



Mirage Operating System Version 3 Updates

ENSONIQ is committed to ongoing development geared towards upgrading your Mirage systems. Since the Mirage's Operating System is stored on disk, we are able to offer this upgrade with each Sound Diskette or Blank Formatted Diskette. Version 3 and higher numbers of the operating system offer some important new features that will enhance your performance with the Mirage.

The Mirage's Operating System is loaded into the Mirage when the system is first turned on or when you press **Load ALL, 0, Enter** on the Mirage Keypad. We recommend that you load the most current version of the operating system into the Mirage at the start of any session. You must boot up the DMS-8 and the DSK-8 (with serial numbers greater than 14731) with this operating system or higher. Otherwise the system will not boot and OS will show in the display. All of your previously saved sounds, stored on older disks, may still be loaded into the Mirage and played. (To check the version of the operating system currently loaded into the Mirage, select parameter 97).

Mirage Operating System 3 and higher offer the following performance enhancements to the Mirage:

1. The ability to receive information from various external MIDI controllers such as: modulation wheel, breath controller, foot pedal, data entry slider, and volume pedal.
2. The ability to receive MIDI After touch information.
3. The ability to receive MIDI Polyphonic After touch information.
4. The ability to send and receive MIDI disk loading and program change information.
5. The ability to load a sound from disk and instantly select any of the four programs.
6. The ability to turn off local mode, thereby allowing the Mirage to transmit out MIDI information but not sound internal voices.

The following new parameters are now available on the Mirage. These are in addition to the parameters outlined in the Mirage Musician's Manual (pages 26-31).

MIDI PARAMETERS	Range	Default
78/LFO Modulator Source	[0-9]	1
79/MIX Modulator Source	[0-9]	1
80/After Touch Modulation Depth	[0-63]	63
84/MIDI Function Enable	[0-3]	2
KEYBOARD/PROGRAM PARAMETERS		
30/Local On/Off	[ON-OFF]	ON

You can save any of your own values of these parameters on your operating system diskette by selecting parameter 14 and pressing the enter button.

External MIDI Controllers

The Mirage can now receive information from external MIDI controllers which affect LFO modulation (parameter 78) and MIX modulation (parameter 79). You need to set up the Mirage by selecting these parameters and entering the following controller numbers:

Controller Number	Controller
0	No External Controller
1	Modulation Wheel
2	Breath Controller
4	Foot Pedal Controller
6	Data Entry Slider
7	Volume Pedal
8	After Touch
9	After Touch — Polyphonic

Note: To use an external controller for MIX Modulation, you must also set parameter 35 on the Mirage to 0.

When using aftertouch from an external controller you can control the depth of modulation by selecting parameter 80 and setting the range from 0 (no effect) to 63 (maximum effect).

Example:

This example works best with a MIDI controller equipped with after touch, such as the DX-7.

1. Connect a MIDI cable from the MIDI out jack of the DX-7 to the MIDI in jack on the Mirage.
2. Load in the electric guitar sound from Sound Diskette #6. This sound is a MIX mode sound which allows a mix between a straight guitar sound and a feedback sound by using a modulator. On the Mirage this is controlled by the modulation wheel.
3. Set parameter 32 (Upper and Lower) to 0. This enables LFO modulation by the Mirage's Mod Wheel. You may want to save this setting to disk (parameter 13).
4. Set parameter 78 to 1. This enables LFO modulation from an external Mod Wheel.
5. Set parameter 79 to 8. This enables MIX Modulation from after touch on an external controller.
6. Play the Mirage from the DX-7 keyboard. You can control the feedback effect by how hard you press on the DX-7 keyboard. You can also control LFO modulation from the DX-7's Mod Wheel.
7. Adjust parameter 80 to scale the after touch to your playing style.
8. Try setting parameter 78 to 6. This will cause the LFO to be modulated by the DX-7 data entry slider. You will be able to control the LFO by sliding the data entry slider up or down.
9. Try setting parameter 79 to 2. This will allow you to mix in the feedback effect with a breath controller.

MIDI Program Change Commands

You can now change sounds and programs on the Mirage from an external MIDI controller.

84/MIDI Function Enable [0-4] Default 2

This parameter has been changed from an on/off switch to a four stage function:

Value

- 0 Only MIDI key information is transmitted or received.
- 1 Key information and controller information are both transmitted and received.
- 2 Same as value 1 with the addition that program changes are both transmitted and received.
- 3 Same as value 2 with the addition that to change a program on the Mirage you must also press the MIDI +1/yes button on instruments such as the DX-7. This setting allows you to change sounds on your controller instrument without changing sounds on the Mirage.

Consult the owner's manual of your particular MIDI controller for the proper program transmit number. Following are two tables — the first for the DX-7 and the next for most other MIDI controllers.

Mirage Program Number: DX-7

	1	2	3	4
Load All Sound 1	1	4	7	10
Load All Sound 2	2	5	8	11
Load All Sound 3	3	6	9	12
Change Upper/Lower Program Number	13	14	15	16
Load Lower Sound 1	17	20	23	26
Load Lower Sound 2	18	21	24	27
Load Lower Sound 3	19	22	25	28
Change Lower Program Number	29	30	31	32
Load Upper Sound 1	33	36	39	42
Load Upper Sound 2	34	37	40	43
Load Upper Sound 3	35	38	41	44
Change Upper Program Number	45	46	47	48

Requires Cartridge Programs 1-16

Mirage Program Number: Other MIDI Controllers

	1	2	3	4
Load All Sound 1	0	3	6	9
Load All Sound 2	1	4	7	10
Load All Sound 3	2	5	8	11
Change Upper/Lower Program Number	12	13	14	15
Load Lower Sound 1	16	19	22	25
Load Lower Sound 2	17	20	23	26
Load Lower Sound 3	18	21	24	27
Change Lower Program Number	28	29	30	31
Load Upper Sound 1	32	35	38	41
Load Upper Sound 2	33	36	39	42
Load Upper Sound 3	34	37	40	43
Change Upper Program Number	44	45	46	47

Note: Changing programs from your MIDI controller will cause the Mirage to display only the value of the program (1, 2, 3 or 4). The first display on the Mirage will be blank.

Example:

1. Set Parameter 84 on the Mirage to 2. This will allow all key, controller and program change information to be transmitted and received.
2. If you select program 3 on the DX-7 it will cause the Mirage to load sound 3 and select program number 1.
3. Selecting program 16 on the DX-7 will change the upper and lower programs of the Mirage to number 4.
4. If you set parameter 84 on the Mirage to 3, you must press the +1/yes button on the DX-7 following the program selection.

Loading Sounds and Transmitting Program Changes

You may now load a sound from the front panel of the Mirage and select a program number (1-4) at the same time. Also, the Mirage will now transmit program changes over MIDI.

Sound Loading Procedure

When loading a lower, upper or both sounds from disk, you can select program 1, 2, 3 or 4 before hitting the enter key. This will load in the given program along with the sound being loaded.

Transmitting MIDI Program Changes

If parameter 84 is set to a value of 2 or 3, then loading a sound from the Mirage will transmit MIDI program change information as outlined in the previous charts.

If you change programs with the upper/lower link switch (parameter 25) set on then program changes 13 through 16 will be transmitted. If you change a lower program with the link switch set off then program changes 29-32 will be transmitted. If you change upper programs with the link switch off then program changes 45-48 will be transmitted.

Example:

Press Load Upper 2 and enter a 3. This will load Upper Sound 2 from the disk and automatically select Upper Program 3.

Note that if parameter 84 is set to 2 or 3 then the Mirage will also transmit a program change through MIDI as in the previous charts.

Using The Mirage As a MIDI Controller

The Mirage Keyboard can be set to transmit out MIDI information without playing sounds on the internal Mirage. The Mirage will still sound voices which are coming in from MIDI.

30/Local ON/OFF [ON-OFF] Default ON

When the switch is set on, the Mirage functions as normal. When set off, the Mirage will not sound voices played from the keyboard. This is a useful function when using the Mirage in a multiple keyboard set-up or when using the Mirage with external MIDI sequencers.