

MMS 60
MMS 50
MULTIMEDIA MUSIC STATION

OWNER'S MANUAL

SOLTON
— by KETRON lab —

A Solton product by KETRON srl
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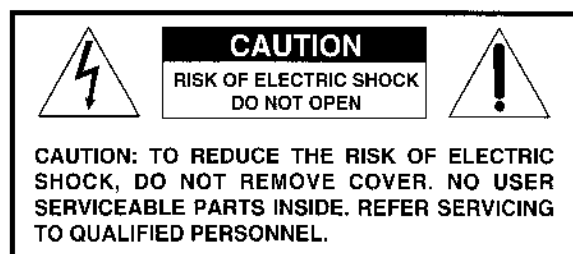
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1. INTRODUCTION

SAFETY PRECAUTIONS AND INSTRUCTIONS



EXPLANATION OF GRAPHIC SYMBOLS:



The arrowheaded lightning flash symbol, inside an equilateral triangle, is intended to alert the user to the presence of “dangerous voltages” inside the product. They may be of sufficient level to constitute a risk of electric shock to persons coming into contact with these.



The exclamation mark inside an equilateral triangle indicates the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

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



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.



- EARTHING (GROUNDING) INSTRUCTIONS -

This product must be earthed (grounded). If it should function badly or breakdown, earthing (grounding) provides the lowest resistance path to reduce the risk of electric shock. This product is supplied with a mains lead (power cord) containing an equipment-earthing (grounding) conductor and an earthing (grounding) plug (for Great Britain see the special instructions at the top of page 1.9). The plug must be inserted into an appropriate AC voltage wall socket that is properly installed and earthed (grounded) in accordance with all local safety rules and regulations.

DANGER - Improper connection of the equipment earthing (grounding) conductor can result in a risk of electric shock. Check with a qualified electrician if you have any doubts as to whether the product is properly earthed (grounded) or not.



IMPORTANT SAFETY AND INSTALLATION INSTRUCTIONS

WARNING - When using electrical products, basic precautions must be followed, including the following:

1. Read all the instructions before using the product and refer to the instructions on pages 1.7, 1.8, 1.9 and 1.10 to ensure a correct and safe installation.
2. When the instrument is used by children, supervision by an adult is advised.
3. Do not use the instrument near water, for example near a bath tub, washbowl, kitchen sink, or near a swimming pool etc., or in a wet or damp basement.
4. The instrument should only be used with the support approved by the manufacturer.
5. This instrument, when connected to an external amplifier and headphones or speakers, is capable of producing sound levels that can cause damage to hearing. Do not operate it for a long period of time at high volume levels or in any case at an uncomfortable volume level.
6. The instrument should be placed in a position that will provide adequate ventilation.
7. The instrument should never be positioned in direct sunlight and should always be kept away from heat sources such as radiators, heaters or other products that produce heat.
8. Do not use the instrument in extremely hot or damp locations or in dusty or dirty conditions.
9. Do not position the instrument where excessive vibrations can occur.
10. This instrument should only be connected to an AC power supply of the voltage corresponding to that shown on the label on the instrument. This label, containing all electrical data, relevant warning messages and the instrument identification data, can be found on the underside of the instrument.
11. This product may be equipped with a polarized plug (one blade wider than the other). This is a safety feature. If you are unable to insert the plug into the wall socket, contact an electrician to replace your obsolete wall socket. Do not defeat the safety purpose of the plug.
12. The instrument should be connected to the AC power supply only with the mains lead (power cord) supplied.
13. The mains lead (power cord) should be unplugged from the wall socket when the instrument is not used for long periods. Do not pull the mains lead (power cord) but hold the plug when unplugging.
14. Follow the procedure outlined in this manual when setting up this instrument with other equipment.
15. Care should be taken to avoid foreign objects falling into or liquid being spilled into the inside of the instrument through any of the slots or openings in the case.
16. This instrument should be referred to an approved service centre when:
 - a. The mains lead (power cord) or plug has been damaged.
 - b. Objects have fallen into the instrument or liquid has been spilled into or over it.
 - c. It has been exposed to rain.
 - d. It appears to operate incorrectly or shows a marked change in performance.
 - e. It has been dropped or if the case has been damaged.
17. Never attempt to repair the instrument yourself. Any operation should be referred to authorized personnel, otherwise the guarantee will be declared void.
18. **WARNING** - Do not place objects on the product's mains lead (power cord) or place the lead (cable) in a position where anyone could trip over, walk on or roll something over it. Do not allow the product, its bench, pedalboard or control pedals to rest on or to be installed over mains leads (power cords) of any type. Improper installations of this type create the possibility of fire hazard and/or personal injury.

SAVE THESE INSTRUCTIONS

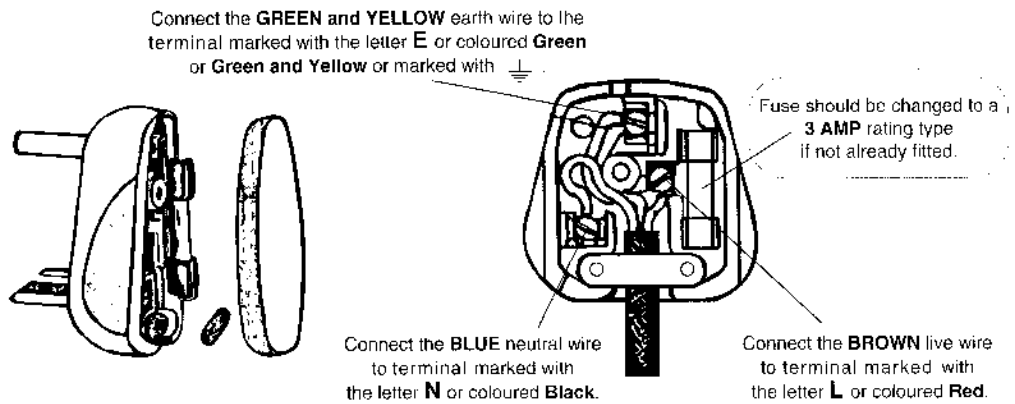
SPECIAL INSTRUCTIONS FOR USE IN GREAT BRITAIN

IMPORTANT

The wires in the mains lead are coloured according to the following code:

Green-and-Yellow	—	Earth
Blue	—	Neutral
Brown		Live

The wires in the mains lead of this instrument may not correspond with the coloured markings, you should therefore refer to this diagram to identify the terminals in your plug:



WARNING: THIS INSTRUMENT MUST BE EARTHED

RADIO/TV INTERFERENCE AVOIDANCE

This instrument operates at radio frequencies. Unless it is correctly installed and used properly - that is in strict accordance with the manufacturer's instructions - it may interfere with radio and television reception.

It has been carefully designed according to the rules and regulations in force at the time, and has been equipped with various types of screening designed to provide reasonable protection against such interference in a residential installation.

However, there is no guarantee that interference will not occur in any particular installation.

If this equipment does appear to cause interference with radio and TV, which can be determined by switching it off to see if the interference disappears and then switching it on again to see if it reappears, the user is encouraged to try to correct the interference by carrying out one or more of the following measures:

1. Turn the radio or TV aerial (antenna) to face in a different direction.
2. Change the instrument's position with respect to the receiver.
3. Move the instrument away from the receiver.
4. Plug the instrument into another power socket, which is part of a different branch circuit.
5. If necessary, the user should contact the dealer or an experienced Radio/TV technician for additional advice.

FOR USERS IN THE UNITED STATES OF AMERICA:

The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to identify and resolve Radio/TV interference problems". This book is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock No. 004-000-00345-4.

2 HOW TO PLAY AND USE THE MS60/50

GETTING STARTED

After correctly connecting the instrument to the external equipment (amplifier, mixer etc., and volume pedal and footswitch FS13 or FS6 if used) and connecting the mains cable (power cord) between the socket on the back panel and a mains power socket of the correct voltage, proceed as follows:

1. Ensure that:
 - all volume controls of the amplifier, mixer or other amplification means are turned down.
 - the volume of the MS60/50 is turned down.
2. Turn the MS60/50 'ON' by means of the switch on the back panel. The following display showing the instrument name will appear:


```

      S O L T O N   M S   5 0
Multisynthesis Keyboard by KETRON LAB
  
```

The live menu display below will then appear:

```

Ø1  16BEAT_1   4Ø   84           GRAND   63
Finger 4Ø  Dxpian 2Ø  Steel  22  Incapa  25
  
```

3. Turn the amplifier power 'ON' and adjust the volume.
4. Set the MS60/50 to about half volume with the **MASTER** control.
 
5. Turn the power 'OFF' in the reverse order, first the external units (amplifier etc.) and then the MS60/50.

ONLY MS60 MODEL

HI-FI AMPLIFICATION

The MS60 is fitted with an excellent 2 x 22 watt RMS internal amplification and 2-way Bass-Midrange and Tweeter speaker system. The two speaker enclosures guarantee perfect Hi-Fi response through the whole frequency range and remarkable sound reproduction.

It is possible to exclude these internal speakers, useful when using headphones, by means of the Speaker On/Off slide switch on the back panel (see page 2.4).

PLAYING THE MS60/50

1. You can now start to explore the instrument sounds by playing the right hand section of the keyboard. The sound that you hear is shown in the top right hand corner of the display:

```
01 GREAT 40 84 GRAND 63
finger 40 Dxpian 20 Steel 22 Trcapa 25
```

in this case, Grand (Piano).

To get used to the voice changing procedure, while playing the right hand section of the keyboard, try changing the voice in this family (PIANO) from Voice Bank 1, by pressing the keys from 1 to 8 on the right of the display. Each time you press a different key, the new sound will play and the relative name will be seen in the top right hand corner of the display above. A complete explanation of the voice selection procedure is explained further ahead (see HOW TO SELECT A VOICE).

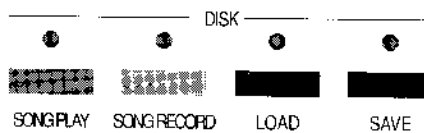
2. The volume of this sound is varied by means of the two keys above the heading **RIGHT** in the group of Volume keys on the extreme right.
3. To listen to the rhythm shown in the top left hand corner of the display, press the red **START/STOP** key in the centre of the bottom line of buttons.
4. If you now hold down a chord in the left hand section of the keyboard, the automatic arrangement will play and change according to the chords played.
5. Repress **START/STOP** to stop the rhythm playing.

HOW TO PLAY THE SONGS ON DISK

1. With Live Menu display showing as above, insert the disk in the drive on the right of the front edge of the MS60/50 (see diagram on the right).



2. Press **SONG PLAY** in the disk section under the VOICE BANK group of keys:



the display will change to:

```
--- -- Nx -- 84 GRAND 63
DIRECTORY Lyric:Off Lead:On Count: 0
```

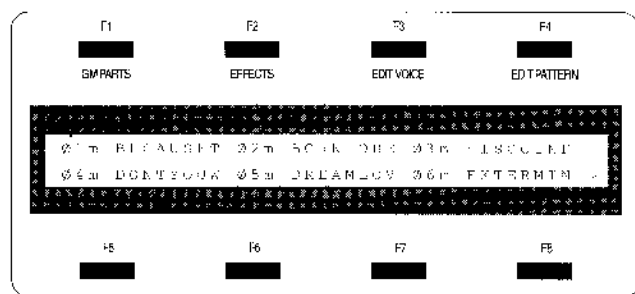



On the bottom line of the display you will see the Lyric On/Off function. This enables you to follow the words of the song that will be shown on the display (**Lyric: On**), or to exclude the words from the display (**Lyric: Off**).

The selection is made by means of function key **F6**.

Also in the bottom line of the display the Lead On/Off function can be set. With **Lead: On**, the solo line of the Song will play normally, whereas when you set **Lead: Off**, the lead line will be excluded. You can follow the *Bar Count* of the song in the bottom right hand corner (**Count**). In the top line of the display the next song number (**Nx**) is shown (see point 4 on page 2.3).

3. With the display showing as in point 2 on the previous page, press function key **F5** (DIRECTORY); after the message **Please Wait ...**, the display shows the first page in the list of all the songs on the disk with their respective numbers as in the example below:



Only the first 6 songs will be shown in the first page of the Directory; the remaining songs can be seen by pressing the **PAGE>>** key on the left of the display. The **PAGE >>** and **PAGE <<** keys can be used to “scroll” up and down through the  pages making up the list of the songs, to enable you to make your selection.

Select the song that you want to listen to by pressing the corresponding function key (**F1**, **F2**, **F3**, **F5**, **F6** or **F7**).

4. The song will then be prepared (shown by the two arrows on the right of the title in the top line of the display), after which you can press **START/STOP** to play it. While the song is playing you can ‘book’ the next one that you want to play by selecting this with the **VALUE +/-** keys in the usual way. The selected song will be shown in the **Nx** position on the top line of the display, for example **Nx: 05**. When you press **START/STOP** to stop the song that is playing, this next one will automatically be selected from the disk and held in stand-by. When you repress **START/STOP** to listen to this, the next number in the list (06 in this case) will be shown in the ‘Nx’ position in the display ready to be played. To listen to this at any time, press **START/STOP** twice. Using this ‘booking’ procedure all the titles in the list can be played one after the other. ***N.B.** - The first song selected for the Nx position can be any one in the list, before or after the one playing, but once this is selected, the numbers of the next titles will always be automatically booked one by one, following on from this in numerical order.*

If you have inserted the ‘Demo Disk’ supplied with your MS60/50 in the drive unit, after pressing **F5** (DIRECTORY) in point 3 above the display will show as follows:

```

Ø 1 c  1 _ S T Y L E S   Ø 2 m  2 _ G T E L L   Ø 3 m  3 _ Z O O T
Ø 4 m  4 _ M A G I C A   Ø 5 m  8 B E A T   Ø 6 m  8 B E A T ' 3   >

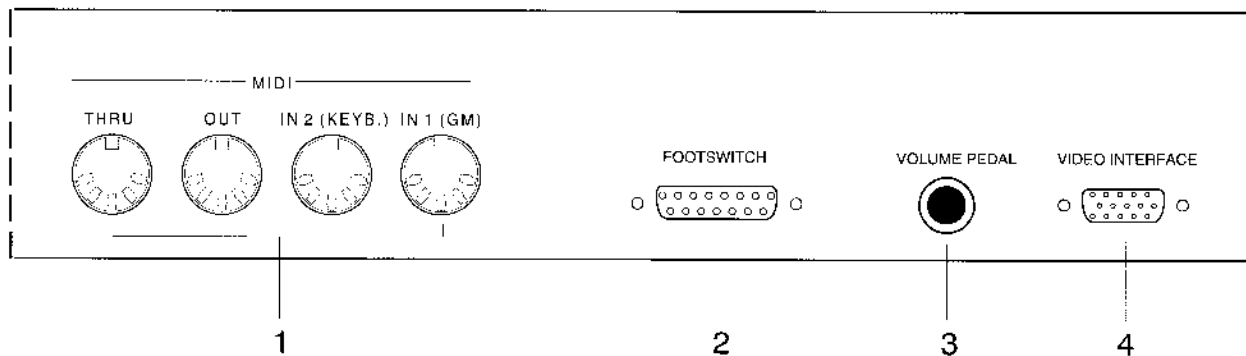
```

You can now proceed with your selection as described above to immediately listen to the infinite Styles and sounds of your MS60/50.

Further functions available while in the DISK environment are described on page 3.46, the DISK DRIVE section of Chapter 3 - “PROGRAMMING THE MS60/50”.

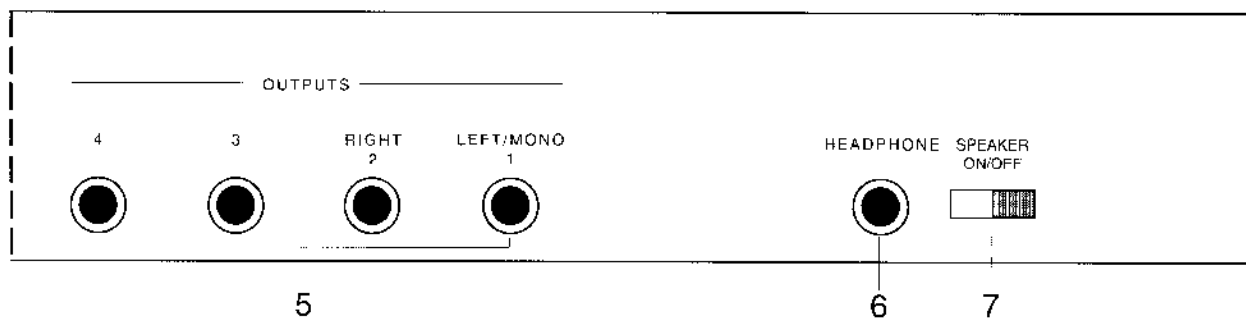
REAR PANEL CONNECTIONS

MIDI IN/OUT AND AUDIO/VIDEO CONTROL CONNECTIONS



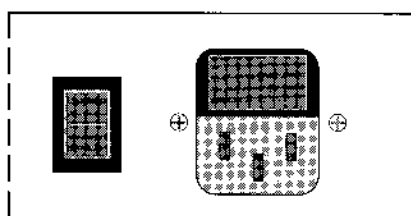
- 1. MIDI input/output sockets.
- 2. Footswitch multi-pin connector.
- 3. Volume Pedal socket.
- 4. V1 Video Interface connector.

AUDIO OUTPUT CONNECTION SOCKETS



- 5. Audio signal output sockets.
- 6. Headphones jack.
- 7. Internal Speakers On/Off switch (MS60 only).

MAINS CONNECTION AND ON/OFF



- 7. Mains (Power) On/Off switch.
- 8. Mains Lead (Power Cord) connector socket and fuse holder.

MAIN CONTROL PANEL

2. List of Styles

3. Live Performance Controls

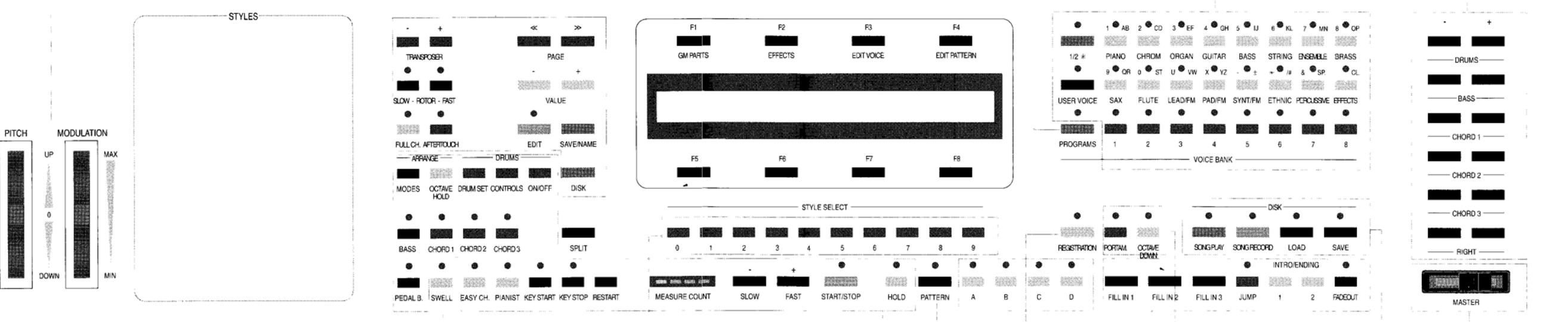
4. Display and Funktion Keys

6. Voice Selection Keys

1. Pitch and Modulation Wheels

5. Programs Key

7. Volume Keys



8. Swell to Right Key

9. Style Selection Keys

10. Style Control Keys

11. Pattern Key

12. Arranger Keys

13. Registration Key

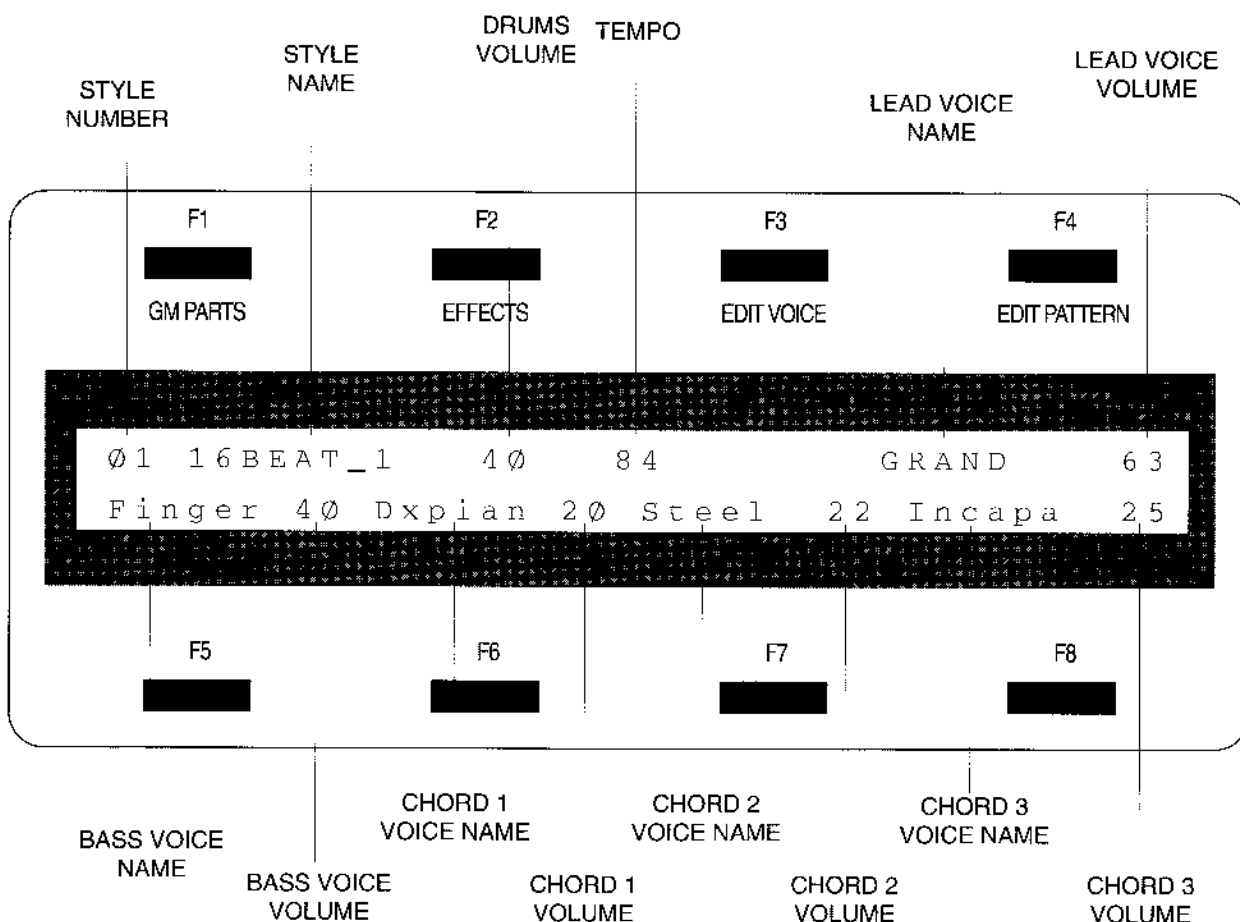
14. Live Performance Keys

15. Disk Drive Keys

16. Master Volume

FUNDAMENTALS OF THE MS60/50

The fundamental sections of the MS60/50 can all be programmed by means of the display and function keys shown below. The LIVE menu is shown in the diagram below which will enable you to identify the various sections by means of the indications shown.



The 8 FUNCTION KEYS arranged above and below the display each have a specific function. **F1** enables you to programme the various General Midi parts by means of the display that will appear when you press this key. **F2** opens the Effects display in which you can select the various sound effects available in the MS60/50 and set the parameters of these. **F3** enables the voices to be edited with the aid of the display that appears when you press this key. **F4** enables the Patterns to be edited, in the same way as the voices, by referring to the display. **F5 to F8** enable the voice used for the Bass, Chord 1, 2, 3 sections to be changed. When the corresponding key is pressed, the voice name currently selected for that section will flash in the display (showing that it is ready to be changed) and the led indicators will light above the selection keys corresponding to this in the VOICE BANK section on the right of the display. The voices are changed by the keys in the VOICE BANK section (see HOW TO SELECT A VOICE on page 2.17). Repress the function key to deselect the section, when this will cease to flash in the display.

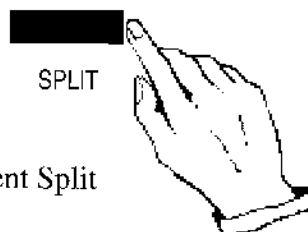
More detailed information on the use of these Function keys will be found in the specific paragraphs that explain the various functions further ahead in this manual.

THE KEYBOARD SPLIT KEY (SPLIT)

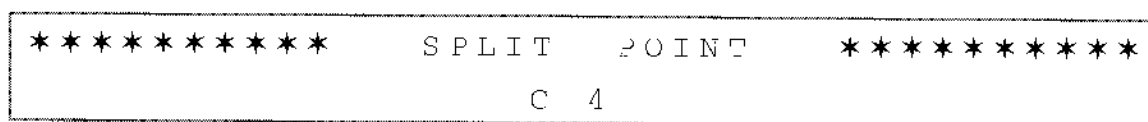
This key, in the left hand group on the main control panel, is of extreme importance as it determines the portions of the keyboard used for the accompaniment and solo sections. All the notes on the left of the 'Split Point' selected will play the accompaniment (Drums, rhythm arrangements), while those in the right hand section (from the 'Split Point' to the top end of the keyboard) will play the solo voices.

Your MS60/50 is programmed in the factory with the 'Split Point' (extreme left hand note of the solo section) corresponding to C⁴. To change this and therefore modify the notes available for the accompaniment and solo sections of the keyboard, follow the procedure below:

1. Press the **SPLIT** key and hold it down.



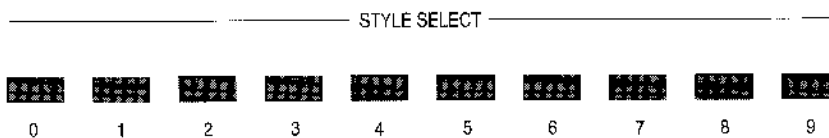
2. The display, shown below, will show the current Split Point in the keyboard; by default this is C⁴.



3. While still holding down the **SPLIT** key, press the key on the keyboard that you want to use as the lowest key in the solo (right hand) section of the keyboard. The display will change immediately to show the new 'Split Point' selected.
4. Release the **SPLIT** key, and the 'Split Point' will remain in the position selected until you modify this with the above procedure.

HOW TO SELECT A STYLE

The Style is selected by the **numeric keys** under the central display section of the main control panel. 99 different styles can be selected by pressing the keys from **0 to 9** in the STYLE SELECT section:



To choose an accompaniment pick the number of the desired Style from the list located on the left hand side of the front panel and enter this number by means of the **numeric keyboard**: the MS60/50 automatically selects the tempo and the voices required for the accompaniment you have selected. Selection of the styles from 0 to 9 is achieved by pressing **01, 02, 03.....09**.

If for example, Style number 08 (8 Beat 2) is chosen, the voices required for the accompaniment are also appropriately selected as shown in the following LIVE display:

08	8_BEAT_2	40	100	GRAND	63
Finger	40	Rock	25	Folk	25
			Slow	F	35

The **BASS** and **CHORD** voices selected for any **STYLE** can be modified by pressing the **F5, F6, F7** and **F8** keys. This will cause the current voice name to flash in the corresponding section of the display, enabling it to be changed by the **keys in the VOICE BANK** section.

The new voice is immediately accepted and ceases to flash after about 3 seconds.

This modification is however only valid for the Arranger that is playing and (if not saved in a Registration) is lost as soon as a new STYLE is selected.

Pressing both **PAGE +/-** keys simultaneously blocks the Voices of the Arranger, which means that they will not change when changing the Style. This condition is shown in the display by a dot beside each of the Arranger sections.

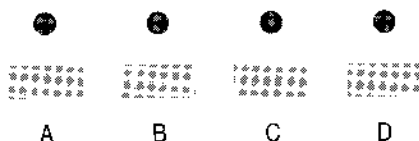
Each time a Style is selected, even though this may be playing with some parameters that have been modified, the default parameters will be re-established (therefore also the original Tempo, the Voices and Volumes).

It is also possible to change **DRUM SET** in the current **STYLE** by pressing **DRUM SET** and selecting the new set with the **VALUE +/-** keys.

This selection will also be lost when selecting a new Style, if not saved in a Registration.

Furthermore, each Style memorizes the Reverb. type and level and type of Chorus used in the various **DRUM, CHORD 1, CHORD 2** and **CHORD 3** parts.

For each Style chosen, the MS60/50 provides four different arrangements which can be selected with the keys **A, B, C** and **D** in the bottom line of keys on the front panel.



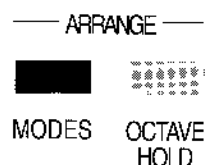
The Arrangement currently selected is identified by the relative led indicator which will be turned 'ON'.

If you select a different arrangement while the Style is playing, this will be heard to change at the end of the bar currently playing.

Several other keys are integral parts of the arrangements, for example ARRANGE (Modes, Octave Hold), DRUMS (Drum Set, Controls, On/Off), BASS, CHORD 1, CHORD 2, CHORD 3, CHORD 3, PEDALBOARD, EASY CHORD, PIANIST, KEY START, KEY STOP, RESTART, SLOW - FAST - MEASURE COUNT, START/STOP, HOLD, FILL IN 1, 2 and 3, JUMP, INTRO-ENDING 1 and 2, FADE OUT. These keys are described from the next page onwards.

ARRANGE (MODES, OCTAVE HOLD)

The two keys under this heading enable you to set the modes used in the arrangement, select the octave of the sections used in the arrangements (Bass, Chord 1, Chord 2 and Chord 3) and set the HOLD function in these sections.



MODES

Press **MODES** to open the following display:

```
P i a n i s t   S u s t .   : O f f   D Y N . A R R .   R E T R I G .
L o w e r : O f f   B a s s   t o   L o w e s t : O f f   S u s t a i n : 0
```

This enables you to set the various modes shown as follows.

- Pianist Sust.** - Press **F2** to enable or disable the Sustain effect command to the pedal when the PIANIST key has been pressed. When 'ON', the Sustain is activated as it would be with a piano sustain pedal, that is, the effect is activated only when you press the pedal (Pianist Sust. :On). When 'OFF', the Sustain is deactivated.
- DYN.ARR** - Press **F3** to recall the DYNAMIC ARRANGEMENT display below:

```
D Y N A M I C   A R R A N G E M E N T :           D r u m : 1 8
B a s s : 1 8   C h r d 1 : 1 8   C h r d 2 : 1 8   C h r d 3 : 1 8
```

In this display the five Arranger sections are set to a Dynamic Arrangement default value of 18. Each of the five sections shown can be selected in turn by their respective function key **F4** to **F8** which enables the dynamic value to be set by the **VALUE +/-** keys from 0 to 63. When these values are other than 0, the section in the Arrangement will play according to the keyboard dynamics set in the display. This means, the harder you play the louder the section will play. In this way you can put some of your own feeling into the Arrangements.

It is recommended that a value between 15 and 30 is set to conveniently play the Styles. Press **PAGE <<** to return to the first MODES page display shown at the top of the page.

3. **RETRIG.** - Press **F4** to recall the display below that enables you to set the retrigger function for each of the four Arrangement sections (Bass, Chord 1, Chord 2 and Chord 3):

```
RETRIGGER ARRANGEMENT :
Bass : Off   Chrd1 : Off   Chrd2 : Off   Chrd3 : Off
```

Each section in which you want to use the function can be activated by the function keys **F5** to **F8**. With the RETRIGGER function activated (On), each time you press a key on the keyboard, the BASS and CHORD (1, 2 or 3) will repeat the notes played.

Press **PAGE <<** to return to the first MODES page display shown at the top of the page.

4. **Lower** - Press **F5** to set this parameter to 'On' enabling the manual playing of the BASS and CHORD 3 sections when the Arrangement is not playing (START/STOP led indicator 'OFF').
5. **Bass to Lowest** - Press **F7** to activate this function. The Automatic Bass of the MS60/50 will play the lowest note of the chord played on the left section of the keyboard. This function also works when the Lower function is activated (see point 4).
6. **Sustain** - Press **F8** to set the Bass Sustain value which will flash in the display. The value can be set to a value from 0 to 63.

OCTAVE, HOLD

Press this key to open the following display:

```
Bass ( 16 )   Chrd1 ( 4 )   Chrd2 ( 4 )   Chrd3 ( 4 )
Hold : On    Hold : On    Hold : On    Hold : On
```

This display enables you to set the octave for each of the manually played sections in the Arrangement (Bass, Chord 1, Chord 2 and Chord 3). Each section can be selected by means of the relative function key **F1** to **F4** (the octave setting in the brackets will begin to flash) and then modified by the **VALUE +/-** keys on the left of the display. The octave can be set to 16', 8', 4' or 2'.

Furthermore the HOLD function can be enabled or disabled for each of the above manually played sections by simply pressing the corresponding function keys **F5** to **F8** to change the setting from 'Off' to 'On' and vice-versa. This function maintains a constant sound level of the of the selected sections when the **HOLD** key is pressed.

(see LOAD in DISK DRIVE section further ahead). The first letter in the name will be flashing when the above display appears, indicating that the name is ready to be modified if desired. To change the name, first use the **F5** (<<Down) and **F6** (Up>>) to select the character to be written, then use the light grey keys in the top two lines of the VOICE BANK section on the right of the display to achieve this. These keys should be used according to the references in blue above each of these keys. Repeatedly pressing these keys will show the number and letters for each key in a cyclic manner in the display, enabling you to select the character required for the name.

- Once satisfied with the name, press **F8** (Save) to memorize the User Drum Set with the name given. If you decide not to save the Drum Set, press **F7** (Cancel) to return to the LIVE MENU (the led indicator above the EDIT key will turn 'OFF', indicating that you have left the editing environment).

CONTROLS

This key enables the Volume, Reverb. levels and Pan positions of the 7 drum instrument sections to be set. The settings are defined as follows:

- Press **CONTROLS** to open the display below:

```
DRUMS_VOL Bass : 63 Snare : 63 Hi Hat : 63
Cymbal : 63 Tom : 63 L.Lat : 63 H.Lat. : 63
```

This first page of parameters refers to the VOLUME of the single Drum instruments.

- Press **F2** to **F8** to select each Drum section in turn (the relative value will flash). The Volume value of these can then be modified by means of the **VALUE +/-** keys. These keys enable you to scroll through the values in a cyclic manner in order to easily reach the value desired. The new value (from 0 to 63) is shown immediately in each case in the appropriate position in the display.
- Press **PAGE >>** on the left of the display to open the second Controls page - DRUMS_REV:

```
DRUMS_REV Bass : 8 Snare : 8 Hi Hat : 8
Cymbal : 8 Tom : 8 L.Lat : 8 H.Lat. : 8
```

This page refers to the REVERBERATION levels of each Drum instrument sections.

- The selection and setting of the REVERB. level of each Drum section is done in the same way as for the Volume settings in point 2 above, although in this case the values range from 0 to 8 and do not scroll cyclically.
- Press **PAGE >>** on the left of the display to open the third Controls page - DRUMS_PAN:

```
DRUMS_PAN Bass : - - Snare : - - Hi Hat : - -
Cymbal : - - Tom : - - L.Lat : - - H.Lat. : - -
```

This page refers to the left and right PAN positions of each Drum instrument.

- Select the Drum instruments in the same way as the above Volume and Reverb. parameters and modify these as required by means of the **VALUE +/-** keys in the normal way. The PAN positions can be set from values of L63 to R63, these being the extreme left and right positions respectively in the stereo spectrum. The centre position for each instrument is defined by - - .

This setting can be defined at any time in the set up procedure by simultaneously pressing **both VALUE +/-** keys.

- The new settings remain until modified again. They can also be saved by pressing the **SAVE/NAME** key on the left of the display to open the following display which enables the set up to be saved in one of the **REGISTRATIONS** with relative name:

SAVE REGISTR.	REG_001	TO	REG_001
<< Down	Up >>	Cancel	Save

The Registration (in this case REG_001) can be saved with the new name which you can write in the top right hand corner of the display as in point 4 of the User Drum Set described on page 2.11. The name should be changed if you want to create a new Registration because otherwise, the new settings will replace those already present in the original Registration, shown in the middle of the top line of the display.

- Press **F8** (save) to memorize the settings in the Registration with the name given. If you decide not to save the settings made, press **CANCEL** to return to the **LIVE MENU**.

ON/OFF

This function, which can also be used when a Style is playing, enables you to exclude or include the 7 sections of the drums.

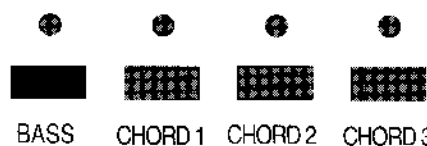
- Press **ON/OFF** to recall the display below:

DRUMS_OFF	Bass: On	Snare: On	Hi Hat: On
Cymbal: On	Tom : On	L. Lat: On	H. Lat.: On

- Start the Style by pressing **START/STOP**, then select the drum instrument that you want to cancel from the Style. In this way you can immediately hear the effect while the Style is playing and act according to the effect required.
- The changes made can be saved in a Registration in the normal way by pressing the **SAVE/NAME** key and proceeding as in the previous parameters (User Drum Set, Drum Volumes etc.)

BASS CHORD 1 CHORD 2 CHORD 3

This group of keys is used to allow you to play the accompaniment sections manually. On pushing one of these keys, the corresponding accompaniment section is excluded from automatic operation and can then be played manually. Try pressing the keys **CHORD 1**, **2** or **3**. You will notice that one of the three rhythm accompaniments will stop: now you can play it manually with the left hand.



The leds above the keys inform you continuously about the status of the various Chord and Bass accompaniment sections:

Led on = the section can be played manually;

Led off = played automatically.

The chord notes that play in the "Manual" mode are deactivated when you press STOP or at the end of an Ending even if the Hold function has been activated.

PEDALBOARD (PEDAL B.)

This key enables the chords of the Automatic Accompaniment to be played on the MIDI Pedalboard when pressed (led 'ON'). Each time the Accompaniment is stopped by pressing **START/STOP**, the BASS and CHORDS are set to the MANUAL mode. If the MS60/50 is connected to the Solton MIDI Pedalboard, that transmits on CH. 2 by default, you must set the MIDI Rx with LEFT: Off and BASS: 02 (see CHAN Rx on page 3.6).



SWELL (TO RIGHT)

This function will enable the Swell Pedal to act only on the **right hand** section of the keyboard, leaving the left hand section to play with a constant volume level.



EASY CHORD

Enables you to automatically produce a fully orchestrated accompaniment by pressing just one key. When playing the styles normally, this key must always be 'ON'. When it is 'OFF', the accompaniment will play only the notes pressed.



PIANIST

This feature enables you to play any harmony on the keyboard with two hands as is the normal technique for a pianist, while the Automatic Accompaniment follows perfectly everything played.

The effect is obtained by pressing the Sustain Pedal (optional) immediately after having formed the chord on the keyboard.

The arrangement remains frozen in the memory as long as the pedal is held down.

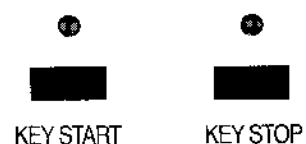


KEY START/KEYSTOP

With only **KEYSTART** pressed, the STYLE starts as soon as the keyboard is played on and continues to play even after releasing the keys.



With only **KEYSTOP** pressed, the STYLE starts as soon as the keyboard is played on and continues to play only if you keep the keys pressed for more than a quarter of a second, otherwise it stops immediately.



When **both KEYSTART and KEYSTOP** are activated, the STYLE starts and stops according to whether or not you play on the keyboard. It should be noted that whenever both keys are activated (and both Leds are 'ON'), their functions are not automatically disabled; they must be manually deactivated by repressing the **KEY START** and **KEY STOP** keys.

When the **HOLD** key is pressed with the **KEYSTOP** function active (led 'ON'), you can play 'staccato' on the left hand section as long as you do not hold the keys down for more than about 200 ms. If you hold the keys down for more than this, the styles will continue even if you remove your hand from the keyboard.

RESTART

When pressed, this key restarts, from the beginning, the rhythm accompaniment already playing. When playing Songs from disk the RESTART works as a PAUSE control.



SLOW - FAST + MEASURE (BAR) COUNT

These two keys regulate the speed (Tempo) of the Automatic Accompaniment and the led indicator shows the beats in the bar with the first beat indicated by the green led.



FIXED TEMPO

By simultaneously pressing both the **SLOW/FAST +/-** keys, the Tempo remains constant and will not vary when changing from one Style to another. The Tempo is shown in the middle of the top line of the LIVE MENU and an **asterisk** close to this will indicate that this function is activated.

START/STOP

The START/STOP key starts and stops the automatic accompaniment, the Patterns and the Songs. The Led continuously indicates it's status: when the key is **pressed once**, it assumes the **START** function (the Led turns 'ON'), when it is **repressed** with the led 'ON', it assumes the **STOP** function (the Led turns 'OFF').



HOLD

When you press this key, the last chord played will continue to play. In other words, you can play a chord, then remove your hand from the keyboard; the MS60/50 continues playing the chord for you. *N.B. - See note at the top of this page in KEYSTART/ KEYSTOP section on for it's use in conjunction with HOLD and OCTAVE/HOLD on page 2.10.*



PATTERN

This key allows you to select up to 24 different Patterns. Each of these can be made up of Intro 1, Intro 2, Arranger A, B, C, D, Fill In 1, Fill In 2, Fill In 3, Ending 1, Ending 2 in all Major, Minor or Seventh keys. On pushing this key the Led turns 'ON', indicating that the patterns can be selected by means of the keys numbered from 0 to 9 under the display. If no Patterns have been programmed, the following message will show:

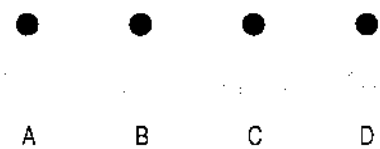
ALL PATTERNS EMPTY	< EDIT >
	< CANCEL >

For full information of the Pattern programming see EDIT PATTERN on page 3.32 in Chapter 3 - "PROGRAMMING THE MS60/50".

ARRANGER KEYS A, B, C, D

The MS60/50 is provided with four different arrangements for each single preset Style, A, B, C and D.

The Arrangements are selected by pressing the relative key (the selection will turn the led indicator 'ON').



FILL IN 1, 2, 3

The FILL IN 1, 2, 3 keys are used for selecting three different drum rolls for each Style. You will soon learn how to select the most suitable roll for each performance.

FILL IN 3 often acts as a 'Stop' for the FILL IN.



JUMP

The JUMP function is used in conjunction with the FILL IN and INTRO/ENDING keys to enable various functions to be performed.

With **JUMP** activated (Led 'ON'), *with a Style playing*, (**START/STOP** led 'ON'):




With a Style playing, pressing one of the INTRO/ENDING keys will play the relative INTRO and then proceed with the Rhythm.

With no Style playing (**START/STOP** led 'OFF'), pressing one of the INTRO/ENDING keys will play the relative ENDING and then stop.

INTRO/ENDING 1, 2

Your MS60/50 provides two introductions (INTROS) and two endings for each single Style selected. To begin your performance with the appropriate automatic introduction, select the desired Style and press **INTRO/ENDING 1** or **2**. While the INTRO is playing the display indicates the selected INTRO as follows (in this case INTRO 1):

INTRO/ENDING

 1 2

Ø 1	INTRO 1	4 Ø	8 4	GRAND	6 3
Finger	4 Ø	Dxpian	2 Ø	Steel	2 2 Dream 2 5

As soon as this is completed, the display resets to its previous status.

To end a piece of music with an automatic ending, press **INTRO/ENDING 1** or **2**. During the ENDING the display indicates the one you selected, in this case ENDING 1:

Ø 1 <	ENDING 1	4 Ø	8 4	GRAND	6 3
Finger	4 Ø	Dxpian	2 Ø	Steel	2 2 Dream 2 5

When the ENDING has stopped playing, the display is reset to its previous status and the led indicator above the START/STOP key will be turned 'OFF'.

It should be pointed out that **INTRO/ENDING 1** will perform an Introduction or Ending only in **C Major** while **INTRO/ENDING 2** will carry out a completely harmonized Introduction or Ending.

FADE OUT

The FADE OUT key allows you to automatically achieve "fade out" endings (the volume gradually decreases down to zero). To activate this function, simply press the **FADE OUT** key (the led turns 'ON'); the sound level of the MS60/50 will automatically fade out and stop when this reaches zero.



Repress the **FADE OUT** key (the led is turned 'OFF'), to carry out a "FADE IN" (the sound level gradually increases until reaching its previous level).

To deactivate the FADE OUT function (without performing any FADE IN), simply press the **START/STOP** key (the Led is switched off) and then press **FADE OUT** (the Led is switched off).

HOW TO SELECT A VOICE

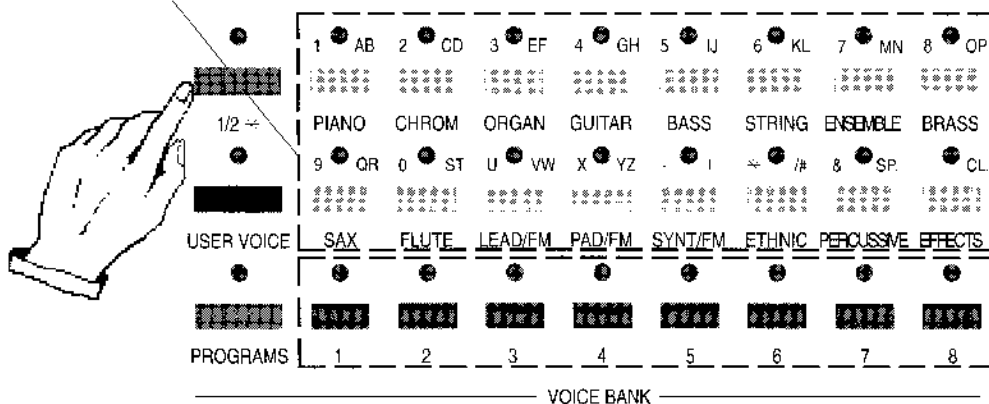
The MS60/50 offers a total of 256 voices for the right hand. Selecting a voice is extremely easy.

Make sure that the **PROGRAM** and **REGISTR.** leds are off (otherwise you will select a Program or a Registration instead of a voice).

Two separate banks of 128 voices are provided in the MS60/50.

The 16 Voice Families in each bank, indicated by the name under each key, are selected by means of the 16 light grey keys. The 8 instrument voices in each family are selected by the keys numbered 1 to 8.

Bank selection is by means of the blue 1/2* key in the top left hand corner of the section shown below:



With the 1/2* (Bank number) key led 'OFF', indicating that Bank 1 will be selected from, select the **DRAWBARS** voice by pressing **ORGAN** and **numeric key 1** in the bottom line, for example. The display will show the selected voice in the top right hand corner, as below:

```

Ø1  16BEAT_1    4Ø    84          DRAWBARS  63
Finger 4Ø  Dxpian  2Ø  Steel   22  Incapa  25
    
```

This voice is part of the ORGAN family in Voice Bank 1 (see VOICE BANKS in the APPENDIX at the back of this manual). Now try all the voices in this family by pressing the keys from **1 to 8** in the bottom line in this section of keys.

For example, press **key 3** to select **ROCKORG** as shown in the display below:

```

Ø1  16BEAT_1    4Ø    84          ROCKORG   63
Finger 4Ø  Dxpian  2Ø  Steel   22  Incapa  25
    
```

The display indicates the name of the selected voice, **ROCKORG** on the right of the top line in the display.

You can select VOICE BANK 2 by pressing the 1/2* key on the left of the top line of this section of keys. The led indicator will turn 'ON' to show that you have selected VOICE BANK 2.

The display will show the voice name that was last selected in this bank in the top right hand corner as below, in this case key 1 (GOSPEL) was the last selected:

```

Ø1  16BEAT_1    4Ø    84          GOSPEL    63
Finger 4Ø  Dxpian  2Ø  Steel   22  Incapa  25
    
```

Exactly the same selection method is used for both voice banks; in both cases the Voice Family and individual Voice number selected at any time are identified by the led indicators which turn 'ON' when the relative key is pressed.

The last used voice and family in Bank 2 or in the User Voice remain in the memory, so that when passing from Bank 1 to Bank 2 the previous sounds are immediately set.

USER VOICE

The User Voices can be selected by means of the 16 light grey keys, which determine the voice groups (1 - 8, 9 - 16, 17 - 24 etc.) and the bottom line of keys numbered from 1 - 8, which select the voice in each group. The User Voice 001 position is used for storing the PCM sounds (Sounds and 'Grooves') that can be loaded from disk (see DISKDRIVE on page 3.46 in Chapter 3 - "PROGRAMMING THE MS60/50"). This will show 'EMPTY', if no PCM sound has been loaded, or the PCM sound or Groove name if this has been loaded. Press (F3) EDIT VOICE to show the following display:

```
USER 1 ONLY AVAILABLE FOR PCM LOAD
Press <EDIT> to Exit
```

reminding you of the purpose of the User Voice 001 position, which cannot be edited but can be incorporated in a Pattern or Program that you create. Press **EDIT** to return to the LIVE menu.

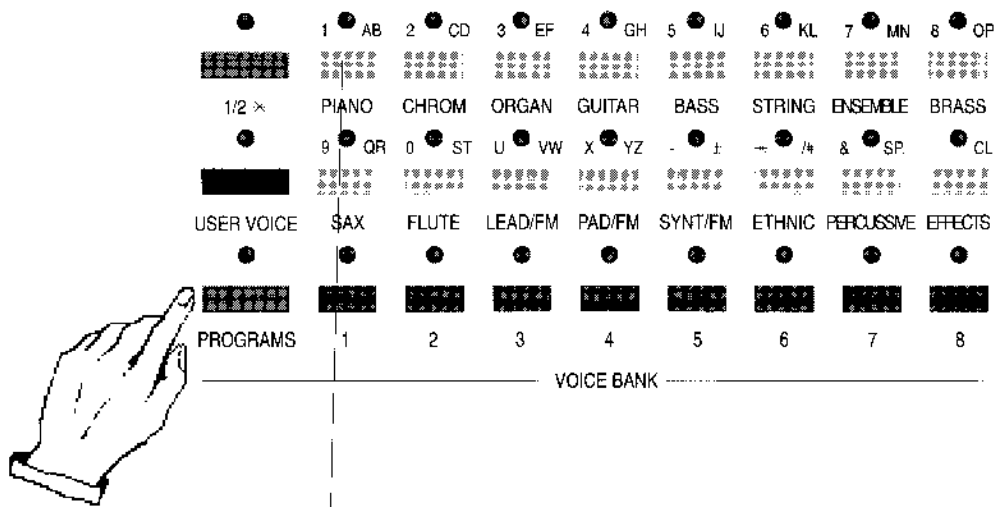
All the other 127 User Voice positions can be used to save the voices edited according to your requirements. The User Voice editing procedure is fully described in EDIT VOICE on page 3.30 in Chapter 3 - "PROGRAMMING THE MS60/50".

The User Voices cannot be selected if the blue PROGRAMS key is active (led 'ON'). This should be repressed (led 'OFF') before selecting the User Voice desired.

HOW TO SELECT A PROGRAM

The MS60/50 offers a total of 128 different programs which can be set up by means of the **PROGRAM** function in the EDIT menu, recalled by pressing **EDIT** with the LIVE menu showing. It is possible to distribute four instrument voices along the length of the keyboard, assigning them to variable sections which can even overlap by any amount where required. Several parameters can be set for each instrument by means of the various menus available. Full programming instructions can be found in **HOW TO WRITE A PROGRAM** on page 3.18 in Chapter 3 - "PROGRAMMING THE MS60/50".

To select a Program, press the blue **PROGRAMS** key in the VOICE BANK section of keys.



The display will show the last selected Program in the top right hand corner, in this case PIANO 1:

```

Ø1 16BEAT_1 4Ø 84 PIANO 1 63
Finger 4Ø Dxpian 2Ø Steel 22 Incapa 25
    
```

The 128 Programs, divided into 16 groups of 8, are selected in the same way as the Voices (see page 2.17). The 16 light grey keys are used to select the groups of Programs (1 to 8, 9 to 16 etc.) and the keys numbered from 1 to 8 to select the Programs in each group. For example, to select HONKYPN0, press the light grey key **PIANO** to select the group of Piano Programs then, *in the bottom line*, **Key 6** to select the specific program; to select ACCORDION, press the light grey key **ORGAN** to select the group of Organ Programs then, *in the bottom line*, **Key 8** to select the specific program and so on. The Programs are divided into families in the same way as the voices. The bottom line of numbered keys selects the 8 Programs in each family.

HOW TO SELECT A REGISTRATION

The 64 Registrations can contain all the panel settings and other parameters in the set up at the time they are memorized.

The panel settings and functions that can be saved in each Registration are as follows;

Program	Pianist
User	Easy Chord
Portamento	Full Chord
Arranger A, B, C, D	Key Start/Stop
Voice Bank 2	Swell
Jump	Pedalboard
Pattern	Rotor Slow/Fast
Bass	Aftertouch
Chord 1, 2, 3	Hold
Split	Tempo
Voice N°	Program N°
Rhythm	Volumes
MIDI Reception parameters	Pitch Menu parameters
Aftertouch Menu parameters	Arabic Scale Menu parameters
Chord Name On/Off	Footswitch menu
Crash On/Off	Map & Lead Menu
Retrigger menu	Octave Hold Menu
DRUMS - Drum Set Menu	DRUMS - Volume/Reverb Menu
DRUMS - On/Off Menu	Effects Menu
Global Transpose	

This means that any of the above settings or functions that are active (led 'ON') at the moment the Registration is saved, will be reactivated when that Registration number is recalled.

To save a set up in a particular Registration number:

1. Press **SAVE/NAME**



2. The following display will appear:

SAVE/NAME

```

SAVE REGISTR :          REG_001  to  REG_001
<< Down   Up >>          Cancel   Save

```

3. The first character in the registration name in the top right hand corner will flash, indicating that it can be changed.
4. This display enables you to give a name to the Registration. The first letter in the name will be flashing when the above display appears, indicating that the name is ready to be modified if desired. To change the name, first use the **F5** (<<Down) and **F6** (Up>>) to select the character to be written. Then use the light grey keys in the top two lines of the VOICE BANK section on the right of the display to achieve this. These keys should be used in accordance with the blue inscriptions above each one. Repeatedly pressing these keys will show the number and letters for each key in a cyclic manner in the display, enabling you to select the characters for the name.
5. Once satisfied with the name, press **F8** (Save) to memorize the Registration with the name given. If you decide not to save the Registration, press **F7** (Cancel) to return to the LIVE MENU (the led indicator above the EDIT key will turn 'OFF', indicating that you have left the editing environment).

In this way the current set up of panel controls and menu functions will have been saved in the Registration number written and can be recalled at any time as explained below.

The Registrations are selected, as for the Voices and Programs, by means of the keys in the VOICE BANK section of keys. The only difference being in that as 64 Registrations are selectable, only the top line of light grey keys is used to select the groups of Registrations (1 to 8, 9 to 16, 17 to 24 and so on), whereas the bottom line of keys numbered from 1 to 8 are used to to select the Registration in each group as before.

To select a REGISTRATION:

1. Press **REGISTRATION**.
2. Select the group containing the Registration required by means of the top line of **light grey keys** in the **VOICE BANK** section, then select the Registration number by pressing the relative **key numbered from 1 to 8** in the bottom line.



The panel leds indicating the keys active in the Registration selected will automatically turn 'ON' and all the functions and parameters saved in the various menus will automatically be activated.

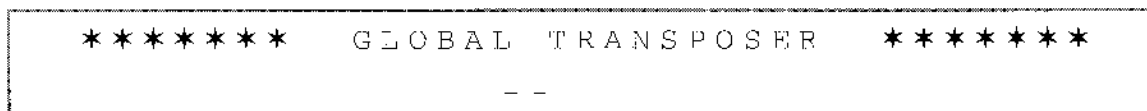
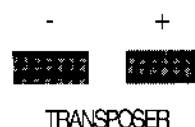
LIVE PERFORMANCE CONTROLS

The “Live Performance” controls are so called because they are used during live performances. The MS60/50 has been designed to meet all the needs for live playing, and for this reason it is equipped with a large number of this kind of controls.

TRANSPOSER +/-

These keys change the key of the MS60/50 in a range from -24 to +24 semitones.

1. Press either the - or + **TRANSPOSER** key to respectively flatten or sharpen the tuning. The display will show as follows:



2. Repress the relative key (- or +) while the display is still showing. Each time you press the key the instrument tuning will be flattened or sharpened accordingly by one semitone.
N.B. - If neither key is pressed immediately, while the display is still showing, this will return to show the LIVE menu.

SLOW - ROTOR - FAST

The SLOW/FAST ROTOR keys are used to select the two different ROTOR effect speeds. The instrument passes immediately from “effect off” to one of the two speeds, but it passes gradually from one speed to another. The status of the effect is shown by the led indicators that will be ‘ON’ for the effect selected. Both leds ‘OFF’ indicate that no Rotor effect is selected.

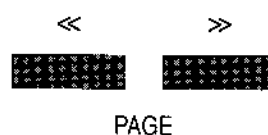


The ROTOR effect only works on all the ORGAN voices except PIPE, CHURCH and POSITIVE.

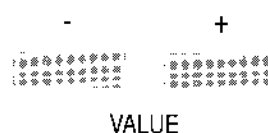
PAGE << >>

These two keys are used in certain conditions of the display to return to the previous page or move to the next one, in those functions where more than one page is used for the programming of the parameters, or when all the parameters or files (Songs, Patterns) etc. cannot be shown on one page.

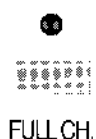
Simultaneously press both the **PAGE <<>>** keys blocks the voices of the Arranger so that they are not changed when you select a new Style.

**VALUE +/-**

The values of various parameters in the displays used for the programming of the MS60/50 can be varied by using these two keys. Their use is fully explained in the paragraph concerning each specific case.

**FULL CH. (FULL CHORD)**

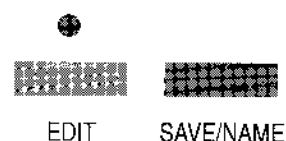
When FULL CHORD is pressed (led 'ON'), all the notes of the chords played in the left section of the keyboard are repeated by the keys played in the Right Hand section.

**AFTERTOUCH**

This key activates and deactivates the Aftertouch; when activated, this will perform with the parameters selected by pressing **F4** when the MAIN EDIT display is showing after the **EDIT** key has been pressed - led indicator 'ON'. See AFTERTOUCH MENU on page 3.21 in Chapter 3 - "PROGRAMMING THE MS60/50".

**EDIT, SAVE/NAME**

These two keys are used to enter into the EDIT MENU (EDIT) and to carry out the various memorizing operations and name writing procedures during the programming of the instrument (SAVE/NAME). See also the beginning of Chapter 3 - "PROGRAMMING THE MS60/50".

**DISK**

This key, when pressed, opens the following DISK EDIT sub menu:



DISK_UTIL	DIRECTORY	DELETE	RENAME
COPY	TRANSPOSE	TEMPO	CHAINS

As can be seen, several functions are shown in this DISK EDIT sub menu and these can be programmed by appropriate selection with the Function keys, as explained on the next page.

DISK_UTIL - F1

Press **F1** (DISK_UTIL) to open the following display:

```
FREE      120 Kbytes (16 %)   FILES   8
DISK FORMAT                Cancel   Confirm
```

This display shows the amount of free memory space available on the disk (in Kbytes and percentage), the number of files currently on the disk and enables the disk to be formatted if required. To return to the DISK EDIT sub menu, press **F7** (Cancel). To format the disk, first press **F8** (Confirm) when the display below will be shown:

```
DISK FORMAT:                ERASING ALL DATA
ARE YOU SURE ?             No      Yes
```

At this point you can either proceed with the formatting by repressing **F8** (Yes), remembering that *all the data on the disk will be cancelled*, or return to the DISK EDIT sub menu by pressing **F7** (No). If you proceed with the disk formatting, a further display will be shown as below:

```
DISKETTE FORMATTING
28 % Completed
```

This informs you of the progress as the formatting is carried out. When the process is completed, the display will return to the DISK EDIT display shown at the top of the page.

DIRECTORY - F2

Press **F2** (DIRECTORY) to open the following sub menu:

```
Global      Snd      Registr     Program
UserD.Set   UserVoice Song/Chn     Patt/Chain
```

This contains all the different types of files that might be on the disk. To see the list of each specific type, press the relative **function key F2 to F8** and the display will show all the files of that type on the disk. To see a complete list of all types of files on the disk, press **F1** (Global) and the display will show all the files on the disk irrespective of their type.

When no files of the type selected in the above display are present on the disk, the 'NO FILE FOUND' display will appear. Return to the DISK EDIT sub menu by pressing **F8** (Cancel).

DELETE - F3

Press **F3** (DELETE) to open the sub menu below:

```
DELETE                Registr     Program
UserD.Set   UserVoice Song/Chn     Patt/Chain
```

This shows the 8 types of file that might be found on the disk. To cancel a specific file, first select the type by pressing the relative **function key F3 to F8** to show the list of this type of file (if no file

of the selected type is present, 'NO FILE FOUND' is shown).

In the case of F7 and F8 (Song/Chn and Patt/Chain) an intermediate display will be shown, enabling you to select between these two types of file by appropriately pressing F1 or F5. Now select the file to be cancelled by pressing the corresponding **function key**. At this point you will be asked to confirm your decision by pressing F8 (Confirm) to cancel the file or F7 (Cancel). In both cases the DISK EDIT sub menu will then be restored

RENAME - F4

Press F4 (RENAME) to open the following sub menu:

```

R E N A M E                R e g i s t r   P r o g r a m
U s e r D . S e t   U s e r V o i c e   S o n g / C h n   P a t t / C h a i n

```

As in the Delete function, this shows the 8 types of file that might be found on the disk. To rename a specific file, first select the type by pressing the relative **function key F3 to F8** to show the list of this type of file (if no file of the selected type is present, 'NO FILE FOUND' is shown).

In the case of F7 and F8 (Song/Chn and Patt/Chain) an intermediate display will be shown, enabling you to select between these two types of file by appropriately pressing F1 or F5. Now select the file to be renamed by pressing the corresponding **function key**. At this point the following display will be shown:

```

R E N A M E :                B O R N T O B E   T O   B O R N T O B E
< <   D o w n                U p   > >                D i r                C o n f i r m

```

The first letter of the name in the top right hand corner of the display is flashing, showing that it is ready to be changed. This can be done by following the procedure used for the naming of a Registration, explained in point 4 of HOW TO SELECT A REGISTRATION on page 2.21.

COPY - F5

Press F5 (COPY) to open the COPY sub menu similar to that in the Rename function. The selection method is the same as before and also in this case you can rename the copy if required. A different name must be used if the disk onto which the copy is to be made is the same as that containing the original. This will avoid repeating the copy procedure when the display warns you that the same file name already exists.

1. Press F8 (Confirm), the following display will appear:

```

I N S E R T   T A R G E T   D I S K E T T E
                                                D i r                C o n f i r m

```

At this point the target disk should be inserted in the drive. This is the disk onto which the copy

will be made and although it can be the same disk that contained the original, this must however be extracted and then re-inserted in this and each stage of the procedure.

2. Re-press **F8** (Confirm) when, if the name was not changed, after the 'Please Wait' message, the display will show as follows:

```
FILE ALREADY EXISTS
                                C a n c e l       O v e r w r i t e
```

At this point you can either decide to go ahead by pressing **F8** (Overwrite), in which case the original will be cancelled (overwritten), or **F7** (Cancel) to return to the DISK EDIT sub menu and repeat the procedure with a different name.

If a disk different to the one containing the original is used for the copy, when you press **F8** (Confirm), after the 'Please Wait' message the display will show as below:

```
INSERT SOURCE DISKETTE
                                D i r           C o n f i r m
```

3. Press the button on the drive to extract the target disk (used for the copy) and then insert the source disk (containing the original). Press **F8** (Confirm); after a short while the display will again ask you to insert the target disk. The procedure is repeated a number of times (each time confirmed by pressing **F8**), depending on the size of the file, until the copy is completed. When the copy is completed, the display will return to the DISK EDIT sub menu.

TRANSPOSE - F6

Press **F6** (TRANSPOSE) to open the list of songs on the disk as shown below:

```
BECAUSETI  BORNTOBEI  DTSCOINFI  DONTYOUWI
DREAMLOVI  EXTERMINI  FUNKYTOWI  LIFE      I >
```

Select the song that you want to transpose by pressing the corresponding **function key**. The display will then change to show:

```
GLOBAL TRANSPOSER :           [ EXTERMIN ]
SONG   TRANSPOSER :           D i r
```

This display gives you the choice of making two types of Transposing. When you press **F1** (GLOBAL TRANSPOSER) a further display will open in which you can carry out the setting, as shown on following page:

```

GLOBAL TRANSPOSE [EXTERMIN]      0
                                Dir  Confirm

```

The GLOBAL TRANSPOSER transposes both the MIDI Song and the keyboard enabling you to play with the song in the usual key positions on the keyboard, although what you play will be in the new key.

The direct transposition of the keyboard notes that is made, also in fact modifies the SPLIT (although the indication on the display remains unaltered).

In this way the various sections of the Arranger (Bass and Chords) will always work in their best ranges even with very high values of Transposition values ± 12 .

The other type of Transposer available is called the SONG TRANSPOSER and this is selected by pressing **F5**. In this case though, only the MIDI Song is transposed and in order to use the same key positions on the keyboard, the player will have to carry out any changes needed to the pitch of the keyboard by means of the **TRANSPOSER +/-** keys.

In both cases the newly transposed Song is saved by pressing **F8** (Confirm). The display will show as follows:

```

ASSIGN SONG NAME EXTERMIN TO    EXTERMIN
<< Down      Up >>           Dir      Save

```

Press **F8** (Save) to save with a new name, keeping the version of the song in the original pitch, write the name by the usual method as explained in point 4 of HOW TO SELECT A REGISTRATION on page 2.21 and press **F8**.

If you want to replace the original, just immediately press **F8** (Save) without giving a new name.

TEMPO - F7

The Tempo of each song on the disk can be individually set by pressing **F7** (TEMPO) with the DISK EDIT sub menu showing. The display will then show the list of the songs on the disk as in the Transpose function explained previously. When the song in which you want to modify the tempo has been selected by pressing the corresponding **function key**, the display will show as follows:

```

SONG TEMPO          [BORNTOBE] TEMPO  0
                                Dir  Confirm

```

This display which shows the name of the selected song in the centre of the top line, enables the current TEMPO value (flashing in the top right hand corner) to be changed. The value can be modified within a range between -63 to +63 by means of the **VALUE +/-** keys. The value can quickly be set to 0 by pressing **both VALUE keys** simultaneously. Save the new setting by pressing **F8** (Confirm) when the display will ask you to assign a name to the song. The name can be changed if required by the normal method - as described in point 4 of HOW TO SELECT A REGISTRATION on page 2.21. You are advised to change the name of the song at this stage, if you want to keep the original, because otherwise this will be cancelled.

Press **F8** (Save) to complete the procedure and save the modified song onto the disk or **F7** (Dir) to return to the song list without saving the new Tempo setting.

CHAINS - F8

Press **F8** (CHAINS) to open the following display:

SONG CHAIN	Create	View
PATTERN CHAIN	Create	View

To view the chains currently on the disk, press **F4** for the SONG CHAINS or **F8** for the PATTERN CHAINS.

The display will show the list of all the chains of the type selected currently present on the disk. To view all the songs or patterns in a specific chain, press the corresponding **function key**.

To create a chain of songs or patterns press **F3** or **F7** respectively and the following display will appear (in this case for a Song Chain):

→ BECAUSET ←

This is showing the first song in the chain which can be changed if required, as indicated by the arrows, by means of the **VALUE +/- keys** used to scroll through the list of songs on the disk. When the first song in the chain has been decided, press **F2** to select the song for the second position in the chain; the display will show as follows:

BECAUSET	→ BECAUSET ←
----------	--------------

This shows the song currently in the second position of the chain (a new position inserted always shows the same song as the previous one), but as this is now indicated by the arrows, it can be changed by means of the **VALUE +/- keys** as before. The procedure can be repeated for as many songs as you want to put in the chain. If you want to change a song in a chain already made up, press the **function key** corresponding to the position in which you want to make the change. This will then be indicated by the arrows, showing that it can be changed.

Once the Song or Pattern Chain has been defined, it must be saved by pressing **SAVE/ENTER** on the left of the display. You will be asked to assign a name to the chain and this can be done by the usual means. After writing the name, press **F8** (Save) to save the chain on disk.

Remember that to view the list of the Chains currently on the disk, press the blue **DISK** key on the left of the display to open the DISK EDIT menu, then press **F2** (DIRECTORY) with this menu showing and then either **F7** (Song/Chn) or **F8** (Patt/Chain) to respectively see the list of Song or Pattern Chains. The list shown in the display will contain Songs/Patterns or Song/Pattern Chains. The Chains are identified by the letter 'c' shown on the right of each one. The Songs or Patterns are shown with an 'm' in this position.

PORTAMENTO

This key enables you to activate the PORTAMENTO effect (led 'ON'). When you play a note on the right hand section of the keyboard before releasing the one played previously, the pitch of this second note will be reached by 'sliding' from the pitch of the previous one. The note will slide up or down depending on whether the second key pressed is higher or lower than the previous one. This effect can frequently be heard in Steel Guitar or Trombone playing.



The 'glide rate' between the two notes can be set in the Portamento Speed parameter (F8) in the PITCH MENU described on page 3.20 in Chapter 3 - "PROGRAMMING THE MS60/50".

OCTAVE DOWN

This key, when pressed (led 'ON'), enables you to lower the notes played on the right hand section of the keyboard by one octave. Repressing the key (led 'OFF'), will return the notes to the normal pitch.



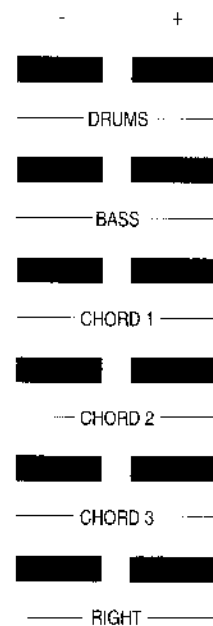
VOLUMES - +

The - and + keys allow you to set the volumes of the Drums, Bass, Chord 1, Chord 2, Chord 3 and the Right (Solo) section.

To increase the volume of a certain section, press the corresponding **+ key**. **To decrease the volume**, press the **- key**. The values available range from 0 to 63.

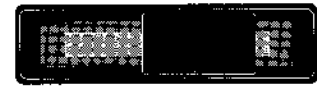
On **pressing both keys** of a section the **volume is set to zero** (the section does not play). Pressing the **+ key** resets the **previous value**.

The changes in the volume of the various section will be immediately shown in the LIVE display in the corresponding position (see diagram on page 2.6).



MASTER VOLUME

The MASTER cursor allows you to adjust the overall volume of the MS60/50.



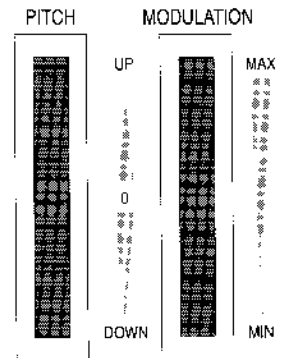
MASTER

PITCH AND MODULATION WHEEL

The PITCH WHEEL sharpens or flattens the notes you play according which way it is rotated. Rotating the wheel **forwards** flattens the notes, rotating it **backwards** (towards you) sharpens them. The variation produced by the Pitch Wheel can be set in the PITCH MENU on page 3.20 in Chapter 3 - "PROGRAMMING THE MS60/50". This wheel automatically returns to the centre position.

The MODULATION WHEEL gradually adds the modulation (or Vibrato) to all the keyboard sounds.

The amount of Modulation effect that the wheel will have depends on the setting in the PITCH MENU on page 3.20 in Chapter 3 - "PROGRAMMING THE MS60/50".



3. PROGRAMMING THE MS60/50

MAIN EDIT MENU

The EDIT MENU contains all the programmable functions not directly accessible by means of the function keys F1 to F4 when in the LIVE menu explained previously. Press **EDIT** to open the EDIT MENU as shown below:

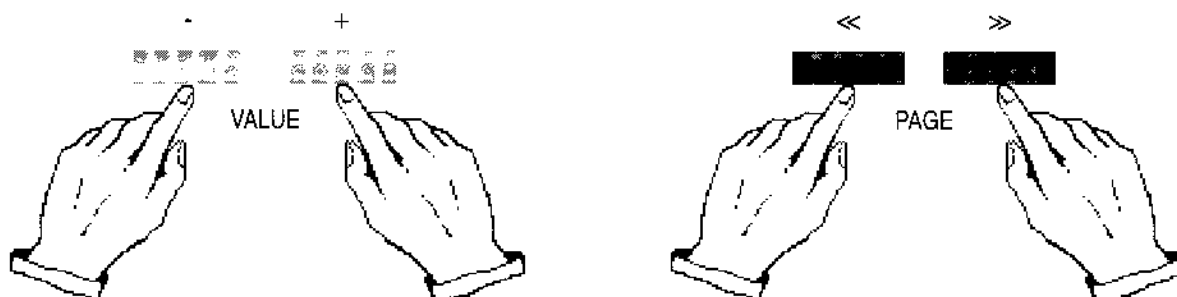


MIDI	PROGRAM	PITCH	AFTERTOUCH
UTILITIES	OUTASSIGN	ACCORD.	ARABIC

This main EDIT MENU contains eight programmable areas of the MS60/50 which can be accessed by pressing the relative function key **F1 to F8**.

The various menus **selected by the function keys** contain the programmable sections, the values of which can be set as follows:

- * The **FUNCTION keys F1 to F8** (where applicable) select the sub menus of each of the sections of the above display.
- * The same Function Keys are used to select the relative sections in each sub menu. When you press the function keys the corresponding 'Value' will flash in the display, indicating that it can be modified.
- * The 'Value' of each section (when flashing) is modified by means of the **VALUE +/- keys**.



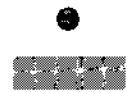
- * Because in some cases the programmable sections of some menus are too numerous to be contained in one page, or too many files are present, further pages can be selected by means of the **PAGE >>** key as in the case of the MIDI TX, MIDIRX, UTILITY and SONG PLAY sub menus etc.
- * The **PAGE <<** key is used to return to the previous display in the case of multiple pages of a menu or the EDIT MENU in the case of a single page.
- * The values and modes set for the various parameters will remain so until changed again.

All the sections of the EDIT MENU are fully explained in the following pages.

MIDI MENU - FUNCTION KEY F1

M.I.D.I. (Musical Instrument Digital Interface) is a standard communication protocol used for the transmission and reception of data between suitably implemented musical instruments.

After opening the EDIT MENU by pressing the **EDIT** key, press **F1** (MIDI) to open the MIDI MENU.



The following display will appear:

EDIT

M I D I T X	M I D I R X	C . C H A N G E	E X . M E S S
U T I L I T I E S	C L O C K	S O F T T H R U	D U M P

This display allows access to all the programmable MIDI functions of the MS60/50.

All the values that are set in the various sections will be automatically memorized and will remain so until modified.

These MIDI functions will now be examined and explained one by one.

CHAN_TX (TRANSMISSION CHANNEL)

With the MIDI MENU showing, as on the previous page, press **F1** (MIDITX) to open the following CHAN_TX (TRANSMISSION CHANNEL) display:

CHAN_TX	Right:1	Drum :10	Left :2
Bass:3	Chrd1:4	Chrd2:5	Chrd3:6

This first page refers to the MIDI transmission channels of the various sections of the MS60/50. By suitably setting the channel numbers for each section it is possible to transmit messages to external MIDI units (samplers, synthesizers or sound modules) enabling them to generate the corresponding notes of the MS60/50 sections. The MIDI **transmission** channel of the following sections or their deactivation can be made in this page:

RIGHT: Notes played by the **right hand** (from the split point to the top key of the keyboard).

DRUM: Notes played by the **percussion** instruments either manually (after pressing DRUM SET in the DRUMS section of keys on the left of the display) or automatically.

LEFT: Notes played by the **left hand** (from the split point to the bottom key of the keyboard).

BASS: **Bass** notes (manual or automatic).

CHORD 1, 2, 3: Notes played by the relative **chords 1, 2 and 3** either manually (Led above the relative CHORD key 'ON') or automatically (Led 'OFF').

Use the **function keys** to select the sections in which you want to set the MIDI channel (the value will flash in the display) and then enter the channel required by means of the **VALUE +/- keys**.

The values available range from 1 to 16, and "Off" (meaning that no MIDI transmission channel has been set for this section, and therefore will not transmit data via MIDI). By holding down either - or +, the values will quickly scroll in the corresponding direction until reaching 16 or "Off". To set the MIDI channels of a specific section in "Off", press both **VALUE +/- keys** simultaneously. Once the MIDI transmission channels have been set for the single sections, press **PAGE <<** to return to the MIDI MENU or **PAGE >>** to proceed to the next page (PROGRAM TRANSMISSION CHANNELS).

PROGRAM TRANSMISSION CHANNELS

With the previous CHAN_TX display showing, press **PAGE >>** to open the following PROGRAM TRANSMISSION CHANNELS display:

PROGRAM TRANSMISSION CHANNELS :			
Voice1:11	Voice2:12	Voice3:13	Voice4:14

This page refers to the MIDI TRANSMISSION channels for the four voices of the **RIGHT HAND**

Program. Suitable setting of the channel numbers for each voice will enable external MIDI units (samplers, synthesizers or sound modules) to play the notes of each voice of the **Program**.

Use the **function keys** (F5, F6, F7 and F8) to select the voice for which you want to set the MIDI channel (the channel number will flash in the display), then enter the channel numbers available from 1 to 16 or "Off" (meaning that no MIDI transmission channel has been set for this section, and therefore will not transmit data via MIDI). By holding down either - or +, the values will quickly scroll in the corresponding direction until reaching 16 or "Off". Once the MIDI transmission channels have been set or deactivated for the single voices, press **PAGE <<** repeatedly to return to the MIDI MENU or **PAGE >>** to proceed to the next page (TRANSPOSER_TX)

TRANSPOSER TX

With the previous PROGRAM TRANSMISSION CHANNELS menu showing press **PAGE >>** to open the TRANPOSER_TX display as shown below:

TRANSPOSER_TX	Left : --	Right : --	
Bass : --	Chrd1 : --	Chrd2 : --	Chrd3 : --

This function makes it possible to transmit a MIDI message from the Left Hand, Right Hand, Bass or Chord sections (1, 2, and 3) of the MS60/50, enabling external MIDI units (synthesizers, keyboards etc.), programmed to the corresponding channels, to be transposed up or down over a range of two octaves *in semitone steps*.

IMPORTANT: This transposition refers only to the notes transmitted via MIDI and not to those produced by the MS60/50 itself. In other words, if you connect the MS60/50 "MIDI OUT" to the "MIDI IN" of another MIDI unit and suitably set the MIDI transmission and reception channels of both units, the unit receiving the data from the MS60/50 will play notes which are transposed over a possible range of ± 2 octaves (± 24 semitones) with respect to the notes played by the MS60/50 itself. The transposition values can be set independently for each section.

The following values can be set in this page:

After using the **function keys** (F3, F4, F5, F6, F7 and F8) to select the sections Left, Right, Bass, Chord 1, Chord 2 and Chord 3 respectively in which you want to set the transposition value (the value will flash in the display), enter the value required by means of the **VALUE +/- keys**.

The values available range from - 24 to + 24, and "- -" (meaning that no MIDI transposition transmission has been set for this section). By holding down either - or +, the values will quickly scroll in the corresponding direction until reaching the value - 24 or + 24. Pressing both VALUE keys at once will cancel any transposition value, - or +, and the display will show "- -" in that position.

The transposition messages for the Bass and Chord 1, 2 and 3 sections will be transmitted in both **manual** (with the Led 'ON' above the relative section keys of the MS60/50) and **automatic** modes (with the relative leds 'OFF'). Once the values have been set for the single sections, press **PAGE <<** repeatedly to return to the MIDI MENU or **PAGE >>** to proceed to the next page (PR.CN_TX).

PR.CN_TX (PROGRAM CHANGE TRANSMISSION)

PR.CN_TX	Voice:On	Drum :On	Right:On
Bass:On	Chrd1:On	Chrd2:On	Chrd3:On

This page enables you to activate or deactivate the *transmission* of the MIDI Program Change commands for each section. By selecting **ON**, each time you change a sound in a section of the MS60/50, a MIDI Program Change command will be transmitted. If you select **OFF**, this MIDI command will not be transmitted.

Press the respective **FUNCTION KEYS** (F2, F3, F4, F5, F6, F7 and F8) to activate or deactivate the Program Change command (ON or OFF) in each of the Voice, Drum, Right, Bass, Chord 1, Chord 2 and Chord 3 sections.

The sections that are deactivated (OFF), will not transmit the Program Change via MIDI. Once the command has been activated or deactivated in the single sections, press **PAGE <<** repeatedly to return to the MIDI MENU or **PAGE >>** to proceed to the next page (REGISTRATION TX CHANNEL).

REGISTRATION TX CHANNEL

REGISTRATION TX CHANNEL	Ch:Off
-------------------------	--------

This display enables the MIDI transmission channel for the **Registration** to be set or turned 'OFF'. More precisely, the channel indicated above, if not in 'Off', transmits the Program Change relative to the Registration selected on the panel.

Press **F4** to enable the channel number to be set.

The channel number (in the top right hand corner of the display) will flash, showing that it can be changed or deactivated (Off) by means of the **VALUE +/-** keys. The Registration will be transmitted on the channel shown in the display or not transmitted at all if set to 'Off'.

Once the Registration Transmission Channel has been set or deactivated, press **PAGE <<** 5 times to return to the MIDI MENU shown below:

MIDITX	MIDIRX	C.CHANGE	EX.MESS
UTILITIES	CLOCK	SOFTTHRU	DUMP

With this display showing, you can either return to the EDIT MENU by repressing **PAGE <<** or open the MIDI RX menu by pressing **F2**.

CHAN_RX (RECEPTION CHANNEL)

With the MIDI display showing, as on the previous page, press **F2** (MIDIRX) to open the following CHAN_RX (RECEPTION CHANNEL) display:

CHAN_RX	Right : 1	Drum : 10	Left : 2
Bass : 3	Chr d 1 : 4	Chr d 2 : 5	Chr d 3 : 6

This page refers to the MIDI reception channels of the various sections of the MS60/50. By suitably setting the channel numbers for each section, it is possible to receive messages from external MIDI units (samplers, synthesizers or sound modules) set to transmit on corresponding channels. This will enable them to play the notes of the MS60/50 sections shown in the above display. The MIDI **reception** channel of the following sections or their deactivation can be made in this page:

RIGHT: **Right hand** notes (from the split point to the top key of the keyboard).

DRUM: **Percussion** instruments.

LEFT: **Left hand** notes (from the split point to the bottom key of the keyboard).

BASS: **Bass** notes played either manually or automatically.

CHORD 1, 2, 3: **Chords 1, 2 and 3** notes played either manually (Led above the relative CHORD key 'ON') or automatically (Led 'OFF').

Use the **function keys** to select the sections in which you want to set the MIDI channel (the value will flash in the display) and then enter the channel required by means of the **VALUE +/- keys**. The values available range from 1 to 16, and "Off" (meaning that no MIDI reception channel has been set for this section, and therefore will not receive data via MIDI). By holding down either - or +, the values will quickly scroll in the corresponding direction until reaching 16 or "Off". Once the MIDI transmission channels have been set for the single sections, press **PAGE <<** to return to the MIDI MENU or **PAGE >>** to proceed to the next page (PROGRAM RECEPTION CHANNELS).

PROGRAM RECEPTION CHANNELS

With the previous CHAN_RX display showing, press **PAGE >>** to open the following PROGRAM RECEPTION CHANNELS display:

PROGRAM RECEPTION CHANNELS :
Voice1 : 11 Voice2 : 12 Voice3 : 13 Voice4 : 14

This page refers to the MIDI reception channels for the four voices of the **RIGHT HAND** Program. Suitable setting of the channel numbers for each voice will enable the MS60/50 to receive messages

from external MIDI units (samplers, synthesizers or sound modules), enabling these to play the notes of the voices in the Program corresponding to the same MIDI channel numbers.

Use the **function keys** (F5, F6, F7 and F8) to select the voice for which you want to set the MIDI channel (the channel number will flash in the display), then enter the channel numbers available from 1 to 16 or "Off" (meaning that no MIDI reception channel has been set for this section, and therefore will not receive data via MIDI). By holding down either - or +, the values will quickly scroll in the corresponding direction until reaching 16 or "Off". Once the MIDI reception channels have been set or deactivated for the single voices, press **PAGE <<** repeatedly to return to the MIDI MENU or **PAGE >>** to proceed to the next page (TRANSPOSER_RX)

TRANSPOSER RX

With the previous PROGRAM RECEPTION CHANNELS menu showing press **PAGE >>** to open the TRANSPOSER_RX display as shown below:

TRANSPOSER_RX	Left : - -	Right : - -
Bass : - -	Chrd1 : - -	Chrd2 : - -
	Chrd3 : - -	

This function makes it possible to receive messages from external MIDI units (synthesizers, keyboards etc.) programmed to the corresponding channels, enabling them to play the notes of the Left Hand, Right Hand, Bass or Chord sections (1, 2, and 3) of the MS60/50, transposed up or down over a range of two octaves *in semitone steps*.

IMPORTANT: This transposition refers only to the notes received via MIDI and not to those produced by the MS60/50 itself. In other words, if you connect the MS60/50 "MIDI IN 2" to the "MIDI OUT" of another MIDI unit and suitably set the MIDI transmission and reception channels of both units, the MS60/50 will play notes which are transposed over a possible range of ± 2 octaves (± 24 semitones) with respect to the notes generated by the external units. The transposition values can be independently set for each section.

Use the **function keys** (F3, F4, F5, F6, F7 and F8) to select the sections Left, Right, Bass, Chord 1, Chord 2 and Chord 3 respectively in which you want to set the transposition value (the value will flash in the display) and then enter the value required by means of the **VALUE +/- keys**.

The values available range from - 24 to + 24, and "- -" (meaning that no MIDI transposition reception has been set for this section). By holding down either - or +, the values will quickly scroll in the corresponding direction until reaching the value - 24 or + 24. Pressing both VALUE keys at once will cancel any transposition value, and the display will show "- -" in that position.

Once the values have been set for the single sections, press **PAGE <<** repeatedly to return to the MIDI MENU or **PAGE >>** to proceed to the next page (PR.CN_RX)

PR.CN_RX (PROGRAM CHANGE RECEPTION)

PR.CN_RX	Voice:On	Drum :On	Right:On
Bass:On	Chrd1:On	Chrd2:On	Chrd3:On

This page enables you to activate or deactivate the *reception* of the MIDI Program Change commands for each section. By selecting **On**, each time you change a sound in an external unit, a MIDI Program Change command will be received by the MS60/50 section corresponding to the same MIDI channel number. If you select **Off**, this MIDI command will not be received.

Press the respective **FUNCTION KEYS** (F2, F3, F4, F5, F6, F7 and F8) to activate or deactivate the Program Change command (On or Off) in each of the Voice, Drum, Right, Bass, Chord 1, Chord 2 and Chord 3 sections.

The sections that are deactivated (Off), will not receive the Program Change via MIDI. Once the command has been activated or deactivated in the single sections, press **PAGE <<** repeatedly to return to the MIDI MENU or **PAGE >>** to proceed to the next page (REGISTRATION RX CHANNEL).

REGISTRATION RX CHANNEL

REGISTRATION RX CHANNEL	Ch:15
LEFT & RIGHT GLOBAL CHANNEL	Ch:16

This display enables the MIDI reception channels for the Registration and Left & Right Global to be set or turned 'Off'.

On the channel relative to the REGISTRATION RX, the Program Change of the Registration will be received, if this is not in 'Off'; remember that the REGISTRATION key must be 'On'.

To set the channel for the Registration reception, press **F4**. The channel number will flash showing that it can be changed or deactivated (Off) by means of the **VALUE +/- keys**.

The channel relative to the LEFT & RIGHT GLOBAL enables the total control of the MS60/50 from a Master Keyboard or other keyboard that transmits on only one channel. In this mode all the splits set on the MS60/50 will be respected. The operation is simple; connect a MIDI cable from the MIDI OUT socket on the Master or Keyboard to the MIDI IN 2 socket on the MS60/50 and then appropriately set the MIDI channels of both units.

To set the channel for the Left & Right Global reception, press **F8**.

The channel number will flash showing that it can be changed or deactivated (Off) by means of the **VALUE +/- keys**. Once the Channels have been set or deactivated, press **PAGE <<** 5 times to return to the MIDI MENU.

MIDITX	MIDIRX	C.CHANGE	EX.MESS
UTILITIES	CLOCK	SOFTTHRU	DUMP

With this display showing, you can either return to the EDIT MENU by repressing **PAGE <<** or open the CONTROL CHANGE menu by pressing **F3**.

CONTROL CHANGE

With the main MIDI MENU showing as below:

M I D I T X	M I D I R X	C . C H A N G E	E X . M E S S
U T I L I T I E S	C L O C K	S O F T T H R U	D U M P

Press **F3** (C.CHANGE) to open the following display:

C . C H A N G E : V O L U M E	T r a n s m i t : O n
	R e c e i v e : O n

As soon as the display appears, the "Volume" control will be flashing. To select further controls (VOLUME, PAN, CHORUS, REVERBERATION, MODULATION, EXPRESSION, RPN and NRPN) use the **VALUE +/-** keys.

The Transmission and Reception of the selected Control Change command is activated ('On') or deactivated ('Off') by repeatedly pressing the **function keys F4** and **F8** respectively. To transmit the Control Change from the MS60/50 to an external unit, the Transmit function (**F4**) should be set to 'On'. To enable the MS60/50 to receive a Control Change from an external unit, the Receive function (**F8**) should be set to 'On'.

Once the Control Change functions have been set, press **PAGE <<** to return to the MIDI MENU, shown at the top of the page, and then either repress **PAGE <<** to return to the main EDIT MENU or select another of the MIDI functions in the MIDI MENU by means of the Function keys.

EXCLUSIVE MESSAGE

With the MIDI MENU showing, press **F4** (EXCL.MESS) to open the following display:

E X C L U S I V E M E S S A G E :	T x : O n	R x : O n
T A B S :	T x : O f f	R x : O f f

This display enables the Exclusive message command transmission and reception to be activated ('On') or deactivated ('Off'). Furthermore the TABS control transmission and reception can be activated or deactivated.

Exclusive System Messages are different for each instrument; they refer to the internal structure of the instrument and are used to modify specific parameters. The exclusive codes of the MIDI songs are transmitted from the MIDI OUT socket.

To activate and deactivate the Transmission and Reception of the EXCLUSIVE MESSAGE command, repeatedly press the **function keys F3** and **F4** respectively.

In a similar manner, to activate and deactivate the Transmission and Reception of the TABS command, which refers to the changes made on the panel, repeatedly press the **function keys F7** and **F8** respectively. Press **PAGE <<** to return to the MIDI MENU.

UTILITIES

This sub menu of the MIDI enables various MIDI Utilities to be set up or activated/deactivated as follows:

Press **F5** (UTILITIES) with the MIDI MENU showing to open page 1 of the UTILITIES menu as shown below:

```
Key Velocity Curve   : 1
Bass to Pedal:Off Local Control   : On >
```

The functions of this menu can be selected with the relative **function keys F3 , F6 and F8**.set up as follows:

Key Velocity Curve (F3): After selection by pressing **F3** (the curve number will flash), use the **VALUE +/- keys** to select the dynamic curve required. The four curves available each represent a relationship between the pressure exerted on the key of the keyboard and the volume of sound produced.

Bass to Pedal (F6): When activated ('On') by pressing **F6**, the Manual Bass playing on the left hand section of the keyboard is deactivated. This enables the player to play the Bass notes on the *optional* MIDI Bass Pedalboard and the Chords on the keyboard, in a typical organist's manner.

Local Control (F8): Press **F8** repeatedly to select 'On' or 'Off' thereby activating or deactivating the Local Control command of the MS60/50. When the Local Control is 'Off', all the sections of the MS60/50 that are enabled for MIDI reception on a specific channel will be used only via MIDI. Therefore, if all the sections have been enabled with a MIDI reception channel, the MS60/50 can be used as a Sound Module. In this case the Local Control in 'Off' completely separates the keyboard from it's sound module.

On the contrary, if there are some sections of the MS60/50 with the MIDI reception channel in 'Off', these can be played directly on the keyboard.

Press **PAGE >>** to open page 2 of the MIDI UTILITIES as shown below:

```
MIDI DEFAULT                               Confirm
MIDI LOCK FOR REGISTRATION                 Off
```

This second page of MIDI Utilities contains the following two functions:

MIDI DEFAULT: The MIDI DEFAULT function makes it possible to quickly reset the maker's settings of the MS60/50.

Press **function key F4** (Confirm) to set the default values.

"Default" values are the values that the instrument automatically assumes when it is switched on the first time or after each HARD RESET operation (for further information on how to reset the MS60/50, refer to INITIALIZING THE MS60/50 section on page 4.1 in the APPENDIX).

When you press **F4** to confirm this operation you will lose the MIDI set up that you have programmed in the various menus.

MIDI LOCK FOR REGISTRATION

When this function is 'On', all the parameters are separated from the Registration. This means that when a Registration is recalled, this will not be able to vary the MIDI settings. On the contrary, when in 'Off', all the MIDI settings will be according to the last Registration recalled.

Suppose that you carried out some MIDI settings (for example, Right Hand on MIDI channel 1, Bass on MIDI channel 2 etc.) and memorized them in a Registration, then you made some different settings (for example, right hand on MIDI channel 3, bass on MIDI channel 4 etc.) and memorized them in another Registration.

Having done this, on changing from one Registration to another, the MIDI settings will vary, causing an interruption in the communication with an external MIDI unit. Consider a case where an expander is connected to the MS60/50 with the intention of creating a second sound for the solo:

In the first Registration proposed above, the expander will be set to receive on MIDI channel 1, but on passing to the second example (that is with the Right Hand set to MIDI channel 3), the expander (set to receive on channel 1) will not be able to carry out its function of providing the second solo instrument for the right hand.

To solve this problem the "MIDI LOCK" function has been implemented enabling the temporary deactivation of the MIDI settings memorized in the Registration, at the same time compelling all Registrations to use the current MIDI settings selected in the MIDI menu.

In this way all the Registrations have the same settings and changing to another causes no problems for the external units connected.

Press **PAGE << twice** to return to the MIDI MENU below:

MIDITX	MIDIRX	C.CHANGE	EX.MESS
UTILITIES	CLOCK	SOFTTHRU	DUMP

CLOCK

This function enables the MS60/50 to be synchronized with external MIDI instruments capable of transmitting a 'clock' signal (MIDI CLOCK IN). It also establishes whether the clock signal produced by the MS60/50 will be transmitted to external MIDI instruments connected to it or not (MIDI CLOCK OUT).

Press **F6 (CLOCK)** in the above menu to open the display below:

MIDI CLOCK IN	Inactive
MIDI CLOCK OUT	Inactive

The display is showing the default settings for the clock, that is both functions deactivated.

MIDI CLOCK IN

Press **F4** to activate the MIDI CLOCK IN function and vice-versa to deactivate it when 'Active' is shown. When the CLOCK IN is **Active**, the MS60/50 waits for an incoming MIDI "clock" and synchronizes with it. This function makes it possible to synchronize several MIDI units, and in this case the MS60/50 can be synchronized with other units which can be keyboards, expanders, sequencers, etc., or any other MIDI units capable of transmitting a MIDI clock signal.

When **Inactive** is shown, any external clock signal received at the MIDI IN socket of the MS60/50 will have no effect.

MIDI CLOCK OUT

You can activate or deactivate this function by repeatedly pressing **F8**. When the display is showing **Active**, the Automatic Accompaniment and Percussion sections of any external MIDI units connected to the MS60/50, will play in perfect synchronism. When **Inactive**, no clock message will be transmitted from the MS60/50 and therefore the external units will not be able to synchronize with it.

Press **PAGE <<** to return to the MIDI MENU.

SOFT MIDI THRU

Press **F7** (SOFTTHRU) to show the following menu:

SOFT MIDI THRU	Midi1:Off
	Midi2:Off

This function allows the through transmission of all software received by the MIDI IN 1 and MIDI IN 2 sockets to the MIDI OUT socket. When MIDI 1 is 'Off', this means that the messages received by the MIDI IN 1 socket do not have to be re-transmitted via the MIDI OUT socket. On the contrary, when MIDI 1 is 'On', this means that all messages received by the MIDI IN 1 socket have to be fed to the MIDI OUT socket for re-transmission. The MIDI IN 2 function is identical. The display is showing the default condition of this function for both Midi 1 and Midi 2, which can be activated separately by pressing **F4** and **F8** respectively.

Press **PAGE <<** to return to the MIDI MENU.

DUMP

This page allows you to select the various **Patterns**, **User Drum Sets**, **User Voices**, **Programs** and **Registrations** that you want to 'Dump' via MIDI. Dump means unload, and in this case you can carry out single or global dumpings of all the sections except the User Drum Set, which is single.

When you select GLOBAL in the relative display, the sections of the Patterns, User Voices etc., depending on which you have selected, will be stored in an external unit such as a MIDI Data Recorder in one single operation. These units are able to store the data coming from any MIDI equipment.

In this way you can build up complete libraries of sounds, Patterns, Registrations etc., and as the operation can be repeated an infinite number of times, you can always unload the entire memory contents of your MS60/50 onto disk and then save new material in its place. The same operation can also be carried out by a computer.

To carry out a 'Dumping' operation follow this procedure:

Press **F8** (DUMP) with the MIDI MENU showing to show the following MIDI DUMP display:

```
MIDI DUMP                               Pattern
UserD.Set  UserVoice  Program  Registr.
```

Select the section you want to dump by pressing the relative **function key** (F4 to F8), for example **F6** (User Voice). The following display will show:

```
DUMP USER VOICE           Global       Single
                          <Cancel>   <Send>
```

This display will be similar when you select Patterns, User Voice, Program and Registr. (Registrations) and the procedure is the same for all these.

To dump all the User Voices in this case, press **F3** and then **F8**; the MS60/50 will transmit all the User Voices in one block to the external memory unit (Disk etc.).

To dump a single User Voice or several specific ones, press **F4** (Single). The first User Voice number will flash in the display and this can be changed by pressing the **VALUE +/-** keys to select the one that you want to dump. Once selected, press **F8** (<Send>) to transmit this via MIDI to the external memory unit.

When selecting **UserD.Set** by pressing **F5** with the MIDI DUMP menu showing, the display will show:

```
DUMP USER DRUM SET
                          <Cancel>   <Send>
```

In this case you can carry out the dumping of the User Drum Set by pressing **F8** or return to the MIDI DUMP menu by pressing **F7** (<Cancel>).

PROGRAM MENU - FUNCTION KEY F2

This menu enables you to memorize combinations of up to four different voices, which can be used in three different operating modes: PATCH, DUET and TRIO. Furthermore it enables the Reverberation, Chorus and Rotor effects to be applied to each of the 4 voices as required.

With the EDIT MENU showing as below:

M I D T	PROGRAM	P I T C H	A F T E R T O U C H
U T I L I T I E S	O U T A S S I G N	A C C O R D .	A R A B I C

Press **F2** (PROGRAM) to open the EDIT PROGRAM menu as follows:

E D I T PROGRAM : [P I A N O 1]			
P A T C H ←	D U E T	T R I O	E F F E C T

The display shows the flashing name of the Program last selected in this menu which can be changed if required, by the **VALUE +/-** keys, and the PATCH, DUET, TRIO and EFFECT functions which are selected by the relative function keys as explained later.

The **PATCH** mode allows four voices to be assigned to different areas of the keyboard, even overlaying them in the same area if desired. Volume, Transposition (Shift), Detune and keyboard area can be set for each single voice.

In the **DUET** mode the voices played depend on how many keys are pressed down. If you select piano and strings for the two voices, the first key pressed will always correspond to the piano, while, with the previous key being held down, the second will play the strings. If you play a series of notes one after the other (staccato), they will all play the first key sound; that is, piano. If for example you press a C note, the piano will play, and if, while keeping this pressed, you now press an E, this second key will play the strings. If you keep the C key pressed down, release the E and then press an F, this latter key will again play the strings (this now being the second key pressed). If you now release both keys and then press a D for example, this will play a piano again because it is considered as the first key pressed, and so on.

If the Program also contains other voices, these will play normally and can be located in the same area as the DUET voices or elsewhere as desired. In this mode, the two voices in the F1 and F2 positions of the display will play as a DUET, while those in the F3 and F4 positions will play polyphonically if not turned 'Off'.

The **TRIO** mode performs similar to the above DUET mode, but in this case three voices are involved and are played respectively by the first three keys pressed. If the Program also contains a fourth voice, this can be located in the same area as the TRIO voices or elsewhere as desired.

In this mode, the three voices in the F1, F2 and F3 positions of the display will play as a TRIO, and only that in the F4 position will play polyphonically if not turned 'Off'.

The currently selected mode is indicated by an arrow to the right of the mode type.

The **EFFECT** function enables the REVERB., CHORUS, ROTOR, SUSTAIN and PAN effects levels to be set or turned 'Off' (-) for each section. After pressing **F8** (EFFECT), press the relative **function key F5 to F8** to select the section (the present value will flash), then set the level required for that effect or turn 'Off' by means of the **VALUE +/-** keys. Re-press the function key, while the value is flashing, to select the other effects in that section and then set the value as before.

The SUSTAIN control enables you to select which of the 4 voices in the Program will be effected by the Sustain Pedal, creating a HOLD effect, by setting it to 'On' or 'Off' for each of the Voices.

The programming method for the three modes is similar and the PATCH mode is considered in the following explanation.

With the EDIT PROGRAM display showing, press **F5** (PATCH). The following display will be shown:

GRAND	CONCERT	OFF	OFF
Vol. : 63	Vol. : 30	Vol. : 63	Vol. : 63

This display is showing the four default (or last selected) voices with their Volume values. The four voices can be selected independently by means of the relative **function keys F1 to F4**.

When a voice is selected by pressing the relative function key, this will start to flash in the display and can be changed by scrolling through the voices in each bank by means of the **VALUE +/- keys** (changing banks with the blue **1/2 * key** in the VOICE BANK section of keys on the right of the display) or by direct selection with the voice keys (see page 2.18).

To set a Voice in 'Off', just press **twice** the **function key** (F1 to F4) relative to the section that you want to exclude.

To change the Volume value of each voice, press the corresponding **function key F4 to F8**, the relative value will flash as shown below:

GRAND	CONCERT	OFF	OFF
Vol. : 63	Vol. : 30	Vol. : 63	Vol. : 63

This is changed by means of the **VALUE +/- keys** within a range of values from 0 to 63 in a cyclic manner.

Repressing the **same** function key, with the Volume value flashing, will open the display below:

GRAND	CONCERT	OFF	OFF
Shift : -12	Shift : -12	Shift : +12	Shift : -12

This will enable you to set the individual **SHIFT** values for each voice from -24 to +24 semitones (\pm two octaves), in steps of 1 semitone, by means of the **VALUE +/- keys**. Pressing both these keys simultaneously will show '--' in the value position and indicating that no shift (Transposition) is set for this voice.

Repressing the **same** function key, with the Shift value flashing, will open the display below:

GRAND	CONCERT	OFF	OFF
Detu. : +1	Detu. : -1	Detu. : --	Detu. : --

This will enable you to set the individual **DETUNE** values for each voice by \pm 1 semitone, in 64th steps, by means of the **VALUE +/- keys**. Pressing both these keys simultaneously will show '--' in the value position and indicating that no detuning is set for this voice.

The three parameters for each voice are selected in a cyclic manner by repeatedly pressing the relative **function key F5 to F8**.

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Press **PAGE >>** to proceed to the below display or **PAGE <<** once or twice to return to the EDIT PROGRAM or EDIT MENU respectively if programming the DUET or TRIO modes in which this display is not provided for:

GRAND	CONCERT	OFF	OFF
OFF - OFF	OFF - OFF	OFF - OFF	OFF - OFF

This is the display that enables you to assign the keyboard area for each of the four voices. To set the area for one of the voices, press the relative **function key**. For example, to set the keyboard area used to play the GRAND piano in the display above, press **F5**. The display will then show the display as below:

GRAND	CONCERT	OFF	OFF
OFF - OFF	OFF - OFF	OFF - OFF	OFF - OFF

The position in which you can set the note played by the bottom key of the keyboard area for this voice will be flashing in the display as shown.

NOTE: To set this note, if within the range from C² to C⁷, directly press the relative key on the keyboard. For the notes from C¹ to B¹ and from C^{#7} to C⁸, use the **VALUE +/- keys**. These can also be used as an alternative means to the keyboard for all settings, if preferred, irrespective of their note number. After setting the bottom note for the area, you can then set the top note; this will be flashing in the display as shown below:

GRAND	CONCERT	OFF	OFF
F 3 - C 8	OFF - OFF	OFF - OFF	OFF - OFF

Set this note in the same way as for the bottom one and then set the areas for the other voices in the Program by the same method, after selection with the relative **function key**.

You will notice that the key pressed does not correspond to the note number in the display; this is because, although the keyboard is composed of 61 keys, the actual note extension that can be assigned is of one octave above and below this (C¹ - C⁸), without transposition - see note above.

After setting the specific areas in which the four voices will play, you can set the key dynamics for each as follows (only in PATCH mode).

Press **PAGE>>** to open the following display:

GRAND	↔CONCERT	↔OFF	↔OFF	↔
KEY VELOCITY SWITCH THRESHOLD				64

The **KEY VELOCITY SWITCH THRESHOLD** enables the keyboard's dynamic characteristics to be used as a switch for the voices in the four sections of the Program. The Threshold value (that is the level

at which the switch will have effect) can be set from 1 to 127. In order to appreciate the examples below, you are advised to change the Voice corresponding to the **F2** position to NYLON by the normal voice selection method. To vary the threshold value, press **F8** when the current value will begin to flash as shown in the display below, and then set the value by means of the **VALUE +/-** keys within a range from 1 to 127.

```

GRAND    <-> NYLON    <-> OFF    <-> OFF    <->
KEY VELOCITY SWITCH THRESHOLD          6 4

```

The value can now be set by means of the **VALUE +/-** keys within a range of from 1 to 127.

Once the value has been set, a further parameter can be assigned to each voice, that is the type of dynamics involved (low velocity or high velocity).

With the settings shown by the arrows for the GRAND and NYLON voices in the above display, when playing on the keyboard, both voices will play together. Appropriate setting of the type of dynamics for each voice will enable you to play specific voices according to whether you play in a hard or soft manner. To set the most appropriate type of dynamic switch to the voice in question, press the relative function key (**F1 to F4**) with the above display showing. Both arrows showing indicate that the voice will play at any velocity; an arrow pointing to the **left** will enable the voice to play with a **low velocity** key movement and vice-versa an arrow pointing to the **right** will enable the voice to play with a **high velocity** key movement.

Press **F1** to flash the corresponding arrows in the display and then press the **VALUE -** key to set the L.H. arrow. In the same way, press **F2** and then press the **VALUE +** key to set the R.H. arrow. The display will then show as below:

```

GRAND    <  NYLON    - -> OFF    <-> OFF    <->
KEY VELOCITY SWITCH THRESHOLD          6 4

```

In this type of set up, the GRAND piano voice will play when you play lightly on the keyboard (*low velocity - arrow towards the left*) and the NYLON voice will play when you play harder (*high velocity - arrow towards the right*). The exact intervention point of the switch is decided by the setting made previously, shown on the bottom line of the display.

Now press **F1** to flash the arrow in this position and press both **VALUE +/-** keys together to change the display as shown below:

```

GRAND    <-> NYLON    -> OFF    <-> OFF    <->
KEY VELOCITY SWITCH THRESHOLD          6 4

```

With the settings for the two voices shown above, when you play lightly on the keyboard the GRAND piano will play, whereas the NYLON voice will not be heard as this has a high velocity setting (playing lightly does not activate the switch). If you play hard on the keyboard (*high velocity*), both the GRAND piano and the NYLON guitar will play.

To create an opposite situation, set the GRAND voice with a R.H. arrow in the normal way, and the NYLON voice without a switch setting (both arrows showing), changing the display as below:

```

GRAND    -> NYLON    <-> OFF    <-> OFF    <->
KEY VELOCITY SWITCH THRESHOLD          6 4

```

With these settings, when you play lightly on the keyboard (*low velocity*), the NYLON guitar voice will

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be heard, whereas the GRAND piano will not play as this has a high velocity setting. Playing hard on the keyboard (*high velocity*) will produce both the GRAND piano and the NYLON guitar voices.

The final sound will depend on the type of voice, the harmonic content etc., etc. An interesting effect can be obtained by programming two voices in the same keyboard area with opposing dynamic characteristics. For example, try programming the GRAND and DRAWBARS voices; set the threshold value to 90, then set the dynamics of the GRAND piano and DRAWBARS voices to low velocity (<) and high velocity (>) respectively. Playing hard on the keyboard will play the DRAWBARS organ sound whereas playing softer will produce the GRAND piano voice.

Once all the voices and parameters have been set up, you can memorize the Program by pressing **SAVE/NAME** and then giving a name of your choice to the Program in the normal way (see point 4 - HOW TO SELECT A REGISTRATION on page 2.21, which is identical).

HOW TO WRITE A PROGRAM

Try setting up the following Program from the beginning. It contains four voices: A string voice (Tremolos), used as a background in the two lower octaves, Brass in the bottom two octaves of the right hand section and two voices, a synth effect (Icepad) and Blowsax in the top octave. Set the keyboard SPLIT to C⁴ if not already so (see page 2.7). Now proceed as follows:

1. Press **EDIT**. The EDIT MENU will show in the display.
2. Press **F2** (PROGRAM). The EDIT PROGRAM menu will appear on the display.
3. The name of the Program will be flashing in the top line and for the time being this can be ignored.
4. Select the mode to be used, in this case **PATCH**, by pressing **F5**.
5. Select the voices to be used as follows:
 - a. Select the voice to be used in the first two left hand octaves by pressing **F1**. Then select the voice (TREMOLOS) either with the **VALUE +/- keys** or by means of the VOICE BANK keys by directly pressing first **STRINGS** and then the key numbered **5** in the bottom line of keys.
 - b. Select the voice to be used in the first two right hand octaves by pressing **F2**. Then select the voice (BRASS) in the usual way (BRASS then key 6).
 - c. Select the first voice to be used in the top right hand octave by pressing **F3**. Then select the voice (ICEPAD) in the usual way (SYNT/FM then key 1).
 - d. Select the second voice to be used in the top right hand octave by pressing **F4**. Then select the voice (BLOWSAX) in the usual way (SAX then key 1).

N.B - When selecting the voices, check that both the 1/2 * and USER VOICE key leds are 'OFF', as in this case the Voices selected will all be from BANK 1.

6. Adjust the Volume of the voices as follows:
 - a. Adjust the TREMOLOS volume by pressing first **F5** and then pressing the **VALUE +/- keys** to set a value of 35.
 - b. Adjust the BRASS volume by pressing first **F6** and then pressing the **VALUE +/- keys**

- to set a value of 63.
- c. Adjust the ICEPAD volume by pressing first **F7** and then pressing the **VALUE +/-** keys to set a value of 63.
 - d. Adjust the BLOWSAX volume by pressing first **F8** and then pressing the **VALUE +/-** keys to set a value of 63
7. Now set the Shift value of each voice as follows:
 - a. Adjust the TREMOLOS shift by pressing first **F5** twice (value will flash) and then pressing the **VALUE +/-** keys to set a value of +24 (two octaves higher).
 - b. Adjust the shift values of the other three voices to zero ('- -') by pressing first **F6, F7 and F8** to select the relative part and then the **two VALUE +/-** keys simultaneously to show '- -'. In this way no shift (Transposition) is set for these voices.
 8. Set all the Detune values to zero ('- -') by first pressing **F5** to **F8** with Shift showing in these positions, then bring the value to show '- -' by the above means.
 9. At this point you can assign the keyboard area of each voice by pressing **PAGE >>** to open the relative display (explained in full on page 3.16).
 10. Set the keyboard areas of each voice as follows:
 - a. Assign the area in which the TREMOLOS will be played by first pressing **F5**. The bottom note position will flash and at this point you can enter this number by pressing the **bottom C on the keyboard**, corresponding to note C². The top note position in this area (flashing) can now be defined by pressing the relative key, in this case the **second B from the bottom**, corresponding to note B³. In this way the TREMOLOS voice will play in the two lower octaves of the keyboard and the display will show: C2 - B3. The bottom note position of the second voice will now begin to flash, showing that the next key that you press will be assigned to that position.
 - b. Now assign the area played with the BRASS voice in the same way as above. In this case the two lower octaves of the **right hand section** must be assigned by first pressing the **third C from the left**, corresponding to C⁴ and then the **fourth B from the bottom** which corresponds to note number B⁵.
 - c. Now assign the area played with the ICEPAD and BLOWSAX voices in the same way as above. As these voices are superimposed in the same area of the keyboard, the operation is identical in both cases. In this case the top octave of the **right hand section** must be assigned to both voices by first pressing the **second C from the top** of the keyboard, corresponding to C⁶ and then the **top C** which corresponds to note number C⁷.
 11. No Key Dynamics are required, therefore press **PAGE >>** to open the **KEY VELOCITY SWITCH THRESHOLD** page and set all sections to '< >' by pressing both **VALUE +/-** keys.
 12. Press **PAGE <<** to return to the **EDIT PROGRAM** menu and then press **F8** to set the **EFFECTS** for each voice.
 13. No effects are required in this Program, therefore set all the Rev., Chor. and Rotor effects to '- -'.
 14. At this point all that remains is to memorize the Program with a name of your choice with the same procedure used for saving a Registration, fully explained in point 4 on page 2.21. After pressing **F8** (SAVE), the name given to the Program will be shown in the top right hand corner of the display.

PITCH MENU - FUNCTION KEY F3

With the EDIT MENU showing as below:

MIDI	PROGRAM	PITCH	AFTERTOUCH
UTILITIES	OUTASSIGN	ACCORD.	ARABIC

Press **F3** (PITCH), to open the display that enables the MODULATION, Pitch Bend, Vibrato and Portamento Speed parameter values to be set, as shown below:

MODULATION : 63	Bend : + / - 2
Vibrato : On	Portam. Speed : 3

The various parameters, which flash in the display when selected, are varied as follows:

MODULATION - F2

This parameter is the one controlled by the MODULATION Wheel on the left of the panel. This control manually controls the modulation of the voices. No effect is heard with the wheel rotated towards the keyboard, but by moving it towards the back of the instrument (away from you), the effect is gradually increased up to a maximum level that is set in this display. Press function key **F2**, with the above display showing, to set the maximum MODULATION value from 0 to 63 with the **VALUE +/-** keys on the left of the display. This wheel will remain in the position you select and the modulation effect will be heard accordingly - see also page 2.30.

NOTE: After changing the value in the display, the change in the effect will be heard only after rotating the wheel, even slightly.

BEND - F4

This parameter controls the maximum amount of transposition that will be heard in the notes played when you rotate the PITCH wheel on the left of the panel. The maximum value is ± 12 semitones (one octave up and down). The notes are flattened by rotating the wheel towards the keyboard and sharpened by rotating it in the opposite direction towards the back of the instrument. This wheel will always automatically return to its spring loaded central position - see also page 2.30.

Press **F4** (Bend) to set the maximum Bend extension by means of the **VALUE +/-** keys.

VIBRATO - F5

Press function key **F5** to activate or deactivate the VIBRATO effect. The display will show 'On' or 'Off' respectively in this position. When 'On', the vibrato will be applied over the entire extension of the keyboard, to the voices in which the effect is considered to be applicable. When 'Off', the voices, *except those in which the Vibrato is part of the sample*, will play naturally without the effect.

PORTAM. SPEED - F8

The value of the parameter of this effect, activated by the PORTAMENTO key on the main control panel (see page 2.29 for further information), can be set by pressing function key **F8** and then entering the value required by means of the **VALUE +/-** keys in a range of from 1 to 63.

AFTERTOUCHE MENU - FUNCTION KEY F4

Press **F4**, with the EDIT MENU showing as at the top of the previous page, to open the AFTERTOUCHE MENU as shown below:

```
AFTER TOUCH Threshold:0 Sensitivity:96
Bend:Off Vol.:Off Lfo:On
```

AFTERTOUCHE is the pressure made on the key after the note has played; this means exerting extra pressure on the key after the amount needed to play the note. The display enables the parameters that are controlled by the AFTERTOUCHE of the keyboard to be set. These parameters, Threshold, Sensitivity, Bend (direction), Volume and Lfo will flash in the display when selected by their respective function keys.

THRESHOLD - F3

THRESHOLD sets the point at which the Bend, Volume and Lfo effects will start to have effect; that is, it defines how hard or soft the extra pressure on the key will have to be in order to obtain the effects programmed. The value can be set from 0 to 63. To set this value, press **F3** and then set the value required by means of the **VALUE +/- keys**. The value can be zeroed by simultaneously pressing **both VALUE +/- keys**.

SENSITIVITY - F4

This parameter controls the amount of the effect. The value can be set from 0 to 127. To set this value, press **F4** and then set the value required by means of the **VALUE +/- keys**. The value can be zeroed by simultaneously pressing **both VALUE +/- keys**.

BEND - F5

By selecting the BEND parameter you can decide whether the note will be sharpened or flattened by the pressure on the key or deactivate the effect if not required. The amount of Bend depends on the Threshold value set previously in the BEND function of the PITCH MENU.

To set this parameter, repeatedly press **F5** to set this to **Up, Down** or **Off** as required.

VOLUME - F6

By selecting the VOLUME parameter you can decide whether the volume of the notes played will be varied by the Aftertouch pressure. To activate this parameter, repeatedly press **F6** to set this to **On** or **Off** as required. In order to achieve a good result from this function, the volume of the Right Hand section should not exceed a value of 40 to 45.

LFO - F7

By selecting the LFO parameter you can decide whether or not the Low Frequency Oscillator effect will be applied to the notes played by means of the Aftertouch pressure. To activate this parameter, repeatedly press **F7** to set this to 'On' or 'Off' as required.

UTILITIES MENU - FUNCTION KEY F5

With the EDIT MENU showing as below:

MIDI	PROGRAM	PITCH	AFTERTOUC
UTILITIES	OUTASSIGN	ACCORD.	ARABIC

Press **F5** (UTILITIES), to show the display that enables the various UTILITY sub menus to be opened and programmed, as shown below:

RELOAD	REG.TAB OFF	CHRD.NAME	FOOTSW.
TUNE	Crash: On	MAP&LEAD	525video

These sub menus can be opened and programmed as follows:

RELOAD - F1

This function enables you to RELOAD the Original User Drum Set, User Voices, Programs and Registrations, that is those programmed by the instrument's manufacturer, either singularly or globally. Press **F1** to open the RELOAD display:

RELOAD	User D.Set	
UserVoice	Program	Registrations

To Reload the various sections follow the procedure below:

USER DRUM SET - F4

Press **F4** to open the following display:

RELOAD USER DRUM SET	
Cancel	Confirm

You can now reload the USER DRUM SET by pressing **F8** (Confirm) or **F7** (Cancel) to return to the RELOAD sub menu shown above. If you press **F8**, the Original User Drum Set will be restored in place of the last User Drum Set programmed.

Press **PAGE** << to return to the RELOAD sub menu.

USER VOICE - F5, PROGRAM - F6 and REGISTRATIONS - F7 (Same procedure for all three)

The below procedure uses the User Voice reload as an example, press **F5** to open this display:

RELOAD USER VOICE	Global	Single
	Cancel	Confirm

You must now decide if you want to reload all the User Voices or single ones by pressing **F3** (Global) or **F4** (Single).

If you want to reload all the User Voices from the disk, press **F3** (Global will flash in the display, indicating that it can be confirmed or not), and then press **F8** to complete the reload operation or **F7** to cancel it and return to the RELOAD sub menu.

To reload single User Voices, with the display showing as at the bottom of the previous page, press **F4** (Single) to open the display that enables their selection as shown below:

RELOAD USER VOICE	Global	[_ _ _ _ _]
	Cancel	Confirm

A User Voice name will be flashing in the display, indicating that the one to be reloaded can be selected by means of the **VALUE +/-** keys. When selected, press **F8** to confirm your decision or **F7** to cancel the operation and return to the RELOAD sub menu. This operation can be repeated to reload several single User Voices. If you change your mind and decide to reload all the User Voices, you can still do so in this display by pressing first **F3** (this will flash) and then **F8** (Confirm).

Remember the same procedure is used for User Voices, Programs and Registrations.

Press **PAGE <<** once or twice, according to the situation, to return to the UTILITIES MENU.

REG. TAB OFF - F2

This function turns the Registration key led 'OFF' about a second after the last Registration has been recalled, enabling changes to be made on the panel within the Registration selected.

With the UTILITIES MENU showing as at the top of the previous page, press **F2** (REG. TAB. OFF) to show:

REGISTR. AUTOMATIC SWITCH OFF :	No
---------------------------------	----

Press **F4** to activate (Yes) or deactivate (No) this function.

CHRD. NAME - F3

This function enables you to see on the display the name of the chord that you play on the left hand section of the keyboard. When activated, the chord name is shown in place of the Drums Volume and Tempo setting in the top line of the LIVE MENU when the chord is pressed. With the UTILITIES MENU showing, press **F3** (CHRD.NAME) to open the following display:

CHORD TONALITY DISPLAY :	No
--------------------------	----

Press **F4** to activate (Yes) or deactivate (No) this function.

FOOTSW. - F4

Selecting the FOOTSWITCH sub menu enables you to choose from 32 different functions which can be assigned to each of the 13 foot switches in the *optional FS 13* Footswitch.

With the UTILITIES MENU showing as below:

```

RELOAD      REG.TAB.OFF  CHR.D.NAME  FOOTSW.
TUNE        Crash: On  MAP&LEAD  525video
    
```

Press **F4** (FOOTSW.) to open the following display:

```

*FOOTSW. ASSIGN*  LOCK:Off      1:Sust.
 2:Arr. A   3:Arr. B   4:Arr. C   5:Arr. D
    
```

This is showing the functions assigned by default to the first five of the footswitches, press **PAGE >>** to open the second page of this sub menu as shown below:

```

 6:Fill 1   7:Fill 2   8:Fill 3   9:In/E 1
10:In/E 2  11:Key Sr  12:Key Sp  13:Str/Sp
    
```

To assign a function to one of the switches, first select this by pressing the relative function key **F4** to **F8** in the first display and **F1** to **F8** in the second. The function already assigned to the selected footswitch will begin to flash in the display, indicating that it can be changed by means of the **VALUE +/-** keys. The 32 different functions that can be assigned are as follows: Arr. A, Arr. B, Arr. C, Arr. D, Str/Sp (Start/Stop), In/E 1 (Intro/Ending 1), In/E 2, Fill 1, Fill 2, Fill 3, Rot. sl (Rotor Slow), Rot. fs (Rotor Fast), Sust., Voic.U (Voice Up), Voic. D (Voice Down), Jump, Key Sr (Key Start), Key Sp (Key Stop), Patt., Rest. (Restart), Tempo +, Tempo -, minor, 7th, m7th, 5+, dim., 6th, Soft, Sosten., Hold and Glide.

The Footswitch Assign menu contains a LOCK function in the F3 position. This enables you to lock a particular Footswitch assignment (LOCK: On) that will not change when selecting different Registrations.

TUNE - F5

The TUNE function enables you to fine tune the entire MS60/50 by ± 1 semitone. This permits the tuning to be aligned to another instrument being played with it if any slight differences in the tuning are noticed. It will prove to be extremely useful when the tuning of the other instrument cannot be varied, for example in the case of a piano or other instrument where the retuning would be an extremely complex operation. To enable this fine tuning to be carried out, press **F5** with the UTILITIES MENU showing as at the top of this page. The display will then show as follows:

```

GLOBAL TUNE VALUE:      440 HZ
    
```

The value can be varied between - 64 and + 63 by means of the **VALUE +/-** keys, equivalent to ± 1 semitone with respect to 440 Hz.

Crash On/Off - F6

With this function showing **'On'** in the UTILITIES MENU, a Crash Cymbal will be automatically played at the end of all the FILL INS and INTROS selected. When, on the other hand, the function is deactivated (**'Off'**), the FILL INS and INTROS are played without the automatic Crash ending. Press **F6** repeatedly to activate or deactivate the Crash Cymbal.

MAP & LEAD - F7

This function permits the conversion of the SOUNDS and DRUM SET in the MS60/50's sound map making them compatible with the MIDI Songs in the FD 1 Song library of disks for the MS5, MS4 and MS3.

The appropriate MIDI MAP for MS5/MS4/MS3 or MS60/50 compatibility can be set by this sub menu as well as the channel for the MIDI Song LEAD part, which is channel 6 for the FD 1 and channel 4 for the MS60/50. Press **F7** (MAP & LEAD) with the UTILITY MENU showing to open the following display:

TRNSP . KEYB . ONLY	: Off	MS MAPS : Off
SONG LEAD CHANNEL	: 4	

The MIDI map is selected by means of the **F4 function key**. Press this key repeatedly to show **'Off'** or **'On'**. When showing **'On'**, the MS5/MS4 and MS3 map is activated, *allowing the loading of songs from the FD 1 library*, whereas when **'Off'**, the MS60/50 map is operative. In each mode the relative **MIDI SONG LEAD CHANNEL** is automatically indicated on the bottom line. Press **F7** to modify the channel number. This will then flash, indicating that it is ready to be changed by means of the **VALUE +/- keys**.

The **TRANSPOSE KEYBOARD ONLY** function (**F3**) enables the Right Hand section only of the keyboard to be transposed, leaving the other parts unaltered.

525video - F8

This function enables the system to be set in accordance with the video system connected to the MS60/50. Pressing **F8** (525video) alternates the value shown in this position between 525 and 625. This should be set to 525 for the European PAL or SECAM system or 625 for the American NTSC system. Full information is contained in the specific User's Manual for the VI 1 Video Interface.

Press **PAGE <<** to return to the EDIT MENU.

OUT ASSIGN MENU - FUNCTION KEY F6

This menu enables you to assign the various sections to the four output sockets on the back panel. Press **F6** (OUT ASSIGN) to open the following display:

OUT ASSIGN :	L & R STANDARD ←	
L & R + OUT 3	L & R + OUT 3 & 4	4 SEPARATE OUT

The display enables the selection of four different output solutions, L&R STANDARD, L&R + OUT 3, L&R + OUT 3 & OUT 4, OUTPUTS 1 to 4 separately.

L&R STANDARD

This is the default output mode and is indicated by the arrow in the display when opened for the first time.

L&R + OUT 3

Press **F5** to assign each of the sections, Right, Bass, Chrd1, Chrd2 and Chrd3 to either the L&R OUTPUT or OUT 3. Press the **function key** corresponding to the section that you want to assign and then press the **VALUE +/- keys** to select L&R or 3. Each section can be selected and assigned separately as required. Furthermore when you select DRUM by pressing **F3**, the display will show the Bass, Snare, H.Hat, Cymbal, Tom, L.Lat and H. Lat instruments separately, enabling each one to be selected separately by pressing the corresponding **function key F2 to F8** and assigned to either L&R or OUT 3 as desired.

N.B. - When the OUT 3 socket is selected, the internal reverberation is not applicable. The OUT 3 socket is monophonic.

L&R + OUT 3 & 4

Press **F6** to assign each of the sections, Right, Bass, Chrd1, Chrd2 and Chrd3 to either the L&R OUTPUT or OUT 3 or OUT 4. Press the **function key** corresponding to the section that you want to assign and then press the **VALUE +/- keys** to select L&R or 3 or 4. Each section can be selected and assigned separately as required. As in the above case, each DRUM instrument shown in the display can be separately assigned to either L&R, OUT 3 or OUT 4.

N.B. - When the OUT 4 socket is selected, the internal Chorus, Delay, Rotor and Echo Repeat effects are not applicable. The OUT 4 socket is monophonic.

4 SEPARATE OUT

Press **F7** to assign each of the sections, Right, Bass, Chrd1, Chrd2 and Chrd3 to either the OUT 1, OUT 2, OUT 3 or OUT 4 sockets. Press the **function key** corresponding to the section that you want to assign and then press the **VALUE +/- keys** to select 1, 2, 3 or 4. Each section can be selected and assigned separately as required. As in the above cases, each DRUM instrument shown in the display can be separately assigned to either OUT 1, OUT 2, OUT 3 or OUT 4.

N.B - The selection of the 4 SEPARATE OUT option excludes all the internal effects of the MS60/50 and these are monophonic.

Press **PAGE <<** to return to the EDIT MENU.

ACCORD. - FUNCTION KEY F7

You can easily adapt the MS60/50 set up to the most used types of MIDI accordion by means of this function. Press **F7** to open the following display:

```
SELECT ACCORDION MODE :           Off
```

The type of accordion can now be selected from **Belgian**, **International** or deactivated ('Off') by repeatedly pressing **function key F4**.

This selection will enable you to immediately play the MS60/50 from the MIDI accordion with the following MIDI channels: Right Hand - Channel 1, Chords - Channel 2, Bass - Channel 3.

If you want to modify the channel number, refer to the MIDI RX procedure on page 3.6.

The ACCORDION MODE is not memorized in the Registrations.

Press **PAGE <<** to return to the EDIT MENU.

ARABIC SCALE MENU - FUNCTION KEY F8

The ARABIC SCALE menu permits you to individually tune the notes of the MS60/50 to suit the scales commonly used in the Arab countries. To programme the ARABIC SCALE, press **F8** (ARABIC) with the EDIT MENU showing to open the display below:

```
SELECT FROM C6 TO B6
/ / / / / / / / / / / / / / Normal
```

As shown in the display, if you now press one of the keys from C⁶ to B⁶ (in the MS60/50's top octave), for example C⁶. The display will show as follows:

```
SELECT FROM C6 TO B6           C - +50%
C/ / / / / / / / / / / / / / Normal
```

This is showing that the C notes are set 50% above the standard tuning (indicated by + 50%). This is the default setting of each note that is selected by pressing a key from C⁶ to B⁶. The value of each note pressed (shown in turn in the top right hand corner of the display) can be modified by first pressing **F4** to make this flash, and then the appropriate **VALUE key** - or + to change the value between - 99% and + 99% with a central 0 position (no detuning).

The various notes to be played with the Arabic Scale can be memorized in a Registration. The 'Pitch Change' for each note is memorized until you press **Normal** (F8) to return to the standard tuning.

THE EDIT KEYS F1-F2-F3-F4

The four function keys F1, F2, F3 and F4 enable the programming of the 16 General MIDI parts, the Effects (Reverberation, Chorus, Delay etc.), the User Voices and the Patterns.

GM PARTS - F1

Pressing **F1** enables the setting of all the 16 parts provided for the General Midi Standard. With the LIVE MENU showing in the display, press **F1** to open the following General MIDI menu:

01 Part	001 Grand	Vol : 63	Pan : - -
Rev : 8	Chor. : 8	K. Shf : - -	MidCh : 1

The first part will be flashing in the display; the other 15 parts can be selected by means of the **PAGE <<** and **PAGE >>** keys. The Voices (Drum Set in Part 10), Volume, Pan position, Reverberation level, Chorus level, Key Shift and MIDI channel can all be set for each of the parts.

To programme the parameters of the 16 parts follow this procedure:

1. First select the part to be defined by means of the **PAGE <<** and **>>** keys.
2. Select the parameter to be modified by pressing the relative function key from **F2** to **F8**. When this is flashing in the display, the value can be modified by means of the **VALUE -/+** keys within the ranges specified for each:
 - F2** (Voice) - any of the voices can be selected for each of the parts from 1 to 9 and from 11 to 16; to part 10, you can assign one of the 12 Drum Sets;
 - F3** (Volume) - 0 to 63;
 - F4** (Pan) - from L63 to R63 with centre pos.;
 - F5** (Reverb.) - 0 to 8;
 - F6** (Chorus) - 0 to 8;
 - F7** (Key Shift) - from -36 to + 36 semitones;
 - F8** (MIDI Ch.) - 1 to 16.

The MIDI In socket relative to the GENERAL MIDI PARTS is MIDI IN 1 (GM).

The 16 parts are also used by the Disk for the reproduction of all the MIDI Songs.

In the original SOLTON LIBRARY Songs, part 1 is left free for the "Live" performance.

EFFECTS - F2

The Reverberation and Chorus (Echo Repeat, Delay etc.) effects can be set with this sub menu and by means of a second page opened in the display for the Amount and Depth values, these can be set independently for each of the Drums, Right, Bass, Chord 1, Chord 2 and Chord 3 sections.

With the LIVE MENU showing in the display, press **F2** (EFFECTS) to open the following display:

```

REVERBER : Hall_2      Level : 13      AMOUNT
CHORUS   : Chorus_1      DEPTH

```

Press **F2** to select the REVERB. type (this will begin to flash, showing that it is ready to be changed if desired). The selection can be made by means of the **VALUE +/-** keys when the current type is flashing. 15 different Reverberation settings are available plus a Rev. Off option as follows:

Rev. Off, Hall_1, Hall_2, Hall_3, Hall_4, Stage_1, Stage_2, Stage_3, Stage_4, Room_1, Room_2, Room_3, Room_4, Cathedral, Arena, Square.

The level of the Reverberation effect can be set at a value from 0 to 16 by first pressing **F3** (Level) and then adjusting the value with the **VALUE +/-** keys.

To set the individual amount for each section, press **F4** (AMOUNT) to open the following display:

```

REVERBER AMOUNT :      Drums : 8   Right   : 8
Bass : 4   Chrd1 : 7   Chrd2 : 7   Chrd3   : 7

```

This display shows the default Reverb. value for each section which can be changed by pressing the corresponding **function keys F3 to F8**. After selecting the section, with the value flashing, use the **VALUE +/-** keys to change the amount of Reverb to your requirements.

An additional Reverberation control has been provided for the 7 Drum instruments; this is explained in the DRUMS section (Controls) in HOW TO SELECT A STYLE on page 2.8 of Chapter 2.

Press **PAGE <<** to return to the previous display and press **F6** to make the current CHORUS effect flash in the display. This can now be changed if desired by means of the **VALUE +/-** keys.

9 different settings can be made as follows:

Chorus Off, Chorus_1, Chorus_2, PanChor., Leslie, Delay_1, Delay_2, EchoRp_1, EchoRp_2.

To set the individual depth for each section, press **F8** (DEPTH) to open the following display:

```

CHORUS DEPTH ;      Right   : 8
Bass : 0   Chrd1 ; 0   Chrd2 : 0   Chrd3   : 0

```

This display shows the default Chorus Depth value for each section which can be changed by pressing the corresponding **function keys F4 to F8**. After selecting the section, with the value flashing, use the **VALUE +/-** keys to change the depth of the Chorus to your requirements.

EDIT VOICE - F3

This function of the MS60/50 enables up to 128 User Voices to be programmed to your requirements. There are 128 positions but the first cannot be used as it is needed for the loading of the PCM sounds from Disc. Each voice can be tailor-made with its own REVERB, CHORUS, PITCH, DCA, DCF and AFTERTOUC parameters specifically programmed to give exactly the sound that you want in each case. To programme the User Voices, with the LIVE MENU showing in the display, press **F3** to open the following display:

V . EDIT :	[Grand -----]	Reverb : 15	
Chor . : 0	PITCH	DCA / DCF	AFTER T .

The VOICE EDIT MENU contains all the parameters required for the customizing of a voice. When it appears, the current voice will be flashing, indicating that it can be changed if necessary. This can be done by using the **VOICE BANK keys** as explained on page 2.17/18. Once a basic voice has been selected as a starting point, you can start the modifications as follows.

Press **F4** to set the REVERB level from 0 to 15, then **F5** to do the same for the CHORUS (From 0 to 15).

In both the above parameters, a zero setting can be achieved by simultaneously pressing both **VALUE +/- keys**.

PITCH - F6

This allows you to adjust the Vibrato (LFO:Low Frequency Oscillator), Tuning and Pitch of the voice.

Press **F6** (PITCH) to open the following display:

LFO -->	Rate : 0	Depth : 0	Delay : 0
Tune : 0	Shift : 0		

The RATE, DEPTH and DELAY parameters from 0 to 63 are set by first pressing the relative **function key F2 to F4** and then, when flashing, by using the **VALUE +/- keys**.

The TUNE value, when flashing after selection by the **function key F5**, can be set from - 64 to + 63 by means of the **VALUE +/- keys**.

The SHIFT value, when flashing after selection by the **function key F6**, can be set from - 24 to + 24 semitones in the same way.

In all the above parameters, a zero setting can be achieved by simultaneously pressing both **VALUE +/- keys**.

Press **PAGE <<** to return to the VOICE EDIT menu to continue with the editing.

DCA/DCF - F7

These two functions, DCA (Digitally Controlled Amplifier) and DCF (Digitally Controlled Filter)

are fundamental in the formation of a sound in that they control the Attack, Decay and Release of the sound (DCA), and the harmonic structure with the Cut Off and Resonance controls of the DCF.

Press **F7** (DCA/DCF) with the VOICE EDIT MENU showing in the display to open the following menu:

DCA -->	Att. : 0	Decay : 0	Rel. : 0
DCF -->	C.Off : 0	Res. : 0	

To set the values of the ATTACK, DECAY and RELEASE parameters of the DCA in the top line of the display, first press the relative **function key F2 to F4** and then, with the value flashing, the **VALUE +/-** keys.

To set the values of the CUT OFF and RESONANCE parameters of the DCF in the bottom line of the display, first press the relative **function key F6 to F7** and then, with the value flashing, the **VALUE +/-** keys.

The values for all the above parameters can be set from - 16 to + 16 and a zero setting can be achieved by simultaneously pressing both **VALUE +/-** keys.

Press **PAGE <<** to return to the VOICE EDIT menu to continue with the editing.

AFTERTOUCH - F8

The display which allows the settings of the parameters controlled by the pressure exerted on the key after the note has played, called AFTERTOUCH, can be opened by pressing **F8** (AFTERTOUCH) as below:

AFTER TOUCH		
Bend : Off	Vol. : Off	Lfo : Off

The **Bend** parameter can be set to 'Up', 'Down' or 'Off' by repeatedly pressing **F5**. When set to 'Up', the note will be sharpened when the extra pressure is applied to the key; vice-versa, when set to 'Down', the note will be flattened. The quantity of Bend depends on the value previously set in the BEND function of the PITCH MENU. When set to 'Off', no effect will be heard.

The **Volume** parameter can be set to 'On' or 'Off' by repeatedly pressing **F6**. When set to 'On', the Volume of the note will increase when the extra pressure is applied to the key; vice-versa, when set to 'Off', the Volume will decrease.

The **Lfo** parameter can be set to 'On' or 'Off' by repeatedly pressing **F7**. When set to 'On', the Lfo (Low Frequency Oscillator) effect will be applied to the note when the extra pressure is applied to the key; vice-versa, when set to 'Off', no effect will be heard.

At this point all the parameters in the USER VOICE editing have been set and you should now save the settings in a User Voice position with a name of your choice.

3. PROGRAMMING THE MS60/50

Press **SAVE/NAME** to show the following display:

```
SAVE USER VOICE [GRAND ] to [GRAND ]
<< Down Up >>      Cancel      Save
```

The voice just edited, in this case Grand (piano), can now be saved with a different name if required. The first letter in the name shown in brackets on the right of the top line will be flashing, indicating that it is ready to be changed if necessary. This can be done by following the same procedure as for a registration, described in point 4 on page 2.21. A different location can be selected by means of the **VALUE +/-** keys after pressing **F4** which will flash the entire name.

User Voice position 001 is used for the PCM sound or Groove that can be loaded from disk and if selected will be shown 'EMPTY': if you try to edit this, the following display will show:

```
USER 1 ONLY AVAILABLE FOR PCM LOAD
Press <EDIT> to Exit
```

See page 2.19 for further explanation on User Voice 001.

After giving a name to the edited voice and confirming this by pressing **F8** (Save), the display will return to the **LIVE MENU** as follows:

```
Ø1 16 BEAT_1 4Ø 84 GRAND 63
Finger 4Ø Dxpian 2Ø Steel 22 Incapa 25
```

At this point you can proceed with the programming of a **PATTERN** if desired, by pressing function key **F4** (EDIT PATTERN).

EDIT PATTERN - F4

When you press **F4** (EDIT PATTERN) the following **EDIT PATTERN** menu will shown in the display:

```
Ø1 [EMPTY ]          VALUE      VOICE
VOL/EFF RECORD      DELETE      COPY
```

This comprises all the parameters necessary to create a Pattern:

1. **VALUE** - Free, Chord Mode, Pattern Tempo, Autocrash, Lock and Time Signature.
2. **VOICE** - enables the Voice and Drum Set for the Bass, Chord 1, Chord 2, Chord 3 and Drum sections to be defined in each of the parts - Intro 1, Intro 2, Arr. A, Arr. B, Arr. C, Arr. D, Ending 1 and Ending 2.
3. **VOL/EFF** - enables the Volume Level, Reverb. Type and Level, Chorus Level and Pan positions - L <Centre> R for each of the Bass, Chord 1, Chord 2, Chord 3 and Drum sections.

4. **RECORD** - selection of the part that you want to record - Intro 1, Intro 2, Arr. A, Arr. B, Arr. C, Arr. D, Common, Fill In 1, Fill In 2, Fill In 3, Ending 1 and Ending 2.
5. **DELETE** - selection of the part that you want to delete - Intro 1, Intro 2, Arr. A, Arr. B, Arr. C, Arr. D, Common, Fill In 1, Fill In 2, Fill In 3, Ending 1, Ending 2 and Global.
6. **COPY** - enables entire Preset Rhythms and Patterns or parts of these to be copied into a Pattern or part of this.

These are now examined one by one:

VALUE - F3

Press **F3** (VALUE) to open the below sub menu:

```

FREE 100%  CHRDMODE  TEMPO_PATTERN  : 120
AUTOCR.    LOCK:off  TIME_SIGNATURE: 4 / 4
```

FREE

This shows the amount of free memory space currently available (for example it may show, FREE 85%) for the programming of Patterns, and enables the Chord Mode, Pattern Tempo, Autocrash, Lock and Time Signature parameters to be set by pressing the respective **function keys F2, F4, F5, F6 and F8** to open the relative display or set the relative parameter value or mode.

CHORD MODE - F2

Press **F2** (CHRDMODE) to open the relative display as shown below:

```

SELECT CHORD MODE (Parallel or Close)
          Chrd1:Pl  Chrd2:Pl  Chrd3:Pl
```

This display enables you to select each Chord section in turn by pressing the relative function key from F6 to F8. Once the Chord has been selected, set the mode by repeatedly pressing this to show 'Pl' or 'Cl'.

- **Pl** (Parallel) means that, when changing key, the notes will always be transposed in a parallel manner.
- **Cl** (Close) will play closer inversions of the chord, while taking into account the harmonic rules.

Return to the VALUE sub menu by pressing **PAGE <<**.

PATTERN_TEMPO - F4

Press the function key **F4** (PATTERN_TEMPO) to make the value of this parameter flash in the display and then set it to the required value by means of the **VALUE +/- keys**. The range of values is from 40 to 250.

3. PROGRAMMING THE MS60/50

AUTOOCR. - F5

Press **F5** (AUTOOCR.) to open the following display:

AUTO CRASH AFTER INTRO & FILL	: On
VOLUME	: 45

This display enables you to play a *Cymbal Crash* at the end of the Intros or Fill Ins of the Pattern. When set to 'On', the Crash will be played at the end of the Intros or Fill-Ins. On the contrary, when set to 'Off', the Crash will not play.

Press **function key F4** repeatedly to turn the Crash 'On' or 'Off'.

With the Volume function in the lower line of the display, you can set the Volume level of the automatic Crash that will play.

Press **function key F8** to flash the Volume setting of the Crash and then set this to the required value, from 0 to 63, by means of the **VALUE +/-** keys.

LOCK - F6

This is the protection facility of the EDIT PATTERN environment. Press **F6** (LOCK) to *protect* or *unprotect* the Pattern shown in the EDIT PATTERN menu on page 3.32 (this can be recalled by pressing **PAGE <<**). When 'On' shows in the LOCK position of the display (corresponding to F6), no editing will be permitted to the Pattern in question and if you try to copy another Style in that location or attempt some changes, the following warning display will be shown:

PATTERN PROTECTED
< CANCEL >

Press **F8** (<CANCEL>) to return to the VALUE sub menu and then press **F6** (LOCK) to change the setting to 'Off' which will then enable you to make any changes required to the Pattern.

TIME_SIGNATURE - F8

Press **F8** (TIME_SIGNATURE) to set the value required for the Pattern you are programming. The left hand digit of the Time Signature will flash in the display, showing that a change can be made if necessary, by means of the **VALUE +/-** keys. Then repress **F8** (the right hand digit will flash) to change the setting by the same means, if necessary. The settings can be from 1/4 to 16/8. The setting must be made before beginning the recording as *it is not possible to modify the Time Signature of an existing Pattern*.

Press **PAGE <<** to return to the EDIT PATTERN menu as shown below in order to continue with the Pattern editing.

Ø 1 [EMPTY]	VALUE	VOICE
VOL / EFF	RECORD	DELETE
		COPY

VOICE - F4

Press **F4** (VOICE) with the EDIT PATTERN menu showing to open the following sub menu:

INTRO_1	INTRO_2	ARR.A	ARR.B
ARR.C	ARR.D	END_1	END_2

This shows the eight parts that can be programmed in a Pattern to which the various Voices can be assigned. The **Voices** and **Drum Set** for each section; Drums, Bass, Chord 1, Chord 2 and Chord 3 can be defined by pressing the relative **function key** from **F1** to **F8**. Pressing for example, **F1** (INTRO_1) opens the following display showing the instruments currently in use in the five sections:

VOICE: INTRO_1	STANDARD
Fingered	Electric Folk Score

The voices in the four sections in the lower line in the display can be modified by first pressing the relative key from **F5** to **F8** (the voice name will flash in the display and at the same time the corresponding led indicators in the VOICE BANK section of the panel will turn 'ON'). Then select the required Voice in the usual way by means of the keys in the VOICE BANK section - see HOW TO SELECT A VOICE on page 2.17.

To define the Drum Set that will be used for the entire Pattern, press **F4** (the name of the current Drum Set will flash in the display and at the same time the corresponding led indicators in the VOICE BANK section of the panel will turn 'ON'), then select the Set that you want to use by pressing one of the first 12 keys in the VOICE BANK.

There is only one Drum Set for the entire Pattern and like the sounds, it is selected in the VOICE BANK section of keys (from Piano to Pad).

The name of the Voice or Drum Set selection will be shown immediately in the relative position in the display.

Return to the VOICE sub menu by pressing **PAGE <<** to programme the voices in the other parts in the same way.

MANUAL VOICE TO LEFT

With the VOICE sub menu showing in the display, press **PAGE >>** to open the following display:

MANUAL VOICE TO LEFT	[SYNST1]
----------------------	------------

This display enables you to select the voice that will be played with the Bass when the Style is not playing (**START/STOP** led 'OFF'), with **Lower** (F5) set to 'On' in the ARRANGE (Modes) sub menu on page 2.9 in HOW TO SELECT A STYLE of Chapter 2.

Press **PAGE <<** twice to return to the EDIT PATTERN menu and continue with the programming as follows:

VOL/EFF - F5

Press **F5** (VOL/EFF) with the EDIT PATTERN menu showing to open the first page of the following sub menu which concerns the **VOLUME** settings for the five sections:

```
VOLUME                               Drum : 40
Bass : 40   Chrd1 : 30   Chrd2 : 30   Chrd3 : 30
```

In this page you can set the Volume level of each section by first pressing the relative **function key** from **F5** to **F8**, and then (with the value flashing in the display) varying the value by means of the **VALUE +/- keys** in the usual way from 0 to 63. Once the Volume settings have been made, press **F1** to recall the second page of the VOL/EFF sub menu, **REVERBER TYPE** as shown below:

```
REVERBER TYPE :   [ Hall_2   ] Drum : 8
Bass : 3   Chrd1 : 5   Chrd2 : 6   Chrd3 : 6
```

Select the Reverberation type from the 15 available by first pressing **F3** and then scrolling with the **VALUE +/- keys**. The level for each section can then be set from 0 to 8, as for the Volumes above.

Once the Volume settings have been made, repress **F1** to recall the third page of the VOL/EFF sub menu, **CHORUS** as shown below:

```
CHORUS
Bass : 0   Chrd1 : 0   Chrd2 : 0   Chrd3 : 0
```

Set the Chorus level of each of the four voice sections by first pressing the relative **function key** from **F5** to **F8**, and then (with the value flashing in the display) varying the value by means of the **VALUE +/- keys** in the usual way from 0 to 8.

Once the Chorus settings have been made, repress **F1** to recall the fourth page of the VOL/EFF sub menu, **PAN** as shown below:

```
PAN
Bass : __   Chrd1 : 24L   Chrd2 : 40R   Chrd3 : __
```

Set the Pan position for each of the four voice sections by first pressing the relative **function key** from **F5** to **F8**, and then (with the value flashing in the display) varying the value by means of the **VALUE +/- keys** in the usual way from 63L to 63R. This setting will enable the section to be heard in the relative position in the stereo spectrum.

Once all the Volume and Effects settings have been made, return to the EDIT PATTERN menu by pressing **PAGE <<**.

HOW TO RECORD A PATTERN

RECORD - F6

This function enables the recording of a new Pattern to be carried out. Press **F6** (RECORD) with the EDIT PATTERN menu showing in the display to open the following sub menu:

INTRO_1	INTRO_2	ARR.A	ARR.B
ARR.C	ARR.D	COMMON	FILL_1 >

This first page is showing 8 parts of the Style that can be selected for recording. Press **PAGE >>** to open the second page of this sub menu, showing the other 4 parts of the Style that can be selected for recording as shown below:

< FILL_2	FILL_3	END_1	END_2
***	***	***	***

Select which part you want to record first, by pressing the corresponding function key. For example, after pressing **F3** (corresponding to ARR. A), the following display is opened:

ARR.A	Drum	120	Quant. : 16
CLEAR	(M, m, 7th)	Bar: 2	Metron. : On

Press the corresponding function key to set the following recording parameters which, when flashing, can be carried out by means of the **VALUE +/-** keys:

F1 - this position in the display shows the part of the Style that is currently selected for recording.

F2 - enables you to select which section of the Arranger (DRUM, BASS, CHORD 1, CHORD 2, CHORD 3) of the current part will be recorded. When flashing, the section can be selected by means of the **VALUE +/-** keys.

F3 (TEMPO) - enables the Tempo of the recording to be set by the **SLOW / FAST** keys.

-	+
	
SLOW	FAST

F4 (QUANTIZE) - with this function you can set the quantize value between 4 and 96 (a musical value from $\frac{1}{4}$ to $\frac{1}{96}$). This function automatically corrects the recorded data which can then be said to have been 'put it in order'. This means that if you assign a quantize value of 8 ($\frac{1}{8}$), the musical events will be recorded only every $\frac{1}{8}$ of a bar.

Any events which are recorded at any other time will be automatically adjusted to coincide with the quantize interval selected.

The quantize value must be chosen carefully, and the basic rule is to choose the shortest value in the musical score to be recorded. If for example the shortest note is $\frac{1}{16}$, you should use a quantize value of 16.

The 12 and 24 values are included to permit you to play triplets. In fact these values divide a bar into twelfths (triplets of quavers) or twenty-fourths (triplets of semi-quavers). These values are very suitable for rhythms such as Slow Rock, Swing etc.

- F5 (CLEAR)** - enables you to carry out partial or total cancellation of the Pattern that you are recording. Holding down the **F5** key the display will change to the following:

SINGLE: Press F5 and NOTE to Clear
GLOBAL: Press F5 and F8

This gives you the instructions for a partial cancellation, note by note, and a complete cancellation when the entire part will be cancelled.

To carry out a partial cancellation, press **function key F5** together **with the notes** that you want to cancel.

To completely cancel the part, press **function keys F5 and F8** for the entire length of the part. The end of the part can be verified in the **Bar** position in the display, which counts the bar numbers set for the part when **START/STOP** is pressed.

- F6 (KEY)** - press **F6** to flash this section of the display and allow you to make the selection by means of the **VALUE +/- keys**. If you decide to leave the default setting (M, m, 7th), a single table will be recorded that will be valid for all three musical keys.

- F7 (BAR)** - shows the length of the part in bars. When the part is being recorded, it works as a bar counter. The length of the part can be set from 1 to 16 bars in all the parts except the **FILL INS**, in which this will be set to 1 bar by default and cannot be modified.

- F8 (METRON.)** - pressing **F8** repeatedly will turn the **METRONOME 'On' or 'Off'**.

TO START THE RECORDING

Press **START/STOP** and if the Metronome was set to 'On', this will begin to beat time and you can begin to play the part you want to record.

During the recording, the octaves of the notes played by the Bass and the Chord sections 1, 2 and 3 will depend on the settings made in the **OCTAVE/HOLD** menu explained on page 2.10 and the Drum Set and Voices in the various sections will be those set in the **VOICE** menu explained on page 3.35.

Repress **START/STOP** to stop the recording at the end of the number of bars defined.

You can listen to what you have just recorded by pressing **START/STOP** again. If you have made a mistake or you are not satisfied with what you have recorded, this can be completely or partially cancelled as explained in **F5** above.

N.B. - The DRUMS will play immediately after pressing START/STOP; the BASS and CHORD sections of the four Arrangements can be only be heard by playing on the left hand section of the keyboard. To listen to the INTROS, ENDINGS and FILL INS, these must be selected by the relative keys in the normal way.

PROGRAMMING A SIMPLE PATTERN

This Pattern will be made up of an introduction (INTRO_1), two Arrangement parts (ARR. A, ARR. B), a Fill In (FILL_1) and an Ending (END_1).

1. With the Live menu showing as below:

Ø1	16	BEAT_1	4Ø	84	GRAND	63
Finger	4Ø	Dxpian	2Ø	Steel	22	Incapa 25

Press **F4** (EDIT PATTERN) to open the relative display which will show as below if you are programming a Pattern for the first time or the last Pattern selected if some Patterns are already programmed. In this last case, press **VALUE +/-** keys to select an empty Pattern position as shown below:

Ø1	EMPTY		VALUE	VOICE
VOL/EFF	RECORD		DELETE	COPY

2. Press **F3** (VALUE) to show the display below:

FREE	1ØØ%	CHRMODE	TEMPO_PATTERN	: 12Ø
AUTO CR.	LOCK: Off	TIME_SIGNATURE	:	4 / 4

Set the parameters in this sub menu as explained on page 3.33.

Press **PAGE <<** to return to the EDIT PATTERN menu.

3. Press **F4** (VOICE) to show the display below:

INTRO_1	INTRO_2	ARR. A	ARR. B
ARR. C	ARR. D	END_1	END_2

This display enables you to assign the Voices to the specific sections of each part that you want to record by pressing the corresponding **function key F1 to F8**.

4. Press **F1** (INTRO_1) to show the display containing the sections of this part as shown below:

VOICE: INTRO_1	STANDARD
Fingered	Electric Folk Score

5. Press the **function keys F4, F5, F6, F7** and **F8** respectively to select the Drum Set and Voices in each section of this part (INTRO_1) by means of the keys in the VOICE BANK section on

the right of the display (see HOW TO SELECT A VOICE on page 2.17). The Drum Set is selected by pressing the **VOICE BANK** keys from 1-12.

Press **PAGE <<** to return to the VOICE menu below:

INTRO_1	INTRO_2	ARR. A	ARR. B
ARR. C	ARR. D	END_1	END_2

- Repeat the procedure in points 4 and 5 for the ARR. A, ARR. B and END_1 parts of the pattern.

The Fill In (FILL_1) will be played by the Drum Set assigned above.

Press **PAGE <<** twice to return to the EDIT PATTERN menu below. This will now be shown with a number, as after any operation is carried out in an empty Pattern position, this is automatically given the next free number in numerical order:

Ø1 PATT. . Ø1 —	VALUE	VOICE
VOL/EFF	RECORD	DELETE
		COPY

- For the purpose of this example you can use the default VOLUME/EFFECTS settings which can otherwise be set at this stage by pressing **F5** (VOL/EFF) to recall the relative display which enables the settings to be modified as explained on page 3.36. For this example proceed as follows.
- Press **F6** (RECORD). The display will show as follows:

INTRO_1	INTRO_2	ARR. A	ARR. B
ARR. C	ARR. D	COMMON	FILL_1 >

Press the **PAGE >>** key to visualize the display showing FILL 2, FILL 3, END 1 and END 2.

- Press **F1** (INTRO_1) to record the INTRO_1 part. The display will show the following sub menu:

INTRO_1	Drum	12Ø	Quant. :16
CLEAR	(M,m,7th)	Bar: 2	Metron.:On

This is showing the name of the part about to be recorded (in this case INTRO_1) in the **F1** position and the first section of this part in the **F2** position. The other areas in the display are showing the parameters which were explained on pages 3.37/3.38.

- To select the section that you want to record in the INTRO_1 part, press **F2** and the section name will flash showing that it can be changed by means of the **VALUE +/-** keys.

11. After selecting the first section that you want to record (Drum, Bass, Chord 1, Chord 2 or Chord 3) press **START/STOP** to begin the recording.

Stop the recording by repressing **START/STOP**.

12. Repeat the recording process for all the sections that you want to include in the INTRO_1 part.
13. Press **F1**. The part name in this section of the display (INTRO_1 in this case) will begin to flash and can be changed by means of the **VALUE +/-** keys.
14. With the part name flashing in the display, select **ARR. A** with the **VALUE +/-** keys. When one of the ARRANGEMENT parts are selected (A, B, C or D), the corresponding led indicator on the control panel will also turn 'ON'.
15. After selecting the first section that you want to record (Drum, Bass, Chord 1, Chord 2 or Chord 3) press **START/STOP** to begin the recording.

Stop the recording by repressing **START/STOP**.

16. Repeat the recording process for all the sections that you want to include in the ARR. A part.
17. Press **F1**. The part name in this section of the display (ARR. A in this case) will begin to flash and can be changed by means of the **VALUE +/-** keys.
18. Repeat the above recording procedure for the ARR. B, FILL_1 and END_1 parts.
19. Each separate recording can be listened to after selecting the relative part, by pressing **START/STOP**. If something is not to your liking, you can cancel this either partially or completely by pressing **F5**; for instructions on this procedure see **F5 (CLEAR)** on page 3.38.
20. When you are satisfied with everything, you can memorize the entire Pattern with a name of your choice by pressing **SAVE/NAME**. Write the name by the normal method as explained in **HOW TO SELECT A REGISTRATION** on page 2.20.

DELETE - F7

This function of the **EDIT PATTERN** menu enables you to cancel all or parts of the current Pattern (the one shown in the top left hand corner of the display). Press **F7 (DELETE)** to show the following display:

INTRO_1	INTRO_2	ARR. A	ARR. B
ARR. C	ARR. D	COMMON	FILL_1 >

This display is page 1 of the Pattern Parts List. To open page 2, press **PAGE >>** and the following display will show (see top of next page):

<	FILL_2	FILL_3	END_1	END_2
GLOBAL	***	***	***	***

A Pattern, part of a Pattern or section of a part cannot be deleted if the Pattern is protected by the LOCK function in the VALUE sub menu as explained on page 3.34. If this is so, when you press **F7** (DELETE), instead of page 1 of the Pattern Parts List, the following display will appear:

PATTERN PROTECTED	<CANCEL>
-------------------	----------

This warning message avoids accidental interventions in Patterns that you want to keep intact.

Press **F8** (CANCEL) and the display will automatically return to the VALUE display, enabling the LOCK function to be turned 'Off' if you still want to proceed with the deletion.

The entire Pattern, Parts or sections of the Parts can be deleted as follows:

1. TO DELETE THE ENTIRE PATTERN:

- a. Press **F5** (GLOBAL) in page 2 of the Pattern Parts List at the top of the page. The display will then show:

Ø1 [PATT..Ø1]	Clear Global Pattern
	<Cancel> <Confirm>

- b. Press **F8** (Confirm) to delete the Pattern or **F7** (Cancel) to return to page 1 of the parts menu shown at the bottom of the previous page.

2. TO DELETE AN ENTIRE PART (INTRO, ARR., END ETC.).

- a. Press **F7** (DELETE) in the EDIT PATTERN menu.
- b. Select the part to be deleted from the two Pattern Parts List pages (press **PAGE >>** if this is not in the first page) and the display below will show:

DELETE	INTRO_1	Global	Drum
Bass	Chord1	Chord2	Chord3

- c. Press **F3** (Global). You will then be asked to confirm your decision to delete the part as in point 1 above or cancel the operation as desired. Proceed as is appropriate.

3. TO DELETE SPECIFIC SECTIONS OF A PART.

- a. Press **F7** (DELETE) in the EDIT PATTERN menu.
- b. Select the Part containing the section you want to delete, as in **b** point 2.
- c. Select the sections that you want to cancel, by pressing the corresponding **function keys F4** to **F8**, then, as in all the other cases, press **F8** (Confirm) or **F7** (Cancel) to return to page 1 of the Pattern Parts List without deleting the section.

COPY - F8

This function of the EDIT PATTERN menu enables you to copy into a Pattern both a Preset Style or another Pattern. The copy can be global or partial.

Press **F8** (COPY) to show the following display:

```

PRESET      [ROCK_1  ] TO PATT..01 Global
Intro      Arrange   Fill           Ending
  
```

The top line of this display shows the names of the preset STYLE (F2) that can be copied and the PATTERN (F3) into which this will be copied. Whether copying the entire Style or part of it you must now:

- a. Press the **function key F1** to select the group of which the Style to be copied is part (PATTERN or PRESET).
- b. **Select the Style which is to be copied** entirely or partially into the selected Pattern, by pressing **F2**. The name of the preset Style will flash, indicating that it can be changed if required by means of the **VALUE +/-** keys.
- b. **Select the Pattern into which the Style (or part of it) will be copied**, by pressing **F3**. The name of the Pattern will flash, indicating that it can be changed if required by means of the **VALUE +/-** keys.

1. TO COPY AN ENTIRE PRESET STYLE INTO A PATTERN.

- a. Press **F4** (Global) with the above display showing. The following display will then ask for confirmation:

```

GLOBAL [ROCK_1  ] -> GLOBAL [PATT..01]
                        <Cancel> <Confirm>
  
```

- b. Press **F8** (Confirm) to copy the entire Style into the Pattern or **F7** (Cancel) to return to the previous display.

2. TO COPY PART OF A PRESET STYLE INTO A PATTERN.

- a. After defining the Style to be copied and the Pattern into which the copy will be made, explained on the previous page, press the **function key F5 to F8** to select the part that you want to copy (Intro, Arrangement, Fill In or Ending). The following display will then ask for confirmation:

```
INTRO 1   [ ROCK_1   ] - >  INTRO 1   [ PATT..01 ]
                                     <Cancel>   <Confirm>
```

If either *Intro* or *Ending* is selected, you can choose between INTRO 1 and INTRO 2 of the Style by pressing **F1**; the name in the display will flash, enabling you to make the selection by means of the **VALUE +/- keys**.

Likewise you can choose between INTRO 1 and INTRO 2 of the Pattern into which the copy will be made by the same means.

- b. Press **F8** (Confirm) to copy the selected part into the Pattern or **F7** (Cancel) to return to the previous display.

The procedure used above for the INTRO applies for the copying of the two ENDINGS.

HOW TO COMPOSE A PATTERN USING A COMPUTER OR SEQUENCER

You can compose a Pattern on the MS60/50 not only by playing it directly on the keyboard, but also using a computer or sequencer. This system, apart from being extremely fast and precise, enables you to write very sophisticated scores.

For this type of operation you need to do as follows:

- Connect a MIDI cable from the MIDI OUT socket of the computer (or sequencer) to the MIDI IN 2 (Keyb.) socket of the MS60/50.
- Activate the MIDI Clock In of the MS60/50. To do this, press EDIT, F1 (MIDI), F6 (CLOCK), F4 (Active).
- Set the MIDI Clock Out of the computer (or sequencer) in the active mode.

These operations are very important because they assure that the Master Clock is that of the computer (or sequencer).

Suppose you already have a sequence programmed over 4 bars, which refer to the Arrangement A of the Style that you want to programme. Furthermore, suppose that you have programmed for Arrangement A, all five tracks available for the Pattern, that is:

DRUMS, BASS, CHORD 1, CHORD 2 and CHORD 3.

The MIDI transmission channels, set for the five tracks, in the computer (or sequencer), must correspond exactly with those of the parts set for reception in the MS60/50.

If no modifications have been made to the MIDI channels of the MS60/50, you should assign the following transmission channels to the five tracks of the Arrangement:

DRUM	CH. 10
BASS	CH. 3
CHORD 1	CH. 4
CHORD 2	CH. 5
CHORD 3	CH. 6

At this point, in order to have a standard reference for the octaves of the sounds, open the OCTAVE HOLD menu by means of the relative key. Now set all the sections of the Orchestral Accompaniment (Bass, Chord 1, Chord 2 and Chord 3) to **8**, by means of the **function keys F1, F2, F3 and F4**. This operation is very important for sequences that respect the General MIDI sound format; in fact by setting the four orchestral sections to 8, the relative sounds will be allocated to the octave set by General MIDI standards.

Having carried out these operations, that are valid for the complete Style, you are ready to record Arrangement A. This is the procedure that you must follow:

1. Open the EDIT PATTERN menu by pressing **F4**.
2. Select an empty Pattern or one that you want to complete with the **VALUE +/-** keys.
3. Enter the RECORD mode by pressing **F6**.
4. Select the part of the style that you want to record. In this case press **F3**, as you want to compose the Arrangement.
5. Set the number of bars in the Arrangement by pressing **F7** and then the **VALUE +/-** keys.
6. Set in which type of key you want to record the Arrangement (Major, Minor or Seventh) by first pressing **F6** and then making the selection with the **VALUE +/-** keys.
7. If not done already, set the METRONOME to 'On' with the **F8** key.
8. Set all the MIDI parameters of the computer (or sequencer) as explained above.
9. Make the computer (or sequencer) recycle automatically, five times in the 4 bars, as the MIDI channels to record are five.
10. Press **START** on the computer (or sequencer).

At this point if all the operations have been carried out correctly, the MS60/50's clock should activate automatically and therefore begin the recording.

The first track that is recorded is the Drums, then Bass, Chord 1, Chord 2 and Chord 3. You will hear the tracks being superimposed on each other each time the computer (or sequencer) recycles; the display on the MS60/50 will show the part that is being recorded each time. Once the Chord 3 track has been recorded the Start of the MS60/50 will be turned 'Off' automatically. This indicates that the recording of Arrangement A is completed and that you can record another part of the Style.

N.B. - In the whole operation it is most important to remember the following points:

1. The Metronome function must be 'On', otherwise the START of the MS60/50 will turn 'Off' at the end of each track.
2. It is not important to set the quantize value as with this system, the value will always be set automatically to 96.

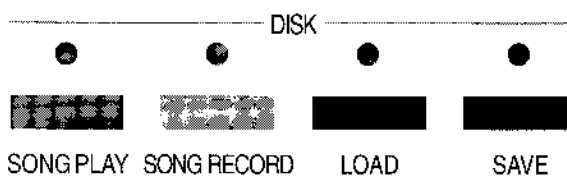
This system can also be used for 'Real Time' recordings of the Styles of other keyboards into the Pattern of the MS60/50.

If you do this, the only inconvenience will be with the Endings and Fill Ins, which, in many keyboards, cannot be activated if at least one bar of rhythm backing has not already been played. Fortunately the Pattern in the MS60/50 is able to resolve this inconvenience also. In fact you just have to set the Metronome function to 'Off', press the **FADE OUT** key and keep this pressed and then start the Style that you want to copy.

By doing this, the MS60/50 will not take into consideration the first bar and therefore you can record an ENDING or FILL IN without running into any problems.

DISK DRIVE

This section covers all the operations that can be performed with the use of the incorporated DISK DRIVE unit; that is those controlled by the SONG PLAY, SONG RECORD, LOAD and SAVE keys and relative displays.



SONG PLAY

You can play General MIDI type Songs from disk with this function. Remember that to play the Songs from the FD 1 disks, you must first set the MS5/MS4/MS4 MAPS in the **MAP & LEAD** display to 'On' as explained on page 3.25.

To play a Song from disk, you should follow this procedure:

1. Press **SONG PLAY** in the DISK section of keys under the VOICE BANK. After the **Please Wait ...** message, the following display will show:

```

----- Nx -- 84          GRAND      63
D I R E C T O R Y  L y r i c : O n   L e a d : O n   C o u n t :   0
    
```

At this point, if you know the reference number of the Song you want to play, you can enter the number by pressing the **relative numbered keys** under the display. *Song numbers from 1 to 9 should be entered as 01, 02 etc.* If however, you are not familiar with the Songs on the disk, press **F5** (DIRECTORY) to show the list of files on the disk, similar to that shown below:

```

01m BECAUSE1  02m BORNTOBE  03m DISCOINF
04m DONTYOUW  05m DREAMLOV  06m EXTERMIN >
    
```

If all the Songs are not shown in this page on the display (only 6 songs can be shown on each page), an arrow sign on the right of the list will indicate that you can proceed to a second page by pressing **PAGE >>**. Use **PAGE <<** to return to the previous pages if more than one page is used.

2. Once you decide which Song to play, you can prepare this, with the above display showing, by pressing the corresponding **function keys F1 to F3** and **F5 to F7** or relative **numeric keys**. After a short period, depending on the length of the Song, the name will show in the top left hand corner of the display with the relative Song number.
3. You should now set the **Lyric On/Off** and **Lead On/Off** functions.
 - a. If you want to follow the words of the Song while this is playing, press **F6** (Lyric On/Off) to set this to '**On**'. In this case, when the Song is playing, the words will scroll along the top

- line of the display in time with the music and the chords will be shown on the bottom line. **F6**, however can be repressed at any time to recall the normal display.
- b. If you want to play the solo line of the Song yourself, on the right hand section of the keyboard, press **F7** (Lead On/Off) to set this to 'Off'. The Song will now play without the Lead line, allowing you to play this with the Voice of your choice, which can be selected by means of the keys in the VOICE BANK section (see HOW TO SELECT A VOICE on page 2.17)
4. Press **START/STOP** to listen to the Song. If you set the Lyric On/Off to 'Off', the display will remain the same, with the difference that you can follow the bars in the 'Bar Counter' in the **Count** position in the display.

TO START THE SONG FROM A SPECIFIC BAR NUMBER

It is possible to start the SONG from any bar that you desire by means of the COUNT function (mentioned in point 4 above). Before starting the Song, press **F8**, then when the Bar Number is flashing, select the Bar at which you want the Song to start by means of the **VALUE +/- keys**: repress **F8** to confirm this operation. The MS60/50 will now show **Pause...** in the display and the Song can be started from the Bar shown by pressing the **RESTART** key on the left of the MEASURE COUNT indicator.

- a. While the Song is playing, in either mode (Lyric On or Off) you can 'book' the next Song by using the **Next** function as explained in point 4 on page 2.3, which covers this function in full.
- b. Stop the Song by repressing **START/STOP**.

NOTE:

1. During the playing of a Song it is possible to lower the Volume of all the backing parts by pressing the two **DRUMS +/- keys**. The Volume of the Right Hand section remains unaltered and the Volumes of the Bass, Chord 1, Chord 2 and Chord 3 sections will be inactive. In this way you will obtain the best balance between the backing and the Solo part played live.
2. When you press SONG PLAY, the HALL 2 reverb effect and the OUT ASSIGN setting L + R Standard will be imposed (even if a different assignment exists).

MODIFICATION/REMAPING OF A SONG

1. When SONG PLAY is inserted, it is possible to save a REGISTRATION in which the 16 MIDI parts of the Song have been modified. If you assign the same name as the Song in question to such a Registration, each time this Song is loaded from Disc, this will automatically set the Registration with the same name that exists in the internal RAM (the REGISTRATION key must be 'On').
This function will be particularly useful when personalizing the editing and adaptation of all the Songs in your library, modifying the Sounds, Volumes, Effects, Transposer.
Naturally, you must remember to save and load from the Disk, the Registrations relative to the Songs.

- When the Lead Line of the Song is excluded with the LEAD OFF function, in actual fact MIDI Channel 4 (or Channel 6 in the Backings for the MS5, MS4, MS3) is not completely excluded and will continue to receive MIDI controls and notes.

SONG RECORD

The SONG RECORD function enables you to record on disk everything you play and all the changes you make to the various settings during the recording. Styles and Arrangements can be played by pressing **START/STOP**, effects can be added, Voices changed etc.; anything you want to include in the Song will be recorded automatically in Real Time.

To RECORD a Song:

- Press **SONG RECORD** in the DISK section of keys under the VOICE BANK. The display will show as follows:

```

ASSIGN SONG FILE NAME :
<< Down      Up >>      Cancel  Record
  
```

- The position of the first character of the name you can assign to the Song will be flashing, indicating that it is ready to be written by the usual method (see point 4 in HOW TO SELECT A REGISTRATION on page 2.20).
- Once the name has been written (at least one character must be entered), press **F8** (Record). The following display will be shown:

```

Press F8 for Start Record !
                          Cancel  Start
  
```

- Repressing **F8** (Start) will put the MS60/50 in a 'standby' situation, so called because the recording will actually start when the first operation is carried out. This does not mean only when you start to play; any changes main to the panel set up will start the recording and show a rectangular sign in the top line of the display as shown below:

```

Ø1 16 BEAT_1    4Ø    84    □    GRAND    63
Finger 4Ø Dxpian 2Ø Steel 22 Incapa 25
  
```

- Repress **SONG RECORD** to terminate the recording and the rectangular indication in the above display will disappear.

The MS60/50 will now be automatically set into the SONG PLAY mode, indicated by the led which will turn 'ON' above the relative key, and the display will show the name of the Song just recorded and the number assigned to it. The Song number will be assigned according to the alphabetical order of the name.

- Press **START/STOP** to listen to the Song.

LOAD

Any files on disk can be loaded into the MS60/50 by means of this function.

To LOAD any file from the disk:

1. Press **LOAD** in the DISK section of keys under the VOICE BANK. The following LOAD MENU will show:

```

LOAD -->  Snd           Registr  Program
UserD.Set  UserVoice Pattern  Chain Patt
  
```

This display is showing all the possible types of files that can be loaded.

2. Select the type of file that you want to load by pressing the corresponding **function keys** from **F2** to **F8**.

TO LOAD A GROUP OF REGISTRATIONS, PROGRAMS, USER VOICES OR A USER DRUM SET.

1. Press the relative function key. The display will show a list of all the files of that type.
2. Press the corresponding **Function key** to select the name of the group that you want to load. The display will then show the **Please Wait for Loading ...** message, after which the loading will be completed.
The new group or Drum Set will be loaded in place of those resident in the MS60/50 before the operation was carried out. If, for example, you load a group of Registrations from Disk, these will substitute the 64 internal Registrations.

TO LOAD A PATTERN, STYLE OR GROOVE & STYLE

The LOAD configuration will also have to be used when you want to load a STYLE, PATTERN or a GROOVE & STYLE. In this way the Style will be loaded into the Pattern position selected, to be played on the left hand section of the keyboard. The Groove will be loaded into the USER VOICE 001 and at the same time in all the DRUM SETS in note location 97.

1. Press **F7** (Pattern) to show the display containing the list of Patterns (or Styles and Grooves) on the Disk. Select the one you want to load by pressing the corresponding **function key**, in this case **GROOVE_1** was selected, and the display will show as follows:

```

LOAD GROOVE_1 TO      Ø1 [ EMPTY   ]
                       <CANCEL>  <CONFIRM>
  
```

The name of the Pattern position into which the Disk Pattern or Groove will be loaded, is flashing, indicating that it can be selected by means of the **VALUE +/-** keys. If you do not want to cancel any of the Patterns, you should select an 'EMPTY' pattern position.

- If you have selected a Pattern position that was previously 'write protected' in the LOCK function of the VALUE sub menu (EDIT PATTERN explained on page 3.34, a display similar to the following will appear:

```
LOAD GROOVE_1 TO      Ø1 [PATT..Ø1]
  * LOCK *           <CANCEL>  <CONFIRM>
```

Press **F7** (<CANCEL>) to return to the Load Menu. If you want to load into a protected position, you should remove the protection as explained in the relative LOCK function on page 3.34.

- If you selected to load a GROOVE rather than a Pattern or Style, when you press **F8** (<CONFIRM>) a further display will give you the choice of two loading methods; Multi_Task and Fast_Load, as shown in the following display.

```
LOAD GRV: Multi_Task  Fast_Load
```

If you select Multi_Task by pressing **function key F2**, you can play the instrument while the loading process is being carried out. Bear in mind though, that the loading will take very much longer. If you select Fast_Load by pressing **function key F3** you will have to wait a short time for the loading to be completed before playing.

SYNGROOVE

This exclusive SOLTON feature enables any GROOVE that is loaded into the MS60/50 Pattern section to be automatically synchronized with the internal clock. This means that you can use it with any Pattern that you programme and it will play the exclusive natural sounding arrangement at the selected tempo. The Groove can of course be synchronized with the Internal Styles, substituting them or in addition to the existing rhythm.

TO LOAD PATTERN CHAINS

- Press **F8** (Chain Patt) to open the display showing the list of Pattern Chains.
- Select the Chain that you want to load by pressing the corresponding **function key**. The display will then ask:

```
EXISTING PATTERNS !!----- <OVERWRITE ALL>
|                               <KEEP ALL >
```

This gives you two choices:

- a. Press **F4** (<OVERWRITE ALL>) to load the selected Chain and overwrite, that is cancel, all the existing Patterns in the memory.
- b. Press **F8** (<KEEP ALL>) to load the selected Chain without cancelling any Patterns memorized previously. This is only possible if enough memory space is available. If not, the following display will show:

```

NO MEMORY AVAILABLE
                                     < CANCEL >
```

Press **F8** (<CANCEL>) to cancel the operation and return to the main Load Menu.

Patterns can be deleted to make more memory space, should this become necessary, by following the procedure in TO DELETE THE ENTIRE PATTERN on page 3.42.

3. If any locked Patterns (write protected) are present in the memory when you select the file to be loaded in point 2, the following display will show, warning you that some Patterns are protected:

```

EXISTING PATTERNS !!           <OVERWRITE ALL>
<KEEP LOCKED>                 <KEEP ALL>
```

If you now press **F5**, you will keep all the protected patterns in the memory and load the Pattern Chain without cancelling these, whereas all others will be cancelled. You can however, as before, press **F4**, which in this case will overwrite all files (protected or not) or **F8** to keep all the current files on the disk and load the new one after these, memory space permitting.

TO LOAD A SOUND (SND) OR GROOVE (GRV)

1. Press **F2** (Snd). After showing **Wait >>**, the display will change to:

```

SND  :      Multi_Task      Fast_Load
GRV  :      Multi_Task      Fast_Load
```

This is asking you what you want to load, a SOUND or a GROOVE. Each type can be loaded by one of two methods, as for a Groove Pattern; Multi_Task or Fast_Load.

2. Press **F2** or **F6** to load a SOUND or a GROOVE respectively with the Multi_Task method, and **F3** or **F7** respectively for the Fast_Load method, after which the display will show the list of these files currently on the Disk. Select the file to be loaded by pressing the corresponding **function key** and this will then be loaded by the method selected previously. If you select Multi_Task by pressing **function key F2** or **F6**, you can play the instrument while

the loading process is being carried out. Bear in mind though, that the loading will take very much longer. If you select Fast_Load by pressing **function key F3** or **F7** you will have to wait a short time for the loading to be completed before playing.

If no file of the selected type is present on the disk, the display will show:

```
NO FILE FOUND
                                     Dir          Cancel
```

3. Press **F8** (Cancel) to return to the main LOAD MENU or **F7** (Dir) to return to the previous display.

When you load a GROOVE from disk with this loading configuration (Load GRV), **this is loaded both** into the **USER VOICE 001** position and the **key position 97** of the Drum Set and can be included in any of the Patterns that you programme, just as any other drum instrument.

When you load a SOUND (Load Snd) from disk, **this is loaded in USER VOICE 001.**

SAVE

The SAVE function enables you to save User Drum Sets, User Voices, Programs, Registrations and Patterns on the disk. The method used is the same for all files.

1. Press **SAVE** in the Disk section of keys under the VOICE BANK to open the following display:

```
SELECT FILE TO SAVE
UserVoice Program Registr. Pattern
UserD.Set
```

2. Press the relative **function key F4** to **F8** to select the type of file that you want to save. A display will then show in which you can change the name of the file that you want to save on disk.
3. After giving the name, press **F8** (Save) to save the file on disk with the name selected.
4. If you try to save a file with a name already on the disk, the following display appears:

```
FILE ALREADY EXISTS
                                     Overwrite Cancel
```

5. Press **F7** (Overwrite) to superimpose the new file over one having the same name already on Disk. If you do not want to cancel the old file resident on the Disk, just repeat the SAVE operation giving a different name to the new material to be saved.
6. Press **F7** (Cancel) to return to the LIVE MENU.

KARAOKE (WITH THE VI 1 VIDEO INTERFACE - OPTIONAL)

WORDS & CHORD WRITING ON THE MS60/50 KEYBOARD

RECOMMENDED COMPUTERS: ATARI with Notator programme.

MACINTOSH with Opcode "Vision" programme.

WRITING WORDS:

1. Insert a "Lyrics" event at the desired point.
2. Write "<".
3. Write the words (maximum 40 characters each line).
4. Continue to the end of the Song.

WRITING CHORDS:

1. Insert a "Lyrics" event at the desired point.
2. Write "%".
3. Write the chords.
4. Continue to the end of the Song.

COLOURING THE WORDS:

1. Move the Words and Chords tracks slightly backwards with respect to where they were written on the computer. If you use a division of 480 ticks/quarter, the amount you need to move back could be between -300 to -400 according to the playing speed of the Song.
2. Save the MIDI file just edited.
3. Connect the keyboard as follows:
MIDI Out Keyboard > MIDI In Computer / MIDI Out Computer > MIDI In Keyboard.
4. Simultaneously press the four **function keys F5, F6, F7 and F8** on the front panel of the keyboard.
5. Press **function key F1** (KRK 'On').
6. Press the **EDIT** key.
7. Re-press the **EDIT** key.
8. Press **F1** (MIDI); press **F6** (Clock); press **F4** (Clock In active).
9. Set up the computer as follows:
Send MIDI Clock.
Filter all events in the recording except Control 31.
Set an empty track to Record.
10. Select the Song in which you want to colour the words. This operation must be carried out both on the computer and on the keyboard.
11. At this point setting the computer in Record, the keyboard will start to play the Song, showing the words both on the display and on the TV connected to the VI 1 Video Interface.
12. Moving the Modulation Wheel on the keyboard will colour the words. It is advisable to lower the playing speed of the Song in order to make the colouring more precise.
13. At the end of the recording of the Karaoke effect you will have the final file on the computer. At this point you can save the MIDI file. You are advised to channelize both the Lyrics events and Control 31 events for the colouring on MIDI Channel 1, which is the only free channel.

Suggestion:

Remember to MUTE all the active tracks on the computer during the recording of the colouring in order to avoid a Loop effect.

4 APPENDIX

INITIALIZING THE MS60/50

Like all computerized products, it is sometimes necessary to reset the internal microprocessor. This will be seen from unusual readings on the display or some kind of malfunctioning like, for example, no response from a key when pressed etc.

N.B. - When you initialize your MS60/50 the Patterns, Registrations, Programs, User Voices and User Drum Set will all be completely cancelled. You are therefore advised to keep a copy of any programming done on the instrument.

It is good practise to copy of all the programming that you do not want to lose from time to time, as this can be lost when a defect occurs in the instrument or when it is sent to a service centre for repair.

To initialize or reset the MS60/50 do as follows:

1. Switch the instrument 'OFF'.
2. Hold down the **F1** and **F2 function keys** and then with these held down, switch the instrument 'ON'. The following display will show:

HARD RESET REQUESTED
'F3' to Confirm -- 'F4' to Skip

3. Press **F3** to carry out the HARD RESET. Press **F4** to proceed without resetting the instrument.
4. After a few seconds the MS60/50 will show the Live menu on the display showing that it is ready to be used.

VOICE LISTS

BANK 1

1. GRAND	33. ACOUSTIC	65. BLOWSAX	97. ICEPAD
2. ROCK	34. FINGERED	66. ALTOSAX1	98. SOUNTRAC
3. UPRIGHT	35. PICKED	67. TENORSAX	99. CRYSTALS
4. HONKY	36. FRETLES	68. BARITON	100. SPHERE
5. RODES	37. SLAP BAS	69. OBOE	101. BRIGHT
6. DXPIANO	38. FUNK BAS	70. E. HORN	102. GOBLIN
7. HARPSCH	39. SYNBA1	71. BASSOON	103. ECODROP
8. CLAVINE	40. SYNBA2	72. CLARINET	104. STARTREK
9. CELESTA	41. VIOLIN	73. PICCOLO	105. SITAR
10. GLOCKEN	42. VIOLA	74. FLUTE1	106. BANJO
11. MUSICBOX	43. CELLO	75. FLUTE2	107. SHAMISEN
12. VIBES	44. CONTRAB	76. PANFLUTE	108. KOTO
13. MARIMBA	45. TREMOLOS	77. BOTTLE	109. KALIMBA
14. XYLOPHON	46. PIZZICAT	78. SHAKUHA	110. BAGPIPE
15. TUBOLAR	47. HARP	79. WHISTLE	111. FIDDLE
16. SANTUR	48. TIMPANI	80. OCARINA	112. ZURNA
17. DRAWBARS	49. ENSEMBLE	81. SQUARE	113. BELLS
18. JAZZORG1	50. SLOW ENS	82. BRIGHT	114. AGOGO
19. ROCKORG	51. SYNST1	83. CALLIOPE	115. STEELDRM
20. PIPE ORG	52. SYNST2	84. CHIFF	116. WOODBLOC
21. REEDORG	53. CHOIR1	85. PLATE	117. TAIKO
22. MUSERTE	54. CHOIR2	86. HEAVY	118. MELOTON
23. HARMONIC	55. SYNVOICE	87. SAW5TH	119. EL. SNARE
24. ACCORDIO	56. HITS	88. ELEKTRO	120. REVERSE
25. NYLON	57. TRUMPET	89. FANTASY	121. SLIDE
26. FOLK	58. TROMBONE	90. INCAPAD	122. BREATH
27. JAZZGUIT	59. TUBA	91. SCORE	123. SEASHORE
28. CLEAN	60. MUTE TRP	92. SPACE	124. TWEET
29. STOPPED	61. F. HORN	93. DARKPAD	125. TELEPHON
30. OVERDRIV	62. BRASS	94. SHIFSTONE	126. HELICOPT
31. ROCKLEAD	63. SYNBR1	95. HALO	127. APPLAUSE
32. HARMONIX	64. SYNBR2	96. SWEEP	128. GUNSHOT

BANK 2

1. CONCERT	33. JAZZBASS	65. SOFTSAX	97. MELOGUIT
2. ELECTRIC	34. FING. BAS	66. CIRCUSAX	98. HUMBUCK
3. MUTED	35. PLUCKBAS	67. R&B SAX	99. JAZZY
4. CHOR. PNO	36. MUTEBASS	68. GROWLSAX	100. STRATOS
5. E. PNO1	37. THUMBASS	69. ROCKSAX	101. MUTE GTR
6. E. PNO2	38. TECNOBAS	70. WOULDREED	102. PLUCK GT
7. E. PNO3	39. SYNBA3	71. SOFTROMB	103. CHOR.GTR
8. CLAVIX	40. SYNBA4	72. CORNET	104. 60'S GT
9. CARILLON	41. TZYGANY	73. HIFLUTE	105. HAWAIAN
10. TUNEBELL	42. BOWED	74. FIFE	106. MANDOLIN
11. DULCIMER	43. VIOLAS	75. FM WHIST	107. ZITHER
12. VIBRAPHO	44. CELLOS	76. ANDES	108. CETRA
13. MALIMBA	45. OCTASTRG	77. ECODREAM	109. UKULELE
14. MALLETS	46. PLUCKEDS	78. WHISPER	110. KANUN
15. BELLS	47. ORCHSTRA	79. NEWAGE	111. JEWSHARP
16. TOYBOX	48. ARCOS	80. WARMTH	112. SHANAI
17. GOSPEL	49. STRINGS	81. WOW	113. BELLTREE
18. BOPORGAN	50. SLOW STR	82. SAWLEAD	114. CLAVES
19. TONEWHEL	51. SYNST3	83. RAMP	115. TIMBALES
20. POSITIVE	52. SYNST4	84. ANALOG	116. CONGA
21. CHURCH	53. SINGERS	85. POPBASS	117. BONGO
22. DIATONIC	54. CHORALE	86. SINUSBAS	118. POWERTOM
23. CASSOTTO	55. DREAM	87. BOURDON	119. SNARE
24. BANDONEO	56. XVOICE	88. SUBBASS	120. COWBELL
25. SPANISH	57. JAZTRUMP	89. JINGLORG	121. HUGH
26. COUNTRY	58. SLIDETBN	90. CLICKORG	122. HOUGH
27. J.ACOUST	59. EUPHON	91. FMORG1	123. HUO
28. STEEL	60. MARIACHI	92. FMORG2	124. YEAH
29. STOP 5TH	61. FLUGHORN	93. FMORG3	125. CHACK
30. BLUELEAD	62. BRASSECT	94. FMORG4	126. LAUGHING
31. 12STRING	63. GROWBRAS	95. FMORG5	127. WIND
32. R & ROLL	64. BUGLE	96. FMORG6	128. EFFECTS

"STANDARD" DRUM SET			DRUM SETS	PROGRAM CHANGE
24		Syn tom 6	STANDARD	001
25	25	Syn tom 5		
26		Syn tom 4		
27	27	Syn tom 3	FOLK	009
28		Syn tom 2		
29		Syn tom 1		
30	30	Crash 6	HARD ROCK	017
31		Spring 1		
32	32	Spring 2		
33		Metron. 1		
34	34	Metron.2	DANCE	025
35		Bd 13		
36		Bd 18		
37	37	Rim sh.3	TECNO	026
38		Snarc 13		
39	39	Clap		
40		Snare 1		
41		St. tom6	FUSION	033
42	42	Stick 4		
43		St. tom5		
44	44	Close 3	JAZZ	041
45		St. tom4		
46	46	Open 4		
47		St. tom 3		
48		St. tom2	ORCHESTRA	049
49	49	Crash 1		
50		St. tom1		
51	51	Ride 1	CONTEMPORARY	057
52		China		
53		Ridecup2		
54	54	Tamb3	LATIN	065
55		Crash 2		
56	56	Cowb 1		
57		Crash 3	ROCK & ROLL	073
58	58	Vibrasla		
59		Ride 2		
60		Bongo h1		
61	61	Bongo l1	USER DRUM SET	128
62		Conga m2		
63	63	Conga h2		
64		Conga l2		
65		Timb. h2		
66	66	Timb l2		
67		Agogo h.		
68	68	Agogo 1.		
69		Cabasa		
70	70	Maracas2		
71		Whistle s		
72		Whistle 1		
73	73	Guiro 2		
74		Guiro 1		
75	75	Claves		
76		Wblock h		
77		Wblock l		
78	78	Cuica m.		
79		Cuica		
80	80	Triang.1		
81		Triang.2		
82	82	Shaker 3		
83		Shaker 2		
84		Sticks		
85	85	Castagn.		
86		Tamb.1		
87	87	Rim sh.5		
88		Snare 14		
89		Snare 18		
90	90	Snr Roll		
91		Middle 1		
92	92	Stick 1		
93		Close 1		
94	94	Open 1		
95		Reverse		
96		Applause		

MIDI IMPLEMENTATION CHART

MODEL: MS 50

VERSION: 1.1

DATE: 10.03.94

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Channel	1 -16	1 -16	
Mode	Default Messages Altered	1	1 - 4	
Note Number	True Voice	21 -108	21 -108	
Velocity	Note On	0	0	
	Note Off	0	0	
AfterTouch	Key's	X	X	
	Ch's	0	0	
Pitch Bender		0	0	
Control Change	0	0	0	Page 0 : Sounds 1 -128 1 : Sounds 129 -256 2 : User Voices 1 -128
	1	0	0	Modulation
	5	0	0	Portamento Rate
	6	0	0	Data Entry
	7	0	0	Volume
	10	0	0	Pan (0 = Left; 64 = Centre; 127 = Right)
	11	0	0	Expression
	30	0	0	Rotor (0 = null; 1 - 64 = Slow; 65 -127 =Fast)
	64	0	0	Sustain
	65	0	0	Portamento
	66	0	0	Sostenuto
	67	0	0	Soft Pedal
	91	0	0	Reverb. Level
	93	0	0	Chorus Level
	96/97	0	0	Data Increment/Decrement
	98/99	0	0	NRPN (LSB/MSB) *
	100/101	0	0	RPN LSB/MSB) 0 : Pitch Bend Sensitivity 1 : Fine Tuning 2 : Coarse Tuning
	120	0	0	All sounds off
	121	0	0	Reset all controls
	123	0	0	All notes off
	124	0	0	OMNI mode Off
	125	0	0	OMNI mode On
	126	0	0	MONO mode On
	127	0	0	POLY mode On
Program Change	True #	0	0	1-128 sounds
System Exclusive		0	0	
System Common	: Song Pos.	0	0	
	: Song Select	X	X	
	: Tune	X	X	
System Real Time	: Clock	0	0	
	: Commands	0	0	
Aux Messages	: Local On/Off	0	X	
	: All Notes Off	0	0	
	: Active Sense	X	X	
	: Reset	X	X	
Notes: see below				

MODE 1: OMNI ON; POLY
MODE 3: OMNI OFF; POLY

MODE 2: OMNI ON; MONO
MODE 4: OMNI OFF; MONO

0: Yes
X: No

NON-REGISTERED PARAMETER NUMBERS

NRPNH	NRPNL	DATA	RANGE	PARAMETER
08H	01H	mm	+/- 63	Vibrato Rate
09H	01H	mm	+/- 63	Vibrato Depth
0AH	01H	mm	+/- 63	Vibrato Delay
20H	01H	mm	+/- 63	Filter Cut Off Frequency
21H	01H	mm	+/- 63	Filter Resonance
63H	01H	mm	+/- 63	EG Attack Time
64H	01H	mm	+/- 63	EG Decay Time
66H	01H	mm	+/- 63	EG Release Time
rr	18H	mm	+/- 63	Coarse Pitch of Drum
rr	19H	mm	+/- 63	Fine Pitch of Drum
rr	1AH	mm	0-127	Drum level
rr	1CH	mm	0-127	Drum Pan
rr	1DH	mm	0-127	Drum Reverb. Level
rr	1EH	mm	0-127	Drum Chorus Level

mm: value of parameter
rr: Drum code (18H - 60H)

TECHNICAL SPECIFICATIONS

KEYBOARD:	61 velocity sensitive keys (C to C) with 4 Dynamic curves. After Touch assignable to Modulation, Pitch and Volume. Pitch Bend and Modulation Wheels. Portamento. Portamento Speed. Global Transposer. Octave Down. Keyboard Split. Arabic Scale. Full Chord.
DISPLAY:	2 x 40 characters LCD.
SOUND GENERATION:	256 PCM and Algorithm voices. 2 Voice Banks. 28 note Polyphony.
USER VOICE:	128 User Voices. Edit Parameters: DCA, DCF (Attack, Decay, Release, Cut Off, Resonance), LFO Rate, Depth, Delay, Aftertouch, Reverb, and Chorus.
DRUM SET:	11 Internal Drum Sets + 1 User Drum Set. 192 Percussion Instruments. 7 Percussion Sections: Bass Drum, Snare, Hi Hat, Cymbal, Toms, Hi Latin, Low Latin. Separate controls for: Volume, Reverb, and Pan/Pot. Audio exclusion (On/Off) for each section.
PROGRAMS:	128 Programs. Modes : Patch, Duet, Trio. 4 Splits. Voice controls : Volume, Pan Pot, Detune, Shift, Sustain, Reverb, Chorus/Rotor. Velocity Switch function with threshold control.
EDIT:	Edit, Save/Name, Page -/+, Value -/+, F1, F2, F3, F4, F5, F6, F7 and F8 function keys.
REGISTRATIONS:	64 Global Registrations of the control panel settings. MIDI Lock function.
VOLUME CONTROLS:	Drums, Bass, Chord 1, Chord2, Chord 3, Right Hand, Master, Fade Out.
DSP EFFECTS:	Effects Processor with 15 Reverbs, Chorus 1, Chorus 2, Pan Chorus, Rotor, Delay 1, Delay 2, Echo Repeat, Rotor Slow/Fast.
STYLES:	99 Internal Styles. 4 Arrangements : A, B, C, D. Intro 1, Intro 2, Fill In 1, Fill In 2, Fill In 3, Ending 1, Ending 2, Jump, Key Start, Key Stop, Tempo Slow - Fast (40/250). Measure Count, Arranger Modes: Easy Chord, Pianist, Dynamic Arranger, Retrigger, Bass to Lowest, Lower, Bass Sustain, Octave/Hold, Swell to Right, Restart, Hold, Autocrash, Automatic Tempo.
PATTERNS:	24 Programmable Styles. Functions: Memory Protection (Lock), Value, Voice, Volume / Effects, Chord Mode (Open - Closed), Tempo, Quantize (4 - 96), Time Signature (1/4-16/8), Record, Delete, Copy.
SONG:	Song Record. "Real Time" performances recorded directly on Disk.
DISK DRIVE:	Functions : Format, Directory, Delete, Rename, Copy, Transpose, Tempo, Song / Pattern Chains, Commands : Load/Save for Programs, User Drum Set, User Voice, Pattern, PCM Voices (.Snd), Grooves PCM (.Grv), Fast Load - Multitask, Song Play, Song Record.
MIDI:	General MIDI Standard with MIDI parts and channels. MIDI IN 1 (GM), MIDI IN 2 (Keyboard), OUT, THRU, Transmit/Receive of Channels, Transposer, Program Change, Volume, Exclusive Messages, Tabs, Control Change, Clock In - Out for the internal sections, Soft Thru, Dump, Tx/Rx for Registrations and Programs.
MIDI UTILITIES:	4 Dynamic Curves, Local Control On/Off, Pedalboard On/Off.
UTILITIES:	Reload , Registration tab Off, Chord name, Footswitch assign (Footsw. Lock), Master Tune, Autocrash, Map Conversion for MS5, MS 4, MS 3, 625/525 Video.
MIDI SONGS:	Lead On/Off, Lyrics On/Off, Selection of Next Song (Next) and Song Chains, Directory, Bar Counter, Chord Name, Karaoke in colour with the VI 1 VIDEO INTERFACE.
PEDALBOARD:	13 note MIDI Pedalboard, Manual or Arranger function modes with footswitch key changing facility.
OUTPUTS:	OUT 1 Left/Mono, OUT 2 Right, OUT 3, OUT 4. Output Assignment : L&R Standard, L&R+Out 3, L&R+Out 3 & 4, 4 Separate, Stereo Headphones, Volume Pedal, Sustain Pedal, Footswitch (FS 13 or FS 6).
AMPLIFICATION:	2 x 22 W RMS Stereo amplifier with Bass/Midrange and Tweeter speakers. Internal Speakers On/Off switch.
ACCESSORIES:	Supplied Accessories: Demo Disc, Music Support, Owner's Manual. Optional Accessories : Volume Pedal, Sustain Pedal, Piano Type Sustain Pedal, MIDI Pedalboard, VI 1 Video Interface, FS 13 - 13 Pedal Switch Unit, FS 6 - 6 Pedal Switch Unit, Hard Case.
DISK LIBRARY/ MUSICAL SOFTWARE:	MIDI Songs (Words and Music), MIDI Instrumentals, PCM Voices, PCM Grooves/ Styles, Styles.

Both models have the same technical and musical specifications with the exception that the MS50 model does not include internal amplification.

The manufacturer reserves the right to modify the technical specification at any time without notice.

