# Roland

MIDI **MULTI TIMBRAL**
LINEAR SYNTHESIZER
MULTI TRACK SEQUENCER

D-20

Owner's Manual

VOLUME
1
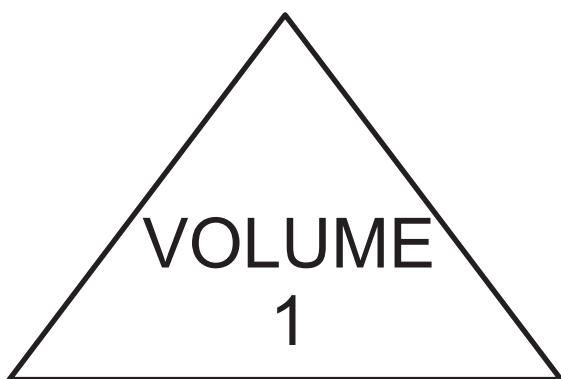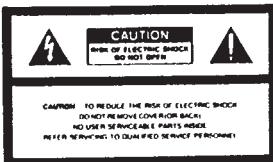
The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

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 a 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

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Bescheinigung des Herstellers /Importeurs

Hiermit wird bescheinigt, daß der/die/das

ROLAND MULTI TIMBRAL LINEAR SYNTHESIZER MULTI TRACK SEQUENCER D-20

(Gerät, 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 Uberprüfung 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 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 the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio TV Interference Problems"

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

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

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CONTENTS

The Roland D−20 is a multi timbral, linear synthesizer with a built−in multi track sequencer.

Please read the owner's manual thoroughly to make the best use of the Roland D−20.

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.

Do not use the same socket used for any noise generating device (such as a motor or variable lighting system) or large power consuming device.

When connecting the power cable to the socket, be sure that the unit is turned off.

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

Handle the power cord gently.

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

It is normal for this unit to become hot during operation.

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

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.

CLEANING

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

LOCATION

Do not place this unit in the following conditions :

In extreme heat (where it may be affected by direct sunlight, near a heater, etc) In extreme humidity Where it may be affected by dust or vibration
Operating this device near a neon, fluorescent lamp, TV or CRT display may cause noise interference. If so, change the angle or the position of the device.

If you operate this unit near a TV or radio which is turned on, noise or picture trouble may occur. If this happens, move the unit away from it.

Do not place anything heavy on this unit or the power cord.

Strong magnetic field such as a speaker may disturb proper function of the disk.

Place this unit in a steady, horizontal place. If it is inclined upward at more than 20 detrees of downward at more than 20 degrees. the disk drive may not function properly.
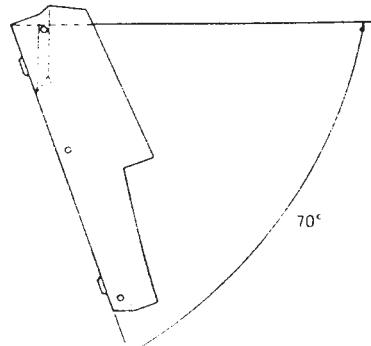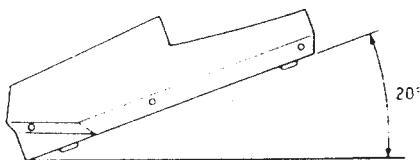
MEMORY BACK—UP

This device 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 memory may be lost.

HOW TO HANDLE A FLOPPY DISK

The built—in disk drive is a precise machine. Place the unit in a steady, horizontal place to avoid shock or vibration. Specially when the disk drive is running, do not give shock or vibration to the unit.

Floppy disks are delicate and can be ruined if not handled properly. Do not touch the shutter that covers the magnetic film. The magnetic film can be easily damaged even by slight amount of grease.

Make a few copies of important data.

Do not switch on or off the unit with a disk connected in the disk drive.

Insert a disk secruely into the disk drive unitl it clicks. When removing the disk, push the Eject Button firmly. If the disk has stuck in the disk drive. simply push the Eject Button.

Never remove the disk, or switch the unit off. while the disk is running (when the disk drive indicator is lit). The disk may be permanently damaged. And while the disk drive is running. do not give strong shock to thie unit, or data many be improperly read from the disk.

Keep the disk away from extremely hot or cold temperatures, direct sunlight or dust.

To prevent accidental loss of data, be sure to set the Protect Tab to the PROTECT position.

Attach the label firmly to the disk. If it comes off in the disk drive. the disk will be stuck.

Do not expose the disk to strong magnetick field such as speakers.

Do not touch the Shutter

Magnetic film is included here.

WRITE
PROTECT
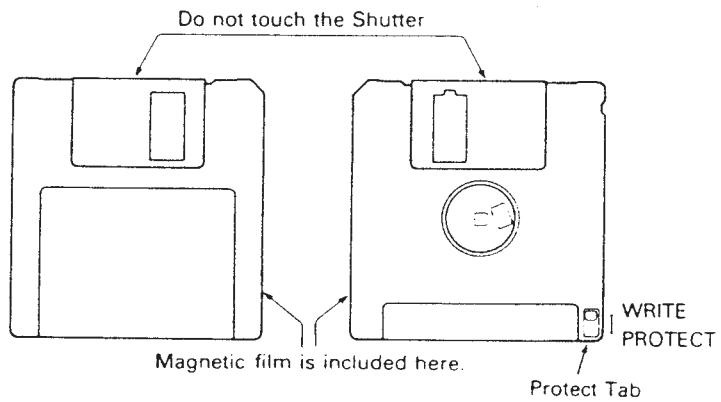
Protect Tab

⋄ To prevent accidental loss of data, be sure to set the Protect Tab to the PROTECT position except when writing (recording) data

4

PANEL DESCRIPTION

㉙ Power Switch

㉗ Pedal Hold Socket

㉖ Start/Stop Socket

㉕ Punch In/Out Socket

㉔ MIDI Connectors

㉓ Card Slot

㉒ Output Sockets

㉑ Headphones Socket

Roland D-20

⑬ Exit Button

⑫ Edit Button

⑪ Tune/Function Button

⑩ MIDI Button

⑨ Compare Button

⑧ Write Button

⑦ Data Transfer Button

⑥ Enter Button

⑳ Bank Buttons

⑲ Number Buttons

⑱ A/B Button

⑰ Synth Button

⑯ Display Buttons

⑮ Cursor Buttons

⑭ Internal/Card Button

⑬ Mode Button

⑫ Sequencer Button

⑪ Rhythm Button

⑩ Display

⑨ Key Transpose Indicator

⑧ Value Control Knob

① Volume Knob

② Stop Button

③ Start Button

④ Tempo Button

⑤ Value Buttons

① Disk Drive

② Eject Button

③ Bender Lever

5

❶ Bender Lever

Using the Bender Lever, you can change the pitch, or create a vibrato effects.

❷ Eject Button

Push this button to remove a disk from the disk drive.

❸ Disk Drive

This is where a floppy disk is inserted.

❹ Volume Knob

This controls the volume of the sound sent from the Output Socket and Headphones Socket.

❺ Value knob

Use this knob to change values. During playback, this is used for tempo control.

❻ Key Transpose Indicator

This is lit while the Key Transpose function is turned on.

❼ Display Window

This shows the current condition of the D-20.

❽ Rhythm Button

Push this button to switch the D-20 to rhythm machine mode. When the indicator of the button is lit, the D-10 works as a rhythm machine and the rhythm patterns can be changed by using the Bank and Number Buttons.

❾ Sequencer Button

Pushing this button turns the D-20 to a MIDI sequencer (= the indicator of the button is lit). A Track to be played can be selected with the A/B or NUMBER buttons.

❿ Mode Button

This button selects the Performance or Multi Timbral mode. The indicator (on either side of the button) of the corresponding mode will light up.

⓫ Internal/Card Button

This selects the internal memory or memory card where the sound to be used is stored.

⓬ Exit Button

Use this button to return to the Play mode from another mode.

⓭ Edit Button

Push this button to enter the Edit mode.

⓮ Tune/Function Button

Push this button for changing the values of parameters related to tuning, such as the Master Tuning.

⓯ MIDI Button

Push this button for editing MIDI functions.

⓰ Compare Button

Using this button, you can call the original Tone, to compare it with your edited version.

⓱ Write Button

Push this button to begin the writing process.

⓲ Data Transfer Button

Push this button to perform Data Transfer functions.

⓳ Enter Button

Push this button to execute a specific procedure.

⓴ Bank Buttons

In the Play mode, these buttons are used for changing sounds, but they function differently in other modes.

㉑ Number Buttons

In the Play mode, these buttons are used for changing sounds, but they function differently in other modes.

㉒ Stop Button

Push this button to stop playing a Rhythm or song.

㉓ Start Button

Push this button to start playing a Rhythm or song.

㉔ Tempo Button

Push this button to see the tempo value currently set, or to change metronome values.

㉕ Value Buttons

These buttons can be used for fine value control. Pushing the ▲ button increases the value and the ▼ button decreases it. During data playback this can be used for tempo control.

㉖ Cursor Buttons

Use these buttons for moving a cursor or selecting a parameter in the Display.

㉗ Display Buttons

These buttons are used for changing displays. Pushing the ▲ button advances the display, and the ▼ button goes back to the previous display.

㉘ Synth Button

Push this button to return to the Play mode from the Rhythm or Sequencer mode. When the indicator of this button is lit, you can change Patches (Timbres) with the Bank and Number Buttons.

㉙ A B Button

This selects a Group, A or B, of a Patch Timbre.

㉚ Output Sockets

These output sockets operate in stereo output during rhythm play or in the Multi Timbral mode.

㉛ Headphones Socket

Connect stereo headphones to this socket. (The best possible headphones to be used should have an impedance from 8 to 150 ohms.) Even when headphones are connected to this socket, the Output Sockets still send signals.

㉜ Pedal Hold Socket

By connecting the optional pedal switch (DP-2, DP-6), the Hold effect can be controlled with the pedal.

㉝ Start/Stop Socket

By connecting the optional pedal switch (DP-2, DP-6), the Rhythm can be controlled with the pedal.

㉞ Punch In/Out Socket

By connecting optiona pedal swiches (DP-2 or DP-6) to these sockets, the Punch In/Out function can be obtained during recording.

㉟ MIDI Connectors

These are used to connect other MIDI devices.

㊱ Card Slot

Insert a memory card here.

㊲ Power Switch

This turns the unit on or off.

2 OUTLINE OF THE D-20

The Roland D-20 is a multi timbral, linear synthesizer with a built-in sequencer, designed for both keyboardists and multi-track recording.

The following will explain the features and the modes of the D-20.

1. Features of the D-20

● LA Sound Source

The D-20's LA sound source allows warm analog type sounds as well as sharp attack digital-type sounds.

● Performance Mode and Multi Timbral Mode

The Performance mode may be selected for playing the D-20 using its own keyboard, and the Multi Timbral mode is suitable for ensemble performance using a built-in sequencer.

● Tone

The D-20's internal memory stores 128 different preset Tones, 64 programmable Tones and 63 preset Rhythm Tones.

● Patch and Timbre

A sound consists of a Tone or a pair of Tones and performance controlling functions. In the Performance Mode, two Tones are assigned to a sound (=Patch), and in the Multi Timbral Mode, only one Tone is assigned to a sound (=Timbre).

● Reverb

The digital reverbration section of the D-20 can create reverb effects. In the Performance mode, a different reverb effect can be set for each Patch.

● Multi Track Sequencer

The built-in sequencer is a multi track sequencer with 9 tracks including the Rhythm Track. Using the sequencer in the Multi Timbral mode, you can enjoy ensemble.

● Rhythm Tone

When using the D-20 as a rhythm machine, you can use Tones you have programmed as well as the 63 Preset Rhythm Tones (altogether 85 tones). Also, it is possible to set the Pan and Level parameters for each Rhythm Tone, and therefore obtain the desired volume balance in the stereo outputs.

● Rhythm Machine

The built-in rhythm machine stores 32 different preset rhythm patterns and another 32 user programmable patterns. You can make a song (or tune) in a rhythm track by using those rhythm patterns. You can record the real-time rhythm performance in other tracks for making variations.

● Metronome

The metronome can be used not only for practicing the keyboard but for making a rhythm pattern or sequencer recording.

● Floppy Disk

Using a floppy disk, you can save your original sound data and recorded performance for future use.

● Memory Card

Using an optional memory card (M-256D, M-256E), your original sound data and rhythm data can be saved for future use.

2. Modes

The D-20 features various modes which should be selected depending on what you wish to achieve.
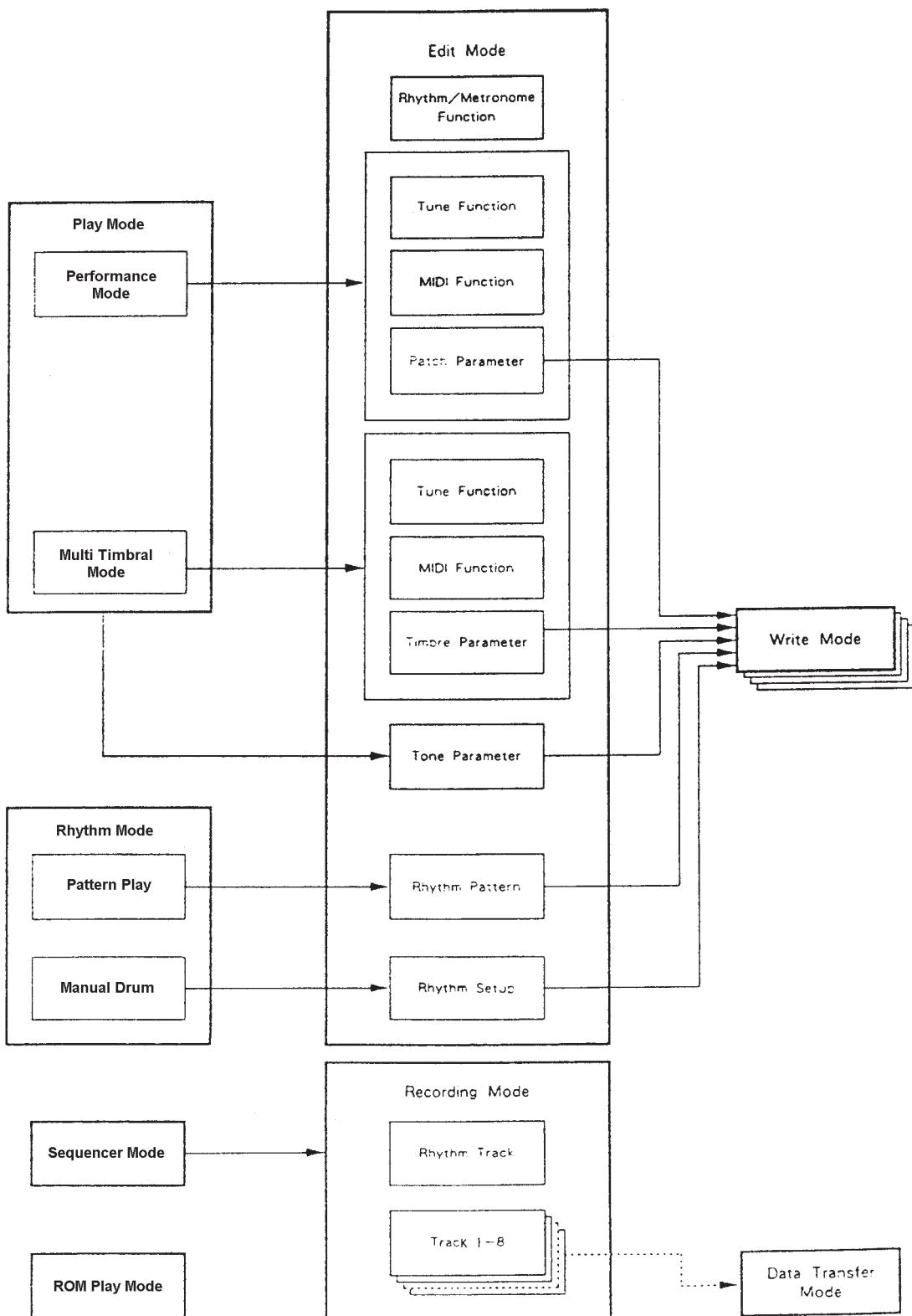
[Play Mode]

There are two different Play modes, Performance and Multi Timbral modes, and each mode allows you to select the Patch or Timbre you prefer.

● Performance Mode

The Performance mode may be selected for playing the D-20 using its own keyboard. You can play the keyboard to the rhythm played in the Rhythm section.

● Multi Timbral Mode

In the Multi Timbral mode, the D-20 works as a ryhthm and 8 independent synthesizers. You can play an ensemble style performance using the built-in Multi Track sequencer.

[Rhythm Mode]

This mode turns the D-20 into a rhythm machine. You can select a rhythm pattern or play the keyboard using the Rhythm Tones.

[Edit Mode]

This mode allows you to edit various parameters. Normally, the edited version does not rewrite the previous data unless the appropriate writing procedure is taken.

[Recording Mode]

The Recording mode allows you to record performance data into the sequencer section. Recorded data will be erased when the unit is turned off except when it is recorded in the Rhythm Track, therefore. if you wish to retain the data. save it onto a floppy disk by taking "Data Transfer" procedure.

[Write Mode]

The Write mode allows you to write an edited version into the internal memory of the D-20 or onto a memory card.

[Data Transfer Mode]

The Data Transfer mode allows you to copy the entire data written in the D-20's internal memory onto a memory card, a floppy disk. or into the internal memory of another D-20, and also copy the data on the memory card, on the floppy disk or -in the D-20 into another D-20.

[ROM Play Mode]

In this mode, you can play any of the 8 songs which are preprogrammed in the D-20 to demonstrate the effects of the Multi Timbral function.

3. Partial and Maximum Voices

The D-20 can produce a maximum of 32 voices using 32 Partials at the same time. A Partial is the smallest unit of sound within the D-20. A Tone consists of one to four Partials. A Tone made of only one Partial can be played 32 voice polyphonically, but a Tone of two Partials has 16 voices, and a Tone of four Partials is 8 voice polyphonic. It is very important that you fully understand this concept. Specially in the Multi Timbral mode, this can be very tricky as several Tones are involved at the same time.

③ CONNECTIONS

MIDI THRU / OUT / IN

CONTROL INPUT
PUNCH IN/OUT / START STOP / PEDAL HOLD

PHONES

OUTPUT
R / L (MONO)

Pedal Switch
(DP-2,DP-6)

Headphones
(RH-100 etc)

Stereo Amplifier
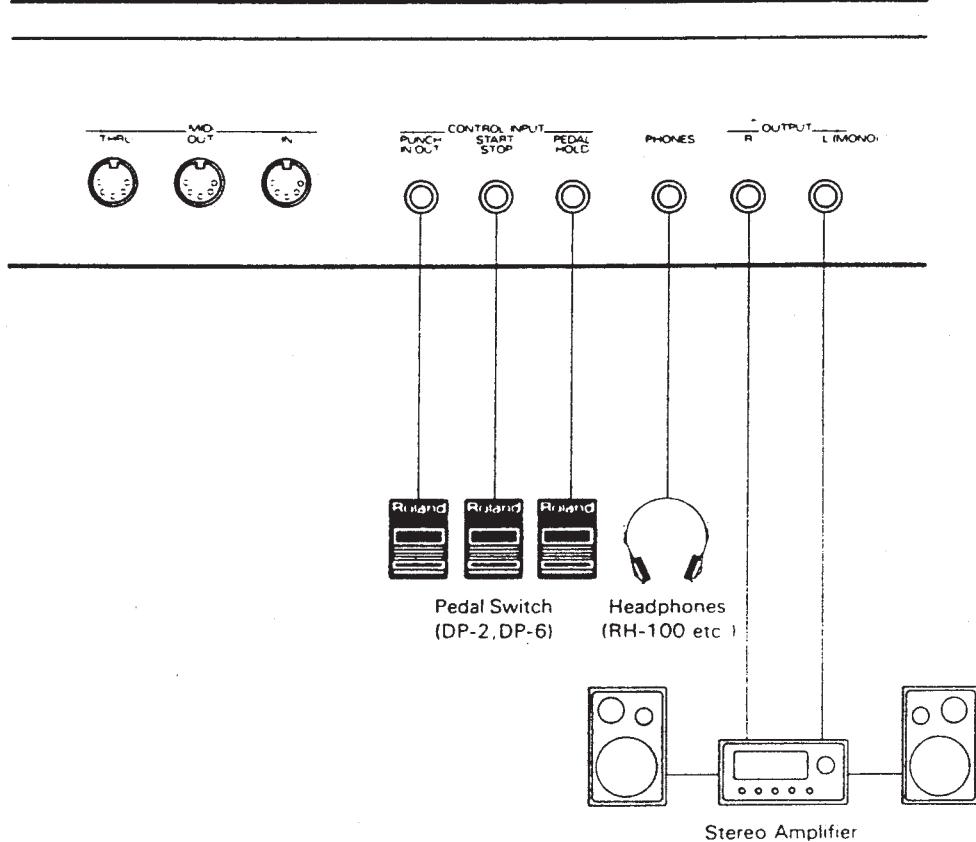
4 PERFORMANCE MODE

This section explains how to operate the D-20 in the Performance mode.

1. Power-up

Make sure that the D-20 is securely and correctly connected to the external devices, then turn the D-20 on.

Turn on the
Power Switch
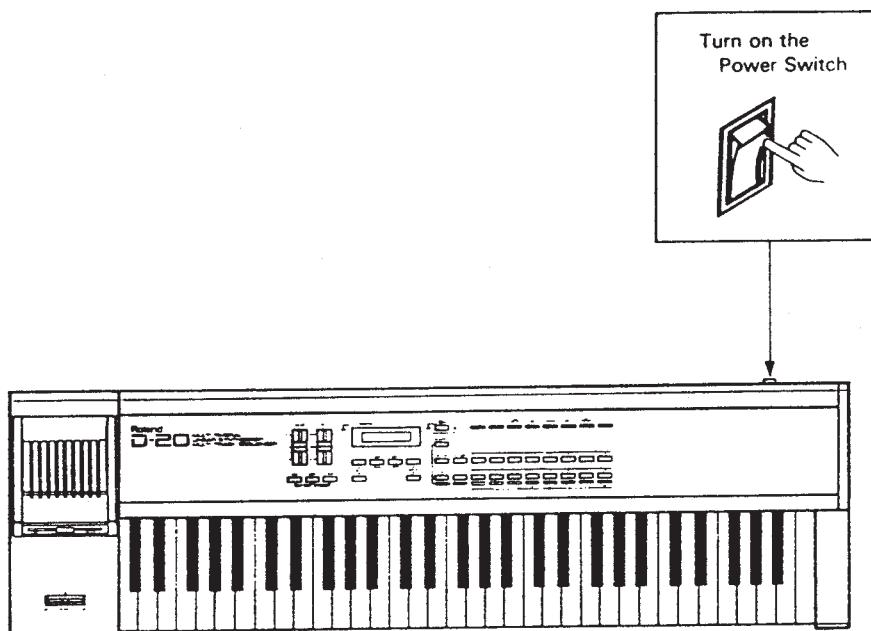
The Display will change as shown below.

```
* Roland  D-20 *
  LA Synthesizer
```

(ex.) Performance Mode Display

```
I-A11 SPLIT C4
```
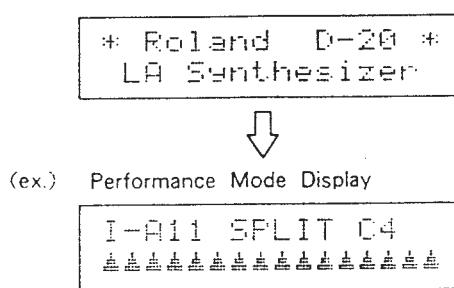
If the Display does not respond as above, press the Mode Button to switch to the Performance mode.
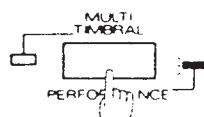
2. Patch Selection

A Patch is represented by a Group (A or B), Bank (1 to 8) and Number (1 to 8). The internal memory of the D-20 can store up to 128 Patches and a memory card can also store 128 Patches, allowing you to select from 256 Patches, just by pressing the relevant buttons.
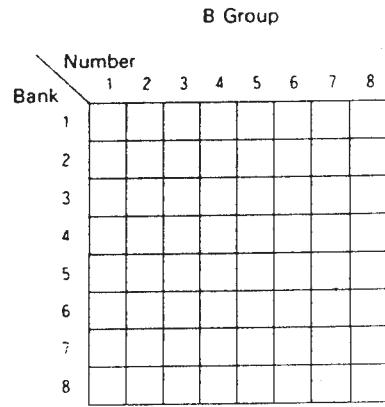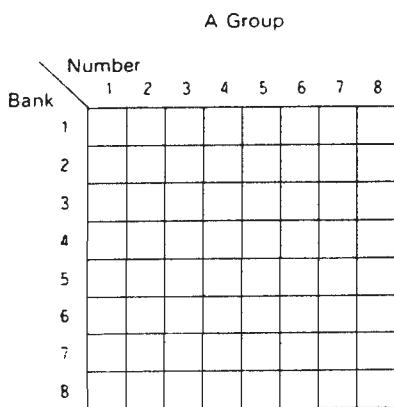
Internal : 128 Patches
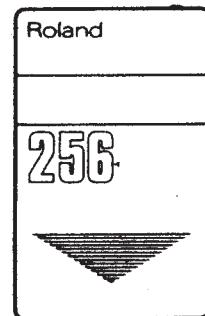
Memory Card : 128 Patches

For selecting a Patch, the following buttons are involved. Patch selection is not executed unless the NUMBER button is pressed. If you wish to change only the Number of a Patch, simply press the relevant NUMBER button.

Each time this button is pressed, Internal and Memory Card mode are alternately selected.

Select a Bank (1-8).

Each time this button is pressed, A or B Group is selected.

Select a Number (1-8).

<Display>
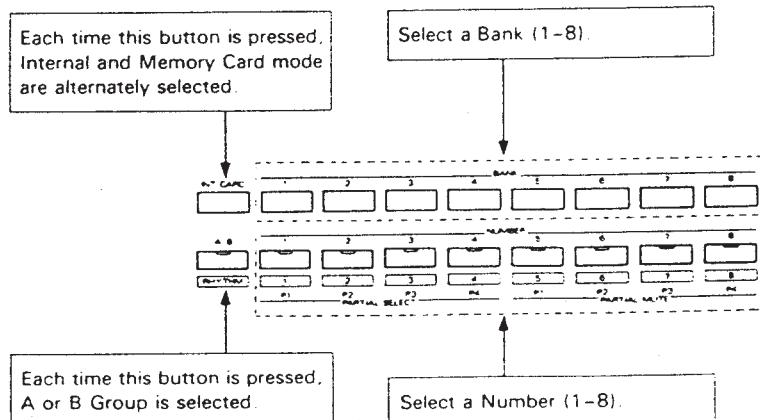
When the Internal mode is selected, "I" is shown, and when the Memory Card is selected "C" is shown.

Group
Bank
Number

I-A11 SPLIT C4

17
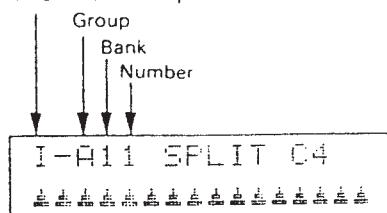
【e.g.】

Changing from Patch I—A11 to I—B31

① Push the A/B button.

```
I-B11 SPLIT C4
▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲
```
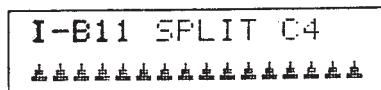
② Push the BANK button 3.

```
I-B31 SPLIT C4
▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲
```
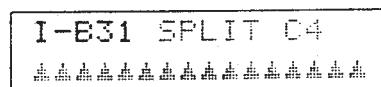
③ Push the NUMBER button 1.

Now. Patch I—B31 is selected.

```
I-B31 WHOLE
▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲
```
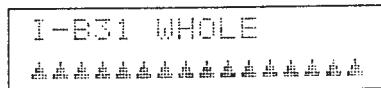
[Display]

The Display shows some of the data related to the selected Patch.

Key Mode

Split Point (appears when the Split Key Mode is selected)

```
I-A11 SPLIT C4
```

Patch Name
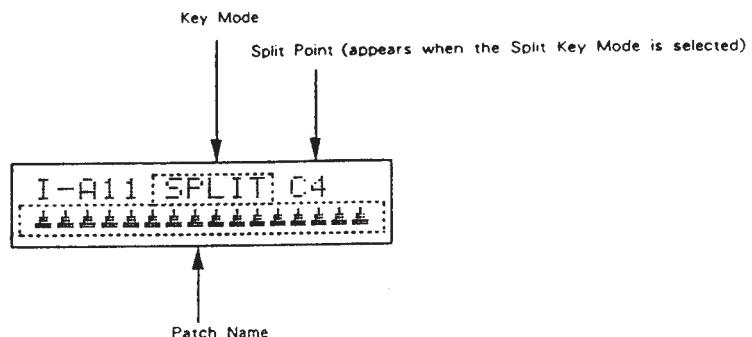
[Key Mode]
  A pair of Tone are assigned to a Patch.
  The Key Mode determines how to play these Tones.

● WHOLE : Only the Upper Tone is played
● DUAL : Upper and Lower Tones are mixed.
● SPLIT : The Keyboard is divided into two sections at a Split point. Upper and
          Lower Tones are played in different sections.

∗The maximum number of voices which can be played simultaneously
changes depending on the setting of the Patch, or whether the Rhythm
section is playing or not.

If you wish to check what Tones are assigned to the Patch, press
either of the DISPLAY buttons. Each time the button is pressed, the
Display changes.

Tone Number   Tone Name

Upper

```
U: a01
L: b01
```

Lower

DISPLAY

19
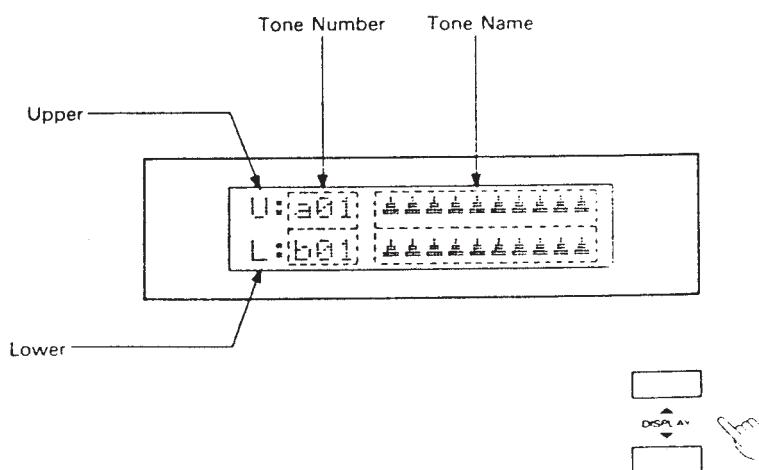
【Memory Card】

A memory card can store Rhythm data as well as the Sound data of Patches (Timbres) and Tones.

*A brand new memory card (M—256D, M—256E) does not contain any data at all, so it cannot be used unless an appropriate Saving procedure (see page 189 in the Volume 2) is taken for copying the entire data in theinternal memory onto the memory card. This also applies to a memory card that contains data other than the D—20's.

Step 1   To use a Patch on a memory card, insert the memory card into the Card Slot in the correct direction.
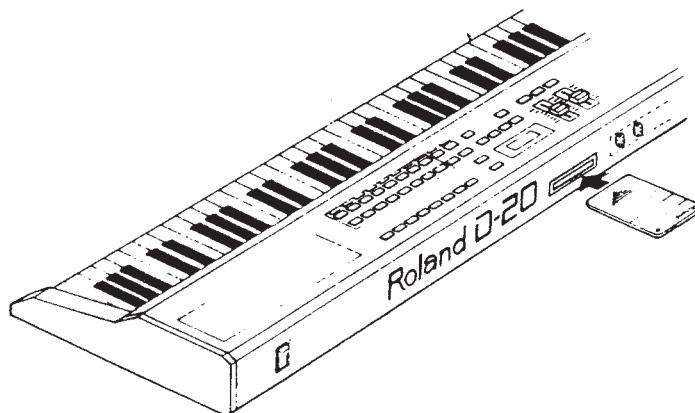
Step 2   Using the INT/CARD button, select CARD.

*If a memory card is not connected properly or not connnected at all, the Display will show as below, and the CARD cannot be selected.

```
Card Not Ready
```

*If you use a memory card that contains data other than that of the D—10 or D—20, the Display will show as below for a while, and the CARD cannot be selected. (Regarding the D—110, only the Key assignment for Timbres/Tones/Rhythm setup is compatible with the D —20 in the Multi Timbral mode.)

```
Illegal Card
```

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There are two types of memory cards.

ROM Card

Data on a ROM card cannot be edited as it is not erasable. The optional sound libraries are ROM cards.

RAM Card

Data on a RAM card can be edited. This type features a memory back-up system supported by a battery. The optional memory card (M-256D, M-256E) is a RAM card. Use this for saving the sound data you have programmed.

3: Performance Controlling Functions

During live performance, you can control the sound using the following performance controlling functions.

a. Bender Lever

Using the Bender Lever, you can change the pitch, or create vibrato effects.

Vibrate effect is obtained

Lowers the Pitch   Raises the Pitch
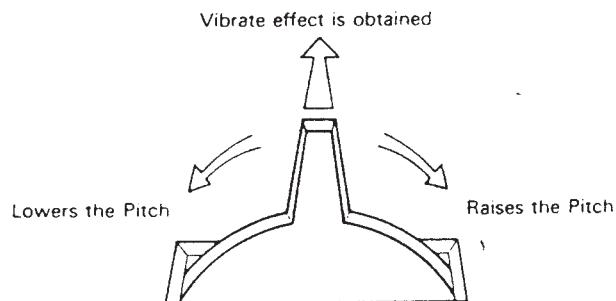
*The depth of the bender has been set differently for each Patch so that it will match the sound, therefore, the effect varies depending on the Patch you select.

b. Velocity

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

*The depth of the velocity has been set differently for each Patch so that it will match the sound, therefore, the effect varies depending on the Patch you select.

c. Hold

"Hold" is the function that allows the sound to be held even after the key is released. This function can be controlled by the pedal switch connected to the Pedal Hold Socket.

```
_____CONTROL INPUT_____
PUNCH        START         PEDAL
IN OUT       STOP          HOLD
```

The sound is sustained as long as the pedal is depressed

Pedal Switch (DP-2,DP-6
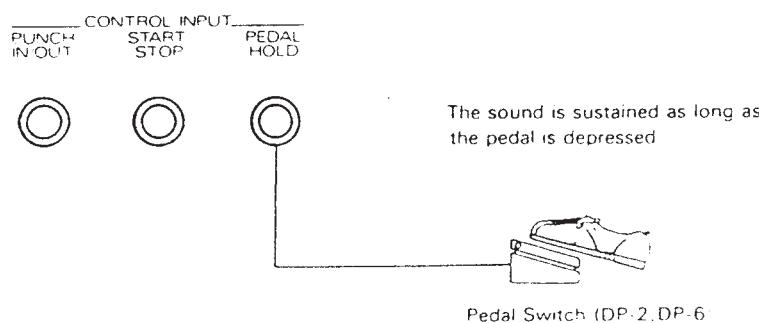
4. Rhythm Play

You can play rhythm patterns or rhythm tracks on the built—in rhythm machine and play the keyboard to the rhythm. Also, it is possible to play rhythms from the keyboard.

*The above function is also attainable in the Multi Timbral mode.

a. Track Play

At power—up, the Rhythm Machine defaults to the Rhythm Track playing mode.

*When performance data is recorded in the built—in sequencer, sequencer data can be played by taking the similar procedure.

2 Adjust the tempo from 40 to 250 (beets per measure) which changes in 2 steps.

3 To stop the rhythm, push STOP

When the rhythm is played up to the end, it automatically stops

1 While holding STOP down, push START

Rhythm starts playing from the 1st bar.

4 To resume playing, push START.

2 While TEMPO is being pressed, the Display shows the current tempo, etc.

♩=120
Rthm 50 M.M. 50
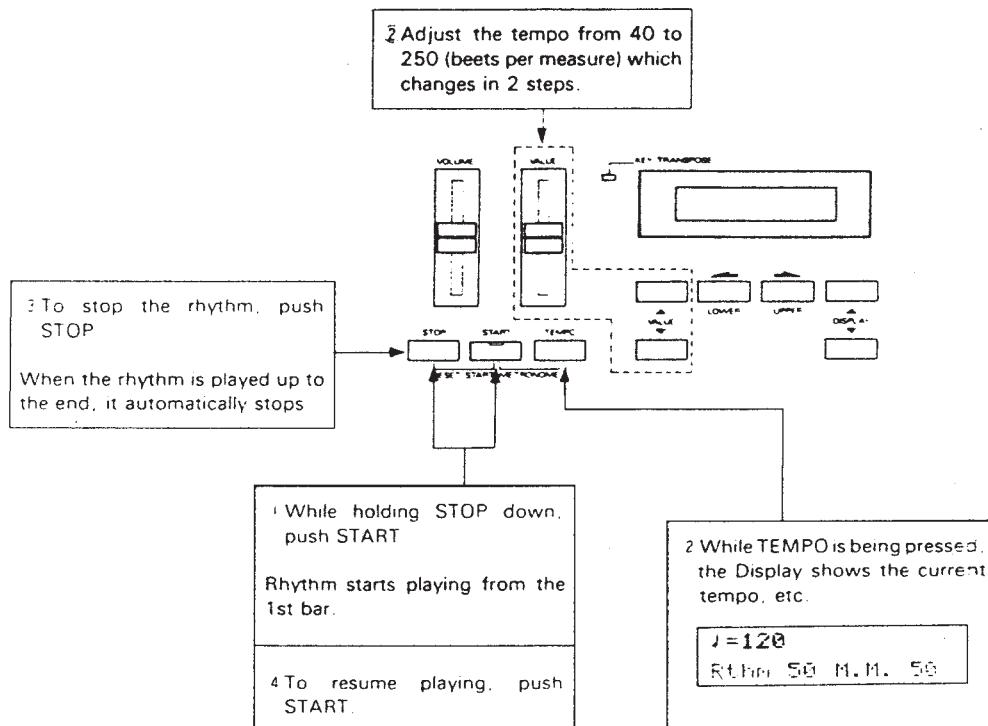
Starting (or stopping) the rhythm can also be controlled by a pedal switch connected to the Start/Stop Socket.

CONTROL INPUT
PUNCH IN/OUT   START STOP   PEDAL HOLD

Pressing the pedal alternately selects "Reset Start" and "Stop"

Pedal Switch (DP-2,DP-6)

【Level Adjustment】

The volume of the rhythm can be changed as follows.

＊The volume you have set is retained even after the unit is turned off.

2 Adjust the volume with VALUE
0 to 100 are valid. Higher
values raise the volume.

3 Push EXIT to return to the
previous Display.

While holding TEMPO down,
push LOWER.
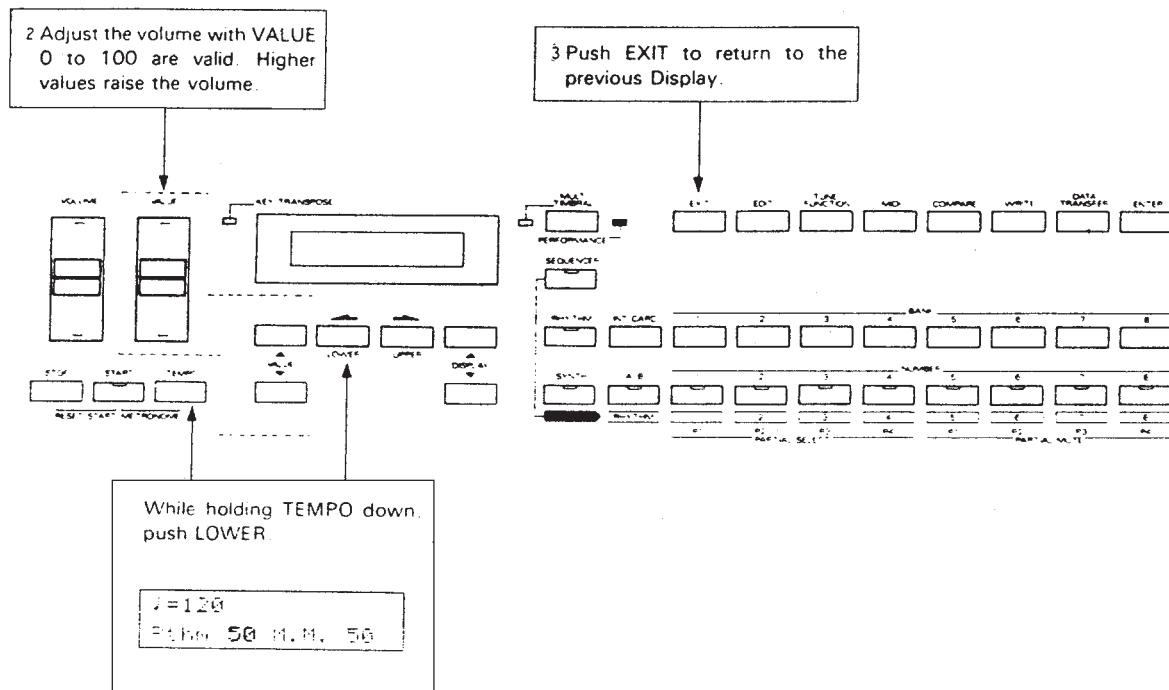
b. Rhythm Mode

The Rhythm mode turns the D-20 into a rhythm machine, allowing you to change rhythm patterns or play a rhythm from the keyboard.

The Tempo can be adjusted.
The current tempo is shown as long as TEMPO is pressed.

```
♩=120
Rthm 50 M.M. 50
```

i Push RHYTHM. (The SYNTH indicator goes out, and the RHYTHM indicator lights up.)

```
Pattern Play
P-11:8Beat 1
```

2 Two types of Rhythm Playing can be performed in the Rhythm Mode.
Select either of them with DISPLAY.

〈Pattern Play〉
A particular rhythm pattern can be played

```
Pattern Play
P-11:8Beat 1
```

〈Manual Drum〉
Rhythm can be played from the Keyboard.

```
Manual Drum
P-11:8Beat 1
```

In the Rhythm Mode, BANK and NUMBER work as Rhythm Pattern Selectors (of the 64 Rhythm Patterns.)

* P11 to P48 are Preset Rhythm Pattern
When a Preset Rhythm Pattern is selected, the Display shows the Pattern Name.

Preset Rhythm Pattern

Number / Bank	1	2	3	4	5	6	7	8
1	8Beat 1	8Beat 2	8Beat 3	8Beat 4	8Beat 5	8Beat 6	Ballad	Reggae
2	16Beat 1	16Beat 2	16Beat 3	16Beat 4	16Beat 5	16Beat 6	Shuffle 1	Shuffle 2
3	Disco 1	Disco 2	Electric Pop 1	Electric Pop 2	Jazz 1	Jazz 2	Jazz 3	Jazz Wa 2
4	Samba 1	Samba 2	Samba 3	Bossanova 1	Bossanova 2	Mambo	Merengue	Rumba

[Pattern Play]

The Pattern Play mode allows you to play the keyboard while a certain Rhythm pattern is being played. The Patch selected before the RHYTHM button was pressed is played from the keyboard.

2 Push START, and the selected rhythm pattern will start playing

If you select a new rhythm pattern while a rhythm is playing, it will be played from the next bar.

To stop playing, push STOP.

1 Select a rhythm pattern with BANK and NUMBER.

```
Pattern Play
P-11:▲▲▲▲▲▲▲▲▲
```

Pattern Number   Pattern Name
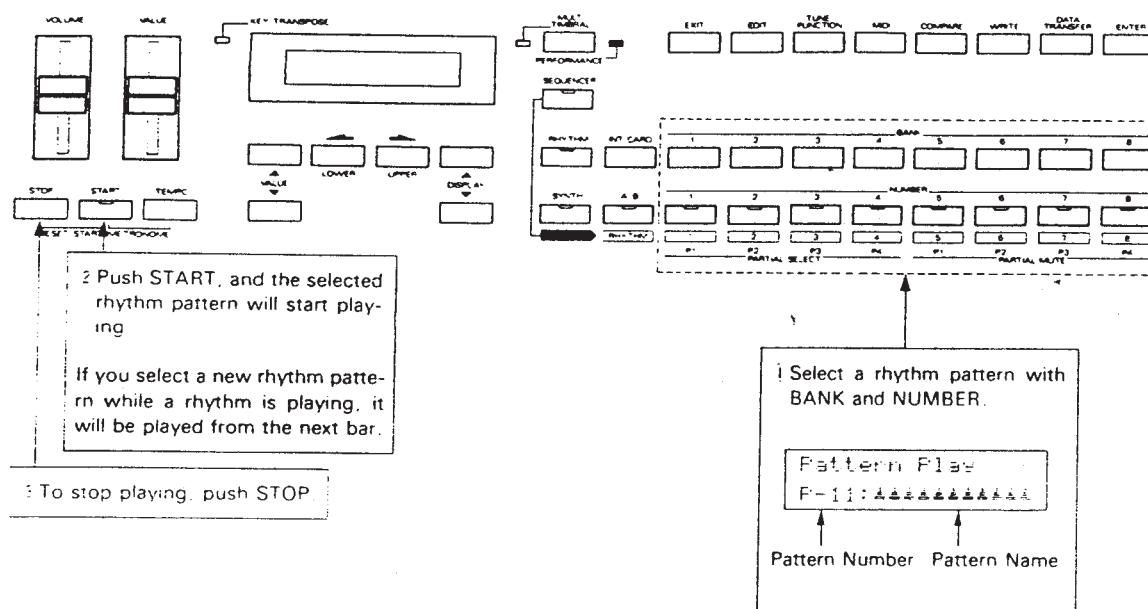
[Manual Drum]

In the Manual Drum mode, a rhythm can be played with the D-20's keyboard. Pressing the START button will play the rhythm pattern currently shown in the Display, so that you can play the keyboard to the rhythm.

```
Manual Drum
P-11:▲▲▲▲▲▲▲▲▲▲▲
```

Pattern Number   Pattern Name
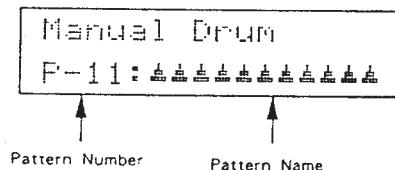
Rhythm Tones have been assigned to the keyboard by the manufacturer as shown right. Playing a key will play the corresponding Rhythm Tone.

	Tone	Note
r63	Native Drum-3	C7
r62	Native Drum-2	
r61	Native Drum-1	
r09	Ride Cymbal (short)	
r3?	High Tom Tom-3	
r06	Crash Cymbal (short)	
r??	Middle Tom Tom-3	
r??	Closed High Hat-2	
r??	Low Tom Tom-3	
r??	Snare Drum-6	
r23	Snare Drum-5	
r22	Snare Drum-4	
r??	Bass Drum-4	
r??	Bass Drum-3	C6
r60	Bell	
r59	Wood Block	
r3?	High Pitch Tom Tom-1	
r58	Triangle	
r3?	High Pitch Tom Tom-2	
r57	Castanets	
r??	Brush-2	
r??	Brush-1	
r56	Claves	
	Cup (mute)	
	Quijada	
	Long Whistle	C5
	Short Whistle	
	Maracas	
	Cabasa	
	Low Agogo	
	High Agogo	
	Low Timbale	
	High Timbale	
	Low Conga	
	High Conga	
	High Conga mute	
	Low Bongo	
	High Bongo	C4 (Middle C)
	Ride Cymbal (mute)	
	Snare Drum-3	
	Crash Cymbal (mute)	
	Cowbell	
	Splash Cymbal	
	Tambourine	
	Cup	
	China Cymbal	
	Ride Cymbal	
	High Tom Tom-2	
	Crash Cymbal	
	High Tom Tom-1	C3
	Middle Tom Tom-2	
	Open High Hat-1	
	Middle Tom Tom-1	
	Open High Hat-2	
	Low Tom Tom-2	
	Closed High Hat-1	
	Low Tom Tom-2	
	Snare Drum-2	
	Hand Clap	
	Snare Drum-1	
	Rim Shot	
	Bass Drum-2	C2
	Bass Drum-1	

*The Key assignment or the volume of the Rhythm Tones can be altered. if you like. See page 80 "Rhythm Setup" in the Volume 2.

*To move the keyboard sound range. take an appropriate transposing procedure (page 33).

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5: Metronome

The D-10 features a metronome which can be used for practicing the keyboard or for programming rhythm data.

If you wish to turn on only the metronome, push the START button while holding the TEMPO button down.
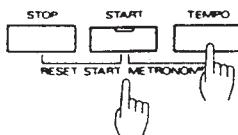
[Volume Adjustment]

The volume of the metronome can be adjusted as shown below.

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

2 Using VALUE, adjust the volume.

0 to 100 are valid Higher values increase the volume.

3 Press EXIT to return to the previous Display.

1 While holding TEMPO down, push UPPER
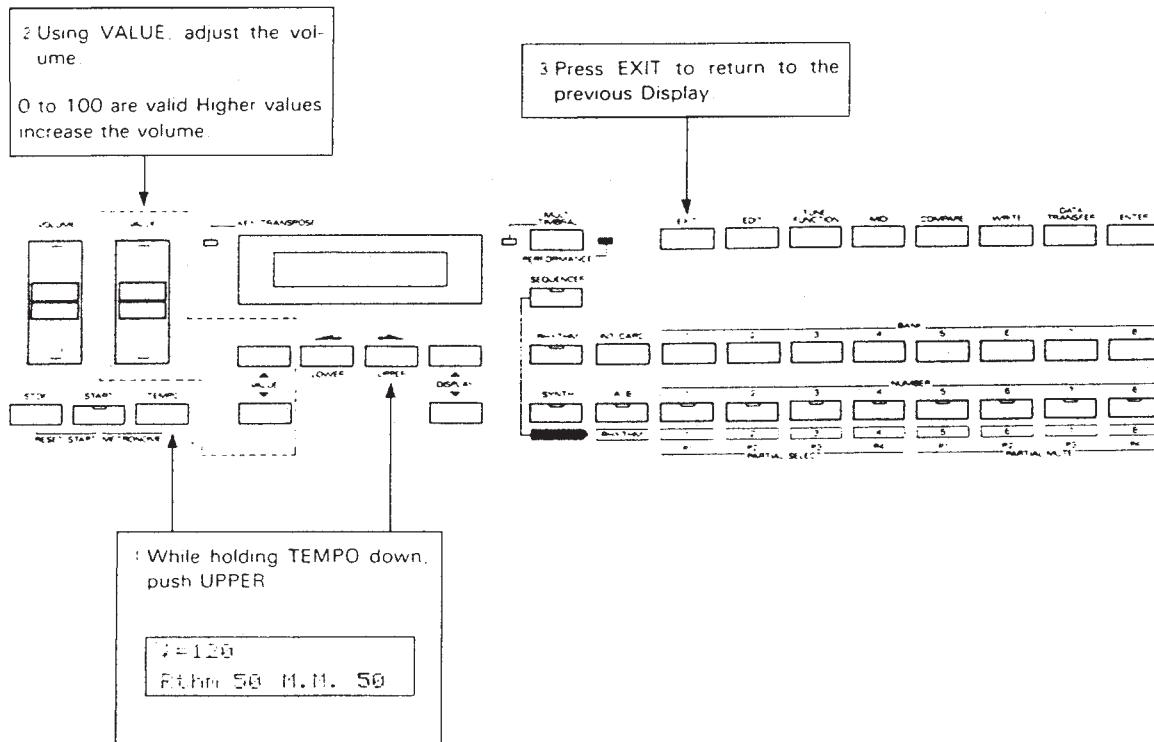
【Beat Setting】

You can change the beat of the metronome as shown below.

＊The beat you have set will be retained even after the unit is turned off. While in recording, the rhythm will play in its own beet regardless of the beat set here.

② Change the beat using VALUE 0 to 8 are valide.

③ Push EXIT to return to tbe previous Display.

① While holding TEMPO down, push DISPLAY▼.

Metronome
Beat 0 Rec Only
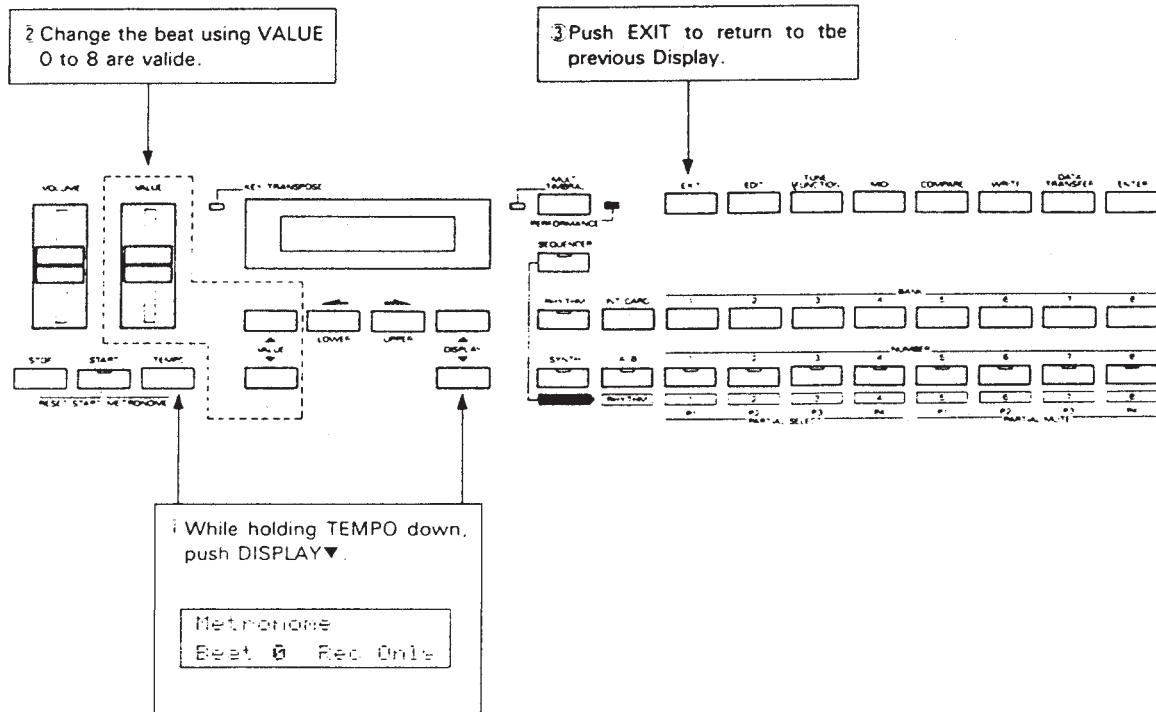
[Playing the Metronome with the rhythm performance]

To play the metronome with the rhythm performance. change the Metronome modes as shown below.

*The Metronome mode you have set here will be retained even after the unit is turned off.

3 Select "Rec & Play" with VALUE

4 Push EXIT to return to the previous Display.

1 While holding TEMPO down. push DISPLAY▼.

2 Push UPPER
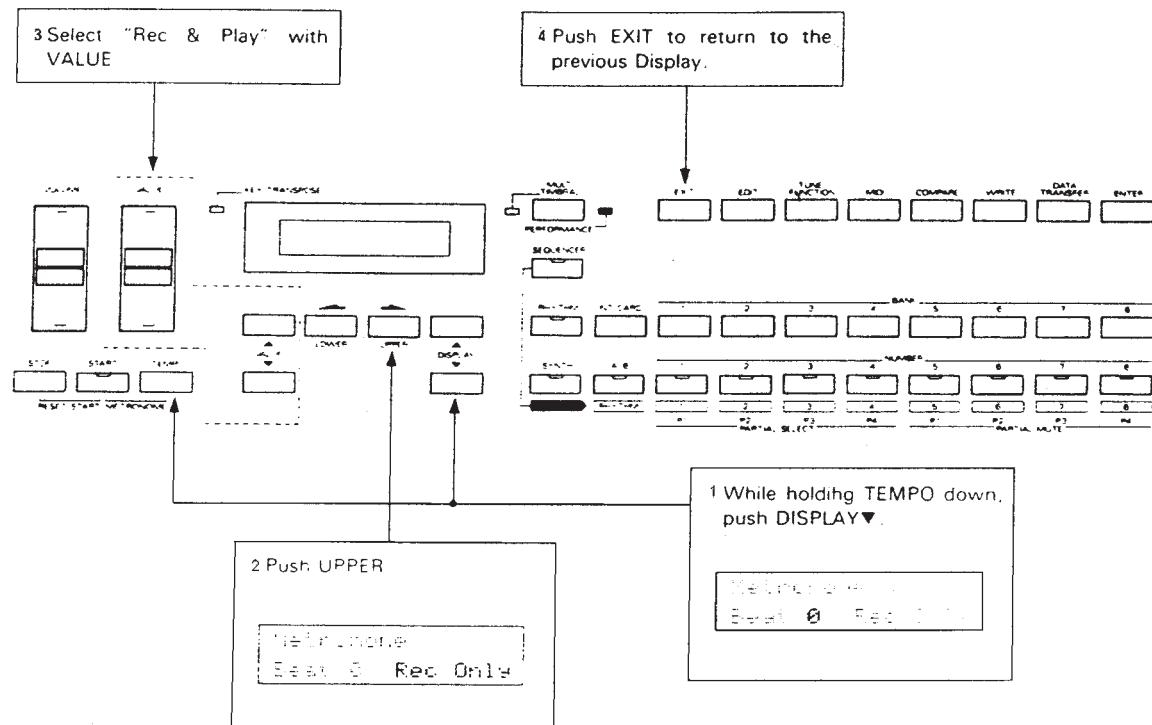
6. Master Tuning

Master Tuning adjusts the pitch of the D-20 to that of other musical instruments.

*The Master Tuning value you have set will be retained even after the unit is turned off.

*A Tone which uses a PCM sound may not be correctly tuned by the Master Tuning function.

---

2 Using VALUE, tune the unit.

The value shown in the Display is frequencies of the standard pitch (= A4).
It changes in 1Hz steps in the Display, but it actually changes almost continuously

---

3 Push EXIT to return to the previous Display.

---

1 Push TUNE/FUNCTION.

Master Tune
440Hz
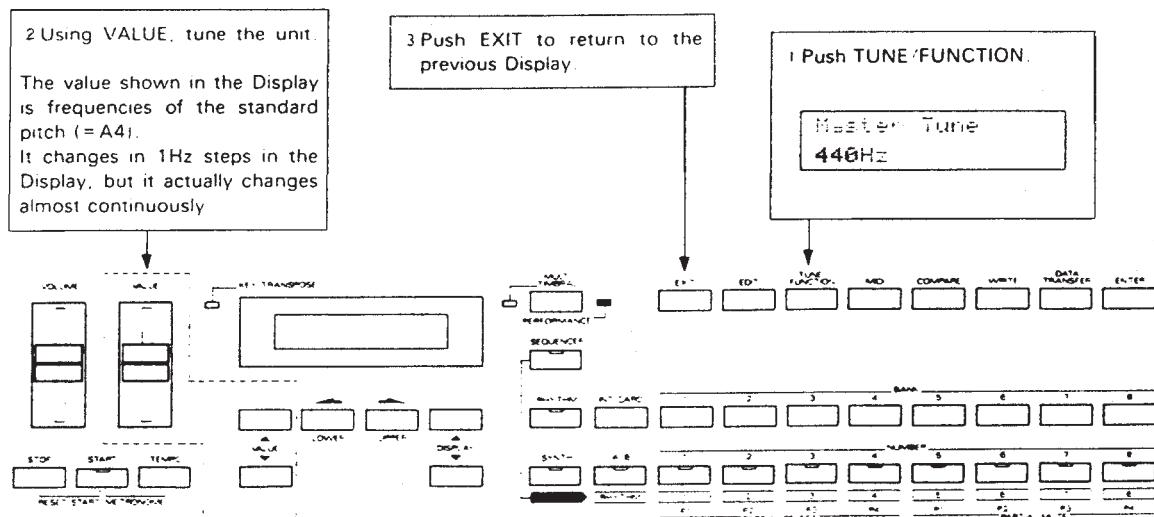
7. Key Transpose

The Key Transpose function transposes the entire keyboard in semi—tone steps, allowing you to play the same keyboard in different keys.

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

* The Key Transpose function does not work in the Rhythm Setup or Rhythm Patteern programming mode.

---

3 Set the value with VALUE.

- 12 to - 12(= 1 octave in semi
tone steps) are valid.
When it is set to other than zero,
the Key Transpose Indicator will
light up.

Key Transpose Indicator

4 Push EXIT to return to the
previous Display.

1 Push TUNE/FUNCTION.

2 Push DISPLAY▼.

Key Transpose
00
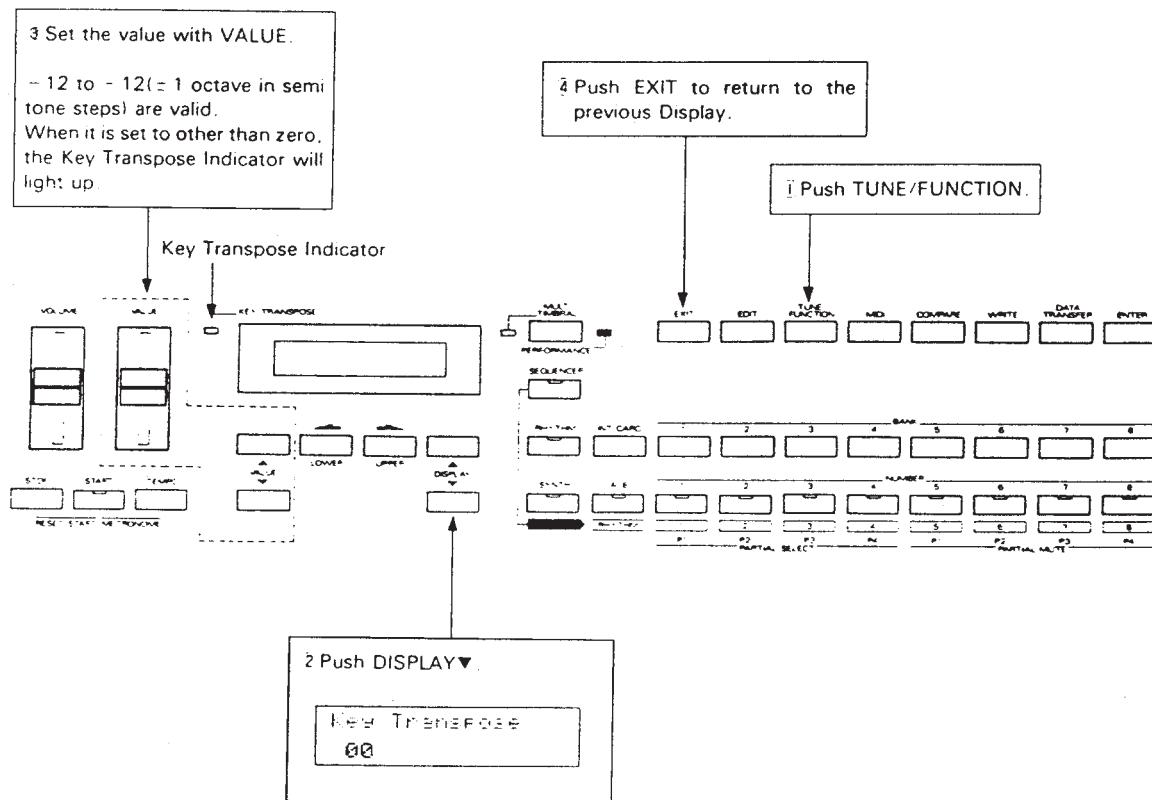
⑤ ROM PLAY MODE

Eight different songs are programmed in the D-20 in order to demonstrate the effects of the Multi Timbral function. Playing these preprogrammed songs is called ROM PLAY. When playing these songs, please use a stereo amplifier if possible, to obtain the best effect of the Multi Timbral functions.

〔Procedure〕

1 Push SEQUENCER while holding ENTER.

```
*** ROM Play ***
Chain of Songs
```

5 Pushing EXIT returns to the previous Display be for changing to the ROM Play mode.

3 Push START to start playing

4 To stop playing. push STOP

2 Select a song with NUMBER or A/B.
(The corresponding indicator will light up with green.

Song 1 Song 2 Song 3 Song 4 Song 5 Song 6 Song 7 Song 8

Playing Songs 1 to 8 in sequence

During the performance, the NUMBER or A/B indicator will flash along with the performance.

Song Number	Song Name	
1	Macho Memory	Music by Eric Persing Ⓒ 1988 by Eric Persing
2	Jah May Kah !	Music by Amin Bhatia Ⓒ 1988 by Amin Bhatia
3	Sugar Plum	Composed by Tchaikovski Arranged by Amin Bhatia
4	My Brother	Music by Adrian Scott Ⓒ 1988 by Adrian Scott
5	Folk	Music by Amin Bhatia Ⓒ 1988 by Amin Bhatia
6	Bumble Dee	Composed by Rymsky-Korsakow Arranged by Amin Bhatia
7	Mergatroid	Music by Eric Persing C 1988 by Eric Persing
8	Dinner Set	Music by Adrian Scott C 1988 by Adrian Scott

✻During ROM Play. you cannot play the keyboard or use the controls such as a bender.

✻The performance data of the ROM Play is not sent through the MIDI OUT Connector.

[6] SPECIFICATIONS

D-20 : Multi Timbral Linear Synthesizer with
        a built-in Multi Track Sequencer

● **Keyboard**
  61 Keys (with Velocity)

● **Sound Source**
  LA System
  Maximum Voices : 32 Voices

● **Synthesizer Section**
  Patches : 128
  Timbres : 128
  Preset Tones : 128
  Programmable Tones : 64
  Preset Rhythm Tones : 63

● **Rhythm Section**
  Setups : 85 types (C1 to C8)
  Preset Rhythm Patterns : 32
  Programmable Rhythm Patterns : 32
  Maximum number of notes to be
  simultaneously recorded (Rhythm Pattern)
  : 8
  Maximum number of notes to be recorded
  (in each Rhythm Pattern) : 96 notes
  Maximum number of bars to be recorded
  (Rhythm Track) : 500

● **Sequencer Section**
  Maximum number of notes to be recorded :
  approx. 16.000 notes
  Maximum number of bars to be recorded :
  500

● **Memory Card (M-256D, M-256E)**
  Patches : 128
  Timbres : 128
  Tones : 64
  Rhythm Patterns : 32
  Rhythm Track : One Song
  Rhythm Setups : One Set

● **Floppy Disk (Double Density Track)**
  Memory Capacity : approx. 35.000 notes (Song
  Data)

[Front Panel]
  Volume Knob
  Value Knob
  Stop Button
  Start Button
  Tempo Button
  Value Button × 2
  Cursor Button × 2
  Display Button × 2
  Mode Button
  Sequencer Button
  Rhythm Button
  Synth Button
  Internal/Card Button
  A/B Button
  Bank Button × 8
  Number Button × 8
  Exit Button
  Edit Button
  Tune/Function Button
  MIDI Button
  Compare Button
  Write Button
  Data Transfer Button
  Enter Button
  Bender Lever

[Display]
  2 lines, 16 letter (back-lit)

[Indicators]
  Start Indicator
  Key Transpose Indicator
  Multi Timbral Indicator
  Performance Indicator
  Sequencer Indicator
  Synth Indicator
  Rhythm Indicator
  A/B Indicator
  Number Indicator × 8

[Rear Panel]
  Output Socket × 2
  Headphones Socket
  Start/Stop Socket
  Hold Socket
  Punch In/Out Socket
  MIDI Connectors (IN, OUT, THRU)

Dimensions :
1,014 (W) ×301 (D) ×106 (H) mm
39−15/16" ×11−7/8" ×4−3/16"

Weight :
10.1kg/22 lb 4 oz

Consumption :
25W

Accessories :
Owner's Manual (Volume 1, Volume 2)
Quick Operation Table
Sound Chart
Guide Book for MIDI
Connection Cable (LP−25)
Floppy Disk (3.5" 2DD)

[Options]
Memory Card (RAM) M−256D, M−256E
Carrying Case SHC−1
Programmer PG−10
Stereo Headphones RH−100
Pedal Switch DP−2/DP−6
MIDI/SYNC Cable
MSC−07/15/25/50/100

Roland