reference
manual.

contents.

introduction.

overview.

AlphaLive is the AlphaSphere's official software application that allows you to program the device into an expressive musical instrument and controller. The software lets you apply a range of modes and settings to pads individually or within groups, ultimately allowing you to set up the instrument to a highly customised level.

An overview of its main features:

- Functions as a MIDI mapping editor, sampler, sequencer, and Open Sound Control converter.
- Map notes over the 'sphere using notational scales and arrangements.
- Infinitely programmable - Mix and match settings to the pads either individually or within custom groups.
- As a MIDI device the AlphaSphere can be programmed to be a polyphonic aftertouch-enabled, multichannel instrument.
- Attractive and intuitive interface - Apply settings easily using features such as drag-and-drop, presets, sample banks and premade sequence arrangements.
- Perfect for live performance - Boasts features such as playback quantization, easy scene-switching, and realtime visual feedback for each pad.
- Contains a set of filters and effects that can be used to modulate individual samples in realtime.

hardware/software communication.

When the AlphaSphere is plugged into a computer it will be recognized as a standard USB MIDI device. Currently AlphaLive is used to generate the actual MIDI messages therefore AlphaLive will always need to be open for the AlphaSphere to send MIDI data. To get the most out of the AlphaSphere and AlphaLive, access to a third party DAW (Digital Audio Workstation), MIDI Sequencer, or MIDI instrument software is recommended.

On Mac OS X, when launching AlphaLive without the AlphaSphere connected it will create a virtual MIDI device called 'AlphaLive'. This will allow you to send MIDI messages directly from AlphaLive to your MIDI sequencing software without the need of the AlphaSphere device.

On Windows, virtual MIDI devices are not supported directly within the operation system. However when launching AlphaLive without the AlphaSphere connected it will provide you with the option to connect AlphaLive to a MIDI output device. You can then use virtual MIDI port software (such as **loopMIDI**) to route the output of AlphaLive to the input of your MIDI sequencing software.

If the device is connected later on in the session, the virtual MIDI device or the MIDI output port will be removed and all MIDI communication will be done though the AlphaSphere.

using this manual.

This manual will tell you everything you need to know about using AlphaLive and interfacing the AlphaSphere with any MIDI or OSC compatible software. The main section of this manual looks at each part of AlphaLive's user interface and describes in depth what its function is and what each of its controls do. At the end of the manual there is a Glossary that describes a number of terms and jargon that appear throughout this document, as well as an Appendix that contains a number of diagrams and tables of information that you may want to refer to often.

minimum system requirements.

Mac OSX

- Mac Intel machine running OS X 10.5 or later
- 2 GHz or faster
- 1GB RAM or above
- 50MB of free HD space (an extra 1GB for sample library)

Windows

- Windows XP SP3 or later
- 2 GHz or faster
- 1GB RAM or above
- 50MB of free HD space (an extra 1GB for sample library)
- Supports the ASIO (recommended), Direct Sound, and WASAPI audio drivers/platforms. If your sound card does not have native ASIO support, you can try out **ASIO4ALL** – The Universal ASIO Driver For Windows Driver Model Audio.

Computers that do not satisfy these system requirements will not guarantee full functionality. Higher system specifications will be required if you plan to use a large amount of AlphaLive's CPU-extensive features such as audio effects and sequences. To get the most out of the AlphaSphere and AlphaLive, access to a third party DAW (Digital Audio Workstation), MIDI Sequencer, or MIDI instrument software is recommended

licensing and disclaimer.

AlphaLive is an open source application released under the GNU General Public License version 2.0. The AlphaSphere firmware is open source under the GNU General Public License version 3.0. The source code for both is available at https://github.com/nu-desine.

The information in this document is subject to change without notice and does not represent a commitment on the part of nu desine.

ASIO, VSTi, and Cubase are registered trademarks of Steinberg Media Technologies GmbH. RTAS and Pro Tools are registered trademarks of Avid Technology, Inc., or its subsidiaries or divisions. Mac, Mac OS X, Quartz Composer, Logic Pro and Audio Units are registered trademarks of Apple Inc. Windows, Windows XP, Windows 7, DirectSound and WASAPI are registered trademarks of Microsoft. Digital Performer is a registered trademark of Mark Of The Unicorn (MOTU). Reaktor is a registered trademark of Native Instruments GmbH. REAPER is a registered trademark of Cockos Incorporated. VirtualDJ is a registered trademark of Atomix Productions. Max/MSP is a registered trademark of Cycling '74. Ableton Live is a registered trademark of Ableton Inc. Reason is a registered trademark of Propellerhead Software. FL Studio is a registered trademark of Image-Line. Intel and Pentium are registered trademarks of Intel Corporation. All other product and company names are trademarks™ or registered® trademarks of their respective holders.

installation / uninstallation.

installation.

You do not need to manually install any drivers before connecting the AlphaSphere to your computer for the first time. On Windows when you initially connect the device the operating system should automatically install any required drivers. This may require an Internet connection and could take a couple of minutes. Also it may alert you that you need to restart your computer before use. On Mac the AlphaSphere is a true plug-and-play device.

AlphaLive is easy to install – on Mac OS X simply double click the 'AlphaLive.dmg' file and drag the containing AlphaLive directory to your Applications folder, or on Windows double click the 'AlphaLive Installer.exe' file and follow the onscreen instructions. When the application is run for the first time it will create a folder in your Documents directory called 'AlphaLive Projects', which will be the default location to save your projects.

Do not move the AlphaLive .app/.exe file out of its parent directory or away from the other containing files and folders, or manually rename or rearrange any of the folders contents, as this could limit the software's functionality.

There is also no authorization process to run – AlphaLive is free to use without any serial or registration.

On Mac OS X Lion and Mountain Lion there is a feature called Gatekeeper where your security and privacy settings may alert you that you cannot open AlphaLive because it is from an "unidentified developer". There are two ways to resolve this issue:

- Go to System Preferences -> Security & Privacy, and under the 'General' tab select the 'Anywhere' option within the 'Allow applications downloaded from' section.
- If you would rather not change your system security settings, ctrl-click on the AlphaLive application and click Open. This will give you the option to open AlphaLive and exempt it from Gatekeeper.

More information about Gatekeeper can be found at **http://support.apple.com/kb/HT5290**.

When initially launching the latest version of AlphaLive you may be instructed that the AlphaSphere firmware needs updating. It is strongly recommended that you apply the update, as there may be features in the latest AlphaLive version that requires the latest firmware in order to work properly. Press 'OK' to apply the update and leave the AlphaSphere connected to the computer during this process.

uninstallation.

To uninstall AlphaLive, on Mac OS X delete the AlphaLive folder from your Applications directory, or on Windows simply run the 'uninstall AlphaLive.exe' file that can be found in the AlphaLive Start Menu folder. You will also need to remove the following files/folders:

On Mac OS X:

- "[user]/Library/Application Support/AlphaLive"
- "[user]/Library/Preferences/com.nu_desine.AlphaLive"
- "[user]/Library/Caches/AlphaLive", if it exists.
- "[user]/Documents/AlphaLive Projects", or the user chosen project directory. Do not delete this directory if you do not want to loose your projects!

On Windows XP:

- "C:\Documents and Settings\[user]\Application Data\AlphaLive"
- "C:\Documents and Settings\[user]\Local Settings\Temp\AlphaLive", if it exists.
- "C:\Documents and Settings\[user]\My Documents\AlphaLive Projects", or the user chosen project directory. Do not delete this directory if you do not want to loose your projects!

On Windows Vista and above:

- "C:\Users\[user]\AppData\Roaming\AlphaLive"
- "C:\Users\[user]\AppData\Local\Temp\AlphaLive", if it exists.
- "C:\Users\[user]\Documents\AlphaLive Projects", or the user chosen project directory. Do not delete this directory if you do not want to loose your projects!

using alphalive.

This section of the manual explains in detail how to use each of the sections and controls within AlphaLive.

functionality overview.

AlphaLive contains three main modes that enables the AlphaSphere to act as a MIDI controller, a Sampler, and a Sequencer, as well as a fourth 'Controller' mode that contains an extra set of functionalities such as OSC Output. AlphaLive includes a set of Pad Behaviours that determine how the physical interaction with a pad controls the playback of an audio sample, sequence, or MIDI note; a set of 10 effects for modifying and modulating audio samples; as well as a global clock that allows synchronization and quantization for pad playback and tempo-relative effects.

midi mode.

Setting pads to MIDI Mode enables the AlphaSphere to act as a MIDI device that can interface with your Digital Audio Workstations and MIDI soft synths. In this context AlphaLive can then be used as a MIDI mapping editor to set the MIDI functionality for the different pads set to this mode. A pad set to MIDI mode can send two types of MIDI message at anytime – note on/off messages from the touch interaction and various types of continuous MIDI messages with the depth/pressure interaction.

sampler mode.

Settings pads to Sampler Mode allows the AlphaSphere to trigger, loop, and manipulate audio samples directly in AlphaLive without the need for external MIDI software. Filters and effects can be applied to individual audio samples and modulated in realtime using the pads pressure.

sequencer mode.

Setting pads to Sequencer Mode allows you to record and draw a set of up to eight 32-step step sequences of MIDI notes or audio samples for each pad, which can then be looped and manipulated. The pads pressure can be set to set some kind of continuous MIDI data when sending MIDI sequences or manipulate audio sequences with effects, however the pressure can also be used to switch between the different sequences on each pad to create new 'on-the-fly' arrangements. As well as drawing and recording sequences directly within AlphaLive, sequences can be created by importing MIDI files. Sequences can also be exported as MIDI files so that can then loaded into any of your MIDI sequencing software.

The main concept behind AlphaLive and programming the AlphaSphere is based on the idea of completely independent pads – you select a pad and give it some functionality that is practically independent from the rest of the pads. Any pad can be given any mode and any settings no matter what its position on the 'sphere, allowing completely custom mappings of settings.

The most basic procedure of using AlphaLive is as follows:

1. Select a pad or a set of pads from the Pad Layout section.
2. Give the selected pads a Mode and some corresponding settings using the Pad Settings section and/or the Toolbox section.

When programming the AlphaSphere everything is based on the 'currently selected pad/s'. That is, when you select a pad it will display it currently set settings, and when you change the value of a control with the Pad Settings section it will alter that value for all the currently selected pads. Note that when you select multiple pads it will only display the correct value of each settings control if that value is the same for each pad. Otherwise it will display empty/blank or default settings.

1. **Pad Layout** – This section represents a 2D version of the pad layout on the AlphaSphere arranged in rows as if you are viewing the device from top down and the pads have been laid out flat. Use this section to select which pads you would like to display and edit the settings of, as well as view visual feedback of the pads current state and mode. It is also possible to emulate physical pad presses using this component.
2. **Pad Settings** – This is the section where all controls for displaying and editing a pads functionality and settings are displayed. The row of buttons at the top determine the mode of the selected pads and subsequently what controls are displayed. The two buttons directly underneath also determine the set of controls displayed.
3. **Piano** – This component is used to set and display MIDI note data when the selected pads have been set to have some kind of MIDI functionality. A number of mouse commands are available to set note data in various ways.
4. **Toolbox** – This component contains a number of different items that can be applied to pads. This includes audio samples, MIDI scales and layouts, and preset settings, with the available items depending on the mode of the selected pads.
5. **Global Clock** – This section is used to set and display controls relating to the internally timer within AlphaLive to assist on quantized playback of sounds and MIDI data and recording sequences.
6. **Scene Object** – This component contains 20 'slots' that can each hold a set of pads settings. This allows easy switching of setups, which is most useful for live performance.
7. **Info Box** – When you hover the mouse over any control on the interface a description of that control will be displayed within this component.
8. **Other** – This section contains a set of global controls, which consist of global gain and pan controls as well as open and save buttons.
9. **Elite Controls (AlphaSphere elite model only)** – This section contains a set of buttons to set and display the functionality of the AlphaSphere elite dials and buttons. The settings controls will be displayed within the Pad Settings section.

interface overview.

The interface for AlphaLive contains eight main sections (nine sections for users of the AlphaSphere elite):

common controls.

Text Box Slider Control – This control is essentially a vertical slider with an editable text box. Click and drag in the vertical axis anywhere on the control to change the sliders value, or instead double-click anywhere on the control to change the sliders value via the text box using the enter/return key to submit an entered value.

Rotary Slider Control – You can use this slider like any regular rotary dial – click and drag in a rotary fashion to change the sliders value. However you can also right-click (and ctrl-click on Mac) to bring up an editable text box using the enter/return key to submit an entered value.

selecting pads.

Selecting pads will allow you to set and display settings within the Pads Settings section, as well as displaying items within the Toolbox that could be applied to the pads. You can perform the following commands:

- Click on a single pad to edit a single pad.
- Click on the background between adjacent pads to select a particular row of pads to edit.
- Click the center logo to select all pads to edit.
- Click on the edge of pad layout display to deselect all pads.
- Cmd-click on Mac or ctrl-click on Windows to select a group of pads individually to edit. You can perform this command on pads, row selectors, and the 'all pads' selector. Clicking on a selected pad will deselect it.
- Shift-click to select a group of pads from the last clicked pad to the newly clicked pad in order based on pad number. You can perform this command on pads, row selectors, and the 'all pads' selector.
- Right-click (and ctrl-click on Mac) to provide options to copy and paste pad settings.

As mentioned above, when you select multiple pads it will only display the correct value of each settings control if that value is the same for each pad. Otherwise it will display empty/blank or default settings.

visual feedback.

Each virtual pad displays the following information:

- Pad pressure – pressing a pad on the AlphaSphere changes the gradient display of the corresponding software pad depending on how much pressure is applied.
- Pad state – When a pad is currently active (e.g. playing a note, sample, or sequence) a colour ring will be displayed with the following format: Red - Playing, Yellow - waiting to play (caused using quantized playback) and Orange - waiting to stop (caused using quantized playback)
- Pad mode – this allows you to know the set mode on each pad at any time, and this is displayed using a coloured gradient on the pad: Green - MIDI Mode, Yellow - Sampler Mode, Red - Sequencer Mode and Purple - Controller Mode.

emulating pad presses.

You can emulate physical pad interaction using the software pads by performing **alt-click** to imitate a press and then dragging the mouse in the vertical axis either up or down from the centre of the pad to emulate a change in pressure. This is a handy feature to use when you want to edit an AlphaLive project without an AlphaSphere at your disposal.

pad layout.

The pad layout section represents a 2D version of the pad layout on the AlphaSphere arranged in rows as if you are viewing the device from top down and the pads have been laid out flat. This is the central component of AlphaLive as it will be one of the most used components of the software and will be your first place to go when launching the application.

The pads are numbered starting from the bottom row, spiraling upwards anticlockwise. They are ordered so that when you reach the last pad on a row the following pad is positioned to the left on the above row. They are laid out in this way as it allows for intuitive mappings of scale-based notational arrangements of notes – see Appendix 1 for mappings of all the notational arrangements.

The pad layout provides three main functions – selecting pads to edit, displaying visual feedback, and emulating pad presses.

pad settings.

The Pad Settings section is where all controls for displaying and editing a pad's functionality and settings are set and displayed, therefore this is the most extensive section within AlphaLive.

This section has the following common controls:

1. **Off Mode** – This button sets the selected pads to be off/inactive.
2. **MIDI Mode** – This button sets the selected pads to be a MIDI pad, where both the touch and pressure aspects of the pad can be programmed to send different types of MIDI data.
3. **Sampler Mode** – This button sets the selected pads to be a Sampler pad, where audio samples can be triggered, looped, and manipulated with effects controlled in realtime using the pads pressure.
4. **Sequencer Mode** – This button sets the selected pads to a Sequencer pad, where MIDI or audio based sequences can be triggered, looped, and manipulated with MIDI data or audio effects controlled in realtime using the pads pressure.
5. **Controller Mode** – This button gives the selected pads access to a number of other types of functionality, such as sending Open Sound Control messages, switching scenes, or sending MIDI program change messages.
6. **Touch/Trigger Settings** – Use this button to display all the settings controls relating to the touch aspect of the pads functionality for the selected mode (E.g. MIDI note data, audio sample, Pad Behaviour settings).
7. **Pressure Settings** – Use this button to display all the settings controls relating to the depth/pressure aspect of the pads functionality for the selected mode (E.g. MIDI pressure data, Sampler effect, pressure scaling).
8. **Settings controls section** – this is the area where the majority of a pads settings controls will be displayed, based on the selected buttons above.
9. **Global Pad Setting** – use this button to set and display settings that are common to all modes.
10. **Quantize Button** – This button is used to set a pad to be quantized to the globally set quantization value. Quantization allows the playback of pads to be synchronized by setting a pad to 'start' at the next set time interval. MIDI Mode, Sampler Mode, and Sequencer Mode can all handle quantized playback of their content.

1. **Pad Behaviour Buttons** – See the Pad Behaviour Modes section.
2. **Note Status Button** – This button sets whether a pad will send MIDI note/on off data.
3. **Indestructible Button** – This button sets a pad to be ‘Indestructible’ – it can only be turned off via Exclusive Groups (or using the kill switch).
4. **MIDI Channel Buttons** – This set of buttons is used to select a pads MIDI channel.
5. **MIDI Pressure Mode Buttons** – See the MIDI Pressure Modes section.
6. **Pressure Status Button** – This button sets whether a pad will send MIDI data via the pads pressure.
7. **Pressure Range Sliders** – This pair of sliders is used to set the range of a pads MIDI pressure data.
8. **Sticky Button** – This button sets a pad to be ‘Sticky’ – a pads pressure value will stick at the highest pressed value until the pad is released and pressed again.

To set MIDI note data, see the Piano section.

midi mode.

Setting pads to MIDI Mode enables the AlphaSphere to act as a MIDI device that can interface with your Digital Audio Workstations and MIDI soft synths. Please note that pads set to this mode will not create any sound directly within AlphaLive, and you may want to refer to the MIDI section within the Glossary of this manual when reading this section.

MIDI Mode contains the following controls:

sampler mode.

Settings pads to Sampler Mode allows the AlphaSphere to trigger, loop, and manipulate audio samples directly in AlphaLive without the need for external MIDI software.

Sampler Mode contains the following controls:

1. **Pad Behaviour Buttons** – See the Pad Behaviour Modes section.
2. **Central Rotary Controls** – This section contains a single rotary dial whose functionality can be changed using the '+' and '-' buttons. There are five options here:
   - **Gain Control** – The dial is used to set the gain/ volume of the audio sample.
   - **Pan Control** – The dial is used to set the pan or stereo position of the audio sample.
   - **Attack Time Control** – The dial is used to set the attack time of the audio sample is seconds. Setting an attack time will create a fade-in on the sample.
   - **Release Time Control** – The dial is used to set the release time of the audio sample in seconds. Setting a release time will create a fade-out on the sample.
   - **Polyphony Control** – The dial is used to set the maximum number of instances of the audio sample that can be playing/overlapped at any time.
3. **Audio File Selector** – This control is used to select a pads audio file. The '+' button will bring up a file browser to choose either a .wav or .aiff file from your computer, and the selected file will also be added to the 'Recently Added' drop-down menu. Audio samples can also be dragged-and-dropped onto the Pad Layout section, or by selecting the 'Set audio sample' option in the pads popup menu.
4. **Loop Button** – This button sets the audio sample to loop.
5. **Finish Loop Button** – When a sample has been commanded to stop, this button sets the sample to finish its current loop first.
6. **Indestructible Button** – This button sets a pad to be 'Indestructible' – it can only be turned off via Exclusive Groups (or using the Killswitch).

To set Sampler pressure/effect settings, see the Effects section.

1. **Sequence Settings** – Use this button to display all the settings controls relating to the arrangement and parameters of the sequence.
2. **Record Button** – Use this button to enable a sequencer pad to be in record mode. See the Recording Sequences section for details about this feature.
3. **MIDI Sequencer Mode** – Use this button to set a pad to MIDI Sequencer Mode, where sequences are made up of MIDI note data.
4. **Audio Sequencer Mode** – Use this button to set a pad to Audio Sequencer Mode, where sequences are made up of audio samples loaded directly into AlphaLive.
5. **Circular Sequencer Grid** – This is the component used to draw and display sequences. It is a standard step-sequencer interface arranged in a circular layout, comprising of 12 rows that each represents a MIDI note or audio sample and 32 columns which each represent a quarter of a beat in time. To create a 'note' click on an empty block of the grid, or click on a note to delete it. To change the MIDI velocity or gain of a note, alt-click the note and drag in the vertical axis.
6. **Number of Sequences Control** – Use this dial to select the number of sequences for a pad. Up to eight individual sequences can be created for each pad.
7. **Sequence Number Selectors** – Use this pair of '+' and '-' buttons to select which sequence you want to display and edit. The currently selected sequence number is then displayed on the central button of this section.
8. **Preview Button** – Use this button to preview the currently displayed sequence.
9. **Sequence Length Buttons** – Use this pair of '+' and '-' buttons to change the length of a pads sequences.
10. **Sequence Options Menu** – Click this button to display a pop-up menu with further sequencer options. If you have multiple pads selected fewer options will be available, and some options will only be available depending one which sequencer mode is selected. Below is a description of the available options:

- **Copy Sequence** – copies the currently displayed sequence.
- **Paste Sequence** – puts the copied sequence in to the currently displayed sequence. You can copy and paste sequences anywhere in within the application, whether it within the same pad, a different pad, a different scene or a different project.
- **Import Sequence** – opens up a file browser to load a single sequence arrangement from a .alphaseq file into the currently displayed sequence.
- **Import Sequence Set** – opens up a file browser to load a set of sequences from a .alphaseqset file.
- **Export Sequence** – opens up a file browser to save the currently displayed sequence into a .alphaseq file.
- **Export Sequence Set** – opens up a file browser to save the pads sequence set into a .alphaseqset file.
- **Import Sequence From MIDI File** – opens up a file browser to load a single sequence arrangement from a .mid file into the currently displayed sequence. See the Importing/Exporting MIDI Files section for more details.
- **Import Sequence Set From MIDI File** – opens up a file browser to load a sequence set from a .mid file into the selected pads. See the Importing/Exporting MIDI Files section for more details.
- **Export Sequence As MIDI File** – opens up a file browser to save the currently displayed sequence as a .mid file. See the Importing/Exporting MIDI Files section for more details.
- **Export Sequence Set As MIDI File** – opens up a file browser to save a pads sequence set as a .mid file. See the Importing/Exporting MIDI Files section for more details.
- **Import Sample Bank** – opens up a file browser to load up a set of samples from a .alphabank file into the selected pads. This option is only available for Audio Sequencer Mode.
- **Export Sample Bank** – opens up a file browser to save the selected pads set of samples to a .alphabank file. This option is only available for Audio Sequencer Mode.
- **Clear** – deletes the currently displayed sequence.
- **Clear All** – deletes the whole sequence set of a pad.

sequencer mode.

Setting pads to Sequencer Mode allows you to record and draw a set of up to eight 32-step step sequences of MIDI notes or audio samples for each pad, which can then be looped and manipulated. You may want to refer to the MIDI section within the Glossary of this manual when reading this section.

MIDI and audio sequencers contain the following common controls:

11. **Pad Behaviour Buttons** – See the Pad Behaviour Modes section.
12. **Central Rotary Controls** – This section contains a single rotary dial whose functionality can be changed using the '+' and '-' buttons. The options here depends on whether you are set to MIDI Sequencer Mode or Audio Sequencer Mode, however the following are common for both modes:
    - **Relative Tempo Control** – The dial is used to set the relative tempo of the sequence. This allows you to set sequences to be at either quarter time, half time, normal time, double time, or quadruple time compared to the global tempo.
13. **Loop Button** – This button sets the sequence to loop.
14. **Finish Loop Button** – When a sequence has been commanded to stop, this button sets the sequence to finish its current loop first.
15. **Indestructible Button** – This button sets a pad to be 'Indestructible' – it can only be turned off via Exclusive Groups (or using the Killswitch).
16. **Pressure Link Button** – Use this button to set whether the pads pressure will be used to switch between the different sequences of a set.

midi sequencer mode.

Setting a pad to MIDI Sequencer Mode allows the AlphaSphere to trigger, loop and manipulate sequences of MIDI note data, with the pads pressure being using to send various types of continuous MIDI data similar to the functionality of MIDI Mode pads. Please note that pads set to this mode will not create any sound directly within AlphaLive, and you may want to refer to the MIDI section within the Glossary of this manual when reading this section. MIDI Sequencer Mode contains the following extra controls:

1. **MIDI Channel Buttons** – This set of buttons is used to select a pads MIDI channel.
2. **Central Rotary Controls** – This section contains a single rotary dial whose functionality can be changed using the '+' and '-' buttons. MIDI Sequencer Mode contains the following extra options:
    - **Note Length** – The dial is used to set the global length of MIDI notes in a sequence, measured in quarter beats. A notes length cannot be longer than the length of the sequence.
3. **MIDI Pressure Mode Buttons** – See the MIDI Pressure Modes section.
4. **Pressure Status Button** – This button sets whether a pad will send MIDI data via the pads pressure.
5. **Pressure Range Sliders** – This pair of sliders is used to set the range of a pads MIDI pressure data.
6. **Sticky Button** – This button sets a pad to be 'Sticky' – a pads pressure value will stick at the highest pressed value until the pad is released and pressed again.

To set MIDI note data, see the Piano section.

1. **Audio File Selector Buttons** – Use this set of buttons to manually select the set of audio samples for a sequencer pad. Clicking a button will open up a file browser, or you can drag and drop .wav or .aiff files to these buttons. Use the Info Box to display the name of the set audio files.
2. **Central Rotary Controls** – This section contains a single rotary dial whose functionality can be changed using the '+' and '-' buttons. Audio Sequencer Mode contains the following extra options:
   - **Gain Control** – The dial is used to set the global gain/volume of the audio samples.
   - **Pan Control** – The dial is used to set the global pan or stereo position of the audio samples.
   - **Attack Time Control** – The dial is used to set the global attack time of the audio sample is seconds. Setting an attack time will create a fade-in on the samples.
   - **Polyphony Control** – This dial is used to set the maximum number of instances of each audio sample that can be playing/ overlapped at any time.

To set Audio Sequencer pressure/effect settings, see the Effects section.

audio sequencer mode.

Setting a pad to Audio Sequencer Mode allows the AlphaSphere to trigger, loop and manipulate sequences of audio samples, with the pads pressure being used to control effect parameters directly within AlphaLive, similar to the functionality within Sampler Mode. Audio Sequencer Mode contains the following extra controls:

recording sequences.

Within AlphaLive it is possible to record note data from MIDI and Sampler pads into Sequencer pads. When a Sequencer pad is record-enabled and running it will listen out for MIDI notes or samples being triggered elsewhere that match the notes/samples set to the sequencer, and record them into the sequence to the nearest quarter beat in time. Below is a simple guide to recording sequences:

1. Set a group of pads to MIDI or Sampler Mode, and to this set of pads set the note data or audio samples you would like to record.
2. Set a pad to Sequencer Mode and set its MIDI note data (and MIDI channel) or audio samples selection to match the content of the MIDI or Sampler pads created previously.
3. Set the Sequencer pad to be record-enabled by turning on the Record Button, and start/play the sequencer pad.
4. Whenever a MIDI or Sampler pad is triggered it will record a 'note' into the sequence.

importing/exporting midi files.

Within Sequencer pads you can import and export .mid files to create sequence arrangements. As the sequencer within AlphaLive is a 32-step step sequencer as opposed to a piano roll interface, when importing files the MIDI file must be modified so that it can be applied to AlphaLive's step sequencer in a logical fashion.

importing.

MIDI files can be very complex and most of the different types of MIDI messages that a .mid can hold cannot be used within AlphaLive's sequencer, therefore a lot of data is filtered out when being importing into the application. Also as MIDI files can contain up to 127 different note number values and an infinite sequence length, an imported MIDI sequence will most likely be cropped in terms of number of note numbers and sequence length to fit into the 8 x 12 x 32 sequence set size.

MIDI files are imported using the following procedure:

1. The MIDI sequence is analyzed from start to finish in the time domain, looking for note-on messages. Each note number is logged until it has found 12 different note numbers. Any MIDI note on events that do not match these 12 note numbers are then deleted from the sequence.
2. If you have selected to import a single sequence, it will crop the sequence length to fit the length set within AlphaLive. If you have selected to import a sequence set, it will apply the MIDI sequence over the entire set of sequences, splitting the sequence each time it exceeds the length set within AlphaLive.
3. Only note-on events are imported; any other MIDI events, including note-off events, are ignored. Notes are applied to the sequencer rows in note number order, and notes are applied to the sequencer columns to the nearest quarter beat.
4. If you are importing a MIDI sequence into a MIDI Sequencer Mode pad you will have the option to import note number data from the MIDI file. This will importing the matching MIDI note numbers and apply them to the sequencer. Otherwise just the note arrangement will be imported and the set sequencer MIDI notes will not change.

Note that if you are importing a multitrack MIDI file it will only import the first track. MIDI channel data is also filtered out.

exporting.

Exporting a sequence as a MIDI file is more straightforward to understand than importing a sequence. All the notes within a sequence are converted to MIDI note-on events, and the matching note-off events are created using the set note length. If you are exporting a sequence from an Audio Sequencer pad the exported MIDI note numbers are set to a standard General MIDI drum mapping (See Appendix 2) which will approximately match the layout of the AlphaLive drum banks found in the Toolbox section. All exported MIDI files are set to MIDI channel 1, and are exported as a single MIDI region/track.

1. **Scene Switch Mode** – This option allows a pad to be used to switch to another Scene (see the Scene Component section). Clicking this button will display a control to select which scene you would like to switch to.
2. **MIDI Program Change Mode** – This option allows a pad to be used to send a MIDI Program Change message. MIDI Program Change messages contain a program change number and a channel number, both of which can be user-defined using the provided controls.
3. **Dual Scene and Program Change Mode** – This option is the same as the first two modes merged together.
4. **OSC (Open Sound Control) Mode** – This option allows a pad to sends OSC messages. See the Open Sound Control Glossary section for more details, as well as Appendix 3 for the AlphaLive OSC address naming scheme.

controller mode.

Setting a pad to Controller Mode allows you to apply a number of other functionalities to the AlphaSphere.

global pad settings.

The button at bottom left of the Pad Settings section on the interface is used to access a set of settings that are common to all modes:

1. **Exclusive Group Mode** – Pads can be put into Exclusive Groups which allows only a single pad to be active/playing at anytime, so that if you trigger a note, sample or sequence set to an exclusive group and then trigger a new pad within the same group, it will automatically turn off the first pad. This feature could also be defined as Choke Groups or Monophonic Playback. Clicking this button will display an extra control for selecting the group number (annotation 4).
2. **Pressure Curve Selector** – This option allows you to change the mapping of a pads physical depth to its data output. Setting this control to the Exponential option means that there is more focus on the lower pressure values, whereas the Logarithmic curves give you more control over the higher pressure values.
3. **Velocity Curve Selector (MIDI, Sampler, and Controller Modes only)** – This option allows you to change the mapping of a pads velocity value. Setting this control to the Exponential option means that there is more focus on the lower velocity values, whereas the Logarithmic curves give you more control over the higher velocity values. Setting this control to the Static option essentially means that the pads velocity data is ignored and the pads MIDI note or audio sample will be played at a fixed velocity or gain. If set to MIDI or Controller Mode you will be provided with an extra control for setting the static velocity value (annotation 5) (for Sampler mode the sample gain can be chosen using the modes Gain Control).

piano.

The function of the curved piano component is to set and display MIDI note number data for pads set to either MIDI Mode or MIDI Sequencer Mode. This component will be disabled if the selected pads are not set to either of these modes. The piano contains a number of mouse commands that allow you to intuitively arrange sets and scales of MIDI notes to both single and multiple pads. The piano also contains a display to show the set MIDI note or root note, which can be displayed as either a MIDI note number or a note name; right-click this display or use the preferences pane to change this.

midi mode.

Within MIDI Mode the piano is used to set a single MIDI note number for each pad. When the selected pads are set to MIDI Mode you can perform the following mouse commands on the piano keys:

- Regular-click to select a single MIDI note for all the selected pads.
- Cmd-click on Mac or ctrl-click on Windows to select a custom set of notes for the selected pads. The selected notes will be applied in the order they are selected to the numerical order of the selected pads. The maximum number of keys you can select is equal to the number of selected pads, and if you don't select the maximum number of keys the remaining pads will be set to the first set note.
- Alt-click to transpose a set of notes. The selected key will act as the 'root note' for the note selection, therefore the lowest selected note will be moved to the newly selected note. You cannot transpose a set of notes if any of the notes are out of the pianos range (above 120/B7).

sequencer mode.

Within Sequencer MIDI Mode the piano is used to set the 12 note numbers for the sequencer grid. When the selected pads are set to MIDI Sequencer Mode you can perform the following mouse commands on the piano keys:

- Regular-click to transpose the set of notes. The selected key will act as the 'root note' for the note selection, therefore the lowest selected note will be moved to the newly selected note. You cannot transpose a set of notes if any of the notes are out of the pianos range (above 120/B7).
- Cmd-click on Mac or ctrl-click on Windows to select a set of notes. The selected notes will be applied to the sequencer grid from lowest to highest. You can select up to 12 notes, and if you don't select the maximum number of keys the remaining rows of the grid will effectively be 'off'. You can also perform this action on selected keys to remove the note from the set.

samples.

AlphaLive comes with 1GB of professionally made audio samples from the likes of Loopmasters, Zero-G, and 5Pin Media. The audio samples Toolbox view is a standard file browser – click on the '+' symbol to open a folder and view its contents. This Toolbox tab is only available for Sampler pads.

banks.

AlphaLive comes with a selection of drum kits that can be applied to Audio Sequencer pads as well as to a set of Sampler pads. The audio samples within a kit are applied in an order that approximately matches a general MIDI drum mapping (see Appendix 2) to either the sequencer grid in row order or to Sampler pads in the order that they were selected. Each kit contains 16 samples, which allows you to apply a drum kit to up to 16 pads, and the individual samples can also be accessed through the Audio Samples Toolbox tab within the folder entitled 'AlphaBanks', which allows samples to be applied individually.

scales.

AlphaLive contains a set of premade notational scales that can be applied to MIDI Sequencer pads as well as to a set of MIDI pads. When applying a scale it uses the currently selected root note selected on the piano component, and applies the scale in numerical order to either the sequencer grid in row order or to MIDI pads in the order that they were selected. Scales contain 48 notes so that they can be applied to any number of pads on the AlphaSphere. Once a scale is applied and displayed you can perform any of the available mouse commands on the piano interface to modify the set of notes.

It is possible to manually add your own scales to the Toolbox by editing the 'user_scales' XML file within the 'Application Data' directory of the AlphaLive folder. See this file for instructions on how to do this.

notational layouts.

Layouts are similar to scales however they can only be applied when the whole set of pads is selected and set to MIDI Mode. Whereas scales are just based on a numerical note order, layout arrangements consider the position of each pad to the pads surrounding it to allow for intuitive mappings and lines of notes which work well together. See Appendix 1 for more details on the layout mappings.

It is possible to manually add your own notational arrangements to the Toolbox by editing the 'user_notational_arrangements' XML file within the Application Data directory of the AlphaLive folder. See this file for instructions on how to do this.

sequences.

This Toolbox tab contains premade sequence arrangements/patterns for Sequencer pads. Sequences can be applied as sets or as single sequences to the currently displayed sequence. Once a sequence is applied and displayed it can be edited using the sequencer grid.

effects.

This Toolbox tab contains a number of effect presets that can be applied to both Sampler pads and Audio Sequencer pads. Loading an effect preset from the Toolbox will change both the set effect and that effects settings for the selected pads.

mode presets.

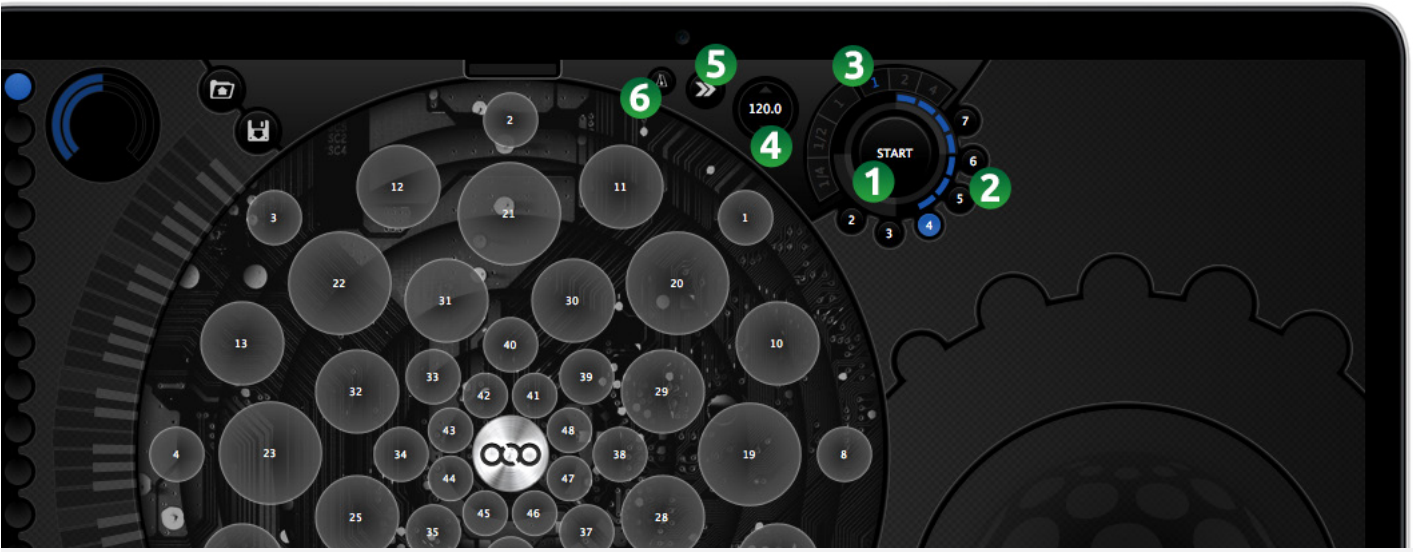
Mode presets are available for every mode and contain a set of premade settings for each mode. Not every mode preset item will change every setting; in particularly most mode presets will not contain MIDI note data, audio samples, sequence arrangements or effect settings.

toolbox.

The Toolbox component contains a number of different items and presets that can be applied to pads. It is made up of a number of tabbed views that change depending on the mode of the selected pads and number of selected pads. Double-click any item in the Toolbox to apply to the selected pads. To the left is a list of the different items available.

global clock.

The Global Clock section is used to set and display controls relating to the internal timer within AlphaLive, used mainly to assist on the quantized playback of notes/samples/sequences, but is also useful for recording sequences. The majority of the controls here are similar to the transport controls you will find within any standard MIDI sequencing software. This section contains the following controls:



1. **Start/Stop Button** – Use this button to manually start or stop the clock. When the clock is running a visual display of the current beat and bar number is represented using a series of lines that circles this button. The clock will run up to four bars in length before starting again. The clock can also be started/stopped using the Space Bar on your keyboard.
2. **Beats-Per-Bar Buttons** – Use this selection of buttons to set how many beats there are in a bar for the current scene. This allows you to set a basic time signature to the clock.
3. **Quantization Value Buttons** – Use this selection of buttons to set the global quantization value for the current scene that will be used by any pads that are set to be quantized. Quantization allows the playback of pads to be synchronized by setting a pad to 'start' at the next set time interval relating to the beat or bar number.
4. **Tempo Selector** – Use this slider to set the global tempo for the current scene. The tempo is used to set the speed of the clock and the sequences, as well as being used by some of the effects to allow them to be synchronized with the audio. Tempo is measured in beats-per-minute.
5. **Auto-Start Button** – When this button is set to 'on' the clock will automatically start when any MIDI, Sampler, or Sequencer pad is first played.
6. **Metronome Button** – Use this button to set an audible click track to be played when the clock is running. The metronome will be most useful for recording sequences.

scene component.

The Scene component contains 20 'slots' that can each hold a set of pads settings. This allows easy switching of setups, which is most useful for live performance. A slot can be in one of the following three states:

- **Empty** – All pads in the scene are set to Off Mode. This is visually represented by an empty/black slot.
- **Selected** – The slot of the currently displayed scene data. This is visually represented by a blue slot.
- **Filled** – At least one pad in the scene contains some data. This is visually represented by a grey slot.

You can perform the following mouse commands on a slot:

- **Regular-click** to load up the scene settings from the clicked slot.
- **Shift-click an unselected slot** to copy the current scenes data to the clicked scene.
- **Shift-click the selected slot** to store any recently changed settings to the scene. By default when you switch scenes any changed settings will automatically be stored meaning that you won't need to use this command, however there is an option in Preferences to turn off the Auto-save feature in which this command will need to be performed before switching to another scene.
- **Right-click** to display a pop-up menu with further options:
  - **Import Scene** – Opens a file browser allowing you to select a .alphascene file to load into the selected scene. Scene files can also be dragged-and-dropped onto slots.
  - **Export Scene** – Opens a file browser allowing you to save the clicked scenes data into a .alphascene file.
  - **Clear Scene** – Sets all the pads of the clicked scene to be off, and resets all settings to their default values.
  - **Revert to Saved Settings** – Resets all settings back to their values of the last time this scene was loaded or saved.

elite controls.

If you are lucky enough to own a limited edition AlphaSphere elite model you will have an extra section on the software interface for editing the functionality of the elite rotary dials and buttons. On the bottom left-hand side of the interface there are five buttons each representing one of the elite controls on the hardware; clicking on these buttons will then display a set of controls in the Pad Settings section allowing you to view and edit the functionality of the clicked control. You can duplicate the settings of an elite control for all scenes within a project by right-clicking the control and selecting the option from the popup menu.

The elite dials can have the following functionality:

- **Off** – use the central button to disabled the selected elite dial.
- **Global Gain** – Acts as hardware control for the global gain dial within AlphaLive.
- **Global Pan** – Acts as a hardware control for the global pan dial within AlphaLive.
- **Scene Switcher** – Each 'step' of the rotary dial is used to move to the next or previous scene number.
- **MIDI CC** – Allows the dial to send MIDI CC messages. This option gives you four further controls:
  - MIDI CC Number Selector
  - MIDI Channel Selector
  - MIDI CC Minimum Range Selector
  - MIDI CC Maximum Range Selector
- **OSC** – Allows the dial to send Open Sound Control messages (See the Open Sound Control Glossary section for more details, as well as Appendix 3 for the AlphaLive OSC address naming scheme). This option gives you four further controls:
  - OSC Port Number Selector
  - OSC IP Address Editor
  - OSC Minimum Range Selector
  - OSC Maximum Range Selector

The elite buttons can have the following functionality:

- **Off** – use the central button to disabled the selected elite button.
- **Start/Stop Clock** – Acts as a hardware control for starting and stopping the global clock within AlphaLive.
- **Killswitch** – trigger a 'panic button' that instantly stops the playback of any notes, samples, or sequences as well as stopping the clock.
- **Scene Switcher** – Allows the button to be used to switch to a different user-defined scene.
- **Save** – Acts as a hardware control for saving the AlphaLive project.
- **MIDI CC** – Allows the button to send MIDI CC messages. This option gives you four further controls:
  - MIDI CC Number Selector
  - MIDI Channel Selector
  - Button 'Off' Value Selector
  - Button 'On' Value Selector
- **OSC** – Allows the button to send Open Sound Control messages (See the Open Sound Control Glossary section for more details, as well as Appendix 3 for the AlphaLive OSC address naming scheme). This option gives you four further controls:
  - OSC Port Number Selector
  - OSC IP Address Editor
  - Button 'Off' Value Selector
  - Button 'On' Value Selector

other.

At the top left-hand side of the interface are a few final controls:

1. **Global Gain and Pan Controls** – Use this pair of sliders to set the global gain/volume and pan/stereo position of audio for the selected scene.
2. **Open and Save Project Buttons** – Use this pair of buttons to open and save .alphalive files which store all scenes as a single project file.
3. **Device Status Component** – This component displays the connectivity of an AlphaSphere to the software. If it is blue then an AlphaSphere has been successfully connected to AlphaLive.

pad behaviour mode.

As noted above, the interfaces for MIDI Mode, Sampler Mode and Sequencer Mode all contain a set of buttons called Pad Behaviour Modes. A Pad Behaviour determines how the physical interaction with a pad controls the playback of an audio sample, sequence, or MIDI note. There are a total of six Pad Behaviours available within AlphaLive:

1. **Standard Mode** – Press the pad to play the sound, release the pad to stop.
2. **Toggle Mode** – Press the pad to play the sound, press for a second time to stop.
3. Latch Mode – Press the pad to play the sound, press the pad to its full depth and release to stop.
4. **Trigger Mode** – Press the pad to the play the sound, press again to re-trigger, press the pad to its full depth and release to stop.
5. **Cycle Mode** – This behaviour is only available within Sequencer Mode. Press the pad to play the first sequence, press again to move to the next sequence, press the pad to its full depth and release to stop.
6. **Auto-cycle Mode** – This behaviour is only available within Sequencer Mode. Press the pad to the play the first sequence, when it reaches the end a sequence it will move onto the next sequence of the set, press the pad again to stop.

midi pressure mode.

As noted above, both MIDI Mode and MIDI Sequencer Mode contain a set of called MIDI Pressure Mode buttons that determine what kind of MIDI data the pads pressure is sending. You may want to refer to the MIDI section within the Glossary of this manual when reading this section. You can choose between the following options:

1. **Polyphonic aftertouch.** This is also known as poly pressure.
2. **Channel Aftertouch.** This is also known as channel pressure.
3. **Modulation Wheel.** This sends out controller 1 CC messages.
4. **CC Messages.** This sends out control change messages, and provides you with an extra control for selecting the controller number.
5. **Pitch Bend Up.**
6. **Pitch Bend Down.**

effects.

As noted before, both Sampler Mode and Audio Sequencer Mode include a set of effects that can be controlled in realtime using the pads pressure. AlphaLive contains a set of 10 effects that include a number of controls that can be mapped to the pads depth in order to expressively modulate samples and audio sequences.

All effects contain the following common controls that allow you to program the effects pressure mapping to a highly customized degree.

1. **On/Off Button** – Use this button to activate/deactivate the effects.
2. **Effect Buttons** – Use this set of buttons to select the effect you would like to apply. The buttons are in the following order (clockwise from top): Gain and Pan, Lowpass Filter, Highpass Filter, Bandpass Filter, Distortion, Bitcrusher, Delay, Reverb, Flanger/Phaser, Tremolo.
3. **AlphaTouch Menu** – Allows you to select which effect parameter is controlled by the pads pressure.
4. **AlphaTouch Invert Button** – Use this button to invert the direction of the modulation created by the pressure.
5. **AlphaTouch Intensity Control** – Use this slider to set the range of modulation that is created by the pressure.
6. **Sticky Button** – This button sets a pad to be 'Sticky' – a pads pressure value will stick at the highest pressed value until the pad is released and pressed again.
7. **Wet/Dry Mix Control** – The majority of the effects contain a mix slider which controls the level of the original unprocessed signal compared to the level of the effected signal.

The range of the AlphaTouch effect parameter that is modulated by the pads pressure is determined by three things – the set value of the parameters control/slider; the Invert state; and the AlphaTouch Intensity value. The set intensity value acts as a percentage between the set AlphaTouch parameter value and the maximum AlphaTouch parameter value (or the minimum value if Invert is on). Note that if the set parameter value is already set to its maximum value and Invert is off, the pressure won't modulate the effect at all, which is also true if the set parameter value is set to its minimum values and Invert is on.

gain and pan.

This is a very simple effect that allows you to modulate the gain or pan position of audio. It only contains two unique controls, a gain slider and a pan slider.

filters.

AlphaLive contains three basic filters – a Lowpass filter (LPF), a Highpass filter (HPF) and a Bandpass Filter (BPF). A LPF is used to filter out higher frequencies, a HPF is used to filter out lower frequencies, and a BPF is used to filter out all frequencies except for a certain band. All three filter effects have the following unique controls:

- **Frequency Control** – Use this slider to set the cut-off frequency of the LPF or HPF, or the centre frequency of the BPF.
- **Bandwidth/Resonance Control** – use this slider to set the bandwidth of the filter. A higher value creates a smaller bandwidth that in turn creates a more pitched/tuned sound.

distortion.

AlphaLive contains a multi-type distortion effect with the following unique controls:

- **Distortion Type Menu** – Allows you to select from a number of different distortion types.
- **Drive Control** – Use this slider to set the level of distortion.
- **Tone Control** – Use this slider to set the overall tone of the sound. This essentially controls the frequency of a BPF with a static bandwidth that bypasses the filter when set to zero.

bitcrusher.

AlphaLive contains a second distortion effect that creates its sound be reducing the resolution of the audio. The Bitcrusher effect contains the following unique controls:

- **Downsampling Control** – Setting a higher Downsampling value reduces the quality of the sound, creating a Lo-Fi distorted sound.
- **Crush Control** – Use this slider to set the level of Bitcrusher distortion.
- **Smoothing Control** – Use this slider to set the overall tone of the sound. This essentially controls the cut-off frequency of a LPF with a static bandwidth.

delay.

AlphaLive contains a simple dual-filter echo effect that can be synced to the global tempo. This effect contains the following unique controls:

- **Feedback Control** – Use this slider to set the amount of delay. Please note that a high feedback value could create an unstable delay that will continuously get louder and never die out!
- **Lowpass Filter Frequency Control** – Use this slider to set the LPF cut-off frequency for the delayed sound. Please note that if this value is lower than the HPF cut-off frequency then the delayed sound will not be audible.
- **Highpass Filter Frequency Control** – Use this slider to set the HPF cut-off frequency for the delayed sound. Please note that if this value is higher than the LPF cut-off frequency then the delayed sound will not be audible.
- **Sync Button** – When this button is set to 'on' the delay effect will be synced to the applications tempo.
- **Delay Time Menu** – Use this button to set the delay time in beats when the effect is set to sync with the tempo.
- **Delay Time Control** – Use this slider to set the delay time in milliseconds when the effect isn't set to sync with the tempo.

reverb.

AlphaLive contains a reverberation effect that can be used to create the effect of a sound being in a different environment. The reverb effect has the following unique controls:

- **Room Size Control** – Use this slider to set the reverb length. A larger room size will create a longer reverb.
- **Damping Control** – Use this slider to set the reverb damping. A larger damping value will remove higher frequencies from the reverb tail to create a more subtle sound.
- **Width Control** – Use this slider to set the reverb width. A larger width will create a wider sound in the stereo spread.

flanger/phaser.

AlphaLive contains a Flanger/Phaser effect that can be used to create tempo-synced sweeping filter-like effects. The Flanger/Phaser effect has the following unique controls:

- **Feedback Control** – Use this slider to set the level of the effect. A higher value creates a more pitched/tuned sound. Please note that a high feedback value could create an unstable sound that will continuously get louder.
- **Intensity Control** – Use this slider to set the intensity of the effect. A greater intensity will cause the effect to sweep over a larger frequency range.
- **Sync Button** – When this button is set to 'on' the flanger/phaser effect will be synced to the applications tempo.
- **LFO Rate Menu** – Use this button to set the low-frequency-oscillator rate in beats/bars when the effect is set to sync with the tempo.
- **LFO Rate Control** – use this slider to set the low-frequency-oscillator rate in hertz when the effect isn't set to sync with the tempo.

tremolo.

AlphaLive contains a tremolo effect for applying periodic amplitude modulation to audio. This effect contains the following unique controls:

- **Waveshape Buttons** – Use this selection of buttons to set the low frequency oscillator shape. The available shapes are sine, square, triangle, rising sawtooth, and falling sawtooth.
- **Sync Button** – When this button is set to 'on' the tremolo effect will be synced to the applications tempo.
- **LFO Rate Menu** – Use this button to set the low-frequency-oscillator rate in bars when the effect is set to sync with the tempo.
- **LFO Rate Control** – use this slider to set the low-frequency-oscillator rate in hertz when the effect isn't set to sync with the tempo.

menu bar.

AlphaLive contains a standard menu bar for accessing a number of other commands and controls as well as displaying their keyboard shortcuts. The menu bar consists of the following menus and items:

- **Apple Menu (Mac Only)**
  - About – Displays general information about AlphaLive.
  - Preferences – See Preferences section below.
- **File**
  - **New** – Creates an empty project.
  - **Open** – Allows you to select an AlphaLive Project (.alphalive) file to open.
  - **Open Recent** – Displays a list of recently opened projects that can be selected to open. The 'Clear All' option at the bottom of the list allows you to clear the list.
  - **Save** – Allows you to save an AlphaLive Project to file. If the current project hasn't yet been saved a file browser will open allowing you to chose a file name and location.
  - **Save As** - Allows you to save an AlphaLive Project to file, displaying a file browser allowing you to chose a file name and location.
  - **Project Settings** – See Project Settings section below.
  - **Clean Up Project** – Cleaning a project is the process of searching through the current projects Audio Files directory and removing any unused files, which will help prevent an excessive build-up of redundant data. It will also reset any unused mode settings to default values.
  - **Import Scene** – Allows you to select an AlphaLive Scene file (.alphascene) to load settings into the current scene.
  - **Export Scene** – Allows you to save the current scene to file.
  - **Preferences (Windows Only)** – See the Preferences section below.
- **Edit**
  - **Copy Pad Settings** – Copies the currently selected pads settings. This option is only available when a single pad is selected.
  - **Paste Pad Settings** – Applies the copied pad settings to the currently selected pad. This option is only available when a single pad is selected.
  - **Clear Scene** – Sets all the pads of the selected scene to be off, and resets all settings to their default values.
  - **Clear All Scenes** – Sets all the pads of all scenes to be off, and resets all settings to their default values.
- **Options**
  - **Disable Info Box** – Turns off the functionality of the Info Box that can be found at the bottom of AlphaLive's interface.
- **Controls**
  - **Killswitch** – This command triggers a 'panic button' that instantly stops the playback of any notes, samples, or sequences as well as stopping the clock.
  - **Start/Stop Clock** – Use this button to manually start or stop the clock.
- **Help**
  - **Reference Manual** – Opens the AlphaLive Reference Manual PDF file.
  - **About (Windows Only)** – Displays general information about AlphaLive.

preferences.

The preferences panel of AlphaLive allows you to set global application settings and can be accessed from the Apple Menu on a Mac or the File Menu on Windows. Preference settings are stored in a single .preferences file for each computer running AlphaLive; any settings set here will not change between projects. The Preferences section is organized into a number of tabbed views, with a 'Close' button below for going back to the main interface (pressing ESC also does this).

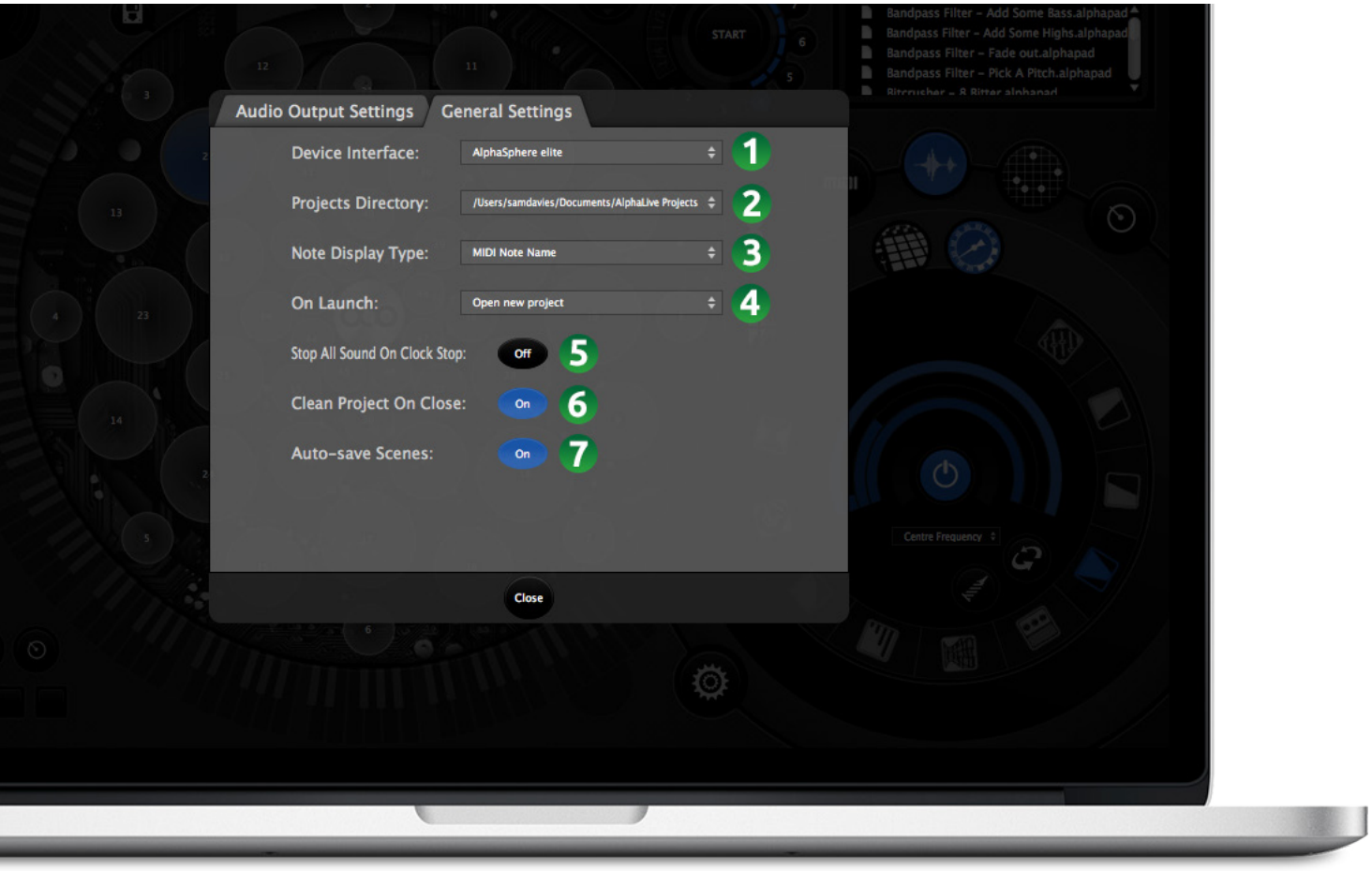
1. **Audio Device Type (Windows Only)** – Allows you to select the type of audio device you would like to use. AlphaLive supports Windows Audio (WASAPI) (Windows Vista and above), Direct Sound, and ASIO.
2. **Audio Output/Device** – Allows you to select the audio output relating to the chosen device type. If you have selected the ASIO device type this control will be named 'Device' and allows you to select the particular ASIO device/output you would like to use.
3. **Test Button** – Allows you to check that the selected output is working by playing a short test tone.
4. **Active Output Channels** – Allows you to select the output channels of the selected audio output.
5. **Sample Rate** – Allows you to select the audio sample rate that will define the audio quality. A higher sample rate will produce a higher quality audio output however it will require greater processing power.
6. **Audio Buffer Size** – Allows you to select AlphaLive's audio buffer size. The buffer is used to process any audio information before it is sent to the output and is used to set the audio latency. If the buffer size is too large you may notice some latency between pressing a pad and hearing its function, however if it's too small there may be clicks/pops/dropouts in the audio due to too much strain being put on the buffer.
7. **Show Devices Control Panel (Windows ASIO only)** – If you have selected the ASIO device type this button can be used to display the ASIO devices control panel for setting further parameters of the audio output.

audio output settings.

The Audio Output Settings tab displays a set of controls for setting parameters of the overall audio within AlphaLive. It contains the following controls:

general settings.

The General Settings tab displays a set of controls for setting general functionalities within AlphaLive. It contains the following controls:



1. **Device Interface** – Allows you to manually change the AlphaLive user interface to comply with a particular AlphaSphere model. When an AlphaSphere is connected to AlphaLive it will automatically display the correct interface.
2. **Projects Directory** – Allows you to set the location of the AlphaLive Projects Directory. Note that the folder you choose with the file browser is the location of the AlphaLive Projects folder, not the location of the folders contents.
3. **Note Display Type** – Allows you to choose how MIDI notes are displayed within AlphaLive. You can either display them as MIDI notes numbers or note names.
4. **On Launch** – Allows you to set what happens when AlphaLive is launched. You can either open a new project or open the last opened project.
5. **Stop All Sound On Clock Stop** – When set to 'on' all MIDI notes, samples, or sequences will be instantly stopped whenever the clock is stopped.
6. **Clean Project On Close** – When set to 'on' the open project will automatically be 'cleaned' whenever AlphaLive is closed. Cleaning a project is the process of searching through the current projects Audio Files directory and removing any unused files (files not currently set to a Sampler or Sequencer pad), which will help prevent an excessive build-up of redundant data. It will also reset any unused mode settings to default values.
7. **Auto-save scenes** – When set to 'on' any recently changed pad settings within a scene will be automatically stored when you switch to a new scene. If set to 'off' you will need to shift-click on the current scenes slot before switching to a new scene if you would like to store its settings.

project settings.

The Project Settings pane of AlphaLive allows you to set global project settings and can be accessed from the File Menu. Project settings are independent to each AlphaLive project and their values do not change between scenes. The Project Settings section is organized into a number of tabbed views, with a 'Close' button below for going back to main (pressing ESC also does this).

Project Settings contains the following controls:

- **Copy External Files** – By default, when you add an audio file to a Sampler or Sequencer pad the audio file gets copied into the Audio Files directory within the current projects directory. This allows AlphaLive projects to be moved between computers without causing any 'missing file' errors. If this button is set to 'off' this feature will by turned off. If this feature is turned back on after being turned off it will instantly copy any included audio files into the projects Audio Files directory.

faq / troubleshooting.

If you are having any issues with the performance or operation of the AlphaSphere and/or AlphaLive.

common issues.

Below is a list of common issues you might come across with some suggested solutions. There is also an official AlphaSphere/AlphaLive forum (see the Contact/Support section below) where you can find further support.

problem.	solution.
OSC messages not being received by external software.	The port number you are using may already be in use. Try a number of different port numbers.
No audio output from AlphaLive.	Use the Preferences panel to make sure that the correct audio output has been selected, and that a pair of active audio channels has been selected. Be aware that most ASIO devices on Windows are single-client – they can only connect to a single application at anytime. Therefore if another application is currently using your ASIO device AlphaLive will not provide you with any available ASIO output channels.
Missing audio files in a project.	This would be caused by manually moving or deleting audio files from the projects Audio Files directory.
Toolbox items not appearing.	All the toolbox items exist in the Application Data or Library directories that should be in the same directory as the AlphaLive application file. If you have moved the application file away from this directory please move it back. If you have manually edited the contents of this directory you should re-download the software and not edit any of the directories contents.
AlphaLive isn't being translated into my language.	AlphaLive's language is automatically set to the computers current system language. AlphaLive currently supports English, Chinese, and Japanese. If AlphaLive isn't being translated into any of the supported languages, see the Toolbox items not appearing solution above.
'Missing files' error when attempting to update the firmware.	See the Toolbox items not appearing solution above.

contact/support.

You can find the official AlphaLive support forum at **http://www.alphasphere.com/groups/software-support/forum.** This should be your first place to go to ask questions and find solutions to any problems you might be having. The AlphaLive developers will moderate this forum regularly.

glossary.

midi.

MIDI, short for Musical Instrument Digital Interface, is the standard protocol for enabling electronic musical instruments and computers to communicate with each other. The majority of electronic musical instruments and music software is compatible with MIDI, allowing a lot of freedom in terms of working with computer-based music systems.

It comprises of a set of commands designed for creating sequences of musical notes and modulating the produced sounds. MIDI messages do not create sound directly – a MIDI message is simply a command sent to a sound generator (such as a hardware or software synthesizer) telling it what kind of sound to produce. The MIDI functionality within AlphaLive enables the AlphaSphere to interface with your existing music production software and virtual instruments in a very open and customizable way.

When talking about MIDI within this manual you will come across the following terms:

- **Note Number** – A MIDI note number refers to a certain musical note or frequency; setting a pads note number within AlphaLive determines the pitch it will create. AlphaLive supports note numbers in the range of 0-119 (notes C-2 to B7), where middle C is note number 60.
- **Channel** – Within Digital Audio Workstations and MIDI sequencing software a channel usually refers to an individual track of MIDI messages or a single instrument/sound/voice. MIDI contains 16 channels that allows you to create separate sequences of notes with different sounds/instruments; setting a pads MIDI channel enables you to route a pads MIDI messages to a specific track or instrument within your DAW.
- **Velocity** – MIDI velocity refers to the gain/intensity of a MIDI note. Velocity can be set in the range of 0-127.
- **Note Event** – A note event is the type of MIDI message that creates a pitched note or sound. Note events are made up of a note-on message that determines the start of a note with a specific number, channel, and velocity, as well as a note-off event that determines the end time of the note. Within AlphaLive note events can be created by tapping a pad set to MIDI mode, or by creating a sequence of notes within a MIDI Sequencer pad.
- **Aftertouch** – Aftertouch is one of the key aspects of the AlphaSphere. On a regular MIDI keyboard Aftertouch is a feature that can be accessed by applying more pressure once a key is depressed, which can usually be assigned to control and modulate any available parameters of the produced sound. There are two types of Aftertouch – Polyphonic Aftertouch (also known as poly pressure), and Channel Aftertouch (also known as channel pressure). Poly Aftertouch is individual to each note – applying aftertouch using a certain key/pad will modulate the sound of that note only, however with Channel Aftertouch all notes on a certain channel will be modulated using any key/pad. On the AlphaSphere Aftertouch can be produced using the pads depth/pressure. Poly Aftertouch is the default pressure setting for pads set to MIDI Mode as it allows an extra level of expression not found within most existing MIDI controllers, however due to the rarity of aftertouch in more recent hardware not all virtual instruments currently support it.
- **Control Change/Continuous Controller/CC** – Control Change messages, often abbreviated to CC, are a set of 128 commands/controllers that are most commonly used to send control data. While the MIDI specification has loosely defined what each of the CC commands should control, the majority of them are freely assignable within DAWs and virtual instruments commonly using a feature called MIDI CC Learn. On a regular MIDI controller these commands are usually set to sliders, dials, and buttons that control an array of parameters such as volume, pan, track solo/mute or any other available control. Within AlphaLive CC messages can be produced using the pads pressure as well as using the elite dials and buttons.
- **Mod Wheel** – The Modulation Wheel is a common control found on MIDI keyboards. It is programmed to send MIDI messages via CC controller number 1 therefore it is not a unique MIDI message in itself, however most DAWs and MIDI instruments will contain presets that use CC 1 to apply certain modulation effects. Again this is usually freely assignable within MIDI software, and is another command that can be sent using the AlphaSphere's pads pressure.
- **Pitch bend** – A pitch bend wheel is another commonly found control on MIDI keyboards that enables the pitch of a MIDI note to be modulated at a high resolution. Pitch Bend is its own defined MIDI message however most MIDI instruments allow you to modify the range of the pitch modulation. Within AlphaLive there are two pitch bend options that can be set to a pads pressure – Pitch Bend Up and Pitch Bend Down.
- **MIDI file** – A MIDI File is a specific file type (.mid) for storing sequences of MIDI messages. The majority of MIDI sequencing software supports MIDI file import/export that ultimately allows sequences to be shared between software and users. Within AlphaLive MIDI files can be imported into MIDI Sequencer pads to create sequences, as well as exported to all AlphaLive sequences to be opened in other MIDI sequencing software.
- **Program Change Messages** – MIDI program change messages are generally used by MIDI devices and software to change a program, patch, or preset of settings or sounds. Within AlphaLive you can set a pad to send MIDI Program Change messages via the Controller Mode.
- **MIDI Sequencer** – A MIDI Sequencer is a system or application that enables sequences of MIDI notes and events to be recorded, drawn, edited, and played back.

To understand the MIDI functionality within your existing MIDI software, DAWs, and virtual instruments, please refer to their documentation.

open sound control.

Often abbreviated to OSC, Open Sound Control is a more recent protocol for computers, sound synthesizers, and other multimedia devices that allows them to share realtime data over a network. OSC is similar to MIDI in that it allows musical hardware to communicate with other hardware and software, however it offers a number of advantages such as an open-ended, human-readable message naming scheme; higher data resolution; data transfer over a network (including WiFi); more accurate synchronization; and a faster data rate. However MIDI still has an advantage in that OSC is yet to be accepted as a standard protocol in all commercial music software.

OSC is supported within a number of audio applications such as Digital Performer, REAPER, Reaktor, and VirtualDJ, and it is also supported in more general media software such as Max/MSP, Processing, and Quartz Composer, allowing the AlphaSphere to be used to control more than just audio.

AlphaLive contains a couple of OSC related terms:

- **OSC Port** – When sending OSC messages you need to set a port number that defines the UDP/TCP port on the network that the messages will be sent over. There are a large number of port numbers available (0-65535) however a lot of ports are reserved for other applications and only a single application can be sending messages over a single port at any time. The default port within AlphaLive is 5004 which seems to be available the majority of the time, however it is system dependent and may not work for everyone.
- **OSC IP Address** – When sending OSC messages you also need to supply the IP Address of the device you want to send OSC messages to. If you are sending OSC messages to an application on the same computer/system the IP address needs to be set to 127.0.0.1. Please refer to your computers/devices documentation to learn how to obtain IP addresses external devices.

other.

ASIO – ASIO is a computer sound card driver protocol that provides low-latency audio recording and playback between software and a computers sound card. It is the recommended audio device type to use within AlphaLive on Windows, and if your sound card does not have native ASIO support you can try out **ASIO4ALL** – The Universal ASIO Driver For Windows Driver Model Audio.

DAW – A Digital Audio Workstation is a system or application that enables the user to record, edit, and playback digital audio, and often includes MIDI sequencing functionality too. The most popular commercially available software DAWs include Logic Pro, Cubase, Ableton Live, Pro Tools, Reason, and FL Studio. The AlphaSphere/AlphaLive MIDI functionality allows the instrument to interface with the majority of available DAWs.

DirectSound – DirectSound is the default protocol for handling audio on the Windows XP platform. It is simpler and more user-friendly than ASIO, however unlike ASIO it does not communicate with the computers sound card directly therefore it can produce an increased latency and lower sound quality, as well not giving you as much control over the audio. DirectSound is generally not well suited for professional audio applications.

Quantization – Audio quantization is the process of aligning a set of musical notes or sounds to a precise setting which results in notes being set on beats and on exact fractions of beats. Within AlphaLive there are two places where quantization is available – quantization of sequence notes when recording sequences or importing MIDI files, and **Playback Quantization** of pads that allows notes, samples, and sequences to play/stop at the next determined beat or bar.

Virtual/MIDI Instruments – Virtual/MIDI Instruments, also referred to as Software Synthesizers or Softsynths, are software applications that take in MIDI data and produce a realtime audio output based on the input. The most common form of MIDI instruments are VSTi, Audio Unit, and RTAS plugins that can be opened up as instruments within DAWs and MIDI sequencing software, however many also exist as standalone applications too.

WASAPI – Often abbreviated to Windows Audio, it is the default protocol for handling audio on Windows Vista and above. It is preferred over DirectSound due to an improved sound quality and latency, however it still doesn't provide professional audio recording and playback on the same level as ASIO does.

credits.

Lead Programmer – Liam Lacey
Interface Designer – Sam Davies
Documentation – Liam Lacey, Sam Davies.
Original Concept and Prototyping – Adam Place
Contributors – Kaspar Bumke, Felix Godden, Richard de Lancey
Audio Samples provided by:
Loopmasters
5Pin Media
Zero-G
Ali Lacey

Thanks to all AlphaSphere alpha and beta testers for all their bug finding, suggestions, and general support throughout the development.

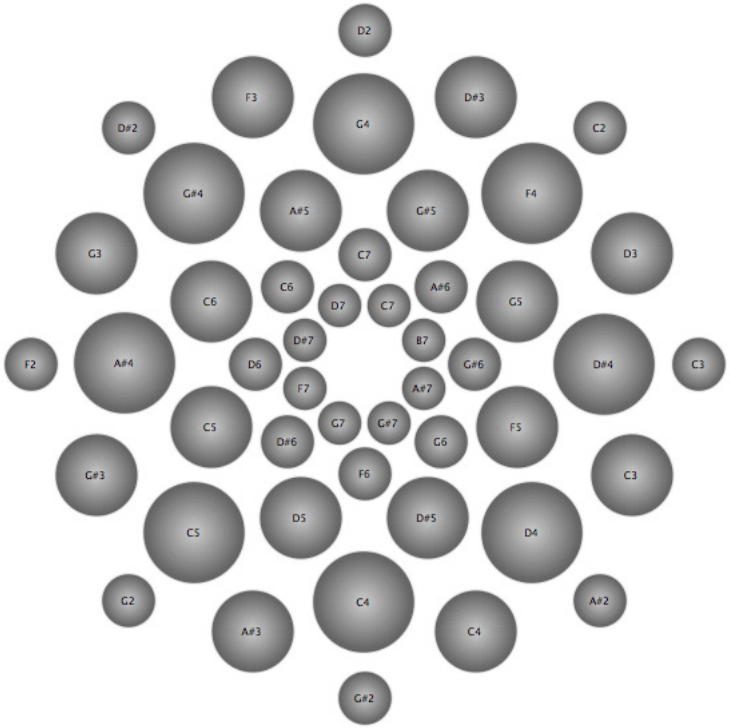
appendix.

note layout arrangements.

As mentioned in the Toolbox section, AlphaLive contains a number of notational layouts that can be mapped to the ‘sphere when all pads are set to MIDI Mode. Below are example mappings of the layouts; the pad layout is the same as can be found the on the AlphaLive interface, with note C2 on pad one being the root note.

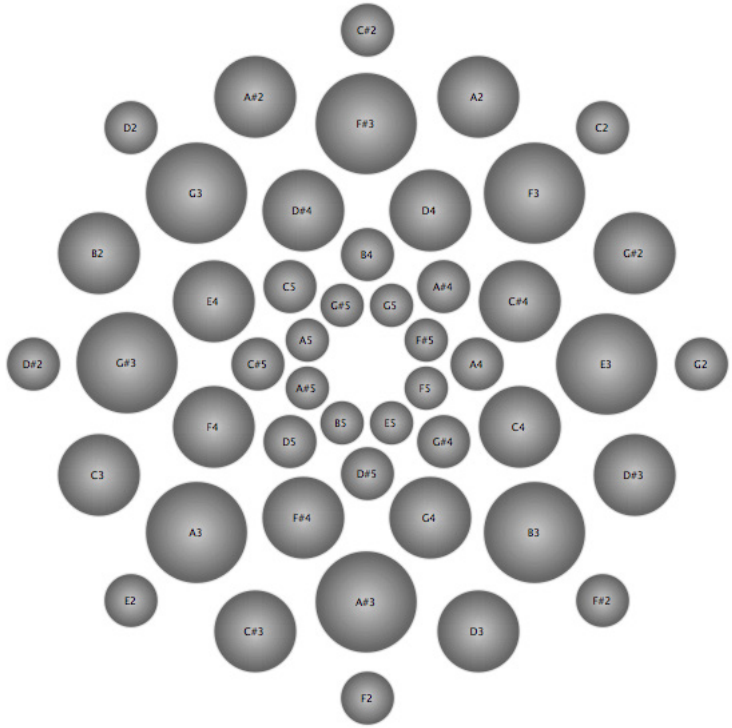
scale-based layouts.

AlphaLive contains a number of layouts based on common notational scales such as Major and Minor scales. These layouts are arranged so that each row of pads contains the same set of notes but with each row being an octave higher than the row below, with each scale starting on the first pad of each row. The way that the pad numbers are arranged means that you can move up the scale intuitively in an anticlockwise fashion. Below is an example of the Minor layout:



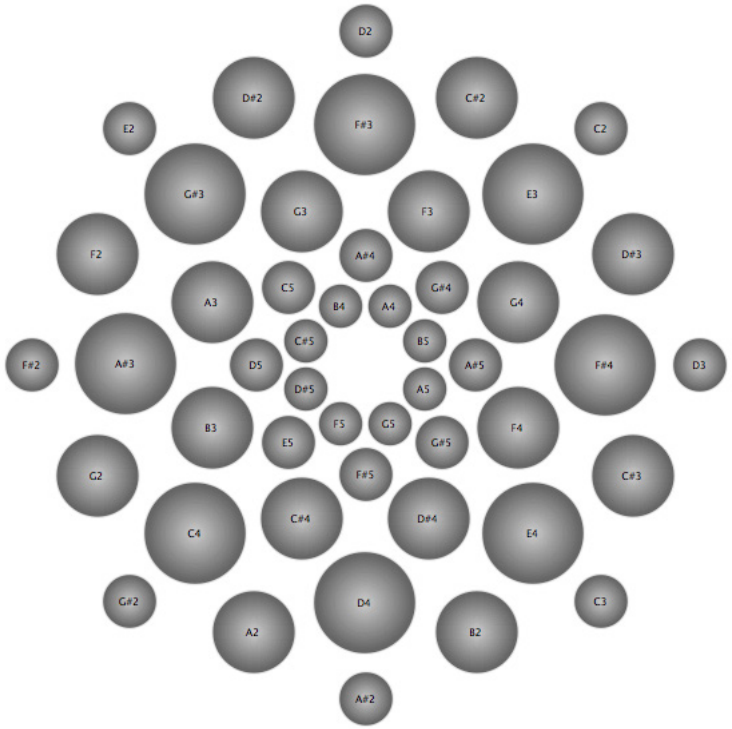
chromatic.

The chromatic layout runs a four-octave chromatic scale around the AlphaSphere. When you reach the last pad of a row the next note in the scale is to the right on the above row.



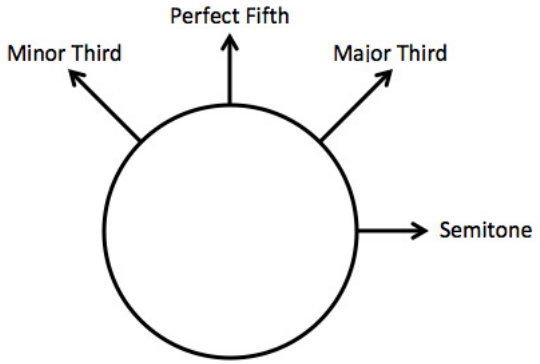
chromatic (2-row).

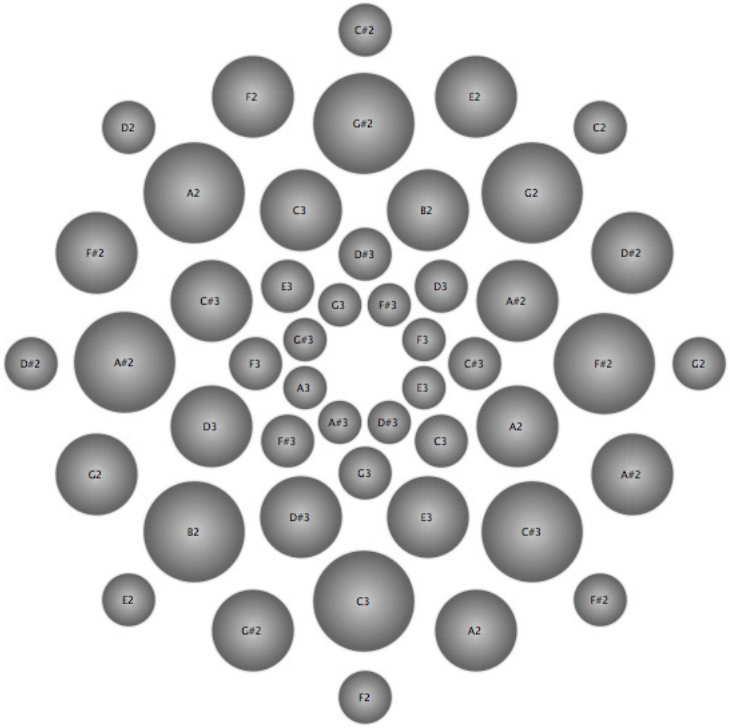
The Chromatic (2-row) layout is a chromatic scale laid out over two rows at a time, in which the notes of the scale alternative between row. So, for example, when starting at pad one the next note in scale is positioned to the right on the above row, with the following note positioned to the right back on the first row.



harmonic table 1.

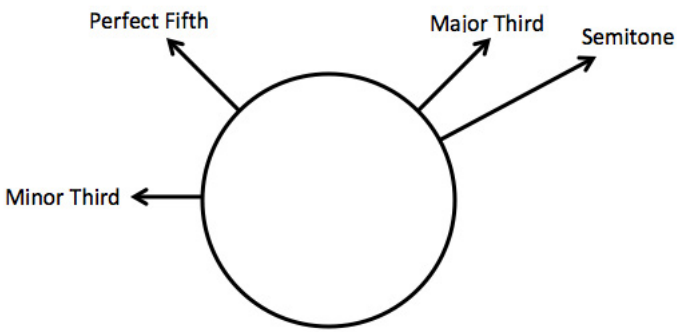
The Harmonic Table is an alternative notational arrangement that contains a number of different musical intervals based on the position of each pad. The following diagram shows the relationship between pads:

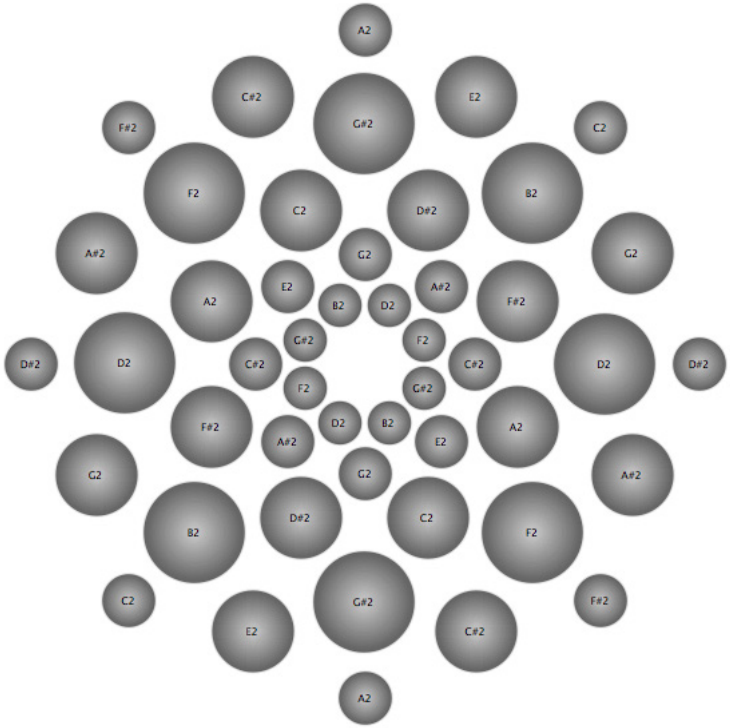




harmonic table 2.

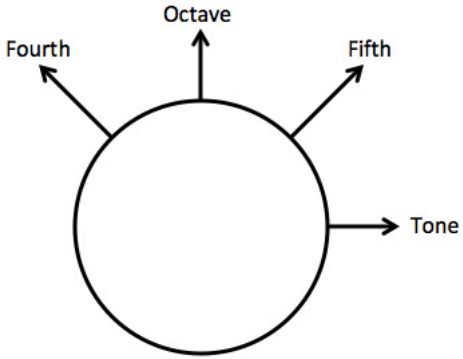
The Harmonic Table 2 layout is a modified version of the original Harmonic Table where the musical intervals are in slightly different directions:

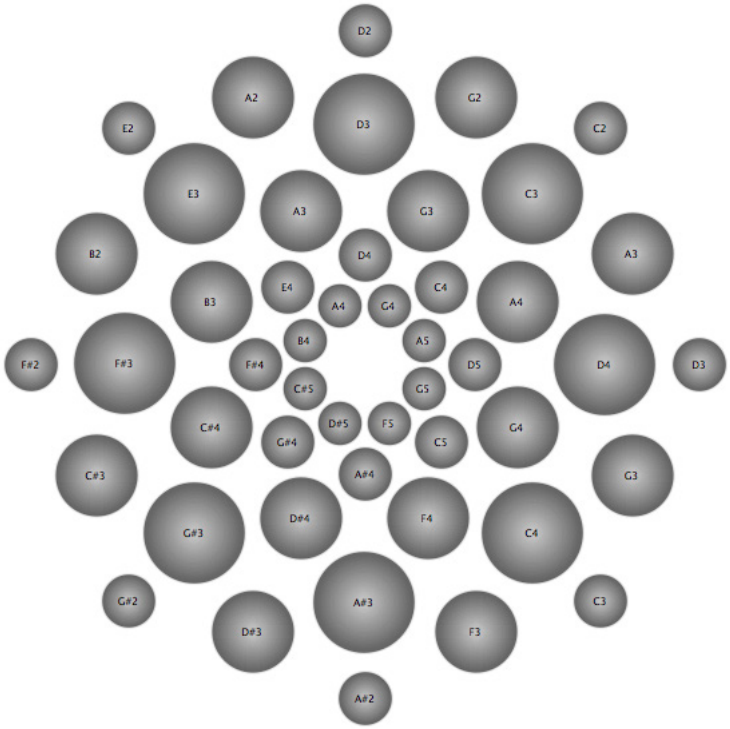




wicki-hayden.

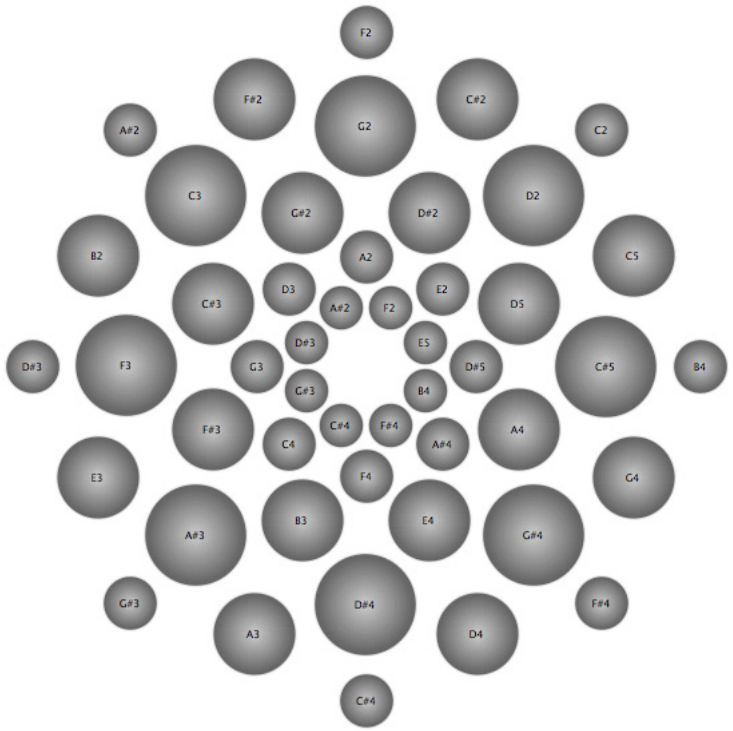
The Wick-Hayden layout is another alternative notational arrangement that contains a number of different musical intervals based on the position of each pad. The following diagram shows the relationship between pads:





perfect fourths.

The Perfect Fourths layout orders notes in fourths (5 semitones) along each row, with each row being one semitone higher than the last.



GM drum mapping.

As mentioned above the AlphaLive drum banks found in the Toolbox use a General MIDI drum mapping. The main purpose of the mapping is to synchronize drum layouts within AlphaLive with any external MIDI software/DAW that you may be interfacing with. The mapping used in AlphaLive is as follows, in order of sequencer row number or selected sampler pad number:

midi note number	instrument/sound
35	Kick 1
36	Kick 2
37	Rim Shot/Percussion/Sub-Hit
38	Snare 1
40	Snare 2
41	Low Tom/Mid Tom
42	Closed Hat/Percussion
45	Mid Tom/High Tom
46	Open Hat/Percussion
48	High Tom/Percussion
49	Crash/Cymbal
51	Splash/Ride/Cymbal

open sound control address naming scheme.

Using AlphaLive you can set any pad to send OSC data by setting it to Open Sound Control Mode within Controller Mode, and the AlphaSphere elite dials and buttons can also send OSC messages too. AlphaLive sends the following OSC addresses:

/alpha [pad number] [pad pressure] [pad velocity]
/alpha [elite control number] [elite control value]

The arguments have the following ranges:
Pad Number – 1 to 48
Pad Pressure – 0 to 511
Pad Velocity – 0 to 127
Elite Control Number – 101 to 102 for the dials, 103 to 105 for the buttons.
Elite Control Value – 0 to 1 for the buttons, user-defined for the dials.