

YAMAHA

YRM-103

 **EX7 VOICING PROGRAM**
OWNER'S MANUAL

 **PROGRAMME DE REGISTRATION**
MANUEL D'UTILISATION

INTRODUCTION

Congratulations on your purchase of the Yamaha DX7 Voicing Program.

In order to appreciate the full performance of this program, please read this Owner's Manual carefully and completely. Keep it in a safe place for future reference.

For further information on the DX7 programming functions and details on voice creation, read the instruction manual supplied with the DX-7.

Features

This DX7 Voicing Program (YRM-103) is a ROM cartridge that enables the Yamaha CX5M computer to be used for the programming of voices for the Yamaha DX7 Digital Programmable Algorithm Synthesizer. This program makes it much easier to edit and create voices, and store the voices, as well as the function parameters for future use. Here is a list of this program's main features.

- The parameters of DX7 voicing are all displayed on the monitor screen to simplify the actual process of voice editing or creation from scratch. The data for the EG (Envelope Generator) and keyboard scaling can also be displayed in detail on the monitor so that the actual envelopes can be checked visually.
- The CX5M is equipped with a voice memory, enabling function parameters for pitch bending etc. to be stored independently for each voice. The voice data, including function parameters, can be sent to the DX7 from the CX5M.
- The voice data and the list of voices can be printed out. (an MSX compatible printer is necessary).
- The completed voice data can be saved onto DX7 RAM cartridges (sold separately) through DX7's storage function. Also voice data and function parameters can be saved onto cassette tape and onto UDC-01 Data Memory cartridges (sold separately).
- Editing can be done either from the control panel of the DX7 or from the keyboard the CX5M computer.

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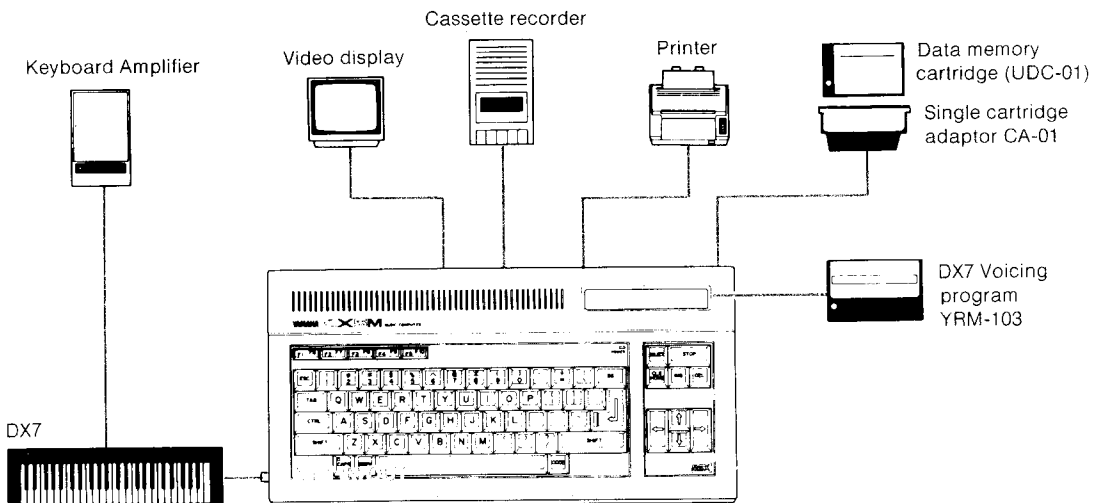
CHAPTER I ASSEMBLING THE SYSTEM

SYSTEM COMPONENTS

Here is a list of the components that you need to enjoy the full potential of the DX7 Voicing Program.

- **Yamaha CX5M Music Computer** The main unit of the system. This computer includes a built-in Yamaha Sound Synthesizer unit.
- **Color monitor or Color TV plus RF Modulator/Adaptor** Necessary for visual control of the voice data.
- **Yamaha DX7 plus two MIDI cables** This DX7 Voicing Program is designed for exclusive use with the Yamaha DX7 Digital Programmable Algorithm Synthesizer.
- **Cassette recorder** Necessary for storing the voice data.
- **Yamaha Data Memory Cartridge (UDC-01) plus Single Cartridge Adaptor (CA-01)** For easy storage of the voice data.
- **MSX standard printer** To make hard copies of the screen display.
- **Stereo amplifier/speaker system or Keyboard amplifier** To fully enjoy the high quality FM sound.

Fig. 1 System Configuration

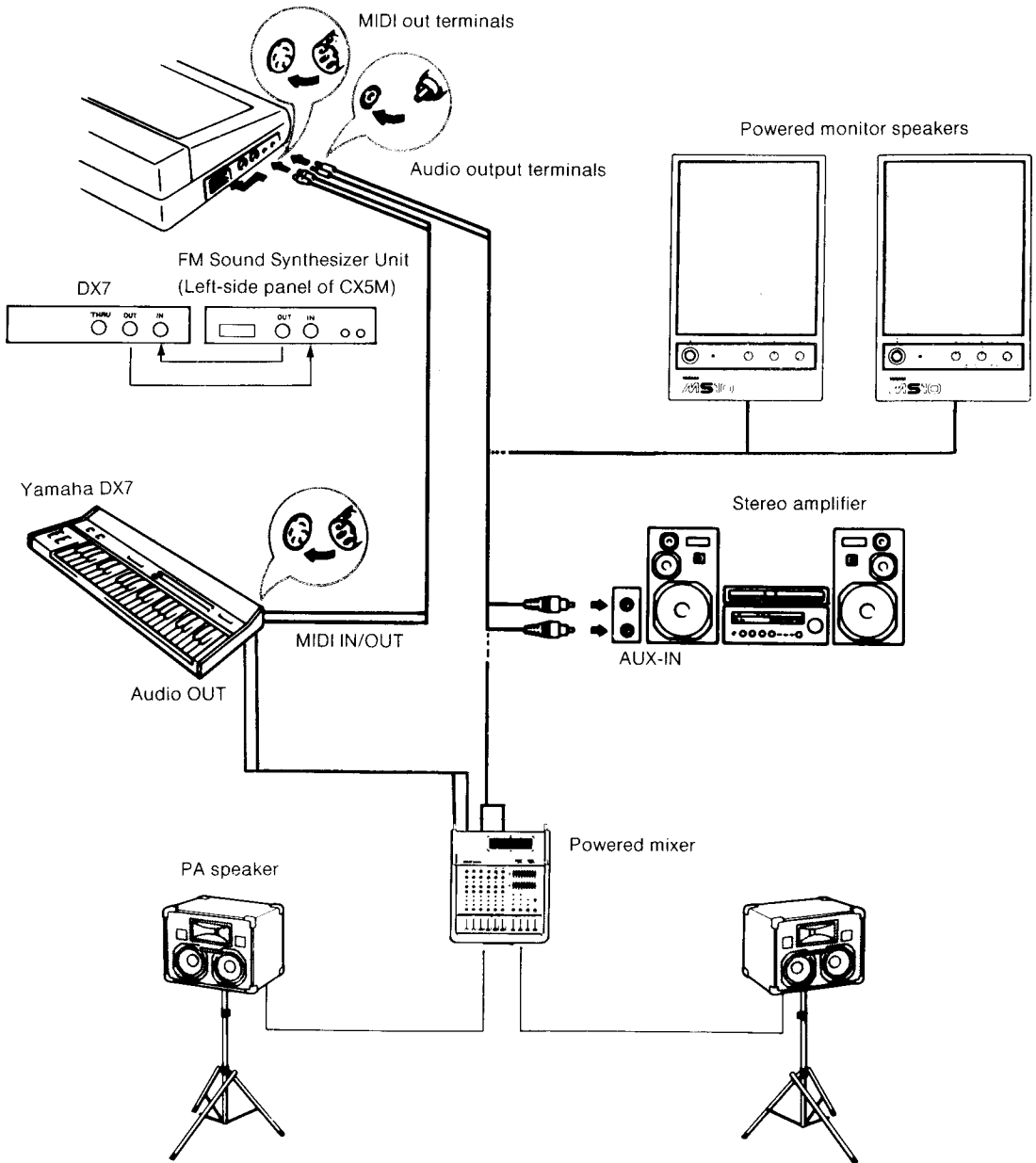


SYSTEM COMPONENTS

Please refer to the Owner's Manual supplied with your CX5M Music Computer for connecting video display, printer, and cassette recorder. The following diagram is given for easy reference. Please read carefully the Owner's Manual provided with each component before assembling.

Caution: Before connecting the system, be sure that the power to all components is turned OFF.

Fig. 2 Connection diagram for Audio System and Yamaha DX7



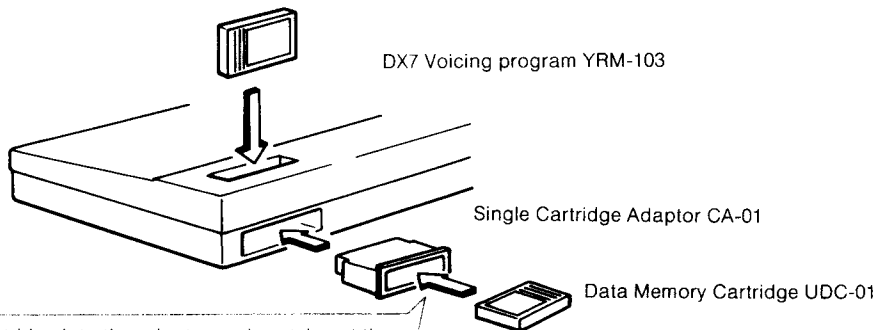
PROGRAM AND DATA MEMORY CARTRIDGE

Precautions regarding the use of cartridges

Always turn the power to CX5M OFF before inserting or removing a cartridge; removing or inserting a cartridge when the power is ON can easily cause trouble.

Always return the cartridges into their protective package after use and reinstall the rear slot cover when a cartridge is removed from rear slot as dust on the connection pins can produce erratic operation.

Fig. 3 Insertion of the cartridges



First, insert the cartridge into the adaptor and next, insert the assembly into the rear slot.

CHAPTER II

GETTING STARTED

POWER ON DISPLAY AND FUNCTION OUTLINE

Starting the program

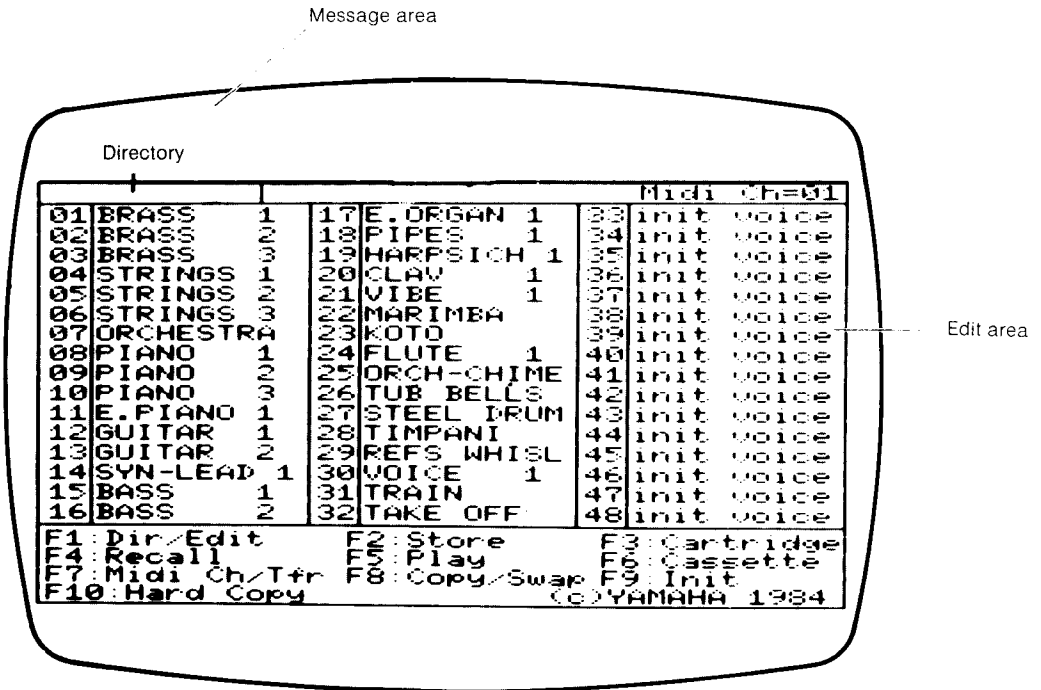
- (1) Check to see that all components (including the Data Memory Cartridge) are correctly connected.
- (2) With the power of the CX5M off, insert the YRM-103 ROM cartridge into the CX5M cartridge slot.
- (3) Next turn the power of the DX7 on. Then turn the power of CX5M on. The internal voice data will be read into the CX5M and a list of all the voices will appear on the monitor.

★ TURN ON THE POWER OF THE DX7 FIRST BEFORE TURNING THE CX5M ON.

★ IF THE PROGRAM WILL NOT RUN, TURN THE CX5M OFF, AND CHECK TO ENSURE THE ROM CARTRIDGE IS PROPERLY INSERTED.

★ DO NOT ATTEMPT TO RUN THE VOICING PROGRAM WITH THE DX7 UNTIL THE COMPLETE LIST OF DX7 INTERNAL VOICES APPEARS ON THE VIDEO MONITOR.

Fig. 4 Screen display when power is turned ON



Functions of the DX7 voicing program

The DX7 Voicing program is equipped with a variety of functions. The functions can be roughly divided according to 2 modes of operations as follows.

- Edit mode: Used for editing existing voices or creating new voices from scratch, and for changing the function parameters.
- Command mode: This mode includes various functions.

These are some of the operations possible through the use of this program:

- Display of existing voice data on the monitor (envelopes can be displayed graphically)
- Creation of new voices for the DX7
- Storage of new voices onto cassette tape or data memory cartridge
- Edition of voice data
- Print-out of voice data

KEYBOARD OPERATION

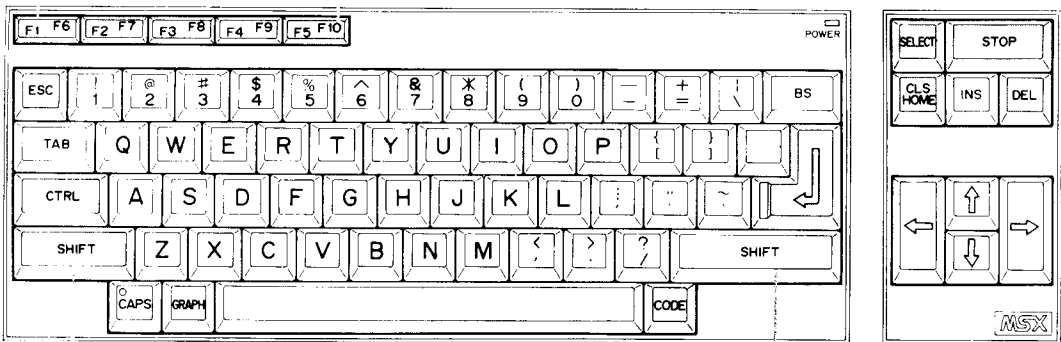
The various functions of the DX7 Voicing Program are activated by using the CX5M keys. Here is a simple description of each key.

Command keys

These keys are used to activate/deactivate several commands.

Fig. 5 Command keys

Function keys



Used along with function keys **F1** ~ **F5**
to obtain **F6** ~ **F10**

The main command keys are the function keys; other command keys are used to enter or cancel a command. The **CODE** key is useful to switch the cassette recorder motor ON/OFF.

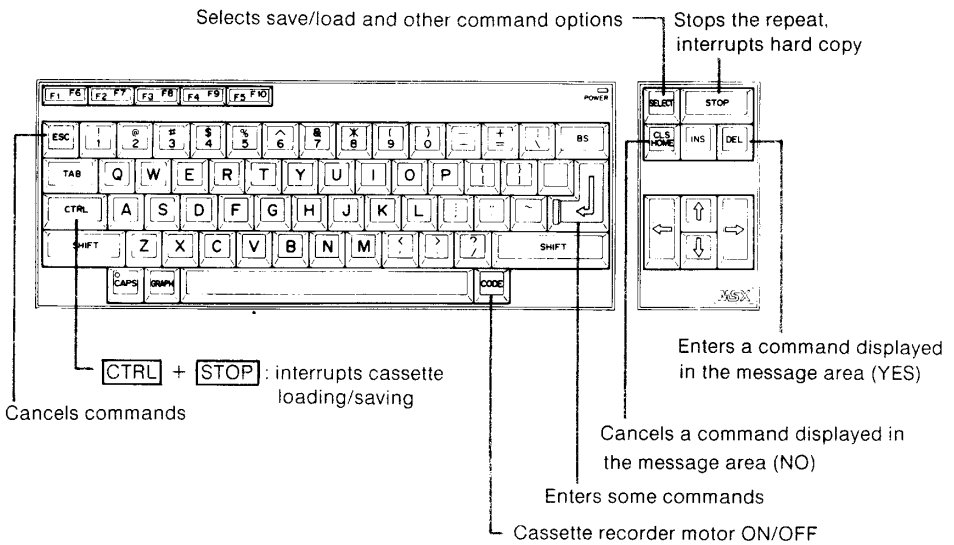
Function keys

Fig. 6 Function key definition

<p>SHIFT + function key</p>	<p>F6: Saves onto and loads from cassette</p>	<p>F7: Transfers data with DX7</p>	<p>F8: Copies/swap voice data</p>	<p>F9: Voice initialize</p>	<p>F10: Hard copy of screen</p>
<p>function key alone</p>	<p>F1 F6</p> <p>F1: Selects Edit mode/displays voice list</p>	<p>F2 F7</p> <p>F2: Stores voice data</p>	<p>F3 F8</p> <p>F3: Saves onto and loads from Data Memory Cartridge</p>	<p>F4 F9</p> <p>F4: Edit/Recall</p>	<p>F5 F10</p> <p>F5: Play mode (voice selection)</p>

Other command keys

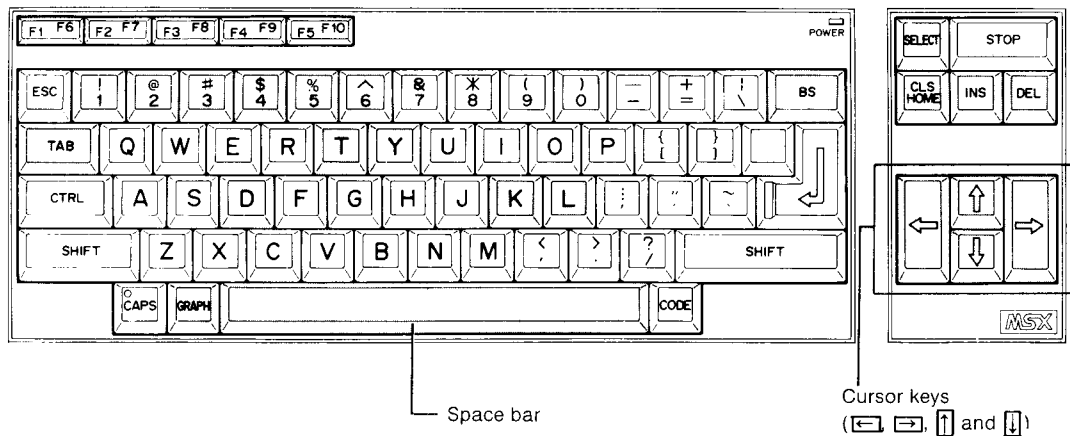
Fig. 7 Other command key definition



Edit keys

These keys are used for the actual creation of voice (Edit mode) and for the selection of block display.

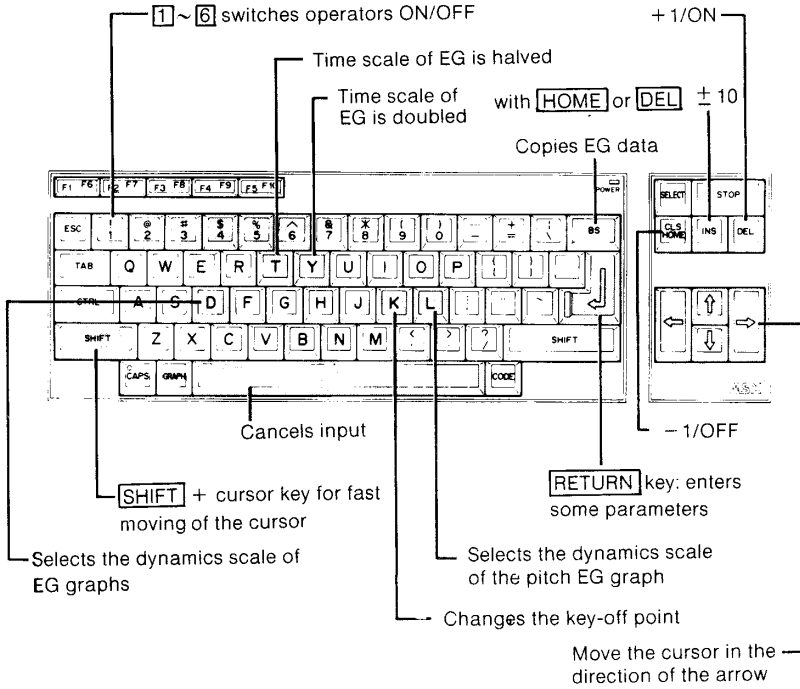
Fig. 8 Edit keys



Some keys are used to modify the voice parameters (input, correction, etc.); other keys are used to select the screen display in edit area.

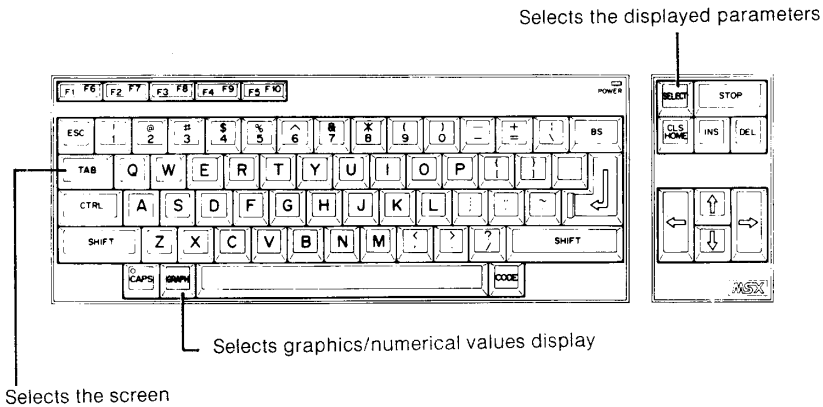
Keys used to modify the voice parameters

Fig. 9 Keys used to modify the voice parameters



Keys used to select display

Fig. 10 Keys used to select display



SCREEN DISPLAY

There are two main types of screen displays; one for the Edit mode and the other for the Voice List (or the "directory"). The Edit mode is further divided into different screens which can be selected. The different types of displays and the keys that are used to make them appear on the screen are explained here.

- F1** Selects Directory/Edit display
- TAB** Select Voice parameters/Function parameters display
- SELECT** Selects the set of parameters to be displayed in the block indicated by the cursor (the upper-left block is not affected by this key).
- GRAPH** Selects Graphics/Numerical value display for the block indicated by the cursor (LFO block and the performance parameter display are not affected by this key).

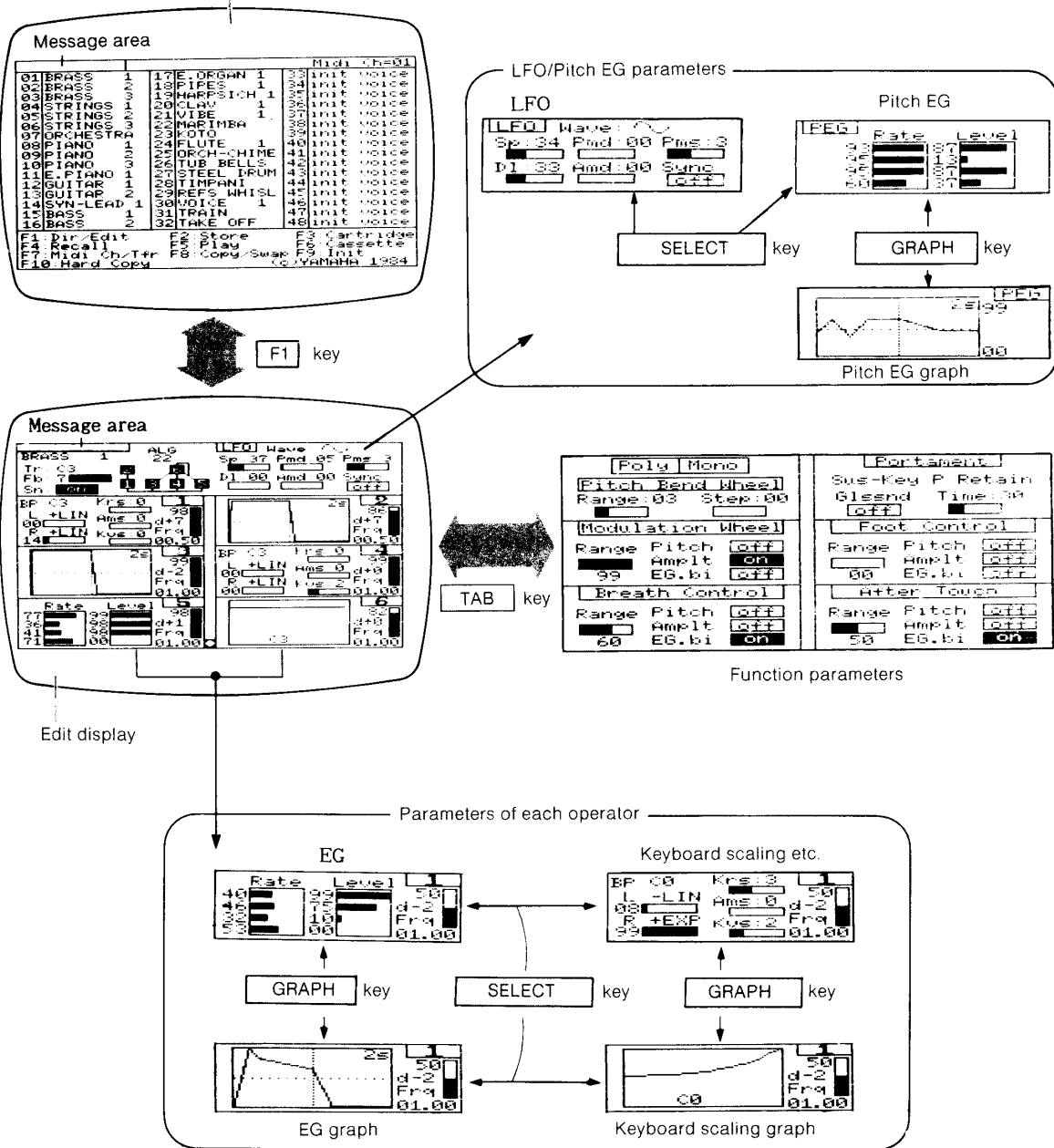
★ Pressing any of these keys twice will return the original display.

SHIFT + **GRAPH** or **SHIFT** + **SELECT** Match the six lower block display with the block display indicated by the cursor.

You should become familiar with these four keys before starting with the creation of voices.

Fig. 11 Display diagram

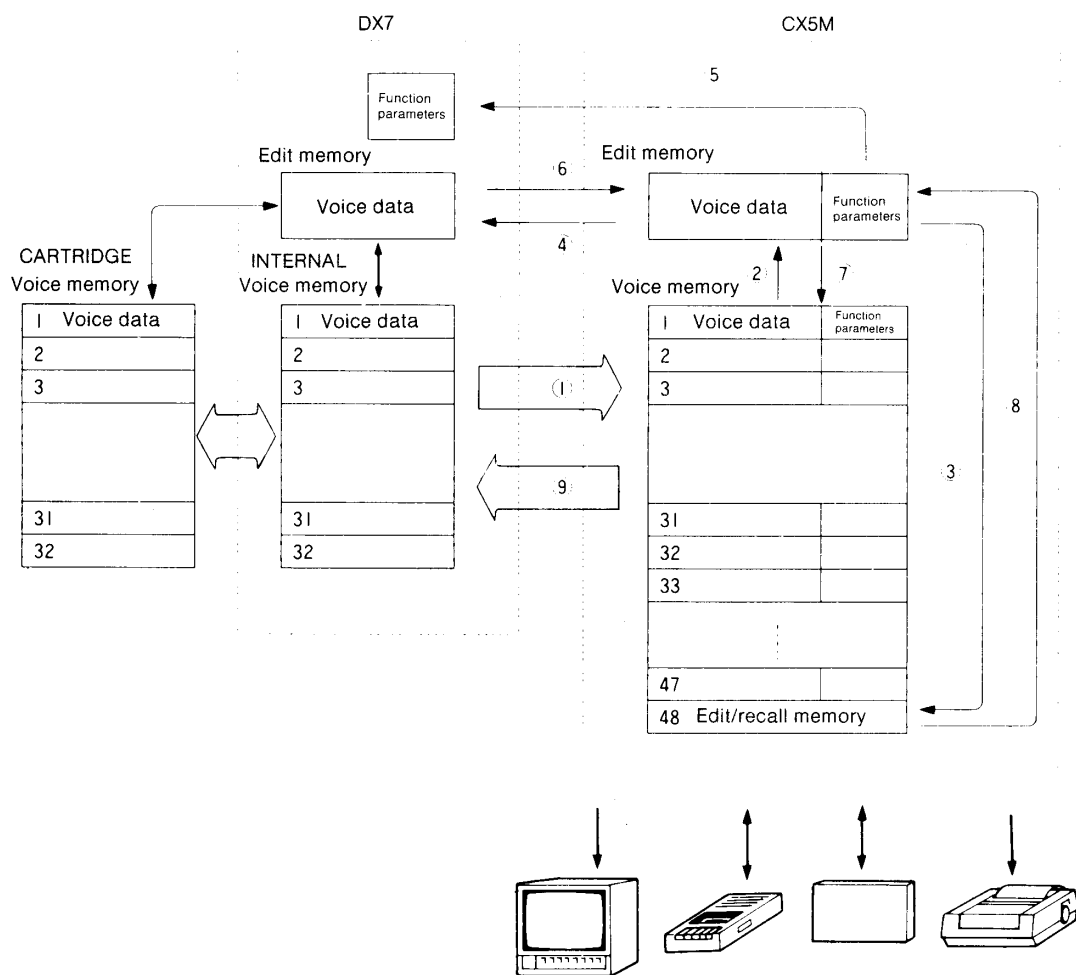
Directory display (Power-on display)



OPERATION OUTLINE

The operation outline of the DX7 Voicing Program is as follows:

Fig. 12 Operation diagram



Data for 48 voices can be stored in the voice memory of the CX5M. Function parameters can also be stored in the CX5M voice memory according to voices; and these can be transferred to the DX7.

- 1 All 32 voices in the internal memory of DX7 can be loaded into the voice memory of the CX5M by first turning on the power of the DX7 and then that of the CX5M. The voice list (the names of the DX7 voices) will be displayed at this stage. The remaining voices in the CX5M voice memory (voices No. 33 to 48) will be set to INITIAL voice.
- 2 In addition to the 48 voice memories, the CX5M has an edit memory like the edit buffer of the DX7. When a voice is selected with the Play function **[F5]**, the data for that voice (including the function parameter) will be entered into the edit memory of the CX5M. (Henceforth, any reference to the edit memory will refer to that of the CX5M, not the DX7, unless otherwise indicated.) The selected voice can be edited by pressing the **[F1]** key.

The default voice in the edit memory is voice No.1 which is automatically loaded when the system is turned on.

- 3 When you select a new voice to edit by using the Play function, the voice data that was in the edit memory will be entered in the edit/recall memory for voice No.48; but only if that voice data is to be modified with the CX5M. This prevents the data being edited from being erased by mistake.
- 4 The data in the edit memory of the CX5M will also be transferred to the edit memory of the DX7.
- 5 The function parameters (performance parameters) in the edit memory of the CX5M will be transferred to the performance parameter (function control) memory of DX7.
- 6 Whenever a voice is selected by using the operation panel of the DX7 (even during the PLAY mode), that voice data will be sent to the edit memory of the CX5M, insuring that the contents in the edit memories of the DX7 and the CX5M will always match. This means that everything heard from the DX7 coincides with the data that appears on the monitor screen. The voice data that was in the edit memory, if it is being revised with the CX5M, will be sent to the edit/recall memory. However, if envelopes are copied with the DX7, the data in the CX5M will not be revised. Therefore envelopes should be copied with the CX5M, not with the DX7.
- 7 The voice data in the edit memory can be stored in the voice memory by using the Store function.
- 8 The voice data that is in the edit/recall memory can be called into the edit memory with the edit recall function.
- 9 The 32 voices (No.'s 1 to 32) in the voice memory of the CX5M can be transferred to that of the DX7 by using the MIDI Transfer function. (After powering up the system, the MIDI Transfer function also can be used when loading the voices of the DX7 into the CX5M.)

PRECAUTIONS

- Do not attempt to operate or play the DX7 during the time the voice data of the CX5M is being loaded into the DX7.
- When the DX7 Voicing Program begins to transfer data between the DX7 and the CX5M, the Memory Protect function for the internal voices of the DX7 is automatically deactivated. After the voice memory transfer is completed, reactivate the Protect function for the internal voices of the DX7 by using its Memory Protect button.
- The voice data being edited in the CX5M will be altered if any operations other than voice programming (such as MASTER TUNE, MIDI, EDIT/RECALL, VOICE INIT, BATTERY CHECK, CARTRIDGE SAVE/LOAD etc.) are carried out on the DX7 while the DX7 Voicing Program is running. These non-editing operations should be carried out only when the DX7 Voicing Program is not running.
- While the DX7 Voicing Program is being used, continuously changing the voices with the DX7 may damage the contents in the CX5M edit memory. Selecting voices with the DX7 should be done one at a time, after the edited voice on the CX5M has been saved to a voice memory.

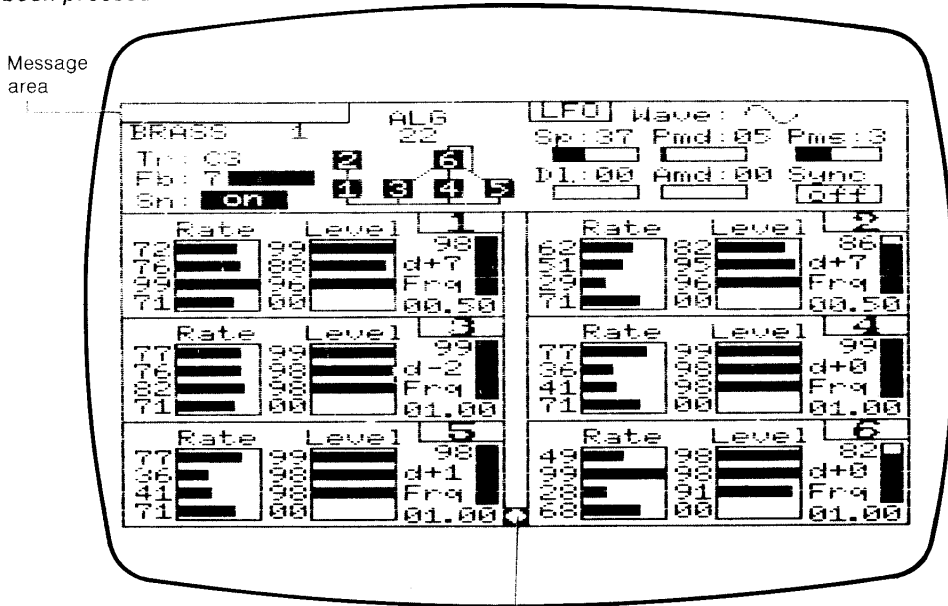
CHAPTER III OPERATING THE DX7 VOICING PROGRAM

EDIT MODE

The Edit mode revises the voice data in the edit buffer memory and modifies the existing voice or creates entirely new voices. In addition, effects (performance parameters) such as pitch bending and modulation can be revised.

Press the **[F1]** key to initiate the Edit mode. The Edit mode screen display will appear, and the voice data will be displayed. Using the arrow keys, move the cursor (the red blinking mark) to the parameter that is to be edited.

Fig. 13 The screen in the Edit mode immediately after the power has been turned on, and the **[F1]** key has been pressed



This indicator will change to yellow if any editing is done with the CX5M.

Moving the cursor

The cursor is moved with the arrow keys which are called cursor keys. Move the cursor in the direction of the parameter that is to be edited by pressing the arrow key that points in the proper direction. The screen display is divided into 8 blocks as shown in the figure. The cursor can be moved between blocks by pressing the cursor key while holding down the **[SHIFT]** key. This causes the cursor to move to the very beginning of the block.

Changing the parameters

The voice editing and performance parameters are changed with the **[HOME]** key and the **[DEL]** (delete) key, which operate like the DATA ENTRY buttons on the DX7. The **[HOME]** key does exactly the same thing as the **[-1]** button of the DX7 and the **[DEL]** key does the same thing as the **[+1]** button.

If a large change in a numeric value is desired, press the **[INS]** key together with the **[HOME]** or the **[DEL]** key and the value can be changed by units of $+/- 10$. (Thus, **[HOME]** together with **[INS]** or **[DEL]** is analogous to the DX7's DATA ENTRY slider.)

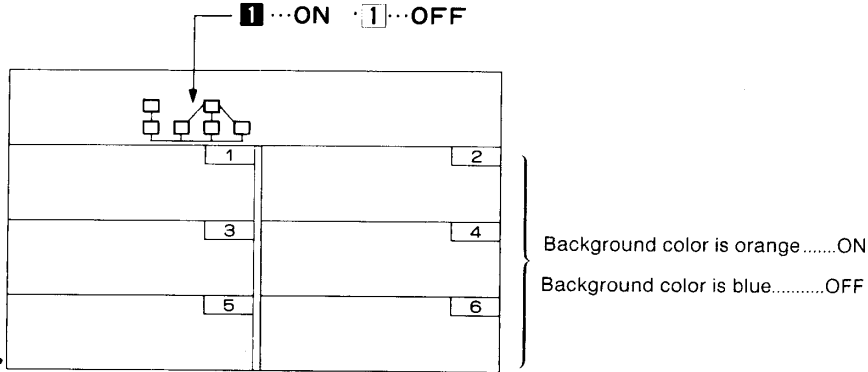
[HOME] key	-1, OFF, NO
[DEL] key	+1, ON, YES

The change in parameters can be cancelled by pressing the **[SPACE]** key before the cursor is moved. The data will return to its original status before the change was initiated.

Turning the operators ON and OFF

Numeric keys **1** to **6** are used for turning the operators on and off. When keys **1** to **6** are pressed, the operator corresponding to that number will turn off; pressing the same key once again causes the operator to turn on.

Fig. 14 Turning the operators ON/OFF



Individual block display

The DX7 has an extremely large number of parameters. To facilitate the monitoring of these parameters, the DX7 Voicing Program divides the parameters into groups and alternately switches the display screen as required. The main editing screen is sub-divided into 8 blocks as mentioned before. Here is a description of what kind of parameters are in each block. Blocks names have been assigned arbitrarily as a matter of convenience.

Fig. 15 Edit display configuration

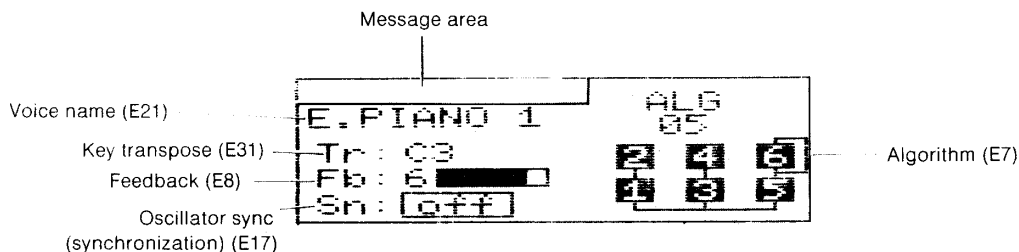
A BLOCK	B BLOCK
C1 BLOCK	C2 BLOCK
C3 BLOCK	C4 BLOCK
C5 BLOCK	C6 BLOCK

The symbol within the parentheses (see Fig. 16 and next) after the parameter name indicates which switch on the DX7 that parameter corresponds to. For example, E8 corresponds to Edit mode 8, and F2 corresponds to function mode 2.

BLOCK A

This block displays the algorithms and the voice names.

Fig. 16 Block A

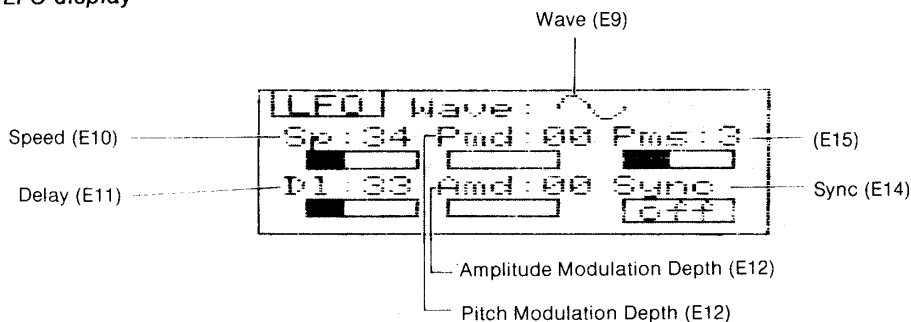


BLOCK B

This block displays the parameters of the LFO and the Pitch EG. The parameters for the LFO will be displayed when the Edit mode is selected after the power is turned on. The parameters for the Pitch EG can be displayed by pressing the **[SELECT]** key while the cursor is in BLOCK B. Pressing the **[SELECT]** key once again will cause the LFO display to reappear. Pressing the **[GRAPH]** key while the Pitch EG parameters are displayed will cause the envelopes to be displayed graphically.

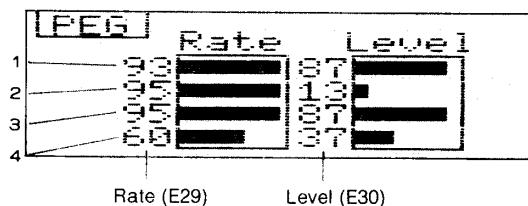
• LFO Display

Fig. 17 LFO display



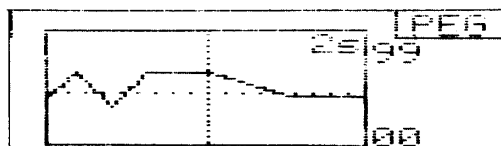
• Pitch EG Display

Fig. 18 PEG display



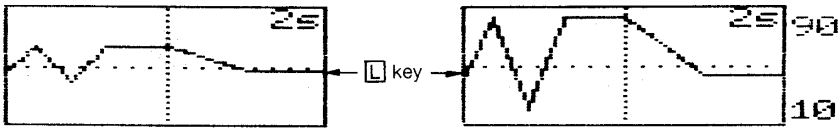
• Graphic Display

Fig. 19 PEG graphics display



The display can be enlarged by pressing the **L** key as shown below. The display can be returned to its normal state by pressing the **L** key once again.

Fig. 20 Change in vertical scale

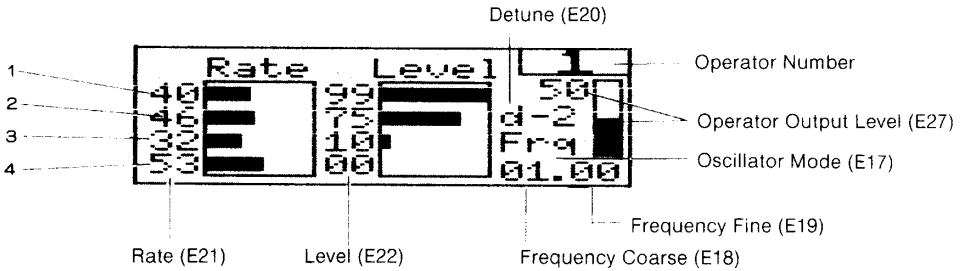


BLOCK C (C1 to C6)

This block independently displays the parameters to be input into each operator.

- EG Display

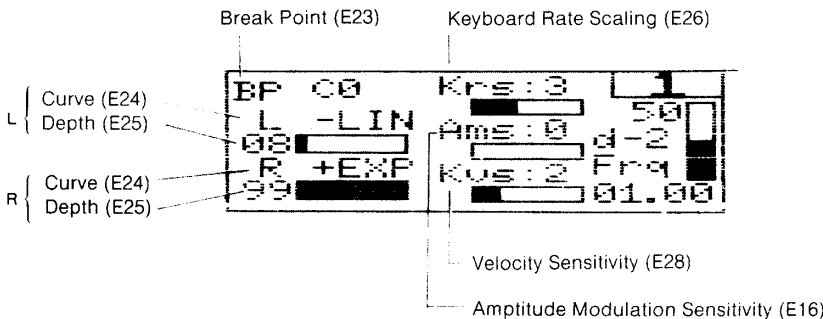
Fig. 21 EG display



If the **SELECT** key is pressed while the cursor is within this block, the EG display will change and instead the block will display the parameters for the keyboard scaling etc. Pressing the **SELECT** key again causes the block to return to the EG display.

- Display for Keyboard Scaling etc.

Fig. 22 DX7 keyboard scaling display



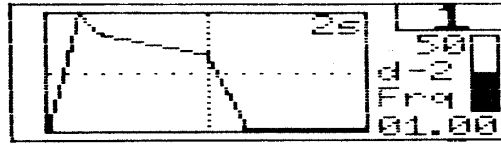
The values and the graphics displays can be switched by using the **GRAPH** key. Pressing the **GRAPH** key when the EG parameters (numbers) are displayed will cause the envelopes to be displayed graphically.

If the keyboard scaling is displayed, it will be represented graphically rather than numerically.

★ If the **SELECT** or the **GRAPH** key is pressed while the **SHIFT** key is held down, the entire BLOCK C display can be matched to the display of whatever block the cursor happens to be in at the time.

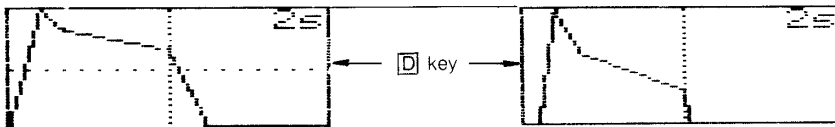
- Graphic Display of the Envelopes

Fig. 23 Graphic display of the envelopes



When the **[D]** key is pressed, the vertical height of the EG's for all operators will be enlarged to twice the original size as shown below, and the background color will turn from green to blue. Pressing the **[D]** key once again will restore the original display.

Fig. 24 Change in dynamics scale



Editing can be done while the graphic display is on the screen. When the graphic display is selected, parameter R1 will be indicated in the right half of the screen. Imagining that the parameters are listed in the same manner as the numeric value display, select the parameter to be edited with the cursor key. For example, press the **[↓]** key twice when R3 is to be edited. The selected parameter itself will be displayed in the right half of the block. However, its position on the envelope graph will be indicated either by an "x" (rate) or a "+" (level).

Any changes in the parameters will be reflected in the envelope display.

★ If the position of the chosen parameter cannot be indicated within the envelope display (ie. if the value overflows the displayable range) the direction of the actual position will be indicated by a red arrow. This is also true when display is not possible following key-off.

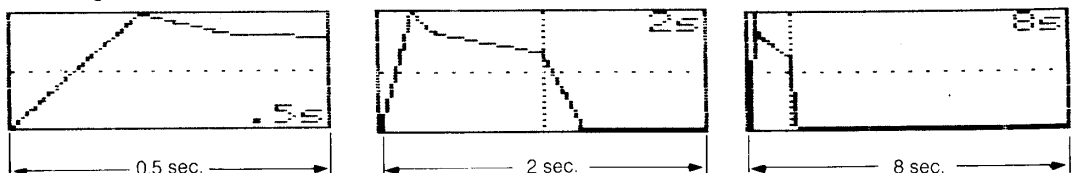
- Changing the time scale

The graphic display of the envelopes is shown with a time scale of 2 seconds. However, the time scale can be altered between 0.5 to 16 seconds, enabling the user to get a condensed view or see very small changes in the attack and sustain, especially for long notes.

The switching of the range (time scale) is done with the **[T]** and **[Y]** keys. The range is halved when the **[T]** key is pressed, and doubled when the **[Y]** key is pressed (all EG's including the Pitch EG will change simultaneously).

[T] key	0.5 ← 1 ← 2 ← 4 ← 8 ← 16 sec.
[Y] key	0.5 → 1 → 2 → 4 → 8 → 16 sec.

Fig. 25 Change in time scale



★ Setting the keyboard rate scaling will cause the time scale (rate) of the envelopes to vary according to the position on the keyboard of the key being played. In order to provide a uniform frame of reference, despite actual envelope differences due to rate scaling, the DX7 Voicing Program graphically indicates the envelope of the note played by the C3 key.

- **Changing the key-off point**

The actual envelope which results when you play a note depends on the elapsed time between pressing the key and letting the key return to its resting position. In order to see the results of different key-off points graphically, the CX5M enables you to change the location of the key-off point. The vertically dotted line in the graphic display indicates the key off point.

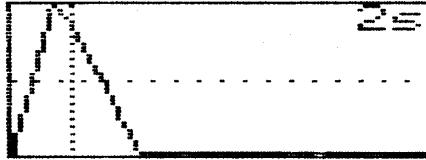
The initial default value of the key off point is 1 second after the key-on point.

In order to change this, the **[K]** key is pressed. A black dotted line will appear on the screen, signaling that the key off points of all EG's can be moved to the left (shortened) by pressing the **[HOME]** key, or moved to the right (lengthened) by pressing the **[DEL]** key. In order to make a major change in the value of the key off point, press **[K]** and then press the **[INS]** key and either the **[HOME]** or **[DEL]** key simultaneously.

When the key-off point has been set as desired, press the **[RETURN]** key. This causes the black dotted line to disappear and returns the CX5M to the parameter editing stage.

In order to cancel the key-off change before you commit to it, press the **[SPACE]** key instead of the **[RETURN]** key.

Fig. 26 Key-off point setting



★ Revision of the key-off point cannot be accepted unless the block with the cursor has its envelopes displayed graphically. When a change in the key-off point is to be made, press the **[K]** key after first activating the envelope graphic display for that block, or move the cursor to a block in which the envelopes are graphically displayed.

- **Graphic Display of Keyboard Scaling**

The graphic display of the keyboard level scaling shows more than just the scaling. The curve also takes into account the operator output level setting. The maximum output level, with or without scaling, is 99. Therefore, even if the curve + LIN is selected for level scaling (increasing the depth), when the output level of the operator is set at 99, an output level above this point cannot be attained. Hence the graph will remain flat, not curved.

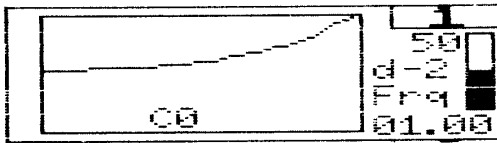
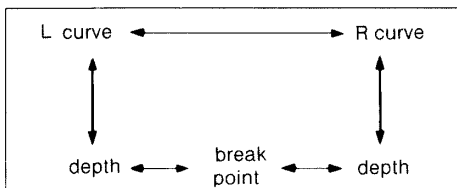


Fig. 27 Graphic display of keyboard scaling

The parameters of the keyboard level scaling can be changed during the graphics display as well. In this case, imagine the parameters to be situated in the manner shown in the figure below. Move the cursor to select the parameter to be edited. The selected parameter will be displayed on the screen.

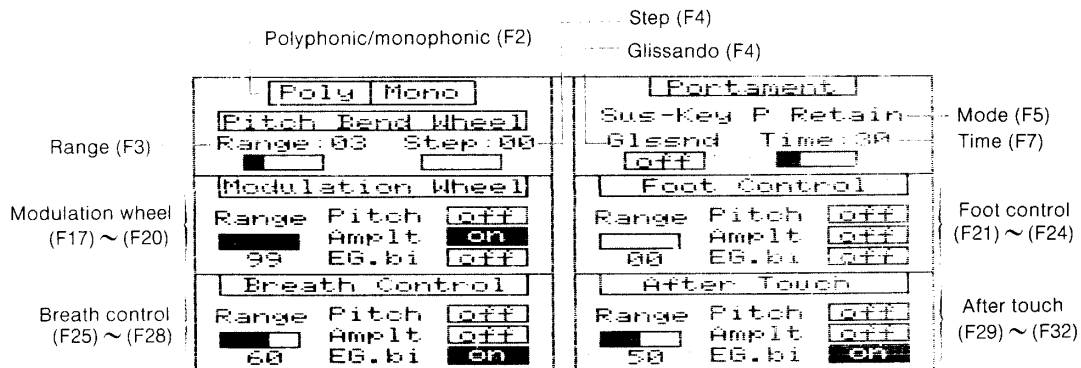
Fig. 28 Selection of the parameter to be edited (cursor keys)



BLOCK C (Second version)






When the **TAB** key is pressed during the Edit mode, the entire BLOCK C will be replaced by data for function parameters (function control effects) such as pitch bending and the modulation wheel. This data can be edited, and stored with the voice in the CX5M.

Fig. 29 Function parameters display






The function parameters are revised by using the **HOME** key (same as the **-1** key on the DX7) and the **DEL** key (same as the **+1** key on the DX7). The **TAB** key is pressed once again to return the system to the Block C display, with the cursor moved to the beginning of BLOCK C1.

Changing voice names

The method of input for changing the voice names differs from other forms of input. Names must be written in numbers, and/or upper and lower case letters (0~9, A~Z, a~z, spaces are OK) and input is made directly from the keyboard on the CX5M. The cursor can be moved either right or left with the  and  cursor keys. This is useful if there is a mistake in input, or in order to start the input process once again. When the  key is pressed, the character to the left of the cursor is deleted. In order to cancel the voice name revision, the  key is pressed. After the voice name has been input, the  key is pressed. This completes the input process. The system will return to its status immediately preceding the voice name revision.

EG copy

When the cursor is in BLOCK C, (the block that indicates the parameters of each operator) and the  key is pressed, EG copy is possible. The EG data in the block of the cursor will be copied. "EG copy n to" (n = operator No.) will appear in the message area when the  key is pressed. Then, by pressing the return key, copy is initiated. Press the  key to interrupt the EG copy in progress.

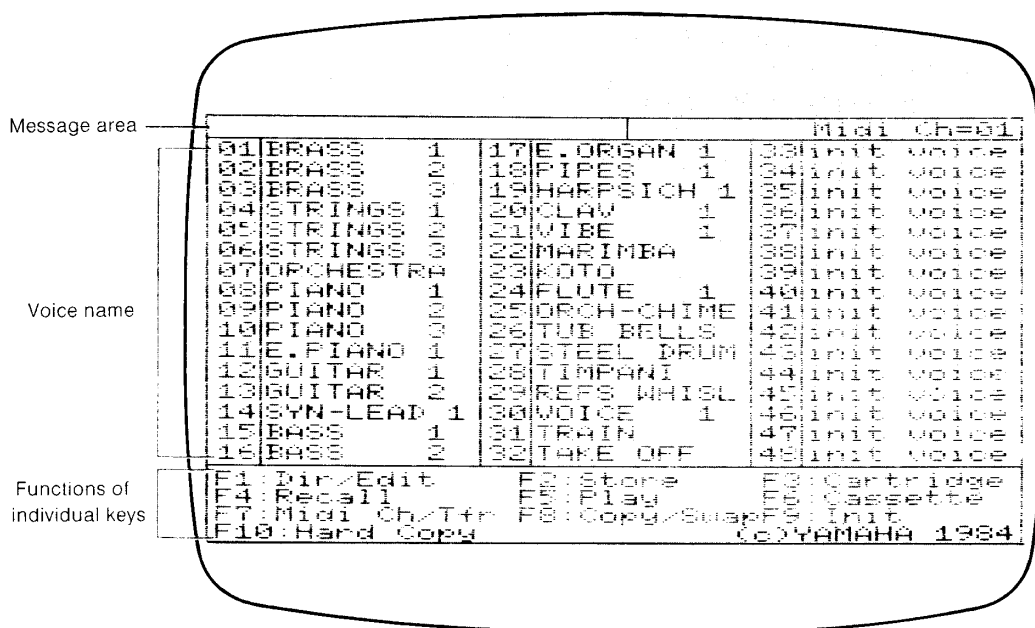
FUNCTION KEYS

Initialization and storage of voice data is done using the function keys. This section will help you understand what each of these function keys actually do. Also, as an added user convenience, when a function key is pressed, a message corresponding to that function will appear in the message area. If a command is given at this stage, that command will be put into effect. Press the **[ESC]** key to interrupt any of the functions in progress:

[F1] Key [Directory/Edit]

This key selects the Edit mode. When the **[F1]** key is pressed during the Edit mode, the voice list (directory) will appear as follows.

Fig. 30 Directory display



The blinking red mark designates the last voice number that was selected with the Play function **[F5]** of the CX5M.

[F2] Key [Store Memory]

This key is for storing the voice data from the CX5M edit buffer into the CX5M voice memory locations. By pressing the **[F2]** key, the directory will appear and the prompt "Store =" will appear in the message area. Type the number of the voice that is to be stored and press the **[RETURN]** key. Pressing the **[ESC]** key will cancel the function and allow you to start again.

[F3] Key [Cartridge Load/Save]

This key loads the data from a data memory cartridge connected to the CX5M (not the DX7 cartridge) into the CX5M voice memory. It also saves the contents of the CX5M voice memory in the data memory cartridge. Data for 32 voices (including function parameter data) from the voice memory can be saved on the data memory cartridge connected to the CX5M.

Saving

- (1) When the **F3** key is pressed, the prompt
"Cartridge Save?"
will appear in the message area.
- (2) Press the **DEL** key and the confirming message
"Are you sure?"
appears.
- (3) Press the **DEL** key once again and the data will be saved.
★ Pressing the **ESC** key will cancel the function and allow you to start again.

Loading

- (1) When the **F3** key is pressed, the prompt
"Cartridge Save?"
will appear in the message area.
- (2) Press the **SELECT** key and the prompt will change to
"Cartridge Load?"
(The system will return to 'Save' if the **SELECT** key is pressed once again.)
- (3) Pressing the **DEL** key will cause the prompt
"Are you sure?"
to appear.
- (4) Press the **DEL** key once again and the data will be loaded.
★ Pressing the **ESC** key will cancel the function and allow you to start again.

F4 Key [Edit/Recall]

This key loads the voice data from the special edit/recall memory into the edit memory.

- (1) When the **F4** key is pressed, the prompt
"Edit Recall?"
will appear in the message area. Press the **DEL** key.
"Are you sure?"
will appear.
- (2) Press the **DEL** key once again to start the edit recall.
★ Pressing the **ESC** key will cancel the function and allow you to start again.

F5 Key [Play]

This key is used to select the voice data from one of the CX5M voice memories. The selected voice data will be input simultaneously into the CX5M edit buffer memory and transferred to the DX7. The sound of the voice that has been selected should be heard from the DX7 when it is played.

When the **F5** key is pressed, the directory will be displayed and the message "Play =" will appear in the message area. Type the desired voice number and press the **RETURN** key.

Pressing the **ESC** key will cancel the function and allow you to start again.

F6 Key (**SHIFT** + **F1** keys) [Cassette Load/Save]

This key loads the data from a cassette tape recorder into the CX5M voice memories or saves the contents of the CX5M voice memories onto a cassette tape.

Saving

All 48 voices stored in the voice memory, including the performance parameters, can be saved onto cassette tape.

- (1) Connect the cassette recorder to the CX5M and insert a cassette tape into the recorder. The tape should be wound past the blank leader.
- (2) Pressing the **F6** key will cause the prompt
"Cassette Save ="
to be displayed in the message area. Type the name of the data (or file) to be saved on the tape. The name can be any combination of up to six alphanumeric characters. We recommend that you write the name on the cassette label for future reference, along with the tape counter location.
- (3) Now, set the cassette recorder to the recording mode and press the CX5M **RETURN** key to start saving.
- (4) After saving has been completed, the cassette recorder motor will stop (due to the remote control cable). Manually return the recorder to the STOP mode by pressing its stop button.

Loading

- (1) Connect the cassette recorder to the CX5M and insert a cassette tape. Wind the tape so that the data to be loaded is ready to play. If you cannot wind the tape with the recorder connected to the CX5M, press the **CODE** key to enable the recorder motor (the light in **CODE** key should be blinking at this point), and then press the **CODE** key again after the tape is parked at the correct location, disabling the cassette motor.
- (2) Pressing the **F6** key will cause the prompt
"Cassette Save ="
to appear in the message area. Press the **SELECT** key.
The prompt
"Cassette Load ="
will replace the preceding message.
(Pressing the **SELECT** key once again toggles the display back to Save.)

- (3) Type the exact name of the data (file) to be loaded. Set the recorder to the playback mode, press the **RETURN** key and the data will load. If the name of the file is different from the name that is saved on cassette, the cassette will continue to play and the CX5M will wait until an identical type file name is found. However, if the name has been abbreviated, using only the first letters, the type file that is found first with the same beginning letters will be loaded.

Interrupting the save/load function

In order to interrupt the save/load function in progress, simultaneously press the **CTRL** + **STOP** keys on the CX5M. If the loading of data is interrupted prematurely, the entire voice memory of the CX5M will be initialized and the message "Data error!" will be displayed.

F7 Key (SHIFT + F2 key) [MIDI Channel/Transfer]

This is the key that controls MIDI channel data transfer functions. This key is used for voice data transfer between the DX7 and the CX5M.

MIDI channel

The MIDI channel for both the DX7 and the CX5M should be set to 1. To begin MIDI transfer, press **F7** key and the prompt:

"MIDI Ch = "

will appear in the message area. Simply press the **RETURN** key to select the default of channel 1. First make sure DX7 is set to "sys into avail" in its MIDI /Function menu.

MIDI channel

The MIDI channel for both the DX7 and the CX5M should be set to 1. To begin MIDI transfer, press **F7** key and the prompt:

"MIDI CH = "

will appear in the message area. Simply press the **RETURN** key to select the default of channel 1.

Transferring the voice data in the DX7 internal memory to the CX5M voice memory

- (1) Press the **F7** key and the prompt

"MIDI Ch = "

will appear in the message area.

- (2) If the MIDI channel displayed in the message area is set to the desired channel, press the **SELECT** key and the prompt

"MIDI Tfr from DX7?"

will replace the previous message.

- (3) Press the **DEL** key. The prompt

"Are you sure?"

will be displayed next.

- (4) Press the **DEL** key once again and all data in the DX7 internal memory will be transferred to the voice memory of the CX5M.

Transferring the voice data in the CX5M voice memory to the DX7 internal voice memory

(1) Pressing the **[F7]** key will cause the prompt

"MIDI Ch = "

to appear in the message area. If the MIDI channel displayed in the message area is set to the desired channel, press the **[SELECT]** key twice. The prompt

"MIDI Tfr to DX7?"

will replace the previous message.

(2) Press the **[DEL]** key and the prompt

"Are You Sure?"

will appear.

Press the **[DEL]** key once again and the first 32 voices in the CX5M voice memory will be sent to the DX7.

★ The voices cannot be accepted by the DX7 if its memory is protected. THEREFORE, BE SURE THE MEMORY PROTECT FUNCTION OF THE DX7 IS DEACTIVATED BEFORE YOU ATTEMPT THE TRANSFER.

[F8] key ([SHIFT] + [F3] key) [Copy/Swap]

This key is used for editing the CX5M voice memory. The voice data is copied or replaced.

Copying

Press the **[F8]** key and the prompt

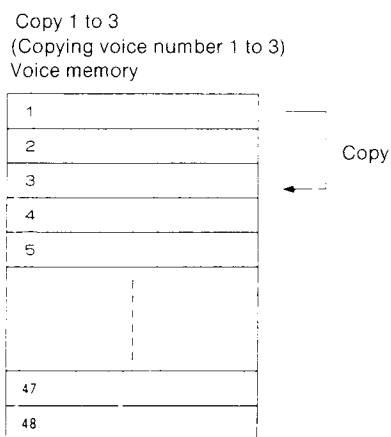
"Copy"

will appear.

Type the number of the voice memory to be copied and press the **[RETURN]** key. Next the system will ask where to place the copied voice. Type the voice memory number in which you wish to store the copy and press the **[RETURN]** key. This completes the copying process. The contents of the edit buffer memory will remain the same.

★ Pressing the **[ESC]** key instead of the **[RETURN]** will cancel the function and allow you to start again.

Fig. 31 Copy diagram



Swapping

- (1) Press the **F8** key and the prompt

"Copy"

will appear. Press the **SELECT** key and the previous message will be replaced by

"Swap".

(Pressing the **SELECT** key once again toggles the display and the system will return to the "Copy" prompt.)

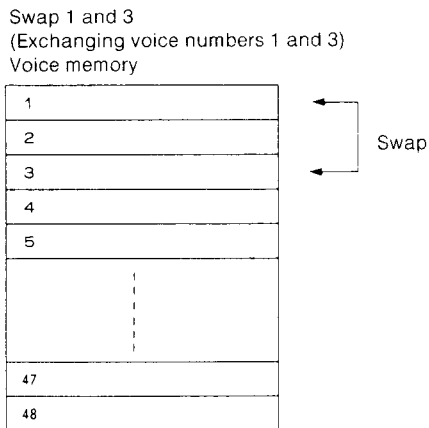
- (2) Input the voice number to be swapped and press the **RETURN** key. Input the other voice number and press return to complete the swapping process. This simply exchanges the voices in the two memory locations.

★ Pressing the **ESC** key instead of **RETURN** will cancel the function and allow you to start again.

The contents in the edit buffer memory will remain the same.

This function is useful for rearranging voices in the order you wish to use them for a performance, or for swapping voices in memories 33 to 48 with those in 1 to 32.

Fig. 32 Swapping diagram



F9 key (**SHIFT** + **F4** key) [Voice initialize]

This key is used to create sounds from scratch. Press the **F9** key and the prompt

"Voice Init?"

will appear in the message area. Press the **DEL** key and the prompt

"Are You Sure?"

will appear. Press the **DEL** key once again and the initialized voice (pure sine wave, ALG1, square envelopes) will be loaded into the edit buffer memory. Pressing the **ESC** key will cancel the function and allow you to start again. This allows you to create sounds from a simple starting point rather than editing an existing voice.

F10 key (**SHIFT** + **F5** key) [*Hard copy/Auto copy*]

This key is used to print out the contents of the screen. Using the Hard Copy option will create a printout of the current screen display. The Auto Copy option will create a printout of the EG parameter, Keyboard Scaling parameter and Performance parameter displays.

Making hard copies

- (1) Press the **F10** key and the prompt

"Hard Copy?"

will appear in the message area. Press the **DEL** key and the contents will be printed out. Pressing the **ESC** key will cancel the function and allow you to start again.

Auto copying

- (1) Press the **F10** key and the prompt

"Hard Copy?"

will appear in the message area. Press the **SELECT** key and the prompt

"Auto Copy?"

will replace the previous message.

(Press the **SELECT** key once again and the system will return to 'Hard Copy'.)

- (2) Press the **DEL** key here and the screen will automatically change and a hard copy of all the parameters will be printed out. The order of the parameters printed out will change depending on the situation. Press the **STOP** key to interrupt the print-out.

