

# STRETCH THAT NOTE



Synthesis and Sound Design





## **Welcome and thank you for purchasing L.E.W.D**

### **Low End Warp Device – L.E.W.D**

The idea behind L.E.W.D was to create an aesthetically and fully functional low end bass and kick module that would have the type of controls that I selfishly wanted. Ease of use and ‘fun’ were the main criteria for developing this product. To be able to dynamically affect every layer on the fly appealed to me greatly. Chaining specific effects and dynamics into single function knobs and dials not only makes it easy to run deep edits on the go but it makes for a much more pleasing approach to sound design. Additionally, the whole concept of making everything simple and beautiful gave me an insight into how to design a functioning GUI whilst maintaining control.

The decision to chain and condense effects and dynamics into single functions was made to help beginners and intermediates understand and utilize commonly desired processes.

The real power of L.E.W.D lies in the layering process. Each kick and sine layer has been meticulously processed to layer both in tune and harmonically with each other. Using phase cancellation, polarity inversion and M/S, specific frequencies have been dug out and others enriched so that when applying heavy overdriving and saturation effects the results are both genuine unique.

There are no limits as to what can be done with L.E.W.D and I implore you to abuse the beast as much as possible and enjoy the same mayhem that I have had such fun in being the cause of.



L.E.W.D is an ongoing project with additional low end modules being created for different genres.

I sincerely hope you enjoy using L.E.W.D as much as I have in creating it.

Eddie Bazil

STN – Stretch That Note



## **DISCLAIMER**

PLEASE BE AWARE THAT YOU WILL ENCOUNTER THE ODD CLICK AND CRACKLE WHEN USING THE SLIDERS AND DIALS IN LEWD. PLEASE NOTE THAT THIS HAS NOTHING TO DO WITH THE PROGRAMMING OR SCRIPTING OF LEWD AND IS DOWN SOLELY TO NATIVE INSTRUMENTS CODING. THIS IS A KNOWN AND ONGOING BUG. ALTHOUGH KONTAKT 5 HAS SEEN IMPROVEMENTS IT HAS NOT YET RESOLVED THIS PARTICULAR ISSUE.



## INSTALLATION AND SETUP

Once you have successfully downloaded the product, use either Winzip or Winrar to unzip the contents.

You should see something like the following:

Documentation	File Folder
Instruments	File Folder
Lewd Samples	File Folder
Lewd.nkc	3 KB NKC File
Lewd.nkr	5,664 KB NKR File

L.E.W.D requires Kontakt 4.2.3 and higher and one of the new functionalities is wrapping resources into Resource Containers which includes things like graphics etc. It is, therefore, important that the **nkc** and **nkr** files are kept within the same main folder.

Place this main folder into the usual Kontakt library root directory, or wherever your library is located. BUT please make sure to keep all the relevant files together.

L.E.W.D is supplied with over 60 presets to help get you going in your Low End projects. A vast array of kicks and basses are provided with the odd manic texture thrown in for good measure.

Warp and weep!

## L.E.W.D GUI – Panels and Controls



L.E.W.D consists of the following:

4 layers (synthetic kicks and sine based waveforms) with ADSR envelopes for each layer.

A global master section that contains the standard Amp Env, Tune, Velocity, Level and Amount for the whole module.

A central 'hub' section that handles varying forms of saturation and overdriving. Additional controls for processing layers with specific EQ curves.

A reverse chop effect for dropping down basses.

A slider that handles 'rubber', or bounce, values.

A Glide function that does not behave like a standard Glide (more on this later).

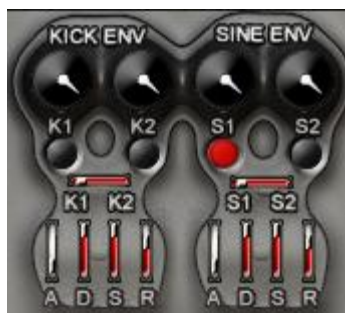


An extensive Wobble section with full control over time and response values.  
 A Waver section with full control over time and response values.

## ROUTING

LAYER	LOW END	LOW DRIVE	LOW SAT	TIGHT	EDGE	REV C	RUBBER	WOBBLE	WAVER	GLIDE
K1	-	-	-	YES	-	-	YES	-	-	-
K2	-	-	-	-	YES	-	YES	-	-	-
S1	YES	YES	YES	-	-	-	YES	YES	YES	YES
S2	-	YES	YES	-	-	YES	YES	YES	YES	-

## LAYERS



**K1** and **K2** are synthetic kick drums created specifically for layering purposes. Both kicks have different transient responses and their duration and tuning have been timed to sit perfectly in line.

**S1** and **S2** are the real 'meat and gravy' of L.E.W.D. S1 is a sine waveform and S2 is a sine kick waveform that has undergone extensive phase cancellation and then processed with harmonic saturation and sub harmonic saturation (below 20Hz) to



allow for processing via the GUI.

Sine waveforms have no harmonics and therefore the use of filters serves no useful or musical purpose. However, when layered and saturated they can sound warm, fuzzy and fat. The trick is to create and mimic harmonic content. For these reasons L.E.W.D has no filter section but concentrates heavily on low energy driving processes and variable saturation. Because of this complex set up of non harmonic layers it was essential for me to create the right responses from effect to effect and within each effect lies a chain of gain control elements (limiters and compressors), and each layer is directed to a specific function.

Layers are selected by switching on the red LEDs beneath them.

Each layer has its own ADSR which can be selected by moving the slider above the ADSRs to select which waveform needs shaping. Each layer has its own gain/amt dial. This makes layer selection both simple and easily editable on the fly. Simply switch on, move a slider, turn a dial, shape the ADSR and you are good to go!



## MAIN CONTROL PANEL

The control panel houses the global functions for the whole module.



## GLOBAL AMP ENV – Amplitude Envelope



**ATTACK** determines the time it takes the sound to reach peak value

**HOLD** determines how long peak value is held prior to the decay

**DECAY** determines time taken for attack to die prior to sustain

**SUSTAIN** determines how long the note is held

**RELEASE** determines how long the note takes to release (die)

**AMT** controls ADSR amount



**VEL** controls the velocity curve of the instrument.

**LEVEL** controls the overall level (volume) of the instrument.

**TUNE** controls the overall tuning of the instrument and is a single octave pitch down/up.

## GLIDE



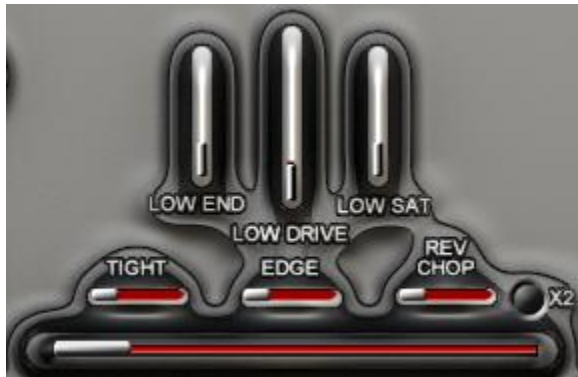
Glide has been designed to be very specific in terms of both modulation and envelope and acts as a pitch up and pitch down effect depending on which note is played last. This allows for subs to pitch drop or pitch rise, a feature very popular in the Urban genre.



The GLIDE function can be switched on by clicking on the red LED next to the slider.

The SLIDER controls the RATE or SPEED as the modulator is time based.

## CENTRAL CONTROL PANEL



### LOW END

The LOW END slider controls specific EQ curves for S1 – sine waveform. This is a double banded EQ with inversely proportional value triggered when the slider is moved. This is then run through a limiter and a compressor for added fatness and dynamic control.

### LOW DRIVE

The LOW DRIVE slider controls a number of chained effects in series which include heavy SATURATION, limiting and compression. This slider affects SATURATION amount for both S1 – sine waveform and S2 – kick sine waveform.

### LOW SAT

The LOW SAT slider controls a number of chained effects in series which include SATURATION, 2 banded inversely proportional EQ, 2 stages of limiting and finally tamed by compression. This slider affects low end SATURATION amount for S2 – kick sine waveform.



## **TIGHT**

The TIGHT slider controls a number of chained effects in series which include a 2 banded inversely proportional EQ, limiting and compression. This slider affects K1.

## **EDGE**

The TIGHT slider controls a number of chained effects in series which include a 2 banded inversely proportional EQ, a limiter which is then fed into a compressor, this in turn is fed into another limiter and then a compressor to tame the dynamics. This slider affects K2.

## **REV CHOP**

The REV CHOP slider controls the send amount to a convolution reverse chopped effect. The slider activates the effect for S2 and the X2 (double speed) is activated by switching on the red LED next to it. This effect has been designed to reverse the kick sine into slices and to play them until they pitch drop down back to the fundamental. Limiting and compression have been used to accentuate the effect and control the pitch dynamics.

A cool effect I threw in because I like a little madness here and there.

## **RUBBER**

The RUBBER slider controls a very specific chain of effects and dynamics so as to allow for the proverbial 'bounce' that is common on specific kicks and basses. The effect runs through limiting, delay – with very precise L/R delay amounts set to control both width and depth, and then a compressor. The slider affects all layers.

## WOBBLE and WAVER



These two processes are at the heart of L.E.W.D and control all motion including the perception of 3-D movement.

This process only affects S1 – sine waveform.

Each process has very detailed and extensive user controls hidden behind the big ass dials and funky little parameters on either side of said big ass dials.

Both are controlled via the following modulation matrix:



## WOBBLE



The WOBBLE function is switched on by clicking on the red LED. The dial controls the LFO rate of the modulator. The WOBBLE effect is an effect that modulates the amplitude of the S1 – sine waveform.



The FADE slider controls the fade value of the modulator (time taken to fade into the rate) and the PHASE slider controls the LFO phase value (cycle point trigger).

D1 (Decay 1), B (Break) and D2 (Decay 2) control the envelope of the LFO rate/frequency and can be shaped to manipulate how the WOBBLE behaves.



## WAVER



The WAVER function is switched on by clicking on the red LED. The dial controls the LFO rate of the modulator. The WAVER effect is an effect that modulates the PAN of the S1 – sine waveform.



The FADE slider controls the fade value of the modulator (time taken to fade into the rate) and the PHASE slider controls the LFO phase value (cycle point trigger).

D1 (Decay 1), B (Break) and D2 (Decay 2) control the envelope of the LFO rate/frequency and can be shaped to manipulate how the WAVER behaves.



Using WOBBLE and WAVER together gives the impression of 3-D sound as the movement is amplitude controlled, and that signifies a louder signal when close and a quieter signal when distant. This coupled with left to right movement



makes for some very interesting motion effects. Do not be scared to use these functions to their extremes as some crazy effects and textures can be attained.





## VOICE GROUPS

Each layer has its own voice group. This allows for monophonic playing or multi voiced playing (as demonstrated in the preset examples). Selecting more than one voice for the S1 – sine waveform allows for some really interesting GLIDE effects and the time variances give great 'beating' effects.

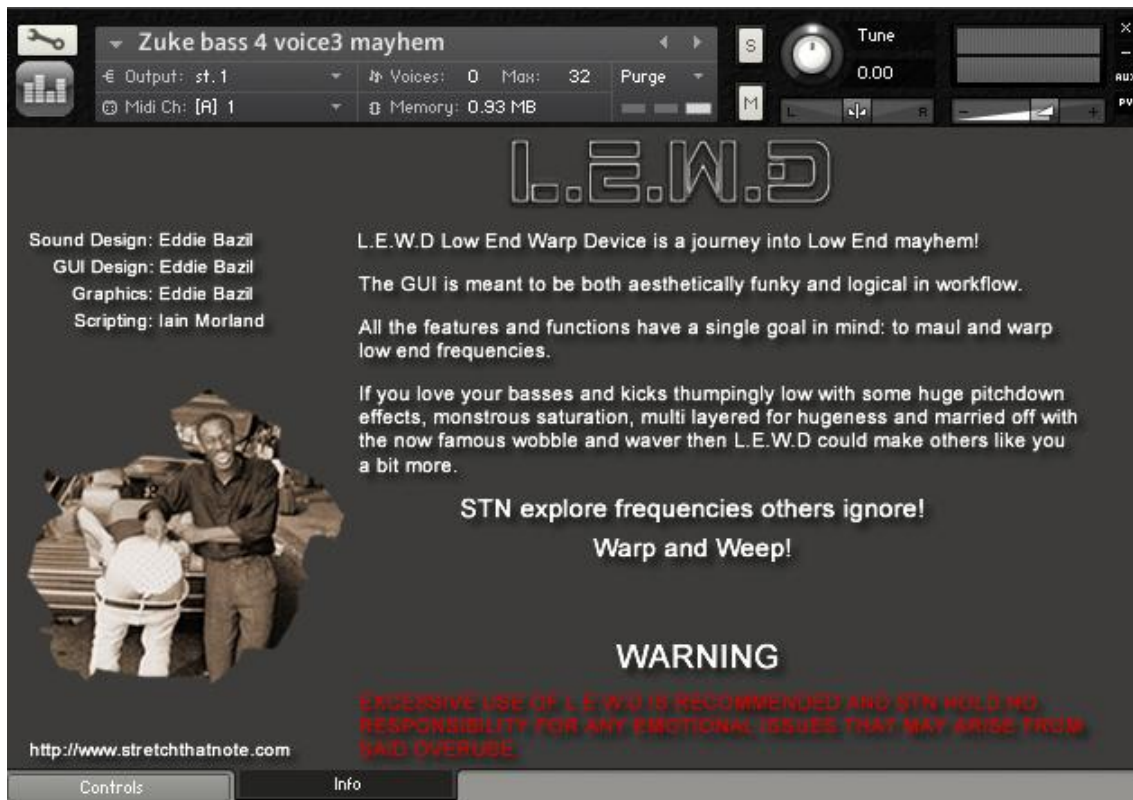


## THE SAMPLES and LAYERING

I have used specific sample inversion techniques and polarity inversions with some M/S to create width and this has resulted in specific frequencies being removed for layering purposes. By phase cancelling specific frequencies I was able to create the frequency space and harmonic content to allow for heavy saturation and layering of other layers without smearing. This makes for layering without the usual uncontrollable frequency cancellations and summing that normally takes place with sample layering.

With L.E.W.D this means you can safely layer all 4 layers without any worry of smearing of frequencies or summing of enharmonic frequencies. Additionally, saturation now sounds far clearer and warmer.

## INFO



The screenshot shows the L.E.W.D. software interface. At the top, there's a header with the text "Zuke bass 4 voice3 mayhem". Below this, there are several control elements: "Output: st. 1", "Voices: 0 Max: 32", "Purge", "Midi Ch: [A] 1", and "Memory: 0.93 MB". On the right side, there's a "Tune" knob set to "0.00". The main content area features the "L.E.W.D." logo in a stylized font. Below the logo, there's a list of credits: "Sound Design: Eddie Bazil", "GUI Design: Eddie Bazil", "Graphics: Eddie Bazil", and "Scripting: Iain Morland". To the left of the text is a circular image of a man and a child sitting on a car. The text describes the software as a "journey into Low End mayhem!" and mentions its "funky and logical" GUI. It also includes a "WARNING" section in red text: "EXCESSIVE USE OF L.E.W.D. IS RECOMMENDED AND STN HOLD NO RESPONSIBILITY FOR ANY EMOTIONAL ISSUES THAT MAY ARISE FROM SAID OVERUSE". At the bottom, there are two tabs: "Controls" and "Info", with "Info" being the active tab.

Click the **INFO** tab to access all the necessary credits and a very brief breakdown of the 'heart' of DruMM.



## KONTAKT ISSUES

Kontakt displays certain anomalies with certain effects and dynamics.

Whilst creating and then testing L.E.W.D we found that the SATURATION effect crackles when used. This was investigated and found to be a known issue with this specific effect in Kontakt.

When sliders and dials are at zero, they do not affect the sound, but Kontakt's internal effects, once switched on, create a click when a slider or dial is first moved. This is a known Kontakt issue. Additionally, any non 0 value, once triggered, exhibits a click. A good example of this is the Lev or Vel sliders. Again, a Kontakt issue.



## **USING THE FREE KONTAKT PLAYER**

Please be aware that there is a time limitation when using the free Player to audition L.E.W.D. The Player will shut down after a specific period (depending on which version you have) and although it allows full access for editing the edits cannot be saved.



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