

# KORG

## PERFORMANCE SIGNAL PROCESSOR

# A2

## OWNER'S MANUAL

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### CANADA

THIS APPARATUS COMPLIES WITH THE "CLASS B" LIMITS FOR INTERFERENCE REGULATIONS.

CET APPAREIL EST CONFORME AUX NORMES "CLASS B" SPECIFIÉES DANS LE RÈGLEMENT SUR LE FOUILLAGE RADIOÉLECTRIQUE.

### THE FCC REGULATIONS

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:



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## CANADA

THIS APPARATUS COMPLIES WITH THE "CLASS B" LIMITS FOR RADIO NOISE EMISSIONS SET OUT IN RADIO INTERFERENCE REGULATIONS.

CET APPAREIL EST CONFORME AUX NORMES "CLASS B", POUR BRUITS RADIOELECTRIQUES. TEL QUE SPECIFIER DANS LE REGLEMENT SUR LE BROUILLAGE RADIOELECTRIQUE.

## THE FCC REGULATION WARNING

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient the receiving antenna.
- Relocate the equipment with respect to the receiver.
- Move the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful. "How to Identify and Resolve Radio - TV Interference Problems". This booklet is available from the US Government Printing Office, Washington D.C. 20402, stock No. 004 - 000 - 0003454.

# MAIN FEATURES OF THE A2

## 1. "Full Programable" Digital Multi Effects

The A2 comes with 102 effects in 44 groups that can be combined to make up an effect chain, each chain using up to 6 effects simultaneously. The chains and individual effect setting can be edited and stored in the 100 program RAM memory.

## 2. Complete Digital Effect Processing

Full digital effect processing is made possible by the newly developed DSP (Digital Signal Processor), which keeps the A2 from any signal degradation while connecting with several effect units.

## 3. A Wide Variety of Effect Chains for use with Different Instruments

The 97 preset chains in the A2 include typical studio and live multi – effect connections for guitar, bass, keyboards, vocals, drums and wind instruments. Normally, these effects require many different effect units and a complex patching system. However by plugging your instrument into the A2, the latest and most sophisticated studio/live effect configurations are available at the touch of a button.

## 4. Full Stereo Effects

Using the 2 inputs(L,R) together with the stereo effect chains in the A2, full stereo separation is possible with stereo input and output.

## 5. Unlimited Sound Expansion

With memory cards, you can load a variety of new effects into the A2 with entirely new effect programs, which is impossible with most effect devices. Using the optional ROM card, you can then select and play any one of 200 effect programs. (Internal programs and ROM card programs.) You can also store any edited effect settings into a RAM card (up to 100 programs) to create your own library of original effects.

## 6. Compatible with all A3 Cards

To further expand the range of sound creation, the A2 can read the program data from all the memory cards available for the A3 Performance Signal Processor. However, effect chains in the A3 cards SPC – 01, 02, 03, 04, and 05 are already built in the A2.

## 7. Built – in Digital Noise Reduction

The A2 is equipped with a built – in digital noise reduction system to automatically cut off hum and noise during breaks in the input signal.

## 8. 4 Times Over – sampling Digital Filter

Degradation in sound quality, due to multiple delay and distortion, is eliminated by the 4 times over – sampling digital filter. The filter preserves phase characteristics in the high frequencies and this results in high – quality sound output.

## 9. Connection with Foot Controller FC6

Program change, Effect ON/OFF, as well as Individual Effects Parameter Settings can be controlled in real time by connecting the optional FC6 Foot Controller for ultimate control of live performances.

## 10. Performance Play Function

The A2 allows you to control the parameters of multiple effects simultaneously in the Performance Edit Mode for easy real time editing of complex effect chains.

## 11. Double Function Editors

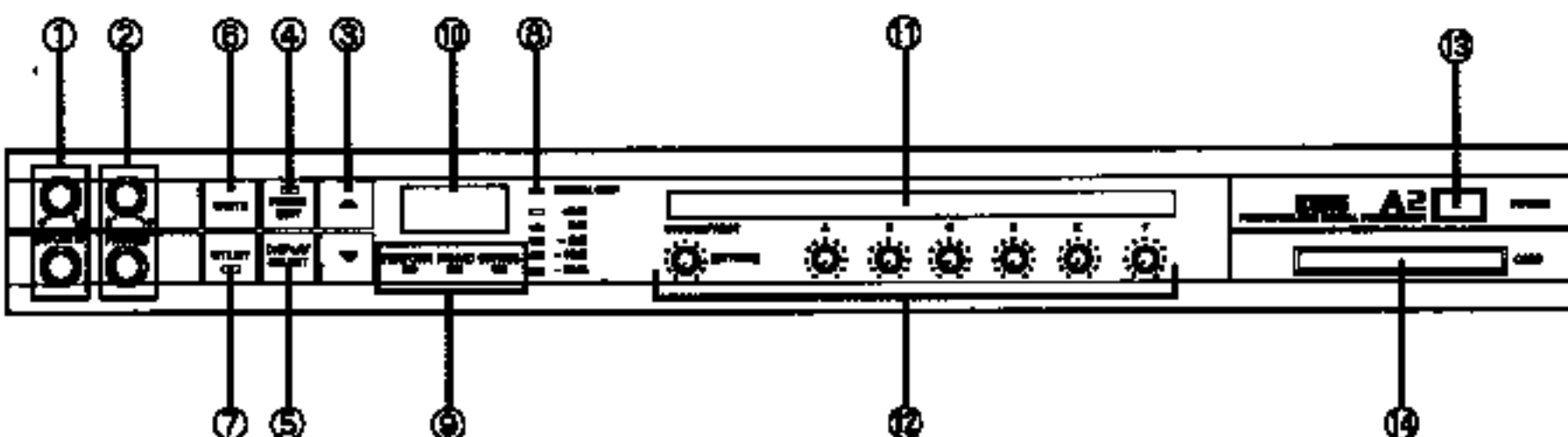
Double function editors operating as both rotary and push button switches can make your checking and editing procedures extremely easy. Even the most complex effect set – ups can be quickly edited and stored by just looking at the display.

## 12. Automatic Front Panel Input Terminal Assignment

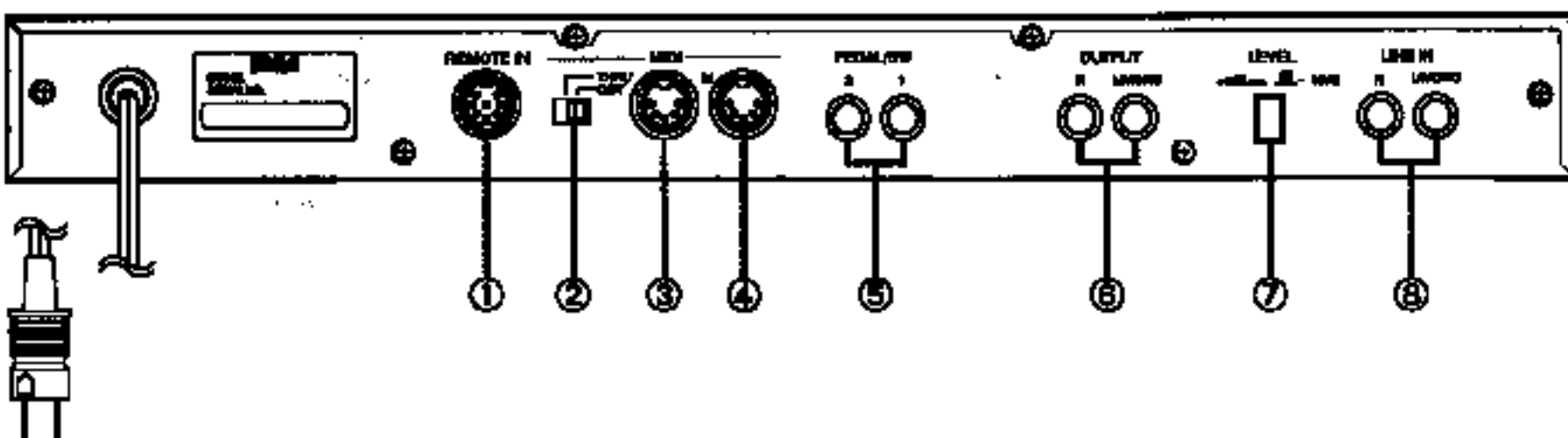
When connected, the front panel GUITAR IN terminal automatically overrides the rear panel input terminals.

# NAMES AND FUNCTIONS OF CONTROLS AND TERMINALS

FRONT PANEL



REAR PANEL



## FRONT PANEL

### ① Guitar In, Input Level

For connecting a guitar, etc. This front panel input has priority over the rear panel inputs.

### ② Headphone Jack, Headphone Volume

For connecting headphones and adjusting the volume.

### ③ Up/Down Keys

For selecting programs and adjusting parameters in the edit mode.

### ④ Parameter Edit Key

For entering edit mode. (Refer to page 17.)

### ⑤ Display Select Key

For selecting either Performance Play or Individual Play in the Play Mode. (This key is also used to switch between the parameter name and the parameter value in the display while editing individual effects in the Effect Edit Mode.)

### ⑥ Write Key

For storing edited data to memory. (Refer to page 19.)

### ⑦ Utility Key

This is used to select the utility functions of the A2. (Refer to page 22.)

### ⑧ Input Indicator

For visual monitoring of the input level while making adjustments. Set the input level to light up the +6dB indicator but not the DIGITAL CLIP LED.

### ⑨ Mode Indicator Display

LED's indicate the currently selected mode. The PERFORM LED is lit when in the PERFORMANCE mode, the INDIVID LED when in the individual mode, and the BYPASS LED when Bypass has been selected.

### ⑩ Program No. Display

Indicates the current program number.

### ⑪ LCD Display

Indicates the current parameters, settings, etc.

### ⑫ Double Function Editors

These function as two controls in one depending on whether they are rotated or pressed.

#### 1) CHAIN/EFFECT (BYPASS)

Chains can be selected by turning this control. Pressing this control in normal operation modes toggles the bypass function on and off. When editing individual effects in the Edit Effect mode, rotating the control varies the selected effect. Pressing the control in this mode turns the effect on and off. Pressing while in the PARAM/EDIT[SELECT] MODE ENABLES the compare function.

#### 2) A – F

For setting the parameter values, effect variations, effect ON/OFF, etc.

### ⑬ Power Switch

For turning the power on and off.

### ⑭ Card Slot

For inserting optional RAM (MCR – 03) and ROM cards.

## REAR PANEL

### ① Remote Input Terminal

For connection of optional FC6 Foot Controller, with a special remote cable.

### ② MIDI IN Terminal

### ③ MIDI OUT/THRU Terminal

For connection of external MIDI devices.

### ④ MIDI OUT/THRU Selection Switch

For changing the MIDI OUT/THRU terminal to either MIDI OUT or THRU. When set to OUT, MIDI messages from the A2 are transmitted via MID OUT; when set to THRU, MIDI messages received at the MIDI IN terminal are transmitted unaltered via MIDI THRU.

### ⑤ Pedal/Switch Input Jacks

For connection of a footswitch or volume pedal. Please see the Utility section (page 32) for detailed setup information.

### ⑥ L/MONO and R Outputs

For connection to amplifiers, mixers, etc. To take advantage of the sophisticated stereo effects in the A2,

connect the two outputs to a stereo amplification system. For monaural operation, connect to the L/MONO output jack.

### ⑦ Level Attenuator Switch

For setting the nominal level to match the application.

– 10dB : Electric instruments with high – level output, such as keyboards, etc. Also audio equipment for the amateur/semi – professional level.

+4dB : Professional audio equipment, power amplifiers.

This switch does not attenuate the input level at Guitar In.

### ⑧ L/MONO and R Inputs

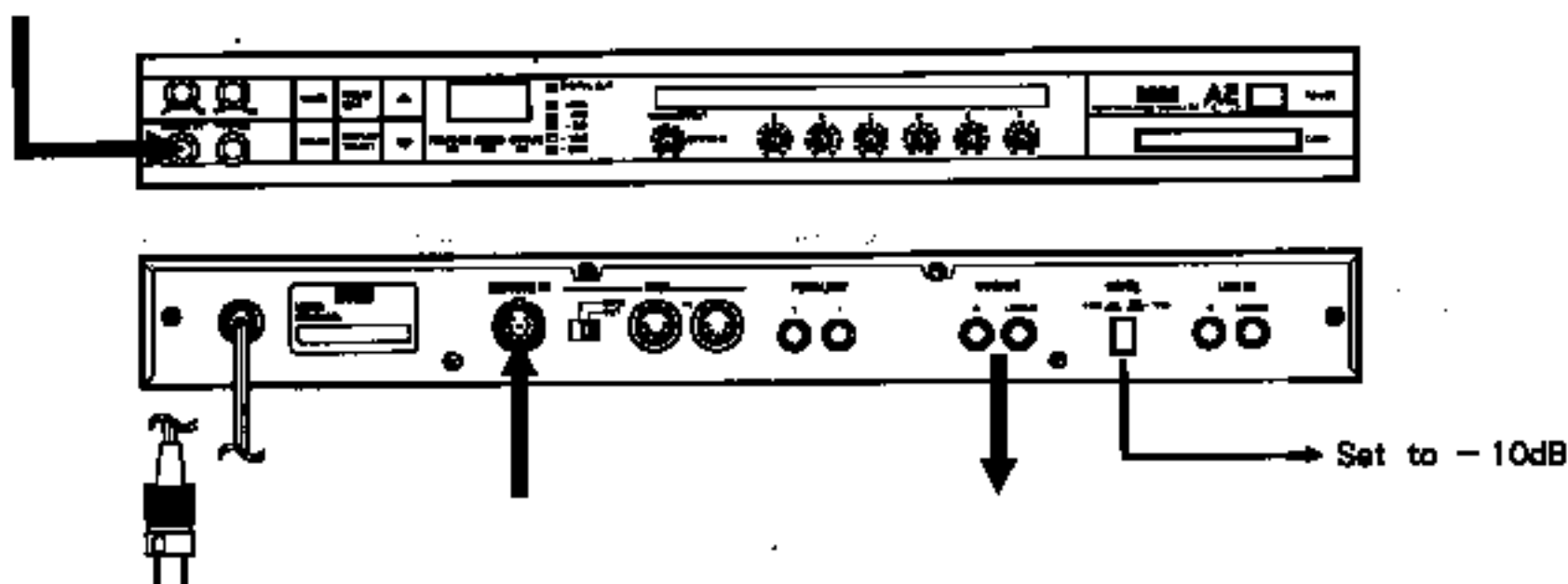
For connection of keyboards such as synthesizers or electric pianos or line level signals from mixers, etc. When using a monaural instrument, connect to the L/MONO input jack.

# BASIC OPERATION

NOTE: Do not turn on the power until you finish making all the connections with other instruments and equipment.

## 1. Connection of Instrument and Amplifier

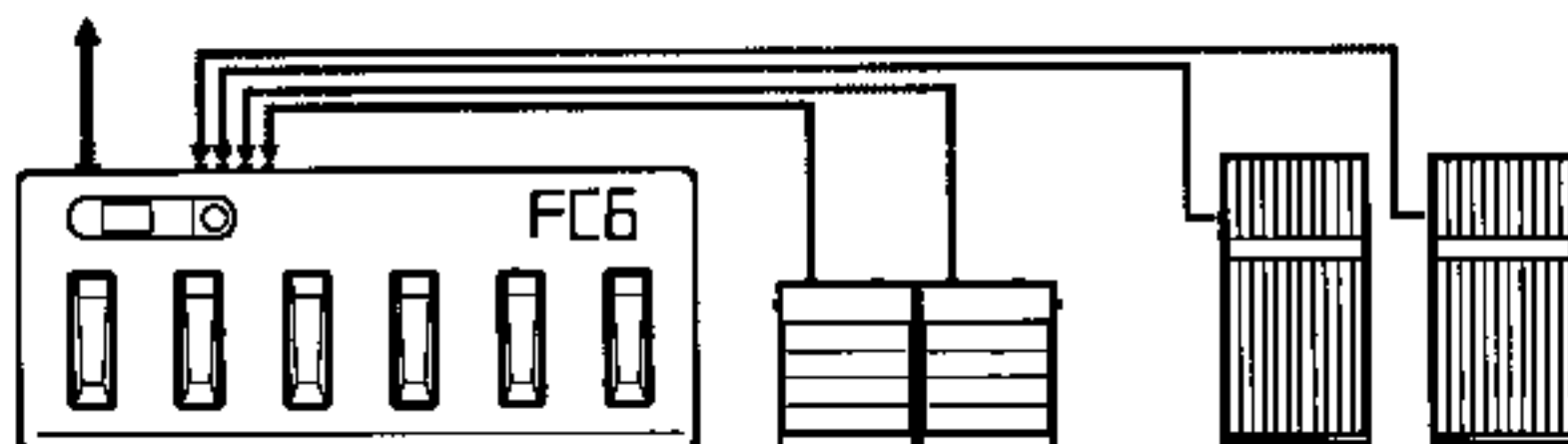
- ① Connect the guitar, etc. to the GUITAR IN terminal on the front panel. (Fixed at  $-20\text{dB}$ .)
- ② Connect the guitar amplifier, etc. to the OUTPUT terminal on the rear panel.
- ③ Set the LEVEL SW of the rear panel to  $-10\text{dB}$  (switch should be in the raised position.)



### Connection with the FC6

The following notes and instructions apply to connection of the A2 to the optional FC6 Foot Controller.

- ① The remote cable has a lock on one of its plugs and no lock on the other. Connect the plug with the lock to the FC6 and the other side to the A2.
- ② Set the power switch on the rear panel of the FC6 to OFF/EXT. The power is now supplied from the A2.
- ③ The FC6, upon connection to the A2, automatically sets itself to control the operation of the A2.

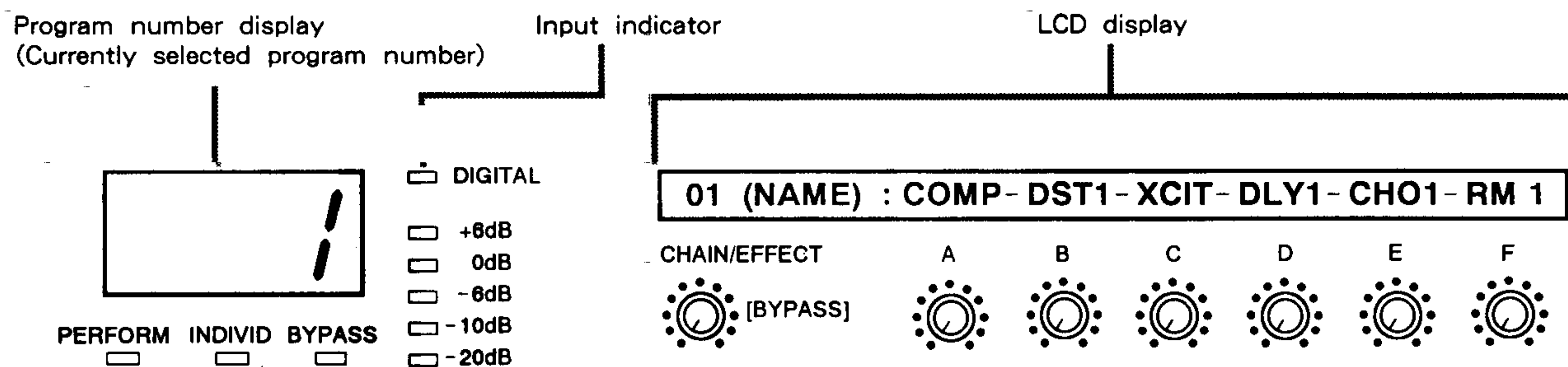




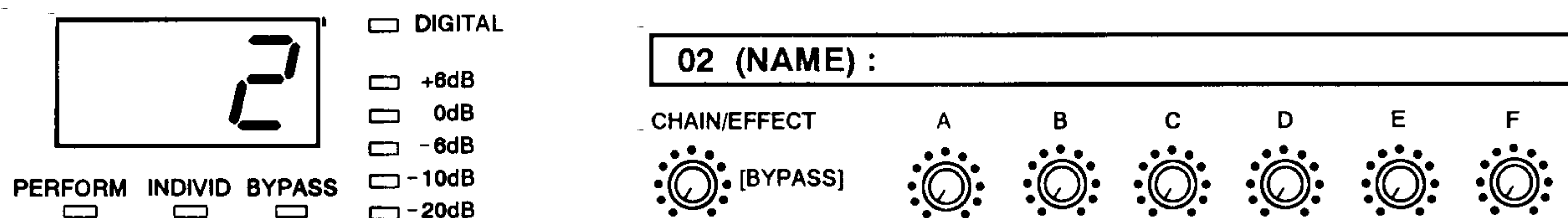
## 2. Selection of Internal Effect Programs

The A2 is equipped with 100 factory set effect programs.

- ① Turn on the power. The display illustrated below will appear in the LCD. The A2 will power up to the last program selected when powered down. The program number is indicated in the left side of the LCD display, and the effect contents of the program are shown in the right side of the display.

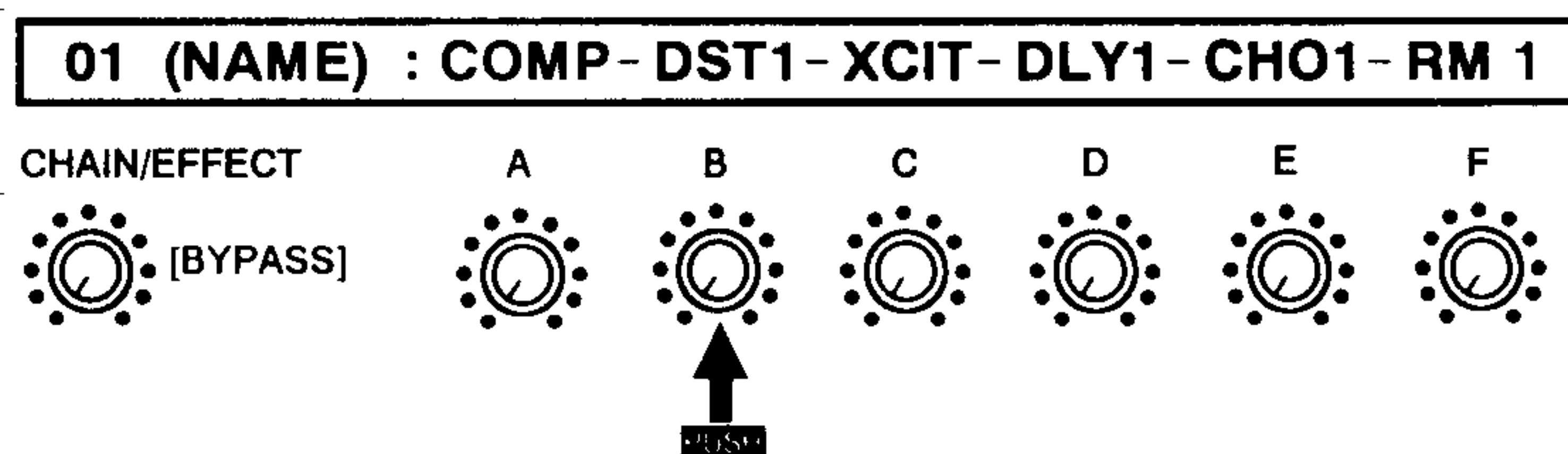


- ② Set the input level such that input indicator lights at around "+3" and "+6" when playing the loudest.
- ③ To select other programs, press the UP key or the DOWN key. Pressing either of these keys single – steps the program numbers in increasing and decreasing order, respectively.



- ④ Each program is made up of a combination of several effects. Any effects can be set to OFF if undesired. For example, a program using chain 01 includes six separate effects, Compressor [COMP], Distortion [DIST1], Exciter [XCIT], Delay [DLY1], Chorus1[CHO] and Room Reverb 1 [RM1]. In this example, the Distortion effect can be turned off as in the following procedures.

- 1) Turn the "Chain/Effect" double function editor completely to the left. (Until the display reads 01.)
- 2) Press the "B" double function editor, directly under "DST1" in the display. The effect name in the display switches to lowercase letters ("dst1") to indicate that the Distortion effect is OFF. You can return it to the original setting by pressing the "B" double function editor again.



Other effects can be toggled ON and OFF in the same manner by pressing the corresponding A – F double function editors.

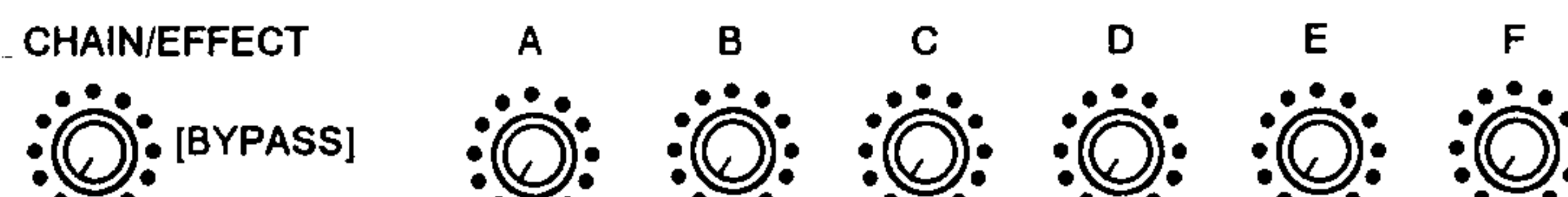
Any desired effect programs can be selected in the Play Mode. Refer to the Play Mode (page 12) for more functions of this mode.

# 3. Creating Your Own Effects

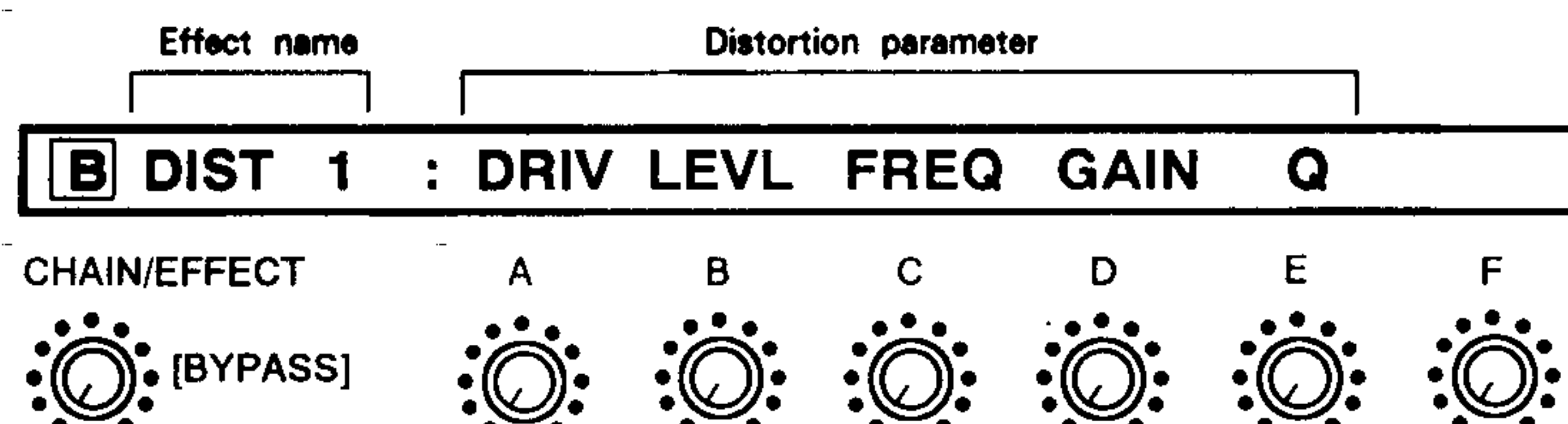
## Making changes to the factory Effect Programs

- ① Select the program you wish to change by using the UP/DOWN keys. Select a program using the "Distortion" effect, for example.
- ② Press the PARAM EDIT (Parameter Edit) key. The LED in this key lights up to indicate that the Parameter Edit Mode has been selected. (In this mode it is possible to change or edit the programs.)

**01(SELECT) : COMP-DST1-XCIT-DLY1-CHO1-RM 1**

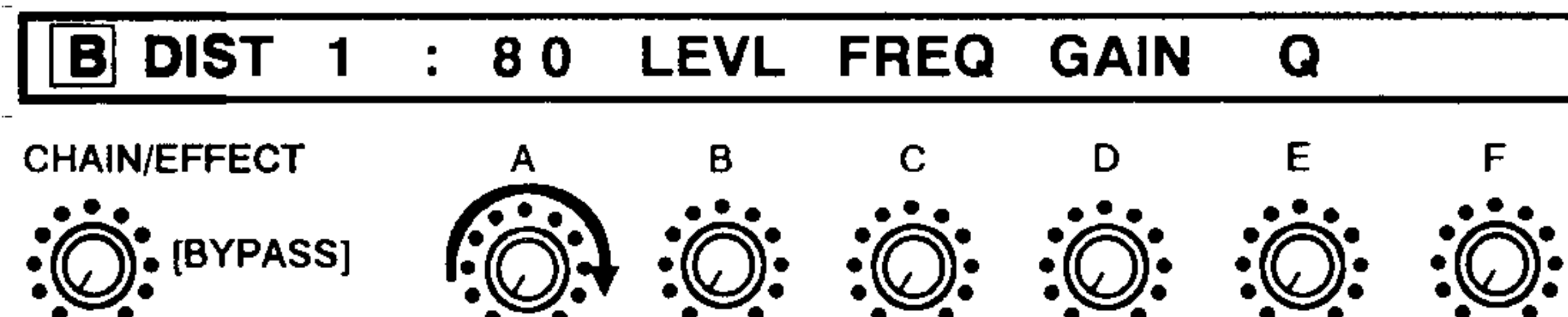


- ③ Edit the individual effects by pressing the double function editor directly below the name of the effect. For example, select "Distortion" by pressing the "B" doublefunction editor.



The name of the selected effect is indicated in the left side of the display. And the right side shows all the effect parameters you can change.

- ④ Set the parameter to the desired value by rotating the double function editor under each parameter. For example, the degree of distortion in the Distortion effect is changed when rotating the "A" double function editor below "DRIV". (The display automatically and temporarily changes to the parameter value when the double function editor is rotated.)



- ⑤ Change other parameters in the same way. Refer to the "Effect Parameter List" for details of each effect parameters.
- ⑥ Switch among variations of the effect, since some of the preset effects in the A2 include certain variations. For example, the Distortion effect has 4 variations: [DST1], [DST2], [OVD1], and [OVD2]. The variation can be changed (while Distortion is selected in the Parameter Edit Mode) by rotating the CHAIN/EFFECT double function editor. Select the desired variation and edit the parameters.
- ⑦ You can switch to any effects and parameters other than Distortion by pressing the desired A – F double function editors. To return to the "[SELECT]" display (where all effects in the selected program are shown), press the PARAM EDIT key twice. The first press exits the Parameter Edit Mode, and the second press returns to the mode again.
- ⑧ Save the edited program by executing the write operation. A recently edited program will return unaltered to its original program setting if you select another program without executing the write operation.



Creating Original Effect Programs

① Select any program number. For example, select Program number 1.

01 (NAME) : COMP-DST1-XCIT-DLY1-CHO1-RM 1

CHAIN/EFFECT

[BYPASS]

A

B

C

D

E

F

② Next, select a chain. The pattern or order of connecting the effects is called a "chain" in the A2. There are 97 factory preset chains (No.1 – 97) in the A2. (Refer to the attached "Effect Parameter List".) When you rotate the CHAIN/EFFECT double function editor, the chain number (shown on the left in the display) and the connected effects change together. Set this to Chain number 07 ,for example. The display changes as shown below.

Chain number

Order of effects in Chain # 07

07 (NAME) : DST1-XCIT- SP 1-DLY 1- CHO1-RM 1

CHAIN/EFFECT

[BYPASS]

A

B

C

D

E

F

③ To disable any effects in Chain #07, press the double function editors directly below them. For example, when Chorus is not needed, press the double function editor under [CHO1].

Effect names in lowercase letters indicate that they are set to OFF.

07 (NAME) : DST1-XCIT- SP 1-DLY 1- cho 1-RM 1

CHAIN/EFFECT

[BYPASS]

A

B

C

D

E

F

PUSH

- ④ Different variations of the same effect type can be selected by rotating the double function editor below the appropriate effect name.
- ⑤ Enter the Parameter Edit Mode to edit parameters and make detailed changes to the sound. Press the PARAM EDIT key, and select the effect you wish to edit by pressing the appropriate double function editor. The parameters of the selected effect will be shown in the display. Adjust the parameter settings by rotating the corresponding double function editors.
- ※ Extreme settings in the compressor, distortion, overdrive and equalizer effects may result in unwanted noise, since the difference in adjacent settings is quite wide.

B DIST 1 : 80 LEVL FREQ GAIN Q

CHAIN/EFFECT

[BYPASS]

A

B

C

D

E

F

(6) Make sure to write the program when you are satisfied with the edits you have made. You can use a maximum of 7 characters to name your effect programs.

# STRUCTURE OF EFFECT PROGRAMS

## About Effect Chains

The A2 is capable of combining up to 6 effects at once, called a chain. The A2 contains chains of both monaural input and stereo input. The stereo chains supply separate effects to each of the L and the R channels. The A2 includes factory programmed 76 monaural chains (01 – 76) and another 21 stereo chains (77 – 97). There are also 4(71–74) guitar amp "Switching" chains.

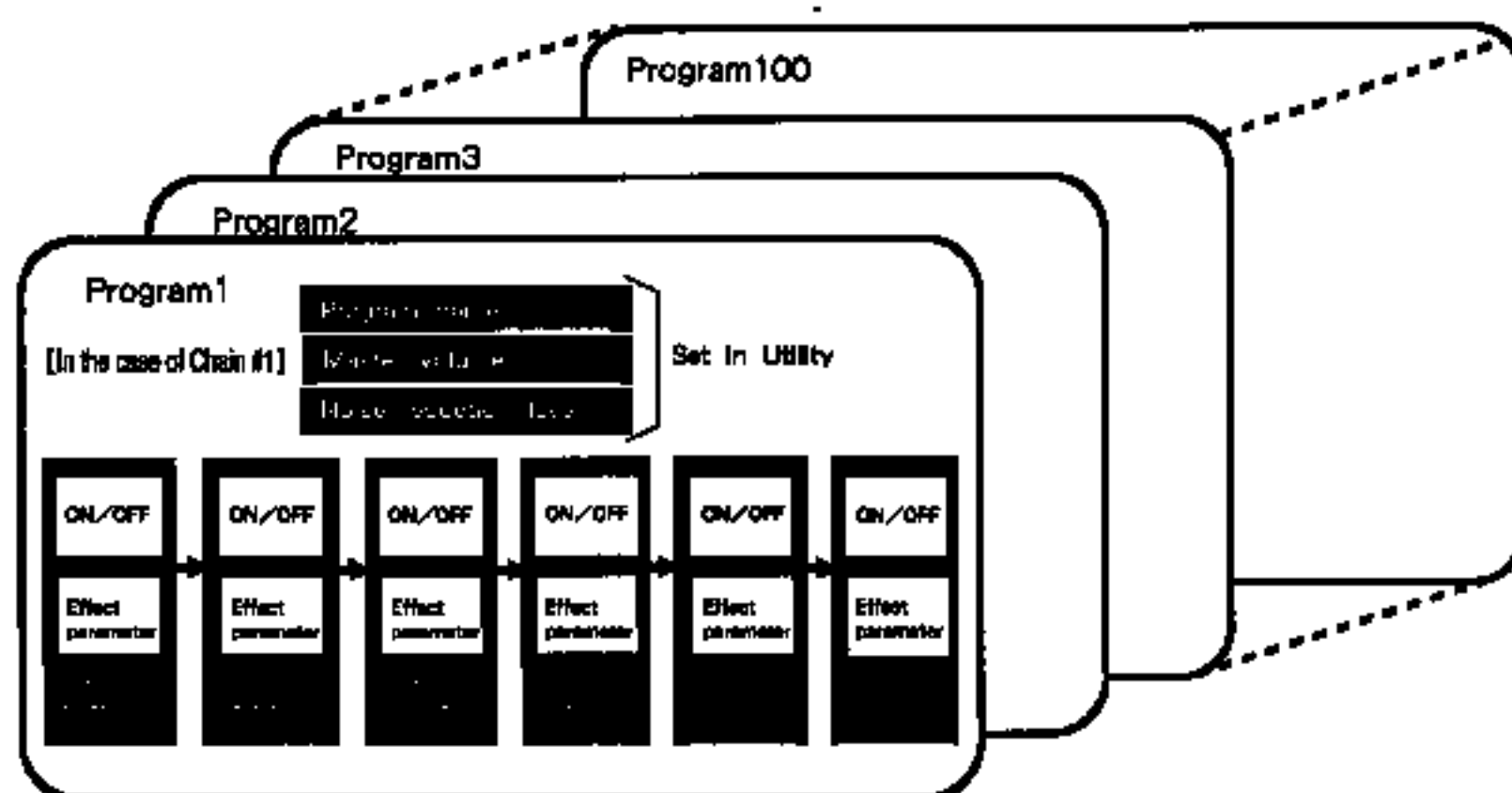


The chain can be given a program name, a master volume setting and a specified degree of noise reduction (as well as ON/OFF and parameter settings of each effect) and then written to memory as an "effect program". Additional chains and effect programs are available on optional memory cards. However, 10 chains each from A3 cards SPC – 01, 02, 03, 04 and 05 are already built into the A2 as Chain Nos. 21 – 70. (SPC – 01 programmed as Chain Nos. 21 – 30, SPC – 02 as Nos.31 – 40, etc.) Refer to the attached "Effect Parameter List" for details of effects in each chain.

### Variation

Each of the 6 effects in a chain forms its own effect group. Some groups contain more than one variation. Effect variations can be selected both in the Play Mode and the Parameter Edit Mode.

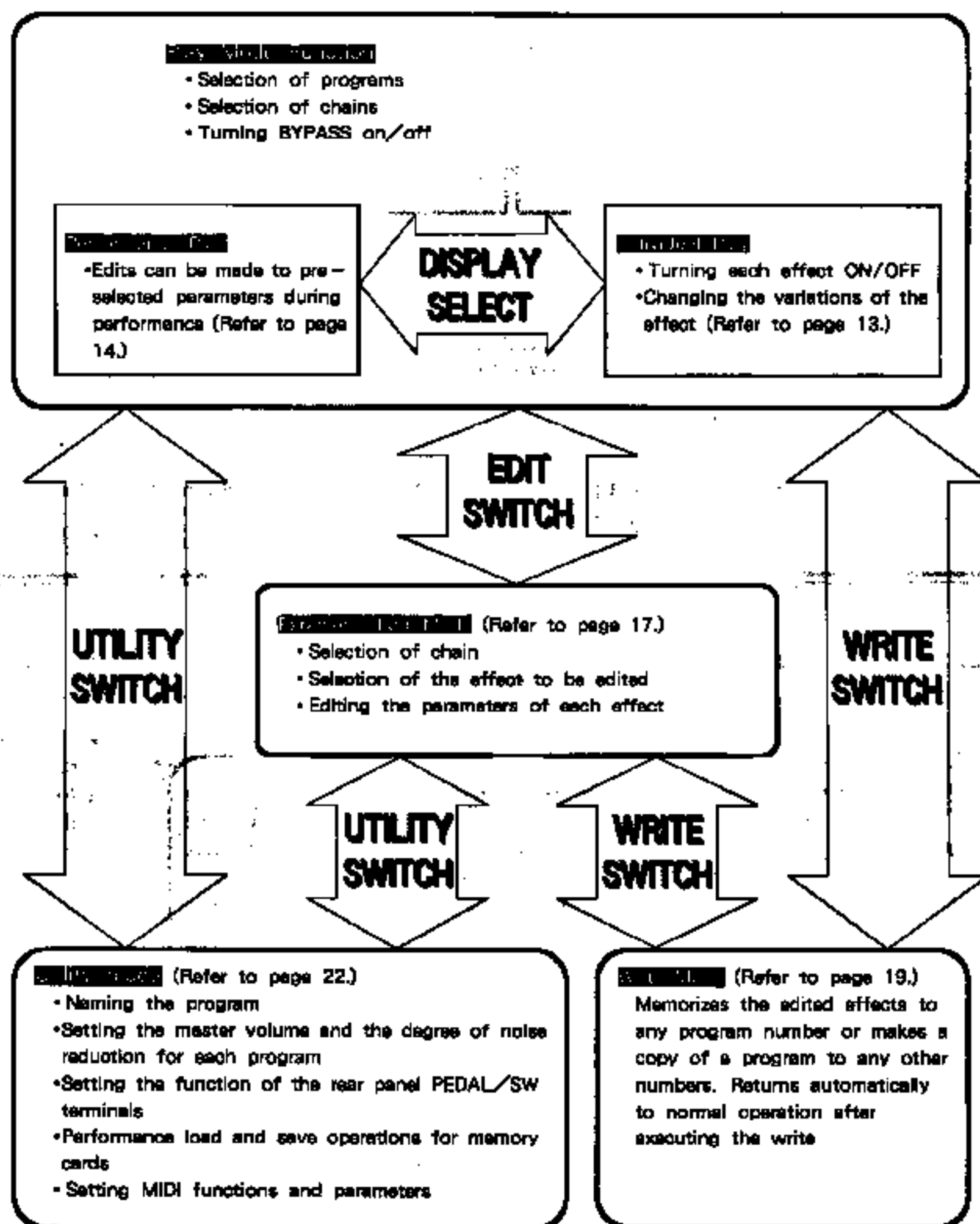
## Structure of Program





# OUTLINE OF OPERATION SYSTEM

The A2 has four operation modes: Play Mode, Parameter Mode, Utility Mode, and Write Mode. Functions in each mode are outlined below. Each mode can be entered by pressing the switches indicated in the arrows below. Refer to pages 12 – 41 for more details of each mode.



# PLAY MODE

**NOTE:** The A2 is in Play mode whenever the LED in the Parameter Edit key is off.

In the Play Mode, any of 100 internal effect program can be selected. The A2 memorizes 100 internal programs (No.1 – 100), and additional 100 programs can be saved to a memory card (No.101 – 200) as well. The following data are memorized in each program.

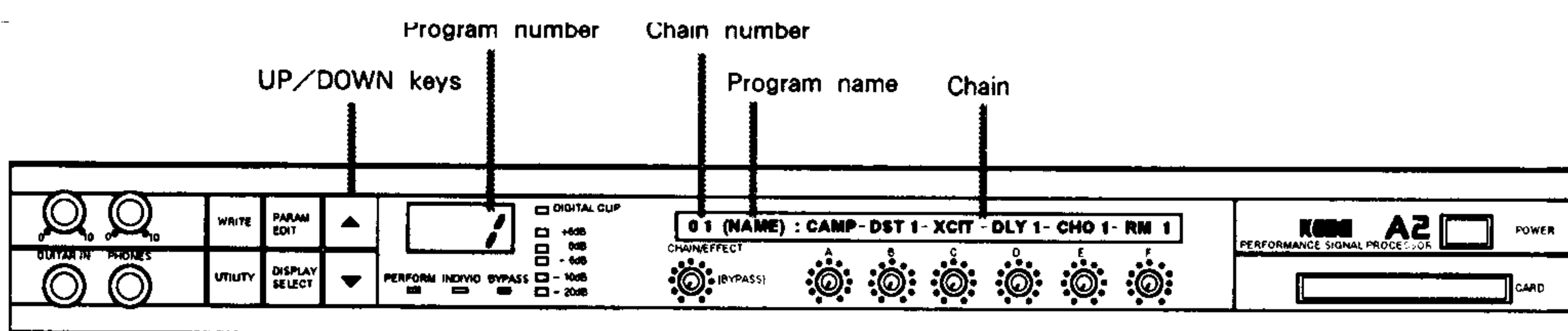
## Programs

- Name Program name. (Set in the Utility mode. Refer to page 35.)
- Chain. Effect connection patterns, such as COMPRESSOR → DISTORTION → EXCITER → CHORUS → DELAY → REVERB. The A2 has 97 factory programmed chains.
- Individual Parameter Data Separate parameter data for each effect. For example, DISTORTION has parameters such as DRIVE, LEVEL, etc. whose values make up the parameter data for the effect.
- Master Volume, Noise Reduction Total volume and threshold level of noise reduction for the program. (Set in the Utility mode. Refer to page 22.)

Effect programs can be selected for play in one of the two ways; Individual Play and Performance Play. Individual play allows you to turn each effect on or off separately within the program (as described in the BASIC OPERATION section). Performance play allows real – time editing of effects in a program, using the "A" – "F" double function editors.

## 1. Selecting Programs

The Play Mode is selected automatically when the A2 is turned on.



Programs can be selected by using the UP/DOWN keys.

- ① When no card is inserted : Programs 1 – 100 can be selected upon each press of the UP/DOWN keys.
- ② When a card is inserted (to expand the A2's memory) : Programs 1 – 200 can be selected with the UP/DOWN keys.

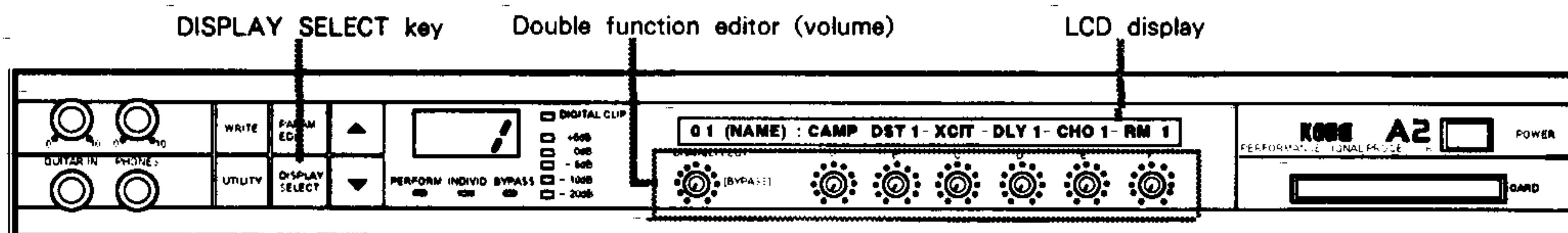
- ♠ Holding down the UP or DOWN key allows continuous scrolling through the program numbers.
- ♠ You can advance through the program numbers in groups of 10 by holding down the UP key, then pressing the DOWN key. To reverse through the program numbers in groups of 10, do just the opposite: hold down the DOWN key, then press the UP key.



## 2. Individual Play

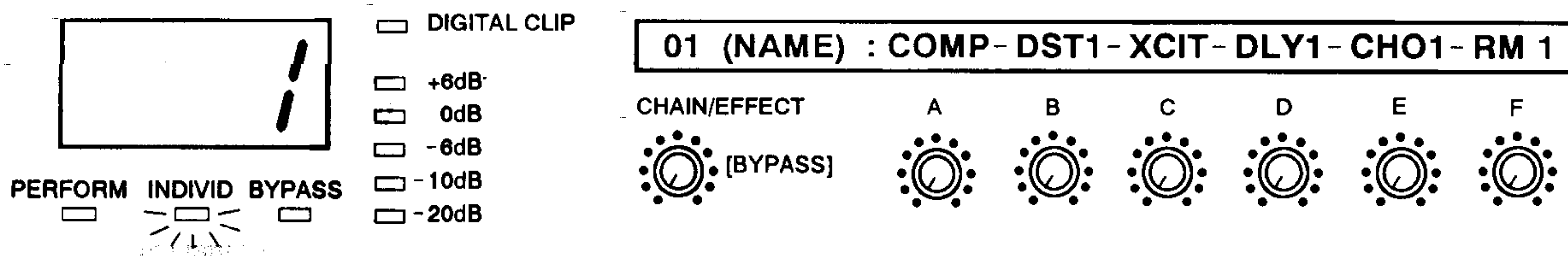
Individual play allows you to separately control each of the effects in a program by:

- 1) turning each effect on or off, and
- 2) changing the variation of each effect (selecting one type of effect from the same effect group).



**Procedure :** To select Individual play, press the DISPLAY SELECT key until the INDIVID LED is lit. The display below will appear.

**Note :** When the power is first applied, Individual play is automatically selected.



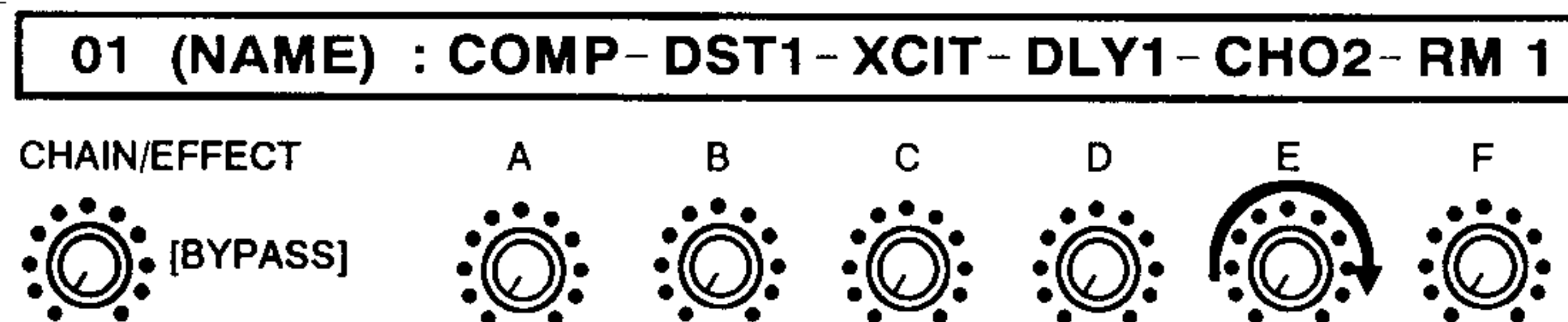
### Switching effects ON and OFF

Pressing the double function editor immediately below the displayed effect name toggles the effect ON and OFF. (Capital letters = effect ON, Lowercase letters = effect OFF)

### Changing the Effect Variation

Variations of effect can be selected by rotating the double function editor immediately below each effect name in the display. For example, Chorus effect can be selected from CHO1 (Chorus 1), CHO2, FLN1 (Flanger 1) and FLN2.

**NOTE:** Where an effect has only one type, no variations can be selected.



### Turning ON and OFF the Bypass Function

Pressing the CHAIN/EFFECT double function editor (BYPASS) toggles the bypass function ON and OFF, and the BYPASS indicator LED (in the Mode Indicator display) is lit or unlit accordingly.

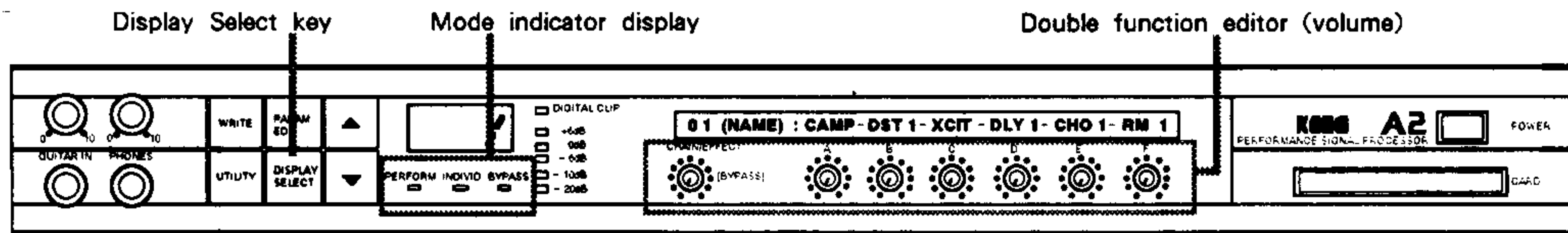
### Selecting Chains

Chains can be selected by rotating the CHAIN/EFFECT double function editor. The display indicates the effect connection of each chain. During a normal operation without a card, the chain numbers change over a range of 1 – 97. When programs Nos. 101 – 200 are selected from the card, additional chain numbers stored in the card can be selected. Once you have loaded data from the card, these new chains can be used while writing internal programs 1 – 100, also.

**Note:** For finer selection of the available 97 chains, enter the Parameter Edit [SELECT] mode and press the UP/DOWN keys to single – step through the chain numbers.

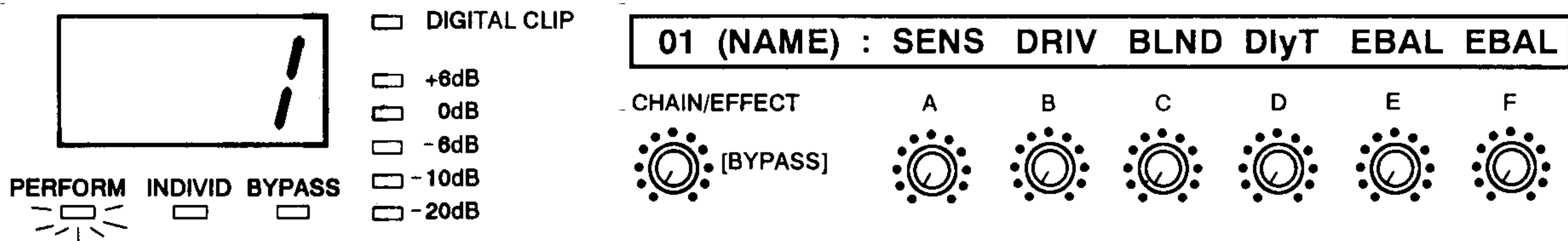
# 3. Performance Play

In Performance Play mode, each program is treated as a complete effect unit and can be controlled by editing the featured parameters that make up the character of the program. This makes it easy to change or edit the color of an entire program, without having to edit individual effect parameters. (Available parameters for editing in this mode are predetermined for each chain. Refer to page 21 and the attached "Chain List" for more details.)

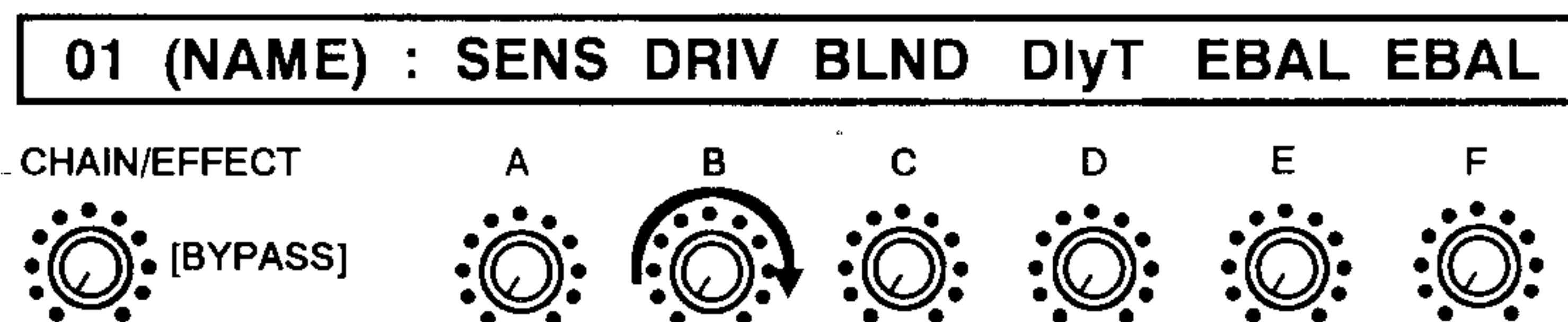


## Editing the Performance Parameters

1) Press the DISPLAY SELECT key until the PERFORM LED lights up. The display shows effect parameters in each chain.



2) To change the parameter value, rotate the double function editor immediately below each parameter name. In the figure below, the parameter value for "DRIV" is changed by turning the "B" double function editor. The parameter values are not indicated in Performance play mode, however the parameter names can be always displayed by turning the double function editor to the central position.



3) Follow the same procedure for changing other parameters.

## Selecting Chains

To select chains, rotate the CHAIN/EFFECT double function editor. No chain can be shown when the display is selected to Performance play mode.

## Cancelling Effects with Bypass Function

Press the CHAIN/EFFECT [BYPASS] double function editor to light up the BYPASS LED. This operation puts the A2 in Bypass mode, disabling all effects. To release the BYPASS function, simply press the double function editor again.

♠ The display shows no effect NAMES during Performance Play Mode. To check them, press the DISPLAY SELECT key to select the Individual Play Mode.

♠ Keep in mind that all edited data in the effects will be erased upon switching to another program unless written to the internal memory.



## MODE 1

In this mode, programs are grouped for selection into banks, with five consecutive programs making up one bank. The program – to – bank assignments are : programs No. 1 – 5, 6 – 10, 11 – 15, 16 – 20, 21 – 25, and so on. (Example : When the last selected program number is 18.)

SW A :	Selecting the first program in the bank.	----->	pressing SW A calls up # 16 ;
SW B :	Selecting the second program in the bank.	----->	pressing SW B calls up # 17 ;
SW C :	Selecting the third program in the bank.	----->	pressing SW C calls up # 18 ;
SW D :	Selecting the fourth program in the bank.	----->	pressing SW D calls up # 19 ;
SW E :	Selecting the fifth program in the bank.	----->	pressing SW E calls up # 20 ;
SW F :	Selection of bank.	----->	pressing SW F calls up the next bank,
	(Bank advances upon each press of the switch : [1],[6]		starting with program # 21.
	[11],[16],[21],[26],[31]....[76],[81],[86],[91],[96],[1])		

- ♠ Each press of switch [F] changes the program number display and advances the bank selection as follows : # 21, # 26, # 31, # 36, and on up to # 96. After # 96, the selection "wraps around" to # 01.
- ♠ To decrease the bank number, press switch [F] while holding down switch [E]. This operation calls up the fifth program in the bank first, and changes the banks in decreasing order.

## MODE 2

In this mode, program number increases or decreases in steps of ten or in individual steps. (Example : When the last selected program number is 23.)

SW A :	Program number decreases by 10	----->	pressing SW A calls up program number 13 ;
SW B :	Program number increases by 10	----->	pressing SW B calls up # 33 ;
SW C :	Program number decreases by 1	----->	pressing SW C calls up # 22 ;
SW D :	Program number increases by 1	----->	pressing SW D calls up # 24 ;
SW E :	no change	----->	pressing SW E has no change in the program selection.
SW F :	no change	----->	pressing SW F has no change in the program selection.

- ♠ The FC6 Foot Controller is capable of selecting any of the programs 1 – 100 on the A2. However, when selecting card programs with the FC6, you must manually switch the A2 to the appropriate program group, first. Selecting any program number in the group 101 – 200 on the A2 enables the FC6 to control that range of programs. To go back to the 1 – 100 range, simply use the UP/DOWN key to select any number in that range.

### (2) Individual Play Using the FC6 Foot Controller [Manual 2]

The FC6 turns each effect ON/OFF or bypasses all effects at once.

Procedure :

- 1) Switch the FC6 to the Effect ON/Off mode (Manual 2).
- 2) Press the pedal switch (A – F) to turn each effect ON/OFF. Check the ON/OFF status with LEDs in the pedal switch.
  - LED turns red = Effect ON
  - LED turns green = Effect OFF
  - Unlit LED = no effect available
- 3) All ON/OFF status of effects is also indicated in the A2's display.
  - Capital letter = Effect ON
  - Lowercase letter = Effect OFF

NOTE: Effect variation cannot be selected from the FC6.

## MODE 1

In this mode, programs are grouped for selection into banks, with five consecutive programs making up one bank. The program – to – bank assignments are : programs No. 1 – 5, 6 – 10, 11 – 15, 16 – 20, 21 – 25, and so on. (Example : When the last selected program number is 18.)

SW A :	Selecting the first program in the bank.	----->	pressing SW A calls up # 16 ;
SW B :	Selecting the second program in the bank.	----->	pressing SW B calls up # 17 ;
SW C :	Selecting the third program in the bank.	----->	pressing SW C calls up # 18 ;
SW D :	Selecting the fourth program in the bank.	----->	pressing SW D calls up # 19 ;
SW E :	Selecting the fifth program in the bank.	----->	pressing SW E calls up # 20 ;
SW F :	Selection of bank.	----->	pressing SW F calls up the next bank,
	(Bank advances upon each press of the switch : [1],[6]		starting with program # 21.
	[11],[16],[21],[26],[31]....[76],[81],[86],[91],[96],[1])		

- ♠ Each press of switch [F] changes the program number display and advances the bank selection as follows : # 21, # 26, # 31, # 36, and on up to # 96. After # 96, the selection "wraps around" to # 01.
- ♠ To decrease the bank number, press switch [F] while holding down switch [E]. This operation calls up the fifth program in the bank first, and changes the banks in decreasing order.

## MODE 2

In this mode, program number increases or decreases in steps of ten or in individual steps. (Example : When the last selected program number is 23.)

SW A :	Program number decreases by 10	----->	pressing SW A calls up program number 13 ;
SW B :	Program number increases by 10	----->	pressing SW B calls up # 33 ;
SW C :	Program number decreases by 1	----->	pressing SW C calls up # 22 ;
SW D :	Program number increases by 1	----->	pressing SW D calls up # 24 ;
SW E :	no change	----->	pressing SW E has no change in the program selection.
SW F :	no change	----->	pressing SW F has no change in the program selection.

- ♠ The FC6 Foot Controller is capable of selecting any of the programs 1 – 100 on the A2. However, when selecting card programs with the FC6, you must manually switch the A2 to the appropriate program group, first. Selecting any program number in the group 101 – 200 on the A2 enables the FC6 to control that range of programs. To go back to the 1 – 100 range, simply use the UP/DOWN key to select any number in that range.

### (2) Individual Play Using the FC6 Foot Controller [Manual 2]

The FC6 turns each effect ON/OFF or bypasses all effects at once.

Procedure :

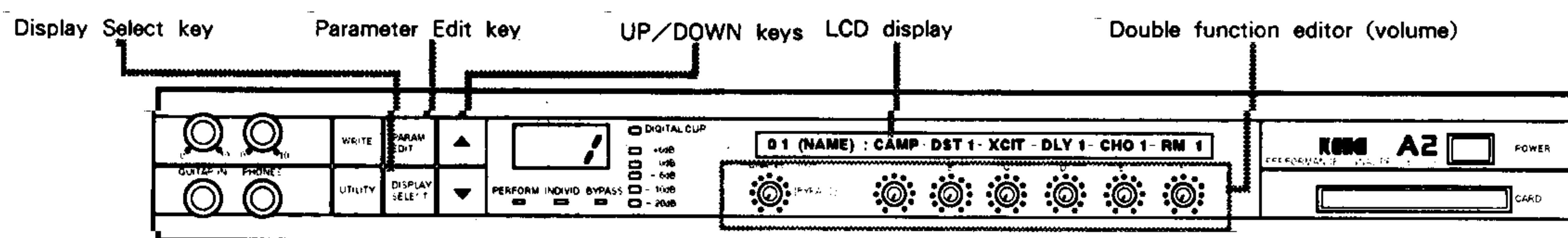
- 1) Switch the FC6 to the Effect ON/Off mode (Manual 2).
- 2) Press the pedal switch (A – F) to turn each effect ON/OFF. Check the ON/OFF status with LEDs in the pedal switch.
  - LED turns red = Effect ON
  - LED turns green = Effect OFF
  - Unlit LED = no effect available
- 3) All ON/OFF status of effects is also indicated in the A2's display.
  - Capital letter = Effect ON
  - Lowercase letter = Effect OFF

NOTE: Effect variation cannot be selected from the FC6.



# PARAMETER EDIT MODE

This mode provides the editing functions of effect parameters in a program.



## Setting Up

Press the PARAM EDIT key from either Performance Play or Individual Play. The LED in the key lights up to indicate the A2 is in Parameter Edit Mode.

NOTE: In BYPASS mode, effects are not active and cannot be heard. Turn BYPASS off before switching to Parameter Edit Mode for editing.

## Effect Selection

1) When Parameter Edit Mode is selected, the display changes as below.

**01 (SELECT) : COMP - DST1 - XCIT - DLY1 - CHO1 - RM 1**

2) If necessary, change the chain by rotating the CHAIN/EFFECT double function editor or by pressing the UP/DOWN keys.

**B DIST 1 : DRIV LEVL FREQ GAIN Q**

3) Press the double function editor under each effect name to display its parameters. The names of the parameters are indicated when the effect is selected.

- ① At this time, different effect variation in a group can be selected by rotating the CHAIN/EFFECT [BYPASS] double function editor.
- ② Also, the current effect can be turned ON or OFF by pressing the CHAIN/EFFECT [BYPASS] double function editor. (ON/OFF can be applied only to the currently selected effect. Capital letters = ON, lowercase letters = OFF)
- ③ To change the value of each parameter, rotate the double function editor under the parameter name or use the UP/DOWN keys for finer adjustments. The display automatically returns to the parameter name when editing is finished. Each press of the DISPLAY SELECT key toggles the screen to display all parameter names or all parameter values at once. The display below will appear when the "DRIV" value for DIST1 is edited, for example.

**B DIST 1 : 10 LEVL FREQ GAIN Q**

4) Edit other effects by pressing the corresponding double function editor (A – F). The display below will appear when Exciter is selected, for example.

**C EXCITER : BLND FREQ**

To return to the [SELECT] display, press the PARAM EDIT key twice. The first press exits the Parameter Edit Mode, and the second press returns to the mode again.

# COMPARE FUNCTION

Pressing the CHAIN/EFFECT[Bypass] double function editor, during while in the PARAM/EDIT [SELECT] display can recall the original program before edits.

## 1. Comparing chains, effect variations, or effect ON/OFF

1) Enter the parameter Edit Mode and edit chains, effect variations, or effect settings(ON/OFF).

01 [SELECT] : COMP- OVD1- xcit - DLY1- cho1 - RM 2

2) To compare your current EDIT with THE ORIGINAL PROGRAM, Press the PARAM/EDIT Button twice, to first exit the Edit mode and to re - enter the [SELECT] display. Now press the CHAIN/EFFECT BYPASS button to enter the COMPARE MODE. (Recalling the original settings can be visually confirmed with the "C" in the display, as in the figure below. ) Pressing the CHAIN/EFFECT[Bypass] double function editor again (leaving the original program without editing it), returns you to the edited program. It is now possible to continue editing or to write the new program.

01 [SELECT] **C** COMP- DST1- XCIT- DLY1- CHO1- RM 1

## 2. Comparing effect parameters

1) After selecting an effect you wish to edit in the Parameter Edit Mode, start editing it's parameters with the double function editors. While the parameters are being edited, press the Display Select Key to display all parameters values at once.

**B** DIST 1 : 46 50 3.00 0 7.00

2) Pressing the CHAIN/EFFECT[Bypass] double function editor recalls their original parameter values. This can visually be confirmed with a "C" on the display, as in the figure below. Pressing the CHAIN/EFFECT[Bypass] double function editor again (leaving the original data without editing it), returns you to the edited program.

**B** DIST 1 **C** 50 50 3.00 10 3.50

3) Comparing only CHAIN Edits when first entering the PARAM/EDIT[SELECT] display , it is possible to Select a different chain and (by pressing the CHAIN/EFFECT/BYPASS) view the originally programmed chain. Pressing the CHAIN/EFFECT BYPASS button again returns you to the chain edit

# Saving DATA (WRITE OPERATION)

This mode is for storing the edited program data or copying one program to another program number. Unless stored in this mode, the edited data will be erased when selecting another program.

## Setting Up

Make sure the LED in the UTILITY key is not lit.

### When a card is not used

1)After editing the effect parameters in Parameter Edit mode or selecting a program to copy, press the WRITE key. Program number 6 is selected in the figure below.

PROGRAM WRITE      6    →    6    YES / NO

2)Use the UP/DOWN keys to select the destination program number. The destination number is indicated above the "D" double function editor. Holding down the UP/DOWN keys continuously scrolls through the program numbers.

3)Press the double function editor immediately below "YES" to execute the Write function.To cancel the Write operation, simply press "NO".

4)When write operation is completed, the display below appears.

WRITE COMPLETED!!

♠ To leave from the Write Mode, you must press "YES", "NO", or the Write Key.

### When a card is inserted

When using a memory card, the A2's memory area is expanded to program Nos. 1 – 200. However, certain limits apply to the program number for storage.

(1)Edited programs cannot be written to Programs # 101 – #200, when using the A3 cards.

(2)Edited programs can be written to both Programs #1 – 100 and Programs #101 – 200. When using internal chains.

(Note: Internal chains are built into the A2. Internal chains are, when selected, displayed in numbers only.)

(3)When using external chains;

Edited programs #1 – 100 cannot be written to Programs #101 – 200.

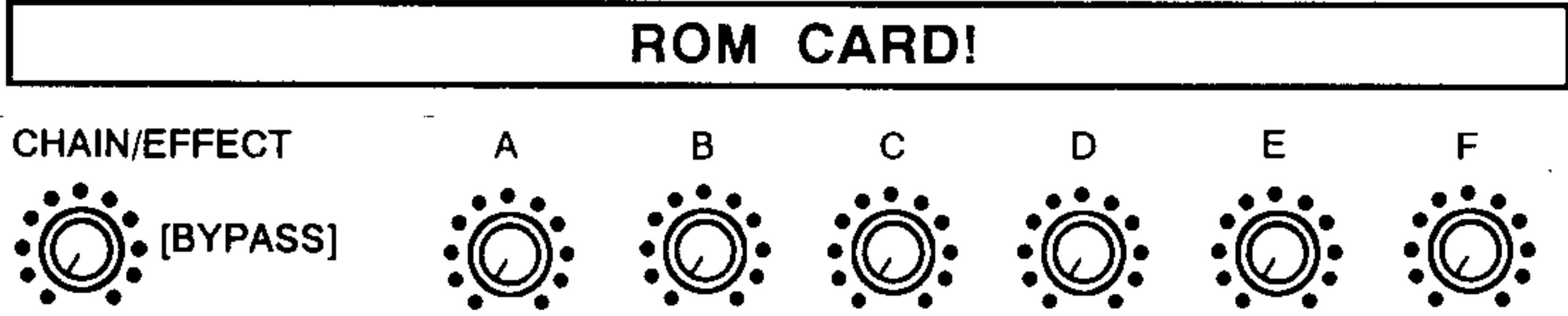
Edited programs #101 – 200 cannot be written to Programs #1 – 100.

(Note: External chains are provided from the memory cards. External chains are, when selected, displayed in letters and numbers.)

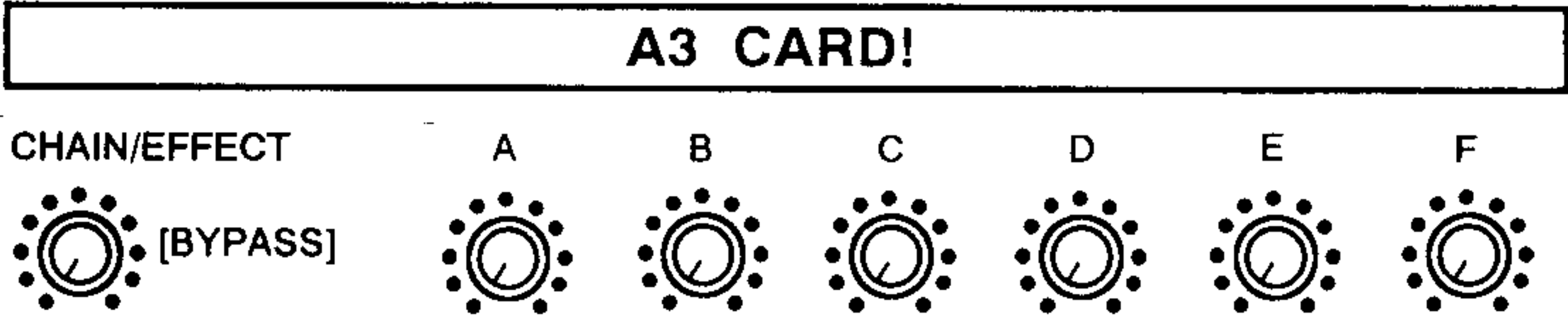
WRITE TO \ WRITE FROM	# 1~100	# 101~200
Internal Chains # 1~100	○	○
External Chains # 1~100	○	×
Internal Chains # 101~200	○	○
External Chains # 101~200	×	○



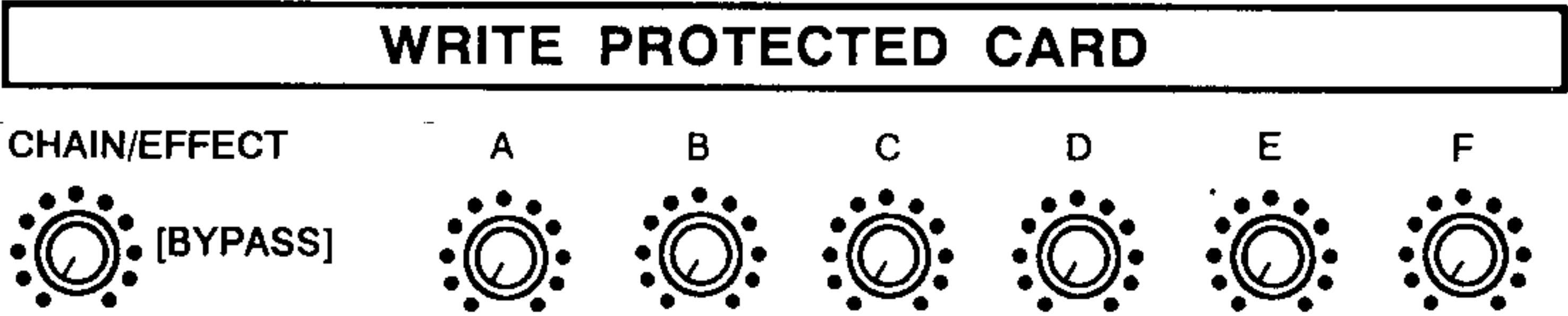
Error messages in Write operation



You tried to write to a ROM card. Use a RAM card.



No write operation can be made to the A3 memory cards. If you wish to use the A3 card for the A2, load the A3 data from such a card to the A2, first. Then, re – format the card for the A2 and save the data. Once you have re – formatted the A3 card, you cannot use it again for the A3.



Card protection is set on the RAM card itself. Turn off the "WRITE PROTECT SW" and attempt the Write operation again.

# PERFORMANCE PARAMETERS

Performance Play mode displays the featured parameters for the maximum of six effects in a chain. The A2 calls these the performance parameters. The displayed position of performance parameters has one – by – one correspondence to that of the effect names in Individual Play. Press DISPLAY SELECT key to see the parameters. The figure below shows that "SENS" is a performance parameter of "COMP" effect.

Individual Play

: COMP-DST1-XCIT-DLY1-CHO1-RM 1



Performance Play

: SENS-DRIV-BLND-DlyT-EBAL-EBAL

Parameter Name	Display	Functions
SENSITIVITY	SENS	Sensitivity of compressor.
TONE	TONE	Frequencies of equalizer.
DRIVE	DRIV	Amount of gain in distortion group effects.
BLEND	BLND	Amount of exciter (depth of effect).
DELAY TIME	DlyT	Delay time of delay group effects.
ER TIME	ErT	Time to the start of early reflection.
SPEED	SPD	Speed of effects having SPEED parameters.
DEPTH	SPD	Depth of effects having DEPTH parameters.
EFFECT BALANCE	EBAL	Balance of effects having EBAL parameters.
PITCH	PTCH	Pitch of pitch shifter.
THRESHOLD LEVEL	THR	Threshold level of gate.
RATIO	RATO	Ratio of limiter.
AMBIENCE	Amb	Ambiance for reverb II, etc.

# UTILITY

The following five functions make up the Utility mode.

## (1) NAME

Naming of programs.

## (2) LEVEL

Sets the master volume and the threshold level of the internal noise gate for each program.

## (3) PEDAL SW (Pedal switch)

Assigning functions to Pedal SW 1,2 jacks on the rear panel.

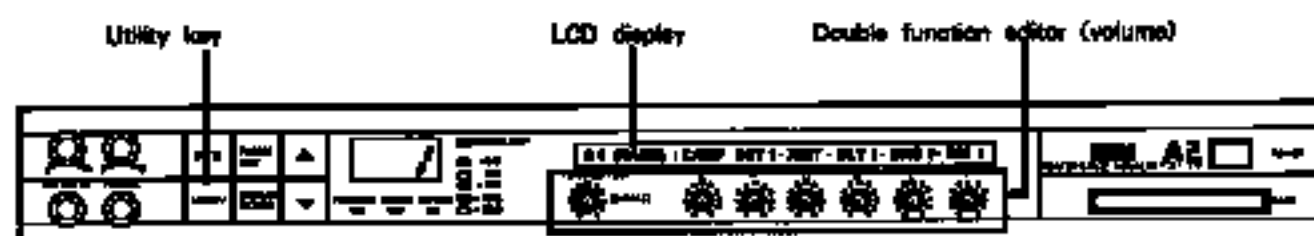
## (4) CARD

Loading data from optional ROM/RAM cards to the A2's internal memory, and saving internal data to RAM cards.

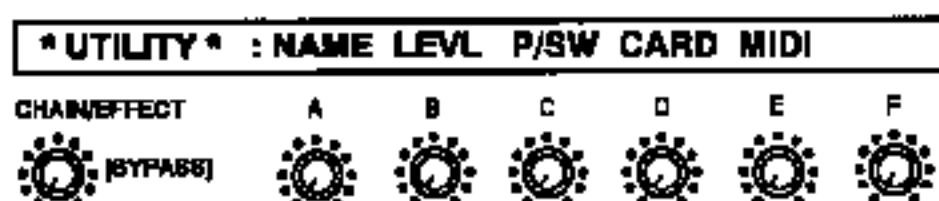
## (5) MIDI

- Selecting the MIDI channels and OMNI ON/OFF.
- Loading and saving data through MIDI Exclusive Message.

## Setting Up



- ① Press the UTILITY key. The LED in the key lights up. The Utility mode can be selected directly from any modes (except when the Write operation is executed). To return to the previous operation or mode, press the UTILITY key again. The LED will go off. The display below appears when selecting the Utility mode.

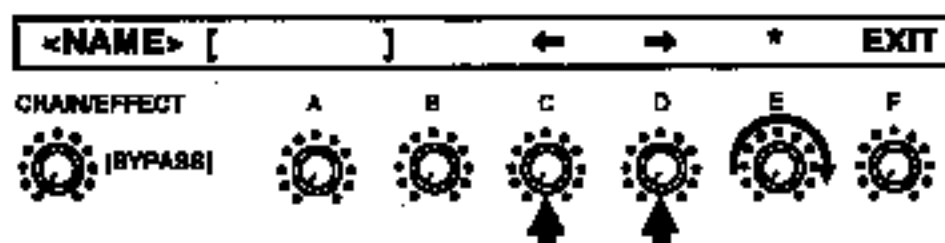


- ② Press the double function editor (A — E) under the parameter you wish to edit.



## 1.NAME

Before entering the Utility mode, use the UP/DOWN keys to select the program you wish to name. Select "NAME" (press "A" double function editor) in the Utility mode, and name the program within 7 characters. The display appears as below.



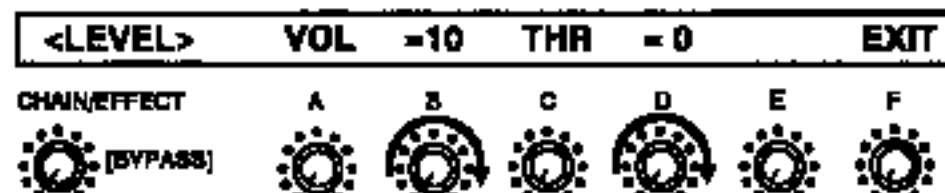
Press the double function editors C(←) and D(→) to shift the cursor in the name field. Then, select the characters by rotating the E(\*) double function editor. Use the UP/DOWN keys to single-step through the characters. When naming is finished, press the F(EXIT) double function editor or the Utility key. (There is no need to write it.)

The following characters and numbers are available for naming.

	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/	0	1	2	3	4	5	6	7
8	9	:	;	<	=	>	?	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_	`	a	b	c	d	e	f	g
h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	{		}	→	←

## 2.LEVEL

Before entering the Utility mode, select the program you wish to change the level. Select "LEV" (press "B" double function editor) in the Utility mode. The display appears as below.



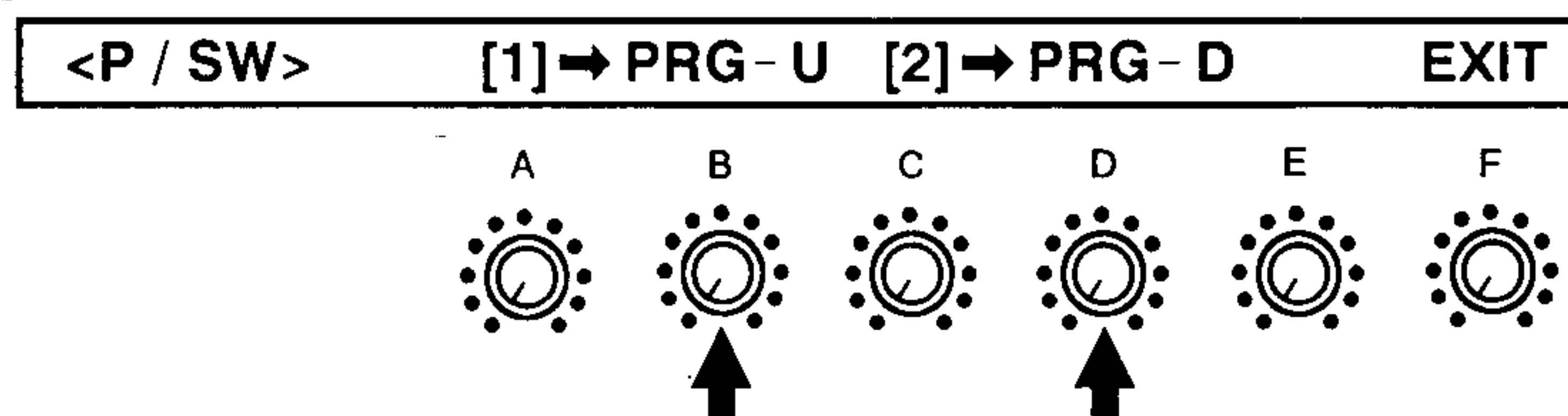
- The master volume of the selected program can be adjusted by rotating the "B" double function editor. (Adjustable range = 0 – 10)
- The threshold level of the internal noise reduction can be adjusted by rotating the "D" double function editor. (Adjustable range = 0 – 10)
- Press the "F" double function editor directly below "EXIT" to return to the initial Utility mode display.

### About Noise Reduction System

The A2 is equipped with the digital noise reduction system which shuts down the output signal when the input signal falls below a certain level. This user selectable level is called the threshold. The higher the noise level is, the higher the threshold level should be.

## 3. Pedal/Switch (P/SW)

Select "P/SW" (press "C" double function editor) in the Utility mode. The display appears as below.



To assign the functions to Pedal Switch 1, press the "B" double function editor. Likewise, to assign the functions to Pedal Switch 2, press the "D" double function editor.

### Functions Controllable with KORG Volume Pedal KVP - 001

- VOL (Volume) : For continuous adjustment of effect volume.
- PARAM (PARAMETER CONTROL) : For continuous control of effect parameters. Controllable parameters are listed in the attached "Effect Parameter List".

### Functions Controllable with Footswitches (such as KORG PS - 1)

- PROG - U (Program Up) : Advances the program number by 1.
- PROG - D (Program Down) : Reverses the program number by 1.
- BYPASS : Switches the bypass function ON/OFF.
- R.SPD (Rotary speaker speed) : Changes the speed of Rotary speaker effect.

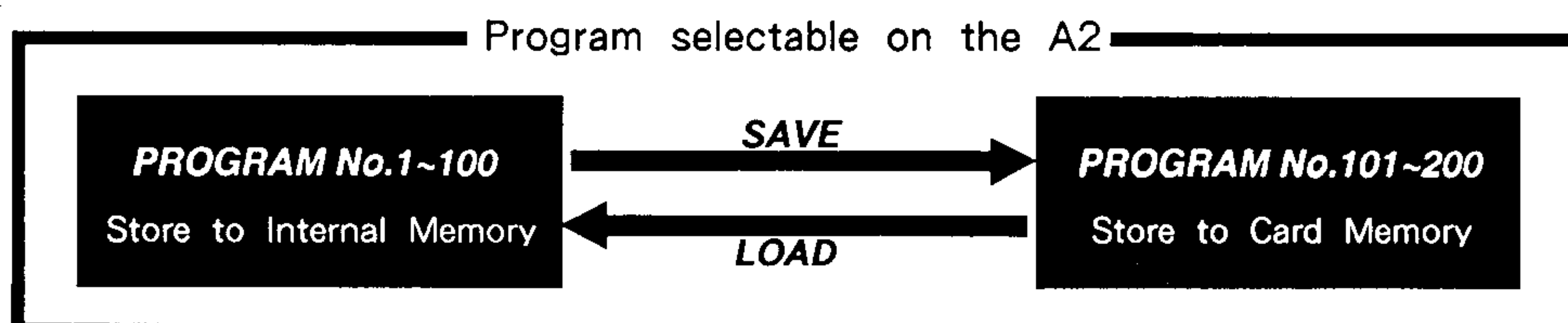
## 4. CARD

You can use any RAM cards or A3 ROM cards for the A2. But the chains in the A3 ROM cards SPC - 01, 02, 03, 04 and 05 are already built into the A2. ROM cards, available from your nearest KORG dealers, are capable of providing additional effects and effect programs into the A2. (You cannot save any data to the cards.) On the other hand, the A2 data can be both loaded from and saved to RAM cards.

Select "CARD" (press "D" double function editor) in the Utility mode. The display below appears.



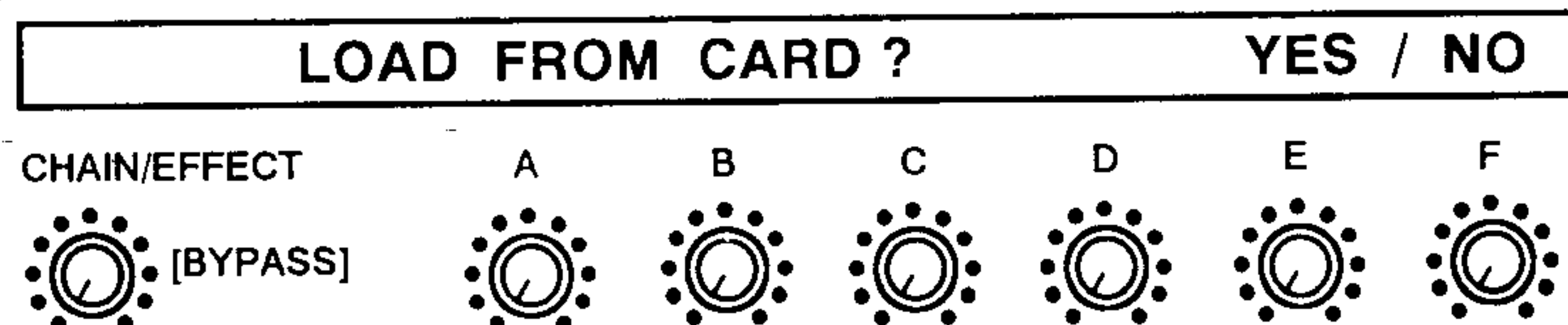
Select "SAVE" to store the A2's internal data to the card. Select "LOAD" to send the card data into the A2's internal memory. Press EXIT to cancel the operation.



## ① LOAD Operation

### Procedure

- 1) Insert a ROM or RAM card into the CARD slot of the A2. Then, select "LOAD" while < CARD> is shown on the display. The display appears as below.



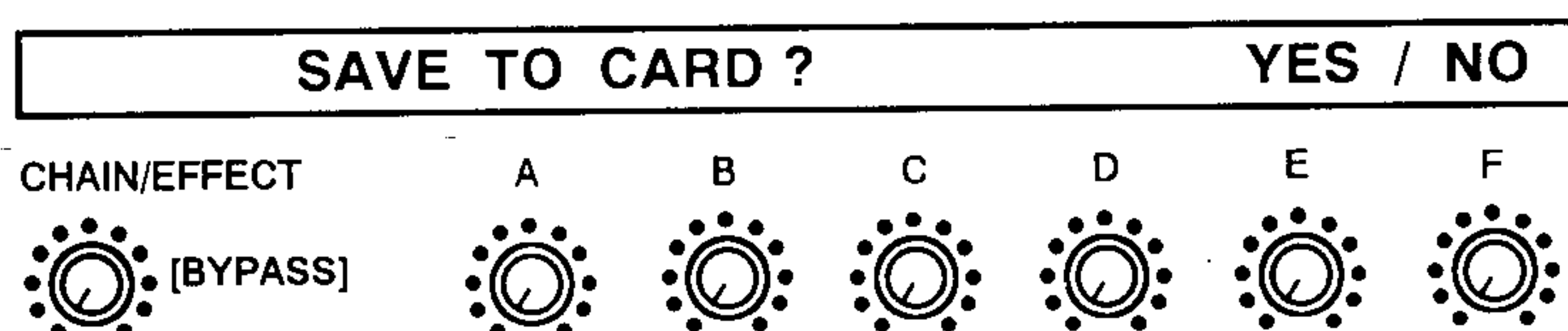
- 2) Select "YES" to start loading. When loading is completed, the display will return to the initial Utility mode.

## ② SAVE Operation

### Procedure

- 1) Insert a RAM card into the A2's CARD slot. (Make sure the Protect Switch on the upper left corner of the card is set to OFF.) Then, select "Save" while < CARD> is shown on the display. The display appears as below.

Following the above procedure, the card data for programs Nos. 101 – 200 are now transmitted to the A2's internal programs Nos. 1 – 100.



- 2) Select "YES" to start saving. When saving is completed, the display will return to the initial Utility mode. Following the above procedures, the A2's internal data for programs Nos. 1 – 100 are now transmitted to the programs Nos. 1 – 100 in the card.

♠ To save the A2's internal data to a RAM card formatted to the A3, you have to re – format the card to the A2 before going into the saving operation. Formatting an A3 card to the A2 results in erasing all previous A3 data in the card and saving the A2 data – Programs #1 – 100

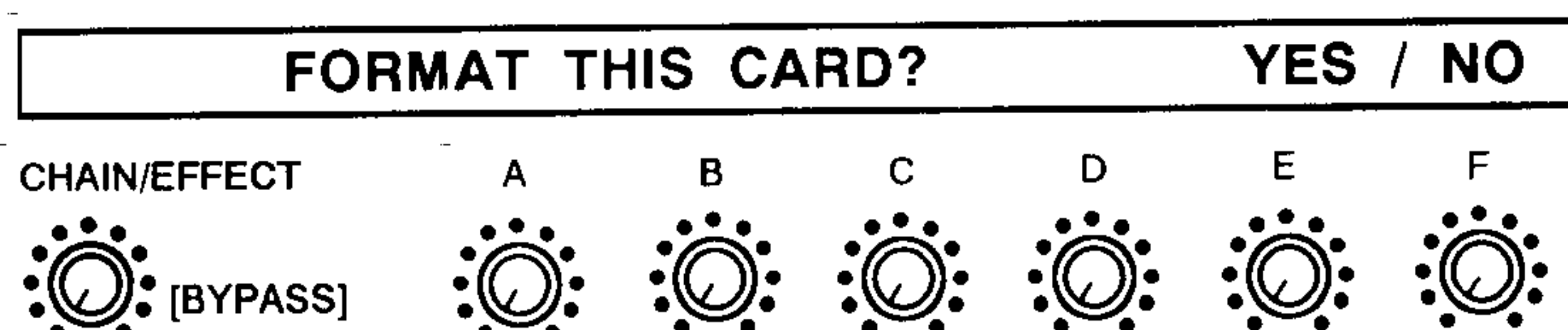
## ③ How to Format a RAM Card

Before using newly purchased RAM cards or RAM cards that are formatted to other devices, you must have them formatted on the A2.

### Procedure

- 1) Insert the RAM card you wish to format into the CARD slot. When doing so, make sure the Write Protect Switch on the upper left of the card is set to OFF. When you insert the card, the display may indicate "DIFFERENT CARD". Even when this happens, continue the operation.

- 2) Enter the Utility mode and select "CARD" (by pressing the "D" double function editor). The display appears as below.



- 3) Press the E double function editor right below "YES" to execute the formatting operation. The display will return to the initial Card selection display as soon as the formatting is completed.

- 4) Select "YES" (press the "E" double function editor) to execute the formatting operation. When formatting is completed, the display returns to the initial Card mode.

♠ When formatted, the card is written with the data ID which indicates that the card has been formatted to the A2, as well as saving the program data for Nos. 1 – 100.



## ④ Error Messages

When any of the following error messages appears in the display, attempt the operation again according to each instruction.

### DIFFERENT CARD !

CHAIN/EFFECT



[BYPASS]

A



B



C



D



E



F



☆ The inserted ROM card is neither for the A2 nor the A3, or you have inserted an unformatted card with its "WRITE PROTECT SW" at ON position.

### NO CARD !

CHAIN/EFFECT



[BYPASS]

A



B



C



D



E



☆ The card is not properly inserted, or not inserted at all. Insert a RAM or ROM card, firmly.

### WRITE PROTECTED CARD

CHAIN/EFFECT



[BYPASS]

A



B



C



D



E



☆ You are using a write – protected RAM card. Slide the protect switch to OFF and attempt the Save operation again.

### ROM CARD !

CHAIN/EFFECT



[BYPASS]

A



B



C



D



E



F



☆ Data cannot be saved to a ROM card. Use a properly formatted RAM card.

### \* \* \* DATA ERROR !! \* \* \*

CHAIN/EFFECT



[BYPASS]

A



B



C



D



E



☆ Save or Load has not been correctly executed. Attempt the operation again. The card may possibly be damaged if this message appears repeatedly. When this message appears during the formatting operation, either the Protect Switch on the card is ON or the card itself is damaged.

## 5.MIDI

When you select "MIDI" in the Utility mode, the following will appear in the display.

### ① MIDI Receive, Transmit Channels and OMNI

To set the MIDI channel, press the "A" double function editor. The channel number advances by 1 upon each pressing of the "A" double function editor. (Range = CH 1 – 16) Select the Omni setting by pressing the "C" double function editor. Omni can be only toggled ON/OFF.

Omni ON is indicated by the capital letters "OMNI", and Omni OFF by the lowercase letters "omni" in the display.

★ When OMNI is set to OFF, only the MIDI data in the selected MIDI channel are received. Likewise, set the EXCLUSIVE by pressing the "C" or "D" double function editor. EXCLUSIVE ON is indicated by the capital letters "EXCLUSIVE", and EXCLUSIVE OFF by the lowercase letters "exclusive".

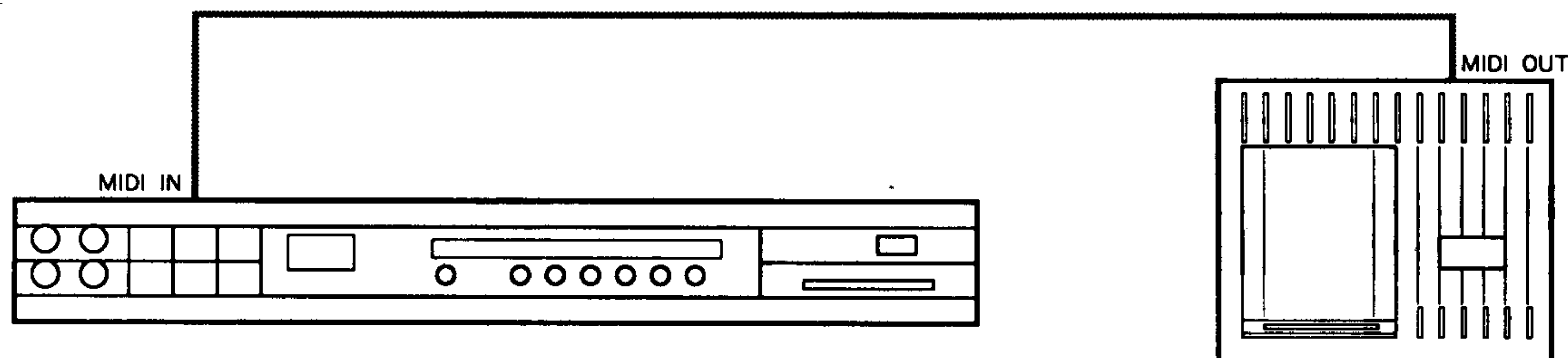
★ When EXCLUSIVE is set to OFF, the A2's parameters cannot be edited nor the program parameters can be received through the exclusive message.

★ When EXCLUSIVE is set to OFF, the A2's program parameters cannot be transmitted nor received through the exclusive message.

Select "EXIT" to return to the initial Utility mode. Set the EXCLUSIVE OFF during normal operation.

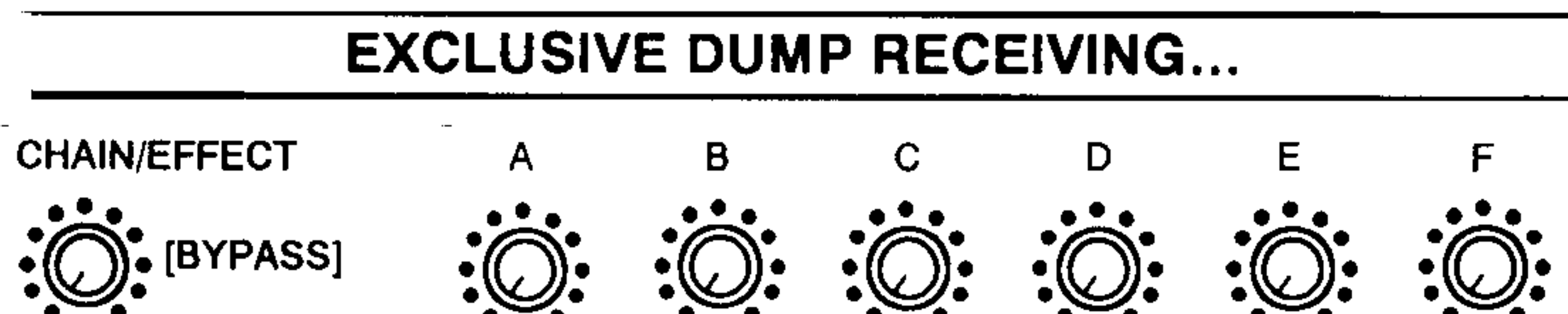
### ② Load by MIDI Exclusive Message

1) Connect the MIDI IN port on the A2 to the MIDI OUT port on the external MIDI data filer.

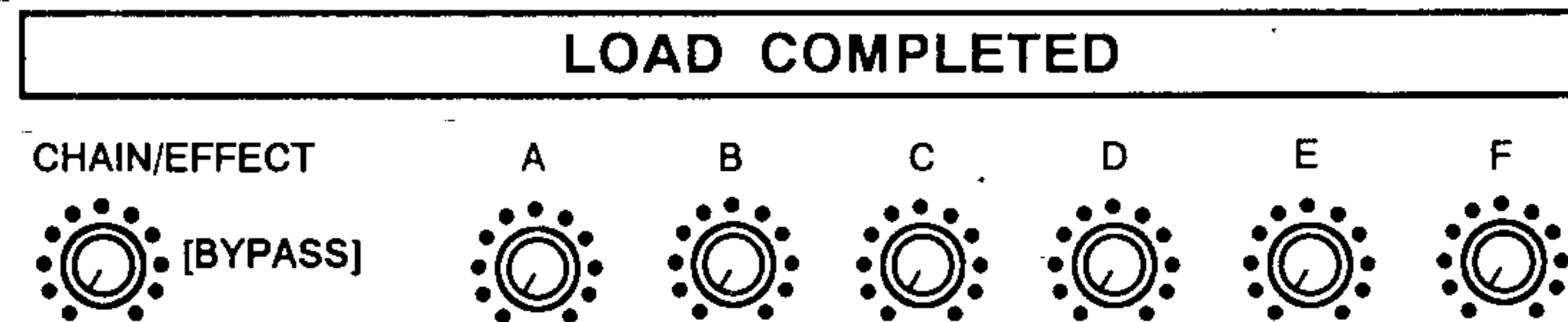


2) After you select "MIDI" in the Utility mode, select EXCLUSIVE ON by pressing the "C" or "D" double function editor. The capital letter "EXCLUSIVE" indicates that the A2 is ready for loading the exclusive data.

3) When the data is transmitted from an external device and being loaded to the A2, the following message will appear in the display.



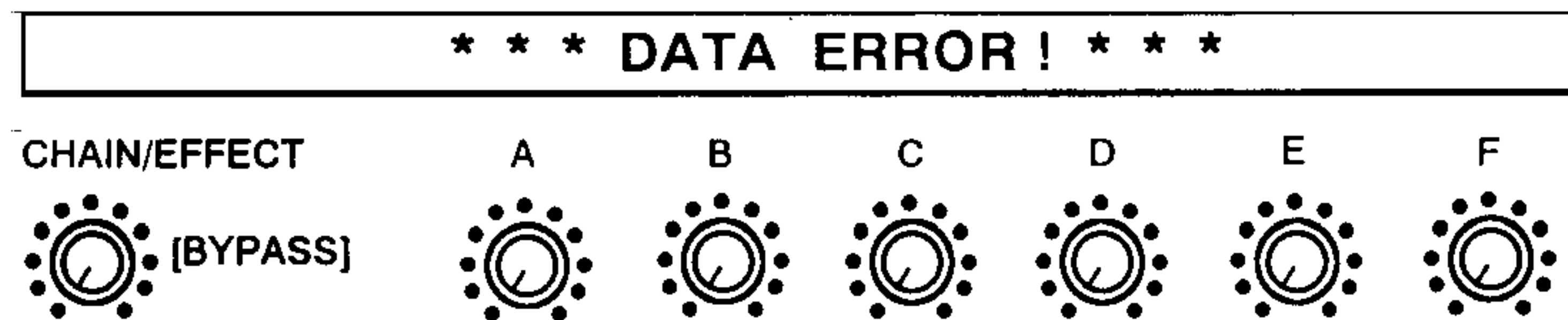
4) When loading is completed, the display shows the following message, and returns to the initial MIDI display in the Utility mode within a few seconds.



The data from an external MIDI device are loaded to the A2's internal programs Nos.1 – 100 by the above operation.

#### Data Error in Loading Operation

- If the following message appears while data is being loaded, there has been a error in data transmission. Attempt the loading operation, again. If the same message appears repeatedly, the data files may be damaged.

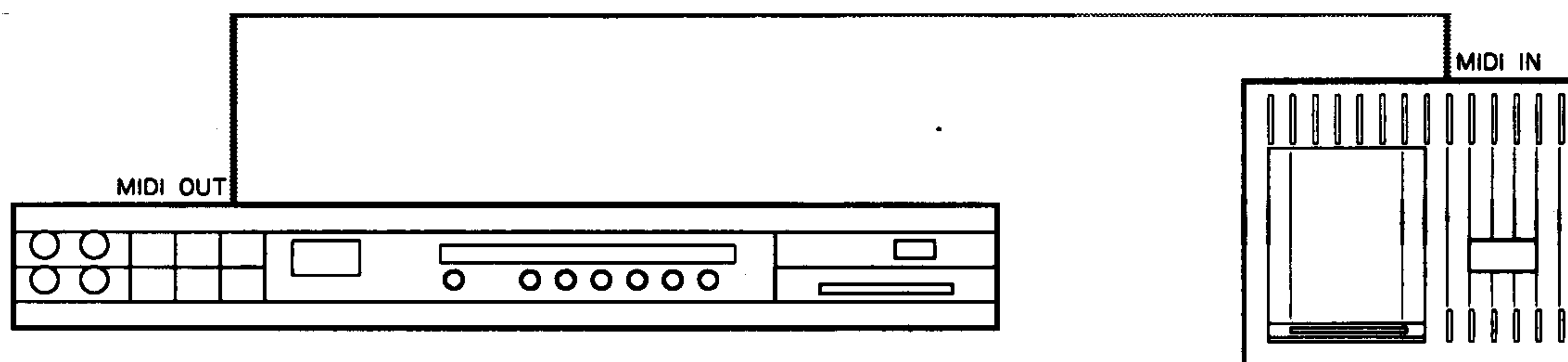


- If the "EXCLUSIVE DUMP RECEIVING" message remains on the display after the external device finishes sending the MIDI data, the data transmission may have been interrupted by a loose MIDI cable. Also , when an error occurs during loading, part of data may be automatically modified by the A2's system protecting function.

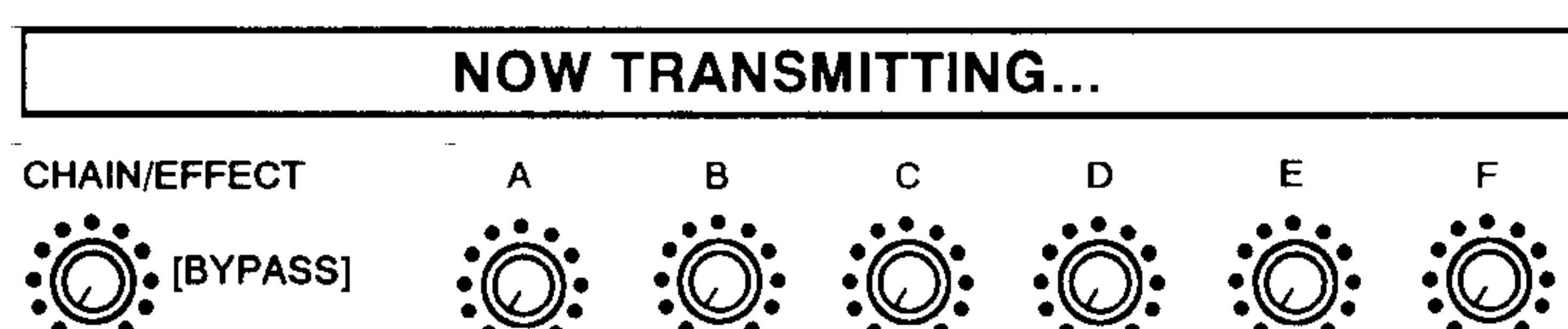
- 1) Data was not sent at all, because the MIDI cable was not connected properly.
- 2) The data being sent was formatted on something else other than the A2.

### ③ Saving by MIDI Exclusive

- 1) Connect the MIDI OUT port on the A2 to the MIDI IN port on the external data filers such as KORG MIDI DATA FILER DF – KORG MIDI RECORDER SQD – 8, or T – series keyboard. (Set the MIDI output switch on the rear panel of the A2 to OUT.)



- 2) Set the external MIDI device to receive MIDI data.
- 3) After selecting "MIDI" in the Utility mode, select "DUMP" by pressing the "E" double function editor. The message below will appear, indicating that a saving operation through MIDI exclusive is being executed.



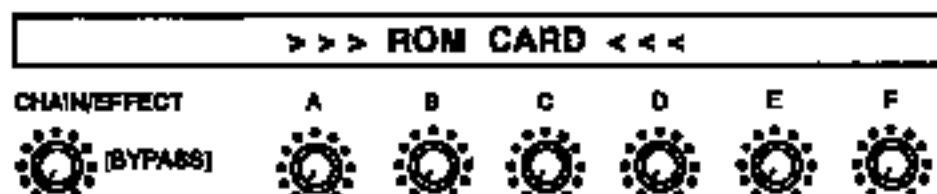
- 4) When the data is transmitted from an external device and being loaded to the A2, the following message appears in the display.
- 5) When saving is completed, the display returns to the initial MIDI display in the Utility mode.



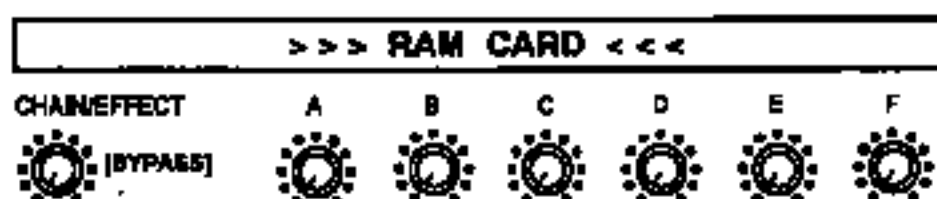
# OTHER MESSAGES

## When Card is Used:

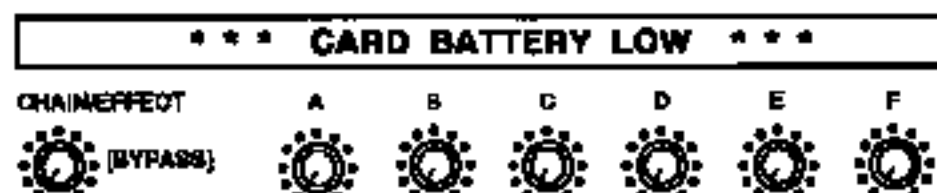
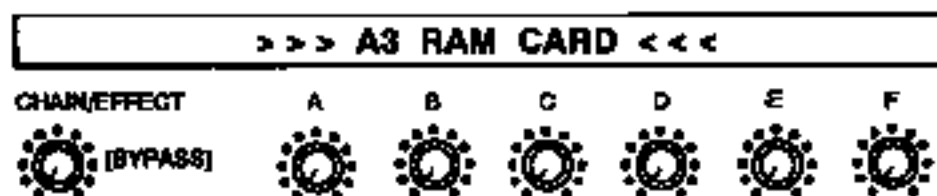
☆The inserted is a ROM card.



☆The inserted is a RAM card.

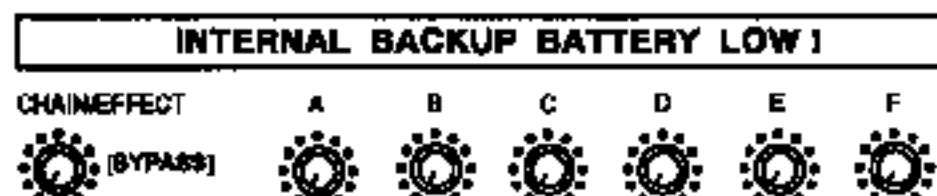


☆A RAM card formatted to the A3 is inserted.



☆The back — up battery in the RAM card is low. When you find this message, replace immediately with a new battery (CR2016 lithium battery). When changing the batteries, make sure the card is kept inserted in the slot until you finish replacing them (to protect the card data from being erased).

## When Turning On the Power



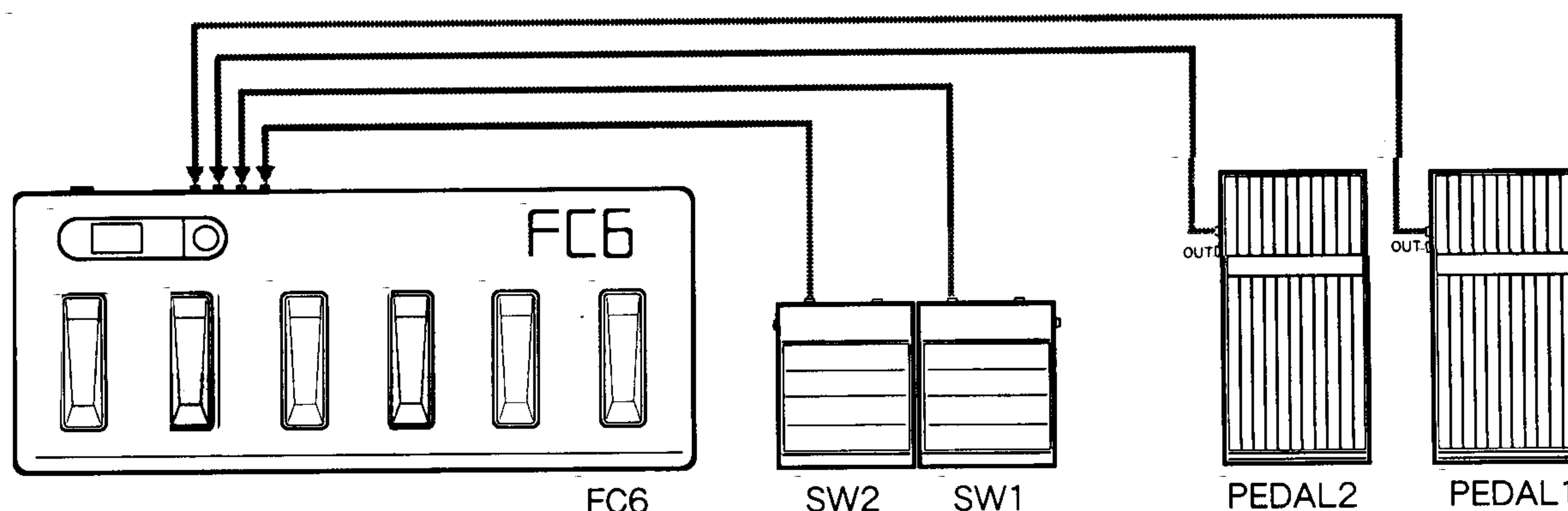
☆The back — up battery (to preserve the A2's internal memory) is low. When you see this message, contact immediately the store of purchase or your nearest KORG service center for battery replacement.

# OTHER FUNCTIONS OF THE FC6

The optional FC6 Foot Controller is especially designed to make control of the A2 easier and faster. When you connect it to the A2, you can control the program changes and ON/OFF switching of individual effects, as explained on pages 15 – 16. Moreover, you will be able to control many other functions of the A2 by connecting footswitches or volume pedals to the FC6.

## Setting Up

Connect footswitches such as PS – 1 or PS – 2 to the SW 1, 2 terminals on the rear panel of the FC6. And connect KVP – 001 Volume Pedal to one of the PEDAL 1, 2 terminals. (See the illustration below.)



SW 1 : For switching the manuals (modes) of the FC6.

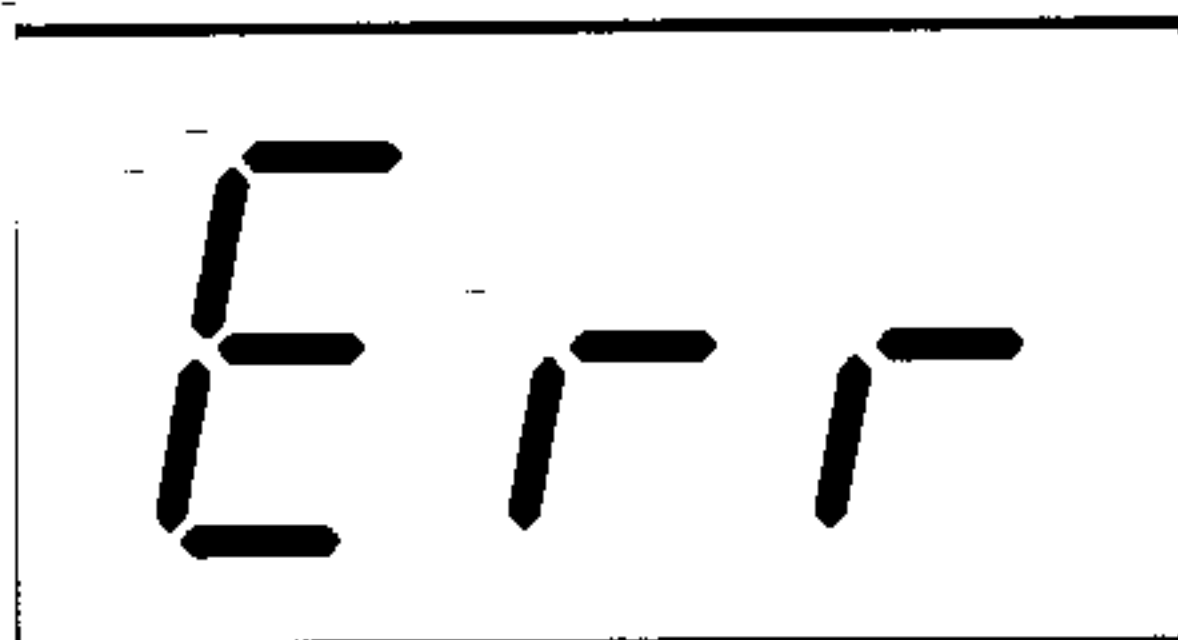
SW 2 : For turning the A2's Bypass function ON/OFF.

PEDAL 1 : For controlling the volume of the A2.

PEDAL 2 : For controlling individual effect parameters. See the attached "Effect Parameter List". This pedal allows you to obtain such effects as pedal – controlled pan and pedal – controlled wah – wah.

♠ The pedals directly connected to A2 have priority over these accessory pedals when the Pedal/Switch function is already set to "Volume" or "Parameter Control" in the Utility mode. When you desire to use PEDAL 1 or 2 of the FC6, set the A2 Pedal/Switch function to parameters other than "Volume" and "Parameter Control".

## Error Messages on the FC6

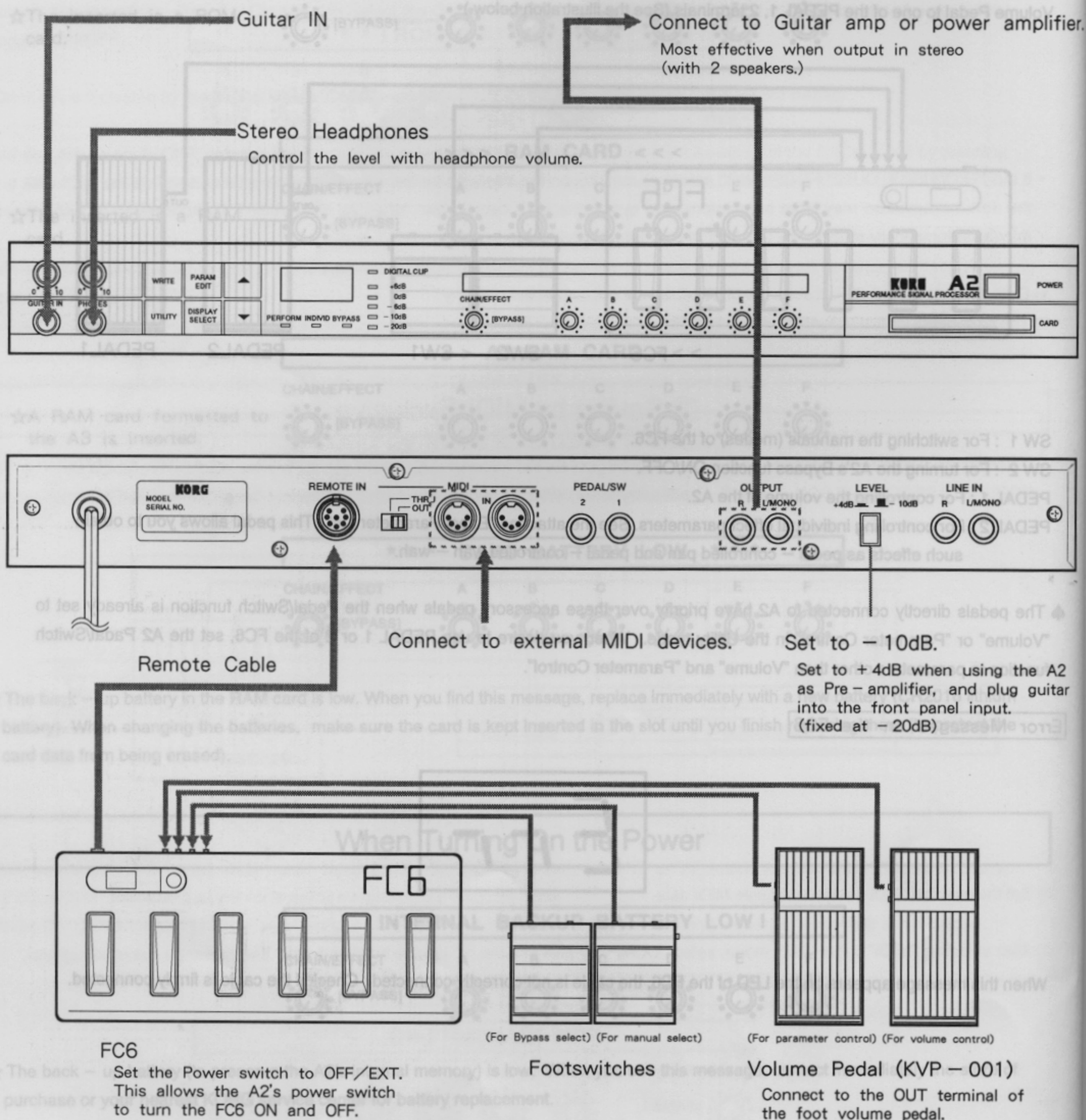


When this message appears on the LED of the FC6, the cable is not correctly connected. Check if the cable is firmly connected.



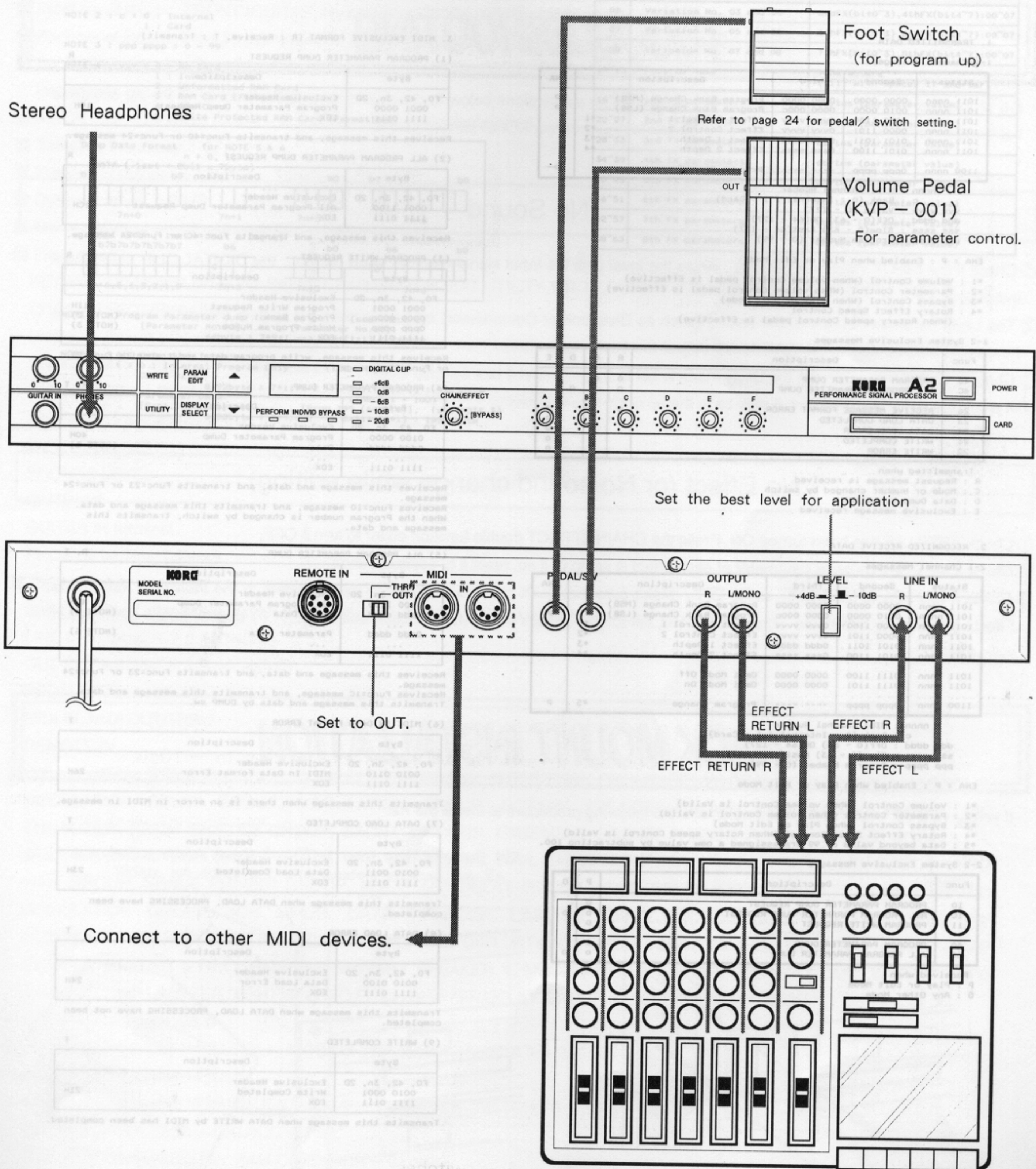
# CONNECTING EXAMPLES WITH THE A2

## 1. Guitar Setup (with the FC6)





## 2. Mixer and Multi-track recorder Setup





# MIDI IMPLEMENTATION

## 1. TRANSMITTED DATA

### 1-1 Channel Messages

Status	Second	Third	Description	ENA
1011 nnnn	0000 0000	0000 0000	Program Bank Change (MSB)	P
1011 nnnn	0010 0000	0000 000c	Program Bank Change (LSB)	P
1011 nnnn	0000 1100	0vvv vvvv	Effect Control 1	*1
1011 nnnn	0000 1101	0vvv vvvv	Effect Control 2	*2
1011 nnnn	0101 1011	0ddd dddd	Effect 1 Depth	*3
1011 nnnn	0101 1100	0sss ssss	Effect 2 Depth	*4
1100 nnnn	0ppp pppp	-----	Program Change	P

nnnn : MIDI Channel Number  
c : Bank (0 = Internal / 1 = Card)  
vvv vvvv : Value (0 - 127)  
ddd dddd : OFF(0 - 63) ON(64 - 127)  
sss ssss : Slow(0 - 63) Fast(64 - 127)  
ppp pppp : Program Number (0 - 99)

ENA = P : Enabled when Play or Edit Mode

\*1 : Volume Control (When volume Control pedal is Effective)  
\*2 : Parameter Control (When volume Control pedal is Effective)  
\*3 : Bypass Control (When Play or Edit Mode)  
\*4 : Rotary Effect Speed Control  
(When Rotary speed Control pedal is Effective)

### 1-2 System Exclusive Messages

Func	Description	R	C	D	E
40	PROGRAM PARAMETER DUMP	o	o		
4C	ALL PROGRAM PARAMETER DUMP	o		o	
26	RECEIVE MESSAGE FORMAT ERROR	o			o
23	DATA LOAD COMPLETED				o
24	DATA LOAD ERROR				o
21	WRITE COMPLETED				o
22	WRITE ERROR				o

Transmitted when  
R : Request message is received  
C : Mode or Number changed by switch  
D : Data Dump by switch  
E : Exclusive message received

## 2. RECOGNIZED RECEIVE DATA

### 2-1 Channel Messages

Status	Second	Third	Description	ENA
1011 nnnn	0000 0000	0000 0000	Program Bank Change (MSB)	P
1011 nnnn	0010 0000	0000 000c	Program Bank Change (LSB)	P
1011 nnnn	0000 1100	0vvv vvvv	Effect Control 1	*1
1011 nnnn	0000 1101	0vvv vvvv	Effect Control 2	*2
1011 nnnn	0101 1011	0ddd dddd	Effect 1 Depth	*3
1011 nnnn	0101 1100	0sss ssss	Effect 2 Depth	*4
1011 nnnn	0111 1100	0000 0000	Omni Mode Off	
1011 nnnn	0111 1101	0000 0000	Omni Mode On	
1100 nnnn	0ppp pppp	-----	Program Change	*5 P

nnnn : MIDI Channel Number  
c : Bank (0 = Internal / 1 = Card)  
ddd dddd : OFF(0 - 63) ON(64 - 127)  
sss ssss : Slow(0 - 63) Fast(64 - 127)  
ppp pppp : Program Number (0 - 99)

ENA = P : Enabled when Play or Edit Mode

\*1 : Volume Control (When volume Control is Valid)  
\*2 : Parameter Control (When volume Control is Valid)  
\*3 : Bypass Control (When Play or Edit Mode)  
\*4 : Rotary Effect Speed Control (When Rotary speed Control is Valid)  
\*5 : Data beyond value of 99 are assigned a new value by subtracting 100.

### 2-2 System Exclusive Messages

Func	Description	P	O
10	PROGRAM PARAMETER DUMP REQUEST	o	
1C	ALL PROGRAM PARAMETER DUMP REQUEST	o	o
11	PROGRAM WRITE REQUEST	o	
40	PROGRAM PARAMETER DUMP	o	
5C	ALL PROGRAM PARAMETER DUMP	o	o

Received when  
P : Play or Edit Mode  
O : Any Other Mode

## 3. MIDI EXCLUSIVE FORMAT (R : Receive, T : Transmit)

### (1) PROGRAM PARAMETER DUMP REQUEST

Byte	Description
FO, 42, 3n, 2D 0001 0000 1111 0111	Exclusive Header Program Parameter Dump Request EOX

Receives this message, and transmits Func=40 or Func=24 message.

### (2) ALL PROGRAM PARAMETER DUMP REQUEST

Byte	Description
FO, 42, 3n, 2D 0001 1100 1111 0111	Exclusive Header All Program Parameter Dump Request EOX

Receives this message, and transmits Func=4C or Func=24 message.

### (3) PROGRAM WRITE REQUEST

Byte	Description
FO, 42, 3n, 2D 0001 0001 0000 000c 0ppp pppp 1111 0111	Exclusive Header Program Write Request Program Bank Write Program Number EOX

Receives this message, write program data and transmits Func=21 or Func=22 message.

### (4) PROGRAM PARAMETER DUMP

Byte	Description
FO, 42, 3n, 2D 0100 0000 0ddd dddd ... 1111 0111	Exclusive Header Program Parameter Dump Data EOX

Receives this message and data, and transmits Func=23 or Func=24 message.

Receives Func=10 message, and transmits this message and data.  
When the Program number is changed by switch, transmits this message and data.

### (5) ALL PROGRAM PARAMETER DUMP

Byte	Description
FO, 42, 3n, 2D 0100 1100 0ddd dddd ... 0ddd dddd ... 1111 0111	Exclusive Header All Program Parameter Dump Chain Data Parameter Data EOX

Receives this message and data, and transmits Func=23 or Func=24 message.

Receives Func=1C message, and transmits this message and data.  
Transmits this message and data by DUMP sw.

### (6) MIDI IN DATA FORMAT ERROR

Byte	Description
FO, 42, 3n, 2D 0010 0110 1111 0111	Exclusive Header MIDI In Data Format Error EOX

Transmits this message when there is an error in MIDI in message.

### (7) DATA LOAD COMPLETED

Byte	Description
FO, 42, 3n, 2D 0010 0011 1111 0111	Exclusive Header Data Load Completed EOX

Transmits this message when DATA LOAD, PROCESSING have been completed.

### (8) DATA LOAD ERROR

Byte	Description
FO, 42, 3n, 2D 0010 0100 1111 0111	Exclusive Header Data Load Error EOX

Transmits this message when DATA LOAD, PROCESSING have not been completed.

### (9) WRITE COMPLETED

Byte	Description
FO, 42, 3n, 2D 0010 0001 1111 0111	Exclusive Header Write Completed EOX

Transmits this message when DATA WRITE by MIDI has been completed.

(10) WRITE ERROR

Byte	Description
FE, 4E, 2E, 2D 0010 0010 1111 0111	Exclusive Header Write Error END

Transmit this message when data write by HSD has not been completed.

NOTE 1 : m = 0 : Play Mode  
1 : Soft Mode  
2 : Utility Mode

NOTE 2 : d = 0 : Internal  
1 : Card

NOTE 3 : card-type = 0 ~ 10

NOTE 4 : vvv = 0 : No Card  
1 : Invalid Card  
2 : Unformatted ROM Card  
3 : ROM Card (Formatted)  
4 : ROM Card  
5 : Write Protected ROM Card (Formatted)



NOTE 5 : Program Parameter dump format (with TABLE 1)  
[Parameter No.00], ..., [Parameter No.43]  
440byte + 20000 -> 20000 + 440byte

NOTE 6 : All Data dump format (100 Prog.)  
d = 0 : Internal Program Only  
Data Data  
Size0byte = 20000000 -> 20000000 + 10000000  
Parameter Data  
[Param.000 (40000000)], ..., [Param.200 (80000000)], (see NOTE 5)  
44000000 + 20000000 -> 20000000 + 44000000 = 240000000

TABLE 1 : Program Parameters (40000000)

Addr.	Parameters	Data (Hex) / Value
00	Chain Number	Internal: 0x00, External: 0x00
01	(no use)	
02	Master Volume	0x00
03	Threshold	0x00
04	(no use)	
05	Variation No. 01 and 02	0x00000000, 0x00000000
06	Variation No. 03 and 04	0x00000000, 0x00000000
07	Variation No. 05 and 06	0x00000000, 0x00000000
08	Variation No. 07 and 08	0x00000000, 0x00000000
09-15	Program name	8 characters (fill with space if 8 characters)
16-21	1st FX parameters	6bytes (parameter values)
22-27	2nd FX parameters	6bytes (parameter values)
28-33	3rd FX parameters	6bytes (parameter values)
34-39	4th FX parameters	6bytes (parameter values)
40-45	5th FX parameters	6bytes (parameter values)
46-51	6th FX parameters	6bytes (parameter values)
52-57	7th FX parameters	6bytes (parameter values)
58-63	8th FX parameters	6bytes (parameter values)



# TROUBLESHOOTING/ RACK MOUNT INSTALLATION

## TROUBLESHOOTING

If a problem is found during operation of the A2, follow the suggestions below to check and remedy the trouble. If the A2 still does not function properly, contact the store of purchase or your nearest KORG service center.

### No Sound

- ① Check if the INPUT volume is set to 0. Raise the level until the input signal reaches +6dB but not the DIGITAL CLIP of the Input Indicator.
- ② The Level parameter in one of the effects (such as Distortion or Compressor) may have been set to 0. In this case, sound can be heard only when pressing the "BYPASS". Adjust the Level parameters.
- ③ Check if the master volume in the Utility mode is set to 0. If so, reset it to a suitable level.
- ④ If a volume pedal is connected, it may be in the up or no sound position.

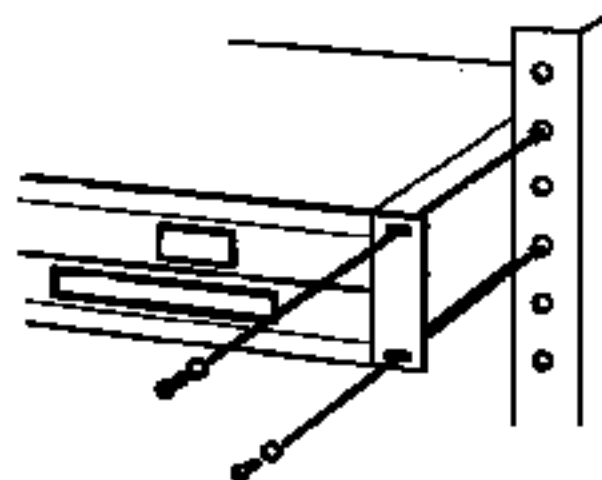
### No Effect (or No sound change while editing)

- ① Check if BYPASS has been turned ON. Press the CHAIN/EFFECT double function editor to turn it OFF.
- ② Check if the Effect Balance parameter of each effect is set to 0. If so, reset it to a suitable level.
- ③ Check if any effects have been set to OFF. Make sure that each effect is indicated in capital letters in the Individual Play mode. Effects indicated in lowercase letters have been set to OFF. Press the double function editors (A – F) directly below them to turn them ON.

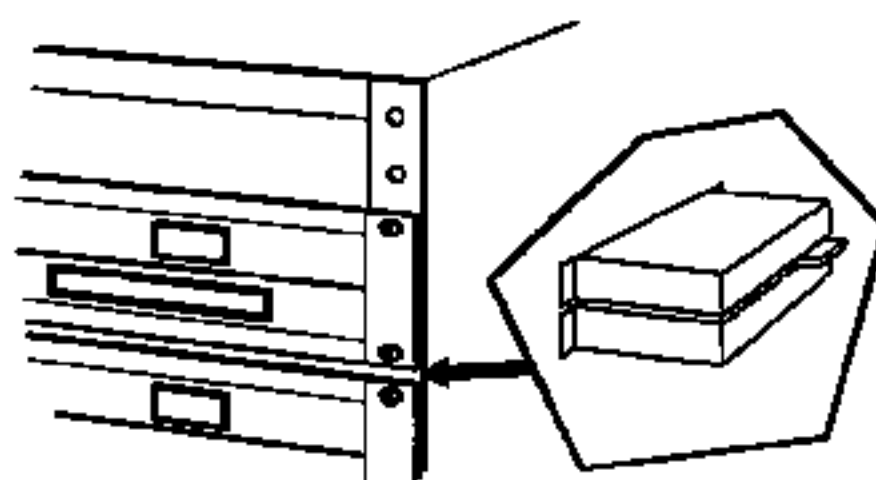
## RACK MOUNT INSTALLATION

If you have a 19 – inch rack mount case, use the following procedure to install the A2.

① Mount the A2 to the rack, with the provided large screws.



② If there is more than 1/8" of space above or below the A2, put packing material into the space for stable



# SPECIFICATIONS AND OPTIONS

- Front panel input : FRONT (GUITAR IN) fixed at  $-20\text{dB}$  ( $-5\text{dBm MAX}$ )/ $1\text{M}\Omega$
- Back panel input : Input level/impedance :  $+4\text{dB}$  ( $+19\text{dBm MAX}$ )/ $50\text{K}\Omega$   $-10\text{dB}$  ( $+5\text{dBm MAX}$ )/ $50\text{K}\Omega$
- Back panel output : Output level/impedance :  $+4\text{dB}$  ( $19\text{dBm MAX}$ )/ $470\Omega$   $-10\text{dB}$  ( $+5\text{dBm MAX}$ )/ $470\Omega$   
Headphone out impedance: over  $10\Omega$
- AD/DA : 16 – bit linear (DA: 4 – times over – sampling digital filter)
- Sampling frequency : 37.1KHz
- Frequency response : 24Hz – 18KHz  $+1.5/-3\text{dB}$
- Dynamic range : 90dB
- Memory : No.1 – 100; No.1 – 200 when using card
- Front panel :  
KEY SW : UP,DOWN,DISPLAY SELECT,PARAMETER EDIT,UTILITY,WRITE,POWER SW, DOUBLE FUNCTION EDITOR [A – F, CHAIN/EFFECT(BYPASS)]  
Display : Backlit LCD display: 40 characters  $\times$  1 row  
PROGRAM No. display : 7 – segment LED  $\times$  3  
Dot type LEDs : PERFORMANCE,INDIVIDUAL,BYPASS,PARAMETER EDIT,UTILITY  
Input level : 5 – element level meter, with digital clip  
INPUT VOLUME  
PHONES LEVEL  
CARD slot  
GUITAR IN terminal  
PHONES terminal (stereo)
- Rear panel  
Switches : level attenuation switch ( $-10\text{dB}/+4\text{dB}$ ), MIDI OUT/THRU toggling switch  
LINE IN terminal  $\times$  2 (L/MONO,R)  
OUT PUT terminal  $\times$  2 (L/MONO,R)  
PEDAL/SW input terminal  $\times$  2  
MIDI IN, MIDI OUT/THRU  
REMOTE IN
- Internal effects: REVERB GROUP, COMPRESSOR GROUP, DISTORTION GROUP, DELAY GROUP,STEREO DELAY GROUP, MODULATION DELAY GROUP, MODULATION GROUP, ROTARY SPEAKER GROUP, PAN GROUP, PARAMETRIC EQUALIZER, PITCH SHIFTER GROUP, EXCITER GROUP, ENSEMBLE GROUP, PHASER GROUP, 3 BAND EQUALIZER, SPEAKER SIMULATION GROUP, PEDAL PAN, GATE,PEDAL WAH, EAFly REFLECTION, HARD DISTORTION GROUP, AUTO WAH GROUP, SPACE PHASER GROUP, MULTI TAP DELAY GROUP, LONG DELAY GROUP,TEMPO DELAY, DYNAMIC MODULATION GROUP, 4CH MIXER, GATE II GROUP, LIMITTER, BAND CHORUS GROUP, STEREO EXCITER, COMP/LIMITTER, SUPER DISTORTION GROUP, HARD DISTORTION I GROUP, NEW 3 BAND EQUALIZER, MULTI – TAP CHORUS, REVERB II GROUP,DRIVER, ROTARY SPEAKER II, MODULATION II GROUP, STEREO COMP/LIMITTER LEFT, STEREO COMP/LIMITTER RIGHT,STEREO PITCH SHIFTER/DELAY GROUP, SPACIAL REVERB GROUP,
- Power consumption: 26 W
- Dimensions: 482(W)  $\times$  332.5(D)  $\times$  44(H)mm (19"  $\times$  12 – 15/16"  $\times$  1 – 3/4")
- Weight : 4.5 kg (albs 14½oz)
- Optional accessories: VOLUME PEDAL(KVP – 001), FOOT SWITCH(PS – 1,PS – 2),  
REMOTE CABLE(RCC – 050,RCC – 100),  
FOOT CONTROLLER(FC6), RAM CARD(MCR – 03 only),  
ROM CARD(SPC – 01 ~)

★ Specifications subject to change without notice.

# MIDI IMPLEMENTATION CHART

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1 1~16	1 1~16	
Mode	Default Messages Altered	× × *****	MODEL × ×	
Note Number	:True Voice	× ×	× ×	
Velocity	Note ON Note OFF	× ×	× ×	
After Touch	Key's Channels	× ×	× ×	
Pitch Bender		×	×	
Control Change		×	×	
Program Change	:True #	0~99 *****	0~127 0~99	* 1
System Exclusive		○	○	
System Common	:Song Pos :Song Sel :Tune	× × ×	× × ×	
System Real Time	:Clock :Command	× ×	× ×	
Aux Message	:Local ON/OFF :All Notes OFF :Active Sense :Reset	× × × ×	× × × ×	
<b>Notes</b>  * 1 : Program number 1~100 is selected for Program change 1~128.				

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

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

○ : Yes  
× : No