GOLDEN BOY OVERVIEW

> "The bluesbreaker circuit has been my favorite overdrive circuit forever. I have a collection of clones that I love. The Golden Boy takes that classic tasteful circuit adds some 3D depth, marries it with the modern ideas of Brad Jackson and turns it into an absolute Swiss Army knife for just about any pedalboard." - Joey Landreth

The GOLDEN BOY is a very flexible overdrive with 4 presets for clipping options, an innovative gain adjustment feature that we call GAIN CYCLE, and a 3 band active EQ for maximum tonal flexibility. To top it off, we added a boost circuit which is the same type of MOSFET boost circuit found on our top selling PRISM Preamp pedal.

BOOST OVERVIEW

The boost circuit is in its own true bypass loop which means it can be used independently of the DRIVE circuit. The boost circuit in the GOLDEN BOY is a MOSFET based boost much like the AMP MODE found in our best selling PRISM Preamp pedal. To activate/deactivate the boost circuit simply press the BOOST footswitch.

One of the things that makes the boost in the GOLDEN BOY different from other boosts on the market is that it has 4 presets available. Each preset is EQ'd slightly differently to allow it to alter how it interacts with the overdrive circuit in the GOLDEN BOY or any other pedal you may have in your rig

Preset 1 – YELLOW LED: Bright Boost. Very useful for creating a thinner sound or when boosting a thick sounding overdrive.

Preset 2 – GREEN LED: Mid Boost. Not as thin as the yellow mode, the green mode allows more lows and takes on the character of a mid boost.



Preset 3 – AQUA LED: Tailored Boost. Most people will find this a perfect setting that will complement most any overdrive setting in the GOLDEN BOY.

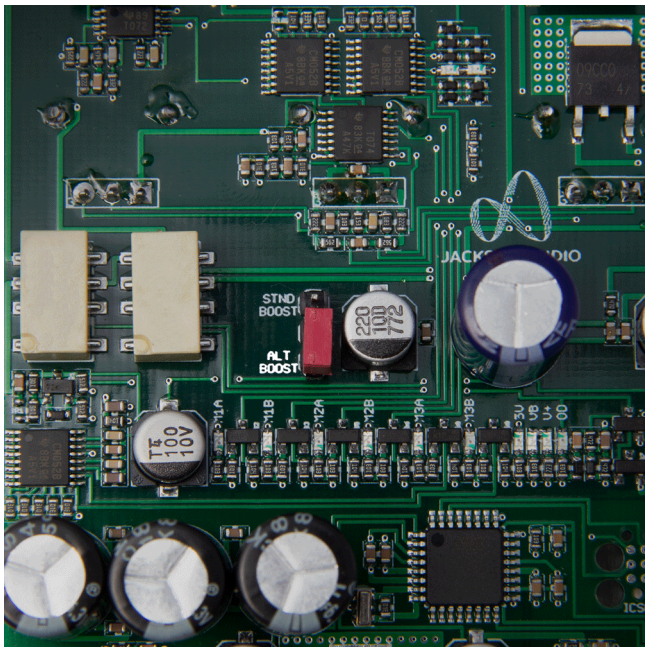
Preset 4 – BLUE LED: Full Range. No tonal coloring here! Just your guitars natural tone!

To select a boost preset, press and hold the BOOST footswitch for more than 1 second and boost program mode will become active.

When in this mode, the BOOST led will flash to indicate that you are in program mode. A quick tap on the BOOST footswitch will cycle the boost presets and you'll be able to hear these presets change as you cycle through them, assuming that the boost circuit was active when the boost program mode was entered. Once you arrive at a boost preset that you want to use, press and hold the BOOST footswitch for

more than 1 second and boost program mode will exit.

EASTER EGG! There is an easter egg in the boost circuit of the GOLDEN BOY! The boost circuit is based on a MOSFET transistor which is a very popular type of transistor to use for boost circuits because it has many “amp like” characteristics when it clips etc. There can be downsides to this circuit though. Several very popular MOSFET boost circuits on the market have a very noticeable crackle when their boost knobs are rotated. We fixed this issue in the GOLDEN BOY and our boost is perfectly silent when the boost knob is rotated. The only downside to our fix of this problem is that we lose about 5% of the gain at the highest rotation setting. To most people this would never be a problem as the boost on the GOLDEN BOY is crushingly loud as it it.



However if you are a purist, or you just want to hear the difference, I have good news for you. We included an internal jumper that you can move to go back to stock MOSFET boost operation with 100% gain and all the crackle your heart

could ever desire! Quiet or Crackle. The choice is yours!

STND BOOST – Our version of the MOSFET boost. Same tone, no noise.

ALT BOOST – Modified version of the MOSFET boost. Same tone, slightly more gain, crackles when you turn the knob.

OVERDRIVE OVERVIEW

The Golden Boy is based on the Bluesbreaker/King of Tone circuit, so the resulting tone is very open, uncompressed and transparent sounding. Think John Mayer overdriven tones. The Golden Boy sits in the mix perfectly and while it adds overdrive and grit, your guitar still sounds like your guitar!

Where the Golden Boy differs from other Bluesbreaker type circuits is that it has the ability to run much higher gain and instantly switch to a low gain transparent overdrive with a tap of the footswitches. With four gain settings at your feet while you play, you can use the GOLDEN BOY as an always on tone shaper, a low gain transparent overdrive, a mid gain drive or a high gain solo drive all without bending down to adjust settings! With the GOLDEN BOY, you keep playing and use your foot (or MIDI) to adjust the gain for you!

CLIPPING DIODE PRESETS

The GOLDEN BOY allows for 4 different presets of clipping diodes which themselves drastically alter the tone and feel of the way the overdrive clips and

distorts.

To select a clipping preset, press and hold the DRIVE footswitch for more than 1 second and the clipping program mode will become active. When in this mode, the DRIVE led will flash to indicate that you are in program mode. A quick tap on the DRIVE footswitch will cycle the clipping presets and you'll be able to hear these presets change as you cycle through them, assuming that the drive circuit was active when the clipping program mode was entered. Once you arrive at a clipping preset that you want to use, press and hold the DRIVE footswitch for more than 1 second and clipping program mode will exit.

Preset 1 – GREEN: Classic Screamer. Two symmetrical silicon diodes give the classic drive and compression that the Tube Screamer is known for.



Preset 2 – MAGENTA: Asymmetric Clipping. Three asymmetric silicon diodes will clip the top and bottom portions of your guitars waveform differently resulting in a more complex and interesting tone. This sounds great when laying down aggressive rhythm parts!

Preset 3 – BLUE: Symmetrical Clipping. Four symmetric silicon diodes will clip the top and bottom portions of your guitars waveform evenly which gives a more focused and direct tone. Two notable pedals

that uses this style of clipping are the Timmy and the King of Tone.

Preset 4 – AMBER: Vintage Marshall. Two RED LED's are used to symmetrically clip the top and bottom portions of your guitars waveform evenly. The LED's allow MUCH higher headroom so your tone will stay more open and less compressed much like a vintage Marshall.

Changing clipping diodes are a great way to radically change how an overdrive pedal sounds and feels but oftentimes the change that you perceive has more to do with a change in volume than an actual change in tone….until now!

When we were designing the GOLDEN BOY we knew we wanted to give the overdrive section a lot of tonal flexibility and most importantly make that flexibility useful on stage. So when changing clipping diodes we included circuitry that level matches the output of the pedal as various clipping diodes are selected. So now you can select between all four clipping options, your volume level will remain constant. More importantly, the difference that you hear between the clipping modes will be because of the difference in how those clipping diodes sound and not because your volume is jumping all over the place as it does with other designs.

GAIN CYCLE

The most exciting feature of the GOLDEN BOY is the new feature that we developed called GAIN CYCLE. GAIN CYCLE takes the GAIN knob setting, which selects your maximum gain, and divides that level of gain into 4 equal parts. Say for instance you have your GAIN knob set at the maximum setting or in other

words, 100% gain. Every time you ***press both footswitches simultaneously***, the gain of the pedal will jump up 25% until you get to 100%. The following press after 100% will cause the gain cycle to start again at 25%.

TIP: Set the GAIN control to around 3:00+ to have 4 distinct overdrive settings as you cycle through the gain!

My goal with the GAIN CYCLE feature is to allow guitarists to easily ramp their gain up without having to bend down and change it or try to adjust it with the edge of their foot while playing live. Here's a perfect use case!



Let's assume the GAIN control is set to 100%

Verse 1 – Gain cycle set at 25% – Slightly overdriven edge of breakup tone.

Press GAIN CYCLE

Chorus – Gain cycle set at 50% – Distinct overdriven tone.

Press GAIN CYCLE

Bridge – Gain cycle set at 75% – Heavy overdrive tone.

Press GAIN CYCLE

Solo – Gain cycle set at 100% – Heavily saturated overdriven tone!

TIP: Add the BOOST to push the overdrive even harder for endless sustain!

It's important to remember that GAIN CYCLE setting #4 (100%) will be as much gain as you have the GAIN knob set for. Think of the GAIN knob on the GOLDEN BOY as your ***maximum*** gain with each GAIN CYCLE setting being a percentage of that maximum value.

The brightness of the DRIVE led will change to let you know which percentage of gain you have selected. The higher the percentage, the brighter the DRIVE led. For instance:

GAIN CYCLE #1 – DIM LED – 25% of GAIN knob value.
GAIN CYCLE #2 – BRIGHTER LED – 50% of GAIN knob value.
GAIN CYCLE #3 – BRIGHT LED – 75% of GAIN knob value.
GAIN CYCLE #4 – VERY BRIGHT LED – 100% of GAIN knob value.

3-BAND ACTIVE EQ

To top it off, the DRIVE circuit of the GOLDEN BOY has a 3 band active EQ. The EQ circuit features a studio grade EQ that gives tremendous tonal flexibility to the GOLDEN BOY. Based on the legendary Baxandall EQ that is featured in countless studio EQ's, the GOLDEN BOY EQ takes this circuit and tailors it for guitarists! We spent tons of time on this EQ dialing it in so it would hit all the frequencies that

guitarists need to adjust, and then sweetened it by removing the ear fatiguing highs and lows that can appear at extreme settings.

EQUALIZER CIRCUIT FEATURES:

Studio-grade EQ with High Bandwidth and Flat Response at 12:00
+/- 12dB Boost/Cut per control
Center Detents on the pots that make it easier to get back to a neutral or flat response.

MIDI FEATURES

It's 2020 and it's time to expect more from an analog overdrive pedal! Since the BROKEN ARROW came out in 2019, all of our overdrive pedals have featured MIDI control over clipping options, gain cycle options, boost eq options as well as ON/OFF of the overdrive and boost circuits and the GOLDEN BOY is no exception.

We always want to make sure that our pedals are as easy to integrate into complex rigs as they are into simple rigs and MIDI makes that happen!

CABLE INFORMATION: In order to use MIDI on the GOLDEN BOY, you will need a cable that converts a MIDI (DIN-5) connector to a TRS cable. This is the cable that we have used with great success and can't recommend it enough.

https://www.disasterareadesigns.com/shop/p/mj-5p-midi-cable

For those building their own cables, the GOLDEN BOY receives MIDI information via the RING connection on a TRS (Tip, Ring, and Sleeve) connector.

Check out this link for some detailed wiring: https://www.midi.org/articles-old/trs-specification-adopted-and-released

MIDI CHANNEL

By default, the GOLDEN BOY ships with MIDI Channel 1 being the selected channel. This can be changed by pressing and holding the DRIVE footswitch while

applying power to the GOLDEN BOY. Press the BOOST footswitch to increment the MIDI channel number.

You'll notice that as you continue to hold the DRIVE footswitch, the BOOST LED will flash to indicate which MIDI channel you have selected. IE – 7 flashes = MIDI Channel 7. After the LED flashes, we inserted a 2-second pause so you could tell when the LED was finished flashing. The LED will continue flashing as long as you are holding down the DRIVE footswitch. Once you have selected the MIDI channel you want and have verified it by counting the flashes, simply release the DRIVE footswitch and the pedal will save this MIDI Channel to the internal EEPROM on the microprocessor and reboot.

MIDI DETAILS

Accessing the new MIDI features of the GOLDEN BOY is done by Control Changes. Below is a list of the features of the GOLDEN BOY that can be accessed via MIDI as well as how to access them.

CC #1 – DRIVE ON/OFF (value of 127 = ON /value of 0 = OFF)

CC #2 – BOOST ON/OFF (value of 127 = ON /value of 0 = OFF)

CC #3 – CLIPPING DIODES
(value of 1 = 2x SYMETRICAL DIODES)
(value of 2 = 3x ASYMETRICAL DIODES)
(value of 3 = 4x SYMETRICAL DIODES)
(value of 4 = 2x SYMETRICAL RED LED's)

CC #4 – GAIN CYCLE
(value of 1 = 25% GAIN)
(value of 2 = 50% GAIN)
(value of 3 = 75% GAIN)
(value of 4 = 100% GAIN)

CC #5 – BOOST EQ

(value of 1 = BRIGHT BOOST)

(value of 2 = MID BOOST)

(value of 3 = TAILORED BOOST)

(value of 4 = FULL BOOST)



VOLUME

Acts as a master volume for the overdrive circuit.

BOOST

BASS

The 12:00 position is totally flat with +/-12dB boost/cut on either side of center.

MIDDLE

Sets the amount of boost when the BOOST footswitch is engaged.

GAIN

Sets the maximum gain for the overdrive circuit.

The 12:00 position is totally flat with +/-12dB boost/cut on either side of center. The mid frequency is centered around 660hz.

TREBLE

The 12:00 position is totally flat with +/-12dB boost/cut on either side of center.

TECHNICAL SPECS

- Input Impedance: 1M
- Output Impedance: 100k
- Power Supply: DC
- Voltage Input: 9V MAX
- Polarity: Center Negative
- Min Current Required: 150mA
- Dimensions: 2.7” x 4.875"