

SPITFIRE AUDIO

**UCO**

UNION CHAPEL ORGAN  
USER MANUAL

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# CONGRATULATIONS

Thank you for purchasing Union Chapel Organ. A legendary Organ built by the master Henry Willis, in a legendary London venue; the beautiful Union Chapel. From angelic soft delicacies to roaring thunder, this instrument is one of the finest examples of 19th Century craftsmanship in the world, and gives you a Symphonic Orchestra of tones at your fingertips.

## Quick Specs

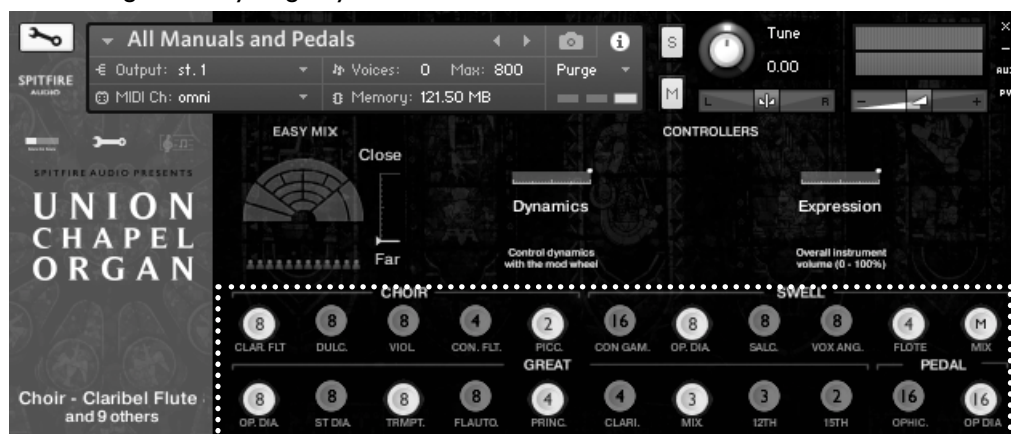
- 3099 samples
- 11.9 GB Uncompressed WAV
- 7.7 GB Disk space required
- **15.4 GB Disk space required during install**
- KONTAKT FULL REQUIRED
- New intuitive GUI with inline help
- Essential microphones (CAO)
- Detailed sampling:
  - Multiple Stops
  - Multiple dynamics
  - Release Triggers

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# PRECAUTIONS

If you've never used a Spitfire instrument before there are two very basic principles to grasp. Once you've got these, you'll be up and running and ready to go. By all means read on, but the first two rules are:



**TOP TIP:** The little 'i's on your GUI are 'inline' help. Click on these to find out stuff.

1.) Use these switches to change the stops... you can also set these up to correspond to keyswitches on the very bottom of your keyboard.

2.) For swells make sure you always use your Modwheel

3.) If you don't know what something does and it has an **i** next to it, click on it to get some help!



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# WELCOME

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The Organ at London's Union Chapel was built by Henry 'Father' Willis in 1877 specifically to match the size and acoustics of the building and is undoubtedly one of the finest in the world. Henry Willis who is regarded as the foremost organ builder of the Victorian era also built the organs at the Royal Albert Hall and St Paul's Cathedral.

The Union Chapel Organ remains essentially unaltered. The only significant changes have been the replacement of the Choir Gemshorn 4ft by a 2ft Piccolo in 1909, the provision of electric blowing in the 1920s, and the installation of a balanced swell pedal in the 1940s. As an important example of 'Father' Willis's work, in 2012-13 the organ was fully restored by organ builders Harrison & Harrison based on historic principles. The original hydraulic blowing engines (water powered) have also been restored to working order by James Richardson-Jones and are retained as an alternative to electric blowing (one of very few left in the world!). It has three manuals, Swell, Great, Choir, and a full pedalboard.

Since the restoration Union Chapel have been running a diverse concert programme around the organ including a brand new experimental organ festival launching in 2016. These concerts of all genres continually demonstrate how versatile the organ can be and that it is not simply a church instrument, but in fact the world's first synthesiser which can be incorporated into most genres of music. For more information on their programme please visit [www.unionchapel.org.uk](http://www.unionchapel.org.uk) The chapel itself has a beautiful acoustic and has hosted artists such as Nils Lofgren, Ray Davies, Beck, Suzanne Vega, Nitin Sawhney, Ryan Adams, Lady Antebellum, Elton John, Ellie Goulding, Chris Martin, James Morrison, Amy Winehouse, David Byrne, Tori Amos, Björk.

## BACKGROUND

Spitfire co-founder Paul Thomson grew up sat on the organ stool. From playing in churches before he could reach the pedal board, to practising at night locked alone in Worcester Cathedral as a teenager, he has always had a soft spot in his heart for this instrument. So after finding the perfect organ to sample, this became a pet project.

The organ is like an orchestra, from charming flutes to trumpets and trombones, with many interesting harmonic mixtures and options for voicing. You can set up different sounds on the manuals and pass from one to another, or combine them for a greatly amplified sound character. "The humble organist can have an orchestra of a thousand voices" - Marie Alain

Paul and his colleagues at Spitfire waited a long time before selecting the organ they wanted to sample, and the timing was perfect with the restoration and the collaboration with the Union Chapel. They started the project back in 2013 and many hours were spent during the night recording! This instrument has bags of character and can go from extraordinarily soft and delicate to full thunder and power while never sounding slightly synthetic or brittle like some of the later instruments.

As an instrument, the pipe organ has featured in many films and on many albums over the years, a sampling includes most recently *Interstellar*, *Rollerball*, *2001 A Space Odyssey*, many of Danny Elfman's scores including his two *Batman* offerings, *Koyaanisqatsi*, *The Omega Man*, *Interview With a Vampire*, *Paton* and *The Godfather*.

As a bonus feature Spitfire's team of sound designers have created 10 eDNA presets using the raw materials of the Organ, which have most recently featured in the 2016 Paul Feig reboot of *Ghostbusters*, plus a Dev Kit for the user to create their own unique Synths, Basses, Atmospheres and Rhythmic pulsing patches.

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# DOWNLOADING & INSTALLING

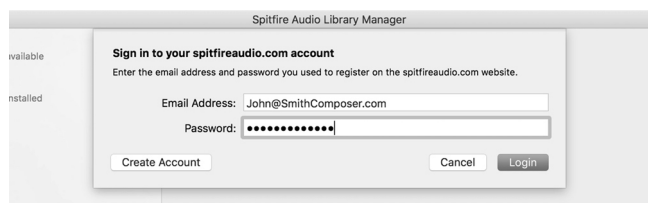
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Thank you for buying this Spitfire product. If you are a total newbie to this kind of thing you can get up to speed here:

<http://www.spitfireaudio.com/info/basics/>

First though, grab our 'Library Manager' app from this link: <http://www.spitfireaudio.com/info/library-manager/>

This app will enable you to download the library



When you launch the app you will be prompted to login using the same details you use at our site. Then you'll see your available downloads:

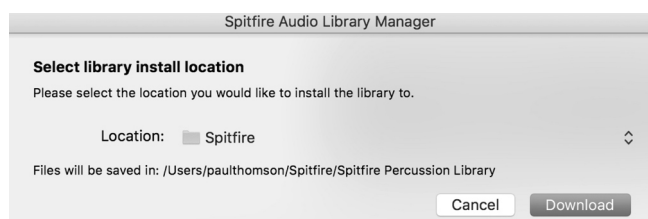


Once you've selected the location you can proceed with the download. **NOTE THAT THE DOWNLOADER WILL CREATE A SUB-FOLDER FOR YOUR LIBRARY IN THE LOCATION SELECTED.** This is important: if you have a multi part library, or an update, it means that the Library Manager app will look **INSIDE** the selected location for your library folder. If it's not there, it will create a new library folder. So, if you mistakenly select the actual library folder itself, when adding content or doing an update, instead of the location (one folder level up) that **CONTAINS** this library folder, you'll end up with a nested mess!!

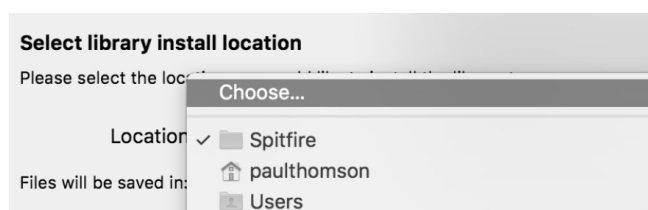
**TOP TIP:** You will need approx **TWICE** the amount of hard drive space as the library uses (see the product page on our site for this info) to download: this is because the zip files are all downloaded, and then unzipped. This process takes a while so don't panic if it looks like it's frozen!

**TOP TIP 2:** If you get in a total mess you can reset the download of either the whole library or just the latest update from the 'Library' menu of the app. This is limited to a couple of downloads so please only do this if you actually need to.

Once you have selected what you wish to download on the left pane and clicked the 'download' button you will have the option to select a location.



A default location will be generated but you'll most likely want to change this. Here's how! Click on the two little vertical arrowheads to the right of the default location. You will be presented with the following options, and you'll want to click 'CHOOSE'.



# NATIVE INSTRUMENTS KONTAKT

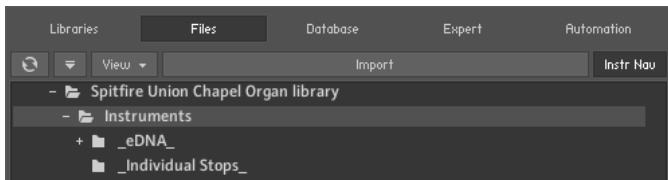
If you've never used one of our libraries before and you don't own a copy of Native Instruments Kontakt, you'll need to buy it from Native instruments:

<https://www.native-instruments.com/en/products/komplete/samplers/kontakt-5/>

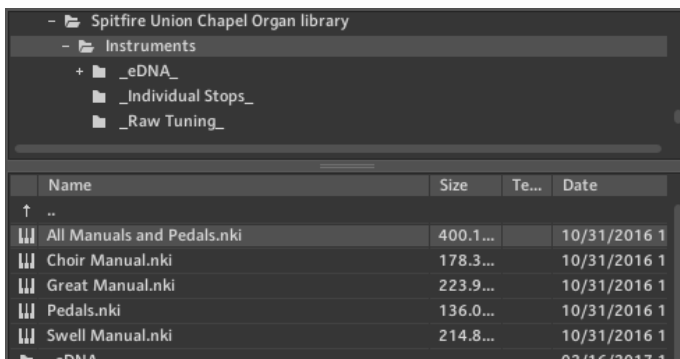
If you'd like to find out more about the differences between Kontakt and Kontakt Player (we know, very confusing!) go to *Appendix A*.

If you'd also like to know what we recommend as an optimal set up please go to *Appendix B*.

1. Install Kontakt (skip this step if you already have it)
2. Open Kontakt 5 and click 'Files' in the library browser window:



3. Navigate to the instruments folder within the library folder.
4. Double click or drag the .nki file corresponding to the instrument you want to load into the right hand side of Kontakt.



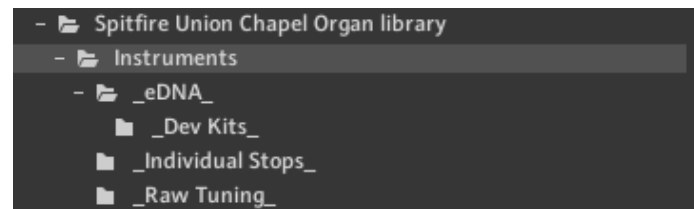
If you have never used Kontakt before we wholeheartedly recommend that you familiarise yourself with the basics of patch (or instrument) loading, multi management, outputting and midi routing detailed in the Kontakt user manual and native instruments website:

<https://www.native-instruments.com/en/products/komplete/samplers/kontakt-5/downloads/>

If you are an established Kontakt user please make sure you absolutely have the latest version of it downloaded via the NI

service centre or the NATIVE ACCESS apps. Our libraries are frequently updated and often simply won't work on any previous versions. We cannot describe the multitude of painful symptoms you will experience if you don't do this!

## FOLDER STRUCTURE



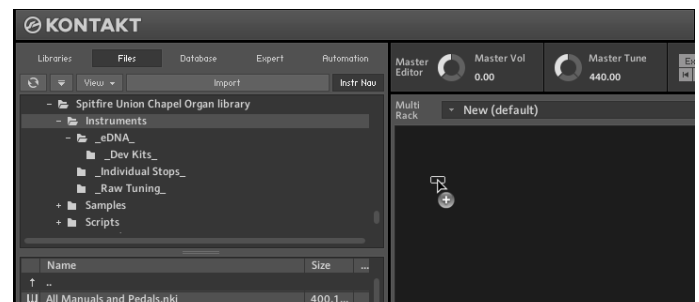
The instruments folder contains 5 patches: All Manuals and Pedals; Choir Manual; Swell Manual; Great Manual and Pedals. In this context "manual" refers to each keyboard on the organ and the sounds or "stops" available to it. In addition, there are 3 folders :

**eDNA:** Presets in our eDNA script engine, created by Spitfire sound designers using the raw materials of the organ.

**Individual Stops:** All of the separate stops in individual patches

**Raw Tuning:** All 5 of the main patches in a "Raw Tuning" folder. After recording the instrument, we tuned up anything that was slightly out, but have made the original untuned samples available for those that want the unedited sound of the instrument.

## OPENING AN INSTRUMENT

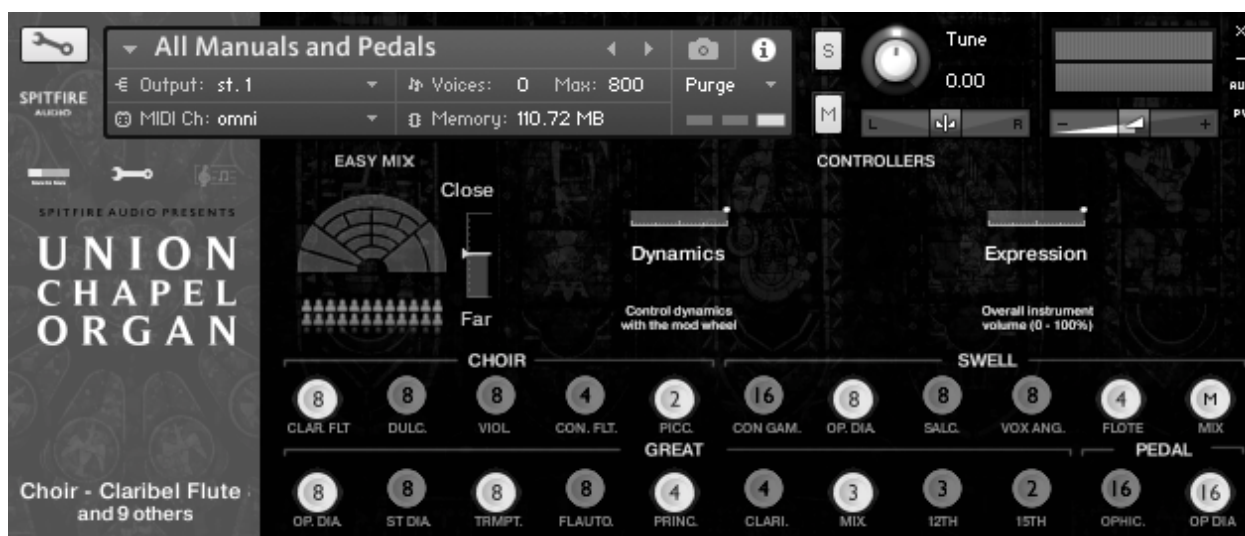


Simply double click an 'nki' file (this is Native Instruments' file extension for a Kontakt instrument) to load, or indeed drag the instrument (it'll have the little keyboard icon and the suffix .nki) from the left pane into the right pane.

If you can't hear anything double check first that the midi channel you are transmitting on with your keyboard is the same as the one in the Kontakt Instrument!

# A QUICK LOOK

## SWITCHING VIEWS



In order to reproduce the experience of playing the Union Chapel as closely as possible using this library, you would need to stack three keyboards on top of each other and have a pedal controller at your feet, then using different MIDI channels for each, load up the Choir, Swell and Great manual patches and the pedals patch (remember that “manual” means “keyboard” in this context) and play each patch with each keyboard.

In reality, you are more likely to want to play a combination of different stops and pedals on a single keyboard, so the “All Manuals and Pedals” patch is perfect for doing that.

When you first load up a Union Chapel preset you’ll be greeted with this GUI. This is one of 2 pages that you can switch between using the **panel switcher**...

## ASSIGNING CONTROLS IN KONTAKT

All GUI controls can be assigned a unique controller number so you can automate or adjust via an external controller (vital when playing in virtual Orchestral parts). To un-assign, assign or just to see what CC number is assigned to any control **RIGHT** or **CTRL CLICK**.

You can then alter the controller parameters in the “Automation pane” if for example you want your mod wheel to go all the way from top to bottom but the control to have restricted bandwidth change from the default of 0-127 to 20-100. Or if you want the controller to make the GUI control in the reverse direction change from the default of 0-127 to 127-0.

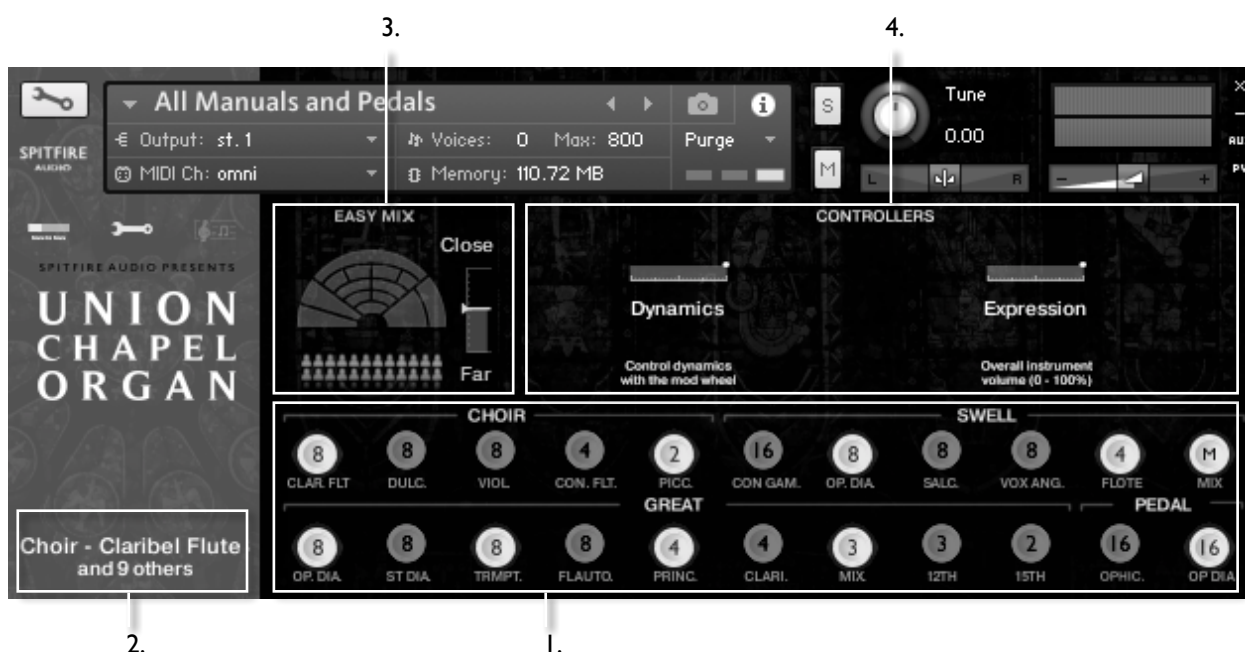


Click on these to switch views or pages:

1. **General Overview** (the view shown above)
2. **Expert View**
3. **Not used in this library**

All of which are discussed in more detail over the next few chapters...

# THE ‘GENERAL OVERVIEW’ PANEL

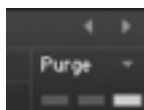


## 1. STOP SWITCHER

These are the stops, they are active (or “out”) when highlighted and any number of stops can be out at once. There must be a minimum of one stop out at any time.

If what you're playing stutters, or feels delayed or cuts out make sure everything is loaded, as some of the sounds are very deep sampled.

### LOAD STATUS:



Make sure Kontakt displays the instrument load status as pictured. If the left hand bar is illuminated and red it's in a queue and hasn't started loading yet, if the middle bar is lit and yellow the instrument is still loading up. If you try to play before it's loaded it may not be nice!

**STOPS** - Click on the stops to select the different sets of pipes, whatever stops are live is displayed in the yellow sidebar on the left. You can also select different stops by hitting key switches, you can do this whilst you're playing so if you want to switch on a stop, hit the keyswitch whilst you're playing your last note and the next note will be with the new stop configuration. For details of the stops recorded go to Appendix A.

## 2. SIDE BAR

Tells you what stops you're playing.

## 3. EASY MIX

The organ was recorded with several different mic perspectives. Move this slider up or down to change the perceivable distance from the organ. NB: the first time you use this it will need to load in the samples, so give it a moment!

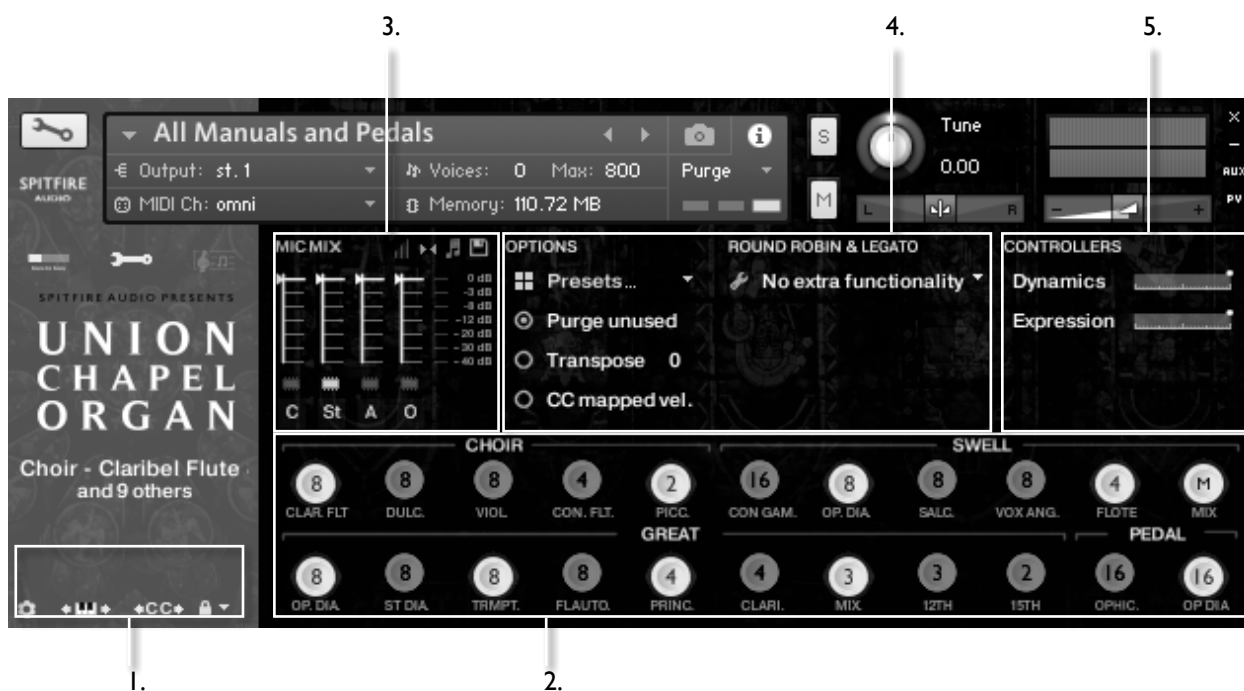
## 4. EXPRESSIVE CONTROLLERS

**Dynamics** - probably the most important controller you have. This crossfades between the different dynamic layers recorded.

**Expression** - ostensibly instrument volume trim (CCI 1), so this adjusts the volume within the instrument volume (CC7) great when used in conjunction with expression.



# THE EXPERT VIEW

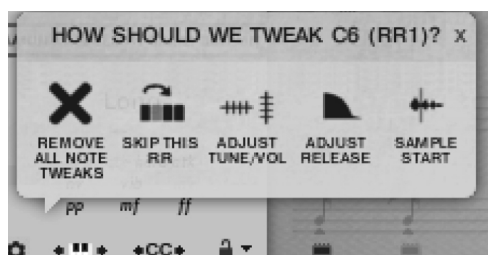


## I. SIDE BAR

On the 'General Overview' page this simply displays the stop being played. In the 'Expert View' there are some additional functions:



**Ia. THE COG** - a. The Cog - Awesome tool for fine tuning & tweaking your presets.



- **HOW SHOULD WE TWEAK?** - Then your last note played will be displayed, if this is correct get tweaking.
- **SKIP THIS RR** - This skips round robins in instruments that have them, this library doesn't contain round robins
- **ADJUST TUNE/ VOL** - Will adjust the tuning and or volume of the last played note.
- **ADJUST RELEASE** - This will alter the level of the release trigger (which will affect the perceived decay of that note).
- **REMOVE ALL NOTE TWEAKS** - This removes all custom changes you have made with the Cog.

**Ib. "KEYBOARD SHIMMIER"** - This shifts your bank of keyswitches left or right to suit your needs, preference or performance. Simply click on the icon and drag your cursor left or right and you'll see the pink bank of keyswitches follow! Wherever you stop, those will be the new keyswitches.

**Ic. "KEYSWITCH TO CC SELECTOR"** - Use this to assign a CC controller to act as stop/ keyswitcher. RIGHT or CTRL Click on "CC" and you can assign a controller to change stops.

**d. "STOP LOCKER"**

Unlocked Artic' - Select stops via the front panel or associated keyswitch.

Locked Artic' - This locks your stops so they don't change either via front panel or keyswitch.

Locked Keyswitch - This locks your stops via keyswitch but you're free to switch via the front panel.

Locked to UACC - This is a new standard being developed by Spitfire and detailed in appendix E. The default controller channel is #32 but this can be changed by right/ CTRL clicking on the padlock.

Locked to UACC KS - The functionality of UACC with the flexibility of a keyswitch. When activated, a single keyswitch is available. Pressing this key at varying velocities (according to UACC standards) changes articulation.

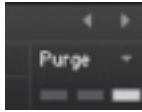
Shared Keyswitches - In larger libraries, this setting allows you to spread keyswitches across multiple palettes of articulations.



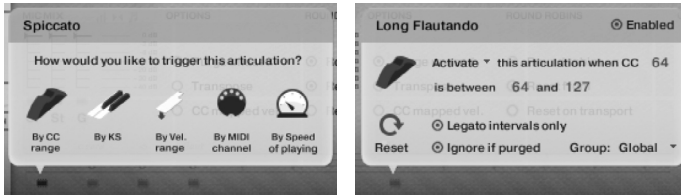
## 2. STOP SWITCHER

This works the same as it does in the 'General Overview' panel.

### LOAD STATUS



**TRIGGERING** - For triggering options CTRL or COMMAND click on the stop icon:



**“By CC Range”** - This will allow you to use a single controller channel to switch between stops. This allows you to fine tune on your MIDI event list, or to use a midi controller fader or indeed button with a single range assigned to select your desired stop'. Our default setting is guided by our UACC protocol.

**“By KS”** - The default setting. This is scripted so it won't switch mid note but wait 'til the next note-on event before switching. This means you're able to play the key switch say whilst playing one stop and have it switch to a different stop on your next note.

**“By Velocity Range”** - This is great for changing stops on the fly, you could have a different stop activate when you hit the keyboard really hard. A second menu will open up giving you options for this function.

**“By MIDI Channel”** - Ingeniously turns your single instance into a multi timbral instrument. MIDI channel lets the instrument change stop based on the incoming MIDI channel. To use, pop the instrument Midi Ch. to 'Omni' mode in Kontakt. The single instance can now be configured to play based on the incoming MIDI channel.

**“By Speed Of Playing”** - A revolutionary new function that allows you to switch stops based on the playing speed of your performance. When selected, it provides options to specify a triggering time-range in milliseconds. (See right hand menu above). For example, you could specify that 'Piccolo 2' should be activated if the time between playing each interval is between 0 and 250ms. Fully configurable to suit the user's playing style and needs and can be deactivated by unchecking 'Enabled' (or if not in the stop switching screen, simply holding ALT and clicking the stop icon on the stanza).

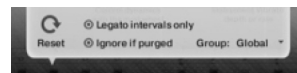
When an stop has a 'trigger' assigned to it, it shows a little short-cut icon above to let you know that it has been customised.



Holding down ALT and clicking an stop with this short-cut above it will toggle the trigger between enabled and disabled.



It's a handy way to quickly turn off speed/velocity switching if the user doesn't want it.



**TRIGGER PANEL** - Reset will clear the trigger for this stop, allowing you to set it to a different type or disable it permanently. Ignore if purged means that this trigger will only occur if the stop is not purged.

Group allows you to group together triggers. When set, the trigger only occurs when an stop in the same group is currently active.

### 3. MICROPHONE MIXER

Giving you greater control over the blends of microphone positions for your work.

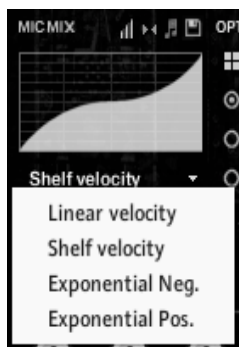
Use the chips beneath the faders to load & unload different microphones and the faders above to tweak the balance of them. Turning a fader all the way down will also unload the mics, conversely turning the fader back up will reload. Right click on the faders to assign CC controllers so you can mix these live for fantastic shifts in the spacial nature of the samples. Left click on the mic letters to change Kontakt channel/output assignment.

On the top right of the mixer controller section are some deeper mixing options.

a. b. c. d.



#### 3a VELOCITY RESPONSE



Pick from 4 different velocity curves to suit your controller. Not used in this library

#### 3b CLOSE PAN MIC COLLAPSER



The close mics are a stereo mix and this collapser allows you to refine how the stereo image is handled. All our musicians are recorded in-situ, ie. where they would be seated on a standard scoring session, giving you a fantastic spectral spread when putting all the elements together, which helps define the detail. This panning tool helps you to manage and tweak this to your own tastes/ needs.

**STEREO WIDTH** - Allows you to control how far the stereo image reaches. All the way to the right would be like having your two pan pots panned hard. All the way to the left would be like having both pots centre,

**STEREO PAN** - Then allows you to control where in the pan field the centre of this image is placed.

#### 3c MIC MIX TO STOP LINKER

The small notation symbol locks the microphone mix or tweak you've made to the stop selected. This means if you want to boost any perceived inconsistencies in volume between stops. Or indeed if you want to roll off some of the hall ambience for one stop verses another, this is how to fine tune.

#### 3d MIXER PRESETS



A new way to transfer mixer settings between patches, or save and load presets to disk.

**AUTOMATING MIXER FADERS** - Each mixer fader has a dedicated #CC. To change this to suit your MIDI controller or surface, simply RIGHT or CTRL click on the fader itself to "learn" the new controller.

**ROUTING MIC MIXES** - To route each mic mixer channel to unique Kontakt channels simply click on the mic letter. Great for putting your ambient mics in the surround for example. Also good for tracklaying individual mics for your engineer to control in your final mix sessions.

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## 4. GENERAL CONTROLS

### OPTIONS

**PRESETS** - Not used in this library

**PURGE UNUSED** - This control keeps unloading any samples you are not using to keep your memory usage as low as possible.

**TRANSPOSE** - Toggle this on and tweak the number to the right to transpose your instrument. Note this is not the same as tuning, the instrument will actually offset the samples to the selected pitch.

**CC MAPPED VEL(OCITY)** - In many libraries you would click this to control note velocity with the Dynamics slider. However, in this library dynamics are always controlled with the dynamics slider.

### ROUND ROBINS & LEGATO

Not used in this library

## 5. EXPRESSION CONTROLS

**DYNAMICS - CC#1** This slider displays and controls which dynamic layer is live. Also controlled via the modulation wheel.

**EXPRESSION - CC#11** Displays the overall instrument volume (0-100%). Remember you can also trim your instrument volume with CC#7.

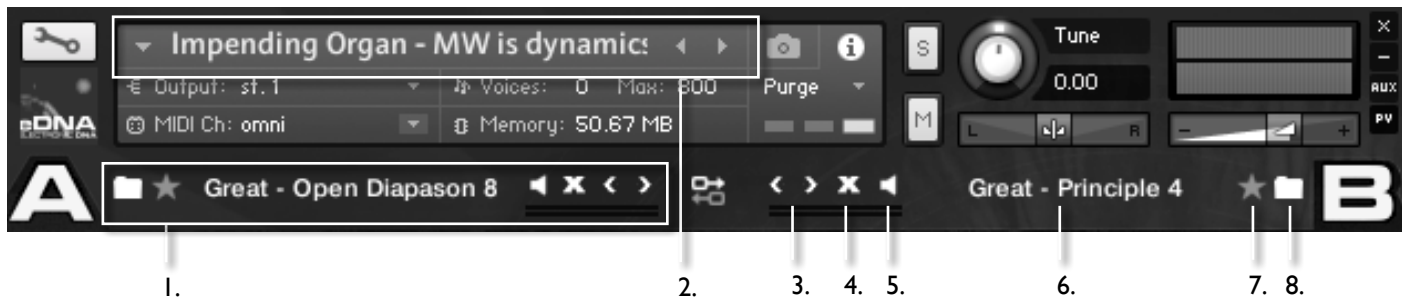
# THE eDNA INTERFACE

For our more synthesized and warped sounds we had Blake Robinson, our crack script editor, come up with the 'mother' of interfaces designed for the tweakhead in us all. With raw 'sound' material that is already awe inspiring this interface has allowed us to create for you mind blowing instruments. More importantly it will allow you to instantly combine sounds to customise instruments of your own. In the eDNA folder you'll find specially curated patches made from the organ.

Its time to meet eDNA...



eDNA 'instruments' are made from up to two sounds loaded into each bay (A & B ). So when you load an instrument, not only do you have the choice of pimping the front end, you can also use eDNA's very own sound browser to load different content into your tweaked bays.



1. Is eDNA's sound browser for sound bay A with the name of the sound loaded and a selection of quick to deep browsing options. These are matched and mirrored for bay B to the right.

2. Is Kontakt's browser with the instrument name and some very quick browsing options. You can also use the library or file pane to browse for more instruments detailed in page 28.

3. Navigation transport, loads next sound along or goes one back.

4. Mutes the Bay

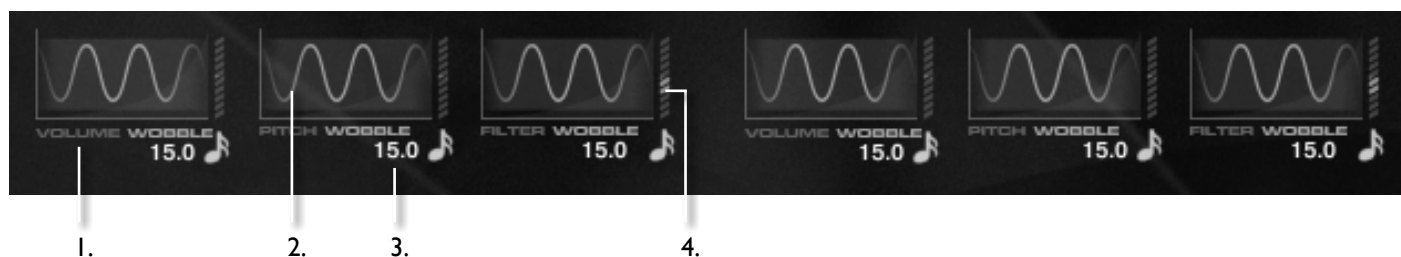
5. Toggles audition on or off for when using the file browser.

6. Name of sound

7. Like the sound? click this and you'll be able to find it again when using eDNA's file browser.

8. eDNA's sound file browser. Navigate in list form with lots of browsing functionality mentioned later.

## WOBBLES



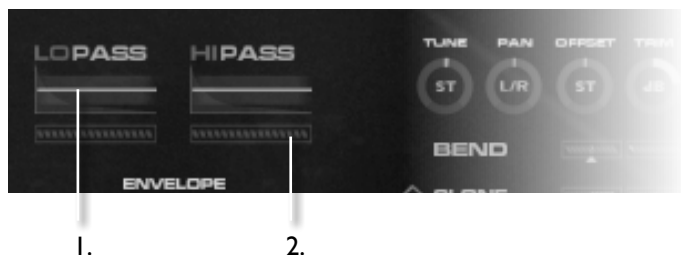
**1. WOBBLE TYPE** - eDNA can modulate three different parameters, the intensity of which are controlled by clicking and dragging on the control to the right of the waveform (4.)

- Volume - 4. Controls how loud to soft.
- Pitch - 4. Controls how high to low
- Filter - This modulates both the LPF and HPF filter stages in the bay. Move 4. up for HPF, down for LPF, more about these in a minute.

**2. SPEED** - Drag the waveform up and down to change the speed / frequency of the wobble. The speed will be indicated by 3.

**3. INTENSITY / DIRECTION** - This controls how much you're going to wobble by and the direction of travel.

## FILTER STAGE



Here are two conveniently placed low pass (cuts frequencies above the LP cutoff point) and high pass filters (cuts frequencies below the cutoff point).

**1. FREQUENCY** - Move the wave up or down to adjust the frequency of the filter.

**2. RESONANCE** - Pull left to right to adjust the resonance

## TUNE, PAN, OFFSET, TRIM



As with the wobbles, all knobs move by clicking and holding your mouse over them then moving your mouse up for clockwise down for anti'.

**1. Tune** - adjusts the pitch of the sample in 50 cent (quarter tone or half semitone) steps. To have a smooth dial (which moves in 5 cent steps) click SHIFT and then move the knob. Example: if you want to move this down an octave pull the knob down 1200 cents.

**2. Pan** - moves the instrument within the stereo spectrum left and right. This is particularly useful when using the Auto X-Fade oscillator but more of that later.

**3. Offset** - is the quickest way of changing the samples you're using and a great way of warping the sound, use this in conjunction with the tune knob to get the desired effect. In our other libraries it's called transpose but we feel offset is a truer description. So if you're offsetting by + 7 keys, maybe draw the tune button down -700 cents (which is 7 semitones) this will make sure the instrument is at the same pitch as before but is polling different samples.

**4. Trim** - is a gain stage that becomes a valuable tool in conjunction with the x-fade slider. This helps you tweak the volume balance between sound bay A & B. You'll find this particularly useful if the instruments seem to get quieter when the x-fade slider passes through the middle position, adjusting the trim of one of the instruments will fix this.

*TOP TIP: Holding down alt while wiggling a bay A and B knob/tuner alt will duplicate the value on the mirror bay. ie. hold alt and change the Tune and both bays sync value.*

## BEND

## BEND, CLONE, GLIDE



These control what happens when you use the pitch bend wheel. Again a parameter that is independent between Bay A & B. So you can do some pretty cool stuff with this.

**1. Amount** - this controller sets the extreme bend amount up to 2400 cents.

**2. % Bend** - this controller then sets how much in % the pitch bends. For example, if you set the right to 2400 cents, then the left to -100% you get a bend of -2400 cents. If you put the left slider to +50% you get a bend of +1200 cents. This is so you can specify how far you want to bend and then easily bend it.

## CLONE

**3. Clone** - Click this to do as it suggests, clone or double the sample playback, you can then...

**4. Coarse Tune** - this tunes the clone up and down in 100 cent (1 semitone/half tone) steps to +/- 1200 cents (1 octave)

**5. Fine Tune** - This tunes the clone further in smaller increments +/- 100 cents (1 semitone/half tone)

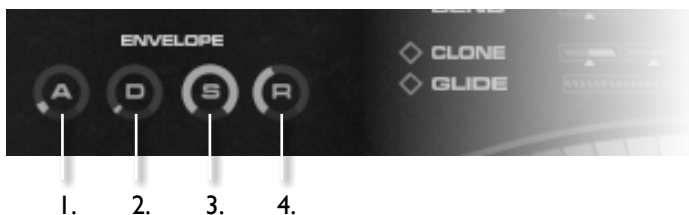
## GLIDE

This is quite simply the most ingenious piece of scripting. eDNA intuitively analyses the way you play and organises the transitions accordingly.

**6. Glide On/Off** - click to activate.

**7. Glide Amount** - slide this amount up to increase the "Glide" between notes.

## A.D.S.R.



For those of you who are new to synthesis this array of controls “shapes” your sound.

**1. Attack** - This moves your sound from a percussive hit to a slow entry.

**2. Decay** - This is the time the sound takes to drop to the “Sustain” level that the instrument then plays at. This is a great dial to automate with more percussive sounds.

**3. Sustain** - This sets the level at which the decay drops to. So for spiky little arpeggiator type sounds pull sustain all the way down and set the decay to taste.

**4. Release** - This sets the time in which it takes the sound to die away, for sounds that have a lot of room in them it may be useful to leave a long release.

## THE MIGHTY X-FADER



Yes, it hasn't escaped our notice that it looks a little bit like a Cylon's face either.

This is where the beautiful simplicity of Earth comes to life, as default (in 'factory' cartridges) routed to your mod wheel and is why we feel that to get the best out of this (and pretty much all of our libraries) product you've got to give it a wiggle! So x-fader right to left adjusts the amount that you hear instrument bank A vs B. But it doesn't stop there, we've also designed a custom oscillator script that automates the slider. Click on osc, play a sound and off you go.

**1. Oscillate Mixer** - Switches the automated mixer on.

**2. Speed** - Move this up or down to effect the frequency of the oscillator. From slow evolving soundscapes to fluttering madness! All sync'd to your host DAW tempo, or the internal Kontakt tempo in standalone.

**3. The X-FADER** - She's got some tricks up her sleeves though, a bit of work with her and she may surprise!! Just a simple cross-fader with a nice big sweep so you can fine tune your instrument blends.

**TOP TIP.** When browsing instruments in the Factory carts, make sure your x-fader is +/- 100% so you can only hear the sound you're auditioning

**4. Start/ Phase** - This slider controls where the x-fader starts and which way it goes at first.

**5. Direction Strength** (new in v1.1) - You have two of these vertical sliders. They control the amount the XFader travels in each direction. The default position is 100% up on left and right. This will mean the sound from bay A&B will noticeably disappear at the apex of the oscillation. With both sliders at 50% it will simply oscillate half way in and out of each bay. These sliders don't need to be symmetrical and can create all sorts of wonderful nuance.

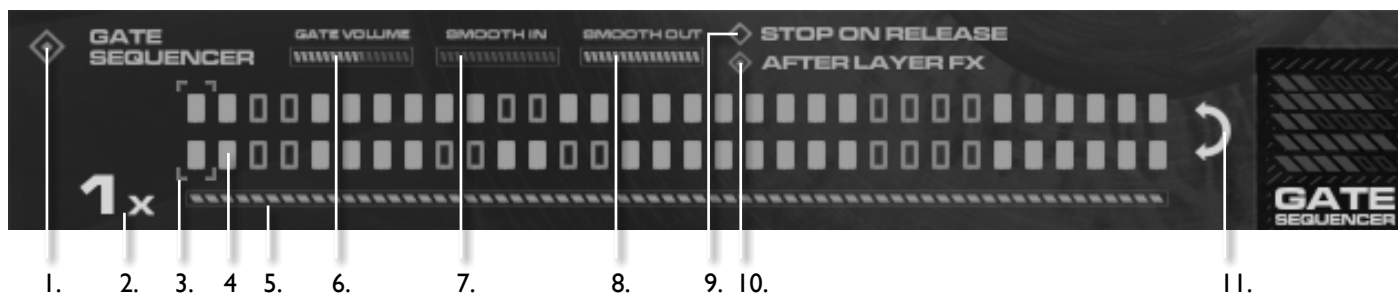
**6. Stop On Release** - this toggle returns the fader to the 50/50 position on note release. When this option is off the x-fader still returns to 50/50, but only after the sound in bay a and b have stopped playing/decayed (for example, if they have a long ADSR release).

**7. XFADE Oscillator Shape** (new in v1.1) - These switches toggle between the standard 'equal' shape moving left and right, to a more jagged shape to uni-directional.

We'll come back to this stage later to talk about how you can achieve very different effects, from simple blending to a very effective dynamic controller, a wonderful way to flick between diverse sounds to suck your listener's brain out through their nostrils or indeed a beautiful shimmering wave-like oscillation engine.



## THE GATE SEQUENCER



Unlike your usual on-off scenario you have two sound banks, so 5 options A on, B on, both on, A off, B off, both off! We're probably labouring this point, easier if you just look at the very intuitive gate interface.

The top line is the gate for Bay A, the bottom for Bay B. The default position is everything "on" to gate either A or B simply click on the step you wish to gate and hey presto. You can gate in unison or alternate or indeed create some great stutter.

**1. Gate Sequencer** - switches the machine on or off.

**2. Speed** - adjusts the speed of your gate sequence in relation to your DAW tempo (or the host Kontakt tempo in standalone).

**3. Transport Position** - where you are in your sequence.

**4. Gate Cell** - This one is in the "on" position.

**5. Division Slider** - Need more or fewer gate stages than the 16 provided as default? Move the division slider. Note that this will not affect the gate speed, but the number of steps in your pattern, particularly useful when working in a 3/4 time signature or meter. To adjust the speed of your gate pull up or down the 1x - 128x indicator to select different sub divisions of your host tempo or indeed the Kontakt internal tempo. You'll also notice when playing at its default setting that all gate lamps on creates a continuous signal without any stutters. So if you just want to gate one sound leave all the lamps for the other on!

**You can also control how the gate sounds.**

**6. Gate Volume** - This adjusts how much the gate gates! It's default position is all the way off, the more you adjust the slider the more you adjust how much the gate drops down to.

**7. Gate In Smooth** - changes the shape of the front of the gate and smooths it in.

**8. Gate Out Smooth** - the amount of tail the gate has. This is an especially cool tool to automate.

**9. Stop on release** - switches the gate engine off when you release your sound.

**10. After Layer FX** - This switches the gate stage between the bank FX. Something we'll come back to but if you find your gate clicking when playing lower ended material, you may find that this is the quickest and easiest fix.

**11. FLIP** - This swaps the sequence over so what you programmed for B will affect A and vice versa.

We have also have some quick keys that helps you tweak and experiment quickly and easily:

- Holding shift toggles a range of cells (ie press the 2nd cell, hold shift, press the 10th cell - cells 2-10 will change)
- Holding alt affects both A and B cells (same as alt and knob twiddling)
- Holding CMD/CTRL (Mac/PC) and clicking inverts the current sequencer track. On becomes off and vice versa.

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## FX DASH



### A Quick Assignable Controller Stage

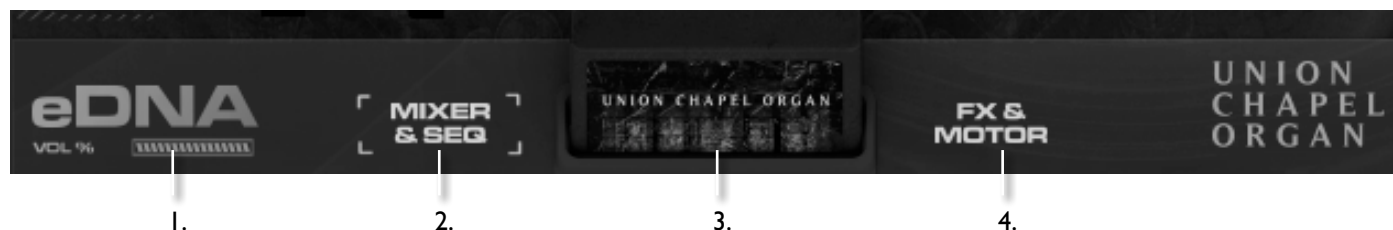
We'll detail this more when talking more deeply about effects. On the custom patches we have carefully curated the fx and which controllers you're most likely to get your hands on for quick and easy tweaking. Say to make the sound drier, wetter, more distorted or modulated. But more crucially this is how you would assign controllers and automate FX controls which can be found on other pages of the UI, a Kontakt feature exclusive to Spitfire and unique to EARTH.

**1. Parameter Name** - To remove this FX parameter ALT Click. A numerical value of the parameter is also displayed.

**2. Parameter Dial** - Remember to set CC value, control and automate CTRL/Right Click.

**3. An Empty FX Enclosure** - Waiting for your next mangler, pick carefully.

## MASTER CONTROLS & SWITCHES



### Some Master Functions

At the bottom of the eDNA interface are four controllers and switches that allow you to get even deeper into the heart of eDNA, or most importantly, turn her down!

**1. Volume or Expression** - This defaults to CCI I to re-assign (say to CC7) CTRL/ Right Click.

**2. The Mixer Tab** - On the FX pane you'll need to re-click this to get back to the main interface.

**3. Cartridge Loaded** - A lovely graphical indication of what collection you have loaded or what collection your individual instrument or patch belongs to. If you need to see / get to your FX controls more, try pushing it in.

**4. FX/Motor Tab** - Click this to get to the next stage in your exploration of eDNA...

## THE FX PANEL

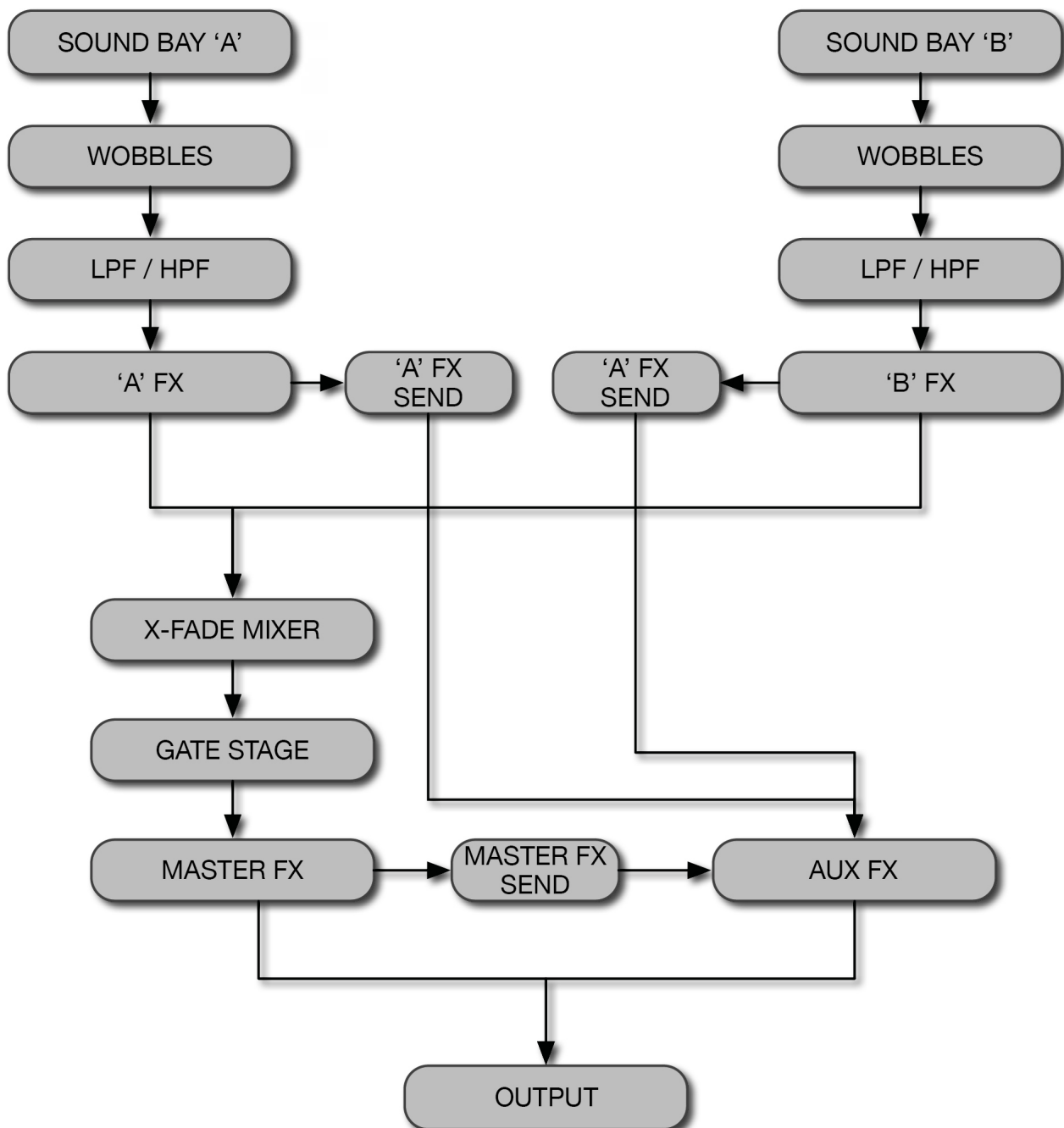
As the eDNA engine is basically a complicated sample player, a lot of the effects one would create from traditional synthesiser modules are created here via FX plugins. We've curated a potent set of plug in effects that sit in different stages of the signal path.



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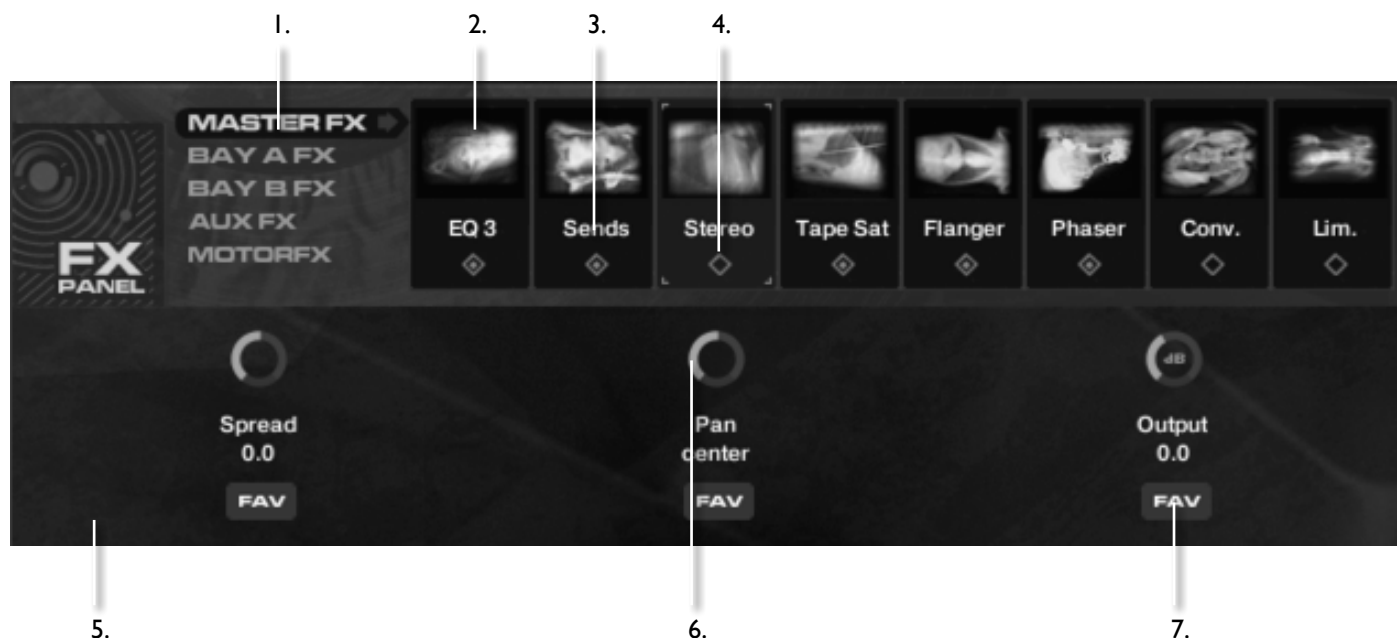
## eDNA'S FX SIGNAL PATH

Here's a quick diagram of what the signals are doing under eDNA's hood so you can best decide at which stage you wish to add and tweak your effects. We have pre-curated the FX racks according to their stage in the signal path. So verbs and FX more on busses with phases, flangers and distortion on more direct stages.



## AN FX RACK

In all there are 5 FX racks in the eDNA engine. Every one of them behaves the same, save for the motor fx rack discussed later. Here's how the master, bay A & B and Aux FX racks behave.



**1. FX Stage** - This toggles between the 5 different FX racks available to you in eDNA.

**2. Effect Icons** - These elegant depictions of veterinary x-rays, signify the different effect plugins available in the 8 enclosures per rack. **CLICK ON THESE TO LOAD THE EFFECT PARAMETERS ONTO THE PLUGIN DASH BELOW (5.).**

**3. Effect Name**

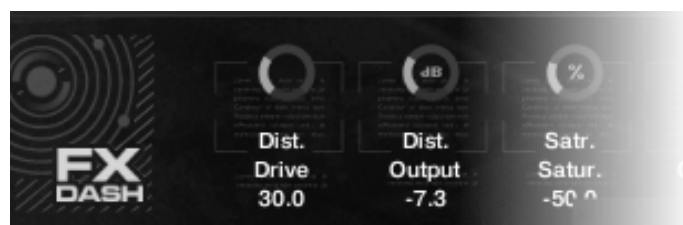
**4. Effect Bypass** - or on/off. Depicted here bypassed (or off). To activate click on this button.

**5. The plugin Dash** - displays the plugin parameters. Click on 2. to access the parameters for the effect you want to tweak.

**6. Plugin Parameter** - you will NOT be able to assign a controller to this parameter directly. It must first be loaded into the Quick FX dash on the main mixer pane.

**7. FAV Buttons** - or "favorite". These allow you to load your favourite FX onto your "Quick FX" dash. You also need to do this if you want to automate any of the effects or tweak them via a controller, say the modulation wheel. To remove simply click on the FAV button again and elect to remove. This parameter is NOT assigned to the QUICK FX dash, the rest of the parameters in this Plugin Dash are.

Going back to the Dash on the main mixer page you will now see your FAV knobs obediently waiting for your controller:



(Remember to assign a controller, Right/ CTRL click on the knob itself and wiggle your controller). You can quickly remove these direct from the dash and...

Store as default stores the current knob value as the 'default' value. You can reset a knob to its default value by holding CMD (CTRL on PC) and clicking it. Say that you like the value of the 'IR Wet amount' - you can store it as default. Give it a wiggle and don't like the new value? CMD/CTRL click and its back to what you set as the default.

**TOP TIP:** The quick FX are displayed in the order you loaded them into the QFX panel. If they get in a muddle simply unload them all (easily done on the QFX panel itself) and reload them in the order you'd like.

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## THE FIVE DIFFERENT FX STAGES (I.)

### Master FX

Probably the easiest and most predictable FX to get your head around. These happen at the last stage and affect everything that is audible. So the x-fader and the gate will all have an impact on what is affected and what you hear. This is why we've put mainly mastering effects and some obvious modulators. The key thing to understand with the Master FX is they are layered on top of the whole "mix" of your sound, so in the case of the reverb you can have a 100% wet signal.

### Layer FX A & B

These FX affect either sound bank A or B independently of each other and the fade slider. You can also place the gate engine before or after the layer fx, depending say if you wanted to gate a reverb or indeed keep the verb tail intact.

You will notice that the FX between the two sound banks are distinctly different. We've done this because that's the beauty of having several different FX stages. So here we're making the most of the independent sound banks and how much you can make them contrast each other. It also gives you more FX to pick from, and more veterinary x-ray pictures to display. Remember you can switch out and swap the sounds between different banks if you feel one suits a distortion type better than another for example.

## ABOUT SENDS.

You will see in A&B and the Master FX racks, one plug in enclosure is occupied by an effect called "SEND". Clicking this on opens up the signal for your sound to route into the AUX FX rack. Click the send plugin itself and adjust the different dials in the dash to control the amount of signal that gets to the specific FX within the SEND FX.

Remember, these FX will not sound unless switched on in the AUX FX Panel.

You can select specific sounds to go to the aux and the amounts they send. It is therefore advised that you do not send a signal to the same effect plugin via both the layer and master fx send as you will be duplicating the signal. Here's an example of how to mix and match the way in which you apply aux effects to your sound.

I want to have delay 1 on sound bay A, also little delay 2 on sound bay A and more on B and a touch of splosh across the whole thing.

Go to all 3 sends in Layer A&B and master FX and switch them on, click on the send icon and pull down all the controllers (we default to a 0db send signal for your convenience).

In A Send, boost the delay 1 send to 0db. Then delay 2 to say -6db. In Send B set delay 2 to 0db, then in master FX dial up the splosh. Finally go to the AUX fx and make sure these FX are switched on! You may want to control the returns of these FX via the front panel so click on the "return" FAV button in delay 1 and 2 and the Reverb "Wet" FAV button. Now seeing as you care about the balance between A & B to Delay 2, you may also want to put the send levels to delay 2 on the front panel too. So go to A FX, click on send and assign the delay 2 send FAV button and repeat for FX B.

## MOTORISED FX



OK, so if you've got a lovely sound up that you don't want to lose and want to experiment with these motorised FX we suggest that now would be a good stage to save your sound! The motorised FX are at first, a tricky set of tools to master.

To save your sounds in Kontakt first go to the top bar in Kontakt, change the name then click on the floppy icon, save instrument as. Make sure you don't save over the factory shipped patches if you ever want to get back to how it was originally shipped!

We've selected two effects that work best with these type of techniques, you'll notice that different cartridges have different effects loaded depending on the genre, and we have different combinations prepared in the Custom Cartridge Builders for users of the full version of Kontakt.

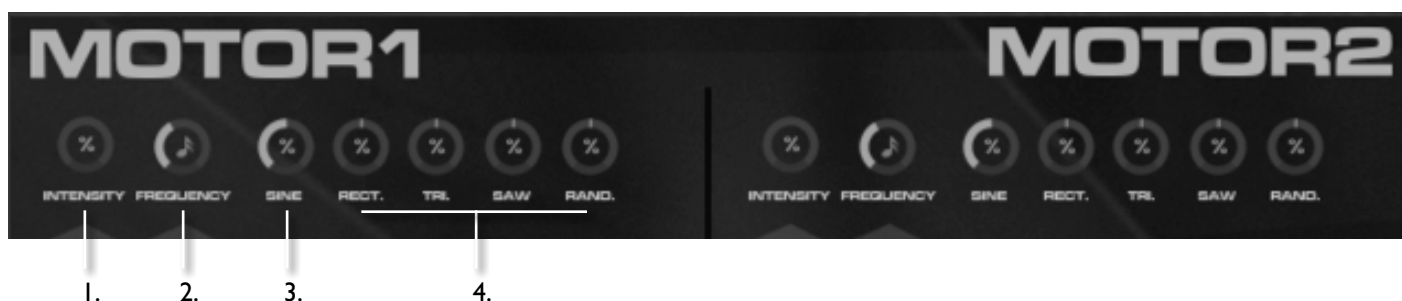




- Click on motorised FX (1.)
- Click on whether you want to apply this effect to instrument bay A or B or Both, for this demo let's pick A. (2.)
- Click on the effect you want to use, and click on the icon to access it's controls (3.)

OK so far so good. Now have a fiddle with the different parameters and work out which one you'd like to motorise. Click on the motor beneath it and assign to the motor you want to use.

- Let's start with Motor 1 and let's use cutoff in the "ladder notch" (4.)



OK this one takes a little to get one's head around so we'll do our best to explain. The key thing is to ignore anything in red for now.

**1. Intensity** - this controls how much the motor is going to affect your FX parameter (in this example cutoff).

**2. Frequency** - controls the speed.

So pull the intensity all the way to the right and hear how the motor is dialling up your effect parameter (cutoff) from 1 - 100% (all the way to the left to all the way to the right). Pull the intensity back a bit and the parameter you're controlling will be motorised in a less extreme manner (ie 25% - 75%). Then move the frequency knob to adjust the speed.

**3. & 4.** The 5 knobs to the right affect the shape in which your motor controls the parameter (cutoff). So (just like wobble amounts) first try adjusting the depth of the sine (3.) wave (an equal smooth shaped wave) then to neutralise it pull the knob to the centre. Then try adding a rectangle (4.) wave etc. You can then create more chaotic shapes by dialling up more than one of these dials. But things can get out of hand quite quickly so remember, if you're in trouble, pull everything back to midday.

---

## THE SUB MOTOR

OK so Motor 1 is now turning your effect parameter (cutoff) dial back and forth a measured amount at equal intervals with a shape that you're happy with. Now move the Frequency slider back and forth, that's kind of cool, changing the speed that the effect parameter (cutoff) dial moves back and forth. So let's have a go at motorising this.



**1. Main Intensity to Sub** - This slider controls the intensity of the sub motor control to the intensity control of the main motor (told you it gets confusing!).

**2. Main Frequency to Sub** - This slider controls the intensity of the sub motor control to the frequency control of the main motor.

**3. Sub Motor Frequency** - This then controls the speed in which you're motorising the two possible parameters within the main motor.

Maybe you don't want to control the frequency that your effect parameter (cutoff) is going, but the amount of intensity. You want to vary that according to the sub motor frequency (3.). Dial up the intensity slider beneath the intensity knob (1.) and hear how this affects your sound. Oh and then you've got the whole range of shaping dials as with the first motor (4. & 5.).

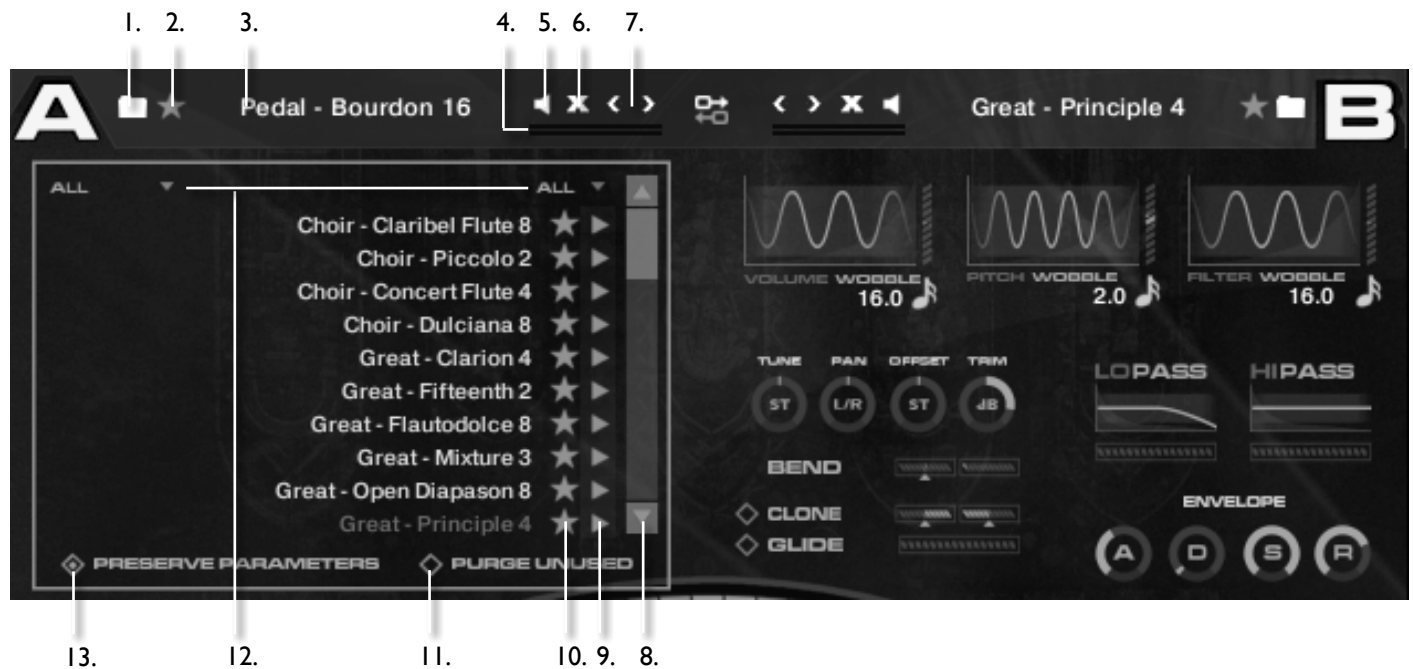
Combine this with a second motor, more effects, and all these dials, you can tie yourself in sonic knots.

***Top Tip.** This is the one area in eDNA that we think a slightly considered approach is called for. It is quite easy to get lost in these motorised effects. We find some of the best effects are created by using massive intensities and very slow frequencies. Carefully thinking about what you're motorising and how much you're going to motorise it by can reap rewards that sound totally awesome, anarchic and original. But it's only by careful experimentation that these rich rewards will avail themselves.*

Go appendix C2 to find more out about the individual FX.

## THE EDNA BROWSER

Once you've had a play with our specially prepared presets you may want to make some of your own. The stops are all available in the browser:



Make sure you're in the mix window, now we're going to look at how the instrument bay browsers works. As a brief overview of this section each bay has.

**1. Browser button** - opens/closes the browser window.

**2. A Red Favourites Star** - this simply tags a sound you like with a star so you can find it later. (NEW IN v1.1 YOU CAN SELECT 1-5 STARS TO REFINE YOUR OPINIONS!)

**3. Instrument name.**

**4. Level Meter** - These are independent meters in each bay so you can see exactly who is outputting what.

**5. Mute button** - toggles the sound on and off independently of the xfader and/ or gate stage.

**6. Purge Button** - this empties the bay.

**7. Scroll Buttons** - These move the sound along to the next in the list, or back one. A quick and easy way to browse, but also you'll find that sounds are grouped together in similar sets. So if you're happy with a sound but would like it to be maybe a little different in character, this is often a quick way of checking out if we had another stab at it. Maybe something similar but a bit brighter for example.

Click on the folder next to the instrument name (1.). This will pop-down a hugely extensive list of sounds which you can scroll through, browse and rate according to your tastes. Having created some 1,900+ instruments you'll imagine that naming became a bit of a task, so we've organised the sounds into categories too for your convenience.

**8. Scroll Bar** - holding shift slows the scroll speed, or you can use the scroll avenues for finer detective work.

**9. Audition Buttons** - check the sound before you commit! (you can also CMD click on the instrument name to preview).

**10. Favourites Stars** - displays sounds that you have tagged as favourites and also acts as toggles to tag more.

**11. Purge Unused** - Purges unused sounds from memory (anything not in an active layer). Use this to save memory when you've finished building your sound. When this is turned on 'pre-viewing' each sound in the browser is unavailable. It defaults to off.

**12. Instrument Browser Filters** - allow you to refine your search

NB. In v1.1 we will also have a full database that you can browse within the Kontakt database window.

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**13. Preserve Parameters** - preserves the current bend/glide/tune/pan/LFO settings etc. when loading a new sound. By default this is turned on and each sound will share the LFO/tune/pan that you set. If turned off then each sound remembers its unique configuration.

To select an instrument first preview it using the play buttons. If you want to hear more we recommend you double click to load, this performs several functions; it loads the instrument into the bay, closes the browser window and moves the browser in Bay B to this selection you have made. Give it a try, select an instrument in Bay A by double clicking, then open the browser in Bay B, see how it's easy to select the next sound along.

If you're clear on what type of sound you'd like you can reduce this list by clicking off "all" and selecting a different category of sound. If you want to try the different sounds simply click once on them.

***Top Tip:** If you like what you hear but it's not quite right it may be worth giving it a star so you can quickly and easily see sounds that you liked the next time you return. Remember to save the patch down though, you can do this by clicking on the files icon in the top of the Kontakt interface and saving as (Maybe worth saving as suffixed with something like "browsed" so you have the original vanilla patch as shipped from Spitfire). Next time you return click on the larger "all" bar and select "favourites".*

It's worth noting that you can only load any instance of an instrument into one bay. With this in mind you'll find a lot of our sounds are produced in pairs and quads. Say loud and soft (to create dynamic modulation via the xfader/ mod wheel) and "distant" which are true surround images made from ambient mics on the original orchestral recordings. Some of these may sound similar to the raw sound itself but load into an accompanying instance of Kontakt or within a multi and route to your surround speakers and hey presto, 3D sound! Once you've got a combination you like, it may be worth saving as a patch of your own. Again, to do this use the floppy icon on the top Kontakt bar.

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## APPENDIX A - RECOMMENDED TECH SPECS

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IF YOU PLAN TO USE THIS LIBRARY WITH THE FULL VERSION OF KONTAKT PLEASE MAKE SURE YOU HAVE THE LATEST VERSION OF KONTAKT 5 INSTALLED.

### RECOMMENDED SPEC:

The better your computer, the better the performance of any Spitfire module. But not to worry if you're not spec'd up to the hilt. All programs are provided with a set of parameters that enable you to dial back the CPU demands of any given patch. But moving forward, we're confident this module will keep your computer busy for many years to come! We recommend a combination of high processor speeds, a good chunk of memory and a devoted 7200rpm eSata, USB2 or 3, or Thunderbolt audio drive. The more memory you have, the less demand placed on your drive, and having a totally devoted drive gives you the chance to load less into memory and reduce load times. The higher the speed of your CPU, the more capable your computer will be to deal with some of the amazing, but complicated scripts we've written.

### PCs:

We recommend Windows 7 or later (latest Service Pack, 32/64 Bit), Intel Core Duo or AMD Athlon 64 X2, 4 GB RAM (8 GB recommended).

### MACs:

We recommend Mac OS X 10.10 or later (latest update), Intel Core 2 Duo, 4 GB RAM (8 GB recommended).

### DRIVES:

USB2 or USB3, Thunderbolt, or eSata, 7200rpm. Ask your dealer for drives that are suitable for "AV use". If you can afford an SSD drive, this will massively increase the power of your system. Instead of 7-9ms seek time, the usual seek time is <0.1ms. These are fast enough to run a patch 'Purged' of all its samples, and they can load on the fly as you play the notes. You can also reduce your sampler's "pre-load" buffer tenfold meaning you'll be able to load enormous orchestral palettes into a single machine.

### HOST:

The Kontakt 5 platform should work comfortably on most commonly found platforms and DAWs. As always make sure you're as up-to-date as you can afford! If your main DAW is not a newish machine, or has a limited spec, and you're planning on building or adding Spitfire to an already large orchestral palette, you could consider running your library independently of your DAW, either on your host computer (e.g. via Re-Wire) or on a slave device (e.g. via Midi or MOL). This will assist your loading times, and will allow your DAW to do what it does best, sort out all your note ons and note offs! We heartily endorse Plogue Bidule (<http://www.plogue.com>) as a virtual rack/ routing system.

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## APPENDIX B - KONTAKT vs KONTAKT PLAYER

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Kontakt Player is a free version of the Kontakt sample playback engine available to download:

<https://www.native-instruments.com/en/products/komplete/samplers/kontakt-5/downloads/>

It works with libraries that the developer has paid a license fee for. Essentially, you've bought this playback engine along with your library.

The Kontakt player gives you full access to all the sounds and all the editable parameters on the front panel. Also, unlike non-Player libraries, these libraries will also have a banner that appears on the Kontakt Libraries pane.

If you want to go deeper into editing you'll need a full version. As you will already own the free Kontakt player and have bought one of our 'player' libraries you will be eligible for a discount upgrade to Kontakt via the NI website. See here for more details:

<https://www.native-instruments.com/en/products/komplete/samplers/kontakt-5/pricing/crossgrade-offer/>

If the library you want to use is NOT a 'Player' library then you need to buy the full retail version of Kontakt.

Then you can also load 'non-Player' libraries like some of our other ranges, Spitfire LABS, Harp, Piano, Harpsichord, Solo Strings etc. Please note that non-Player library instruments will not appear on the Kontakt libraries pane and so can't be added as a library as Player libraries need to be. Instead, these libraries will simply need to be loaded via the Kontakt files browser or alternatively you can add the library as a favourite to the Kontakt Quick Load window.

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# APPENDIX CI - STOP LIST

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## PRESETS / STOPS

All Manuals and Pedals

Choir Manual

Great Manual

Pedals

Swell Manual

## EDNA:

Union Organ eDNA - Close

Union Organ eDNA - Stereo

Union Organ eDNA - Warps

A Big Ass Organ 1 - Stereo

A Big Ass Organ 2a - Stereo

A Big Ass Organ 2b - Stereo

A Big Ass Organ 3 - Stereo

A Big Ass Organ 3b - Stereo

Atmospheric Organ Pad - MW is LPF

Big But Tuney - Stereo

Calming Beauty MW is Phase

Classic Organ MW Chorus

Deep Organ - Stereo

Dissonant Space Organ Pad MW

Distant Detuned Organ Pad - MW is LPF

Dreamy Organ

Flutey Organ Pad

Giant Dirt Organ MW is Drive

Glassy Organ Pad

Good As Low 8ve Drone MW - Filter

Hypnotic Drone MW is Gate Vol

Impending Organ - MW is dynamics

Mellow Organ Pad 2 MW - Gate and Phaser

Mellow Organ Pad MW - Gate and Phaser

Mellower Organ Pad MW - Gate and Phaser

Overtone Organ Pad - MW is pitch LFO

Space Organ MW is Glide

Space Organ

Spooky Organ Bells 2

Spooky Organ Bells

Spooky Organ MW - Spookiness

Stutter Organ MW is LPF and Gate

The Scientific Organ MW - LPF

Very Nasty Lead Organ MW - Distortion

Very Slow Pad MW - Phaser

Vintage Organ

Voice Organ Pad

Choir - Claribel Flute 8

Choir - Concert Flute 4

Choir - Dulciana 8

Choir - Piccolo 2

Choir - Voil dAmore 8

Great - Clarion 4

Great - Fifteenth 2

Great - Flautodolce 8

Great - Mixture 3

Great - Open Diapason 8

Great - Principle 4

Great - Stopped Diapason 8

Great - Trumpet 8

Great - Twelfth 3

Pedal - Bourdon 16

Pedal - Open Diapason Wood 16

Pedal - Ophicleide 16

Swell - Contra Gamba 16 (Open Only)

Swell - Flote 4 MW

Swell - Mixture MW

Swell - Open Diapason 8 MW

Swell - Salcional 8

Swell - Vox Angelica 8

## RAW TUNING:

All Manuals and Pedals

Choir Manual

Great Manual

Pedals

Swell Manual

## INDIVIDUAL STOPS:

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## APPENDIX C2 - eDNA EFFECTS

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**EQ3** - This EQ is a 3-Band, parametric EQ that allows you to boost or cut any frequency range throughout the entire spectrum by up to 18db, with adjustable Bandwidth parameters allowing you to choose between 'surgical' EQ-ing or gentle corrections.

**Jump** - The 'Jump' effect simulates the classic tone for British guitar amplifiers. It is ideal for creating smooth, singing lead sounds.

**Limiter** - A form of compressors with a ratio of one to infinity, a threshold just below the maximum level and a very short attack time. A limiter acts as a safety net to keep short signal peaks from overloading the system, which would result in audio clipping.

**Tape Saturator** - The Tape Saturator emulates the soft compression and distortion of recording to tape. It is mainly used to lightly add warmth and colouring to the sound, or alternatively, to add aggressive distortion.

**Distortion** - This module achieves Distortion by clipping or rounding off high sample value, therefore it simulates the behaviour of overloaded tube circuits or transistors by adding artificial harmonics to a sound.

**Lo-Fi** - This module adds various digital artefacts such as aliasing or quantising noise, to clean the signal. It is ideal for roughing up sounds that would otherwise be too plain and featureless, or to recreate those classic 8Bit video game sounds.

**Saturation** - A basic amplifier with a non-linear characteristic. This allows you to recreate the effect of tape saturation, which causes an increase of high-level energy in your signal.

**Stereo Modeller** - This allows you to control the width of your signal's stereo base, change the panning and also allows you to create a pseudo-stereo signal from mono sources.

**Delay** - This Delay effect is a process that creates a carbon copy of the sound and repeats it back after a period of time. It can optionally be synced to the tempo and provides an adjustable feedback level, a low-pass filter and a pan control for 'ping-pong' echo effects. Delay times lower than 20ms are not discernible as delays, but can produce interesting comb filtering effects.

**Chorus** - This is a method of adding "thickness" to the audio signal by splitting it up and detuning one version in relation to the original. Separate LFOs with an adjustable phase relationship detune each stereo channel independently to create a wide-panorama effect.

**Flanger** - This module splits the audio signal and delays one version in relation to the original signal. By modulating the delay time, as well as feeding an adjustable amount of the output signal back into the input, the Flanger creates a characteristic 'whoosh' sound. The Flanger module uses a separate LFO for each stereo channel, with the phase relationship between both LFOs being adjustable.

**Phaser** - This effect continually changes the phase relationships in the signal with an all-pass filter. As a result comb filtering occurs, which attenuates some frequencies while boosting others. The sound is of a similar nature to the Flanger effect, but it is more subtle.

**Convolution** - This is a type of reverb that allows you to replicate the acoustical behaviour of a linear system; such as a room, a speaker, a harp or even a hardware reverb unit, for your own signals. To accomplish this, a short audio recording of a wide-band signal played through a system is fed into the convolution processor. This recording is usually a normal audio file called an 'Impulse Response' (or 'IR'). Convolution reverb is best known for achieving highly realistic reverbs. The convolution processor included in Kontakt fully supports multichannel signal flow, allowing you to use surround impulse responses if desired. It can be used within the 'Instrument Insert Effects', and the 'Instrument Send Effects' chances, or as an 'Output effect.'

**Reverb** - This reverb is algorithmic, it simulates the natural reverberation that occurs when a sound source is placed in an acoustic environment, this adding a feeling of spaciousness to the sound.

**Formant I & II** - Formants are acoustic resonances, the term often applies to the phonetics of the human speech. Formant Filters are designed to mimic the frequency response of the human focal tract and as a result, these types of filters are used to emulate the 'talk box' effect.

**Vowel A** - This module is similar to a Formant Filters as it also simulates the resonant frequencies of the human vocal tract in regards to forming a vowel sounds. The throat and mouth cavities will change their shape in order to create a complex, natural filter that emphasis certain frequencies in the sound created by our vocal chords. These characteristics allow human hearing to discern between different vowels, and are being replicated by this filter.

**Vowel B** - The Vowel B module is very similar to the Vowel A module, but it has a slightly different sonic characteristic.

**Ladder Peak** - Based on the classic ladder circuit use in early synthesis, these filters are the first choice for recreating synthetic sounds. The Peak is a filter than accents frequencies at the cutoff.

**Ladder Notch** - The 'Ladder Notch' module is very similar to the 'Ladder Peak' module with the difference being that the Notch cuts two narrow bands of frequencies either side of the cutoff.



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## APPENDIX D - MIC & MIX ACRONYMS

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**C - Close** mics. Neumann KM184 - On the pipes (Inside the organ structure)


**St - Stereo.** This refers to a pair of KM184s in ORTF placement on the stage.

**A - Ambient.** A set of Schoeps MK2H omni mics placed in the aisles away from the organ. This mic position gives a massive amount of stereo spread and room sound over the organ. Great mixed in with the other mics but also ideal fed to your Ls & Rs speaker sends for true surround information.

**O - Outriggers.** A set of Schoeps MK2H omni mics placed wide apart in the left and right galleries. These give a similar balance of room and organ but with a broader stereo spread. The effect of this mic is somewhere between the stereo and ambient mics.

# APPENDIX E - UACC

With the development of Spitfire's BML Sable it was proving quite difficult to standardise how to access the ever-growing number of articulations contained within instruments and libraries. While they worked adequately, Keyswitches and CC32 were inconsistent between sections and instruments and it could prove a pain to do something as simple as substituting a Viola for a Violin section.

To address the problem, Spitfire developed UACC, a specification that hopes to standardise articulation control between instruments and libraries. UACC is turned on via the Keyswitch locking option (  ) and utilises the same CC as above (and can be customised identically). When UACC is activated you can change articulation by setting CC32 to specific values that correlate with different articulations. Here's the latest (v2) spec:


<b>Long (sustain)</b>	34	Detache	80	Synced - 120bpm (trem/trill)
1 Generic	35	Higher	81	Synced - 150bpm (trem/trill)
2 Alternative	36	Lower	82	Synced - 180bpm (trem/trill)
3 Octave				
4 Octave muted	<b>Short</b>		<b>Phrases &amp; Dynamics</b>	
5 Small (1/2)	40	Generic	90	FX 1
6 Small muted	41	Alternative	91	FX 2
7 Muted	42	Very short (spicc)	92	FX 3
8 Soft (flaut/hollow)	43	Very short (soft)	93	FX 4
9 Hard (cuivre/overb)	44	Leisurely (stacc)	94	FX 5
10 Harmonic	45	Octave	95	FX 6
11 Tremolo/flutter	46	Octave muted	96	FX 7
12 Tremolo muted	47	Muted	97	FX 8
13 Tremolo soft/low	48	Soft (brush/feather)	98	FX 9
14 Tremolo hard/high	49	Hard (dig)	99	FX 10
15 Tremolo muted low	50	Tenuto	100	Up (rips/runs)
16 Vibrato (molto vib)	51	Tenuto Soft	101	Downs (falls/runs)
17 Higher (sultasto/bells up)	52	Marcato	102	Crescendo
18 Lower (sul pont)	53	Marcato Soft	103	Decrescendo
19 Lower muted	54	Marcato Hard	104	Arc
	55	Marcato Long	105	Slides
<b>Legato</b>	56	Plucked (pizz)		
20 Generic	57	Plucked hard (bartok)	<b>Various</b>	
21 Alternative	58	Struck (col leg)	110	Disco up (rips)
22 Octave	59	Higher	111	Disco down (falls)
23 Octave muted	60	Lower	112	Single string (Sul C/G/etc.)
24 Small	61	Harmonic		
25 Small muted				
26 Muted	<b>Decorative</b>			
27 Soft	70	Trill (minor 2nd)		
28 Hard	71	Trill (major 2nd)		
29 Harmonic	72	Trill (minor 3rd)		
30 Tremolo	73	Trill (major 3rd)		
31 Slow (port/gliss)	74	Trill (perfect 4th)		
32 Fast	75	Multitongue		
33 Run	76	Multitongue muted		

For example, turning on UACC and changing CC32 to 26 will change the current articulation to Legato - Muted. Setting it to 52 would change to Short - Marcato. You can set these manually in your DAW but it's much easier to utilise DAW functionality such as VST Note Expression, or a dedicated tablet app such as Lemur, TouchOSC, LiveControl, etc.

The advantages of UACC are that it's consistent between all supported libraries (ie. setting CC32 to 52 will change to Marcato regardless of the library or patch) and easily configurable on tablet apps such as Lemur. It remains consistent between updates (any product using v2 will have the articulations mapped to the above spec). It also takes up no space on the keyboard.

The disadvantages are that it's difficult to control for live playing (unless using a tablet) and it does not support articulation layering.

## UACC KEYSWITCH

UACC keyswitching is a new feature in Spitfire products and updates. It is a mixture of keyswitching and UACC to provide the advantages of both methods. When UACC Keyswitch is activated via the lock panel menu (  ) a single keyswitch is available. Using the UACC spec outlined above, this keyswitches velocity is used to switch articulation.

For example pressing the keyswitch at velocity 70 would switch to the Trill (minor 2nd) articulation while pressing at velocity 56 would switch to Short Pizzicato. As with UACC, you can manually input these velocity values but it's easier to use your DAW or tablet app's functionality.

The main advantage of UACC KS over UACC is that you can layer articulations by overlaying the keyswitch's notes on the piano roll.

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# APPENDIX F - FAQs & TROUBLESHOOTING

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## **Q: HOW DO I AUTHORISE A KONTAKT PLAYER LIBRARY ON A MACHINE NOT CONNECTED TO THE INTERNET?**

You have to use the Native Instruments Service Centre. There is an offline system. Copy it over to the offline machine, add the library as usual, then run Service Centre - it will generate a file that they can copy back to the online machine. Its explained as you do it.

## **Q: HOW DO I DOWNLOAD AND AUTHORISE A KONTAKT FULL LIBRARY ONTO MY MAIN RIG IF IT ISN'T CONNECTED TO THE INTERNET?**

Simply use our download manager on a computer that IS connected, transfer over either over your LAN or via a shuttle drive. No further authorisation is required.

## **Q: THE LIBRARY KEEPS DISAPPEARING FROM MY KONTAKT 'LIBRARIES' PANE OR I CAN'T ADD THE LIBRARY - IT FAILS EACH TIME I TRY?**

This is a known Kontakt bug. Please contact our support team to obtain a small file which should enable you to workaround the problem.

## **Q: "NO LIBRARY FOUND" ERROR MESSAGE**

If you are getting the error message "No Library Found" in Kontakt when trying to add a new library, it's because the product you have purchased isn't a "Player" library (also see appendix B) You will therefore need to load the files manually into Kontakt to load them. This can be done via the 'Files' browser, top left hand side of Kontakt, or by simply dragging the instrument files over the Kontakt window to load them.

## **Q: WHAT IS THE DIFFERENCE BETWEEN KONTAKT AND KONTAKT PLAYER?**

See appendix B

## **Q: HOW CAN I REDOWNLOAD A PRODUCT?**

With the continuous improvements to our Library Manager app, we have incorporated the ability to reset your own downloads, be it the entire library or the most recent update!

This can easily be done via your Library Manager app. To reset both your entire library download or the latest update;

Open up the Library Manager app and log in with your account email and password.

- Select the download you wish to re-download
- In the toolbar under Library > Reset Download > Entire Download/Latest Update
- This will reset your whole download/your latest update

You can repeat this process for any of the libraries you own.

Note that there is a limit to how many times you can reset your downloads in a certain time frame. If you do exceed your reset limit please get in touch.

## **Q: DIFFICULTIES IN DOWNLOADING / INSTALLING**

Customers may find that they have some difficulties in the downloading process. If you find that you are having some trouble, please check the list below for possible causes.

- The formatting of your drive, if it is FAT32 this will cause errors, because there is a maximum file size with this format of 4GB and our download files will exceed this limit. To solve this problem, reformat your drive to a more modern format, or use a different drive. We recommend NTFS on PC and Mac OS Extended (journalled) on Mac.

- Free space on your hard drive, please allow at least double the space for the respective library. This is because your library is downloaded compressed, then uncompressed into a separate location, then the original is deleted. So briefly during install, there are two copies of the library on disk. To solve this problem use a drive with more space (the size you'll need during install is listed on the website page of the product you bought).

Other issues;

- Library Manager freezes in the "Extracting" stage for hours. This may be because our libraries are often very large files, and this is the stage where the compressed files are extracted and placed in their final locations on the hard drive. There could be hundreds of GB of content to unpack, so it really can take hours. If you're unsure whether it has crashed or is simply extracting files, visit the installation folder you chose when you started the install. If everything is working normally you'll see various files appearing in the folder (or one of its sub-folders).

- If you see a "Download interrupted" message, this may be caused by a change in IP, usually the case with people using a VPN, or people who for some reason started a download in one country and tried to resume it in another. In this case, please submit a support ticket and we can unblock you.

- If your download gets stuck and is continually cycling and not resuming, please get in touch with us, giving us as much detail as possible about your set up. It would be helpful if you can tell us: Your operating system, where you are downloading from (your country, and also whether you're at home or work), your ISP, and whether there are any proxy servers or firewalls between your computer and the internet.

## **Q: I'VE LOST MY INSTRUMENT FILES.**

In some cases, instrument files may get lost when transferring libraries from one place to another, or if an update has gone wrong. If this happens, the best way forward is to re-download the library in question. It will ensure you will get all of the content you are missing

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### **Q: I HAVE FAST INTERNET, WHY IS MY DOWNLOAD SLOW?**

We have no direct influence on your actual download speeds, our libraries are hosted on Amazon S3 servers which are normally very quick but it may well be that at certain times of the day when traffic is particularly busy, your ISP may throttle your connection speeds.

We would advise you to leave your download running overnight as speeds should ramp up at less busy times. Our Library Manager downloader aims to use as much of the available bandwidth as possible to give you the quickest possible speeds, and may take several minutes to reach its peak.

### **Q: CAN I INSTALL ON MORE THAN ONE COMPUTER?**

With our products you have two licenses. This means that you are allowed to download and install on two computers you own, say your main rig and your mobile rig. The best way to get your library on both of your machines is to copy it from one to another via an external HDD. It saves you from having to re-download the whole library again!

### **Q: CAN I TRY BEFORE I BUY?**

No - it is not currently possible to demo our products. If you go to our YOUTUBE CHANNEL you'll see many many walkthroughs containing detailed info about all our products -- you can hear them being played in real time with no smoke and mirrors!

### **Q: MY LIBRARIES ARE NOT SHOWING UP IN MY LIBRARY MANAGER**

A handful of customers may find that when they log into their Library Manager, some of their previous purchased products do not show up in the 'Installed' section or in the 'Download Ready' section either. It may be that you have purchased these under another email address. Checking other possible email addresses for your previous purchases may help to find these missing products. If this is not the case, and these missing products were purchased a few years ago, please create a support ticket telling us your account email address, and any serial numbers you may have to go with these missing products. Our support team can also merge one or more accounts together if you'd like to consolidate all your purchases in one place.

The more information, the quicker we can get you back up and running!

### **Q: HOW DO I UPDATE MY PRODUCTS?**

The main premise of downloading our products is that our library manager downloads into the folder you choose, so it is always good to choose the folder above where you want the download to go. The best file path for our products is something very simple, a long file path will cause errors as there is a character limit on how far the library manager can read. We advise a file path of something along the lines of:

Samples Drive > Spitfire Audio - always point the downloader to the folder 'Spitfire Audio' (the folder above the library) for all downloads and updates.

When it comes to downloading / updating - if you have a folder called 'Spitfire Audio' always point the library manager to the folder Spitfire Audio - never go into this folder and choose the actual library in question.

### **Q: HOW DO I REDOWNLOAD THE LATEST UPDATE?**

With the continuous improvements to our Library Manager app, we have incorporated the ability to reset your own downloads. This can easily be done via your Library Manager app.

Open up the Library Manager app and log in with your account email and password.

- Select the download you wish to re-download
- In the toolbar under Library > Reset Download > Latest Update
- This will reset your latest update

You can repeat this process for any other updates you wish. If you do not see the option to reset your download in your Library Manager App, we would advise downloading the latest version of the library manager from [spitfireaudio.com/info/library-manager/](http://spitfireaudio.com/info/library-manager/).

### **Q: I'VE BEEN WAITING AGES FOR MY DOWNLOAD LINKS...???**

We run all our orders through a fraud checking process. The automatic fraud check takes 20 minutes (but can take up to an hour during a very busy period, eg. Black Friday), but if your order gets caught at this stage, we run a manual order check, and this can delay the processing of your order for up to 24 hours (though this would be a rare and exceptional case).

You should however receive an order confirmation email IMMEDIATELY upon placing your order. This confirms that your order has successfully been logged in our system and that your payment was successfully taken. Please check your junk folders before contacting our support. The message will come from [do\\_not\\_reply@spitfireaudio.com](mailto:do_not_reply@spitfireaudio.com) if you'd like to add us to your whitelist.

### **Q: CAN I DOWNLOAD ON A PC, THEN TRANSFER TO A MAC OR VICE VERSA?**

All of our libraries are compatible on both PC and Mac computers (as they run inside Kontakt). You can download all of our libraries on either PC or Mac and they will work if you need to transfer them across to the other operating system. We advise to do this by copying the library you want to move across to an external HDD and then copying it to your other machine.

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### **Q: 'SAMPLES MISSING' ERROR MESSAGES**

In some cases, samples files may get lost when transferring libraries from one place to another, or if an update has gone wrong. You may also get this error in some cases if you installed your library on a drive with just under the minimum necessary amount of space to install the library (remembering that you need **DOUBLE** the size of the final library to install successfully - see above). If this happens, the best way forward is to re-download the library in question. It will ensure you will get all of the content you are missing. For more information on how to re-download a product, please see the question above.

### **Q: HOW DO I DOWNLOAD PRODUCTS ON MAC OSX 10.6.8?**

Our Library Manager only supports Mac OSX 10.7 and upwards. If you do not have a system with 10.7 upwards installed, or do not wish to update your system there is a way of creating an external boot drive that will work with our Library Manager app. Alternatively, you can download the library to any other Mac or PC that is compatible with the Library Manager and then simply copy everything over to your own machine. We suggest doing this via an External Hard drive.

### **Q: NON PLAYER INSTRUMENT OPENING IN 'DEMO' MODE?**

If you are seeing the 'demo' button and your patches are timing out, it means you are trying to run a non-player library in the Kontakt Player software. You need to upgrade your Player to the full version of Kontakt. We try very hard to ensure at all stages of our website that everyone understands which libraries need full Kontakt and which need the Player only. Essentially our Player libraries don't need the full Kontakt because we have paid the license fee on our customers' behalf. This is more financially viable on our higher priced libraries. If you have any of our Player libraries you can qualify for a discount on the full version of Kontakt. See the following page for more information: <https://www.native-instruments.com/en/products/komplete/samplers/kontakt-5/pricing/crossgrade-offer/>

### **HOW TO BATCH RESAVE A LIBRARY**

There are two main reasons to batch resave: Firstly it greatly speeds up the loading of patches once you have batch resaved them. Secondly, it can help you find missing samples and relink them to the patches so that you don't need to search every time you load a patch. Bear in mind that it can sometimes take a few attempts to batch resave, and if Kontakt crashes the first time you try, you could go into the instruments folder and batch resave a bit at a time -- go by sub folders for example, just to lessen the load on Kontakt.

### **Q: I WANT TO BUY A COLLECTION, BUT I ALREADY OWN ONE OR MORE OF THE PRODUCTS IN IT**

Our cart will intelligently deduct the proportional cost of any products you already own from the total price when you get to the checkout.

### **Q: I'VE LOST MY SERIAL NUMBER FOR PRODUCT ACTIVATION**

Emails get misplaced and you might find that you are out of luck when you need to find a past serial number. The best place to find all of your serial numbers would be to log into your Native Instruments account here: <https://www.native-instruments.com/en/>, and traverse to the My Products, Serials, And Downloads section. Under there you will find all of your serial numbers, including your Spitfire Audio serial numbers. If you find that the serial number you are looking for is not there, please contact us with all of the relevant information.

### **Q: I HAVE FOUND A BUG**

In some cases we can't squash them all and bugs shamefully make their way through. If you think you have found a bug, please contact us with all the relevant information;

- A description of the bug you have found
- A screencast (video) of the bug happening, or an audio example
- The exact patch name (or patches) in question and also the library giving us as much detail as possible will help us get to the bottom of the issue.

### **Q: WHAT IS THE NCW COMPRESSED FORMAT?**

This is Native Instrument's new lossless compressed sample format – we have managed to reduce the sample data pool by around 55% and this also shows a benefit in streaming for you, along with reduced hard disk space required.

### **Q: WHAT IS YOUR REFUNDS / RETURNS POLICY?**

If you have NOT completed the download / installation process, then we CAN refund / return your product, please contact support with your account email address and order number so we can handle this quickly. If you HAVE completed the installation process (even if you've not yet registered your serial number), please see our EULA in regards to why we do not accept refunds and returns. We can refund hard drive orders up until the point when the drive is dispatched from our office. This is usually 2-4 days after you order.

### **Q: I'VE FORGOTTEN MY PASSWORD?**

If you have forgotten your password, please go to [spitfireaudio.com/my-account/login](https://spitfireaudio.com/my-account/login), and click 'Forgotten Password'. If at some point in the past you asked us to merge two or more accounts but have since forgotten, you MAY find that the forgotten password isn't working for the email address you asked us to merge FROM. In this case, please contact support with your name, and any email addresses you think we might know about, and we'll work out what has happened.

### **Q: VEP - CONTROLS / GUI HAS DISAPPEARED!?**

You need to 'connect' the instance of VEP to your sequencer, and send it some MIDI - then the controls will reappear. Unless the instance of VEP is 'booted up' by actually connecting it, Kontakt will not complete the setup of the instrument which includes drawing the GUI.

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