MOTIF-RACK 1.02 OS UPDATE PROCEDURE
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This firmware improves sound generation, and improves high polyphony playback operation from sequencer software.

<ATTENTION>

Before the word "Completed" appears on the Motif Rack LCD, please do not adjust or change any settings on your sequencer software or the Motif Rack. Please use the Motif Rack system exclusive bulk dump function to bulk dump all sounds to a suitable sysex application prior to installation of this updater. It is recommended that you perform a complete system exclusive bulk dump to back up your Motif Rack on PC or Mac before proceeding. (See Instructions at the end of this document for backup procedure)

Procedure for updating your Motif Rack

1. Connect your PC or Macintosh and MOTIF-RACK as below.

        PC   -------->   MOTIF-RACK
        USB port

* Please install the USB MIDI Driver for MOTIF-RACK before connecting. These files can be found on the CD-ROM which comes with your Motif Rack.

2. Turn on the MOTIF-RACK switch holding down

Cursor UP...PAGE RIGHT..+ .EXIT..altogether.

Your Display will now read

Motif Rack Updater

Current Ver Kernel	xxxxx	
Firm		xxxxx
Data		xxxxx

Where xxxxx is the existing revision type

[handwritten note: USe WINDOWS MEDIA PLAYER BUT GOTO CONTROL Panel ♪ SOUND & MIDI DEVICE SELECT YAMAHA 01 TURN LOOP OFF]

3. Open the "V1020_firm.MID" file on SQ01 or suitable sequencer software

4. Play back the MIDI file at TEMPO 120, ensure all quantization options are set to off, and ensure that no data filtering occurs for MIDI transmission

Your Motif Rack LCD should now appear as follows.

```
###MOTIF-RACK Update###
[  UPDATER FROM MIDI]
Current Packet:*********h
```

The firmware update should take about 20 minutes to complete. During the update ensure that no interruption of the update procedure takes place.

5. Don't turn off the switch of the MOTIF-RACK at any stage during this update.

6. After checking the "Completed Reboot" message has appeared on the Motif Rack LCD, turn off the switch and then turn on the switch again.

Your OS should now be updated. If the Motif Rack does not work properly after upgrading, and you've tried upgrading several times, please contact your nearest Yamaha dealer or subsidiary office.

<How to back-up the User Data on MOTIF-RACK>

When you update the firmware of your MOTIF-RACK, all user data will be deleted (The unit will revert back to factory default settings). Make sure you back up any valuable data using your sequencer program prior to any update of firmware if appropriate.

(a) Connect MOTIF-RACK to sequence software.
　　　*Connect MOTIF-RACK to your computer using a USB cable. (You need to install USB-MIDI driver on CD-ROM bundled with MOTIF-RACK beforehand)
　　　*Set the MIDI IN port on the sequence software to USB port on MOTIF-RACK.

(b) Set the MIDI IN/OUT parameter to USB mode
　　(i)　　　Press the [UTILITY] button.
　　(ii)　　　Press the [PAGE ←or→] button repeatedly until the "UTILITY [MIDI] page displays.
　　(iii)　　　Move the cursor by the [Cursor ↓] button and select the "MIDI IN/OUT".
　　(iv)　　　Set to USB using the Data dial.

(c) Prepare for All Bulk Dump Out on MOTIF-RACK
　　(i)　　　Press the [UTILITY] button.
　　(ii)　　　Press the [PAGE→] button repeatedly until the "UTILITY [Jobsel]" page displays.
　　(iii)　　　Move the cursor by the [Cursor ↓] and select the "BulkDump".
　　　　　　　Press the [Enter](Shift.Mute / Sel) to enter the BulkDump mode.
　　(iv)　　　Select the "All Bulk Dump" by moving the cursor using the [Cursor ↑or ↓] buttons.
　　　　　Mark X at the left side of the "All Bulk Dump" using the Data dial.
(d) Start recording of the sequence software connected to MOTIF-RACK.

　　<Attention>
　　　　　☐　Set the Echo Back (MIDI Thru) to OFF on sequence software.
　　　　　☐　Set all the MIDI Message Filter functions to OFF when recording and MIDI input.
　　　　　　　(When the filter is set to ON, back-up data can be recorded without full data.)

. When you back up data using SQ01 bundled with MOTIF-RACK, set the MIDI Receive
  Buffer Size as follows. (After installing SQ01, you may not be able to receive data with
  the default setting.)

How to set up buffer size on SQ01

(i)   From the menu bar, select the [Setup]>[MIDI]>[Device].
(ii)   Select the System Exclusive tab on the MIDI dialog.
(iii)   Set the Receive Buffer Size to 65536 or above. (Default setting is 8192)

(e) Start All Bulk Dump Out on MOTIF-RACK.
   Press the [ENTER](Shift+Mute/Sel) on MOTIF-RACK and press the [ENTER](Shift+Mute/Sel)
   again when the Confirmation display shows up.

(f) Data transmission will start showing the "Transmitting MIDI Bulk...".
   It takes about 8 minutes to record the data (data back-up).
   (about 240 measures in recording at Tempo 120.)
The "Transmitting MIDI Bulk..." message will disappear from LCD on MOTIF-RACK and the
"Completed" will show up in a second and then go back to the "UTILITY [Jobsel]" display when
completing the data transfer.

**(g) Save the recorded data in a file on sequence program. (e.g. The file size will be about
700 KB in the SMF format.**

After the firmware update on MOTIF-RACK finished, you can have data back before the update
by playing back the saved data to transfer it to MOTIF-RACK.
(The MIDI transmission is automatically reset to the "MIDI mode" after the firmware update. Set
to the "USB mode" with a process (b) before playing (transmitting) data.