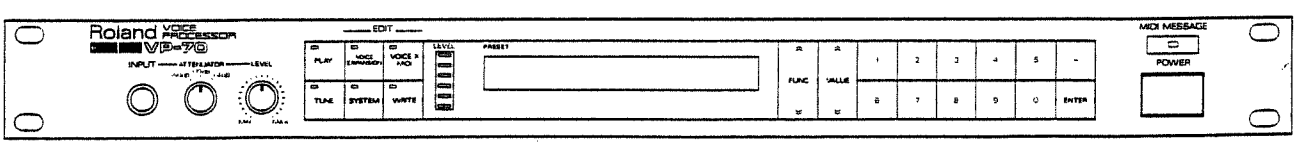
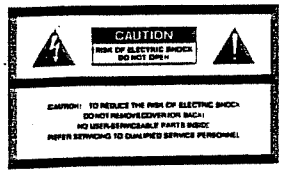
Roland

MIDI VOICE PROCESSOR

VP-70

Owner's Manual





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 VOICE PROCESSOR VP-70
(Gerat, Typ. Bezeichnung)

in Übereinstimmung mit den Bestimmungen der
Amtsbl. Vfg 1046 / 1984
(Amtsblattverfügung)

funk-entstört ist.

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

Roland Corporation Osaka / Japan
Name des Herstellers / Importeurs

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:

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

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

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

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

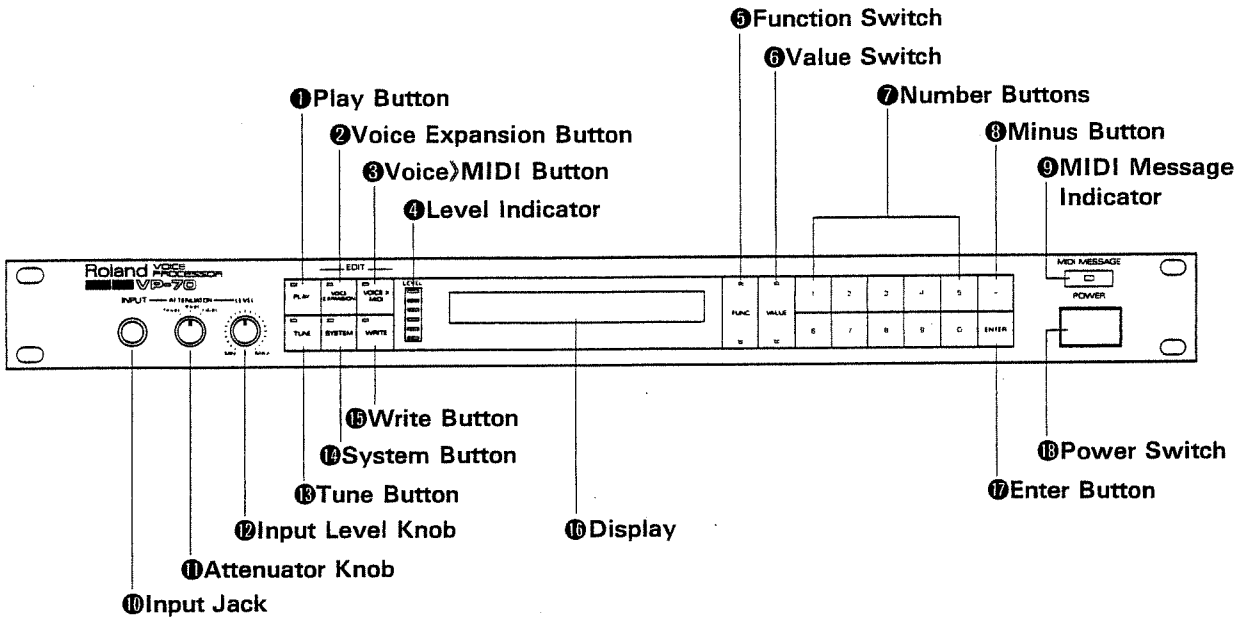
If necessary, you should consult your dealer or an experienced radio/television technician for additional suggestions. You may find helpful the following booklet prepared by the Federal Communications Commission:

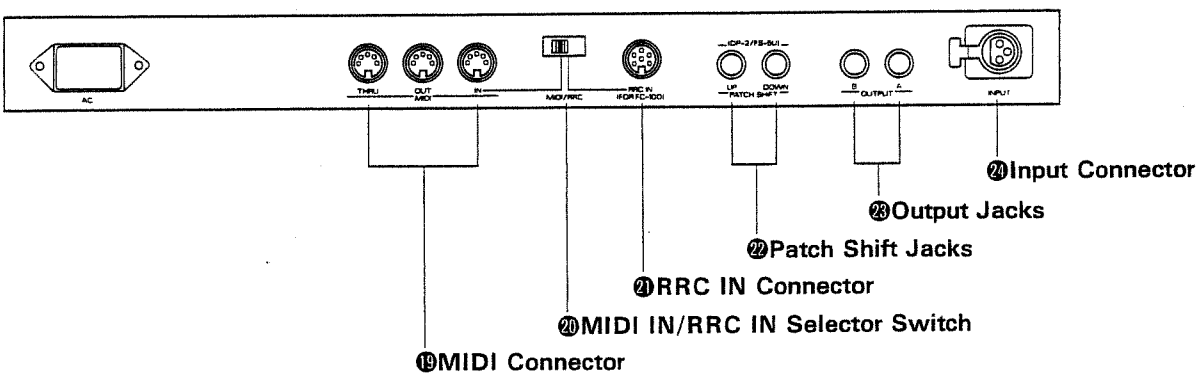
"How to Identify and Resolve Radio-TV Interference Problems."

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

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

PANEL DESCRIPTIONS





IMPORTANT NOTES

- 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 a few seconds later.

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

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

- When disconnecting the power cord from a wall socket, please do not pull the cord but hold the plug. When this unit is not to be used for a long period of time, be sure to disconnect the power cord from the socket.

- Use a soft cloth and clean only with a mild detergent.

- Do not use solvents such as paint thinner.

- Avoid using this unit in excessive heat or humidity or where it may be affected by direct sunlight or dust.

- Operating this unit near a neon, fluoresent lamp, TV or CRT Display may cause noise interference. If so, change the angle or the position of the unit.

- The VP-70 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 unit.)

The Roland VP-70 Voice Processor is a device that features four built-in pitch shifting units, each of which can change the pitch of an audio signal.

Please read this owner's manual carefully.

FEATURES

- The four built-in pitch shifting units can create chorus effects, similar to singing in unison, by digitally processing the sound. Also, it can be used like a vocoder by connecting a MIDI keyboard.
- These four pitch shifting units can be turned on simultaneously, therefore, five sounds, including the direct sound, can appear at the same time.
- The VP-70 also features a function that converts audio signals to MIDI, and this function can be used with the pitch shifting function at the same time.
- The VP-70 has MIDI Mono mode that assigns a different MIDI channel to each of the four pitch shifting units and therefore allows each pitch shifting unit to receive different MIDI messages separately.
- The VP-70's memory capacity can retain up to 128 different effects.

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1 OUTLINE OF THE VP-70

1. PITCH SHIFTING FUNCTION (VOICE EXPANSION)

The VP-70 has four built-in pitch shifting units; each of them can shift the pitch of the input sounds up to one octave up or down in semi-tone steps, or more finely using [DETUNE]. The amount of pitch shift can be assigned from the VP-70, or even with real time MIDI NOTE messages sent from an external MIDI device. This fact makes it possible for you to change the amount of pitch shift by using a MIDI keyboard or sequencer.

There are two methods for setting the amount of pitch shifting :

● HARMONIZE

This determines how many semi-tones of shift from the pitch of the input sound. The DETUNE function allows you to adjust the pitch even more finely.

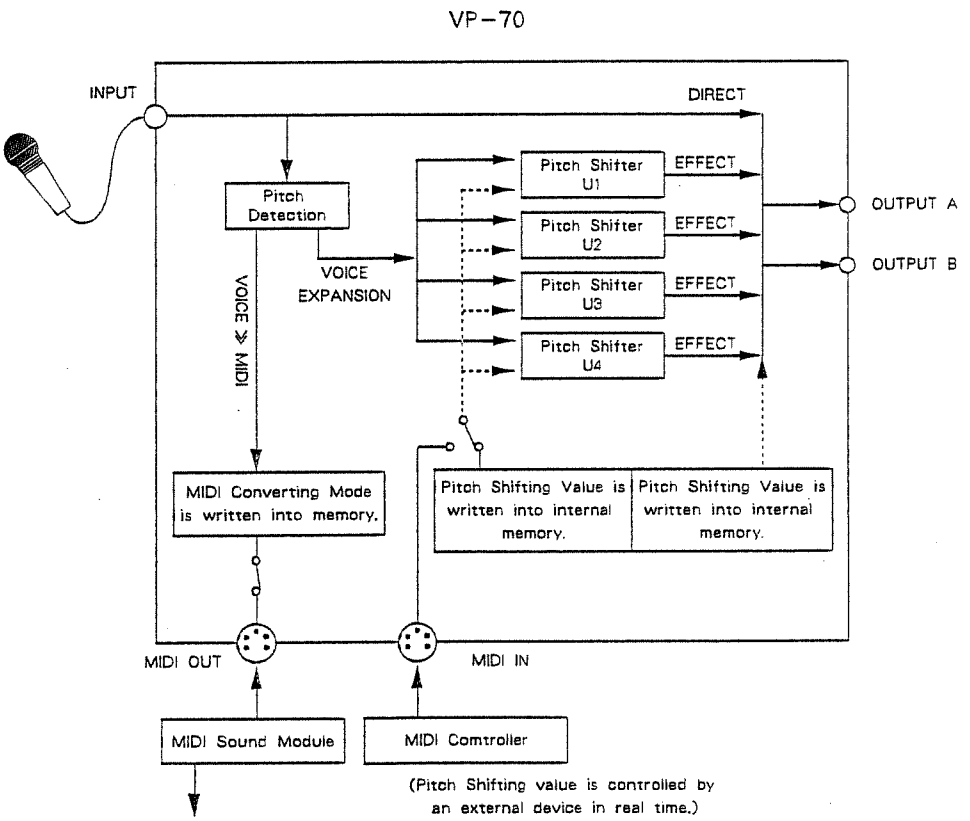
● PITCH FOLLOW

Playing a key on the connected keyboard will reproduce the audio input signals on that note. That is, the VP-70 and the keyboard work like a vocoder.

2. VOICE → MIDI FUNCTION

The VP-70 can convert the pitch and the volume of the input sound (single note) to MIDI Note, Volume, Bender and Aftertouch messages. This function makes it possible to control an external MIDI sound module by the sounds fed into the VP-70.

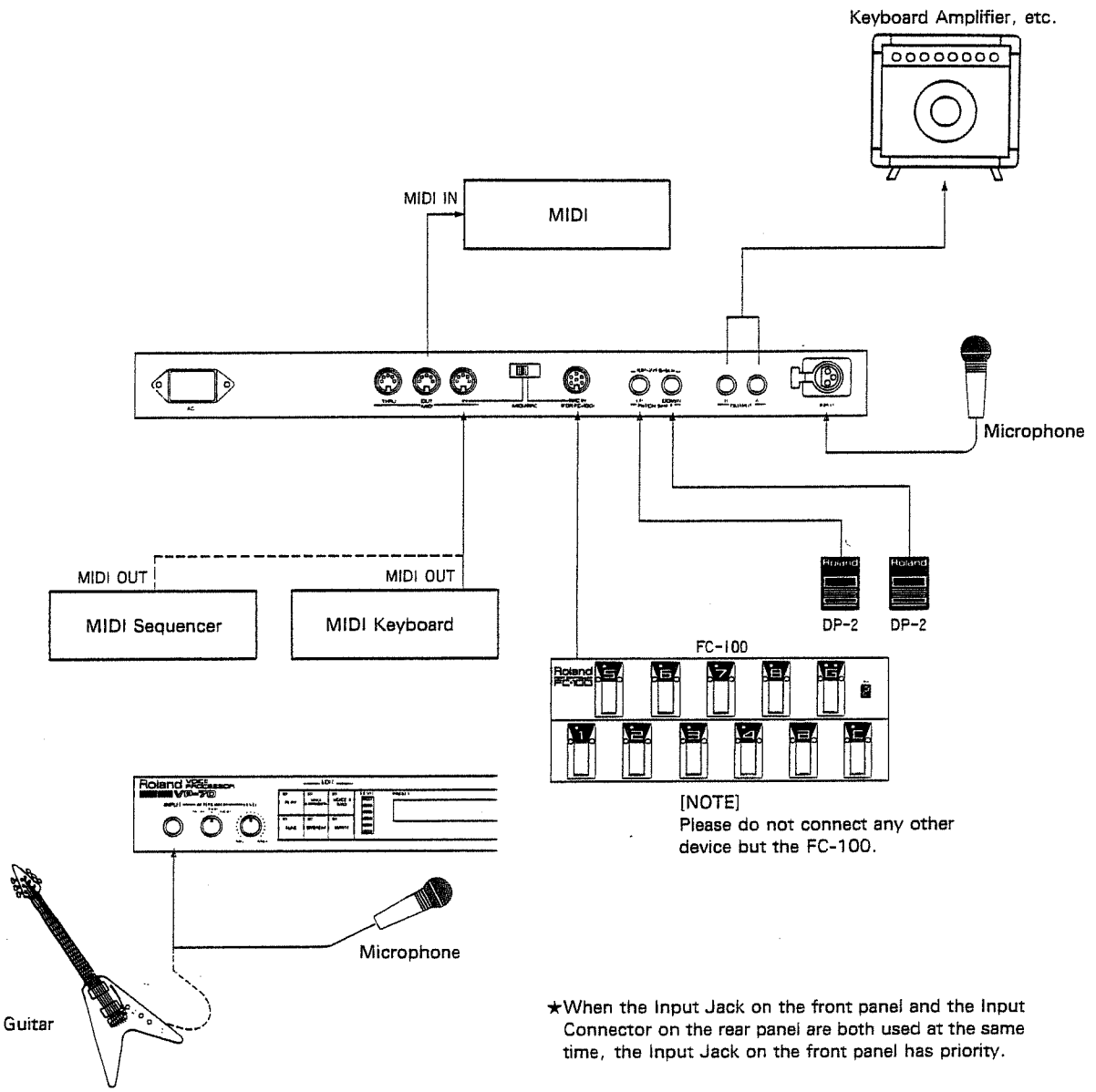
The VOICE → MIDI function can be used with the pitch shifting function at the same time.



A patch consists of how the pitch shifting and VOICE → MIDI functions are set, and up to 128 different patches can be stored in the VP-70.

2 PERFORMANCE CONTROLS

1. CONNECTIONS



[NOTE]
Please do not connect any other device but the FC-100.

★When the Input Jack on the front panel and the Input Connector on the rear panel are both used at the same time, the Input Jack on the front panel has priority.

● **MIDI Connectors**

MIDI IN : To control the amount of pitch shifting by MIDI messages, connect the MIDI OUT of an external MIDI device to this connector using a MIDI cable.

MIDI THRU : Through this connector an exact copy of the MIDI messages fed into the MIDI IN will be sent out. Use this to drive the VP−70 by MIDI messages and control other MIDI devices at the same time.

MIDI OUT : Through this connector, MIDI messages converted from the audio input signal will be sent out.

● **MIDI IN/RRC IN Selector Switch**

When using the FC−100 foot controller, set this switch to the "RRC IN" position, and when using a MIDI device (connected to the MIDI IN), set this to the "MIDI IN" position.

● **RRC IN Connector**

Connect the FC−100 optional foot controller to this connector.

***Please do not connect a device other than the FC−100 to this connector.**

● **Patch Shift Jack (Patch Shift)**

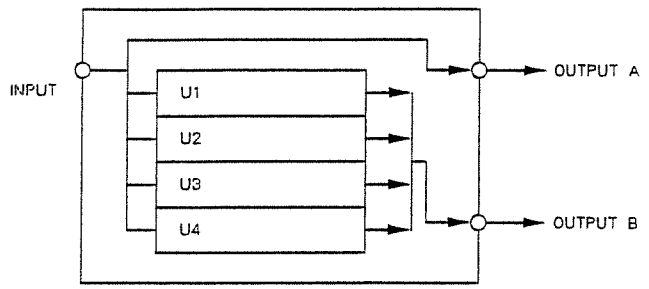
Use this jack to call patches sequentially with a pedal switch such as the DP−2. When UP is used, pressing the pedal advances the patch numbers, and when DOWN is used, the opposite effect is obtained.

● **Output Jacks**

These jacks are provided to connect to amplifiers. Using only one jack, A and B will be mixed and sent out. When both jacks are used, the sounds sent out through these jacks vary depending on the Output mode selected in each patch.

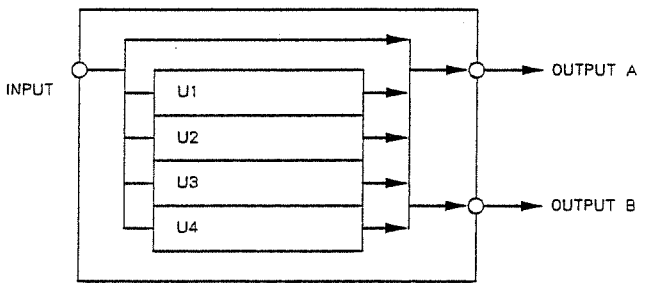
When both Output A and B are connected • • •

OUT MODE=1



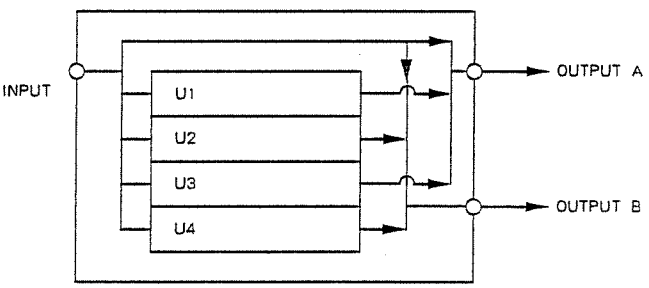
Direct sounds are sent through Output A and effect sounds through Output B.

OUT MODE=2



A mixture of direct and effect sounds is sent through Outputs A and B.

OUT MODE=3



Through Output A effect sounds of U1 and U3 are sent out, and effect sounds of U2 and U4 are sent through Output B.
Direct sounds are sent through A and B.

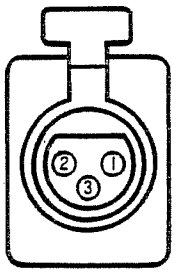
If possible, use amplifiers and speakers of wide frequency band and dynamic range, such as a keyboard amplifier.

● **Input Jack**

● **Input Connector**

These are used for feeding human voice or instrument sounds to the VP-70. Line signals can be directly fed in as well as mic signals. When both are connected, the Input Jack has priority.

Pin positions of the Input Connector



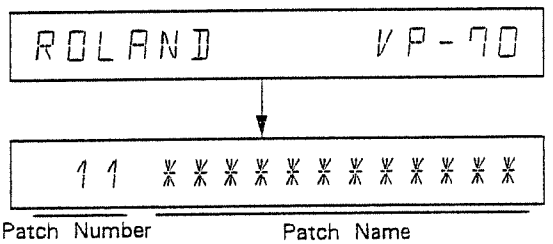
1:Earth(GND)
2:Input(−)
3:Input(+)

*Please use a microphone with a good polar pattern (that does not pick up background noise), such as a microphone designed for close use, or a contact microphone (to connect to a brass instrument).

e.g.) Close use : Shure SM12A
Contact microphone : Barcus−Berry

2. POWER−UP (PLAY MODE)

Make sure that the VP−70 is correctly set up with the other devices, then turn the unit on, and the Display responds with :



The VP−70's memory capacity can retain up to 128 different patches. Each patch has a name, and a patch number which is a combination of a bank and a number. When the VP−70 is turned on, the first patch (1−1) is automatically called. The number shown at the left of the Display is the patch number, and the name of the patch is shown at the right.

This is the Play mode of the VP−70. When in the Play mode, the Play Button is alight.

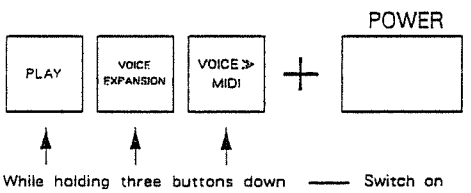
3. INITIALIZATION

128 different patches are preprogrammed in the VP−70 from the manufacturer. These patches can be restored (initialized) even after you have edited them. When you use the VP−70 for the first time, take the following initialization procedure to call the preprogrammed patches.

***Initialization automatically erases any data programmed in the VP−70, and replaces it with the preprogrammed patches.**

[How to Initialize]

Switch the VP−70 on, while holding the Play, Voice Expansion and MIDI Buttons down.



The Display responds with :

When initialized, the VP−70 returns to the Play mode.

4. PATCH SELECTION

Any of the 128 patches can be called by pushing the relevant buttons. A patch is represented by the combination of a group (A or B), bank (1 to 8) and number (1 to 8). A patch from Group B can be distinguished by the "−" mark before the number, such as "− 25", which is patch 2−5 from group B.

[Group A]

Bank \ Number	1	2	3	4	5	6	7	8
1	11	12	13	14	15	16	17	18
2	21	22	23	24	25	26	27	28
3	31	32	33	34	35	36	37	38
4	41	42	43	44	45	46	47	48
5	51	52	53	54	55	56	57	58
6	61	62	63	64	65	66	67	68
7	71	72	73	74	75	76	77	78
8	81	82	83	84	85	86	87	88

[Group B] ("−"indication)

Bank \ Number	1	2	3	4	5	6	7	8
1	−11	−12	−13	−14	−15	−16	−17	−18
2	−21	−22	−23	−24	−25	−26	−27	−28
3	−31	−32	−33	−34	−35	−36	−37	−38
4	−41	−42	−43	−44	−45	−46	−47	−48
5	−51	−52	−53	−54	−55	−56	−57	−58
6	−61	−62	−63	−64	−65	−66	−67	−68
7	−71	−72	−73	−74	−75	−76	−77	−78
8	−81	−82	−83	−84	−85	−86	−87	−88

The 128 patches default to (when initialized) :

Patch Number	Patch Name	HARM / P.Fo	INT / EXT	U1 (Detune)	U2 (Detune)	U3 (Detune)	U4 (Detune)	EFFECT	DIRECT	OUT MODE	VOICE ≫ MIDI					
											CH	P.Ch	BEND	VOL	A.T	TRA
11	CHORUS HARM1	HARM	INT	0 (+5)	0 (−5)	0 (−2)	0 (+2)	6	6	1	1	1	12	ON	OFF	0
12	MAJ HARM	HARM	INT	OFF	+4 (0)	0 (0)	+7 (0)	6	6	1	1	2	12	ON	OFF	0
13	MIN HARM	HARM	INT	OFF	+3 (0)	0 (0)	+7 (0)	6	6	1	1	3	12	ON	OFF	0
14	MAJ 7TH HARM	HARM	INT	OFF	+7 (0)	4 (0)	+10 (0)	6	6	1	1	4	12	ON	OFF	0
15	MIN 7TH HARM	HARM	INT	OFF	+7 (0)	3 (0)	+10 (0)	6	6	1	1	5	12	ON	OFF	0
16	MIN 7TH−5TH	HARM	INT	OFF	+6 (0)	3 (0)	+10 (0)	6	6	1	1	6	12	ON	OFF	0
17	OCTAVE HARM	HARM	INT	−12 (0)	OFF	OFF	OFF	5	8	1	1	7	12	ON	OFF	0
18	DIRECT	HARM	INT	OFF	OFF	OFF	OFF	0	8	1	1	8	12	ON	OFF	0
21	CHORUS HARM2	HARM	INT	0 (+9)	0 (−9)	0 (−4)	0 (+4)	6	6	1	1	9	12	ON	OFF	0
31	CHORUS HARM3	HARM	INT	0 (+13)	0 (−13)	0 (−6)	0 (+6)	6	6	1	1	17	12	ON	OFF	0
41	CHORUS HARM4	HARM	INT	0 (+5)	0 (−5)	0 (−2)	0 (+2)	6	6	3	1	25	12	ON	OFF	0
51	CHORUS HARM5	HARM	INT	0 (+9)	0 (−9)	0 (−4)	0 (+4)	6	6	3	1	33	12	ON	OFF	0
61	CHORUS HARM6	HARM	INT	0 (+13)	0 (−13)	0 (−6)	0 (+6)	6	6	3	1	41	12	ON	OFF	0

Patch Number	Patch Name	HARM / P.Fo	INT / EXT	POLY / UNISON	DETUNE	BEND RANGE	OCT SHIFT	KEY HOLD	LO. LIMIT UP. LIMIT	EFFECT	DIRECT	OUT MODE	VOICE ≫ MIDI					
													CH	P.Ch	BEND	VOL	A.T	TRA
−11	VOCODER	P.Fo	EXT	POLY	−	2	−1	OFF	FREE	8	0	1	1	1	12	ON	OFF	0
−12	HOLD VOCODER	P.Fo	EXT	POLY	−	2	−1	ON	FREE	8	0	1	1	1	12	ON	OFF	0
−13	OCT VOCODER	P.Fo	EXT	POLY	−	2	0	OFF	FREE	8	0	1	1	3	12	ON	OFF	0
−14	OCT HOLD VOC	P.Fo	EXT	POLY	−	2	0	ON	FREE	8	0	1	1	4	12	ON	OFF	0
−15	UNISON VOC	P.Fo	EXT	UNISON	4	2	−1	OFF	FREE	8	0	1	1	5	12	ON	OFF	0
−16	KEY HARMO	HARM	EXT	POLY	0	2	0	OFF	FREE	8	0	1	1	6	12	ON	OFF	0
−17	KEY HOLD HRM	HARM	EXT	POLY	0	2	0	ON	FREE	8	0	1	1	7	12	ON	OFF	0
−21	VOCODER	P.Fo	EXT	POLY	−	2	−1	OFF	FREE	6	6	1	1	9	12	ON	OFF	0
−22	HOLD VOCODER	P.Fo	EXT	POLY	−	2	−1	ON	FREE	6	6	1	1	10	12	ON	OFF	0
−23	OCT VOCODER	P.Fo	EXT	POLY	−	2	0	OFF	FREE	6	6	1	1	11	12	ON	OFF	0
−24	OCT HOLD VOC	P.Fo	EXT	POLY	−	2	0	ON	FREE	6	6	1	1	12	12	ON	OFF	0
−25	UNISON VOC	P.Fo	EXT	UNISON	4	2	−1	OFF	FREE	6	6	1	1	13	12	ON	OFF	0
−26	KEY HARMO	HARM	EXT	POLY	0	2	0	OFF	FREE	6	6	1	1	14	12	ON	OFF	0
−27	KEY HOLD HRM	HARM	EXT	POLY	0	2	0	ON	FREE	6	6	1	1	15	12	ON	OFF	0

*All the other patches are exactly the same as 18 DIRECT.

Patch selection can be done only in the Play mode. There are several methods for patch selection as follows.

a. Patch selection on the VP-70

Using the Value Switch

Pushing the upper side of the Value Switch advances a number, and the lower side backs up a number. Holding down either side of the switch will change the numbers continuously, up to the highest or the lowest number.

Using the Number Buttons

Press the relevant Number Buttons to assign the bank and number of a patch, then push the Enter Button.(If you push the wrong Number Button, assigning a patch number that does not exist, such as 0-1 or 9-9, it will be ignored.) Each time the "-" Button is pressed, patch group A and B are alternately selected.

b. Patch Selection with Pedal Switches or Foot Controller

Using Pedal Switches

Connect pedal switches (e.g. DP-2) to the Patch Shift Jacks on the rear panel.

Pushing the pedal connected to the UP Jack advances a number, and the pedal connected to the DOWN Jack backs up a number.

Using the FC-100 foot controller

See page "Patch Selection with the FC-100".

5. ADJUSTING THE INPUT LEVEL

To make the best use of the VP−70, you should accurately set the level of the sound fed into the VP−70 (through the Input Jack or the Input Connector.

PROCEDURE

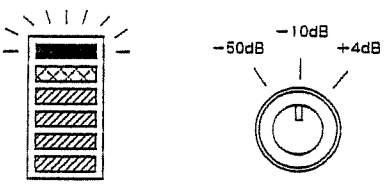
Step 1 **Connect a microphone or musical instrument to the Input Jack or the Input Connector on the rear panel, and feed an audio signal of average volume.**

The Level Indicator will light up.

***When using a microphone, bring your mouth close to the microphone, and speak clearly.**

Step 2 **Rotate the Attenuator Knob and Input Level Knob until the red Level Indicator flashes occasionally.**

Attenuator Knob



−50dB	Microphone
−10dB	Electric Guitar
+ 4dB	Cassette Deck, CD Player (Line Level)

*When a microphone is used, and feedback occurs, lower the volume of the amplifier until it stops.

3 PATCH PLAYING AND EDITING

The VP−70 can achieve various functions as follows :

1. **Add chorus effects to the input signal (see page 18).**

   By slightly shifting the pitch (=Detune) of the sound by using the four pitch shifting units, rich chorus effects can be obtained.

2. **Harmonize the input signal (see page 22).**

   By changing the pitch of the pitch shifters in semi−tone steps the input sounds can be harmonized, creating an effect choral singing.

3. **Using the VP−70 as a Vocoder (see page 35).**

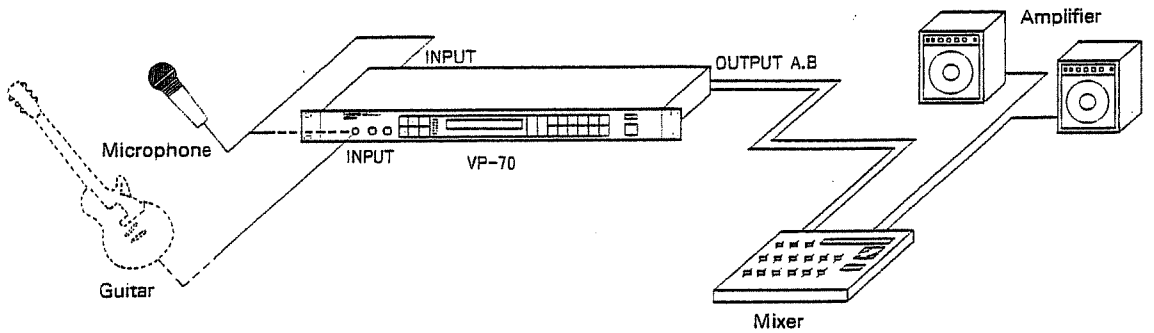
   A voice fed into the VP−70 can be heard in the pitch of a note played on the connected Keyboard.

4. **Send only direct sounds (see page 42).**

5. **Control a MIDI sound module by the sound fed into the VP−70 (see page 44).**

1. ADDING CHORUS EFFECTS

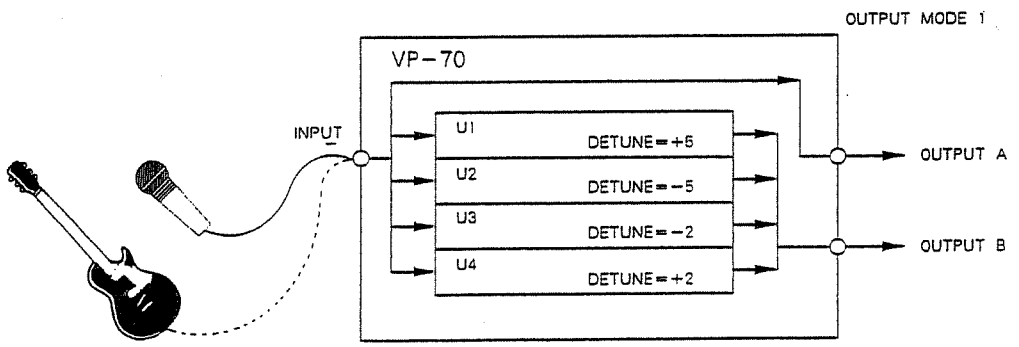
By slightly shifting the pitch (=Detune) of the sound using the four pitch shifting units, rich chorus effects can be obtained. In other words, the VP-70 behaves like a chorus machine.



*This effect is ideal for guitar sounds.

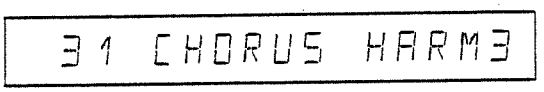
■Now, let's call Patch Number B [11]. This patch contains a moderate Chorus effect. The Output mode of this patch is "1", which sends the direct sound (the input signal) from Jack A, and the effect sound (processed by the pitch shifting units) from Jack B.

Patch Number 11



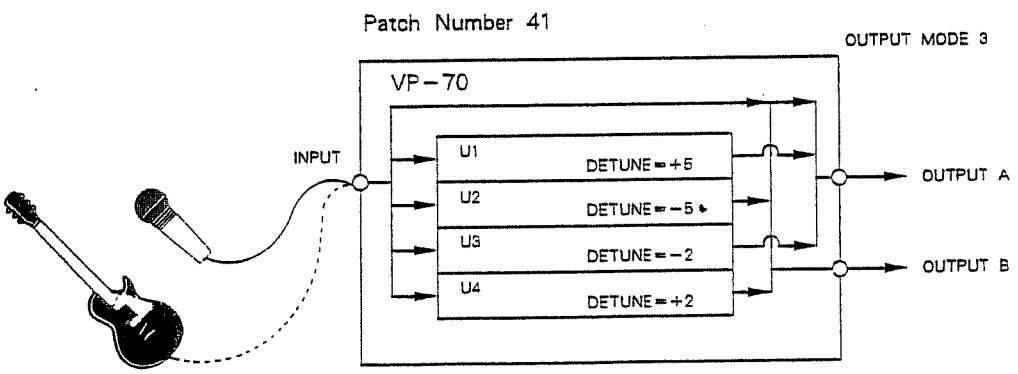
Patch numbers [21], [31], [41], [51] and [61] are chorus effects that are slightly different from each other.

■Patch number [21] is a "fatter" chorus effect, with slightly more Detune than [11].



■Patch number [31] is an even fatter chorus, with more Detune than [21].

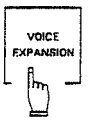
■Patch number [41], [51] and [61] have the same amounts of Detune as [11], [21] and [31] but is set to Output mode 3 that divides the effect sounds into Output Jacks A and B, and sends the direct sounds from both Jacks, A and B.



*The Voice →MIDI function does not work properly on a chord. Therefore, it is not possible to control an external MIDI device by playing a chord on a guitar.

[Patch Editing]

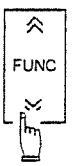
The contents (effect settings) of a patch can be edited.



Controls pitch shifters and Output mode of each patch.

Step 1 **Push the Voice Expansion Button, and the amount of Detune in each pitch shifter and the Output Mode can be changed.**

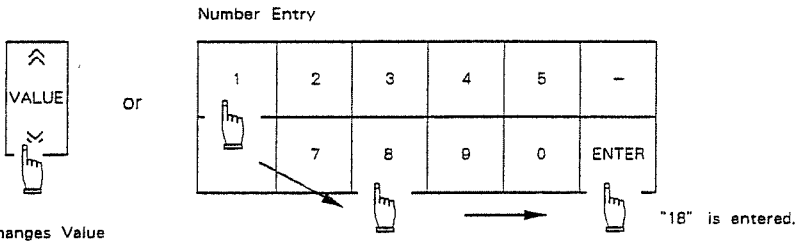
Step 2 **Push the Function Button, see how the Display changes.**

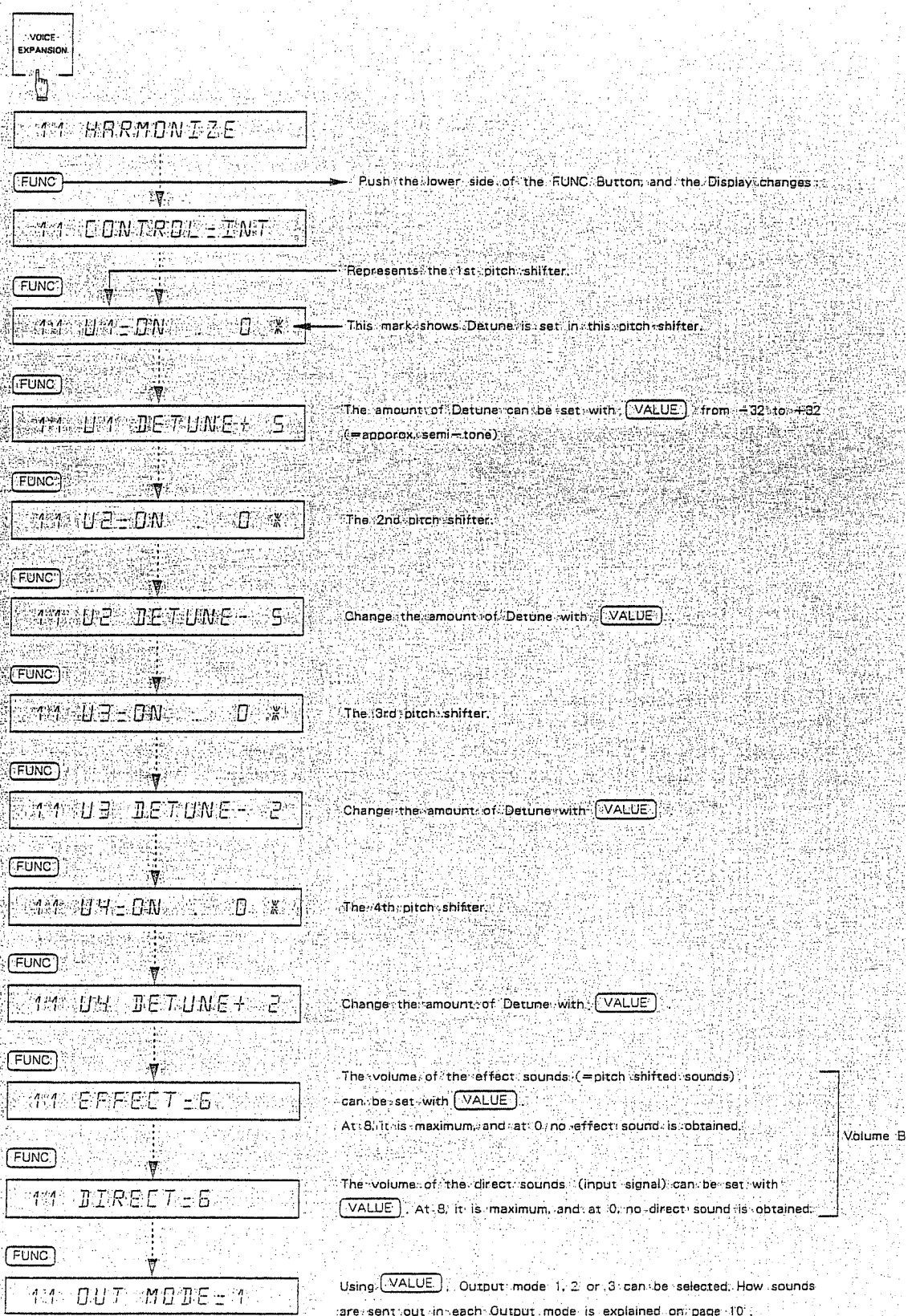


Calls functions sequentially.

Step 3 **When the Display shows the parameter you wish to edit, set the value of the parameter using the Value Button.**

A number (value) can also be entered by using the appropriate Number Buttons.
To select "+" or "− " , use the Minus Button.



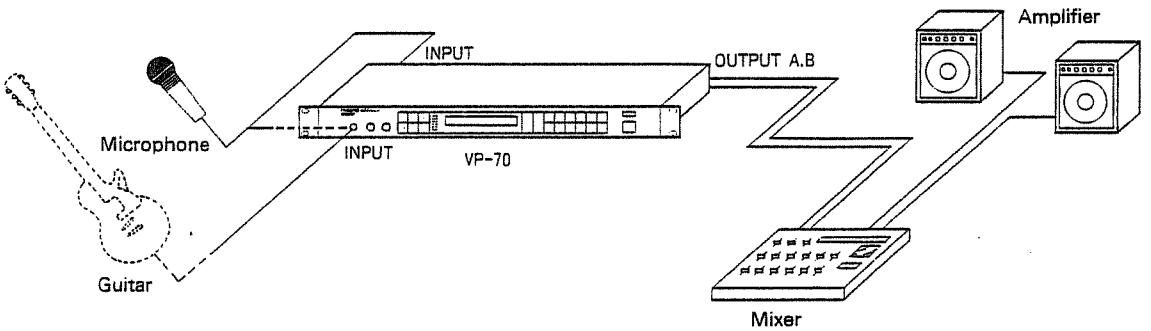


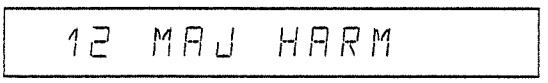
*The edited patch will be erased when the unit is turned off, or when a different patch is selected. To retain the edited patch, rename it (see page 47), then write it into memory (see page 48).

2. HARMONIZING

By changing the pitch of each pitch shifter in semi-tone steps, the input sounds can be harmonized, creating an effect like singing in a choir.

a. When using the pitch shifting Values set in the VP-70 :



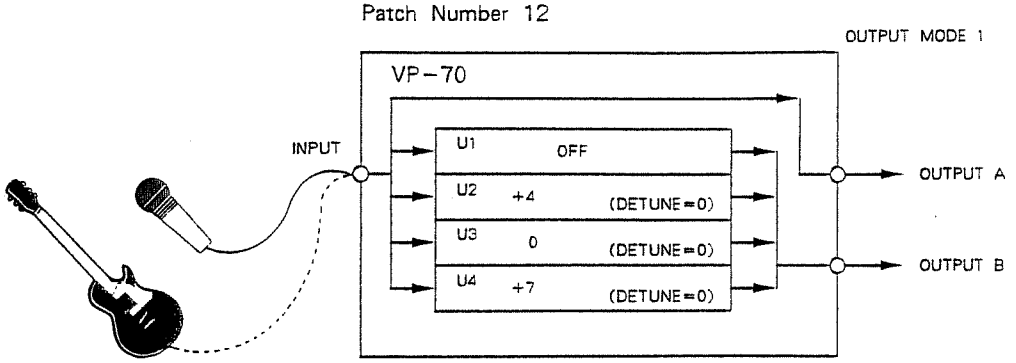


■Now, let's call patch number [12]. This patch contains 0,+ 4 and +7 semi-tones for three pitch shifting units respectively. That is, the input signals (direct sounds) are pitch shifted by two pitch shifters, by + 4 and + 7 semi-tones respectively, and one pitch shifter does not change the pitch. For instance, feeding a human voice will create a major triad that uses the direct sound as the root.

When C is input:

Patch number [12] is set to Output mode 1 that sends the direct sounds (input signal) from Jack A, and the effect sounds (pitch shifted sounds) from Jack B.

Patch Number 12

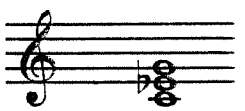


Patches [13], [14], [15], [16] and [17] contain different chords.

13 MIN HARM

■Patch number [13] contains 0, + 3 and+ 7 semi−tones for three pitch shifting units respectively. That is, the input signal (direct sounds) are pitch shifted by two pitch shifters, by + 3 and + 7 respectively, and one pitch shifter sends the input signal without changing the pitch. For instance, feeding a human voice will create a minor triad that uses the direct sound as a root.

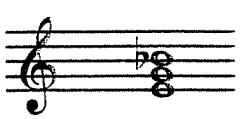
When C is input:



14 MAJ 7TH HARM

■Patch number [14] contains + 4, + 7 and + 10 semi−tones for three pitch shifting units respectively. That is, the input signal (direct sounds) are pitch shifted by three pitch shifters, by + 3, + 7 and+10 semi−tones respectively. For instance, feeding a human voice will create a minor seventh chord that uses the direct sound as a root.

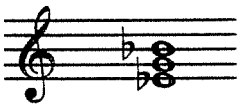
When C is input:



15 MIN 7TH HARM

■Patch number [15] contains + 3, + 7 and + 10 semi−tones for the three pitch shifting units respectively. That is, the input signal (direct sounds) are pitch shifted by three pitch shifters, by + 3, + 7 and +10 semi−tones respectively. For instance, feeding a human voice will create a minor seventh chord that uses the direct sound as a root.

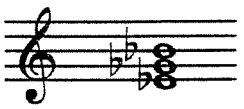
When C is input:



16 MIN 7TH-5TH

■Patch number [16] contains + 3, + 6 and + 10 semi−tones for the three pitch shifters respectively. That is, the input signal (direct sounds) are pitch shifted by three pitch shifters, by + 3, + 7 and +10 semi−tones respectively. For instance, feeding a human voice will create an altered seventh chord (m7−5 or half diminished).

When C is input:

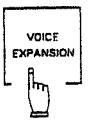


17 OCTAVE HARM

■Patch number [17] contains a pitch shifter that lowers the input signal by one octave, and therefore, can be used as an octaver effect.

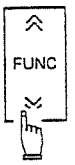
[Patch Editing]

The contents (effect settings) of a patch can be edited.



Controls pitch shifters and Output mode of each patch.

Step 1 Push the Voice Expansion Button, and the amount of Detune in each pitch shifter and the Output Mode can be changed.

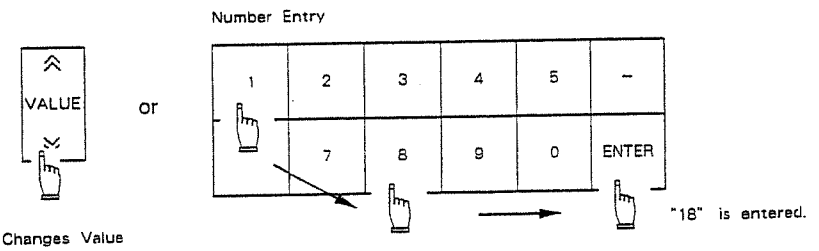


Calls functions sequentially.

Step 2 Push the Function Switch, see how the Display changes.

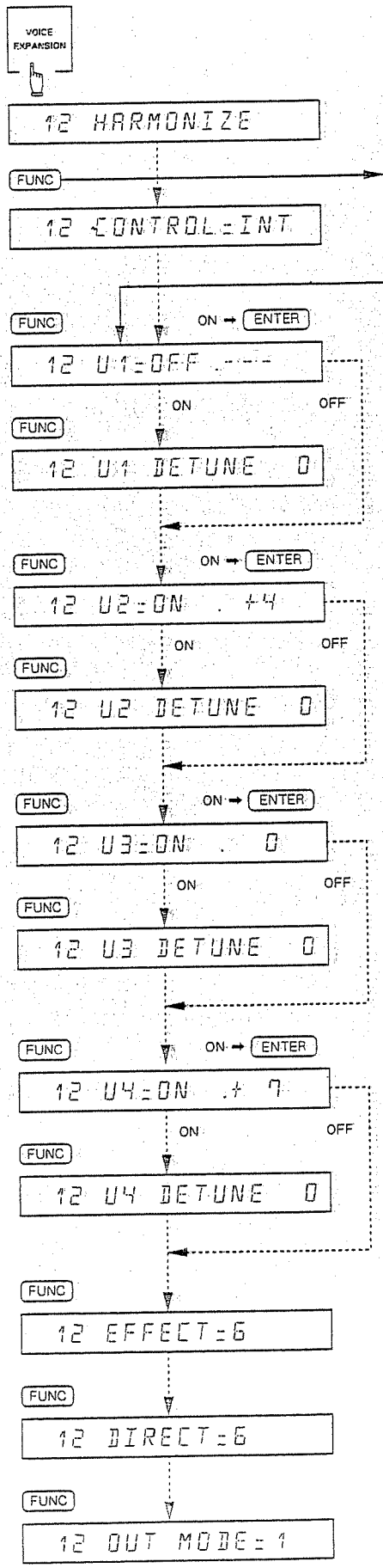
Step 3 When the Display shows the parameter you wish to edit, set the value of the parameter using the Value Button.

A number (value) can also be entered by using the appropriate Number Buttons and the Enter Button, instead of using the Value Button. To select "+" or "−", use the Minus Button.



Changes Value

*The edited patch will be erased when the unit is turned off, or when a different patch is selected. To retain the edited patch, rename it (see page 47), then write it into memory (see page 48).



Push the lower side of the FUNC Button, and the Display changes :

Represents the 1st pitch shifter.

Select whether to turn ON or OFF the 1st pitch shifter with VALUE . When ON, push ENTER , then set the pitch shift value with VALUE from −12 to +12 in semi−tone steps.

Select whether to turn ON or OFF the 2nd pitch shifter with VALUE . When ON, push ENTER , then set the pitch shift value with VALUE

Select whether to turn ON or OFF the 3rd pitch shifter with VALUE . When ON, push ENTER , then set the pitch shift value with VALUE .

Select whether to turn ON or OFF the 4th pitch shifter with VALUE . When ON, push ENTER , then set the pitch shift value with VALUE .

The volume of the effect sounds (pitch shifted sounds) can be set with VALUE .
At 8, it is maximum, and at 0, there is no effect sound.

The volume of the direct sounds can be set with VALUE .
At 8, it is maximum, and at 0, there is no direct sound.

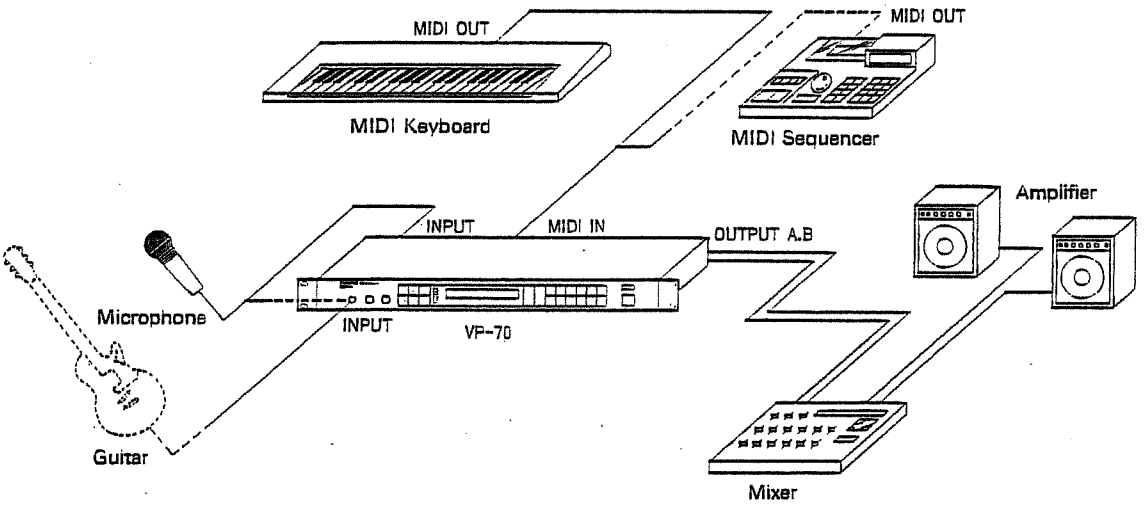
Value Balance

Using VALUE , Output mode 1, 2 or 3 can be selected .
How sounds are sent out in each Output mode is explained on page 10.

b. When using an external MIDI device to control the amount of pitch shift.

The amount of pitch shift can be controlled by using a connected MIDI keyboard or sequencer.

By using a MIDI sequencer that stores Key numbers on a specific MIDI .channel, you can simulate the effect of singing in a choir just by singing to the tempo of the sequencer.



Preparation 1 Connect the MIDI OUT connector of the MIDI device (for controlling pitch) to the MIDI IN of the VP−70.

Preparation 2 Set the MIDI IN / RRC IN Selector Switch to the "MIDI IN" position.

*In this condition, the FC−100 foot controller cannot change patches.

Preparation 3 Set the MIDI channel of the MIDI device to the same number as the VP−70's MIDI receive channel.

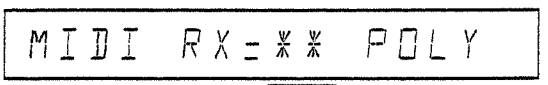
Please carefully select the channel numbers, otherwise, MIDI messages cannot be received by the VP−70.

*Initializing the VP−70 will automatically set the VP−70's receive channel to 1.

[How to change the VP−70's MIDI receive channel]

①Push the System Button.

The number of the MIDI channel currently selected will flash in the Display.



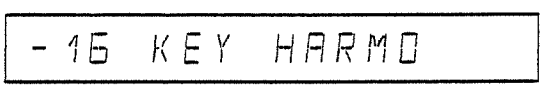
Flashing

②Using the Value Button, select a MIDI channel.

③Push the Play Button to return to the normal condition.

*Here, check if the MIDI indicator lights up by sending Note messages from an external MIDI device (=by playing the keyboard). However, be aware that it does not light whatsoever when "INT" (Internal Control) is selected.

*The MIDI channel you set here will be retained even after the unit is turned off.



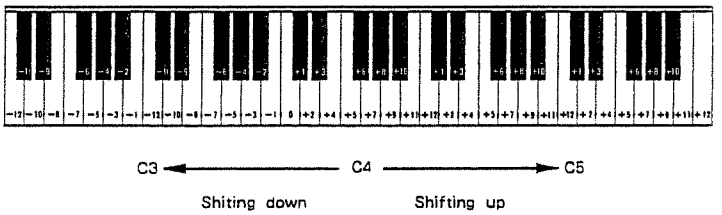
■Now, let's call patch number [−16]. The pitch shift of this patch can be controlled by an external MIDI device (a MIDI keyboard).

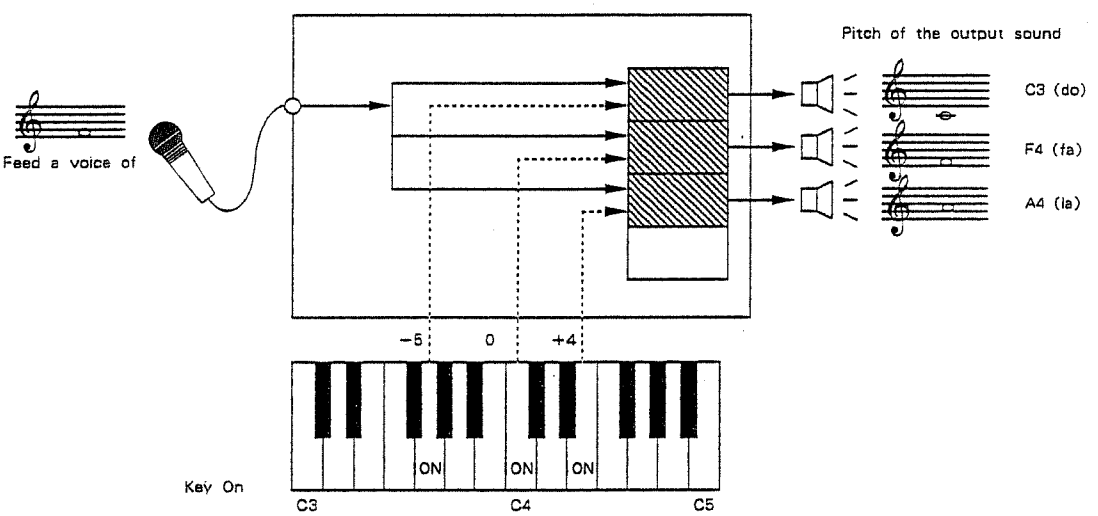
[How to control the pitch shift by an external MIDI device (a MIDI keyboard)]

While feeding sounds to the VP−70, play C4 (middle C) on the connected MIDI keyboard.
This sets the pitch shift value to 0, sounding the same pitch as the input signal. The pitch shift value can be set one octave above or below middle middle C (=0), that is C3 to C5.

For instance, playing E4 will increase the pitch of the sound by a major 3rd. Playing C4 and E4 at the same time will sound a major triad that uses the direct sound as a root. A pitch exceeding C3 to C5 will be substituted by a lower octave.

*The pitch shift is always performed on the sound currently being fed into the VP−70. In other words, when the pitch of the direct sound changes, the effect sounds change.



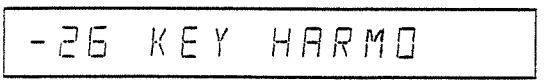


Using the bender lever of a MIDI keyboard, a synthesizer's pitch−bend effect can be obtained. This patch (−16) can be pitch shifted as much as a major 2nd from the key played when the bender lever is moved to its maximum position.

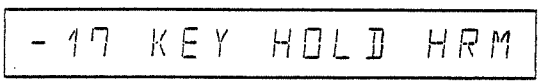
***If the amount of pitch shift exceeds one octave from the direct sound (=the maximum shift amount of the VP−70), a proper shift effect may not be obtained.**

This patch (−16) sends out only effect sounds, and is set to Output mode 1, sending effect sounds from Jack B.

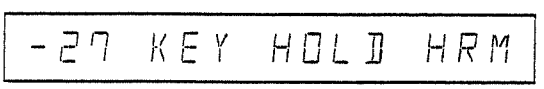
Patch numbers [−26], [−17], and [−27] also contain the effects for controlling the amount of pitch shift by an external MIDI device.



■Patch number [−26] can send out both direct and effect sounds, and therefore can be used for accentuating a melody. This patch selects Output mode 1, which sends direct sounds from Jack A and effect sounds from Jack B.



■Patch number [−17] contains a Key Hold function that can retain the same amount of pitch shift even after the key is released, until a new key is played. This patch sends out only effect sounds from Jack B (=Output mode : 1).



■Patch number [−27] contains a Key Hold function that can retain the same amount of pitch shift even after the key is released until a new key is played. This patch can send out both direct and effect sounds, and therefore can be used for accentuating a melody. This patch selects Output mode 1, which sends direct sounds from Jack A and effect sounds from Jack B.

[Patch Edition]

The contents (effect settings) of a patch can be edited.

Controls pitch shifters and Output mode of each patch.

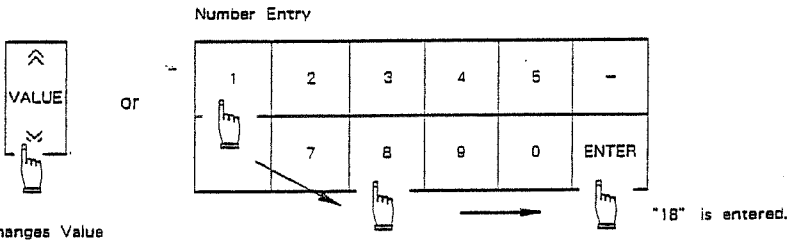
Step 1 Push the Voice Expansion Button, and the amount of Detune in each pitch shifter and the Output mode can be changed.

Calls functions sequentially.

Step 2 Push the Function Button, see how the Display changes.

Step 3 When the Display shows the parameter you wish to edit, set the value of the parameter using the Value Button.

A number (value) can also be entered by using the appropriate Number Buttons and the Enter Button, instead of using the Value Button. To select "+" or "−", use the Minus Button.



Changes Value

VOICE EXPANSION

- 16 HARMONIZE

FUNC → Push the lower side of the FUNC Button.

- 16 CONTROL=EXT

FUNC

- 16 NOTE=POLY

When UNISON is selected (with VALUE), playing one key engages four pitch shifters, and playing two keys engages two pitch shifters for each key. → FigA

FUNC

- 16 DETUNE=0

Using VALUE, the amount of the Detune can be set up to 32 (=approx. semi-tone). Pushing a key higher than C#4 will raise the pitch, and a key lower then B3 will lower the pitch.
Pushing the C4 key will create no Detune effect. → FigB
When UNISON is selected, Detune effects as shown in FigC are obtained.

FUNC

- 16 BENDER=2

VALUE sets the amount of the pitch shift when the bender lever on the MIDI keyboard is moved at its maximum.

FUNC

- 16 OCTAVE=0

Using VALUE, the entire range of the keyboard can be transposed in octave steps.

FUNC

- 16 KEY HOLD=OFF

When Key Hold is turned on with VALUE, the same amount of pitch shift is retained even after the key is released, until a new key is played.

FUNC

- 16 LOWER=FREE

The lowest note number that takes on theS pitch shift effect can be set with VALUE. Any lower key will be ignored. At FREE, there is no limit. → FigD

FUNC

- 16 UPPER=FREE

The highest note number that takes on the pitch shift effect can be set with VALUE. Any higher key will be ignored. At FREE, there is no limit. → FigD

FUNC

12 EFFECT=6

The volume of the effect sounds (pitch shifted sounds) can be set with VALUE.
At 8, it is maximum, and at 0, there is no effect sound.

FUNC

12 DIRECT=6

The volume of the direct sounds can be set with VALUE.
At 8, it is maximum, and at 0, there is no direct sound.

Volume Balance

FUNC

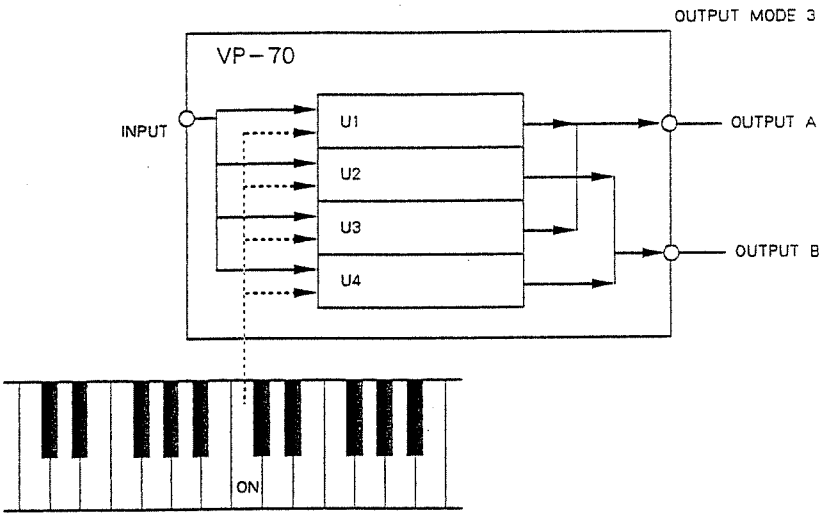
12 OUT MODE=1

Using VALUE, Output mode 1, 2 or 3 can be selected.
How the sounds are sent out in each Output mode is explained on page 10.

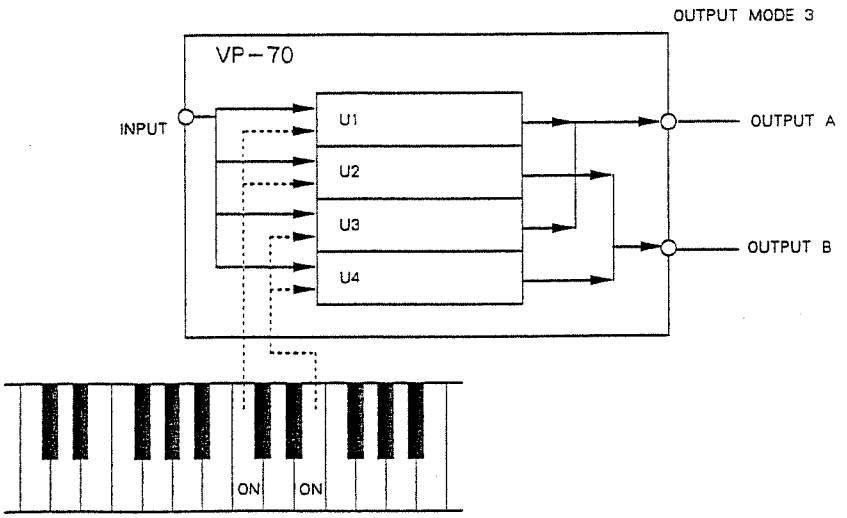
*The edited patch will be erased when the unit is turned off, or when a different patch is selected. To retain the edited patch, rename it (see page 47), then write it into memory (see page 48).

Fig A

★Playing a key=4 note unison



★Playing two keys=2 note unison



Two note unison engages two notes for each key.

Fig B

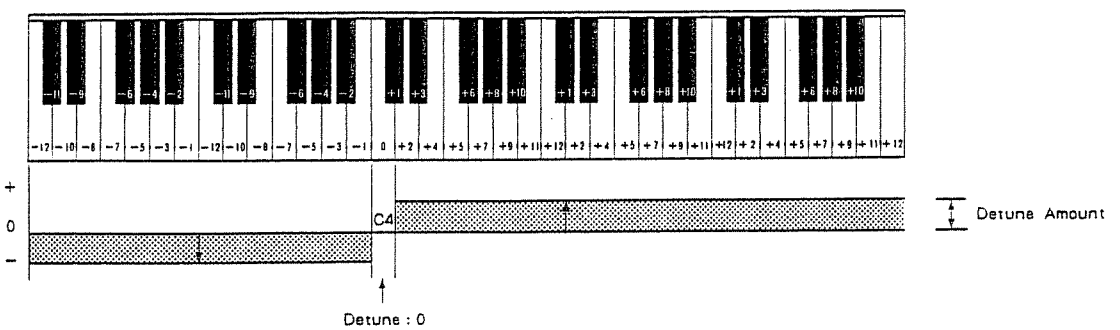
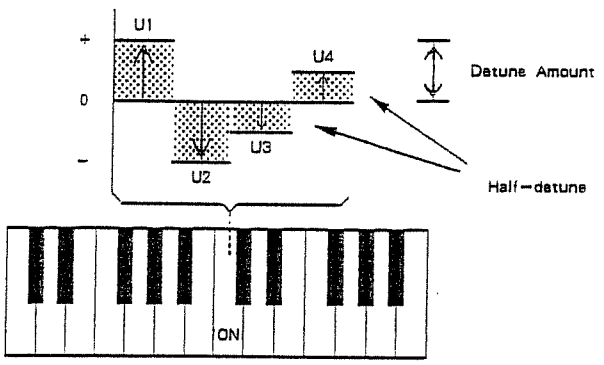


Fig. C

★Four note unison



★Two note unison

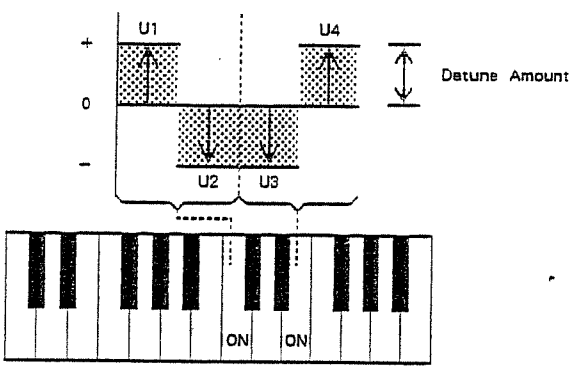
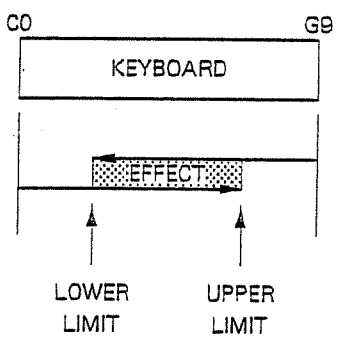


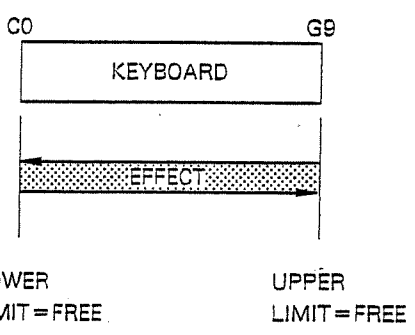
Fig. D

KEY LIMIT sets the key range where the pitch shifting effect is valid.

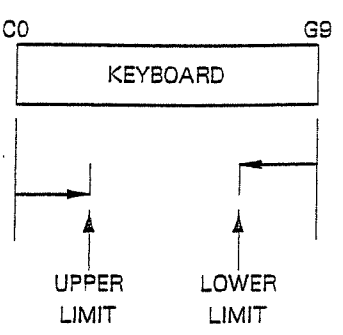
e.g.1)



e.g.2)



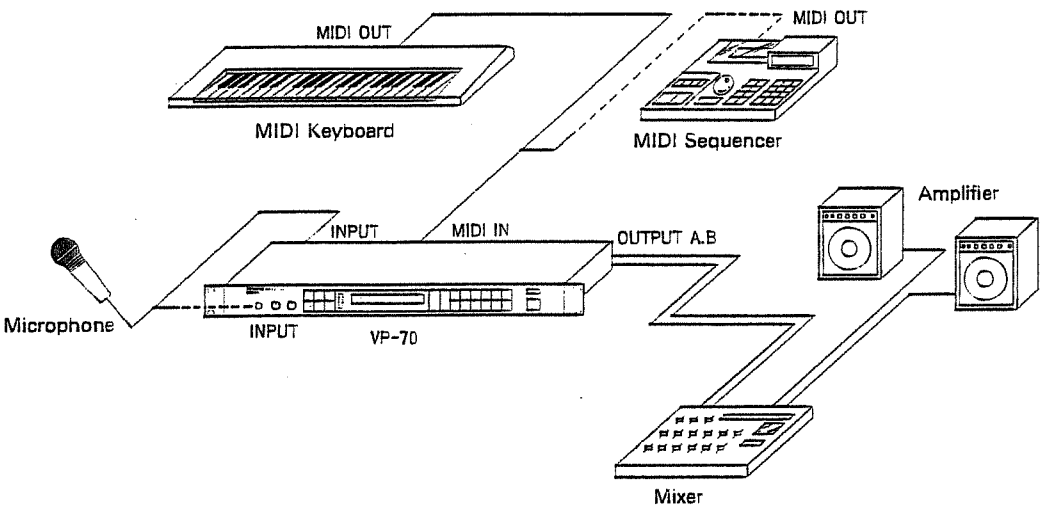
e.g.3)



When set as above, the Display responds with a "＊" mark showing EFFECT is not possible.

3. USING THE VP−70 AS A VOCODER

The voice fed into the VP−70 can sound in the same pitch as a key played on the connected keyboard. A MIDI sequencer can also be used for pitch control.



Preparation 1 **Connect the MIDI OUT connector of a MIDI device (for controlling pitch) to the MIDI IN of the VP−70.**

Preparation 2 **Set the MIDI IN / RRC IN Selector Switch to the "MIDI IN" position.**

***In this condition, the FC−100 foot controller cannot change patches.**

Preparation 3 **Set the MIDI channel of the MIDI device to the same number as the VP−70's MIDI receive channel.**

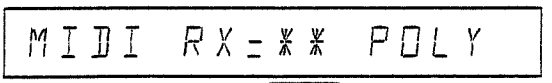
Please carefully select the channel numbers, otherwise, MIDI messages cannot be received by the VP−70.

***Initializing the VP−70 will automatically set the VP−70's receive channel to 1.**

[How to change the VP-70's MIDI receive channel]

①Push the System Button.

The number of the MIDI channel currently selected will flash in the Display.



Flashing

②Using the Value Button, select a MIDI channel.

③Push the Play Button to return to the normal condition.

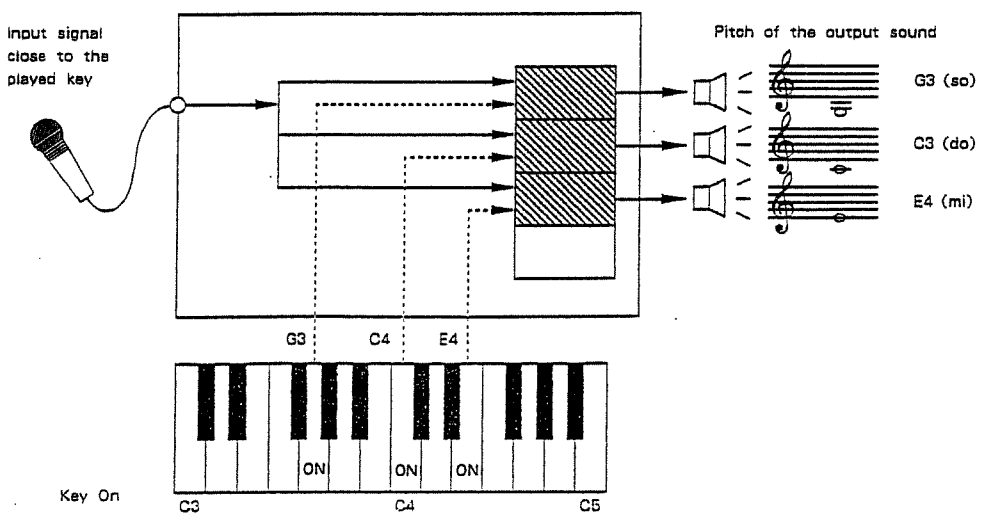
*Here, check if the MIDI Indicator lights up by sending Note messages from an external MIDI device (=by playing the keyboard). However, be aware that it does not light whatsoever when "INT" (Internal Control) is selected.

*The MIDI channel you set here will be retained even after the unit is turned off.

■Now, let's call patch number [-11]. The pitch shift of this patch can be controlled by an external MIDI device (=a MIDI keyboard in the following example).

[How to control the pitch by an external MIDI device]

While feeding your voice into the VP-70, play a key or keys on the keyboard, and you will hear the sound of the played note, or the chord. The VP-70 has four pitch shifters, therefore, up to four keys can be played at the same time. For instance, playing C4, E4 and G4 simutaneously will create a C major chord.



The pitch shift range of each pitch shifter is one octave above or below the input signal. If you play a key that exceeds this range, the pitch may not be properly shifted, and the sound may be altered.

Check where the pitch of the input signal corresponds on the keyboard, and make sure to play keys within the valid range.

***To obtain natural, more realistic harmonies, the pitch of input signal should be fairly close to the played key.**

***Please be sure to feed a single note as the input signal. A chord, or a sound with a large harmonic content may not bring optimum results.**

***When monitoring with speakers, the microhopne may pick up the sound from the speakers, causing unpleasant noise.**

***Please do not feed a sound with pitch alteration, such as vibrato.**

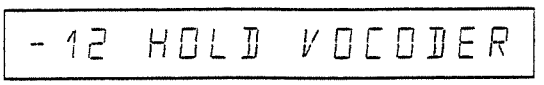
Using the bender lever of a MIDI keyboard, a synthesizer's pitch-bend effect can be obtained. This patch (-11) can be pitch shifted as much as a major 2nd from the played key when the bender lever is moved to its maximum position.

***If the amount of pitch shift exceeds one octave from the direct sound (=the maximum shifting amount of the VP-70), a proper shifting effect may not be obtained.**

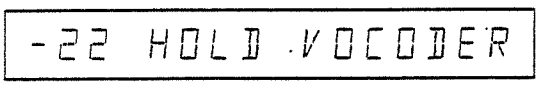
This patch (-11) sends out only effect sounds from Jack B (Output Mode 1).

The patch numbers [-12], [-13], [-14], [-15], [-21], [-22], [-23], [-24] and [-25] are also provided for vocoder use.

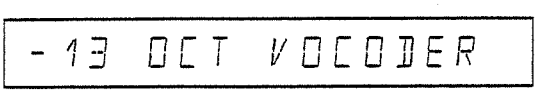
■Patch number [-21] can send out both direct and effect sounds. This patch selects Output mode 1, which sends direct sounds from Jack A and effect sounds from Jack B.



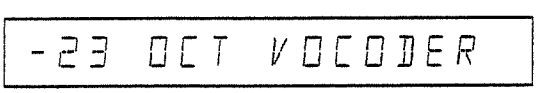
■Patch number [−12] contains a Key Hold function that can retain the same pitch even after the key is released, until a new key is played. This patch sends out only effect sounds from Jack B (=Output mode 1).



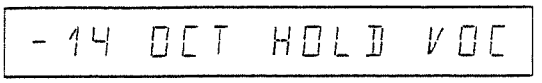
■Patch number [−22] contains a Key Hold function that can retain the same pitch even after the key is released, until a new key is played. This patch sends out both direct and effect sounds. Output mode 1 is selected; sending direct sounds from Jack A and effect sounds from Jack B.



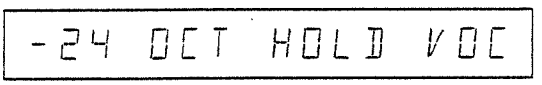
■Patch number [−13] is exactly the same effect as [−11], except that it is one octave higher, and is therefore ideal for a woman's voice.



■Patch number [−23] is exactly the same effect as [−21], except it is one octave higher, and is therefore ideal for a woman's voice.



■Patch number [−14] is exactly the same effect as [−1], except it is one octave higher, and is therefore ideal for a woman's voice.



■Patch number [−24] is exactly the same effect as [−22], except it is one octave higher, and is therefore ideal for a woman's voice.

[Patch Editing]

The contents (effect settings) of a patch can be edited.

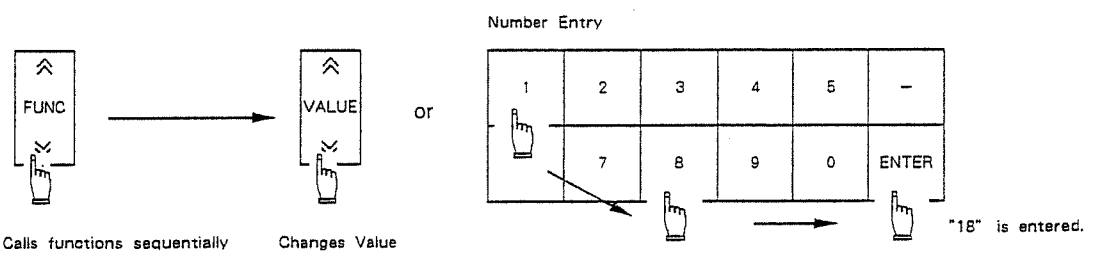
Controls pitch shifters and Output mode of each patch.

Step 1 **Push the Voice Expansion Button, and the amount of Detune in each pitch shifter and the Output Mode can be changed.**

Step 2 **Push the Function Button, see how the Display changes.**

Step 3 **When the Display shows the parameter you wish to edit, set the value of the parameter using the Value Button.**

A number (value) can also be entered by using the appropriate Number Button and the Enter Button, instead of using the Value Button. To select "+" or "−", use the Minus Button.



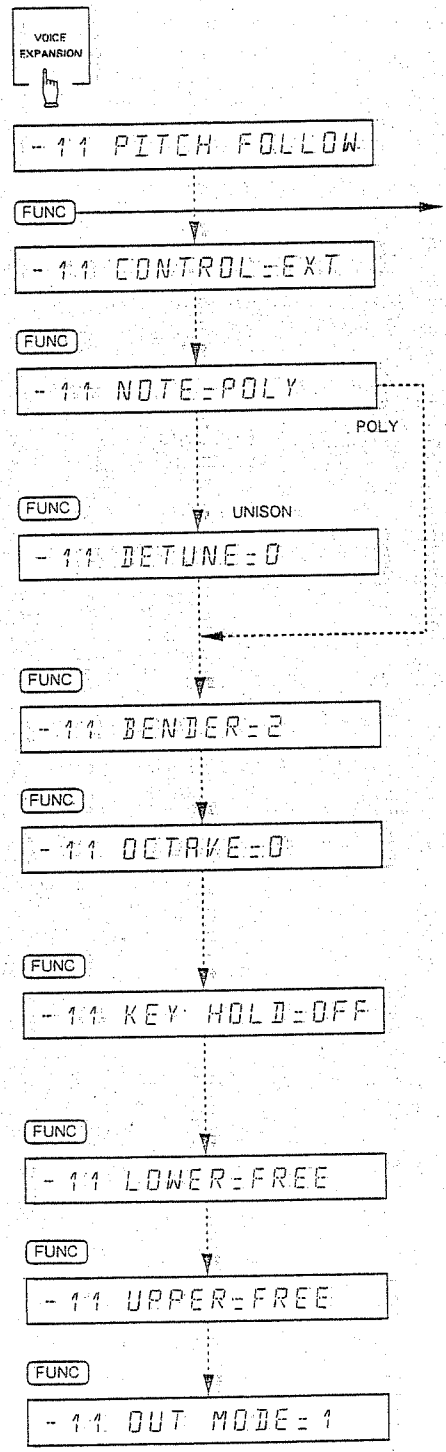
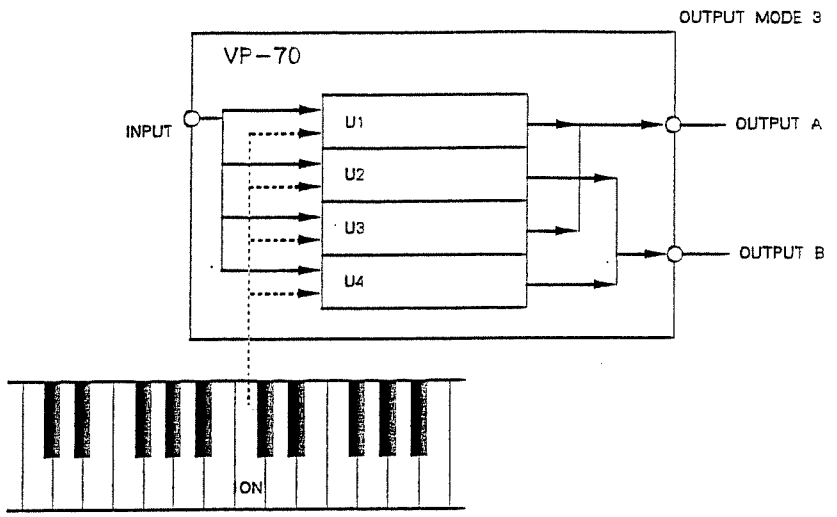
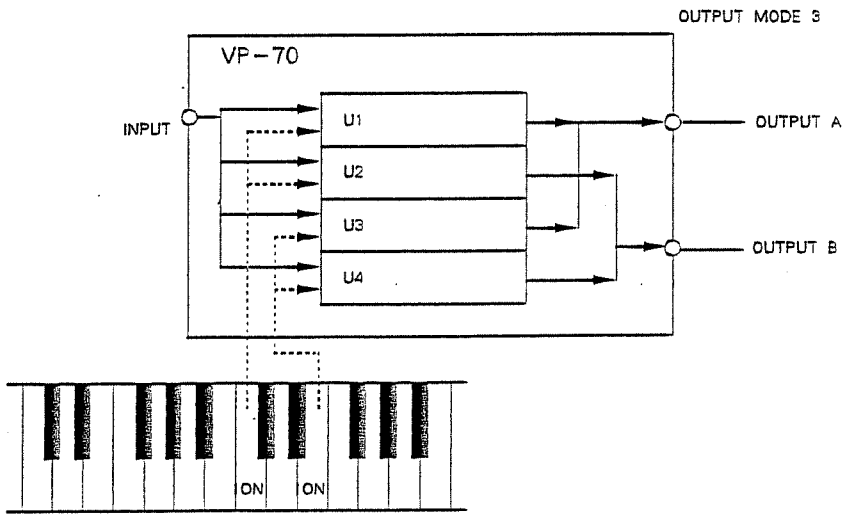

VOICE EXPANSION
VALUE
- 1 1 PITCH FOLLOW
FUNC
Push the lower side of the FUNC Button, and the Display responds with:
- 1 1 CONTROL=EXT
FUNC
- 1 1 NOTE=POLY
POLY
When UNISON is selected (by using VALUE), playing one key engages four pitch shifters, and playing two keys engages two pitch shifters for each key. → FigA
FUNC
UNISON
- 1 1 DETUNE=0
When UNISON is selected, Detune values can be set with VALUE, up to 32 (=approx. semi-tone). → FigC
FUNC
- 1 1 BENDER=2
The maximum effect of the Bender lever of the MIDI keyboard can be set with VALUE.
FUNC
- 1 1 OCTAVE=0
The entire pitch of the MIDI keyboard can be transposed in octave steps.
FUNC
- 1 1 KEY HOLD=OFF
When this is set to ON (with VALUE), the Key Hold function can be obtained. The Key Hold function retains the same pitch even after the key is released, until a new key is played.
FUNC
- 1 1 LOWER=FREE
The lowest note number that can take on the pitch shift effect can be set with VALUE. At Free, there is no limit. → FigD
FUNC
- 1 1 UPPER=FREE
Using VALUE, the highest note number that takes on the pitch shift effect can be set. At Free, there is no limit. → FigD
FUNC
- 1 1 OUT MODE=1
Uisng VALUE. Output mode 1, 2 or 3 can be selected. How the sounds are sent out in each Output mode is explained on page 10.

Fig A

★ Playing a key=4 note unison



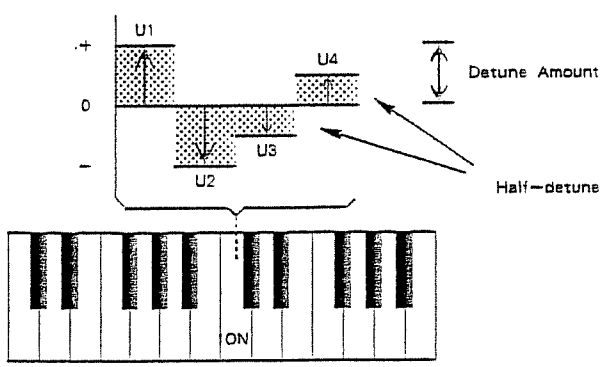
★ Playing two keys=2 note unison



Two note unison engages two notes for each key.

Fig C

★ Four note unison



★ Two note unison

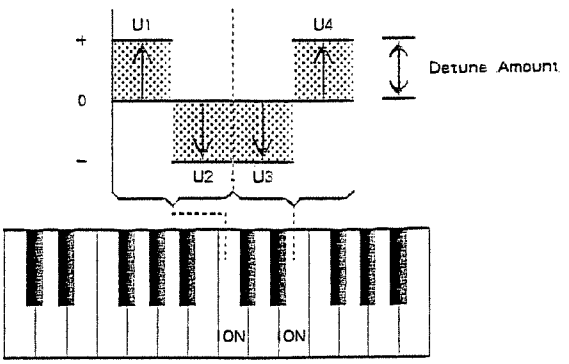
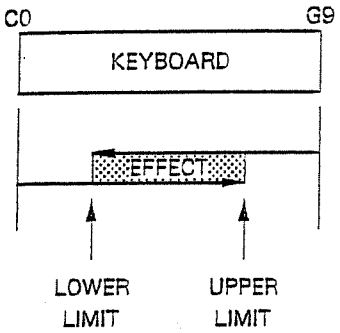


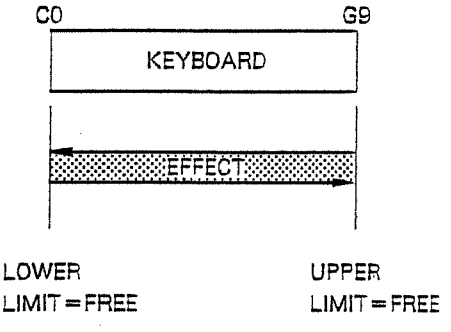
Fig D

KEY LIMIT sets the key range where the pitch shifting effect is valid.

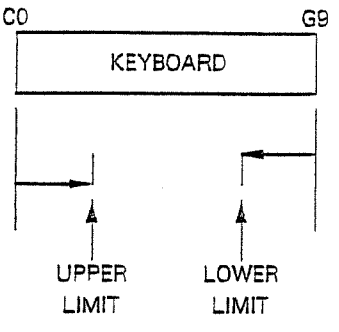
e.g.1)



e.g.2)



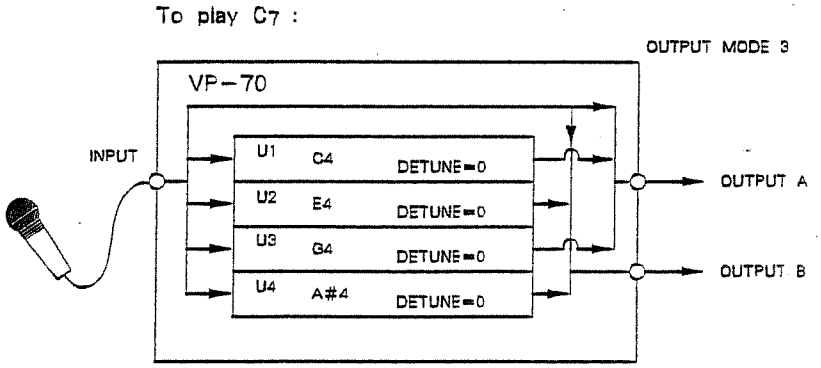
e.g.3)



When set as above, the Display responds with a "*" mark showing the EFFECT is not possible.

The pitch to be sounded can be set on the VP−70 as well as on the external MIDI device. See Operation Table "Pitch Follow−To set the pitch to be sounded on the VP−70" on page 43.

To play C7 :

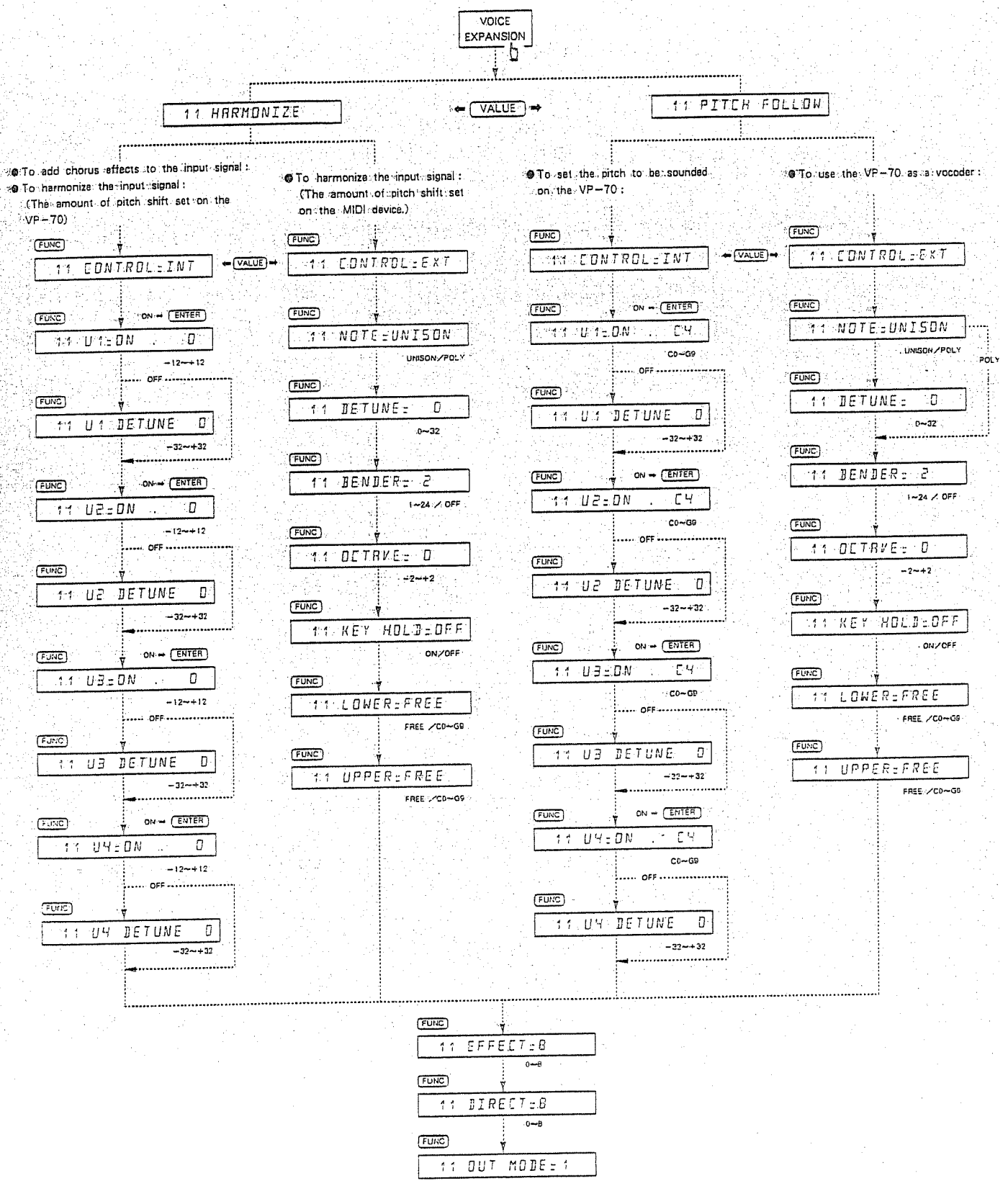


*The edited patch will be erased when the until is turned off, or when a different patch is selected. To retain the edited patch, rename it (see page 47), then write it into memory (see page 48).

4. SENDING ONLY DIRECT SOUNDS

Select the patch called "DIRECT".

[Operation Table for the Pitch Shift function]



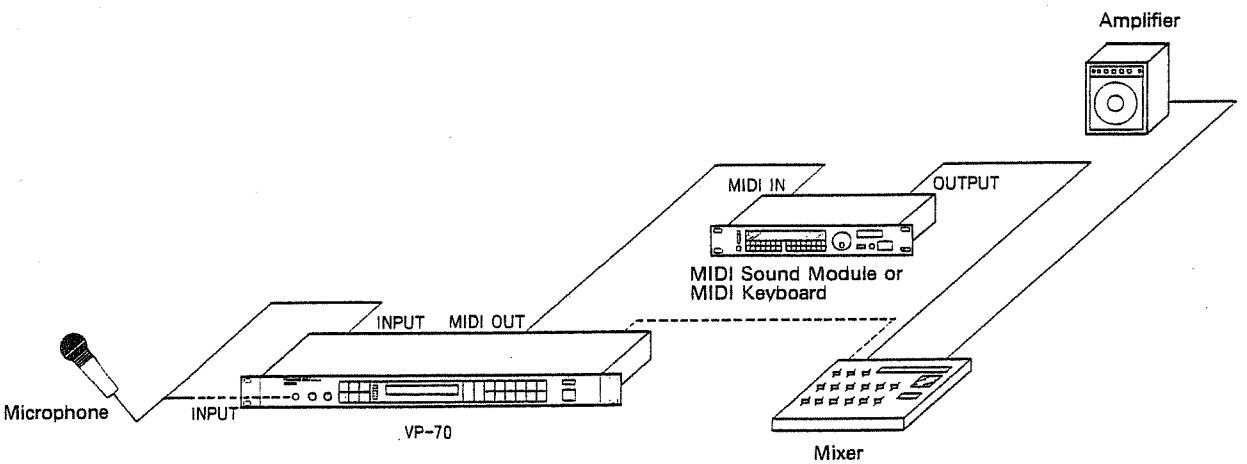
5. CONTROLLING MIDI SOUND MODULES

The [VOICE−MIDI] function, which detects the pitch of the input signal and converts it into MIDI signals, can be obtained in any patch.

The [VOICE−MIDI] function detects the pitch and volume of the input signal, and and converts them into MIDI Note, Bender, Volume and Aftertouch messages. This makes it possible to control a MIDI sound module by the human voice.

***For accurate pitch detection, be sure to use single notes.**

The [VOICE−MIDI] function can be simultaneously used with the pitch shift function.



Preparation 1 **Connect the MIDI IN connector of a MIDI device to the MIDI Out of the VP−70.**

Preparation 2 **Set the receive channel of the MIDI device to the same number as the transmit channel of the VP−70.**

Please carefully select the channel numbers, otherwise, MIDI messages cannot be received by the MIDI device.

The VP−70's MIDI transmit channel can be set individually for each patch. The channel number of the patch currently used can be monitored by pushing the Voice>MIDI Button.

***The channel numbers of all the patches are default to 1.**

The contents (channel number,etc) of a patch can be edited as follows.

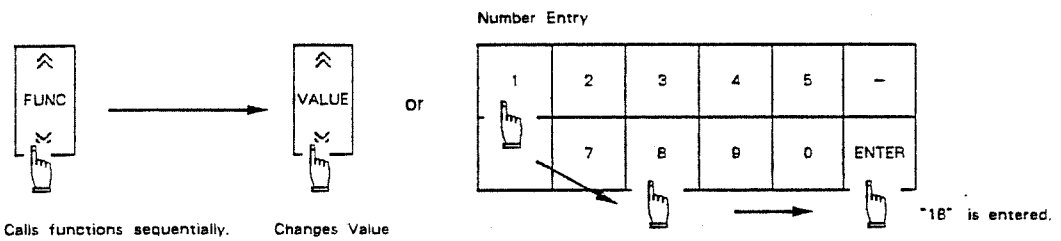
[Patch Editing]

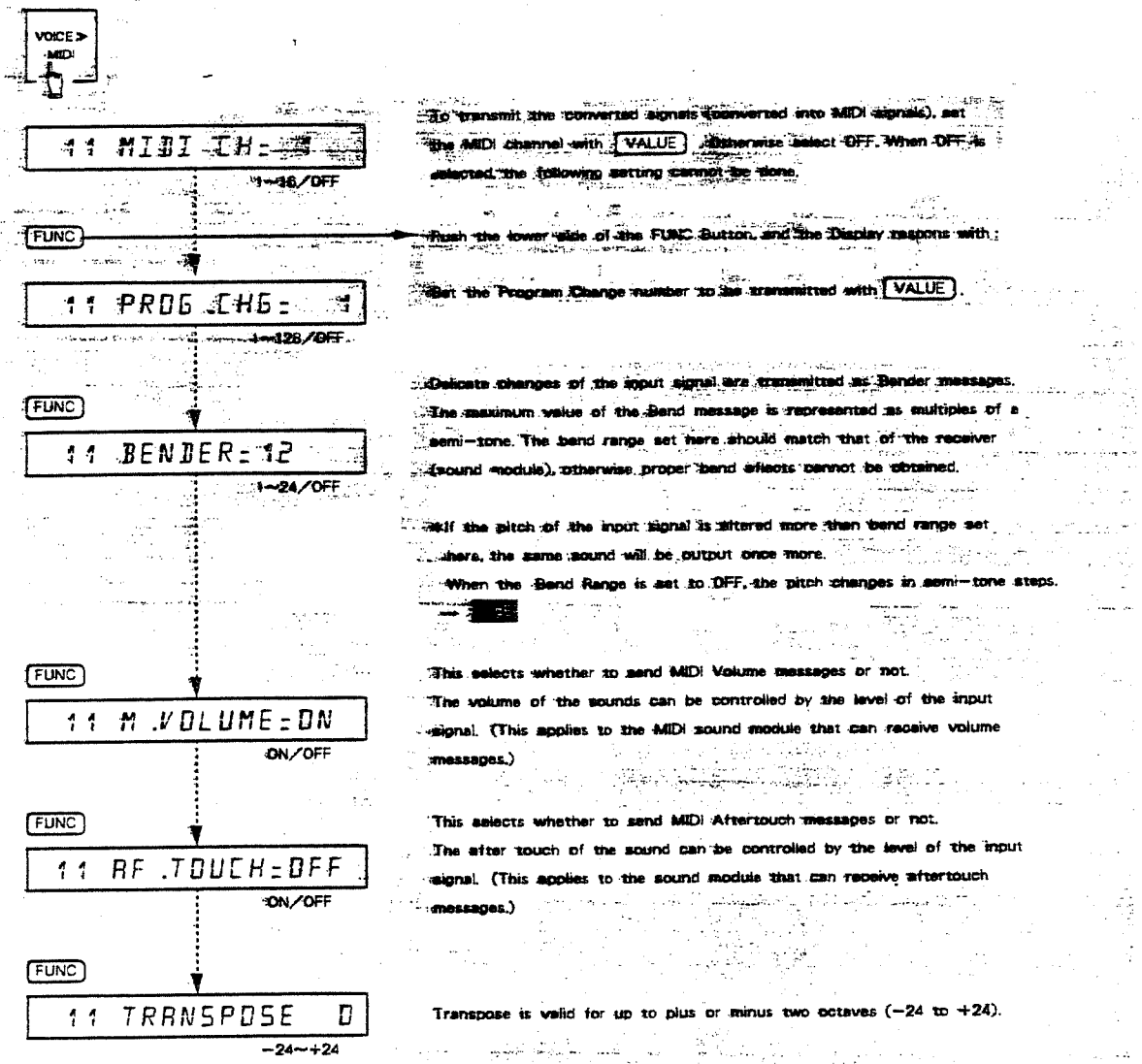
Step 1 **Push the Voice Expansion Button, and the ON/OFF switch of the VOICE → MIDI function, and the MIDI conversion mode can be changed.**

Step 2 **Push the Function Button, see how the Display changes.**

Step 3 **When the Display shows the parameter you wish to edit, set the value of the parameter using the Value Button.**

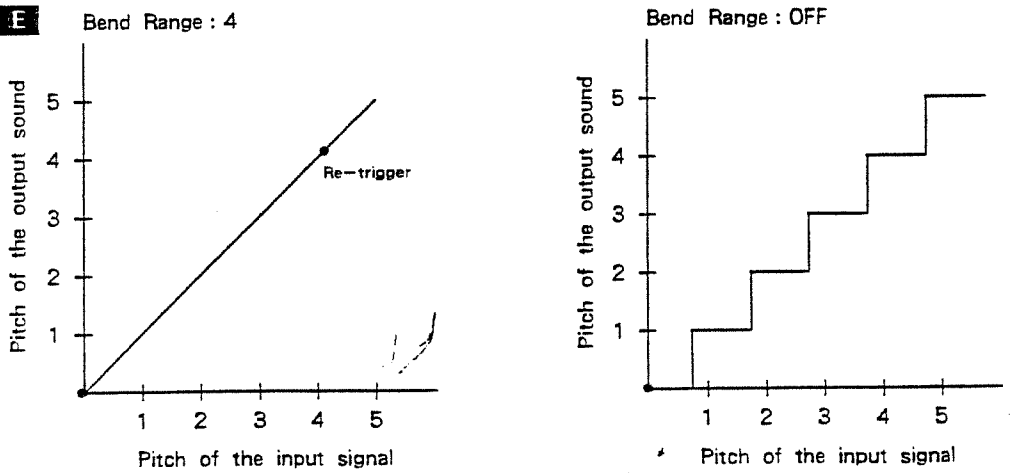
A number (value) can also be entered by using the appropriate Number Button and the Enter Button, instead of using the Value Button. To select "+" or "−", use the Minus Button.





***The edited patch will be erased when the unit is turned off, or when a different patch is selected. To retain the edited patch, rename it (see page 47), then write it into memory (see page 48).**

Fig E



4 PATCH NAMING

Each patch can be named using up to 12 letters.

Step 1 **Push the Voice Expansion and the Voice>MIDI Buttons at the same time.**

The indicators light up.(If not, naming cannot be done).

Flashing

The first letter flashes.

Step 2 **Using the Function Button, make the letter you wish to change flash.**

Step 3 **Using the Value Button, change the flashing letter. (Letters, numbers and signs are available).**

A number can be entered by using the Number Buttons, instead of the Value Button. A space can be entered by pusing the Enter Button.

***The patch name you have edited will be erased when a different patch is selected. To retain the edited name, write it into memory as follows.**

5 PATCH WRITING

To retain the edited data, take the following writing procedure.

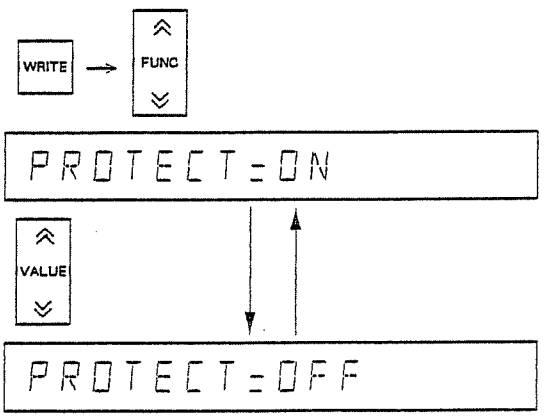
Step 1 **Push the Write Button.**

Step 2 **Assign the patch number you wish to write, using the Number Buttons. (To select a patch group, use the Minus Button.)**

Step 3 **Push the Enter Button.**

The following indication shows that the Protect function is on to protect the data in memory.

Turn the Protect function off as follows, and repeat the writing procedure.



When writing is completed, the Display responds as shown below, then the unit is returned to the Play mode.

6 OTHER USEFUL FUNCTIONS

1. TUNING

The VP−70 allows you to set the pitch (frequency) of A (=standard pitch), and tune the input signal to it.

When using a musical instrument, it is necessary that the instrument is tuned to the VP−70 precisely. Otherwise, the pitches of the direct and effect sounds will differ.

Step 1 **Push the Tune Button, and the Display responds with :**

430.0~450.0

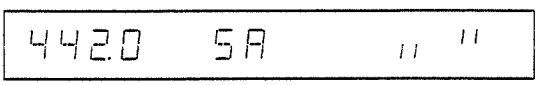
[Tuning to a standard pitch]

Step 2 **Using either the Value Button or the Number Button, set the standard pitch.**

The pitch is variable from A = 430.0 to 450.0Hz in 0.1Hz steps.

When using the Number Button to set the pitch, begin with the center figure. For instance, to set 442.0, enter 4,2, then 0, and push the Enter Button.

Now, playing the instrument will show the corresponding Key number in the Display. "+" represents #.



***Be sure to feed single notes.**

Step 3 **Adjust the pitch of the instrument so that the upper block in the Display should meet the lower one (making a figure 8 shape).**

[If it is not desirable to change the pitch of the instrument, such as when it is a finely tuned to a piano, use the following method.]

Step 4 **While playing the instrument, change the pitch of the VP−70 with the Value Button until an 8 shape is made in the Display.**

When tuning is completed, push the Play Button to return to the Play mode.

*The pitch is automatically written into memory, and retained even after the VP−70 is turned off.

*When the VP−70 controls an external MIDI sound module with the Voice → MIDI function, tune the MIDI sound module to the VP−70.

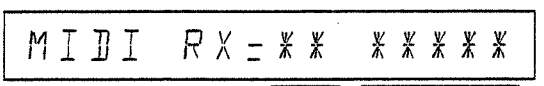
2. MIDI MONO MODE

The VP−70 features MIDI MONO mode, that can assign different MIDI receive channels to the four built−in pitch shifters. This is indicated in the Display as "MONO4".

Mono mode allows four strings of a guitar to control the four built −in pitch shifters of the VP−70 individually, and therefore retains the natural characteristics of a guitar.

[How to select "MONO4" mode]

Step 1 **Push the System Button, and the MIDI receive channel will flash in the Display.**



The channel shown here is called the "Basic Channel".

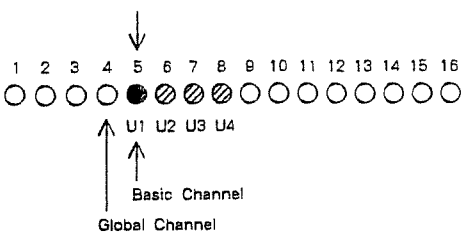
*To select "MONO4" mode, set a MIDI channel number smaller than 14. If it is set to a number higher than 13, "MONO 4" mode cannot be selected.

Step 2 **Push the Enter Button, and the flashing character moves to the left.**

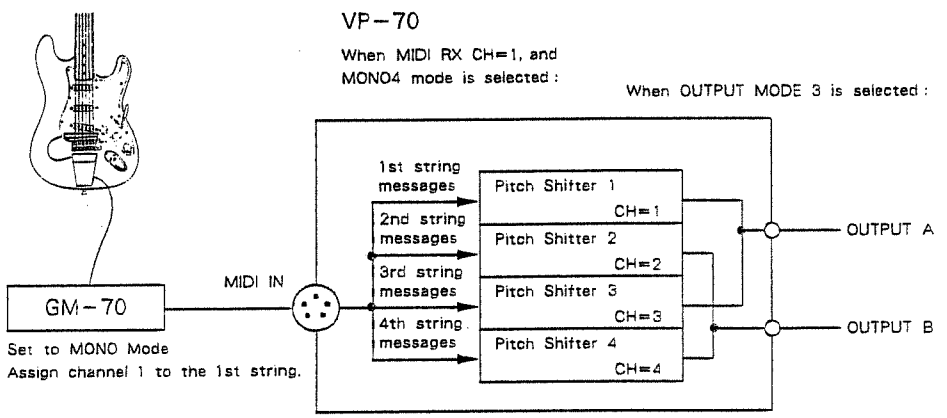
Step 3 **Using the Value Button select "MONO 4" mode, and the MIDI receive channels of the four pitch shifters (U1 to U4) will default to :**

Basic channel=n
U1 → (n) channel
U2 → (n+1) channel
U3 → (n+2) channel
U4 → (n+3) channel

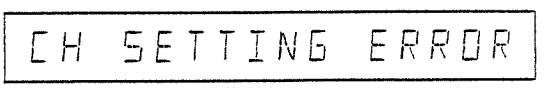
[e.g.] Push [SYSTEM], and set the MIDI receive Channel to 5.



When using the GM−70, assign channel 1 to the first string of the GM−70, and set the VP−70's receive channel (=basic channel) to 1.



***In Mono mode, the basic channel cannot be set higher than 13. If it is set to any number higher than 13 in "MONO 4" mode, the Display responds with :**



"MONO 1", "MONO 2" and "MONO 3" modes are also available, but these cannot be set on the VP−70, only by a command sent from an external MIDI device.

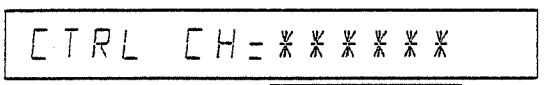
"MONO 1" mode uses only one channel, "MONO 2" uses two channels, and "MONO 3" uses three channels, while "MONO 4" uses four channels.

NOTE) The VP−70 defaults to "MONO 4" mode.

[MIDI Channel for receiving messages common for all the pitch shifters]

Note and Bender messages are received on each MIDI channel (=MIDI receive channel) assigned to each pitch shifter separately. However, Program change and Hold messages are common for all the pitch shifters. The channel on which these messages are received can be set as follows.

Step 1 **Make sure that the Display shows "MONO 4", and push the lower side of the Function Button. The Display responds with :**



BASIC/GLOBAL

Step 2 **Using the Value Switch, select "BASIC" or "GLOBAL".**

When "BASIC" is selected, the Program change and Hold messages are sent on the Basic channel currently set. When "GLOBAL" is selected, those messages are received on the Global channel, that is one number smaller than the Basic channel. (When the basic channel is set to 1, the global channel is 16.)

***When using the GM—70, select "BASIC".**

3. DATA TRANSFER

Using Roland MIDI Exclusive messages, data stored in the VP−70 can be transferred to another VP−70, or to another MIDI device (e.g., a sequencer).

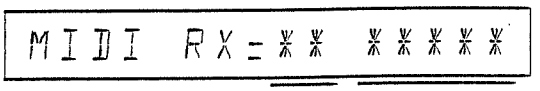
You can transfer the entire data or part of the data as shown below:

ALL : **Entire data**
11 to 88 : Data of Group A
−11 to 88: Data of Group B

a. Setting the MIDI Receive Channel

The Roland System Exclusive messages can select a receiver device by substituting a channel number for a Device ID. The VP−70 uses the number of the MIDI receive channel as a Device ID, therefore, when transferring data between two VP−70's, be sure to set the receive channels of two units to the same number.

To set the MIDI receive channel, push the System Button, then assign a number using the Value Button.



b. Bulk Dump

Step 1 — Connect the MIDI OUT connector of the VP−70 (transmitter) to the MIDI IN on the receiver unit using a MIDI cable.

Step 2 — Push the System Button and make sure the indicator lights up.

Step 3 — Push the Function Button until "BULK DUMP" is shown in the Display.

Step 4 — Using the Value Button, select the data group to be transferred :

The entire data

Patch Group A

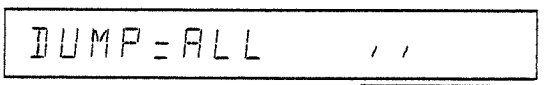
Patch Group B

Step 5 — Push the Enter Button, and the data of the selected group is transferred.

When transferring data from the VP−70 (transmitter) to another VP −70 (receiver), be sure that the receiver VP−70 is set to Bulk Load mode.

During Bulk Dump, the Display shows :

e.g.) ALL



segments

How the Bulk Dump is proceeding can be seen in the Display. When all the four segments are lit, the Bulk Dump is completed. Then the Display responds as shown below, and the VP−70 returns to the Play mode.

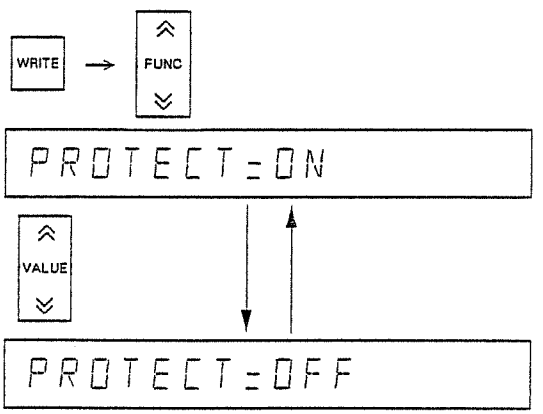
c. Bulk Load

*Data can be transferred to the receiver VP−70 only when the Display shows "BULK LOAD".

Step 1 Connect the MIDI IN connector of the VP−70 (receiver) and the MIDI OUT of the transmitter unit with a MIDI cable.

Step 2 Set the MIDI IN / RRC IN Selector Switch to the "MIDI IN" position.

Step 3 Turn the Protect function off.

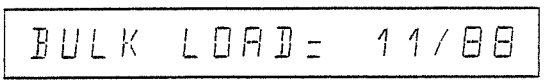


Step 4 Push the System Button, and make sure that it lights up.

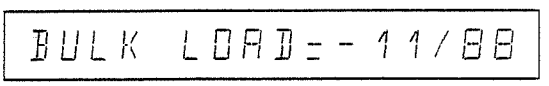
Step 5 Push the Function Button until "BULK LOAD" is shown in the Display.

When bulk−loading Patch Group A or B data, you can choose to which patch Group (location) on the receiver it should be transferred. Use the Value Button to select A or B.

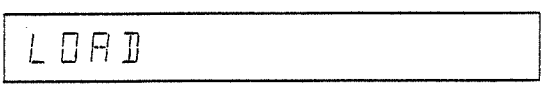
To load to Patch Group A



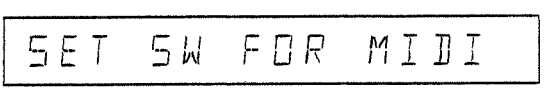
To load to Patch Group B



Step 6 **Push the Enter Button, and the VP−70 is ready to read the data transferred from the transmitter.**



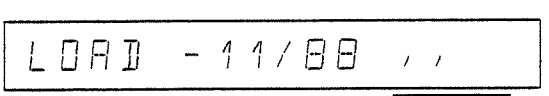
If the MIDI IN/RRC·IN Selector Switch is set to the "RRC IN" position, the following error message is shown in the Display.



Set the switch to the MIDI IN position, and the VP−70 is ready to read the transferred data.

Step 7 **Transfer the data from the transmitter to the VP−70. (Bulk−dump, or play data)**

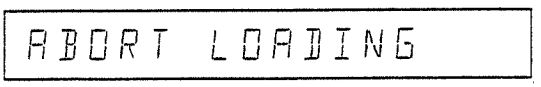
The transferred data will be written in the appropriate memory location of the VP−70.



segments

How the Bulk Dump is proceeding can be seen in the Display. When all the four segments are lit, the Bulk Dump is completed. Then the Display responds as shown below, and the VP−70 returns to the play mode.

To stop the data transfer, push any button on the panel. The Display responds as shown below, and the VP−70 returns to the Play mode.



If the Display does not change after waiting a minute, or the following error message is shown, it is likely that something has gone wrong.

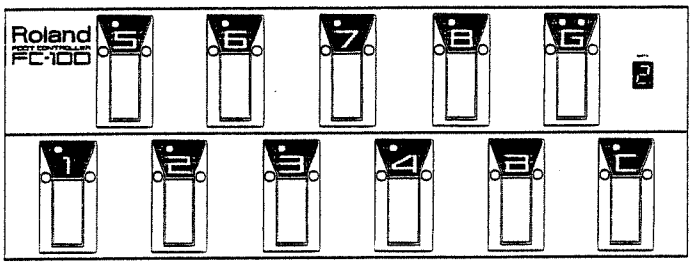
Push any button on the panel to return to the Play mode, and repeat the procedure.

Step 8 **Return the Protect Switch to ON.**

4. PATCH SELECTION WITH THE FC−100

Using the FC−100 optional foot controller, you can change patches by pressing the pedal.

*When a MIDI keyboard or the GM−70 is connected to the MIDI IN connector on the VP−70, the FC−100 cannot be used.



Step 1 Connect the RRC OUT connector of the FC−100 to the RRC IN of the VP−70 with the connection cable supplied with the FC−100.

Step 2 Set the MIDI IN / RRC IN Selector Switch on the VP−70 to the "RRC IN" position.

Step 3 Set the Mode Selector Switch of the FC−100 to the " II " position.

Step 4 Using the Number, Bank and Group pedals of the FC−100, select a patch (See the owner's manual of the FC−100 for a detailed explanation of each pedal.)

*When the FC−100 is set up with the VP−70, the FC−100's Display shows Group A, and the indicators of Bank 1 and Number 1 are alight. This Patch number (A−11) is not sent to the VP−70. Select the corresponding Pedals on the FC−100.

*If you change the Patches without using the FC−100, the FC−100 does not indicate the new patch.

SETTING MEMO

Patch Number	Patch Name	HARM / P.Fo	INT / EXT	U1 (Detune)	U2 (Detune)	U3 (Detune)	U4 (Detune)	EFFECT	DIRECT	OUT MODE	VOICE ≫ MIDI					
											CH	P.Ch	BEND	VOL	A.T	TRA

Patch Number	Patch Name	HARM / P.Fo	INT / EXT	POLY / UNISON	DETUNE	BEND RANGE	OCT SHIFT	KEY HOLD	LO. LIMIT UP. LIMIT	EFFECT	DIRECT	OUT MODE	VOICE ≫ MIDI					
													CH	P.Ch	BEND	VOL	A.T	TRA

VOICE PROCESSOR
MODEL VP-70

MIDI Implementation Chart

Date : May. 30. 1987
Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default	1-16	1-16	Memorized
	Changed	1-16	1-16	
Mode	Default	MODE 3	Mode 3, 4	Memorized
	Messages	×	MONO, POLY	
	Altered	*********		
Note Number		0-127	0-127	
	True Voice	*********	0-127	
Velocity	Note ON	○	×	v=1-127
	Note OFF	× 9n, v=0	×	
After Touch	Key's	×	×	
	Ch's	*1	×	
Pitch Bender		× *1 0-24 SEMI	*1 0-24 SEMI	14 BITS RESO.
Control Change	7	*1	×	VOLUME
	64	×	○	HOLD-1
Prog Change		*2 0-127	0-127	
	True #	*********	0-127	
System Exclusive		○	○	*3
System Common	Song Pos	×	×	
	Song sel	×	×	
	True	×	×	
System Real Time	Clock	×	×	
	Commands	×	×	
Aux Message	Local ON/OFF	×	×	
	All Notes OFF	○ (123)	○ (123, 126-127)	
	Active Sense	×	×	
	Reset	×	×	
Notes		*1 Either ○ or × can be selected and written in a patch. *2 Transmit Program Change Number of each patch can be set freely. *3 Bulk Damp/Load (Roland 'one way' format)		

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

○ : Yes
× : No

SPECIFICATIONS

VP-70 : Voice Processor

● **Memory**
128 patches

Tuning Frequency (standard pitch)
MIDI Receive Channel MIDI Mode (Poly, Mono)

● **Edit**
Patch Edit
a) Voice Expansion Edit
b) Voice≫MIDI Edit
c) Patch Name Edit
System
Tuning Frequency (standard pitch)

● **Front Panel**
Input Jack
Attenuator Knob
Input Level Knob
Play Button
Voice Expansion Button
Voice ≫ MIDI Button
Tune Button
System Button
Write Button
Function Button
Value Button
Number Button (0-9)
Minus Button
Enter Button
Level Indicator
Preset Indicator
16 letter Display
Power Switch

● **Rear Panel**
Input Connector
Output Jacks : A, B
Patch Shift Jacks : UP/DOWN
RRC IN Connector
MIDI Connectors (IN,OUT,THRU)
MIDI IN/RRC IN Selector Switch

● **Dimentions**
482 (W) ×294 (D) ×44 (H) mm
19"×11-9/16×1-3/4"

● **Weight**
4kg/8lb 13oz

● **Consumption**
20w

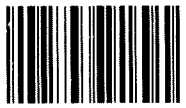
● **Accessories**
Connection cord×1
Owner's manual
What is MIDI

● **Options**
Foot Controller FC-100
Pedal Switch DP-2
Foot Switch BOSS FS-5U
Hard Case

Roland®

10620

UPC 10620



1098:

Roland

VP-70

'87-8-B3-1S