

 **innoFADER**
Scratch Forever.

 **innoFADER** *PNP3*

 **innoFADER** *RANE1-70-72*

Owners' Manual

PLEASE before you proceed with the installation, read this manual **and** scan the QR code corresponding to the Innofader you just purchased. Scroll down to the list of compatible mixers and controllers, find the name of your mixer or controller, and click on it for important installation details. If it is not listed or if you have questions about the installation, please contact us directly for further assistance.

Thank you for supporting the Innofader brand. If you have already purchased Innofaders in the past, we greatly appreciate your support over the years. Happy Scratching!

Elliot Marx

Scan
Before
Opening

PNP3



Scan
Before
Opening

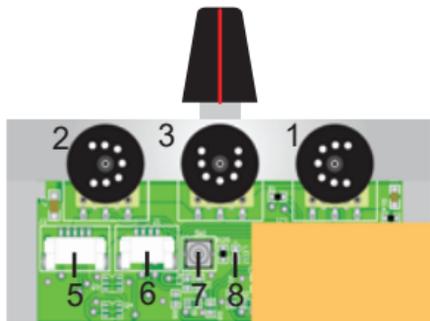
RANE1-70-72



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Familiarize yourself with your InnoFader PNP3



1) LEFT CUT - Turn towards the center to increase dead space, away from the center to decrease dead space on the left side cut point.

Set mixer curve to SHARP when adjusting and checking.

2) RIGHT CUT - Turn towards the center to increase dead space, away from the center to decrease dead space on the right side cut point.

Set mixer curve to SHARP when adjusting and checking.

3) CURVE - Generally leave this dial in the middle. **Test with different mixer curve settings. Use CURVE only to fix curve shape, not lag! Use the LEFT CUT and RIGHT CUT dials to adjust lag.**

4) TENSION ADJUST - Position fader stem in the center to do adjustment. Turn clockwise to increase tension, counterclockwise to loosen. **DO NOT turn too far counterclockwise or fader will get jammed!**

5) INNOJUSTER SOCKET - Only for use with the Innojuster and for connection to the 5 pin cable from the Reloop Elite mixer.

6) XF CABLE - Plug in the fader connection cable from your mixer or controller using the correct adapter (shown later)

7) CALIBRATION - Use this button **only as needed** to recalibrate your Innofader PNP3 or make special setting changes. **Please always first use LEFT CUT, RIGHT CUT and CURVE dials to make adjustments. A brand new Innofader PNP3 should be properly calibrated.**

8) LED - Works as a crossfader sound indicator. It turns off when one side of the crossfader is off. It also indicates special settings at power-on and during calibration.

Innofader PNP3 wiring - Xone 23/23C/43/43C note special case

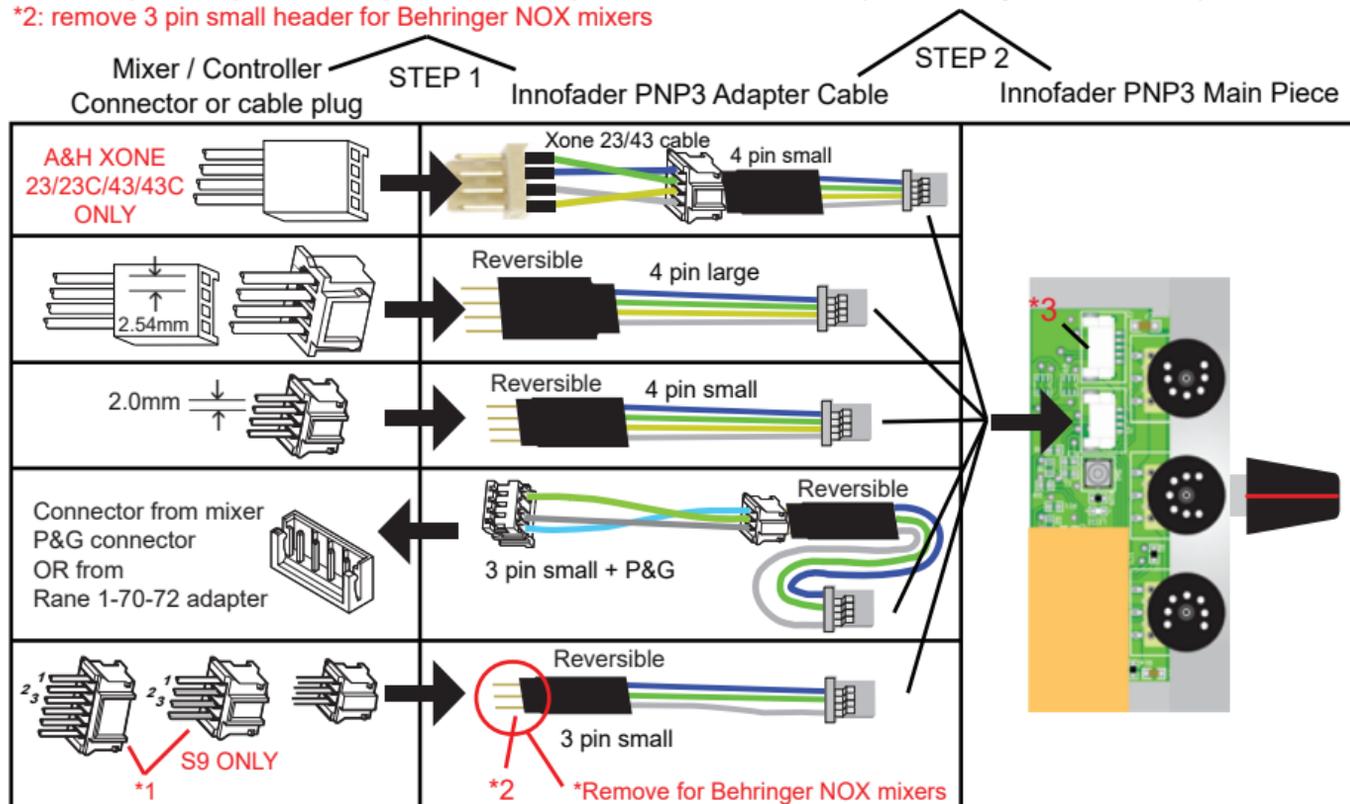
STEP 1: Plug in the connector that fits to the adapter cable

*1: First 3 pins of 6 pin and S9 4 pin connect to 3 pin small

*2: remove 3 pin small header for Behringer NOX mixers

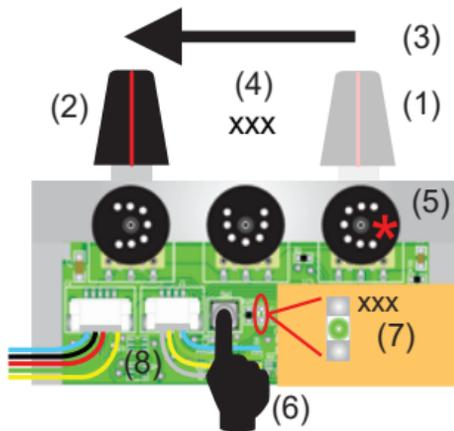
STEP 2: Plug cable assembly into 4 pin socket

*3: Reeloop Elite / Innojuster also use 5 pin connector



HELPFUL HINT: The "Reversible" end of the cable may be plugged in as shown or flipped over. Either way works!
Reversing 4 pin cables WILL reverse the output and reversing 3 pin cables WILL NOT reverse the output.

Mechanical Fitting and How to use this Manual



Throughout the manual you will see items (1) through (8) on all of the PNP3 illustrations. In order to do the adjustments, the power is always ON. Here are some guidelines:

- 1) Knob is greyed out to indicate a starting or intermediate knob position.
- 2) A solid black knob shows where the knob ends up when the step is completed.
- 3) The arrow shows the direction the knob moves during the step. No arrow means no movement.
- 4) This is a brief description of what the step is for.
- 5) Red star * = dial is adjusted by this step. No red star = leave dial in the position shown by the step.
- 6) Finger on the calibration button = keep pressing and release when knob movement is completed.
Finger below the calibration button = let go of the calibration button
- NEVER press the calibration button UNLESS this manual instructs you to do so!**
- 7) This shows a zoomed image of the LED illumination either during or after the step.
- 8) The 4 pin cable always needs to be plugged in. If a 5 pin connection is required, this is also shown.

Turning on your Innofader PNP3 for the first time...

...you will notice 12 bright LED flashes. Each flash on and off cycle lasts about 1/2 second. The LED flashing means your fader is connected and working. ***For now just notice...the LED will flash 11 times when you power on.***

Now start sliding the Innofader PNP3 back and forth. You can wait until the 12 flashes are done or you can start right away. You'll notice the LED is off any time the fader is at either end, and the LED is on any time you slide the fader towards the center to cut in the sound. You may need to slide the fader just a tad bit past the cut point until your mixer or controller starts putting out sound. ***This is perfectly normal. As long as the LED turns on and off when the Innofader PNP3 crosses the cut point, the Innofader PNP3 is working normally.***

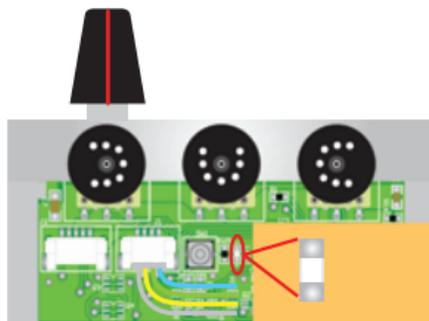
See the next page for an illustration of the LED Cut Point Indicator:

Setting Innofader PNP3 Cut Points

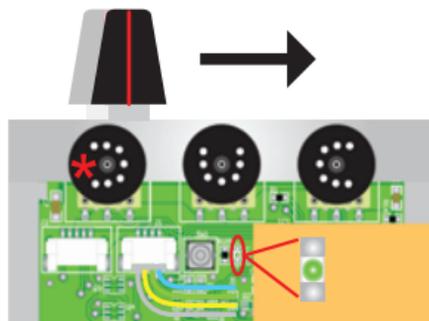
Cut points are shown here from the back side so Left and Right are reversed

RIGHT SIDE CUT POINT TEST

* Adjust this dial as needed



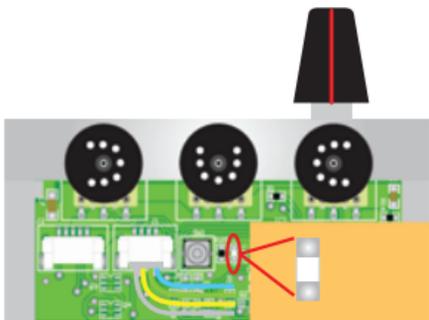
1) Fader is at the right end
LED is off



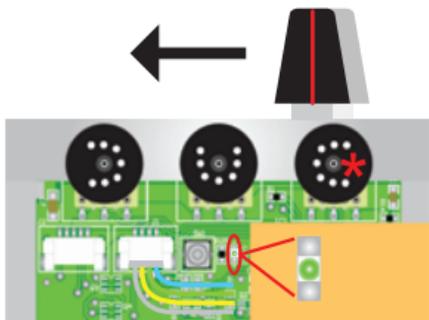
2) Fader crosses right cut point
LED turns on

LEFT SIDE CUT POINT TEST

* Adjust this dial as needed



1) Fader is at the left end
LED is off



2) Fader crosses left cut point
LED turns on

Troubleshooting Guide

Issue: Innofader PNP3 is completely unresponsive

Solution: Set your mixer or controller for a gradual mix curve. Then set the Innofader PNP3 dials as such:

LEFT CUT turn all the way towards the center

CURVE set in the middle

RIGHT CUT turn all the way towards the center

Then adjust dials as needed to achieve the mixing and cutting performance you want.

If solution doesn't work:

- 1) Make sure all cables are connected properly and your mixer or controller is powered on
- 2) Please check our website to confirm you are using the correct cable. There are some special cases where the cable you need to use is different from the standard matching 3 or 4 pin reversible cable:
 - > The A&H Xone:23/23C/43/43C uses the non-reversible 4 pin large cable with a white plug. The reversible 4 pin cable is wired incorrectly for these mixer models
 - > The Pioneer DJM-S9 uses the 3 pin small cable; the grey wire on this cable must align with the DJM-S9 4 pin connector white wire.
 - > All Numark DXM and X series mixers with 6 pin connectors. You must use the 3 pin cable and plug in just the first 3 of the 6 pins as illustrated on page 6. If the first 3 pins do not work, please try the last 3 pins.
- 3) If you are installing the Innofader PNP3 in a Reeloc Elite mixer, please turn on the "Reeloc Elite" mode shown on page 22.
- 4) If you are installing the Innofader PNP3 in a Behringer NOX mixer, please turn on the "Behringer NOX" mode shown on page 22. If this doesn't work, please do a quick power cycle and the Innofader PNP3 should start working. NOTE the Behringer NOX101 is not compatible with the Innofader PNP3.

Issue: Innofader PNP3 is working backwards

Solution: There are 3 easy fixes to this issue:

- 1) Flip over the Innofader PNP3 body.
- 2) If the reversible end of the cable has 4 pins, flip it over.
- 3) Reverse the output electronically as shown on page 19.

Troubleshooting Guide (cont)

Issue: Mixer curve control doesn't work.

Solution: Set the Innofader PNP3 CURVE dial near the middle.

Issue: Output sound doesn't cut out completely on the left side (bleeds)

Solution: Turn LEFT CUT dial towards the center until the sound cuts out completely

If solution doesn't work:

First check for solutions under "Innofader PNP3 is completely unresponsive"

Still doesn't work? Then recalibrate the Innofader PNP3 as illustrated on page 17

Still doesn't work? Then set the Innofader PNP3 for low power mode as shown on page 20

Issue: Output sound doesn't cut out completely on the right side (bleeds)

Solution: Turn RIGHT CUT dial towards the center until the sound cuts out completely

If solution doesn't work:

First check for solutions under "Innofader PNP3 is completely unresponsive"

Still doesn't work? Then recalibrate the Innofader PNP3 as illustrated on page 17

Still doesn't work? Then set the Innofader PNP3 for low power mode as shown on page 20

Issue: The left side has too much dead space (lag)

Solution: Turn LEFT CUT dial away from the center until the lag is small enough for quality scratching

If solution doesn't work:

First recalibrate the Innofader PNP3 as illustrated on page 17

Still doesn't work? Then do the "PRECISION ADJUSTMENT" as shown on pages 25-27

Issue: The right side has too much dead space (lag)

Solution: Turn RIGHT CUT dial away from the center until the lag is small enough for quality scratching

If solution doesn't work:

First recalibrate the Innofader PNP3 as illustrated on page 17

Still doesn't work? Then do the "PRECISION ADJUSTMENT" as shown on pages 25-27

Troubleshooting Guide (cont)

Issue: The cutting sound works more like a volume control

Solution: Turn CURVE dial to the right just until the cutting sound is a true on/off sound. Turning the dial any further will not improve the cut; it will only reduce the range of the curve control on your mixer or controller.

Issue: The Innofader PNP3 doesn't feel smooth

Solution: Make sure to adjust the tension properly. See below "Scan for tension adjust details"

If solution doesn't work: Properly lube the Innofader PNP3. See below "Scan for lubing details"

Issue: There is no sound even though the LED indicator shows that there should be sound

Solution: Do the "PRECISION ADJUSTMENT" as shown on pages 26-28

Issue: There is a popping or static noise every time the sound cuts in and out

Solution: See below "Scan for noisy cut details"

Still doesn't work? Then turn off the LED cut indicator as shown on page 20

Still doesn't work? Then set low power mode as shown on page 20

Issue: The controls from the Innojuster do not affect the Innofader PNP3

Solution: Make sure you set the Innofader PNP3 to work with Innojuster controls as shown on pages 24-25

Scan for
lubing
details



Scan for
noisy cut
details



Scan for
tension
adjust
details



Troubleshooting Guide (cont)

Issue: Help! I think I totally screwed everything up and I want to start over!

Solution: Do the “Factory reset” shown on page 21. Note this will completely erase EVERYTHING you have done and essentially bring all the settings back to the settings of a brand new Innofader PNP3.

Issue: The output seems to be very badly lopsided. One side works perfectly while the other has a huge gap.

Solution: Set the Max Output to 3.3V as shown on page 21. **This is required for the Pioneer S9.**

Issue: The power is unstable where I am. This seems to affect my cuts.

Solution: Set the max output to 3.3V as shown on page 21. NOTE: This will not work for installations which use the 3 pin cable or the Traktor Z2. It is rarely needed, but reports from countries with unstable power have shown that this is effective.

Issue: The CURVE dial doesn't seem to do anything to the sound overlap in the center of the fader. I want to have the flexibility to get rid of the center dip or have more overlap in the center.

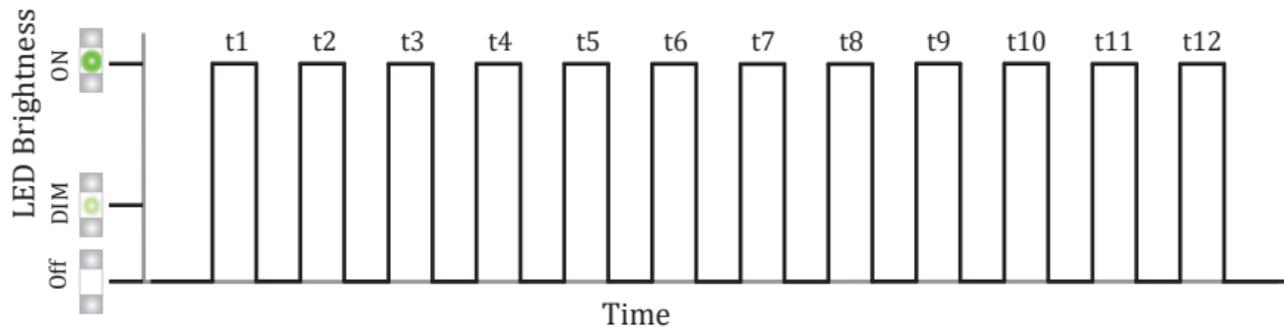
Solution: Use the Y curve setting on page 19.

Issue: The LEFT CUT and/or RIGHT CUT seem to be a little bit off. Either there is some gap when the gap is dialed to minimum or the sound bleeds when the gap is dialed to minimum.

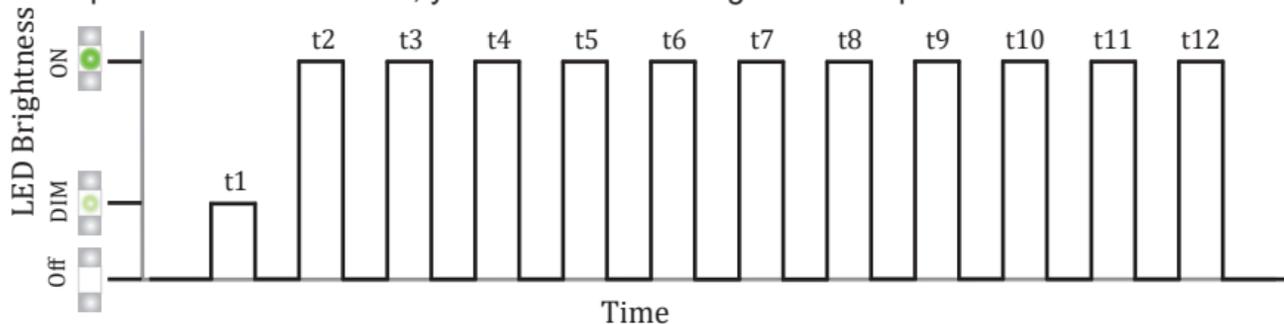
Solution: See “Adjust Cut Dial Ranges” on page 18.

12 LED FLASH SEQUENCE

There are 12 LED flash time slots t1 through t12 indicating your fader settings. These flashes happen every time you power on the Innofader and change a setting. The first time you power on, each time slot is ON indicating factory default:



So let's say you recalibrate the Innofader. Right after recalibration, and every time you power on the Innofader, you'll see the following LED flash pattern. Note the DIM LED:



12 LED FLASH SEQUENCE (continued)



LED ON indicates a factory default setting.



LED DIM means you changed a setting.

t1:



Fader calibration is the original factory calibration



Fader cut points are different from their initial setting

t2:



Fader max output is limited to 5.5V



Fader max output is limited to 3.3V

t3:



Fader output direction is normal



Fader output direction is reverse

t4:



CURVE dial optimized for single VCA xfader (X)



CURVE dial optimized for dual VCA xfader or line fader (Y)

t5:



LED shows both presets and audio on / off



LED remains off after flashing preset settings.

t6:



Innojuster ON option isn't selected



Innojuster CUT-IN controls L/R cut, CURVE is curve control

12 LED FLASH SEQUENCE (continued)

- t7:  Innojuster CUT option isn't selected
 Innojuster CUT-IN = LEFT CUT, CURVE = RIGHT CUT
- t8:  Innojuster CUT REVERSED option isn't selected
 Innojuster CUT-IN = RIGHT CUT, CURVE = LEFT CUT
- t9:  Reelap Elite mode is not selected
 Fader is set up to work with the Reelap Elite Mixer
- t10:  Behringer NOX mode is not selected
 Fader is set up to work with Behringer NOX mixers
- t11:  Fader is running at full power for maximum performance
 Fader uses minimal power to fix output bleeding
- t12:  Rane 1-70-72 anti-bleed mode is not selected
 Rane 1-70-72 bleed is fixed by oscillation at min/max points.

INNOFADER PNP3 FULL RECALIBRATION

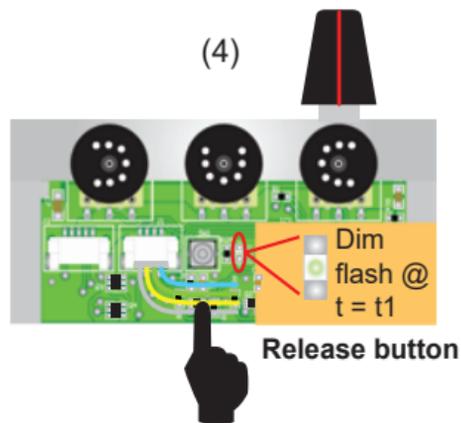
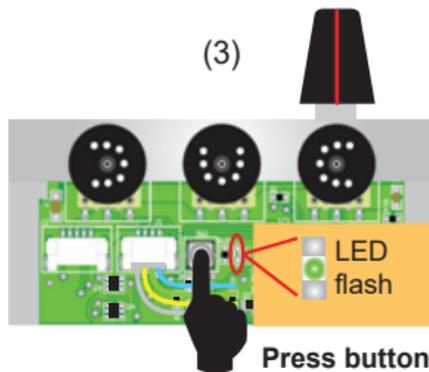
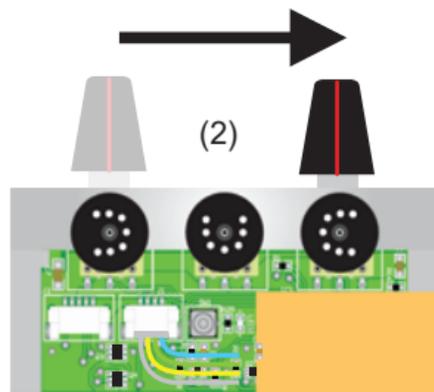
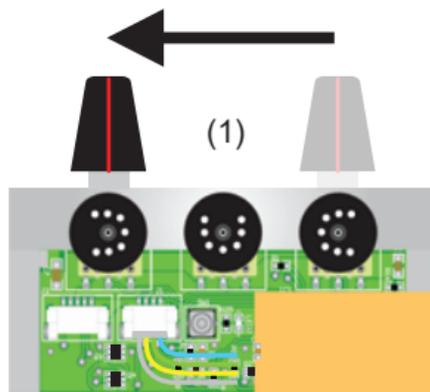
Do only if LEFT CUT or RIGHT CUT dials cannot fix cut point

1) Slide fader all the way left.
Do this slowly and gently until the fader hits the side.

2) Slide fader all the way right.
Do this slowly and gently until the fader hits the side.

3) Press and hold the button for about 1/2 second. The LED will flash to acknowledge that the calibration is working.

4) Release the button. Once you let go, the flash at $t=t_1$ will be dim, indicating you recalibrated the fader



ADJUST CUT DIAL RANGES

Use these to precision calibrate LEFT CUT and RIGHT CUT range of adjustment

RIGHT CUT ADJUST

Set dial at 0mm point *

If 0mm point bleeds,
do "more gap right side"

If 0mm point has dead space,
do "less gap right side"

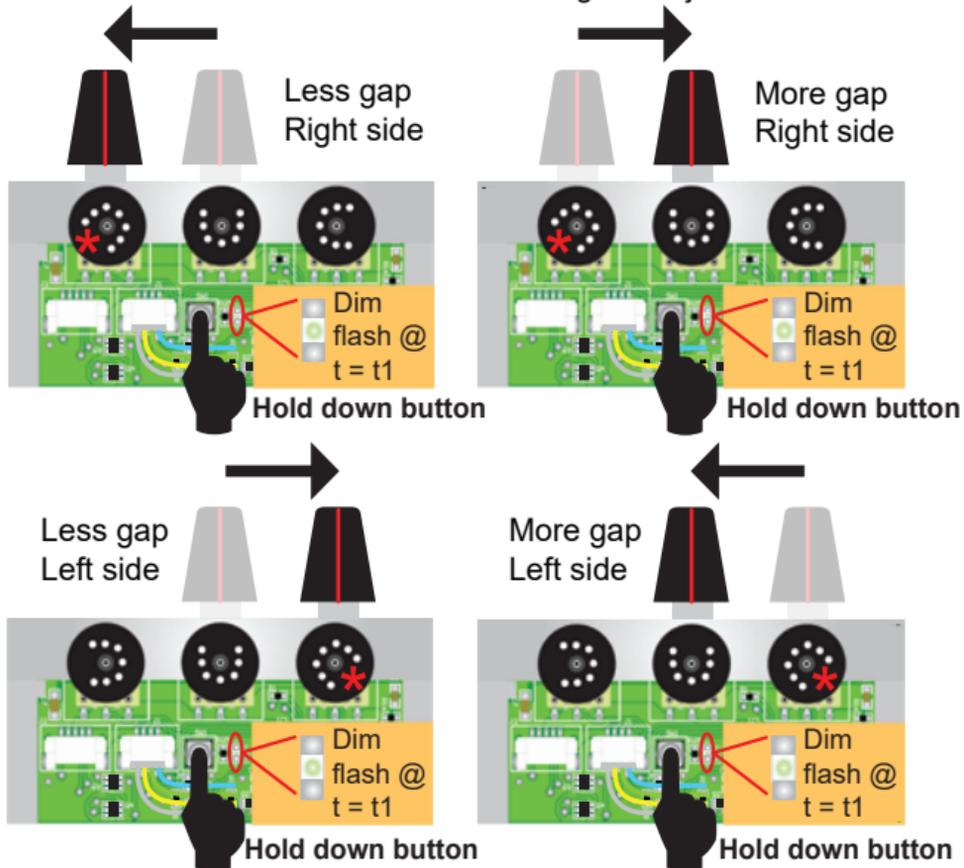
*****Right and left are as viewed from the front of the Innofader PNP3**

LEFT CUT ADJUST

Set dial at 0mm point *

If 0mm point bleeds,
do "more gap left side"

If 0mm point has dead space,
do "less gap left side"



X/Y CURVE (Y for A&H/Stanton/Vestax mixers) & FORWARD/REVERSE

Optimize the CURVE dial operation for your fader installation and fix the output direction

X/Y CURVE

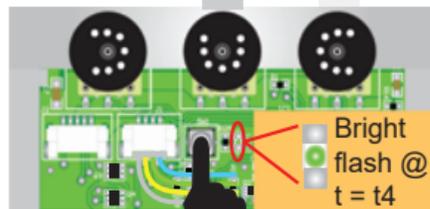
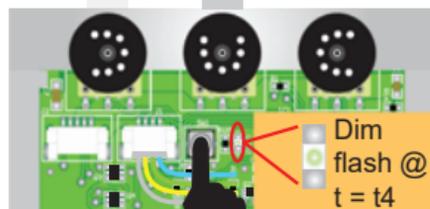
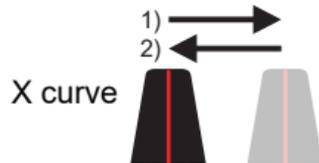
Y: Slide middle-left-middle

For line faders and all xfader
4 pin cable hookups but Z2

For best mixing curves

X: Slide middle-right-middle

For all other xfader installs



Hold down button

Hold down button

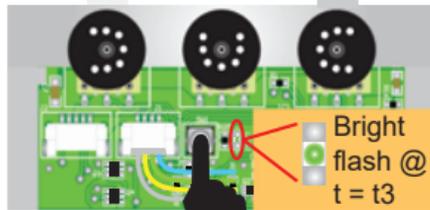
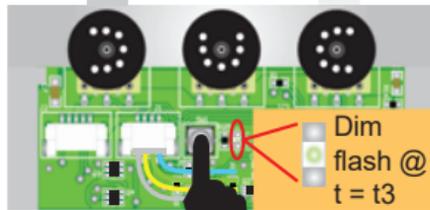


FORWARD / REVERSE

REVERSE: slide right-left

FORWARD: slide left-right

Toggle selection if fader seems
to be "backwards"



Hold down button

Hold down button

LED AND POWER MODES - FIX OUTPUT BLEED AND NOISE

LED CUT INDICATOR

OFF: left-middle-left-middle

Turns off LED cut-in indicator

May fix "pop" sound

ON: right-middle-right-middle

LED shows settings and cuts

LOW POWER MODE

ON: 2x middle-right-middle

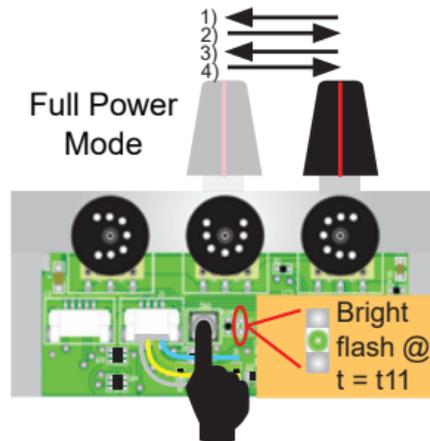
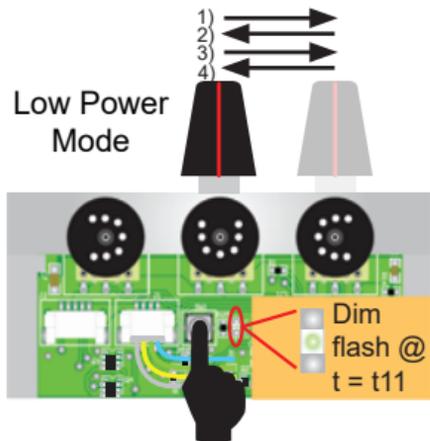
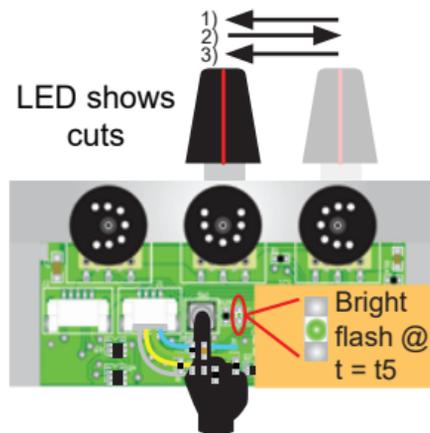
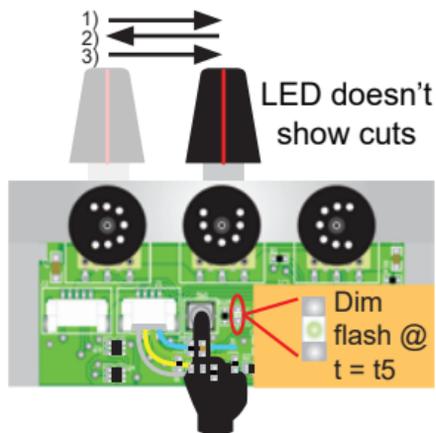
Slows down processor

Turns off LED cut-in indicator

Do if CUT dials can't fix bleed

OFF: 2x right-middle-right

Normal processor speed



PIONEER MAGVEL STEP 1 - 3.3V OUTPUT and FACTORY RESET

Set output voltage limit and restore fader to the default calibration and factory settings

3.3V OUTPUT

3.3V: Slide left-middle-left

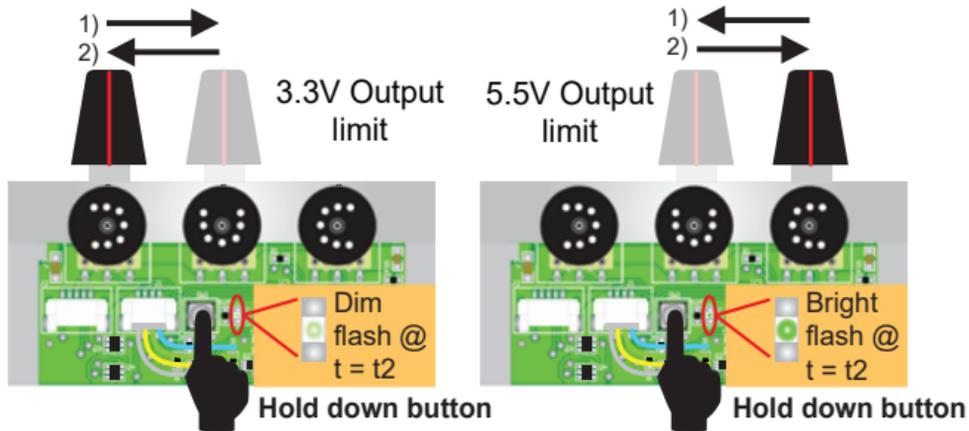
VCA output limits at 3.3V

**MUST DO FOR PIONEER
MAGVEL INSTALLATIONS!**

Improves fader output stability
in some situations.

5.5V: Slide right-middle-right

VCA output limits at 5.5V



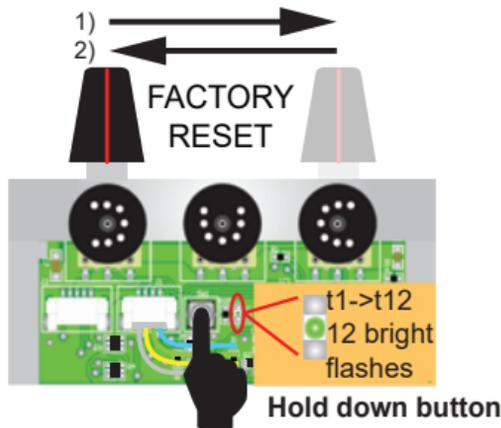
FACTORY RESET

Slide left-right-left

**Erases all fader settings including
Magvel adjust settings**

Restores the factory calibration

Do this to start over!



RELOOP ELITE AND BEHRINGER NOX MODES

RELOOP ELITE MODE

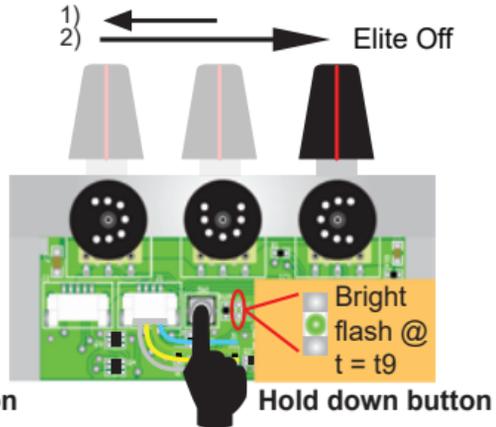
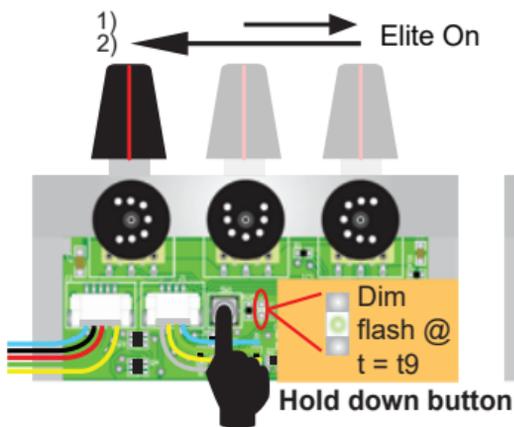
ON: Slide middle-right-left

Sets Reloop Elite mode.

*Connect 4 and 5 pin cables.

OFF: Slide middle-left-right

Cancels Reloop Elite mode



BEHRINGER NOX MODE

ON: 2x left-middle-left

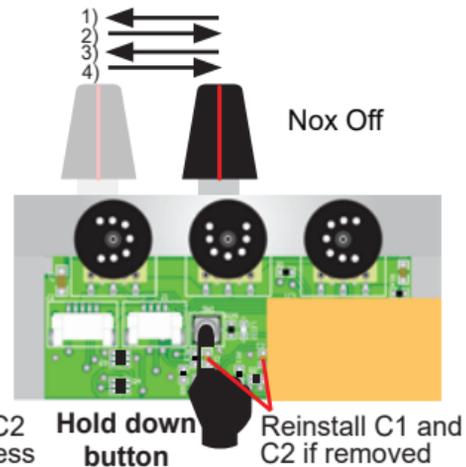
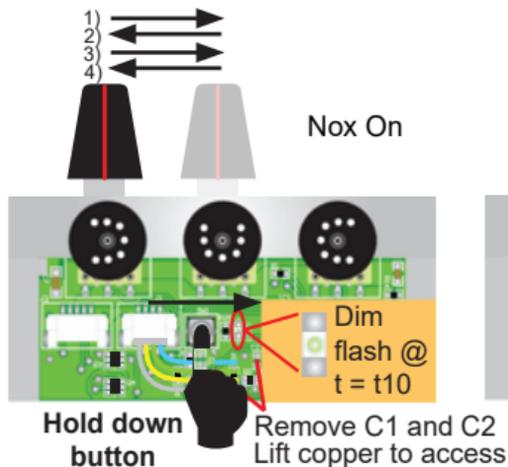
Sets Behringer NOX mode

*Only works with C1 and C2 removed. Please remove and save parts.

OFF: 2x middle-left-middle

Cancels Behringer NOX mode

*Reinstall C1 and C2 if you removed them for NOX mode.



RANE 1-70-72 BLEED FIX MODE

Do for Rane 1/70/72 if output sometimes doesn't turn off even when set for large gap

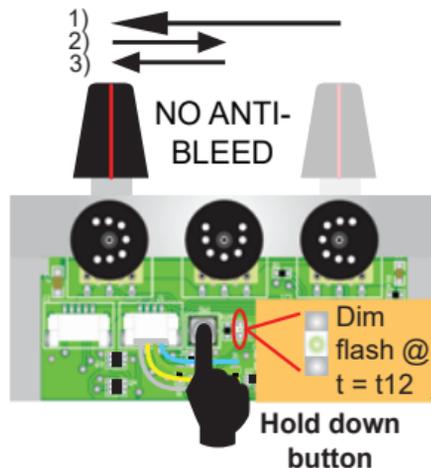
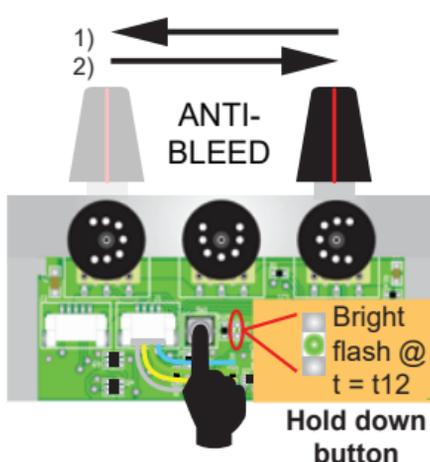
ANTI-BLEED

ON: Slide right-left-right

Adds small oscillation at min and max points to prevent output from getting stuck.

OFF: Slide right-left-mid-right

Cancels Rane 1/70/72 Bleed fix mode



NOTES ON RANE 1-70-72 BLEED FIX:

You may find after doing an installation on the Rane One, Seventy, or Seventy Two that the output does not always shut off. The Rane 1-70-72 Bleed Fix will eliminate this issue when you do this along with the following steps:

1) On the Rane 70/72 mixers, please set the cut point to the 2 setting. Otherwise you will hear an oscillating sound at the cut points. This oscillation sound is normal when this mode is set. On the Rane One, please change the cut point in Serato until this

2) Do the "Precision Adjustment" on Pages 26-28 after setting this mode. This will allow you to have sharp cut points regardless of the Innofader PNP3 CURVE setting.

INNOJUSTER MODES

Sets function of Innojuster when connected.

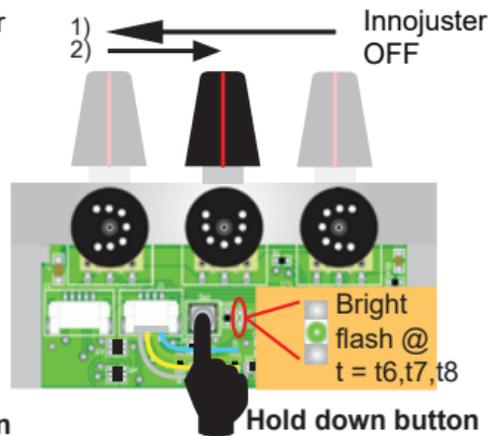
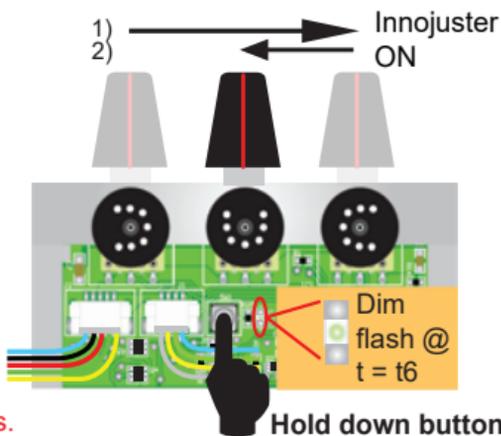
INNOJUSTER ON/OFF

ON: Slide left-right-middle

Innojuster CUT-IN controls
l/r cut points and CURVE
controls PNP3 CURVE

OFF: Slide right-left-middle

PNP3 dials all work normally.
Clears ALL Innojuster functions.



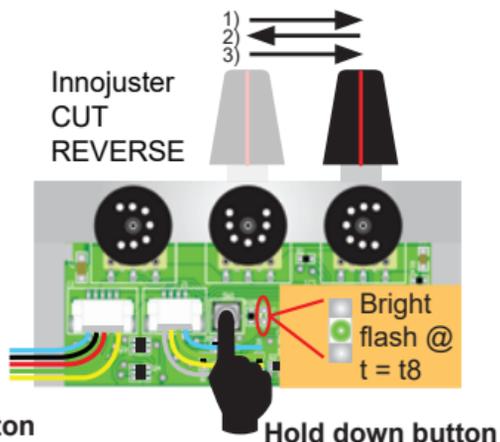
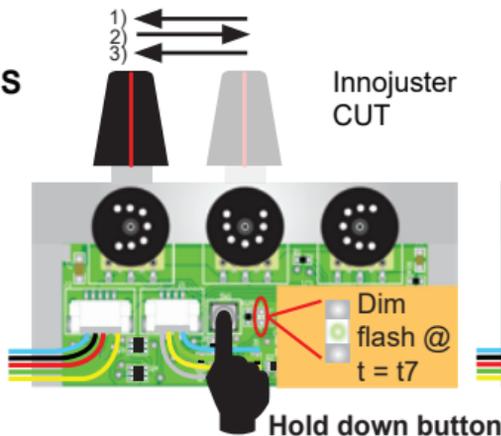
INNOJUSTER CUT MODES

CUT: center-left-center-left

Innojuster has separate l/r cut
controls. PNP3 CURVE works.

CUT REVERSE:
center-right-center-right

Same as CUT mode except
l/r cut controls are reversed.



INNOJUSTER MODES VS DIAL OPERATION

The below chart shows the PNP3 and Innojuster dial functions
These will vary depending on the INNOJUSTER MODE selected

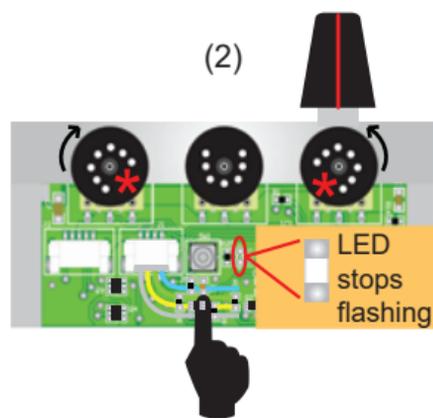
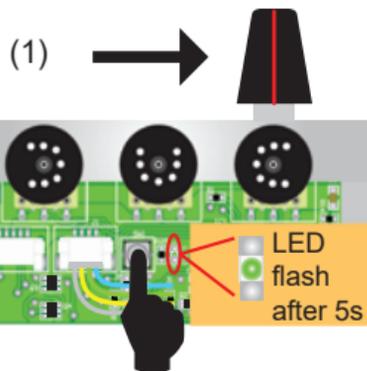
INNOJUSTER MODE	INNOFADER PNP3 DIALS			INNOJUSTER DIALS	
	LEFT CUT	CURVE	RIGHT CUT	CUT-IN	CURVE
OFF	LEFT CUT	CURVE	RIGHT CUT	NONE	NONE
ON	NONE	NONE	NONE	LEFT CUT+ RIGHT CUT	CURVE
CUT	NONE	CURVE	NONE	LEFT CUT	RIGHT CUT
CUT REVERSE	NONE	CURVE	NONE	RIGHT CUT	LEFT CUT

PIONEER MAGVEL STEP 2 - PRECISION ADJUSTMENT

Eliminates large dead spaces, makes the LED flash at exact cut points, & maximizes cutting precision

1) Slide knob all the way right.
Press calibration button > 5 seconds
until the LED starts to flash.

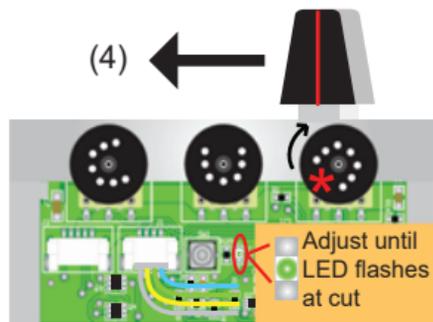
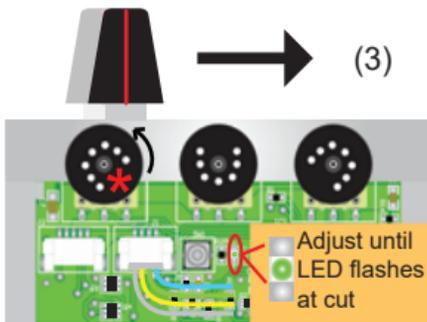
2) Release the calibration button.
Turn RIGHT CUT and LEFT CUT
dials all the way towards the center.
The LED will be off.



*****Right and left are as viewed from the front of the Innofader PNP3**

3) Adjust RIGHT CUT dial until the LED flashes on when sound cuts in and off when sound cuts off.
Check multiple times to confirm.

4) Adjust LEFT CUT dial until the LED flashes on when sound cuts in and off when sound cuts off.
Check multiple times to confirm.



PIONEER MAGVEL STEP 2 - PRECISION ADJUSTMENT (continued)

Eliminates large dead spaces, makes the LED flash at exact cut points, & maximizes cutting precision

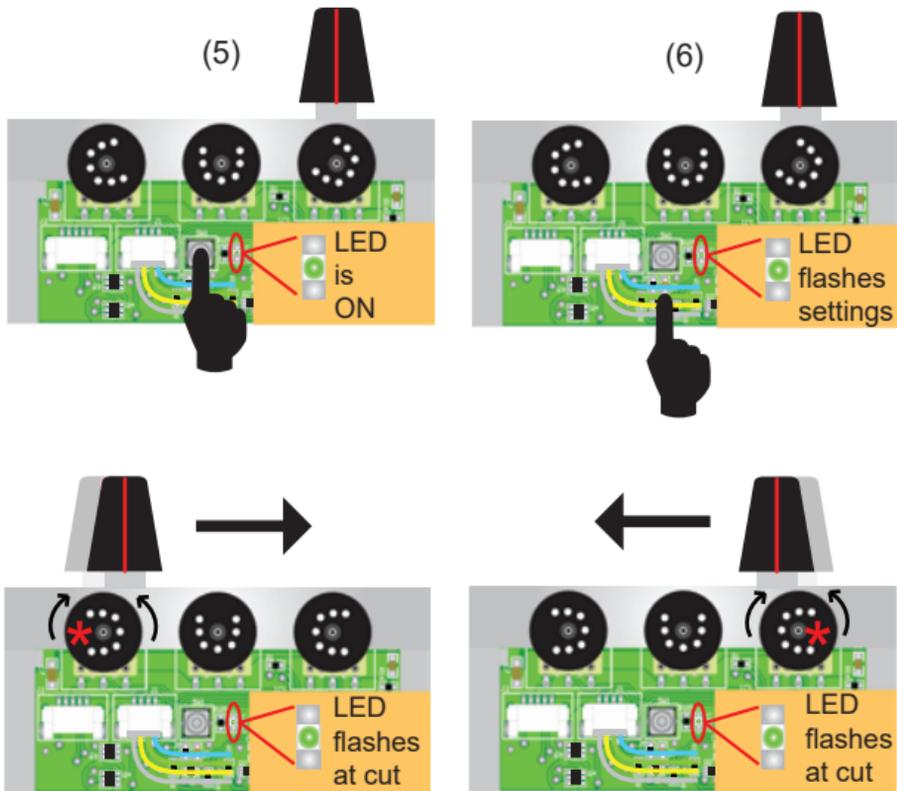
5) Press the calibration button for about 1/2 second. The LED will be on at this point.

6) Release the calibration button. The LED will then flash a pattern to indicate all of the settings. See page 28 for more detail_.

*****Right and left are as viewed from the front of the Innofader PNP3**

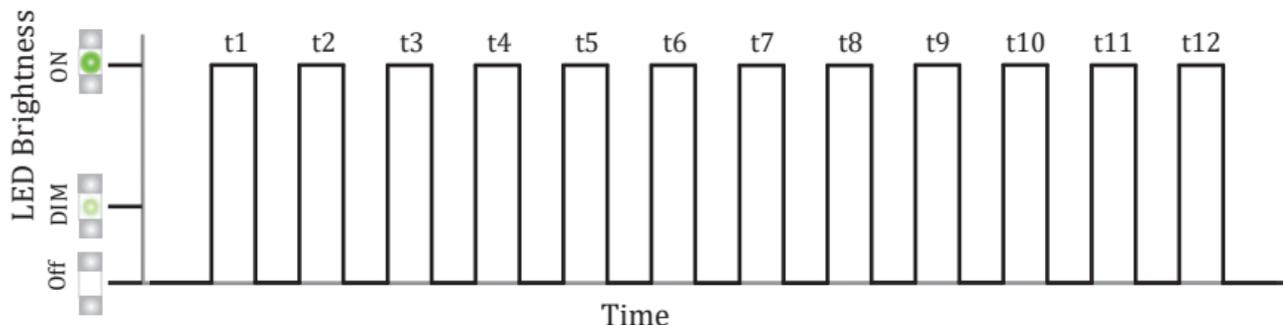
7) Adjust RIGHT CUT dial to where you get the desired cut point. More details on p. 9.

8) Adjust LEFT CUT dial to where you get the desired cut point. More details on p. 9.



PIONEER MAGVEL STEP 2 - PRECISION ADJUSTMENT (Continued)

The 12 LED flash pattern is unchanged by the Precision Adjustment:



But now this pattern is immediately followed with a pattern showing how you adjusted the cut point. Each adjustment is a number 0 (no adjustment) to 255 (max adjustment). t13 to t20 is for the LEFT CUT and t21 to t28 is for the RIGHT CUT. **If both adjustments are zero, this flash pattern is skipped.** So the following shows a LEFT CUT adjustment of 32 (00100000 in binary) and a RIGHT cut adjustment of 64 (01000000 in binary):

