

NOVA DRIFT

LABS® PEDAL

ADAM ADVENTURES SERIES

NOVADRIFT MODULATION EFFECTS PEDAL



Thank you for choosing the NOVADRIFT MODULATION by ALABS Audio. This exceptionally versatile digital effects pedal, powered by our exclusive Wizard Audio Virtual Engine, offers nine innovative and dynamic sound presets. It provides features such as Differential True Stereo mode, analog dry-through, and two selectable bypass modes. The footswitch also controls TAP TEMPO functionality, granting you precise control over modulation timing and the unique ∞ Explore mode exclusive to this series.

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I OVERVIEW

- 9 high-quality effects. Include vibe, chorus, multi-chorus, phaser, filter, rotary, flanger, tremolo, and ring.
- Advanced Audio Algorithm Engine: Powered by ALABS' Wizard Audio Virtual Engine, utilizing high-precision dynamic forward virtual circuit modeling technology, running on a high-performance 32-bit floating-point digital signal processor (DSP).
- True Stereo Operation: Two sets of independent algorithms running on the left and right channels, delivering a wide and immersive stereo field.
- Analog dry-through: Features a controllable independent analog dry-through buffer amplification circuit, preserving the unaffected, zero-latency, pure dry signal without AD / DA conversion.
- Selectable Bypass Modes: Provides high-quality relay-based true bypass and transparent analog buffer bypass options for selection.
- TAP TEMPO: Convenient and flexible tap tempo functionality with two selectable rhythm modes.
- Creative ∞ Explore Mode: Achieve dynamic variations and complex creative effects by simply holding down the footswitch to unleash multiple parameter transformations.

II KNOBS and SWITCHES

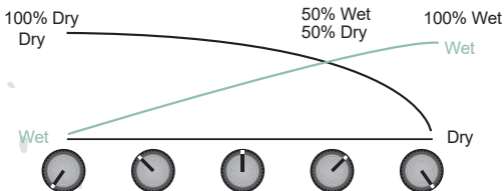
RATE

Controls the oscillation frequency of the Low-Frequency Oscillator (LFO). Increasing the value increases the rate of modulation.

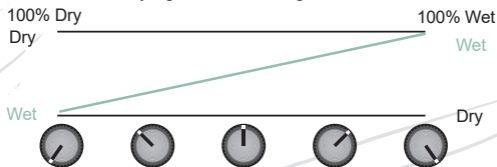
DEPTH

Controls the modulation depth of the LFO within the current effect type. Increasing the value enhances the intensity of modulation.

Controls the balance between the dry and wet signals. The dry modulation generated by the DSP. Clockwise rotation, the dry signal wet signal gradually increases from 0. The total volume remains constant.



Can also set the working mode of this parameter to **LEVEL**, see **VII MIX MODE / LEVEL MODE** for details. When set to **LEVEL MODE**, turn it clockwise, the wet signal will gradually increase from 0, and the dry signal will not change.



TYPE

Selects between nine reverb types. Refer to the **IV EFFECTS TYPE** section for more details.

TONE

Controls the tone of the delay. Adjusting the knob from the minimum value provides a darker tone, while increasing it offers a brighter tone.

X

Controls a specific parameter within certain effect types. Refer to the **IV EFFECTS TYPE** section for more details.

SWITCH

Determines the control target of the left knob and the function triggered by a long press of the footswitch.

- When set to **TAP**, the knob controls the X parameter (The X parameter still maintains the value stored by the system last time, unless the knob is turned), and trigger a system storage of TONE parameter. Now the long press of the footswitch activates the TAP TEMPO function (see **TAP FUNCTION** below).
- When set to **∞**, the knob controls the TONE parameter (The TONE parameter still maintains the value stored by the system last time, unless the knob is turned), and trigger a system storage of X parameter. Now the long press of the footswitch activates the **∞** function (see **∞ FUNCTION** below).

FOOTSWITCH

Engages or bypasses the effect.

- When the white LED light is illuminated, it indicates that the effect is turned on.
- When the effect is bypassed, there are two selectable modes: true bypass and analog buffer bypass (trail on). Refer to the **BYPASS MODE** section for more details.
- Holding down the footswitch activates the **TAP** function or the **∞** function, depending on the position of the switch in the **TAP** or **∞** mode. Refer to the **TAP FUNCTION** and **∞ FUNCTION** sections for specific functionalities.

III REAR PANEL I/O

9V DC

Connect to 9VDC, center negative power supply, 250mA minimum.

Note: If the power supply is insufficient, it may cause malfunction.

IN L (mono)

1/4" mono (TS) unbalanced left input for mono setup.

IN R

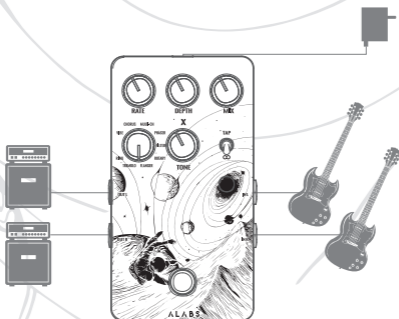
1/4" mono (TS) unbalanced right input for stereo setup.

OUT L (mono)

1/4" mono (TS) unbalanced left output for mono setup.

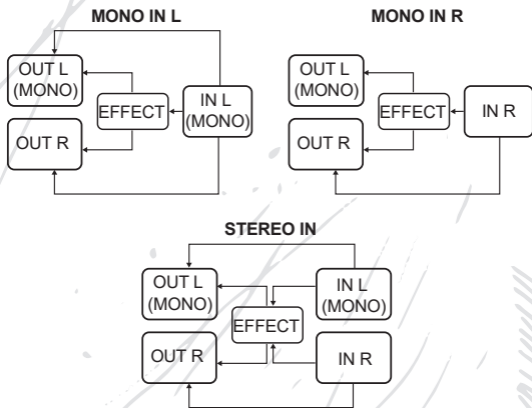
OUT R

1/4" mono (TS) unbalanced right output for stereo setup.



When using a mono input signal, please note the following:

- If the input interface is connected to IN L, both OUT L and OUT R will output the analog dry signal (direct signal) from IN L and the wet signal from the effect.
- If the input interface is connected to IN R, OUT R will output the analog dry signal and the wet signal from IN R, while OUT L will only output the wet signal from IN R. Since it is in STEREO mode even though the IN L (MONO) port is not connected, the analog dry signal from IN L will be output from OUT L, and the analog dry signal from IN R will be output from OUT R.



IV EFFECTS TYPE

VIBE

This model is based on a light-dependent resistor (LDR) and transistor-based phase shifter. While aiming to recreate classic sonic characteristics, it also features modern design elements such as the MIX parameter, adjustable sweep frequency range, and feedback control. The X parameter controls the circuit's feedback level, increasing the intensity of the VIBE effect when rotated clockwise.

CHORUS

This algorithm model is based on classic analog chorus effects and digitally reproduces the tonal characteristics of analog circuits. It emulates features like clock modulation and drift of BBD chips, compression and regeneration found in analog choruses, and the amplification circuit of analog LFOs. The X

parameter controls the delay of the chorus effect, increasing the delay and spatial dimension when rotated clockwise.

MULTI-CH

This algorithm model is based on the classic three-voice chorus effect. It combines three sets of chorus effects with varying lengths, depths, and modulation rates. The X parameter controls the overall delay of the chorus, increasing the delay and spatial dimension when rotated clockwise. Compared to other chorus types, this sound minimizes the oscillation feeling of the LFO and emphasizes a vibrant and dynamic modulation effect.

PHASER

This model is based on a 6-stage JFET phaser and aims to recreate the modulation waveforms and broaden the tonal range. The X parameter controls the phaser's feedback level, making the phaser effect more pronounced when rotated clockwise.

FILTER

This model is based on the widely used ladder VCF found in synthesizers. It features unique resonance and saturation characteristics combined with a special virtual modulation amplification circuit, resulting in creative and playable sound effects.

- The TONE parameter controls the base frequency of the sweep. Rotating it clockwise increases the frequency.
- The X parameter controls the resonance of the VCF. Rotating it clockwise increases the resonance effect.

ROTARY

This model is an acoustic and mechanical emulation of a rotating speaker, including the characteristics and movement variables of a horn and drum.

- The RATE parameter controls the rotation speed.
- The X parameter controls the proportion of sound sent to the drum speaker. Increasing the X intensifies the effect of the drum speaker.

- The DEPTH parameter controls the diameter of the horn speaker, with a larger value emphasizing the rotary effect.

FLANGER

This model is based on classic analog flanger effects, similar to the chorus effect, reproducing characteristics such as clock modulation and drift of BBD chips, as well as compression and regeneration of analog amplification circuits. Additionally, it enhances the saturation harmonic generator to produce more intense flanging effects.

- The X parameter controls the feedback level of the flanger effect, increasing the intensity of the flanging effect when rotated clockwise.

TREMOLO

This model offers clean digital tremolo effects. Its distinctive feature is the gradual control of the triangular wave signal LFO.

- The DEPTH parameter controls the waveform smoothing of the LFO, transitioning from a triangular wave to a sine-like wave, and eventually to a square wave when rotated clockwise.
- The X parameter adjusts the waveform duty cycle, gradually increasing the duty cycle when rotated clockwise. When the X parameter is at the 12 o'clock position, the waveform is symmetrical.

RING

This model creates sci-fi soundscapes with digital ring modulation effects. It modulates the ring modulation effect itself.

- The TONE parameter controls the frequency shift of the ring modulation.
- The RATE and DEPTH parameters control the modulation rate and depth of the frequency shift. By adjusting the RATE and DEPTH, you can achieve a transition from tremolo-like effects to synthesizer-like tones.
- The X parameter controls the shape of the modulation waveform, allowing for highly futuristic sound effects.

The effect-specific parameter-specific mapping table is as follows:

| EFFECT TYPE | DEPTH | X | tone |
|-------------|------------|------------|-----------------|
| Vibe | Mod Depth | Regen | Bright |
| Chorus | Mod Depth | Delay | Bright |
| Multi-ch | Mod Depth | Delay | Bright |
| Phaser | Mod Depth | Regen | Bright |
| Filter | Mod Depth | Resonance | Frequency Mid |
| Rotary | Hornrad | Drum Mix | Bright |
| Flanger | Mod Depth | Regen | Bright |
| Tremolo | Wave Shape | Duty Ratio | Bright |
| Ring | Mod Depth | Wave Shape | Shift Frequency |

V TAP FUNCTIONS

Set the switch to **TAP** mode. While the effect is activated, press and hold the footswitch until the LED turns blue, indicating the entry into **TAP** mode.

- **Speed Setting:** Tap the footswitch continuously according to the desired tempo to set the RATE parameter.
- **Exit Mode:** After 5 seconds of inactivity, the LED will turn white, automatically exiting TAP mode.
- **Beat Setting:** TAP mode offers two beat division options: 1/4 and 1/3. Set the toggle switch to **TAP** and, with the effect engaged, press and hold the footswitch until the LED turns blue. Rotate the DEPTH parameter to any position, and the LED will briefly turn green, indicating selection of the 1/4

VI ∞ FUNCTIONS

This function is similar to automated expression parameter control and can memorize the variation curves of the RATE / DEPTH / MIX and TONE parameters within a 5 second timeframe for playback. It allows you to create rich dynamic modulation effects.

To activate ∞ mode

Set the toggle switch to the ∞ position while the effect is active. Press and hold the footswitch until the indicator light turns purple.

To exit ∞ mode

Release the footswitch, and the indicator light will return to white. All parameters will return to their current knob positions.

Recall

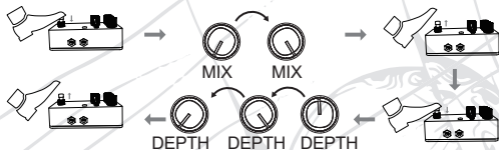
While holding down the footswitch, the parameters that have been memorized will vary according to the memorized curves. Memorized curves shorter than 5 seconds will remain at their end positions once they reach the end.

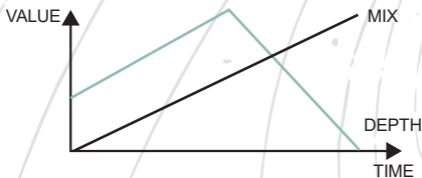
Memorization

While holding down the footswitch, rotate any of the RATE / DEPTH / MIX / TONE parameters.

The indicator light will start flashing purple, indicating that the changes to that parameter are being recorded.

After five flashes (5 seconds), the memorization mode will be exited. Releasing the footswitch within the 5 second period will also exit the memorization mode. It can store up to four memory curves (RATE / DEPTH / MIX / TONE) and be recalled together. The memorized curves of different parameters are aligned automatically and have no specific chronological order.





Overwriting

When setting new memorization for parameters that have already been memorized, the new variation curves will overwrite the previous ones.

Clearing

While holding down the footswitch, set the toggle switch to the **TAP** position to clear all memorized curves.

VII MIX MODE / LEVEL MODE

We offer two working modes of the MIX knob for users to choose.

1. Cut off the power supply, then press and hold the footswitch while powering up the pedal. Once the LED light flashes, release the footswitch, and enter the power-up system mode.
2. Turn the MIX parameter to the far left, and when the LED flashes appearing blue sometime, which means it is MIX MODE at this time; turn the MIX parameter to the far right, and when the LED flashes appearing yellow sometime, which means it is LEVEL MODE at this time.
3. Press the footswitch to exit the power-on system mode and start to work normally.

VIII BYPASS MODE

We offer two bypass modes for users to choose.

1. Cut off the power supply, then press and hold the footswitch while powering up the pedal. Once the LED light flashes, release the footswitch, and enter the power-up system mode.
2. When the switch is pointing up to **TAP**, the LED flashes red, which means it is buffer bypass mode at this time; when the switch is pointing down to ∞ , the LED flashes green, which means it is True bypass mode at this time.
3. Press the footswitch to exit the power-on system mode and start to work normally.

True Bypass with signal relay: Compared to traditional mechanical switch circuits, the use of a signal relay effectively reduces pop and click noise.

Analog Buffer Bypass: By bypassing the AD / DA conversion, the analog dry-through circuit preserves the advantages of a buffer circuit while retaining more of the original signal characteristics, reducing quantization noise and frequency response coloration.

IX SPECIFICATIONS

| | |
|------------------|--|
| Power | 9VDC, center negative, 250mA minimum |
| Input Impedance | 1 Meg Ohm |
| Output Impedance | 100 Ohm |
| Max Input Level | +6 dBu |
| Universal Bypass | electromechanical relay-base true bypass, and analog buffer bypass |
| Dimensions | 4.83" deep x 2.57" wide x 1.40" tall |

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