Roland

MIDI LINEAR SYNTHESIZER

D-50

Owner's Manual

BASIC
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The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK OR INJURY TO PERSONS.

IMPORTANT SAFETY INSTRUCTIONS

WARNING When using electric products, basic precautions should always be followed, 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, or near a swimming pool, or the like.
4. This product should be used only with a cart or stand that is recommended by the manufacture.
5. 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 a high volume level or at level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
6. The product should be located so that its location or position does not interfere with its proper ventilation.
7. The product should be located away from heat sources such as radiators, heat registers or other products that produce heat.
8. The product should avoid using in where it may be effected by dust.
9. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
10. The power-supply cord of the product should be unplugged from the outlet when left unused for a long period of time.
11. Do not tread on the power-supply cord.
12. Do not pull the cord but hold the plug when unplugging.
13. When setting up with any other instruments, the procedure should be followed in accordance with instruction manual.
14. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
15. The product should be serviced by qualified service personnel when:
    A: The power-supply cord or the plug has been damaged; or
    B: Objects have fallen, or liquid has been spilled into the product; or
    C: The product has been exposed to rain; or
    D: The product does not appear to operate normally or exhibits a marked change in performance; or
    E: The product has been dropped, or the enclosure damaged.
16. Do not attempt to service the product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.

SAVE THESE INSTRUCTIONS

ADVARSEL!

Lithiumbatteri. Eksplosionsfare.
Udskiftning må kun foretages af en sagkyndig, og som beskrevet i servicemanual.

VARNING!

Lithiumbatteri. Explosionsrisk.
Får endast bytas av behörig servicetekniker.
Se instruktioner i servicemanualen.

ADVARSEL!

Lithiumbatteri. Fare for eksplotion.
Må bare skiftes av kvalifisert tekniker som beskrevet i servicemanualen.

VAROITUS!

Lithiumparisto. Räjähdysvaara.
Pariston saa vaihtaa ainoastaan alan ammottimies.

WARNING

THIS APPARATUS MUST BE EARTH GROUNDED.

The three conductors of the mains lead attached to this apparatus are identified with color as shown in the table below, together with the matching terminal on the UK type power plug. When connecting the mains lead to a plug, be sure to connect each conductor to the correct terminal, as indicated.
"This instruction applies to the product for United Kingdom."

MAINS LEADS		PLUG
Conductor	Color	Mark on the matching terminal
Live	Brown	Red or letter L
Neutral	Blue	Black or letter N
Grounding	Green-Yellow	Green, Green-Yellow, letter E or symbol

Bescheinigung des Herstellers /Importeurs

Hiermit wird bescheinigt, daß der/die/das

ROLAND LINEAR SYNTHESIZER D-50

(Gerät und Bezeichnung)

in Übereinstimmung mit den Bestimmungen der

Amtsbl. Vfg 1046 / 1984

(Amtsblattverfügung)

funk-entstört ist.

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

Roland Corporation Osaka / Japan

(Name des Herstellers/Importeurs)

RADIO AND TELEVISION INTERFERENCE

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

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

This equipment has been tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J, of Part 15, of FCC Rules. These rules are designed to provide reasonable protection against such a interference in a residential installation. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by the following measure:

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

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

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

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

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

How to Identify and Resolve Radio-TV Interference Problems.

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

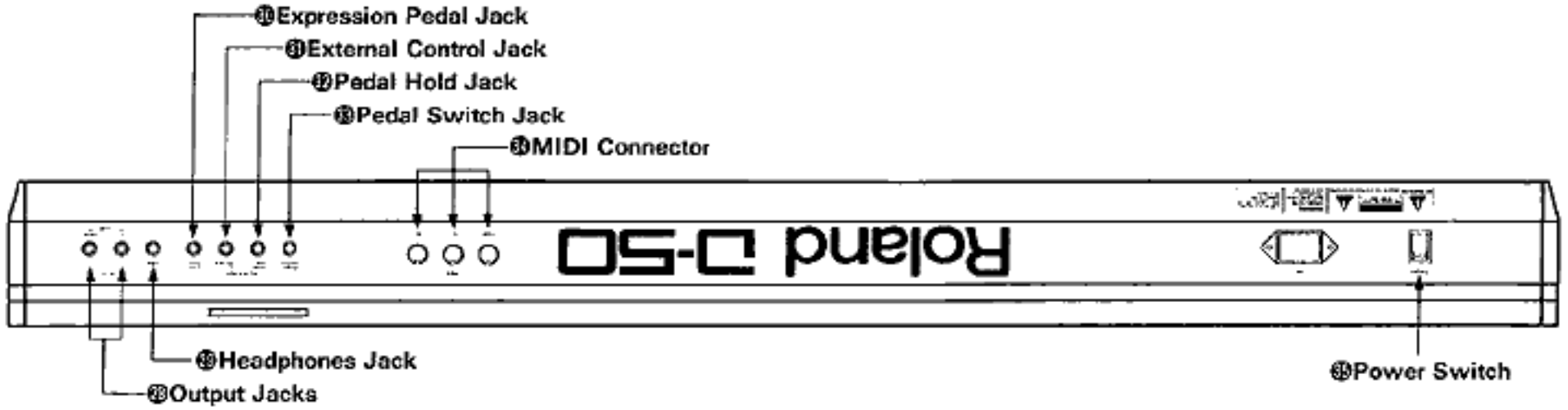
Please read the separate volume "MIDI", before reading this owner's manual.

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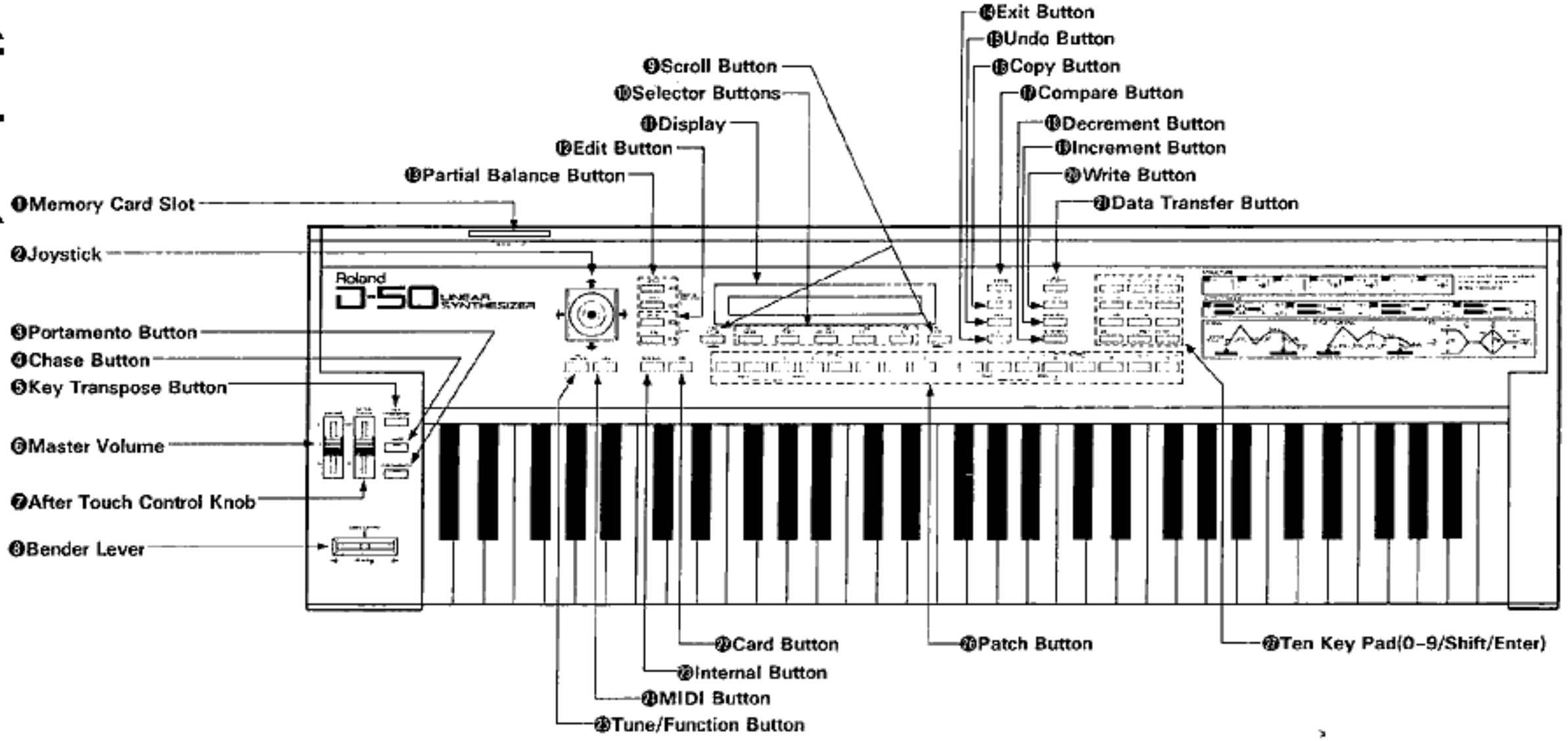
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Rear Panel



Front Panel



The Roland D-50 is a 61 key, 16 voice polyphonic programmable linear synthesizer.

FEATURES

- The D-50 can store up to 64 different patch programs.
- The D-50's **LA sound source** allows warm analog-type sounds as well as sharp attack digital-type sounds.
- Digital equalization, chorus and reverb effects are also built in.
- Each sound (Patch) can have different performance controlling functions (Factors).
- The data stored in the D-50's internal memory can be saved onto a Memory Card.
- The optional Programmer PG-1000 can be used for quicker and easier sound synthesis.

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IMPORTANT NOTES

Power

- The appropriate power supply for this unit is shown on its name plate. Please make sure that the line voltage in your country meets the requirement.

- Please do not use the same socket used for any noise generating device (such as a motor or variable lighting system.)

- This unit might not work properly if turned on immediately after being turned off. If this happens, simply turn it off and turn it on again after waiting a few seconds.

- It is normal for this unit to become hot while being operated.

- Before setting up this unit with other devices, turn this unit and all the other units off.

- When disconnecting the power plug from the socket, do not pull the cord but hold the plug to avoid damaging the cord.

- If the unit is not to be used for a long period of time, unplug the cord from the socket.

- Operating this device near a neon or fluorescent lamp may cause noise interference. If so, change the angle or the position of the device.

- Avoid using this device in extreme heat, humidity or where it may be affected by dust or vibration.

- Use a mild detergent for cleaning. Do not use solvents such as thinner.

- The D-50 features a memory back-up system that retains the data even when switched off. The battery that supports the back-up circuit should be replaced **every five years**. Call Roland for battery replacement.(The first replacement may be required before five years, depending on how much time had passed before you purchased the device.

- To avoid accidental erasure or loss of data, please make a data memo, or save the data onto a Memory Card. If it happens to be erased while the device is being repaired, there is no way to restore the data.

*** When the battery is low, the Display defaults as shown below, and the data in the memory may be lost.**

```
Check Internal Battery
```

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1 OUTLINE OF THE D−50

The ROLAND D−50 is very different from any other synthesizer, past or present, and as such heralds the dawn of a new era in synthesis. In the past, synthesizers have progressed through several very diffrent stages. Firstly, there were ANALOG synthesizers, which relied on a variety of components, such as, VCO's, VCF's, and VCA's. These analog building blocks were relatively easy to understand and program, and they could produce sounds of remarkable warmth and character. However, when it came to accurately simulating acoustic sounds, the process could easily become too involved.

On the other hand, the next breed of synthesizers, known as DIGITAL synthesizers, could easily simulate acoustic sounds, yet they were far more difficult to program. Furthermore, the digital technology behind these instruments seemed to imply that a different type of sound should occur. In general, just as an analog synthesizer would be described as "warm" in character, the digital counterpart was very often "thin". Essentially, the two types complemented each other, one being easy to program, the other capable of accurate simulation.

The ROLAND D−50 has now changed all that. Thanks to a new custom disigned Integrated Circuit known as the 'LA CHIP'. Here, LA stands for Linear Arithmetic synthesis which is the heart of the new technology. LA synthesis involves a great many technological advances resulting not only in a superior sound quality but also an improved ease of programming. In this way, Roland has succeeded in maintaining a high degree of familiarity to the user despite the technical wizardry involved.

To explain the D−50 in a very simple manner, we must begin by saying that it is the next step in DIGITAL synthesizers. This means that the sound is entirely computer generated. In fact, the D−50 has four distinct sections :

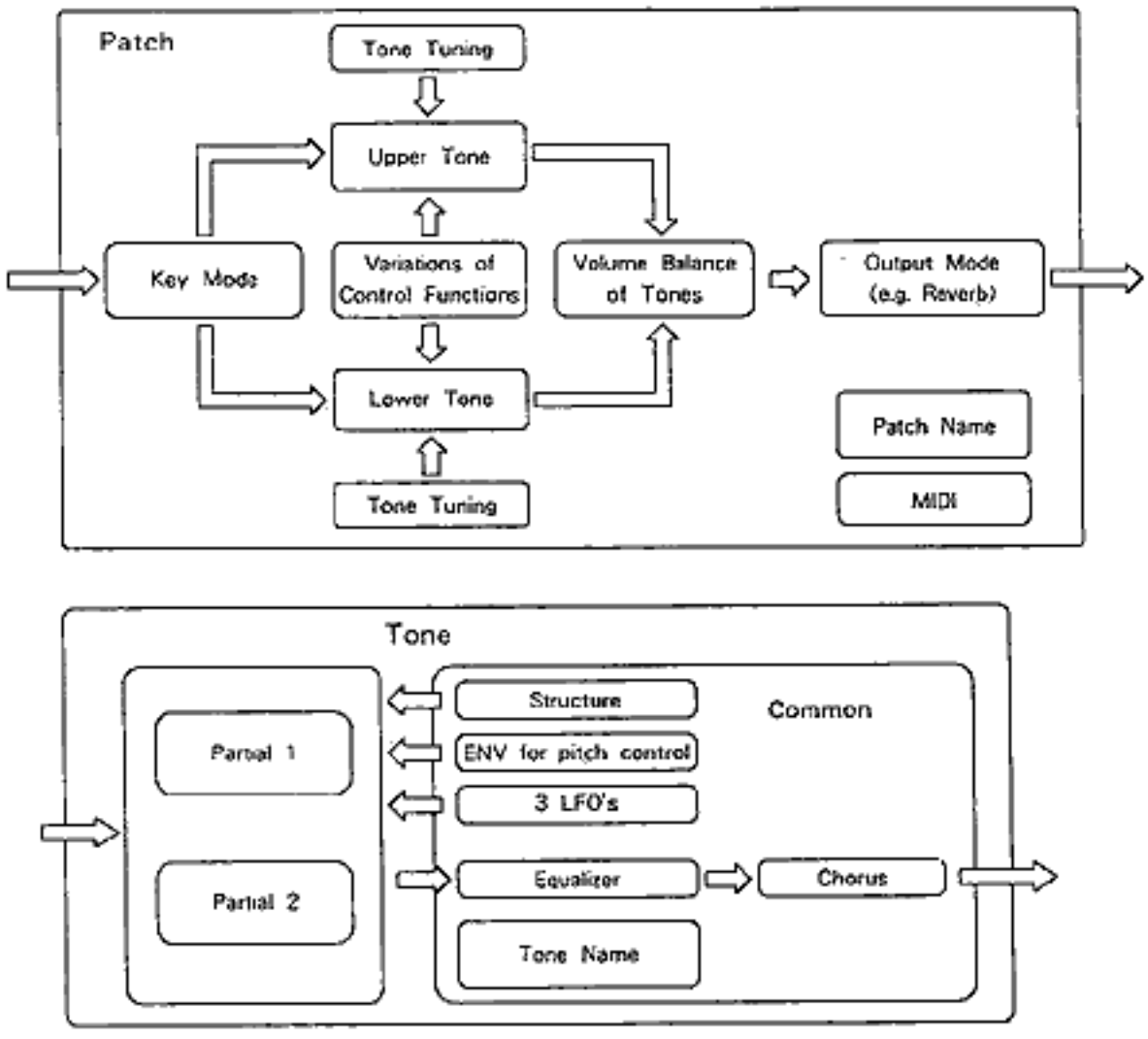
1. A Digital Synthesizer
2. A Digital Equalizer
3. A Digital Chorus section

and 4. A Digital Reverberation section.

Moreover, these four sections occur entirely within the DIGITAL DOMAIN, resulting in a sound quality far beyond that of four similar units combined. Consequently, the musician can take advantage of a complete instrument, one that requires no additional effects or processing.

However, the true power of LA Synthesis lies within the Digital Synthesizer section of the D−50. Remember, first of all, that this is a totally digital instrument, even though the sound would seem to suggest far more. Through LA synthesis, the D−50 appears to have four powerful synthesizers built in. Each of these hypothetical synthesizers could behave like a conventional analog syntheizer, or a PCM sampled synthesizer. Consequently, they are referred to as PARTIALS, since they are far more than just a pure synthesizer. These Partials are combined in pairs to form a TONE. A Tone could either be a mix of the two Partials, or they could take advantage of the LA version of cross modulation. In this way, some of today's more popular digital sounds are remarkably easy to achieve.

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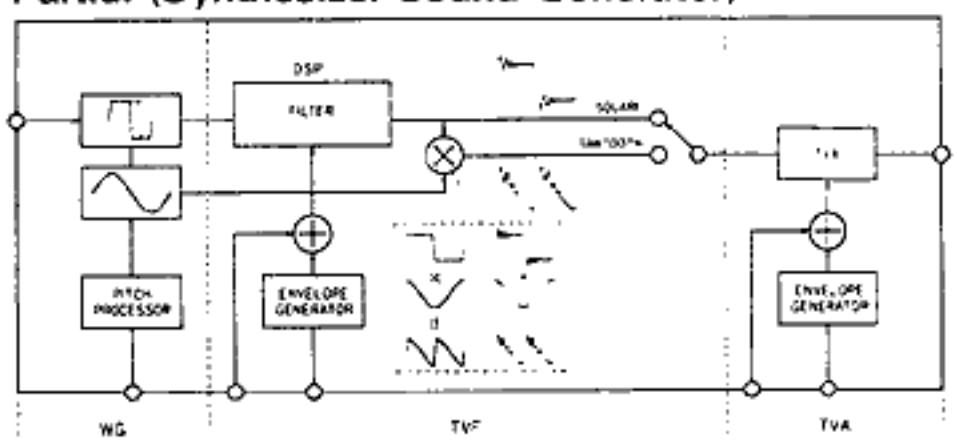


During live performance, you can easily select a PATCH, which is the combination of two Tones, together with programmed E.Q., chorus and reverberation. These other parameters are referred to as COMMON parameters since they are common to both Tones. Throughout the process of programming the D–50, the operation remains simple and logical. Even so, to further improve the ease with which sound can be created, an optional programmer, the PG–1000 is available, which graphically displays all the parameters of the D–50, making it exceptionally simple to operate.

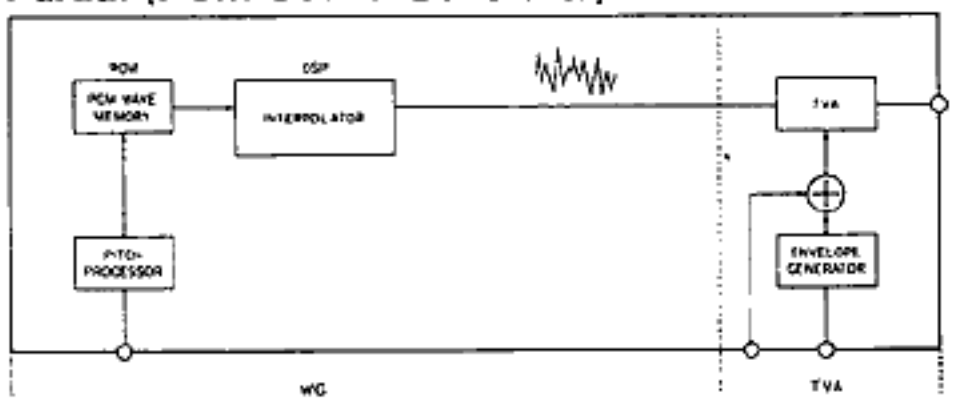
However, it is the performance characteristics such as after–touch, and the control of every aspect of the sound that makes the D–50 a totally new instrument. These things and a sound that can only be described as unique, the LA sound.

Partial Block Diagram

Partial (Synthesizer Sound Generator)

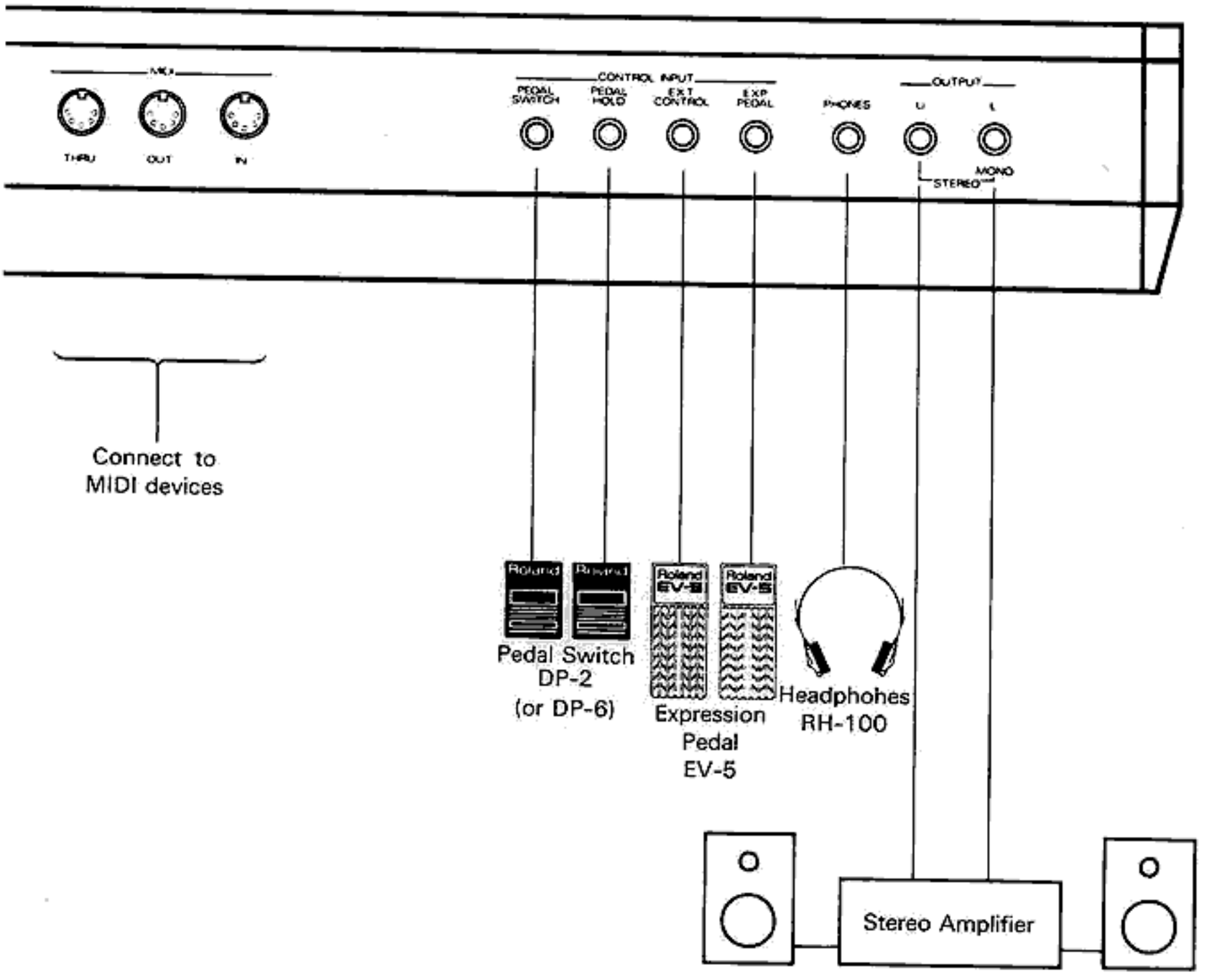


Partial (PCM Sound Generator)



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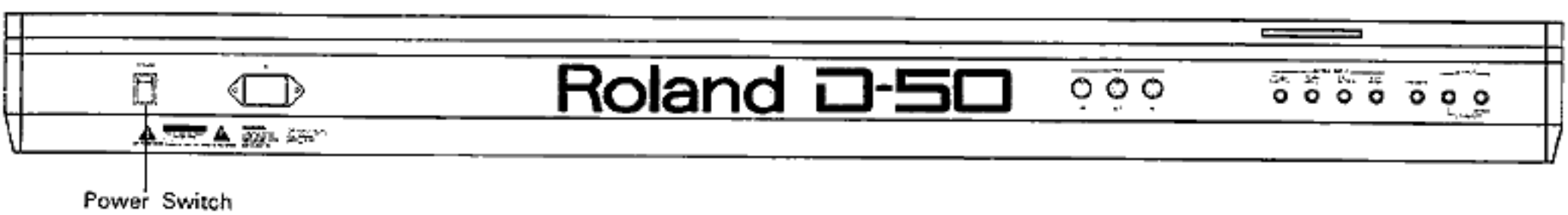
2 CONNECTION



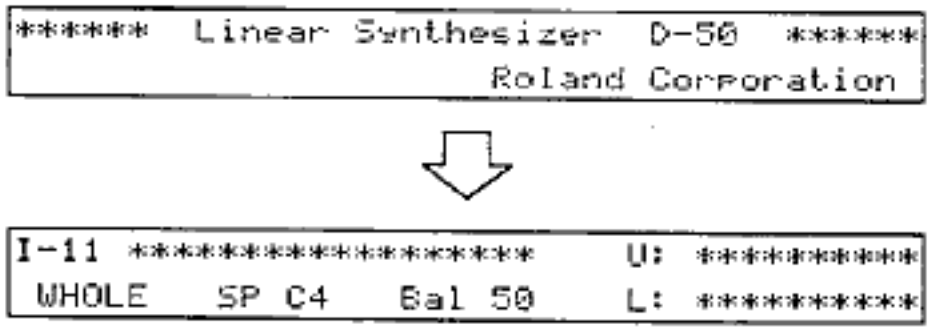
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3 PLAY MODE

Make sure that the D−50 is correctly and securely connected with the other devices, then turn the D−50 on.

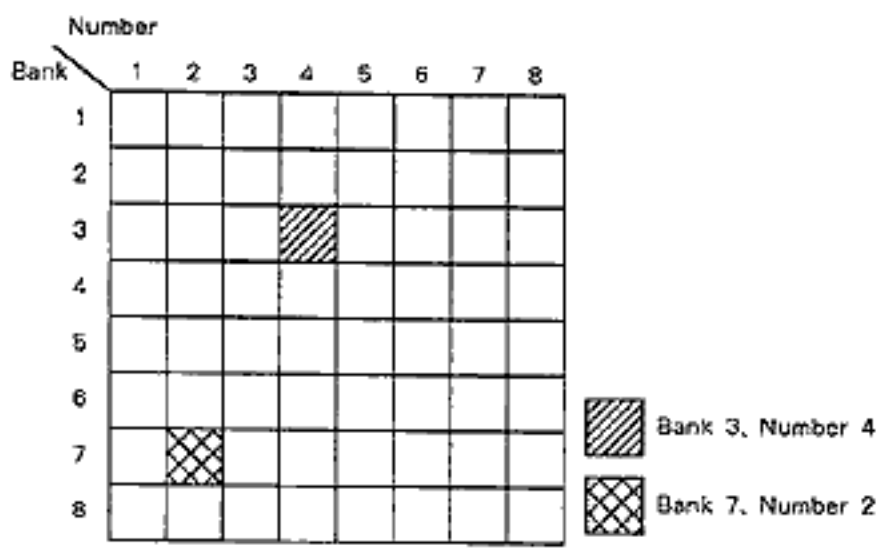


The Display responds as shown below.



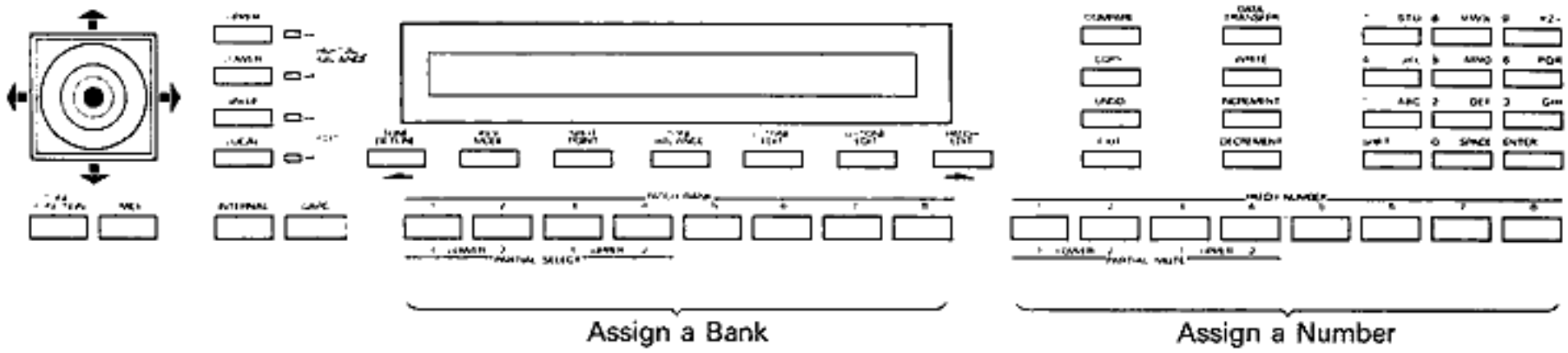
1. Patch Selection

The D−50 retains 64 different Patches. A Patch is represented by a Bank Number (1 to 8) and a Patch Number (1 to 8).

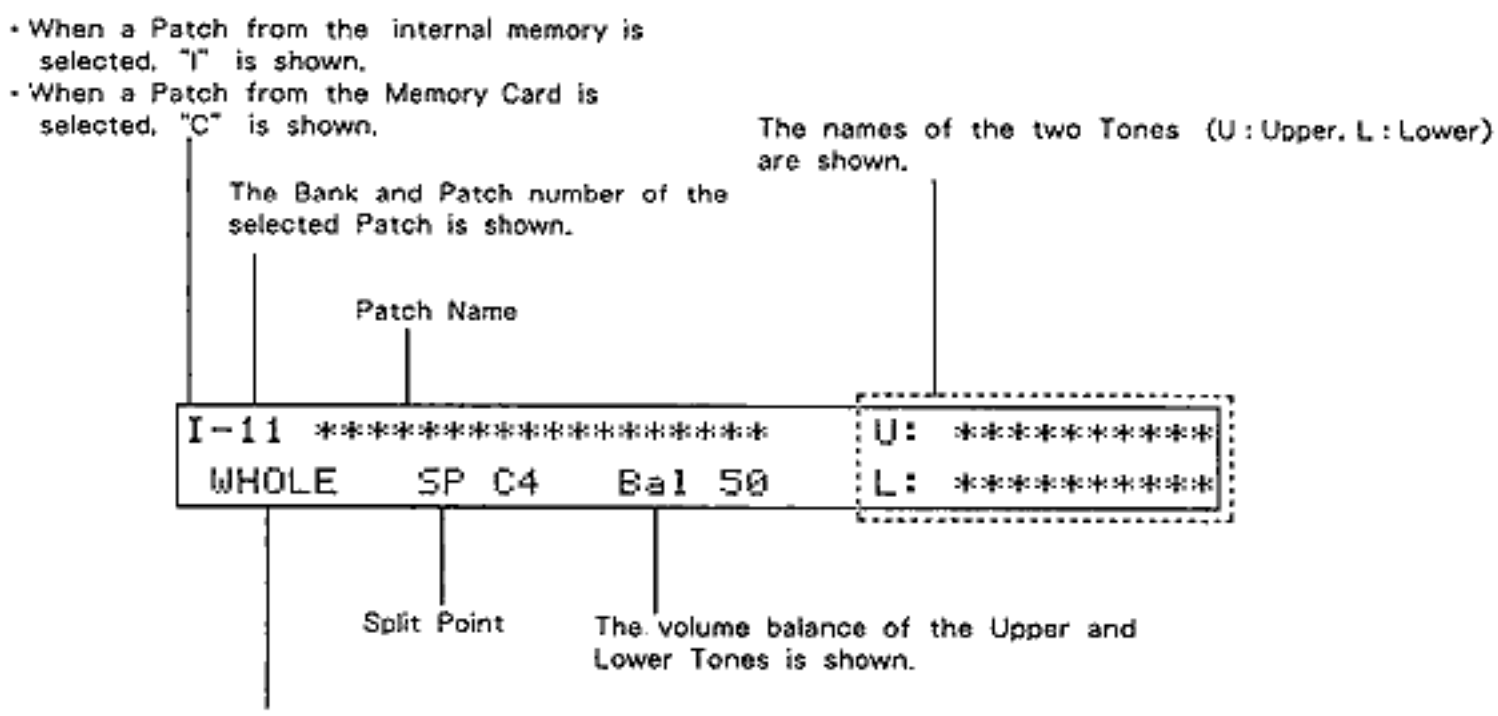


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To select a Patch, assign the relevant Bank and Patch number.



The Display shows the selected Patch.



• Key Mode is shown
Key Mode determines how the Upper and Lower Tones are played on the keyboard.

3 Key Modes

WHOLE	The Upper Tone is played on the entire keyboard in 16 voice polyphony.
DUAL	Both Upper and Lower Tones are played by each key in 8 voice polyphony.
SPLIT	This mode divides the keyboard of the D−50 into upper and lower sections where two different Tones can be used. Each section of the keyboard is 8 voice polyphonic. (Middle C=C4)

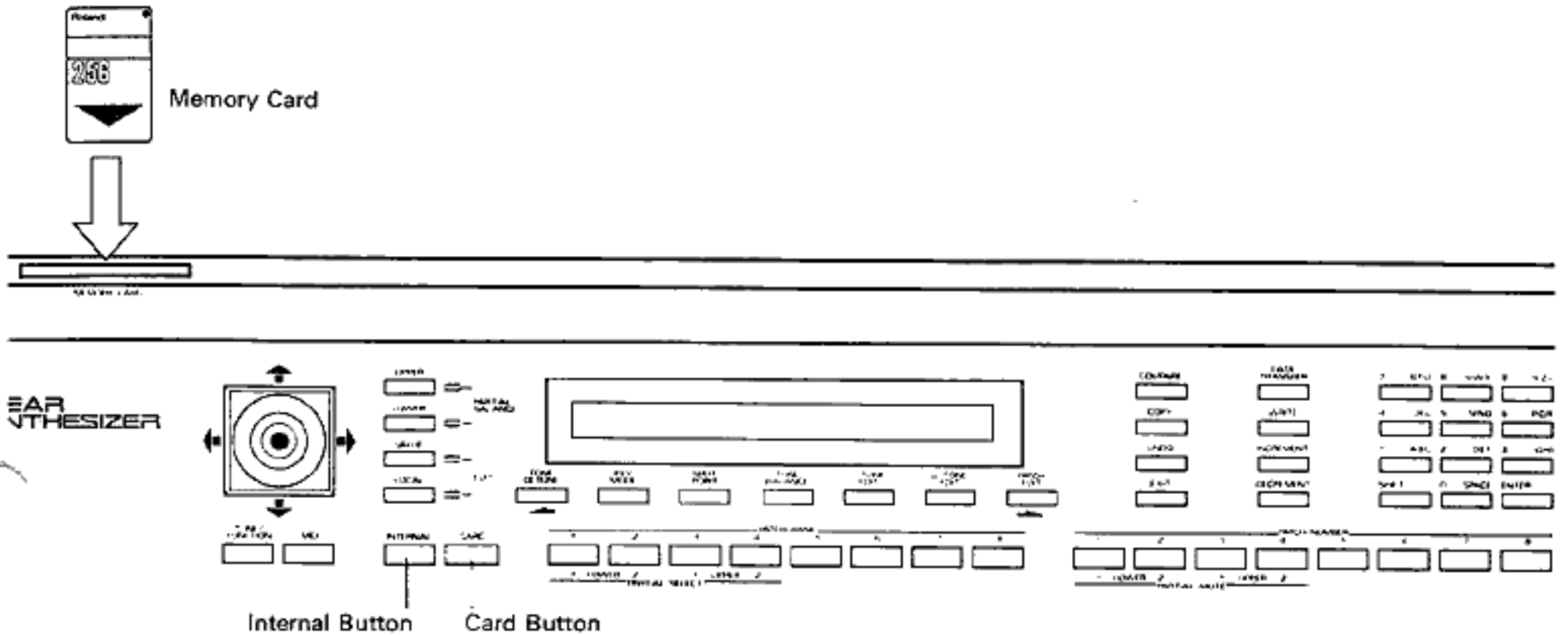
*Some other special Key Modes are also provided.

[MEMORY CARD]

Up to 64 different Patches can be stored on one Memory Card (M−256D). You can save the sounds you have made onto a Memory Card and recall them later.

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Connect the Memory Card securely and correctly as shown in the diagram.



To call a Patch on the Memory Card, simply push the Card Button. To return to the Internal Memory mode, push the Internal Button.

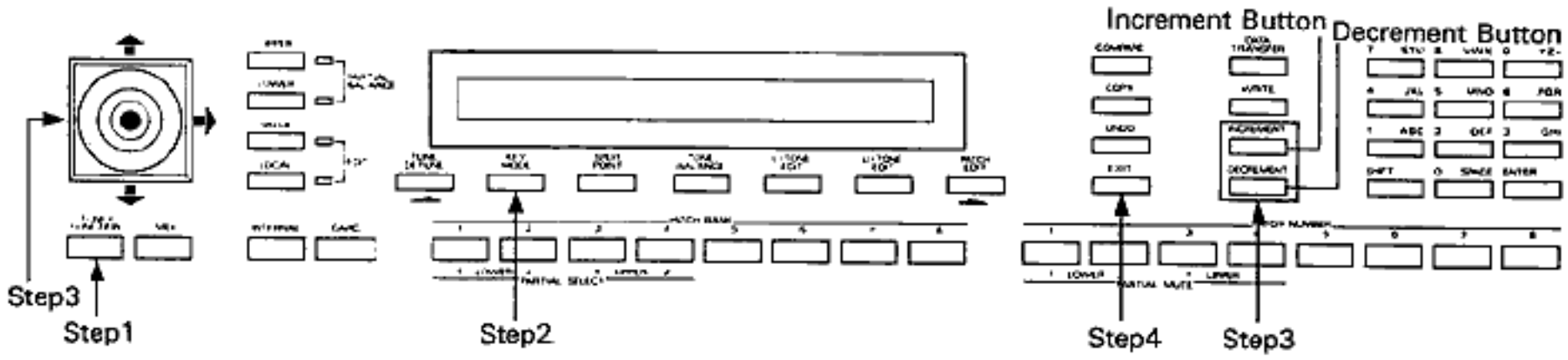
***The Patches preprogrammed on the supplied Memory Card (ROM) can be restored even if rewritten with new Patches.**

***Please be sure to use the correct Memory Card (e.g. the supplied Memory Card, M-256D, etc.).**

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2. TUNING

The D−50 can be tuned to other musical instruments.(Master Tune)

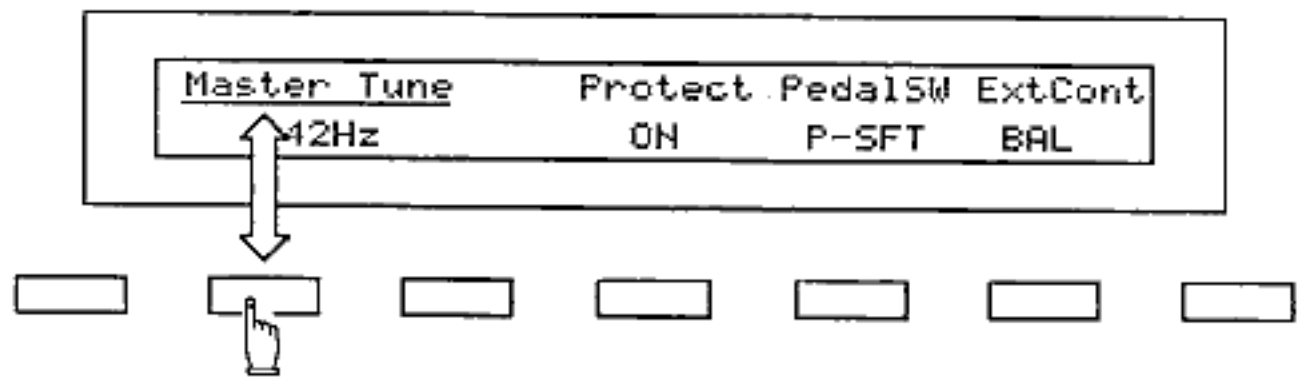


Step 1 **Push the Tune/Function Button.**

The Display will change.

Master Tune	Protect	PedalSW	ExtCont
442Hz	ON	P-SFT	BAL

Step 2 **Select "TUNING" using the appropriate Selector Button.**



This flashes when the corresponding Selector Button is pressed.

Master Tune	Protect	PedalSW	ExtCont
442Hz	ON	P-SFT	BAL

Step 3 **Tune the D−50 as follows.**

For fine tuning, use the Increment Button and the Decrement Button. Holding the Increment Button down raises the pitch, and the Decrement Button lowers pitch.

To change pitch drastically, move the Joystick right and left. Movement to the right raises pitch.

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The number shown in the Display is the frequency of the standard pitch (A=440). The number in the Display changes in 1Hz steps, but the pitch actually changes almost continuously.

Step 4 **Push the Exit Button, and the Display returns to the normal Play mode indication.**

The Master Tuning you have set is retained in memory even after the unit is turned off.

3. CONTROL FUNCTIONS

Control Functions can be effectively used for changing the sound during live performance.

***How each Control Function actually affects the sound differs depending on the individual Patch (Tone). Some Patches may not be affected at all.**

[Key Transpose]

This function transposes the entire keyboard in semi-tone steps, allowing you to play the same keyboard in different keys.

While holding the Key Transpose Button down (the Display shows as below), press the key which you wish to transpose to from −12 to +12(=1 octave).

If the value is set to other than zero, the indicator of the Key Transpose Button will light up.



ON

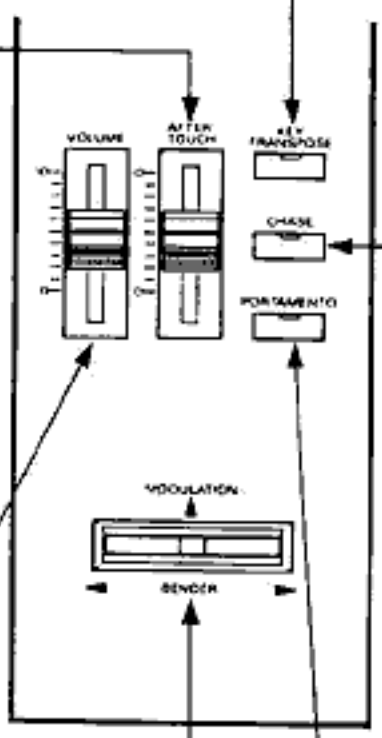
Key Transpose = 00

*The Key Transpose you have set will be retained even after the unit is turned off.



[Aftertouch Control Knob]

Aftertouch is the function that causes any change when the key is pushed harder after playing it in a normal manner. The change caused by the after-touch includes pitch, vibrato, timbre and volume. The maximum effect of the aftertouch is set individually in each Patch or Tone, but the overall sensitivity can be changed with this Knob.



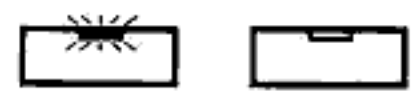
[Master Volume]

This controls the volume of the sounds sent from the Output Jack and the Headphone Jack.

[Chase Button]

The Chase function can output either Lower Tone slightly later than the Upper Tone which you have played. The Chase function is available in the Whole or Dual Key mode. When this function is used in some Patches, delay or sound-on-sound like effects can be obtained.

Pushing the Chase Button turns the function on, and pushing it again turns it off.



ON OFF

If the Chase Button is pushed in a Key Mode other than Whole or Dual, the Display responds as shown below without the Chase function being turned on.

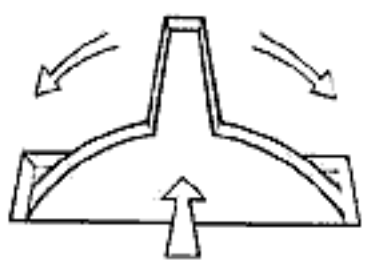
Set Key mode WHOLE or DUAL

[Bender Lever]

Using the Bender lever, you can change the pitches, or create a vibrato effect.

Pushing it to the left lowers the pitch.

Pushing it to the right raises the pitch.



Pushing it forward(in the direction of MODULATION) generates vibrato effects.

[Portamento Button]

Portamento is a slide from one pitch to another, and is often used for violin performance.

Pushing the Portamento Button turns the function on, and pushing it again turns it off.



ON OFF

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[Velocity]

Velocity refers to dynamics, controlling volume, pitch and timbre. This allows piano-like performance.

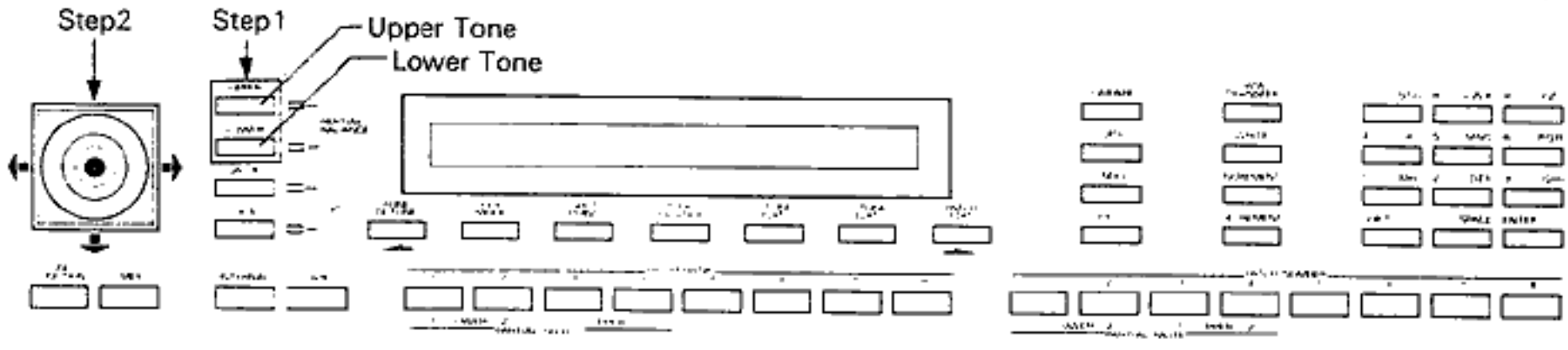
[Partial Balance]

Using the Joystick, the following two volume balance controls can be adjusted at the same time.

- Volume balance of the two Partial sounds of either Tone : Upper or Lower.
- Volume balance of the Upper and the Lower Tones.

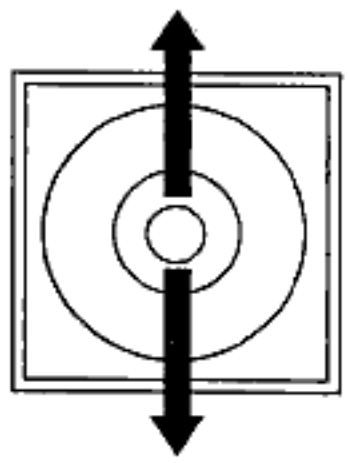
Partial Balance drastically changes the generated sounds.

Step 1 **Select either Tone with the Partial Balance Button.**

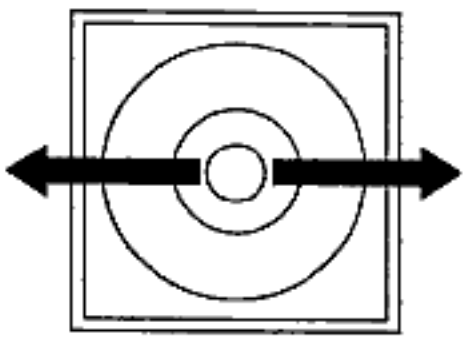


Pushing the button will light up the corresponding indicator.

Step 2 **By moving the Joystick, adjust the volume balance of the two Partial sounds and the Tones.**

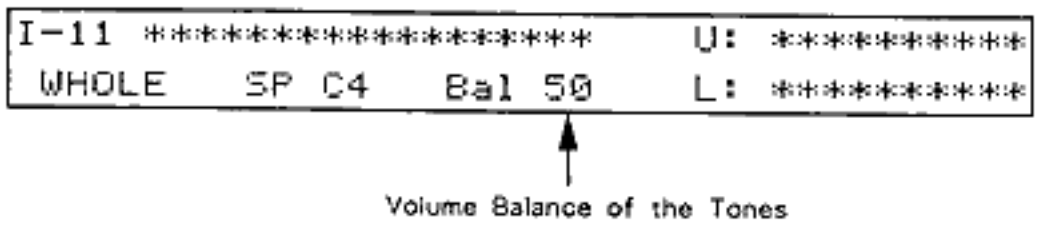


Volume balance of two Tones changes.



Volume balance of the selected Tone's Partials changes.

The volume balance of the Tones is shown in the Display.



Volume Balance of the Tones

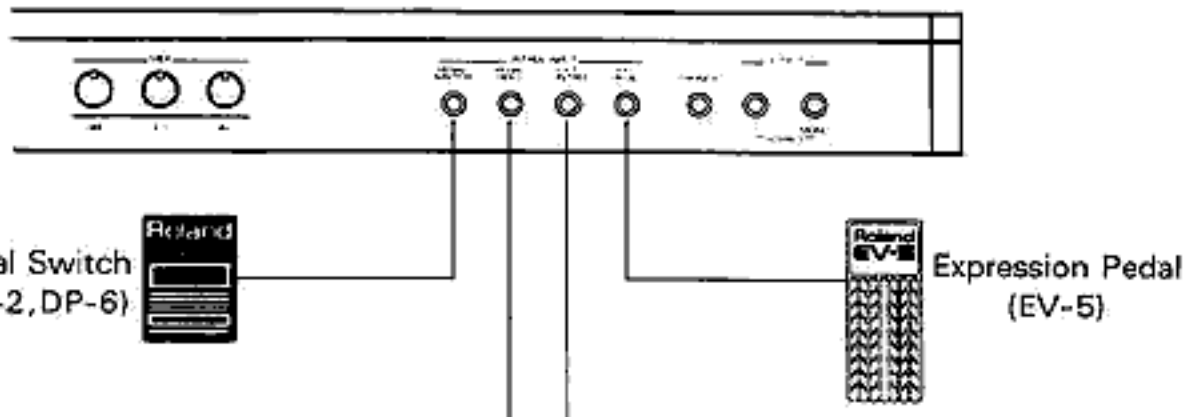
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* The volume balance you have set here is not automatically written into memory, and therefore will be erased when another Patch is selected.

* To write the Patch with a new Partial Balance setting, follow the "Writing Procedure" on page 28.

[Pedal Control]

By connecting a pedal to the Control Input Jack, you can control various functions with the pedal.



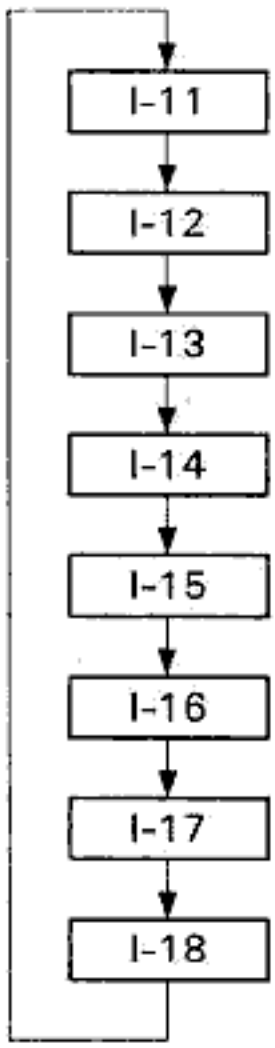
[Pedal Switch]

The connected pedal switch can control the function (parameter)which is selected in the Control Functions.

* Patch Shift function is selected by the manufacturer.

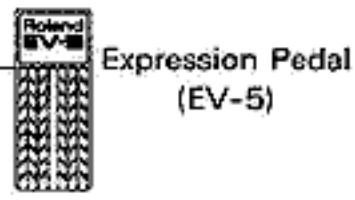
The Patch Shift function allows you to change the Patch Numbers sequentially.

(e. g.)



[Expression Pedal]

This controls the volume of sound.



[External Control]

A function selected in the Control Functions can be controlled.

* Tone Volume Balance is selected by the manufacturer.



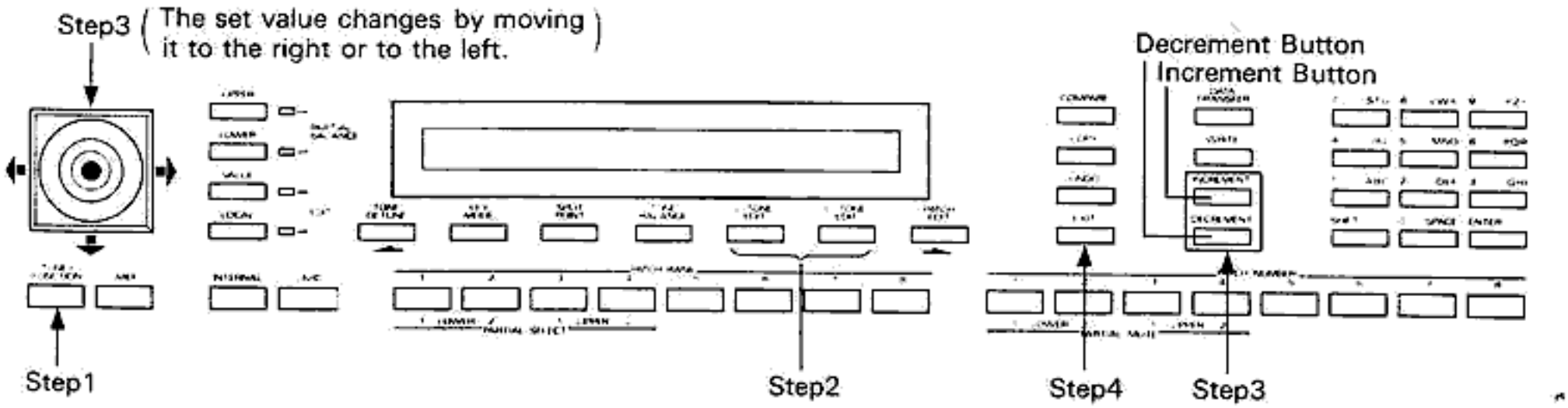
[Pedal Hold Sustain]

Turns on or off the Hold effect, which allows the sound to be held even after the key is released.

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● Changing Control Functions

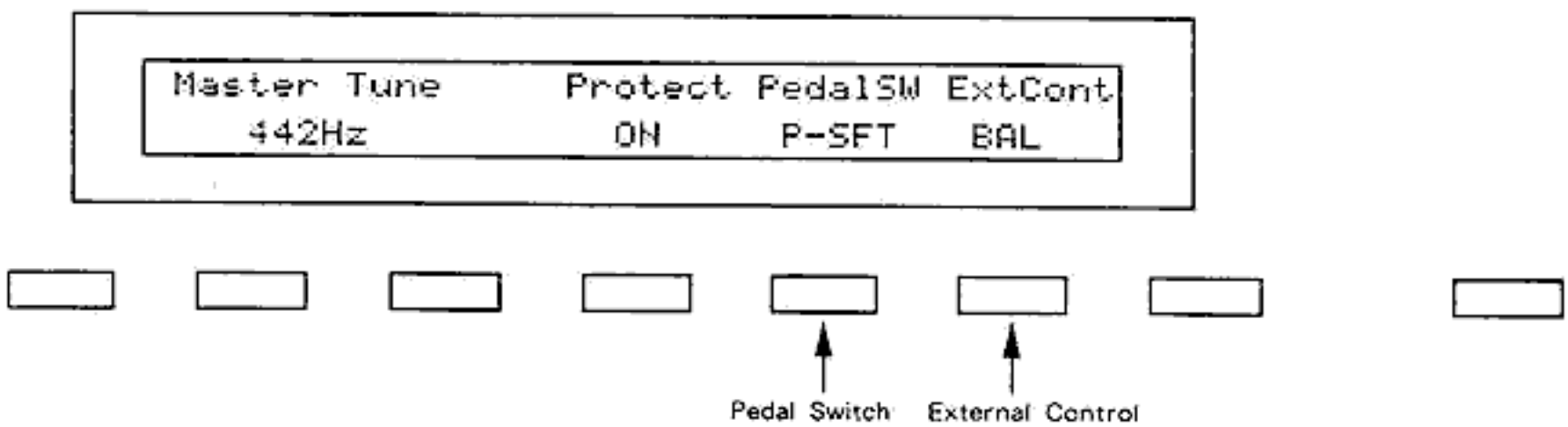
Each of the pedals connected to the Pedal Switch Jack and the External Control Jack can work differently, depending upon which function is assigned to each pedal.



Step 1 **Push the Tune/Function Button.**

The Display changes.

Step 2 **By using the appropriate Selector Button, select the pedal to which you wish to assign a function.**



Pushing the button will cause the function currently assigned to the pedal to flash.

Step 3 **By using the Joystick, or the Increment and Decrement Buttons, select the function to be asssigned.**

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The functions which can be assigned to each pedal are shown below.

Pedal Switch

Control Function	Description
P−SFT (Patch Shift)	Increases the Patch Number.
PORTA (Portamento)	Turns the Portamento effect on or off.
CHASE (Chase)	Turns the Chase effect on or off.
OFF	The D−50 cannot be controlled, but the connected MIDI device can be controlled. (See page 52 "MIDI" in the Advanced Course.)

External Control

Control Function	Description
BAL (Tone Balance)	Controls the volume balance of the Upper and the Lower Tones.
AFTER (Aftertouch)	Controls the Aftertouch effect.
MOD (Modulation)	Controls the vibrato effect.
OFF	The D−50 is not controlled, but the connected MIDI device can be controlled. (See page 52 "MIDI" in the Advanced Course.)

＊The Control Function set here will be retained even after the unit is turned off.

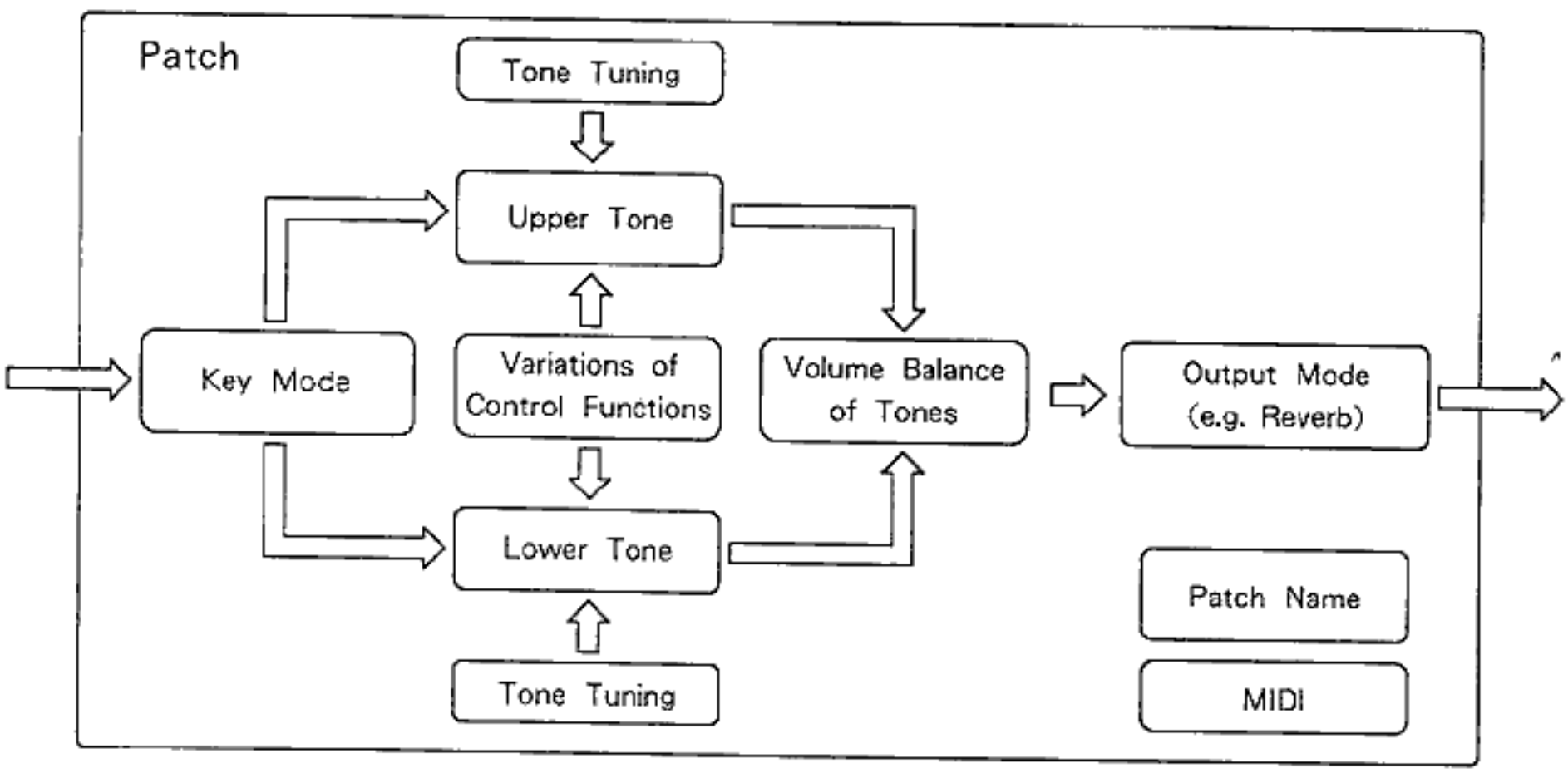
＊When AFTER is selected in the External Control section, aftertouch cannot be controlled by the keyboard.

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4 EDITING PERFORMANCE CONTROLLING FUNCTIONS

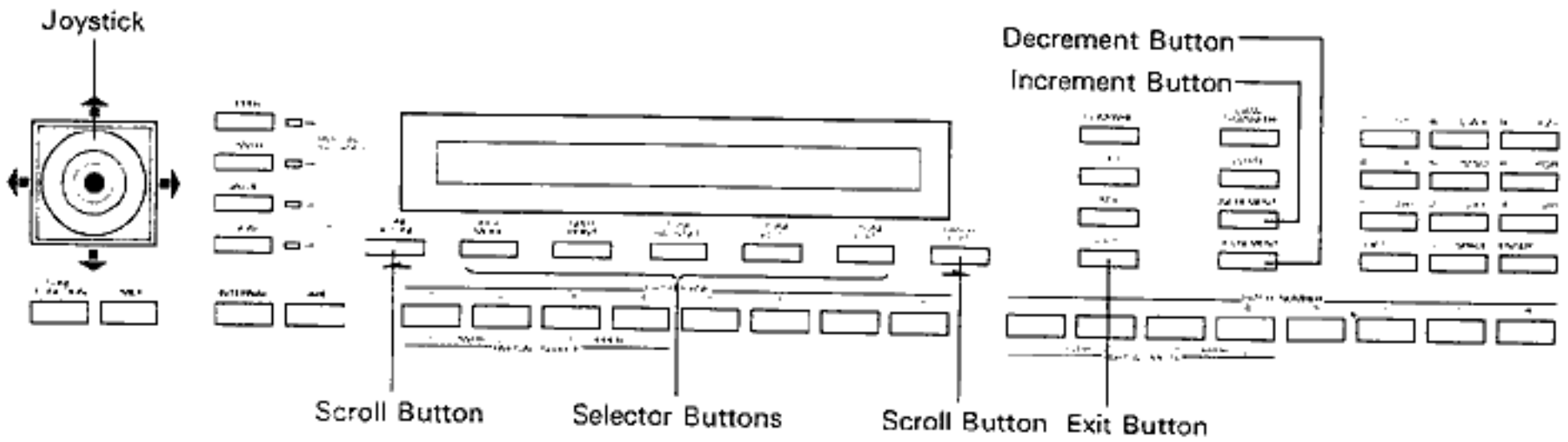
The performance controlling functions (we call them **"Factors"** in this manual) in each Patch can be edited by taking the following procedure.

A Patch consists of several Factors as shown below.



1. BASIC EDITING OPERATION

The Display shows several Factors at a time. If necessary, Scroll up or down the Display to find the Factor to be edited by using the Scroll Buttons. Then push the Selector Button that is located under the Factor you wish edit, and the Factor flashes showing that it can be now edited. To return to the Play mode Display, simply push the Exit Button.



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How to change the value of a Factor

●To change the value drastically, use the Joystick. Moving the Joystick to the right will increase the number.

＊Usually, moving the Joystick forward and backward does not affect the value.

●To change the value slightly, use the Increment and the Decrement Buttons. Pushing the Increment Button increases the number and pushing the Decrement Button decreases it.

To return to the Play mode Display, you may need to push the Exit Button several times.

＊The edited data will be erased when a new Patch is selected.

＊To retain the edited data in memory, follow the "Writing Procedure" on page 29.

＊The D−50 does not allow you to change Patches unless it is turned to the Play mode by pushing the Exit Button. This is to reduce the possibility of accidental erasure of the edited data caused by pushing a Patch Button by mistake.

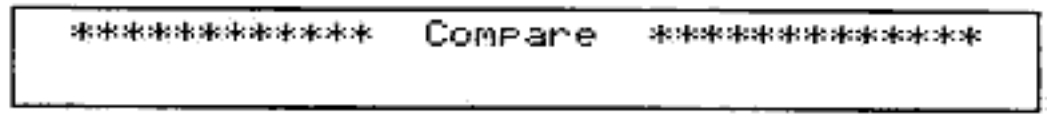
[Compare]

This function can be used while editing. While you are editing a Patch, you may want to call the original Patch, to compare it with your edited version.

Step 1 **Push the Compare Button.**



The Display responds as shown below, and the original Patch is heard by playing the keyboard.



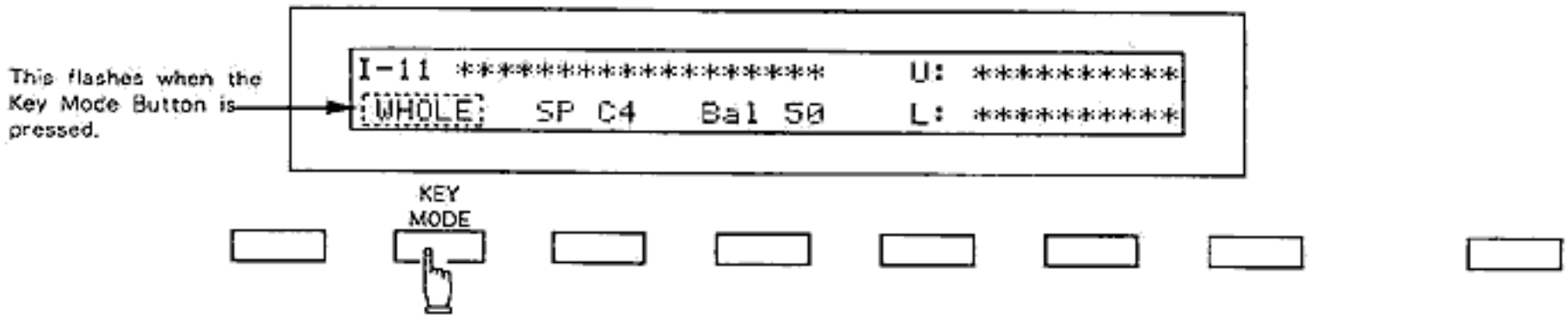
Step 2 **Push the Compare Button again, and the edited Patch is retrieved.**

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2. KEY MODE

Key Mode refers to how the Upper and Lower Tones are played on the keyboard.

Step 1 **Push the Selector Button (Key Mode).**



Step 2 **Select any of the following nine Key Modes using the Joystick.**

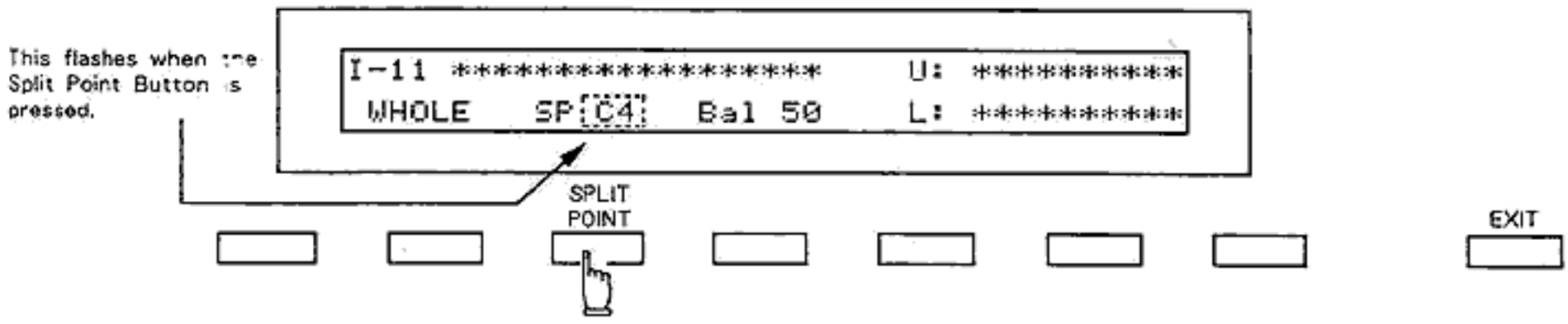
Key Mode	Description
WHOLE	Upper Tone can be played in 16 voice polyphony.
DUAL	Both Upper and Lower Tones are played by each key in 8 voice polyphony.
SPLIT	The Split mode divides the keyboard into upper and lower sections, where two different Tones can be played in 8 voice polyphony. That is, the D-50 works like two 8 voice synthesizers. The Split Point (where the keyboard is divided into two sections) is shown next to the Key Mode indication.
SEP (Separate)	This mode is effective when an external MIDI device is controlling the D-50. (See page 52 "MIDI" in the Advanced Course.)
WHOL-S (Whole Solo)	The Upper Tone is monophonic.
DUAL-S (Dual Solo)	Both Upper and Lower Tones are monophonic.
SPL-US (Split Upper Solo)	The Upper Tone is monophonic, and the Lower Tone is 8 voice polyphonic.
SPL-LS (Split Lower Solo)	The Lower Tone is monophonic, and the Upper Tone is 8 voice polyphonic.
SEP-S (Separate Solo)	This mode is effective when an external MIDI device is controlling the D-50. (See page 52 "MIDI" in Advanced Course.)

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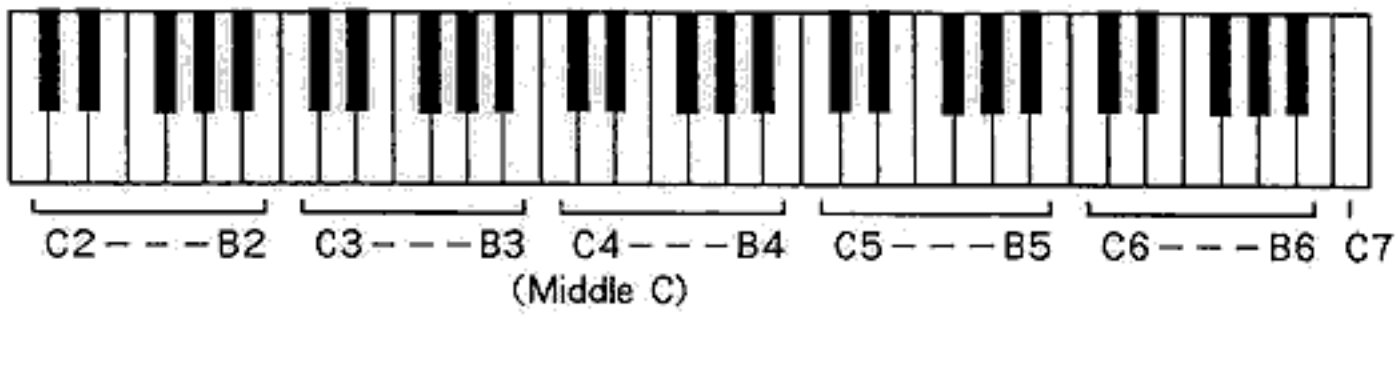
● **Changing the Split Point**

The Split Point can be changed as follows.

Step 1 **Push the Selector Button (SPLIT POINT).**



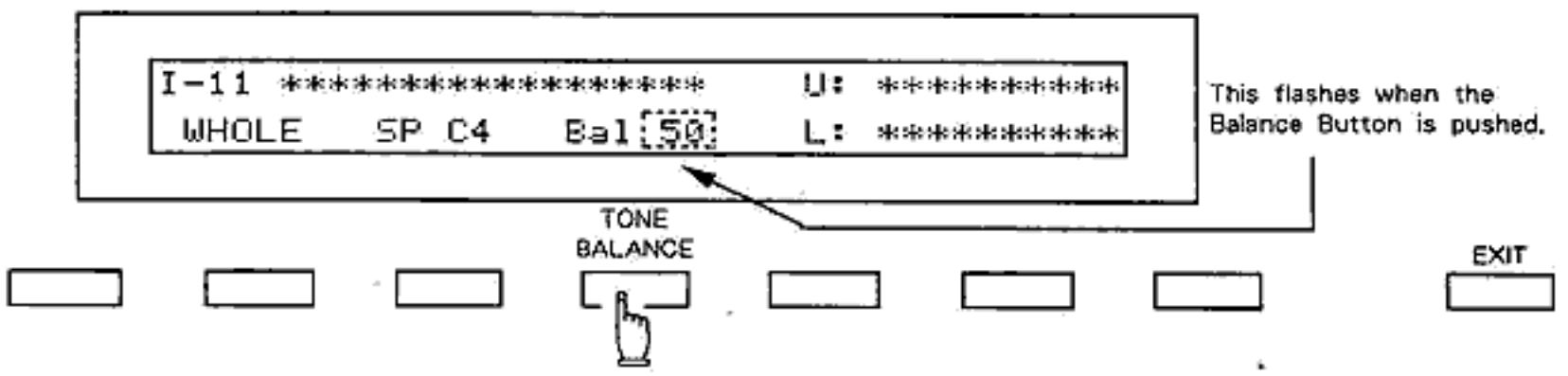
Step 2 **Using the Joystick, set the Split Point represented by a note name.**



3.VOLUME BALANCE OF THE TONES

The volume balance of the Upper and the Lower Tones can be changed as follows.

Step 1 **Push the Selector Button (TONE BALANCE).**



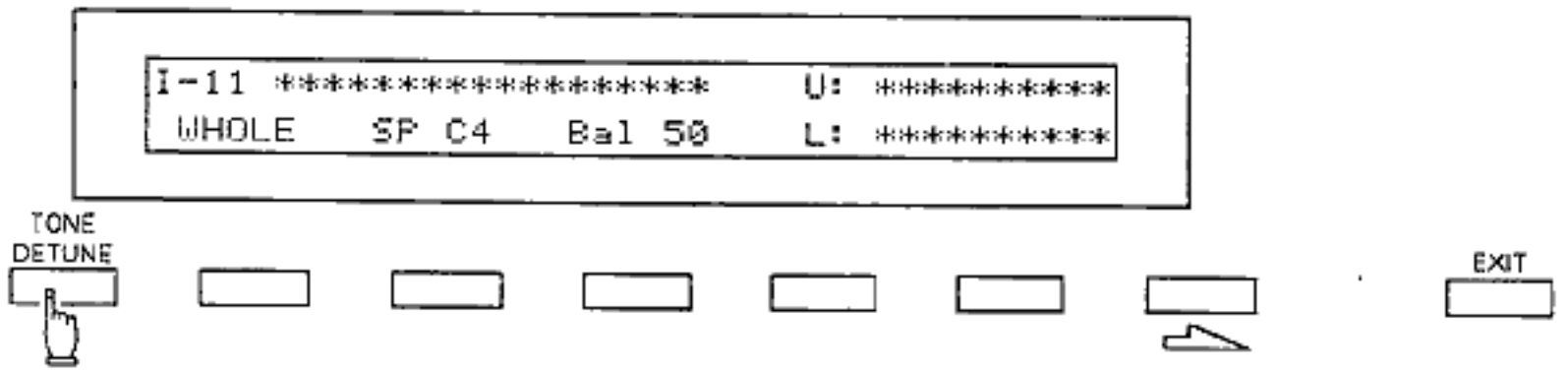
Step 2 **Change the value with the Joystick.**

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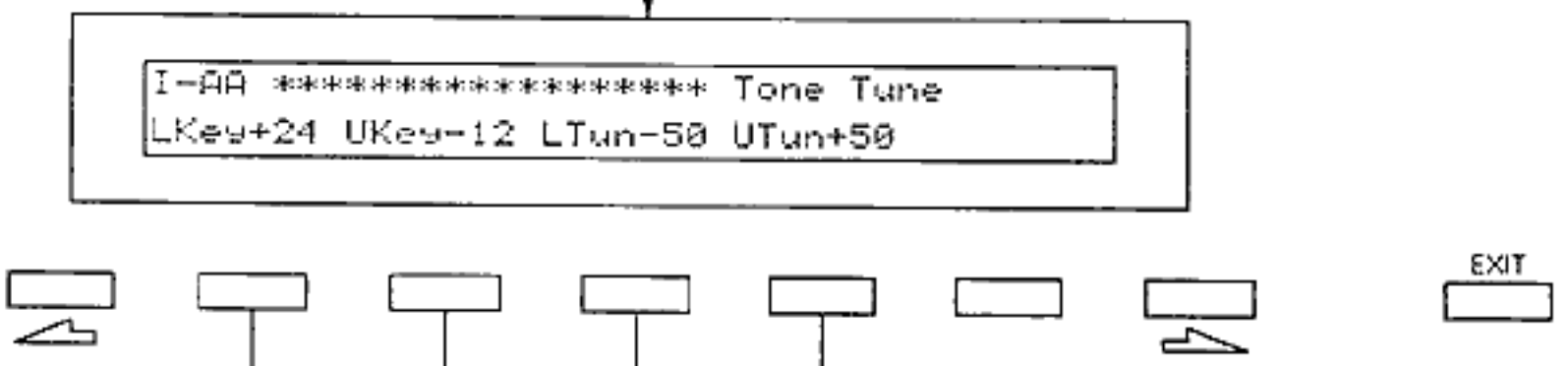
4.TONE DETUNE

The relative pitch of the Upper and the Lower Tones can be separately set. By setting slightly different pitches, a detune effect can be obtained. Also, by lowering the pitch of the Upper Tone, and raising the pitch of the Lower Tone, the pitches of the two Tones can become exactly the same.

Step 1 : Push the left Scroll Button.



Step 2 : Select the parameter to be edited with the Selector Button and edit it with the Joystick.



Key Shift of the Lower Tone
This allows you to shift the pitch of the Lower Tone in semi-tone steps from −24 to +24 (±2 octave).

Key Shift of the Upper Tone
This allows you to shift the pitch of the Upper Tone in semi-tone steps from −24 to +24 (±2 octave)

Fine Tuning of the Upper Tone
This allows you to tune the pitch of the Upper Tone from −50 to +50 (approx. ±50 cents).

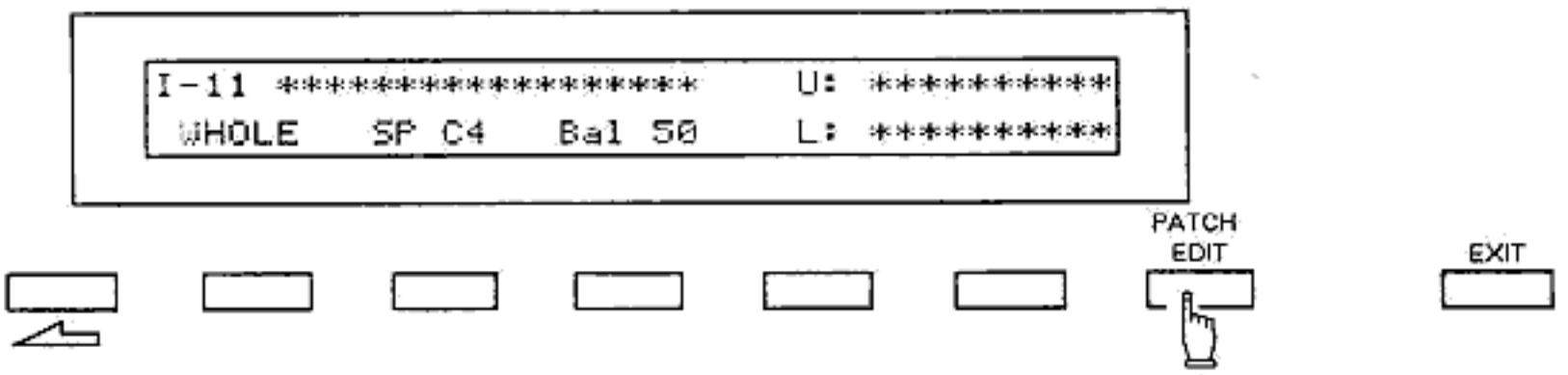
Fine Tuning of the Lower Tone
This allows you to tune the pitch of the Lower Tone from −50 to +50 (approx. ±50 cents)

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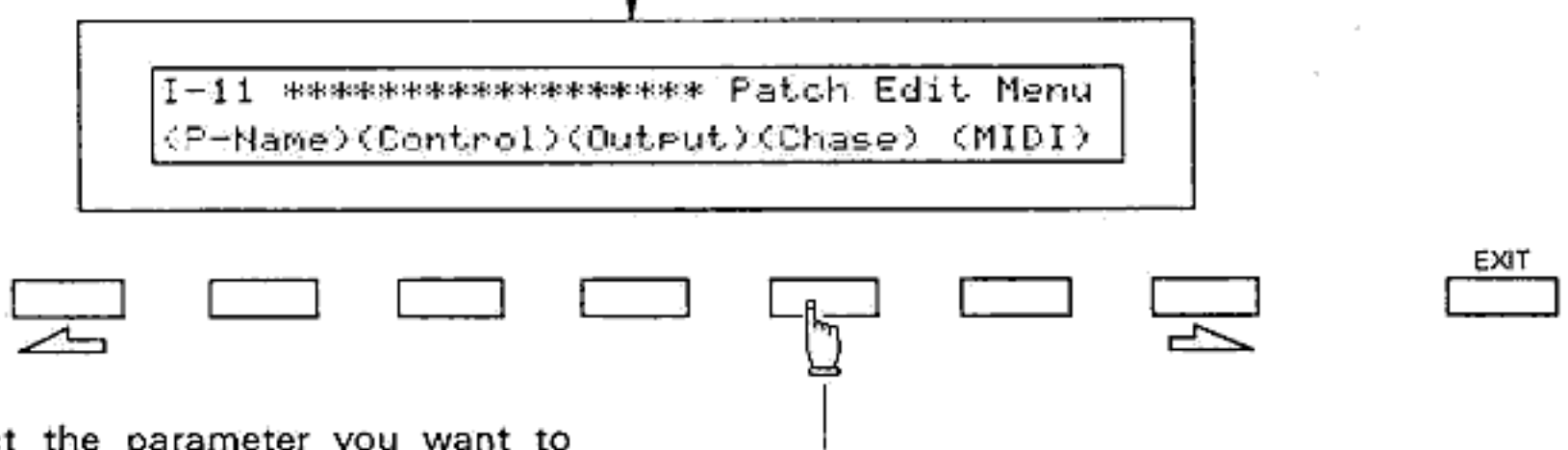
5. CHASE PLAY

The Chase Play function makes it possible to output the Lower Tone slightly later than the Upper Tone which is actually played on the keyboard. This function, however, is only available in Dual or Whole mode.

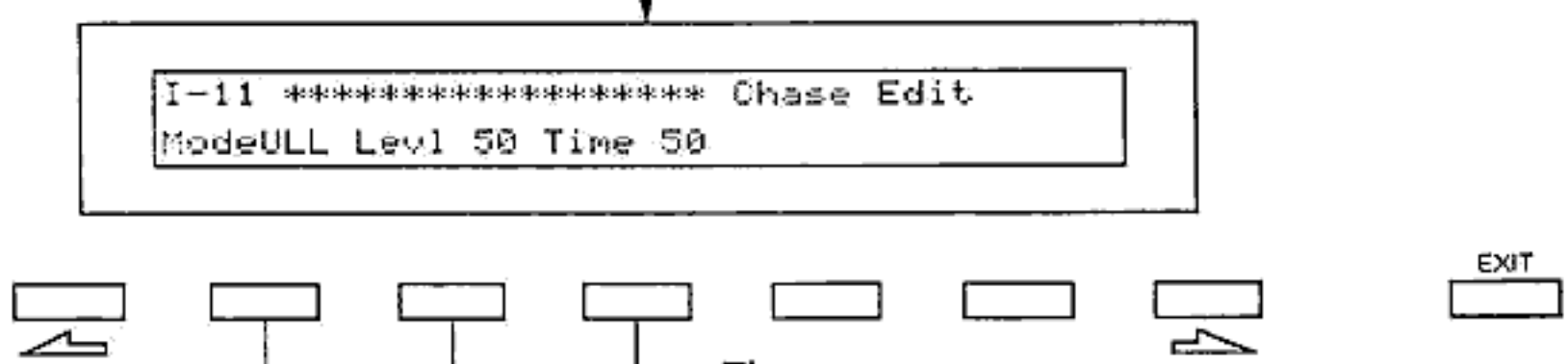
Step 1 : Push the right Scroll Button.



Step 2 : Select "Chase" with the corresponding Selector Button.



Step 3 : Select the parameter you want to edit with the Selector Button and edit it with the Joystick



Time

This adjusts the sounding time from 0 to 100.
Higher value is longer time.

Level

This sets the volume of the chase sound, from 0 to 100.

Mode

This sets how the Tones sound.

●When the Key Mode is Dual, the following choices are available.

UL The Upper Tone then the Lower Tone is played.
ULL The Upper, then the Lower is repeated.
ULU The Upper, the Lower and the Upper Tone alternate.

●When the Key Mode is Whole, the following choices are available.

UL The Upper Tone is played twice.
ULL Upper Tone is repeated.
ULU Upper Tone is repeated.

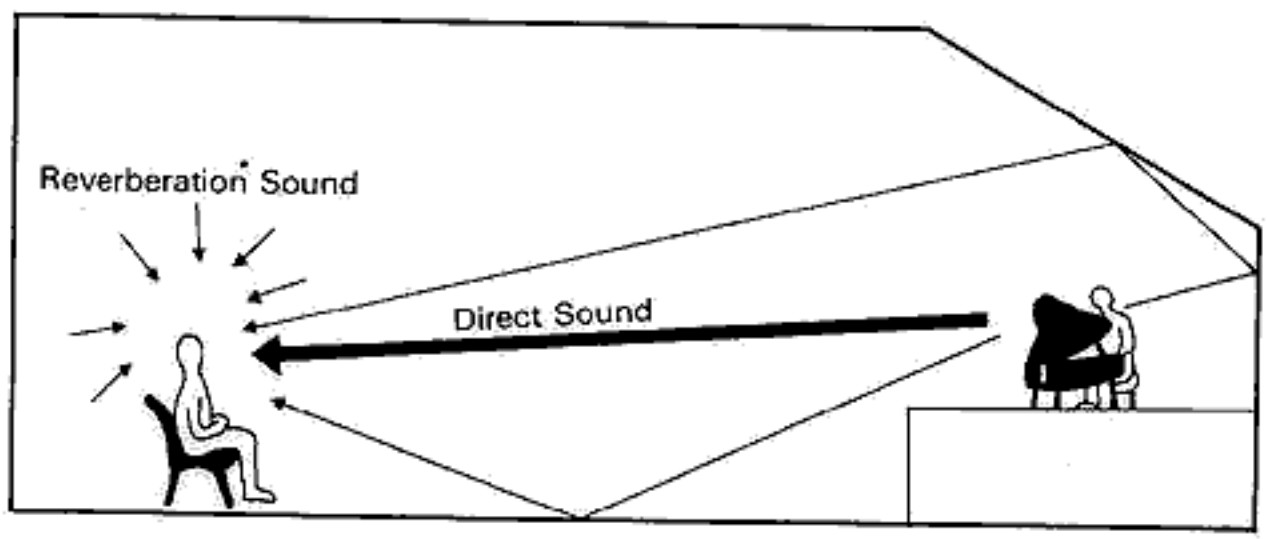
＊Depending on the Chase Level and Velocity, the number of repeats of the delayed sound differ. If "TVA Velocity Sens" (page 43) is set to 0, the sound does not decay but repeats with the same time.

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6. OUTPUT MODE

The Output Mode determines how the Tones take on the reverb effect, and how the Tones appear at the outputs.

■A sound reverberated in an acoustic environment consists of three parts. First, you hear the direct sound as it travels from the source outward. Next the early reflection resounds once, or several times, from the walls, ceiling, and floor. Finally, you hear the reverberated sound as it reflects many times in the environment.



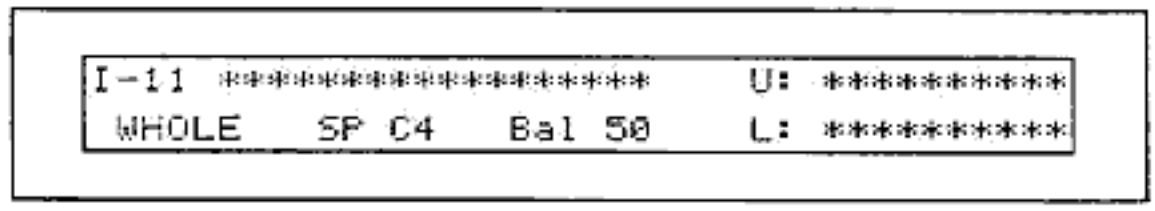
REVERB TYPE

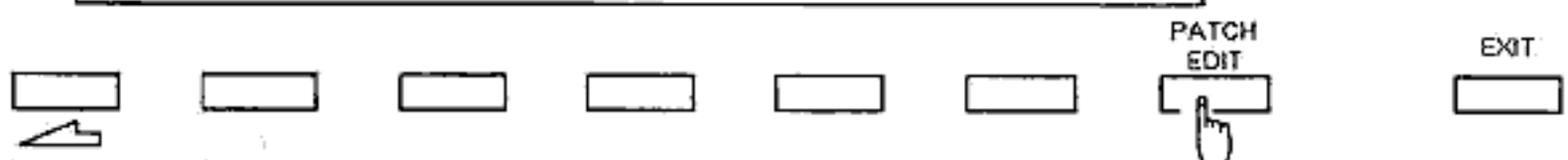
1	Small Hall
2	Medium Hall
3	Large Hall
4	Chapel
5	Box
6	Small Metal Room
7	Small Room
8	Medium Room
9	Medium Large Room
10	Large Room
11	Single Delay (102ms)
12	Cross Delay (180ms)
13	Cross Delay (224ms)
14	Cross Delay (148−296ms)
15	Short Gate (200ms)
16	Long Gate (480ms)

17	Bright Hall
18	Large Cave
19	Steel Pan
20	Delay (248ms)
21	Delay (338ms)
22	Cross Delay (157ms)
23	Cross Delay (252ms)
24	Cross Delay (274−137ms)
25	Gate Reverb
26	Reverse Gate (360ms)
27	Reverse Gate (480ms)
28	Slap Back
29	Slap Back
30	Slap Back
31	Twisted Space
32	Space

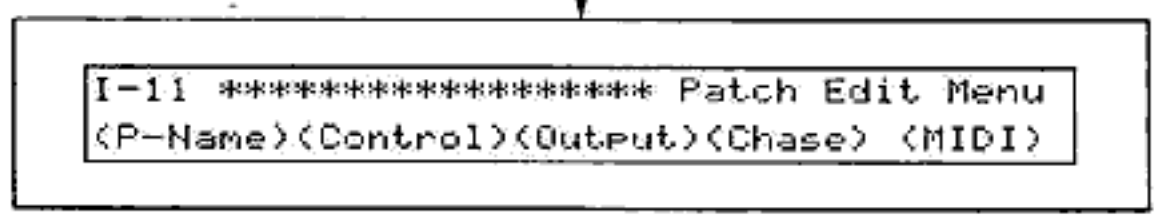
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Step 1 : Push the right Scroll Button.



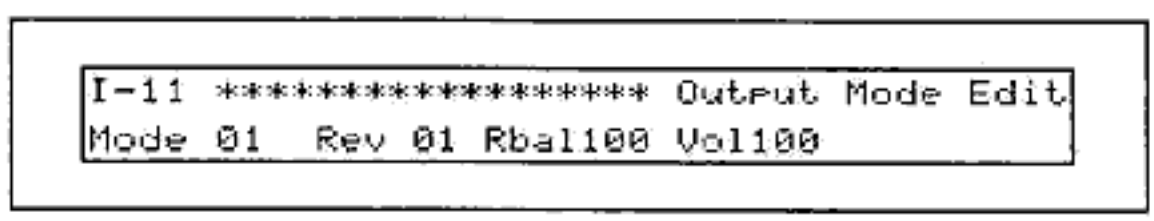


Step 2 : Select "Output Mode" with the corresponding Selector Button.





Step 3 : Select the parameter to be edited with the Selector Button and edit it with the Joystick.





Total Volume

This sets the volume of both Tones from 0 to 100, and therefore adjusts the volume difference between Patches.

Reverb Balance

This sets the volume balance of reverb and direct sounds from 0 to 100.

100 The volume of the reverb sound=maximum, the volume of the direct sound=0.

|

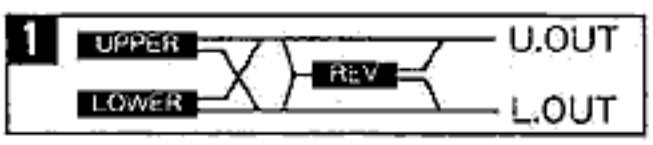
0 The volume of the reverb sound=0, the volume of the direct sound=maximum.

Output Mode

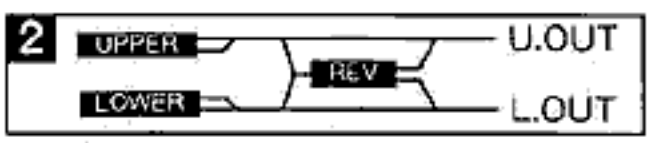
This selects one of the following four output modes.

Reverb Type

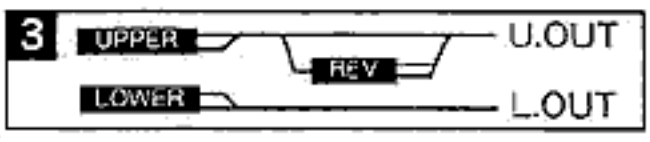
This selects one of the 32 reverb types.(See page 25.)



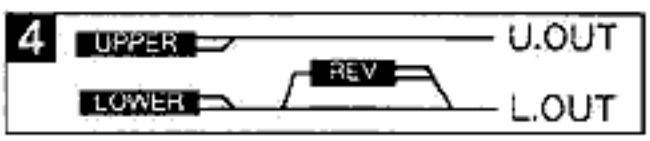
Stereo reverb works on the mixed sound of Upper and Lower Tones, and is sent out in stereo.



The Mixture of Upper and Lower takes on stereo reverb, and the direct sound is sent out separately for Upper and Lower.



Only the Upper Tone takes on reverb. Upper and Lower Tones are sent out separately.



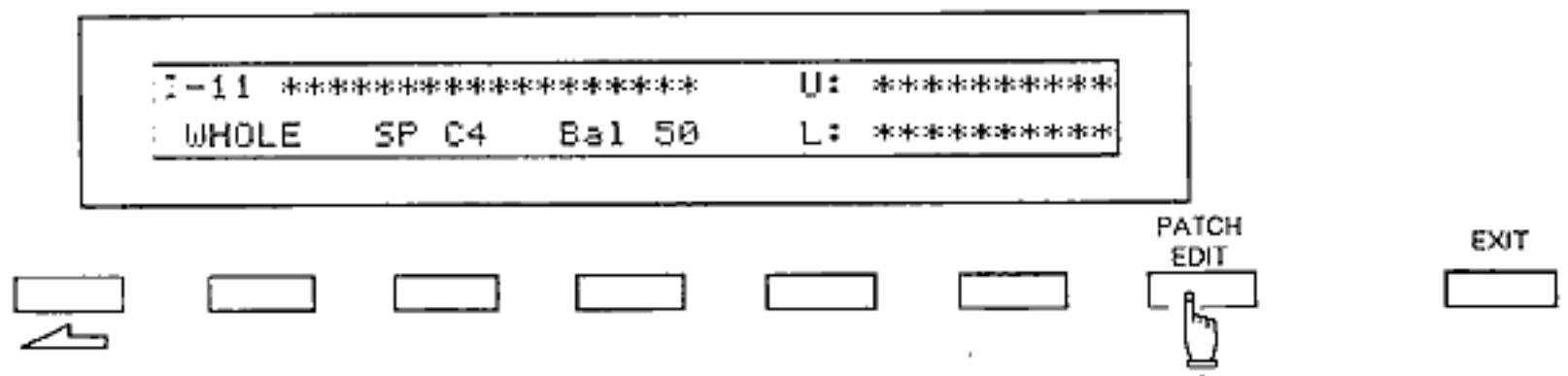
Only the Lower Tone takes on reverb. Upper and Lower Tones are sent out separately.

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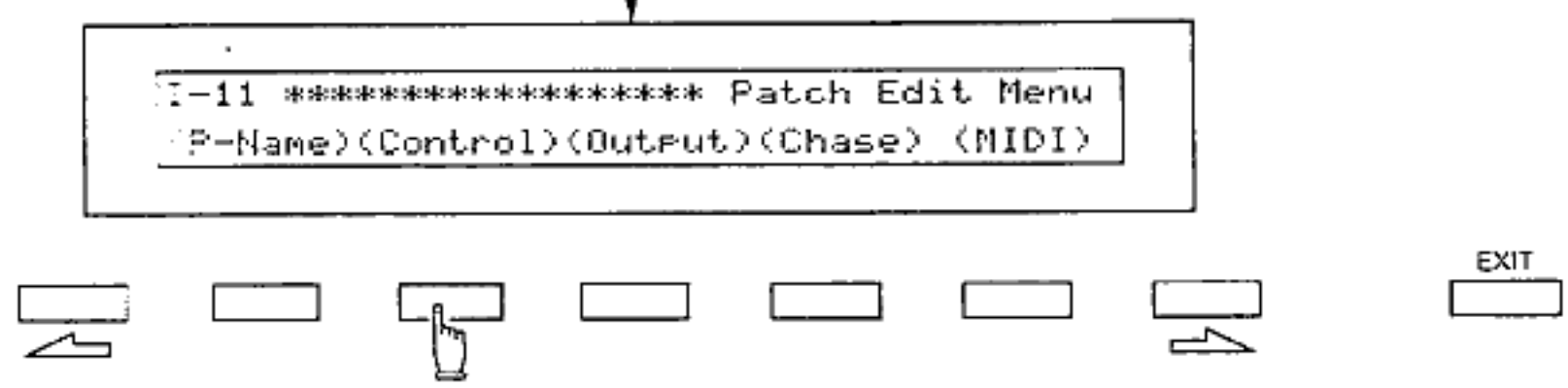
7. PATCH CONTROL

Patch Controls determine how the Control Functions actually affect the Upper and the Lower Tones.

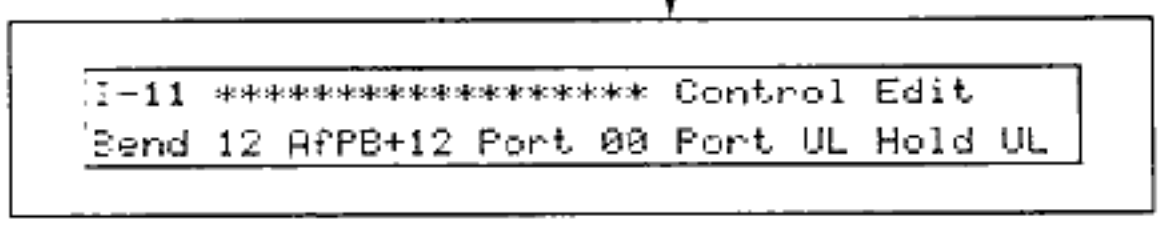
Step 1 : Push the right Scroll Button



Step 2 : Select "Control" with the corresponding Selector Button.



Step 3 : Select the Control function to be edited and change the value with the Joystick.



Bender Range

This sets the variable range of the pitch change caused by moving the Bender lever right and left from 0 to 12 (1 octave).

*The variable range set here may result differently depending on the setting of the Tone Parameters.

Aftertouch. Pitch Bender

This sets the sensitivity of the aftertouch effect on pitch. −12 to +12 are valid. Higher values mean higher sensitivity. A Minus setting decreases the pitch, and a plus setting increases it.

Portamento Time

This sets the Portamento time from one note to another. 1 to 100 are valid. Higher values make the time longer.

Hold Mode

This selects the Tone that should take on the Pedal Hold effect.

U Pedal Hold works on the Upper Tone.
L Pedal Hold works on the Lower Tone.
UL Pedal hold works on the both Tones.
*When the Key mode is Whole. Pedal Hold always works whichever of the above three modes may be selected.

Portamento Mode

This selects the Tone that should take on the Portamento effect.

U Pedal Hold works on the Upper Tone.
L Pedal Hold works on the Lower Tone.
UL Pedal hold works on the both Tones.
*When the Key Mode is Whole. Portamento always works whichever of the above three modes may be selected.

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5 WRITING

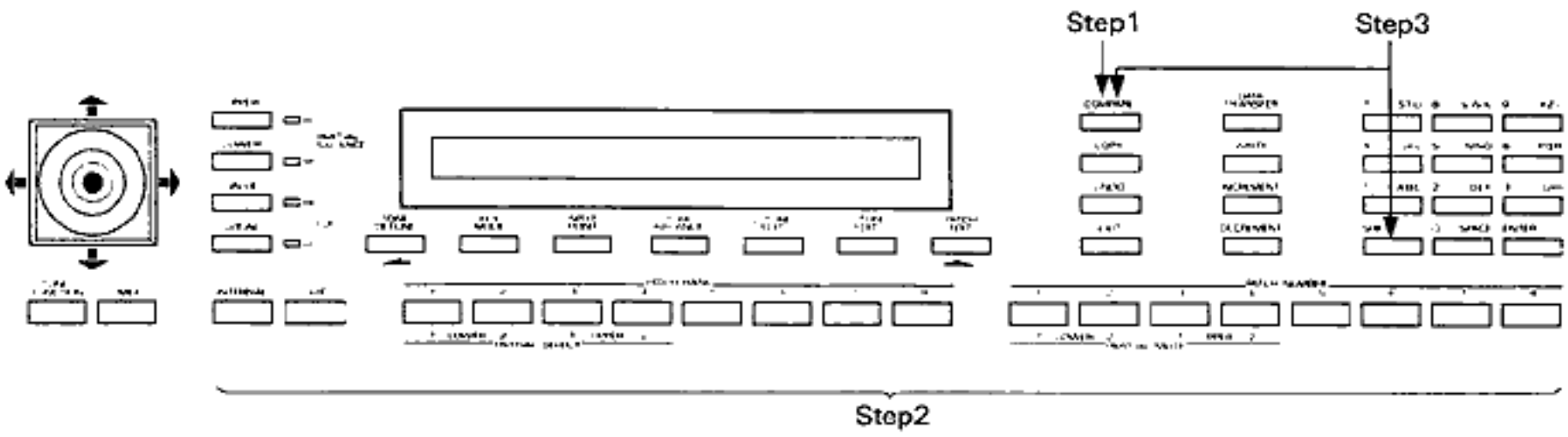
The edited data does not automatically rewrite the previous data, and therefore will be erased when a different Patch is selected, or the unit is turned off. To retain the edited data, take the following writing procedure, either into the internal memory or onto the Memory Card.

***When using a Memory Card (RAM) for the first time, be sure to write the data in the internal memory onto the Memory Card as shown in "Patch Transfer to the Memory Card" on page 65 in a separate book, "Advanced". If you take the writing procedure without doing this, the Display shows "Illegal Card" for a few seconds and writing is not done. This "Illegal Card" message is also shown when you are using a Mmeory Card that contains the data other than D—50's.**

```
Illegal Card
```

[SELECTING A MEMORY LOCATION]

Writing a new Patch inevitably erases an existing Patch, so you may wish to listen to several Patches before deciding which Patch should be sacrificed for the new Patch. You can do it using the Compare Button.



Step 1 **Push the Compare Button.**

The Display responds as shown below.

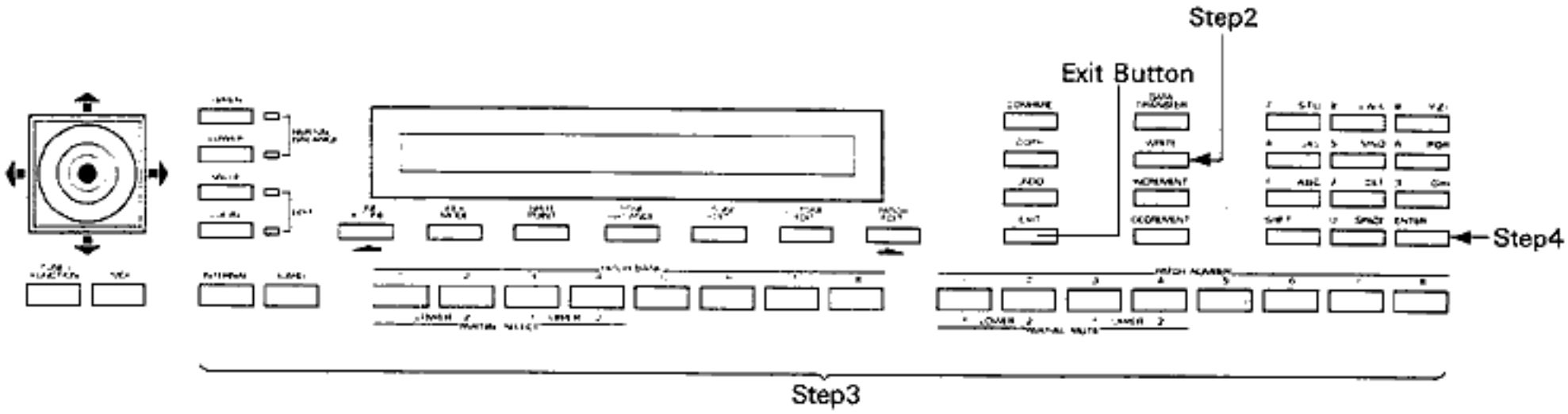
```
********** Compare **********
```

Step 2 **As you change Patches, listen to the sound, selecting the Patch Number to be erased.**

Step 3 **WHILE HOLDING THE SHIFT KEY DOWN, push the Compare Button. This recalls the edited data at the selected Patch Number.**

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[WRITING PROCEDURE]



Step 1 **Set Memory Protect to OFF.**

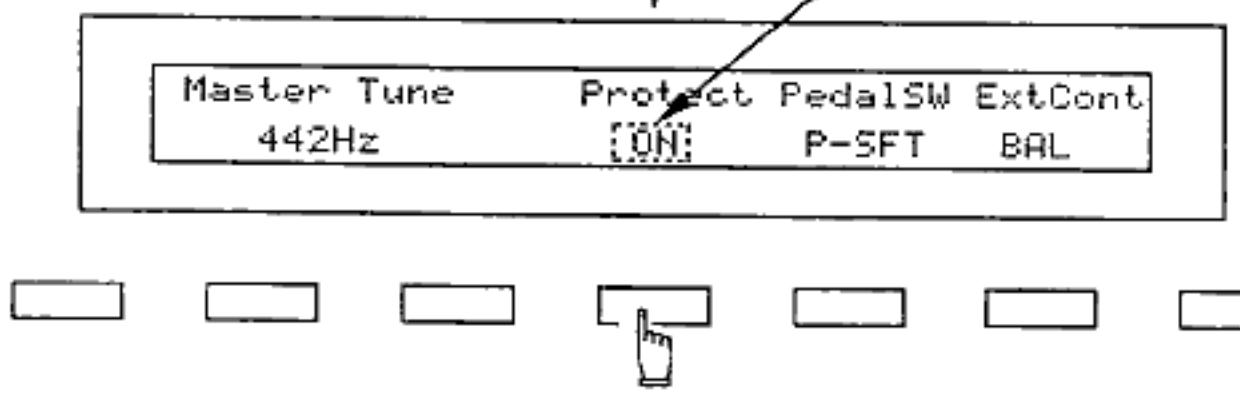
●To write the data into the internal memory, set the Memory Protect of the D−50 to OFF as follows.

1 : Push the Tune/Function Button.

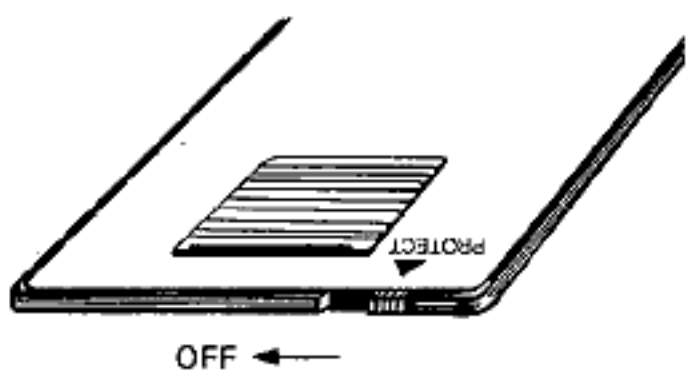


This flashes when the Selector Button is pushed.

2 : Select "Memory Protect" with the Selector Button and turn it OFF with the Joystick.

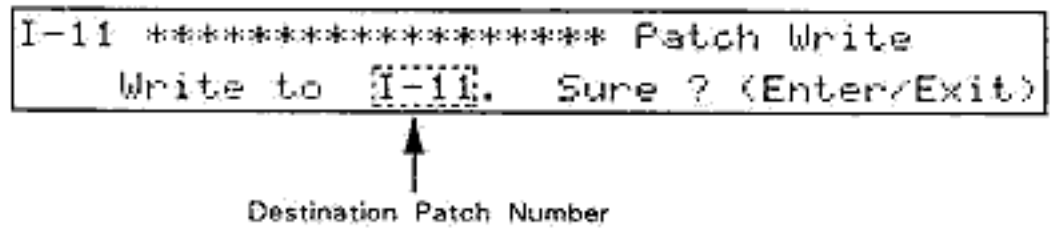


●To write the data onto the optional Memory Card (M−256D), set the Protect Switch of the Memory Card to OFF as follows.



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Step 2 **Push the Write Button.**



Step 3 **If you wish to rewrite the Patch, skip the following two procedures and go to step 4, but if you wish to write the edited Patch to a different Patch number, change the destination Patch number as follows.**

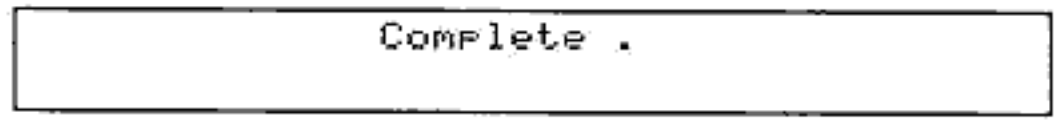
- To write the Patch into the internal memory of the D–50, push the Internal Button, and to write onto the Memory Card, push the Card Button.

- Assign the Bank and Number of the destination Patch by using the Patch Buttons.

To leave the writing mode, simply push the Exit Button.

Step 4 **Push the Enter Key.**

When writing is completed, the Display responds as shown below and then returns to the Play mode indication.



***If the Display does not respond as in the above indication, see "Error Messages" on page 74 in the Advance Course, and repeat the writing procedure carefully.**

Step 5 **Return the Memory Protect to ON.**
(as in Step 1.)

Memory Protect is the function that protects the existing data from accidental erasure. Be sure to set Memory Protect to ON except when writing new data.

***When the unit is turned off and on again, the Memory Protect is automatically returned to ON.**

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SPECIFICATIONS

D-50 : 16 Voice Polyphonic Linear Synthesizier

Memory Capacity : 64 Patches
16 Reverb Types

[Front Panel]

Memory Card Slot
Joystick
Chase Button
Key Transpose Button
Master Volume
Scroll Buttons × 2
Selector Buttons × 2
Edit Buttons (Value, Local)
Partial Buttons (Upper, Lower)
Compare Button
Copy Button
Undo Button
Exit Button
Data Transfer Button
Write Button
Increment Button
Decrement Button
Card Button
Internal Button
MIDI Button
Tune/Function Button
Patch Buttons (Bank 1 to 8, Number 1 to 8)
Ten Key Pad (0 to 9, Shift, Enter)

[Display]

Two Line 40 digit LCD (back-lit)

[Indicators]

Portamento
Chase
Key Transpose
Edit (Value)
Edit (Local)
Partial Balance (Upper
Partial Balance (Lower

[Rear Panel]

Output Jack (mono, stereo)
Headphones Jack
Expression Pedal Jack
External Control Jack
Pedal Hold Jack
Pedal Switch Jack
MIDI Connectors (IN, OUT, THRU)

Dimensions :
974 (W) ×332 (D) ×94 (H) mm
38-3/8"×13-1/16"×3-11/16"

Weight : 10.5kg/23lb 3oz

Power Consumption : 22W

Accessories : Owner's Manual
Guide Book "MIDI"
Memory Card (ROM)
Edit Map
Connection Cable LP-25

[Options]

Stereo Headphones RH-100
Expression Pedal EV-5
Pedal Switch DP-2, DP-6
MIDI/SYNC Cable MSC-07,15,25,50,100
Programmer PG-1000
Memory Card (RAM) M-256D
Case AB-D50
Stand KS-8

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