Nemo x2 Release Notes & User Guide

Operating System version 5.00

Introduction

Welcome to the Nemo X2 Community Edition OS v5.00.

Our project's primary focus is to refine, evolve and streamline these magnificent sequencers.

This release offers bug fixes, stabilisation, performance tuning and essential features. Throughout the process of improvement all components have been thoroughly checked, rechecked by dedicated Nemo users. New features have been added with careful consideration and any bugs that hampered workflow eradicated forever!

The contributors to this project share the dream inherited from GenoQs of the ultimate sequencer and we have <u>not</u> compromised in any way whatsoever in making sure that this release is in keeping with that dream.

Enjoy it all!

Disclaimer

The Software is provided "as is," with all faults, defects and errors, and without warranty of any kind.

Current CE Contributors

- Jean Blanc
- Eric Ellis
- Wilson Stockman

Feedback

We are a small group putting our best efforts together to code, test and document the OS development. Your feedback and involvement are most welcome so please join us on the forum if you have any issues, questions or suggestions. We thank all of you who have taken the time and trouble to get involved!

Installation

- Download the Nemo x2 OS here:

https://groups.yahoo.com/neo/groups/genoQs_users/files/Latest_OS/2017_08_23_CE_OS_v500/Nemo_CE_OS_v500/NEMO_OS_v500.elf

- Follow the usual process of installation via USB.

http://www.genoqs.com/wp-content/uploads/2015/01/OCT_USB_Update.pdf

- OSX Sierra users please see an addendum to the USB update guide
https://groups.yahoo.com/neo/groups/genoQs_users/files/Latest_OS/2017_08_23_CE_OS_v500/USB_OSX_Update.pdf

New Features

Additional Page Modes

Chase light follow:

> ***Double click Mode Step button to activate***
> When multiple tracks are chained the page view will change automatically between tracks 1 to 4 and tracks 5 to 8 following the chase light.
> *It should be noted that when starting the sequencer with the matrix view not showing the head of the chain, then the matrix view will change to show the chase light.*
>
> *NB: When chase light follow is active the Mode Step LED will be flashing when representing the matrix view options above.*

Reset to First Page in Cluster:

> *When in Nemo PAGE follow mode on STOP / PLAY display reset to Bank first page.*

Additional Grid Modes

In Grid mode:

> ***Activation/deactivation of Pages occurs instantly***
> Grid Edit mode (default)   Edit LED flashing Orange,
> *Click Edit button once*
> Grid Live mode   Edit LED Green
>
> Double click Edit button
>
> ***Activation/deactivation of Pages occurs 'on the beat'***
> Grid Edit 'on the beat' mode   Edit LED flashes Red
> *Click Edit button once*
> Grid Live 'on the beat' mode   Edit LED Red

Improved Recording re-take (enable overdub)

In a change to legacy behaviour, starting the sequencer will not delete notes from the track currently selected for recording - this now allows a track to be overdubbed. However, in addition to using Clear there are two options to remove previously recorded notes as follows:- Whilst the sequencer running (and a track is armed for recording), clicking the Play button will delete the track under the chase light - and, if recording to a track chain a double-click of the Play button will delete all notes in the track chain.
Note: Whilst armed for recording the Align function will not be available because the Play button is used for the track/chain clear function.

Step Zoom available from all Page Edit state's

When in Edit Steps state or Edit Perform state, with a matrix Step button held - clicking the Step Mode button will enter Step zoom, thus steps can now be toggled on/off or fully edited from all Page Edit state's.
Note, with a single matrix Step button held the Step Mode led will be lit red - indicating that Step Zoom is available for that step.

Cluster Page Hold

In Grid Edit Mode holding a Page button and turning the STA encoder will, as before, set the number of page repeats, however in this new feature the Page STA may now be set to zero. If a page has a STA of zero if will repeat indefinitely - thus it is now possible to play part, or all, of a Cluster without looping back to the first page.

Chords V2 (supporting octaves)

Introduction

We present a redesign of step chords that removes the current limitation of the UI / REC mode, which has no ability to stack notes within the chord on the octave i.e. C1, C2, C3 are not possible to combine on the current Step.
A work around of course is to have other track(s) fill in the octave notes, but this hampers the workflow fluency (especially when recording).   Addressing this limitation is what Chord V2 is all about.

User Interface

In addition to the familiar chord note entry UI (which we don't need to cover here) Chords V2 offers a UI that allows you to input notes of the chord directly into each of the three octave layers.

The Chord Octave UI is entered by **double clicking a Chord button** and vice versa to go back. The following sections describes the Chord Octave UI for both sequencers.

There are now effectively two Chord modes, Chord View mode and Octave View mode, they both display chord note data but in two different ways.
      - when in Chord View mode everything looks and works, as before
      - when in Octave View mode you can navigate between the chord octave
layers
It should be noted that the note colour scheme is radically different in Octave View mode, as much more information is being conveyed when viewing the chord's 'octave view'.

A word of caution pilgrim:

Chord v2.0 data structure is not <u>fully</u> backward compatible, you can import the chord step from earlier versions and chord steps that contain notes <u>only in octave 1</u> will be unchanged.
However, if the chord step from earlier versions contains chord notes in higher octaves, octave 2 and/or octave 3, then the chord will have to be re-entered as its notes will have been changed(& notes added) in the upgrade process.

Nemo Chord Octave Mode - Hands On UI Guide

Chord Octave Selection

When viewing the Chord Octave UI you can navigate between octave layers by cycling the Chord button 1-3 octaves respectively.

UI Location	State Description
Chord LED ORANGE BLINK	Edit root octave range i.e. C1-B1
Chord LED GREEN BLINK	Edit 2nd octave range i.e. C2-B2
Chord LED RED BLINK	Edit 3rd octave range i.e. C3-B3

Chord Octave Note Input

When viewing the Chord Octave UI the top row displays the 12 note status within chord that is relative to the selected octave.

UI Location	State Description
Note LED ORANGE	Note **IS** set **ONLY** in currently viewed octave
Note LED GREEN	Note **IS** set in currently viewed octave **AND** also in another octave(s)
Note LED RED	Note **NOT** set in current octave, but **IS** set in one or more of the another octave(s)
Note LED ORANGE BLINK	Chord root note
Note LED SHINE_GREEN	Note **IS** set in **ALL** 3 Octaves (full stack)
Note LED SHINE_RED	Note **IS** set in **ALL** 3 Octaves (root note full stack)

Building chords in Octave View Mode

It should be noted that the note colour scheme is radically different in Octave View mode as much more information is being conveyed when viewing the chords 'octave view'.

Enter Octave View mode by double clicking the Chord button, from default the Chord led will flash orange. Assuming the step is turned on and contains a single note, Row 1 will have a flashing orange led - this is the root note. Other notes (in this octave) may be turned on or off by clicking their respective buttons - if turned on their led(s) will be orange.

Now click the Chord button and its led will change to flashing green - this means we are now looking at the octave above the root note (octave 2) and any notes that were entered in octave 1 will now be shown with red leds (the chord root note will be flashing red).

The red led(s) simply means that the note exists in a different octave to the one you are looking at.

Again steps can be toggle on and off, and again when turned on they will be orange unless the note already exists in octave 1 in which case the note led will turn green - signifying that the note is on in the currently viewed octave, and also another octave. Now click the Chord button and its led will change to flashing red - this means we are now looking at the next octave up (octave 3), which works in similar matter to the previous octaves.

The led of a note that exists in all three octave will Shine_Green and if the root note exists in all three octave it will Shine_Red.

Adding Octave spaced notes
If there are no notes at a pitch in any of the available octaves then double-clicking the note will turn-on that pitch in all three octaves.

Removing Octave spaced notes
From any 'octave view', if there are notes at a pitch in other octaves (i.e. led, red, green or shine_green) then, double-clicking the note will turn that note on in the current octave, and any note(s) at that pitch off in the other octaves. Removing notes at the octaves above the root note is accomplished by turning them off in their respective octaves.

Remembering the Chord Mode
When returning to Page mode with the Esc button from either of the Chord Modes, the last used Chord Mode is remembered - therefore when again zooming into a Step you immediately enter your preferred Chord Mode.

Note: Although chord notes may be turned on or off in both chord modes, if the root note is 'stacked' then the the 'root stack' can only be turned off in Octave View mode.

Nemo x2 - In a nutshell

- Doubles the amount of Pages
- Doubles the amount of Tracks per Page
- Doubles the amount of Concurrent Pages
- Multiplies by 4 the amount of Concurrent Tracks
- Multiplies by 4 the amount of Steps
- Allows Chords having the same note on multiple octaves (Chords v2), either by Midi input in any of the Recording Modes or by manual (keyed) input
- Adds - Chase Light Follow for Track Chains
- Adds - Reset to First Page on Page Cluster Follow
- Adds - "on the beat" Grid Modes
- Improves Recording re-take
- Step Zoom now available from all Page Edit State's
- Cluster Page Hold function
- Fixes all known Bugs

Technical Specification

The Nemo x2 operating system upgrades the Nemo's capacity as follows:-

Nemo	x1	x2
Number of Pages	64	128
Number of Tracks per Page	4	8
Concurrent Pages	4	8
Concurrent Tracks	16	64
Total Number of Steps	4,096	16,384

Navigating between x1 and x2 views

The navigation toggle button for the Nemo x2 mode is the Mode Block Step Button and the indicator is the Mode Block Step LED.

Nemo x2 navigation with the Mode Step Button

Force to Scale	**Grid**	Sound Control A - D

Page 1	Page 64	< Mode Step Button >	Page 65	Page 128

ORANGE	< Mode Step LED >	GREEN

Pages 1 to 128

Track 1	Track 4	< Mode Step Button >	Track 5	Track 8

ORANGE	< Mode Step LED >	GREEN
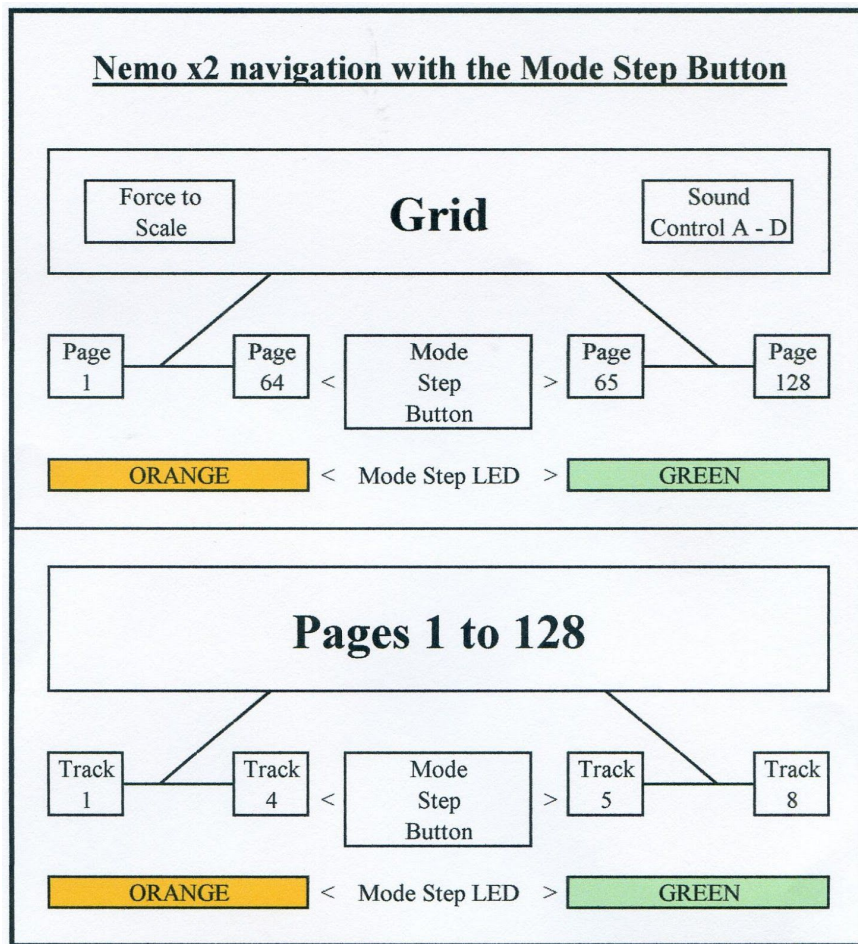
In Grid mode:

- Grid LED flashing Orange

If Step LED is Orange the grid is showing pages 1 to 64
If Step LED is Green the grid is showing pages 65 to 128
Clicking the Step button toggles the Grid pages in view

In Page mode:

- Grid LED Green
- Page LED flashing Orange

If Step LED is Orange the page is showing tracks 1 to 4
If Step LED is Green the page is showing tracks 5 to 8
Clicking the Step button toggles Page tracks in view

NB: When single Step selected (STEP LED Blink Red to indicating double-click to enter STEP mode) unless SEL is kept held indicating that the user may wish to add more steps to their selection (STEP toggle behaves as x2)

In Track mode:

      - Grid LED Green
      - Page LED Green
      - Track LED flashing Orange

      If Step LED is Orange the page is showing tracks 1 to 4
      If Step LED is Green the page is showing tracks 5 to 8
      Clicking the Step button toggles the track view

In Mix Mode:

      If Step LED is Orange the page is showing mix map 1 to 4
      If Step LED is Green the page is showing mix map 5 to 8
      Clicking the Step button toggles the mix map view

In Sound Control Mode:

      If Step LED is Orange the page is showing CC map 1 to 4
      If Step LED is Green the page is showing CC map 5 to 8
      Clicking the Step button toggles the CC map view

Changing between the matrix view is only possible in the above modes.

Observations

Resetting to start-up defaults
Press and hold the GRID mode button, while pressing the Clear button. This function is only available from the first matrix view (Step Mode led: Orange).

Chase Light Page Cluster Follow
If the RECORD transport button is active (led flashing red) then the Page View will change depending on the chase light.

Disconnecting from midi clock Slave Mode
The Nemo led flash rate is derived from the midi clock, whether in clock Master or Slave mode. Therefore, when in Slave Mode and the midi clock is disconnected - all Nemo leds will cease to flash. As well as being somewhat disconcerting, when changing back to Master Mode from this condition, it is necessary to engage sequencer PLAY before the 'led flash' is again restored.

Notes on time
Amongst the bug fixes listed in the next section are various timing improvements - the internal note timings are now very accurate, so much so that, if midi delays are experienced it will almost certainly be due to outboard equipment.

Restarting Paused Tracks
When restarting a paused track, the track button of the paused track is held, the play button is clicked and the track will start playing from its first non-skipped step. To make paused track continue playing from its current position simply hold the track button of a different track when clicking the play button. This is also useful if multiple tracks are paused and one is required to restart from the first non-skipped step whilst the others restart from their respective paused positions.

Track Selections versus Step Selections
A track selection occupies the same 'virtual space' as a step selection, however a track selection is 'stored' on the Sel button (Sel led red), and if all tracks are de-selected the Sel led is off (no track selection stored). On the other hand, whilst holding the Sel button, step selections may be stored on locations A to D – however, although these step selections may be de-selected they still remain in the allocated store location AND with that store location selected it is not possible to make a track selection!
Therefore, it is important to not store step selections to all A - D locations - leave one empty, if the multiple track selection function is wanted on that page.
Rebooting the sequencer will delete all step selection stores, whereas a track selection is stored with the page.

Hyperstep PIT influence
In addition to a 'Hyped-track' being controlled by the Hyperstep LEN & VEL, the Hyperstep PIT also now acts as a control. Therefore, the pitch of the hyped-track will assume the Hyperstep PIT, and changes to the Hyperstep PIT will influence the hyped-track in real time – hence changing the Hyperstep PIT offset will effectively influence the pitch of the hyped-track steps, at the position of the chase light !

Bug Fixes

The following bug fixes have been implemented. All fixes are subsequent to version 1.6200 which was the last official Genoqs Machines release.

Bug Fixes from Nemo v1.6200

v5.00

- Hyperstep PIT not influencing Hyped-track correctly
- Page Copy/Paste loose's the Hyperstep status of the source page
- Page Solo in Grid Edit mode can cause sequencer freeze
- Step STA advance incorrect (chords) at Reduced Track speeds
- Not possible to start sequence with Play from Pause Mode
- After reboot with Clear held, receiving sysex will freeze sequencer
- Changing POS creates high pitched note
- DIR 3 & DIR 5 will play MUTed steps
- DIR 3 & DIR 5 note timing errors
- DIR 5 random distribution uneven
- Step Phrase POS causes note length changes at Reduced track speeds
- Step Phrase POS does not rotate with Track POS
- Hyperstep lost when Track POS rotates
- No Step advance on Step Time Record
- Grid Track Mode can show deleted Page
- Step Event MCH changes incorrect with negative AMT values
- Step Event PIT / VEL swapped
- Changing Track speed limited whilst sequencer running
- On sequencer start, first note occasionally not transmitted
- ALIGNing a track chain will ALIGN to head track (not current)
- Not possible to invoke Sound Control(CC Mix) in Page Edit Mode
- Step Selection stores not selectable from any empty slot in Page Edit Mode
- Midi Clock Slave Mode causes sequencer timing to drift

Bug Fixes for Nemo x2

- On some pages, Track copy buffer clears after a paste operation
- With Track & Page follow active, Page view changes late after first loop
- Nemo freezes when entering Record in the middle of note stream
- Nemo freezes on Page Cluster Record in Slave mode
- Record operation changes Track speed to x1
- Record operation turns-off existing Steps
- A mute step on Step 16 will break any chain
- Hyper-step signalling not correct across the 2 matrix views
- Skip Step not working on both matrix views
- Grid Track mode not switching between the 2 matrix views
- Unable to switch Track view between 1 to 4 and 5 to 8.
- Step zoom not signalling correctly
- Step Selection followed by Step button changes matrix view
- Mix mode knobs not working in second matrix view
- Edit knobs not working in second matrix view
- Unable to switch between matrix views when in Mix mode
- Track Edit knobs do not select correct row in second matrix view
- Page Mix, no feedback in second matrix view
- Grid Page, not possible to change parameters in second matrix view
- Not possible to Select multiple Pages in second matrix view
- Grid Track mode showing the wrong matrix view.