

# TWA<sup>®</sup>



## OO-01 OCTOVERDRIVE<sup>™</sup>

overdrive w./ switchable octavia

IN-**R**IGHT MANUAL

TWA<sup>®</sup>  
OO-01 OCTOVERDRIVE™  
ALL-ORIGINAL OVERDRIVE W./ SWITCHABLE OCTAVIA

Thank you for purchasing the **OCTOVERDRIVE™**!

Autumn is our absolute favorite time of year, and to celebrate the *Season of the Witch* and all that is scary, spooky, and frighteningly fun; we present the **TWA OCTOVERDRIVE™**!

Like **Frankenstein's Monster**, cobbled together from discorporate parts and then electrified back to life, the heart of the **OCTOVERDRIVE™** hides archaic, undead components that should not create sound—*and yet, it lives!*

Cursed to clip for all eternity by a set of selenium rectifiers, the **OCTOVERDRIVE™** offers **two channels** of diabolical dirt. The **TREAT** channel offers a thick, harmonically rich **tube-like drive** with the perfect degree of compression. **TREAT** goes from creepy crunch to ghoulish gain with eerie ease. While the **TRICK** channel adds a haunting, **high-octave harmonic** to the drive signal. Unlike other Octavia's, the **OCTOVERDRIVE™** retains low-end while boosting output level, effortlessly raising your guitar tone from the grave.

The **OCTOVERDRIVE™** also features a **3-BAND CUT/BOOST EQ** circuit to hack & chop your tone to pieces. For the faint of heart, there's also a **DRY BLEND** control to add a touch of purity to the **OCTOVERDRIVE's** evil goodness.

The **OCTOVERDRIVE™** features mechanical True Bypass switching using a 3PDT footswitch and a creepy-cool **Jack O'Lantern LED** display.

## THE HISTORY:

The following information was provided by our engineer **ROBERT DERBY**—The Mad Scientist who designed the **OCTOVERDRIVE™** as well as the majority of **TWA's** audio oddities:

*“So after repairing and updating an Ampex tape recorder’s electronics, I had some selenium rectifiers on my bench. I’ve seen these things most of my life, and they are usually replaced with silicon diodes if and when they go bad.*

*Staring at them, I got to thinking – Germanium diodes sound different, LEDs sound different, Schottky diodes sound different, and Silicon diodes all sound different in audio circuits. Why have I never seen selenium diodes in audio circuits? Since they will not be used in a stressful way – as in power rectification – there should be no concern of failure or any other issues.*

*I decided to set up a little test jig to drive that old rectifier pair from the Ampex and hear what they sounded like with audio going through them.*

*Surprise! Almost from the start, cool things happened. Very warm clipping, able to tune in a great octave up, and that certain something that sounds juicy-magical-saturated...*

*I found that selenium diodes are somewhat similar to germaniums when used in audio, but there is an N factor. I checked inductance, capacitance, and voltage drop versus frequency. All had very surprising results. There is a high inductance in these things, as well as capacitance. The voltage drop is similar to Schottky or germanium diodes, making them clip softly at a lower voltage than silicon or LEDs.*

*I then began testing other takeouts and also some eBay purchases, and found out that they are all cool sounding, but vary a lot!*

*So I perf-boarded a circuit, and tweaked it a lot, and was amazed at the musicality of a drive box using these obsolete selenium components.*

*I added a 3-band EQ—much like what is on mixers/consolos—so the sound could be sculpted. WOW!*

*I found an alternate mode that has thick, heavy distortion, a nice complement to the singing, sustaining octave voice. More tweaks based on user wishes, and there it was: The **Octoverdrive**.*

*Simple—Yet, if you were to examine the circuit, not really that simple. Kind of crazy, actually.*

*The result is a sweet musical drive and sustain, from subtle to over the top.”*

**ROBERT** surprised me with the **OCTOVERDRIVE™** prototype in July of 2021 during one of our regular R&D meetings.

We were going over some other pedal designs (probably the **KRYTICAL MASS!**), and when we were done he pulled out this metal project box the size of a small amplifier. The excitement on his face was palpable – a rare emotion for him to exhibit.

**ROBERT** titled this original proto the “Steam Punk” since it had this crazy Road Warrior future/retro look to it (**ROBERT** has a tendency to assemble prototypes with whatever spare parts & hardware he has within arm’s reach).

We played through the pedal & it was uber-cool. Thick, super-saturated drive that had a decidedly tube-like personality to it.

The octave-up voice had even more goodies in store – the selenium diodes do some weird stuff with audio, and there were hints of filtering, phasing, and even flanging going on that the upper octave harmonic helped to accentuate. It was really cool to just hit a sustained note & listen to it morph and decay into weirdness.

**ROBERT** passed the ‘Steam Punk’ off to me so that we could get some more ears on it and put it through the paces.

The next big lift to get this pedal off the ground would be to find a reliable supplier of selenium rectifiers. **ROBERT** even suggested just scavenging them off of eBay or electronics clearance sites, but we both eventually agreed that component consistency was required in order to mass-produce this pedal.

After some searching we located a company that specialized in current-production of selenium rectifiers (which are still used in some high-power industrial devices). They were willing to build the part to our specs, so we got some prototypes made & started shrinking the circuit down to a manageable size.

Despite **ROBERT**’s suggestion above that he tweaked the **OCTOVERDRIVE™** to our beta team’s specs; the production unit is remarkably close to his original prototype, and the entire control complement & functionality of the pedal wound up crossing over from his original design.

The next and perhaps most difficult task was to come up with a product name worthy of the **TWA** brand that simultaneously described the function of the pedal.

I felt that **ROBERT**’s original Steam Punk moniker was a little too confining, as we would have to dress the pedal in that style in order for it to make sense.

This is where **TWA** co-owner **GEORGE SCHWAB** comes in. **GEORGE** is mostly a silent partner, but when he gets an idea he loves to share it with me and I’ll store them away for (hopefully) future use.

Since we’re both of German descent, **GEORGE** had pitched the idea of an Oktoberfest pedal.

I kept spinning that around in my head and eventually that morphed into **OCTOVERDRIVE™**, which made perfect sense since the pedal was

both an overdrive and an octavia and it was also a cool play on the month of October and the function of the pedal.

Last but not least came the LED array, and what says October better than a **JACK O'LANTERN?!?**

**WILL SAPANARO** came up with the creepy-yet-cute graphics that now adorns the **OCTOVERDRIVE™**, and a new Halloween legend was born.

We actually wound up sitting on the **OCTOVERDRIVE™** project for over a year, as we just couldn't pull things together in time for an October 2022 release date.

This year we decided that, come hell or high water, the **OCTOVERDRIVE™** was going to get released for Halloween, 2023, so here it is!

I hope you enjoy this pedal as much as we enjoyed creating it, and I hope you create music with it that's as unique and intriguing as this pedal's origin story.

The **OCTOVERDRIVE™** lives!!!

**-KEVIN BOLEMBACH**  
*President, TOTALLY WYCKED AUDIO*

The **OCTOVERDRIVE™** is covered by a  
3 year parts and labor warranty.

For more information and to register your warranty,  
please visit our website:

**WWW.TOTALLYWYCKEDAUDIO.COM/WARRANTY**

The **OCTOVERDRIVE™** is made in the USA.

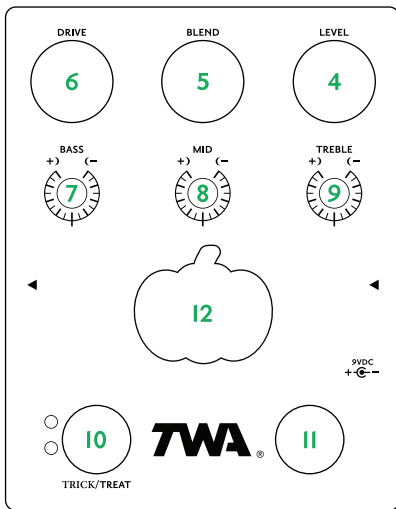
For more info on **TOTALLY WYCKED AUDIO** products,  
please visit our website:

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**GO GIT SUM!!!**



TM



## FRONT PANEL CONTROLS

- INPUT** – 1/4" unbalanced audio. Connect input signal here.
- DC In** – Connect to tip-negative 9VDC regulated power source via a 5.5mm O.D./2.1mm I.D. tip-negative male barrel plug with a minimum of 100mA of current available.  
(**PA-9ECS POWER-ALL ECO-DAPTER** recommended)
- OUTPUT** – 1/4" unbalanced audio. Connect to amplifier, recording equipment, or other effects.
- LEVEL** – Controls output level of effected signal. Turn clockwise for more volume/level/output.



5. **BLEND** – Controls mix of dry (unaffected) signal and distorted (affected) signals. Full counterclockwise is 100% distortion, fully clockwise is 100% dry.
6. **DRIVE** – Controls the amount of overdrive effect. Turning clockwise will provide more breakup/saturation/distortion as well as compression & sustain.
7. **BASS** – +/- 12 dB boost/cut at 100 Hz. The 6 o'clock position is flat response. Turn clockwise for bass boost, turn counterclockwise for bass cut.
8. **MID** – +/- 12 dB boost/cut at 1 kHz. The 6 o'clock position is flat response. Turn clockwise for mid boost, turn counterclockwise for mid cut.
9. **TREBLE** – +/- 12 dB boost/cut at 3 kHz. The 6 o'clock position is flat response. Turn clockwise for treble boost, turn counterclockwise for treble cut.
10. **TRICK/TREAT** – Toggles between overdrive (**TREAT**) and Octavia (**TRICK**) voices.
11. **BYPASS** – Engages or disengages the effect. **OCTOVERDRIVE™** features True Bypass switching via a mechanical 3PDT switch.
12. **JACKO'LANTERN LED ARRAY** – The LED array is an original Jack O'Lantern graphic designed by Will Sapanaro.
  - Engaged = bright orange & green LED
  - Bypassed = dim green LED
  - No power = dark LED

## OPERATING YOUR OCTOVERDRIVE:

- Before making any connections, set **DRIVE**, **BLEND**, and **LEVEL** controls to their lowest (fully counterclockwise) positions. Make sure pedal is bypassed (dim green LED).
- Make all the appropriate power and audio connections. The **OCTOVERDRIVE™** draws approx. 65 mA of current when engaged, depending on control settings.
- Engage the right footswitch—**OO-01 JACK O' LANTERN LED ARRAY** will glow bright orange/green.
- Adjust **LEVEL**, **DRIVE**, and **BLEND** to taste.
- Select between **TRICK** or **TREAT** channel using the left footswitch.
- Further tweak your tone with the small boost/cut **BASS**, **MID**, and **TREBLE** controls.
- Start summoning the spirits.

**PLEASE NOTE:** When the pedal is receiving power, but is not engaged, the **LED ARRAY** will be dimly lit green. This acts as a visual indicator to confirm that your pedal is receiving power. When the pedal is engaged, the **LED ARRAY** will light brightly orange and green.

**NOTE:** When summoning spirits, be sure to **ONLY** summon the good ones.

## FLIGHT DATA

**CODE NAME:** OCTOVERDRIVE™ v1.0

**FUNCTION:** OVERDRIVE/OCTAVIA

**CONTROLS:** Drive, Blend, Level (large pots)  
Bass, Mid, Treble (small pots)

**POWER:** 9-volt DC, tip-negative polarity input  
2.1 mm I.D. barrel connector  
Reverse polarity protection  
Heavy DC filtering  
Over-Current protection  
Heavy bias voltage filtering  
Current draw: ~65mA when engaged

**AUDIO:** Max gain: +5dB (will vary depending on  
EQ settings)  
EQ: Broad Q, +/- 12 dB boost/cut  
Center Frequencies:  
Bass: 100 Hz  
Mid: 1 kHz  
Treble: 3 kHz

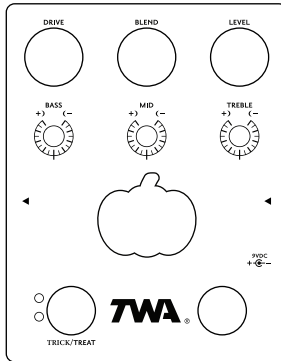
**SWITCHING:** Mechanical true bypass (3PDT)  
Mode Footswitch (Trick/Treat)

**INDICATORS:** Jack O'Lantern symbol LED array

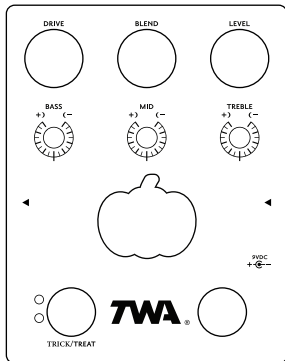
- On = bright orange & green LED
- Bypass = dim green LED
- No power = dark LED

Trick voice LED indicator (red LED)  
Treat voice LED indicator (orange LED)

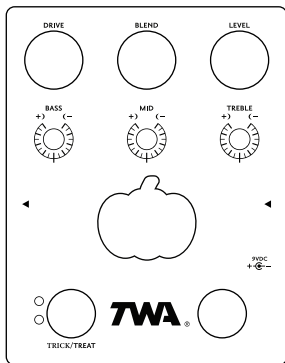
**CONNECTORS:** Input / Output (1/4")  
Power (2.1mm ID / 5.5mm OD Barrel)



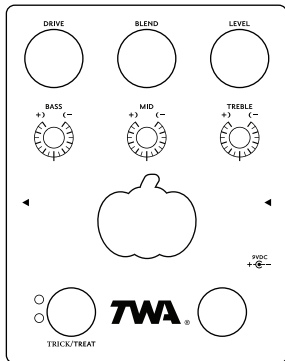
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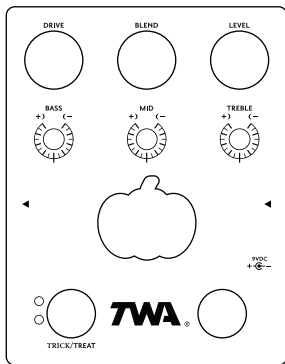
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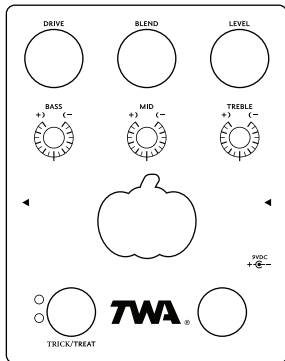
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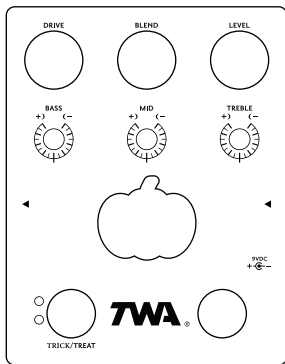
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***Spooky good...***