

**ECHOEY DREAMS...**



**ZANDER**  
CIRCUITRY

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## BEFORE WE GET STARTED...

We just want to thank you for purchasing one of our pedals, your support means an awful lot to us. We love doing what we do and it wouldn't be possible without the fantastic people that help and encourage us to continually push our limits.

We really hope you enjoy making wonderful noise with it!

*Alex Millar*

Founder

# OVERVIEW

Hello... hello... hello...There's definitely something in here.

The Duplo is the full-featured lo-fi delay machine you've been dreaming about, with eight different modes that'll bring buckets of character to your playing. Sonically, it's a throwback to the unique, the battered, and the irreplaceable, delivering the classic, well-worn sound of vintage units – without the hassle of maintaining them.



effect type:  
multi-delay



switching:  
true or buffered bypass



power:  
9v DC (center -)



jacks:  
top mounted

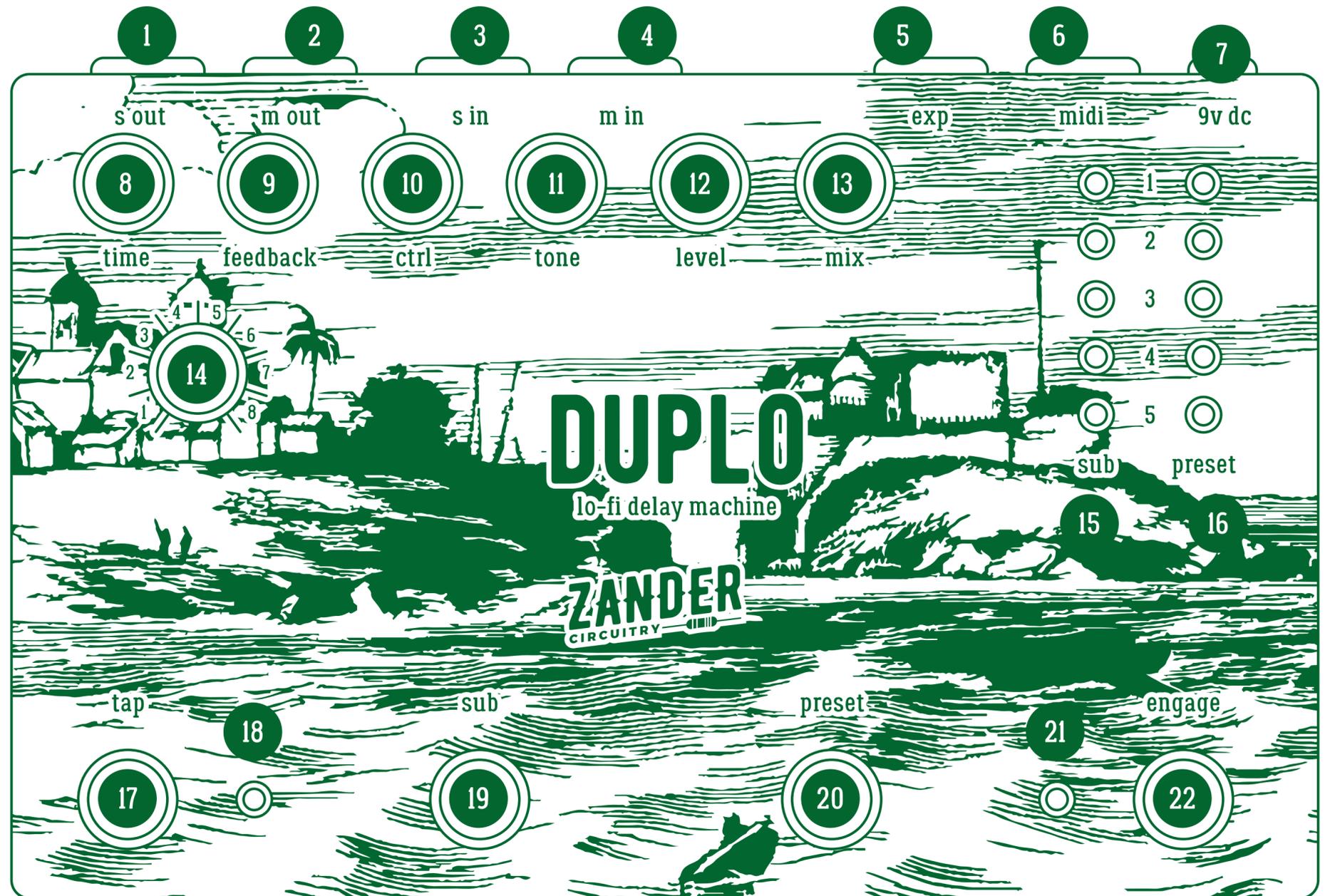


current draw:  
250ma



# ON THE SURFACE

1. Stereo out
2. Mono out
3. Stereo in
4. Mono in
5. Expression pedal in
6. MIDI
7. 9v DC in (center -), current draw 250ma
8. Time - delay speed
9. Feedback - delay repeats
10. Ctrl - secondary parameter (see page 6)
11. Tone - EQ control for the wet signal
12. Level - master volume control
13. Mix - wet/dry blend knob
14. Patch selector
15. Sub division indicator LEDs
16. Preset indicator LEDs
17. Tap - tap tempo
18. Tempo indicator LED
19. Sub - tap sub-division selector
20. Preset - preset selector
21. Engage/bypass mode indicator LED
22. Engage - bypass



# DEEP DIVE

## 1. TAP TEMPO

Pressing the tap tempo footswitch twice will set the tempo of the delay, the tap LED will flash in time with the tempo you've tapped in.

## 2. SUB SWITCH

The sub switch allows you to cycle through 5 different sub-divisions for the tap tempo. These are indicated by the 5 LEDs above the 'sub' label.

1. quarter notes
2. dotted eighths
3. eighth notes
4. triplets
5. sixteenth notes

## 4. PRESETS

The preset switch allows you to store and cycle through 5 on-board presets. These are indicated by the 5 LEDs above the 'preset' label.

To store a preset, cycle through to the number you'd like to assign the preset to, set the controls to the desired settings and then press and hold the preset footswitch for 3 seconds. You'll see the LED jump forward to the next number and then jump back again. This indicates the preset has been stored.

## 4. TRUE/BUFFERED BYPASS (TRAILS)

True or buffered bypass can be assigned per preset. To change bypass modes, press and hold the bypass footswitch for 3 seconds. The bypass LED will flash briefly to confirm the change has taken place.

In true bypass mode, when the pedal is off the bypass LED will be off. In buffered bypass mode, when the pedal is off the bypass LED will be red. In both modes the bypass LED will be green when the pedal is on.

## 5. EXPRESSION PEDAL CAPABILITY

All parameters (including the patch selector!) can be controlled with an expression pedal on a per-preset basis, to do this:

1. Plug in an expression pedal to the 'exp' input
2. Press and hold the sub and engage footswitches for 3 seconds, the bypass LED will start flashing red, you have now entered assignment mode (flashing red means that no parameters have been assigned yet)
3. Rotate the controls you'd like to assign to the expression pedal for that preset. The flashing bypass LED will change from red to orange once the first parameter has been assigned to confirm the change has been recognised
4. To exit assignment mode, press and hold the sub and engage footswitches for 3 seconds. The bypass LED will stop flashing and return to it's previous state
5. To clear the expression assignments for a preset, press and hold the sub and engage footswitches for 5 seconds (from outside of assignment mode). The flashing bypass LED will flash orange (after 3 seconds) and then red (after 5 seconds) to confirm that the assignments have been cleared.

## 6. MIDI (A BRIEF INTRO)

Connecting a MIDI controller to the Duplo via the MIDI jack allows you to access a wide range of additional features including storing up to 128 presets, externally controlling any parameter and accepting beat clock information. The MIDI controller numbers are as follows:

time = 20

feedback = 21

ctrl = 22

tone = 23

level = 24

mix = 25

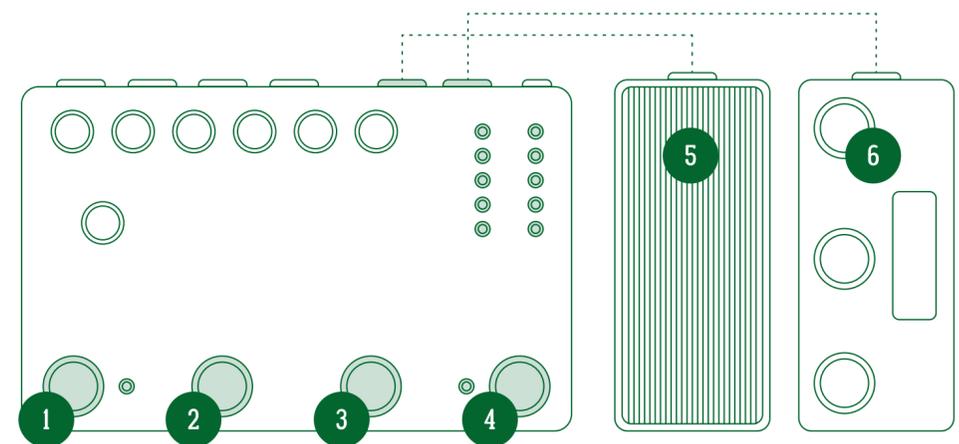
patch selector = 26

tap sub-division = 27

bypass = 29



Our MIDI TRS configuration follows the official MIDI Manufacturers Association's specification. (This is also the same as Empress Effects, however it is possible to flip the configuration to be the same as used by Chase Bliss Audio if needed. Please contact us to discuss this).



# SOUNDS & STEREO

With 8 unique patches, you're sure to find loads of sounds to immerse yourself in!

## A QUICK NOTE ON MONO/STEREO...

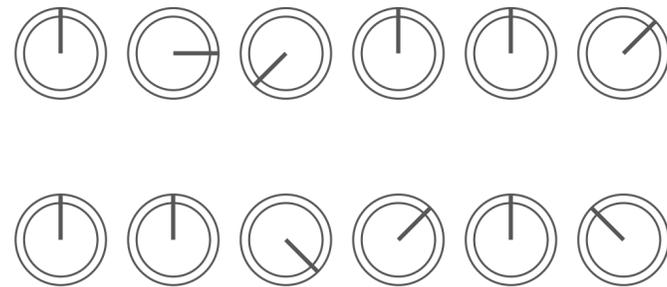
If you're running a mono setup, just use the mono jacks. Do not run a mono setup through the stereo jacks. You can still run mono in to stereo out. Bypass mode must be switched to buffered in order to get stereo bypass.

#	Effect	Description	Ctrl knob	Stereo function
1	Analog with modulation & grit	Voiced to replicate the infamous 'pink box' analog delay pedals of the 1980s.	Adds in subtle modulation as well as more aggressive filtering/headroom reduction which will break up/distort.	Modulation & headroom reduction split across the two channels.
2	Tape with wow/flutter & tape aging	A bright and crispy delay, voiced to sound like a brand new tape delay unit.	Adds in wow/flutter and also 'tape age' which reduces the frequency range of the repeats and will begin to warp/distort.	Wow/flutter and 'tape age' split across the two channels.
3	Multi-modulation (chorus/flanger)	A fairly neutral sounding delay with rich modulation.	Blend between flanging and chorus sounds for the modulation.	Stereo modulation.
4	PT2399 with chip artefacts/aliasing	Voiced to replicate the PT2399 digital delay chip used in many 'boutique' pedals from the early 2000s.	Increases filtering and introduces aliasing/digital artefacts that you'd get from pushing the delay time past the chip's specified limit.	The high and low frequency aliasing is split across the two channels.
5	Multi-head delay - slapback/echo	Tape style delay with additional tape head for slapback/echo.	Controls the delay time of the slapback/echo. (up to approx 150ms)	Second 'delay head' goes to stereo channel.
6	Multi-head delay - dotted eighths	Tape style delay with additional tape head set to dotted eighths. Perfect for rhythmic playing.	Controls the volume of the second delay head.	Second 'delay head' goes to stereo channel.
7	Multi-head delay - triplets	Tape style delay with additional tape head set to triplets. Perfect for rhythmic playing.	Controls the volume of the second delay head.	Second 'delay head' goes to stereo channel.
8	Multi-head delay - golden ratio	Tape style delay with additional tape head set to the 'golden ratio'. A washy/reverb-like delay that crashes into itself.	Controls the volume of the second delay head.	Second 'delay head' goes to stereo channel.

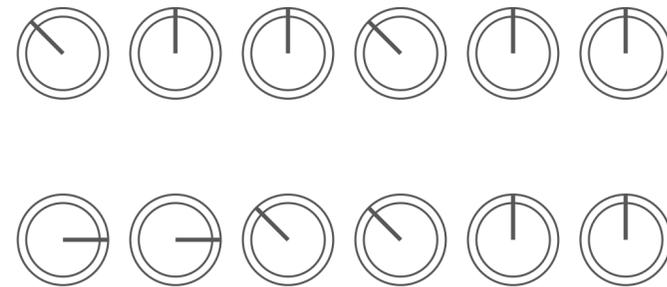
# SUGGESTED SETTINGS

## ANALOG WITH MODULATION & GRIT

Mono

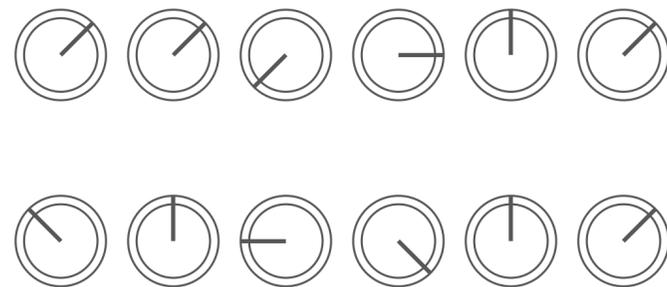


Stereo

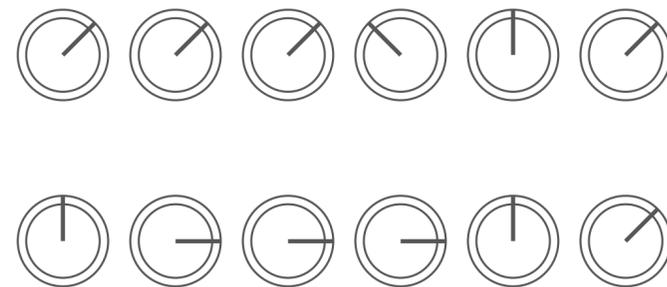


## TAPE WITH WOW/FLUTTER & TAPE AGING

Mono

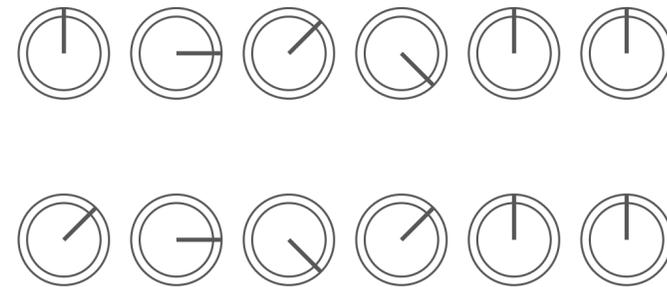


Stereo

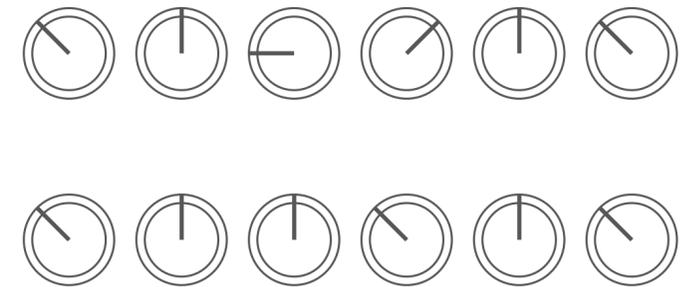


## MULTI-MODULATION (CHORUS/FLANGER)

Mono

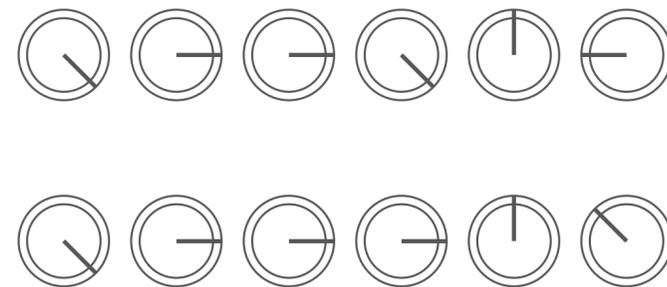


Stereo

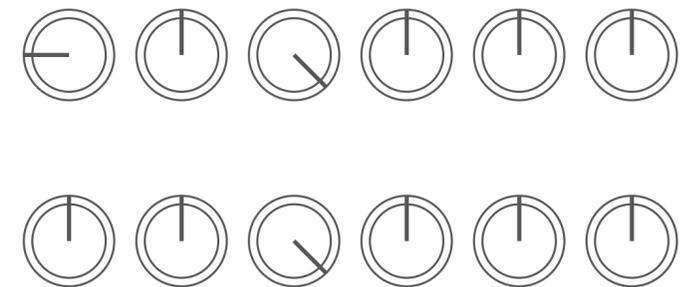


## PT2399 WITH CHIP ARTEFACTS/ALIASING

Mono



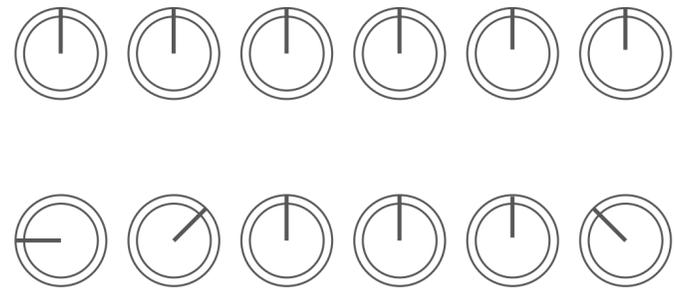
Stereo



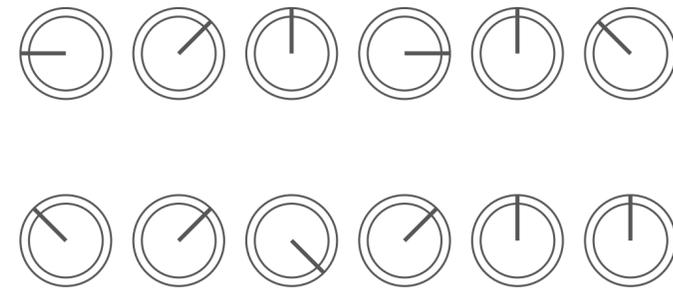
# SUGGESTED SETTINGS

## MULTI-HEAD DELAY - SLAPBACK/ECHO

Mono

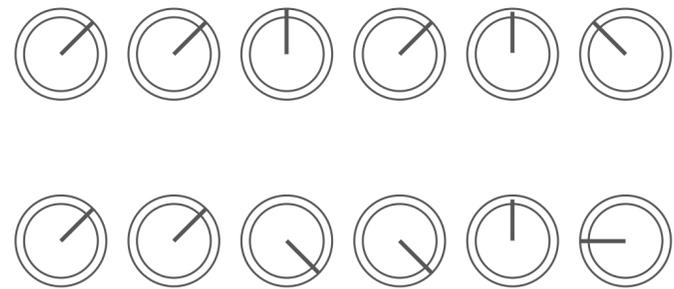


Stereo

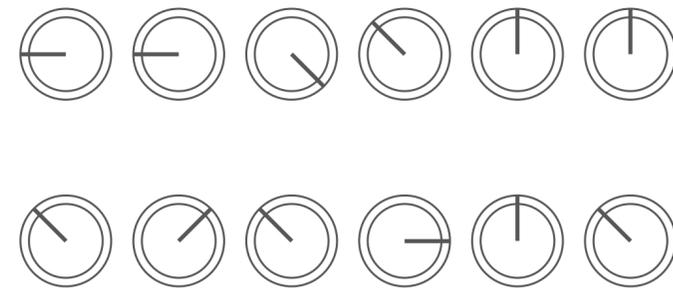


## MULTI-HEAD DELAY - DOTTED EIGHTHS

Mono

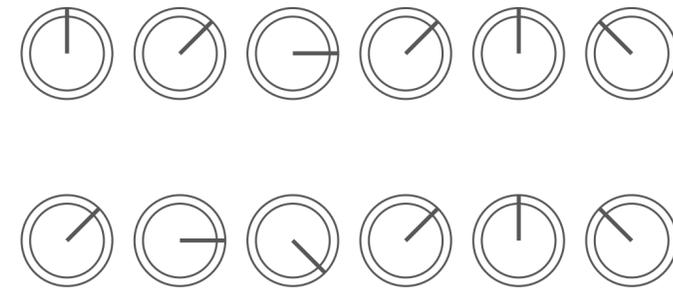


Stereo

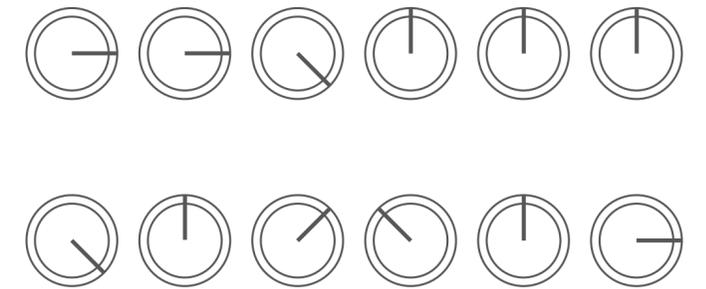


## MULTI-HEAD DELAY - TRIPLETS

Mono

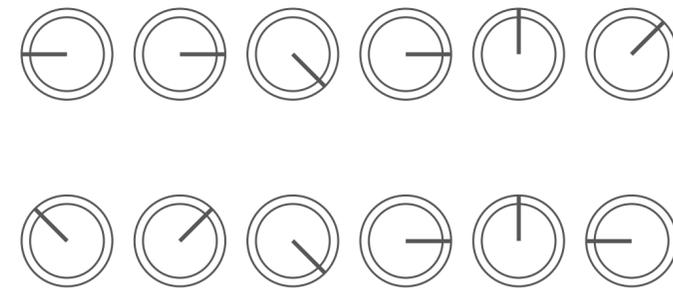


Stereo

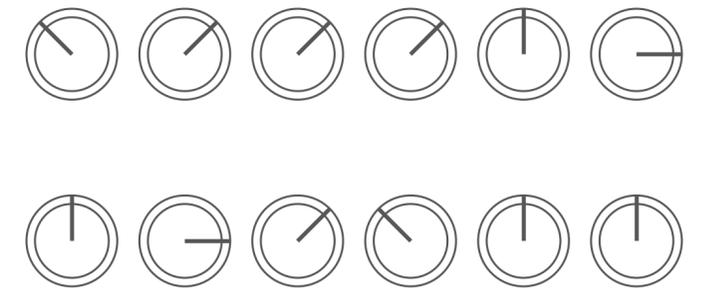


## MULTI-HEAD DELAY - GOLDEN RATIO

Mono



Stereo



# WARRANTY & BORING STUFF

## WARRANTY

All orders are covered by a 6 month repair/replace warranty, this service is free but return postage will need to be covered by the buyer, please note this is only for faults and does not cover mistreatment...so don't go spilling beer on anything! Please note this warranty only applies to the original buyer of the pedal, if it has been bought second hand or is older than 6 months we're still happy to sort any issues for a small cost that will be quoted on a pedal-by-pedal basis.

It goes without saying that we do not recommend you try to fix any faults yourself and always urge you to contact us or seek the help of a knowledgeable tech to carry out the work for you.

Tampering of any kind with the internal circuitry will immediately void the warranty (the only exception being elements that are specifically meant to be tweaked/alterred, such as a level trimpot), but make sure you know what you're adjusting or you'll have to send it back to be fixed!

For a full list of terms or any other frequently asked questions, visit our website:  
[www.zandercircuitry.com](http://www.zandercircuitry.com)

## COMPLIANCE/STANDARDS



## STAY IN TOUCH!

We always love you guys getting in touch, seeing and hearing the wonderful things you create. So please keep us updated with anything you're doing!



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