# KORG

## PERFORMANCE SIGNAL PROCESSOR

# A4

## BASS

# OWNER'S MANUAL

# IMPORTANT SAFETY INSTRUCTIONS

**WARNING** : When using electronic products, basic precautions should always be used. Including the following:

1. Read all the instructions before using the product.
2. To reduce the risk of injury, close supervision is necessary when a product is used near children.
3. Do not use this product near water – for example, near a bathtub, washbowl, kitchen sink, in a wet basement, near a swimming pool, etc.
4. This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at high volume levels or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, consult an audiologist.
5. The product's location or position should not interfere with its proper ventilation.
6. The product should be kept away from heat sources such as radiators, heat registers, and other products that produce heat.
7. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
8. The unit's power cable should be unplugged from the outlet when left unused for a long period of time.
9. Care should be taken so that neither objects nor liquids fall into the unit's enclosure through its openings.
10. The product should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged
    B. Objects have fallen into, or liquid has been spilled into the product
    C. The product has been exposed to rain
    D. The product does not appear to operate normally, or exhibits a marked change in performance
    E. The product has been dropped, or its enclosure damaged
11. Do not attempt procedures to service the product beyond those described in the user maintenance instructions. All other servicing should be referred to qualified service personnel.

Congratulations! And thank you for purchasing the KORG A4 Bass Performance Signal Processor. To get the most out of this advanced instrument and enjoy it in its optimum condition for the longest possible time, please read this manual carefully and keep it handy for reference.

# TABLE OF CONTENTS

## THE FCC REGULATION WARNING

# NAMES AND FUNCTIONS OF CONTROLS AND TERMINALS

## FRONT PANEL

**Input Level**
This controls the level of the signal received at the input jack.

**Level/Peak Indicator**
For visual monitoring of the input level while playing. Adjust the input level so that the 3 color LED lights up green while you play, and occasionally turns orange. If red appears, clipping may occur, so lower the input level.

**Output Level**
Controls the volume of the output signal.

**Mode/Effect Select Buttons**
These up/down buttons are used to select the effects to be edited when in the Edit mode.

**Effect LEDs**
**Effect Names**
**Parameter Names**

**Bank & Program Value**
This indicates the A4 Bass bank and program number when in the Program mode (page 4), or the value of parameters when in the Edit mode (page 6).

**Write Key**
Executes saving of edited data.

**Program and Edit LEDs**
The green LED lights when the program mode is selected and the red LED lights when the Edit mode is selected.

**Bank Up Footswitch**
This footswitch selects a new bank when in the program mode. (The bank is not actually switched until a program footswitch is pressed.)

**Program, Edit Select Footswitch**
This switch toggles between Program mode and Edit mode.

**EFFECT/PROGRAM LEDs**
These LEDs light red to show the chosen program number when in Program mode (page 4). When in Edit mode (page 6), these LEDs light red to show the effects that are turned ON.

**Parameter Editor Knobs**
The value of each effect parameter can be changed by turning these knobs when in Edit mode (page 6).

**User/Preset Selector**
This button is used to select either the User or Preset program areas. When the User LED is lit, the User program area is selected.

**EFFECT/PROGRAM Footswitches**
These switches are used to select the program number when in Program mode (page 4), or to toggle the individual effects ON/OFF when in Edit mode (page 6).

**Bypass•Tune Footswitch**
Pressing this switch toggles the Bypass function ON/OFF. While Bypass is on, the A4 Bass sends a dry unprocessed signal to the output terminals and the chromatic tuner can be accessed. Holding down this switch slightly longer mutes the output completely and silent tuning is possible.

## REAR PANEL

**AC Adaptor Cord Holder**
Fit the AC adaptor cord through this receptacle to prevent it from being accidentally unplugged.

**DC9V Jack**
This jack is for the 9-volt AC adaptor.

**VOLUME Pedal Jack**
For connection to the output jack of the optional KORG KVP-001 volume pedal. (When using the KVP-001, set its volume to 0.)

**OUTPUT Jacks (R, L/MONO)**
These jacks provide stereo output for amplifiers, mixers, etc. The L/MONO jack, when used alone, provides mixed output for monaural equipment.

**INPUT Jack**
For connecting the guitar.

**PHONES Jack**
This jack is for stereo monitoring of the A4's output.

**MIDI Jacks (OUT,IN)**
For transmission and reception of MIDI Program changes and MIDI System Exclusive messages.

**EXT CTRL OUT Jacks (1,2)**
These jacks can be connected to an amplifier's channel switching footswitch jacks. This allows you to switch the amplifier's channels with program changes on the A4.

**POWER Switch**
This switch turns the A4's power on and off. Always make sure that this switch is at the OFF position before connecting or disconnecting the AC adaptor to either the A4 Bass or an electrical outlet.
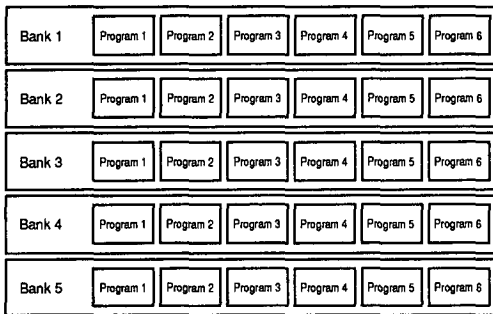
# CONNECTION WITH A BASS

1. Connect a bass to the INPUT jack on the A4's rear panel.
2. Connect your bass amplifier to the OUTPUT jacks on the A4's rear panel. (For best results, use both jacks for stereo output. For monaural operation, connect to the L/MONO jack.)
3. For pedal volume / control / playing, connect the optional KORG KVP-001 volume pedal. (See page 9 for more details.)
4. Input signal can be monitored in stereo by connecting a pair of stereo headphones to the PHONES jack.
5. After completing connection with other instruments and equipment, turn on the A4 Bass's power.
6. When playing the bass, the peak indicator, which moves in accord with the input volume level, will go from green to yellow to orange to red. When in creasing the input volume or playing the bass strongly, please do not allow the indicator to go into the red area.
7. Please set the output volume appropriately.  Following the above will allow for performance conditions.
NOTE: When turning the A4 Bass on and off, make sure to turn all volume controls on all instruments and equipment down as far as they will go.
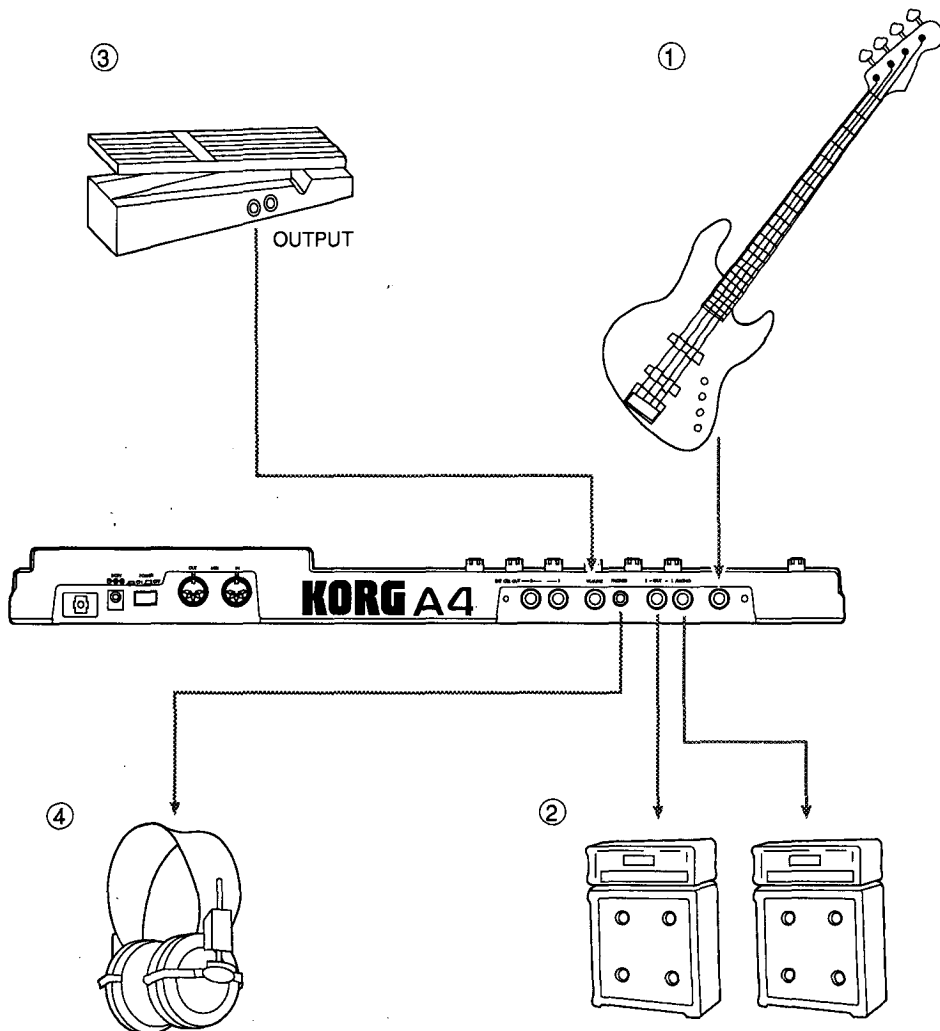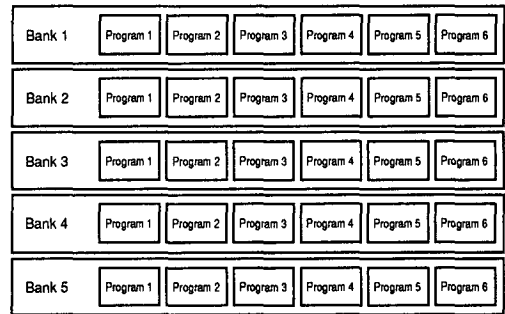
## About Preset Programs

The A4 Bass has a total of sixty (60) effects programs, including thirty (30) user programs and thirty (30) preset programs. It is possible to edit the preset programs, but these edited versions must be stored to the user program area. The user area is also used to store original, user-created programs. Each program area consists of five memory banks, each capable of holding six programs.

| Bank 1 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 2 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 3 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 4 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 5 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |

Preset Program area
(Read Only Memory)

| Bank 1 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 2 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 3 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 4 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 5 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |

User Program area
(Random Access Memory)

1. When the power is first turned on, the A4 Bass automatically enters Program mode. If you are in the Edit mode, simply press the Prog Edit Select switch to go to the Program mode.
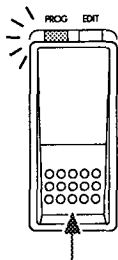
Press the switch until the green PROG LED lights up.

2. Set the input level while playing the Bass. Adjust the input level so that the 3 color LED lights up green while you play and occasionally turns orange. If red appears, clipping may will occur, so lower the input level.
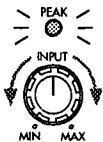
Adjust the input level so that the Peak Indicator lights up as described above.

3. Select the Preset Program mode. Preset Program mode is selected when the User LED is off. If the User LED is lit, press the User/Preset key to turn off the User LED.

USER/PRESET
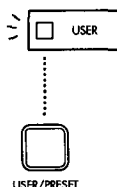
4. Select a new bank by pressing the Bank Up footswitch.
5. Press any of the EFCT/PROG switches (1 thru 6) to select the effect program you wish to play. For example, if Bank 1, Program 1 is selected, the LED should read as below.
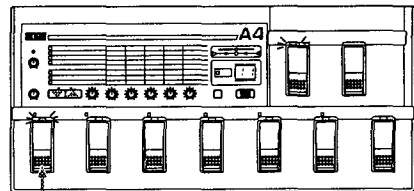
Program 1 in Bank 1 is selected.
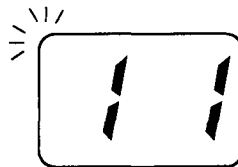
The bank and program numbers blink in the display when changed.

6. Play the bass to hear the effect sound of program 1. To hear the unprocessed sound, press the Bypass•Tune switch. Pressing the Bypass•Tune switch again returns the effect sound. (Refer to page 12 for more information on the Bypass•Tune switch.)
7. Repeat steps 4 and 5 to select the various programs stored in the A4. To select another program in the same bank, simply press the appropriate EFCT/PROG switch.
NOTE: Shifting to a different bank does not select programs in that bank directly. To select programs in a new bank, you must press one of the six EFCT/PROG switches after entering the new bank.
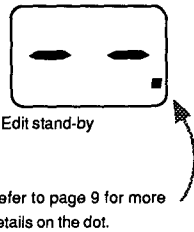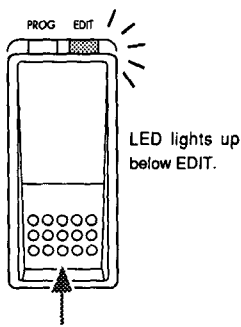
# OPERATING INDIVIDUAL EFFECTS
# [EDIT MODE]

The A4 Basse's effect system consists of six basic effects that are connected in a row, as in the diagram below. Each individual effect can be edited and combined with other effects to create an effect program. Each of the six effects in a program can be independently turned on and off.
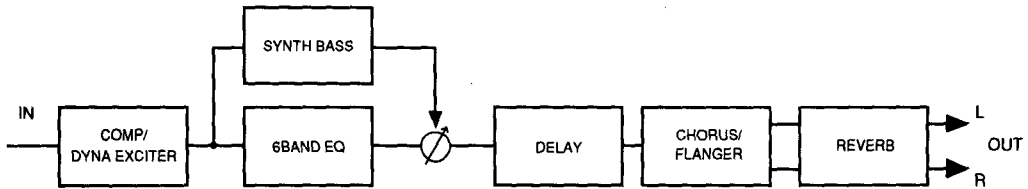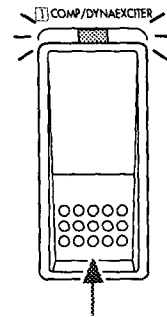


1. Press the Prog Edit Select switch to enter the Edit mode. The red LED lights up, and the Bank&Program/Value display changes to indicate that the machine is on Edit stand-by.



LED lights up below EDIT.

Edit stand-by

Refer to page 9 for more details on the dot.

The function of the EFCT/PROG LEDs also changes. In the Edit mode, the EFCT/PROG switches control the ON/OFF status of each of the six different effects. The EFCT/PROG LEDs light to display the effects which are currently turned on.

For example, the following display appears when the Edit mode is selected after selecting Program 1 in Program mode. This is the first effect program in Bank 1.
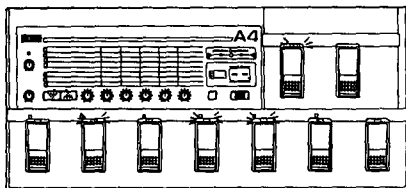


Program 1-1 consists of three effects: COMP•DYNA EX, and 6 BAND EQ.

2. Press the EFCT/PROG switches to toggle the effects on and off. For example, pressing the EFCT/PROG switch immediately under (1) COMPRESSOR•DYNAMIC EXCITER turns on the effect.



3. Press the EFCT/PROG switches once again to turn off the effect. Try different effect combinations to hear variations in the processed sound.
4. To select and hear individual effects in another program, you must first return to Program mode. To do so, press the Prog Edit select switch. The Prog Edit LEDs, the EFCT/PROG LEDs, and the Bank&Program Value display return to their Program mode indication. Now, select a new program and press the Prog Edit Select switch again to return to the Edit mode.

The LED Indicates bank and program number when Program mode.
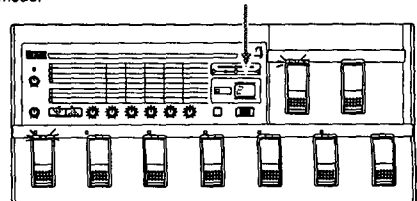
# CREATING ORIGINAL PROGRAMS
# [EDIT MODE]

## About Parameters and Editing

"Editing" involves altering the settings of individual effects, such as the balance between direct sound and effect output. "Parameters" are those specific settings within each effect, that can be edited.

Preset area

| Bank 1 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 2 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 3 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 4 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 5 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |

User Program area

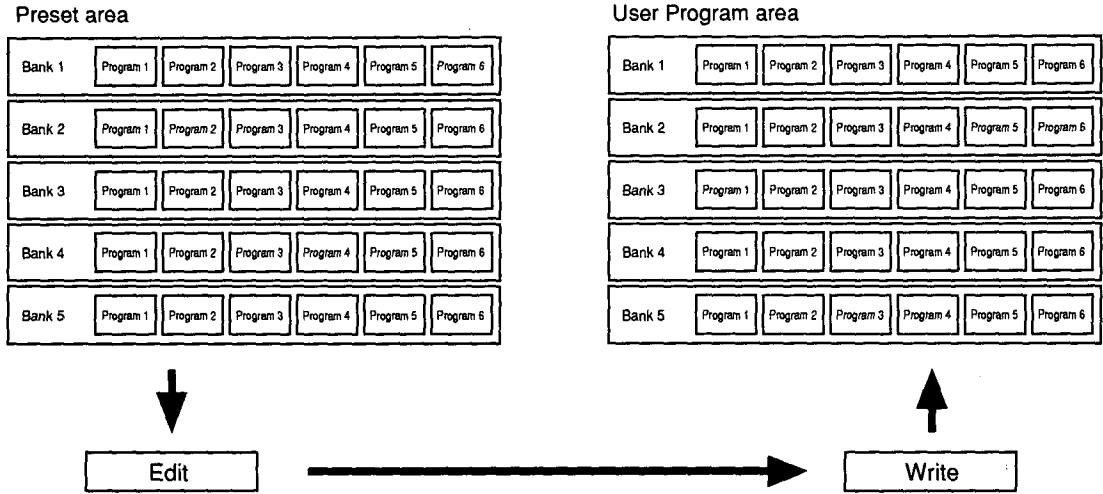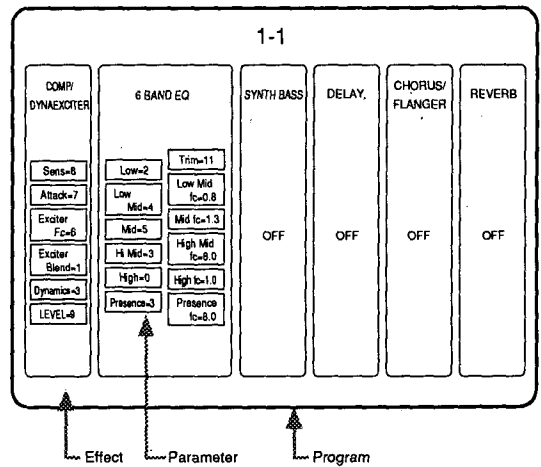| Bank 1 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 2 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 3 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 4 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |
| Bank 5 | Program 1 | Program 2 | Program 3 | Program 4 | Program 5 | Program 6 |

Edit ──────────────────────▶ Write

1. Enter Program mode and find a program that sounds closest to what you want. The example below shows Program 1 in Bank 1.
2. Enter Edit mode by pressing the Prog Edit Select switch. The Prog Edit LEDs, the Value display, and the EFCT/PROG LEDs will change to indicate Edit mode.

The parameters for this program have been initially set as follows:

| 1-1 | | | | | |
|---|---|---|---|---|---|
| COMP/ DYNAEXCITER | 6 BAND EQ | SYNTH BASS | DELAY. | CHORUS/ FLANGER | REVERB |
| Sens=6 | Low=2 / Trim=11 | | | | |
| Attack=7 | Low Mid=4 / Low Mid fc=0.8 | | | | |
| Exciter Fc=6 | Mid=5 / Mid fc=1.3 | OFF | OFF | OFF | OFF |
| Exciter Blend=1 | Hi Mid=3 / High Mid fc=8.0 | | | | |
| Dynamics=3 | High=0 / High fc=1.0 | | | | |
| LEVEL=9 | Presence=3 / Presence fc=8.0 | | | | |

Effect ⌐ Parameter ⌐ Program
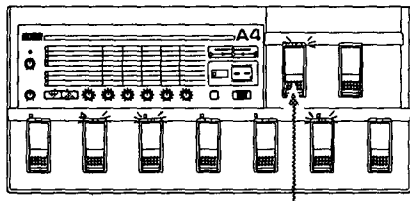
3. Press the Mode (Effect) Select buttons to choose the effect you wish to edit. The figure below shows selection of Compress or Dynamic Exciter [COMP·DYNA EX], for example.



Press

4. Find the parameter you wish to edit from the parameter names on the front panel. Adjust that parameter by turning the Parameter Editor knob (A thru F) directly below it. To change the ATTACK parameter of Compressor, for example, turn the Parameter Editor knob B below ATTACK.
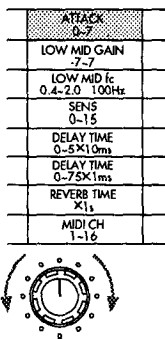


5. Turning the Parameter Editor changes the parameter values on the Value display. (A dot next to a parameter value number indicates the current programmed value.)



Refer to page 9 for an explanation of the dot to the right of the figure.

6. To edit other parameters, use the Mode (Effect) Select buttons and Parameter Editor knobs. (Each of the individual parameters is explained on pages 13 thru 17. See the Effect Parameter List for the parameter values of each preset program.)

NOTE: It is possible to edit the parameters of an effect which is turned off. Simply make sure that the Effect LED selector is in the position of the effect you wish to edit (use the Mode (Effect) buttons).

7. To edit other programs, switch back to Program mode and begin the procedure again. If you wish to save the edited program, perform the Program Write operation explained on page 8.

CAUTION: Selecting another program without performing the Program Write operation causes loss of the previously edited data.

# UTILITY

The Utility mode is provided to set parameters used for the A4 as a whole and also parameters necessary for each program as a whole (non-effect parameters).

TUNER CALIB (Calibration)
This is used to set the tuner's standard pitch. (See page 12 for more details about the tuner.)

MIDI CH (MIDI Channel)
This function is used to set the MIDI channel and for system exclusive transmission and reception of program data. (See page 10 for more details regarding MIDI Dump.)

EXT CRTL (External Control)
Used to set the status of External Control jacks for each of the programs. (See page 11.)

NR LEVEL (Noise Reduction Level)
Used to set the noise reduction threshold level for each program.

MASTER (Master Volume)
Allows setting of the output level for each of the programs.
The procedure for adjusting these parameters is the same as the editing procedures in Edit mode.
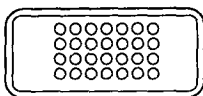
# SAVING EFFECT PROGRAMS [PROGRAM WRITE]

It is possible to save up to 30 edited effect programs to the User area using the Program Write function. Unless you use this function to save the data, the changes you have made to the current program will be erased as soon as you select another program.

NOTE: Saving a program into a particular program number in the User area will erase program data currently residing at that number. (Before leaving the KORG factory, the data from the A4's Preset area is copied to the user area.)

### User Program area



Write the program as a separate program.

Program

↑
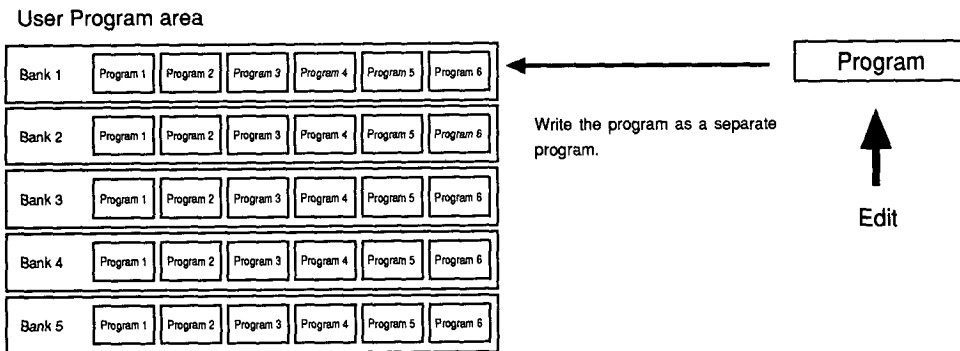
Edit

1. When editing is completed in Edit mode, press the Write key to save the currently edited program. For this example, an edited version of Bank 1-Program 1 is saved as a new program.



**WRITE**

⬆

Press

2. The User LED lights up and the current bank/program number blinks on the Value display. The flashing number indicates that the currently edited program is ready to be written to that particular program number.

Whether it is an edited version of a user program or a preset program, it will be stored in the User Program area.



Blinking

3. Select the program number to which the new program will be written. Press the Bank Up key to select a particular bank and one of the six EFCT/PROG switches to select a particular program number.

If, for example, the third program in Bank 4 is selected, the display should indicate as follows:



Blinking



Select the program number to which the new program will be written.
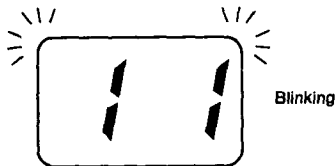
4. Press the Write key again. Once writing is completed, both Mode-LEDs will stop blinking, and you will be returned to the Edit mode.



Blinking

\* To cancel the write operation, press the Prog Edit Select footswitch.

The Write function can also be accessed directly from Program mode. This feature is useful when you wish to select programs you like and place them in a different order (in the User Programs).

8

# OTHER USEFUL FUNCTIONS

## 1. Comparison with Preset Program Parameters

The dot on the Value display assists you in editing by providing information in either the User Program or Preset Program area. The dot appears on the display for your reference in the following cases:

When the current effect On/Off status matches the program a dot appears.

When editing program parameters. A dot appears to the lower right of the value entered if it is the same as the value in the saved version of the program.

• Compare Function

The A4 also has a compare function which allows you to switch back and forth between edited and saved versions of a programs. To use the compare function, simply press the up and down Mode /Effect select buttons together. To return to the edited version of the program, press these buttons again.
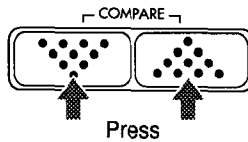
Press

## 2. Using a Volume Pedal

With a volume pedal, it is possible to create a long, slow attack sound by gradually pressing down on the pedal after playing a chord or single note.

Connect to VOLUME pedal output jack.

Optional
KORG KVP-001

Minimum volume
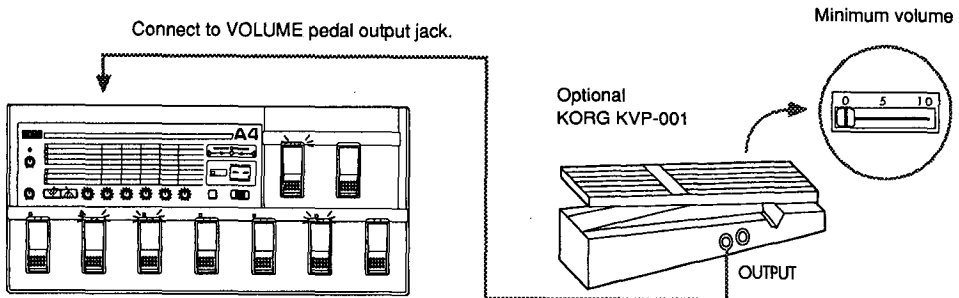
OUTPUT

Connect the optional KORG KVP-001 volume pedal's output jack (OUTPUT) into the VOLUME pedal jack (PEDAL) of the A4 Bass. Make sure that the KVP-001's volume slider has been set to the minimum volume of 0.

## 3. MIDI

The A4 Bass features capabilities for transmitting and receiving MIDI program change messages as well as MIDI dump and load operations.

### Saving All Program Parameters (MIDI Dump)

1. Connect the MIDI OUT of the A4 Bass to the MIDI IN of a MIDI data filer.

MIDI OUT      MIDI IN
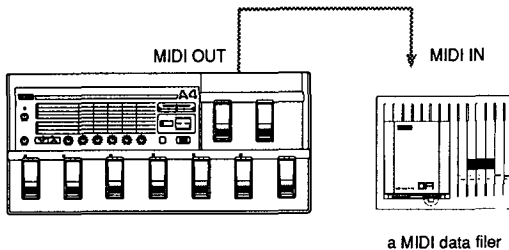
a MIDI data filer

### Loading All Program Parameters

1. Connect the MIDI IN of the A4 Bass to the MIDI OUT of a MIDI data filer.

MIDI IN      MIDI OUT

a MIDI data filer
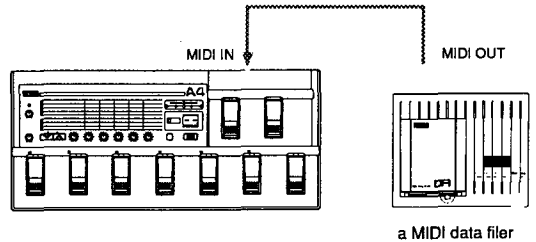
2. Set the external device to receive MIDI data.
3. In the Edit Utility mode, select a MIDI channel for transmitting MIDI data.

| ATTACK 0~7 |
|---|
| LOW MID GAIN -7~7 |
| LOW MID fc 0.4~2.0  100Hz |
| SENS 0~15 |
| DELAY TIME 0~5×10ms |
| DELAY TIME 0~75×1ms |
| REVERB TIME ×1s |
| MIDI CH 1~16 |

2. In the Edit Utility mode, select a MIDI channel for receiving MIDI data.

| ATTACK 0~7 |
|---|
| LOW MID GAIN -7~7 |
| LOW MID fc 0.4~2.0  100Hz |
| SENS 0~15 |
| DELAY TIME 0~5×10ms |
| DELAY TIME 0~75×1ms |
| REVERB TIME ×1s |
| MIDI CH 1~16 |

4. With the MIDI channel lit in the display, press the Write switch. The Value display changes to read "tr" (transmit) as the effect program parameters are transmitted.

WRITE

⬆

Press

5. The MIDI channel indication reappears in the display again upon completion of the transmission.

3. With the MIDI channel lit in the display, transmit the data to the A4 the external device. The Value display changes to read "rc" (receive), as the effect program data is automatically loaded.
4. The MIDI channel indication reappears in the display again upon completion of the loading process.
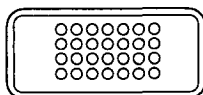
NOTE: It is not possible to save or load program parameters if there is no MIDI channel visible in the display. Please select a MIDI channel (as described above) before saving or loading MIDI data. Also, the MIDI channel setting must be the same as when the data was originally sent.

## プログラムを工場出荷時の状態に戻すには（システム・リセットの方法）

　ライト・スイッチとバンクアップ・スイッチを押しながら、A4のパワースイッチをONにしてください。ディスプレイに"PL"と表示され、すべてのLEDが点滅します。このときもう一度ライト・スイッチを押すと、工場出荷時のプログラムがユーザー・プログラム・エリアにコピーされます。

注意：システム・リセットを行うと、ユーザー・プログラム・エリアのプログラムはすべて消去されます。大切なプログラムはMIDIデータファイラーにセーブするか、パラメータをあらかじめ取扱説明書26ページのチャートに控えておくなどしてください。
不測の事態でプログラムが消去した場合は、上記の方法で出荷時の状態に戻すことができます。

Note : When you restore factory settings, the contents of the User Program area will be deleted. Important programs should be saved to a MIDI data filer, or you can note the parameters on the chart on page 26 of the Owner's Manual.
　If a program is deleted by accident, follow the instructions on page 11 of the Owner's Manual to restore factory settings.

# KORG

# 4. External Control

The A4 Bass is equipped with two external control outputs. This function allows you to simultaneously switch the channels of one or two amplifiers with a program change on the A4 Bass. The open/close status of each EXT CTRL OUTjack can be set by using the External Control utility in Edit mode. This function is useful if you would like to switch between the different channels, thereby incorporating the amplifier's built-in distortion/overdrive with the A4's other effects.

EXT. CTRL OUT                                           FOOT SW.

Bass amplifier(s)

---
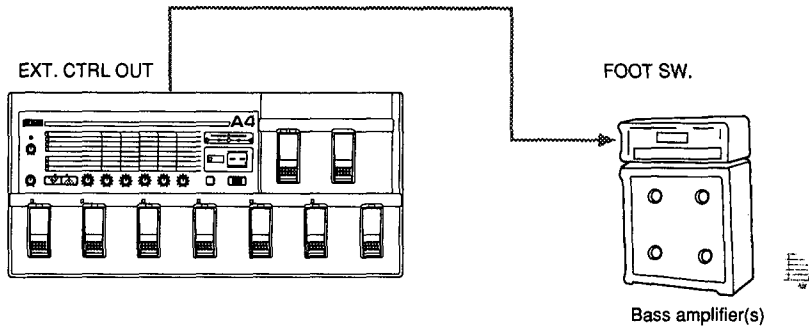
## SYSTEM RESET

To reset the A4 to factory settings:
Hold down the WRITE key and BANK UP footswitch while turning the A4 on. The display will flash "PL". Press WRITE again to load the factory presets into the USER program area.
Note: This procedure will erase all programs stored in the USER program area. Please save any important programs to a MIDI data filer or copy the parameter values on a piece of paper.

# TUNER

A digital auto tuner is built into the A4 Bass.

## 1. Bypass • Tune switch

If this switch is pressed, the Bypass LED lights and all effect are turned off.

At the same time, the tuner is turn on.

If the switch is held for approximately one second after reaching the Bypass condition, the Mute function is activated, and silent tuning is possible.



## 2. Standard Pitch and Calibration

For tuning with other musical instruments, "middle A" or "A440" (A=440Hz) has traditionally been used as the standard pitch. It is known that this standard pitch has varied slightly from time to time and country to country. With this tuner, you can set the standard pitch for the A4 Bass in the 438-445Hz range.

Calibration refers to the setting of the standard pitch.

Calibration is performed by using the Calibration utility in Edit mode.

## 4. Tuning

1). When a note is played on the bass, the name of the note best representing the sound is indicated in the display. (Do not play two or more notes at the same time.)



This indication refers to # (sharp).

2). If a wrong note is indicated, the tension of the bass string should be adjusted such that the note on the display shows the correct note for the string.

3). Once the string's tension is properly adjusted and the correct note is indicated in the display, adjust the string's tension so that only the green center LED in the LED panel lights up.

### CHROMATIC TUNER



Adjust the string's tension so that the center LED in the LED panel lights red.

4). Tune the other strings by repeating steps 1 through 3.

5). If the Bypass•Tune switch is pressed again, the tuner becomes inactive, canceling the Bypass function.

## 3. Example of tuning

|  | (LOW) | 4 | 3 | 2 | 1 | (HIGH) |
|---|---|---|---|---|---|---|
| standard tuning | B | E | A | D | G | C |
| flat tuning | A# | D# | G# | C# | F# | B |

# EFFECT PARAMETER LIST

## 1. COMP/DYNA-EXCITER (COMPRESSOR/DYNA-EXCITER)

◆ The COMP/DYNA-EXCITER includes the COMPRESSOR which enables the system to maintain a constant output level by compressing input signals and the DYNA-EXCITER in which the exciter effect is increased or decreased according to the level of the input signal.

• COMPRESSOR

    This effect helps emphasize the attack sound (popping attack) or lengthening the sustained sound (slow attack).

• DYNA-EXCITER

    This effect allows dynamic control over tone (brightness) harmonics in certain frequency ranges.

◆ Parameters

| | | | |
|---|---|---|---|
| **A** | SENS<br>(Sensitivity) | [0 ~ 15] | The threshold of the compressor effect. This specifies at what signal level the compressor will start working.<br>If this parameters is set at "0", the compressor is off. |
| **B** | ATTACK<br>(ATTACK) | [0 ~ 7] | The attack time of the COMPRESSOR effect. "0" is slow attack and "7" is fast. |
| **C** | EXCITE FREQ<br>(Exciter Frequency) | [0.9 ~ 8.0] kHz | The frequency to which the EXCITER effect is applied. The harmonics of a higher frequency band are emphasized as this value is increased. |
| **D** | EXCITE BLEND<br>(Exciter Blend) | [-2 ~ 12] | The level of the EXCITER effect (boost/cut). The larger this value, the stronger the effect. If this value is set to "0", the exiter effect is turned off (but the compressor stays on). If this value is set below zero, harmonics will be cut. |
| **E** | DYNAMICS<br>(DYNAMICS) | [0 ~ 7] | The DYNAMICS function is used to set the range of EXCITER effect variation, i.e., how much the EXCITER effect should vary according to the input signal level.<br>If this parameter is set at "0," the level of the effect will be maintained at the strength set by EXCITE BLEND regardless of the input signal level. As the value for this parameter becomes larger, the dynamic response becomes wider, with the minimum strength of the effect being the value set by EXCITE BLEND. |
| **F** | LEVEL<br>(LEVEL) | [0 ~ 15] | The Output level of the Effect sound. |

★ Note

  Set the input volume correctly.

  The degree of the compressor's effect varies greatly according to the input signal. In other words, the effect may be enhanced or reduced by the setting of input volume. The input volume should therefore be set properly by referring to the peak indicator.

## 2. 6-BAND EQ (Six-band Equalizer)

◆ This is an equalizer with six frequency bands: LOW, LOW MID, MID, HI MID, HI and PRESENCE. Excluding the Low band, the center frequencies of the frequency bands are programmable.

◆ Parameters

| Gain Block | | | |
|---|---|---|---|
| **A** | LOW GAIN (Low Gain) | [-7 ~ 7] | Gain for the fixed frequency low band equalizer. |
| **B** | LOW MID GAIN (Lower Middle Gain) | [-7 ~ 7] | Gain for the lower-middle band equalizer. |
| **C** | MID GAIN (Middle Gain) | [-7 ~ 7] | Gain for the middle band equalizer. |
| **D** | HIGH MID GAIN (Higher-middle Gain) | [-7 ~ 7] | Gain for the higher-middle band equalizer. |
| **E** | HIGH GAIN (High Gain) | [-7 ~ 7] | Gain for the high band equalizer. |
| **F** | PRESENCE (Presence Frequency) | [-7 ~ 7] | Gain for the ultra-high band equalizer. |

| Frequency Block | | | |
|---|---|---|---|
| **A** | MASTER TRIM (Trim) | [0 ~ 15] | Gain for the input signal. |
| **B** | LOW MID fc (Lower-middle Frequency) | [0.4~2.0 X 100Hz] | The center frequency for the lower-middle band equalizer. Range: (40, 50, 60, 80, 100, 130, 160, 200Hz) |
| **C** | MID fc (Middle Frequency) | [1.0~5.0 X 100Hz] | The center frequency for the middle band equalizer. Range: (100, 130, 160, 200, 250, 320, 400, 500Hz) |
| **D** | HI MID fc (Higher-middle Frequency) | [2.0~10 X 100Hz] | The center frequency for the higher-middle band equalizer. Range: (200, 250, 320, 400, 500, 600, 800, 1kHz) |
| **E** | HI fc (High Frequency) | [0.6~3.2 X 1kHz] | The center frequency for the high band equalizer. Range: (600, 800, 1k, 1.3k, 1.6k, 2.0k, 2.5k, 3.2kHz) |
| **F** | PRESENCE fc (Presence Frequency) | [2.0~10 X 1kHz] | The center frequency for the ultra-high band equalizer. Range: (2.0k, 2.5k, 3.2k, 4.0k, 5.0k, 6.3k, 8.0k, 10kHz) |

★ Note

Use TRIM to prevent clipping.

If gain for each frequency band is raised near its maximum, the output may be distorted (or "clipped") even when the PEAK LED is not lit. In such situations, turn down the TRIM parameter until the clipping stops.

# 3. SYNTH BASS (Synthesizer Bass)

◆ The SYNTH BASS effect is used to output a synthesizer bass waveform by processing of the input waveform.

Note: This effect requires you to play only one note at a time. Play very cleanly, muting the strings that you are not playing. Also, slapping does not generally work well with this effect.

◆ Parameters

| A | MODE<br>(Mode) | [1,2] | 1: Mode in which the harmonics of the synthesizer bass sound-modulate according to the input sound level . This mode produces a resonant Synth Bass sound.<br>2: Mode in which the harmonics of the synthesizer bass remain constant regardless of the input sound level. |
|---|---|---|---|
| B | SENS<br>(Sensitivity) | [0 ~ 7] | The SENS function is used to set the level of the dynamic response of the SYNTH BASS effect.<br>The dynamic response will widen as this value increases. |
| C | DECAY TIME<br>(Delay Time) | [0 ~ 7] | The DECAY TIME is used to set the fade out time of a note.<br>The larger this value, the longer the decay time. |
| D | TONE<br>(Tone) | [0 ~ 7] | The TONE is used to set the tonal brightness of the synthesizer bass sound. |
| F | MIX<br>(Mix) | [0 ~ 30] | The MIX parameter is used to set the mix ratio between the direct sound (output from the 6-BAND EQ) and the synthesizer bass sound.<br>The setting "0" produces only the direct sound, while "30" produces only the Effect sound. |

★ Note

SYNTH BASS is an effect in which synthesizer bass waveforms are produced by processing input waveforms. The SYNTH BASS sound changes according to the bass guitar's tone settings and the selection of its pick-ups. Experiment with creating your favorite SYNTH BASS sounds by changing the settings on the bass guitar.

# 4. DELAY

◆ The DELAY function is an effect which creates repeats of the input sound.

◆ Parameters

| A | DELAY TIME<br>(Delay Time) | [0 ~ 9] | The DELAY TIME A function is used to set the delay time in increments of 100m sec. |
|---|---|---|---|
| B | DELAY TIME<br>(Delay Time) | [0 ~ 9] | The DELAY TIME B function is used to set the delay time in increments of 10m sec. |
| C | DELAY TIME<br>(Delay Time) | [0 ~ 9] | The DELAY TIME C function is used to set the delay time in increments of 1m sec.<br>The sum of the values set by DELAY TIMEs A, B and C represents the actual delay time. |
| D | FEEDBACK<br>(Feedback) | [-15 ~ 15] | The FEEDBACK function is used to set the amount of delay feedback (number of repeats).<br>The larger this value, the higher the number of repeats. Negative values produce repeats with inverted phase. |
| E | HIGH DAMP<br>(High Damp) | [0 ~ 7] | The HIGH DAMP function is used to set the amount of high damp.<br>The larger this value, the more the high band portion of the delay sound is cut every time the signal is repeated. |
| F | MIX<br>(Mix) | [0 ~ 30] | The MIX function is used to set the mix ratio between the delay sound and the direct sound.<br>The setting "0" produces only the direct sound, while "30" produces only the Effect sound. |

# 5. CHORUS/FLANGER

◆ This effect creates a swirling, warm sound by cyclically modulating the sound's pitch. Depending on how the parameters are set, you can obtain both CHORUS and FLANGER effects.

★ Note

Creating CHORUS and FLANGER effects.

- CHORUS
    1) Select MODE 1.
    2) Set the DELAY TIME to 10m sec. or more.
    3) Set the FEEDBACK to "0."
- FLANGER
    1) Select MODE 2.
    2) Set the DELAY TIME to 5m sec. or less. In the case of the FLANGER, the shorter the DELAY TIME, the higher the pitch of the modulation.
    3) Set the FEEDBACK to 7 or more (or -7 or less [negative values = inverted phase]). The higher the FEEDBACK setting, the stronger the modulation.



MODE 1                    MODE 2
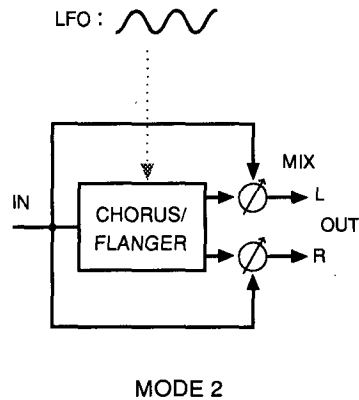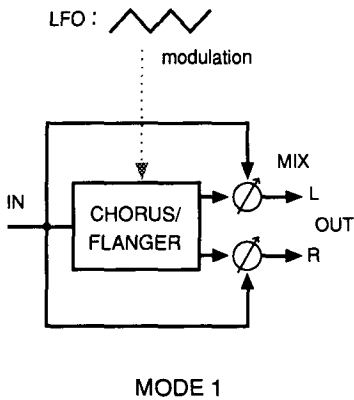
◆ Parameters

| A | MODE (Mode) | [1 ~ 2] | 1: Stereo CHORUS/FLANGER with LFO=TRI (triangle wave). 2: Stereo CHORUS/FLANGER with LFO=SIN (sine wave). |
|---|---|---|---|
| B | DELAY TIME (Delay Time) | [0.0 ~ 75]m sec. | The DELAY TIME function is used to set the time between the dry signal and the wet signal. When used together with the feedback parameter, it controls the frequency of the resonance. |
| C | SPEED (Speed) | [1 ~ 16] | The SPEED function is used to set the speed of modulation. |
| D | DEPTH (Depth) | [0 ~ 15] | The DEPTH function is used to set the depth of modulation. The larger this value, the greater the modulation. |
| E | FEEDBACK (Feedback) | [-15 ~ 15] | The FEEDBACK function is used to set the amount of feedback. Negative values = inverted phase. |
| F | MIX (Mix) | [0 ~ 30] | The MIX function is used to set the mix ratio between the Effect sound and the direct sound. The setting "0" produces only the direct sound, while "30" produces only the effect sound. |

# 6. REVERB (Reverberation)

◆ The REVERB effect gives spatial depth to a sound by simulating the reverberation characteristics of natural listening environments, such as a concert hall or a room.

◆ Parameters

| A | MODE<br>(Mode) | [1 ~ 3] | 1: Room Reverberation<br>2: Hall Reverberation<br>3: Plate Reverberation |
|---|---|---|---|
| B | REVERB TIME<br>(Reverb Time) | [0.3 ~ 2.0] sec.<br>(Room:)<br>[0.4 ~ 10] sec.<br>(Hall&Plate:) | The REVERB TIME function is used to set the reverberation time. |
| C | PRE DELAY<br>(Pre Delay) | [0 ~ 99 X<br>1m sec.] | The PRE DELAY function is used to set the time between the dry signal and the wet signal. |
| D | HIGH DAMP<br>(High Damp) | [0 ~ 15] | The HIGH DAMP function is used to set the amount of high frequency damping.<br>The larger this value, the darker the tone as the reverberation decays. |
| F | MIX<br>(Mix) | [0 ~ 30] | The MIX function is used to set the mix ratio between the effect sound and the direct sound.<br>The setting "0" produces only the direct sound, while "30" produces only the Effect sound. |

# 7. UTILITY

◆ The UTILITY function allows for the setting of various parameters other than effect parameters.

◆ Parameters

| A | The TUNER CALIB<br>(Tuner Calibration) | [438 ~ 445] | The TUNER CALIB function is used for calibrating the tuner by setting the pitch for "middleA" within the frequency band of438Hz to 445Hz. Values on the display vary between 38 and 45, representing a possible frequency between 438 and 445Hz. It is normally set at 440Hz. The value set here will be stored in memory without the need for any PROGRAM WRITE procedures. |
|---|---|---|---|
| B | MIDI CH<br>(MIDI Channel) | [1 ~ 16] | The MIDI CH function is used to set a MIDI transmission/reception channel.<br>Values set here will be stored in memory without the need for any PROGRAM WRITE procedure. |
| C | EXT. CTRL<br>(External Control) | [00, 10, 01, 11] | The EXT. CTRL function enables you to switch your amplifier's channels from A4 program changes. Two EXT CNTL OUT jacks are provided for use with two amplifiers.<br>The left value represents the setting of EXT. CTRL. OUT 1 (0=CLOSE; 1=OPEN)<br>The right value represents the setting of EXT. CTRL. OUT 2 (0=CLOSE; 1=OPEN) |
| E | NR LEVEL<br>(Noise Reduction Level) | [0 ~ 30] | The NR LEVEL parameter is used to set the threshold level of the built-in noise reduction function. In setting this level, with the bass guitar connected to the A4, start with the lowest NR LEVEL value and raise this value, with the strings muted, until almost no noise is perceivable. |
| F | LEVEL<br>(LEVEL) | [0 ~ 30] | The LEVEL function is used to set the overall output level of each effect program. |

★ Note

Among these UTILITY parameters, the values for TUNER CALIB and MIDI CH are the same in all effect programs. It is therefore impossible to set different values for these parameters for each effect program separately.

# ERROR MESSAGES
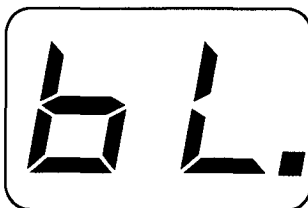


BL (Battery Low)

When the above message appears immediately after turning on the A4 Bass, the battery for internal memory backup needs to be replaced. Contact the KORG distributor nearest you or your local KORG dealer or service center, and have a qualified technician replace it.

# TROUBLESHOOTING

If a problem occurs during normal operation of the A4 Bass, follow the suggestions below and check the A4 Guitar to spot and remedy the trouble. If the A4 Bass still does not function properly, consult the KORG distributor nearest you or your local KORG dealer.

| Trouble | Countermeasure |
|---|---|
| No sound. | 1. Check if the Input volume or the Output volume is set to 0. Adjust the level until the input signal reaches a level strong enough to light the Peak LED (green or orange), or raise the output volume until sound can be monitored with headphones.<br>2. It is possible that the level parameter in one of the effects may be set to 0. In such a case, sound can be heard only when pressing the Bypass key. Enter Edit mode and adjust the appropriate level parameters.<br>3. Check to see if the Utility mode's Master Volume is set to 0. If so, reset it to a suitable level.<br>4. If a volume pedal is connected, it may be in the up or "no sound" position.<br>5. The Bypass•Tune's mute function may be activated. Press the Bypass•Tune switch to deactivate. |
| No effect. No change in effect when editing. | 1. Check the Prog Edit LEDs to ensure that Edit mode is selected.<br>2. Check to ensure that the desired effect is properly selected using the Prog Edit select buttons.<br>3. Check to see if Bypass has been turned on. When the bank&program/value display is blank, the A4 Bass is in Bypass condition. Press the Bypass key to turn it off.<br>4. Check to see if the Mix Level parameter in one of the effects is set to 0. If so, reset it to a suitable level.<br>5. Check to see if any effects have been set to OFF. Make sure the EFCT/PROG LEDs are lit for the effects you wish to edit. |

# A4 MIDI Program Chart

| MIDI Program | A4 Bank/Prog | MIDI Program | A4 Bank/Prog |
|:---:|:---:|:---:|:---:|
| Number | USER AREA | Number | PRESET AREA |
| 1 | 11 | 31 | 11 |
| 2 | 12 | 32 | 12 |
| 3 | 13 | 33 | 13 |
| 4 | 14 | 34 | 14 |
| 5 | 15 | 35 | 15 |
| 6 | 16 | 36 | 16 |
| 7 | 21 | 37 | 21 |
| 8 | 22 | 38 | 22 |
| 9 | 23 | 39 | 23 |
| 10 | 24 | 40 | 24 |
| 11 | 25 | 41 | 25 |
| 12 | 26 | 42 | 26 |
| 13 | 31 | 43 | 31 |
| 14 | 32 | 44 | 32 |
| 15 | 33 | 45 | 33 |
| 16 | 34 | 46 | 34 |
| 17 | 35 | 47 | 35 |
| 18 | 36 | 48 | 36 |
| 19 | 41 | 49 | 41 |
| 20 | 42 | 50 | 42 |
| 21 | 43 | 51 | 43 |
| 22 | 44 | 52 | 44 |
| 23 | 45 | 53 | 45 |
| 24 | 46 | 54 | 46 |
| 25 | 51 | 55 | 51 |
| 26 | 52 | 56 | 52 |
| 27 | 53 | 57 | 53 |
| 28 | 54 | 58 | 54 |
| 29 | 55 | 59 | 55 |
| 30 | 56 | 60 | 56 |

# A4 MIDI IMPLEMENTATION

## 1. TRANSMITTED DATA

### 1-1 Channel Messages

| Status | Second | Third | Description |
|--------|--------|-------|-------------|
| 1100 nnnn | 00pp pppp | ---- ---- | Program Change |

        nnnn : MIDI Channel Number
    pp pppp : Program Number (0 - 59) (NOTE 1)

### 1-2 System Exclusive Messages
    A4 System Exclusive

```
  1st Byte = 1111 0000 (F0) : Exclusive Status
  2nd Byte = 0100 0010 (42) : KORG ID
  3rd Byte = 0011 nnnn (3n) : Format ID  n:MIDI Channel      Ex.Header
  4th Byte = 0011 0001 (31) : A4 ID
  5th Byte = 0fff ffff (ff) : Function Code
  6th Byte = 0ddd dddd (dd) : Data
                 :          :          :
  LastByte = 1111 0111 (F7) : End of Exclusive
```

| Func | Description | R | D | E |
|------|-------------|---|---|---|
| 40 | PROGRAM PARAMETER DUMP | o | | |
| 50 | ALL PROGRAM DUMP | o | o | |
| 26 | RECEIVE MESSAGE FORMAT ERROR | o | | o |
| 23 | DATA LOAD COMPLETED | | | o |
| 24 | DATA LOAD ERROR | | | o |

  Transmitted when
R : Request message is received
D : Data dump by switch
E : Exclusive message received

## 2. RECOGNIZED RECEIVE DATA

### 2-1 Channel Messages

| Status | Second | Third | Description |
|--------|--------|-------|-------------|
| 1100 nnnn | 00pp pppp | ---- ---- | Program Change |

        nnnn : MIDI Channel Number
    pp pppp : Program Number (NOTE 1)
           (Data beyond value of 59 are ignored.)

### 2-2 System Exclusive Messages

| Func | Description |
|------|-------------|
| 0F | ALL DATA DUMP REQUEST |
| 10 | PROGRAM PARAMETER DUMP REQUEST |
| 40 | PROGRAM PARAMETER DUMP |
| 50 | ALL DATA DUMP |

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

## (1) ALL PROGRAM DUMP REQUEST                                              R

| Byte | Description | |
|------|-------------|---|
| F0, 42, 3n, 31 | Exclusive Header | |
| 0000 1111 | All Data Dump Request | 0F |
| 0000 000m | Member Code | (NOTE 2) |
| 1111 0111 | EOX | |

Receives this message, and transmits Func=50 or Func=24 message.

## (2) PROGRAM DUMP REQUEST                                                  R

| Byte | Description | |
|------|-------------|---|
| F0, 42, 3n, 31 | Exclusive Header | |
| 0001 0000 | Data Dump Request | 10 |
| 0000 000m | Member Code | (NOTE 2) |
| 1111 0111 | EOX | |

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

## (3) PROGRAM PARAMETER DUMP                                             R, T

| Byte | Description | |
|------|-------------|---|
| F0, 42, 3n, 31 | Exclusive Header | |
| 0100 0000 | Program Parameter Dump | 40 |
| 0000 000m | Member Code | (NOTE 2) |
| 0ddd dddd | Data | (NOTE 3) |
| ... | ... | |
| 1111 0111 | EOX | |

Receives this message and data, and transmits Func=23 or Func=24 message.
Receives Func=10 message, and transmits this message and data.

## (4) ALL PROGRAM DUMP                                                   R, T

| Byte | Description | |
|------|-------------|---|
| F0, 42, 3n, 31 | Exclusive Header | |
| 0101 0000 | All Data Dump | 50 |
| 0000 000m | Member Code | (NOTE 2) |
| 0ddd dddd | Data | (NOTE 4) |
| ... | ... | |
| 1111 0111 | EOX | |

Receives this message and data, and transmits Func=23 or Func=24 message.
Receives Func=0F message, and transmits this message and data.
Transmits this message and data by DUMP sw.

## (5) MIDI IN DATA FORMAT ERROR                                            T

| Byte | Description | |
|------|-------------|---|
| F0, 42, 3n, 31 | Exclusive Header | |
| 0010 0110 | MIDI In Data Format Error | 26 |
| 1111 0111 | EOX | |

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

## (6) DATA LOAD COMPLETED                                                    T

| Byte | Description | |
|------|-------------|---|
| FO, 42, 3n, 31<br>0010 0011<br>1111 0111 | Exclusive Header<br>Data Load Completed<br>EOX | 23 |

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

## (7) DATA LOAD ERROR                                                        T

| Byte | Description | |
|------|-------------|---|
| FO, 42, 3n, 31<br>0010 0100<br>1111 0111 | Exclusive Header<br>Data Load Error<br>EOX | 24 |

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


NOTE 1 : 00 - 29 : User Program
         30 - 59 : Preset Program

NOTE 2 : m = 0 : A4 GUITAR
             1 : A4 BASS


```
  Dump Data Format
        for PROGRAM PARAMETER DUMP and ALL PROGRAM DUMP DATA
              n = 0, 1, ...
  DATA ( 1set = 8bit x 7byte)
  b7          b0  b7              b0   b7              b0

   7n+0            7n+1      7n+5          7n+6

  MIDI DATA ( 1set = 7bit x 8byte)
  b7b7b7b7b7b7b7      b6        b0     b6          b0

  7n+6,5,4,3,2,1,0    7n+0      7n+5          7n+6
```
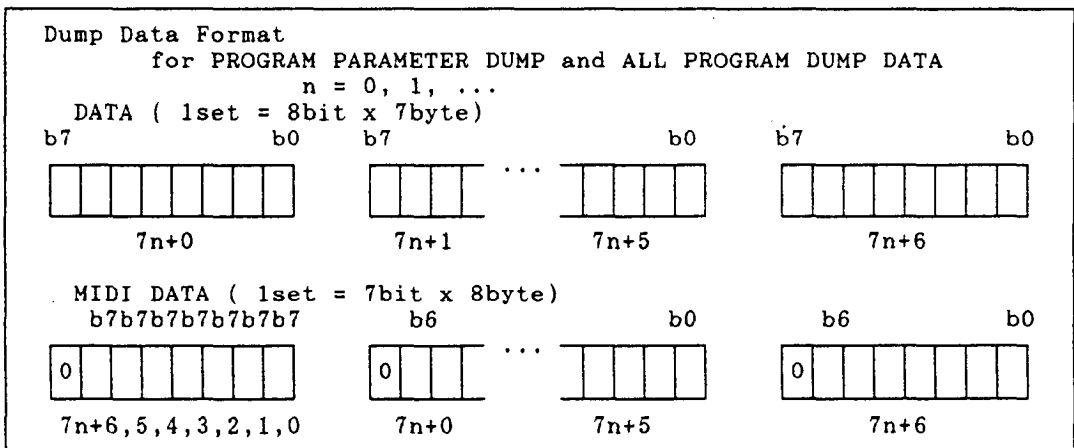
NOTE 3 : Program Parameter Dump Format
               21 = 7 x 3 --> 8 x 3 = 24byte

NOTE 4 : All Data Dump format
            [Prog.11 (21byte)], ... , [Prog.56 (21byte)]
               21 x 30 = 630 = 7 x 90 --> 8 x 90 = 720byte

BASS
TABLE 1    PROGRAM PARAMETERS

| OFFSET NO. | PARAMETERS | DATA(HEX)  :  VALUE |
|---|---|---|
| 00 | COMP DYNA EXCITOR   ON/OFF<br>6 BAND EQ            ON/OFF<br>SYNTH BASS           ON/OFF<br>DELAY                ON/OFF<br>CHORUS / FLANGER     ON/OFF<br>REVERB               ON/OFF<br>EXTERNAL CONTROL 1<br>EXTERNAL CONTROL 2 | bit 0      0:OFF, 1:ON<br>bit 1      0:OFF, 1:ON<br>bit 2      0:OFF, 1:ON<br>bit 3      0:OFF, 1:ON<br>bit 4      0:OFF, 1:ON<br>bit 5      0:OFF, 1:ON<br>bit 6      0:CLOSE, 1:OPEN<br>bit 7      0:CLOSE, 1:OPEN |
| 01 | COMP/EXCT COMPRESSOR SENS<br>COMP/EXCT EXCITOR FREQ | bit 0~3         :   0 ~ 15<br>bit 4~7  0~15  :   0.9 ~ 8.0 |
| 02 | COMP/EXCT EXCITOR BLEND<br>COMP/EXCT LEVEL | bit 0~3  0~14  :  -2 ~ 12<br>bit 4~7         :   0 ~ 15 |
| 03 | 6 BAND EQ LOW GAIN<br>6 BAND EQ LOW MID GAIN | bit 0~3  0~14  :  -7 ~ 7<br>bit 4~7  0~14  :  -7 ~ 7 |
| 04 | 6 BAND EQ MID GAIN<br>6 BAND EQ HIGH MID GAIN | bit 0~3  0~14  :  -7 ~ 7<br>bit 4~7  0~14  :  -7 ~ 7 |
| 05 | 6 BAND EQ HIGH GAIN<br>6 BAND EQ PRESENCE GAIN | bit 0~3  0~14  :  -7 ~ 7<br>bit 4~7  0~14  :  -7 ~ 7 |
| 06 | 6 BAND EQ TRIM<br>SYNTH BASS SENS | bit 0~3         :   0 ~ 15<br>bit 4~7         :   0 ~ 7 |
| 07 | DELAY TIME x 100ms<br>DELAY TIME x 10ms | bit 0~3         :   0 ~ 9<br>bit 4~7         :   0 ~ 9 |
| 08 | DELAY TIME x 1ms<br>CHO/FLA SPEED | bit 0~3         :   0 ~ 9<br>bit 4~7  0~15  :   1 ~ 16 |
| 09 | CHO/FLA DEPTH<br>REVERB TIME | bit 0~3         :   0 ~ 15<br>bit 4~7  0~15           *1 |
| 10 | REVERB PRE DELAY<br>REVERB HIGH DAMP | bit 0~3  0~15  :   0 ~ 99<br>bit 4~7         :   0 ~ 15 |
| 11 | SYNTH MIX<br>COMP/EXCT COMPRESSOR ATTACK | bit 0~4         :   0 ~ 30<br>bit 5~7         :   0 ~ 7 |
| 12 | DELAY FEEDBACK<br>COMP/EXCT EXCITOR DYNAMICS | bit 0~4  0~30  :  -15 ~ 15<br>bit 5~7         :   0 ~ 7 |
| 13 | DELAY MIX<br>6 BAND EQ LOW MID FC | bit 0~4         :   0 ~ 30<br>bit 5~7  0~7   :   0.4 ~ 2.0 |
| 14 | CHO/FLA FEEDBACK<br>6 BAND EQ MID FC | bit 0~4  0~30  :  -15 ~ 15<br>bit 5~7  0~7   :   1.0 ~ 5.0 |
| 15 | REVERB MIX<br>6 BAND EQ HIGH MID FC | bit 0~4         :   0 ~ 30<br>bit 5~7  0~7   :   2.0 ~ 10 |
| 16 | 6 BAND EQ HIGH FC<br>6 BAND EQ PRESENCE FC<br>CHO/FLA MODE<br>SYNTH BASS MODE | bit 0~2  0~7   :   0.6 ~ 3.2<br>bit 3~5  0~7   :   2.0 ~ 10<br>bit 6    0,1   :   1, 2<br>bit 7    0,1   :   1, 2 |
| 17 | CHO/FLA TIME<br>REVERB MODE | bit 0~5  0~63  :   0 ~ 75<br>bit 6~7  0~2   :   1 ~ 3 |
| 18 | CHO/FLA MIX<br>SYNTH BASS DECAY | bit 0~4         :   0 ~ 30<br>bit 5~7         :   0 ~ 7 |
| 19 | NOISE REDUCTION LEVEL<br>SYNTH BASS TONE | bit 0~4         :   0 ~ 30<br>bit 5~7         :   0 ~ 7 |
| 20 | MASTER VOLUME<br>DELAY HIGH DAMP | bit 0~4         :   0 ~ 30<br>bit 5~7         :   0 ~ 7 |

*1        0.3 ~ 2.0 (mode 1)
          0.4 ~ 10  (mode 2,3)

## A4 MIDI Inplementation Chart

| Function | | Transmitted | Recognized | Remarks |
|---|---|---|---|---|
| Basic Channel. | Default | 1~16 | 1~16 | Memorized |
| | Changed | 1~16 | 1~16 | |
| Mode | Default | | 3 | |
| | Messages | × | × | |
| | Altered | ................. | | |
| Note Number | | × | × | |
| | : True Voice | × | × | |
| Velocity | Note ON | × | × | |
| | Note OFF | × | × | |
| After Touch | Key's | × | × | |
| | Channels | × | × | |
| Pitch Bender | | × | × | |
| Control Change | 1~127 | × | × | |
| Program Change | | 00~59 | 00~59 | *1 |
| | :True # | ................. | | |
| System Exclusive | | ○ | ○ | *2 |
| System Common | : Song Pos | × | × | |
| | : Song Sel | × | × | |
| | : Tune | × | × | |
| System Real Time | : Clock | × | × | |
| | : Command | × | × | |
| Aux Message | : Local On/OFF | × | × | |
| | : All Notes OFF | × | × | |
| | : Active Sense | × | × | |
| | : Reset | × | × | |

Notes   *1. See MIDI Program Chart.
　　　　*2. All Program Dump. Transmittable and receivable only when the Utility is set to the MIDI channel.

Mode1 : OMNI ON, POLY　　　Mode 2 : OMNI ON, MONO　　　○ : Yes
Mode3 : OMNI OFF, POLY　　　Mode 4 : OMNI OFF, MONO　　　× : No

- For those who create their own programs, please do so within the guidelines set for the parameters. Please duplicate this page as necessary.

| BANK NO    PROG NO | A4B PROG | | | | | |
|---|---|---|---|---|---|---|
| COMP/DYNAEXCITER | SENS | ATTACK | EXCITE FREQ | EXCITE BLEND | DYNAMICS | LEVEL |
| | | | | | | |
| 6 BAND EQ | LOW GAIN | LOW MID GAIN | MID GAIN | HI MID GAIN | HIGH GAIN | PRESENCE |
| | | | | | | |
| | MASTER TRIM | LOW MID fc | MID fc | HI MID fc | HI fc | PRESENCE fc |
| | | | | | | |
| SYNTH BASS | MODE | SENS | DECAY TIME | TONE | | MIX |
| | | | | | | |
| DELAY | DELAY TIME | DELAY TIME | DELAY TIME | FEED BACK | HIGH DAMP | MIX |
| | | | | | | |
| CHORUS/FLANGER | MODE | DELAY TIME | SPEED | DEPTH | FEEDBACK | MIX |
| | | | | | | |
| REVERB | MODE | REVERB TIME | PRE DELAY | HIGH DAMP | | MIX |
| | | | | | | |
| UTILITY | TUNER CALIB | MIDI CH | EXT. CTRL | | NR LEVEL | LEVEL |
| | | | | | | |

| BANK NO    PROG NO | A4B PROG | | | | | |
|---|---|---|---|---|---|---|
| COMP/DYNAEXCITER | SENS | ATTACK | EXCITE FREQ | EXCITE BLEND | DYNAMICS | LEVEL |
| | | | | | | |
| 6 BAND EQ | LOW GAIN | LOW MID GAIN | MID GAIN | HI MID GAIN | HIGH GAIN | PRESENCE |
| | | | | | | |
| | MASTER TRIM | LOW MID fc | MID fc | HI MID fc | HI fc | PRESENCE fc |
| | | | | | | |
| SYNTH BASS | MODE | SENS | DECAY TIME | TONE | | MIX |
| | | | | | | |
| DELAY | DELAY TIME | DELAY TIME | DELAY TIME | FEED BACK | HIGH DAMP | MIX |
| | | | | | | |
| CHORUS/FLANGER | MODE | DELAY TIME | SPEED | DEPTH | FEEDBACK | MIX |
| | | | | | | |
| REVERB | MODE | REVERB TIME | PRE DELAY | HIGH DAMP | | MIX |
| | | | | | | |
| UTILITY | TUNER CALIB | MIDI CH | EXT. CTRL | | NR LEVEL | LEVEL |
| | | | | | | |

# PROGRAM LIST

| | 1 EQ | 2 w/Delay, Rev | 3 w/Chorus | 4 Synth Bass | 5 Synth Bass | 6 Synth Bass |
|---|---|---|---|---|---|---|
| **Bank 1** | Bright Slap *1 1* | Slap Delay *1 2* | Bass Chorus *1 3* | Pop Attack *1 4* | Synth Bass Chorus *1 5* | Reso Bass *1 6* |
| **Bank 2** | Funk Storm *2 1* | Room Reverb *2 2* | Slight Flange *2 3* | Sub Harmonic *2 4* | Half Reso Mix *2 5* | Euphonic Bass *2 6* |
| **Bank 3** | Dyna-X *3 1* | Pizzicato *3 2* | Deep Flange *3 3* | Slap Mix *3 4* | Sub Harmonic *3 5* | Funk Wig *3 6* |
| **Bank 4** | Big Thumb *4 1* | Ambience *4 2* | Fretless Solo *4 3* | Fuzz Bass *4 4* | Digilog Bass *4 5* | Drone *4 6* |
| **Bank 5** | Shuffle *5 1* | Dripping Wet *5 2* | Ballad *5 3* | Fuzz Bass *5 4* | Fretless Synth *5 5* | Synth Bass Solo *5 6* |

★ At the time of factory shipping, a program and a preset area are included in the user area.

# SPECIFICATIONS AND OPTIONS

- Internal Effects
  COMPRESSOR, DYNAMIC EXCITER, 6-BAND EQ, SYNTH BASS, DELAY, CHORUS/FLANGER, REVERB,
  NOISE REDUCTION

- Programs
  Preset: 30
  User programmable: 30

- Front Panel
  Volume: INPUT VOLUME, PARAMETER EDITORS, OUTPUT VOLUME
  Keys/Switches: BANK UP SWITCH, WRITE KEY, USER/PRESET KEY, BYPASS/TUNE SWITCH, EFCT/PROG
  SWITCHES, PROG EDIT SELECT SWITCH, MODE(Effect) SELECT KEYS(UP, DOWN)
  Display: BANK/VALUE Display: 8 segment LED x 2
  Dot type LEDs: EFCT/PROG LEDs, MODE LEDs, Peak Indicator

- Rear Panel
  Power Switches
  DC9V Jack
  INPUT Terminal
  OUTPUT Terminal (2) (R, L/MONO)
  PHONES Jack
  VOLUME PEDAL Jack
  EXTERNAL CONTROL OUTPUT Terminal (2) (1,2)
  MIDI Terminal (2) (IN, OUT)

- Sampling Frequency: 48kHz

- Dynamic Range: 90dB or more (IHF – A, when bypassing)

- TUNER:
  Measurement Range: Aø-C7
  Measurement Accuracy: ±0.5 cent.
  Power Supply: DC9V.

- Power Consumption: 350mA

- Maximum Input Level/Impedance: +7dBu/1MΩ

- Maximum Output Level/Impedance: +7.5dBu/1k Ω

- Dimensions: 498 (W) x 227.5 (D) x 48.7 (H) mm

- Weight: 2.2kg

- Options: Volume Pedal KVP – 001

★ Specifications, operations, and appearance are subject to change without notice.