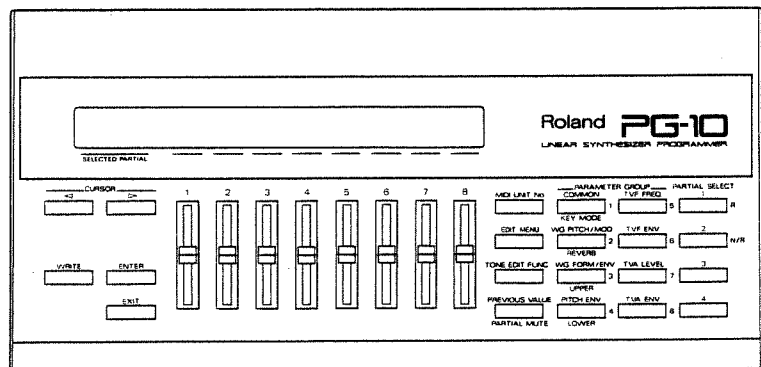




MIDI LINEAR SYNTHESIZER PROGRAMMER

PG-10

Owner's Manual



INTRODUCTION

The Roland PG-10 is a programmer specially designed for the D-10, D-20 and D-110 to make sound programming quicker and easier.

To make the best use of this unit, please read the owner's manual carefully.

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Bescheinigung des Herstellers /Importeurs

Hiermit wird bescheinigt, daß der/die/das
ROLAND LINEAR SYNTHESIZER PROGRAMMER PG-10
(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 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., 20462. Stock No. 004-000-0034-4.

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

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IMPORTANT NOTES

POWER

- Be sure to use the supplied AC adaptor (PSA -120, 220 or 240), depending on the voltage system in your country. Using any other adaptor will cause trouble.
- Connect the AC adaptor to the AC Adaptor Socket first, then the power plug to a power socket.
- 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 AC adaptor to a power 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 plug from the socket.
- Before setting up this unit with other devices, turn this unit and all the other units off.

CLEANING

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

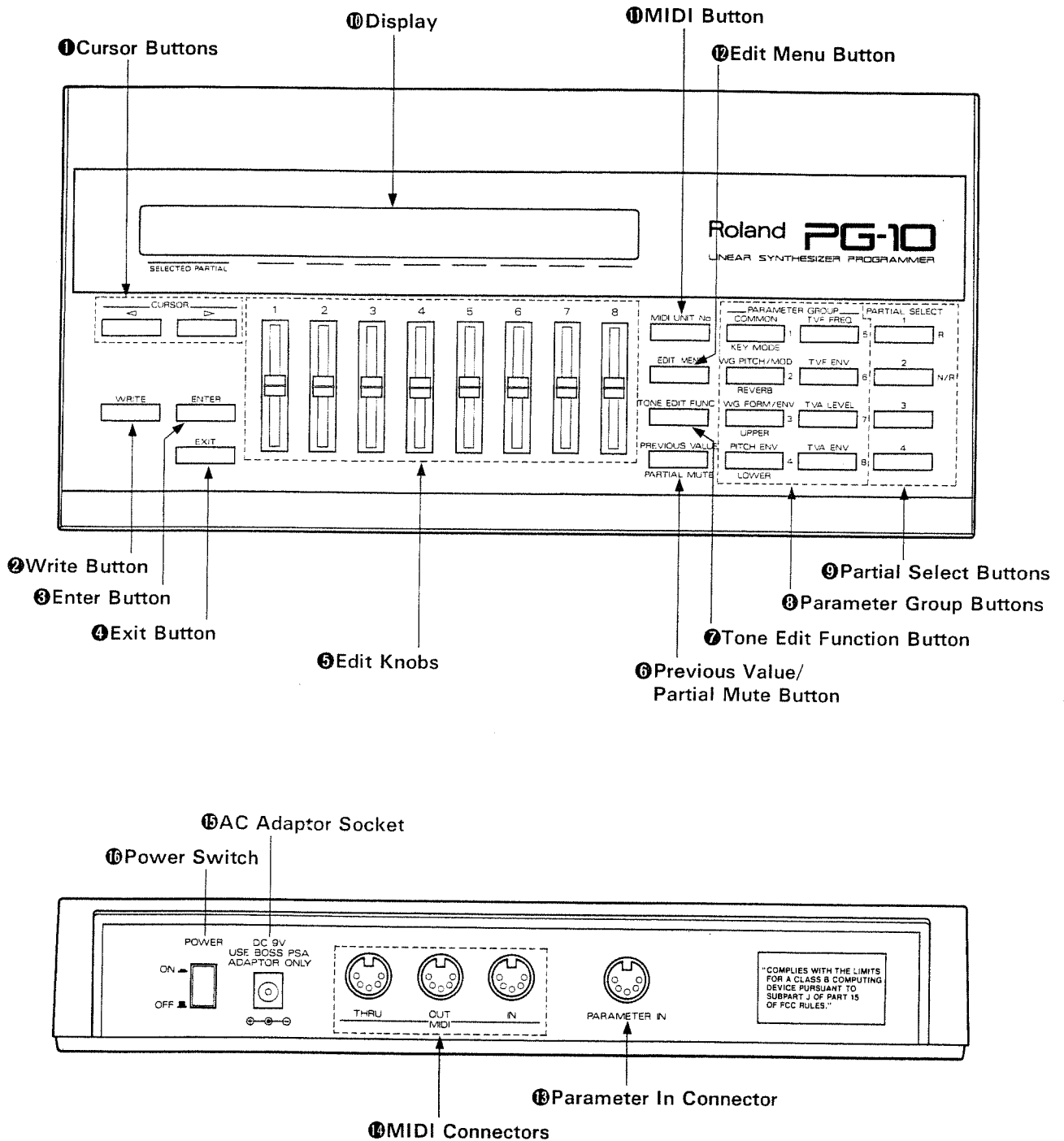
LOCATION

- 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 is 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.

OTHER NOTES

- Avoid applying any solid or liquid stuff to this unit.
- Touching inside the unit may cause electric shock or breakdown.
- Do not give a strong shock to this unit.
- Do not move this unit while it is operating.
- If this unit is turned off while being operated, all data in memory will be erased. Make sure that you do not accidentally touch the power switch or the power plug does not come off the socket.
- If the unit does not function properly, immediately turn the unit off, then call your local Roland service center.

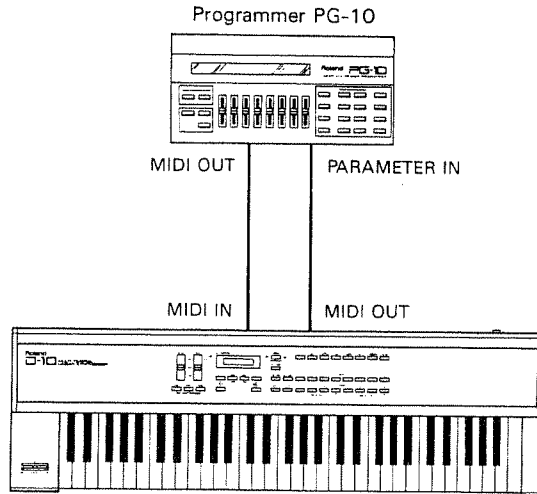
1 PANEL DESCRIPTION



2 CONNECTIONS

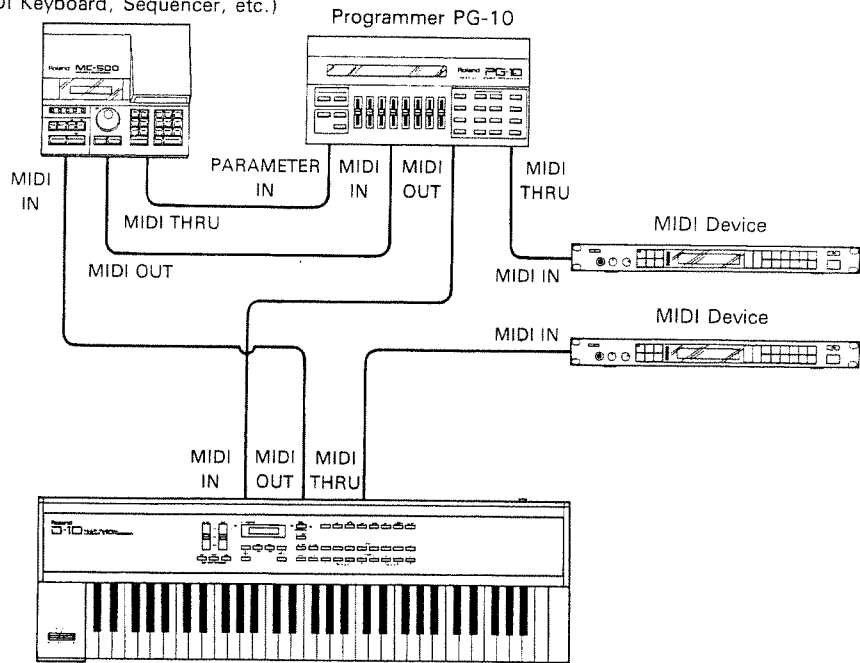
Connect the units as shown below using a MIDI cable, copy the Sound data to be edited into the PG-10, then edit the data with the PG-10.

<Basic Connection>



<Application>

MIDI Controller
(MIDI Keyboard, Sequencer, etc.)



*The PG-10 transmits the messages fed into the MIDI IN to the MIDI OUT, as well as the other messages.

*From the MIDI THRU, only the messages fed into the MIDI IN will be sent out.

*When the Sound data is not correctly copied into the PG-10, the Display will respond as shown below. If this happens, check the connections and connection cables, then repeat copying.

```
***** Error *****  
MIDI Communication
```

*If the messages from an external MIDI device through the MIDI IN stop coming suddenly, the following error message will be shown. If this happens, check if there is anything wrong with the connections or connection cables.

```
***** Error *****  
Active Sense
```

3 OPERATION

1. Power-up

<Power-up to the D-10 or D-20>

Simply turn the unit on.

The Display will respond with :

POWER



```
* Linear Synthesizer Programmer PG-10 *  
For D-10/20 Roland Corporation
```



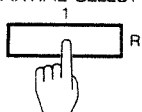
```
TONE EDIT: Select&Press Enter  
*P1 P2 P3 P4 P5 P6 P7 P8 L U
```

<Power-up to the D-110>

Turn the unit on while holding the PARTIAL SELECT 1 down.

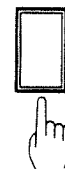
The Display will respond with :

PARTIAL SELECT



+

POWER



```
* Linear Synthesizer Programmer PG-10 *  
For D-110 Roland Corporation
```



```
TONE EDIT: Select&Press Enter  
*P1 P2 P3 P4 P5 P6 P7 P8
```


2. Preparation (Setting the Unit Numbers)

The PG-10 edits sound data using the MIDI Exclusive messages (=MIDI messages of the manufacturer's own). This means that the PG-10 cannot control a unit of a different manufacturer or a unit which cannot receive the MIDI Exclusive messages.

To send or receive the MIDI Exclusive messages, it is necessary to set the Unit Number of the PG-10 and the sound module to the same number. All the PG-10, D-10 and D-20 default to Unit Number 17, therefore you do not need to change the Unit Numbers. If the Unit Number of a unit to be used with the PG-10 is set to other than 17, change the number of the PG-10 to that number.

(See page 39 "Changing MIDI Unit Numbers".)

3. Editing Data of the D-10 or D-20

For editing data of the D-10 or D-20 with the PG-10, do as follows.

a. Patch Editing

Step 1 Select the Patch to be edited on the D-10 or D-20.

Step 2 Change to the following Menu Display using EDIT MENU.

```

PATCH EDIT:                                     Press Enter
    
```

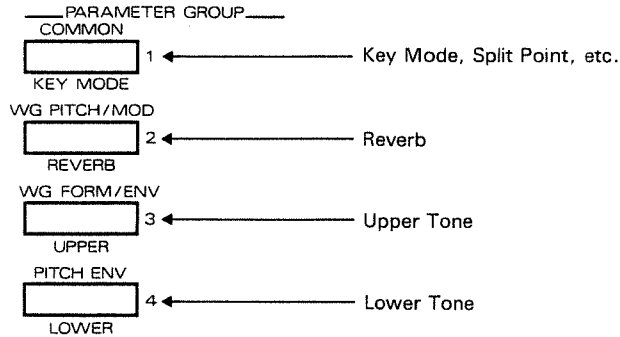
Step 3 Push ENTER.

The selected Patch is now copied to the PG-10.

```

PATCH:      Name                               KeyM  SP  Bal  Lvl
KeyMode     ***** MHL  C4    50  100
    
```

Step 4 Patch Edit includes four different Displays. Using PARAMETER GROUP, select the desired Display.



Step 5 Set the value using the Edit Knob located under the parameter to be edited.

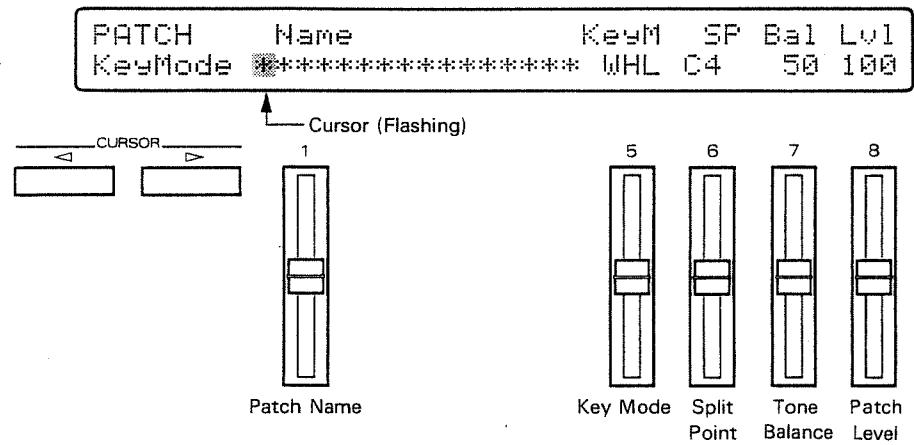
Step 6 Repeat Steps 4 and 5.

*The edited data can be written into memory with the PG-10. (See page 33 "Writing".)

*To return to the Menu Display, push EXIT.

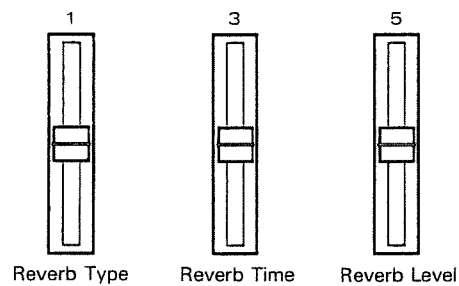
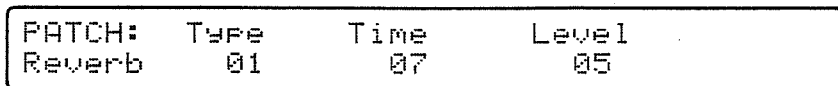
=PARAMETER DISPLAY=

● KEY MODE



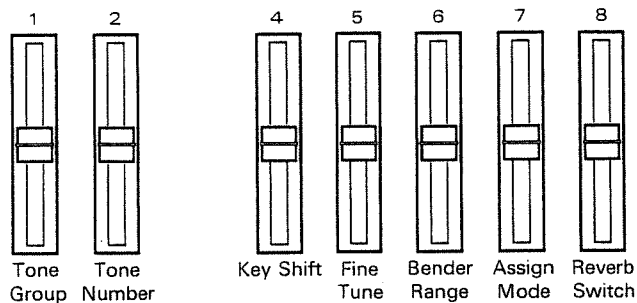
*To edit a Patch Name, move the cursor to the letter to be changed with CURSOR, then select a new letter with the Edit Knob 1.

● REVERB



● UPPER

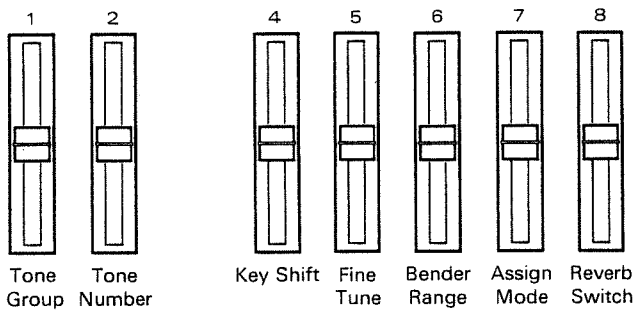
| | | | | | | |
|--------|------|------|-----|-----|-----|-----|
| PATCH: | Tone | KeyS | Fin | Bnd | Asn | Rev |
| Upper | m-11 | 00 | 00 | 24 | 01 | 0H |



*The Tone Group is set to a/b/m. "m" represents "i" when an Internal Patch is selected, and represents "c" when a Memory Card Patch is selected.

● LOWER

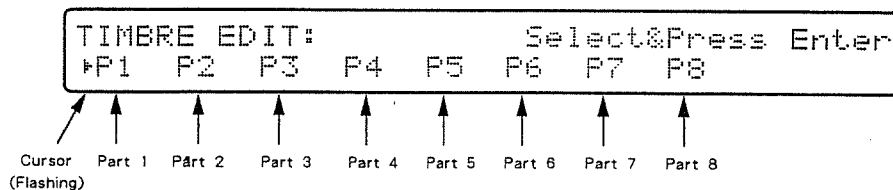
| | | | | | | |
|--------|------|------|-----|-----|-----|-----|
| PATCH: | Tone | KeyS | Fin | Bnd | Asn | Rev |
| Lower | m-11 | 00 | 00 | 24 | 01 | 0H |



*The Tone Group is set to a/b/m. "m" represents "i" when an Internal Patch is selected, and represents "c" when a Memory Card Patch is selected.

b. Timbre Editing

Step 1 Change to the following Menu Display using EDIT MENU.

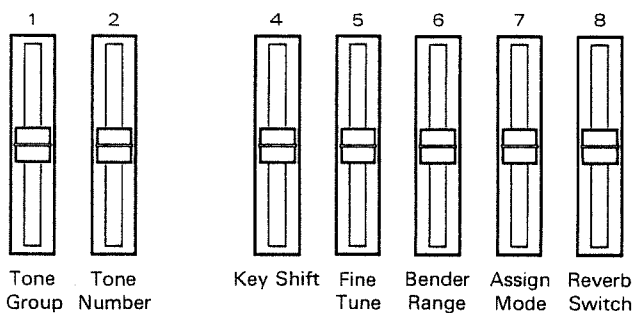
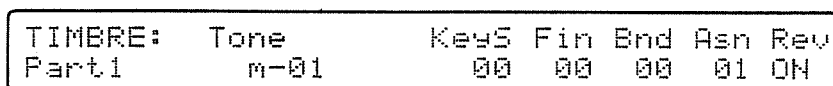


Step 2 With CURSOR, move the cursor to the Part where the Timbre to be edited is assigned.

Step 3 Push ENTER.

The selected Timbre is now copied to the PG-10.

Step 4 Set the value using the Edit Knob located under the parameter to be edited.



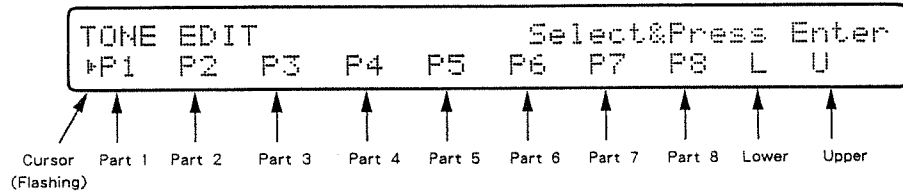
*The Tone Group is set to a/b/m. "m" represents "i" when an Internal Patch is selected, and represents "c" when a Memory Card Patch is selected.

*The edited data can be written into memory either with the PG-10. (See page 33 "Writing".)

*To return to the Menu Display, push EXIT.

c. Tone Editing

Step 1 Change to the following Menu Display with EDIT MENU.



Step 2 Select a Tone to be edited as follows :

[Selecting a Tone in the Performance Mode]

- ① Call the Patch which includes the Tone to be edited on the D-20 or D-10.
- ② Using CURSOR, move the cursor to the Tone to be edited (to Upper or Lower).

[Selecting a Tone in the Multi Timbral Mode]

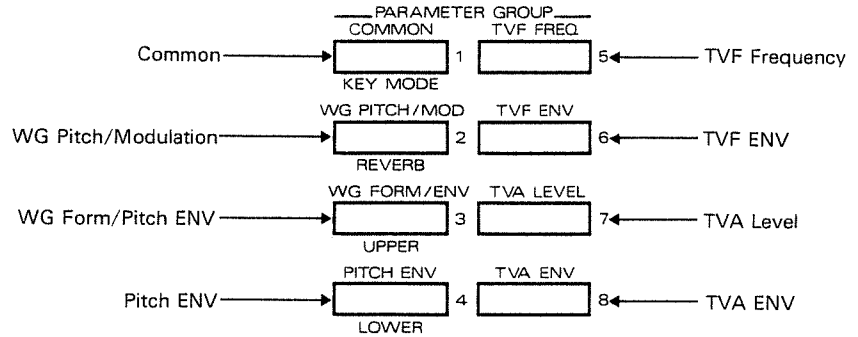
- ① Move the cursor to the Part where the Tone (Timbre) to be edited is assigned using CURSOR.

Step 3 Push ENTER.

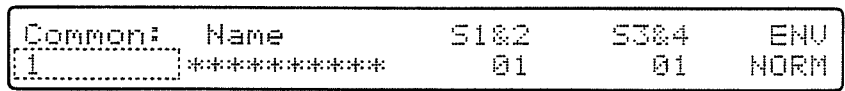
The selected Tone is now copied to the PG-10.

| Common# | Name | S1&2 | S3&4 | ENV |
|---------|-------|------|------|------|
| 1 | ***** | 01 | 01 | NORM |

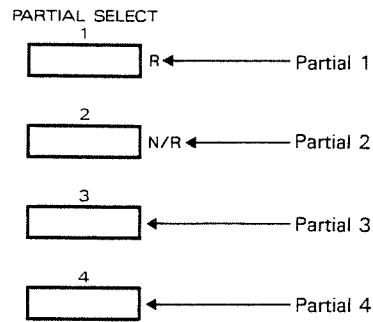
Step 4 Tone Edit consists of 8 different Displays. Select the Parameter Display to be used for editing using PARAMETER GROUP.



Step 5 Select the Partial to be edited with PARTIAL SELECT.



Selected Partial Numbers



Each time the button is pressed, ON or OFF is selected. By turning more than one Partial ON, the same Parameters in the relevant Partials can be all edited at the same time.

*When more than one Partial is selected, the Display shows the value of the Partial which has the youngest Partial number.

Step 6 Change the value using the Edit Knob situated under the parameter to be edited.

Step 7 Repeat Steps 4 to 6.

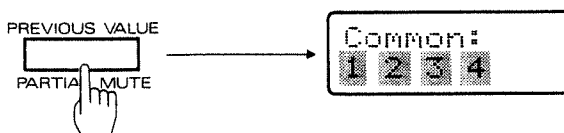
*The edited data can be written into memory with the PG-10. (See page 33 "Writing".)

*To return to the Menu Display, push EXIT.

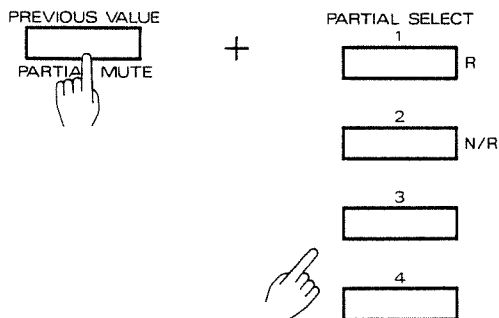
[Partial Mute]

You can mute any Partial.

Push PARTIAL MUTE. While you are holding PARTIAL MUTE down, you can see that heard Partials flash and muted Partials remain dark.



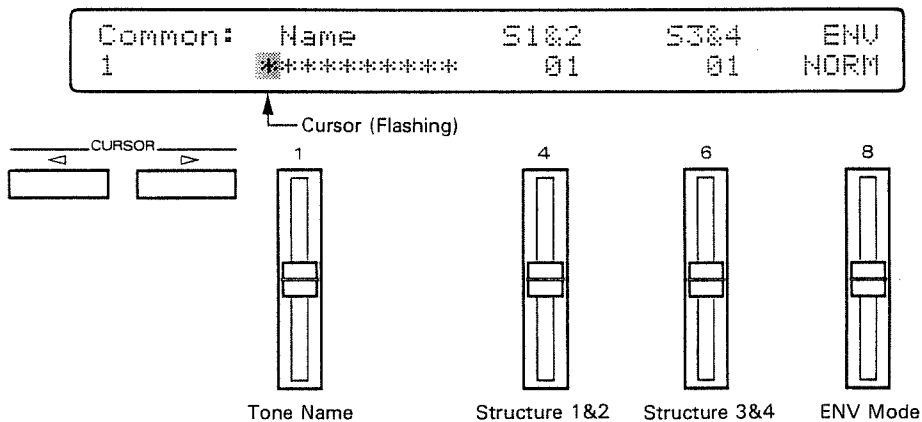
While still holding PARTIAL MUTE, mute the Partials you want by pressing the relevant PARTIAL SELECT. Each time a button is pressed, the corresponding Partial is muted (the indicator goes out) or sounded (the indicator flashing).



*Even the muted Partails can be edited.

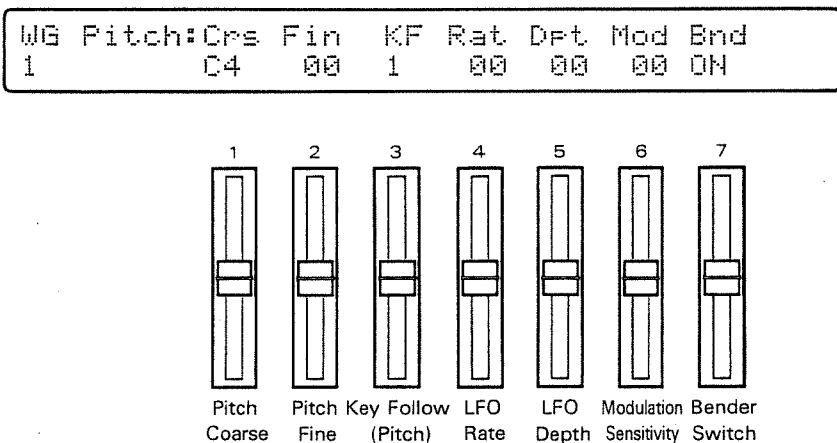
=PARAMETER DISPLAY=

● COMMON



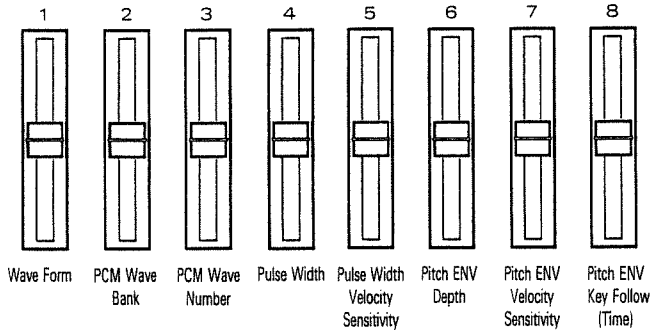
*To edit a Tone Name, move the cursor to the letter to be changed with CURSOR, then select a new letter with the Edit Knob 1.

● WG PITCH/MOD



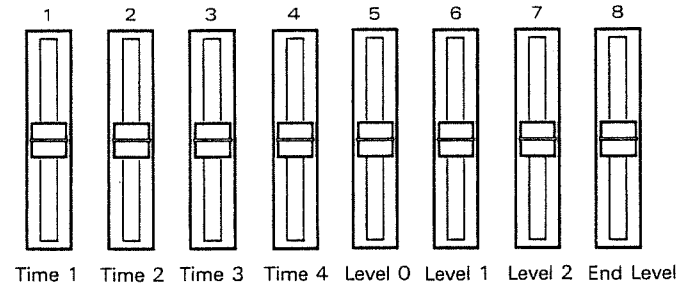
● WG FORM/ENV

| | | | | | | | |
|----------|------|-------|----|-----|-----|-----|-----|
| WG Form: | Wave | PCM | PW | PWV | Det | Vel | TKF |
| 1 | SQU | 1- 01 | 00 | 00 | 00 | 00 | 00 |



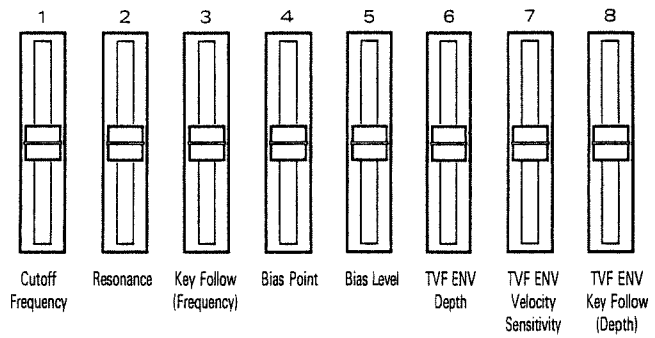
● PITCH ENV

| | | | | | | | | |
|-----------|----|----|----|----|----|----|----|----|
| PitchENV: | T1 | T2 | T3 | T4 | L0 | L1 | L2 | Le |
| 1 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |



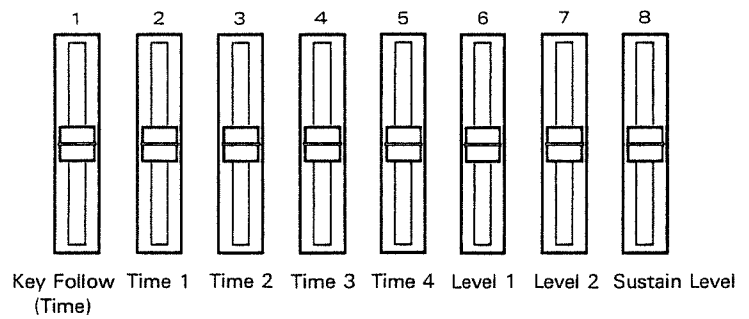
● TVF FREQ

| | | | | | | | | |
|-----------|-----|-----|----|-----|----|-----|-----|-----|
| TVF Freq: | Fra | Res | KF | BP | BL | Dpt | Vel | DKF |
| 1 | 00 | 00 | 1 | <C4 | 00 | 00 | 00 | 00 |



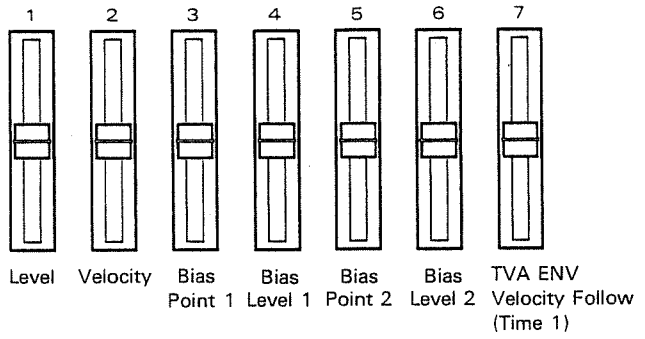
● TVF ENV

| | | | | | | | | |
|----------|-----|----|----|----|----|----|----|----|
| TVF ENV: | TKF | T1 | T2 | T3 | T4 | L1 | L2 | Ls |
| 1 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |



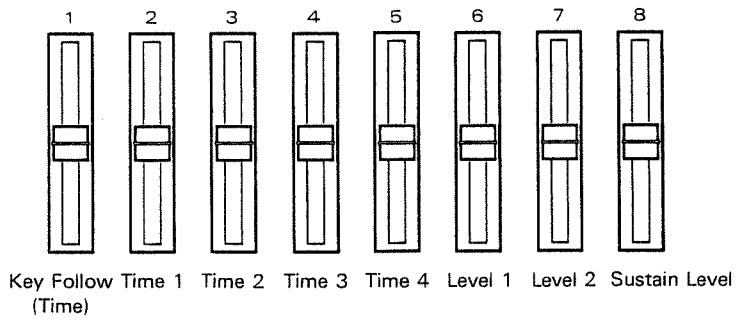
● TVA LEVEL

| | | | | | | | |
|------------|-----|-----|-----|-----|-----|-----|-----|
| TVA Level: | Lvl | Vel | BP1 | BL1 | BP2 | BL2 | EVF |
| 1 | 100 | 00 | <C4 | 00 | <C4 | 00 | 00 |



● TVA ENV

| | | | | | | | | |
|----------|-----|----|----|----|----|----|----|----|
| TVA ENV: | TKF | T1 | T2 | T3 | T4 | L1 | L2 | Ls |
| 1 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |



4. Editing Data of the D-110

For editing data of the D-110 with the PG-10, do as follows.

a. Patch Editing

Step 1 Select the Patch to be edited on the D-110.

Step 2 Change to the following Menu Display using EDIT MENU.

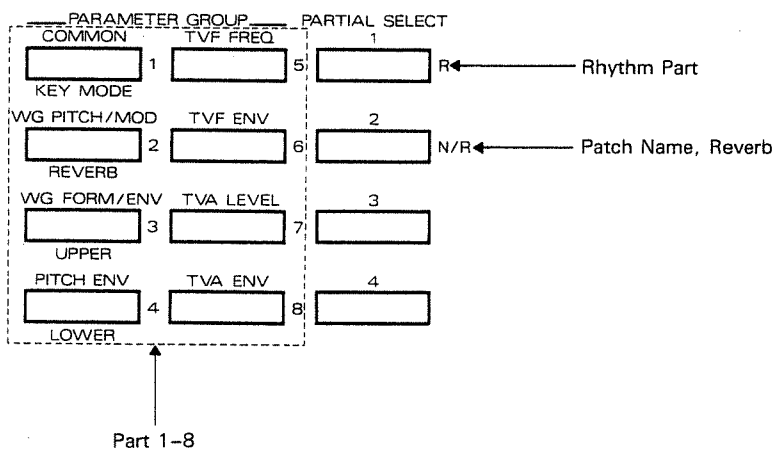
```
PATCH EDIT:                                     Press Enter
```

Step 3 Push ENTER.

The selected Patch is now copied to the PG-10.

```
PATCH: Level Pan      RangL   RangU CH Rsv
Part1      50 ><      C2       C6  01  00
```

Step 4 Patch Edit includes ten different Displays. Using PARAMETER GROUP, select the desired Display.



Step 5 Set the value using the Edit Knob located under the parameter to be edited.

Step 6 **Repeat Steps 4 and 5.**

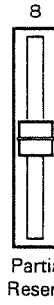
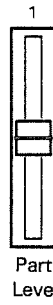
*The edited data can be written into memory with the PG-10. (See page 33 "Writing".)

*To return to the Menu Display, push EXIT.

=PARAMETER DISPLAY=

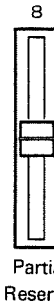
● 1-8 (Part)

| | | | | | | |
|--------|-------|-----|-------|-------|----|-----|
| PATCH: | Level | Pan | RangL | RangU | CH | Rsv |
| Part1 | 50 | X | C2 | C6 | 01 | 00 |

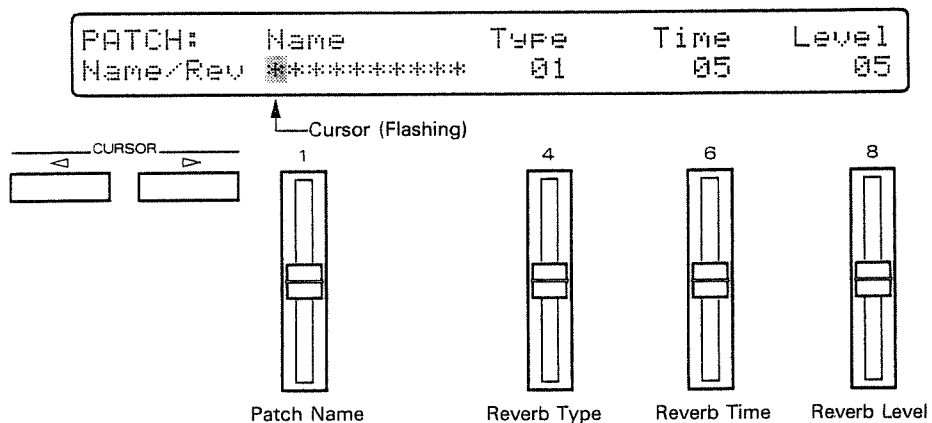


● R (Rhythm Part)

| | | | |
|--------|-------|----|-----|
| PATCH: | Level | CH | Rsv |
| Rhythm | 50 | 10 | 00 |



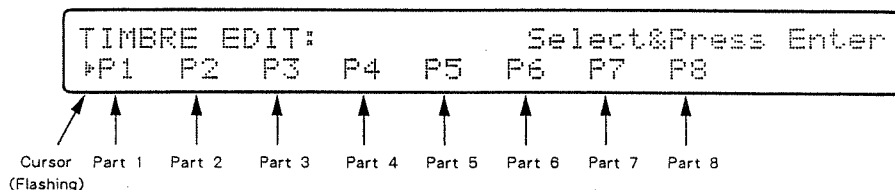
● N/R (Name/Reverb)



*To edit a Patch Name, move the cursor to the letter to be changed with CURSOR, then select a new letter with the Edit Knob 1.

b. Timbre Editing

Step 1 Change to the following Menu Display using EDIT MENU.

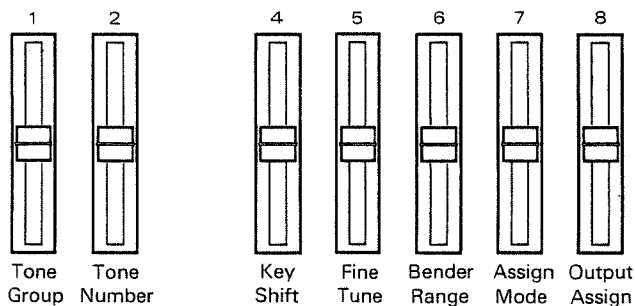
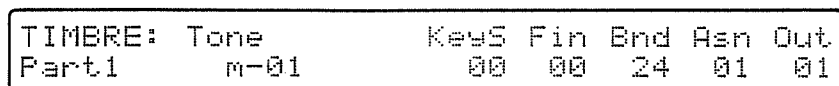


Step 2 With CURSOR, move the cursor to the part where the Timbre to be edited is assigned.

Step 3 Push ENTER.

The selected Timbre is now copied to the PG-10.

Step 4 Set the value using the Edit Knob located under the parameter to be edited.



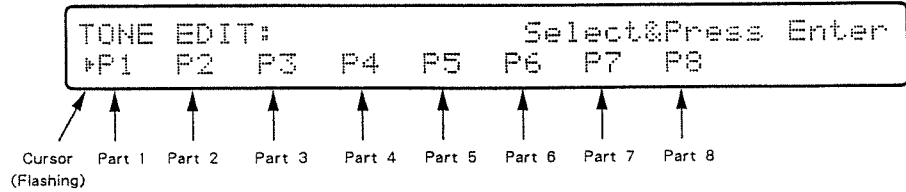
*The Tone Group is set to a/b/m. "m" represents "i" when an Internal Patch is selected, and represents "c" when a Memory Card Patch is selected.

*The edited data can be written into memory with the PG-10. (See page 33 "Writing".)

*To return to the Menu Display, push EXIT.

c. Tone Editing

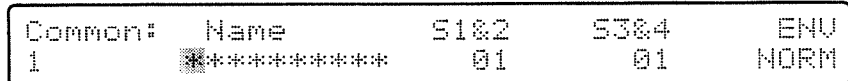
Step 1 Change to the following Menu Display with EDIT MENU.



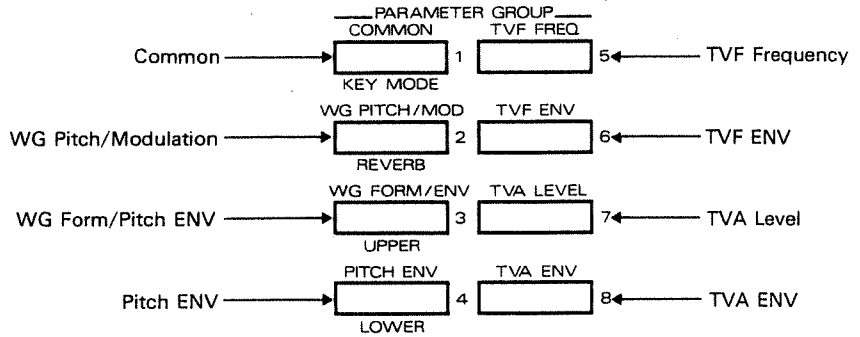
Step 2 Using CURSOR, move the cursor to the Part to which the Tone (Timbre) to be edited is assigned.

Step 3 Push ENTER.

The selected Tone is now copied to the PG-10.



Step 4 Tone Edit consists of 8 different Displays. Select the Parameter Display to be used for editing using PARAMETER GROUP.



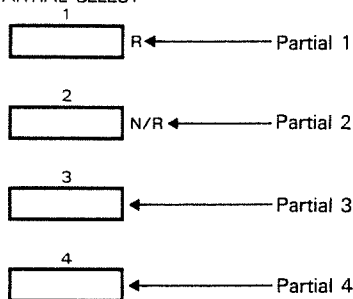
*Parameter Displays are exactly the same as the D-10 or D-20's.
(See page 15-18.)

Step 5 Select the Partial to be edited with PARTIAL SELECT.

| Common: | Name | S1&2 | S3&4 | ENU |
|---------|-------|------|------|------|
| 1 | ***** | 01 | 01 | NORM |

↑
Selected Partial Numbers

PARTIAL SELECT



Each time the button is pressed, ON or OFF is selected. By turning more than one Partial ON, the same Parameters in the relevant Partials can be all edited at the same time.

*When more than one Partial is selected, the Display shows the value of the Partial which has the youngest Partial number.

Step 6 Change the value using the Edit Knob situated under the parameter to be edited.

Step 7 Repeat Steps 4 to 6.

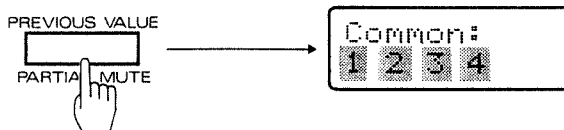
*The edited data can be written into memory with the PG-10. (See page 33 "Writing".)

*To return to the Menu Display, push EXIT.

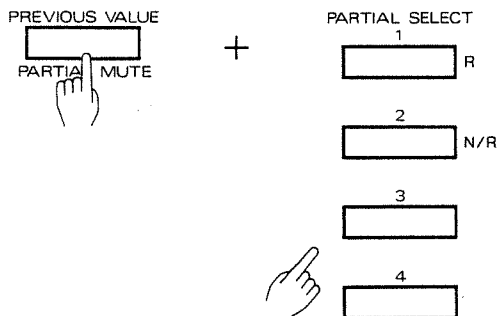
[Partial Mute]

You can mute any Partial.

Push PARTIAL MUTE. While you are holding PARTIAL MUTE down, you can see that heard Partials flash and muted Partials remain dark.



While still holding PARTIAL MUTE, mute the Partials you want by pressing the relevant PARTIAL SELECT. Each time a button is pressed, the corresponding Partial is muted (the indicator goes out) or sounded (the indicator flashing).



*Even the muted Partails can be edited.

[Notes on Editing]

Tone parameters included in the D-10 or D-20 differs from those of the D-110. The Programmer PG-10 has exactly the same parameters as the D-10 or D-20. When using the PG-10 with the D-110, please be careful about the following points.

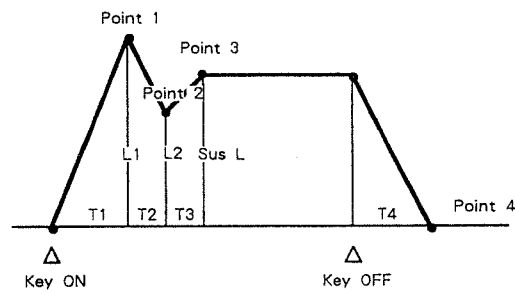
◎ **PITCH ENV**

Changing the PG-10's Time 3 will set the D-110's Sustain Level to zero (=standard pitch).

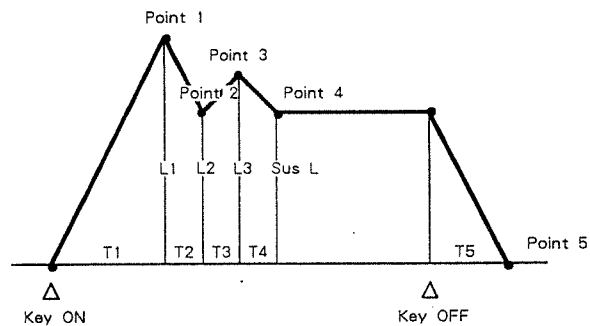
◎ **TVF ENV/TVA ENV**

Changing the Sustain Level of the PG-10 will set the D-110's Level 3 to the same value as the PG-10's Sustain Level. Also, the PG-10's Time 4 corresponds to the D-110's Time 5.

D-10/20



D-110



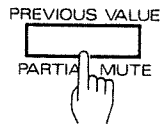
5. Functions for Editing

There are various useful function for editing.

a. Previous Value

The Previous Value function cause the Display to show the value which was set before being edited, in other words, the initial (default) value of the Parameter Display currently selected. This function, therefore will be effectively used for comparing the current value with the value before being edited.

Push PREVIOUS VALUE. While it is being pressed, the Display shows the initial value of the current Display.



***The Previous Value function applies only to the Partials selected with the Partial Select function.**

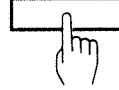
b. Undo

The Undo function returns the current value of the parameter to the initial value of the current Display. This function may be useful for cancelling the edited settings.

*The Undo function is valid only in the Tone Edit mode.

Step 1 Push TONE EIDT FUNC.

TONE EDIT FUNC



```
TONE EDIT FUNCTION:  Select&Press Enter
*COPY UNDO INITIALIZE
```

Step 2 Using CURSOR, move the cursor to UNDO.

Step 3 Push ENTER.

When the Undo function is completed, the Display shows as below for a while, then returns to the Common Display.

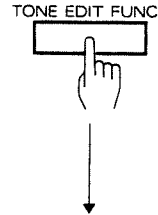
```
UNDO:
      ... Complete
```

*The Undo function only applies to the Partials selected in the Partial Select function.

c. Partial Copy

Any Partial (=source Partial) can be copied to a different location (=destination Partial).

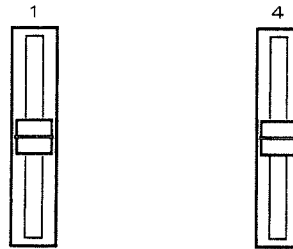
Step 1 Push TONE EDIT FUNC.



```
TONE EDIT FUNCTION:  Select&Press Enter
*COPY  UNDO  INITIALIZE
```

Step 2 Push ENTER.

```
PARTIAL COPY:      Are you sure?...
Partial-1 + Partial-1  (Enter/Exit)
```



Step 3 Select the Partial to be copied (=source Partial) with the Edit Knob 1, then the new location (=destination Partial) with the Edit Knob 4.

Step 4 Push ENTER.

When the source Partial is copied to a destination Partial, the Display responds as shown below for a while then returns to the Common Display.

```
PARTIAL COPY:
... Complete
```

*When the destination Partial is muted, taking the above Partial Copy procedure will release the Partial mute status.

d. Partial Initialize

The Partial Initialize function initializes any Partial you select. This function may be used for creating a sound from scratch.

Step 1 Push TONE EDIT FUNC.

TONE EDIT FUNC



```
TONE EDIT FUNCTION:  Select&Press Enter
*COPY UNDO INITIALIZE
```

Step 2 Using CURSOR, move the corsor to INITIALIZE.

Step 3 Push ENTER.

```
PARTIAL INITIALIZE:  Are you sure?***
                    (Enter/Exit)
```

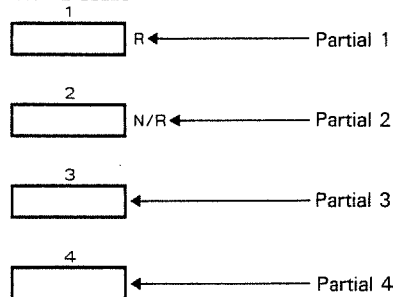
Step 4 Select the Partial to be initialized with PARTIAL SELECT.

The Display shows the selected Partial's number.

```
PARTIAL INITIALIZE:  Are you sure?***
[ ]                 (Enter/Exit)
```

↑
Selected Partial Numbers

PARTIAL SELECT



Each time the PARTIAL SELECT is pressed, the Partial Initialize function is turned on or off. It is possible to select more than one Partial, initializing all the relevant Partials at the same time.

Step 5

Push ENTER.

When the initialization is completed, the Display responds as shown below for a while then returns to the Common Display.

```
PARTIAL INITIALIZE:  
1 2 3 4      ... Complete
```

***When the muted Partial is initialized, taking the above Partial Initialize procedure will cancel the Partial Mute status.**

6. Writing

Your edited version can be written into memory by taking an appropriate writing procedure on the PG-10.

*The Tone writing procedure to be taken on the PG-10 is the same for the D-10, D-20 or D-110, while Patch/Timbre writing differs slightly for each unit.

[Error Messages]

When a correct writing procedure is not taken, the following Error Message will be shown in the Display, returning to the editing mode.

```
***** Error *****
MIDI Communication
```



This appears when the connections are not correctly made. Check if there is something wrong with the connections or connection cables.

```
***** Error *****
Card Protected
```



This appears when the Protect Switch on the memory card is set to the ON position. Set it to the OFF position, then repeat writing.

```
***** Error *****
Card Not Ready
```



The memory card is not correctly connected. Insert the card properly, then repeat writing.

```
***** Error *****
Mode Mismatch
```



This appears when you write the Timbre data with the D-10/20 in the Performance Mode, or when writing the Patch data with the D-10/20 in the Multi Timbral Mode. Set the D-10/20 to the correct mode, then repeat the writing procedure.

a. Patch/Timbre Writing (→D-10/D-20)

After you have edited a Patch or Timbre, do as follows.

*If you write a Patch or Timbre which uses a Tone in i (or c) group onto a memory card (or into the internal memory), a Tone of the same number in c (or i) group will be selected. This fact means, unless the Tones in the internal memory and on the card are exactly the same, the produced sound will change.

Step 1 Push WRITE.

<Patch>

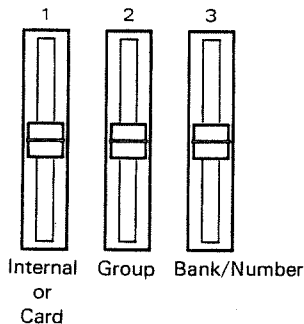
```
WRITE:***** Are you sure?...
Patch  +INT A 11 (Enter/Exit)
```

<Timbre>

```
WRITE:***** Are you sure?...
Timbre +INT A 11 (Enter/Exit)
```

Step 2 Select a destination Patch or Timbre with the corresponding Edit Knob.

```
WRITE:***** Are you sure?...
Timbre +INT A 11 (Enter/Exit)
```



Step 3 When writing onto a memory card, set the Protect Switch on the memory card to the OFF position.

When writing into the internal memory, you do not set the switch to OFF.

Step 4 **Push ENTER.**

When the writing is properly done, the Display responds as shown below for a while then returns to the Menu Display.

```
WRITE:  
Timbre            ... Complete
```

b. Patch/Timbre Writing (→D-110)

[Patch Writing]

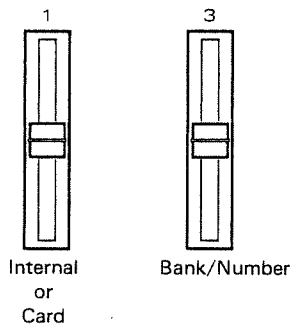
After a Patch or Timbre is edited, do as follows.

Step 1 Push **WRITE**.

```
WRITE:*****          Are you sure?...  
Patch  →INT  11        (Enter/Exit)
```

Step 2 Select a destination Patch with the corresponding Edit Knob.

```
WRITE:*****          Are you sure?...  
Patch  →INT    11        (Enter/Exit)
```



Step 3 When writing onto a memory card, set the **Protect Switch** on the memory card to the **OFF** position.

When writing into the internal memory, you do not set the switch to OFF.

Step 4 Push **ENTER**.

When the Patch is properly written, the Display responds as shown below for a while then returns to the Menu Display.

```
WRITE:  
Patch          ... Complete
```

[Timbre Writing]

After you have edited a Timbre, do as follows.

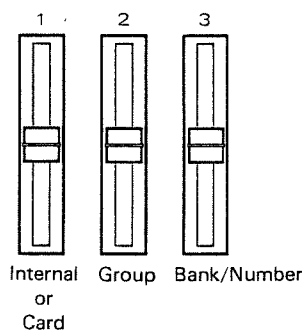
*If you write a Timbre which uses a Tone in i (or c) group onto a memory card (or into the internal memory), a Tone of the same number in c (or i) group will be selected. This fact means, unless the Tones in the internal memory and on the card are exactly the same, the produced sound will change.

Step 1 Push WRITE.

```
WRITE:                                     Are you sure?...
Timbre →INT A 11                          (Enter/Exit)
```

Step 2 Select a destination Timbre with the corresponding Edit Knob.

```
WRITE:                                     Are you sure?...
Timbre →INT A 11                          (Enter/Exit)
```



Step 3 When writing onto a memory card, set the Protect Switch on the memory card to the OFF position.

When writing into the internal memory, you do not set the switch to OFF.

Step 4 Push ENTER.

When the writing is properly done, the Display responds as shown below for a while then returns to the Menu Display.

```
WRITE:
Timbre                    * * * Complete
```

c. Tone Writing (→D-10/D-20, D-110)

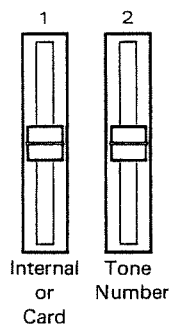
After you have edited a Tone, do as follows.

Step 1 Push WRITE.

```
WRITE:*****
Tone   →INT  01      Are you sure?...
                          (Enter/Exit)
```

Step 2 Select a destination Tone with the corresponding Edit Knob.

```
WRITE:*****
Tone   →INT  01      Are you sure?...
                          (Enter/Exit)
```



Step 3 When writing onto a memory card, set the Protect Switch on the memory card to the OFF position.

When writing into the internal memory, you do not set the switch to OFF.

Step 4 Push ENTER.

When the writing is properly done, the Display responds as shown below for a while then returns to the Menu Display.

```
WRITE:
Tone           ... Complete
```


7. Changing MIDI Unit Numbers

The PG-10 defaults to MIDI Unit Number 17. If you need to change it, do as follows.

Step 1 **Push MIDI UNIT No.**

| | |
|-----------------------|-------------|
| MIDI: UNIT No. 17 | Press Enter |
|-----------------------|-------------|

Step 2 **Change the MIDI Unit Number with the Edit Knob 1.**

Step 3 **Push ENTER.**

A new Unit Number is now set, the Display returned to normal.

***When the PG-10 is switched off once, then swiched on again, the Unit Number will be set back to 17.**

4 SAMPLE NOTES

Patch/Timbre (D-10/20)

Patch No. _____

Patch No. _____

Patch No. _____

Patch Name _____

Patch Name _____

Patch Name _____

| | |
|--------------|--|
| Key Mode | |
| Split Point | |
| Reverb Type | |
| Reverb Time | |
| Reverb Level | |
| Tone Balance | |
| Patch Level | |

| | |
|--------------|--|
| Key Mode | |
| Split Point | |
| Reverb Type | |
| Reverb Time | |
| Reverb Level | |
| Tone Balance | |
| Patch Level | |

| | |
|--------------|--|
| Key Mode | |
| Split Point | |
| Reverb Type | |
| Reverb Time | |
| Reverb Level | |
| Tone Balance | |
| Patch Level | |

| | Lower | Upper |
|---------------|-------|-------|
| Tone Select | | |
| Key Shift | | |
| Fine Tune | | |
| Bender Range | | |
| Assign Mode | | |
| Reverb Switch | | |

| | Lower | Upper |
|---------------|-------|-------|
| Tone Select | | |
| Key Shift | | |
| Fine Tune | | |
| Bender Range | | |
| Assign Mode | | |
| Reverb Switch | | |

| | Lower | Upper |
|---------------|-------|-------|
| Tone Select | | |
| Key Shift | | |
| Fine Tune | | |
| Bender Range | | |
| Assign Mode | | |
| Reverb Switch | | |

Timbre No. _____

Timbre No. _____

Timbre No. _____

| | |
|---------------|--|
| Tone Select | |
| Key Shift | |
| Fine Tune | |
| Bender Range | |
| Assign Mode | |
| Reverb Switch | |

| | |
|---------------|--|
| Tone Select | |
| Key Shift | |
| Fine Tune | |
| Bender Range | |
| Assign Mode | |
| Reverb Switch | |

| | |
|---------------|--|
| Tone Select | |
| Key Shift | |
| Fine Tune | |
| Bender Range | |
| Assign Mode | |
| Reverb Switch | |

Timbre No. _____

Timbre No. _____

Timbre No. _____

| | |
|---------------|--|
| Tone Select | |
| Key Shift | |
| Fine Tune | |
| Bender Range | |
| Assign Mode | |
| Reverb Switch | |

| | |
|---------------|--|
| Tone Select | |
| Key Shift | |
| Fine Tune | |
| Bender Range | |
| Assign Mode | |
| Reverb Switch | |

| | |
|---------------|--|
| Tone Select | |
| Key Shift | |
| Fine Tune | |
| Bender Range | |
| Assign Mode | |
| Reverb Switch | |

Patch/Timbre (D-110)

| | | | | | | | | | |
|-----------------|--------|--------|-------------|--------|--------|--------|--------|--------------|--------|
| Patch No. | | | Patch Name | | | | | | |
| Reverb Type | | | Reverb Time | | | | | Reverb Level | |
| | Part 1 | Part 2 | Part 3 | Part 4 | Part 5 | Part 6 | Part 7 | Part 8 | Part R |
| Output Level | | | | | | | | | |
| Pan | | | | | | | | | |
| Key Range (L) | | | | | | | | | |
| Key Range (U) | | | | | | | | | |
| MIDI Channel | | | | | | | | | |
| Partial Reserve | | | | | | | | | |
| Tone Select | | | | | | | | | |
| Key Shift | | | | | | | | | |
| Fine Tune | | | | | | | | | |
| Bender Range | | | | | | | | | |
| Assign Mode | | | | | | | | | |
| Output Assign | | | | | | | | | |

| | | | | | | | | | |
|-----------------|--------|--------|-------------|--------|--------|--------|--------|--------------|--------|
| Patch No. | | | Patch Name | | | | | | |
| Reverb Type | | | Reverb Time | | | | | Reverb Level | |
| | Part 1 | Part 2 | Part 3 | Part 4 | Part 5 | Part 6 | Part 7 | Part 8 | Part R |
| Output Level | | | | | | | | | |
| Pan | | | | | | | | | |
| Key Range (L) | | | | | | | | | |
| Key Range (U) | | | | | | | | | |
| MIDI Channel | | | | | | | | | |
| Partial Reserve | | | | | | | | | |
| Tone Select | | | | | | | | | |
| Key Shift | | | | | | | | | |
| Fine Tune | | | | | | | | | |
| Bender Range | | | | | | | | | |
| Assign Mode | | | | | | | | | |
| Output Assign | | | | | | | | | |

Tone (D-10/20/110)

Tone No. _____

Tone Name _____

Used Patch No. _____ Used Timbre No. _____

| | | | |
|---------------|---------------|----------|--|
| Structure 1&2 | Structure 3&4 | ENV Mode | |
|---------------|---------------|----------|--|

| WG | | 1 | 2 | 3 | 4 |
|-----------|--------|---|---|---|---|
| Pitch | Coarse | | | | |
| | Fine | | | | |
| | KF | | | | |
| LFO | Rate | | | | |
| | Depth | | | | |
| | Mod | | | | |
| Bend | | | | | |
| Waveform | Form | | | | |
| | PCM B | | | | |
| | PCM No | | | | |
| PW | PW | | | | |
| | Velo | | | | |
| Pitch ENV | Depth | | | | |
| | Velo | | | | |
| | TKF | | | | |
| | T 1 | | | | |
| | T 2 | | | | |
| | T 3 | | | | |
| | T 4 | | | | |
| | L 0 | | | | |
| | L 1 | | | | |
| | L 2 | | | | |
| | End L | | | | |

| TVF | | 1 | 2 | 3 | 4 |
|---------------|-------|---|---|---|---|
| TVF Frequency | Freq | | | | |
| | Reso | | | | |
| | KF | | | | |
| | BP | | | | |
| | BL | | | | |
| TVF ENV | Depth | | | | |
| | DVelo | | | | |
| | DKF | | | | |
| | TKF | | | | |
| | T 1 | | | | |
| | T 2 | | | | |
| | T 3 | | | | |
| | T 4 | | | | |
| | L 1 | | | | |
| | L 2 | | | | |
| Sus L | | | | | |

| TVA | | 1 | 2 | 3 | 4 |
|-----------|----------|---|---|---|---|
| TVA Level | Level | | | | |
| | Velo | | | | |
| | BP 1 | | | | |
| | BL 1 | | | | |
| | BP 2 | | | | |
| TVA ENV | BL 2 | | | | |
| | Velo T 1 | | | | |
| | TKF | | | | |
| | T 1 | | | | |
| | T 2 | | | | |
| | T 3 | | | | |
| | T 4 | | | | |
| | L 1 | | | | |
| | L 2 | | | | |
| Sus L | | | | | |

5 SPECIFICATIONS

● Front Panel

Edit Knob × 8
Cursor Button × 2
Write Button
Enter Button
Exit Button
MIDI Button
Edit Menu Button
Tone Edit Function Button
Previous Value/Partial Mute Button
Parameter Group Button × 8
Partial Select Button × 4

● Rear Panel

Power Switch
AC Adaptor Socket
MIDI IN Connector
MIDI OUT Connector
MIDI THRU Connector
Parameter IN Connector

● Current Draw : 200mA (DC 9V)

● Weight : 800g / 1 lb 2 oz

● Dimensions : 278 (W) × 142 (D) × 46 (H) mm / 10-15/16" × 5-9/16" × 1-13/16"

● Accessories :

Owner's Manual
Guide Book for MIDI
AC Adaptor (PSA-120, PSA-220, PSA-240)
MIDI/SYNC Cable × 2

● Options :

MIDI/Sync Cables (MSC-07, MSC-15, MSC-25, MSC-50, MSC-100)

Roland Exclusive Messages

1. Data Format for Exclusive Messages

Roland's MIDI implementation uses the following data format for all exclusive messages (type IV) :

| Byte | Description |
|--------|--------------------------|
| F0H | Exclusive status |
| 41H | Manufactures ID (Roland) |
| DEV | Device ID |
| MDL | Model ID |
| CMD | Command ID |
| [BODY] | Maindata |
| F7H | End of exclusive |

MIDI status : F0H, F7H

An exclusive message must be flanked by a pair of status codes, starting with a Manufactures-ID immediately after F0H (MIDI version 1.0).

Manufactures-ID : 41H

The Manufactures-ID identifies the manufacturer of a MIDI instrument that triggers an exclusive message. Value 41H represents Roland's Manufactures-ID.

Device-ID : DEV

The Device-ID contains a unique value that identifies the individual device in the multiple implementation of MIDI instruments. It is usually set to 00H - 0FH, a value smaller by one than that of a basic channel, but value 00H - 1FH may be used for a device with multiple basic channels.

Model-ID : MDL

The Model-ID contains a value that uniquely identifies one model from another. Different models, however, may share an identical Model-ID if they handle similar data.

The Model-ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Model-IDs, each representing a unique model :

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

Command-ID : CMD

The Command-ID indicates the function of an exclusive message. The Command-ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Command-IDs, each representing a unique function :

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

Main data : BODY

This field contains a message to be exchanged across an interface. The exact data size and contents will vary with the Model-ID and Command-ID.

2. Address-mapped Data Transfer

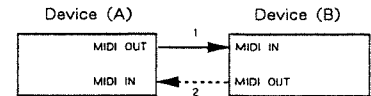
Address mapping is a technique for transferring messages conforming to the data format given in Section 1. It assigns a series of memory-resident records--waveform and tone data, switch status, and parameters, for example--to specific locations in a machine-dependent address space, thereby allowing access to data residing at the address a message specifies.

Address-mapped data transfer is therefore independent of models and data categories. This technique allows use of two different transfer procedures : one-way transfer and handshake transfer.

One-way transfer procedure (See Section 3 for details.)

This procedure is suited for the transfer of a small amount of data. It sends out an exclusive message completely independent of a receiving device status.

Connection Diagram

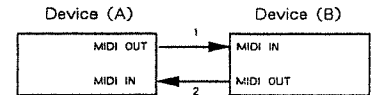


Connection at point 2 is essential for "Request data" procedures. (See Section 3.)

Handshake-transfer procedure (See Section 4 for details.)

This procedure initiates a predetermined transfer sequence (handshaking) across the interface before data transfer takes place. Handshaking ensures that reliability and transfer speed are high enough to handle a large amount of data.

Connection Diagram



Connection at points 1 and 2 is essential.

Notes on the above two procedures

- * There are separate Command-IDs for different transfer procedures.
- * Devices A and B cannot exchange data unless they use the same transfer procedure, share identical Device-ID and Model ID, and are ready for communication.

3. One-way Transfer Procedure

This procedure sends out data all the way until it stops when the messages are so short that answerbacks need not be checked.

For long messages, however, the receiving device must acquire each message in time with the transfer sequence, which inserts intervals of at least 20 milliseconds in between.

Types of Messages

| Message | Command ID |
|----------------|------------|
| Request data 1 | RQ1 (11H) |
| Data set 1 | DT1 (12H) |

Request data # 1 : RQ1 (11H)

This message is sent out when there is a need to acquire data from a device at the other end of the interface. It contains data for the address and size that specify designation and length, respectively, of data required.

On receiving an RQ1 message, the remote device checks its memory for the data address and size that satisfy the request.

If it finds them and is ready for communication, the device will transmit a "Data set 1 (DT1)" message, which contains the requested data. Otherwise, the device will send out nothing.

| Byte | Description |
|------|--------------------------|
| F0H | Exclusive status |
| 41H | Manufactures ID (Roland) |
| DEV | Device ID |
| MDL | Model ID |
| 11H | Command ID |
| aaH | Address MSB |
| ⋮ | ⋮ |
| | LSB |
| ssH | Size MSB |
| ⋮ | ⋮ |
| | LSB |
| sum | Check sum |
| F7H | End of exclusive |

Request data : RQD (41H)

This message is sent out when there is a need to acquire data from a device at the other end of the interface. It contains data for the address and size that specify designation and length, respectively, of data required.

On receiving an RQD message, the remote device checks its memory for the data address and size which satisfy the request. If it finds them and is ready for communication, the device will transmit a "Data set (DAT)" message, which contains the requested data. Otherwise, it will return a "Rejection (RJC)" message.

| Byte | Description |
|------|--------------------------|
| F0H | Exclusive status |
| 41H | Manufactures ID (Roland) |
| DEV | Device ID |
| MDL | Model ID |
| 41H | Command ID |
| aaH | Address MSB |
| ⋮ | ⋮ |
| | LSB |
| ssH | Size MSB |
| ⋮ | ⋮ |
| | LSB |
| sum | Check sum |
| F7H | End of exclusive |

- *The size of the requested data does not indicate the number of bytes, that make up a "Data set (DAT)" message, but represents the address fields where the requested data resides.
- *Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
- *The same number of bytes comprises address and size data, which, however, vary with the Model-ID.
- *The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Data set : DAT (42H)

This message corresponds to the actual data transfer process. Because every byte in the data is assigned a unique address, the message can convey the starting address of one or more data as well as a series of data formatted in an address-dependent order.

Although the MIDI standards inhibit non-real time messages from interrupting an exclusive one, some devices support a "soft-through" mechanism for such interrupts. To maintain compatibility with such devices, Roland has limited the DAT to 256bytes so that an excessively long message is sent out in separate segments.

| Byte | Description |
|------|--------------------------|
| F0H | Exclusive status |
| 41H | Manufactures ID (Roland) |
| DEV | Device ID |
| MDL | Model ID |
| 42H | Command ID |
| aaH | Address MSB |
| ⋮ | ⋮ |
| | LSB |
| ddH | Data |
| ⋮ | ⋮ |
| sum | Check sum |
| F7H | End of exclusive |

- *A DAT message is capable of providing only the valid data among those specified by an RQD or WSD message.
- *Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
- *The number of bytes comprising address data varies from one model ID to another.
- *The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Acknowledge : ACK (43H)

This message is sent out when no error was detected on reception of a WSD, DAT, "End of data (EOD)", or some other message and a requested setup or action is complete. Unless it receives an ACK message, the device at the other end will not proceed to the next operation.

| Byte | Description |
|------|--------------------------|
| F0H | Exclusive status |
| 41H | Manufactures ID (Roland) |
| DEV | Device ID |
| MDL | Model ID |
| 43H | Command ID |
| F7H | End of exclusive |

End of data : EOD (45H)

This message is sent out to inform a remote device of the end of a message. Communication, however, will not come to an end unless the remote device returns an ACK message even though an EOD message was transmitted.

| Byte | Description |
|------|--------------------------|
| F0H | Exclusive status |
| 41H | Manufactures ID (Roland) |
| DEV | Device ID |
| MDL | Model ID |
| 45H | Command ID |
| F7H | End of exclusive |

Communications error : ERR (4EH)

This message warns the remote device of a communications fault encountered during message transmission due, for example, to a checksum error. An ERR message may be replaced with a "Rejection (RJC)" one, which terminates the current message transaction in midstream.

When it receives an ERR message, the sending device may either attempt to send out the last message a second time or terminate communication by sending out an RJC message.

| Byte | Description |
|------|--------------------------|
| F0H | Exclusive status |
| 41H | Manufactures ID (Roland) |
| DEV | Device ID |
| MDL | Model ID |
| 4EH | Command ID |
| F7H | End of exclusive |

Rejection : RJC (4FH)

This message is sent out when there is a need to terminate communication by overriding the current message. An RJC message will be triggered when :

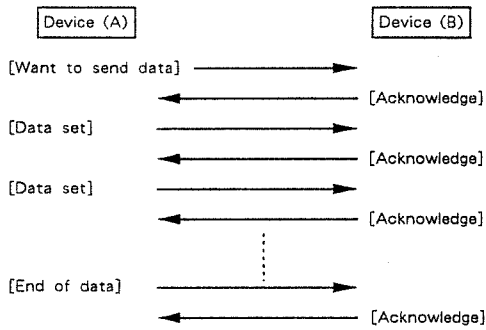
- a WSD or RQD message has specified an illegal data address or size,
- the device is not ready for communication,
- an illegal number of addresses or data has been detected,
- data transfer has been terminated by an operator,
- a communications error has occurred.

An ERR message may be sent out by a device on either side of the interface. Communication must be terminated immediately when either side triggers an ERR message.

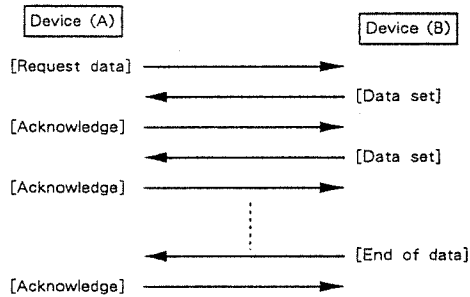
| Byte | Description |
|------|--------------------------|
| FOH | Exclusive status |
| 41H | Manufactures ID (Roland) |
| DEV | Device ID |
| MDL | Model ID |
| 4FH | Command ID |
| F7H | End of exclusive |

Example of Message Transactions

● Data transfer from device (A) to device (B).

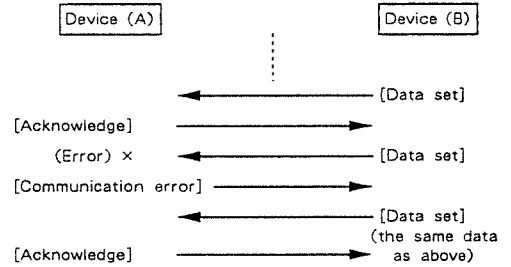


● Device (A) requests and receives data from device (B).

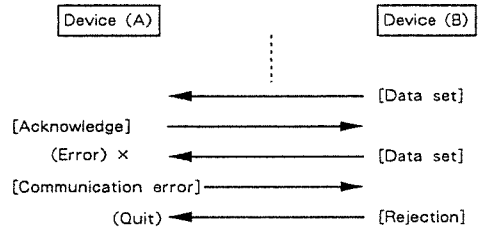


● Error occurs while device (A) is receiving data from device (B).

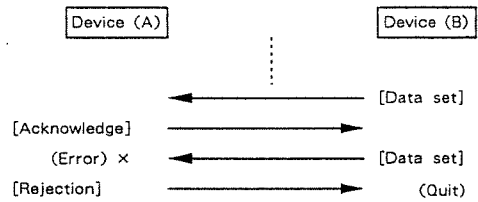
1) Data transfer from device (A) to device (B).



2) Device (B) rejects the data re-transmitted, and quits data transfer.



3) Device (A) immediately quits data transfer.



1. TRANSMITTED DATA

■ **Bypassed Message**

PG-10 retransmits all MIDI IN messages except :

- Active sensing (FEH)
- Reset (FFH)

■ **Note event**

Note off

| Status | Second | Third |
|--------|--------|-------|
| 9nH | kkH | 00H |

kk=Note No. 00H-7FH (0-127)
n =MIDI ch. 0H - FH (1-16)

When PG-10 is directed (from panel operation) to send Parameter Requestor Write command, it temporarily changes input source from MIDI IN to PARAMETER IN. This would cause PG-10 to miss coming MIDI messages.

Among missed MIDI IN messages, Note off will have crucial effect because the corresponding voice will remain on. To overcome this disadvantage PG-10 sends Note off on all channels, upon switching to PARAMETER IN to turn off all notes. Also sends Note off on all channels upon encountering interruption of Active sensing message or message of any type that is expected to come should MIDI connection from the transmitting device is intact. (Provided that PG-10 has received Active sensing message, FEH.)

■ **Mode message**

All notes off

| Status | Second | Third |
|--------|--------|-------|
| BnH | 7BH | 00H |

n =MIDI channel 0H-FH (1-16)

After sending Note off message upon changing input sources or upon detecting failure in the MIDI passage (see Note off above), PG-10 sends All notes off.

■ **Exclusive**

Status
F0H : System Exclusive
F7H : EOX (End of Exclusive)

Fiddling button or control on the PG-10 will cause transmission of related MIDI exclusive message from PG-10.
See Section 3 Exclusive message.

■ **Active Sensing**

Status
FEH : Active Sensing

Optional transmission of this message enables the receiving unit to check MIDI connection from PG-10 MIDI OUT to its MIDI IN.
PG-10 will stop transmitting of Active sensing for about 500 ms if PG-10 itself fails to receive the active sensing sequence.

2. RECOGNIZED RECEIVE DATA

■ **Exclusive**

Status
F0H : System Exclusive
F7H : EOX (End of Exclusive)

PG-10 will take recognizable contents in the received exclusive message.
See Section 3 Exclusive Communication for details.

■ **Active Sensing**

Status
FEH : Active Sensing

Having received this message, PG-10 will expect to receive information of any status or data every 300ms (max). If a 300ms passes with no information received, PG-10 assumes that there is a failure somewhere on the MIDI upstream. And will transmit Note off on all channels to turn off the notes and will return to normal operation (will not check interval of incoming MIDI information).

3. EXCLUSIVE COMMUNICATION

The model ID number of PG-10 is 16H.
Each Device-ID# of PG-10 is Unit# specified by MIDI UNIT No. (17-32).
Note that each Unit# 17-32 corresponds to each actual Device-ID 16-31, respectively. Use of Unit# makes a part of any MIDI channel accessible with no channel barrier.

■ **ONE-WAY COMMUNICATION**

Request Data RQ1 11H

PG-10 transmits Parameter Request when Menu screen is to be changed to Edit screen ; then changes input source from MIDI IN to PARAMETER IN.
This message can be transmitted only when PARAMETER IN (switched-socket) is being engaged with MIDI cable.

| Byte | Description |
|------|--|
| F0H | Exclusive status |
| 41H | Manufactures ID (Roland) |
| DEV | Device ID |
| 16H | Model ID |
| 11H | Command ID |
| aaH | Address MSB *3-1 |
| aaH | Address |
| aaH | Address LSB |
| ssH | Size MSB |
| ssH | Size |
| ssH | Size LSB |
| sum | Checksum |
| F7H | End of System Exclusive |

A summation of the address, data and checksum must result in "0" at lower 7 bits.

| Byte | Description |
|------|---|
| Byte | Description |
| F0H | Exclusive status |
| 41H | Manufacture ID (Roland) |
| DEV | Device ID |
| 16H | Model ID |
| 12H | Command ID |
| aaH | Address MSB *3-1 |
| aaH | Address |
| aaH | Address LSB |
| ddH | Data *3-2 |
| : | |
| sum | Checksum |
| F7H | End of System Exclusive *3-3 |

Notes :

- *3-1 Addresses and size must cover the area in which data exist.
- *3-2 See Section 4.
- *3-3 Upon receiving this message, PG-10 changes input source from PARAMETER IN to MIDI IN.

4. PARAMETER ADDRESS MAP

Address are shown in 7-bit hexadecimal.

| Address | MSB | LSB |
|-----------|-----------|-----------|
| Binary | 0aaa aaaa | 0bbb bbbb |
| 7-bit hex | AA | BB |
| | | 0ccc cccc |
| | | CC |

The actual address of a parameter in a block is the sum start address of each block and one or more offset addresses.

An address in Tone Temporary Area marked by *4-3 is a sum of the start address, offset address in Table *4-3 and one of the offset addresses listed in Common Parameter table or Partial Parameter table.

The data in the address marked by *4-4 can be transmitted only when PG-10 is set in D-110 mode.

Parameter base address

Whole part (Accessible on Unit #)

| Start address | Description | |
|---------------|-------------------------------------|------|
| 03 00 00 | Timbre Temporary Area (Part1) | *4-1 |
| 03 00 10 | Timbre Temporary Area (Part2) | |
| : | | |
| 03 00 60 | Timbre Temporary Area (Part7) | |
| 03 00 70 | Timbre Temporary Area (Part8) | |
| 03 01 00 | Timbre Temporary Area (Rhythm Part) | |
| 03 04 00 | Patch Temporary Area | *4-2 |
| 04 00 00 | Tone Temporary Area (Part1/UPPER) | *4-3 |
| 04 01 76 | Tone Temporary Area (Part2/LOWER) | |
| : | | |
| 04 0B 44 | Tone Temporary Area (Part7) | |
| 04 0D 3A | Tone Temporary Area (Part8) | |
| 10 00 00 | System Area | *4-4 |
| 40 00 00 | Write Request | *4-5 |

Notes :

*4-1 Timbre temporary area

| Offset address | Description | |
|----------------|-------------|--|
| 00 00H | 0000 00aa | TONE GROUP 0-3 (a, b, m, r) |
| 00 01H | 00aa aaaa | TONE NUMBER 0-63 (1-64) |
| 00 02H | 00aa aaaa | KEY SHIFT 0-48 (-24+24) |
| 00 03H | 0aaa aaaa | FINE TUNE 0-100 (-50+50) |
| 00 04H | 000a aaaa | BENDER RANGE 0-24 |
| 00 05H | 0000 00aa | ASSIGN MODE 0-3 (POLY 1, POLY 2, POLY 3, POLY 4) |
| 00 06H | 0000 000a | REVERB SWITCH 0-1 (OFF, ON) |
| 00 07H | 0000 0000 | dummy |
| 00 08H | 0aaa aaaa | OUTPUT LEVEL 0-100 |
| 00 09H | 0000 aaaa | PANPOT 0-14 (L-R) |
| 00 0AH | 0aaa aaaa | Key Range Low |
| 00 0BH | 0aaa aaaa | Key Range High |
| 00 0CH | 0000 0000 | dummy |
| : | : | |
| 00 0FH | 0000 0000 | dummy |

Total size = 00 00 10H

*4-2 Patch Temporary area

| Offset address | Description | |
|----------------|-------------|---------------------------------------|
| 00 00H | 0000 00aa | KEY MODE 0-2 (whole, dual, split) |
| 00 01H | 00aa aaaa | SPLIT POINT 0-61 (C2-C#7) |
| 00 02H | 0000 00aa | LOWER TONE GROUP 0-3 (a, b, m, r) |
| 00 03H | 00aa aaaa | LOWER TONE NUMBER 0-63 (1-64) |
| 00 04H | 0000 00aa | UPPER TONE GROUP 0-3 (a, b, m, r) |
| 00 05H | 00aa aaaa | UPPER TONE NUMBER 0-63 (1-64) |
| 00 06H | 00aa aaaa | LOWER KEY SHIFT 0-48 (-24+24) |
| 00 07H | 00aa aaaa | UPPER KEY SHIFT 0-48 (-24+24) |
| 00 08H | 0aaa aaaa | LOWER FINE TUNE 0-100 (-50+50) |
| 00 09H | 0aaa aaaa | UPPER FINE TUNE 0-100 (-50+50) |
| 00 0AH | 000a aaaa | LOWER BENDER RANGE 0-24 |
| 00 0BH | 000a aaaa | UPPER BENDER RANGE 0-24 |
| 00 0CH | 0000 00aa | LOWER ASSIGN MODE 0-3 (1-4) |
| 00 0DH | 0000 00aa | UPPER ASSIGN MODE 0-3 (1-4) |
| 00 0EH | 0000 000a | LOWER REVERB SWITCH 0-1 (OFF, ON) |
| 00 0FH | 0000 000a | UPPER REVERB SWITCH 0-1 (OFF, ON) |
| 00 10H | 0000 aaaa | REVERB MODE 0-8 (1-8, OFF) |
| 00 11H | 0000 0aaa | REVERB TIME 0-7 (1-8) |
| 00 12H | 0000 0aaa | REVERB LEVEL 0-7 |
| 00 13H | 0aaa aaaa | U/L BALANCE 0-100 |
| 00 14H | 0aaa aaaa | PATCH LEVEL 0-100 |
| 00 15H | 0aaa aaaa | PATCH NAME CHAR.1 32-127 (ASCII CODE) |
| : | : | |
| 00 24H | 0aaa aaaa | PATCH NAME CHAR.16 dummy |
| 00 25H | 0000 0000 | dummy |

Total size = 00 00 26H

*4-3 Tone Temporary area / Tone Memory

| Offset address | Description | |
|----------------|------------------------------------|--------|
| 00 00 00 | Common parameter | *4-3-1 |
| 00 00 0E | Partial parameter (for Partial# 1) | *4-3-2 |
| 00 00 48 | Partial parameter (for Partial# 2) | |
| 00 01 02 | Partial parameter (for Partial# 3) | |
| 00 01 3C | Partial parameter (for Partial# 4) | |

Total size = 00 01 76H

*4-3-1 Common parameter

| Offset address | Description |
|----------------|---|
| 00H | 0aaa aaaa TONE NAME 1 32-127 (ASCII) |
| 09H | 0aaa aaaa TONE NAME 10 |
| 0AH | 0000 aaaa Structure of Partial# 1&2 0-12 (1-13) |
| 0BH | 0000 aaaa Structure of Partial# 3&4 0-12 (1-13) |
| 0CH | 0000 aaaa PARTIAL MUTE 0-15 (0000-1111) |
| 0DH | 0000 000a ENV MODE 0-1 (Normal, No sustain) |

Total size = 00 00 0EH

*4-3-2 Partial parameter

| Offset address | Description |
|----------------|--|
| 00 00H | 0aaa aaaa WG PITCH COARSE 0-96 (C1, C#1, -C9) |
| 00 01H | 0aaa aaaa WG PITCH FINE 0-100 (-50-+50) |
| 00 02H | 000a aaaa WG PITCH KEYFOLLOW 0-16 (-1, -1/2, -1/4, 0, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 5/4, 3/2, 2, s1, s2) |
| 00 03H | 0000 000a WG PITCH BENDER SW 0-1 (OFF, ON) |
| 00 04H | 0000 00aa WG WAVEFORM/PCM BANK 0-3 (SQU/1, SAW/1, SQU/2, SAW/2) |
| 00 05H | 0aaa aaaa WG PCM WAVE # 0-127 (1-128) |
| 00 06H | 0aaa aaaa WG PULSE WIDT 0-100 |
| 00 07H | 0000 aaaa WG PW VELO SENS 0-14 (-7-+7) |
| 00 08H | 0000 aaaa P-ENV DEPTH 0-10 |
| 00 09H | 0aaa aaaa P-ENV VELO SENS 0-3 |
| 00 0AH | 0000 0aaa P-ENV TIME KEYF 0-4 |
| 00 0BH | 0aaa aaaa P-ENV TIME 1 0-100 |
| 00 0CH | 0aaa aaaa P-ENV TIME 2 0-100 |
| 00 0DH | 0aaa aaaa P-ENV TIME 3 0-100 *4-3-3 |
| 00 0EH | 0aaa aaaa P-ENV TIME 4 0-100 |
| 00 0FH | 0aaa aaaa P-ENV LEVEL 0 0-100 (-50-+50) |
| 00 10H | 0aaa aaaa P-ENV LEVEL 1 0-100 (-50-+50) |
| 00 11H | 0aaa aaaa P-ENV LEVEL 2 0-100 (-50-+50) |
| 00 12H | 0aaa aaaa P-ENV SUSTAIN LEVEL 50 0-100 *4-3-3 |
| 00 13H | 0aaa aaaa END LEVEL 0-100 (-50-+50) |
| 00 14H | 0aaa aaaa P-LFO RATE 0-100 |
| 00 15H | 0aaa aaaa P-LFO DEPTH 0-100 |
| 00 16H | 0aaa aaaa P-LFO MOD SENS 0-100 |
| 00 17H | 0aaa aaaa TVF CUTOFF FREQ 0-100 |
| 00 18H | 000a aaaa TVF RESONANCE 0-30 |
| 00 19H | 0000 aaaa TVF KEYFOLLOW 0-14 (-1, -1/2, -1/4, 0, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 5/4, 3/2, 2) |
| 00 1AH | 0aaa aaaa TVF BIAS POINT 0-127 (<1A-<7C >1A->7C) |
| 00 1BH | 0000 aaaa TVF BIAS LEVEL 0-14 (-7-+7) |
| 00 1CH | 0aaa aaaa TVF ENV DEPTH 0-100 |

| | | | |
|--------|-----------|-----------------------|-------------------------|
| 00 1DH | 0aaa aaaa | TVF ENV VELO SENS | 0-100 |
| 00 1EH | 0000 0aaa | TVF ENV DEPTH KEYF | 0-4 |
| 00 1FH | 0000 0aaa | TVF ENV TIME KEYF | 0-4 |
| 00 20H | 0aaa aaaa | TVF ENV TIME 1 | 0-100 |
| 00 21H | 0aaa aaaa | TVF ENV TIME 2 | 0-100 |
| 00 22H | 0aaa aaaa | TVF ENV TIME 3 | 0-100 |
| 00 23H | 0aaa aaaa | dummy (for MT-32) | |
| 00 24H | 0aaa aaaa | TVF ENV TIME 4 | 0-100 |
| 00 25H | 0aaa aaaa | TVF ENV LEVEL 1 | 0-100 |
| 00 26H | 0aaa aaaa | TVF ENV LEVEL 2 | 0-100 |
| 00 27H | 0aaa aaaa | TVF ENV LEVEL 3 | 0-100 *4-3-4 |
| 00 28H | 0aaa aaaa | TVF ENV SUSTAIN LEVEL | 0-100 *4-3-4 |
| 00 29H | 0aaa aaaa | TVA LEVEL | 0-100 |
| 00 2AH | 0aaa aaaa | TVA VELO SENS | 0-100 |
| 00 2BH | 0aaa aaaa | TVA BIAS POINT 1 | 0-127 (<1A-<7C >1A->7C) |
| 00 2CH | 0000 aaaa | TVA BIAS LEVEL 1 | 0-12 (-12-0) |
| 00 2DH | 0aaa aaaa | TVA BIAS POINT 2 | 0-127 (<1A-<7C >1A->7C) |
| 00 2EH | 0000 aaaa | TVA BIAS LEVEL 2 | 0-12 (-12-0) |
| 00 2FH | 0000 0aaa | TVA ENV TIME KEYF | 0-4 |
| 00 30H | 0000 0aaa | TVA ENV TIME V-FOLLOW | 0-4 |
| 00 31H | 0aaa aaaa | TVA ENV TIME 1 | 0-100 |
| 00 32H | 0aaa aaaa | TVA ENV TIME 2 | 0-100 |
| 00 33H | 0aaa aaaa | TVA ENV TIME 3 | 0-100 |
| 00 34H | 0aaa aaaa | dummy (for MT-32) | |
| 00 35H | 0aaa aaaa | TVA ENV TIME 4 | 0-100 |
| 00 36H | 0aaa aaaa | TVA ENV LEVEL 1 | 0-100 |
| 00 37H | 0aaa aaaa | TVA ENV LEVEL 2 | 0-100 |
| 00 38H | 0aaa aaaa | TVA ENV LEVEL 3 | 0-100 *4-3-4 |
| 00 39H | 0aaa aaaa | TVA ENV SUSTAIN LEVEL | 0-100 *4-3-4 |

Total size = 00 00 3AH

*4-3-3 TIME 3 is usually transmitted together with SUSTAIN LEVEL=50. Single transmission of SUSTAIN LEVEL is illegal.

*4-3-4 Transmission of SUSTAIN LEVEL, in turn, is followed by transmission of LEVEL 3 of the same value. Single transmission of LEVEL 3 is illegal.

*4-4 System Area

| Offset address | Description |
|----------------|--|
| 00 00H | 0aaa aaaa dummy |
| 00 01H | 0000 00aa Reverb Mode 0-8 (1-8, OFF) |
| 00 02H | 0000 0aaa Reverb Time 0-7 (1-8) |
| 00 03H | 0000 0aaa Reverb Level 0-7 |
| 00 04H | 00aa aaaa Partial Reserve (Part 1) 0-32 |
| 00 05H | 00aa aaaa Partial Reserve (Part 2) 0-32 |
| 00 06H | 00aa aaaa Partial Reserve (Part 3) 0-32 |
| 00 07H | 00aa aaaa Partial Reserve (Part 4) 0-32 |
| 00 08H | 00aa aaaa Partial Reserve (Part 5) 0-32 |
| 00 09H | 00aa aaaa Partial Reserve (Part 6) 0-32 |
| 00 0AH | 00aa aaaa Partial Reserve (Part 7) 0-32 |
| 00 0BH | 00aa aaaa Partial Reserve (Part 8) 0-32 |
| 00 0CH | 00aa aaaa Partial Reserve (Part R) 0-32 *4-4-1 |
| 00 0DH | 000a aaaa MIDI Channel (Part 1) 0-16 (1-16, OFF) |
| 00 0EH | 000a aaaa MIDI Channel (Part 2) 0-16 (1-16, OFF) |
| 00 0FH | 000a aaaa MIDI Channel (Part 3) 0-16 (1-16, OFF) |
| 00 10H | 000a aaaa MIDI Channel (Part 4) 0-16 (1-16, OFF) |
| 00 11H | 000a aaaa MIDI Channel (Part 5) 0-16 (1-16, OFF) |
| 00 12H | 000a aaaa MIDI Channel (Part 6) 0-16 (1-16, OFF) |

Address Map

| | | | |
|--------|-----------|-----------------------|---------------------|
| 00 13H | 000a aaaa | MIDI Channel (Part 7) | 0-16 (1-16, OFF) |
| 00 14H | 000a aaaa | MIDI Channel (Part 8) | 0-16 (1-16, OFF) |
| 00 15H | 000a aaaa | MIDI Channel (Part R) | 0-16 (1-16, OFF) |
| 00 16H | dummy | | |
| 00 17H | 0aaa aaaa | PATCH NAME 1 | 32-127 (ASCII) |
| : | : | : | : |
| 00 20H | 0aaa aaaa | PATCH NAME 10 | |

Total size = 00 00 17H

*4-4-1 Partial reserves must be sent for 9 parts; the total number of reserves must be less than 32.

*4-5 Write Request *4-5-1

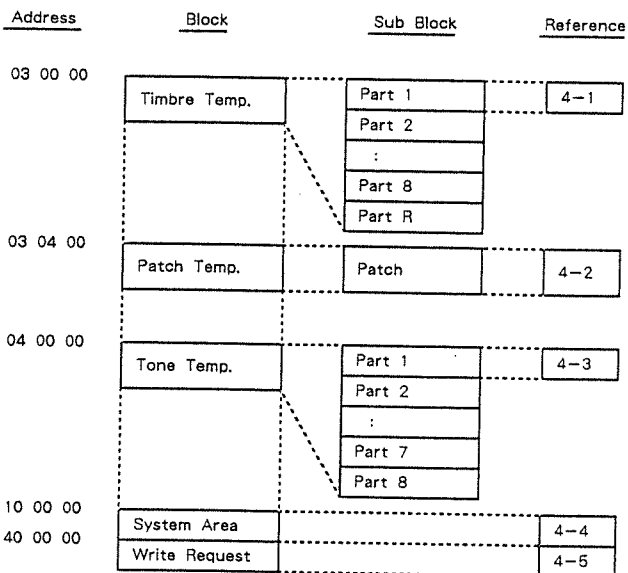
| Offset address | Description | |
|----------------|-------------------------------------|--|
| 00 00H | 00aa aaaa Tone Write (part 1/upper) | 0-63 (01-64) |
| 00 01H | 0000 000a | 0, 1 (Internal, Card) |
| 00 02H | 00aa aaaa Tone Write (part 2/lower) | |
| 00 03H | 0000 000a | |
| : | : | |
| 00 0EH | 00aa aaaa Tone Write (part 8) | |
| 00 0FH | 0000 000a | |
| 01 00H | 0aaa aaaa Timbre Write | 0-127 (A11-B88) |
| 01 01H | 0000 000a | 0, 1 (Internal, Card) |
| 01 02H | 0aaa aaaa Timbre Write (part 2) | |
| 01 03H | 0000 000a | |
| : | : | |
| 01 0EH | 0aaa aaaa Timbre Write (part 8) | |
| 01 0FH | 0000 000a | |
| 02 00H | 00aa aaaa Patch Write | 0-63 *4-5-2 (11-88) |
| 02 01H | 0000 000a | 0, 1 (Internal, Card) |
| 03 00H | 0aaa aaaa Patch Write | 0-127 *4-5-3 (A11-B88) |
| 03 01H | 0000 000a | 0, 1 (Internal, Card) |
| 10 00H | 0000 00aa Result | 0-3 *4-5-4 0=Function Completed 1=Card Not Ready 2=Write Protected 3=Incorrect Mod |

*4-5-1 (With PARAMETER IN connected to MIDI cable) Once enters into Write screen, PG-10 changes input from MIDI IN to PARAMETER IN.

*4-5-2 Sends when PG-10 is D-110 mode.

*4-5-3 Sends when PG-10 is D-10/20 mode.

*4-5-4 (With PARAMETER IN connected to MIDI cable) Upon receiving this message, PG-10 returns input source to MIDI IN.
(With PARAMETER IN disconnected) PG-10 cannot receive this message even it has sent Write Request and will remain receiving information from MIDI IN.



MIDI Implementation Chart

| Function... | | Transmitted | Recognized | Remarks |
|------------------|------------------|--|------------|----------------|
| Basic Channel | Default | X | X | |
| | Changed | X | X | |
| Mode | Default | X | X | |
| | Messages Altered | X ***** | X | |
| Note Number | True Voice | * | X | |
| | | ***** | | |
| Velocity | Note ON | * | X | |
| | Note OFF | * | X | |
| After Touch | Key's | * | X | |
| | Ch's | * | X | |
| Pitch Bender | | * | X | |
| Control Change | | * | X | |
| Prog Change | True # | * | X | |
| | | ***** | X | |
| System Exclusive | | ○ | ○ | Tone Parameter |
| System Common | Song Pos | * | X | |
| | Song Sel | * | X | |
| | Tune | * | X | |
| System Real Time | Clock | * | X | |
| | Commands | * | X | |
| Aux Message | Local ON/OFF | * | X | |
| | All Notes OFF | * | X | |
| | Active Sense | ○ | ○ | |
| | Reset | X | X | |
| Notes | | * This unit transmits all received MIDI messages except Active Sence and Reset. This unit uses Unit Number for Device ID of System Exclusive message. | | |

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