

Blue Boy Deluxe Overdrive Owner's Manual



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Introduction

Hi there! Congratulations on purchasing the MI Audio Blue Boy Deluxe. The Blue Boy Deluxe is a low/medium gain overdrive pedal which takes the concept to a new level of sophistication. The Blue Boy Deluxe is the second generation of 'Blue Boy' pedals. The main difference between the new design and the original is the evolution of the three internal controls (voicing, brightness and character) into external controls. Also, the voicing control has been refocused as a pure midrange control and renamed 'mids', whereas the original controlled both the mids and highs. Also, the new Blue Boy Deluxe features twice the output volume of the original.

Features

Drive Control

The drive control of the Blue Boy Deluxe controls the amount of gain and overdrive of the pedal. The soft clipping architecture of the overdrive circuit ensures that the original character of the signal still comes through the overdrive. The Blue Boy Deluxe has a bit more gain up its sleeve compared to a standard overdrive pedal. For comparison, the Blue Boy Deluxe has 3 times the gain of a typical Ibanez Tube Screamer. At the same time, when turned all the way down, the Blue Boy Deluxe has less gain than a Tube Screamer turned all the way down. In short, the Blue Boy Deluxe has a wider gain range than the Tube Screamer.

One of the things that I worked on very hard with this pedal was the matching of the pedal to all types of pickups. A typical 'blues' pedal is generally suited to single-coil pickups. Humbuckers don't tend to fair as well. I worked for quite some time designing a clipping system which would be suitable with humbuckers as well as single coils. This clipping system involved increasing the overdrive-to-clean ratio. For a typical blues pedal, there's a bit too much clean signal in the sound. This can be heard most of all during the attack. This is often referred to by guitarists as 'compression'. For high output single coils, humbuckers or active



pickups, this attack can start to dominate the sound of a typical blues pedal, resulting in a 'popping' sound. The Blue Boy Deluxe, by effectively reducing the clean signal in the final output, reduced that 'popping' and makes the pedal very usable with higher output pickups as well as with standard single coils. This also has the effect of reducing that 'compression' effect.

In order to get the warmest sound out of the pedal, I tracked down some JRC4558D opamps. If you're familiar with the history of overdrive pedals, you'll know that this particular IC was the legendary IC used in the original Tube Screamers. Also, I've put the opamp in a socket, so that you can muck around with different opamps to get a sound that you like. Just make sure that the pin-out of the opamp is the same. Just remember that it's a dual opamp. Any 4558 variant, the TL072 or the LM833 are good choices. One of my favourites is the LM833,... I think it's one of the best kept secrets ;-)

Warning: Be careful when removing and inserting an IC. You can easily damage the IC, socket, or the board if you're not careful. Depending on the manufacturer, some ICs might need to have their legs bent in slightly to fit into the socket. Also, avoid bending the PCB back when removing and replacing the IC. Hold the PCB firmly to stop it from moving when doing this. I find that the best way to remove the IC is to hold the PCB, and then, using a small flathead screwdriver, I lift the IC gently by wedging the screwdriver in between the IC and the socket. It's best to do this gradually.

Character

The control is something that I'm very excited about. It's something that I call a **character** control. To some ears, this may be a very subtle control, but mature musicians, particularly those with experience with many of the great classic amps will really take a shine to this control. To understand what this does, you'll have to bear with me while I explain the process of clipping.

Vintage guitar amps had a relatively flat frequency response. This is a large part of the 'warmth' of the vintage clean sound. As guitar players began to turn up their amps, and they started to distort, the amps would develop a bit of an edge, which sounded pretty cool. However, if you *really* push one of those old amps over the top (like with a 'flat' booster), they sound pretty muddy and unfocused. Not cool.

Enter the treble booster. By amplifying higher frequencies more than lower ones, treble boosters could overdrive tube amps to get a huge overdrive sound while retaining a large degree of character. This is because when low frequency signals distort too much, they actually sound quite muddy. So the basic principle for getting a good overdrive sound was to reduce the amount of low frequency signals being overdriven. This principle made its way into pedal design as well, and many of the great overdrive and distortion pedal do exactly that. They employ a low cut filter before the clipping stage to reduce the amplitude of low frequency signals. This is also the same principle used in high gain valve amp designs. From a historical perspective, it seems that pedal design has influenced valve amp design!

Now for the new Blue Boy Deluxe, I experimented with a new idea. We know that keeping the bass under control helps with clarity, but what if you want that big, fat, almost fuzzy sound of those old amps? Well, what you'd have to do is add more bass to the *pre-clipping* stage. This is precisely what the character control does.

Please don't think of this control as a bass control like you'd use on an EQ. This control is much more subtle than that. It really controls the character of the overdrive. At one end (fully anti-clockwise), you have focused, clear and 'clean' overdrive, which is the sound of the original Blue Boy Deluxe. At the other end (fully clockwise), you have big, fat, and fuzzy overdrive. You will notice a slight increase in the low end of the signal as you turn this control up. You can compensate for this by turning up the tone control a bit to reduce the bass.



There are no instructions as such for setting up the character control. Do you like your tone tight, focused and modern? Then set the character control low (anti-clockwise). Do you like a bit fat vintage tone? Then set the character control high (clockwise).

Note: It's a good idea to turn up the pre-overdrive bass (character control clockwise) if you're going to be using the pedal in conjunction with other overdrive pedals. With the character control turned up, it's a good idea to put the Blue Boy Deluxe last in the chain of overdrive pedals.

Just as a bit of an aside, I love the sound of 2 Blue Boy Deluxes run into each other. I like to set the first to the 'classic Tube screamer' setting, and the second to the 'almost fuzz' setting (but with the voicing set down to 50%). I leave the drive, tone and volume at 50%. With the first pedal on, I get a classic OD sound. With just the second on, I get a really fat 'fender' sound. With the two on, I get a huge saturated lead sound.

Tone Control

The tone control of the Blue Boy Deluxe is taken straight out of the Tube Zone. I really like this tone control design, since it gives you much better control over the 'shape' of the pedal's frequency response.

Unlike most overdrive and distortion pedals whose tone control is generally nothing more than a basic high cut filter, the Blue Boy Deluxe utilises a circuit which controls both the high and low frequency content of the signal. With the tone control turned fully anti-clockwise, the lower frequencies are boosted, whilst the higher frequencies are attenuated. As the tone control is turned clockwise, the low frequency content begins to decrease, whilst the high frequency content begins to increase. With the tone control turned fully clockwise, the high frequency components dominate.

This design provides the effective flexibility of a multi-band EQ in a single control. It will by no means replace the EQ on your amp, but it will certainly help you get quite close to the tone you're after, which you can then tweak with your amp's tone control.

Mids

As the name implies, this is a midrange control. It is the evolution of the old 'voicing' control on the old Blue Boy. The reason I did this is that the voicing control overlapped a bit too much with the tone control. So in order to make the pedal more flexible, I changed the voicing control into a midrange control.

This control is a bit different to a standard midrange control. It is highly interactive with the tone control, and has more effect as the tone control is turned up. With the tone control all the way down, it has no effect.

Brightness

As the name implies this pot adjusts the brightness of the pedal. It is located near the end of the signal chain, and will not affect the character of the overdrive. I decided to add this control since guitar amps can vary greatly in terms of how bright they are. In the original Blue Boy Deluxe, I tested the pedal with a whole bunch of amps, and set the pedal up so that the brightness was suitable with as many amps as possible. However, every now and then, an amp would come along that was just too bright or too dark, and the sound of the Blue Boy Deluxe just wouldn't work. For example, I tried the Blue Boy Deluxe through a friend's Carvin X100B (great amp...), only to find that it sounded very shrill. I opened up the amp and checked out the clean channel circuit to find that the clean channel was designed with approximately 30db of high frequency boost!

So as a result, I decided to add the brightness control on the Blue Boy Deluxe. This should be adjusted to suit your amp.

A Note about the Tone Controls: There are three tone controls on this pedal, tone (low/high balancing), brightness (high cut) and mids (for just the midrange). You don't need to use these in a traditional way. For example, if you're used to standard tube screamer type pedals, you might like to turn the character all the way down, the mids on 75%, the tone at 60%, and then use the brightness control like you would on a TS.

Volume Control

The final output section of the Blue Boy Deluxe has been designed to provide you with maximum output volume. With the volume turned all the way up, the output signal can reach 14Vpp, which can seriously overdrive a good tube amp. The volume control is also a logarithmic or 'volume' taper, which means that when the control is set to 12 noon, the volume is only 15% of the way up, so there's plenty of volume up your sleeve should you need it.

Other Features

- High quality, heavy duty diecast metal casing, professionally powder coated and silk screened
- Heavy duty footswitch with true bypass.
- 9 volt battery operated or DC port (which accepts a standard barrel jack with a *Negative centre pin.*) Note that the Blue Boy Deluxe has been designed to run comfortably up to 25V.
- High intensity 'clear lens' yellow/amber LED.

To Change the Battery

To access the battery, unscrew the 4 screw with a screwdriver and remove the bottom plate.

Registration

To register your pedal, you can email your name, contact details, purchase date, and retailer details along with the pedal serial number to:

register@miaudio.com

Alternatively, you can send the above information to the postal address on the front of this manual. **PLEASE REGISTER YOUR PEDAL.** In the long run, it will be difficult to have your pedal serviced if you need to if the pedal is not registered.

Warranty

This pedal carries a 5 year warranty that covers all repairs due to manufacturer error. It does not cover any damage due to user mishandling, shipping, acts of God, and abuse. The owner should contact MI Audio directly for all repairs, and any work done by anyone other than MI Audio voids the warranty. All shipping costs are the responsibility of the owner, and are to be paid in advance of any work performed on the pedal. The owner may be asked to provide a copy of the sales receipt for verification.

Disclaimer

The owner or user assumes responsibility for death, injury and/or damages relating to the operation of this device. MI audio assumes no responsibility for death, injury or damages relating from the operation of this device. All specifications are subject to change without notice.