



The Orbitone Collection II

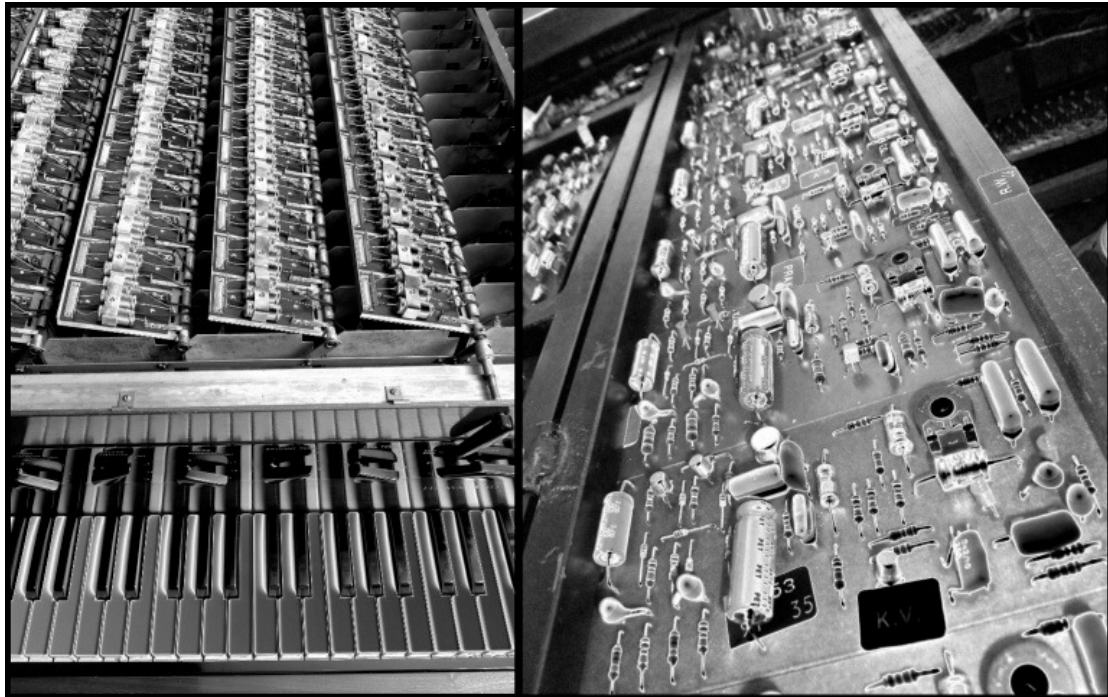
Installation Guide & User Manual

D.A.Wilson, Hideaway Studio, Oct 2013

HS-K4L-A010

Hideaway Studio Presents The Orbitone Collection II....

Orbitone Collection II was conceived very much as an extension to the original release of complex warm electronic textures made with unusual combinations of vintage technologies...



Featuring The Worlds Oldest String Synth That Never Was!....

The 1972 Eminent 310*Unique* was a particularly unusual mix of combo organ and string synthesizer in its own right but what was particularly special about it was the triple parallel analog chorus processor with 6 free running clock modulating LFOs better known as the Orbitone. It is this complex multi-path analog effect that makes the famous strings on the 310U so very special and slightly simplified technology was later used to good effect in the Solina and ARP Omni string synthesizers. It was originally developed to effectively make one rank of sawtooths become three with a high degree of movement without resorting to the very significant expense and complexity of three full divide down chains with independent master oscillators.

Being a self confessed boffin it suddenly occurred to me one day that I had a fantastically rare opportunity on my hands to attempt to feed 1938 Novachord 346 through the Orbitone stages on the Eminent. After consulting the 310U's sea of schematics for some time I determined a potentially suitable point to inject an external audio signal. To my delight this resulted in quite simply the most organic synth strings I've ever heard!

All those lumps bumps and imperfections are thrown into a rich soup of analog processing and the result is truly delicious!

Now armed with this monstrous analog effects processor I got curious and fed a number of other sources through it including one instrument that is known to be a little weedy in isolation namely the little CS-01 monosynth. As well as the Novachord I sampled offerings from new patches I dialled up via the 310U Orbitone stages from the Juno-106, CS-01, Crumar Bit One and Omega 8. In addition to this some new sampled material was taken from the instruments via an analog chorus unit including a series of brass and guitar timbres. Some of the guitar sounds were also created by passing Minimoog 7751 and the Bit One through a 1960's Echo-Reverb featuring a tube buffered electrostatic Tel-ray "Oil Can" delay unit. A further resonator choir was made by feeding the Juno-106 through the rehoused Polymoog Formant Resonator. In addition, a combination of organ stops were sampled directly from the Eminent.

Orbitone Collection II utilises the same proven 4-voice layering engine as the original release but operating on a brand new sample set constructed using a different combination of source instruments and techniques.

Combined Libraries...

As well as the new library featuring 40 example patches and 40 layered multis, a further 40 layers have been created that combine patches from both libraries together to form new layered instruments and textures. The new sounds have been presented as a merged installation thus permitting the user to access and walk through patches from both libraries as one.

***Equipment Used:**

1972 Eminent 310U, 1976 Minimoog, 1938 Novachord, rehoused 1978 Polymoog Formant Resonator Section, 1960's Echo-Reverb tube "Oil Can" Delay, Juno-106, Crumar Bit One, Studio Electronics Omega 8, CE-300 chorus, CS-01.

**A list of equipment used to make Orbitone I can be found in the Orbitone user manual The story of the arrival of Eminent number 91-0071750 wonderfully rescued and restored in Holland by Jean-Michel Jarre's 310U guru, Albert Steenbergen, can be found in the user manual for Orbitone I.*

Pre-merged Installation

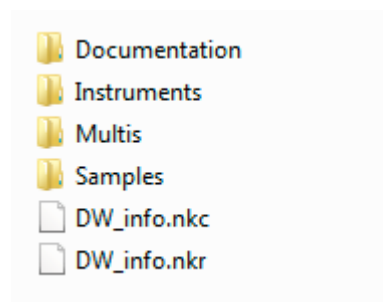
The download contains Orbitone I & Orbitone II as a pre-merged library for ease of installation. This permits the combined patches to correctly call up patches from both libraries without suffering file pathing issues.

NB: Please note that existing Orbitone customers may want to make a backup of their original download and any user patches.

Both Orbitone Collections require Kontakt version 4.2.2 or higher.

Once both .zip files have been downloaded, copy and unzip the archive called "HideawayStudio-HS-4KL-A010-OrbitoneCollection_I-II_(V1.12).zip" making sure the original directory structure is retained.

This should result in a folder called "The Orbitone Collection I-II" containing the following folders:



To run the library simply load up one of the .nki files in the Instruments folder. You will also find a basic template in this directory to use as a starting point for new instruments.

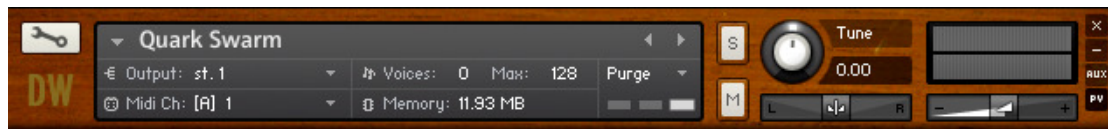
Patch Naming Convention

In order to identify the original patches from the Orbitone I and new Orbitone II collection as well as multis combining both libraries, a naming convention has been adopted:

- Orbitone I Patches & Multis – *prefixed with ORB1*
- Orbitone II Patches & Multis - *prefixed with ORB2*
- Combined Orbitone I & II Layered Multis - *prefixed with XORB*

Instant Gratification

You can easily run through each of the *80 example instruments (.nki) in the instruments folder by clicking on the small arrows to the right of the instrument name.



Please note that the 40 example layered multi instruments (.nkm) in the Multis folder can also be cycled through by clicking on the arrows to the right of the multi rack window.



Hopefully by loading up the examples you will be able to see how they have been constructed in the layering engine and can be used as starting points for new sounds which can be saved under new file names.

**This includes 40 new patches for Orbitone II as well as the original 40 for Orbitone I.*

Using the Layering Engine

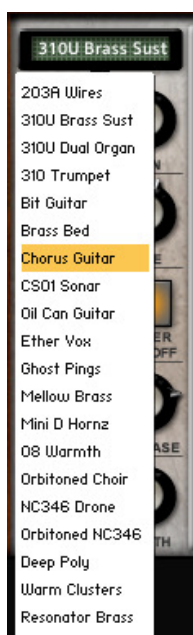


Naturally the example instruments packed with the library can be used as is but where the fun starts is having a go dialling in your own sounds using the intuitive layering engine. This permits up to four sounds to be blended together with a number of basic synthesis parameters at hand such as pitch and envelope control.

The layering engine consists of four identical programming panels and an effects section.

Voice Selection

Above each of the four voice panels there is a green LCD display showing the selected voice. By clicking on each of the displays a pull down menu appears allowing one of 20 voices/partials to be selected.



The selected sounds can be used in any combination including multiple instances of the same sound.

The Programming Panels

Each of the four voice programming panels features 10 basic controls to shape each sound in the layered instrument. Each control is altered by moving the mouse whilst clicking on it.

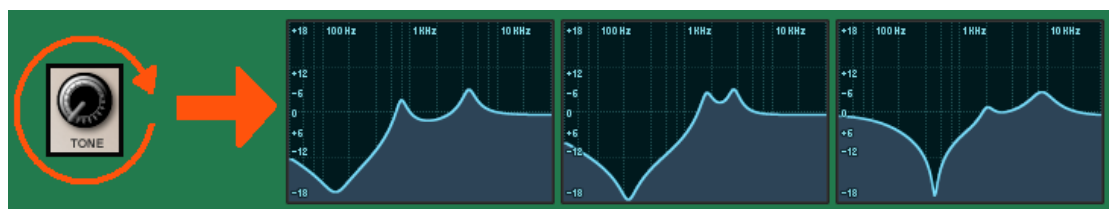


The **LEVEL** control sets the level of the voice in the layer

The **PAN** control sets the position of the voice in the stereo mix

The **SEMI** control sets a fixed pitch offset above or below the key played

The **FINE** control sets the fine pitch of the voice



The **TONE** control is a deceptively powerful feature. In the fully counter clockwise the signal is unaffected. As the control is rotated a continuously evolving complex EQ curve is applied. With some experimentation this

feature can be used for embellishing formants within each voice and helping to sit each of the layered voices together in the mix.

The **LAYER ON/OFF** enables each of the four voices in the instrument. By clicking on the button the layer toggles on and off. It is often useful to use this feature whilst creating new sounds to determine how each voice is contributing to the overall sound.

The Envelope Controls

The **ATTACK** and **RELEASE** controls offer basic envelope control. The further the attack control is rotated clock wise the more gradually the sound builds up. The more the release control is rotated clockwise the longer it takes for the sound to decay after the note is released.

Please note that several of the programs in this library make use of velocity controlled attack modulation. This means that the attack parameter is lowered the harder the note is played. This is a means of improving the playability and expression of a sound especially in a live performance. It can be used to good effect by setting the attack a little more clockwise than first expected.

It is also important to note that, in the interest of preserving some of the magic of the source instruments, their original attack transients have sometimes been preserved. In such cases it may not be possible to apply very fast attack curves to the selected sound. Furthermore, on some occasions, clicks may be heard when the attack parameter is set to minimum. If this occurs then wind the attack control slightly clockwise.

The LFO Controls

Each voice features it's own pitch LFO. This permits everything from a gentle vibrato to a dramatic plunging effect.

Both the **RATE** and the **DEPTH** of the LFO can be altered. To disable the LFO simply set the depth control to the centre position. The depth control is bi-polar which is not something you can hear in isolation but can become a very powerful effect when LFOs of opposite polarity are used on adjacent voices. A typical gentle vibrato is created by setting the depth control just slightly to one side of the centre position with the rate control somewhere around half way.

Mixing it all up

Although the layering engine is basic, it can be used to great effect. With experimentation a multitude of sounds can be created.

As well as the more obvious layers consisting of four different voices all tuned to the same pitch it is also possible to create other effects:

Making it Fat

Try selecting four instances of the same voice and then slightly detuning them using the **FINE** pitch controls and even setting different **LFO** parameters.

Expression

Setting a different **ATTACK** level for each voice can often help to make an instrument more responsive to changes in velocity and through sustain.

Please note that most voice/partial sounds in this library are designed to react in a number of ways to velocity (volume, VCA and VCF attack phase, filter cutoff and pitch). With this in mind it is highly recommended that a velocity sensitive keyboard is used and that many featured sounds often benefit from a very gentle and sustained playing style thus adding to the dynamic effect when more strident notes are subsequently played.

Making it Wide

Try setting the **PAN** controls for each voice to wildly different settings for each voice for a more spatial effect.

Intervals

Some interesting and sometimes quite beautiful effects can be created by setting one or more of the **SEMI** controls to something other than a simple octave. This can be used to create partials on organ voices in conjunction with careful adjustment of the level controls.

Phasey

When using two or more of the same voices setting the **FINE** tune controls to very similar but not identical settings can result in some interesting phasing effects.

Wobbly

Using relatively deep **LFOs** of slightly different speeds across all four voices, especially in conjunction with a suitably timed delay can be quite effective.

The Effects Section

To the right of the layering engine is the effects section.



The effects section comprises of four basic effects. Each of the four effects are chained in series and can be disabled by turning their respective **AMOUNT** control fully anti-clockwise.

Reverb

The reverb utilises the latest convolution technology to digitally simulate the reverberation of a physical or simulated acoustic space.

Click on the blue LCD display to select the type of room simulation required and then use the **SIZE** control to set the size of the space and the **AMOUNT** control to set the amount of the effect to be mixed with the dry signal.

Echo

The echo section is a delay with feedback and damping. The **TIME** control sets the delay whereby turning the control clockwise increases the delay time. The **FEEDBACK** control sets the amount of the signal from the delay that is fed back to the input. The further this control is turned clockwise the more the input signal is recycled thus creating dramatic repeating and sustain effects. The **DAMPING** control determines how the delay decays with time. The **AMOUNT** control determines how much of the effect is mixed in with the dry signal.

Phaser

The phaser is a digital simulation of a classic analog phaser. The **RATE** control determines how rapidly the phaser is modulated and the **AMOUNT** control sets the amount of the effect to be mixed with the dry signal.

Chorus

The chorus is a digital simulation of a classic stereo analog chorus (minus the noise!). The **RATE** control determines how rapidly the phaser is modulated and the **AMOUNT** control sets the amount of the effect to be mixed with the dry signal.

Saving Your Own Sounds

All of your creations can be saved as .nki instruments simply by using the **save as** function by clicking on the **files** icon in the main Kontakt control pane.

Remember that if you edit an existing sound you must save it under a new name otherwise you will overwrite it!





Celebrating 75th Years of Novachord #346

Some Facts About the Novachord:

- Designed & Built in Chicago in 1938 by Hammond
- 1069 were built over 3 years and cost \$1850 in 1939
- Weights a quarter ton and has 163 tubes (valves) in total
- One of very few instruments by Hammond to emulate timbres other than the organ
- Full 72 note polyphony with sustain pedal
- Independent attack and release envelopes for every key (72 tube VCAs!)
- Master envelope control over attack and decay
- Triple L/C formant resonator
- 6 channel vibrato system acting on pairs of oscillators
- Tracking filter in "mellow" mode designed to emulate piano timbres
- The original prototype featured a velocity sensitive keyboard!!
- Less than 50 known operational examples world wide
- 346 is the only operational Novachord in the UK

Find out more at www.novachord.co.uk

Credits

Dani Wilson (Hideaway Studio)

Sound Design, Sample Set & Example Instruments

Stephen Howell (RIP, Hollow Sun)

Layering Engine Concept, GUI Design & Graphics

Mario Krušelj

Layering Engine Script

For more information and many more releases for Kontakt by Hideaway Studio please visit:
www.hideawaystudio.net

Usage Restrictions & Copyright Notice

Purchasing this library grants a single user license. Further users are required to purchase their own copy of this product.

This library may be used in its distributed form as an instrument in any music composition, both commercial or otherwise.

Under no circumstances may the raw sample data, voice groups, example instrument patches or indeed any new instruments created in this product be used as the basis for another sample library or musical instrument.

The sample data in this product is protected under copyright. No third party patches or samples have been used to create the oscillators or raw samples in this library.

HS-K4L-A010 V1.12 02/10/13

© D.A.Wilson, Hideaway Studio 2015