

Tube Zone Overdrive

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Introduction

G'Day! Congratulations on purchasing the new MI Audio Tube Zone. The Tube Zone you now hold in your hands (well go on,... pick it up,...) belongs to the 3rd generation of Tube Zone pedals. In it, all my original concepts have been honed and perfected. The original design was conceived over 10 years ago, and over these 10 years, I continually thought of ways to further improve the design.

If you've seen the original Tube Zone, you'll also notice that the pedal has 'grown' a few more controls. I personally believe that with these extra controls, the Tube Zone is probably one of the most flexible overdrive pedals available today. It is my first choice as a go-to overdrive pedal. It is, after all, the 'flagship' of the MI Audio overdrive/distortion pedal range. No other pedal captures the tonal characteristics and design philosophy of MI Audio pedals better than the Tube Zone.

Let me also mention from the outset that despite the large amount of gain available with the Tube Zone, it's not just another high gain pedal. The Tube Zone is capable of producing some stunning lower gain, semi clean sounds. With its unique gain control taper, you have a very large spread of lower/medium gain sounds, and only towards the end of the control sweep do things get a bit crazy. But boy, do they get crazy! The final point to make about the new Tube Zone is that the character of the pedal has been refined somewhat. The new Tube Zone is now super smooth, and more touch sensitive than any other pedal I have ever tried. This is a pedal which will reward those who approach their instrument with subtlety and control. By varying pick attack, picking position, vibrato etc., you will be able to coax out of the Tube Zone stunning, singing, vocal-like lead tones.

But, to quote Marty DiBergi, "enough of my yakking. Let's boogie!".

Features

Drive Control

The **drive** stage of the Tube Zone is the real secret to its sound. In order to mimic the signal flow of a tube amp, the Tube Zone was designed with multiple gain stages. Each gain stage has its own unique frequency response designed to approximate the frequency responses of a preamp and power amp section of a tube amp. In total, the signal is clipped 4 times using a variety of different techniques. This is multiple clipping process is exactly what you get in a modern tube amp.

The drive control controls the amount of gain in all gain stages. The resulting tone is very touch sensitive. Attack is quite complex and focused, and sustained notes 'bloom'. All these features are very reminiscent of a good tube amp. With the drive turned down low, you can get some beautiful warm blues tones, without the buzziness that a lot of pedals seem to suffer from. Turn the drive up a bit and this thing starts to seriously bite. With the drive turned up high, this pedal gets brutal! One of the most impressive aspects of this pedal is that it stays tight and focused like a good tube amp, although if you want to you can



add more note momentum with the **character** control. Back off the volume on your guitar, and the sound cleans up beautifully. But perhaps the most impressive feature is the pedal's tonal integrity. Each guitar, and each pickup on the guitar retains its own character, no matter how much gain you dial up.

Character

This control, which was formally an internal trimmer on the second generation of Tube Zones, is something that I'm very excited about. It's something that I call a **character** 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 to 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 what the first generation of Tube Zones did.

For the second generation of Tube Zones, 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, not the frequency response of the resultant tone. At one end (fully anti-clockwise), you have focused, clear and 'clean' overdrive, which is the sound of the original Tube Zone. 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 Tube Zone last in the chain of overdrive pedals.

Tone Control

Despite the straight forward useability of the single knob tone control, there's a lot more going on than meets the eye. Unlike most overdrive and distortion pedals whose tone control is generally nothing more than a basic low pass filter, the Tube Zone utilises a complex 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. The range of the tone control has been carefully tuned to be useable over the whole range of settings. This flexibility, coupled with the extra range of tones available from the **mid control** gives the Tube Zone the ability to cover almost all styles of music.

Mid Control

The first two generations of Tube Zone pedals featured a mid 'mode' switch, which gave you access to 2 or 3 mid levels. The more I thought about things, the more I realised that the mids, which are the most important group of frequencies for guitar, really required a dedicated and continuous control. So for the 3rd generation of Tube Zones, I converted the mode switch into a mid control. This is a powerful and unique control, which is highly interactive with the tone control, and allows adjustment to the mid frequencies over a wide, but musical range. Note that as the tone control is turned down, the mid control becomes less effective.

Volume Control

The classic class A output stage of the Tube Zone is not only designed for low impedance output, but also for high output levels. In fact, when the volume is turned up full, the output signal can swing over a 15V range!!! That's a serious amount of boost! In fact, the output volume of the Tube Zone has slowly increased. The current Tube Zone is 6 times louder than the original Tube Zone. This makes the Tube Zone useable not only as an overdrive pedal in its own right, but can also be used as a booster pedal to overdrive the input stage of a guitar amplifier. To take full advantage of this increased output volume, you should power the Tube Zone with a higher DC voltage power supply. The Tube Zone can use up to 25V DC power supply. But don't worry, if you don't need all that output, running off 9V is just fine. The newly redesigned output section ensures that the sound of the pedal stays just as tight and focused (if not more than the old TZ), over all operating voltage ranges.

Brightness

The **brightness** control was formally another internal control. As the name implies this control 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 Tube Zone, 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 Tube Zone just wouldn't work. So as a result, I decided to add the brightness control on the Tube Zone. This should be adjusted to suit your amp.

As an aside, you can also reverse the role of the brightness control and the tone control. You can use the tone control to set the low/high balance, and then use the brightness control as you would a traditional tone control.

Internal Presence Control

The last control, which is an internal control added to further control the neutral tonal balance of the Tube Zone. In the original pedals, some players found that the low end was a bit too 'solid', and thus found

themselves running the tone control higher than they would have liked. With the new presence control, you can tune how prominent the highs are with respect to the low end in order to find a balance which will work for you. I personally like the presence control set in the middle, which gives the same as the tonal frequency response as the original 1st and 2nd generation pedals. For a more liquid lead sound, try running the presence on maximum, which will make the mids and highs more prominent. For a thumping higher gain rhythm sound, run the presence lower (at about 25%), and turn the brightness up.

Other Features

- High quality, heavy duty diecast, chrome plated, metal casing.
- Heavy duty footswitch with true bypass.
- 9 volt battery operated (pedal is powered when a plug is inserted into the input jack. So when not in use, disconnect the in plug to maximise battery life).
- 9 volt DC port (which accepts a standard barrel jack with a *Negative centre pin.*) Note that the Tube Zone has been designed to run comfortably up to 25V.
- High intensity blue LED

To Change the Battery

To access the battery, unscrew the 4 screws at the bottom of the pedal 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. I am always thinking of ways to improve things, so all specifications are subject to change without notice.

Have Fun!

Once again, I hope you enjoy your new gadget. Please feel free to contact me with product feedback (excuse the pun), or for any general enquiries.