself. Turning this to Off sends all data from the keyboard directly to the MIDI OUT port, bypassing the internal tone generator and so not making a sound. Meanwhile, the internal sound module can still be played by signals coming in the MIDI IN port. This is useful when you want to an external device to control a keyboard and use it like a sound source, or use just the keyboard to control other MIDI keyboards.

- **All Notes Off**

  This sends a Note Off to all currently sounding notes. Very useful when for some reason the Note Off message didn't get through and a note or notes becomes "stuck."

- **Active Sensing**

  This message helps prevent stuck notes caused by a bad cable or connection.

- **Reset**

  This message initializes the device to its power on settings.

- **Common**

  This message contains info about song select and position pointer when playing in sync with a sequencer and/or drum machine.

- **Real Time**

  This message transmits timing clock and start/stop commands when playing in sync with a sequencer and/or drum machine.

3) Implementation Charts

MIDI device can only transmit and receive the messages they have in common. That is, MIDI will not give a device the ability to do something (say, aftertouch) which it wasn't already designed to do. And it just doesn't make sense to give every device the capability to do everything the MIDI standard allows; nobody would be able to afford them. So if, for example, a device that can't do aftertouch receives an Aftertouch message, it simply ignores it. Every MIDI device come with something called a "MIDI Implementation Chart" that summarizes what data that device is capable of "implementing" or acting on. By matching up the Implementation Charts of two different devices, you can see at a glance what kinds of messages they both can use, and so what messages can be received and transmitted.

4) Drum Kits

Drum Kits can handle a variety of sounds all at once. With only 16 channels to go around, you can't be giving every percussion instrument its own channel. So instead, up to 128 rhythm instruments are gathered together into one channel and each instrument is assigned a Note number (or numbers) that plays it. That's called a Drum Kit.

There are seven different Drum Kits in one Bank on the K11. Each kit is assembled with a certain music genre in mind, such as "Standard," "Power," and so on.

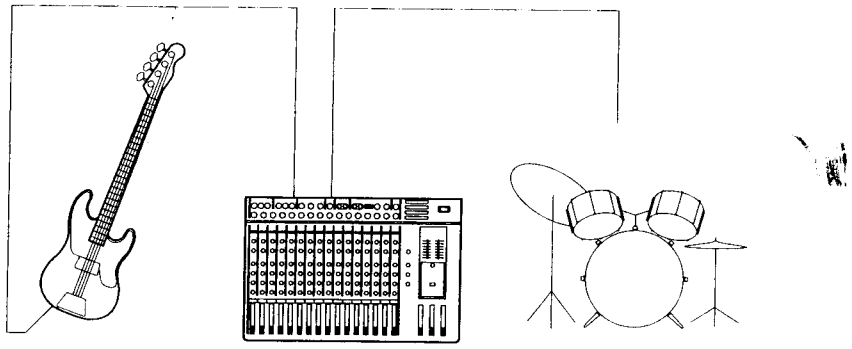
SECTION 3 Section Parameters That Control Timbre and Volume

3.1 Section Parameters

1) How Section Parameters are Organized

As mentioned earlier, you could think of a Section as something akin to a channel on a mixing board. There are 32 such Sections on the K11, and each one has a variety of things you can set and change. So really it's like a 32-channel mixer where you can change what instrument is playing on what channel however you like, and make fine adjustments to boot. Pretty amazing!

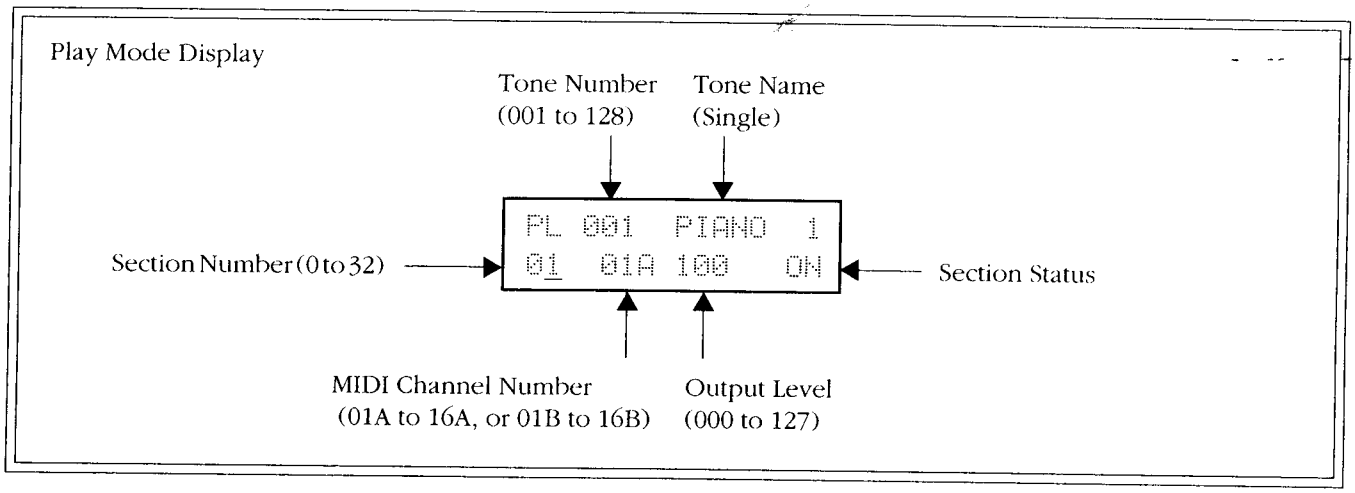
On a mixer, you plug an instrument into a channel to get a new sound; on the K11, you select a "Single" for a Section. On a mixer, you use the knobs to control the pan, effects levels, etc. for an instrument; on the K11, you use the Section Edit functions to select and adjust the parameters from the display screen.



Single tone Drum Kit

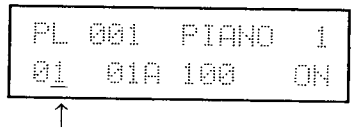
2) How to Select a Section

(1) In Play mode, Tone number and Tone name are shown in the Section display.



(2) Press the cursor buttons ◁ or ▷ to move the cursor to the Section Number location.

(3) Select a new Section Number using the Increment Dial.



3.2 How to Edit

"Editing" just means changing the values of certain settings to create something new. You can edit the settings for a Section in, naturally enough, "Section Edit mode." Common to PERFORMANCE and COMPOSE modes.

1) Entering Section Edit Mode

It's done with the SEC EDIT button.
While still in Play mode, select the Section that you want to edit.



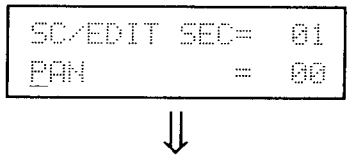
2) Calling Up Functions and Value Settings

It's all determined by the K11's internal settings, what kind of sounds are played or what kind of tones are created in response to messages from a digital sequencer or MIDI keyboard. Each item that can be set is called a "function," and the numerical setting itself is called the "value" of that function.

(1) Get into Section Edit mode (see above).

(2) The FUNCTION will change every time you press the SEC EDIT button, so you can switch to the function you want to edit.

SEC EDIT



(3) When you're there, press the ▷ cursor button to move the cursor over to the place where the Value is set, and change this number by moving the Increment Dial.





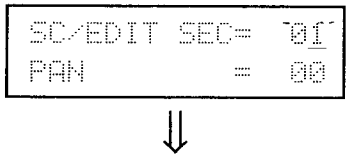
[Note]
On the K11, as soon as you edit something (change the Value), that new value is saved and the previous value is erased.

3) Changing the Section You Are Editing

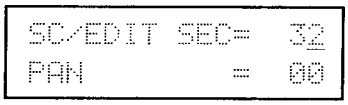
You can check on the settings in other Sections or change the Section you are editing from within Section Edit mode itself, without having to go back to Play mode.

(1) Press the ◁ and ▷ buttons to move the cursor over to the Section Number position.

SEC EDIT



(2) Change the Section Number with the Increment Dial.
+10 and -10 can also be selected.





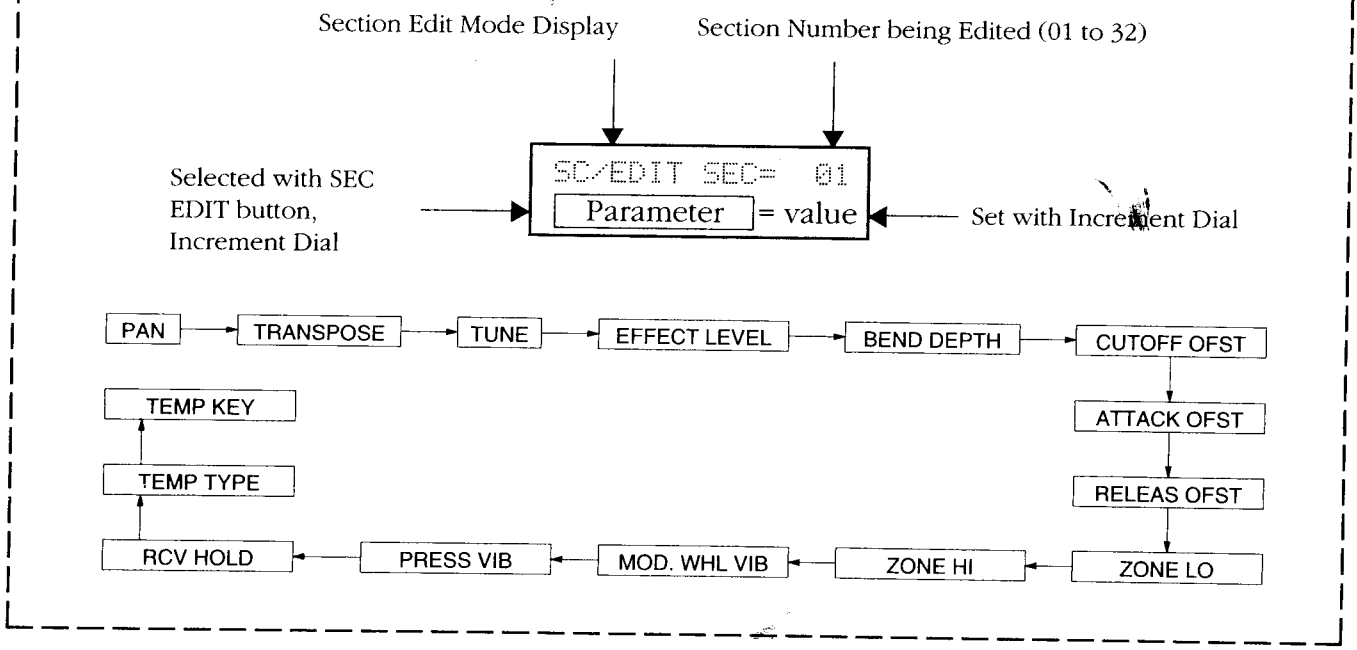
3.3 Editing Section Parameters

The Section parameters that you can select and edit from Play mode include Single, MIDI Receive Channel, Output Level (i.e., Section Volume), and Section Status. There are 17 more parameters you can edit on Section Edit mode that affect the sound itself and its resonance, including such things as Pan, Transpose, and Bend Depth.

[Note]

In Section Edit, you're not really directly editing and changing the values associated with a Single Patch, but rather just making relative changes to them for that Section only.

Section Edit Mode Parameters



- When you move the cursor over to FUNCTION, you can then select the function you want with the Increment Dial. Back up through the list by reversing the dial or pressing the PREV button, or fast forward through the functions.
- When you land on the function you want, just press the Cursor button to move the cursor over to the Value and change it with the Increment Dial.

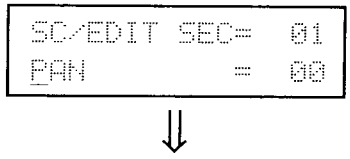
[Note]

Turn the value dial gently when editing a Section on Play mode.

Pan

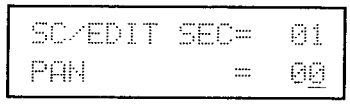
PAN	
Function	Adjusts the stereo position of the audio output from the OUTPUT (R,L) jacks and PHONES jack.
Values	L64 ~ 00 ~ R64, RND
Notes	00 means the sound is centered in the stereo field. RND means there is a different, random Pan applied every time a key is pressed (for every new Note On message received).

(1) Press the SEC EDIT button to switch into SC/EDIT mode.



(2) Press the SEC EDIT button or spin the Increment Dial to select PAN.

(3) Move the cursor over to VALUE and change the Pan setting.



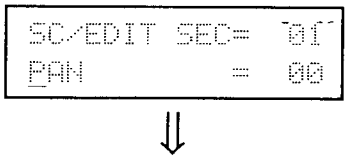


[Note]
You won't be able to change the Pan if that Section is currently assigned to a Drum Kit.

Transpose

TRANSPOSE	
Function	Transpose all the notes in a Section in half-tone increments.
Values	-024 ~ 000 ~ +024
Notes	

(1) Press the SEC EDIT button to switch into SC/EDIT mode.



(2) Press the SEC EDIT button or spin the Increment Dial to select PAN.

(3) Move the cursor over to VALUE and change the Pan setting.





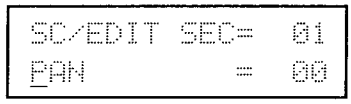
[Note]
You won't be able to change the Transpose setting if that Section is currently assigned to a Drum Kit.



Tuning

TUNE	
Function	Make fine adjustments to the pitch of the Section.
Values	-128 ~ 000 ~ +127
Notes	The pitch can be changed roughly 50 cents down (-127) or 50 cents up (+127) or anywhere in-between. If you have the same tones on different Sections and give each a slight offset in tuning, when you play them at once the combination will sound "thicker" and you'll get a sound with more "weight."

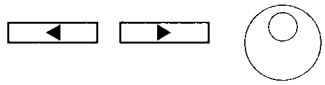
(1) Press the SEC EDIT button to switch into SC/EDIT mode.



(2) Press the SEC EDIT button or spin the Increment Dial to select TUNE.

(3) Move the cursor over to VALUE and change the TUNE setting.

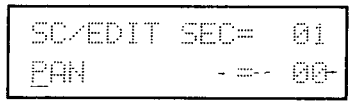




Effect Level

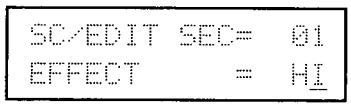
EFFECT LEVEL	
Function	Set the effects for each Section to HI or LO.
Values	HI, LO
Notes	This sets how effect is to be applied. The effect (Reverb, Delay) is set using System Edit; see "System Edit" on page 92 for more about the effect types and settings.

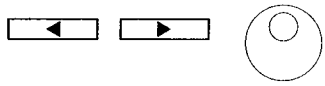
(1) Press the SEC EDIT button to switch into SC/EDIT mode.



(2) Press the SEC EDIT button or spin the Increment Dial to select EFFECT.

(3) Move the cursor over to VALUE and set EFFECT to HI or LO.





[Note]

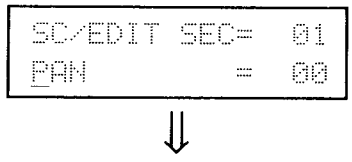
For the Drum Kits in a Section, the effect on the output is shown in the table to the right.

SEC	PERCUS	OUTPUT
HI	HI	→HI
	LO	→LO
LO	HI	→LO
	LO	→LO

Bend Depth

BEND DEPTH	
Function	Sets independently for each Section the amount by which the pitch will change by moving the pitch bend wheel.
Values	-024 ~ 000 ~ +024
Notes	The maximum values represent a pitch change of up or down two octaves, in units of half-step intervals. Minus settings work in the opposite direction from positive settings.

(1) Press the SEC EDIT button to switch into SC/EDIT mode.



(2) Press the SEC EDIT button or spin the Increment Dial to select BEND DEPTH.

(3) Move the cursor over to VALUE and set the Bend Depth however you want.

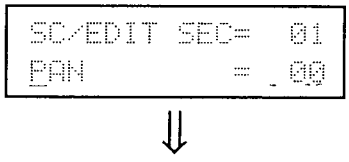




Cutoff Offset

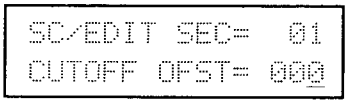
CUTOFF OFFSET	
Function	Sets a frequency at which harmonics will be cutoff for the selected Single Patch in the selected Section.
Values	-064 ~ 000 ~ +063
Notes	This setting adds a relative offset to the DCF CUTOFF value for the selected Single Patch. Higher values will make the sound brighter and more crisp by including more high harmonics.

(1) Press the SEC EDIT button to switch into SC/EDIT mode.



(2) Press the SEC EDIT button or spin the Increment Dial to select CUTOFF OFST.

(3) Move the cursor over to VALUE and set the CUTOFF OFST there.

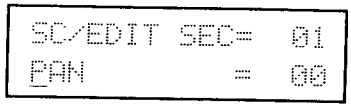




DCA Attack Offset

DCA ATTACK OFFSET	
Function	Sets the attack (onset of the sound) for the selected Single Patch in the selected Section.
Values	-064 ~ 000 ~ +063
Notes	This setting adds a relative offset to the DCF ENV ATTACK value for the selected Single Patch. Higher values give you a faster (sharper) attack.

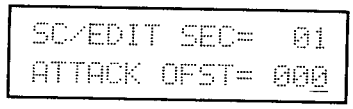
(1) Press the SEC EDIT button to switch into SC/EDIT mode.





(2) Press the SEC EDIT button or spin the Increment Dial to select ATTACK OFST.

(3) Move the cursor over to VALUE and set ATTACK OFST .

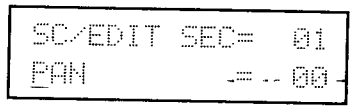




DCA Release Offset

DCA RELEASE OFFSET	
Function	Sets the release time for the selected Single Patch in the selected Section.
Values	-064 ~ 000 ~ +063
Notes	This setting adds a relative offset to the DCA RELEASE OFFSET value for the selected Single Patch. Higher values give you longer sustain until the sound dies away after you let up on (release) the key. This has no effect on Drum Kits.

(1) Press the SEC EDIT button to switch into SC/EDIT mode.





(2) Press the SEC EDIT button or spin the Increment Dial to select RELEAS OFST.

(3) Move the cursor over to VALUE and set RELEAS OFST .

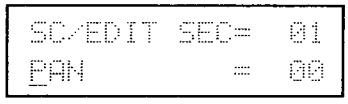




Zone LO/HI

ZONE LO/HI	
Function	Sets the upper and lower limits of the range of notes in a Section. Values; C2 to G8
Values	C-2 ~ G8
Notes	ZONE defines the highest and lowest notes. If you set ZONE LO higher than ZONE HI, no notes at all will sound.

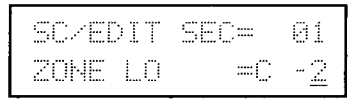
(1) Press the SEC EDIT button to switch into SEC/EDIT mode.

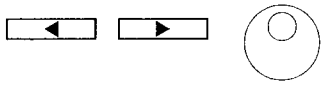




(2) Press the SEC EDIT button or spin the Increment Dial to select ZONE LO or ZONE HI.

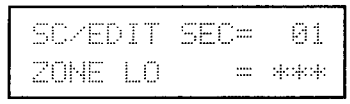
(3) Move the cursor over to VALUE and set the note you'll use for ZONE LO and ZONE HI .





[Note]

When a Drum Kit is assigned to a Section, the ZONE HI/LO setting is disabled.

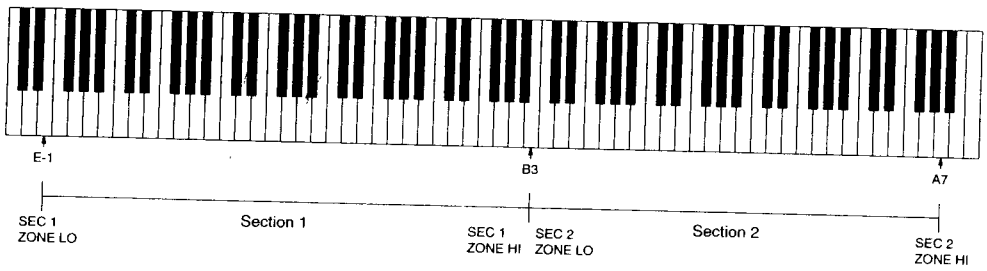


Zone Lo/Hi Setting and Effect

Zone Lo/Hi lets you combine different sounds from different Sections onto the same MIDI channel using splits (each sound is assigned its own part of the keyboard) or layering (sounds are combined because they are played by the same keys).

Example 1 Split

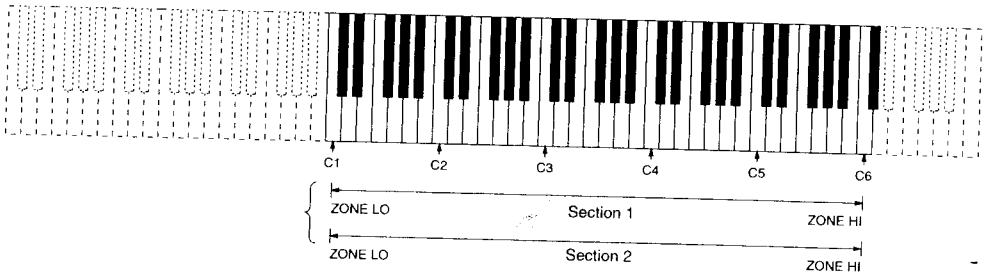
Setting ZONE HI to B3 in Section 1 and ZONE LO to C4 in Section 2 breaks the keyboard neatly in half. The Section 1 sound is played by pressing a key anywhere from B4 down to E1, and the Section 2 sound by pressing a key anywhere from C4 up to A7.



SEC

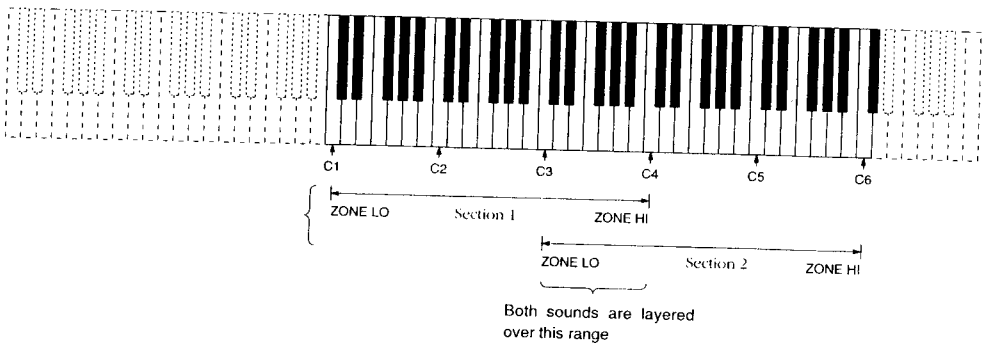
Example 2 Layer

Setting ZONE LO/HI the same for Sections 1 and 2 means pressing a key in that range will play both tones simultaneously.



Example 3 Split/Layer

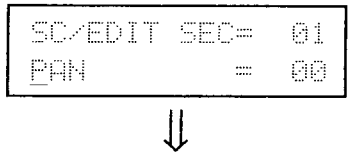
If you set ZONE LO/HI slightly differently for Section 1 and 2, there will be a range in the middle where they overlap, creating a layered sound, and a range on the high and low ends where only one sound or the other is played.



Modulation Wheel Vibrato Depth

MOD WHEEL VIB	
Function	Sets the amount of change in the assigned vibrato caused by movements of the wheel.
Values	000 ~ 127
Notes	When Vibrato is also assigned to Pressure, Modulation Wheel and Pressure Depth settings are added together.

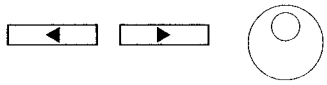
(1) Press the SEC EDIT button to switch into SC/EDIT mode.



(2) Press the SEC EDIT button or spin the dial to select MOD.WHL DEP.

(3) Move the cursor over to VALUE and change the setting for the amount of change in Vibrato.

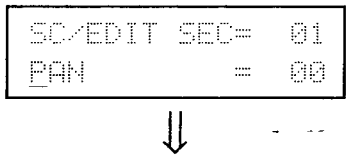




Pressure Vibrato Depth

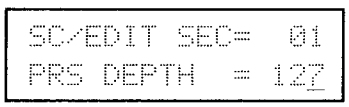
PRESS VIB	
Function	Sets the amount of change in the assigned effect caused by Aftertouch.
Values	000 ~ 127
Notes	When Vibrato is also assigned to Modulation Wheel, Pressure Depth and Modulation Wheel settings will be added together.

(1) Press the SEC EDIT button to switch into SC/EDIT mode.



(2) Press the SEC EDIT button or spin the Increment Dial to select PRS DEPTH.

(3) Move the cursor over to VALUE and change the setting.

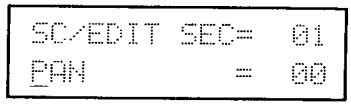




Receive Hold

RECEIVE HOLD	
Function	Turns the Hold signal receiving on and off.
Values	ON/OFF
Notes	When ON, the sound is held out or sustained for as long as the Hold signal is received. When OFF, all Hold signals are cancelled. Hold will not work if the Section is currently assigned to a Drum Kit.

(1) Press the SEC EDIT button to switch into SC/EDIT mode.

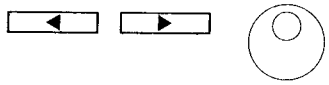




(2) Press the SEC EDIT button or spin the Increment Dial to select RCV HOLD.

(3) Move the cursor over to VALUE and change the ON/OFF setting.



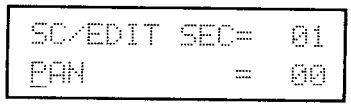


SEC

Temperament Type

TEMPERAMENT TYPE	
Function	Select from 55 different temperament types, ranging from major, minor, and chromatic to ethnic modes.
Values	01 ~ 55
Notes	See page 110 for a list of the present temperament types.

(1) Press the SEC EDIT button to switch into SC/EDIT mode.

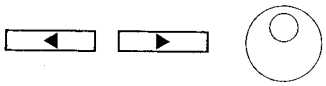




(2) Press the SEC EDIT button or spin the Increment Dial to select TEMP.TYPE.

(3) Move the cursor over to VALUE and change the Tune number to the one you want.

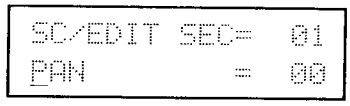




Temperament Key

TEMPERAMENT KEY	
Function	Set the basic key (tonic) for the selected Temperament.
Values	C, C# ~ A#, B
Notes	There are scales for which the tonic is somewhere in the middle or there is no tonic at all. This sets the tonic appropriate to the selected Temperament. See page 110 for a list of the presets.

(1) Press the SEC EDIT button to switch into SEC/EDIT mode.

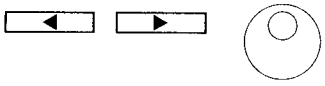




(2) Press the SEC EDIT button or spin the Increment Dial to select TEMP.KEY.

(3) Move the cursor over to VALUE and set the tonic note.





[Note]

When a Drum Kit is assigned to a Section, the TEMPERAMENT TYPE and TEMPERAMENT KEY settings are disabled.

[Note]

On the K11, the pitch of the note set as the tonic will not change when you change the Temperament. Thus even if you have A4 set to 440Hz, this will change if you change the Temperament in a key other than A.

SECTION 4 Creating New Sounds

4.1 Creating a Single Patch

A Single is basically just a tone. In addition to the 128 tones in each of the GM and SP Banks, there are also 128 slots in the User Bank where you can record original tones that you have made up yourself. This is the place where edit (create) these new tones to store in the User Bank: Single Edit mode. (Effects are set in Section Edit mode.)

1) General Procedure for Creating New Sounds

(1) **Find a starting tone you like.**

Even though it's called "creating a new sound," starting from scratch is pretty difficult. You'll get better results sooner by starting from a tone that is close to the sound you're looking for and modifying it. The preset sounds of the K11 were programmed and designed with this in mind, so that by editing you could also see the techniques needed for making new sounds on the K11.

(2) **Think about the ways you could change the sound.**

If you clearly envision how you want the sound to be different, this will determine what parameters you need to change to get it. For example, changing the DCA will affect when the sound starts and its volume; DCF affects the tone "color," it's "brilliance" or "mellowness;" and so on.

(3) **Try changing the waveform.**

Even if all the other parameters are kept the same, you can really change the character of a sound simply by changing the waveform. Changing to a waveform similar to the original will change the tone only subtly; a waveform that is very different will change the tone dramatically.

(4) **Add effects.**

Almost all the sounds you hear on radio and CD these days have effects applied. A good effect can make an otherwise ho-hum tone into a killer sound.

(5) **Tweak the patch.**

There are a number of things you can do at this point with Velocity, Modulation, etc., to make a patch sound more realistic, or trick it up for a special effect.

2) Before the Sound is Output

There are three different sound building blocks to play with on the K11: DCO (digitally controlled oscillator), DCF (filter) and DCA (amplifier).

DCO

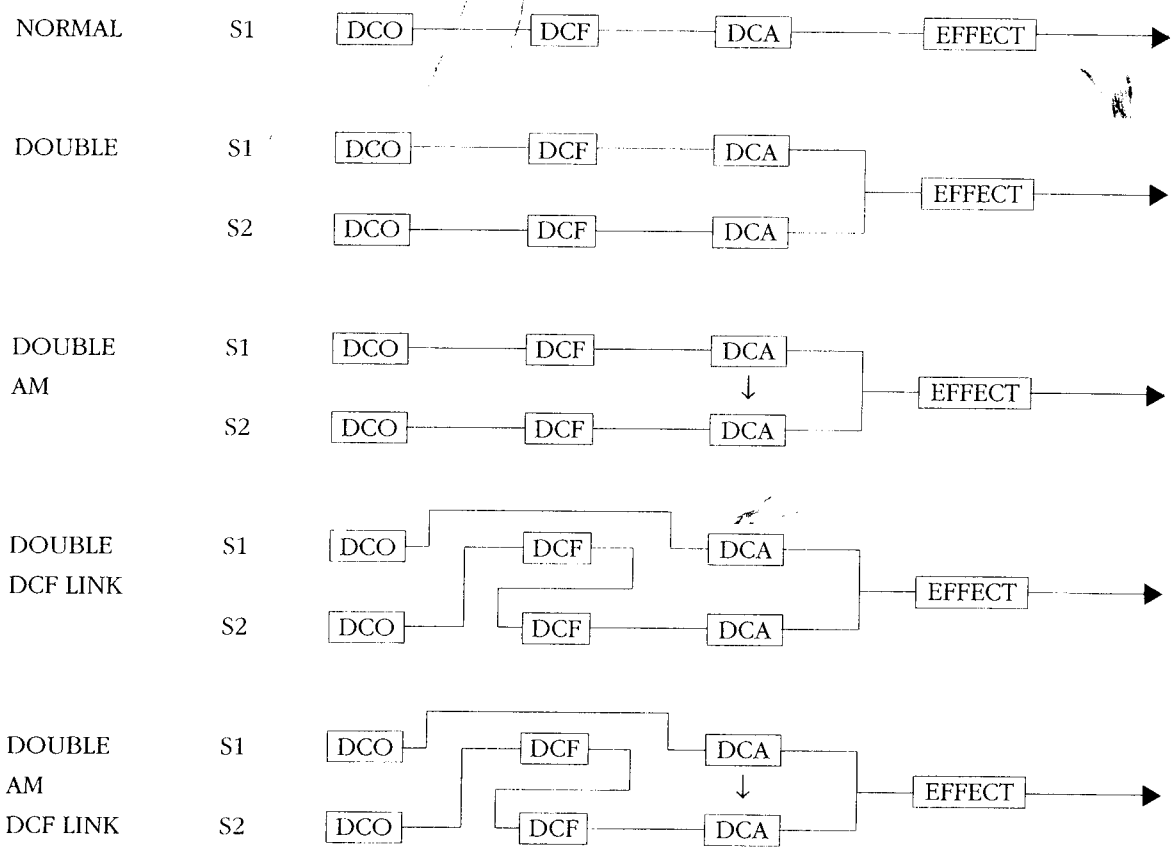
This is where you start: select the basic waveform (source) from which you'll make a new sound, and fix the pitch at which the sound plays back.

DCF

The tone output by the DCO is sent next to the DCF, where the tone quality is adjusted. Settings here involve time-based tonal modulations.

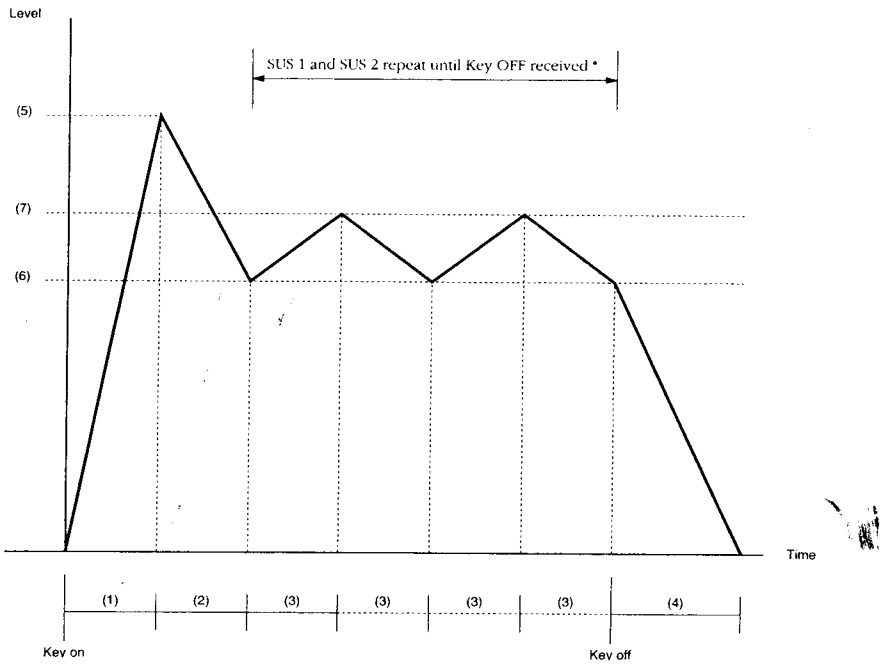
DCA

From the DCF, the tone is sent finally to the DCA where volume adjustments are made. This includes more than just output volume; complex adjustments can also be made to the way the volume levels change over time using the Envelope Generator (EG).



3) Envelopes

The K11 uses a very detailed envelope to create all kinds of tones that can be expressively modulated in real time.



(1) Attack Time	**(5) Attack Level**
(2) Decay Time	**(6) Sustain 1 Level**
(3) Modulation Time	**(7) Sustain 2 Level**
(4) Release Time	

* After the sound decays to the Sustain1 level and until a Key OFF is received, the volume of the tone will oscillate between the Sustain 1 and Sustain 2 levels with a period equal to the Modulation Time.

4) The Tone Generator: How It Works

(1) The K11 Tone Generator

The K11 creates sounds using the DMS2 (Digital Multi Spectrum) System. Most sounds in the real world are complex, shifting patterns of many constituent sounds. Trying to come up with convincing natural sounds by linear processing of the simple waveforms produced by conventional synthesizers was a difficult, painstaking procedure at best; you might even say it was impossible.

The DMS2 system makes it easy to create tones with complex, natural-sounding variation in character by analyzing the basic building blocks of the tone (the attack period, the sustain period, etc.) and breaking them down into adjustable parameters than can then be mixed and matched.

(2) Built-In Waveforms

The K11 makes it possible to create state-of-the-art sounds using a combination of PCM and DC waveforms.

PCM Waveforms

The first synthesizers came equipped with triangle waves and sawtooths that had relatively simple and regular harmonic structures. This made it very difficult to mimic sounds with complex overtone structures, such as the clanging of metal.

The K11 gets over this difficulty by using PCM waveforms to introduce the harmonic complexity needed to make convincing new sounds. PCM stands for Pulse Code Modulation, basically just a way of recording acoustic instruments and converting that into digital signals for playback. With 16-bit resolution and a sampling frequency of 44.1 kHz, the PCM format used on the K11 has a CD-like audio quality.

DC (Digital Cyclic) Waveforms

PCM waveforms can be used to make up the most harmonically complex portions of the sound (e.g., the attack), then the rest rounded out with DC waveforms. These DC waveforms are sustained tones that have been re-synthesized using the harmonic structure analyzed from Fast Fourier Transforms of original PCM waveforms.

(3) AM (Ring Modulation)

AM is a system that combines two input signals to form one output signal. The modulation of one waveform by another, that is, using one waveform to cause changes in the other can produce new, more complex harmonic structures, from the simpler structures in the original waveforms. In this way it's different from a DCF, which can actually eliminate harmonics and reduce harmonic complexity. AM can be used to create brash, overtone-rich sounds like metallic clangs and distortion.

[Warning]

The amount of modulation is determined by the level of each function in the Source 1 DCA filter. This is an important point to keep in mind when applying AM.

4.2 Single Edit Procedures

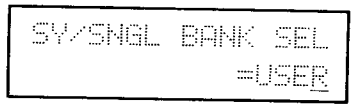
1) Getting Into Single Edit Mode

Creating new sounds (Single Edit) is done in the User Bank. First, Select the USER bank in SINGLE BANK SELECT in System Edit screen.

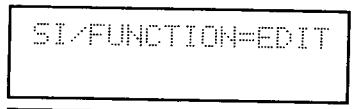
(1) Press the SYSTEM button to enter System Edit mode.

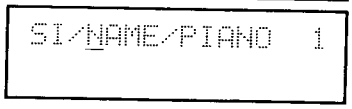


(2) Press the ⇨ cursor button to move the cursor to the BANK position, and select USER with the Increment Dial.



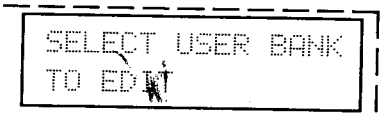
(3) Now press the SINGLE EDIT button to enter Single Edit mode. DR will be displayed in the Single Edit position if you selected a Drum Kit while in Play mode before entering Single Edit mode. The displayed tone name will be the one which was selected when you were in Play mode.





[Note]

Just pressing SINGLE EDIT button will not put you in Single Edit mode, unless you have first selected the USER bank. You'll see this bank-switching message in the display and then be returned to the situation just before you pressed the SINGLE EDIT button.



2) How to Call Up Parameters and Change Their Values

In Single Edit mode, you will create new sounds by editing (changing the values of) the basic constituent elements of the sound (the parameters). There are 10 such parameters associated with and controlling the DCO, 15 with the DCF, and 9 with the DCA, for a total of 34.

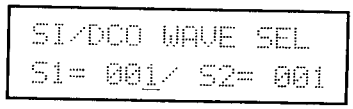
(1) Press the SINGLE EDIT button to enter Single Edit mode.



(2) Pressing the SINGLE EDIT button again steps you through the parameters that can be edited. Or, you can move the cursor over to the parameter position and select with the Increment Dial.



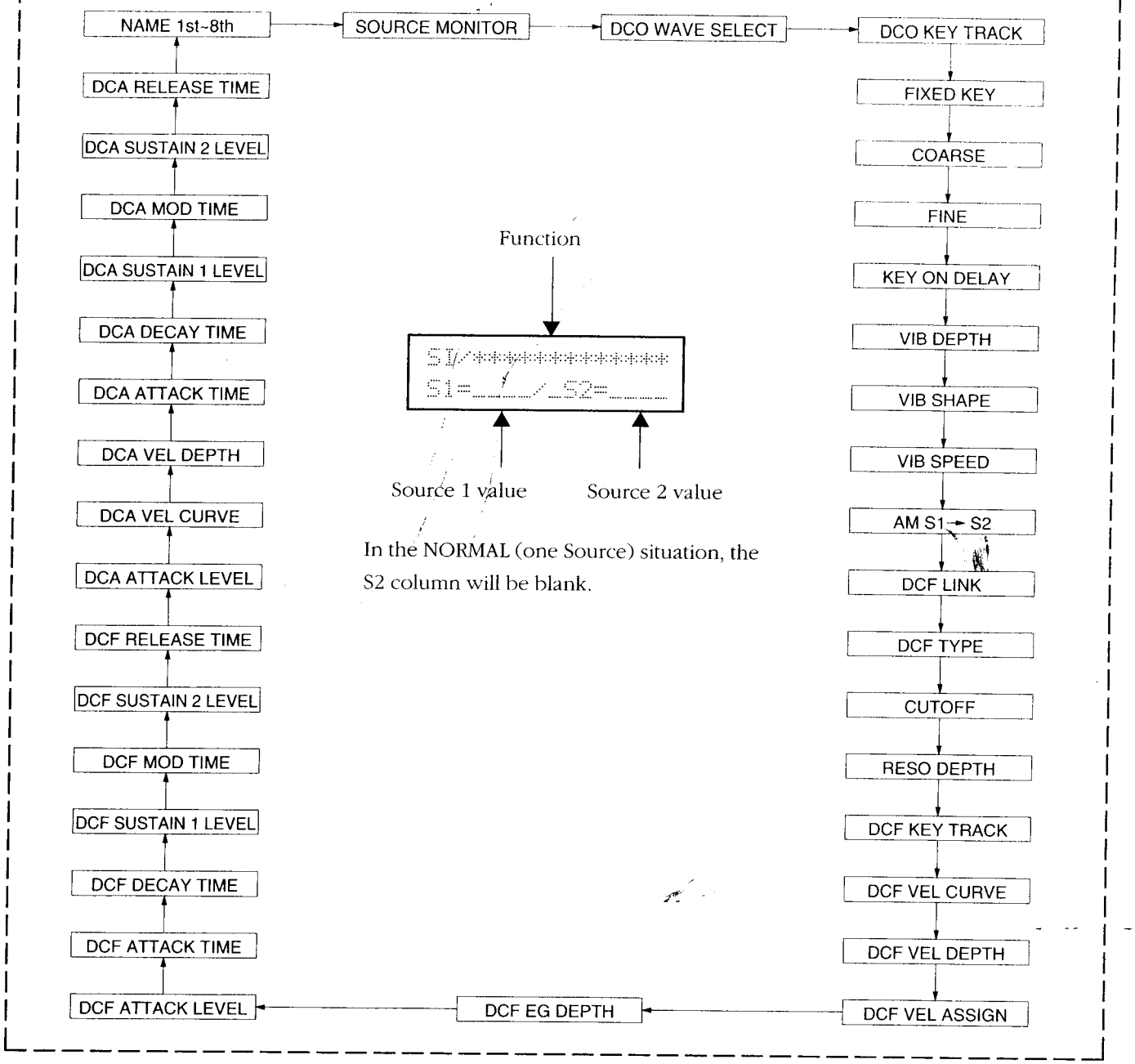
(3) Now, the values can be changed by pressing the ⇨ button to move the cursor to the value position in the display, and setting or selecting with the Increment Dial.



[Note]

On the K11, as soon as you edit something (change the Value), that new value is automatically saved and the previous value erased, unless you did a WRITE operation to save it (more on that later).

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- Move the cursor to the FUNCTION position and select the function you want with the Increment Dial. You can back up through the selections or fast forward with the dial to find the function you want.
- Press the cursor button to move the cursor to the value part of the display, then use the Increment Dial to set or select the values for each of the functions.

[Note]

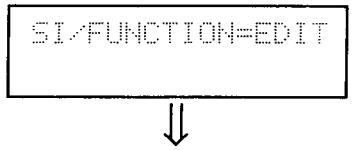
Avoid editing during play as much as possible.

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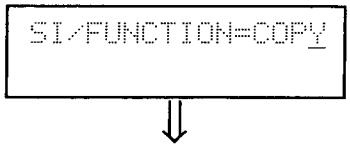
3) Single Copy

Single Copying can be done by the Source, Single, or a complete Bank could be copied all at once. And you can swap Source 1 and 2 using the EXCH (Exchange) function.

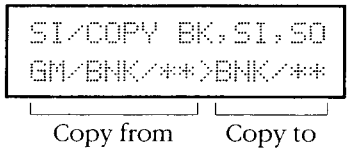
(1) Press the SINGLE EDIT button to enter Single Edit mode.



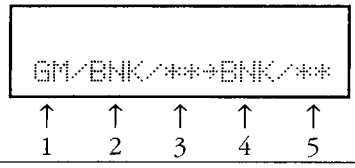
(2) Press the ▷▷ button to move the cursor over to EDIT, then select COPY with the Increment Dial.



(3) Pressing SINGLE EDIT takes you to Copy mode.



(4)

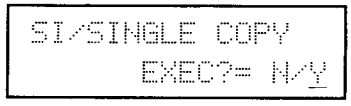


1	**GM, SP, USER**	Selects the "Copy From:" Bank.
2	**BNK, 001 to 128**	Selects the "Copy From:" tone.
3	**AL, S1, S2**	Selects what is to be copied from that "Copy From:" tone. AL means "Copy the Single Patch from the patch number selected in 2, above." S1 and S2 mean "Copy from a Source only (1 or 2)." If you have selected BNK in 2, the display will show a **.
4	**BNK, 001 to 128**	This selects what number to which the tone will be copied in the USER Bank. If you have selected BNK in 2, this will automatically be set to BNK.
5	**AL, S1, S2**	If you have selected BNK in 2, the display will show a **. If you have selected S1 in 3, this will automatically be set to S1 for you.

(5) Check all your settings for the Copy operation, then press the SINGLE EDIT button. The display will say EXEC?, meaning, "Should I execute your orders now?"

Depending on what is being copied, you'll see SINGLE or SOURCE displayed here.







Flip the Increment Dial to the right to indicate YES. The K11 will ask if you're sure. Flipping the Increment Dial once to the left will signal No and cancel the operation right here.

(6) But we're sure, so flip it to the right to answer YES and do the copy operation. You can flip it left at any time to cancel.





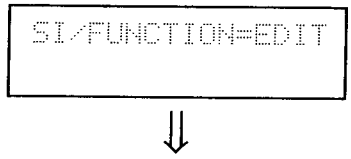
[Note]
If you are copying a Source to a Tone that has AM and DCF LINK set, these settings will be turned off.

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4) Exchanging Sources

You can change between NORMAL (one Source) and DOUBLE (two Sources) Single Patch with the Exchange function.

(1) Press the SINGLE EDIT button to enter Single Edit mode.



(2) Press the ▭▷ button to move the cursor over to EDIT, then select COPY with the Increment Dial.



(3) Press the SINGLE EDIT button again to enter Exchange mode. DOUBLE tones are indicated with a * to the left of the tone number.



(4) Press the ▭▷ button to move the cursor to the tone number position in the display, then use the Increment Dial to select the patch you want to Exchange.



(5) When you press SINGLE EDIT again the display will say "EXEC?" You can respond YES by flipping the Increment Dial to the right. The display will check again by saying "SURE?" in the display.



(6) Flip the Dial right once more to start the Exchange.





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4.3 Single Patch Editing

Name 1 ~ 8

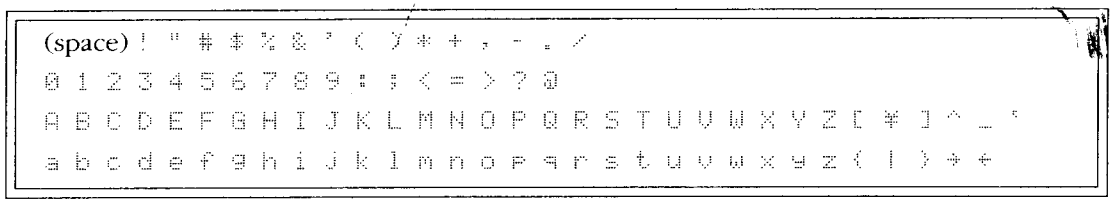
NAME 1st to 8th	
Function	Give a name to the Single currently being edited.
Values	Letters, numbers and symbols
Notes	

(1) Enter Single Edit mode and use the ⇨ button to move the cursor over to the NAME entry.



(2) Use the Dial to specify the tone name by setting it one character at a time, up to eight characters.

These are the letters, numbers, and symbols you can use.



Source Monitor

SOURCE MONITOR	
Function	Check the current Source mode and set Source S1 and S2 to MUTE or ON.
Values	ON, MUTE
Notes	The current Source mode is displayed: DOUBLE if there are two sources, and NORMAL if only one. In NORMAL you will not be able to edit it.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select MONITOR with the SINGLE EDIT button or the Increment Dial.



(3) Press the ⇨ button to move the cursor over to the Value entry and select ON or MUTE with the Dial. You can switch between S1 and S2 with the cursor button.



[Hint]

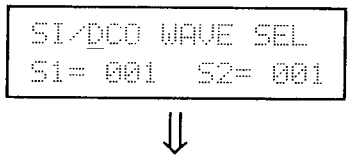
EXCHANGE (see page 54) can be used to change from NORMAL (one Source) to DOUBLE (two Sources), or vice versa.

DCO Wave Select

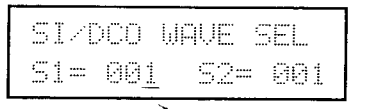
DCO WAVE SELECT	
Function	Select a Wave (waveform) for each Source.
Values	000 ~ 255
Notes	You have 256 different waveforms from which to choose, including 77 DCs (numbered 000 to 076) and 179 PCMs (numbered 077 to 255). Not all of these waveforms will have a clearly defined pitch. Even if all the other parameters remain the same, you can dramatically alter the sound by putting in a different waveform. (For descriptions of the different waveforms.)

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select WAVE SEL with the SINGLE EDIT button or the Increment Dial



(3) Press the ▱▷ button to move the cursor over to the Value entry and select a Wave number. You can switch between S1 and S2 with the cursor button.



[Hint]

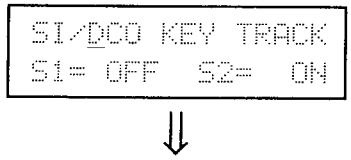
In addition to these Single tones, there are another 256 waveforms stored in the K11 that are specifically for use in making percussion sounds.

DCO Key Track

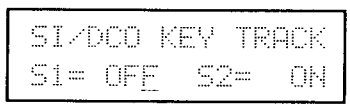
DCO KEY TRACK	
Function	Set Key Track to ON or OFF.
Values	ON, OFF
Notes	This selects whether to have the pitch of the sample correspond to the key played (Note Number). When ON, the pitch corresponding to that Note Number will be played. When OFF, a fixed pitch will be played regardless of what key is pressed. Repeating ON and OFF may noticeably change the Tone as compared to the pre-EDIT.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select KEY TRACK with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▱▷ button to move the cursor over to the Value entry and select ON or OFF with the Dial. You can switch between S1 and S2 with the cursor button.



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Fixed Key

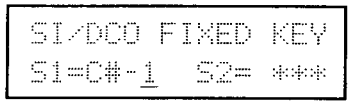
FIXED KEY	
Function	Sets the fixed pitch for each Source when KEY TRACK is OFF.
Values	C-2 ~ G8
Notes	This sets the fixed pitch for each Source when KEY TRACK is set to off. The pitch cannot be fixed when KEY TRACK is ON. (See "Key Track".)

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select FIXED KEY with the SINGLE EDIT button or the Increment Dial.



(3) Press the ⇨ button to move the cursor over to the Value entry and set the fixed pitch with the Dial. You can switch between S1 and S2 with the cursor button.



[Note]

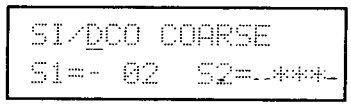
If a Source has KEY TRACK ON, it will display in this screen as ***, and you will not be able to edit it.

DCO Coarse

DCO COARSE	
Function	Sets the pitch of each Source in half-tone increments.
Values	-036 ~ 000 ~ +036
Notes	Can be set up or down three octaves. When KEY TRACK is OFF, you can fix the Source pitch by calling up the FIXED KEY parameter. (See "Key Track" on page 56.)

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCO COARSE with the SINGLE EDIT button or the Increment Dial.





(3) Press the ⇨ button to move the cursor over to the Value entry and select COARSE with the Dial. You can switch between S1 and S2 with the cursor button.



[Note]

If a Source has KEY TRACK ON, it will display in this screen as ***, and you will not be able to edit it.

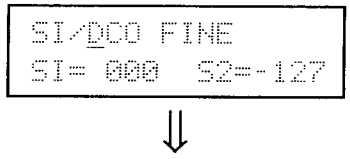
SNGL

DCO Fine

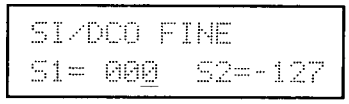
DCO FINE	
Function	Makes fine adjustments to the Source pitch.
Values	-128 ~ 000 ~ +127
Notes	-128 is a full half-step down, +127 a full half-step up. This can only be set when KEY TRACK is ON. When it is OFF, the FIXED KEY parameter must be called up to set and fix the pitch of the Source. (See "Key Track" on page 56.)

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCO FINE with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▷ button to move the cursor over to the Value entry and set this to FINE with the Dial. You can switch between S1 and S2 with the cursor button.

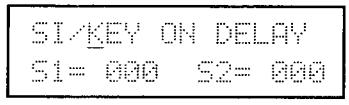


Key On Delay

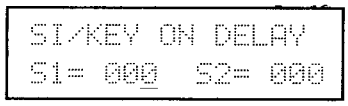
KEY ON DELAY	
Function	Sets the time between receiving a Note On message and the start of the sound.
Values	000 ~ 255
Notes	The larger the value, the longer the delay. The value will be reset to "000" when the AM (p.61) or DCF LINK (p.62) is set to ON.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select KEY ON DELAY with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▷ button to move the cursor over to the Value entry and set the amount of delay with the Increment Dial. You can switch between S1 and S2 with the cursor button.



SNGL

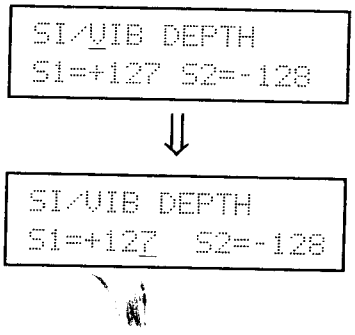
59 Vibrato

Vibrato Depth

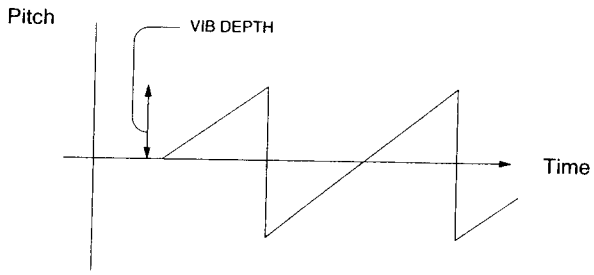
VIB DEPTH	
Function	Sets how widely the pitch will vary during Vibrato.
Values	-128 ~ 000 ~ +127
Notes	Vibrato is a slight periodic undulation or waver in the pitch caused by modulating the DCO with an LFO (low frequency oscillator). A setting of 00 means no Vibrato is applied, and the Vibrato gets "wider" the larger this value. The - and + indicate oppositely phased Vibrato. Vibrato is a very useful, almost indispensable effect for long-sustain instrument sounds like winds and strings.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select VIB DEPTH with the SINGLE EDIT button or the Increment Dial.



(3) Press the ⇨ button to move the cursor over to the Value entry and select VIB DEPTH with the Increment Dial. You can switch between S1 and S2 with the cursor button.



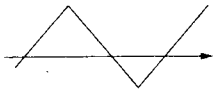
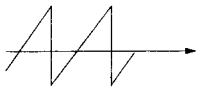
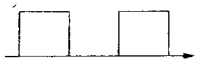
SNGL

[Note]

Settings can be made only when KEY TRACK (p.56) is ON, and have no effect if it is turned OFF.

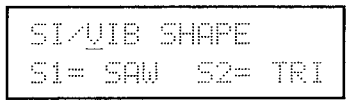
59

Vibrato Shape

VIB SHAPE	
Function	Selects what type of waver will be applied to the pitch.
Values	TRI, SAW, SQR, RND
Notes	This sets what kind of LFO waveform will modulate the DCO output to produce pitch variations. **TRI**  **SAW**  **SQR**  **RND** Random variations in pitch

(1) Press the SINGLE EDIT button to enter Single Edit mode.

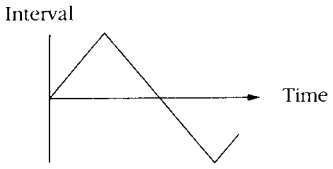
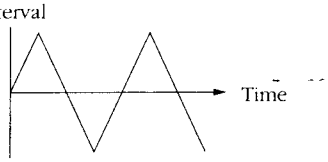
(2) Select VIB SHAPE with the SINGLE EDIT button or the Increment Dial.



(3) Press the ⇨ button to move the cursor over to the Value entry and select the SHAPE you want with the Increment Dial. You can switch between S1 and S2 with the cursor button.



Vibrato Speed

VIB SPEED	
Function	Sets the speed of the vibrato.
Values	001 ~ 016
Notes	This sets the rate at which the pitch varies. **Slow Vibrato**  **Fast Vibrato** 

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select VIB SPEED with the SINGLE EDIT button or the Increment Dial.



(3) Press the ⇨ button to move the cursor over to the Value entry and set the SPEED with the Dial. You can switch between S1 and S2 with the cursor button.



SNGL

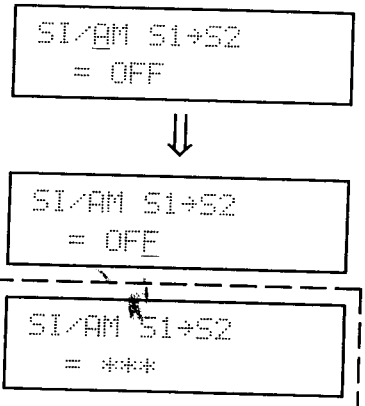
AM (Ring Modulation)

AM	
Function	Sets whether or not to modulate the Source 1 wavefrom with the Source 2 waveform.
Values	ON, OFF
Notes	Ring modulation is used to make clangorous, strident sounds that used to be hard to produce because of their rich overtones. The effect can be increased by increasing the ENV LEVEL of the modulating waveform (Source 1). If AM is ON, copying a Source from another Single will turn it OFF.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

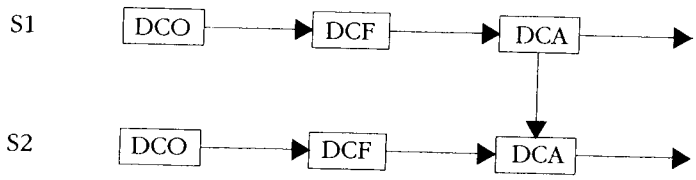
(2) Select AM with the SINGLE EDIT button or the Increment Dial.

(3) Press the ▭▸ button to move the cursor over to the Value entry and turn it ON or OFF with a flick of the Increment Dial.



[Note]

- A *** is displayed and you will be unable to do anything with this setting when the tone is set to NORMAL (one Source).
- AM is applied even if Source 2 is currently Muted.



[Note]

The KEY ON DELAY (p.58) value will be reset to 000 when setting this parameter ON.

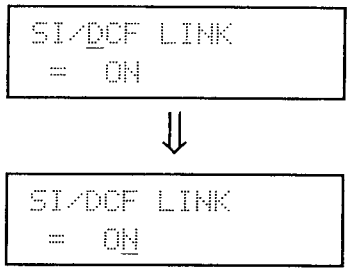
SNGL

DCF Link

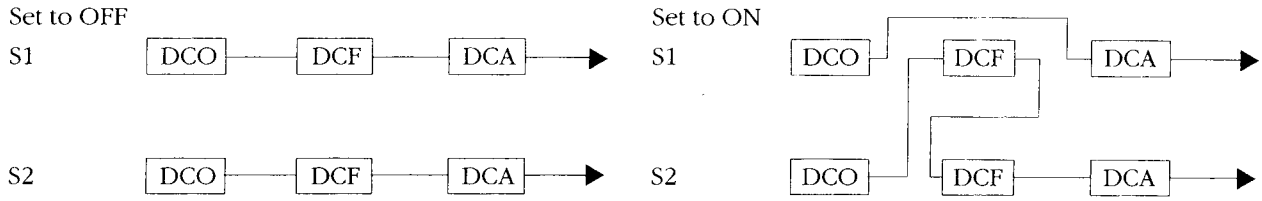
DCF LINK	
Function	Links and unlinks the Source 1 DCF (F1) and Source 2 (F2) DCF filters.
Values	ON, OFF
Notes	When set to ON, both Source 1 and Source 2 DCFs (F1 and F2) will be applied to the Source 2 sound. The Source 1 sound is passed directly from the DCO to the DCA. You can also use a combination of LPF and HPF as a bandpass filter. When DCF Link is ON, copying a Source from another Single will turn it OFF.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF LINK with the SINGLE EDIT button or the Increment Dial.

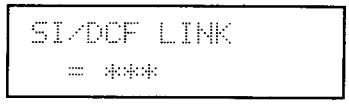


(3) Press the ▭▸ button to move the cursor over to the Value entry and turn it ON or OFF with a flick of the Dial.



[Note]

You won't be able to change the DCF LINK setting if the Single contains only one Source (NORMAL mode).



[Note]

The KEY ON DELAY (p.58) value will be reset to 000 when setting this parameter ON.

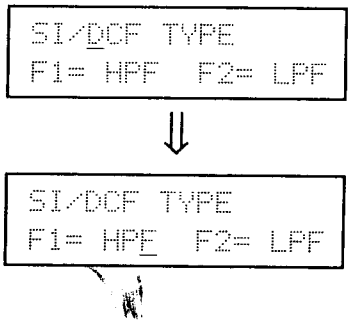
SNGL

DCF Type

DCF TYPE	
Function	Selects the filter type.
Values	LPF, HPF
Notes	This selects the type of filter that will process the sound source waveform output from the Source. The LPF cuts out harmonics above the set Cutoff Frequency to tone down and mellow the sound. The HPF cuts out the fundamental and harmonics below the given Cutoff Frequency so that the tone is defined only by its higher harmonics.

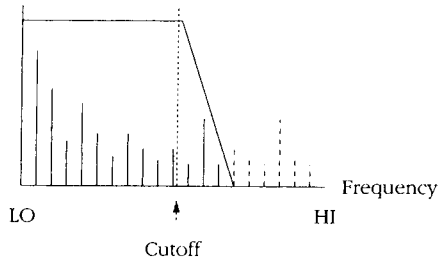
(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF TYPE with the SINGLE EDIT button or the Increment Dial.

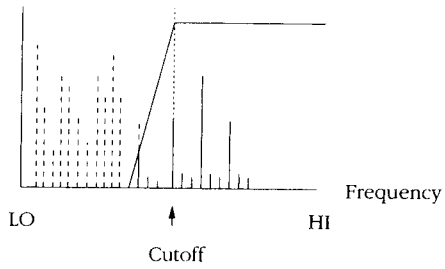


(3) Press the ⇨ button to move the cursor over to the Value entry and select LPF or HPF with the Dial. You can switch between F1 and F2 with the cursor button.

LPF



HPF



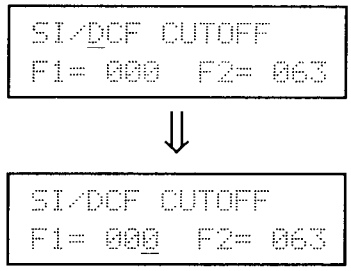
SNGL

DCF Cutoff

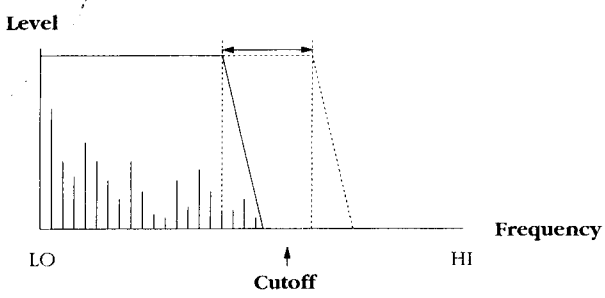
DCF CUTOFF	
Function	Sets the cutoff frequency for the DCF filter.
Values	000 ~ 255
Notes	The larger the value the higher the cutoff frequency, and the more brilliant and hard-edged the sound when DCF TYPE is set to LPF. If this value is set too low on an LPF (or too high on HPF), it might produce no sound at all.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF CUTOFF with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▷ button to move the cursor over to the Value entry and set CUTOFF with the Increment Dial. You can switch between F1 and F2 with the cursor button.

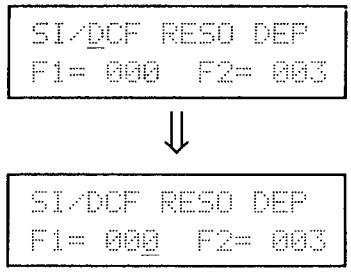


DCF Resonance Depth

DCF RESO DEPTH	
Function	Sets the level at the cutoff point.
Values	000 ~ 003
Notes	The higher the value, the more the harmonics right around the cutoff frequency are emphasized. This lends a characteristic "synthy" quality to the sound which is even more pronounced when Source mode is set to DOUBLE.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF RESO DEP with the SINGLE EDIT button or the Increment Dial.



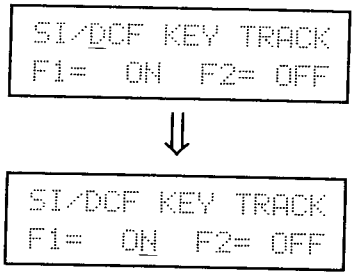
(3) Press the ▷ button to move the cursor over to the Value entry and set the Resonance Depth by spinning the Increment Dial. You can switch between F1 and F2 with the cursor button.

DCF Key Track

DCF KEY TRACK	
Function	Turns Filter Key Tracking ON and OFF.
Values	ON, OFF
Notes	When set to ON, the filter cutoff point will change depending on the key that is played (Note Number). Repeating ON and OFF may noticeably change the Tone as compared to the pre-EDIT.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

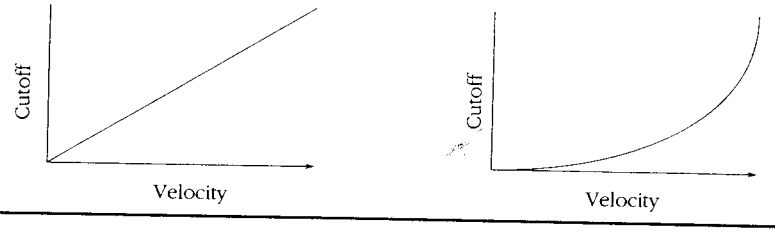
(2) Select DCF KEY TRACK with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▭▷ button to move the cursor over to the Value entry and turn DCF KEY TRACK to ON or OFF with a flick of the Dial. You can switch between F1 and F2 with the cursor button.

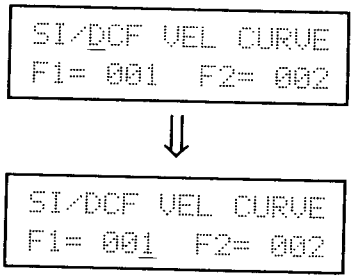
DCF Velocity Curve

DCF VEL CURVE	
Function	Selects the curve used to specify the cutoff point as a function of how hard a key is struck (the "attack velocity"). The intensity of the modulation applied by this curve is adjusted by DCF VEL DEPTH (see page 66).
Values	001, 002
Notes	CURVE 1 / CURVE 2



(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF VEL CURVE with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▭▷ button to move the cursor over to the Value entry and select either Curve 1 or Curve 2. You can switch between F1 and F2 with the cursor button.

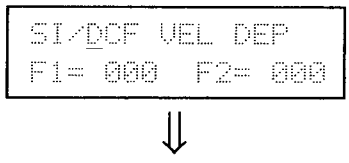
SNGL

DCF Velocity Depth

DCF VEL DEPTH	
Function	Sets how far the cutoff point moves in response to how hard a key is struck.
Values	000 ~ 063
Notes	When Filter Type is LPF and this is set to a positive value, the harder you play the brighter the sound will be. This change will depend on how hard the key is struck ("attack velocity") as specified by the DCF Velocity Curve (see page 65).

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF VEL DEP with the SINGLE EDIT button or the Increment Dial.



(3) Press the ⇨ button to move the cursor over to the Value entry and set DCF Velocity Depth with the Dial. You can switch between F1 and F2 with the cursor button.

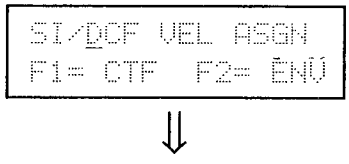


DCF Velocity Assign

DCF VEL ASSIGN	
Function	Sets whether velocity-dependent changes in the tone will control the cutoff frequency (CTF) or the DCF Envelope Depth (ENV).
Values	CTF, ENV
Notes	When making the tone vary with the velocity of the player's attack (how hard a key is struck), this selects whether the cutoff frequency will be directly controlled by velocity, or indirectly via changes to the DCF Envelope Depth parameter.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF VEL ASIGN with the SINGLE EDIT button or the Increment Dial.



(3) Press the ⇨ button to move the cursor over to the Value entry and select CTF or ENV with the Dial. You can switch between F1 and F2 with the cursor button.



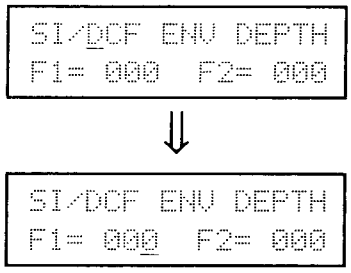
SNGL

DCF Envelope Depth

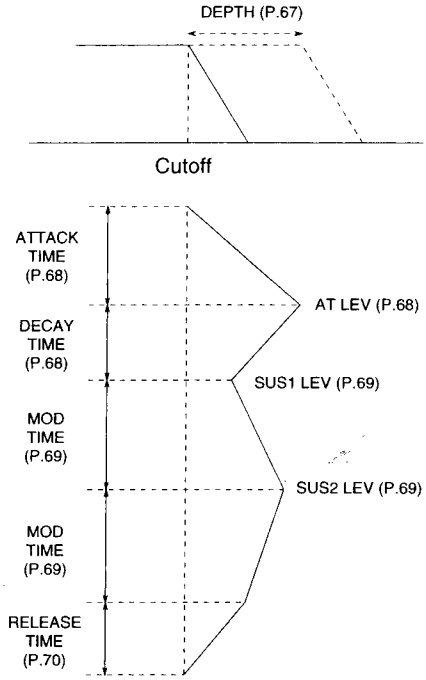
DCF ENV DEPTH	
Function	A factor for how much the tone will vary in response to changes in the envelope.
Values	000 ~ 063
Notes	The higher the Envelope Curve level, the higher the cutoff frequency (the brighter and crisper the sound).

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF ENV DEP with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▷ button to move the cursor over to the Value entry and set the ENV DEP with the Increment Dial. You can switch between F1 and F2 with the cursor button.



* After the initial attack and decay, the envelope will continue to oscillate from SUS1 to SUS2 with a period equal to the MOD TIME for as long as the key is pressed.

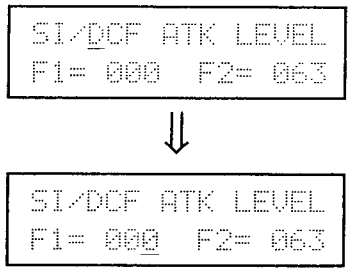
DCF Envelope Attack Level

DCF ATK LEVEL	
Function	Specifies the cutoff point associated with the peak envelope level during the attack portion of the sound.
Values	-064 ~ 000 ~ +063
Notes	The larger this value, the higher the cutoff frequency (the brighter the sound).

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF ENV AT LEV with the SINGLE EDIT button or the Increment Dial.

(3) Press the ▭▸ button to move the cursor over to the Value entry and set ENV AT LEV with the Increment Dial. You can switch between F1 and F2 with the cursor button.



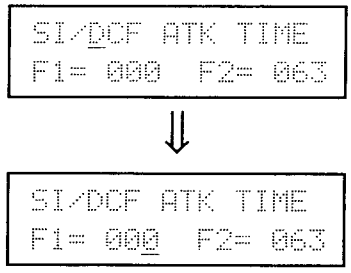
DCF Envelope Attack Time

DCF ATTACK TIME	
Function	Specifies the rate of increase in envelope level during the attack portion of the sound.
Values	000 ~ 063
Notes	The larger this value, the slower the change in envelope level.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF ENV ATTACK with the SINGLE EDIT button or the Increment Dial.

(3) Press the ▭▸ button to move the cursor over to the Value entry and use the Dial to set the ENV AT LEV. You can switch between F1 and F2 with the cursor button.



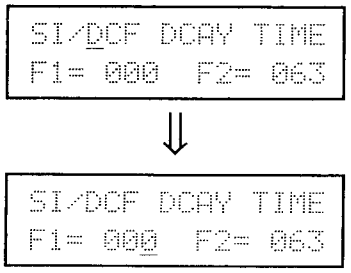
DCF Envelope Decay Time

DCF DECAY TIME	
Function	Specifies the amount of time between the Attack and when the Decay Level 1 frequency is reached.
Values	000 ~ 063
Notes	The smaller the values the shorter the Decay Time.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF ENV DECAY with the SINGLE EDIT button or the Increment Dial.

(3) Press the ▭▸ button to move the cursor over to the Value entry. Set Decay Time with the Increment Dial. You can switch between F1 and F2 with the cursor button.



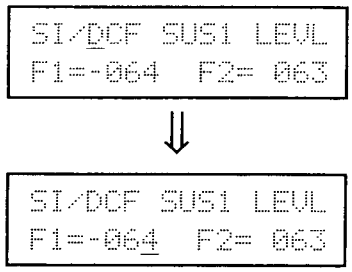
SNGL

DCF Envelope Sustain 1 Level

DCF SUSTAIN 1 LEVEL	
Function	Specifies the Cutoff Frequency 1 that will be in effect until the key is released (Note Off is received).
Values	-064 ~ 000 ~ +063
Notes	You may notice some modulation during a sustain sound on certain Waveforms, even when you have Sustain 1 and 2 levels set the same. If this happens, try setting a longer Modulation Time (P.67).

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF ENV SUS 1 with the SINGLE EDIT button or the Increment Dial.



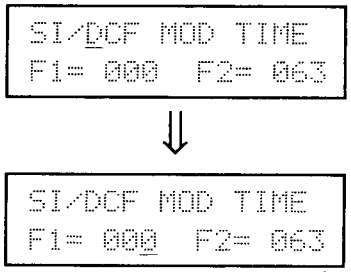
(3) Press the ⇨ button to move the cursor over to the Value entry and set Sustain 1 with the Dial. You can switch between F1 and F2 with the cursor button.

DCF Envelope Modulation Time

DCF MOD TIME	
Function	Sets the amount of time it takes to go from the Sustain 1 level to the Sustain 2 level cutoff frequency.
Values	000 ~ 063
Notes	

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF ENV MOD T with SINGLE EDIT button or the Increment Dial.



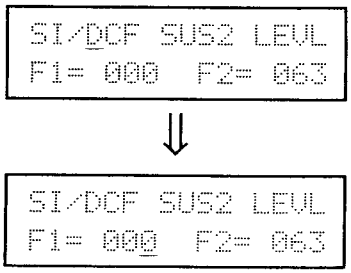
(3) Press the ⇨ button to move the cursor over to the Value entry and adjust the Modulation Time with the Increment Dial. You can switch between F1 and F2 with the cursor button.

DCF Envelope Sustain 2 Level

DCF SUSTAIN 2 LEVEL	
Function	Specifies the Cutoff Frequency 2 that will be in effect until the key is released.
Values	-064 ~ 000 ~ +063
Notes	

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF ENV SUS 2 with the SINGLE EDIT button or the Increment Dial.



(3) Press the ⇨ button to move the cursor over to the Value entry and set it with the Increment Dial. You can switch between F1 and F2 with the cursor button.

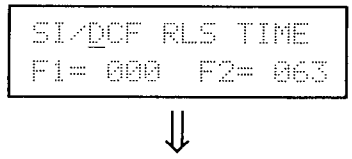
SNGL

DCF Envelope Release Time

DCF RELEASE TIME	
Function	Specifies the time it will take from the release of the key to a volume level of zero.
Values	000 ~ 063
Notes	If the key is released before the envelope has reached its Sustain 1 or Sustain 2 level, the decay starts immediately from the level at which the key was released and decays to zero in the time set by this parameter.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCF ENV RELEASE with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▷ button to move the cursor over to the Value entry and set Release with the Dial. You can switch between F1 and F2 with the cursor button.



DCA Attack Level

DCA ATTACK LEVEL	
Function	Specifies the volume at the envelope peak during the attack portion of the sound.
Values	000 ~ 063
Notes	The larger this value, the higher the volume at the envelope peak.

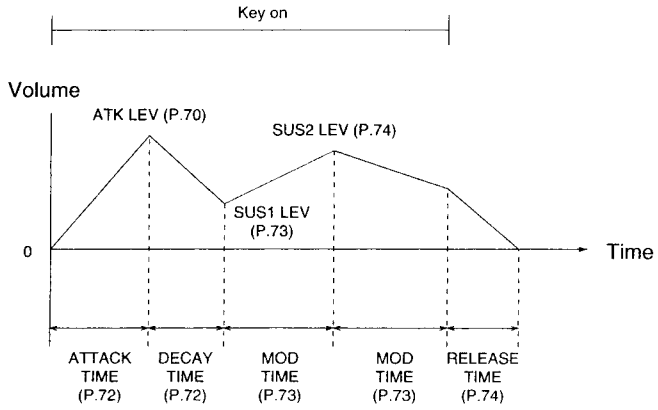
(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCA AT LEV with the SINGLE EDIT button or the Increment Dial.



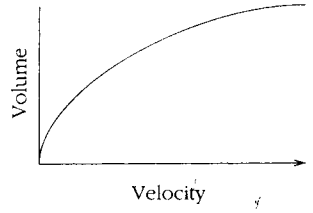
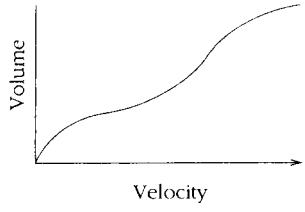
(3) Press the ▷ button to move the cursor over to the Value entry and twist the Increment Dial to set this Level. You can switch between S1 and S2 with the cursor button.





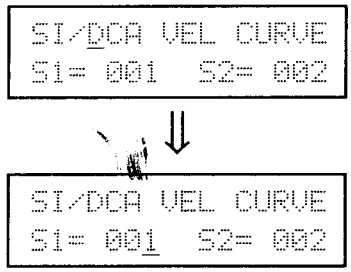
* After the initial attack and decay, the envelope will continue to oscillate from SUS 1 to SUS 2 with a period equal to the MOD TIME for as long as the key is pressed.

DCA Velocity Curve

DCA VEL CURVE	
Function	Selects how the envelope volume and sustain vary when these are controlled by how hard a key is struck (the "attack velocity").
Values	001, 002
Notes	CURVE 1  CURVE 2 

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCA VEL CURVE with the SINGLE EDIT button or the Increment Dial.



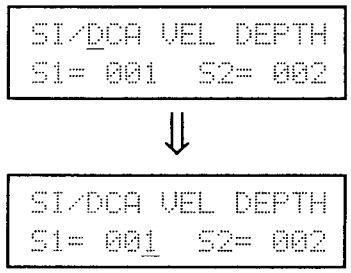
(3) Press the ▷ button to move the cursor over to the Value entry and select either Volume Curve 1 or 2 with the Increment Dial. You can switch between S1 and S2 with the cursor button.

DCA Velocity Depth

DCA VEL DEPTH	
Function	A factor for how much the volume and sustain will vary in response to changes in the envelope.
Values	000 ~ 063
Notes	The way the volume actually changes as a function of velocity is set by the DCA Velocity Curve (see above).

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCA VEL DEPTH with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▷ button to move the cursor over to the Value entry and set the Velocity Depth factor with the Dial. You can switch between S1 and S2 with the cursor button.

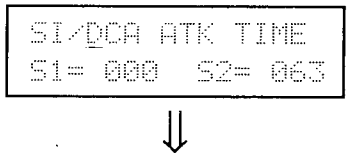
SNGL

DCA Envelope Attack Time

DCA ATTACK TIME	
Function	Specifies the rate of increase in envelope level during the attack portion of the sound.
Values	000 ~ 063
Notes	The smaller this value, the sharper (faster) the attack.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCA EG ATTACK with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▭▸ button to move the cursor over to the Value entry and adjust the Attack with the Dial. You can switch between S1 and S2 with the cursor button.

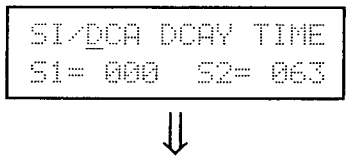


DCA Envelope Decay Time

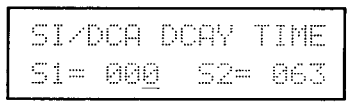
DCA DECAY TIME	
Function	Specifies the amount of time between the Attack and when the Sustain Level 1 volume level is reached.
Values	000 ~ 063
Notes	The smaller the values the shorter the Decay Time.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCA EG DECAY with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▭▸ button to move the cursor over to the Value entry and adjust the Decay time with a twist of the Increment Dial. You can switch between S1 and S2 with the cursor button.



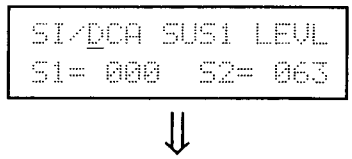
SNGL

DCA Envelope Sustain 1 Level

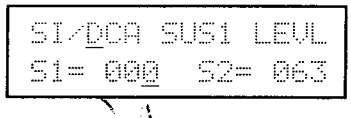
DCA SUSTAIN 1 LEVEL	
Function	Sets the Sustain 1 volume level.
Values	000 ~ 063
Notes	There will be no sustain if you have this set to 000, regardless of the Modulation Time and Sustain 2 settings. In addition, you may notice some modulation during a sustain sound on certain Waveforms, even when you have Sustain 1 and 2 levels set the same. If this happens, try setting a longer MOD TIME (P.72).

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCA EG SUS 1 with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▭▷ button to move the cursor over to the Value entry and set Sustain 1 with the Dial. You can switch between S1 and S2 with the cursor button.

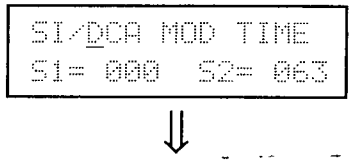


DCA Envelope Modulation Time

DCA MOD TIME	
Function	Sets the amount of time it takes to go from the Sustain 1 Level to the Sustain 2 Level.
Values	000 ~ 063
Notes	There is no sustain if DCA Sustain 1 level is set to 000, regardless of the setting here.

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCA EG MOD T with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▭▷ button to move the cursor over to the Value entry and set EG MOD T with the Dial. You can switch between S1 and S2 with the cursor button.



SNGL

DCA Envelope Sustain 2 Level

DCA SUSTAIN 2 LEVEL	
Function	Sets the Sustain 2 level.
Values	000 ~ 063
Notes	

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCA EG SUS 2 with the SINGLE EDIT button or the Increment Dial.





(3) Press the ⇨ button to move the cursor over to the Value entry and set Sustain 2 with the Dial. You can switch between S1 and S2 with the cursor button.

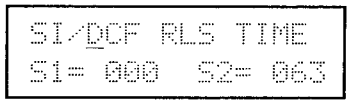


DCA Envelope Release Time

DCA RELEASE TIME	
Function	Specifies the time it will take from the release of the key to the sound completely dying away (volume level of zero).
Values	000 ~ 063
Notes	

(1) Press the SINGLE EDIT button to enter Single Edit mode.

(2) Select DCA EG RELEASE with the SINGLE EDIT button or the Increment Dial.





(3) Press the ⇨ button to move the cursor over to the Value entry and use the Dial to set DCA EG RELEASE. You can switch between S1 and S2 with the cursor button.



SNGL

SECTION 5 Editing Percussion Voices

5.1 Editing

1) The Drum Patches

The drums on the K11 are all kept in one Bank, 128 different tones or "percussion voices." These are collected into 7 "Drum Kits" on the K11, and each Kit has its own way that the instruments are assigned to keys on the keyboard. Percussion voices can be edited by pressing the SINGLE EDIT button from the USER bank, just like Singles.

* Here's a listing of the Drum Kits in the GM Bank.

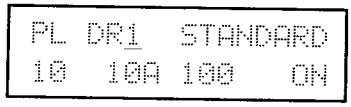
DR1	STANDARD
DR2	ROOM
DR3	POWER
DR4	ELECTRO
DR5	BOB
DR6	JAZZ
DR7	ORCHSTR

See page 77 for a summary of how percussion voices are assigned in these Kits.

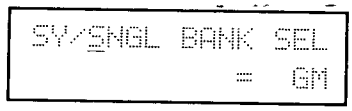
2) Getting into Drum Edit Mode

The procedure for getting into Drum Edit mode is identical to that for getting into Single Edit mode, with the only difference being the lead-up. If you select a Single in Play mode, you'll wind up in Single Edit mode; and if you select a Drum Kit (DR1 to DR7) you'll wind up in Drum Edit mode. Beyond that, the same: select USER from the System Edit SINGLE BANK SELECT screen, etc.

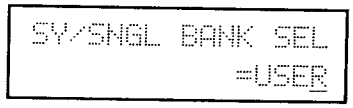
(1) From Play mode, select the Drum Kit you want to edit.



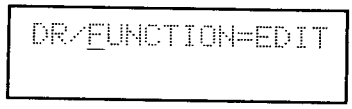
(2) Press the SYSTEM button to enter System Edit mode.



(3) Press the ▭ button to move the cursor to the Bank entry, and change this to USER with the Dial.

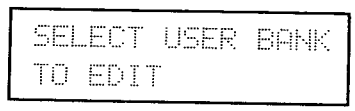


(4) Press the SINGLE EDIT button to get into Drum Edit mode.



[Note]

Just pressing SINGLE EDIT button will not put you in Single Edit mode, unless you have first selected the USER bank. You'll see this bank-switching message in the display and then be returned to the situation just before you pressed the SINGLE EDIT button.



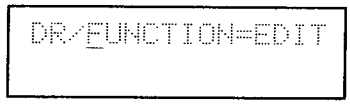
3) Drum Copy

With Drum Copy, you copy a percussion voice Patch, rather than a set of key assignments.

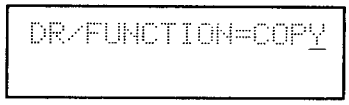
<Copying a Percussion Patch>

With this you can copy percussion patch (tone) data to a different percussion voice.

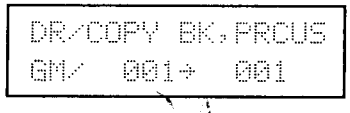
(1) Press the SINGLE EDIT button to get into Drum Edit mode.



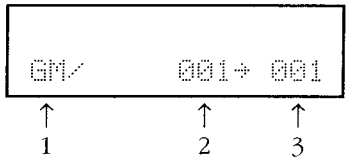
(2) Press the ▭ button to move the cursor to EDIT, and select COPY using the Increment Dial.



(3) After selecting COPY and pressing the SINGLE EDIT button, rotate the Increment Dial toward the Functions to change the display over to Copy mode.



(4)



1	GM, SP	Selects "Copy From:" Bank
2	ALL, 001 to 128	"Copy From:" Percussion No.
3	ALL, 001 to 128	"Copy To:" Percussion No.

(5) Check all your settings for the Copy operation, then press the SINGLE EDIT button. The display will say EXEC?, meaning, "Should I execute now?"

Turning the Increment Dial to the right indicates YES. The K11 will ask if you're sure. Flipping the Increment Dial once to the left will signal No and cancel the operation right here.





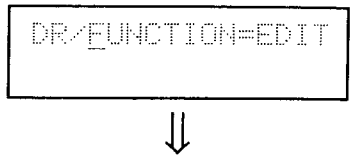
(6) But we're sure, so flip it to the right to answer YES and do the copy operation. You can flip it left at any time to cancel.





4) Calling Up Functions and Value Settings

(1) You can change to the function you want to edit by pressing the SINGLE EDIT button after you're in Drum Edit mode.

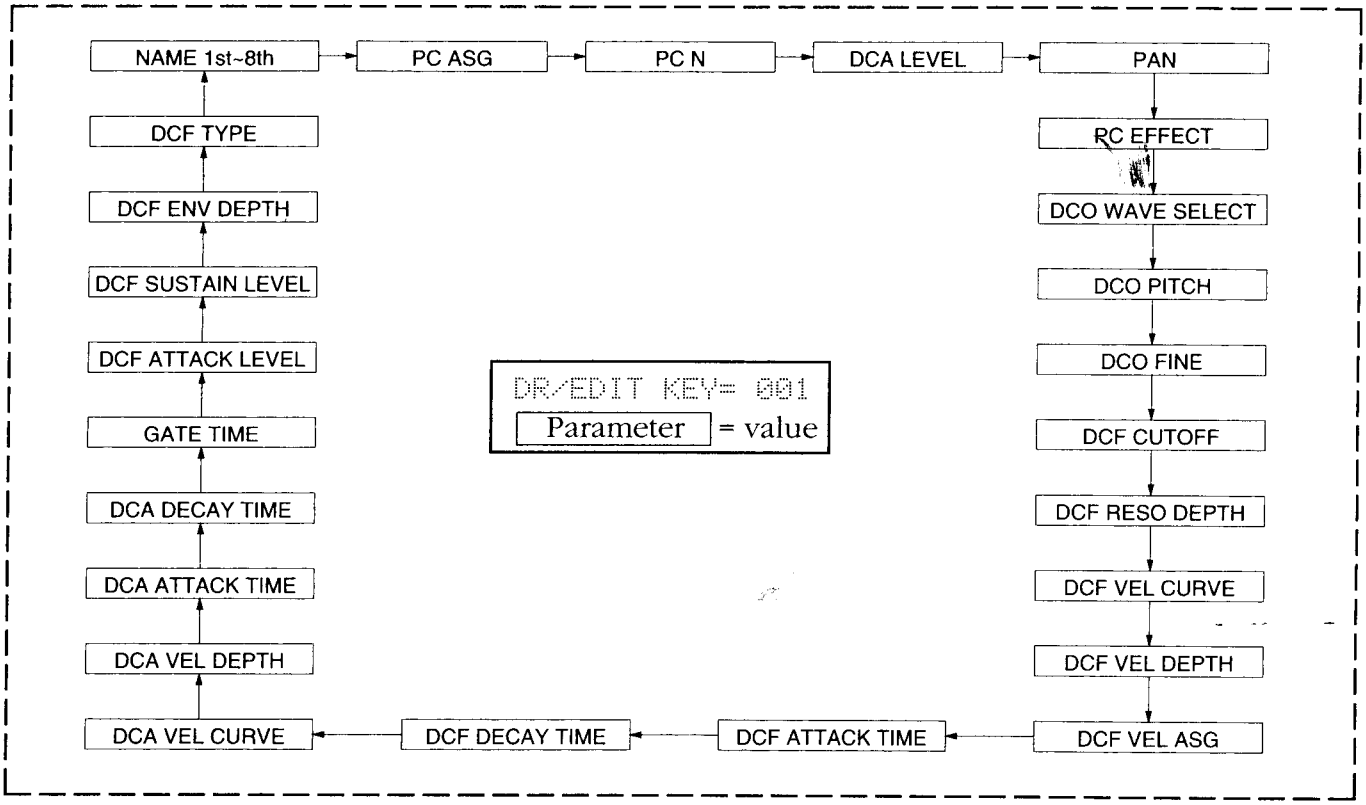


(2) Or move the cursor to the function position you want to edit and select the function with a turn of the Increment Dial.



(3) Press the ⇨ cursor button to move to the Value entry, then set or select your values with the Increment Dial. You can step through the parameters one at a time by pressing the SINGLE EDIT button.





[Note]

Avoid editing during play as much as possible.

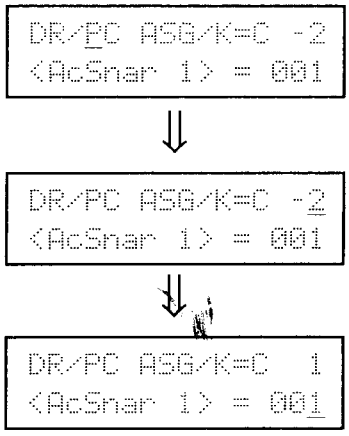
5.2 Editing a Percussion

Percussion Assign/Key Select

PC ASG/KEY SELECT	
Function	Select the key you want to edit and the Percussion voice assigned to that key.
Values	C-2 ~ G8 (or 001 ~ 128)
Notes	If you select a key that already has a Percussion voice assigned to it, the edit you make will "overwrite" the old voice.

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select PC ASG mode with the SINGLE EDIT button or the Increment Dial.



(3) Press the ⇨ button to move the cursor over to the key Name entry and select the key you want to edit with the Increment Dial.

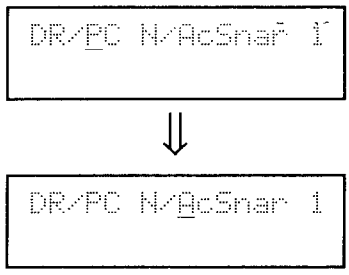
(4) One more press of the ⇨ button takes you to the entry where you select the Percussion voice number.

Percussion Name

PC NAME	
Function	Give a name to the Percussion voice currently being edited.
Values	Letters, numbers and symbols
Notes	

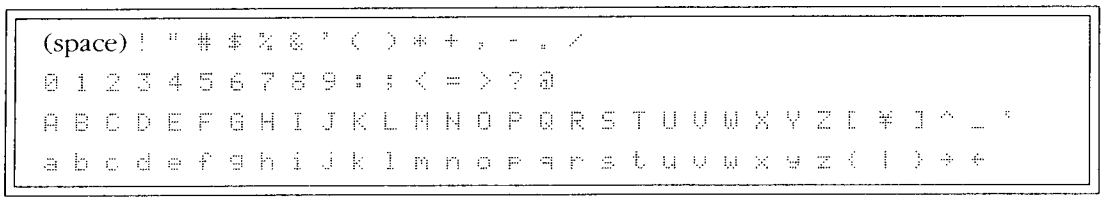
(1) Press the SINGLE EDIT button to get into Drum Edit mode.

(2) Select PC N with the SINGLE EDIT button or the Increment Dial.



(3) Use the Dial to specify the tone name by setting it one character at a time, up to eight characters.

These are the letters, numbers, and symbols you can use.



DCA Level

DCA LEVEL	
Function	Controls the volume of the Percussion voice.
Values	000 ~ 127
Notes	This adjusts the volume of the Percussion voice. The overall balance of all the Percussion voices together is adjusted with the Play mode level (see page 31).

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCA LEVEL with the SINGLE EDIT button or the Increment Dial.





(3) Press the ⇨ button to move the cursor over to the Value entry and set the level with the Dial.

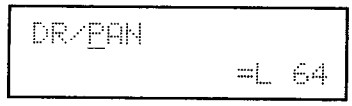


Pan

PAN	
Function	Set the stereo position of the Percussion voices within the selected Drum Kit.
Values	L64 ~ 000 ~ R63
Notes	

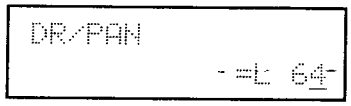
(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select PAN with the SINGLE EDIT button or the Increment Dial.





(3) Press the ⇨ button to move the cursor over to the Value entry and set the Pan with the Increment Dial.



Percussion Effect Level

PC EFFECT LEVEL	
Function	Sets the effects level on the Percussion voices.
Values	HI, LO
Notes	

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select PC EFFECT with the SINGLE EDIT button or the Increment Dial.





(3) Press the ⇨ button to move the cursor over to the Value entry and set the level to HI or LO with a flick of the Increment Dial.



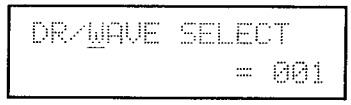
SEC	PERCUS	OUTPUT
HI	HI	HI
	LO	LO
LO	HI	LO
	LO	LO

Wave Select

WAVE SELECT	
Function	Select the Source Wave (waveform) for the Percussion voice.
Values	000 ~ 255
Notes	You have 256 different waveforms from which to choose, including 6 DCs (numbered 000 to 005) and 250 PCMs (numbered 006 to 255). Not all of these waveforms will have a clearly defined pitch. Even if all the other parameters remain the save, you can dramatically alter the sound by putting in a different waveform for the Percussion sound. (For descriptions of the different waveforms.)

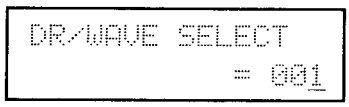
(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select WAVE SELECT with the SINGLE EDIT button or the Increment Dial.





(3) Press the ⇨ button to move the cursor over to the Value entry and select the Wave Number you want with the Increment Dial.



DCO Pitch

DCO PITCH	
Function	Changes the pitch of the Source.
Values	000 ~ 127
Notes	Higher numbers mean higher pitch.

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCO PITCH with the SINGLE EDIT button or the Increment Dial.





(3) Press the ▷ button to move the cursor over to the Value entry and set the value for the pitch with the Increment Dial.

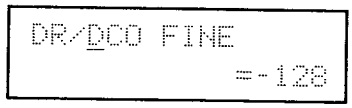


DCO Fine

DCO FINE	
Function	Makes fine adjustments to the pitch of a Source.
Values	-128 ~ 000 ~ +127
Notes	-128 shifts the pitch by roughly 100 cents down, and +127 by roughly 100 cents up.

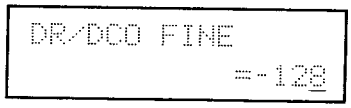
(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCO FINE with the SINGLE EDIT button or the Increment Dial.





(3) Press the ▷ button to move the cursor over to the Value entry and tune the Source with a turn of the Increment Dial.

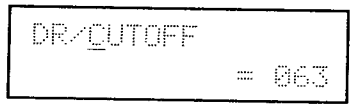


DCF Cutoff

DCF CUTOFF	
Function	Set the DCF filter cutoff point.
Values	000 ~ 255
Notes	Larger values move the cutoff point to higher frequencies. Setting the value too low might eliminate the sound entirely. (When DCF TYPE is LPF.)

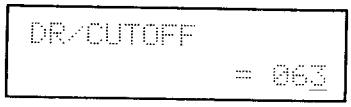
(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCF CUTOFF with the SINGLE EDIT button or the Increment Dial.





(3) Press the ▷ button to move the cursor over to the Value entry and set the DCF cutoff point with the Increment Dial.

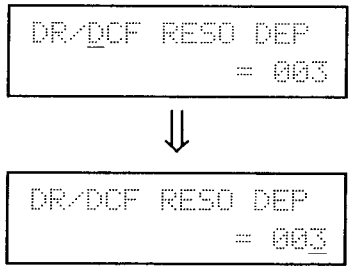


DCF Resonance Depth

DCF RESO DEPTH	
Function	Sets the level in the vicinity of the cutoff point.
Values	000 ~ 003
Notes	The higher the value, the more the harmonics right around the cutoff frequency are emphasized. This lends a characteristic "synthy" quality to the sound.

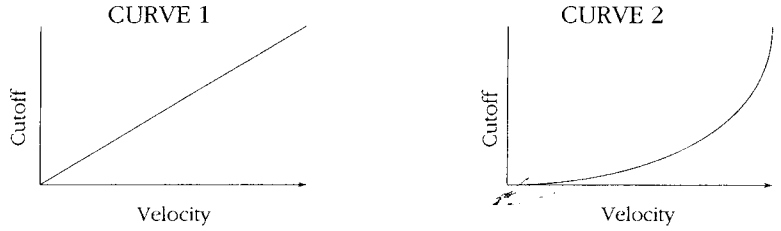
(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCF RESO DEP with the SINGLE EDIT button or the Increment Dial.



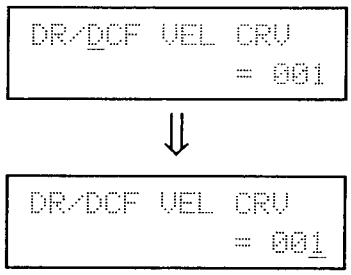
(3) Press the ⇨ button to move the cursor over to the Value entry and set the Resonance Depth by spinning the Increment Dial.

DCF Velocity Curve

DCF VEL CURVE	
Function	Selects the curve used to specify the cutoff point as a function of how hard a key is struck (the "attack velocity"). The intensity of the modulation applied by this curve is adjusted by DCF VEL DEPTH (see page 83).
Values	001, 002
Notes	

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCF VEL CURVE with the SINGLE EDIT button or the Increment Dial.



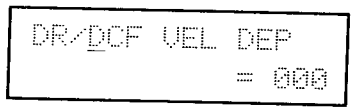
(3) Press the ⇨ button to move the cursor over to the Value entry and select either Curve 1 or Curve 2.

DCF Velocity Depth

DCF VEL DEPTH	
Function	Sets how far the cutoff frequencies moves in response to how hard a key is struck.
Values	000 ~ 063
Notes	When this is set to a positive value, the harder you play the brighter the sound will be. This change will depend on how hard the key is struck ("attack velocity") as specified by the DCF Velocity Curve (see page 82).

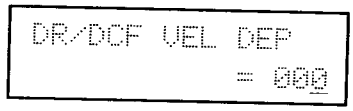
(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCF VEL DEP with the SINGLE EDIT button or the Increment Dial.





(3) Press the ▭▸ button to move the cursor over to the Value entry and set DCF Velocity Depth with the Dial.

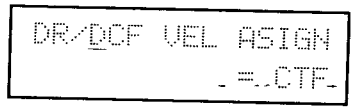


DCF Velocity Assign

DCF VEL ASSIGN	
Function	Sets whether velocity-dependent changes in the tone will control the cutoff frequency (CTF) or the DCF Envelope Depth (ENV).
Values	CTF, ENV
Notes	When making the tone vary with the velocity of the player's attack (how hard a key is struck), this selects whether the cutoff frequency will be directly controlled by velocity, or indirectly via changes to the DCF Envelope Depth parameter.

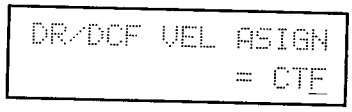
(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCF VEL ASIGN with the SINGLE EDIT button or the Increment Dial.





(3) Press the ▭▸ button to move the cursor over to the Value entry and select CTF or ENV with the Dial.

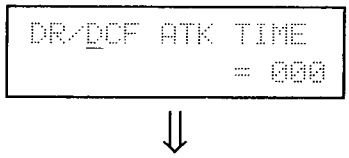


DCF Envelope Attack Time

DCF ATTACK TIME	
Function	Specifies the rate of increase in envelope level during the attack portion of the sound.
Values	000 ~ 063
Notes	The larger this value, the slower the change in envelope level.

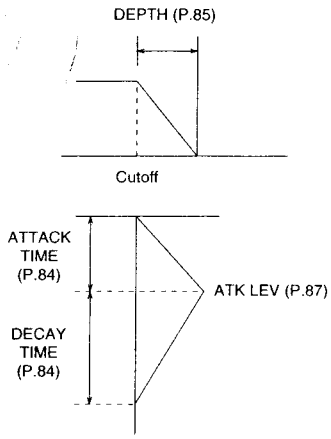
(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCF EG ATTACK with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▷ button to move the cursor over to the Value entry and use the Dial to set the EG AT LEV.



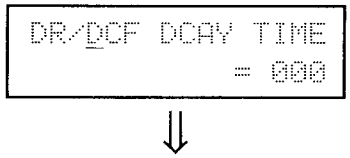


DCF Envelope Decay Time

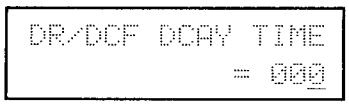
DCF DECAY TIME	
Function	Specifies the amount of time between the Attack and the point at which the Sustain Level frequency is reached.
Values	000 ~ 063
Notes	The smaller the values the shorter the Decay Time.

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

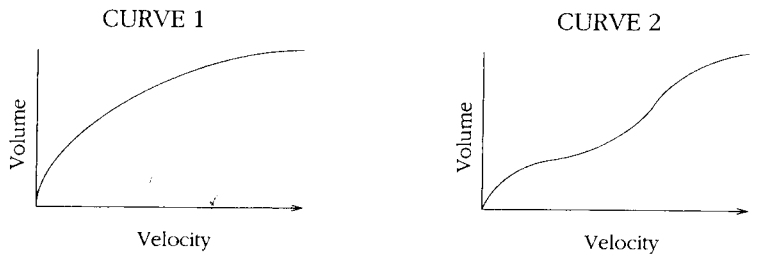
(2) Select DCF EG DECAY with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▷ button to move the cursor over to the Value entry and set the Decay Time with the Increment Dial.

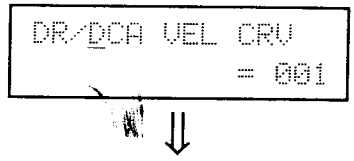


DCA Velocity Curve

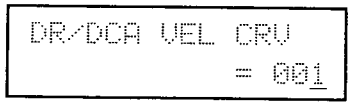
DCA VEL CURVE	
Function	Selects how the envelope volume and sustain vary when these are controlled by how hard a key is struck (the "attack velocity"). The intensity of this effect is adjusted using the parameter DCA VEL DEPTH (see page 85).
Values	001, 002
Notes	

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCA VEL CURVE with the SINGLE EDIT button or the Increment Dial.



(3) Press the ⇨ button to move the cursor over to the Value entry and select either Volume Curve 1 or 2 with the Increment Dial.

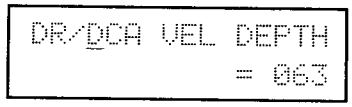


DCA Velocity Depth

DCA VEL DEPTH	
Function	A factor for how much the volume and sustain will vary in response to changes in the envelope.
Values	000 ~ 063
Notes	Negative values mean the harder the attack the lower the volume. The way the volume actually changes as a function of velocity is set by the DCA Velocity Curve (see page 85).

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCA VEL DEPTH with the SINGLE EDIT button or the Increment Dial.



(3) Press the ⇨ button to move the cursor over to the Value entry and set the Velocity Depth factor with the Dial.



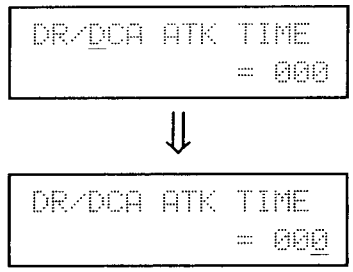
DRUM

DCA Envelope Attack Time

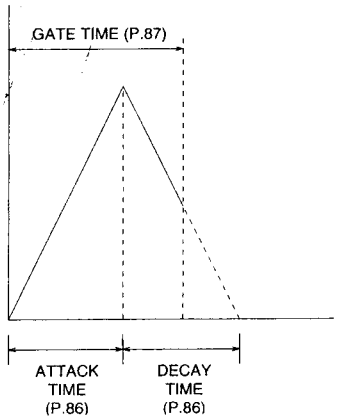
DCA ATTACK TIME	
Function	Specifies the rate of increase in envelope level during the attack portion of the sound.
Values	000 ~ 063
Notes	The smaller this value, the sharper (faster) the attack.

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCA EG ATTACK with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▷ button to move the cursor over to the Value entry and adjust the Attack with the Dial.

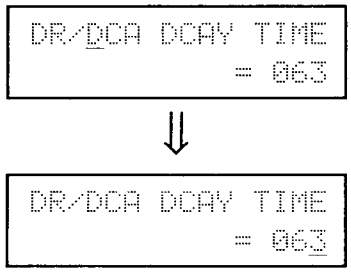


DCA Envelope Decay Time

DCA DECAY TIME	
Function	Specifies the amount of time between the Attack and the point at which the Sustain Level volume is reached.
Values	000 ~ 063
Notes	The smaller the values the shorter the Decay Time.

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

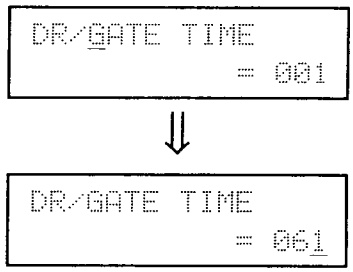
(2) Select DCA EG DECAY with the SINGLE EDIT button or the Increment Dial.



(3) Press the ▷ button to move the cursor over to the Value entry and adjust the Decay time with a twist of the Increment Dial.

Gate Time

GATE TIME	
Function	This sets how long a Percussion voice will sound, regardless of the Decay setting.
Values	001 ~ 255
Notes	The larger the values the longer the Gate Time.



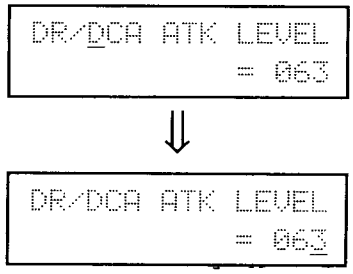
DCF Attack Level

DCF ATK LEVEL	
Function	Specifies the volume at the envelope peak during the attack portion of the sound.
Values	-064 ~ 063
Notes	The larger this value, the higher the volume at the envelope peak.

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCA ATK LEVEL with the SINGLE EDIT button or the Increment Dial.

(3) Press the ⇨ button to move the cursor over to the Value entry and adjust the Attack level with a twist of the Increment Dial.



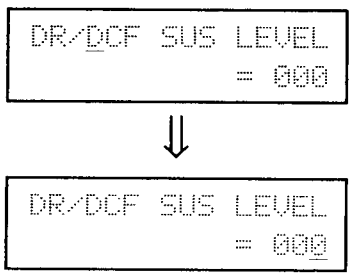
DCF Sustain Level

DCF SUS LEVEL	
Function	Sets the cutoff frequency up to the end of the Gate Time.
Values	-064 ~ 063
Notes	The larger this value, the higher the volume at the envelope peak.

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCA ATK LEVEL with the SINGLE EDIT button or the Increment Dial.

(3) Press the ⇨ button to move the cursor over to the Value entry and adjust the Attack level with a twist of the Increment Dial.

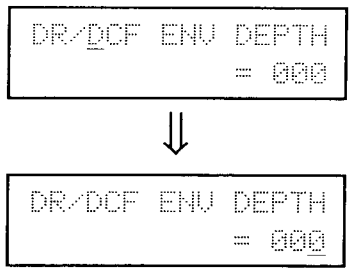


DCF Envelope Depth

DCF ENV DEPTH	
Function	Sets how much the Tone will be altered by the Envelope.
Values	000 ~ 063
Notes	The higher the Envelope Curve level, the higher the cutoff frequency (the brighter and crisper the sound).

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCA ATK LEVEL with the SINGLE EDIT button or the Increment Dial.



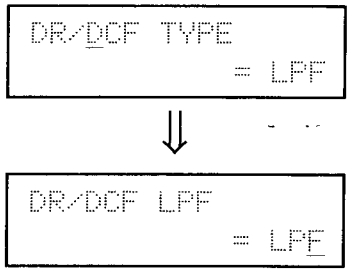
(3) Press the ⇨ button to move the cursor over to the Value entry and adjust the Attack level with a twist of the Increment Dial.

DCF Type

DCF TYPE	
Function	Selects the filter type.
Values	LPF, HPF
Notes	This selects the type of filter that will process the sound source waveform output from the Source. The LPF cuts out harmonics above the set Cutoff Frequency to tone down and mellow sounds with high harmonic content. The HPF cuts out the fundamental and harmonics below the given Cutoff Frequency so that the tone is defined only by its higher harmonics.

(1) Press the SINGLE EDIT button to enter Drum Edit mode.

(2) Select DCA ATK LEVEL with the SINGLE EDIT button or the Increment Dial.



(3) Press the ⇨ button to move the cursor over to the Value entry and adjust the Attack level with a twist of the Increment Dial.

SECTION 6 System Settings

Now we'll about settings that control the K11 as a whole. These functions fall into six basic groups:

SYSTEM EDIT

BANK SELECT	Selecting a Single Patch Bank
EFFECT TYPE	Selecting an effect type and selecting parameters
UNIT RCV FILTER	Settings related to receiving MIDI signals
SERIAL. I/F MODE	Serial interface mode settings
DUMP	Transmitting and storing K11 data to an external MIDI device
FACTORY RESET	This returns all K11 parameters to the factory defaults.
LOCAL, KYBD	This makes settings for the internal keyboard.

[Note]

Turn the value dial gently when editing a Section in Play mode.

Bank Select

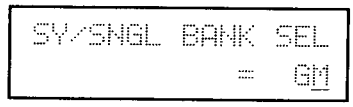
BANK SELECT	
Function	Selects a Single Patch Bank.
Values	USER, GM, SP
Notes	GM: a Bank compatible with General MIDI specifications. SP: a Bank for Sound Palette sounds USER: a Bank for storing sounds created by the user. It may take a few seconds for the Bank to switch. Please do not switch during a song is playing.

(1) Press the SYSTEM button to enter System Edit mode.





(2) Set the value with the Dial.



[Note]

A Bank switch will reset all Sections except the USER Section.

[Hint]

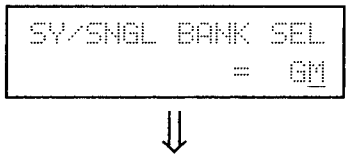
Almost all the button-pressing you do on the K11 panels can also be transmitted from the MIDI OUT using SysEx messages.

SYSTEM

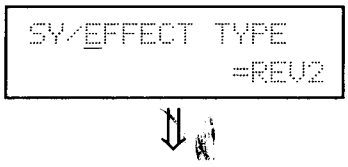
Effect Type

SYS EFFECT TYPE	
Function	Selects the type of effect that will be used.
Values	REV 1 ~ 6
Notes	The effect type selected here will be applied equally to the Section and Drum Kit. You can however set EFFECT LO or HI independently for each Section or Drum Kit (see page 39). The effect of the selected effect can also be changed by a variety of parameters. It may take a few seconds for the Effect to switch.

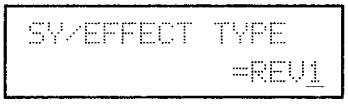
(1) Press the SYSTEM button to enter System Edit mode.



(2) Select the Effect Type with the SYSTEM button, or by pressing the ◄ button and rotating the Dial.



(3) Press the ► button to move the cursor over to the Effect Type entry and set it with the Dial.



[Note]
Do not use effect type switching during song play.

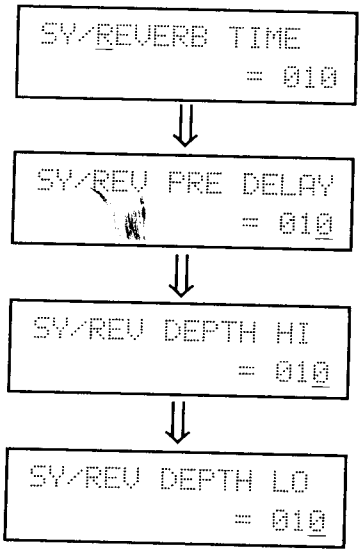
SYSTEM

Effect Parameters (for REV 1 to 6)

EFFECT PARAMETERS 1 to 6			
Function	Set the parameters for each of the Reverb effects 1, 2 and 3.		
Values	PARAMETER 1	REVERB TIME	001 ~ 010: Common setting for REV1 ~ 6
	PARAMETER 2	REV HI DUMP	000 ~ 010: Common setting for REV1 ~ 6
	PARAMETER 3	REV DEPTH HI	001 ~ 010: Common setting for REV1 ~ 6
	PARAMETER 4	REV DEPTH LO	001 ~ 010: Common setting for REV1 ~ 6
Notes	REVERB TIME:	The larger this value, the longer the reverb.	
	REV PRE DELAY:	The higher the setting, the longer the delay time.	
	REV DEPTH:	The larger this value, the more intense the effect.	

(1) Select Effect Type, then press the System button, or press the ▭ button and rotate the Dial, to select the parameter to be set.

(2) Move the cursor over to the Value entry and set it with the Increment Dial.



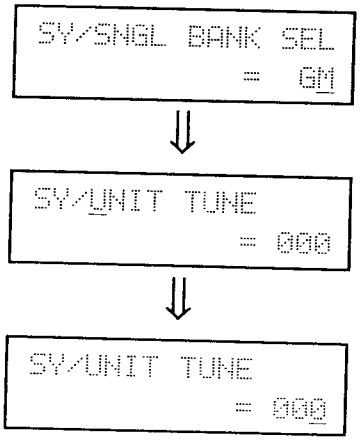
Unit Tune

UNIT TUNE	
Function	Adjusts the tuning of the K11 as a unit.
Values	-128 ~ 000 ~ +127
Notes	This can be used for tuning to the pitch of pianos and other instruments. The maximum values are a full half step (about 50 cents).

(1) Press the SYSTEM EDIT button to enter System Edit mode.

(2) Press the SYSTEM button, or press the ▭ button and rotate the Dial, until you see the UNIT TUNE screen in the display.

(3) Press the ▭ button to move the cursor over to the Value entry and set it with the Increment Dial.

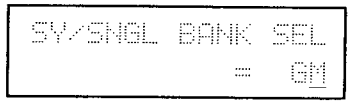


SYSTEM

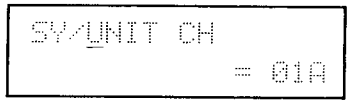
Unit Channel

UNIT CH	
Function	Sets the channel over which System Exclusive messages are received.
Values	01A ~ 16A
Notes	System Exclusive (SysEx) messages can be received over channels 01A to 16A (channels 1 through 16 of MIDI IN A). SysEx cannot be received if UNIT EXCL (see page 93) is set to OFF.

(1) Press the SYSTEM EDIT button to enter System Edit mode.



(2) Press the SYSTEM button, or press the ▭ button and rotate the Dial, until you see the UNIT RCV CH screen in the display.



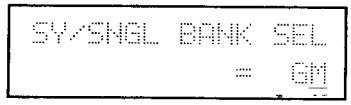
(3) Press the ▭ button to move the cursor over to the Value entry and set the channel with the Increment Dial.



Unit Receive Program Change

UNIT RCV PGM	
Function	Selects whether or not to accept MIDI Program Change messages.
Values	ON, OFF
Notes	

(1) Press the SYSTEM EDIT button to enter System Edit mode.



(2) Press the SYSTEM button, or press the ▭ button and rotate the Dial, until you see the UNIT RCV PGM screen in the display.



(3) Press the ▭ button to move the cursor over to the Value entry and turn it ON or OFF with the Increment Dial.

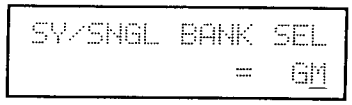


SYSTEM

Unit Receive Exclusive

UNIT RCV EXCL	
Function	Selects whether or not to accept System Exclusive messages.
Values	ON, OFF
Notes	When set to ON, MIDI Exclusive messages are received over the channel (01A through 16A) specified by UNIT RCV CH (page 92).

(1) Press the SYSTEM EDIT button to enter System Edit mode.



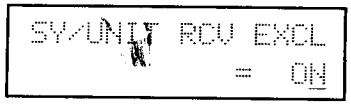
⇓

(2) Press the SYSTEM button, or press the ⇨ button and rotate the Dial, until you see the UNIT RCV EXCL screen in the display.



⇓

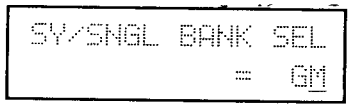
(3) Press the ⇨ button to move the cursor over to the Value entry and turn this ON or OFF with the Increment Dial.



Unit Receive Mode

UNIT RCV MODE	
Function	A simplified "spillover" feature will be set on/off in this mode.
Values	ALL, ODD, EVEN
Notes	When set to ODD, the K11 will play only the odd-numbered of the Note Numbers it receives; set to EVEN, even-numbered ones only; set to ALL, plays all Note Numbers. A total of 64 polyphony is possible with two K11 units, or in combination with the GMega.

(1) Press the SYSTEM EDIT button to enter System Edit mode.



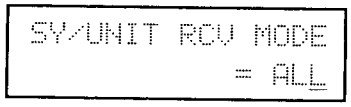
⇓

(2) Press the SYSTEM button, or press the ⇨ button and rotate the Dial, until you see the UNIT RCV MODE screen in the display.



⇓

(3) Press the ⇨ button to move the cursor over to the Value entry and set it with the Increment Dial.

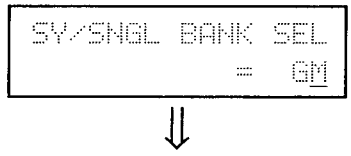


SYSTEM

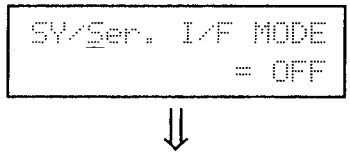
SERIAL Interface Mode

Ser. I/F MODE	
Function	This sets the serial interface mode. The MIDI OUT settings will also be changed by this I/F MODE setting.
Values	OFF, OUT, SEQ, EDIT
Notes	OFF: Playback songs, but not using the serial interface. ON: When using the serial interface

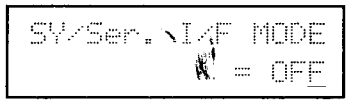
(1) Press the SYSTEM EDIT button to enter System Edit mode.



(2) Press the SYSTEM button, or press the ▭ button and rotate the Dial, until you see the Ser. I/F MODE screen in the display.

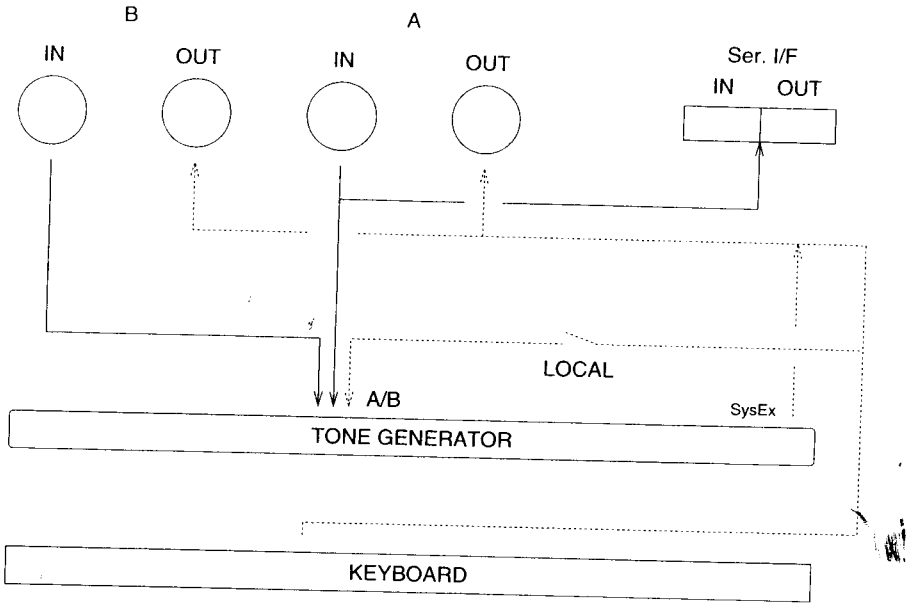


(3) Press the ▭ button to move the cursor over to the Value entry and set it to the desired mode with the Increment Dial.

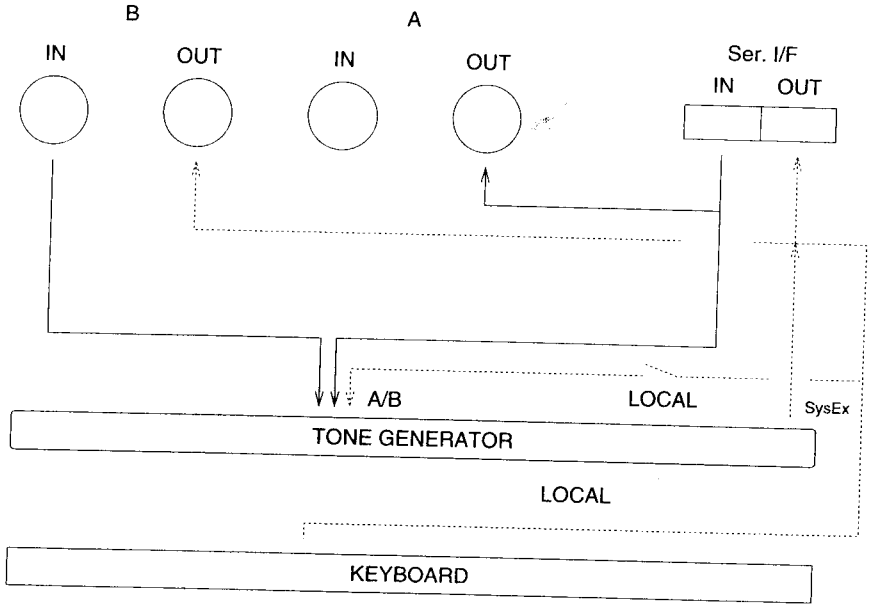


Serial Interface Settings and MIDI Signal Routings

I/F MODE → OFF



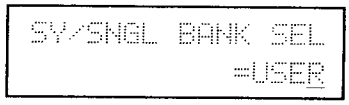
I/F MODE → ON



Dump All

DUMP ALL	
Function	Send all the data of USER BANK, System and 64 PERFORMANCE patches of K11 to an external MIDI device. K11 to an external MIDI device. Please always set the value "USER". Almost 3 minutes will be taken to complete DUMP ALL
Values	Y (Yes), N (No)

(1) Press the SYSTEM EDIT button to enter System Edit mode.



(2) Press the SYSTEM button, or press the ⇨ button and rotate the Dial, until you see the DUMP ALL screen in the display.



(3) Press the ⇨ button to move the cursor over to the Value entry. If you say "YES" by flicking the Dial to the right, you will be asked "SURE?"



(4) Flick the dial to the right again to say "YES" When the data has been transferred, the screen will say "COMPLETED!!" and then you'll be returned to the screen in step (3).



[Note]

If at anytime you flick the Dial to the left, the screen will say "CANCELED!!" and you'll be returned to the screen in step (3) again.

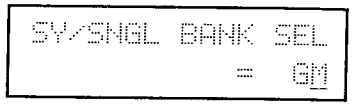
PERFORMANCE patches generated in the GM bank which are dumped and then returned to the K11 require bank switching.

SYSTEM

Dump Section and System Data

DUMP SEC + SYS DATA	
Function	Send the data of section (now selected) and System to the external MIDI device.
Values	Y (Yes), N (No)

(1) Press the SYSTEM EDIT button to enter System Edit mode.



(2) Press the SYSTEM button, or press the ▭ button and rotate the Dial, until you see the DUMP SEC screen in the display.



(3) Press the ▭ button to move the cursor over to the Value entry. If you say "YES" by flicking the Dial to the right, you will be asked "SURE?"



(4) Flick the dial to the right again to say "YES" When the data has been transferred, the screen will say "COMPLETED!!" and then you'll be returned to the screen in step (3).



[Note]

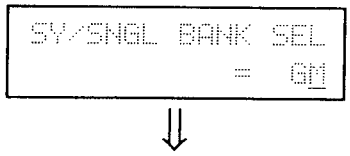
If at anytime you flick the Dial to the left, the screen will say "CANCELED!!" and you'll be returned to the screen in step (3) again.

SYSTEM

Factory Reset

FACTORY RESET	
Function	Returns the K11 to its factory default settings.
Values	Y (Yes), N (No)
Notes	This resets all System Sections, so that the USER Bank sounds (Singles and Percussion) and Drum Key Assigns are the same as in the GM Bank. The reset process takes a few seconds. If the power is turned off during this reset, the K11 might not work properly when powered on again. In that case, perform the Factory Reset over again.

(1) Press the SYSTEM EDIT button to enter System Edit mode.



(2) Press the SYSTEM button, or press the ▭ button and rotate the Dial, until you see the POWER ON MODE screen in the display.



(3) Press the ▭ button to move the cursor over to the Value entry. If you say "YES" by flicking the Dial to the right, you will be asked "SURE?"



(4) Flick the dial the right again to say "YES" When the data has been transferred, the screen will say "COMPLETED!!" and then you'll be returned to the screen in step (3).



[Note]
If at anytime you flick the Dial to the left, the screen will say "CANCELED!!" and you'll be returned to the screen in step (3) again.

Using Reset

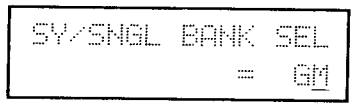
1. Factory reset
   All RAM is reset. The mode is set to the PERFORMANCE mode, and the bank to GM.
2. GM reset (PFRM/COMP button plus SYSTEM button)
   Returns to the COMPOSE mode and the GM bank.
3. Demonstration play end
   Returns to the PERFORMANCE mode.
4. Switching from PERFORMANCE to COMPOSE mode
   The sections will be reset to GM.
5. Bank switching through panel operation
   In the PERFORMANCE mode, only the bank is changed. In the COMPOSE mode all sections other than USER are reset.
6. Exclusive bank switching
   Returns to COMPOSE mode (GM Bank).

SYSTEM

Local on/off

Local	
Function	Turns the connection between the internal keyboard and the sound source on and off.
Value	ON/OFF (power on default is ON).
Notes	When ON the internal keyboard is connected to the sound source. When OFF, the two are not connected. The sound source responds to input signals received through the MIDI IN terminal. The internal keyboard play data is output through the MIDI OUT terminal. This corresponds to control change No. 122 (UNIT CH 122).

(1) Press SYSTEM to enter the system edit mode.



(2) LOCAL will be displayed. Press the SYSTEM button or the ⇨ cursor button, and rotate the dial.



(3) Press the ⇨ cursor button to move the cursor to the value box, and select with the dial.



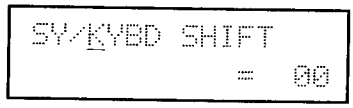
Keyboard Shift

KYBD SHIFT	
Function	Set the output range of the internal keyboard.
Value	-36 ~ 00 ~ +31
Notes	Shifts the 61 keys of the internal keyboard to cover the entire 128 note range.

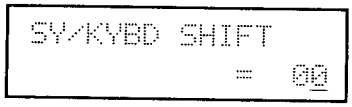
(1) Press SYSTEM to enter the system edit mode.



(2) KYBD SHIFT will be displayed. Press the SYSTEM button or the ⇨ cursor button, and rotate the dial.



(3) Press the ⇨ cursor button to move the cursor to the value box, and select with the dial.

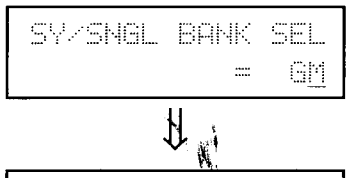


SYSTEM

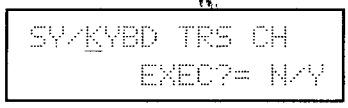
Keyboard transmit channel

KYBD TRS CH	
Function	Sets if the internal keyboard transmit channel is the receive channel for the current section, or the unit channel.
Value	UNIT/SEC
Notes	Sets the relation between the keyboard, sound source and MIDI OUT. UNIT: The internal sound source is connected to the UNIT CH (see p.92), and MIDI OUT is also sent through UNIT CH. SEC: The internal sound source triggered by the keyboard is the section displayed on the LCD. In this case, other sections set to the same receive channel will also sound. MIDI OUT is the RCV CH of the current section (for both A and B). In the PERFORMANCE play mode the unit channel is supported.

(1) Press SYSTEM to enter the system edit mode.



(2) KYBD TRS CH will be displayed. Press the SYSTEM button or the ▭▭ cursor button, and rotate the dial.



(3) Press the ▭▭ cursor button to move the cursor to the value box, and select with the dial.



About the Internal Keyboard

While SNAP or system exclusive multi-packet data (dump) functions are being used, all keyboard and other input is disabled.

SYSTEM

101

SECTION 7 About QUICK MIDI

QUICK MIDI is a function that allows the K11 to output MIDI signals (program change, control change etc.) to directly control external MIDI equipment.

Conventional MIDI systems output a MIDI signal when an event (such as program or control change) occurs at the master side, which means that actions at the receiving side are always triggered by events at the sending side. Control is less than ideal.

The use of QUICK MIDI allows MIDI signals to be sent without any dependency on K11 events, meaning that you can control the MIDI system independently.

There are four QUICK MIDI groups:

- QUICK MIDI
  - PGM — Sets and sends program change.
  - VOL — Sets and sends volume control.
  - PAN — Sets and sends pan control.
  - EFFECT — Sets and sends effect control.

* You cannot enter the QUICK MIDI mode during DEMO or MIDI MONITOR, or in SINGLE EDIT or DRUM EDIT modes.

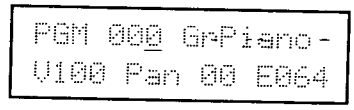
QUICK MIDI Program Change

(Value)	
Function	Sets and sends program change.
Value	000 ~ 127 (The GM standard tone name is displayed in the upper right.)
Notes	The program change signal is output through MIDI (A,B) terminals, and has no effect on the K11 itself.

(1) Press the QUICK MIDI PROG button to enter the QUICK MIDI mode. If already in another QUICK MIDI mode, move the cursor to the program item.

(2) Use the dial or the modulation wheel to select the program number. The output will be made when the selection is complete.

(3) Press EXIT to return to the prior mode.



[Hint]

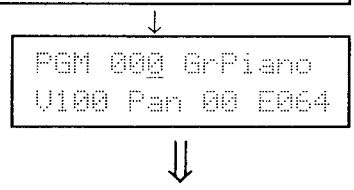
When selecting with the dial, the setting is transmitted when the dial rotation stops.
When selecting with the wheel the transmission is continuous.

101

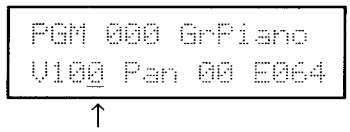
QUICK MIDI Volume Control

(Value)	
Function	Sets and sends volume control.
Value	000 ~ 127
Notes	Control change number 7 is output through the MIDI (A,B) terminals, and has no effect on the K11 itself.

(1) Press the QUICK MIDI VOL button to enter the QUICK MIDI mode. If already in another QUICK MIDI mode, move the cursor to the volume item.



(2) Use the dial or the modulation wheel to select the volume. The output will be made when the selection is complete.

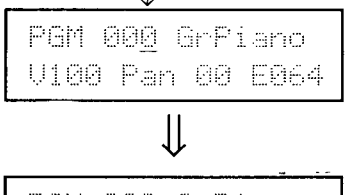


(3) Press EXIT to return to the prior mode.

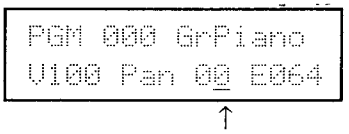
QUICK MIDI Pan Control

(Value)	
Function	Sets and sends pan control.
Value	L64 ~ R63
Notes	Control change number 10 is output through the MIDI (A,B) terminals, and has no effect on the K11 itself.

(1) Press the QUICK MIDI PAN button to enter the QUICK MIDI mode. If already in another QUICK MIDI mode, move the cursor to the pan item.



(2) Use the dial or the modulation wheel to select the pan value. The output will be made when the selection is complete.



(3) Press EXIT to return to the prior mode.

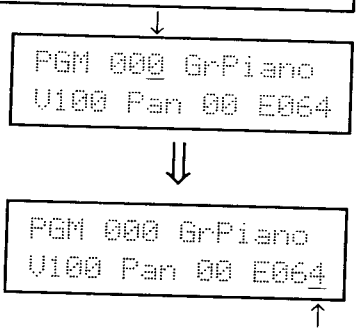
[Hint]

The QUICK MIDI transmit channel is the UNIT CH (see p.92) or the current section channel. (see p.100)

QUICK MIDI Effect Control

(Value)	
Function	Sets and sends effect control.
Value	000 ~ 127
Notes	Control change number 91 is output through the MIDI (A,B) terminals, and has no effect on the K11 itself.

(1) Press the QUICK MIDI PAN button to enter the QUICK MIDI mode. If already in another QUICK MIDI mode, move the cursor to the effect item.



(2) Use the dial or the modulation wheel to select the effect value. The output will be made when the selection is complete.

(3) Press EXIT to return to the prior mode.

[Hint]

Control change number 91 is output through MIDI OUT (A,B) through the UNIT CH (see p.92) or the current section channel. On the K11, 63 or less is low, and over 64 is high.

104

K11 SINGLE PATCH LIST

GM BANK

No.	Voice	Source	No.	Voice	Source
1	GrPiano	1	65	SprnoSax	1
2	BrPiano	1	66	Alto Sax	1
3	El Grand	2	67	TenorSax	1
4	HnkyTonk	2	68	Bari Sax	1
5	ElPiano1	2	69	Oboe	1
6	ElPiano2	2	70	EnglHorn	2
7	Hrpschrd	2	71	Bassoon	2
8	Clavi	1	72	Clarinet	1
9	Celesta	2	73	Piccolo	1
10	Glocken	2	74	Flute	1
11	MusicBox	2	75	Recorder	2
12	Vibes	1	76	PanFlute	1
13	Marimba	1	77	Bottle	1
14	Xylophon	1	78	Shakhach	2
15	TubulBel	1	79	Whistle	2
16	Dulcimer	2	80	Ocarina	2
17	DrawOrgn	2	81	SquareLd	2
18	PercOrgn	2	82	Saw Ld	2
19	RockOrgn	2	83	CaliopLd	2
20	ChrcOrgn	2	84	Chiff Ld	2
21	ReedOrgn	2	85	CharanLd	2
22	Acordion	2	86	Voice Ld	2
23	Harmnica	1	87	Fifth Ld	2
24	TangoAcd	2	88	Bass &Ld	2
25	NylonGtr	1	89	NewAgePd	2
26	SteelGtr	1	90	Warm Pd	2
27	Jazz Gtr	2	91	PolySyPd	2
28	CleanGtr	1	92	Choir Pd	2
29	Mute Gtr	1	93	Bowed Pd	2
30	Ovrdrive	2	94	Metal Pd	2
31	Distortd	1	95	Halo Pd	2
32	Harmnics	1	96	Sweep Pd	2
33	WoodBass	1	97	Rain	2
34	FngrBass	1	98	SoundTrk	2
35	PickBass	1	99	Crystal	2
36	Fretless	1	100	Atmosphr	2
37	SlapBas1	1	101	Bright	2
38	SlapBas2	1	102	Goblin	2
39	SynBass1	2	103	Echoes	1
40	SynBass2	1	104	SciFi	2
41	Violin	1	105	Sitar	1
42	Viola	1	106	Banjo	1
43	Cello	1	107	Shamisen	1
44	Contra	1	108	Koto	1
45	TremStrg	2	109	Kalimba	2
46	Pizzicto	2	110	Bagpipe	2
47	Harp	1	111	Fiddle	2
48	Timpani	1	112	Shanai	2
49	StrgEns1	1	113	TnklBell	2
50	StrgEng2	1	114	Agogo	1
51	SynStrg1	1	115	Stl Drum	1
52	SynStrg2	2	116	WoodBlok	1
53	AahChoir	1	117	TaikoDrm	1
54	OohChoir	1	118	MelodTom	1
55	SynChoir	2	119	SynthTom	2
56	Orch Hit	1	120	RevCymbl	1
57	Trumpet	1	121	FretNoiz	1
58	Trombone	1	122	BrthNoiz	1
59	Tuba	2	123	Seashore	2
60	Mute Trmp	1	124	BrdTweet	2
61	FrenchHr	1	125	Telphone	1
62	BrasSect	1	126	Helicptr	1
63	SynBras1	2	127	Applause	2
64	SynBras2	2	128	Gunshot	1

SP BANK

No.	Voice	Source	No.	Voice	Source
001	GrandPf1	1	065	Wood Bs1	1
002	BrightPf	1	066	Wood Bs2	1
003	GrandPf2	1	067	PickedBs	1
004	E. Pf1	2	068	FingerBs	1
005	E. Gr Pf1	2	069	SlapBs 1	1
006	E. Pf2	2	070	SlapBs 2	1
007	E. Gr Pf2	2	071	Fretles1	1
008	HnkyTonk	2	072	Fretles2	1
009	RockOrgn	2	073	Flute 1	1
010	DrawOrgn	2	074	Flute 2	1
011	PercOrgn	2	075	Piccolo1	1
012	ElecOrgn	2	076	Piccolo2	2
013	PipOrgn1	2	077	Recorder	2
014	PipOrgn2	2	078	PanFlute	1
015	PipOrgn3	2	079	S. Sax	1
016	Acordion	2	080	A. Sax	1
017	Harpsi 1	2	081	T. Sax	1
018	Harpsi 2	2	082	B. Sax	1
019	Harpsi 3	2	083	Cl 1	1
020	Clavi 1	1	084	Cl 2	1
021	Clavi 2	1	085	Oboe	1
022	Clavi 3	1	086	SawBrass	2
023	Celesta1	2	087	Bassoon	2
024	Celesta2	2	088	Harmnica	1
025	SynBras1	2	089	Trumpet1	1
026	SynBras2	2	090	Trumpet2	1
027	OvdrveGt	2	091	Tb 1	1
028	Dist Gt	1	092	Tb 2	2
029	SynBs1	2	093	FreHorn1	1
030	SynBs2	1	094	FreHorn2	2
031	SynBs3	2	095	Tuba	2
032	SynBs4	2	096	BrsEns 1	1
033	NewAgePd	2	097	BrsEns 2	2
034	Warm Pd	2	098	Vibe 1	1
035	Choir Pd	1	099	Vibe 2	2
036	Bowed Pd	2	100	Mallet	2
037	SoundTrk	2	101	WindBell	2
038	Atmosphr	2	102	Glocken	2
039	SynWarm	2	103	TubulBel	1
040	SynVoice	2	104	Xylophon	1
041	EchoBell	2	105	Maimba	1
042	Rain	2	106	Koto	1
043	SynWind	2	107	Shamisen	1
044	Echoes	1	108	Shaku8	2
045	SynSolo	2	109	Whistle1	2
046	ReedOrgn	2	110	Whistle2	2
047	SynBell	2	111	Bottle	1
048	Square	2	112	Chiff	2
049	Strings1	1	113	Timpani	1
050	Strings2	1	114	Melo Tom	1
051	SynStrgs	1	115	DeepSnar	2
052	Pizzicto	2	116	SynDrum1	2
053	Violin	1	117	SynDrum2	2
054	Viola	1	118	Taiko	1
055	Cello 1	1	119	TaikoRim	1
056	Cello 2	1	120	Cymbal	1
057	Con Bass	1	121	Castanet	1
058	Harp 1	1	122	Triangle	1
059	Harp 2	1	123	Orch Hit	1
060	NylonGtr	1	124	NewSyn1	2
061	SteelGtr	1	125	NewSyn2	2
062	E. Gt 1	1	126	NewSyn3	2
063	E. Gt 2	2	127	NewSyn4	2
064	Sitar	1	128	NewSyn5	2

104

105

Drum Key Assign

No.	Key Name	STANDARD	Room	Power	Electro	BOB	Jazz	Orchstr
0	C-2	BOB BD	X	X	X	X	X	X
1	C#-2	BOB Rim	X	X	X	X	X	X
2	D-2	BOB SD	X	X	X	X	X	X
3	D#-2	BOB LoTom2	X	X	X	X	X	X
4	E-2	BOB CloseHH.	X	X	X	X	X	X
5	F-2	BOB LoTom1	X	X	X	X	X	X
6	F#-2	BOB MidTom2	X	X	X	X	X	X
7	G-2	BOB OpenHH	X	X	X	X	X	X
8	G#-2	BOB MidTom1	X	X	X	X	X	X
9	A-2	BOB HiTom2	X	X	X	X	X	X
10	A#-2	BOB Cym.	X	X	X	X	X	X
11	B-2	BOB HiTom1	X	X	X	X	X	X
12	C-1	BOB Cowbell	X	X	X	X	X	X
13	C#-1	BOB HiConga	X	X	X	X	X	X
14	D-1	BOB Midconga	X	X	X	X	X	X
15	D#-1	BOB LowConga	X	X	X	X	X	X
16	E-1	BOB Maracas	X	X	X	X	X	X
17	F-1	BOB Clabes	X	X	X	X	X	X
18	F#-1	MONDO Kick	X	X	X	X	X	X
19	G-1	Gated SN	X	X	X	X	X	X
20	G#-1	PowerTomLow2	X	X	X	X	X	X
21	A-1	PowerTomLow1	X	X	X	X	X	X
22	A#-1	PowerTomMid2	X	X	X	X	X	X
23	B-1	PowerTomMid1	X	X	X	X	X	X
24	C0	PowerTomHi2	X	X	X	X	X	X
25	C#0	PowerTomHi1	X	X	X	X	X	X
26	D0	**MUTE**	X	X	X	X	X	X
27	D#0	HighQ						CloseHH
28	E0	Slap						Pedal HH
29	F0	Scrach Push						Open HH
30	F#0	SCrach Pull						RideCym1
31	G0	Sticks						
32	G#0	Square Click						
33	A0	Metoronome Click						
34	A#0	Metoronome Bell						
35	B0	Ac Bass Drum 2						
36	C1	Bass Drum1		MONDO Kick	Elec.SD	BOB BD	Jazz BD	Orch BD2
37	C#1	Side Stick				BOB Rim		Orch SD
38	D1	Ac Snare1		Gated SN	Elec.SD	BOB SD	Brush Tap	Orch SD
39	D#1	HandClap			EFF Clap		Brush Slap	Castanets
40	E1	Ac Snare2			Gated SN		Brush Swirl	Orch SD
41	F1	Low F Tom	Room Tom Low2	PowerTomLow2	Elec.Lo Tom2	BOB LoTom2		Timpani F
42	F#1	CloseHH				BOB CloseHH.		Timpani F#
43	G1	Hi F Tom	Room Tom Low1	PowerTomLow1	Elec.Lo Tom1	BOB LoTom1		Timpani G
44	G#1	Pedal HH				BOB CloseHH.		Timpani G#
45	A1	Low Tom	Room Tom Mid2	PowerTomMid2	Elec.Mid Tom2	BOB MidTom2		Timpani A
46	A#1	Open HH				BOB OpenHH		Timpani A#
47	B1	Low-Mid-Tom	Room Tom Mid1	PowerTomMid1	Elec.Mid Tom1	BOB MidTom1		Timpani B
48	C2	Hi-Mid-Tom	Room Tom Hi2	PowerTomHi2	Elec.Hi Tom2	BOB HiTom2		Timpani c
49	C#2	TopCym1				BOB Cym.		Timpani c#
50	D2	High Tom	Room Tom Hi1	PowerTomHi1	Elec.Hi Tom1	BOB HiTom1		Timpani d
51	D#2	SidCym1						Timpani d#
52	E2	ChinaCym.			ReverseCym.			Timpani e
53	F2	RideBell						Timpani f2
54	F#2	Tambourine						
55	G2	SplashCym.						
56	G#2	Cowbel				BOB Cowbell		
57	A2	TopCym2						OrchCym2
58	A#2	Vibraslap						
59	B2	SidCym2						OrchCym1
60	C3	Hi Bongo						
61	C#3	Lo Bongo						
62	D3	Mute Hi conga				BOB HiConga		
63	D#3	Open Hi Conga				BOB Midconga		
64	E3	Lo Conga				BOB LowConga		
65	F3	Hi Timbale						
66	F#3	Lo Timbale						
67	G3	High Agogo						
68	G#3	Lo Agogo						
69	A3	Cabasa						
70	A#3	Maracas				BOB Maracas		
71	B3	Short Whistle						

105

106

No.	Key Name	STANDARD	Room	Power	Electro	BOB	Jazz	Orchstr
72	C4	Long Whistle						
73	C#4	Short Guiro						
74	D4	Long Guiro						
75	D#4	Clabes				BOB Clabes		
76	E4	Hi Wood Block						
77	F4	Lo Wood Block						
78	F#4	Mute Cuica						
79	G4	Open Cuica						
80	G#4	Mute Triangle						
81	A4	Open Triangle						
82	A#4	Shaker						
83	B4	Jingle bell						
84	C5	Belltree			Echo Gras			
85	C#5	Castanets						
86	D5	MuteSurdo						
87	D#5	OpenSurdo						
88	E5	Elec.BD	X	X	X	X	X	Applause
89	F5	Elec.SD	X	X	X	X	X	X
90	F#5	Elec.Lo Tom2	X	X	X	X	X	X
91	G5	Elec.Lo Tom1	X	X	X	X	X	X
92	G#5	Elec.Mid Tom2	X	X	X	X	X	X
93	A5	Elec.Mid Tom1	X	X	X	X	X	X
94	A%5	Elec.Hi Tom2	X	X	X	X	X	X
95	B5	Elec.Hi Tom1	X	X	X	X	X	X
96	C6	ReverseCym.	X	X	X	X	X	X
97	C#6	Brush Tap	X	X	X	X	X	X
98	D6	Brush Slap	X	X	X	X	X	X
99	D#6	Brush Swir	X	X	X	X	X	X
100	E6	Jazz BD	X	X	X	X	X	X
101	F6	Concert BD2	X	X	X	X	X	X
102	F#6	Concert BD1	X	X	X	X	X	X
103	G6	Concert SD	X	X	X	X	X	X
104	G#6	Timpani F	X	X	X	X	X	X
105	A6	Timpani F#	X	X	X	X	X	X
106	A#6	Timpani G	X	X	X	X	X	X
107	B6	Timpani G#	X	X	X	X	X	X
108	C7	Timpani A	X	X	X	X	X	X
109	C#7	Timpani A#	X	X	X	X	X	X
110	D7	Timpani B	X	X	X	X	X	X
111	D#7	Timpani c	X	X	X	X	X	X
112	E7	Timpani c#	X	X	X	X	X	X
113	F7	Timpani d	X	X	X	X	X	X
114	F#7	Timpani d#	X	X	X	X	X	X
115	G7	Timpani e	X	X	X	X	X	X
116	G#7	Timpani f2	X	X	X	X	X	X
117	A7	Concert Cym2	X	X	X	X	X	X
118	A#7	Concert Cym1	X	X	X	X	X	X
119	B7	Applause	X	X	X	X	X	X
120	C8	Room Tom Low2	X	X	X	X	X	X
121	C#8	Room Tom Low1	X	X	X	X	X	X
122	D8	Room Tom Mid2	X	X	X	X	X	X
123	D#8	Room Tom Mid1	X	X	X	X	X	X
124	E8	Room Tom Hi2	X	X	X	X	X	X
125	F8	Room Tom Hi1	X	X	X	X	X	X
126	F#8	EFF Clap	X	X	X	X	X	X
127	G8	Echo Gras	X	X	X	X	X	X

A blank indicates the same as GM Standard

106

PERFORMANCE PATCH LIST

107

Group	No.	NAME	Poly
OMNIBUS	11	Big Man	10
	12	RdWarior	6
	13	Go 4 It	8
	14	VaporPad	4
	15	KristBob	16
	16	PMonSter	8
	17	SayWhat?	8
	18	1FingBass	10
SINGLE	21	DreamStg	16
	22	CatNHven	16
	23	RealBigN	16
	24	BotlBlwr	16
	25	SteelGtr	32
	26	DarkStgs	32
	27	Sad Bow	32
	28	DuckFeet	16
LAYER	31	PianKwir	16
	32	Nazz	10
	33	MegaStrg	16
	34	MeloAsia	10
	35	RapBass!	16
	36	The Funk	16
	37	TheSexon	16
	38	DBL Stop	10
3 LAYER	41	Sustine	5
	42	Witress	8
	43	WowWee!	8
	44	BigCntry	10
	45	Dragnet!	10
	46	FnkRythm	10
	47	Fat City	8
	48	OctvPnos	10

Group	No.	NAME	Poly
SPLIT	51	BassPian	32
	52	Bass Sax	32
	53	Lounge	32
	54	ClscViln	16
	55	ClscSynt	16
	56	HarpNGtr	32
	57	TimpFrch	32
	58	FretStor	32
	61	BssNKwir	32
	62	JzGtTrmp	16
	63	WndNBrds	16
	64	PnoNPitz	16
	65	FlangeDs	10
	66	Ho'Down!	16
	67	Th'Funk2	32
	68	Guiseppe	16
MIX	71	SlikSplt	16
	72	UglyDuck	16
	73	CoolHand	10
	74	BssPnoRg	10
	75	Slp Brss	10
	76	TheFlotr	10
	77	BswPKwir	10
	78	BritLIte	10
	81	BgFatSng	10
	82	The Epic	10
	83	Emotions	10
	84	BsPnoStg	16
	85	SaxQuint	8
	86	Shearing	10
	87	12St/Flt	16
	88	PomPous	16

107

107

108

Specifications

- **Keyboard**

  A 61-key weighted keyboard with velocity and pressure

- **Waveforms**

  16-bit PCM + 16-bit DC (44.1kHz Sampling) 256 Singles and 256 Percussion

- **Maximum Polyphony**

  32 (Totally 32 sources)

- **Program Memory**

  64 Performance Patches

- **Compose mode**

  Two ROM Banks (GM and SP), one RAM Bank (USER), containing 32 Sections

- **Timbre Patch**

  Two ROM Banks (GM and SP), one RAM Banks (USER), containing 128 Single Patches (MAX 2 SOURCE), 7 Drum Kits (each 128 key assign) and 128 Percussion Patches

- **Multitimbrality**

  32 Sections

- **Function**

  Performance Play Mode:
  PATCH SELECT

  Compose Play Mode:
  SNGL No., RCV CH, LEVEL, STATUS

  Performance Edit Mode:
  SNGL No., LEVEL, STATUS, NAME

  Section Edit Mode:
  PAN, TRANSPOSE, TUNE, EFFECT LEVEL, BEND DEPTH, CUTOFF OFFSET, DCA (ATTACK, RELEASE) OFFSET, ZONE (LO, HI), MOD WHEEL VIB, PRESS VIB, HOLD, TEMPERAMENT (TYPE, KEY)

  Single Edit Mode:
  COPY, EXCHANGE, NAME
  <Source 1, (2)>
  MONITOR, DCO [WAVE SEL, KEY TRACK, FIXED KEY, COARSE, FINE], KEY ON DELAY, VIB [DEPTH, SHAPE, SPEED], AM, DCF [LINK, TYPE, CUTOFF, RESO, KEY TRACK, VEL (CURVE, DEPTH, ASSIGN), ENV DEPTH, ATK LEVL, ATK TIME, DCAY TIME, SUS1 LEVL, MOD TIME, SUS2 LEVL, RLS TIME, DCA [ATK LEVEL, ATK TIME, DCAY TIME, SUS1 LEVL, MOD TIME, SUS2 LEVL, RLS TIEM]

  Percussion Edit Mode:
  COPY
  DCA LEVEL, PAN, PC EFFECT LEVL, DCO [WAVE SEL, PITCH, FINE, DCF [CUTOFF, RESO DEP, VEL CRV, VEL DEPTH, VEL ASSIGN, ATK TIME, DCAY TIME], DCA [VEL CRV, VEL DEPTH, ATK TIME, DCAY TIME], GATE TIEM, DCF [ATK LEVEL, SUS LEVEL, ENV DEPTH, TYPE]

  Quick MIDI:
  PGM (GM NAME), LEVEL, PAN, EFFECT

  System:
  SNGL BANK SEL, EFFECT TYPE, REVERB TIME, REV PRE DELAY, REV DEPTH (HI, LO), UNIT [TUNE CH, RCV PGM, EXCL, RCV MODE], SER. I/F MODE, DUMP [ALL, SEC+SYS], FACTORY RESET, LOCAL, KYBD [SHIFT, TRS CH]

- **Others**

  Snap:
  SNGL BANK SEL, PGM, LEVEL, PAN, (01A~16A) SEND

  MIDI Monitor:
  MIDI IN A1~16, B1~16

  GM RESET:

- **Jacks**

  LINE OUT (L/MONO, R), PHONES, HOLD, MIDI (IN A, B, OUT A, B), SERIAL I/F

- **Display**

  16 X 2 Backlit LCD

- **External Dimensions (mm)**

  936 (W) X 260 (D) X 80 (H)

- **Weight:** 6.5 (Kg)

108

109

GM RESET DATA

SEC EDIT

SNGL No.001 (SEC10, 26=DR1)
RCV CH SEC1=01A, SEC2=02A, ... SEC32=16B
LEVEL 100
STATUS ON
PAN 00
TRANSPOSE 000
TUNE 000
EFFECT LEVL HI
BEND DEPTH 02
CUTOFF OFST 000
ATTACK OFST 000
RELEAS OFST 000
ZONE LO C-2
ZONE HI G8
MOD WHL VIB 127
PRESS VIB 000
RCV HOLD ON
TEMP TYPE 001
TEMP KEY C

109

110

Table of Temperaments

A "temperament" is a set of rules defining the precise pitch frequency at each note of a 12-note scale (from do to it). Certain temperaments are appropriate for different instruments or types of music. Pianos and organs use Equal Temperament, string, woodwinds and brass use Pure Temperament, and the Pythagorean scale is used by strings in certain especially beautiful melodies. Refer to a textbook on music theory if you'd like to learn more about the different temperaments. On the K11, each individual part can have its own Temperament setting.

Equal Temperament: This is the most popular, and is used on most pianos. Chords can be transposed to any key and maintain a fairly close resonance.

Pure Temperament: This scale has no modulation of the third and fifth scale degrees. It is used often in contemporary choral music.

Pythagorean Scale: This scale has no modulation of the fifth scale degree. This scale emphasizes playing melodies rather than chords, which can sound slightly out of tune.

Meantone: This scale has no modulation of the third scale degree. It overcomes some of the dissonance in the fifth scale degree of the Pure Temperament scale. Chords also have a more pleasing resonance than with Equal Temperament.

Werckmeister III, Kirnberger III:

This temperament is close to the Meantone for simple key signatures. As the key signature becomes more complex, the chord sound becomes more strained and the scale becomes closer to the Pythagorean, where melodies sound more in tune.

No.	TYPE
001	12 Equal Temperament <Equal Temperament>
002	Pythagorean Scale (3#/2b)
003	Pythagorean Scale (2#/3b)
004	Pythagorean Scale (1#/4b)
005	Pythagorean Scale (5b)
006	Pythagorean Scale (4#/1b)
007	Pythagorean Scale (5#)
	<Phthagorean Temperament>
008	Meantone (3#/2b)
009	Meantone (2#/3b)
010	Meantone (1#/4b)
011	Meantone (5b)
012	Meantone (4#/1b)
013	Meantone (5#)
	<Meantone Temperament>
014	Salinas (1/3 Syntonic Comma)
015	Verheijen-Rossi (1/5 Syntonic Comma)
016	Praetorius Meantone
017	Schnitger Meantone
018	Kirnbrger I
019	Kirnbrger II
020	Kirnbrger III
	<Kirnberger>
021	Werckmeister I
022	Werckmeister II
023	Werckmeister III
	<Werckmeister>
024	Kirnberger-Werckmeistar
025	Rameau-Legros Meantone
026	Vogel-III Meantone
027	Bruder Well-Tempered
028	Bruder-Werckmeister

No.	TYPE
029	Gottfried (1/6 Syntonic Comma)
030	Gottfried (1/6 Pythagorean Comma)
031	Marin Mersenne:Pure Temperament
032	Pure (D:-1) Temperament (Q-39)
033	Pure (A:-1) Temperament (Q-40)
034	Pure (E:-1) Temperament (Q-41)
035	Pure (B:-1) Temperament (Q-42)
036	Pure (Bb:0) Temperament (Q-48)
037	Pure (F:0) Temperament (Q-49)
038	Pure (C:0) Temperament (Q-50)
039	Pure (G:0) Temperament (Q-51)
040	Pure (Gb:+1) Temperament (Q-57)
041	Pure (Db:+1) Temperament (Q-58)
042	Pure (Ab:+1) Temperament (Q-59)
043	Pure (Eb:+1) Temperament (Q-60)
044	Pure (D:-1) Temperament (T-39)
045	Pure (A:-1) Temperament (T-40)
046	Pure (E:-1) Temperament (T-41)
047	Pure (F:0) Temperament (T-49)
048	Pure (C:0) Temperament (T-50)
049	Pure (G:0) Temperament (T-51)
050	Pure (Ab:+1) Temperament (T-59)
051	Pure (Eb:+1) Temperament (T-60)
052	Pure (Bb:+1) Temperament (T-61)
053	Pure (Cb:+2) Temperament (T-69)
054	Pure (Gb:+2) Temperament (T-70)
055	Pure (Db:+2) Temperament (T-71)
	<Pure Temperament>

110

INDEX

111

A

ALL 93
AM (Ring Modulation) 50, 61
AUTO 38
DCA ATK LEVEL 70
DCA ATTACK OFFSET 41
DCA ATTACK TIME 72, 86
DCF ATK LEVEL 68
DCF ATTACK TIME 68, 84
DCF ENV ATTACKíl 41
DCF VEL ASSIGN 66, 83

B

BANK SELECT 89
BEND DEPTH 40

C

COARSE 57
CURSOR 11
CUTOFF OFFSET 40
DCO COARSE 57
DCF CUTOFF 64, 81
DCA VEL CURVE 71, 85
DCF VEL CURVE 65, 82
DCF CUTOFFíl 40

D

DC (Digital Cyclic) 50
DC-IN 13
DCA 48
DCA ATK LEVEL 70
DCA ATTACK OFFSET 41
DCA ATTACK TIME 72, 86
DCA DECAY TIME 72, 86
DCA MOD TIME 73
DCA RELEASE TIME 74
DCA SUSTAIN1 LEVEL 73
DCA SUSTAIN2 LEVEL 74
DCA LEVEL 79
DCA RELEASE OFFSET 41
DCA VEL CURVE 71, 85
DCA VEL DEPTH 71
DCF 48
DCF CUTOFF 40, 64, 81
DCF ATK LEVEL 68
DCF ATTACK TIME 68, 84
DCF DECAY TIME 68, 84
DCF MOD TIME 69
DCF RELEASE 70
DCF SUSTAIN1 LEVEL 69
DCF SUSTAIN2 LEVEL 69
DCF ENV DEPTH 67
DCF KEY TRACK 65
DCF LINK 62
DCF RESO DEPTH 64, 82
DCF TYPE 63
DCF VEL ASSIGN 66, 83
DCF VEL CURVE 65, 82
DCF VEL DEPTH 66, 83
DCO 48
DCO COARSE 57
DCO FINE 58, 81
DCO KEY TRACK 56
DCO PITCH 81
DCO WAVE SELECT 56
DISPLAY 11
DOUBLE 48
DOUBLE AM 48
DOUBLE AM DCF LINK 48
DOUBLE DCF LINK 48
DUMP ALL 96
DUMP SEC+SYS DATA 97

E

DCF ENV ATTACK 41
DCF ENV DEPTH 67
EFFECT LEVEL 39
EFFECT PARAMETER 91
EVEN 93
EXIT 11

F

FACTORY RESET 98
FIXED KEY 57
DCO FINE 58, 81

G

GATE TIME 87

111

111

H

I

SERIAL I/F MODE 94
INCREMENT DIAL 11

J

K

KEY ON DELAY 58
KYBD SHIFT 99
KYBD TRS CH 100
DCF KEY TRACK 65
DCO KEY TRACK 56

L

DCA LEVEL 79
DCF LINK 62
LOCAL 99

M

MIDI 32
MOD WHEEL VIB 44
DCF MOD TIME 69
DCA MOD TIME 73

N

NAME 1st~8th 55
NORMAL 48

O

ODD 93
OFF 94
OUTPUT 13

P

PAN 38
PAN 79
PC ASG/KEY SELECT 78
PC EFFECT LEVEL 80
PCWaveforms 50
PC NAME 78
PHONES 11
POWER 11
PRESS VIB 44
DCO PITCH 81

112

Q

QUICK MIDI 101
QUICK MIDI Effect Control 103
QUICK MIDI Pan Control 102
QUICK MIDI Program Change 101
QUICK MIDI Volume Control 102

R

RECEIVE HOLD 45
RND 38
DCA RELEASE OFFSET 41
DCF RESO DEPTH 64, 82
DCA RELEASE TIME 74
DCF RELEASE TIME 70

S

SEC. EDIT 11
SEC SELECT 26
SERIAL I/F 13, 94
SINGLE EDIT 11
SINGLE SELECT 26
SNAP 11
SOLO 27
SOURSE MONITOR 55
SYS EFFECT TYPE 90
SYSTEM 11
DCA SUSTAIN1 LEVEL 73
DCA SUSTAIN2 LEVEL 74
DCF SUSTAIN1 LEVEL 69
DCF SUSTAIN2 LEVEL 69

T

TEMPERAMENT KEY 46
TEMPERAMENT TYPE 45
TRANSPOSE 38
TUNE 39
DCF TYPE 63

U

UNIT CH 92
UNIT RCV EXCL 93
UNIT RCV MODE 93
UNIT RCV PGM 92
UNIT TUNE 91

112

112

V

DCA VEL DEPTH 71
VIB DEPTH 59
VIB SHAPE 60
VIB SPEED 60
VOLUME 11
DCF VEL ASSIGN 66, 83
DCA VEL CURVE 71, 85
DCF VEL CURVE 65, 82
DCA VEL DEPTH 71
DCF VEL DEPTH 66, 83

W

WAVE SELECT 80
DCO WAVE SELECT 56

X

Y

Z

ZONE LO/HI 42

113

113

Digital Synthesizer

Model : K11

Date : Jan. 20 1993
Version : 1.0

MIDI Implementation Chart

Function		Transmission	Reception	Remarks
Basic Channel	Default	X	A1–16, B1–16	Data is stored even after power is OFF.
	Changed	1–16 (Common to A,B)	A1–16each, B1–16each	
Mode	Default	X	mode 3	
	Messages	X	**********	
	Altered	**********		
Note Number		0–127	0–127	
	Sound range	**********	0–127	
Velocity	Note ON	○	○	
	Note OFF	8n, V=64	9n. V=0, 8n. V=0–127	
After Touch	For key	X	X	
	For channel	○	○	
Pitch bender		○	○ (14bit)	
Control Changes	1	○	○	Modulation
	6	X	○	Data entry
	7	○	○	Volume
	10	○	○	Panpot
	11	X	○	Expression
	64	○	○	Hold 1 (Sustain)
	67	X	○	Soft pedal
	69	X	○	Hold 2 (Sustain)
	91	○	○ (LO/HI)	Effect
	120	○	○	All Sound OFF
	121	○	○	Reset All Controllers
	100, 101	X	○	RPN, LSB, MSB
Program Change		○	0–127	
		0–127	0–127	
System exclusive		○	○ *1)	Receive only IN A
System Common	: Song position	X	X	
	: Song Select	X	X	
	: Tune	X	X	
System real time	: Clock	X	X	
	: Commands	X	X	
Others	: Local ON/OFF	X	○	
	: All notes OFF	○	○	
	: Active Sensing	○	○	
	: Reset	X	X	
Notes		1) Turn On or OFF by Exclusive Bank select by Exclusive RPN #0=Pitch Bender sensitivity #1=Master fine tuning #2=Master coarse tuning. Values are given by Data entry		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

○ : Yes
X : No

KAWAI

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