

BITSTREAM[®] 3X



Addendum User Manual V1.3 to V1.7

CME

Wave Idea
AUDIO SOLUTIONS

This Addendum on the Bitstream 3X manual describes the most important changes and new features added since software version V1.3. You need to be on V1.7 for this.

The activity of the arpeggio is now displayed on the LCD

If the arpeggio is active, you can see that on the LCD screen now:



When inserting a checksum into sysex: the Roland method is now applied

Some companies use a checksum value in a sysex string to calculate if the complete string has arrived properly into the destination (synth, effects, controllers etc.). There are various types of calculations used by various companies. Other companies don't use this at all.

Roland uses a specific way of calculating which normally can be found in their manuals. In short it goes like this:

When calculating the checksum you must add up the 4 **address** bytes and the **data** bytes. Then you divide by 128 and take the remainder. Finally, you subtract the remainder from 128. You should end up with a value of 128 or less if you did it correctly. This is the Checksum. If the Checksum is 128, then substitute a value of 0.

So in this typical Roland string F0 41 10 6A 12 00 00 00 01 7F CHECKSUM F7 the first address byte is the 6th byte. So $0 + 0 + 0 + 1 + 127$ (F7h) = 128. 128 divided by 128 gives a remainder of 0. 128 minus 0 = 128. That must be substituted by a value of 0 (in **Roland** checksums only!)

But the software will do this for you now. The above is meant to be able to check it if you like.

When a MIDI STOP/START realtime event is received, all automations are re-synchronized

All automations are now stopped/started according to incoming realtime events start/stop or continue.

Lfo, arp and motion sampler are reset to the beginning of the measure when start/stop is received from midi/usb inputs (external sync) or received from internal sync.

Motion sampler track length can now be updated only when the track is armed to record

LFO can now be synched to measures : from 0.5 measure to 8 measures (0.5 measure step)

Until this firmware version (V1.7) the lfo was not synched to measures. But now the frequency of the lfo is adjusted to measures (from 1/2 to 8 with 1/2 measure step), you can generate a sinewave for instance which is fully synchronized to the measures of your song

Improved Mackie control emulation:

Faders bank change are now emulated by changing MIDI channels instead of groups

Until now the group button was used to emulate faders bank changes, but this same button was also used to change between groups.

The problem was for instance that buttons on group 0 were assigned to solos and buttons for group 1 were assigned to mutes. When switching from group 0 to 1 a bank change message was sent so group 0 (buttons 1-8) becoming group 1 (buttons 9-16) and it was therefore impossible to update solos on buttons 1-8.

In Reason mode, all buttons are automatically configured in push mode

This is a better configuration for most of the Reason synths.

Home screen displays number of expansion modules found

Realtime events (generated by the Bitstream 3X) are no more locked when sending scenes memories

Until now when scenes memories were sent, the realtime events were locked resulting in sync losses.

When sending scenes, controls values are now updated according to the scene number

Now when sending scenes, all controls values are updated with the values located in the scenes memories.

When sending scenes, if hook mode is enabled, analog controls become un-hooked

If a control has a different physical position, when sending scenes the hook mode is updated.

Bitstream 3X now manages connected expansion module(s)

It is no more required to reboot the Bitstream 3X after an initialization to factory default

User and Mackie/Logic modes latencies are now even better

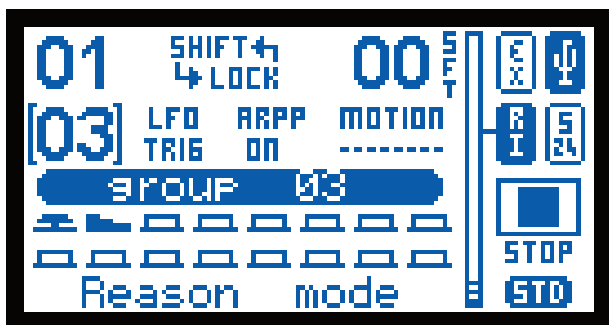
Joystick now features "hook mode", similar to all other analog controls

Similar to all other analog controls, this was not the case because initially the joystick was featuring a spring to center option.

Joystick now features "autosend at startup" function, similar to all other controls

Autosend means the control physical value can be sent at boot so the hardware/soft connected is initialized with all physical values of the controls of the Bitstream 3X

A small bitmap is displayed when SHIFT buttons locks MIDI data



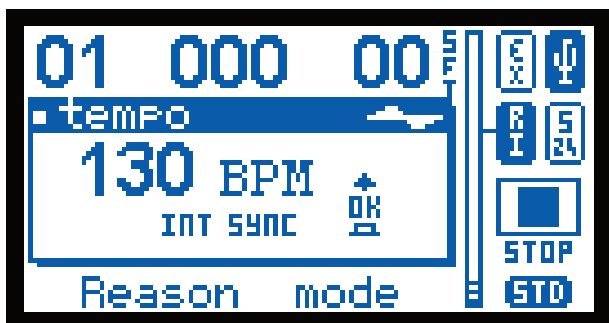
When a control is assigned with a fixed MIDI channel, the channel is now displayed on the LCD

The real channel is now displayed when it is different than the global midi channel

LFO Frequency and range have been improved (64 Freq steps instead of 8)

Direct access to internal sequencer tempo : OK button + select encoder while in normal screen mode

This can be configured in continuous change mode or only updated when OK button is relaxed



Continuous mode: tempo updated as soon as you turn the encoder;
One shot mode: tempo updated only when you release the ok button (usefull if you need to go to 100 to 130bpms without passing through 101, 102, 103 ...)

Improved Mackie control emulation

Mackie control is now configured to send on MIDI/USB Out 1, other non emulated controls send to MIDI/USB Out 2;

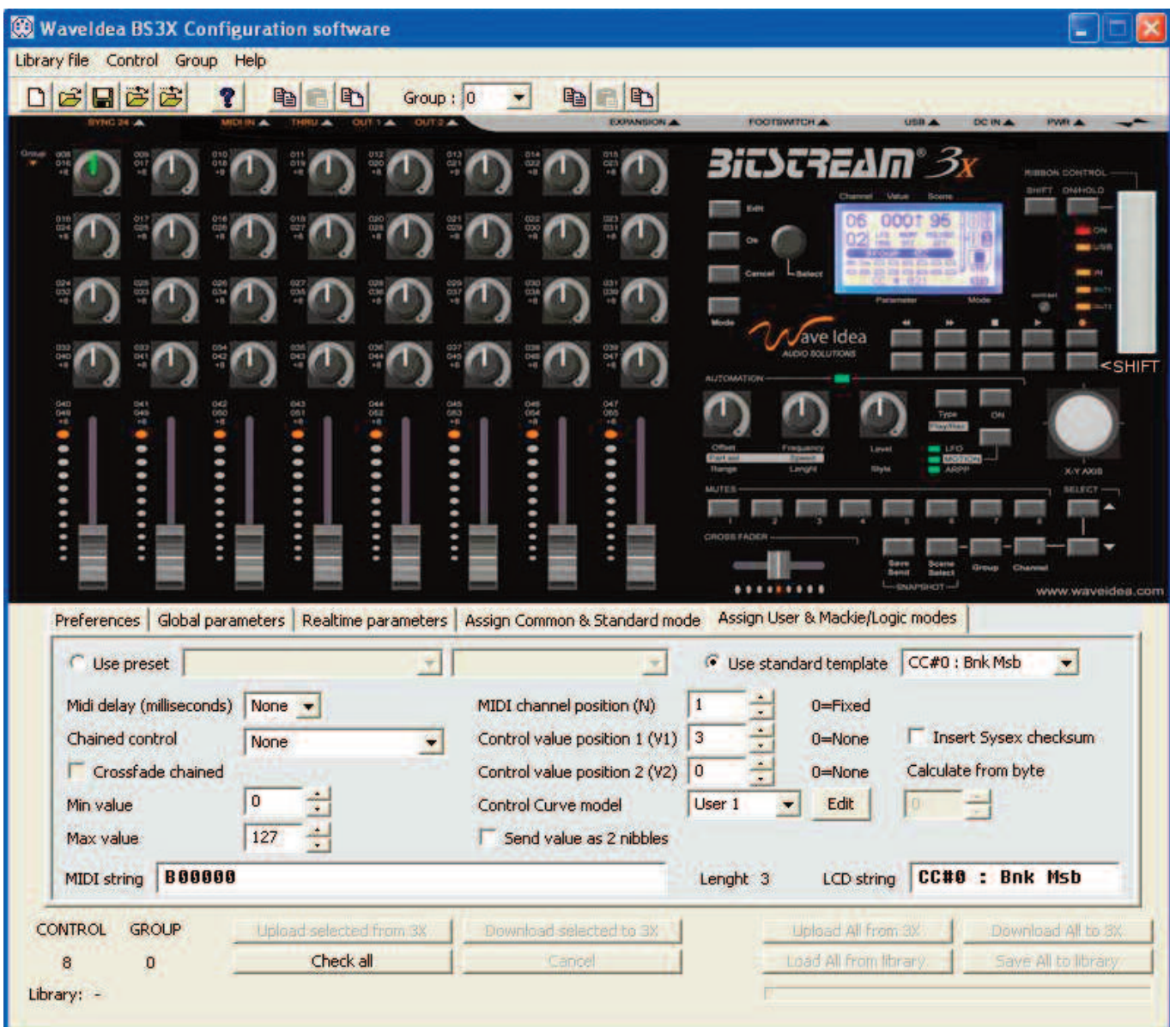
Now support both Mackie control (Cubase, Ableton Live, Sonar, ...) and Logic control;

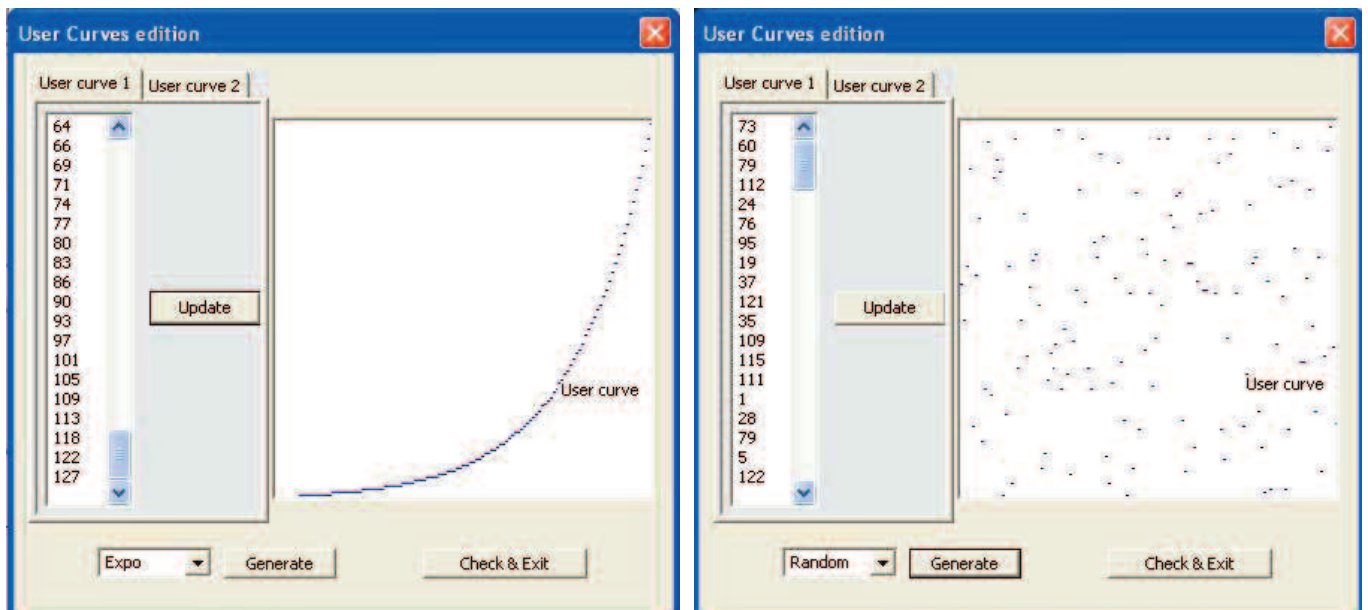
Faders feedback is now emulated (when hook mode is active) (can be disabled);

Mackie time code and channel metering are now properly displayed from Cubase SX.

Most of the above is described in the application note of mackie control emulation

User curves 1 & 2 can now be programmed/uploaded from the configuration software





You can enter your own user curve settings or generate default curves from a popup list (see above) when using the configuration software.

Bitstream 3X now searches for a connected expansion module

Each control can now be sent as 2 nibbles (MSB or LSB first) [Concerns only User mode]

See also AN009 “sys-ex introduction” for more info on system exclusive messages (downloadable from the downloadsection on our website www.waveidea.com).

Shift button locks all MIDI outputs, this function can now be disabled

Shift button can now prevent Bitstream 3X current MIDI channel insertion in the MIDI event [Concerns only User mode]

See also AN010 “Fixed midichannels on controllers” for more info on this (downloadable from the downloadsection on our website www.waveidea.com).

A small bitmap is displayed when SHIFT button is active

Added Sync-24 synchronization type to Bitstream 3X menus

Max tempo value is now 250 BPM instead of 220