BAM UPGRADE INSTRUCTIONS
OTO Machines - January 2024
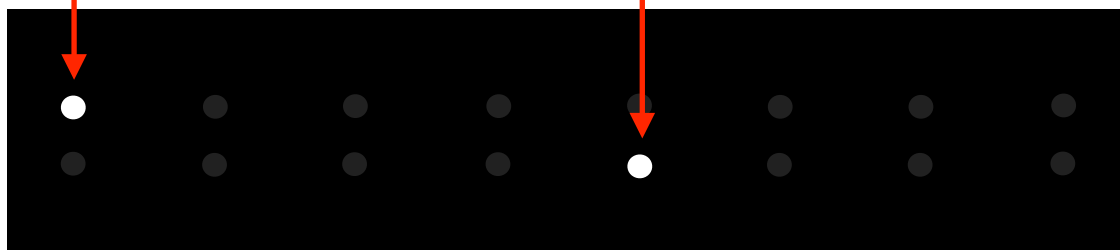
Please first check the revision already installed on your BAM :

1/ Switch off BAM.
2/ Press IN GAIN and FILTERS while powering BAM on.
3/ During 3 seconds, one LED is lit on the upper line and another LED on the lower line.
4/ The upper line LED should be 1 and is the first digit of the revision (before the dot).
5/ The lower line LED should be 3, 4 or 5 and is the second digit of the revision (after the dot).
   For example if the upper LED is 1 and the lower LED is 5, the revision is 1.5.

First digit of the revision number

Second digit of the revision number

Revision is 1.5

As of January 2024, the latest revision for BAM is 1.5.
Revision 1.6 is planned for 2024 Q2.

How to upgrade BAM firmware (Mac) :

1/ Connect a MIDI cable between the MIDI out port of your MIDI interface and the BAM's MIDI input.

2/ Download the SysEx file **BAM_rev_X.X.syx** from our website :
http://www.otomachines.com/support/

3/ Download and install freeware SysEx utility **SysEx Librarian** from this address :
http://www.snoize.com/SysExLibrarian/
You can also use a DAW that have the possibility to send SysEx files. In that case, go to **8**.

4/ Move or copy the **BAM_rev_X.X.syx** file into the « SysEx Librarian » folder (in your « Documents » folder).

5/ Double-click on the **BAM_rev_X.X.syx** file. **SysEx Librarian** will open.

6/ Verify that your MIDI interface is displayed on the upper field, near the **Play** button.
If not, select your MIDI interface.

7/ Go to **SysEx Librarian** then **Preferences…**.
Set **Pause between played messages** to 250 milliseconds and
SysEx receive timeout to 500 milliseconds.
Close the **Preferences…** menu.

8/ Switch BAM on while pressing the **TYPE**, **IN GAIN**, **FILTERS** and **CHORUS** switches.
These 4 switches light up. BAM is now ready for the upgrade.

9/ Select the **BAM_rev_X.X.syx** file in the **SysEx Librarian** main screen and press the **Play** button. The following message **Sending message...** is displayed on the Sysex Librarian screen.
If you use a DAW, send the file **BAM_rev_X.X.syx** to the correct MIDI output port.

10/ LEDs 1 and 9 are lit on the BAM screen indicating that the firmware upgrade has started. The LEDs on the BAM screen will display the progress of the firmware upgrade (from LEDs 1 and 9 to the whole 16 LEDs lit up).

BAM will reset itself and is ready to use.

You can check the revision number by switching BAM on while pressing the **IN GAIN** and **FILTERS** switches.

How to upgrade BAM firmware (PC) :

1/ Connect a MIDI cable between the MIDI out port of your MIDI interface and the BAM's MIDI input.

2/ Download the SysEx file **BAM_rev_X.X.syx** from our website :
http://www.otomachines.com/support/

3/ Download and install SysEx utility **MIDI-OX** from this address :
http://www.midiox.com/
You can also use a DAW that have the possibility to send SysEx files. In that case, go to **7**.

4/ Open the **MIDI-OX** application.

5/ Click **Options** then **MIDI Devices...**. Select your MIDI interface on the **MIDI Outputs** box. Your MIDI interface should be highlighted. Click **OK**.

6/ Click **View** then **SysEx...**. Go to **Sysex** then **Configure...**.
Set **Low Level Output Buffers** to 300 (size) and 19 (Num)
Auto-adjust Buffer... and **Delay After F7** boxes should be unchecked. Click **OK**.

7/ Switch BAM on while pressing the **TYPE**, **IN GAIN**, **FILTERS** and **CHORUS** switches. These 4 switches light up. BAM is now ready for the upgrade.

8/ On the **SysEx View and Scratchpad** screen, click **File** and **Send SysEx File...**.
Select the **BAM_rev_X.X.syx** file with the opened browser.
MIDI OX is now sending the firmware via SysEx.
If you use a DAW, send the file **BAM_rev_X.X.syx** to the correct MIDI output port.

9/ LEDs 1 and 9 are lit on the BAM screen indicating that the firmware upgrade has started. The LEDs on the BAM screen will display the progress of the firmware upgrade (from LEDs 1 and 9 to the whole 16 LEDs lit up).

BAM will reset itself and is ready to use.

You can check the revision number by switching BAM on while pressing the **IN GAIN** and **FILTERS** switches.

BAM revision Changelog
(NF = New feature, BF = Bug fix, IM = Improvement)

Revision nr	Date	Description of changes
1.3 or below	N/A	Need to be upgraded to 1.4 or more
1.4	June 2018	NF : THRU mode added (TYPE no. 8) BF : CC no. 18 was not working IM : some algos were prone to internal clipping with long reverb times and high damping
1.5	May 2021	BF : MIDI CC and PGM CHGE were not working well under certain circumstances