

Roland

EM-50OR

ORIENTAL CREATIVE KEYBOARD

الهيئة العامة للغذاء والدواء
وزارة الصحة العامة والسكان



For Nordic Countries

Apparatus containing Lithium batteries

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

VARNING!

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!

Lithiumbatteri - Eksplosjonsfare.
Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandoren.

VAROITUS!

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

For E.C. Countries

This product complies with EC directives
- LOW VOLTAGE 73/23
- EMC 89/336"

Dieses instrument entspricht folgenden EG-Verordnungen:
- NIEDRIGE SPANNUNG 73/23
- EMC 89/336"

Cet instrument est conforme aux directives CE suivantes:
- BASSE TENSION 73/23
- EMC 89/336"



Questo prodotto è conforme alle seguenti direttive CEE
- BASSA TENSIONE 73/23
- EMC 89/336"

Dit instrument beantwoordt aan de volgende EG richtlijnen:
- LAGE SPANNING 73/23
- EMC 89/336"

Este producto cumple con las siguientes directrices de la CE
- BAJO VOLTAJE 73/23
- EMC 89/336"

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

CLASS B This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

CLASSE B

AVIS

Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Règlement des signaux parasites par le ministère canadien des Communications.

Roland



EM-50OR

ORIENTAL CREATIVE KEYBOARD

الكيبورد الشرقى الذكى

Owner's Manual

Thank you for choosing a Roland EM-50 OR Oriental Creative Keyboard. The EM-50 OR is a member of Roland's new arranger keyboard family that once again redefines the standard for instruments equipped with an automatic accompaniment function. The most striking features include the Style Morphing and Style Progression functions for realtime changes of preprogrammed accompaniments. And, of course, the EM-50 OR offers a D Beam Controller, a stunning sound quality, and the best oriental and western Music Styles available.

To get the most out of the EM-50 OR and to ensure many years of trouble-free service, we urge you to read through this Owner's Manual thoroughly.

To avoid confusion, let's agree to use the word "button" for all keys on the front panel, and only use "key" when referring to the EM-50 OR's keyboard.

Before using this instrument, carefully read the sections entitled "IMPORTANT SAFETY INSTRUCTIONS", "USING THE UNIT SAFELY", and "IMPORTANT NOTES". These sections provide important information concerning the proper operation of the EM-50 OR. Be sure to keep this manual in a safe place for future reference.

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Features

D Beam Controller

The EM-50 OR's D Beam Controller is a new performance function introduced on Roland's groundbreaking MC-505 Groovebox. It allows you to control several parameters by moving your hand over an (invisible) infrared light beam.

Oriental Scale buttons

The EM-50 OR features 12 ORIENTAL SCALE buttons that allow you to tune the corresponding notes (C to B) the way you want them to sound, i.e. a quarter tone (or more) up or down. There are also three SCALE MEMORY buttons for storing and recalling your favorite tuning settings so that you can easily switch scales.

Style Morphing & Style Progression

The *Style Morphing* function allows you to "create" new Music Styles (accompaniments) on the fly by replacing selected accompaniment parts of one Style with the parts from another Style.

Style Progression, on the other hand, allows you to simplify, add, or leave out accompaniment parts of the selected Music Style. This intuitive way of controlling the arrangements of your accompaniments is a wonderful assistant for creating just the right atmosphere for the music you play.

Large, graphic display

Your EM-50 OR is equipped with a large backlit display that keeps you posted about the current status of your instrument. Most functions are represented by means of straightforward icons that provide massive at-a-glance information without confusing you.

64 User Programs with Style Hold function

User Programs are memories where you can save your own panel settings. These include the currently selected Style, Tone (sound), tempo, as well as a lot of other parameters. At the press of a maximum of three buttons, you can thus completely reconfigure your instrument.

The EM-50 OR's Style Hold function allows you to ignore Music Style selection when a User Program is recalled. Thus, while all other settings change, the previously selected Music Style remains in effect. One advantage of this system is that you can save different Style Morphing and Style Progression settings for otherwise identical panel settings, and alternate between them simply by selecting a different User Program.

Floppy disk drive

The EM-50 OR comes with a floppy disk drive so that you can save the internal settings (including the Recorder Song) and load them whenever necessary. It also allows you to load new Styles into the Flash ROM memories.

395 Tones and 15 Drum Kits

The EM-50 OR comes with 354 excellent instrument sounds taken from Roland's acclaimed sound library. There are also 41 oriental sounds of the same superb quality. In most instances, there will be several Tones to choose from for the song you are about to play.

Furthermore, the EM-50 OR's sound source conforms to General MIDI System Level 1 (*GM* for short) as well as Roland's *GS* Format.

96 Music Styles in ROM + 8 in Flash-ROM

The EM-50 OR comes with a total of 104 Music Styles (automatic accompaniments), 96 of which reside in a so-called *ROM memory* (these cannot be replaced). 32 Styles are oriental Styles programmed in the Middle-East. Eight additional Styles *can*, however, be replaced with other Styles loaded from floppy disk or via MIDI. Ask your Roland dealer for details about the availability of new Styles.

The ROM Styles include new Dance/Techno accompaniments as well as 8 Acoustic Styles. The latter are perfect for "unplugged" performances, Jazz ballads, etc.

Three modes

For enhanced operation, the EM-50 OR provides an Arranger, an Organ, and an M.Drums mode. These are selectable at the press of a button and thus bound to help you adapt the EM-50 OR to your musical needs in no time.

Audio inputs with LEVEL control

Another first on your EM-50 OR is the INPUT [LEVEL] control that allows you to set the volume of an external audio source so as to provide the right "mix" with the EM-50 OR's sounds.

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1. Important notes

In addition to the items listed under “IMPORTANT SAFETY INSTRUCTIONS” and “USING THE UNIT SAFELY”, please read and observe the following:

Power supply

- Do not use this instrument on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- Be sure to only use the supplied adapter (Roland ACJ). The use of other adapters may damage your EM-50 OR.
- Before connecting the EM-50 OR to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

Placement

- Using the EM-50 OR near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this instrument or move it farther away from the source of interference.
- This instrument may interfere with radio and television reception. Do not use it in the vicinity of such receivers.
- Do not expose the EM-50 OR to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the instrument.

Maintenance

- For everyday cleaning wipe the EM-50 OR with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a mild, non-abrasive detergent. Afterwards, be sure to wipe the instrument thoroughly with a soft, dry cloth.
- Never use benzene, thinner, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Repairs and data

- Please be aware that all data contained in the instrument’s memory may be lost when it is sent for repairs. Important data should always be saved to floppy disk. In certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data. Roland assumes no liability concerning such loss of data.

Additional precautions

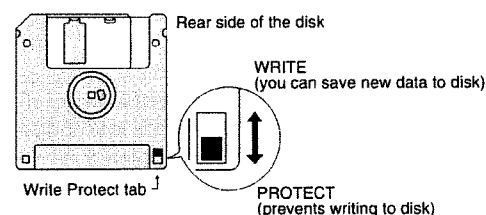
- Please be aware that the memory contents can be irretrievably lost as a result of a malfunction, or the improper operation of the instrument. To protect yourself against the risk of losing important data, we recommend that you periodically make a backup copy of your settings by saving them to a floppy disk or via MIDI.
- Use a reasonable amount of care when using the instrument’s buttons, other controls, and jacks/connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.

- When connecting/disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable’s internal elements.
- A small amount of heat will radiate from the instrument during normal operation. This is perfectly normal.
- To avoid disturbing your neighbors, try to keep the instrument’s volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially late at night).
- When you need to transport the instrument, package it in the box (including padding) that it came in. Otherwise, you will need to use equivalent packaging materials, or a flightcase.

Handling floppy disks

Floppy disks contain a plastic disk with a thin magnetic coating. Microscopic precision is required to enable storage of large amounts of data on such a small surface area. To preserve their integrity, please observe the following when handling floppy disks:

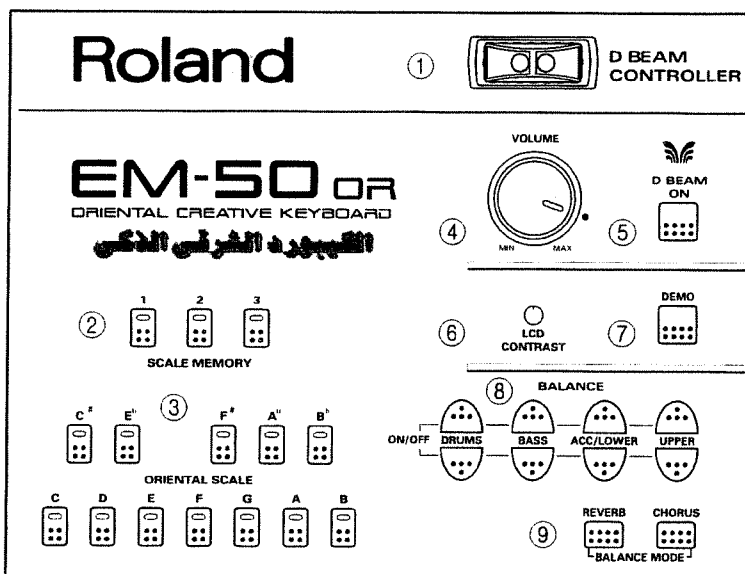
- Never touch the magnetic medium inside the disk.
- Do not use or store floppy disks in dirty or dusty areas.
- Do not subject floppy disks to temperature extremes (e.g., direct sunlight in an enclosed vehicle). Recommended temperature range: 10 to 50° C (50 to 122° F).
- Do not expose floppy disks to strong magnetic fields, such as those generated by loudspeakers.
- Floppy disks have a “write protect” tab which can protect the disk from accidental erasure. It is recommended that the tab be kept in the PROTECT position, and moved to the WRITE position only when you wish to write new data onto the disk.



- Disks containing important performance data for this instrument should always be locked (have their write protect tab slid to the “Protect” position) before you insert them into the drive of another instrument or a product of the HP-G, MT, KR, or Atelier families), or into a computer’s drive. Otherwise, when performing any disk operations (such as checking the contents of the disk, or loading data), you risk rendering the disk unreadable by the EM-50 OR’s disk drive.
- The identification label should be firmly affixed to the disk. If the label comes loose while the disk is in the drive, it may be difficult to remove the disk.
- Put the disk back into its case for storage.

2. Panel descriptions

2.1 Front panel



① **D Beam Controller (sensor)**

The D Beam Controller allows you to control various aspects of your EM-50 OR simply by moving your hand over the two “eyes”. The function to be controlled is selectable.

② **SCALE MEMORY buttons**

These three buttons allow you to save and recall the tuning settings carried out with the ORIENTAL SCALE buttons. These memories already contain useful settings (that will be recalled whenever you initialize your EM-50 OR).

③ **ORIENTAL SCALE buttons**

These buttons allow you to change the tuning of each note of the scale. By default, pressing one of these buttons will lower the corresponding notes in all octaves by a quarter tone (–50 cents). Other settings can be carried out via a Parameter mode function (see page 24). Your own tunings can be saved to one of the three scale memories (see above).

④ **VOLUME control**

Use this control to set the overall volume of your EM-50 OR. More refined volume balance settings can be made with the BALANCE buttons.

Note: For optimum sound quality, set the control to the level indicated by the white dot.

⑤ **D BEAM ON button**

Press this button to activate the D Beam Controller (see page 25).

⑥ **LCD CONTRAST knob**

Use this knob to adjust the contrast if you are having problems reading the display.

⑦ **DEMO button**

Press this button whenever you want to listen to the EM-50 OR’s demo songs. There are 9 Tone demos and 8 Style demos (see page 12).

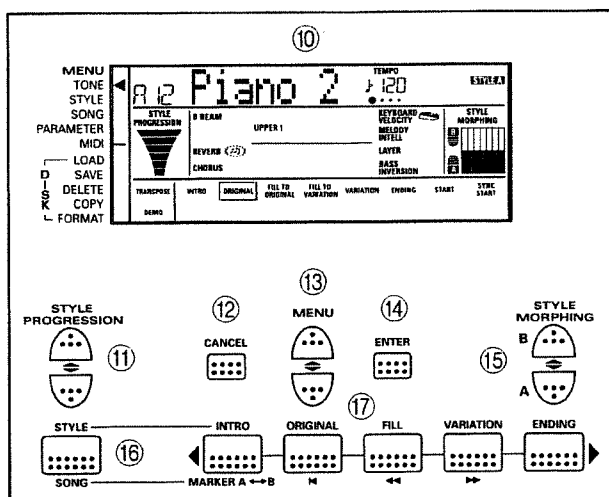
⑧ **BALANCE buttons**

Use the BALANCE buttons to change the volume of the corresponding section, or to switch it off altogether (see page 19). After pressing both [REVERB] and [CHORUS], you can also set the volume of the individual accompaniment parts.

⑨ **REVERB & CHORUS buttons**

The [REVERB] button allows you to switch the internal digital Reverb effect on and off. The setting of this button applies to all sections of the EM-50 OR. If pressed simultaneously with [CHORUS], this parameter provides access to a function that allows you to change the volume (Balance) settings of the individual Music Style (accompaniment) parts.

The [CHORUS] button allows you to switch the internal digital Chorus effect on and off. The setting of this button applies to the Upper 1/2, Lower, and M.Drum parts.



⑩ Display

The display keeps you informed about the current status of your instrument. Most information is displayed by means of easy-to-grasp icons.

⑪ STYLE PROGRESSION buttons

These buttons allow you to change the complexity of the currently selected Music Style in realtime (see page 17). Press them simultaneously to alternate between the highest “basic” level (number “3”) and the highest “advanced” level.

⑫ CANCEL button

Use this button to cancel the currently selected operation and to return to a higher level. This button is also used to answer “No” to any question that may be displayed.

⑬ MENU ▲▼ buttons

Allow you to select a group of functions of the EM-50 OR. The names of the levels are printed on the left side of the display. The currently selected level is indicated by an arrow (◀). These buttons also allow you set the value of the selected parameter in Parameter mode (see page 50).

⑭ ENTER button

Press this button to confirm the currently selected function or to answer “Yes” to a question in the display.

⑮ STYLE MORPHING buttons

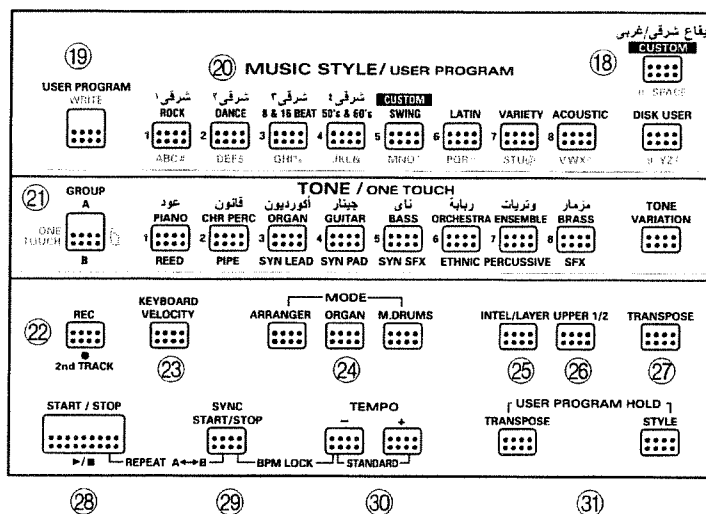
These buttons allow you to create a “mix” of two selectable Music Styles. The result of this operation can be that the currently selected accompaniment uses the melodic patterns of Style A and the drums of Style B. There are 6 Style Morphing levels.

⑯ STYLE/SONG button

This button allows you to select the functions of the buttons to its right (INTRO, ORIGINAL, etc.) and thus to specify whether these buttons are used to select Music Style divisions (“STYLE”) or to operate the on-board Recorder (“SONG”). The functions of the STYLE/SONG buttons are displayed in the lower part of the display.

⑰ STYLE/SONG control buttons

Allow you to start, stop, etc., the Arranger or the EM-50 OR’s Recorder.



18 CUSTOM button

Use this button to access four banks worth of oriental Music Styles (automatic accompaniments), or to select a so-called Custom Music Style (in the EM-50 OR's Flash ROM memory)

19 USER PROGRAM/WRITE button

This button allows you to activate the User Program mode in order to select a User Program or to write your settings to a User Program.

20 MUSIC STYLE/USER PROGRAM buttons

Use the number buttons to select the desired accompaniment (called *Music Style*). Press the [USER PROGRAM] button if you wish to use the number buttons for selecting User Programs (i.e. memories that contain your own settings).

Hold down the [USER PROGRAM/WRITE] button for at least one second to activate the Write function that allows you to save your own User Program settings.

As you see, you can also use the MUSIC STYLE/USER PROGRAM buttons for writing names.

21 TONE/ONE TOUCH buttons

These buttons are used for selecting sounds (called *Tones*) for the parts you can play yourself (the "Real-time parts"). They also allow you to select one of eight One Touch programs available for each Music Style. "One Touch" programs are sets of settings for the Upper parts (the sounds you play with your right hand) that complement the genre of the Music Style you selected.

22 REC/2nd TRACK button

This button allows you to engage the EM-50 OR's record function. In some cases, you can use it to activate the 2nd TRACK function which is for re-recording the Realtime parts. See page 34 for details.

23 KEYBOARD VELOCITY button

Press this button to select one of the three available velocity sensitivity level: Heavy (icon flashes), Medium (icon is display normally), or Light (the KEYBOARD VELOCITY icon disappears).

24 MODE buttons

These buttons allow you to specify how you want to use your EM-50 OR: as an instrument with automatic accompaniments (Arranger), as an instrument with two organ sounds (Organ), for drumming on the keyboard (M.Drums), or for playing one sound via the entire keyboard.

25 INTELL/LAYER button

Press this button to add an automatic harmony voice to your melody (INTELL) or to add a second Tone to your right-hand melody playing (LAYER).

26 UPPER 1/2 button

This button allows you to alternate between the Upper 1 and 2 Tones while playing. You can use this facility for question-and-answer types of solo playing.

27 TRANSPOSE button

Use this button to switch the Transpose function on and off. The interval to be used when this function is on can be set via the Parameter menu (see page 50).

28 START/STOP button

Use this button to start and stop Arranger or Recorder playback. When used in conjunction with [SYNC START/STOP] in Song mode, this button allows you to repeat the measures specified with the Marker function (see page 40).

29 SYNC START/STOP button

This button is used to switch the SYNC START and SYNC STOP functions on and off. When this function is on, you can start Arranger playback (or recording) by pressing one or several keys to the left of the split point. If both Sync Start and Sync Stop are on, you can also stop Musical Style playback by releasing all

keys in the left half of the keyboard. It also allows you to start/stop looped Recorder playback when pressed simultaneously with the [START/STOP] button.

③① TEMPO +/- buttons

Use these buttons to lower or increase the Arranger or Recorder tempo. Press them simultaneously to return to the preset tempo value. Simultaneously press TEMPO [-] and [SYNC START/STOP] to “lock” the Music Style tempo, so that it does not change when you select another Music Style using the MUSIC STYLE/USER PROGRAM buttons.

③② User Program Hold TRANSPOSE & STYLE buttons

These two buttons allow you to preserve two kinds of settings when selecting another User Program: the current Transpose setting and/or the current Music Style settings. See page 49 for details.

③③ Disk drive (below the keyboard)

This is where you insert 2HD or 2DD floppy disks. You can save Songs, User Programs and Custom Styles, load data, delete Songs, User Programs, and Custom Styles; copy disks and format them.

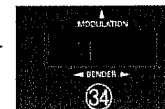
③④ POWER switch (left side)

Press this button to switch your EM-50 OR on (display lights) and off (display goes dark).



③⑤ BENDER/MODULATION lever

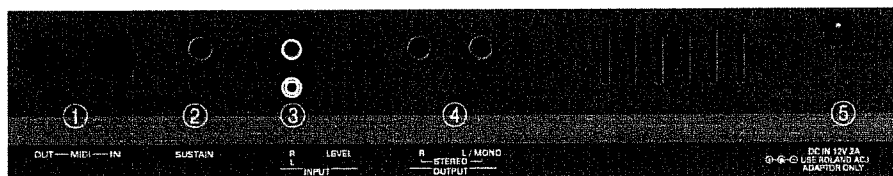
This lever allows you to temporarily change the pitch (“Pitch Bend”) in a slide guitar/trombone fashion, and/or add vibrato to the notes you are playing.



③⑥ Headphone jacks (left side)

This is where you can connect two pairs of stereo headphones (optional). By doing so, you switch off the EM-50 OR’s amplifier and speakers.

2.2 Rear panel



① MIDI OUT/IN connectors

Connect the MIDI OUT jack to the MIDI IN jack of your computer (or sound card) to transfer MIDI data from the EM-50 OR to the computer. Connect the EM-50 OR’s MIDI IN jack to the computer’s MIDI OUT jack to receive data from the computer.

Note: Use the supplied MIDI/Joystick cable for connecting the EM-50 OR to the sound card of your computer. For other MIDI applications, you need regular MIDI cables.

② SUSTAIN jack

This is where you can connect an optional DP-2, DP-6, or BOSS FS-5U footswitch that allows you to hold (“sustain”) the notes you play with your right hand.

③ INPUT jacks/LEVEL control

These jacks allow you to connect the outputs of your CD player, cassette deck, or the audio outputs of another instrument (sound module, synthesizer, etc.). Use the LEVEL control for setting the volume of this external signal source.

④ OUTPUT jacks

Connect these jacks to the inputs of your HiFi or a keyboard amplifier if you think the EM-50 OR’s internal amplification system is not powerful enough. If your amplifier is mono, be sure to only use the L/MONO jack.

You can also connect these jacks to the inputs of your cassette deck, MD recorder, etc. for making audio recordings of your music.

⑤ DC IN jack

This is where you need to connect the supplied ACJ adapter.

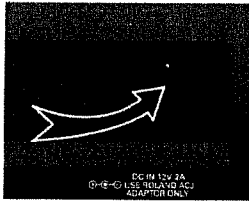
Note: Be sure to only use the ACJ adapter supplied with your EM-50 OR. Other adapters may damage your Oriental Creative Keyboard.

3. Listening to the demo songs

3.1 Setting up your EM-50 OR

The first thing you need to do is connect the adapter to a suitable wall outlet.

1. Unpack the EM-50 OR and place it on a stable surface.
2. Connect the small end of the adapter cable to the EM-50 OR's DC IN jack, and the other end to a suitable wall outlet.



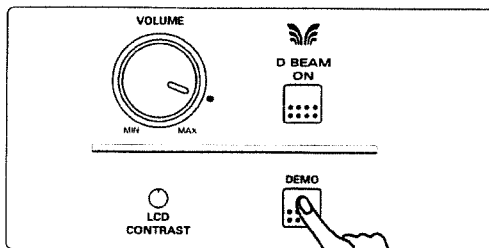
3. Press the [POWER] button (to the left of the keyboard) to switch on the EM-50 OR.

3.2 Playing back the demo songs

Your EM-50 OR comes with 9 Tone demos, 2 Song, and 6 Style demos. The Tone demos show off the EM-50 OR's amazing sound quality, while the Song and Style demos give you an impression of the quality of the EM-50 OR's Music Styles.

1. Press the [DEMO] button.

The [DEMO] icon in the lower left of the display is highlighted by means of a box and the status line of the display contains the message **DEMO ALL**.



There are several things you can do:

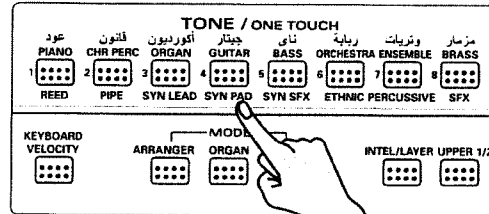
- ① To listen to all demo songs:

- Press the [START/STOP] button.

This will start playback of a Tone demo song, followed by a Style demo song, then again a Tone demo song, etc. This method allows you to listen demo songs 1 and 2, the six Style demos, followed by nine Tone demos.

- ② To listen to a Tone demo song (DemoTne):

- Press a TONE/ONE TOUCH button [1]~[8]. Each button selects a different Tone demo song.



- Press the [TONE VARIATION] button to select the ninth Tone demo song.
- Press the [START/STOP] button to start playback of the selected song.

- ③ To listen to either of the two complete demo songs (DemoSng):

- Press the MUSIC STYLE [1] or [2] button to select the desired complete demo song.
- Press the [START/STOP] button to start playback of the selected song.

- ④ To listen to a Style demo song (DemoSt1):

- Press a MUSIC STYLE/USER PROGRAM [3]~[8] button to select a Style demo song. Again, each button selects a different Style demo song.
- Press the [START/STOP] button to start playback of the selected song.

- ⑤ To stop playback of the demo song(s), press the [START/STOP] button.

Note: Demo songs © 1999 by Roland Europe in collaboration with Mohsen Adly, Hassan Abou El Saoud, Hamad Hosny, Moustafa Morsi, and Mohsen Allam. All rights reserved.

2. Press the [DEMO] button to return to the **DEMO ALL** message.

3. Press the [DEMO] button again to switch off the EM-50 OR's demo function.

4. Playing with accompaniment

Now that you have an idea of your EM-50 OR's capabilities, you probably want to play some music yourself. Before doing so, let us briefly look at the EM-50 OR's four modes.

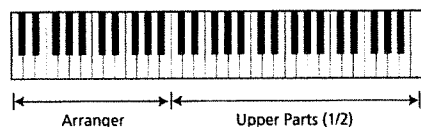
General remark

Your EM-50 OR can be used in four ways. Let us agree to call these "ways" *modes*.

Arranger mode

This mode is selected when you switch on your EM-50 OR. To select it at a later stage, press the MODE [ARRANGER] button. Here, you can control the key of the automatic accompaniments ("Music Styles") with your left hand and play melodies with your right hand.

In Arranger mode, the EM-50 OR's keyboard is split into two halves. The keys you press in the left half are used by the Arranger for determining the key of the accompaniment. The right half of the keyboard allows you to play a tune to the accompaniment. You can use one, or even two sounds, for doing so. These "sounds" are called *Upper parts* (1 and 2).



The key where the split is located is called the *split point*. At first, this is the note "C4" (with the C being the lowest note of the Upper half). You can change it, if you like (see "ArrSplit (Arranger Split)" on page 50).

Whole Upper mode—In this mode, you can play one sound using all 61 keys of the EM-50 OR's keyboard. This is useful for piano parts, for instance. It is also possible to play two sounds simultaneously (a function called Layer). See page 21.

Organ mode—As the name implies, this mode is used for playing organ music. Select it by pressing the MODE [ORGAN] button. Here, you can play the melody with your right hand and add a chord backing with your left. If you like, your left hand not only plays chords but also bass notes based your chords. See "Switching off the M.Bass part" on page 29 for details.

M.Drums mode—In this mode, you can drum on the EM-50 OR's keyboard. Every key is assigned to another drum/percussion sound. Press the MODE [M.DRUMS] button to select this mode (see also page 31).

About the Arranger

The EM-50 OR's automatic accompaniment function is called *Arranger*. This Arranger uses prerecorded musical phrases (called "Divisions") that play accompaniment lines for a given musical genre. The name *Music Style* refers to a collection of such accompaniment Divisions. Each Division consists of the following elements:

- A drum part (A.Drum)
- A bass part (A.Bass)
- Melodic accompaniment lines (chords, riffs, etc.) (Accomp)

4.1 Basic Music Style operations

1. Take a look at the display to see whether the icons below appear (the location of the "box" is of no importance for the time being).

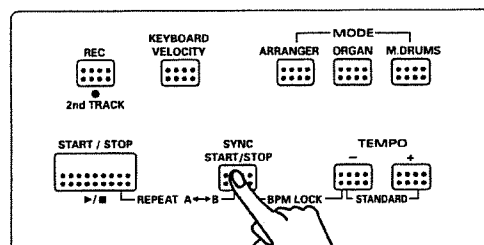


Also check whether the **STYLE A** icon is displayed. If that is not the case, press the [STYLE/SONG] button.

2. If the Arranger mode isn't already selected, press the MODE [ARRANGER] button.

The [ARRANGER] icon now appears more or less in the center of the display.

3. Press the [SYNC START/STOP] button.

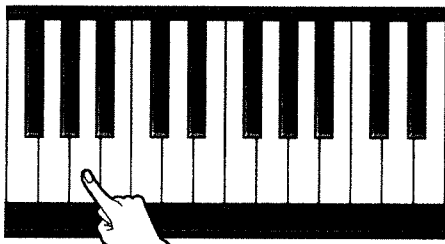


A box appears around the **SYNC START** message in the lower right-hand corner of the display to signal that this function has been switched on. *Sync Start* means that the Arranger will start Music Style playback as soon as you play a note or a chord with your left hand. If you like, you can also activate the Sync Stop function by pressing this button several times until the box surrounding the **SYNC START** message starts flashing. In that case, Music Style playback will stop as soon as you release all keys in the left half of the keyboard.

Note also the box surrounding the ORIGINAL message. It means that the first Division to be used is called *Original* (see also below).

4. Play a chord to the left of the C4 key (the C below the [STYLE/SONG] button) to start Arranger playback.

What you hear now is the Original Division of the O11 Saïdi-M1 Style that is automatically selected when you switch on the EM-50 OR.



You can also start Arranger playback by pressing the [START/STOP] button. In that case, you need to press [SYNC START/STOP] several times to switch off the Sync Start function.

Note: To check which Style is currently selected, press the [MENU ▼] button so as to position the arrow (◀) next to "STYLE" (upper left of the display).

Note: There is no need to hold the notes or chords you play with your left hand. You can release the keys right after specifying the new key for the Music Style. The function that takes care of this is called "Arr Mem" (see page 52).

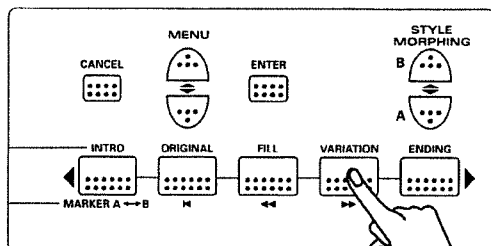
5. Play a different chord to the left of the C4 key.

The Arranger still plays the same accompaniment – but in a different key. That is, all accompaniment parts (except for the drums) follow the note information you supply by pressing keys to the left of the split point.

The EM-50 OR allows you to use a simplified chord fingering system called "Arr Int" (Arranger Chord Intelligence"). If you switch it on (see page 52), you can play one note for sounding major chords, two notes for minor chords (the root and the note three keys to the right of this note), and three, or four, notes for virtually all other chords.

Note: If you don't play chords with your left hand and start the Arranger by pressing [START/STOP], it will only play the drum accompaniment of the selected Music Style.

6. Now press the [VARIATION] button.



This selects another accompaniment pattern (Division) with a different arrangement, which is why the VARIATION icon is now surrounded by a box. It is usually more elaborate and may even contain other accompaniment parts.

7. If you like, you can now add a melody by playing in the right half ("Upper") of the keyboard.

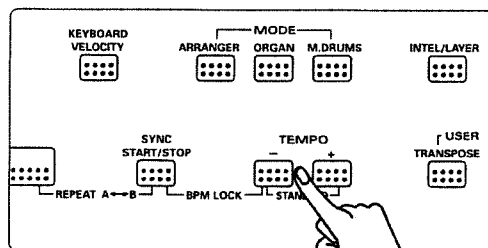
The section you control when you play with your right hand is called the *Upper 1 part*. The Upper 1 part currently uses the A210 Kanoun 1 Tone (see the upper left corner of the display).

Note: See page 22 for more information about the Tones.

Tempo

8. If the tempo is too fast or too slow, use the TEMPO [-]/[+] buttons to change it.

See also "More about tempo" on page 19 for more information about the tempo display.



Note: To return to the Music Style's preset tempo, simultaneously press TEMPO [+] and [-].

9. Press the [START/STOP] button to stop playback again.


If you like, you can switch on the Sync Stop function by pressing [SYNC START/STOP] several times until the box surrounding the SYNC START message starts flashing. In that case, you do not need to stop Music Style playback by pressing the [START/STOP] button: just release all keys in the left half of the keyboard. This also activates the Sync Start function, which means that the Arranger starts every time you press a key in the left half of the keyboard.

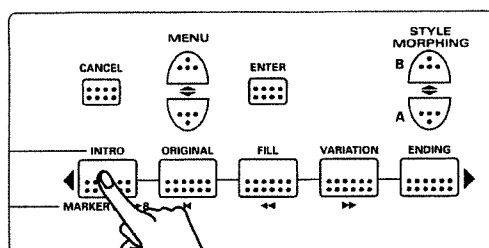
4.2 Selecting other Divisions

So far, we have used two Divisions: Original and Variation. These are the basic accompaniment patterns of the selected Music Style. Unlike the remaining Divisions, *Original* and *Variation* are repeated for as long as you leave the Arranger running or until you select another Division. The remaining Divisions, however, are played only once.

Introduction

If you like, you can start a song by having the Arranger play an Intro.

1. Press the [INTRO] button. The INTRO message is now “boxed” ().



2. Start Arranger playback in one of the following ways:

- Play a note or chord in the left half of the keyboard to specify the key of the Music Style, and then press [START/STOP]; —or—
- Activate the SYNC START function by pressing the [SYNC START/STOP] button until the Sync Start message is surrounded by a box. Then play a note (or chord) in the left half of the keyboard to start Arranger playback.

Note: Do not play chords while the Intro is running. Most Intros already contain chord changes. Playing other chords during the Intro would lead to strange results.

3. While the Intro is running, you can already select the Division to use next by pressing [ORIGINAL] or [VARIATION].

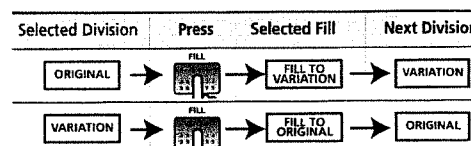
At the end of the Intro, the Arranger will switch to this Division.

Note: The length of the Intro depends on the selected Music Style (usually 2~8 bars).

Fill-Ins

Fill-Ins are short patterns (1 bar) that can be used at the end of a phrase (e.g. the first verse or chorus) or simply to add some variation. Fill-Ins are played only once.

Even though there is only one [FILL] button, there are, in fact two Fill-Ins: *Fill-In To Original* and *Fill-In To Variation*. The function of the [FILL] button depends on whether the display currently reads **ORIGINAL** or **VARIATION**:



If the Variation Division is currently selected, pressing [FILL] will start the Fill-In To Original pattern and then proceed with the Original pattern.

Note, however, that if the Arranger is stopped when you press the [FILL] button, starting the Arranger will start playback of the Fill-In that leads to the *currently selected* Division.

Example—if the display shows **VARIATION**, pressing [FILL] and then starting the Arranger will launch the Fill-In To Variation pattern.

Fill-Ins last one bar, yet their length also depends on *when* you press this button. When pressed in the first half of a bar, the Fill starts right away and lasts until the end of the current bar. Otherwise, the Fill starts on the first beat of the next bar and lasts an entire bar.

Ending

The Ending Division plays a suitable closing section for the currently selected Music Style. Again, the length of the Ending patterns varies between 2 and 8 bars. Just like Intros, Ending patterns may contain chord changes, so that it is probably wiser not to play any chords while the Ending is being played.

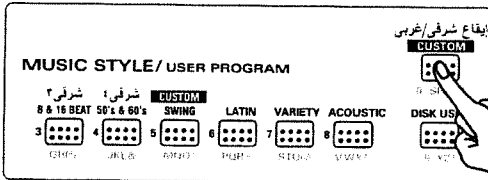
Press the [ENDING] button during Arranger playback to cause the Arranger to play the Ending pattern of the currently selected Music Style. The Ending starts at the beginning of the next bar. When it is finished, the Arranger stops.

4.3 Selecting other Styles

Your EM-50 OR comes with 96 Music Styles that are located in two groups of 8 Banks with 8 memories each. Let us now have a look at how to select other Music Styles. You may remember that each Music Style comprises all of the Divisions discussed above.

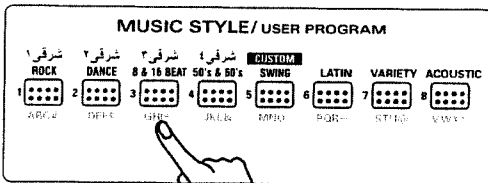
Selecting oriental Styles

1. Press the [CUSTOM] button once or twice until the message “—” appears.



2. Press a MUSIC STYLE/USER PROGRAM [1]~[4] button.

This selects a Bank. As you see in the illustration below, the names of the banks are printed above the buttons. These indications will help you locate the desired Music Style. See “Music Style list” on page 77 for a list of the EM-50 OR’s Styles.



The arrow (◀) in the upper left corner of the display now jumps to the STYLE indication, and the first numeric field indicates the number of the button you pressed. Example: if you pressed the MUSIC STYLE/USER PROGRAM [2] button, the display now reads 02-. The dash means that you still need to specify a number.

3. Press the same or another number button to choose a memory within the selected Music Style bank.

It is perfectly possible to select other Music Styles while the Arranger is running. In that case, the newly selected Music Style will use the same tempo as the previous Style. This is not the case when you select a Style while the Arranger is stopped. In that case, the tempo value stored for that Style is used (see also page 19).

Now go back to “Basic Music Style operations” on page 13 to try your newly selected Music Style.

Note: To check which Music Style is currently selected, press MENU ▲▼ to place the arrow (◀) next to the “STYLE” message and press [ENTER].

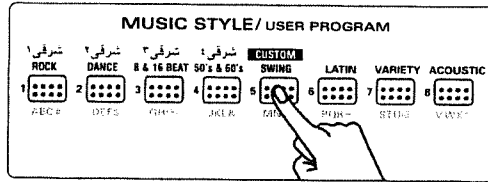
Note: Do not press MUSIC STYLE/USER PROGRAM [5] (Custom bank), [6], [7], or [8]. Banks 6~8 contain the same Music Styles as the “western group”.

Selecting Custom Styles

The EM-50 OR provides eight additional memories whose contents can be replaced by other Music Styles (see page 62). These memories are called *Custom Style* memories. When the EM-50 OR is shipped, they already contain Music Styles, however.

Here is how to select a Custom Style:

1. Make sure the User Program function (see page 47) is not currently active.
2. Press the [CUSTOM] button.
3. Press the MUSIC STYLE/USER PROGRAM [5] button so that the display indicates a C-.



4. Press a MUSIC STYLE/USER PROGRAM number button [1]~[8] to select the desired Custom Style memory.

Note: You can also select oriental Styles while this group is active. The oriental Styles reside in banks 1~4. The western Styles of bank 6~8 are also available.

Selecting western Styles

As explained above, the western Styles of banks 6~8 (Latin, Variety, Acoustic) are always accessible. But there may be occasions where you need only western Styles (i.e. also banks 1~5).

You can now proceed by pressing two MUSIC STYLE/USER PROGRAM number buttons to select the desired bank and number.

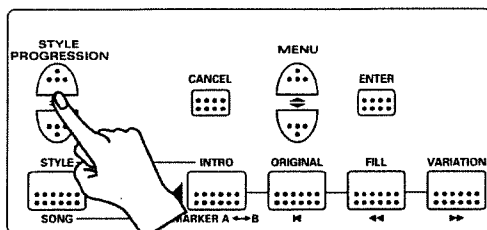
4.4 Style Progression and Style Morphing

The EM-50 OR provides two exciting features that allow you to further refine the accompaniments played by the Arranger. These functions are called *Style Progression* and *Style Morphing*.

Style Progression (“orchestration”)

The [STYLE PROGRESSION] buttons allow you to further refine and vary the accompaniment patterns played by the Arranger. This is a bit like orchestrating the accompaniment because you can leave out parts, thin out the drum part, or even use a totally different accompaniment. This can be done in realtime (i.e. while you are playing). See “More about Style Progression” on page 44 for a detailed discussion of this function.

Press STYLE PROGRESSION ▲ to select a higher level, and STYLE PROGRESSION ▼ to select a simpler version.



Watch the STYLE PROGRESSION field in the display. See page 44 for details about this field.



Note: Unless you select a User Program after switching on the EM-50 OR, you can only “regress” (progress backwards) at first. Once on a lower level, you can, however, work your way up again using STYLE PROGRESSION ▲.

Style Progression is great fun and a wonderful way of using the full potential of Roland’s acclaimed Arranger/Music Style expertise.

Note: As you will see on page 44, there are two “complete” levels labeled “Full Advanced” and “Full Basic”. These can be selected directly by simultaneously pressing STYLE PROGRESSION ▲ and ▼. You thus don’t have to cycle through the intermediate steps.

Style Morphing

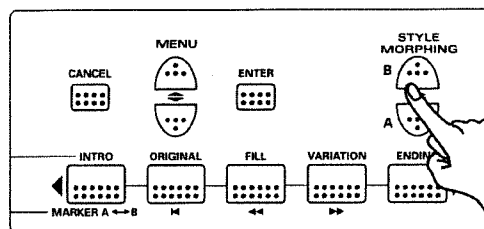
Style Morphing is a totally new concept of working with Music Styles. This function allows you to use one or several accompaniment parts of one Music Style and the others of a second Music Style.

If you’re not sure what is meant by *parts*, go back to “About the Arranger” on page 13. See “Style Morphing details” on page 44 for more information about the Style Morphing function.

Every time you select a Music Style, the EM-50 OR automatically prepares a second Style in the background. The Style you select is called “A”. The “covert” Style is called “B”. If you do not change the Style Morphing setting, you won’t even notice there is a second Style waiting to supply the requested accompaniment part(s).

The link between “A” and “B” Styles is preset. This allows the EM-50 OR to automate the selection process and to prepare a suitable “B” Style. Feel free, however, to assign another Music Style to “B” if you want to explore new morphing combinations (see “Selecting another “B” Style” on page 44).

Press STYLE MORPHING [B] to use one (or yet another) accompaniment part from Style B.



Watch the STYLE MORPHING field in the display. See page 44 for details about this field.

Press STYLE MORPHING [A] to use one more part from Style “A”.

Note: When you select a new Music Style with the MUSIC STYLE/USER PROGRAM buttons, the Style Morphing function is reset to the “Style A only” status. The Style Morphing setting can, however, be written to a User Program.

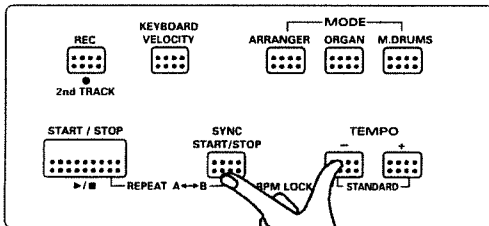
As soon as you morph in one part from Style B (stages 1–6), the **STYLE B** icon appears above the **STYLE A** icon in the upper right-hand corner of the display. If you are only using Style B parts, only the **STYLE B** icon remains in the display.

4.5 Other useful Music Style functions

BPM Lock

You may have noticed that selecting Music Styles as described on page 16 while the Arranger is stopped also sets the predefined tempo for that Style. In some cases, you may prefer continuing at the same tempo however, no matter which Style you select.

In that case, simultaneously press [SYNC START/STOP] and TEMPO [-]:



The metronome icon appears next to the tempo value. If you like, you can also switch this function on and off in the Parameter menu, but using the buttons is probably more convenient.

“BPM” is short for “beats per minute” and refers to the tempo of a song.

Note: BPM Lock does not apply to Music Styles you select via a User Program (see page 47).

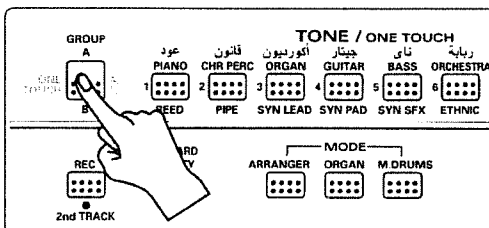
One Touch Program

You may find yourself using the One Touch function at regular intervals because it automates quite a few tasks:

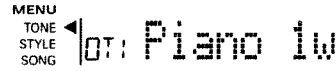
- The Arranger selects the preset Style tempo.
- SYNC START is switched on.
- The EM-50 OR selects Tones for Upper1 and Upper2 that are suitable for the selected Style (eight different possibilities, according to the selected One Touch memory).

There are 8 One Touch memories per Style with different settings for the above parameters. Here is how to select one:

1. Press and hold the [GROUP/ONE TOUCH] button until the number field in the upper left corner reads “OT1”:

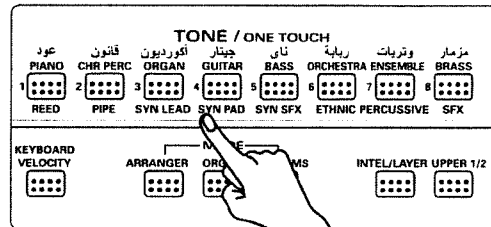


Example:



The number that appears after “OT” varies according to the last One Touch memory you selected. When you first activate the One Touch function after switching on the EM-50 OR, “OT1” is selected.

2. Use the TONE/ONE TOUCH [1]~[8] buttons to select the desired One Touch memory (1~8).



The number of the One Touch memory you select will be displayed to the right of the “OT” message in the upper left corner of the display. You may want to try out several possibilities.

3. Select another Music Style (see page 16) or call up the currently selected Style one more time.

Only now will the selected One Touch memory be loaded.

4. To leave the One Touch mode, press the [GROUP/ONE TOUCH] button again.

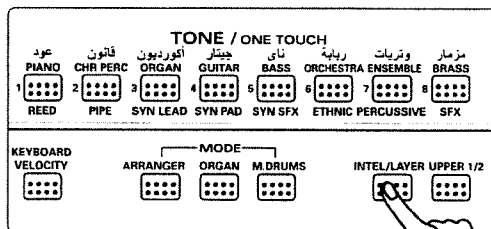
You now return to the last Tone you selected.

Melody Intelligence (INTEL)

The Melody Intelligence function adds a second voice (harmony notes) to the melodies you play with your right hand. In fact, it uses both halves of the keyboard to determine which notes to play:

- It looks at the melody notes in the right half; and...
- It analyzes the chords you play in the left half to see which notes it must add to your melody.

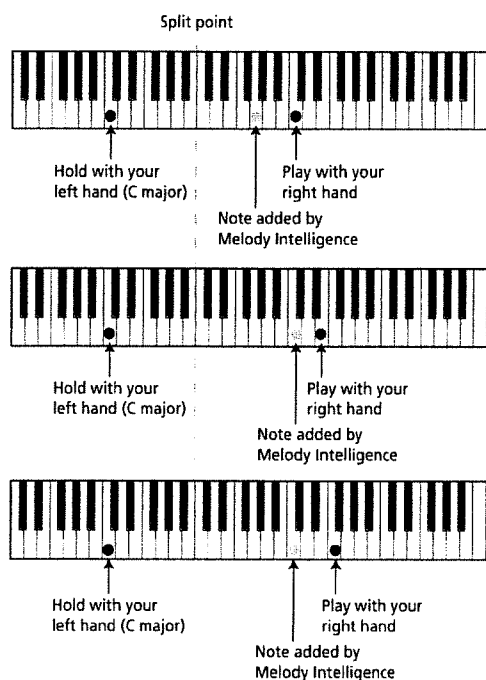
Repeatedly press the [INTEL/LAYER] button until the Melody Intelligence icon (MELODY INTEL) appears in the display (by “icon” we mean the notes).



Note: The [INTEL/LAYER] button also allows you to set the Layer function (see page 21), which is not what we need here. So be sure to select the Melody Intelligence icon.

To get a clear understanding of how this function works, here is a simple example (the function itself is far more powerful, of course):

- Press the [SYNC START] button (no box around the SYNC START message).
- Stop Arranger playback by pressing the [START/STOP] button.
- Play the following notes and notice how the automatic harmony notes change:



Of course, this function also works while the Arranger is running. That is actually when it is most useful. It is also available in Organ mode (see page 28).

The Melody Intelligence notes are played using the EM-50 OR's Upper2 part. If you like, you can assign another Tone to this part (see page 28).

More about tempo



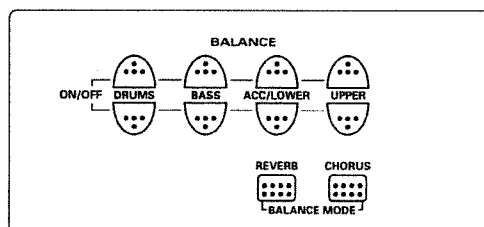
As you see, the currently selected tempo value is displayed, while the dots below the tempo value indicate the current beat. The initial tempo value and time signature depend on the currently selected Music Style (or Song). (The metronome icon means that the BPM Lock function is active. See page 18 for details.)

The dots below the tempo value indicate the current beat. The first dot signals the downbeat (first beat, or "1"), while the other dots indicate the remaining beats ("2", "3", "4"). If the currently selected Music Style is in "3/4", only the first three dots light. If the Style uses a "6/8" time signature, the fourth dot lights three times ("4", "5", "6").

Use the TEMPO [-]/[+] buttons to set a comfortable tempo. Press [-] to decrease the tempo and [+] to increase it.

Volume balance and on/off status of the Arranger parts

Every Music Style consists of various musical parts that are played simultaneously (drums, bass, chords, etc.). The EM-50 OR provides a mixer that allows you to change the balance of these parts when you think the drums are too prominent, the bass is too soft, etc. That is what the BALANCE buttons are for:



Here, we will only discuss the "Arranger assignments" of these buttons. See page 30 for the remaining assignments.

All four ▲▼ pairs have two functions:

1. By pressing ▲ you increase the volume of the selected part or section; press ▼ to decrease it. (Setting range: 0~127).

When you change the volume setting of a part, the display briefly shows the value you entered and the name of the part or section that is affected by your setting. Here is an example (note the "VOLUME" message above the value):



2. By simultaneously pressing the ▲ and ▼ buttons of a pair, you switch off the part or section in question. Press both buttons again to switch the part or section back on.

In Arranger mode, the BALANCE buttons are assigned to the following parts:

▲▼ pair	Assigned to
DRUMS	Drum accompaniment of the currently selected Music Style (A.Drum).
BASS	The bass accompaniment of the selected Music Style (A.Bass).
ACC/LOWER	The melodic accompaniments of the selected Music Style (Accomp). The number of "ACC" parts varies from one Music Style to another. Up to six ACC parts (1-6) may be used simultaneously.
UPPER	The Upper 1/2 parts (i.e. the parts that allow you to play the melody). See page 27 for details about the exact behavior of these buttons.

The settings you make using these buttons can be saved to a User Program (see page 47).

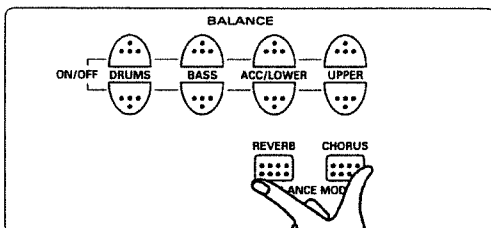
Note: The BALANCE settings are shared by all modes (Arranger, Organ, M.Drums). That's why you can also set the "Accomp" volume (Accompaniment parts) in M.Drums mode, for example, even though the Arranger cannot be controlled in that mode.

Volume and status of individual Arranger parts (Balance Mode)

The method described above allows you to set the volume and status of all parts belonging to the section that is assigned to the button(s) you press.

However, each Music Style comprises six melodic accompaniment parts (ACC 1~6). Using the above method thus only serves to change the volume (or on/off status) of *all* ACC (or Accomp) parts. Here's what you need to do if you only wish to change the volume or status of one of Arranger parts:

1. Simultaneously press the [REVERB] and [CHORUS] buttons.



The display now shows the name of one of the six accompaniment parts (example: ACCOMP 1).

2. Use the following BALANCE buttons to change the volume or status of the desired Arranger part:

▲▼ pair (Balance Mode on)	Function
DRUMS	Volume and status of the drum accompaniment of the currently selected Music Style (A.Drum).
BASS	Volume and status of the bass accompaniment of the selected Music Style (A.Bass).
UPPER	Allow you to select the Accomp/ACC part whose volume or status you wish to set.
ACC/LOWER	Allow you to set the volume or status of the Accomp/ACC part you select with UPPER ▲▼.

3. Press [REVERB] and [CHORUS] again to leave the BALANCE MODE.

The display briefly shows the message "Accomp" to signal that the BALANCE ▲▼ are once again assigned to sections rather than individual instruments.

Note: The BALANCE settings can be written to a User program (see page 47).

Note: The Balance Mode function is only available in Arranger and M Drums modes.

5. Upper part functions

In Arranger and Organ modes, the EM-50 OR's keyboard is split into two halves. As explained in the previous chapter, the split in Arranger mode divides the keyboard into one half for Arranger control, and a second for playing melodies.

The sound you hear when you play with your right hand is called a *Tone*. That Tone belongs to a section called *Upper part*. The EM-50 OR provides two Upper parts (1 and 2) that can either be used in isolation or simultaneously.

The term “part” is used here because the Upper parts are actually “musicians” of an orchestra or band (the lead/solo). And like some musicians (guitarists, keyboard players, flute players, etc.), they do not use the same instrument for every song.

“Tones” are to the Upper parts what instruments are to the musicians of a band or orchestra: you can choose the instrument that best suits the song you want to play.

Note: The following applies both to the Arranger and the Organ modes.

5.1 Selecting the Whole Upper mode

The EM-50 OR allows you to decide against splitting the keyboard so as to play “regular” piano music (and is also useful for educational purposes).

In this case, you can only use the Upper 1 and/or 2 parts, which is why we shall call this mode *Whole Upper* (Upper Parts assigned to the entire keyboard).

To select this mode, press MODE [ARRANGER] or [ORGAN] so that neither the nor the icon is displayed.

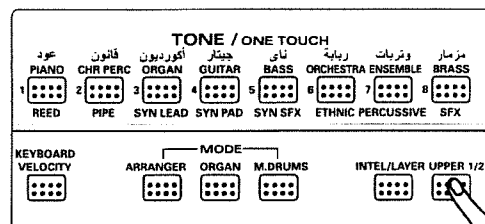
Note: The Arranger can supply a drum accompaniment part to your piano, etc. part. See “Playing to a drum accompaniment” on page 29.

5.2 Selecting the Upper 1 and/or 2 part(s)

As stated above, the EM-50 OR provides two Upper parts (i.e. two musicians). Here is how to choose the one you need:

1. If the UPPER 1 message is displayed (more or less in the center of the display), the Upper 1 part is active.

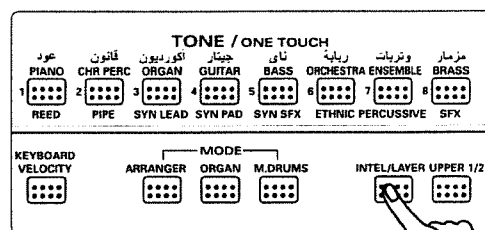
2. To switch off Upper 1, while switching on the Upper 2 part, press the [UPPER 1/2] button (“UPPER 1” disappears and “UPPER 2” is displayed).



You can use the [UPPER 1/2] button to alternate between two completely different Tones (assigned to Upper 1 and Upper 2). This allows you to play question-and-answer types of melodies/solos simply by pressing this button several times in succession.

Layering Upper 1 and 2

3. To use both Upper 1 and Upper 2, press the [INTEL/LAYER] button once or twice until the Layer icon (LAYER ^{INTEL} _{OFF}) appears in the display.



The Layer icon tells you that the Upper 2 part is now added to Upper 1. Every note you play with your right hand will be sounded by two Tones.

Note: The Layer function is not available when you activate the Melody Intelligence function (see page 18).

4. Press [INTEL/LAYER] again to switch the Layer function off again.

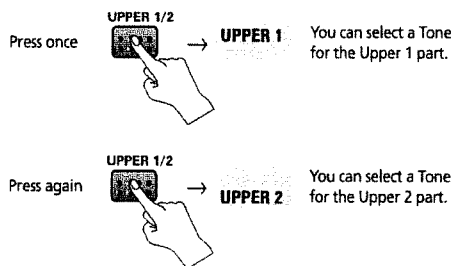
Note: By doing so, you may activate the Melody Intelligence function. If that is not what you want, press [INTEL/LAYER] again (so that neither the MELODY INTELL nor the LAYER icon is displayed).

5.3 Selecting Tones for the Upper parts

Both in Arranger and Organ modes, the EM-50 OR automatically assigns Tones to the Upper 1 and 2 parts. As explained while discussing the One Touch function (see page 18), these assignments include eight different Upper 1/2 sets for every Music Style. But, of course, you can also make your own selection among the EM-50 OR's 395 Tones.

CAUTION: Though possible, you should not select Tones while you are playing. When the Layer icon is off, there is indeed no way to select the "other" part (Upper 1 or 2) for *Tone selection* without also selecting it for *playing*. It is thus not possible to prepare a Tone for an Upper part that is not being used. So stop Arranger playback (or playing in Organ mode) and assign the desired Tones to the Upper 1 and 2 parts. You can write these assignments to a User Program (see page 47) and alternate between these two Tones using the [UPPER 1/2] button.

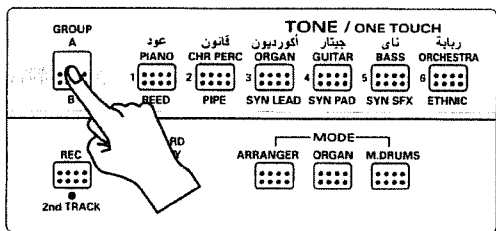
1. Select the Upper part you want to assign a Tone to by pressing [UPPER 1/2].



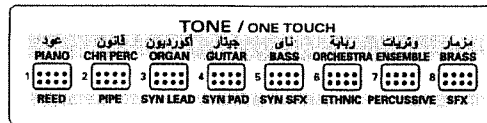
Note: This selection also applies to the Chorus function: if you now press the [CHORUS] button, you switch off the Chorus for the selected Upper part (but not for the other Upper part).

2. If necessary, press the [GROUP/ONE TOUCH] button to select a Tone Group.

The arrow (◀) in the upper left corner of the display jumps to the TONE indication.



The EM-50 OR's Tones reside in two Groups: A and B. If you look at the [GROUP/ONE TOUCH] button, you will notice there's an "A" above it and a "B" below it.



And if you look at the number buttons, you will notice they all have two names: one for the A Group and another for the B Group. All Tones are categorized by instrument families (called *Banks*) that help you narrow down your Tone search. Most oriental sounds can be selected via the TONE/ONE TOUCH number buttons. Western Tones are so-called Tone Variations (see below).

Note: There is no need to select the Group if the new Tone you want to use is in the same Group as the previous Tone.

3. Press a TONE/ONE TOUCH number button [1]~[8] to select a Tone bank.

If you need a brass instrument sound, for example, press [8].

4. Press another (or the same) number button to select a Tone within that bank.

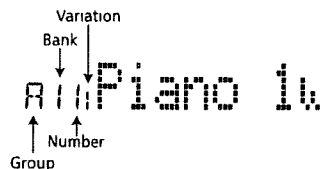
If you want to use the "Mizmar" Tone (A82), for example, press [2].

But please note the following: In some cases, the EM-50 OR does not select the Tone you requested but rather a Tone that sounds even better. Such a Tone is called a *Variation*.

Variations

Tone Variations are alternatives for the Tones you can select with the TONE/ONE TOUCH buttons. The PIANO bank, for instance, contains a grand piano, an upright piano, an electric piano, etc. These are the Tones. If you also wanted to specify the *kind* of grand piano (mellow, bright, stereo/mono), you would have to turn to the Variations (i.e. "Tone subcategories").

Variations are indicated by means of a smaller number in the upper left corner of the display:



5. Press the [TONE VARIATION] button to step through the available Variations.

The number of Variations depends on the Tone you select. Sometimes, there's no Variation, sometimes there are as many as eight (or even more). If the Variation entry in the address field is empty, the "main" Tone (called *Capital*) is selected.

Note: You can also select Variations by holding down [TONE VARIATION] while you press a number button. This only works for the first eight Variations, however.

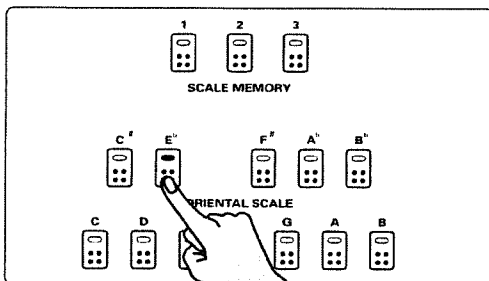
Note: In most instances, the western Tones are Variations, while the oriental Tones are Capitals.

5.4 Oriental Scale/Scale Memory

Your EM-50 OR allows you to change the tuning of the keys, which then applies to all notes of the same name. Here's an example: If you press the ORIENTAL SCALE [B_b]k button (indicator lights), that note's tuning is lowered by a quarter tone (-50 cents). This setting applies to all B-flat keys on the keyboard.

Tuning individual notes a quarter tone down

1. Press a note-name button to tune the corresponding notes a quarter tone down (the button's indicator must light).



2. If you also want to tune down other notes, press the corresponding button(s).

If you pressed the wrong button (indicator lights), press it again so that its indicator goes dark again. The pitch of the corresponding notes returns to normal.

Using other tuning values

As explained above, pressing an ORIENTAL SCALE button toggles between the western tuning of the corresponding notes and a setting that is a quarter tone lower than the western tuning (-50 cents).

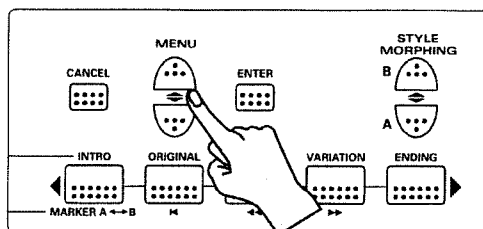
However, you can also select other tuning values if you like to customize the EM-50 OR's tuning.

1. Press and hold the ORIENTAL SCALE button of the note whose tuning you wish to change until the display reads $\square \square \square \square \square$ followed by the note name.

—OR—

1. Proceed as follows:

a) Press MENU $\blacktriangle \blacktriangledown$ to place the mode arrow (\blacktriangleleft) next to the PARAMETER message. This selects the Parameter mode.



The "ENT" message now flashes in the display.

b) Press [ENTER] to enter the Parameter mode.



c) If necessary, use the MENU $\blacktriangle \blacktriangledown$ buttons to select the "Scale C"~"Scale B" parameter, depending on the note whose tuning you wish to customize. As a rule, you should press the ORIENTAL SCALE button that corresponds to the note whose tuning you wish to change.

Note: If you selected this mode by mistake, press [CANCEL] to return to the PARAMETER message, use MENU $\blacktriangle \blacktriangledown$ to select another mode, and press [ENTER].

d) Press [ENTER] to confirm your parameter selection. The VALUE message now flashes.

2. Use the MENU $\blacktriangle \blacktriangledown$ buttons to set the desired the value.

The setting range is -64~+63.

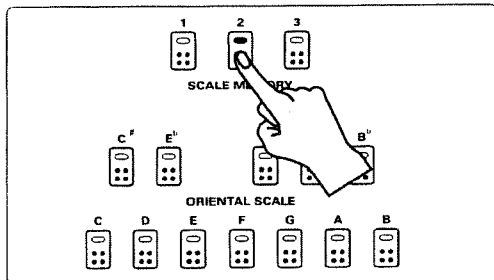
Note: To return to the default value ("-50"), simultaneously press MENU $\blacktriangle \blacktriangledown$.

3. To leave the Parameter mode, press [CANCEL] several times until the "PARAMETER" message is displayed, then use MENU $\blacktriangle \blacktriangledown$, followed by [ENTER] to select another mode.

Saving and loading your tunings (Scale Memory)

After setting the desired tunings, you can save them to one of the three Scale Memories and recall them whenever you need them. Here's what you need to do:

1. Tune the notes to your liking (see above).
2. Press and hold the SCALE MEMORY button (1-3) that corresponds to the memory where you wish to save your tuning settings.



3. Wait until all three SCALE MEMORY indicators briefly light, and release the button you pressed. You can now select this, or another, SCALE MEMORY by briefly pressing the SCALE MEMORY button assigned to the settings you wish to use.

To return to the western tuning, press the SCALE MEMORY button in question again so that its indicator goes dark, or switch off all ORIENTAL SCALE buttons whose indicator lights. In the second case, the SCALE MEMORY indicator of the last memory you selected starts flashing to signal that the current ORIENTAL SCALE settings no longer correspond to the ones contained in the currently selected memory. To save the new settings to the same (or a different) SCALE MEMORY, go back to step (2) under "Saving and loading your tunings (Scale Memory)".

Note: The Oriental Scale settings are never written to a User Program. They either reside in one of the three Scale memories, or they are canceled when you switch off the EM-50 OR.

Choosing the parts to be controlled by Oriental Scale

The Oriental Scale function can be used in one of two modes: it either affects the *Upper1 and Upper2* parts (the ones you usually play with your right hand), or *all parts* except the drums (Upper1/2, Lower, M.Bass, Accomp 1-6, A.Bass), i.e. also the Arranger or Song parts. Choose whichever is more convenient:

1. Save your Oriental Scale settings to a Scale Memory, and the remaining parameter settings to a User Program (see page 47) if you wish to keep them. Otherwise skip to step (2).
2. Switch off the EM-50 OR.
3. Do one of the following:

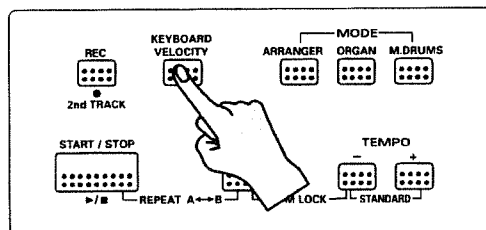
- If you only want the Upper1 and 2 parts to respond to the Oriental Scale settings, switch the EM-50 OR back on.
- If you want all parts except the drums to be affected by the Oriental Scale settings, hold down the [KEYBOARD VELOCITY] button while you switch the EM-50 OR back on. Wait until the three SCALE MEMORY indicators briefly light, then release the [KEYBOARD VELOCITY] button.

5.5 Keyboard Velocity


The EM-50 OR is *velocity sensitive*, which means that the volume and brightness of the Upper 1/2 notes depend on the force/speed with which you strike the keys in the right half of the keyboard.

All acoustic instruments (piano, violin, flute, drums, etc.) are velocity sensitive. The harder you play, the louder and brighter the resulting notes will be, which creates a perfectly natural effect.

1. Press the [KEYBOARD VELOCITY] button to change the EM-50 OR's velocity sensitivity.



There are three possible settings:

Heavy: Playing loud/bright notes requires that you press the keys rather hard. This setting is indicated by the flashing  icon.

Medium: Normal keyboard sensitivity. This setting is indicated by the steady  icon.

Light: The keyboard is only slightly velocity sensitive. Even a relatively light touch already produces loud/bright notes. In this mode, the KEYBOARD VELOCITY icon (the keys) is no longer displayed:

2. Press it again to once again to select another KEYBOARD VELOCITY setting.

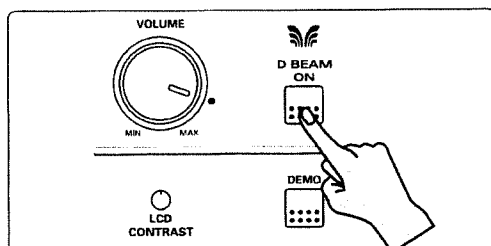
Note: Keyboard Velocity applies to all parts you can play yourself (the "Realtime parts"): Upper 1/2, Lower, M.Bass (see page 28), and M.Drums (see page 31).

5.6 D Beam Controller

The D Beam Controller allows you to control various aspects of your performance by moving your hand, head, etc., in the air. You only need to make sure that you do so over the two “eyes” and within a 40cm (± 16 ”) range. Your movements are then translated into musical expression.

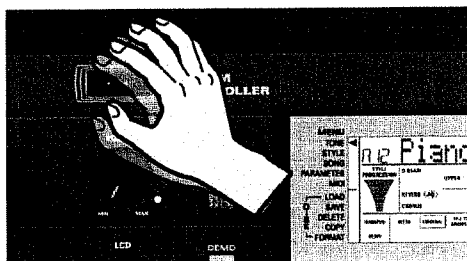
Here, we will use the “usual” default assignment.

1. Press the [D BEAM ON] button.



The D Beam icon () appears in the display.

2. Press the mode [ARRANGER] button.
3. Play a chord with your left hand and while doing so...
4. ...move your hand towards and away from the D Beam’s “eyes”.



5. Press the [D BEAM ON] button once again to switch this function off again when you’re done.

Note: See page 51 for how to assign other functions to the D Beam Controller.

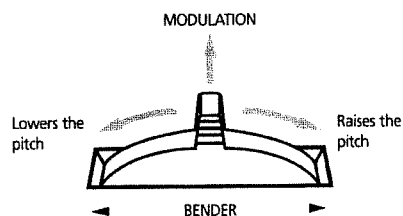
Note: If you hold down [D BEAM ON] for about two seconds, the D Beam parameter will be displayed. We don’t need it here, so you may have to press [CANCEL] several times until the display returns to the previous message.

5.7 Pitch Bend, Modulation, and Sustain

Bender/Modulation lever

The BENDER/MODULATION lever to the left of the EM-50 OR’s keyboard can be used to add two kinds of effects to the Upper part notes. You can even use these effects simultaneously if you like.

1. Press the lever towards the rear of the EM-50 OR to add a vibrato effect (“wobble”) to the notes you are playing.

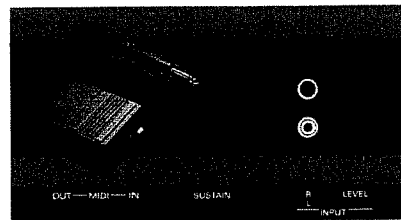


2. Turn the lever to the left to temporarily lower the pitch of the notes you are playing. Turn it to the right to raise the pitch of your notes.
3. In either case, you can release the lever if you no longer need the effect.

Sustain Footswitch

You can connect an optional DP-2, DP-6, or BOSS FS-5U footswitch to the SUSTAIN jack in order to hold the Upper Tone notes even after releasing the keys. You might consider purchasing one if you want to make extensive use of the EM-50 OR’s D Beam function, because using a footswitch frees up your right hand. Here’s how it works.

1. Connect a DP-2, DP-6, or BOSS FS-5U footswitch to the EM-50 OR’s SUSTAIN jack.




2. Play a note with your right hand.
3. Press the footswitch.
4. Release the key.
The note(s) you played keep on sounding after you release the corresponding keys.
5. To stop the note(s) from sounding, release the footswitch.

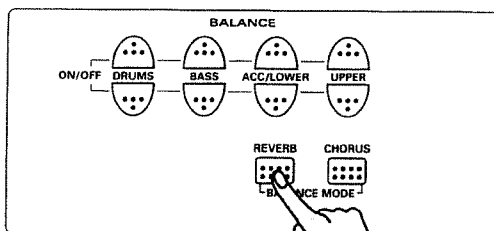
Note: The footswitch function is also available in Organ mode (see page 28) and applies to the Upper parts.

5.8 Chorus and Reverb

The EM-50 OR is equipped with two programmable digital effects: Reverb and Chorus.

Reverb


To activate the Reverb effect, press the [REVERB] button. An icon () appears next to the REVERB message. If you don't need the Reverb effect, press that button again (icon disappears). The Reverb is available for all parts (Arranger, Realtime, and Song).



Note: It is probably a good idea to leave the Reverb effect on at all times to get a livelier sound image.

Note: You can select different Reverb and Chorus types if the preprogrammed settings are not to your liking. See "RevType (Reverb Type)" on page 53 and "ChrType (Chorus Type)" on page 53.

Chorus

To activate the Chorus effect, press the [CHORUS] button. An icon () will appear next to the CHORUS message. If you don't need the Chorus effect, press that button again (icon disappears).

Note: The Chorus can be switched on/off separately for the Upper 1/2 and Lower parts.

5.9 Transpose & Octave

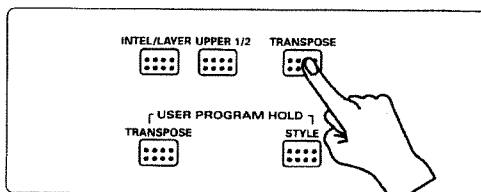
Transpose

The Transpose function changes the pitch of the notes and chords you play. This is particularly useful if you've practised a song in a different key than the one you are asked to play it in when you accompany a singer whose voice is too high or too low for "your" way of performing the song. Instead of figuring out what other keys you need to press in order to accommodate the singer, you can set the required Transpose value and go on playing the song the way you practised it while sounding in a different key.

Here's an example:



1. Press the [TRANPOSE] button. A box appears around TRANSPOSE message in the lower left corner of the display.



The default transposition interval is "1" (one semitone up). Here's how to change the interval:

2. Press and hold the [TRANPOSE] button until the following message appears in the display:



3. The VALUE message already flashes, so do one of the following:
4. Use the [MENU] ▲▼ buttons to select the desired transposition interval (-12~12).

Here's an example: if you want to hear a "D" every time you play a "C", select "2". All other notes will be shifted by the same amount so that you end up sounding in D major when you actually play in C major, etc.

Note: The TrpValue refers to semitones. "Semitones" represent intervals between two keys (black/white, white/black, or white/white).

Note: You can also specify which sections of the EM-50 OR should be transposed. See "TrpMode (Transpose Mode)" on page 51.

Note: The EM-50 OR provides a function that allows you to preserve the current Transpose setting while selecting another User Program. See page 49 for details.

Octave up/down

It is also possible to shift the Upper1 or Upper2 Tone up or down an octave. This can be effective for Techno/Dance songs where you need a piano sound that plays in two different octaves.

To achieve this effect, assign two different (or the same) piano sounds to Upper1 and Upper2 (see page 22), activate the Layer function (see page 21), and proceed as follows:

1. Select the Upper part you want to shift by pressing the [UPPER 1/2] button until the name of the desired part ("UPPER 1" or "UPPER 2") is displayed.

Note: The Octave function is probably only useful when Upper1 and Upper2 are layered, but feel free to use it with only one Upper part.

2. Press and hold the [UPPER 1/2] button until the message area of the display reads:



(Here, we selected Upper1 in step 1.)

3. Use the [MENU] ▲▼ buttons to select “-1” (one octave down), “0” (no shift), or “1”.

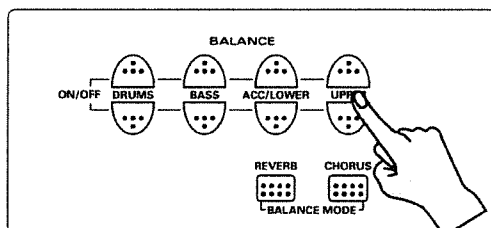
5.10 Upper Tone balance

On page 19 we showed you how to set the balance of the Arranger parts. There is a fourth BALANCE ▲▼ pair called “UPPER” that allows you to set the volume of the Upper 1/2 parts, or to switch them off altogether.

At first, these buttons are assigned to the currently selected Upper part (the display shows the message UPPER 1 OR 2).

Based on what you know about Upper Tone selection for playing (see page 21) and Tone selection, you can momentarily assign the [UPPER ▲▼] BALANCE buttons to the other Upper part: use the [UPPER 1/2] button to select that part, then modify its status (on/off) or volume using the BALANCE buttons. In Layer or Melody Intelligence mode, these buttons are assigned to both Upper parts. Use [UPPER 1/2] if you want to modify the volume (or status) of only one part.

1. Press [UPPER ▲] BALANCE to increase the volume of the currently selected Upper part(s), and [UPPER ▼] BALANCE to decrease it (0~127).

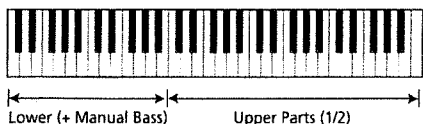


2. Simultaneously press [UPPER ▲▼] BALANCE to switch off the currently selected Upper part(s). Press both buttons again to switch the Upper part(s) back on again.

Note: After activating the Balance Mode function, [UPPER ▲▼] have a slightly different function. See page 20 for details.

6. Organ mode

In Organ mode, the keyboard is again split into two halves (*Lower* and *Upper*). This time, however, there is no automatic accompaniment. As its name implies, Organ mode is primarily intended for playing organ music, which is why selecting this mode calls up three organ sounds.

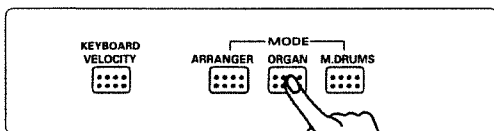


The left half of the keyboard allows you to use one part for chords (the *Lower* part) and a second one that plays bass notes (*Manual Bass*, or just *M. Bass*).

Just like in Arranger mode, there is a simplified chord fingering system (called “LWR Int”) for the Lower part. See page 52 for how to switch it on if you want to use it. Furthermore, you could release the Lower notes immediately after playing them because they will be held until you play new notes. The function that takes care of this is called *LWR Mem*. See page 52 for how to switch it on.

The right half of the keyboard allows you to play one or two Upper parts. Here again, you can change the location of the split point (originally C4). See below and page 50 for details.

To select the Organ mode, press the MODE [ORGAN] button.



6.1 Setting the split point via the keyboard (Lwr Split)

Here's what you need to do if you do not agree with the preset split point in Organ mode. The following procedure is a lot quicker than using the corresponding Parameter mode function (see page 50).

1. Press and hold the MODE [ORGAN] button.

The **LOWER** icon appears in the display to signal that you can assign a Tone to the Lower part (see below), while the message line of the display reads **LWR-Split**. You only need to pay attention to the latter here, because we were going to change the Lower split point, remember?

2. Keep holding the MODE [ORGAN] button while you press the key where you want the new split point to be.

3. Release the MODE [ORGAN] button.

Note: This setting can be written to a User Program (see page 47).

6.2 Selecting Tones

Selecting Upper Tones

Upper Tone selection (both for playing and Tone selection) works exactly like in Arranger mode. See page 21 and following for details.

Selecting Lower Tones

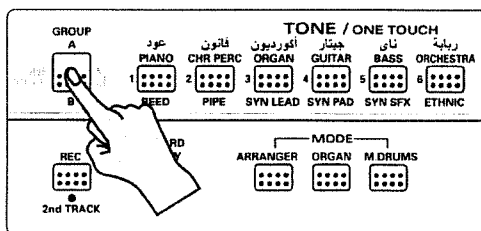
Whenever you select the Organ mode (by pressing MODE [ORGAN]), the EM-50 OR automatically assigns a Tone to the Lower part that goes well with the Upper part. At first, the A710 StrngOct sound will be assigned to the Lower part.

You can assign other Tones to the Lower part – and those Tones need not necessarily be organ sounds. All 395 Tones are selectable. The M.Bass Tone, however, is selected automatically and cannot be changed via the front panel.

Here is how to assign another Tone to the Lower part:

1. Press and hold the MODE [ORGAN] button until the LOWER icon appears in the center of the display.

2. If necessary, press the [GROUP/ONE TOUCH] button to select a Tone Group.



See page 22 for more information about Groups.

3. Press a TONE/ONE TOUCH number button [1]~[8] to select a Tone bank.

4. Press another (or the same) number button to select a Tone within that bank.

5. If necessary, press the [TONE VARIATION] button to step through the available Variations.

See page 22 for more information about Variations.

Note: By pressing the [CHORUS] button now, you can switch off this effect for the Lower Tone only (i.e. it will remain on for the Upper 1 and 2 parts).

6. Press [UPPER 1/2] to leave the Lower Tone selection function.

6.3 Playing to a drum accompaniment

In Organ mode (as well as in Whole Upper mode, page 21), you can use the drum accompaniment (A.Drums) of the selected Music Style in much the same way as in Arranger mode. However, since you cannot change the key of the “melodic” Arranger parts (A.Bass, Accomp), the latter are not available.

Arranger operation is very similar to using Music Styles in Arranger mode. So please see pages 13 and following. Most functions are available. Here are a few remarks:

- Most *Style Progression* settings only apply to “melodic” accompaniment parts. Using the Style Progression function may therefore produce no audible changes.
- The same applies to the *Style Morphing* function. You may have to press the button in question several times.
- *Sync Start/Stop* (see page 13) also works in Organ mode and is controlled by the Lower part (i.e. the notes you play in the left half of the keyboard).


6.4 Other functions you can use

Most functions discussed so far are also available in Organ mode. Here are the most important ones:

- Oriental Scale (see page 23).
- Melody Intelligence (see page 18).
- The Reverb and Chorus effects (see page 53).
- The D Beam Controller (see page 25).
- The Keyboard Velocity function (see page 24).
- Pitch Bend, Modulation, and Sustain (see page 25). The footswitch (SUSTAIN) is only available for the Upper parts.
- Almost all settings can be written to a User Program (see page 47). This includes the selection of the Organ mode itself.

6.5 Switching off the M.Bass part

In Organ mode, a bass line is added to your left-hand chords. This is played by a part called *M.Bass*. The M.Bass part plays bass notes based on the chords you play in the left half of the keyboard. If the [BASS INVERSION] function (see page 54) is off, the M.Bass part sounds the root notes (fundamentals) of the chords you play with your left hand (using the Lower part).

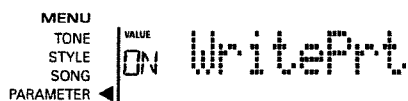
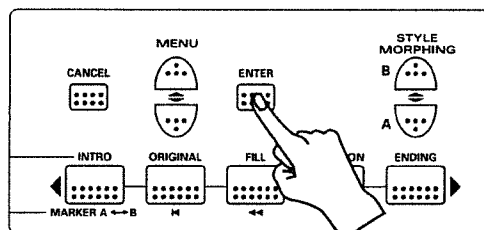
If the Bass Inversion icon () is displayed, the Manual Bass part sounds the lowest note of the chords you play with your left hand (not necessarily the root). Here is how to switch the M.Bass part off if you don't need it:

1. Use the MENU ▲▼ buttons to place the MENU arrow (◀) next to the “PARAMETER” entry:



The “ENT” message now flashes to signal that you can enter the Parameter mode.

2. Press [ENTER].



3. Use the MENU ▲▼ buttons to select the “M.Bass” option.



4. Confirm the choice of this parameter by pressing the [ENTER] button.

The VALUE message above “OFF” starts flashing.



5. Press MENU ▼ to select “OFF”.

The M.Bass part no longer sounds when you play in the left half of the keyboard.

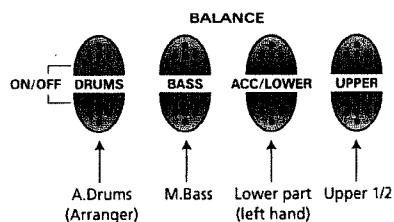
6. Press [CANCEL] several times to leave the Parameter mode.

Note: This setting can be written to a User Program (see page 47). Next time you switch on the EM-50 OR, the M.Bass part will be on again, however.

6.6 Balance in Organ mode

Like in Arranger mode, you can change the balance of the EM-50 OR's parts using the BALANCE ▲▼ buttons. Again, simultaneously pressing a ▲▼ pair switches off (or on) the assigned part.

In Organ mode, the BALANCE buttons are assigned to the following parts:



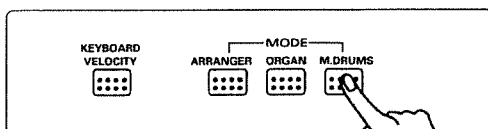
Note: If you're not sure how to operate these buttons, see page 27.

Note: The Balance Mode function is not available in Organ mode.

7. M.Drums mode

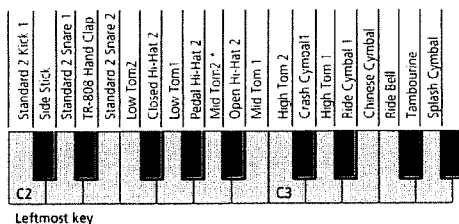
The M.Drums mode allows you to drum on the EM-50 OR's keyboard. Here, every key is assigned to a different drum sound.

Press the MODE [M.DRUMS] button to select the M.Drums mode.



With the leftmost key, you can play a bass drum sound (also called “kick”). The white key next to it triggers a snare drum sound, etc. Try it out by pressing several keys either in succession or simultaneously.

Here is an example of a drum sound assignment:



If the Arranger is still running, it will go on sounding the last Music Style Division you selected. If you did not switch off the *Arr Mem* function (see page 52) (“On” by default), the bass and the accompaniment parts keep playing your last chord. That is probably when the M.Drums mode is most useful because it allows you to play a drum solo to an inspiring accompaniment.

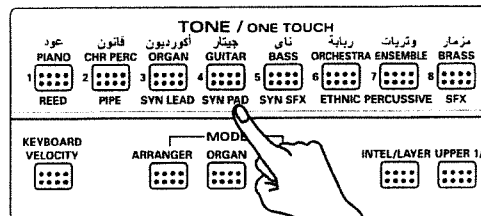
If you like, you can simultaneously press BALANCE ▲▼ [DRUMS] to switch off the Music Style drums (A.Drums).

7.1 Selecting other Drums Sets

The sounds used in M.Drums mode (“M.Drums” is short for *Manual Drums*) are not produced by Tones but rather by a *Drum Set*. Drum Sets are collections of over 90 sounds, each assigned to a different key.

The EM-50 OR comes with 15 Drum Sets to accommodate various musical genres. There is a “Standard” Set for good old rock/pop music, while several other sets (TR-909, Techno, etc.) can be used for Dance/Techno music. Choose the Set that best suits your music.

1. Press a TONE/ONE TOUCH number button to select the desired Drum Set.



This allows you to select one of the 8 basic “Sets”. There are four more Drums Sets, though:

2. Press the [TONE VARIATION] button to select a “Variation” Drum Set.

This button only works for the following Drum Set numbers: 2, 4 (2 Variations), and 7 (3 Variations). Like for Tone Variation selection, you can either press it repeatedly, or hold it down while you press TONE/ONE TOUCH [1] or [2].

See the end of this manual for a list of the drum/percussion sounds contained in each Drum Set. The following Drum Sets are available:

dr-1 Standard 2	dr-5 Jazz
dr-2 Room	dr-6 Brush
dr-2 1 Techno	dr-7 Oriental 1
dr-2 2 House	dr-7 1 Oriental 2
dr-3 Power	dr-7 2 E-40 Mod
dr-4 1 Electron	dr-7 3 Orchestra
dr-4 1 TR-808	dr-8 SFX
dr-4 2 TR-909	

Playing other drum/percussion sounds (MDr Shift)

The EM-50 OR's keyboard allows you to play 61 different drum/percussion sounds. Yet, every western Drum Set contains over 90 sounds (the oriental Drum Sets contain 61 drum and percussion sounds). Here is how to play the sounds that lie outside the 61-note range of the EM-50 OR's keyboard:

1. Press and hold the [M.DRUMS] until the following message appears on the display:



2. Use the MENU ▲▼ buttons to select either *dWN* or *UP*.

By selecting *dWN*, you literally shift the keyboard towards the left so that the keys trigger other drum sounds.

The same applies to a positive transposition of the drums, but in the opposite direction. That is, the "Standard Kick 1" sound, for example, is shifted to the left and can no longer be played via the keyboard. In return, other sounds are available.

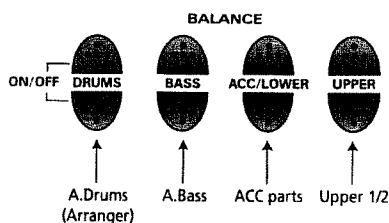
Note: MDr Shift works in 3-octave steps.

3. Select OFF to return to the "standard" assignment of the drum sounds to the keyboard.

Note: MDr Shift is not available for the oriental Drums Sets (numbers dr7, dr71, and dr72).

7.2 Volume balance in M.Drums mode

Unlike the Arranger and Organ modes, the M.Drums mode contains no new BALANCE ▲▼ button assignments. These buttons work the same as in Arranger mode. The [DRUMS] ▲▼ buttons are thus used for controlling the *accompaniment drums* (A.Drums) – not the drums you play yourself.



If, while setting the balance, you stumble upon messages such as "A.Bass", "Accomp", etc., please remember that they are there because you do not need to stop Arranger playback before selecting the M.Drums mode. Thus, if the Arranger is playing back a Division while you change to the M.Drums mode, the accompaniment keeps playing. In such situations, being able to reduce or increase the volume of an Arranger part or section (or to switch it off altogether) may be downright practical.

You can also set the volume of the Upper parts. See page 27 for details. This won't have any audible results in M.Drums mode, but it does allow you to prepare everything for when you switch back to Arranger (or Organ) mode.

Right... and what about the M.Drums part? You can't change its volume, nor can you switch it on or off. The reason is simple: since you deliberately selected the M.Drums part (by calling up the mode of the same name), the EM-50 OR assumes that your drum solo should always be audible. That is why the M.Drums volume is fixed at "100" (maximum volume).

Note: The Balance Mode function is also available in M.Drums mode. See page 20 for details.

8. Using the Recorder

Your EM-50 OR comes with a 2-track Recorder you can use for recording your own songs. Feel free to use the Arranger to add an accompaniment to the melodies you record. This functionality is actually the main reason why the Recorder provides two tracks: the first is used to record the accompaniment, while track 2 (or *2nd Track* as it is called) allows you to record the melody, etc., using the Realtime parts (Upper 1/2, Lower, M.Bass).


Note: The 2nd TRACK function is only available for Songs you record yourself – not for songs you load from disk.

A word about the sound source

The EM-50 OR's sound source is 24-voice polyphonic, which means that it can sound a maximum of 24 notes simultaneously. Some Tones, however, use two tone generators ("voices") per note, so that there may be situations where you won't be able to play 24 notes at the same time.

In most instances, polyphony will be no problem, but do keep in mind that you should not "over-arrange" your songs to ensure that all notes can be played back as expected.

8.1 Deleting the song in the internal memory

There is no real function for deleting the song in the internal memory. You can, however, achieve the same result by pressing the [REC] button once or twice until the  icon is displayed. As soon as you start recording, the old song will be overwritten and replaced by your new data.

8.2 Recording your own Songs

The EM-50 OR's Recorder is surprisingly flexible. You can:

- Record with Arranger backing (see "Recording with Arranger backing" on page 33).
- Record an organ piece with different sounds for the left and right hands (see "Recording organ music" on page 35). If you like, you can even add a drum accompaniment (just like in Organ mode).
- Record piano, etc., music using one Tone in Whole Upper mode (see page 36).
- Replace your solo/melody with a better version (see "Second recording pass" on page 34).

- Record your own drum/percussion part (either with or without the Arranger's drum part as rhythmic backing), and then add a melody to it (see page 36).


Recording with Arranger backing

This is probably what you will do most of the time: leave the accompaniment to the Arranger and add the melody in realtime. If you like, you can first record the Arranger parts (and concentrate on the chord changes), and then add the melody, etc., during a second pass (see below).


First recording pass

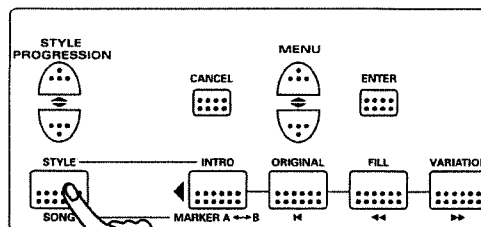
Parts you can record during your first "session":


TRACK A ("one-shot")	TRACK B (can be overwritten)
All Arranger parts	Upper1 –and/or– Upper2 –or– M. Drums

By selecting , you can record the Arranger parts as well as the Upper 1 and 2 parts the first time around. The Arranger parts reside on a track we shall call "A", while the Upper part(s) will be recorded onto track "B". Track "B" parts can be overwritten using the 2nd TRACK function (see page 34). You may consider it your "second chance", which is only available for the most difficult parts: the ones you need to play in realtime.

Note: It is not possible to add the Arranger backing without overwriting the entire song, so be sure to record it the first time around.

1. Press the [STYLE/SONG] button and check whether the display contains the  icon.



2. Press the MODE [ARRANGER] button so that the  icon appears.
3. Select the Music Style you want to use as backing track.
If you like, you can activate the ONE TOUCH function "One Touch Program" or select a User Program "User Programs".
4. Select the Upper1 or Upper2 part using the [UPPER 1/2] button.

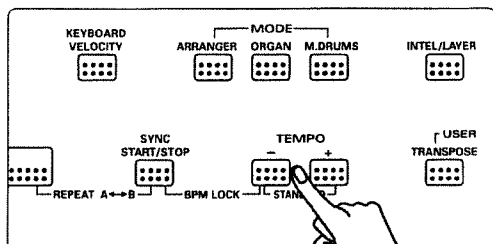
If you like, you can layer the Upper1 & Upper2 parts by pressing [INTEL/LAYER] until the LAYER icon appears.

5. If you also want to record the melody (using Upper1 and/or Upper2), select the Tones to be used (see page 22).

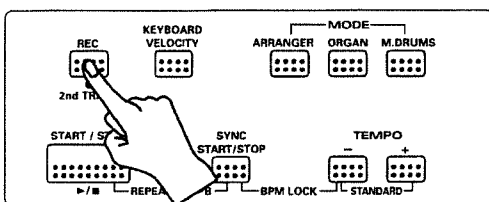
This is only necessary if you do not wish to take advantage of the ONE TOUCH function or one of your User Programs.

Note: You can also record the melody at a later stage. See "Second recording pass" on page 34.

6. Set the tempo using the TEMPO buttons.



7. Press the [REC] button once or twice to select the function.



8. Start recording in one of the following ways:

a) Play the first melody notes (to the right of the Split point). This will start the recording without Arranger backing. You can add it whenever you like by pressing [START/STOP] or by playing a chord in the left half of the keyboard (if the SYNC START function (see page 13) is on). The Arranger will then start at the next downbeat.

Note: If you start recording using this method, you can stop the Arranger by pressing [START/STOP] and improvise an ending without backing, because recording doesn't stop.

b) Press the [START/STOP] button to start Arranger playback with the selected Division.

c) Activate the SYNC START/STOP function and press one or several keys to the left of the Split point.

9. Stop recording in one of the following ways:

a) Press [REC] again.

b) If you started recording with method (b) or (c) above, press the [ENDING] button to start the Ending phrase. As soon as it ends, recording stops.

c) If you started recording using methods (b) or (c) above, press [START/STOP] to stop both the Arranger and recording.

Note: Save your song to disk or via MIDI if you want to keep it and play it back sometime in the future (see page 38).

Listening to your song

To listen to your song, press the [STYLE/SONG] button to select the Song mode, followed by [START/STOP] (▶/■). The display now contains the following icons (the INTRO, VARIATION, etc., icons are no longer available):



The PLAY▶ icon is surrounded by a box to indicate that playback is running. Press [START/STOP] once again to stop playback.

Second recording pass

Suppose that you are happy with the accompaniment but would like to redo the melody (or that you deliberately forgot about the melody the first time around). The EM-50 OR allows you to do just that – and best of all: you only need to play the melody again because the accompaniment resides on a separate track!

Note: The 2nd TRACK function is only available for freshly recorded songs, i.e. songs you did not load from disk (or via MIDI).

1. Press the [REC] button.

The EM-50 OR now automatically selects the 2nd TRACK function, which is indicated by the following icon: . This icon by itself only indicates the 2nd TRACK record standby mode. You still need to start it.

Note: You can repeat this additional recording onto track "B" as many times as you like. Be sure, however, to select the "2nd TRACK" icon – otherwise you will erase the entire song.

2. Select the Upper Tone(s) you wish to use.

Play a few notes on the keyboard: this time, all keys are assigned to the Upper part(s). This may come in handy for piano pieces or solos that stretch over a wider range than would be possible when the Arranger or Organ mode is active!

Note: If you like, you can also press MODE [M.DRUMS] to record a drum part rather than a melody. Note that it is not possible to first redo or record the melody and then add manual drums.

3. Press the [START/STOP] button.

The icon now appears next to the icon to signal that the EM-50 OR has started recording.

4. Play your melody or solo – and feel free to use the D Beam Controller and the BENDER/MODULATION lever!

5. When you are finished, press the [REC] button (or [START/STOP]).

Note: Save your song to disk or via MIDI if you want to keep it and play it back sometime in the future (see page 38).

Recording organ music

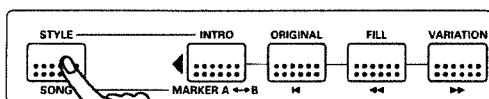
Parts you can record during your first “session”:

TRACK A (“one-shot”)	TRACK B (can be overwritten)
Acc. Drums (Arranger) Lower part M. Bass part	Upper1 –and/or– Upper2 –or– M. Drums

Select this method when you want to record organ music, or for any other type of song that requires the use of different sounds for the left and right hands. Again, what is recorded onto Track “A” cannot be replaced without overwriting the entire song, so be sure to get the Lower and/or M.Bass parts right. See also page 33.

First recording pass

1. Press the [STYLE/SONG] button and check whether the display contains the **STYLE A** icon.



2. Press the MODE [ORGAN] button so that the **ORGAN** icon appears.

If necessary, adjust the Split point (see “Setting the split point via the keyboard (Lwr Split)” on page 28).

3. Select the Upper1 or Upper2 part using the [UPPER 1/2] button.

If you like, you can layer the Upper1 & Upper2 parts by pressing [INTEL/LAYER] until the LAYER icon appears.

4. Select the desired Tones for the Upper and Lower parts (see pages 28 and 22).

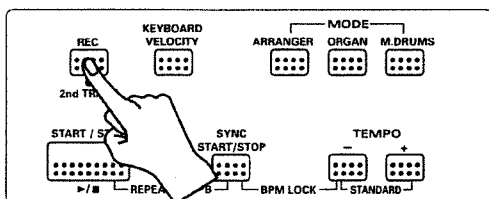
Note: If you don't need the M.Bass part, switch it off (see page 29).

5. Set the tempo using the TEMPO buttons.

Note: It is not possible to add the Lower, M.Bass and/or Arranger drum parts without overwriting the entire song, so be sure to record them the first time around (using “REC” rather than “2nd TRACK”).

6. Select the Music Style whose drum part you want to use as backing.

7. Press the [REC] button once or twice to select the **REC** function.



8. Start recording in one of the following ways:

a) Play the first melody notes (to the right of the Split point). This will start the recording without the

Arranger drums. You can add them whenever you like by pressing [START/STOP]. The drums will then start at the next downbeat.

- b) Press the [START/STOP] button to start Arranger drum playback with the selected Division.
- c) Press one or several keys to the left of the Split point (to play the first Lower-part notes, possibly with the M.Bass part).
- d) Press [SYNC START/STOP] to activate this function, and play one or several notes to the left of the Split point. The Arranger drums will start in sync with your first notes.

9. Stop recording in one of the following ways:

- a) If you started recording using methods (b) or (d) above, press [START/STOP] to stop both the Arranger and recording.
- b) Press [REC] again.
- c) If you started recording with method (b), (c), or (d) above, press the [ENDING] button to start the Ending phrase. As soon as it ends, recording stops.

Listening to your song

To listen to your song, press the [STYLE/SONG] button to select the Song mode, followed by [START/STOP] (▶/■). See also page 34.

Second recording pass

Operations are the same as for recordings made with the Arranger, so please see page 34. Again, you can decide to record the Upper1/2 parts or the M.Drums part. Bear in mind, though that by selecting 2nd TRACK, you overwrite (and thus lose) the Upper1/2 parts you may have recorded the first time around.

Recording piano music

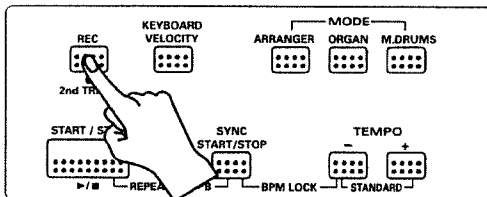
Parts you can record during your first "session":

TRACK A ("one-shot")	TRACK B (can be overwritten)
Acc. Drums (Arranger) Upper 1 and/or 2	Upper1 -and/or- Upper2 -or- M. Drums

Select this method when you want to record piano music, or for any other type of song that requires the use of only one sound for the entire keyboard. Again, what is recorded onto Track "A" cannot be replaced without overwriting the entire song. Here, however, you can add a second Upper1 and/or Upper2 part (Track "B") to the one(s) on track "A". The most obvious use for this function is to record the left-hand part of a piano piece the first time around, and the right hand-part using 2nd TRACK. If you like, you can add a drum accompaniment to your playing. *Note: The Upper part(s) you add using the 2nd TRACK function (Track "B") will use the same Tone(s) as the parts on track "A".*

First recording pass

1. Press the [STYLE/SONG] button and check whether the display contains the **STYLE A** icon.
2. Press the MODE [ORGAN] or [ARRANGER] button so that neither the **ARRANGER** nor the **ORGAN** icon is displayed (**M.DRUMS** should not be displayed either).
3. Select the Upper1 or Upper2 part using the [UPPER 1/2] button.
If you like, you can layer the Upper1 & Upper2 parts by pressing [INTEL/LAYER] until the LAYER icon appears.
4. Select the desired Tones for the Upper parts (see page 22).
5. Set the tempo using the TEMPO buttons.
6. Select the Music Style whose drum part you want to use as backing.
7. Press the [REC] button once or twice to select the **REC** function.



8. Start recording in one of the following ways:
 - a) Play the first melody notes. This will start the recording without the Arranger drums. You can add them whenever you like by pressing [START/STOP]. The drums will then start at the next downbeat.
 - b) Press the [START/STOP] button to start Arranger drum playback with the selected Division.

c) Press [SYNC START/STOP] to activate this function, and play one or several notes. The Arranger drums will start in sync with your first notes.

9. Stop recording in one of the following ways:

- a) If you started recording using methods (b) or (c) above, press [START/STOP] to stop both the Arranger and recording.
- b) Press [REC] again.
- c) If you started recording with method (b) or (c) above, press the [ENDING] button to start the Ending phrase. As soon as it ends, recording stops.

Listening to your song

To listen to your song, press the [STYLE/SONG] button to select the Song mode, followed by [START/STOP] (▶/■). See also page 34.

Second recording pass

Operations are the same as for recordings made with the Arranger, so please see page 34. Here, you can add more Upper1/2 part notes to the ones already recorded onto track "A", or add some live drums using the M.Drums part.

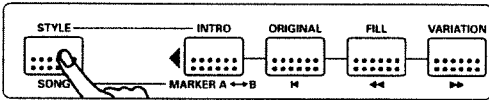
Recording live drums

Parts you can record during your first "session":

TRACK A ("one-shot")	TRACK B (can be overwritten)
Acc. Drums (Arranger) M.Drums	Upper1 -and/or- Upper2 -or- M. Drums

Select this method to record a live drum part using the EM-50 OR's M.Drums function (see page 31). What is recorded onto Track "A" cannot be replaced without overwriting the entire song, so be sure to get your first (or all) drum notes right. You can, however, add more drum notes using the 2nd TRACK function – or add a melody-cum-chords to your drum track. Feel free to use the Arranger's drum part as rhythmic backbone during the first recording pass.

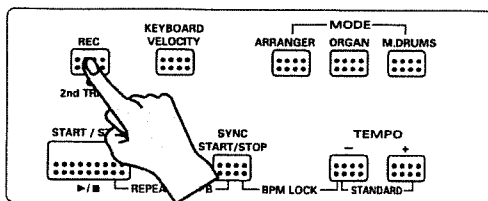
First recording pass

1. Press the [STYLE/SONG] button and check whether the display contains the **STYLE A** icon.
- 
2. Press the MODE [M.DRUMS] button so that the **M.DRUMS** icon appears.
 3. Select the Drum Set you want to use for recording (see page 31).
 4. Set the tempo using the TEMPO buttons.

Note: It is not possible to record the Arranger drum part without overwriting the entire song, so be sure to record it the first time around (using "REC" rather than "2nd TRACK").

5. Select the Music Style whose drum part you want to use as backing.

6. Press the [REC] button once or twice to select the [REC] function.



7. Start recording in one of the following ways:

- Play the first drum notes. This will start the recording without the Arranger drums. You can add them whenever you like by pressing [START/STOP]. The drums will then start at the next downbeat.
- Press the [START/STOP] button to start Arranger drum playback with the selected Division.
- Press [SYNC START] to activate this function, and press one or several keys. The Arranger drums will start in sync with your first notes.

8. Stop recording in one of the following ways:

- If you started recording using methods (b) or (c) above, press [START/STOP] to stop both the Arranger and recording.
- Press [REC] again.
- If you started recording with method (b) or (c) above, press the [ENDING] button to start the Ending phrase. As soon as it ends, recording stops.

Listening to your song

To listen to your song, press the [STYLE/SONG] button to select the Song mode, followed by [START/STOP] (▶/■). See also page 34.

Second recording pass

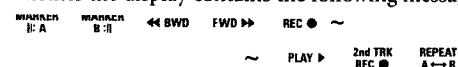
Operations are the same as for recordings made with the Arranger, so please see page 34. Here, you can add more drum notes (using the same Drum Set as the one you selected before you started recording), or play the melodic part using the Upper1/2 parts.

Other recording options (Song mode)

It is also possible to record in the EM-50 OR Song mode (when the icon is displayed). Doing so, however, means that you cannot rely on the Arranger for melodic and/or rhythmic backing.

Another “drawback” is that if you press MODE [ARRANGER] after selecting the Song mode, you cannot record anything to the “A” track and that the left half of the keyboard does nothing (because the Arranger cannot be used in Song mode). Recording (using the option) in Song/Arranger mode is probably not very useful. But it works, and you can take advantage of it. Here we shall only list the track “distribution” because operations are similar to the equivalent modes while the Arranger is available (“Style”). Just remember that the start/stop functions related to the Arranger (Sync Start, Ending) are no longer available.

- Press the [STYLE/SONG] button and check whether the display contains the following messages:



2. Select the desired mode by pressing [ARRANGER], [ORGAN], or [M.DRUMS].

Remember that the Whole Upper mode can be selected by switching off the mode icon (ARRANGER, ORGAN, M.DRUMS) that is currently displayed.

① Tracks in Song/Arranger mode

TRACK A (“one-shot”)	TRACK B (can be overwritten)
-Nothing- (only right half of the keyboard available)	Upper1 -and/or- Upper2 -or- M. Drums

② Tracks in Song/Organ mode

TRACK A (“one-shot”)	TRACK B (can be overwritten)
Lower	Upper1 -and/or- Upper2 -or- M. Drums

③ Tracks in Song/M.Drums mode

TRACK A (“one-shot”)	TRACK B (can be overwritten)
M.Drums	Upper1 -and/or- Upper2 -or- M. Drums

④ Tracks in Song/Whole Upper mode

TRACK A (“one-shot”)	TRACK B (can be overwritten)
Upper 1/2	Upper1 -and/or- Upper2 -or- M. Drums

Again, Upper1/2 notes added using the 2nd TRACK function supplement the notes recorded onto track “A”.

8.3 Changing the song tempo

You can change a song's playback tempo with the TEMPO [-]/[+] buttons. Doing so, however, means that the tempo will still change if the song you are playing back contains tempo change messages. Furthermore, every time you jump back to the beginning of the song using [|◀], the programmed song tempo will be set.

8.4 Saving your Song

Though you can switch off your EM-50 OR without losing the song in its internal memory, be aware that it will be erased in certain cases (such as when receiving a Song dump or updating the system), and that recording new material with the [REC] option means that the song in the EM-50 OR's internal memory will be overwritten.

The EM-50 OR is equipped with a floppy drive that allows you to save your new song to a 2HD or 2DD floppy disk.

Here, we shall only look at the Song Save function. See page 62 for the remaining Disk functions.

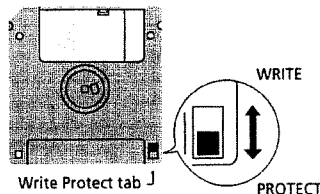
Note: Make it a habit to save your songs to disk (or via MIDI) before switching off the EM-50 OR, even though that is unnecessary. Musicians are usually bad at house-keeping and keep forgetting those seemingly insignificant details...

Saving your Song to disk

1. Insert a blank disk into the drive.

If this is not the first song you save to disk, you may, of course, use the disk you used for previous songs.

Every floppy contains a square tab that allows you to "close" a little window. With the tab in that position, you can save data to the disk. Do not forget to write-enable the disk by closing this little window prior to inserting the floppy disk.



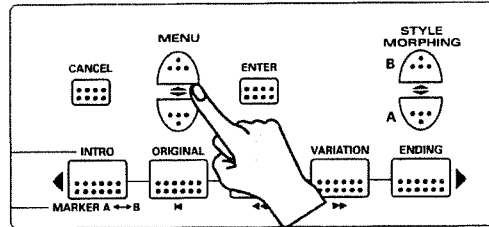
Formatting a disk

Before being able to save files to a disk, you need to prepare a floppy disk. You are free to use 2DD or 2HD disks. Please do not use the cheapest disks available unless you are absolutely sure that they are reliable. It would be a pity to lose a great recording because the disk you saved it to has become unreadable.

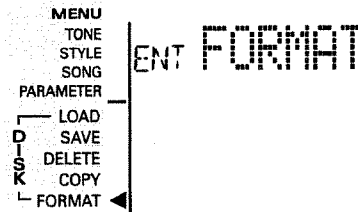
If the floppy you are about to use is IBM PC formatted, there is no need to format it, though disk access is faster with EM-50 OR-formatted disks. Otherwise proceed as follows:

(For now, we'll assume that your disk is not yet formatted. If it is, skip to step (5)).

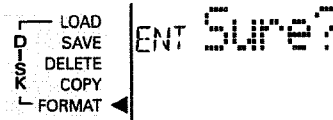
2. Use the MENU ▲▼ buttons to place the arrow (◀) next to the FORMAT entry (left side).



The display now responds with:



3. Press the [ENTER] button.



The "ENT" message flashes, indicating that you need to...

4. Press the [ENTER] button to format you disk.

Note: If you do not want to format your floppy, press [CANCEL] to return to the previous message ("FORMAT").

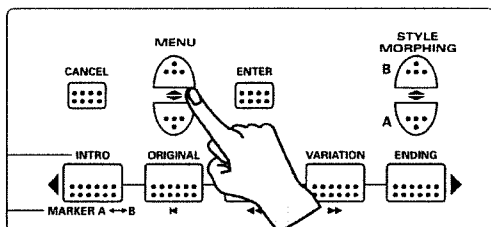
Note: By formatting a disk, you erase all files on that disk. It would be a good idea to first check what it contains (e.g. on your PC).

The value to the left of the Formatting message now counts down from "80" to "1" while the disk icon flashes to indicate that the disk is being accessed. When the disk is formatted, the message "Complete" is briefly displayed.

Save operation

OK, so your disk is ready. Now we need to save the song to it:

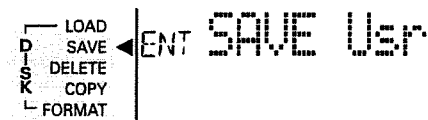
5. Use the MENU ▲▼ buttons to place the arrow (◀) next to the SAVE entry.



The display now responds with:

```
ENT Save
```

6. Press the [ENTER] button.



The "ENT" message flashes.

7. Use the MENU ▲▼ buttons to select SAVE Sng and confirm by pressing [ENTER].

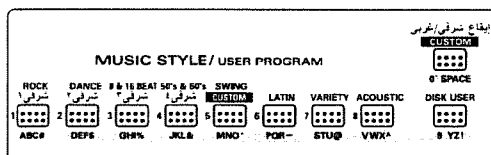
The display now looks as follows:



You could save this song with the current default name (SONG_000). A proper name, though, will help you identify the song file at all times. We therefore suggest you take the time to specify a meaningful name.

The "S" and the "█" alternately flash in the display to indicate that you can enter a character for this position.

8. Use the MUSIC STYLE/USER PROGRAM buttons for selecting the character you wish to assign to this position.



You may have to press the button in question several times to select the desired character. The following characters are available:

```
_ ! # $ % & ' - @ ^ `
0 1 2 3 4 5 6 7 8 9
A B C D E F G H I J K L M N
O P Q R S T U V W X Y Z
```

Note: The cursor jumps automatically to the next position whenever you press a different button than the one you pressed before. To enter characters that are assigned to the same button, you need to move the cursor using the MENU ▲▼ buttons.

Note: If you select "SPACE" ([CUSTOM] button), the display will insert a "_". This is because MS-DOS® does not allow you to use spaces.

9. If necessary, use the MENU ▲▼ buttons to move the cursor to the next position.

10. Repeat steps (8) and (9) to enter the remaining characters.

11. Press [ENTER] to save the file to disk.

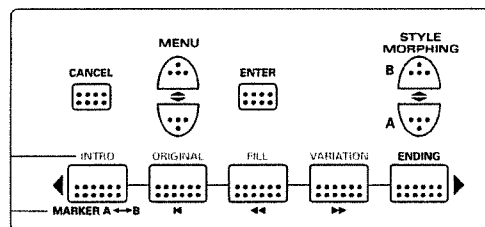
The display now responds with the message Saving as well as a flashing disk icon (DISK █). When the song is saved, the COMPLETE message appears.

If the message DiskProt appears, you forgot to switch off the disk's Write protection. Press the EJECT button of the disk drive, remove the floppy and close the tab. Then, insert the disk again and press [ENTER].

12. Press [CANCEL] several times and use the MENU ▲▼ buttons to select another mode.

8.5 Fast Forward, Rewind, and Reset

The buttons of the STYLE/SONG pad have two functions: one in Style mode (printed above the buttons), and another one in Song mode (printed below the buttons). In Song mode, they allow you to do the following:



To fast forward (jump to a measure later in the song), press [▶▶]. To rewind (return to a measure that lies before the current position), press [◀◀].

Press [◀◀] (RESET) to jump back to the first measure of the song. You need to stop playback before being able to use the [◀◀] button.


Note: In certain cases, these three functions may not be available. This is only the case for very large songs, however.

8.6 Loop playback (Repeat)

Another clever feature of the Recorder is that you can program playback loops. Again, you can do so during playback or while the Recorder is stopped.

1. Press [MARKER A↔B] (INTRO) where you want the loop to begin (the  icon is displayed).

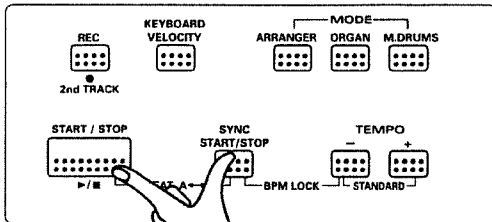


2. Fast forward to the measure where you want the loop to end and press [MARKER A↔B] again (the  icon appears).



You can also program loops on the fly. Remember, however, that the Recorder always memorizes the beginning (downbeat) of the next measure.

3. To play back the loop you have just programmed, hold down [SYNC START/STOP] and press [START/STOP].



At the end of the B measure, the Recorder immediately jumps back to the beginning of measure A.

Note: In certain cases, the Marker function may not be available. This only happens with very large songs, however.

8.7 Playing back Standard MIDI Files


The EM-50 OR allows you to play back commercially available music data files (called *Standard MIDI Files*) or your own songs you saved to disk.

In fact, when you save a song to disk, it is saved as Standard MIDI Format 1 file and can also be played back using any other SMF compatible sequencer (or software).

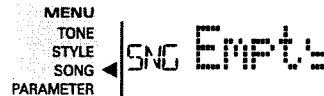
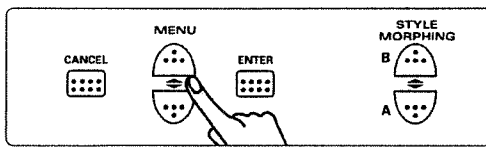
Let us have a look at how to play back a music data file:

1. Insert a floppy disk with Song/Standard MIDI File data into the drive.

2. Press the [STYLE/SONG] button to switch to the EM-50 OR's Song mode.

This is necessary because, otherwise, pressing the [START/STOP] button will start Arranger playback. The black message in the upper right corner must read .

3. Use the MENU ▲▼ buttons to position the arrow (◀) next to the SONG entry:



The above message ("Empty") is only an example because what is displayed, depends on whether you have inserted a disk and whether it contains Standard MIDI Files. Here is what the various messages mean:

Message	Meaning
Empty	The EM-50 OR's song memory does not contain data (you have neither recorded a song nor played back a song on disk).
No Disk	You forgot to insert a disk into the drive.
No Files	The disk you inserted into the drive does not contain Standard MIDI Files.
Int Song	The Song memory does contain song data and these are selected.

4. Press the [ENTER] button.

If an error message appears, see the table above and take the necessary steps.

5. Use the MENU ▲▼ buttons to select the Standard MIDI file you want to listen to.

Select "Int Song" to listen to the song you recorded yourself (see page 33).

Note: Please bear in mind that starting playback of the selected song on disk will erase your own song. Be sure to save it to disk before proceeding (see "Saving your Song" on page 38).

6. Press [ENTER] to load the first data chunk.
7. Once again check whether the **SONG** icon is displayed in the upper right corner of the display (if it is not, press [STYLE/SONG]).
8. Press [START/STOP] to start playback. Press this button once again to stop playback. See also “Fast Forward, Rewind, and Reset” on page 39 and “Loop playback (Repeat)” on page 40 for other functions you can use during playback.

8.8 Live performance with song backing (Minus One)

Your EM-50 OR allows you to mute any given part of the song you are currently playing back. You could use this feature to mute the solo part so that you can play it yourself. This is called *Minus One* playback (because one part of the original song data will not be played back). The functions described below do not erase the data you no longer hear: they just prevent them from sounding.

All Realtime parts remain active in Song mode. In other words, you are free to use the Upper1, Upper2, Lower, and Manual Bass parts if you like. The M. Drums part is also available but, as you remember, selecting the M. Drums part means that the other four Realtime parts are temporarily deactivated.

Select the Whole Upper (no icon), Organ (**ORGAN**) or M. Drums (**M.DRUMS**) mode.

Note: Whenever you start playing back a new song or return to the beginning of the current song (using [|◀]), all Realtime parts, except Upper1, will be switched off and the EM-50 OR will select the WHOLE UPPER keyboard mode.

Muting song parts

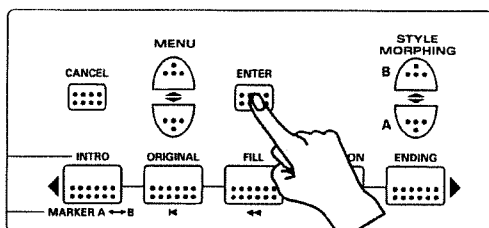
The EM-50 OR allows you to mute song parts, which means that they do not sound.

In most instances, you probably only want to mute the song part that plays the melody, so that you can play it yourself using the Upper1 (possibly doubled with the Upper2) part.

Here is how to mute the melody part:

1. Press MENU ▲▼ to place the mode arrow (◀) next to the PARAMETER message. The “ENT” message now flashes in the display.

2. Press [ENTER] to enter the Parameter mode.

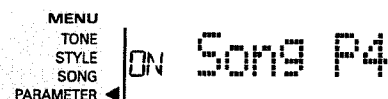


3. Use the MENU ▲▼ buttons to select the song part you wish to mute (Song P1~Song P16).

To mute the melody of the Recorder song (or Standard MIDI File), select “P4”.

4. Press [ENTER] to confirm your parameter selection.

The VALUE message now flashes to signal that you can change the value.



5. Use the MENU ▲▼ buttons to select “MtN” or “MtA”.

MtN—The song part does not sound. MIDI messages other than Note On/Off and Velocity, however, are executed normally. That way, Tone selection, pitch bend, modulation, etc., behave the way you expect them to. This setting is useful for song parts you can replace with your own playing (see below).

MtA—Mutes all MIDI messages for the corresponding song part (including Tone selection, Pitch Bend, etc.).

You have now muted the melody of the Recorder song, which is linked to the Upper1 part. This link ensures that Upper1 sounds and behaves the same as the melody part.

Repeat the above procedure if you also want to mute other song parts.

6. To leave the Parameter mode, press [CANCEL] several times until the “PARAMETER” message is displayed, then use MENU ▲▼, followed by [ENTER] to select another mode.

Note: This setting can be saved to a User Program (see page 47).

Song parts linked to the EM-50 OR's Realtime parts

Song Part	MIDI channel/ Song Part #	EM-50 OR
Drums	10 (*16)	M. Drums
Chord backing	3 (*11)	Lower
Solo/melody	4	Upper1
Counter melody	6	Upper2

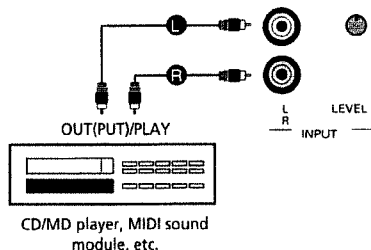
(*) MIDI channel for songs you record on the EM-50 OR itself.

9. Miscellaneous

9.1 Using the INPUTs

Use the INPUT jacks to connect a CD or MD player, a cassette deck or another instrument (synthesizer or sound module) to your EM-50 OR. Doing so allows you to amplify the external "signal source" using the EM-50 OR's speakers. Here is how to:

1. Switch off the EM-50 OR.
2. Connect the OUT(PUT)/PLAY jacks of the external signal source to the EM-50 OR's INPUT "L" (white) and "R" (red) jacks. See the illustration.



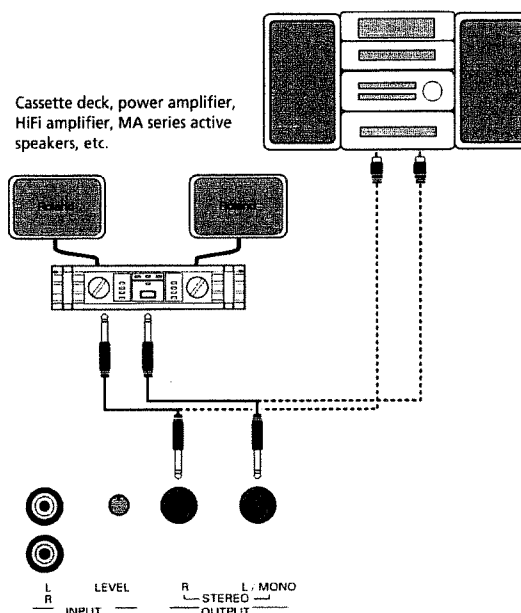
You will need a standard phono/RCA/Cinch cable.

Note: For a synthesizer, digital piano, etc., you probably need an adapter cable (1/4" phone jack→phono/RCA). Consider using a pair of PJ-1Ms. Ask your Roland dealer for details.

3. Turn the [LEVEL] control next to the INPUT jacks all the way to the left (minimum).
4. Start playback of your signal source (in case of a synthesizer or module, consider starting a demo song).
5. Set the output level of the external signal source to a suitable level.
6. Gradually increase the [LEVEL] setting on the EM-50 OR until you obtain the desired level.

9.2 Using the OUTPUTs

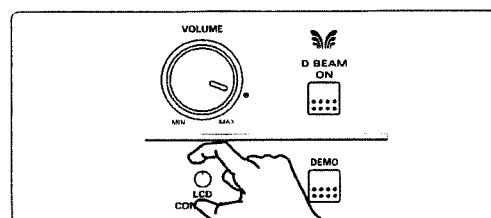
If you like, you can also record your performance (or the Recorder song) to cassette, MD, etc. To this end, you need to connect the EM-50 OR's OUTPUT L/R jacks to the external device's REC IN jacks. Use a standard 1/4" phone cable for doing so. Another use for these outputs is to connect the EM-50 OR to your HiFi or keyboard amplifier (such as the Roland KC-500/300/100). Using a HiFi amplifier requires the use of an adaptor plug (phono/RCA→1/4" jack). If you like, you can also purchase two Roland PJ-1M cables.



Note: By connecting the OUTPUT jacks, you do not switch off the EM-50 OR's amplification system.

9.3 Setting the display contrast

Sometimes, the display may be difficult to read due to the lighting conditions in your living room, on stage, etc. In that case, you can improve the readability of the EM-50 OR's display using the [LCD CONTRAST] control below the [VOLUME] control.



Turn it to the left to make the characters lighter, and to the right to make them darker.

9.4 Functions for educational purposes

The EM-50 OR provides two functions that may come in handy for music teachers or for those who use the EM-50 OR in class:

Deactivating or activating the Demo function

The EM-50 OR's Demo function can be switched off so that pressing the [DEMO] button will have no effect at all. This may be useful in situations where the EM-50 OR is used in class. Here is how to deactivate the Demo function:

1. Switch off the EM-50 OR.
2. Hold down the [DEMO] button while switching the EM-50 OR back on again.

This setting is remembered, so that next time you want to listen to a demo song, you have to repeat the above procedure.

Deactivating the Arranger

Use the following procedure to ensure that the Arranger cannot be started or stopped:

1. Switch off the EM-50 OR.
2. Hold down the [STYLE/SONG] button while you switch the EM-50 OR back on again.

It is now impossible to start/stop the Arranger using the [START/STOP] button or the Sync Start/Stop function.

Repeat the above procedure when you want to use the Arranger again.

Locking both the Arranger and the Demo function

A third "educational" option is to switch off both the Demo and the Arranger functions in one go:

1. Switch off the EM-50 OR.
2. Hold down the [START/STOP] button while you switch the EM-50 OR back on again.

It is now impossible to start/stop the Arranger or demo song playback. Repeat the above procedure when you want to use the Arranger and Demo function again.

Note: You can also hold down [DEMO] or [STYLE/SONG] while switching on the EM-50 OR to only unlock the Demo or Arranger facility.

10. Advanced Arranger settings

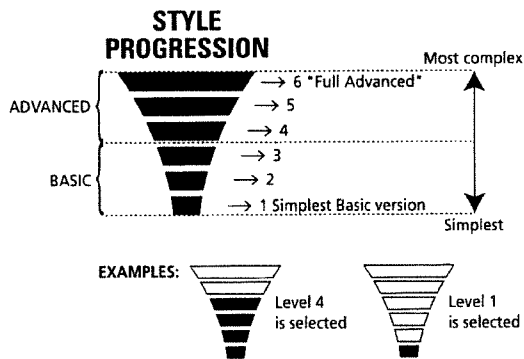
10.1 More about Style Progression

The Style Progression field in the display keeps you posted about the currently selected Style Progression level.

The levels are roughly divided into two groups (which we shall call *Advanced* and *Basic* for those familiar with previous Roland keyboards). Levels 4~6 represent different versions of the Advanced group, while levels 1~3 are Basic versions. That is why the most striking difference (except for the fact that some instruments are missing or added) will be between levels 3 (most complete Basic version) and 4 (simplest Advanced version). That transition may indeed involve the use of an altogether different Division pattern.

Please note that these are only guidelines that are certainly true of the EM-50 OR's internal Styles. But since you can load new Styles into the Custom memories, the Style Progression behavior of these new Styles may vary somewhat.

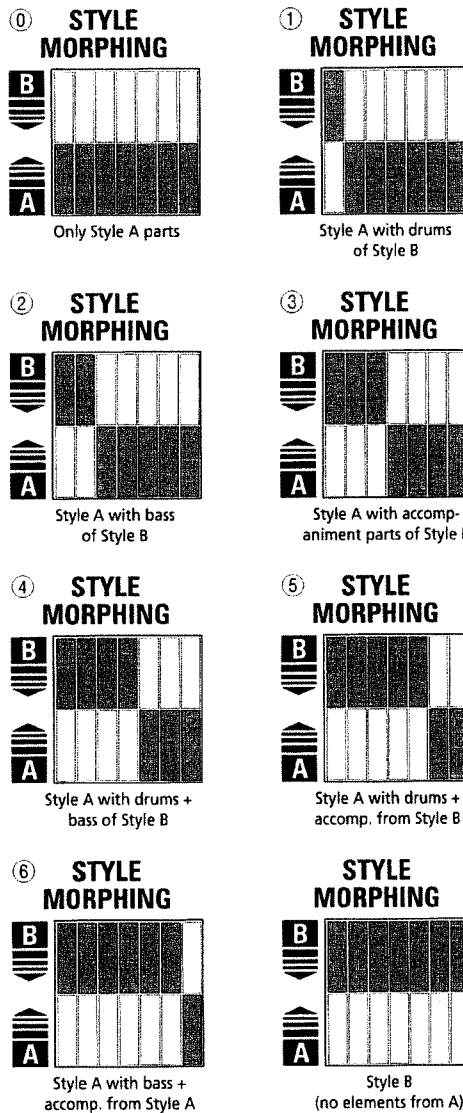
There are 6 complexity levels to choose from. The last Style Progression setting will be written to a User Program (see page 47). So be sure to select the desired Style Progression level before saving your settings.



By simultaneously pressing STYLE PROGRESSION ▲▼, you can toggle between levels "3" and "6" in the above illustration.

10.2 Style Morphing details

Style Morphing uses a display system that provides at-a-glance information about the current status of the Style Morphing function. Except for the possibility to use Style "A" or "B" in its entirety, there are 6 morphing levels. Here is what the indications in the STYLE MORPHING field mean:



Note: When you select a new Music Style with the MUSIC STYLE/USER PROGRAM buttons, the Style Morphing function is reset to the "A only" status ("0" in the above illustrations). The Style Morphing setting can, however, be written to a User Program.

10.3 Selecting another "B" Style

As stated earlier, the "B" Style is prepared automatically whenever you select an "A" Style, so that the Style Morphing function is ready whenever you are.

If you do not agree with this preset selection (or want to experiment with other Styles), hold down the STYLE MORPHING [B] (▲) button and select the desired "B" Style using the MUSIC STYLE/USER

PROGRAM buttons. This selection will also be written to a User Program.

Please be aware of the following when selecting a “B” Style:

- Style Morphing also works with new Styles you transfer to the Custom memories (page 62).
- Style Morphing also works with Disk User Styles (see page 45). The result of this operation depends on the Disk User Style that is currently in the EM-50 OR’s memory. Though this may seem obvious, you should bear this in mind when you write your settings to a User Program: next time you select that User Program, the EM-50 OR’s RAM memory may contain a different Disk User Style.

10.4 Disk User Styles

The EM-50 OR comes with a floppy disk drive that can be used for playing back Standard MIDI Files (see page 40), for saving your settings, etc., to disk, and for loading new Music Styles.

There are two ways of using new Music Styles:

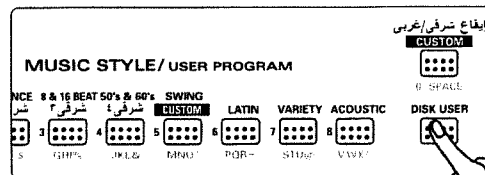
- New Styles can be transferred to the Flash ROM memories (1~8), in which case they replace the Styles that resided in these memories when you purchased the EM-50 OR. See page 62 for details and “Selecting Custom Styles” on page 16 for how to use Custom Styles;
- You can *load one Music Style* to the EM-50 OR’s Disk User memory and use it as if it were a 97th Music Style. The Style data in this memory are only available until you switch off your EM-50 OR or load another Style.

Here, you will learn how to use the Disk User memory.

1. Insert a disk containing MSA or MSD series Music Styles for the EM-50 OR into the disk drive.

Note: See your Roland dealer for MSA and MSD series Style Disks. You can use Music Styles that were for the following (and probably also other) Roland instruments: E-86, E-68, E-96.

2. Press the [DISK USER] button.



The **DISK USER** message appears in the upper right corner of the display, while the mode arrow (◀) jumps to the “STYLE” message.

Note: Let us agree to use the term *RAM memory* for the memory area that contains a single Style you load from disk. “RAM” is short for “Random Access Memory.” It refers to a memory that only works while the instrument is switched on. As soon as you switch it off, the RAM memory is erased.

3. Press the [ENTER] button.

4. Use the MENU ▲▼ buttons to select a Music Style on the inserted floppy disk.

5. Press [ENTER] to load the selected Disk User Style into the EM-50 OR’s RAM memory.

6. Press the [CANCEL] button to leave the Disk User function.

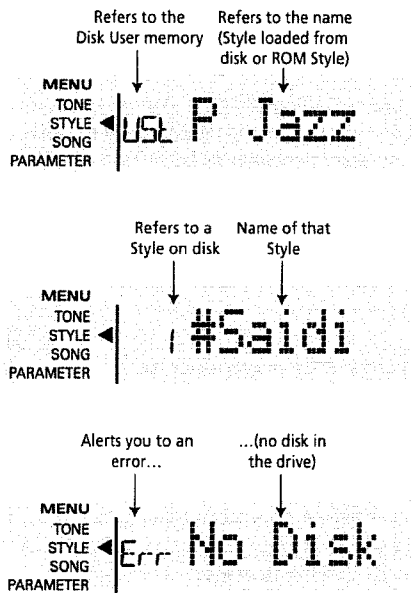
When you press [ENTER] (see step (5)), the Disk User Style in the EM-50 OR’s RAM memory is automatically selected and can be started in one of the usual ways (see page 13). If you pressed [START/STOP], the freshly loaded Style is already playing at this point.

7. To return to an internal Style after working with a Disk User Style, use the MUSIC STYLE/USER PROGRAM number buttons. To once again use the Disk User Style, press [DISK USER]. To work with another Disk User Style, return to step (1) above.

Note: The selection of the Disk User memory will be written to a User Program (see page 47). This, however refers to the memory address rather than its contents. Next time you recall such a User Program, the EM-50 OR will therefore use the last Disk User Style you loaded after switching it on. If you haven't yet loaded a User Style, the EM-50 OR will select a ROM Style

Display messages while loading a Disk User Style

Let us briefly look at the information that is displayed during the load operation of a Disk User Style. Once you know how to read it, you will have little trouble understanding what you are doing and/or why what you want to do does not seem to work.



What you really should pay attention to is whether the message line starts with "USt" or a number. The Style name to its right contains no hint about the location of the Style.

Here is an example: if the Disk User memory already contains the "#Saidi" Style when you press [DISK USER], the display will show "USt #Saidi". If you then press MENU ▼ (to select another Style on disk), the display may change to "1 #Saidi". This means that the first Style on disk is also called "#Saidi" (and thus probably the one you loaded earlier).

Loading it again by pressing [ENTER] is unnecessary. (But you probably want to press MENU ▼ again to select another Style on that disk...)

Note: Some disk Styles are too big for the EM-50 OR's RAM memory. That is why the message Err - Too Big may appear. In that case, select another Style on disk.

11. User Programs

The EM-50 OR is equipped with 64 User Programs that allow you to store almost all settings (or registrations) you make on the front panel and via the Parameter menu (see page 50).

Note: MIDI settings are not saved to a User Program because the EM-50 OR memorizes them automatically.

11.1 Writing your settings to a User Program

It is a good idea to write your settings frequently, even if you still need to do some editing afterwards. Those intermediary saves allow you to return to the previous stage whenever you do not like your last modifications. In other words, you could (and probably should) use the User Programs as “temporary memories” to be able to return to the previously edited settings, discarding only the latest modifications.

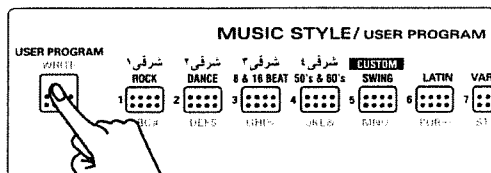
Try saving your settings after...

- selecting Tones for the Realtime parts;
- selecting a Style, the first division, and after setting the tempo;
- editing the EM-50 OR's Parameters (see page 50);
- modifying the volume balance;

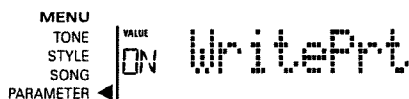
In short, every time you like the settings you just made. That way, every subsequent modification can be undone by selecting the previously saved version.

Note: The Scale Memory settings (see page 23) are not written to a User Program. Please use the three Scale Memories provided to this effect.

1. Press and hold the [USER PROGRAM/WRITE] button.



The EM-50 OR now automatically jumps to the following parameter:



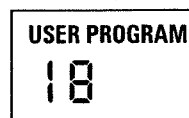
Every time you power on your EM-50 OR, the Write Protect function is switched on. It is therefore impossible to accidentally overwrite an existing User Program memory. But since that is precisely what we want to do here, you must proceed as follows:

2. Press MENU ▼ to set Write Protect to “Off”.

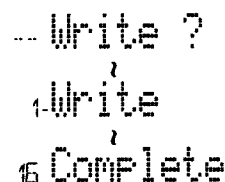
3. Again press and hold the [USER PROGRAM/WRITE] button while pressing a MUSIC STYLE/USER PROGRAM number button.

The number you select appears next to the Write message. This is the User Program bank. There are eight banks of 8 numbers each.

4. Press another (or the same) number button to specify the desired memory within the selected bank.



Here, we selected memory “8” of bank “1”. The display now responds with the following messages (Complete means that your settings have been stored and can be recalled).



It is perfectly possible to program several User Programs for the same song. Selecting a User Program is a lot faster than calling up the Parameter mode, modifying the settings, etc., while playing. In other words, you could write one User Program for the first part of a song, another for the bridge, and a third one for the closing section. Doing so allows you to “play” with the On/Off status and volume of the Realtime parts, for example.

5. Release the [USER PROGRAM/WRITE] (or [WRITE]) button.

Note: To be on the safe side, you should turn WritePrt back on again after writing your settings to a User Program. See page 50.

Notes about writing User Programs

Leaving the User Program environment

Press [USER PROGRAM] to leave the User Program environment. The User Program field in the display will go blank again.

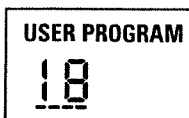
Mode selection

The mode (Arranger, page 13; Organ, page 28; M.Drums, page 31, Whole Upper, page 21) is also memorized when you write a User Program. You could take advantage of this facility to alternate between Arranger (song proper) and Organ modes (ad lib introduction or ending without Arranger backing) with suitable settings for both. This procedure

(rather than pressing the MODE [ORGAN] button, for example) is the only guarantee that the settings you do not want to change remain in effect.

Meaning of the dashes below the User Program number

At some stage, you may come across four dashes below the User Program number (see the example).



They mean that the last User Program you selected is still in effect but that the current settings no longer correspond to the ones in that memory. Such changes may include the status of the Reverb or Chorus effect, a changed Balance value, etc.

Before selecting another User Program or switching off the EM-50 OR, you should therefore write these settings to the same (or a different) User Program if you want to keep them. Otherwise, you lose these changes. Please also see page 48.

User Programs and Disk User/Custom Styles

The address of the Style you select is also memorized. That is also the case of the Style RAM memory that may contain a so-called Disk User Style (see page 45) as well as of the selected Custom Style (see page 16). The EM-50 OR only remembers the memory address —not the name of the Style it contained when you wrote your settings to a User Program.

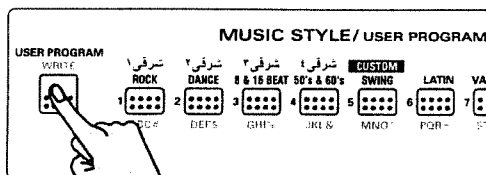
If, at the time you recall such a User Program, no Disk User Style is available, the EM-50 OR will go on using the last internal Music Style you selected. If the Style RAM memory does contain a Disk User Style, it will be used. But remember that it may be the wrong Style (namely the last Disk User Style you loaded).

A similar system is used for Custom Style memories 1–8. These are Flash ROM memories whose contents may be replaced (see page 62). Again, the EM-50 OR only remembers the address (C1, C2, C3...) but not the name of the Style (no names are used internally). This may lead to situations where recalling a User Program (see below) does select the correct Custom memory but the wrong Style. In that case, reload Custom Styles that were in use when you wrote the User Program in question.

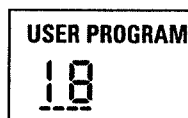
11.2 Selecting a User Program

Though the User Program you specified above is already selected, there will be times when you need to select another memory. In that case, here is what you need to do:

1. Briefly press [USER PROGRAM/WRITE]. Do not hold this button down because doing so will start the Write procedure (see above).



The User Program field now indicates the number of the User Program you selected last, or “11” if you have not yet selected a User Program since switching on the EM-50 OR. The important thing to note here are the dashes below the number:



They are meant to alert you to the fact that the EM-50 OR is still using the last manual changes you may have made before selecting the User Program function. The User Program number therefore only means “this is the last memory you selected”. None of its settings are being used for the time being. By pressing [USER PROGRAM/WRITE] again, you can leave the User Program mode without changing your manual settings. This may be important to remember if you were about to write your settings and accidentally pressed the wrong button (or didn’t press it long enough).

To actually select a User Program...

2. Press a [MUSIC STYLE/USER PROGRAM] number button.

You can perform this step a little ahead of the song part where you want the new settings to take effect. Only when you specify the User Program number will the corresponding settings be loaded.

3. Press another (or the same) number button to specify the desired memory within the selected bank. The settings of the selected User Program will be recalled.

Note: You do not need to load all User Program settings. See “Selectively recalling User Program settings (User Program Hold Style)” for more information.

Note: As soon as you modify any setting (on the front panel or in the Parameter menu), four dashes appear below the User Program number. See also “Meaning of the dashes below the User Program number”.

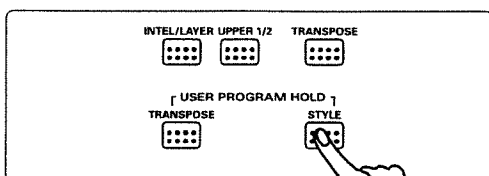
4. Once again press [USER PROGRAM/WRITE] to leave the User Program mode.

Selectively recalling User Program settings (User Program Hold Style)

Style Hold allows you to keep certain settings of the previous User Program while selecting another User Program. Selectively loading User Program settings allows you to quickly assign other Tones to the Real-time parts without loading the Style parameters contained in the new User Program.

The parameters affected by the User Program Hold Style setting are:

- Address of the currently selected Style (internal, Custom Style, or Disk User)
- Style Progression setting (see page 17)
- Style Morphing setting (see page 17)
- Arr Int setting (see page 52)
- Arr Mem setting (see page 52)



Pressing the User Program Hold [STYLE] button without selecting a User Program afterwards has no effect. Only when you select another User Program will the data filter (because that is what Style Hold is) start working.

Note: The "HOLD" function is only available in User Program mode. You need to select it by pressing [USER PROGRAM/WRITE].

Keeping the current Transpose setting (User Program Hold Transpose)

A similar Hold function is also available for the Transpose setting. As the transposition is part of the User Program settings, there may be times when you would like to use the settings of a given User Program without also loading the Transpose setting (see page 26).

Press the User Program Hold [TRANSPOSE] button to switch this function on or off.

If you switch it on, the box surrounding the TRANSPOSE icon in the display starts flashing.

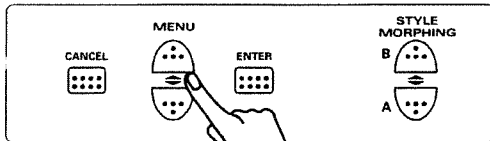
12. Parameter mode

The EM-50 OR's Parameter mode contains more advanced settings you may not need every day. They allow you to fine-tune your instrument's response. It would therefore be a good idea to familiarize yourself with these parameters. All settings (except *Write Protect*) can be written to a User Program.

12.1 Editing the parameters (general procedure)

You can edit the EM-50 OR's parameters via the display. Here is a general outline to be used for all parameters discussed below:

1. Press MENU ▲▼ to place the mode arrow (◀) next to the PARAMETER message.



The "ENT" message now flashes in the display.

2. Press [ENTER] to enter the Parameter mode.



3. Use the MENU ▲▼ buttons to select the parameter you wish to edit (see below).

Note: If you selected this mode by mistake, press [CANCEL] to return to the PARAMETER message, use MENU ▲▼ to select another mode, and press [ENTER].

4. Press [ENTER] to confirm your parameter selection.

The value or On/Off message to the left of the parameter name now flashes to signal that you can change ("edit") it.

5. Use the MENU ▲▼ buttons to modify the value of the selected parameter.

Note: To return to the default value of the currently selected parameter, simultaneously press MENU ▲▼.

6. To leave the Parameter mode, press [CANCEL] several times until the "PARAMETER" message is displayed, then use MENU ▲▼, followed by [ENTER] to select another mode.

12.2 Parameters

The following parameters are available:

WritePrt (Write Protect)

(Off, On) This parameter is the same as the one that appears when you try to write your settings to a User Program (see page 47). Write Protect is automatically set to "On" when you power off the EM-50 OR. However, the first time you try to write your settings to a User Program after switching on the EM-50 OR, WritePrt automatically appears and can be switched off just before writing your settings. – So why include this parameter here?

Because otherwise, the only way to switch WritePrt back on again would be to power the EM-50 OR off and on again, which is not very convenient and may lead to the loss of other settings (such as the Disk User Style in RAM). And there will be situations where you do not want your saved settings to be accidentally overwritten by someone else (or yourself). So once you are satisfied with a User Program, call up this parameter and switch it back On.

Please bear in mind, though, that this only slows down the Write procedure (because the WritePrt message appears when you attempt to write your settings). It does not make it impossible altogether.

MstrTune (Master Tune)

(415.3~466.2, *Default: 440.0*) This parameter allows you to change the EM-50 OR's overall tuning, which may be necessary when you accompany a singer, an acoustic instrument, or when you play to a recording on CD or cassette. See also "Using the INPUTS" on page 42.

ArrSplit (Arranger Split)

(48~84, *Default: 60*) Use this parameter to set the split point for the Arranger mode. The note you set here is the lowest note you can play with the Upper1/2 parts. See also "About the Arranger" on page 13. The number refers to a note. "60" refers to the note "C4" (the one below the [STYLE/SONG] button).

LwrSplit (Lower Split)

(48~84, *Default: 60*) Use this parameter to set the split point for the Organ mode. The note you select here is the lowest note you can play with the Upper1/2 parts. See also page 28.

MBass

(On/Off, *Default: On*) See "Switching off the M.Bass part" on page 29.

UP1 Octv/UP2 Octv/LWR Octv

(-1, 0, 1) These three parameters allow you to shift the octave of the part in question (Upper1, Upper2, or Lower). See also page 26 for the Upper parts. LWR Octv works in much the same way.

MDrShift

(Off, dWN, UP, *Default*: Off). This parameter allows you to shift the EM-50 OR's keyboard in order to play drum/percussion sounds that are currently not accessible. See also "Playing other drum/percussion sounds (MDr Shift)" on page 31.

Note: MDr Shift is not available for the oriental Drums Sets (numbers dr7, dr71, and dr72).

TrpValue (Transpose interval)

(-12~12, *Default*: 1) Use this parameter to transpose the EM-50 OR in semitones. What exactly will be transposed depends on the setting for the *TrpMode* parameter (see below). If you're not sure what transposition is, see "Transpose" on page 26. This parameter can also be selected by holding down the [TRANPOSE] button.

TrpMode (Transpose Mode)

(*Default*: I-S) This parameter allows you to select what parts (and sections) are affected by the Transpose interval.

INT—Only the internal (Realtime and Arranger) parts are transposed.

SNG—Only the Recorder (Song) parts are transposed.

MID—Only the note messages received via the EM-50 OR's MIDI IN connector are transposed. Select this setting if you want to play to a song you play back using an external sequencer (or your computer) without changing your fingering.

I-S—The internal (Realtime and Arranger) and Recorder Song parts are transposed.

I-M—The internal parts and the note messages received via MIDI IN are transposed.

S-M—The Song parts and note messages received via MIDI IN are transposed.

ALL—All sections (internal, Recorder, and MIDI) are transposed.

PB Range (Pitch Bend Range)

(0~24, *Default*: 8) This parameter allows you to set the interval you obtain by pushing the BENDER/MODULATION lever fully to the left or to the right. You can set this parameter in semitone steps, with a maximum of 24 semitones (2 octaves), the default value being "2". This should be OK in most situations.

Note: Pitch Bend is only available for the Upper1, Upper2, and M.Drums parts. See also page 25.

DBeamCtr

(*Default*: 4) This parameter allows you to assign a function to the EM-50 OR's D Beam Controller. Please note that not all functions are available at all times. This usually depends on whether or not certain Arranger parts can be accessed.

Note: If you plan to use the D Beam Controller while controlling the Arranger, it is probably a good idea to activate the Arr Mem function (see page 52).

One final note before we get down to the available parameters: all options marked with a "o" apply to the currently active Realtime parts.

1-Modulation^o—Select this function if you want the D Beam to duplicate the modulation function of the Bender/Modulation lever.

2-Pitch Bend Up^o—By moving your hand over the D Beam, you can bend the notes of the Realtime parts upward (make them sound higher). The extent to which a Realtime part can be controlled depends on the PB Range setting.

3-Pitch Bend Down^o—By moving your hand over the D Beam, you can bend the notes of the Realtime parts downward. The extent to which a Realtime part can be controlled depends on the PB Range setting (see above).

Note: In the case of the two Pitch Bend options, the D Beam value is added to the current setting of the Pitch Bend axis of the Bender/Modulation lever. But the sum of the D Beam and Pitch Bend values cannot exceed the Range setting.

4-Cut&Reso Up^o—(Only for Upper 1 and/or 2) By moving your hand over the D Beam, you can vary the filter setting of the Upper 1 and/or 2 part and make it sound brighter and more "synthesizer-like". This allows you to create some nifty filter effects that are particularly useful for Dance/Techno music. When you move your hand outside the D Beam's range, the Upper 1/2 part(s) return to normal.

Note: Some Tones already use the highest possible Cutoff value by default, in which case you cannot add more overtones (by opening the filter even further).

Note: See "Selecting the Upper 1 and/or 2 part(s)" on page 21 for how to specify which Upper part is affected by this setting.

5-Cut&Reso Down^o—(Only for Upper 1 or 2) By moving your hand over the D Beam, you can make the Upper 1/2 part(s) sound mellower.

Note: Some Tones already use the lowest possible Cutoff and/or Resonance value by default, in which case you cannot remove more overtones (by closing the filter even further).

6, 7, 8-Arpeg 1/2/3 octaves—By moving your hand over the D Beam, you trigger arpeggios (broken chords) based on the notes you play in the left half of the keyboard (Arranger or Organ mode). Depending on the setting you select here, the notes of the left half will be arpeggiated over 1, 2, or 3 octaves. This function uses the Upper2 Part for playing these notes.

Note: If you switch on the Arr Int parameter (see page 52), it is enough to play one note for major chords, two for minor chords, etc.

9, 10, 11—Chord 1/2/3 Octv—By positioning your hand inside the D Beam's range, you cause the EM-50 OR to sound the notes of the chords you play in the left half of the keyboard. You could use this function to add syncopated brass or guitar "hits" to your melody. The velocity value used for playing these notes is "100". The number (1, 2, or 3) bears on the octave of this "added chord": 1= A₃~G₄, 2= A₄~G₅, and 3= A₅~G₆. Move your hand outside the D Beam's range to stop the chord. This function uses the Upper2 Part for playing these notes.

Note: If you switch on the Arr Int parameter see below, it is enough to play one note for major chords, two for minor chords, etc.

12, 13—Tempo Up/Down—Select one of these options if you want to increase (Up) or decrease (Down) the current Arranger or Recorder tempo. By moving your hand outside the D Beam's range, you return to the previous tempo value.

14—Arr Start/Stop—Depending on the current condition of the Arranger (running or stopped), one move inside the D Beam's range stops (or starts) it. A second movement will start (or stop) it again.

15—Fill To Var/Or—Here, too, the D Beam performs two functions that depend on the currently selected Division (Original or Variation). The first time the D Beam senses your hand (or other limb), it activates the Fill-In TO VARIATION function. Upon completion of that Fill, the Arranger switches to the Variation pattern. The second time, the Fill-In TO ORIGINAL is activated.

16—ADrum On/Off—This setting allows you to switch the A.Drums part on and off using the D Beam Controller. There are also combined on/off options (see below).

17—ABass On/Off—This setting allows you to switch the Arranger's bass part (of the currently selected Music Style) on and off using the D Beam Controller.

18—Accomp On/Off—This setting allows you to switch the Accompaniment parts (ACC1~6) on and off using the D Beam Controller.

19—ABs&ADr On/Off—This setting allows you to use the D Beam for switching on and off the A.Bass and A.Drums parts.

20—Acc&ABs On/Off—This setting allows you to use the D Beam for switching on and off the A.Bass and Accomp parts.

21—Acc&ADr On/Off—This setting allows you to use the D Beam for switching on and off the A.Drums and Accomp parts.

Arr Int (Arranger Chord intelligence)

(On/Off, *Default: Off*) When switched on, EM-50 OR's Arranger Chord Intelligence function allows you to play major chords by pressing just one key, minor chords by pressing two keys, and more complex chords by pressing three keys. See the end of this manual for a list of chords and how to play them when Arranger Chord Intelligence is on or off.

Note: This setting is ignored when you load a User Program while User Program Hold STYLE is active (see page 49).

Arr Mem (Arranger Chord Memory)

(On/Off, *Default: On*) The Arranger Chord Memory function memorizes the chords you play with your left hand and keeps playing the corresponding notes until you play another chord. (If Arr Int is on, you can play major chords by pressing just one key.)

In a way, this is like a Hold pedal, except that you do not need to press it. It is switched on every time you play a chord, and released (and then 'pressed' again) as soon as you play another chord.

If you switch off Arr Mem, the melodic Arranger parts (A.Bass, Accomp) stop playing as soon as you release the key(s) in the left half of the keyboard, leaving you only with the drum accompaniment.

For your convenience, this function is switched on every time you power on the EM-50 OR.

Note: This setting is ignored when you load a User Program while User Program Hold STYLE is active (see page 49).

LWR Int (Lower Chord Intelligence)

(On/Off, *Default: Off*) This function works exactly like Arr Int. This time, however, it applies to the notes you play in the left half of the keyboard when the Organ mode is selected. When switched on, EM-50 OR's Lower Chord Intelligence function allows you to play major chords by pressing just one key, minor chords by pressing two keys, and more complex chords by pressing three keys.


LWR Mem (Lower Chord Memory)

(On/Off, *Default: Off*) The Lower Chord Memory function memorizes the chords you play with your left hand (Organ mode) and keeps playing the corresponding notes until you play another chord. If you need this Hold function for the Lower part (e.g. when playing organ music), switch it on.

RevType (Reverb Type)

(Default: HL2) Use this parameter to select the kind of Reverb that best suits your musical purposes. There are four major types (Room, Hall, Plate, and Delay) with one or several variations. The best way to find out more about them is to experiment.


Type	Explanation
RM1, RM2, RM3	These types simulate the Reverb characteristics of a room. The higher the number (1, 2, or 3), the "bigger" the room becomes.
HL1, HL2	These types simulate the Reverb of a small (1) or large (2) concert hall and thus sound far "bigger" than the RM types above.
PLT	Digital simulation of a metal plate that is sometimes used for creating Reverb effects. Works well for percussive sounds.
dLY	A Delay effect (no Reverb). Works a lot like an echo effect and thus repeats the sounds.
PdY	Pan Delay. This is a stereo version of the preceding Delay effect. It creates repetitions that alternate between the left and right channels.

Please bear in mind that you will only hear the difference when the Reverb effect is on ().



ChrType (Chorus Type)

(Default: CH3) This parameter allows you to specify the sound of the Chorus effect. We could try to describe them, but you will get a better idea by selecting one after the other. Flanger (FLN) or Feedback Chorus (FbC) can be interesting for guitar Tones.

Again, there are two echo effects: Short Delay (SdY) and Short Delay with Feedback (SdF). They are, however, much shorter than those available for the Reverb effect processor.

Note: Please bear in mind that you will only hear the difference when the Chorus effect is on ().

Scale C~Scale B (Scale Tune)

(+63~–64, Default: 0 for all notes) These parameters allow you to stray away from the usual semitone-interval scale (used in western music) by changing the pitch of the notes so as to accommodate other musical cultures or tuning methods (oriental, baroque music, etc.). See also page 23. Using the ORIENTAL SCALE buttons has the advantage that the desired Scale parameter (note) will be selected automatically. In the Parameter menu, you need to use MENU  .

Note: You can also specify which parts are affected by the Oriental Scale/Scale settings. See "Choosing the parts to be controlled by Oriental Scale" on page 24.

Song P1~Song P16

(On, Mtn, MtA, Default: On) We already discussed these parameters while talking about the Recorder (see page 41).

Select "On" for a Song part you want to hear, and "MtN" or "MtA" for Song parts you wish to mute. The difference between "MtN" and "MtA" is of little


importance for Song parts that are not linked to a Realtime part, so choose whichever you like.

The Song parts that have no link with the Realtime parts are: Song P1, 2, 5, 7~9, and 11~16.

Part Switches (U/S)

The following parameters are called "part switches" because they allow you to choose whether the settings contained in a Recorder song may affect the settings currently in effect (SNG) or whether the User Program or current panel settings (USP) should take precedence.

More specifically, you can choose to filter the following Song settings:

U/S MTun—(Default: SNG) This is the Master Tune filter. The Master Tune setting is usually absent in Standard MIDI Files. There is, however, another important aspect that makes this parameter very meaningful indeed. Suppose you programmed a User Program with a Master Tune setting of 442Hz because the violin player you wish to accompany prefers that tuning. Pressing [] or simply starting play back of the Recorder would cause the Master Tune setting to revert to 440Hz (because that is the default setting), so that you suddenly sound hopelessly flat with respect to the violin.

If, however, you select "USP", your EM-50 OR remains tuned at 442Hz – provided you changed the Master Tune setting by hand or selected a User Program containing that Master Tune value.

U/S Rev and U/S Chr—(Default: SNG) These switches are filters for the Reverb and Chorus effects. Select "USP" here if you do not like the effect settings of the song you are playing back.

U/S UP1, UP2, LWR, MDR—These switches allow you to ignore the settings of the Song parts linked to the Realtime parts. In fact, these *are* the link switches between the Song parts and the assigned Realtime parts. Selecting "USP" breaks the link between the parts in question. See "Live performance with song backing (Minus One)" on page 41 for more information about these links.


The most important parameters that can be protected from unwanted modification are: volume (Balance), Pitch Bend Range, Chorus, Tone selection, and Scale Tune. Remember that breaking the link is not enough, as that only means that the corresponding Song part settings will not be used. Don't forget to make your own desired settings, or load a suitable User Program.

Note: Though you can only activate or deactivate the Chorus for the Upper1, Upper2, Lower & M.Drums parts on the EM-50 OR's front panel, the tone generator is capable of applying Chorus to any part. If the Standard MIDI File you play back contains such settings, they will be faithfully carried out in SNG mode.

BPM Lock

(On/Off, *Default: Off*) This function allows you to ignore the preset tempo of the Music Styles you select with the MUSIC STYLE/USER PROGRAM buttons. It does not apply to User Programs. See also page 18.

Bass Inv

(On/Off, *Default: Off*) Use this function to switch on the Bass Inversion function (the  icon appears). This changes the way the Arranger reads the chords you play.

If the icon is not displayed, the Accompaniment Bass part plays the root of the chords that feed the Arranger. If you play a C (or C chord), the bass thus sounds a C; if you play an A minor chord (or if you press A and the C to its right), the bass sounds an A, etc.

Activating Bass Inversion gives you more artistic license because *you* specify the note played by the Accompaniment Bass part (the lowest note of your chords). Switch on Bass Inversion for songs that rely on bass rather than on chord patterns (for example C – C/B – C/B_b, etc.).

Resume

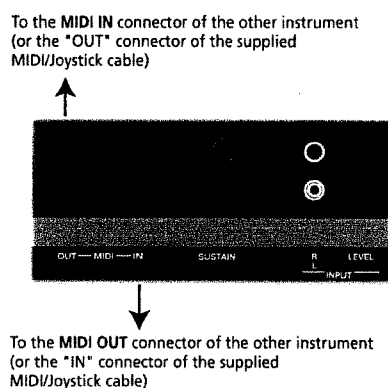
This function allows you to recall the default settings of all Parameter mode functions (i.e. the ones in effect when you switch on your EM-50 OR without selecting a User Program). Press [ENTER] in response to the flashing “ENT” message to recall the default settings. If, at that time, a User Program is selected, the dashes appear below its address to indicate that your User Program has been edited.

13. MIDI functions

MIDI is short for *Musical Instrument Digital Interface*. The word refers to many things, the most obvious being a connector type that is used by musical instruments and other devices to exchange messages relating to the act of making music. Every time you play on the EM-50 OR's keyboard or start the Arranger, your instrument will send MIDI data to its MIDI OUT port. If you connect this port to the MIDI IN port of another instrument, that instrument may play the same notes as one of the EM-50 OR's parts.

MIDI is a universal standard, which means that musical data can be sent to and received by instruments of different types and manufacturers. Furthermore, MIDI allows you to connect your EM-50 OR to a computer or hardware sequencer.

Connect your EM-50 OR as follows:



Channels

MIDI can simultaneously transmit and receive messages on 16 channels, so that up to 16 instruments can be controlled. Nowadays, most instruments –like your EM-50 OR– are multitimbral, which means that they can play several musical parts with different sounds.

The EM-50 OR is equipped with an Arranger capable of playing the drums, the bass, and up to six accompaniment parts, while at the same time allowing you to play up to two Realtime parts (Upper1, Upper2).

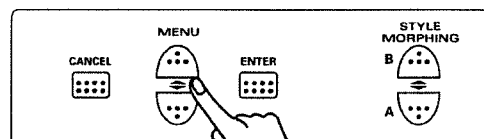
Other controllers that can be used to play the EM-50 OR include trigger-to-MIDI instruments (TD-10, TD-7, TD-5, SPD-20, Octapad II), guitar-to-MIDI instruments (GR-30, GR-1, GR-09, GI-10) as well as any kind of "to MIDI" controller (wind, MCR-8 fader unit).

Note: All EM-50 OR parts are set to receive MIDI messages. If they do not seem to respond to the messages you send from the external controller, you should check whether the external controller's MIDI OUT is connected to the MIDI INput of your EM-50 OR.

13.1 Editing the MIDI parameters (general procedure)

You can edit the EM-50 OR's MIDI parameters via the display:

1. Press MENU ▲▼ to place the mode arrow (◀) next to the MIDI message.



The "ENT" message now flashes in the display.

2. Press [ENTER] to enter the MIDI mode.

3. Use the MENU ▲▼ buttons to select the parameter you wish to edit (see below).

Note: If you selected this mode by mistake, press [CANCEL] to return to the MIDI message, use MENU ▲▼ to select another mode, and press [ENTER].

4. Press [ENTER] to confirm your parameter selection.

The value or On/Off message to the left of the parameter name now flashes to signal that you can change ("edit") it.

5. Use the MENU ▲▼ buttons to modify the value of the selected parameter.

Note: To return to the default value of the currently selected parameter, simultaneously press MENU ▲▼.

6. To leave the MIDI mode, press [CANCEL] several times until the "MIDI" message is displayed, then use MENU ▲▼, followed by [ENTER] to select another mode.

Note: There is no need to save these settings as the EM-50 OR memorizes them automatically. To reset all MIDI parameter settings, use the Resume function (see page 58).

Parameters in Style mode

Here are the MIDI parameters you can set in Style mode (when the **SONG** icon is not displayed). This mode allows you to use the Arranger.

Receive (Rx) and Transmit (Tx) channels

Though it is perfectly possible to change the transmit and receive channels of all parts, we recommend you only do so if there is no other way to solve your MIDI problems. The default values indeed correspond to a tacit Roland standard and are therefore shared by all recent EM, E, G, and RA series instruments. Besides, these settings guarantee perfect GM/GS compatibility.

Here are some of the parts whose MIDI channels you can set:

UP1	Upper 1
UP2	Upper 2
LWR	Lower (available in Organ mode)
MDR	Manual Dums part (the one you can play yourself)
MBS	M Bass (available in Organ mode)
ADR	A Drums (Arranger drum part)
ABS	A Bass (Arranger bass part)
AC1-AC6	Melodic Arranger parts (that play chords or riffs)

Tx/Rx means "MIDI transmit and receive channel". The setting range is 1~16 (the number represents the MIDI channel). Select "Off" if you don't want a part to receive or transmit MIDI messages.

RX1, RX2, RX3

(1~16, Off, Default: Off) Your EM-50 OR has three parts ("musicians") that can only be played via MIDI. That is, you cannot trigger them on the instrument itself – hence the name "RX" (receive). If you work with a sequencer or an external MIDI controller, however, these parts can be used for playing additional lines of your sequence.

At first (and every time you initialize the EM-50 OR's MIDI parameters using the Resume function), these parts are set to "Off" and therefore do not receive MIDI messages. You can, however, activate them by assigning them a MIDI channel. Be careful not to select a MIDI channel you have already assigned to other EM-50 OR parts. The channels you could use are: 13, 14, and 15, provided you select "Off" for NTA1, NTA2, and Basic Ch.

NTA1/2 Rx (Note-to-Arranger 1/2 Rx channel)

NTA is short for "Note-to-Arranger", or the notes you play in the left half of the keyboard to feed the Arranger with chord information. These notes can also be received via MIDI. If you want the Arranger to use these notes, you must transmit them on the MIDI channels assigned to the NTA function (from your computer or external MIDI instrument to the EM-50 OR).

You probably noticed the plural in "channels". There are indeed two NTA receive channels so that you could use the EM-50 OR as realtime arranger module for a MIDI accordion or any other MIDI instrument capable of transmitting on two channels.

You could also take advantage of these two NTA channels to control the Arranger from two external master keyboards or a PK-5 MIDI bass pedal unit.

There is no Tx parameter for the NTA level. The notes you play on the EM-50 OR's keyboard are indeed transmitted to the Arranger, from there to the Arranger parts, and used to play the accompaniment in the right key. Since all Music Style notes are trans-

mitted via MIDI, there is no need to send the NTA notes separately.

Before setting the (or just one) NTA receive channel, see the manual of your external MIDI controller to find out which channel(s) it transmits on.

Possible values: Off, 1~16 (may not be the same as NTA2). Default: 14 (NTA1) and 15 (NTA2).

Style Ch (Style Select TxRx Channel)

As its name implies, the Style Select channel is used to receive and transmit program changes that cause the EM-50 OR or the receiver to select another Music Style. Note that the Custom Style memories (and the EM-50's Disk User memory) can also be selected via MIDI.

Possible values: Off, 1 ~ 16. Default: 10.

Basic Ch (Basic TxRx Channel)

The Basic Channel is the MIDI channel used for receiving and transmitting Program Change and Bank Select messages relating to the selection of User Programs. In other words, every time you select a User Program on your EM-50 OR, it will send a series of MIDI messages to the MIDI OUTPUT on the MIDI channel you select here.

Likewise, if the EM-50 OR receives a series of messages (Bank Select and Program Change) on the Basic Channel, it will select the User Program that is assigned to the numbers contained in the received MIDI messages.

Possible values: Off, 1 ~ 16. Default: 13.

MIDI data filters

The following parameters allow you to decide whether or not certain MIDI message types should be received and transmitted.

ProgChng (Program Change)—This filter allows you to enable (On) or disable (Off) the transmission and reception of Program Change messages. These messages are used to select Tones, Styles, or User Programs.

Possible settings: Off, On. Default: On.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 59).

PitchBnd (Pitch Bend)—This filter allows you to enable (On) or disable (Off) the transmission and reception of Pitch Bend messages. These messages are used to temporarily increase or decrease the pitch of the notes (Upper1, Upper2, or M.Drums parts).

Possible values: Off, On. Default value: On.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 59).

Modulatn (Modulation)—This filter allows you to enable (On) or disable (Off) the transmission and reception of Modulation messages. These messages are used to add vibrato to the notes you play (control change CC01).

Possible values: Off, On. Default: On.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 59).

Volume—This filter allows you to enable (On) or disable (Off) the transmission and reception of volume messages (control change CC07).

Possible values: Off, On. Default: On.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 59).

Sustain (Hold)—This filter allows you to enable (On) or disable (Off) the transmission and reception of Hold messages (control change CC64).

Possible values: Off, On. Default: On.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 59).

NRPN (Non-Registered Parameter Number)—This filter allows you to enable (On) or disable (Off) the transmission and reception of NRPN messages. These messages are only understood by GS compatible tone generators and allow you to edit certain parameter settings via MIDI.

Possible settings: Off, On. Default: Off.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 59).

Velo Rx (Receive Velocity)—This filter allows you to enable (On) or disable the reception of Velocity messages. This only applies to note messages received via MIDI. Choose the velocity value to be substituted for the actual values the EM-50 OR receives (1–127), or select “On” to use the velocity values as is.

Possible settings: Off, On. Default: On.

Note: The setting of this parameter also applies to the parameter of the same name in Song mode (see page 59).

Lyrics Tx (Transmit Lyrics messages)—The EM-50 OR is capable of transmitting Lyrics messages contained in Format 0 Standard MIDI Files you playback. It cannot display them but it allows you to transmit them to a device capable of displaying Lyrics messages (such as the Roland LVC-1). This filter allows you to enable (On) or disable (Off) the transmission of Lyrics data.

Possible settings: Off, On. Default: On.

Synchronization parameters

Sync Rx (MIDI Synchronization)

Use this parameter to specify how the EM-50 OR should be synchronized (as slave) to an external MIDI sequencer, computer, drum machine, etc. Synchronization is a learned term for the fact that one device (or function) is set to start and stop at the same time as another device (or function), and to run at the same tempo (BPM). Please note that synchronization is only possible when you connect the external device's MIDI OUT port to the EM-50 OR's MIDI IN port (though you can also work the other way around; in that case, see the sequencer's manual for details).



Int—In this case, the EM-50 OR is not synchronized with other MIDI devices. It is thus impossible to start/stop it via MIDI.

Mid A—This synchronization mode does two things at a time: it synchronizes both Arranger playback and Song recording in response to Start/Stop and MIDI Clock messages. In fact, after pressing the [REC/2nd TRACK] button, you have to start the external device to cause the Recorder to start. At the same time, Arranger playback will be started, making this mode ideal for recordings involving both the Arranger and the EM-50 OR's Recorder.

Mid S—In this case, only the Recorder will be synchronized. This synchronization mode bears both on Recorder playback and recording, meaning that the Recorder can only be started with MIDI Clock messages received from an external unit. Also, the Song mode must be on (SONG). Furthermore, recording can only be started if you press the [REC/2nd TRACK] button to put the EM-50 OR in standby.

Note: The Recorder will only start when MIDI Clock messages are received in Song mode.

Aut A—Here, Arranger playback and Song recording are only synchronized if the EM-50 OR receives MIDI Start and Stop messages followed by MIDI Clock signals. If all the EM-50 OR receives is a Start message, it will wait a moment to see if there are also MIDI Clock messages coming. If there are, it will synchronize to them. If there are no MIDI Clock messages, it will follow its own tempo. In either case, you can stop playback or recording with a MIDI Stop message. The EM-50 OR thus “knows” when to synchronize to external MIDI Clock messages and when to follow its own tempo.

Aut S—See above. This time, however, the automatic synchronization applies to Song recording and playback. The Arranger will therefore neither start, nor synchronize to incoming MIDI Clock messages.

rEM A—The Arranger and Recorder wait for a start message to start playback or recording at its own tempo. As soon as the EM-50 OR receives a stop message, Arranger playback and/or Song recording will stop.

rEM S—This is the same as *rEM A*, except that it applies to Song playback and recording (and thus to the Song mode). The Arranger is not affected by Start/Stop messages received via MIDI.

Clock Tx

This option allows you to determine whether or not the Arranger and Recorder send MIDI Clock messages when you start them. These messages are necessary for synchronizing external MIDI instruments/sequencers/software to the EM-50 OR.
Possible settings: Off, On. Default: On.

StrStpTx (Start/Stop/Continue)

(On/Off, *Default: On*) This option allows you to determine whether or not the Arranger and Recorder send Start/Stop/Continue messages when you start or stop them. Select “Off” when you wish to control the tone generator of a MIDI organ, etc., without starting its automatic accompaniment every time you start Arranger or Recorder playback on the EM-50 OR.

Song Pos P (Song Position Pointer)

(On/Off, *Default: On*) The EM-50 OR's Recorder also sends Song Position Pointer messages. Select *Off* if you don't want the Recorder to send these messages.

PartMute

(Int/All, *Default: All*) The Part Mute parameter allows you determine what happens when you mute a part (see page 27). One thing you know will happen is that the part in question no longer sounds when you play on the keyboard. What you do not see, however, is whether a muted part still sends MIDI data. *Part Mute* allows you to specify whether or not a muted part should go on sending MIDI messages to MIDI OUT:

Int—A muted part can no longer be played via the EM-50 OR's keyboard or Recorder but continues to send MIDI messages to the MIDI OUTput.

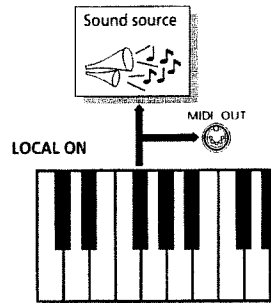
All—A muted part can no longer be played via the EM-50 OR's keyboard or Recorder and no longer sends MIDI messages.

Default: All.

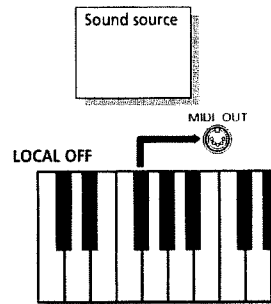
Local

(On/Off, *Default: On*) The Local parameter allows you to establish or break the connection between the EM-50 OR's keyboard/Recorder and the internal tone generator.

When set to *On* (factory setting), playing on the EM-50 OR's keyboard or playing back a Recorder song will cause the corresponding notes to sound. If you select *Off*, the corresponding MIDI messages are no longer sent to the internal tone generator. Local doesn't, however, interfere with the transmission of the corresponding MIDI data to the MIDI OUTput.



Setting Local to *Off*, on the other hand, means that neither the keyboard nor the Recorder control the internal tone generator.



When working with a sequencer equipped with a Soft Thru (MIDI echo) function – and only if (i) you connect the EM-50 OR's MIDI IN and OUT connectors to the external sequencer or computer, and (ii) use the EM-50 OR as MIDI master keyboard for sequencing – you may have to set this parameter to *Off* to keep the notes from sounding twice (producing an unpleasant sound called *MIDI loop*). In all other cases, select *On*.

Note: The setting of this parameter is not memorized when you switch the EM-50 OR off.

Resume


Select this function to recall the EM-50 OR's factory MIDI settings (both for the Style and the Recorder modes). Press [ENTER]. After showing the “Complete” message, the display returns to the RESUME message. Press [CANCEL] to leave the MIDI mode.

Note: There is no “Sure?” question that gives you time to think. Only press [ENTER] if you are certain you want to recall ALL factory MIDI settings.

Dump Tx

See “Archiving your settings via MIDI (Dump TX)” on page 60.

MIDI in Song mode

Select the Song mode by pressing [STYLE/SONG] until the  icon appears. Except for the part names and their numbers (Part 1~16), the Song MIDI parameters are similar to those of the Style mode. Here, however, you can set the transmit and receive channels of the Recorder Song parts.

One final remark: by default, Song Part 1 is assigned to MIDI Channel 1, Song Part 2 to MIDI Channel 2, etc.

14. Archiving/loading settings

14.1 Archiving your settings via MIDI (Dump TX)

The EM-50 OR provides four functions you can use for transferring its settings to another EM-50 OR, EM-50 or EM-30, or to a computer/sequencer.

About the Dump function

"Dump" (or *Bulk Dump*) is the term generally used for transferring special sets of MIDI data. As a rule, these data are only understood by the model in question. That is why these messages are called *System Exclusive* (or SysEx for short). The EM-50 OR also accepts SysEx-messages from an EM-50 or EM-30 (Custom Styles & User Programs).

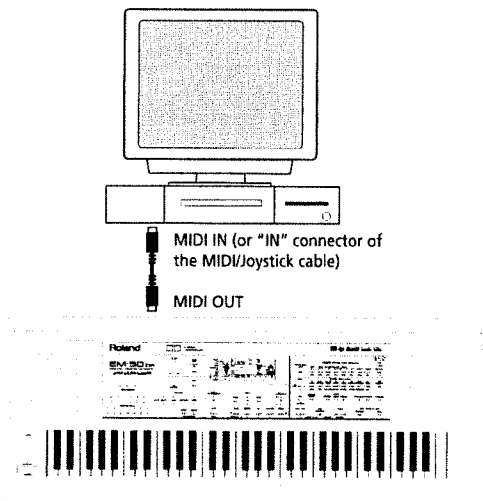
Sequencers (hardware or software) usually don't care what kinds of MIDI messages you record. You can therefore also record SysEx data. When you play back a song containing such data, the computer/sequencer transfers the data back to the EM-50 OR. That, in turn, changes the contents of the selected memories.

Note: In the following "sequencer" refers to both hardware sequencers and computers with sequencer software.

Here is what you need to do to transfer your settings to a sequencer/computer:

1. Connect the EM-50 OR's MIDI OUT port to the sequencer's MIDI IN port.

Note: If you also connect the EM-50 OR's MIDI IN port to the sequencer's MIDI OUT port, be sure to switch off the sequencer's Soft Thru (or MIDI Echo) function. See its manual for details.



2. Select the Dump TX function:

- Press MENU ▲▼ to place the mode arrow (◀) next to the MIDI message. The "ENT" message now flashes in the display.

- Press [ENTER] to enter the MIDI mode.
- Use the MENU ▲▼ buttons to select the DUMP TX parameter.



- Press [ENTER] to confirm your parameter selection. The VALUE message flashes.

3. Use the MENU ▲▼ buttons to select the desired setting:

CST—The contents of the 8 Custom Style memories (see page 16) will be transferred to the sequencer. You should do this before loading new Custom Styles (see page 61).

USP—The contents of the 64 User Programs will be transferred to the sequencer.

SNG—The Song currently in the EM-50 OR's RAM memory will be transferred to the sequencer.

Note: In some rare cases, the song you wish to transfer may be too big and cannot be dumped to an external instrument. In that case the message IMPOSSIBLE is displayed (it means "Impossible").

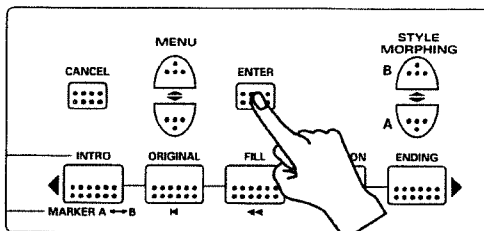
PRG—The EM-50 OR's operating system will be transferred to the sequencer. Do this before updating your EM-50 OR. See also page 66.

Note: This function may not be supported by certain software sequencers.

4. Start recording of your sequencer.

For best results, set the sequencer's tempo to a value between ♩ = 100~120.

5. Press the [ENTER] button on the EM-50 OR.



6. The display now asks you for a confirmation (SURE?), so press [ENTER] again.

7. Wait until the display tells you COMPLETE, then stop the sequencer.

8. Save your new sequencer song to floppy or hard disk.

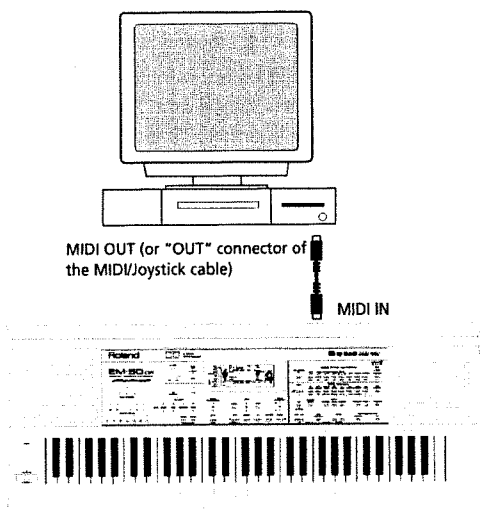
Try to save it under a clear name (example: *UserProg-EM 2/9/99*). That way, you know exactly which file you need to transfer back to the EM-50 OR at a later stage.

9. To leave the MIDI mode, press [CANCEL] several times until the "MIDI" message is displayed, then use MENU ▲▼, followed by [ENTER] to select another mode.

Transmitting archived/new data to the EM-50 OR

Transferring your dumped settings back to the EM-50 OR is relatively easy and requires no special actions on your Oriental Creative Keyboard. Do note, however, that the settings you transfer back to the EM-50 OR will overwrite the current settings in that memory area (Custom Styles, User Programs or Song).

1. Connect the EM-50 OR's MIDI IN port to the sequencer's MIDI OUT port.



2. Stop Arranger (or Song) playback on the EM-50 OR and dump the internal settings you do not wish to lose to the sequencer (see page 60).

3. Start the sequencer and load the file you wish to transfer to the EM-50 OR.

For best results, set the sequencer's playback tempo to a value between ♩ = 100–120.

4. Start playback on your sequencer.

As soon as the first data arrive, the display indicates the following:

CST Sys 34%

SYS means that the EM-50 OR is receiving SysEx messages (that are only understood by the EM-50 OR). The display will also inform you about the data type being received: *Custom Styles* (for all 8 memories; CST), *User Programs* (for all 64 memories; USP) or a *song* (SNG).

5. Wait until the Complete message appears, then stop playback on your sequencer.

6. Try out your freshly loaded settings to see if they work as expected.

Note: SysEx data cannot be received while the EM-50 OR is in Song mode.

Possible error messages during the reception of Bulk data

As SysEx data are rather delicate data (the slightest data error will make the entire bulk unusable), there may be situations where receiving these data does not work out as planned. Here are the error messages that *could* be displayed. Note that you need to switch off the EM-50 OR and try again if one of these messages is displayed.

File Err—These data are probably not for the EM-50 OR because it cannot read them.

Csum Err—Checksum error. The checksum does not correspond to the data contained in the SysEx string. This probably only happens when someone has tampered with the data on a computer, etc.

ID Err—Wrong Model ID. Every instrument has a Model ID that says "I am an EM-50 OR". This ID number is also included in SysEx data (and then means "this is only for an EM-50 OR, EM-50 or EM-30"). If the EM-50 OR received Bulk data for, say, a JX-305 ("this is only for a JX-305"), the EM-50 OR would respond with "but I am an EM-50 OR", and would turn down the data.

Long Sys—The SysEx string is too long and cannot be received. Again, this is only likely to occur when someone programmed the SysEx data by hand (which is perfectly possible, by the way). This message should not appear for data you dumped from the EM-50 OR itself (see page 60).

Addr Err—Wrong SysEx address. Every parameter of a SysEx string has an address that informs the receiver about its nature (e.g. "I am the Cutoff parameter..."). This error message means that the EM-50 OR received an address that does not exist.

Rx Fault—The reception doesn't seem to work according to plan. Check the cable connections, or use another MIDI cable.


Flash Err—Flash Memory Error. There is a problem with the Flash ROM memory which is used by the Custom Music Styles. Contact your Roland dealer, or local distributor.

OvRunErr—Framing error/Buffer overrun. The SysEx data were transmitted too fast for the EM-50 OR. Slow down the playback tempo of your "song" and try again.

14.2 Disk functions

The Disk mode allows you to save the Recorder Song in the internal Song RAM memory to disk, to save and load your User Programs to and from disk, to format floppy disks, to delete files on a floppy disk, and to copy disks.

You are free to use 2DD or 2HD disks. Please bear in mind, however, that 2HD disks have twice the capacity of 2DD disks, so use 2HDs whenever you can.

Whenever the disk drive writes data to or reads data on disk, the Disk icon () flashes in the display. Do not remove the floppy disk while this icon is displayed as that may damage both the disk drive and the disk (so that it becomes unreadable).

Loading files from disk

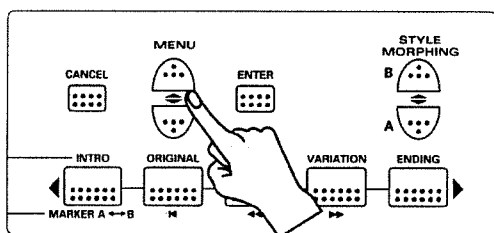
There are two Load functions:

LOAD UPr—This function allows you to transfer a set of 64 User Programs (i.e. for all eight banks) to the EM-50 OR's internal memory. This will overwrite the User Programs that currently reside in the internal memories.

LOAD CSt—This function allows you to transfer a set of 8 Music Styles from floppy to the EM-50 OR's Custom Style memories (1–8, see also page 16), thereby overwriting the eight Music Styles that currently reside in the EM-50 OR's Custom Style memories.

Note: The 8 Custom Styles loaded into the EM-50 OR's memory when it is shipped can also be found on the supplied floppy disk and loaded as and when needed.

1. Insert a disk into the drive.
2. Press MENU ▲▼ to place the mode arrow (◀) next to the LOAD entry.



The display now responds with LOAD. The ENT message to its left flashes.

ENT Load

3. Press the [ENTER] button.
4. Use the MENU ▲▼ buttons to select either LOAD UPr or LOAD CSt.
5. Press [ENTER] again.
6. Use the MENU ▲▼ buttons to select the file whose contents you wish to load (example: "USPR_000").
7. Press the [ENTER] button to load the selected file.

Note: Press [CANCEL] if you do not want to load the selected file after all. You need to do so before pressing [ENTER].

If you pressed [ENTER], the display now shows the message LOADING. Once the data have been loaded, the COMPLETE message briefly appears.

8. Press [CANCEL] several times and select another mode.

Possible error messages

No Disk—You forgot to insert a floppy disk into the drive.

No Files—The disk you insert contains no User Program or Custom Style Set data.

Disk Err—The disk is probably damaged and cannot be used.

File Err—The file you selected is damaged and cannot be loaded.

Saving files to disk

The EM-50 OR provides the following Save functions:

SAVE Sng—This allows you to save the Song in the internal memory to a floppy disk. Please note that a Song saved to disk becomes a Standard MIDI File. You can therefore no longer replace the Realtime parts ("2nd TRACK") with new versions after transferring the Song back to the EM-50 OR's internal memory.

By the way: there is no LOAD Sng function. All you need to do to transfer the Song data back to the EM-50 OR's internal Song memory is play back the Standard MIDI File in question.

Note: See also "Saving your Song" on page 38.

SAVE UPr—Use this function to save the contents of the EM-50 OR's internal User Program memories (all 64 of them) to a floppy disk.

SAVE CSt—This function allows you to save the contents of all eight Custom Style memories to disk.

1. Insert a blank disk into the drive. See page 38 for a few precautions you may want to take.

2. Press MENU ▲▼ to place the mode arrow (◀) next to the SAVE entry.

The display now responds with SAVE. The ENT message to its left flashes.

ENT Save

3. Press the [ENTER] button.
4. Use the MENU ▲▼ buttons to select SAVE Sng, SAVE UPr, or SAVE CSt.

The display now responds with DELETE. The ENT message to its left flashes.

ENT DELETE

3. Press the [ENTER] button.
 4. Use the MENU ▲▼ buttons to select DEL Sng, DEL UPr, or DEL CSt.
 5. Press [ENTER] again.
 6. Use the MENU ▲▼ buttons to select the file you want to delete (example: "USPR_000").
 7. Press the [ENTER] button.
- To be on the safe side, the EM-50 OR now asks you whether you really want to delete the file (SURE?).

8. Press [ENTER] to delete the file, or [CANCEL] to abort the operation.
If you pressed [ENTER], the display now shows the message Delete in progress. Once the data have been deleted, the COMPLETE message briefly appears.

9. Press [CANCEL] several times and select another mode.
- If you keep holding down [CANCEL], you will automatically return to the first Delete page.

Possible error messages

No Disk—You forgot to insert a floppy disk into the drive.

Disk Prot—You forgot to switch off the disk's Write protection. Press the EJECT button of the disk drive, remove the floppy and close the tab, insert the disk again and press [ENTER]. See also page 38.

Disk Err—The disk is probably damaged and cannot be used.

No Files—The disk contains no files of the selected type. Insert another disk.

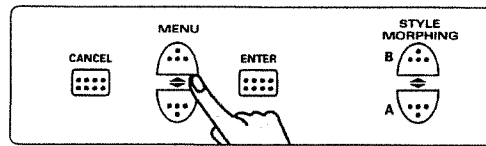
DiskCopy (Copying the contents of an entire disk)

This function allows you to make backup copies of important disks.

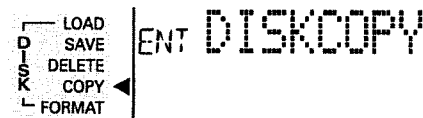
WARNING: The Disk Copy function uses the RAM memory and erases the EM-50 OR's Recorder song and its Disk User memory. Before using Disk Copy, save your song to disk if you haven't already done so (see page 62).

Disk Copy copies all files of the *Source* disk (see below) to the *Destination* disk.

1. Press MENU ▲▼ to place the mode arrow (◀) next to the COPY entry.



The display now looks as follows:



2. Press the [ENTER] button.

The EM-50 OR now tells you something you already know but may tend to forget at times:

Improper use of COPY infringes
Copyright!! For personal back-up
use only! Song and User Style
will be erased.

Copying Songs from commercially available Standard MIDI Files is OK as long as *you keep* the copy (as safeguard against possible disk errors). Under no circumstances, however, may you give copies of copyright-protected material to your friends.

Also, the display tells you that the Disk Copy function needs the available RAM memory – i.e. the memory set aside for the Recorder song and for the Disk User Style. Be aware that really activating the Disk Copy function (which you haven't done so far), erases the song in the internal memory. Save it to disk before proceeding.

The above message is followed by the SURE? question.

3. If you are sure you wish to make a backup copy of a disk, press [ENTER].

The display now asks you to insert the original (or *SOURCE*) disk into the drive.

Before doing so, you must write-protect it, otherwise the display tells you to do so (No Prot.). In that case, remove the disk from the drive, set its Write Protect tab to the PROTECT position ("to open the little window"), and insert the disk into the drive again.

The next two messages, `LOAD` and `Flash`, indicate that the data are being read from disk and that the Flash ROM (the memory where the operating system resides) is being updated.

3. Wait until the `COMPLETE` message is displayed, then switch off the EM-50 OR.
4. Hold down the [WRITE] button while switching the EM-50 OR back on. This will initialize it.
5. Eject the disk and store in a safe place.

Possible error messages when using SysLoad/Sys-Save

The following messages will abort the SysLoad or Sys-Save operation. You thus need to repeat the entire procedure if you manage to cure the problem or obtain another disk.

CSumErr—The checksum of the SysEx data is incorrect. Ask your Roland dealer for another disk.

SysErr—A system error occurred. Try again, possibly with another disk.

WRProt—The disk is write-protected. Disable its protection.

DskErr—The disk is probably damaged and cannot be used.

DskFull—The remaining disk capacity does not allow to save your data to this disk. This message is only displayed when you are trying to use a 2DD floppy rather than a 2HD one for saving the operating system.

NoDisk—You forgot to insert a floppy disk.

NoFile

The disk you inserted doesn't contain an operating system file. Insert the correct disk.

14.3 Updating the operating system via MIDI

The other way of updating the EM-50 OR's operating system is to do so via MIDI. You may prefer to use the SysSave function (see page 65) because it's faster.

Note: Before updating the operating system, be sure to archive your User Programs, Custom Styles, and song to disk (see page 62) or via MIDI (see page 60). Updating the system version indeed erases the entire contents of the internal memory. Also, do not forget to make a backup of the current system version. You may need it if turns out the new version doesn't work.

1. Connect the EM-50 OR's MIDI IN port to the sequencer's MIDI OUT port.

For best results, use a computer with Cubase of Audio Logic.

2. Switch off the EM-50 OR, wait a few seconds, then hold down TONE/ONE TOUCH [7] + User Program Hold [STYLE] while switching the EM-50 OR back on again.

The display now shows the `Update` message.

3. Start the sequencer and load the file you wish to transfer to the EM-50 OR.

4. Start playback on your sequencer.

As soon as the first data blocks arrive, the display will show a `Update` message.

5. Wait until the `COMPLETE` message is displayed, then switch off the EM-50 OR.

6. Hold down the [WRITE] button while switching the EM-50 OR back on. This will initialize it.

14.4 Loading new Styles in the Custom memories

We already told you that the EM-50 OR provides eight Custom Style memories whose contents can be changed by loading new Styles from disk. Here's what you need to do:

1. Get a floppy disk with new Styles for the EM-50 OR. You can surf to www.rolandeur.com to do so, ask a friend with an EM-50 to copy the Styles on his CD-ROM to a floppy disk, or ask your Roland dealer.

Note: The following procedure will erase the Song in the EM-50 OR's internal memory. You may want to save it to disk before proceeding (see page 38).

2. Insert the floppy disk into the EM-50 OR's drive.

3. Press the [DISK USER] button.

The display now shows the name of the Music Style currently in the EM-50 OR's RAM memory (internal or Disk Style).

4. Press and hold the [DISK USER] button until the message `C-Wrt. Into` appears (the hyphen flashes).

5. Press a MUSIC STYLE/USER PROGRAM number button.

6. Wait until the message Complete appears before selecting another function.

14.5 Initializing your EM-50 OR (Factory)

After working extensively with your EM-50 OR, you may want to recall the original factory settings. This is not indispensable because you could use the Resume functions in Parameter and MIDI modes to restore the original Parameter and/or MIDI settings. Initializing your EM-50 OR means that all Scale memory, User Program, Parameter, and MIDI settings will be replaced with the original settings – except for the Recorder song that will be empty after initializing your EM-50 OR.

Here is how to initialize your EM-50 OR:

1. Power off your EM-50 OR.

2. Hold down the [WRITE] button while turning your EM-50 OR back on again.

The message **F a c t o r y !** will inform you that the EM-50 OR has been initialized.

Thanks

Roland Corporation wishes to express gratitude and thanks to:

- Mr Abdallah George (General Manager/Al Fanny Trading – Egypt).
- Mr Mohsen Adly for composing demo song no. 1, “Rakkasni Ya Gadaa”
- Mr Hassan Abou El Saoud for composing demo song no. 2, “Gelbab Abi”
- Mr Hamid El Shaeri for his oriental style ideas
- Messrs Tarek Helmy, Cherif Cotta, and Raafat Baheeg (Alfanny Trading Egypt) for their technical support
- Mr Eddy Kanaan (Chahine & Fils Lebanon) for his cooperation and new ideas.

15. Specifications

EM-50 OR Oriental Creative Keyboard

General

Keyboard—61 keys, velocity sensitive, velocity sensitivity adjustable in 3 levels

Display—Custom graphic display (backlit)

Output Power—2x 10W, bass reflex speaker system

Memories—64 User Programs (with Style Hold), 8 Custom Style memories (Flash ROM)

Special Music Style functions—Style Morphing (6 levels), Style Progression (6 steps)

Effects—Digital Reverb (8 types), digital Chorus (8 types)

Disk drive—Save & Load User Programs, Custom Style Sets, Song (save only), Operating system, playback of Format 0 & 1 Standard MIDI Files (Songs are saved as Format 0 Standard MIDI Files)

Modes—Arranger, Whole Upper, Organ, M.Drums

Melody Intelligence—18 types

Sound source

Tone generator—GM/GS compatible, 395 Tones, 15 Drum Sets

Polyphony—24 voices, 16 multitimbral parts

Music Styles

ROM—96 Music Styles with Style Progression (6 levels) & Style Morphing (6 steps); these are comprised of 64 western and 32 oriental Styles.

One Touch—8 One Touch memories (automatic registrations) per Style

Disk User—1 memory (RAM).

Custom Styles—8 (Flash ROM)

Controllers

D Beam Controller

Bender/Modulation lever

Oriental Scale/Scale memory buttons

Connections

Output—L/Mono, R (1/4" phone jack)

Input—RCA/phono (L, R) with LEVEL control

Headphones—2 connectors (1/4" phone jacks)

MIDI—IN, OUT (MIDI/Joystick cable supplied for direct hookup to PC)

Dimensions (W x D x H)

1016 x 400 x 142 mm

(40 x 15 3/4 x 8 5/8 inch)

Weight

8.5kg (18.7 lbs)

Power supply

ACJ adapter (included)

Supplied accessories

Owner's Manual, ACJ adapter, MIDI/Joystick cable
Sticker with lists of the Styles & Tones

Options

RH series headphones

DP-2, DP-6, or BOSS FS-5U footswitch

KS-12 keyboard stand

Music Rest

Note: Specifications subject to change without prior notice.

16. Tone chart

GBN	PC	CC00	CC32		Sound Name	Voices	GBN	PC	CC00	CC32		Sound Name	Voices	GBN	PC	CC00	CC32		Sound Name	Voices
			Receive	Send						Receive	Send						Receive	Send		
A11	1	0	0,1,2	2	Piano 1	1	A32s	18	32	0,1	1	Organ 5	1	A57c	14	66	0	0	Wow101B	2
A11r	1	08	0,1,2	2	Piano1w	1	A33	85	116	0	0	Accordn2	2	A57d	14	67	0	0	SwpWowB	2
A11z	1	16	0,1,2	2	Piano1d	1	A33i	22	00	2	2	AccrdFr	1	A57e	14	68	0	0	MGStHs	2
A11s	41	64	0	0	AcPiano	2	A33z	19	00	0,1	1	Organ 3	2	A57f	10	66	0	0	101Bas1	1
A12	112	116	0	0	Oud 1	1	A33s	19	08	2	2	RtryOrg	1	A58	40	00	0,1	1	SynthBs2	2
A12i	115	116	0	0	Oud1TrVm	2	A33a	48	65	0	0	OrgChrd	1	A58i	40	01	0,1	1	SyBas201	2
A12z	2	00	0,1,2	2	Piano 2	1	A33s	52	65	0	0	LFOrgan	2	A58z	40	08	0,1	1	SyBass 4	2
A12s	2	08	0,1,2	2	Piano2w	1	A33e	49	64	0	0	60sOrgn	1	A58s	40	16	0,1	1	RubrBass	2
A12a	41	65	0	0	BrPiano	2	A34	17	116	0	0	Or Orgn1	2	A58a	10	64	0	0	101Bas1	1
A13	113	116	0	0	Oud 2	1	A34i	20	00	0,1	1	Church1	1	A58s	10	69	0	0	DubBas	2
A13i	116	116	0	0	Oud2TrVm	2	A34z	20	08	0,1	1	Church2	2	A58s	12	67	0	0	MGBass4	2
A13z	3	00	0,1	1	Piano 3	1	A34s	20	16	0,1	1	Church3	2	A58r	13	67	0	0	MGBass5	1
A13s	3	08	0,1	1	Piano 3w	1	A35	21	116	0	0	Or Orgn2	2	A58s	12	65	0	0	MGBass2	1
A14	114	116	0	0	OudTrem	2	A35i	21	00	0,1	1	Reed Org	1	A58s	12	68	0	0	FM5uprB	1
A14i	117	116	0	0	OudOct	2	A36	22	00	0,1	1	AccordFr	2	A58a	12	69	0	0	CheesBs	1
A14z	4	00	0,1	1	HonkTonk	2	A37	23	00	0,1	1	Harmonic	1	A58s	14	69	0	0	DoomBas	2
A14s	4	08	0,1	1	HonkTnkW	2	A37i	23	01	0,1	1	Harmonic2	1	A58c	14	71	0	0	RubrBs2	2
A14a	110	116	0	0	Oud1Trem	1	A38	24	00	0,1	1	Bandneon	2	A58b	15	64	0	0	AcidBas	2
A15	106	116	0	0	Bozouki	2	A38i	24	00	2	2	Bandneon	1	A58e	15	65	0	0	BubbleB	2
A15i	107	116	0	0	BzkTr	2	A41	25	00	0,1	1	NylonGtr	1	A61	111	116	0	0	Rababa	1
A15z	5	00	0,1	1	E.Piano1	1	A41i	25	08	0,1	1	Ukulele	1	A61i	41	116	0	0	FolkViol	1
A15s	5	08	0,1	1	DetunEP1	2	A41z	25	16	0,1	1	NylonGto	2	A61z	40	116	0	0	FVIoVb	1
A15a	5	16	0,1	1	EPiano1v	2	A41s	25	24	0,1	1	VeloHarm	1	A61s	41	00	0,1	1	Violin	1
A15s	5	24	0,1	1	60Piano	2	A41a	25	32	0,1	1	NylonGt2	1	A61a	41	08	0,1	1	SViolin	1
A15e	5	08	2	2	SoftEP	2	A41s	25	32	3	3	NylnGl2	1	A62	42	00	0,1	1	Viola	1
A16	108	116	0	0	BzkTrVm	2	A42	26	00	0,1,3	3	StStrGt	1	A63	43	00	0,1	1	Cello	1
A16i	6	00	0,1	1	E.Piano2	1	A42i	26	08	0,1	1	12-strGt	2	A64	44	00	0,1	1	Contrabs	1
A16z	6	08	0,1	1	DetunEP2	2	A42z	26	09	0,1	1	Nyl+Stel	2	A65	45	00	0,1	1	TremoStr	1
A16s	6	16	0,1	1	EPiano2v	2	A42s	26	16	0,1	1	Mandolin	1	A66	46	00	0,1	1	Pizzicat	1
A16a	6	16	2	2	StFMEP	2	A42a	26	32	0,1	1	SteelGt2	1	A67	47	00	0,1	1	Harp	1
A16e	42	66	0	0	EPiano3	2	A43	27	00	0,1	1	Jazz Gtr	1	A68	48	00	0,1	1	Timpani	1
A17	7	00	0,1	1	Harpsi	1	A43i	27	08	0,1	1	HawaiGt	1	A71	11	116	0	0	StrngOct	2
A17i	7	08	0,1	1	CouplHps	2	A44	28	00	0,1	1	CleanGtr	1	A71i	49	00	0,1	1	Strings	1
A17z	7	16	0,1	1	Harpsi.w	1	A44z	28	08	0,1	1	ChorusGt	2	A71z	49	08	0,1	1	Orchestr	2
A17s	7	24	0,1	1	Harpsi.o	2	A45	29	00	0,1	1	MutedGtr	1	A71s	29	64	0	0	RStrng1	2
A18	8	00	0,1	1	Clav.	1	A44z	28	09	2	2	JCStrGt	2	A71z	29	65	0	0	RStrng2	1
A21	95	116	0	0	Kanoun1	1	A45i	29	08	0,1	1	FunkGtr	1	A71a	29	65	0	0	RStrng2	1
A21i	93	116	0	0	Kn1TrVmX	2	A45z	29	16	0,1	1	FunkGtr2	1	A72	50	00	0,1	1	SlowStr	1
A21z	9	00	0,1	1	Celesta	1	A46	30	00	0,1,2	2	OvdrvGt	1	A72i	32	64	0	0	SlowStr	1
A22	96	116	0	0	Kanoun2	1	A47	31	00	0,1,3	3	DstortG	1	A73	51	00	0,1	1	Syn Str1	1
A22i	94	116	0	0	Kn2TrVmX	2	A47i	31	08	0,1	1	FeedbGtr	2	A73i	51	08	0,1	1	SyStrng3	2
A22z	10	00	0,1	1	Glocken	1	A48	32	00	0,1	1	GtrHarmo	1	A73z	30	64	0	0	AuhStrm	2
A23	99	116	0	0	KnounOct	2	A48i	32	08	0,1	1	GtrFeedb	1	A74	52	00	0,1	1	Syn.Str	2
A23i	87	116	0	0	KanounSt	2	A48z	32	16	0,1	1	AcGtHarm	1	A74i	30	68	0	0	SynStr3	1
A23z	11	00	0,1	1	MusicBox	1	A48s	60	64	0	0	AcGtGtr1	2	A75	53	00	0,1	1	ChoirAah	1
A24	97	116	0	0	KanounTr	2	A48a	60	68	0	0	WahGtr	1	A75i	53	32	0,1	1	ChoirAh2	1
A24i	12	00	0,1	1	Vib	1	A51	118	116	0	0	Nay	1	A76	54	00	0,1	1	VoiceOoh	1
A24z	12	08	0,1	1	Vib.w	1	A51i	119	116	0	0	NayOct	2	A77	55	00	0,1	1	SynVox	1
A25	13	00	0,1	1	Marimba	1	A51z	120	116	0	0	NayOctVm	2	A77i	35	66	0	0	Synvox1	1
A25i	13	08	0,1	1	MarimbaW	1	A51s	33	00	0,1	1	AcouBass	1	A77z	35	74	0	0	Noisvox	2
A26	14	00	0,1	1	Xylophon	1	A52	101	116	0	0	Kawala1	1	A77s	35	67	0	0	Auh	1
A27	15	00	0,1	1	Tub-bell	1	A52i	102	116	0	0	KawlaOct	2	A77a	35	70	0	0	AuhAuh	2
A27i	15	08	0,1	1	ChurcBel	1	A52z	34	00	0,1	1	FingBass	1	A78	56	00	0,1	1	Orch Hit	2
A27z	15	09	0,1	1	Carillon	1	A53	100	116	0	0	Kawala2	1	A78i	22	65	0	0	OctStck	2
A28	16	00	0,1	1	Santur	1	A53i	103	116	0	0	KwlOctVm	2	A78z	22	66	0	0	SynStck	2
A31	83	116	0	0	Accordn1	2	A53z	35	00	0,1	1	PickBass	1	A78s	77	70	0	0	DistHit	1
A31i	17	00	0,1	1	Organ 1	1	A54	36	00	0,1	1	Fretless	1	A78a	22	64	0	0	SynStck	1
A31z	17	01	0,1	1	Organ101	1	A55	37	00	0,1	1	Slap Bs1	1	A78s	22	67	0	0	SawStck	2
A31s	17	08	0,1	1	DetunOr1	2	A55i	37	00	0,1	1	Slap Bs2	1	A78s	77	73	0	0	SpceFrg	2
A31a	17	09	0,1	1	Organ109	2	A56	38	00	0,1	1	Slap Bs2	1	A78r	23	64	0	0	SynSB1	1
A31s	17	16	0,1	1	60'sOrg1	1	A57	39	00	0,1	1	SynthBs1	1	A78s	23	65	0	0	SynSB2	2
A31z	17	17	0,1	1	60'sOrg2	1	A57i	39	01	0,1	1	SyBas101	1	A78r	23	67	0	0	DirtySB	2
A31s	17	18	0,1	1	60'sOrg3	1	A57z	39	08	0,1	1	SyBass 3	1	A78a	76	66	0	0	MG Blip	1
A31a	17	32	0,1	1	Organ 4	1	A57s	9	66	0	0	DstTB2	2	A81	66	116	0	0	OrienSax	2
A319	17	33	0,1	1	EvenBars	2	A57a	9	68	0	0	AcidTB2	2	A81i	57	00	0,1	1	Trumpet	1
A31A	17	08	3	3	TrOrgan	2	A57s	13	68	0	0	JPMGBas	2	A81z	57	01	0,1	1	Trumpet2	1
A32	86	116	0	0	JVAccord	2	A57s	13	71	0	0	OscBass	2	A81s	57	08	2	2	FlgHorn	1
A32i	22	08	0,1	1	Accrdnlt	2	A57s	9	64	0	0	NormTB	1	A82	122	116	0	0	Mizmar	1
A32z	18	00	0,1	1	Organ 2	1	A57s	9	65	0	0	DistTB1	1	A82i	124	116	0	0	MizmTrVs	1
A32s	18	01	0,1	1	Organ201	1	A57a	14	64	0	0	ResoBas	1	A82z	58	00	0,1	1	Trombone	1
A32a	18	08	0,1	1	DetunOr2	2	A57b	14	65	0	0	WowMGBs	2	A82s	58	01	0,1	1	Trombone2	2

GBN	PC	CC00	CC32	CC32	Sound Name	Voices	GBN	PC	CC00	CC32	CC32	Sound Name	Voices	GBN	PC	CC00	CC32	CC32	Sound Name	Voices		
			Receive	Send						Receive	Send						Receive	Send				
A824	121	116	0	0	MizmarTr	1	B41	89	00	0,1	1	Fantasia	2	B854	125	04	0,1	1	Scratch	1		
A83	126	116	0	0	MizmarDu	2	B42	90	00	0,1	1	Warm Pad	1	B855	125	05	0,1	1	Windchim	2		
A831	123	116	0	0	MizmrOct	2	B421	90	04	2	2	'SoftPad	2	B856	37	70	0	0	^DstScrt	2		
A832	59	00	0,1	1	Tuba	1	B422	27	64	0	0	^WarmPad	2	B86	126	00	0,1	1	Helicptr	1		
A84	127	116	0	0	Arghoul	2	B423	27	66	0	0	^Oct Pad	2	B861	126	01	0,1	1	CarEngin	1		
A841	60	00	0,1,2	2	'MutedTp	1	B424	27	67	0	0	^OBStrPd	2	B862	126	02	0,1	1	Car Stop	1		
A85	42	116	0	0	BrassOct	1	B425	27	70	0	0	^SweepPd2	2	B863	126	03	0,1	1	Car Pass	1		
A851	61	00	0,1	1	Fr Horn	2	B426	27	71	0	0	^OBStPd	1	B864	126	04	0,1	1	CarCrash	2		
A852	61	01	0,1	1	FrHorn2	2	B43	91	00	0,1	1	Polysynt	2	B865	126	05	0,1	1	Siren	1		
A86	62	00	0,1	1	Brass 1	1	B44	92	00	0,1	1	SpVoice	1	B866	126	06	0,1	1	Train	1		
A861	62	08	0,1	1	Brass 2	2	B45	93	00	0,1	1	BowGlass	2	B867	126	07	0,1	1	Jetplane	2		
A862	63	64	0	0	^Brs&Str	2	B46	94	00	0,1	1	MetalPad	2	B868	126	08	0,1	1	Starship	2		
A863	63	65	0	0	^SBRBrass	2	B47	95	00	0,1	1	Halo Pad	2	B869	126	09	0,1	1	BrstNois	2		
A87	63	00	0,1	1	SyBrass1	2	B48	96	00	0,1	1	SweepPad	1	B87	127	00	0,1	1	Applause	2		
A871	63	08	0,1	1	SyBrass3	2	B51	97	00	0,1	1	Ice Rain	2	B871	127	01	0,1	1	Laughing	1		
A872	63	16	0,1	1	AnBrass1	2	B52	98	00	0,1	1	Soundtrk	2	B872	127	02	0,1	1	Scream	1		
A873	66	69	0	0	^StckBrs	2	B53	99	00	0,1	1	Crystal	2	B873	127	03	0,1	1	Punch	1		
A874	66	71	0	0	^StrBras	2	B531	99	01	0,1	1	SyMallet	1	B874	127	04	0,1	1	Heart	1		
A88	64	00	0,1	1	SyBrass2	2	B54	100	00	0,1	1	Atmosph	2	B875	127	05	0,1	1	Footstep	1		
A881	64	08	0,1	1	SyBrass4	1	B541	24	70	0	0	^RevAtom	2	B88	128	00	0,1	1	Gun Shot	1		
A882	64	16	0,1	1	AnBrass2	2	B542	24	64	0	0	^Atmsphr	1	B881	128	01	0,1	1	MachGun	1		
							B543	24	65	0	0	^FreBckW	1	B882	128	02	0,1	1	Lasergun	1		
B11	65	00	0,1,2	2	'SoprSax	1	B543	24	65	0	0	^FreBckW	1	B883	128	03	0,1	1	Explosion	2		
B12	66	00	0,1	1	Alto Sax	1	B55	101	00	0,1	1	Brightns	2	B884	36	70	0	0	^Roboord	2		
B121	66	09	2	2	AltoSax2	1	B56	102	00	0,1	1	Goblin	2	B885	40	65	0	0	^PnkBomb	2		
B13	67	00	0,1	1	TenorSax	1	B57	103	00	0,1	1	EchoDrop	1	B886	36	64	0	0	^UFO FX	2		
B131	67	01	2	2	TenrSax2	1	B571	103	01	0,1	1	EchoBell	2	B887	36	67	0	0	^Abductn	2		
B132	67	08	3	3	'BreathT	2	B572	103	02	0,1	1	Echo Pan	2	B888	36	69	0	0	^UP FX	2		
B14	68	00	0,1	1	BaritSax	1	B573	55	65	0	0	^JunoBel	2	B889	36	71	0	0	^NoisGrw	2		
B15	69	00	0,1	1	Oboe	1	B574	55	66	0	0	^MGPerc	1	B88a	40	64	0	0	^Explosn	2		
B16	70	00	0,1	1	EnglHorn	1	B575	57	69	0	0	^DirtBel	2	B88b	38	65	0	0	^PR5Nois	1		
B17	71	00	0,1	1	Bassoon	1	B58	104	00	0,1	1	StarThem	2	B88c	38	66	0	0	^PnkNois	1		
B18	72	00	0,1	1	Clarinet	1	B581	24	68	0	0	^7thAtom	2	B88d	38	67	0	0	^WhtNois	1		
							B582	24	69	0	0	^OtSpace	2									
B21	73	00	0,1	1	Piccolo	1	B583	25	64	0	0	^2.2 Pad	2									
B22	74	00	0,1	1	Flute	1	B61	105	00	0,1	1	Sitar	1									
B221	70	66	0	0	^PipeLd1	2	B611	105	01	0,1	1	Sitar 2	2									
B222	70	67	0	0	^PipeLd2	2	B62	106	00	0,1	1	Banjo	1									
B23	75	00	0,1	1	Recorder	1	B63	107	00	0,1	1	Shamisen	1									
B24	76	00	0,1	1	PanFlute	1	B64	108	00	0,1	1	Koto	1									
B25	77	00	0,1	1	BotBlow	2	B641	108	08	0,1	1	TKoto	2									
B26	78	00	0,1	1	Shakuhac	2	B65	109	00	0,1	1	Kalimba	1									
B27	79	00	0,1	1	Whistle	1	B66	110	00	0,1	1	Bag Pipe	1									
B28	80	00	0,1	1	Ocarina	1	B67	111	00	0,1	1	Fiddle	1									
							B68	112	00	0,1	1	Shanai	1									
B31	81	00	0,1	1	Square W	2	B71	113	00	0,1	1	TinkBell	1									
B311	81	01	0,1	1	Square	1	B72	114	00	0,1,3	3	Agogo	1									
B312	81	08	0,1	1	SineWave	1	B73	115	00	0,1	1	SteelDrum	1									
B313	3	66	0	0	^PR5Squ1	1	B74	116	00	0,1	1	Woodblk	1									
B314	3	64	0	0	^TrLead1	1	B741	116	08	0,1,3	3	Castanet	1									
B315	1	67	0	0	^LeadTB3	2	B75	117	00	0,1	1	Taiko	1									
B316	7	65	0	0	^SwpLead	2	B751	117	08	0,1,3	3	ConcrtBD	1									
B317	7	66	0	0	^Vocordm	2	B76	118	00	0,1	1	MeloTom1	1									
B318	8	64	0	0	^4tLead1	2	B761	118	08	0,1	1	MeloTom2	1									
B319	8	65	0	0	^4tLead2	2	B77	119	00	0,1	1	SynthDrum	1									
B32	82	00	0,1	1	Saw Wave	2	B771	119	08	0,1	1	808 Tom	1									
B321	82	01	0,1	1	Saw	1	B772	119	09	0,1	1	ElecPerc	1									
B322	82	08	0,1	1	DoctSolo	2	B78	120	00	0,1	1	RevrSycm	1									
B323	5	64	0	0	^SeqSyn	2	B81	121	00	0,1	1	GFrtnois	1									
B324	2	70	0	0	^Jno6Saw	2	B811	121	01	0,1	1	GtCNoise	1									
B325	5	65	0	0	^Polysyn	1	B812	121	02	0,1	1	StrSlap	1									
B326	5	70	0	0	^ResStck	1	B813	37	68	0	0	^AnalgFX	1									
B327	6	67	0	0	^D50 Saw	1	B82	122	00	0,1	1	BrtNoise	1									
B328	2	64	0	0	^MG Saw	1	B821	122	01	0,1	1	FKClick	1									
B329	2	65	0	0	^Voc.Saw	1	B83	123	00	0,1	1	Seashore	1									
B32A	2	66	0	0	^CheeSaw	1	B831	123	01	0,1	1	Rain	1									
B32B	2	69	0	0	^OB2Saw1	2	B832	123	02	0,1	1	Thunder	1									
B32c	6	64	0	0	^SftLead	2	B833	123	03	0,1	1	Wind	1									
B32D	6	65	0	0	^8DV Saw1	1	B834	123	04	0,1	1	Stream	2									
B33	83	00	0,1	1	SynCall	2	B835	123	05	0,1	1	Bubble	2									
B34	84	00	0,1	1	ChifferL	2	B84	124	00	0,1	1	Bird	2									
B35	85	00	0,1	1	Charang	2	B841	124	01	0,1	1	Dog	1									
B351	4	64	0	0	^Ju25bOs	1	B842	124	02	0,1	1	Horse	1									
B36	86	00	0,1	1	Solo Vox	2	B843	124	03	0,1	1	Bird 2	1									
B37	87	00	0,1	1	5th SawW	2	B85	125	00	0,1	1	Telephn1	1									
B38	88	00	0,1	1	Bas&Lead	2	B851	125	01	0,1	1	Telephn2	1									
							B852	125	02	0,1	1	DCreakng	1									
							B853	125	03	0,1	1	Door	1									

Bold/italic names: Tones that will be selected when you use the TONER/USER PROGRAM buttons.

['] = from SC-88
 ["] = from SC-88 Pro
 [^] = from MC-303

17. Drum Sets

	BRUSH PC: 41 CC32: 0.3	E-40 MODIFIED PERC. SET 3 PC: 117 CC32: 0	ELECTRON PC: 25 CC32: 0.3	HOUSE PC: 13 CC32: 0	JAZZ PC: 33 CC32: 0.3	ORCHESTRA PC: 49 CC32: 0.3	ORIENTAL PERC. SET 1 PC: 117 CC32: 1
C-1 0	Standard 1 Kick 1		Electric Kick 2	Electric Kick 2	Standard 1 Kick 1	Standard 1 Kick 1	
1	Standard 1 Kick 2		Electric Kick 1 *	Electric Kick 1 *	Standard 1 Kick 2	Standard 1 Kick 2	
2	Standard 2 Kick 1		CR-78 Kick 1	CR-78 Kick 1	Standard 2 Kick 1	Standard 2 Kick 1	
3	Standard 2 Kick 2		CR-78 Kick 2	CR-78 Kick 2	Standard 2 Kick 2	Standard 2 Kick 2	
4	Kick Drum 1		TR-606 Kick 1	TR-606 Kick 1	Kick Drum 1	Kick Drum 1	
5	Kick Drum 2		TR-707 Kick 1	TR-707 Kick 1	Kick Drum 2	Kick Drum 2	
6	Jazz Kick 1		TR-808 Kick	TR-808 Kick	Jazz Kick 1	Jazz Kick 1	
7	Jazz Kick 2		TR-808 Kick	TR-808 Kick	Jazz Kick 2	Jazz Kick 2	
8	Room Kick 1		TR-808 Kick 2	TR-808 Kick 2	Room Kick 1	Room Kick 1	
9	Room Kick 2		TR-909 Kick	TR-909 Kick	Room Kick 2	Room Kick 2	
10	Power Kick 1		Dance Kick	Dance Kick	Power Kick 1	Power Kick 1	
11	Power Kick 2		Hip-Hop Kick 2	Hip-Hop Kick 2	Power Kick 2	Power Kick 2	
12	Electric Kick 2		TR-909 Kick 1 *	808 SD 4 *	Electric Kick 2	Electric Kick 2	
13	Electric Kick 1		Hip-Hop Kick 3	Jungle SD 1 *	Electric Kick 1	Electric Kick 1	
14	TR-808 Kick		Hyper SD 1 *	Hyper SD 2 *	TR-808 Kick	TR-808 Kick	
15	TR-909 Kick		Techno Kick 1	Techno Kick 1	TR-909 Kick	TR-909 Kick	
16	Dance Kick		Bounce Kick	Finger Snap *	Dance Kick	Dance Kick	
17	Voice One		Voice One	Voice One	Voice One	Voice One	
18	Voice Two		Voice Two	Voice Two	Voice Two	Voice Two	
19	Voice Three		Voice Three	Voice Three	Voice Three	Voice Three	
20				Dry BD 1 *			
21							
22	MC-500 Beep 1		MC-500 Beep 1	MC-500 Beep 1	MC-500 Beep 1	MC-500 Beep 1	
23	MC-500 Beep 2		MC-500 Beep 2	MC-500 Beep 2	MC-500 Beep 2	MC-500 Beep 2	
C1 24	Concert SD		Concert SD	909 BD 7 *	Concert SD	Concert SD	
25	Snare Roll		Snare Roll	Snare Roll	Snare Roll	Snare Roll	
26	Finger Snap		Finger Snap	Funky SD 1 *	Finger Snap	Finger Snap	
27	High Q		High Q	Real Clap *	High Q	Closed Hi-Hat 2 [EXC1]	
28	Slap		Slap	Slap	Slap	Pedal Hi-Hat [EXC1]	
29	Scratch Push		Scratch Push 2 [EXC7]	Scratch Push 2 [EXC7]	Scratch Push	Open Hi-Hat 2 [EXC1]	
30	Scratch Pull		Scratch Pull 2 [EXC7]	808 CH *	Scratch Pull	Ride Cymbal 1	
31	Sticks		Sticks	808 Mid Tom 3 *	Sticks	Sticks	
32	Square Click		Square Click	Real PH 1 *	Square Click	Square Click	
33	Metronome Click		Metronome Click	808 Hi Tom 3 *	Metronome Click	Metronome Click	
34	Metronome Bell		Metronome Bell	808 OH *	Metronome Bell	Metronome Bell	
35	Jazz Kick 2		Electric Kick 2	TR-808 Kick 2	Jazz Kick 2	Jazz Kick 1	
C2 36	Jazz Kick 1	Bass Drum (TR-707)	Electric Kick 1 *	909 BD 3 *	Jazz Kick 1	Concert BD 1	Bass Drum (TR-707)
37	Side Stick	Rim Shot (TR-707)	Side Stick	909 Rim Shot *	Side Stick	Side Stick	Rim Shot (TR-707)
38	Brush Snare 1	Snare Drum (TR-707)	Electric Snare 1	909 SD 3 *	Jazz Snare 1	Concert SD	Snare Drum (TR-707)
39	Brush Slap	Hand Clap 1 Stereo (E-40)	TR-808 Hand Clap	909 Clap *	Hand Clap 2	Castanets	Hand Clap 1 (Stereo)
40	Brush Snare 2	Snare Drum (TR-707)	Electric Snare 2	TR-808 Snare 2	Jazz Snare 2	Concert SD	Hand Clap 2 (Mono)
41	Brush Low Tom 2 *	Tom 1 (from Standard)	Electric Low Tom 2 *	TR-808 Low Tom 2 *	Low Tom 2	Timpani F	Tom 1 (from Standard)
42	Brush Closed Hi-Hat [EXC1]	Closed Hi-Hat (TR-707)	Closed Hi-Hat 2 [EXC1]	909 CH *	Closed Hi-Hat 2 [EXC1]	Timpani #	Closed Hi-Hat (TR-707)
43	Brush Low Tom 1 *	Tom 2 (from Standard)	Electric Low Tom 1 *	TR-808 Low Tom 1 *	Low Tom 1	Timpani G	Tom 2 (from Standard)
44	Pedal Hi-Hat [EXC1]	Closed Hi-Hat (TR-707)	Pedal Hi-Hat 2 [EXC1]	909 CH 2 *	Pedal Hi-Hat 2 [EXC1]	Timpani #G	Closed Hi-Hat (TR-707)
45	Brush Mid Tom 2 *	Tom 3 (from Standard)	Electric Mid Tom 2 *	909 Mid Tom 1 *	Mid Tom 2	Timpani A	Tom 3 (from Standard)
46	Brush Open Hi-Hat [EXC1]	Open Hi-Hat (TR-707)	Open Hi-Hat 2 [EXC1]	909 OH *	Open Hi-Hat 2 [EXC1]	Timpani #H	Open Hi-Hat (TR-707)
47	Brush Mid Tom 1 *	Tom 4 (from Standard)	Electric Mid Tom 1 *	TR-808 Mid Tom 1 *	Mid Tom 1	Timpani B	Tom 4 (from Standard)
C3 48	Brush High Tom 2 *	Tom 5 (from Standard)	Electric High Tom 2 *	909 Hi Tom 1 *	High Tom 2	Timpani c	Tom 5 (from Standard)
49	Brush Crash Cymbal	Crash Cymbal (TR-707)	Crash Cymbal 1	909 Crash 1 *	Crash Cymbal 1	Timpani #	Crash Cymbal (TR-707)
50	Brush High Tom 1 *	Tom 6 (from Standard)	Electric High Tom 1 *	TR-808 High Tom 1 *	High Tom 1	Timpani d	Tom 6 (from Standard)
51	Ride Cymbal Inner	Ride Cymbal (from)	Ride Cymbal 1	TR-606 Ride Cymbal	Ride Cymbal Inner	Timpani #H	Ride Cymbal (from)
52	Chinese Cymbal	Doholla 2 Dom	Reverse Cymbal	Chinese Cymbal	Chinese Cymbal	Timpani e	Doholla 1 Rim 1
53	Brush Ride Bell	Doholla 2 Sak	Ride Bell	Ride Bell	Ride Bell	Timpani f	Doholla 1 Dom
54	Tambourine	Tambourine (from Standard)	Tambourine	Tambourine *	Tambourine	Tambourine	Finger Doff A
55	Splash Cymbal	Doholla 2 Rim 1	Splash Cymbal	Splash Cymbal	Splash Cymbal	Splash Cymbal	Doholla 1 Rim 2
56	Cowbell	Cowbell (from Standard)	Cowbell	TR-808 Cowbell	Cowbell	Cowbell	Cowbell (from Standard)
57	Crash Cymbal 2	Doholla 2 Rim 2	Crash Cymbal 2	808 Cymbal 1 *	Crash Cymbal 2	Concert Cymbal 2	Doholla 1 Sak
58	Vibra-slap	Cabasha (from Standard)	Vibra-slap	Vibra-slap *	Vibra-slap	Vibra-slap	Dof 2 Dom
59	Ride Cymbal 2	Dof 2 Dom	Ride Cymbal 2	Ride Cymbal Edge	Ride Cymbal Edge	Concert Cymbal 1	Dof 1 Rim 1
C4 60	High Bongo	Dof 2 Sak 1	High Bongo	CR-78 High Bongo	High Bongo	High Bongo	Dof 1 Dom
61	Low Bongo	Bongos Dom (from)	Low Bongo	CR-78 Low Bongo	Low Bongo	Low Bongo	Dof 1 Sak 1
62	Mute High Conga	Dof 2 Sak 2	Mute High Conga	Hi Conga Slap *	Mute High Conga	Mute High Conga	Dof 1 Rim 2
63	Open High Conga	Bongos Tak (from)	Open High Conga	Hi Conga Open *	Open High Conga	Open High Conga	Dof 1 Sak 2
64	Open Low Conga	Dof 2 Rim	Open Low Conga	Lo Conga Open *	Open Low Conga	Open Low Conga	Tabla 1 Tak 1
65	High Timbale	Tabla 2 Dom	High Timbale	High Timbale	High Timbale	High Timbale	Tabla 1 Tak 2
66	Low Timbale	Tabla Roll	Low Timbale	Low Timbale	Low Timbale	Low Timbale	Tabla Roll
76	High Agogo	Tabla 2 Sak	High Agogo	High Agogo	High Agogo	High Agogo	Tabla 1 Dom
68	Low Agogo	Tabla (FX) (Roll End)	Low Agogo	Low Agogo	Low Agogo	Low Agogo	Tabla (FX) (Roll End)
69	Cabasa	Tabla 2 Tak	Cabasa	Cabasa	Cabasa	Cabasa	Tabla 1 Tak 3
70	Maracas	Tabla 2 Tik	Maracas	Cabasa Up *	Maracas	Maracas	Tabla 1 Sak
71	Short High Whistle	Tabla 2 Rim	Short High Whistle	Short High Whistle	Short High Whistle	Short High Whistle	Tabla 1 Rim
C5 72							

	BRUSH PC: 41 CC32: 0,3	E-40 MODIFIED PERC. SET 3 PC: 117 CC32: 0	ELECTRON PC: 25 CC32: 0,3	HOUSE PC: 13 CC32: 0	JAZZ PC: 33 CC32: 0,3	ORCHESTRA PC: 49 CC32: 0,3	ORIENTAL PERC. SET 1 PC: 117 CC32: 1
C5 72	Long Low Whistle	Rek 2 Dom Open	Long Low Whistle	Long Low Whistle	Long Low Whistle	Long Low Whistle	Rek Trill
73	Short Guiro	Rek 2 Rim	Short Guiro	Short Guiro	Short Guiro	Short Guiro	Rek 1 Sak
74	Long Guiro	Rek 2 Dom Closed	Long Guiro	CR-78 Guiro [EXC3]	Long Guiro	Long Guiro	Rek 1 Tak 1
75	Claves	Rek 2 Tak 1	Claves	TR-808 Claves	Claves	Claves	Rek 1 Rim
76	High Wood Block	Rek 2 Tak 2	High Wood Block	High Wood Block	High Wood Block	High Wood Block	Rek 1 Dom
77	Low Wood Block	Rek 2 Tak 2	Low Wood Block	Low Wood Block	Low Wood Block	Low Wood Block	Rek 1 Tak 2
78	Mute Cuica	Hager	Mute Cuica	High Hoo [EXC4]	Mute Cuica	Mute Cuica	Rek 1 Brass
79	Open Cuica	Rek 2 Khana Closed	Open Cuica	Low Hoo [EXC4]	Open Cuica	Open Cuica	Rek 1 Tak 3
80	Mute Triangle	Zir	Mute Triangle	Electric Mute Triangle	Mute Triangle	Mute Triangle	Rek 1 Roll
81	Open Triangle	Rek 2 Khana Open	Open Triangle	Electric Open Triangle	Open Triangle	Open Triangle	Rek 1 Khana Closed
82	Shaker	Rek 2 (Roll)	Shaker	TR-626 Shaker	Shaker	Shaker	Tabl Noueri Rim
83	Jingle Bell	Rek 2 Sak	Jingle Bell	Jingle Bell	Jingle Bell	Jingle Bell	Rek 1 Khana Open
84	Bell Tree	Sagat Mid	Bell Tree	Bell Tree	Bell Tree	Bell Tree	Sagat Mid
85	Castanets	Sagat High	Castanets	Castanets	Castanets	Castanets	Tabl Noueri Dom 1
86	Mute Surdo	Sagat Sak	Mute Surdo	Mute Surdo	Mute Surdo	Mute Surdo	Sagat High
87	Open Surdo	Shaker (from Standard)	Open Surdo	Open Surdo	Open Surdo	Open Surdo	Tabl Noueri Tak 1
88	Applause *	Zaghrouta A	Small Club 1 *	Small Club 1 *	Applause *	Applause *	Sagat Sak
89		Zaghrouta B					Hager
90		Tabl Noueri Dom		Syn Perc. ^			Zir
91		Nakrazan A		MG Blip^			Nakrazan A
92		Tabl Noueri Rim					Zaghrouta 1 Loop
93		Nakrazan B					Nakrazan B
94		Tabl Noueri Tak					Zaghrouta 2 End
95		Bass Drum (TR-707)					Zaghrouta 2 Loop
96		Hand Clap 2 Mono (E 40)					Zaghrouta 2 End
97			Techno Hit	Techno Hit		Applause 2 *	
98			Philly Hit *	Philly Hit *		Small Club 1 *	
99			Shock Wave *	Shock Wave *		Timpani D#	
100	Brush Tap 1		Lo-Fi Rave *	Lo-Fi Rave *	Brush Tap 1	Timpani E	
101	Brush Tap 2		Bam Hit	Bam Hit	Brush Tap 2	Timpani F	
102	Brush Slap 1		Bim-Hit	Bim-Hit	Brush Slap 1	Timpani F#	
103	Brush Slap 2		Tape Rewind	Tape Rewind	Brush Slap 2	Timpani G	
104	Brush Slap 3		Phonograph Noise	Phonograph Noise	Brush Slap 3	Timpani G#	
105	Brush Swirl 1		Power Snare 1	Power Snare 1	Brush Swirl 1	Timpani A	
106	Brush Swirl 2		Dance Snare 1	Dance Snare 1	Brush Swirl 2	Timpani A#	
107	Brush Long Swirl		Dance Snare 2	Laser Gun^	Brush Long Swirl	Timpani B	
108	Jazz Snare 1		Disco Snare	Disco Snare	Jazz Snare 1	Timpani c	
109	Jazz Snare 2		Electric Snare 2	Starship^	Jazz Snare 2	Timpani c#	
110	Standard 1 Snare1		Electric Snare	Electric Snare	Standard 1 Snare1	Timpani d	
111	Standard 1 Snare2		Electric Snare 3 *	Electric Snare 3 *	Standard 1 Snare2	Timpani d#	
112	Standard 2 Snare1		TR-606 Snare	TR-606 Snare	Standard 2 Snare1	Timpani e	
113	Standard 2 Snare2		TR-707 Snare	TR-707 Snare	Standard 2 Snare2	Timpani f	
114	Snare Drum 2		TR-808 Snare 1	TR-808 Snare 1	Snare Drum 2		
115	Standard 1 Snare 1		TR-808 Snare 2 *	TR-808 Snare 2 *	Standard 1 Snare 1		
116	Standard 1 Snare 2		TR-808 Snare 2	TR-808 Snare 2	Standard 1 Snare 2		
117	Standard Snare 3		TR-909 Snare 1	TR-909 Snare 1	Standard Snare 3		
118	Room Snare 1		TR-909 Snare 2 *	TR-909 Snare 2 *	Room Snare 1		
119	Room Snare 2		TR-909 Snare 1	TR-909 Snare 1	Room Snare 2		
120	Power Snare 1		TR-909 Snare 2	TR-909 Snare 2	Power Snare 1		
121	Power Snare 2		Rap Snare	Rap Snare	Power Snare 2		
122	Gated Snare		Jungle Snare 1	Jungle Snare 1	Gated Snare		
123	Dance Snare 1		House Snare 1	House Snare 1	Dance Snare 1		
124	Dance Snare 2		House Snare *	House Snare *	Dance Snare 2		
125	Disco Snare		House Snare 2	House Snare 2	Disco Snare		
126	Electric Snare 2		Voice Tah	Voice Tah	Electric Snare 2		
127	Electric Snare 3 *		Slappy *	Slappy *	Electric Snare 3 *		

White keys: only accessible via the keyboard when Transpose is set to "-11" or "11".

Gray keys: accessible via the keyboard when transposition for Drum Sets is off.

All percussion sounds derived from the SC-88 Fro except for ^ (MC-303) and \$ (SC-55)

PC: Program Number (Drum Set Number) [EXC] Tones of the same EXC number cannot sound simultaneously

[blank] No sound

* Tones that require two voices (polyphony)

	ORIENTAL PERC. SET 2 PC: 117 CC32: 2	POWER PC: 17 CC32: 0,3	ROOM PC: 9 CC32: 0,3	SFX PC: 57 CC32: 0,1	STANDRD2 PC: 1 CC32: 0,3	TECHNO PC: 12 CC32: 0	TR-808 PC: 26 CC32: 0,3	TR-909 PC: 31 CC32: 0,3
C-1	0	Standard 1 Kick 1	Standard 1 Kick 1		Standard 1 Kick 1	Electric Kick 2	Electric Kick 2	Electric Kick 2
	1	Standard 1 Kick 2	Standard 1 Kick 2		Standard 1 Kick 2	Electric Kick 1 *	Electric Kick 1 *	Electric Kick 1 *
	2	Standard 2 Kick 1	Standard 2 Kick 1		Standard 2 Kick 1	CR-78 Kick 1	CR-78 Kick 1	CR-78 Kick 1
	3	Standard 2 Kick 2	Standard 2 Kick 2		Standard 2 Kick 2	CR-78 Kick 2	CR-78 Kick 2	CR-78 Kick 2
	4	Kick Drum 1	Kick Drum 1		Kick Drum 1	TR-606 Kick 1	TR-606 Kick 1	TR-606 Kick 1
	5	Kick Drum 2	Kick Drum 2		Kick Drum 2	TR-707 Kick 1	TR-707 Kick 1	TR-707 Kick 1
	6	Jazz Kick 1	Jazz Kick 1		Jazz Kick 1	TR-808 Kick	TR-808 Kick	TR-808 Kick
	7	Jazz Kick 2	Jazz Kick 2		Jazz Kick 2	TR-808 Kick	TR-808 Kick	TR-808 Kick
	8	Room Kick 1	Room Kick 1		Room Kick 1	TR-808 Kick 2	TR-808 Kick 2	TR-808 Kick 2
	9	Room Kick 2	Room Kick 2		Room Kick 2	TR-909 Kick	TR-909 Kick	TR-909 Kick
	10	Power Kick 1	Power Kick 1		Power Kick 1	Dance Kick	Dance Kick	Dance Kick
	11	Power Kick 2	Power Kick 2		Power Kick 2	909 SD 1^	Hip-Hop Kick 2	Hip-Hop Kick 2
C0	12	Electric Kick 2	Electric Kick 2		Electric Kick 2	808 SD 4^	TR-909 Kick 1 *	TR-909 Kick 1 *
	13	Electric Kick 1 *	Electric Kick 1 *		Electric Kick 1 *	Hip-Hop Kick 3	Hip-Hop Kick 3	Hip-Hop Kick 3
	14	TR-808 Kick	TR-808 Kick		TR-808 Kick	Hard SD 1^	Hyper SD 1^	Hyper SD 1^
	15	TR-909 Kick	TR-909 Kick		TR-909 Kick	Techno Kick 1	Techno Kick 1	Techno Kick 1
	16	Dance Kick	Dance Kick		Dance Kick	Finger Snap^	Bounce Kick	Bounce Kick
	17	Voice One	Voice One		Voice One	909 BD1^	Voice One	Voice One
	18	Voice Two	Voice Two		Voice Two	Voice Two	Voice Two	Voice Two
	19	Voice Three	Voice Three		Voice Three	Voice Three	Voice Three	Voice Three
	20							
	21							
	22	MC-500 Beep 1	MC-500 Beep 1		MC-500 Beep 1	MC-500 Beep 1	MC-500 Beep 1	MC-500 Beep 1
	23	MC-500 Beep 2	MC-500 Beep 2		MC-500 Beep 2	MC-500 Beep 2	MC-500 Beep 2	MC-500 Beep 2
C1	24	Concert SD	Concert SD		Concert SD	909 BD 7	Concert SD	909 BD 1^
	25	Snare Roll	Snare Roll		Snare Roll	Snare Roll	Snare Roll	Snare Roll
	26	Finger Snap	Finger Snap		Finger Snap	Hyper SD 3^	Finger Snap 2	909 SD 3^
	27	High Q	High Q		High Q	707 Clap^	High Q	Hip Clap 1^
	28	Slap	Slap		Slap	Tamb SD 2	Slap	909 SD 1^
	29	Scratch Push 2 [EXC7]	Scratch Push		Scratch Push [EXC7]	Scratch Push 2 [EXC7]	Scratch Push 2 [EXC7]	Scratch Push 2 [EXC7]
	30	Scratch Pull 2 [EXC7]	Scratch Pull		Scratch Pull [EXC7]	808 Clap^	808 CH^	808 CH^
	31	Sticks	Sticks		Sticks	Sticks	Sticks	Sticks
	32	Square Click	Square Click		Square Click	707 CH^	Square Click	Square Click
	33	Metronome Click	Metronome Click		Metronome Click	Metronome Click	Metronome Click	Metronome Click
	34	Metronome Bell	Metronome Bell		Metronome Bell	Room OH^	Metronome Bell	909 Dist. OH^
	35	Electric Kick 2	Room Kick 2		Standard 2 Kick 2	TR-808 Kick 2	TR-808 Kick 2	TR-808 Kick 2
C2	36	Bass Drum (TR-707)	Electric Kick 1 *	Room Kick 1	Standard 2 Kick 1	TR-808 Kick 1	TR-808 Kick 1	909 BD 1^
	37	Rim Shot (TR-707)	Side Stick	Side Stick	Side Stick	TR-808 Rim Shot	TR-808 Rim Shot	TR-808 Rim Shot
	38	Snare Drum (TR-707)	Electric Snare 1	Room Snare 1	Standard 2 Snare 1	909 SD 3^	TR-808 Snare 1	909 SD 2^
	39	Hand Clap 1 (Stereo)	TR-808 Hand Clap	TR-808 Hand Clap	High Q \$	TR-808 Hand Clap	Hyper SD 2^	909 Clap^
	40	Hand Clap 2 (Mono)	Electric Snare 2	Room Snare 2	Slap \$	Standard 2 Snare 2	TR-808 Snare 2	TR-808 Snare 2
	41	Tom 1 (from Standard)	Electric Low Tom 2 *	Room Low Tom 2 *	Scratch Push \$ [EXC7]	Low Tom 2 *	TR-808 Low Tom 2 *	TR-808 Low Tom 2 *
	42	Closed Hi-Hat (TR-707)	Closed Hi-Hat 2 [EXC1]	Closed Hi-Hat 3 [EXC1]	Scratch Pull \$ [EXC7]	Closed Hi-Hat 2 [EXC1]	909 CH^	TR-808 Closed Hi-Hat [EXC1] 909 CH^
	43	Tom 2 (from Standard)	Electric Low Tom 1 *	Room Low Tom 1 *	Sticks \$	Low Tom 1 *	TR-808 Low Tom 1 *	TR-808 Low Tom 1 *
	44	Closed Hi-Hat (TR-707)	Pedal Hi-Hat 2 [EXC1]	Room Pedal Hi-Hat [EXC1]	Square Click \$	Pedal Hi-Hat 2 [EXC1]	Room CH^	TR-808 Closed Hi-Hat [EXC1] 909 CH 2^
	45	Tom 3 (from Standard)	Electric Mid Tom 2 *	Room Mid Tom 2 *	Metronome Click \$	Mid Tom 2 *	TR-808 Mid Tom 2 *	TR-808 Mid Tom 2 *
	46	Open Hi-Hat (TR-707)	Open Hi-Hat 2 [EXC1]	Open Hi-Hat 3 [EXC1]	Metronome Bell \$	Open Hi-Hat 2 [EXC1]	909 Dist. OH^	TR-808 Open Hi-Hat [EXC1] 909 OH^
	47	Tom 4 (from Standard)	Electric Mid Tom 1 *	Room Mid Tom 1 *	Guitar Sliding Finger \$	Mid Tom 1 *	TR-808 Mid Tom 1 *	TR-808 Mid Tom 1 *
C3	48	Tom 5 (from Standard)	Electric High Tom 2 *	Room High Tom 2 *	Gtr Noise 1 \$	High Tom 2 *	TR-808 High Tom 2 *	TR-808 High Tom 2 *
	49	Crash Cymbal (TR-707)	Crash Cymbal 1	Crash Cymbal 1	Gtr Noise 2 \$	Crash Cymbal 1	909 Crash 1^	TR-808 Crash Cymbal 1
	50	Tom 6 (from Standard)	Electric High Tom 1 *	Room High Tom 1 *	String Slap \$	High Tom 1 *	TR-808 High Tom 1 *	TR-808 High Tom 1 *
	51	Ride Cymbal (from)	Ride Cymbal 1	Ride Cymbal 1	Key Click \$	Ride Cymbal 1	909 Ride^	TR-606 Ride Cymbal
	52	Doholla 2 Rim 1	Reverse Cymbal	Chinese Cymbal	Laughing \$	Chinese Cymbal	Rev. Cymbal^	Chinese Cymbal
	53	Doholla 2 Dom	Ride Bell	Ride Bell	Screaming \$	Ride Bell	Asian Gong^	Ride Bell
	54	Hager	Tambourine	Tambourine	Punch \$	Tambourine	TR-78 Tambourine	Tambourine^
	55	Doholla 2 Rim 2	Splash Cymbal	Splash Cymbal	Heart Beat \$	Splash Cymbal	Splash Cymbal	909 Crash 2^
	56	Cowbell (from Standard)	Cowbell	Cowbell	Footsteps 1 \$	Cowbell	TR-808 Cowbell	Cowbell^
	57	Doholla 2 Sak	Crash Cymbal 2	Crash Cymbal 2	Footsteps 2 \$	Crash Cymbal 2	909 Crash 3^	TR-909 Crash Cymbal
	58	Zir	Vibra-slap	Vibra-slap	Applause \$ *	Vibra-slap	Vibra-slap	Vibra-slap
	59	Dof 2 Rim 1	Ride Cymbal 2	Ride Cymbal 2	Door Creaking \$	Ride Cymbal 2	Ride Cymbal Edge	Ride Cymbal Edge
C4	60	Dof 2 Dom	High Bongo	High Bongo	Door \$	High Bongo	CR-78 High Bongo	CR-78 High Bongo
	61	Dof 2 Sak 1	Low Bongo	Low Bongo	Scratch \$	Low Bongo	CR-78 Low Bongo	CR-78 Low Bongo
	62	Dof 2 Rim 2	Mute High Conga	Mute High Conga	Wind Chimes \$ *	Mute High Conga	TR-808 Mute High Conga	TR-808 Mute High Conga
	63	Dof 2 Sak 2	Open High Conga	Open High Conga	Car Engine \$	Open High Conga	TR-808 Open High Conga	TR-808 Open High Conga
	64	Tabla 2 Tak 1	Open Low Conga	Open Low Conga	Car Stop \$	Open Low Conga	TR-808 Open Low Conga	TR-808 Open Low Conga
	65	Tabla 2 Tak 2	High Timbale	High Timbale	Car Passing \$	High Timbale	High Timbale	High Timbale
	66	Tabla Roll	Low Timbale	Low Timbale	Car Crash \$ *	Low Timbale	Low Timbale	Low Timbale
	76	Tabla 2 Dom	High Agogo	High Agogo	Siren \$	High Agogo	High Agogo	High Agogo
	68	Tabla (FX) (Roll End)	Low Agogo	Low Agogo	Train \$	Low Agogo	Low Agogo	Low Agogo
	69	Tabla 2 Tak 3	Cabasa	Cabasa	Jetplane \$ *	Cabasa	Cabasa	Cabasa
	70	Tabla 2 Sak	Maracas	Maracas	Helicopter \$	Maracas	TR-808 Maracas	TR-808 Maracas
	71	Tabla 2 Rim	Short High Whistle	Short High Whistle	Starship \$ *	Short High Whistle [EXC2]	Short High Whistle	Short High Whistle
C5	72							

	ORIENTAL PERC.SET 2 PC: 117 CC32: 2	POWER PC: 17 CC32: 0,3	ROOM PC: 9 CC32: 0,3	SFX PC: 57 CC32: 0,1	STANDRD2 PC: 1 CC32: 0,3	TECHNO PC: 12 CC32: 0	TR-808 PC: 26 CC32: 0,3	TR-909 PC: 31 CC32: 0,3
C5	72	Rek Trill	Long Low Whistle	Long Low Whistle	Gun Shot \$	Long Low Whistle [EXC2]	Long Low Whistle	Long Low Whistle
	73	Rek 2 Sak	Short Guiro	Short Guiro	Machine Gun \$	Short Guiro [EXC3]	Short Guiro	Short Guiro
	74	Rek 2 Dom Closed	Long Guiro	Long Guiro	Laser Gun \$	Long Guiro [EXC3]	CR-78 Guiro [EXC3]	CR-78 Guiro [EXC3]
	75	Rek 2 Rim	Claves	Claves	Explosion \$	Claves	TR-808 Claves	TR-808 Claves
	76	Rek 2 Dom Open	High Wood Block	High Wood Block	Dag \$	High Wood Block	High Wood Block	High Wood Block
	77	Rek 2 Tak 1	Low Wood Block	Low Wood Block	Horse-Gallop \$	Low Wood Block	Low Wood Block	Low Wood Block
	78	Rek 2 Khana Open	Mute Cuica	Mute Cuica	Birds \$ *	Mute Cuica [EXC4]	High Hoo [EXC4]	High Hoo [EXC4]
	79	Rek 2 Tak 2	Open Cuica	Open Cuica	Rain \$	Open Cuica [EXC4]	Low Hoo [EXC4]	Low Hoo [EXC4]
	80	Rek 2 Roll	Mute Triangle	Mute Triangle	Thunder \$	Mute Triangle [EXC5]	Electric Mute Triangle	Electric Mute Triangle
	81	Rek 2 Khana Closed	Open Triangle	Open Triangle	Wind \$	Open Triangle [EXC5]	Electric Open Triangle	Electric Open Triangle
	82	Tabl Noueri Rim	Shaker	Shaker	Seashore \$	Shaker	626 Shaker^	626 Shaker^
	83	Rek 2 Tak 3	Jingle Bell	Jingle Bell	Stream \$ *	Jingle Bell	Jingle Bell	Jingle Bell
C6	84	Sagat Mid	Bell Tree	Bell Tree	Bubble \$ *	Bar Chimes	Bell Tree	Bell Tree
	85	Tabl Noueri Dom 2	Castanets	Castanets		Castanets	Castanets	Castanets
	86	Sagat High	Mute Surdo	Mute Surdo		Mute Surdo [EXC6]	Mute Surdo	Mute Surdo
	87	Tabl Noueri Tak 2	Open Surdo	Open Surdo		Open Surdo [EXC6]	Open Surdo	Open Surdo
	88	Sagat Sak	Applause 2	Applause 2		Applause 2 *	Small Club 1 *	Small Club 1 *
	89	Bongos Dom						
	90	Nakrazan A						
	91	Bongos Tak						
	92	Zaghrouta 1 Loop						
	93	Bongos Rim						
	94	Zaghrouta 1 End						
	95	Zaghrouta 2 Loop						
C7	96	Zaghrouta 2 End						
	97		Standard 1 Snare 1	Standard 1 Snare 1		Standard 1 Snare 1	Techno Hit	Techno Hit
	98		Standard 1 Snare 2	Standard 1 Snare 2		Standard 1 Snare 2	Philly Hit *	Philly Hit *
	99		Standard 2 Snare 1	Standard 2 Snare 1		Standard 2 Snare 1	Tape Rewind^	Shock Wave *
	100		Standard 2 Snare 2	Standard 2 Snare 2		Standard 2 Snare 2	Lo-Fi Rave *	Lo-Fi Rave *
	101		Snare Drum 2	Snare Drum 2		Snare Drum 2	Bam Hit	Bam Hit
	102		Standard 1 Snare 1	Standard 1 Snare 1		Standard 1 Snare 1	Bim-Hit	Bim-Hit
	103		Standard 1 Snare 2	Standard 1 Snare 2		Standard 1 Snare 2	Tape Rewind	Tape Rewind
	104		Standard Snare 3	Standard Snare 3		Standard Snare 3	Phonograph Noise	Phonograph Noise
	105		Jazz Snare 1	Jazz Snare 1		Jazz Snare 1	Power Snare 1	Power Snare 1
	106		Jazz Snare 2	Jazz Snare 2		Jazz Snare 2	Dance Snare 1	Dance Snare 1
	107		Room Snare 1	Room Snare 1		Room Snare 1	Dance Snare 2	Dance Snare 2
C8	108		Room Snare 2	Room Snare 2		Room Snare 2	Disco Snare	Disco Snare
	109		Power Snare 1	Power Snare 1		Power Snare 1	Electric Snare 2	Electric Snare 2
	110		Power Snare 2	Power Snare 2		Power Snare 2	Electric Snare	Electric Snare
	111		Gated Snare	Gated Snare		Gated Snare	Electric Snare 3 *	Electric Snare 3 *
	112		Dance Snare 1	Dance Snare 1		Dance Snare 1	TR-606 Snare	TR-606 Snare
	113		Dance Snare 2	Dance Snare 2		Dance Snare 2	TR-707 Snare	TR-707 Snare
	114		Disco Snare	Disco Snare		Disco Snare	TR-808 Snare 1	TR-808 Snare 1
	115		Electric Snare 2	Electric Snare 2		Electric Snare 2	TR-808 Snare 2 *	TR-808 Snare 2 *
	116		Electric Snare	Electric Snare		Electric Snare	TR-808 Snare 2	TR-808 Snare 2
	117		Electric Snare 3 *	Electric Snare 3 *		Electric Snare 3 *	TR-909 Snare 1	TR-909 Snare 1
	118		TR-707 Snare	TR-707 Snare		TR-707 Snare	TR-909 Snare 2 *	TR-909 Snare 2 *
	119		TR-808 Snare 1	TR-808 Snare 1		TR-808 Snare 1	TR-909 Snare 1	TR-909 Snare 1
C9	120		TR-808 Snare 2 *	TR-808 Snare 2 *		TR-808 Snare 2 *	TR-909 Snare 2	TR-909 Snare 2
	121		TR-909 Snare 1	TR-909 Snare 1		TR-909 Snare 1	Rap Snare	Rap Snare
	122		TR-909 Snare 2 *	TR-909 Snare 2 *		TR-909 Snare 2 *	Jungle Snare 1	Jungle Snare 1
	123		Rap Snare	Rap Snare		Rap Snare	House Snare 1	House Snare 1
	124		Jungle Snare 1	Jungle Snare 1		Jungle Snare 1	House Snare *	House Snare *
	125		House Snare 1	House Snare 1		House Snare 1	House Snare 2	House Snare 2
	126		House Snare *	House Snare *		House Snare *	Voice Tah	Voice Tah
	127		House Snare 2	House Snare 2		House Snare 2	Slappy *	Slappy *

White keys: only accessible via the keyboard when Transpose is set to "-1" or "1"
 Gray keys: accessible via the keyboard when transposition for Drum Sets is off
 All percussion sounds derived from the SC-88 Pro except for ^ (MC-303) and \$ (SC-55)

PC Program Number (Drum Set Number) [EXC]: Tones of the same EXC number cannot sound simultaneously
 [blank] No sound
 * Tones that require two voices (polyphony)

18. MIDI Implementation Charts

ORIENTAL CREATIVE KEYBOARD (Arranger)

Date : JUL 1999

Model: EM-50 OR

MIDI Implementation Chart

Version: 1.00

Function	Transmitted	Recognized	Remarks
Basic Default	1-16	1-16	1= ACC1, 2=A.BASS, 3=ACC2, 4=Upper1, 5=ACC3, 6=Upper2, 7=ACC4, 8=ACC5, 9=ACC6, 10=A Drums/SII PG, 11=Lower, 12=M.Bass, 13=Basic Channel, 14=NTA1, 15=NTA2, 16=M.Drums
Channel Changed	1-16, Off	1-16, Off	
Mode Default Message Altered	Mode 3 Mode 3, 4(M=1) *****	Mode 3 Mode 3, 4(M=1) *2	
Note Number True Voice	0-127 *****	0-127 0-127 *1	
Velocity Note ON Note OFF	○ *1 X	○ *1 X	
After Touch Key's Ch's	X X	○ ○	
Pitch Bend	○ *1	○ *1	
Control Change	0, 32 ○ 1 ○ *1 5 ○ 6, 38 ○ 7 ○ *1 10 ○ 11 ○ 64 ○ *1 65 X 66 X 67 X 84 ○ 91 ○ 93 ○ 98, 99 ○ *1 100,101 ○	○ ○ *1 ○ ○ ○ *1 ○ ○ ○ *1 ○ ○ ○ ○ ○ ○ (Reverb) ○ (Chorus) ○ *1 ○	Bank Select Modulation Portamento Time Data Entry Volume Panpot Expression Hold 1 Portamento Sostenuto Soft Portamento Control Effect 1 Depth Effect 3 Depth NRPN LSB,MSB RPN LSB,MSB
Program Change True #	○ ***** *1	○ 0-127 *1	Program Number: 1-128
System Exclusive	○	○	
System Common Song Pos Song Sel Tune	X X X	X X X	
System Real Time Clock Commands	○ *1 ○ *1	○ *1 ○ *1	MIDI File Record/Play
Aux Messages All Sounds Off Reset All Controllers Local On/Off All Notes Off Active Sense Reset	X X X X ○ X	○ (120,126,127) ○ (121) ○ ○ (123-125) ○ X	
Notes	*1 ○ X is selectable. *2 Recognized as M=1 even if M≠1		

Mode 1 : OMNI ON, POLY
Mode 3 : OMNI OFF, POLYMode 2 : OMNI ON, MONO
Mode 4 : OMNI OFF, MONO○ : Yes
X : No

ORIENTAL CREATIVE KEYBOARD (Sound Module, Keyboard Section, SMF Player)
 Model : EM-50 OR

Date : JUL 1999
 Version : 1.00

MIDI Implementation Chart

Function	Transmitted	Recognized	Remarks
Basic Default	1-16	1-16	4=Upper1, 6=Upper2 10=M.Drums 11=Lower
Channel Changed	1-16, Off	1-16, Off	
Mode Default Message Altered	Mode 3 Mode 3, 4(M=1) *****	Mode 3 Mode 3, 4(M=1) *2	
Note Number True Voice	0-127 *****	0-127 *1 0-127	
Velocity Note ON Note OFF	○ *1 X	○ *1 X	
After Touch Key's Ch's	X X	○ ○	
Pitch Bend	○ *1	○ *1	
Control Change	0, 32 ○ 1 ○ *1 5 ○ 6, 38 ○ 7 ○ *1 10 ○ 11 ○ 64 ○ *1 65 ○ 66 ○ 67 ○ 84 ○ 91 ○ 93 ○ 98, 99 ○ *1 100,101 ○	○ *1 ○ ○ ○ ○ *1 ○ ○ ○ ○ ○ ○ ○ (Reverb) ○ (Chorus) ○ *1	Bank Select Modulation Portamento Time Data Entry Volume Panpot Expression Hold 1 Portamento Sostenuto Soft Portamento Control Effect 1 Depth Effect 3 Depth NRPN LSB,MSB RPN LSB,MSB
Program Change True #	○ *1 *****	○ *1 0-127	Program Number: 1-128
System Exclusive	○	○	
System Common Song Pos Song Sel Tune	○ *1 X X	○ *1 X X	
System Real Time Clock Commands	○ *1 ○ *1	○ *1 ○ *1	MIDI File Record/Play
Aux Messages All Sounds Off Reset All Controllers Local On/Off All Notes Off Active Sense Reset	○ ○ X ○ ○ X	○ (120,126,127) ○ (121) ○ ○ (123-125) ○ X	
Notes	*1 ○ X is selectable. *2 Recognized as M=1 even if M 1		

Mode 1 : OMNI ON, POLY
 Mode 3 : OMNI OFF, POLY














































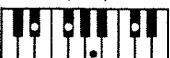




















Mode 2 : OMNI ON, MONO
 Mode 4 : OMNI OFF, MONO

○ : Yes
 X : No

19. Music Style list

BN	Style Name	BPM	TimeSign	CC00	CC12	BN	Style Name	BPM	TimeSign	CC00	CC12	BN	Style Name	BPM	TimeSign	CC00	CC12
11	Rock1	128	4/4	1	17	61	Bossa1	125	4/4	22	16	O31	Malfouf2	100	4/4	50	39
12	Rock2	140	4/4	1	18	62	Bossa2	173	4/4	22	18	O32	Katkofti	106	4/4	50	40
13	HardEdge	96	4/4	1	16	63	Samba1	105	4/4	22	9	O33	Dabkah	100	4/4	50	41
14	Sh Rock1	100	4/4	1	19	64	Samba2	130	4/4	27	10	O34	Leebi	100	4/4	50	42
15	Sh Rock2	113	4/4	1	20	65	Mambo	89	4/4	38	6	O35	Samba-Eg	108	4/4	50	43
16	Sh Balld	88	4/4	4	12	66	Merengue	115	4/4	59	3	O36	Fox	110	4/4	50	44
17	Sl Rock1	90	6/8	5	15	67	Salsa	98	4/4	25	7	O37	Noubi	120	4/4	50	45
18	Sl Rock2	80	4/4	5	16	68	ChaCha	121	4/4	24	7	O38	Greek	110	4/4	50	46
21	Dance 1	138	4/4	2	51	71	Son	125	4/4	45	1	O41	RmbaGulf	160	4/4	50	47
22	Dance 2	129	4/4	2	53	72	Calyпсо	165	4/4	35	4	O42	Khebeiti	180	4/4	50	48
23	House 1	128	4/4	2	40	73	Reggae	96	4/4	8	8	O43	Arabi	160	4/4	50	49
24	House 2	127	4/4	2	45	74	Rhumba	97	4/4	23	6	O44	Adani	180	4/4	50	50
25	Hip Hop	94	4/4	3	16	75	EurTango	120	4/4	26	7	O45	Sharh	150	3/4	50	51
26	Techno	132	4/4	2	58	76	SlWaltz	90	3/4	18	5	O46	Maghrebi	145	6/4	50	52
27	Big Beat	132	4/4	1	25	77	March	120	4/4	20	11	O47	Guartcha	120	4/4	50	53
28	Pop Dance	130	4/4	7	41	78	Polka	128	4/4	19	9	O48	Waltz-Or	150	3/4	50	54
31	8B Pop1	60	4/4	6	32	81	G Slow	93	4/4	6	40						
32	8B Pop2	70	4/4	6	33	82	G Bossa	145	4/4	22	21						
33	8B Pop3	85	4/4	6	36	83	G Pop	100	4/4	7	40						
34	8B Pop45	75	4/4	6	39	84	G FstPop	87	4/4	22	22						
35	16B Pop1	65	4/4	7	31	85	P Ballad	55	4/4	5	17						
36	16B Pop2	85	4/4	7	33	86	P Shuffl	180	4/4	15	6						
37	16B Pop3	100	4/4	7	34	87	P Night	60	4/4	13	11						
38	Bld RckS	78	4/4	7	37	88	P Jazz	150	4/4	12	19						
41	Rock'N1	122	4/4	10	22	O11	Saidi-M1	120	4/4	50	23						
42	Rock'N2	176	4/4	10	23	O12	Saidi-M2	135	4/4	50	24						
43	Rock'N3	185	4/4	10	25	O13	Saidi-M3	135	4/4	50	25						
44	PopRock	140	4/4	39	13	O14	Saidi-Eg	95	4/4	50	26						
45	Surf	153	4/4	10	21	O15	Maksoum	120	4/4	50	27						
46	Boogie	150	4/4	9	7	O16	Maks-Mlf	105	4/4	50	28						
47	Charlest	212	4/4	11	4	O17	Baladi	95	4/4	50	29						
48	Twist	158	4/4	10	20	O18	Fallahi	180	4/4	50	30						
51	SlSwing	56	4/4	13	7	O21	Malfouf1	100	4/4	50	31						
52	MedSwing	110	4/4	13	8	O22	Zar	90	2/4	50	32						
53	CoolJazz	160	4/4	12	7	O23	Wehda-Kb	120	4/4	50	33						
54	SwCombo	184	4/4	12	18	O24	Masmoudi	120	8/4	50	34						
55	Blues	60	4/4	44	14	O25	Zekr	106	4/4	50	35						
56	R&B	114	4/4	44	5	O26	Samai-D	105	3/4	50	36						
57	BigBand	135	4/4	14	3	O27	Samai-T	120	10/4	50	37						
58	Shuffle	180	4/4	15	3	O28	Zaffa	85	4/4	50	38						

20. Chord Intelligence charts

C	C#	D	E \flat	E	F
					
CM7	C#M7	DM7	E \flat M7	EM7	FM7
					
C7	C#7	D7	E \flat 7	E7	F7
					
Cm	C#m	Dm	E \flat m	Em	Fm
					
Cm7	C#m7	Dm7	E \flat m7	Em7	Fm7
					
CmM7	C#mM7	DmM7	E \flat mM7	EmM7	FmM7
					
Cdim	C#dim	Ddim	E \flat dim	Edim	Fdim
					
Cm7 (b5)	C#m7 (b5)	Dm7 (b5)	E \flat m7 (b5)	Em7 (b5)	Fm7 (b5)
					
Caug	C#aug	Daug	E \flat aug	Eaug	Faug
					
Csus4	C#sus4	Dsus4	E \flat sus4	Esus4	Fsus4
					
C7sus4	C#7sus4	D7sus4	E \flat 7sus4	E7sus4	F7sus4
					

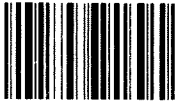
F#	G	A \flat	A	B \flat	B
F#M7	GM7	A \flat M7	AM7	B \flat M7	BM7
F#7	G7	A \flat 7	A7	B \flat 7	B7
F#m	Gm	A \flat m	Am	B \flat m	Bm
F#m7	Gm7	A \flat m7	Am7	B \flat m7	Bm7
F#mM7	GmM7	A \flat mM7	AmM7	B \flat mM7	BmM7
F#dim	Gdim	A \flat dim	Adim	B \flat dim	Bdim
F#m7(b5)	Gm7(b5)	A \flat m7(b5)	Am7(b5)	B \flat m7(b5)	Bm7(b5)
F#aug	Gaug	A \flat aug	Aaug	B \flat aug	Baug
F#sus4	Gsus4	A \flat sus4	Asus4	B \flat sus4	Bsus4
F#7sus4	G7sus4	A \flat 7sus4	A7sus4	B \flat 7sus4	B7sus4

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