



DROP'N'LIFT

SEMITONE TRANSPOSE FX

[RACK EXTENSION]

MANUAL

2020



FX device by Turn2on Software



DROP'N'LIFT is a creative semitone transpose effect, that can help you re-tune your instrument from 1 semitone (halfstep) up to 2 octaves up or down.

Drop tune and **Lift** tune - is what this device is designed to do. It is a polyphonic re-tuning effect for any kind of audio signal. The device changes the tuning in intervals as an integer number of halftones. The device draws inspiration from the famous guitar pedal Whammy™ DT * (Drop Tune functionality). This helps to transpose the input signal of a guitar (or any other signal source) by semitones. This functionality is the main feature of the device, but much bigger additional features are available and totally change the main idea of a simple transpose effect.

DROP'N'LIFT works with two separate **Tune lines** (Line A and Line B). Both lines can transpose the incoming signal in the range -24 / 0 / +24 semitones (half-steps) separately. The device includes **DUAL TUNE** mode. There you can transpose LINE A TUNE and LINE B TUNE for incoming signals simultaneously in **parallel** mode. **Opposed** Mode changes Line A/B intervals symmetrically as positive and mirror negative tunes in parallel mode. **PAN** Mode uses A/B signal lines in parallel mode at the same time as L/R channel tunes. **GLITCH** mode simultaneously change Line A/B Tune intervals symmetrically to get creative glitchy sounds. **Mid/Side** mode re-tunes signals individually for Line A and Line B as Tunes of MID and SIDE signals.

The **DRY/WET** functionality adds a dry and wet control for mixing incoming and processed signals. If you set the DRY/WET control to 50%, it simulates a **12 string guitar effect** for Line A or Line B tune. In DUAL TUNE mode, when you set the Dry/Wet control to 50%, it creates a mixture of the incoming signal with

Line A and Line B Tune transpose effects simultaneously. An important part of the semitone transpose effect is the **Smooth** functionality. By default, in Poly mode, it helps to transpose the signal with phase-align shifting. In Mono mode, it acts like a classical pitch-shifting effect where interval transposing (shifting) sounds somewhat glitchy.

The heart of the effect is a **Transpose Resolution** that can set a delay size in ms or quaretr notes, to optimise the transpose shifting effect of the processed signal. It also can be used as creative delay/slide fx. The **Momentary** switch is used to momentarily enable, or bypass the effect (with pressing "SOFT BYPASS" button).

The **DROP'N'LIFT** Rack Extension functionality can be used as a live performance device and also as a studio utility for fast re-tuning of your instruments via Line A or Line B tunes separately. This device can also be used as an original modulation pitchshifter in the mix of incoming signal with transposed intervals via Line A or Line B tune, including DUAL Tune (parallel mode) using Dry/Wet proportions.

Try the **DROP'N'LIFT** - creative transpose-shift utility for re-tuning of instruments on the fly, create fast semitone-shiftings with Momentary mode, and create a mix of Line A/B Tune or DUAL tune (in parallel mode) with the original incoming signal.

DROP'N'LIFT is not only a Guitar double Drop/Lift semitone tune shifter. It can also be a Synthesizer Sub/Hi generator, an Octave generator with crossfades, a tune-shifter sequencer with external CV source, and a Note-tuner with a lite-shifting crossfade effect.



This is a semitone effect for re-tuning and creating layers of retuned signals in many creative ways! It's not a pitch-shifter fx! When you change intervals in real-time, you will notice some artifacts because the device works with a range of integers, not a decimal number of semitones. You can use the device like a real-time pitch-shifter in creative ways, but keep in mind that the device changes the intervals as an integer number of halftones without decimal smoothing. It is a creative transpose effect, not a pitch-shifter!

Drop And Lift / Not just a simple transpose fx

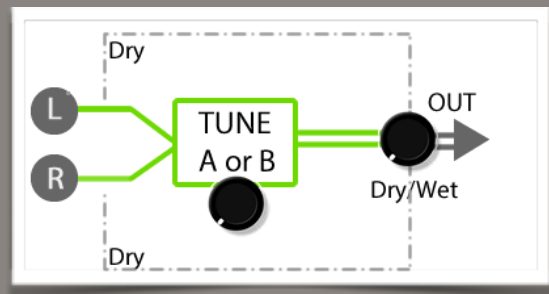
The Drop'n'Lift device works in a few main creative modes

Line A Tune	Dual A/B Tune	Pan A/B Tune	Mid-Side A/B Tune
Line B Tune	Opposed A/B Tune	Glitch A/B Tune	x



FRONT PANEL

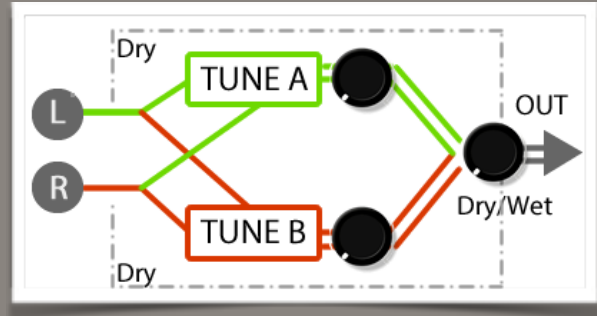
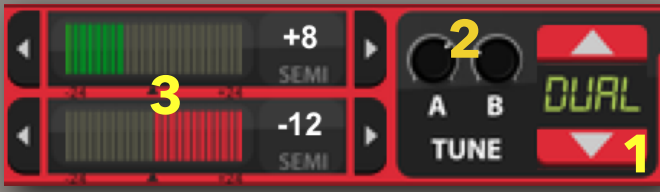
MODES:



LINE A or LINE B TRANSPOSE (SHIFT)

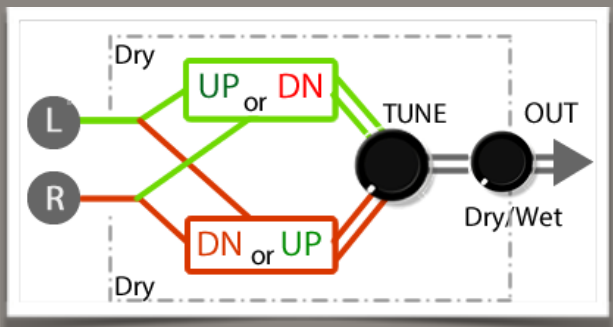
Line A mode is a first copy of signal for semitone transpose tuning.
 Line B mode is a second copy of signal for semitone transpose tuning.
 Lines A/B can't be used at the same time, but these modes save their own individual semitone shifts and you can switch them.

LINE A / LINE B TUNE TRANSPOSE			
1 MODE	Selects how to transpose (shift) the instrument signal UP or DOWN for drop or lift tune simulation. Select active lines: Only Line A, Only Line B		
2 TUNE	The Tune knob selects the transpose (shift) interval for the selected Line Tune (A or B). This parameter re-tuning incoming signal in 2 variants - Line A and Line B, that can be switched by Orientation and transposed individually. Signal transposes in range -24 / 0 / +24 semitones (half-steps). 12 semitones = 1 Octave.		
3 SEMITONES	<p>Display shows selected transpose interval. LEDs light up in RED colours when a Line A / Line B Tune transposes signal down (and in GREEN colours when transposes signal up).</p> <table border="0"> <tr> <td style="vertical-align: top;"> <p>Negative transpose called DROP TUNE. LEDs light up red colour when Line A/B Tune transposes signal DOWN from 1 up to 24 semitones (2 Octaves). As example:</p> <ul style="list-style-type: none"> -1 - transposes signal down 1 semitone -2 - transposes signal down 2 semitones -12 - transposes signal down 1 octave </td> <td style="vertical-align: top; padding-left: 20px;"> <p>Positive transpose called LIFT TUNE. LEDs light up green colour when Line A/B Tune transposes signal UP from 1 up to 24 semitones (2 Octaves). As example:</p> <ul style="list-style-type: none"> +1 - transposes signal up 1 semitone +2 - transposes signal up 2 semitones +12 - transposes signal up 1 octave </td> </tr> </table>	<p>Negative transpose called DROP TUNE. LEDs light up red colour when Line A/B Tune transposes signal DOWN from 1 up to 24 semitones (2 Octaves). As example:</p> <ul style="list-style-type: none"> -1 - transposes signal down 1 semitone -2 - transposes signal down 2 semitones -12 - transposes signal down 1 octave 	<p>Positive transpose called LIFT TUNE. LEDs light up green colour when Line A/B Tune transposes signal UP from 1 up to 24 semitones (2 Octaves). As example:</p> <ul style="list-style-type: none"> +1 - transposes signal up 1 semitone +2 - transposes signal up 2 semitones +12 - transposes signal up 1 octave
<p>Negative transpose called DROP TUNE. LEDs light up red colour when Line A/B Tune transposes signal DOWN from 1 up to 24 semitones (2 Octaves). As example:</p> <ul style="list-style-type: none"> -1 - transposes signal down 1 semitone -2 - transposes signal down 2 semitones -12 - transposes signal down 1 octave 	<p>Positive transpose called LIFT TUNE. LEDs light up green colour when Line A/B Tune transposes signal UP from 1 up to 24 semitones (2 Octaves). As example:</p> <ul style="list-style-type: none"> +1 - transposes signal up 1 semitone +2 - transposes signal up 2 semitones +12 - transposes signal up 1 octave 		



DUAL TUNE (Line A & Line B in parallel)

DUAL TUNE TRANSPOSE (parallel mode)	
1 DUAL Mode	Special DUAL mode - use both signal lines (LINE A and LINE B Tune) in parallel mode. You can listen to Line A and Line B tunes and change their intervals at the same time.
2 TUNE	Two Tune knobs (A and B) selects the transpose (shift) interval for the both Line A and Line B tunes. This parameters re-tunes the incoming signal in parallel mode individually for Line A and Line B. Signal transposes in range -24 / 0 / +24 semitones (half-steps).
3 SEMITONES	Two displays show selected transpose intervals for Line A and Line B tunes. LEDs light up in RED colours when a Line A / Line B Tune transposes signal down (and in GREEN colours when transposes signal up). In DUAL mode you can Drop down and Lift up incoming signals at the same time as parallel re-tuning. You can also Drop down or Lift up twice the incoming signal with individual intervals as parallel re-tuning.

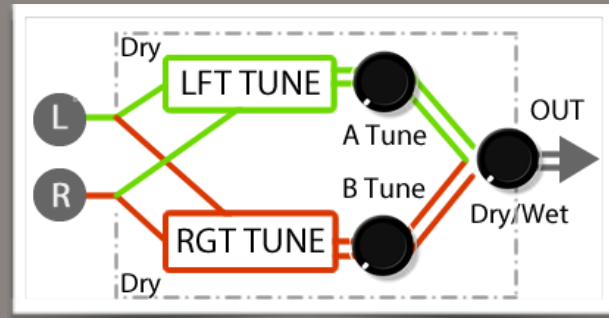


OPPOSED (Line A vs Line B in parallel)

OPPOSED TRANSPOSE (parallel mode, A vs B Tune)	
1 OPPOSED Mode	Special A vs B tune mode - uses both signal lines (LINE A and LINE B Tune) in parallel mode at the same time. It works as a positive and mirror negative transposition tune lines. You can listen to Line A and Line B tunes and simultaneously change their intervals symmetrically.
2 TUNE	One Tune knob selects the transpose (shift) interval for the both Line A and Line B tunes symmetrically. This parameter re-tunes the incoming signal in parallel mode individually for Line A and Line B as Positive (A) and symmetrical Negative (B) lines. The signal transposes as Line A in range -24 / 0 / +24 semitones and reversed Line B in range +24 / 0 / -24 semitones at the same time. Examples: - Tune = 0: Line A = 0 semi / Line B = 0 semi - Tune = +/-7: Line A = +7 / Line B = -7 semi - Tune = -/+12: Line A = -12 / Line B = +12 semi
3 SEMITONES	Two displays show selected symmetrical transpose intervals for Line A and Line B tunes. LEDs light up in RED colours when a Line A or Line B Tune transposes signal down (and in GREEN colours when transposes signal up). In Opposed mode you can Drop down and Lift up incoming signals at the same time as symmetrical parallel re-tuning.



PAN (Line A & Line B as L/R Tunes)

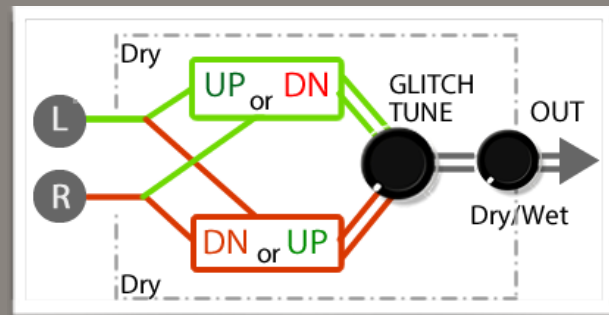


PAN TRANSPOSE (Line A and B as L/R channels Tunes)

- 1 PAN Mode** Special PAN tune mode - uses both signal lines (LINE A and LINE B Tune) in parallel mode at the same time as L/R tunes.
Line A Tune - changes tune of **Left** channel.
Line B Tune - changes tune of **Right** channel.
 You can change the tune of Left and Right channels at the same time for Line A and Line B with their individual intervals.
- 2 TUNE** Two Tune knobs (A and B) select the transpose (shift) interval for the both Line A and Line B tunes. These parameters re-tune the incoming signal in parallel mode individually for Line A and Line B as Tunes of Left and Right channels.
 The signal transposes in range -24 / 0 / +24 semitones (half-steps) for L and R channels.
- 3 SEMITONES** Two displays show selected transpose intervals for Line A and Line B tunes. LEDs light up in **RED** colours when a Line A or Line B Tune transposes signal down (and in **GREEN** colours when transposes signal up).



GLITCH (Line A vs Line B Tune)

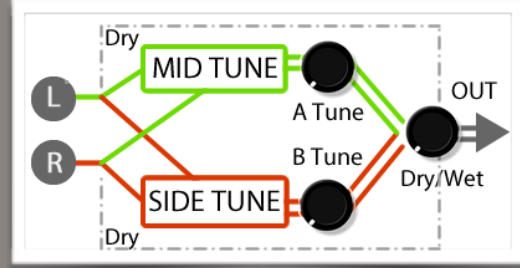


GLITCH TRANSPOSE (Line A vs B Tune)

- 1 GLITCH Mode** Special A vs B creative glitch mode - uses both signal lines (LINE A and LINE B Tune) in parallel mode at the same time. It works as a positive and mirror negative transposition tune lines to create glitch sounds for your signal. You can listen to Line A and Line B changes and simultaneously change their intervals symmetrically to get a more deeper glitch sound.
- 2 TUNE** One Tune knob selects the transpose (shift) interval for the both Line A and Line B symmetrically. This parameter adds a glitch sound to the incoming signal in parallel mode individually for Line A and Line B as Positive (A) and symmetrical Negative (B) lines. The signal transposes as Line A in range -24 / 0 / +24 semitones and reversed Line B in range +24 / 0 / -24 semitones at the same time.
- 3 SEMITONES** Two displays show selected symmetrical transpose intervals for Line A and Line B. LEDs light up in **RED** colours when a Line A or Line B transposes signal down (and in **GREEN** colours when transposes signal up).



MID/SIDE (Line A = Mid, Line B = Side Tune)



MID/SIDE TRANSPOSE (Line A = Mid, Line B = Side Tunes)

1	MID/SIDE Mode	Special MID/SIDE tune mode - uses both signal lines (LINE A and LINE B Tune) in parallel mode at the same time as Mid / Side tunes. Line A Tune - change tune of the MID signal. Line B Tune - change tune of the SIDE signal. * Works for Stereo signals.
2	TUNE	Two Tune knobs (A and B) selects the transpose (shift) interval for both of the Line A and Line B tunes. These parameters re-tune the incoming signal in parallel mode individually for Line A and Line B as Tunes of MID and SIDE signals.
3	SEMITONES	Two displays show selected transpose intervals for Line A (MID signal) and Line B (SIDE signal) tunes. LEDs light up in RED colours when a Line A / Line B Tune transposes signal down (and in GREEN colours when transposes signal up).



OTHER

1	SMOOTH	The smooth control of the selected transpose effect has two modes: MONO: Glitchy interval transpose fx (classical shifting) POLY: Smoother interval transpose fx (phase-align shifting)
2	CORRECT	Select one of the Correction elements:
3	GAIN	Controls the level of the master output signal (up to +12dB).
4	LINE LEV	Controls the level of the Line A Tune and Line B Tune (up to +12 dB)
5	DRY/WET	Dry/Wet function of incoming and processed signals. Mid position of Dry/WET (50%) - simulates a 12 string guitar . With this mid position of the Dry/Wet, you can create a Polyphonic Tune transpose FX. In this situation you can hear a mix of the original signal with the transposed interval. In DUAL Tune mode, you can create a DUAL polyphonic transpose FX and hear the original signal plus the Line A and Line B tune transposed intervals simultaneously.
6	SOFT BYPASS	Bypass with fading of effect activity (without glitches). This button can be used to turn the Line A / Line B / DUAL Tune effect on and off as indicated by the LED
7	MOMENTARY	This switch is used (if On) to momentarily enable or bypass the effect at moment of pressing "SOFT BYPASS" button
8	TRANSPOSE RESOLUTION	Set delay size in ms or quaretrnotes to optimise transpose shifting effect of processed signal in Line A / Line B / DUAL tune mode.
9	TRANSPOSE MODE	Select one of the Transpose Resolution modes: Time (ms), Tempo (quarternotes)
10	Bypass / On / Off	Standard switch with 3 modes: Bypass effect, On Effect, Off Effect



MIDI KEYS INPUT

This is a special mode of the Drop'n'Lift device to create additional momentary changes of the current semitone transpose interval by using midi keys input at the active device track in Reason sequencer. Can additionally change momentary selected transpose interval in range +/-2 octaves (+/- 24 semitones) by midi keys.

Just create Track for the Drop'n'Lift from context menu, select created track and play midi notes to change active semitone transpose interval momentary in +/-24 semitone range .

MIDI Section shows two parameters:

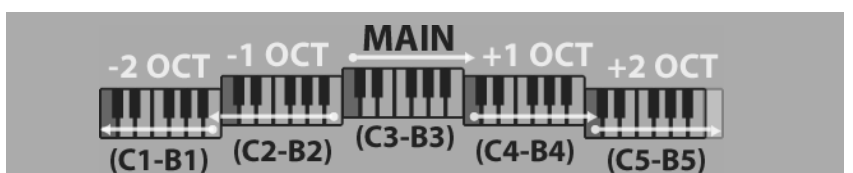
1 MIDI NOTE	Show incoming midi note in range of one octave (C, C#, D, D#, E, F, F#, G, G#, A, A#, B), that affects momentary (when key is held) additional to the current Line A/B transpose interval. When intervals at Line A/B is set to +12semi, and you play C4(72 key), at the button hold moment you add momentary additional +12semi to current intervals. If you release this key, transpose interval goes back to selected interval at Line A/B (back from +24 sum transpose to +12 semi).
2 OCT SHIFT	Shows how much octaves by playing note momentary, shift the current selected transpose interval of the Line A/B [up or down]. (Default position C 0 = no changes [note = C octave shift = 0])
0	C3 (key 60) is the default key that sets momentary midi transpose interval to 0 semitone transpose. Use it anytime to revert to the selected transposed interval of the Line A/B signals from midi key changes.
-1	C2-B2 (keys 48-59): drop down selected transpose interval of Line A/B to -1 oct (-12 semitones)
-2	C1-B1 (keys 36-47): drop down selected transpose interval of Line A/B to -2 oct (-24semitones)
-3, -4, -5	C-2-B0 (keys 0-35): drop down selected transpose interval of Line A/B to -2 oct (-24semitones) if transpose interval of the Line A/B set to 0. Because Midi key transpose shift works only in range of +/- 2 octaves. You can play notes in this range, but changes can be heard only if Line A/B transpose interval shifted more than 1 octave.
1	C4-B4 (keys 72-83): lift up selected transpose interval of Line A/B to +1 oct (+12 semitones)
2	C5 (key 84 and upper): lift up selected transpose interval of Line A/B to +2 oct (+ 24semitones)
+3, +4, +5	C6 - G8 (keys 0-127): lift up selected transpose interval of Line A/B to +2 oct (+ 24semitones) if transpose interval of the Line A/B set to 0. Because Midi key transpose shift works only in range of +/- 2 octaves. You can play notes in this range, but changes can be heard only if Line A/B transpose interval shifted more than 1 octave.



Main default octave is C3-B3 (60-71 midi keys).

Octave include 12 half-steps (semitones).

Device apply to change semitone transpose (shifts) in range of +24 semi (+2 octaves) up, and -24 (-2 octaves) down.





BACK SIDE PANEL



AUDIO INPUT / OUTPUT

Mono/Stereo connections for Input and Output audio signals

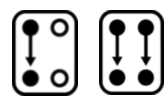


CV INPUTS

Use these CV inputs to control the main parameters of the Semitone Transpose effect

- TUNE A / B** - CV control of LINE A and LINE B Tune parameter.
- SMOOTH** - two step CV control of SMOOTH parameter (Mono / Poly).
- RESOLUTION** - CV control of Transpose Resolution parameter (in ms / tempo sync).
- GAIN** - CV control of Gain output parameter.
- BYPASS** - CV control of Soft Bypass parameter (also of Momentary mode).
- DRY/WET** - CV control of processed and unprocessed signal mix property.

CONNECTIONS:



The device is a True-Stereo effect. For Mono input, the device produces mono output. For Stereo input, the device sums the Left and Right channels before applying the effect. The output is in Stereo.



DROPN'LIFT

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Turn2on

Rack Extension Developer

contacts: <https://turn2on.com/>
supp.turn2on@gmail.com

Thanks to all beta-testers.
Special thanks for help to:

- Philip Meadows,
- Navi Retlav

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