Dirty Little Secret

User Guide

INTRODUCTION

Welcome to the Dirty Little Secret! If you're reading this, you obviously wanna bring the rawk! We're here to help you on your quest!

The Dirty Little Secret was designed to be the secret weapon in your tone arsenal. Want to get cranked amp tones at bedroom rocker levels? Playing gigs but have to use whatever amp is provided as the backline? Like your clean amp sound but don't care for its overdrive channel? Love your fuzz pedal but it needs to be plugged into a cranked amp to sound good? Enter the Dirty Little Secret!

The Dirty Little Secret (DLS) is an overdrive pedal designed to bring you the sound and response of a classic Marshall amplifier. It, like the other pedals in our Foundation Overdrive range of pedals, is designed to be a "foundation" pedal - it is your "always on" pedal that forms the core of your guitar sound which you can enhance and embellish by adding boosters, fuzzes, filters, and other overdrives in front of it - just like you would in front of a real amp. And the reason you can leave it always-on is that you can get a great clean sound just by rolling your guitar's volume knob back! That's the way the old school Marshall players did things!

This is the latest evolution of our famous Dirty Little Secret, the most dynamic Marshall-style overdrive out there.

The Dirty Little Secret features:

* Two distinct voicings - "Super Lead" and "Super Bass" switchable via an internal slider switch.

* A full three-knob treble-middle-bass tone control complement that reproduces exactly the tone circuits of the Super Lead and Super Bass amps.

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MECHANISMS OF MUSIC

The "Super Lead" mode gives you the great rock sound of a Marshall Super Lead amp with awesome harmonics, touch sensitivity, cab thumb, and kerrang. Higher gain than the Super Bass mode, Super Lead mode is perfect for use with humbucker-equipped guitars. It's gain range goes from classic plexi all the way to modified JCM800 levels. And, just like a great plexi, you can go from clean to scream with just a twist of your guitar's volume knob. Like a Super Lead, it's voice is all about thump and upper-midrange kerrang. This is THE rock sound!

The "Super Bass" mode gives you the tone and gain structure of a Marshall Super Bass (which is very similar to a JTM45, JTM50/100, or very early plexi). This mode was voiced to really hone in on that elusive in-between "not quite clean, not quite dirty" response that old tube amps were so good at getting. And it was specifically voiced to make fuzz pedals sound great (especially two-transistor based fuzzes like the fuzz face). Plug a Strat into a Fuzz Face into the new DLS in SB mode and you'll see what we mean! It's voice is deeper bass, and an emphasis on the lower midrange band (in contrast to the Super Lead mode's upper mid-range emphasis) and sounds especially great with Fender style guitars. (And basses too! Go figure!)

The SL/SB mode switch
The voicing mode switch doesn't just add a bit more bass to make it a "super BASS" or something simple like that. It completely reconfigures the tone stack and key first gain stage parameters to give authentic Super Lead or Super Bass type response. The treble-middle-bass tone control complement exactly reproduce the tone stack circuits of the Super Lead and the Super Bass amps. So when you switch from SL to SB mode, the tone circuit gets reconfigured to the Super Bass circuit. A bit of history - early plexi Marshalls and JTM45s also had the "Super Bass" tone stack. It was later changed in the Super Lead amps to emphasize the upper mid-range frequencies since guitarists in the late sixties wanted a more aggressive cutting sound. Compared to the SL tone circuit, the SB tone circuit shifts the bass response lower and gives a somewhat more "scooped" sound than the SL mode. It's actually not really much more scooped but the SL mode adds a lot of upper midrange cut to give that classic Super Lead kerrang response. Both SL and SB voices are compelling so we wanted to be able to give you access to both!

A Marshall Super Lead's circuit cuts out a lot of low end in the first gain stage, while the Super Bass or older Super Leads passed a lot of bass through. The reason the Super Lead cuts so much bass is to keep things tight when the amp is turned up. And that's exactly what the SL mode of the DLS does - it tightens the bass response at the classic Marshall frequency point and turns up the gain potential to give a hot, fast respond-ing, gainier sound. It sounds absolutely fantastic with humbuckers but with Fender style guitars a player may prefer a fuller response…

Enter the Super Bass mode. This mode has full frequency response up front so everything gets through. What we end up with is a slightly slower response but a nice thick tone that's perfect for those in-between levels of gain. And this is precisely why it works so great with fuzzes like the fuzz face. Super Leads cut too much bass right up front and are too gained up so a fuzz face ends up sounding farty and pinched sounding instead of a huge, full sound. Fuzz Face and Marshall fans will know what we're talking about. Using Marshall amp-geek language, the difference between the SL and SB mode on the new DLS is akin to split-cathode vs. shared-cathode configuration on an old Marshall. Split-cathode has a high-pass response starting around 700hz while shared-cathode lets everything through. But the SB mode is not just for single-coils. This is the mode you want if you're trying to get that classic AC/DC sound - big, open crunch that's not too gained out sounding. Hendrix fans will love this mode. It was voiced with that sound in mind! Without a fuzz in front of it, think The Wind Cries Mary. With a fuzz in front of it? Pull out your live Hendrix recordings!

There are a lot of great Marshall tones lurking in this pedal. Enjoy!

QUICK START

It's a dirt box, right? How hard could it be? Plug it in and turn the knobs and rock your guitar. Explore the three tone knobs, play with different gain settings via the Pre-Amp control.

But plug it in by itself first! Step away from the pedalboard! ;-) Get familiar with it on its own before integrating it in with your pedalboard (we'll give you tips for best placement in your signal chain).

Your new Dirty Little Secret ships in "Super Lead" mode. So, most likely, that's the mode you'll hear when you first plug in out of the box.

After you've had a good session rocking out with your new Dirty Little Secret, come back here and read on to get more insight and tips on how to get the most out of your new DLS.

CONTROLS

treble , middle , bass

As mentioned in the Introduction, the tone controls get reconfigured, depending on what mode the pedal is set to. Whether in SL or SB mode, the tone circuit is exactly, part-for-part, the same tone circuit as found in Super Lead and Super Bass Marshalls, and they will behave and interact the same way as on their amp counterparts. So if you're a seasoned Marshall player, you'll feel right at home with these tone controls. Keep in mind, that they are TONE controls, not EQ controls. A big part of the way Super Lead and Super Bass amps' sound is due to the tone control circuit. The controls are highly interactive and dependent on where the other tone knobs are set. Experimentation is key to finding the tone you are looking for. Once you've honed in on the basic tone settings you are looking for you'll find that you can make precise adjustments by slight turns of one of the knobs. Not quite cutting enough? Turn the Treble up just a tad. Too bassy? Turn the bass control down a tiny bit. Or, if you find the tone is not cutting enough, rather than turning the Treble up, perhaps what is needed is just turning the Middle control down a bit. Just spend some good quality time exploring the tone knobs.

There's a lot of bass available! If you've spent any time with a plexi Super Lead or Super Bass, especially a Super Bass, you'll find that you don't need to run the Bass control very high. In fact, if you do some research on famous players' Marshall settings you'll find that they often run the Bass control at minimum, especially if the amp is cranked. The new DLS behaves in much the same way. So don't feel like you're doing something wrong if you find yourself wanting to run the Bass control at a very low setting. As a general rule with all tube amps, the louder you have the amp set, the less Bass you'll need (unless you're going for a woofy, farty sound in which case by all means go for it!).

So don't think that all tone knobs at noon is "flat" response. There is no "flat" response on a Marshall!

The Middle knob can also be thought of as a sort of "gain" knob since most of the guitar's energy is in the middle frequencies. So if you want the gainiest sound possible, run the Middle knob high. But if you want a less gainy sound run it lower. Which means you might also want to run the Treble and Bass knobs even lower to balance things out.

The Treble knob is an important knob. Circuit-wise, it is actually a sort of "mixer" control, mixing between the treble side and the middle/bass side. So if you want a less bassy sound, not only would you turn the Bass control down but you might also want to turn the Treble control up to "mix" less of the middle/bass frequencies into the sound.

There are many approaches to setting the tone knobs. You could start with them at noon and adjust from there which is probably what most people intuitively do. Nothing really wrong with that. But, also try this approach - start with all the tone knobs at the their minimum. You'll hear that the pedal is producing full frequencies but they just aren't getting out. That's because on a Marshall, the tone circuit is after the first two gain stages in the preamp, and the DLS follows this same basic architecture but using JFETS instead of tubes. In contrast, a black- or silver-face Fender has its tone circuit way up front, after just one tube stage and before the volume knob. Anyway, so start with the tone controls at minimum and then bring up the Treble control to where it feels like you have enough highs, then bring up the Middle tone control to where the tone is filled out enough. And finally by the time you get to the Bass control you may find you don't need to add any Bass at all. I find that setting the tone controls this way, I end up with them not turned up as high. This approach is particularly effective if you're trying to find that elusive clean/crunch sound where it is just starting to overdrive and is really touch sensitive. Now, if you're going for maximum brewtal gain-zorz, then try setting the Treble and Middle controls at their maximum and the Bass control at minimum and fine-tune from there. In fact, a great AC/DC sound can be found by setting Treble and Middle at full and Bass at zero and setting the Pre-Amp around 2:00 with the pedal in Super Bass mode.

To elaborate on the differences between the tone controls in SL and SB mode:

In SB mode, the Treble knob will control a higher slice of Treble frequencies. In SL mode, the Treble knob will have more upper-mids present as you turn it up. So the Treble control is "fuller" sounding in SL mode.

The all-important Middle knob. In SB mode, you'll find that it boosts more of the low mids and in SL mode more of the upper mids. This accounts for a big part of the difference in tone between the two models.

The Bass knob let's a LOT of low end through in either mode. In SB mode, the lows boosted are deeper. And in SL mode the lows affected are up slightly higher, right in the "thump" zone. So in SL mode, you get prominent upper mids from the Treble and Middle controls and thump frequencies from the Bass knob - perfect for a rock sound that is full yet cuts through the band mix! No wonder Super Leads were used by, um, almost everybody!

So spend time exploring the tone controls in both SB and SL modes to get a feel for their unique characteristics!

pre-amp

This controls the gain or amount of overdrive. The new DLS was tuned to allow a bit more gain than most plexi Marshalls actually got. Super Bass mode was tuned to have less gain then the Super Lead mode to get more of that early Marshall response. So depending on what mode you're in, the Pre-Amp control will respond differently. There are great tones to be had throughout the Pre-Amp control's rotation so spend time with it to find the perfect sweet spot! In general, the lower you have the Pre-Amp control set the higher you'll want to have the Master volume control set and the higher you'll be able to get away with setting the Bass knob. While the new DLS is loads of fun to just crank the gain and wail on there are a lot of subtle shades of lower gain overdrive available. If you run the Pre-Amp control really low and the Master volume up high you can get a virtually clean sound and use the DLS' tone knobs as a tone shaper.

master

This knob controls the output volume. For the best response out of your DLS, you should set the Master volume so that the sound with the DLS engaged is a bit louder than your bypassed sound. In fact, once you have set your tone and Pre-amp controls you should adjust the Master back and forth to find the sweet spot for interfacing with the your amp or rest of your signal chain.
You will find you need to run the Master control up higher to get the same volume if you're in SB mode than in SL mode. This is normal and is because SB mode has less gain.

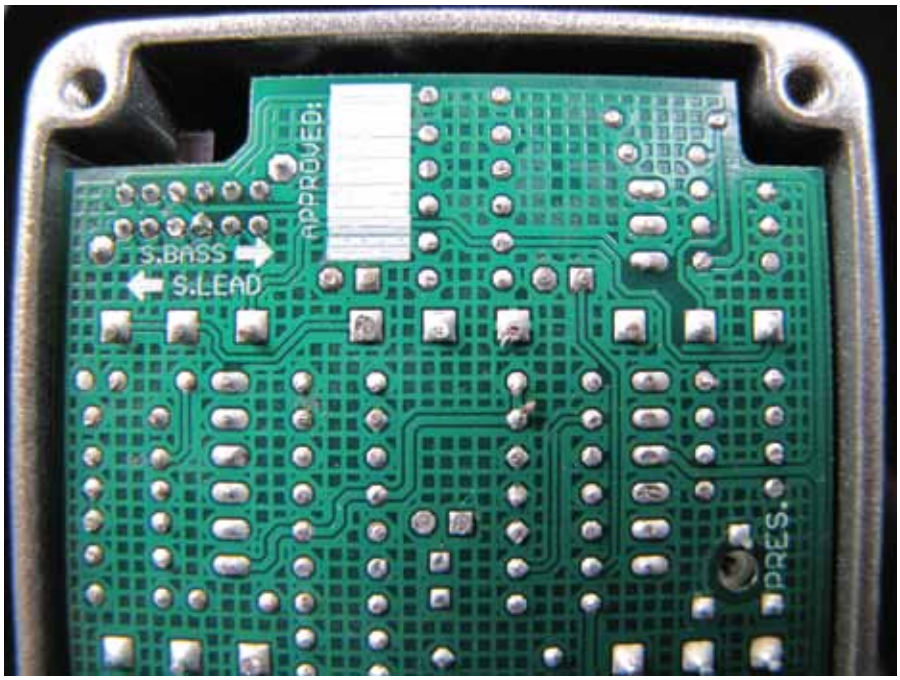
Remember, your guitar's volume works in conjunction with the Dirty Little Secret.

Yup! You should consider your guitar's volume knob as part of the Dirty Little Secret's control surface. Even in Super Lead mode with the Pre-Amp cranked, you can get a perfectly clean sound by rolling back your guitar's volume knob. And you'll find there's a hundred different great shades of subtle overdrive available just by varying your guitar's volume control. For best volume knob response, be mindful of what pedals are on between your guitar and the DLS. Spend time playing with your guitar plugged directly into the DLS and varying your guitar's volume knob. Then when you integrate it back in to your pedalboard you'll see how your other pedals are affecting it.

INTERNAL CONTROLS

Mode Switch
The mode switch can be accessed by removing the four screws of the bottom plate. It is located up at the top corner of the pedal. It's a tight fit to get fingers in there so a small flat blade screwdriver can be used to access the switch.

Presence trimpot
There is a trimpot (accessible by removing the bottom plate) that allows you to fine-tune the amount of presence or high treble frequencies that the pedal produces. It is factory set to provide the best tone in most circumstances. However, everyone has different guitars, amps, and tastes so we've given you control over the final brightness of the pedal. We recommend that you don't adjust the presence trimpot until you've spent a good amount of time with the DLS in your rig. After playing it at home, at rehearsal, and at the gig, you'll know better if you need to adjust it or not. You may find after a while that the pedal is a bit too bright with your rig or for your tastes. If that's the case, you can adjust the trimpot to reduce the brightness a bit. This is different than adjusting the Treble knob. The Treble knob is in the tone stack section of the circuit and it actually adjusts upper midrange frequencies. The presence trimpot is a final brightness control and adjusts around the 3khz range. Or if you find that you need a bit more brightness to cut through your band and the drummer's cymbals, go ahead and adjust the presence trimpot to be a bit brighter. The factory setting is exactly halfway on the trimpot.



POWER SUPPLY

You can power your DLS with any quality power supply designed for use with effects pedals. The output should be a negative tip DC from 9 to 18 volts. If you want more volume, headroom, and percussive attack, try running an 18 volt power supply. A 9 volt power supply will have a slightly softer sound that saturates more easily - it's sort of like the difference between a 50 watt and 100 watt amp! Definitely try it on 18 volts though - there's quite a difference! 18 volts is great for playing with the band. You'll get great attack and clarity with power to cut through the mix. You can also try a battery that is drained down to as little as 3-4 volts to get an even softer sound that is great for late night jam sessions when you don't want to wake anyone up! Or use a power supply that is capable of providing "starved" voltage. It's sort of like running a Variac and you get the same benefits - a "browner" sound and less volume! We encourage to to try these different powering options to see what you like the best!

Amplifiers

Generally speaking, the DLS works best into a tube guitar amp set relatively clean and neutral. However, it can work great to further overdrive an amp that is already overdriven as well, although this was not its design intention. If you are running a Fender style amp, try setting the tone controls as follows Treble 6, Middle (if your amp has it) 6, Bass 3, and Volume between 2-4. This is generally the best response from a Fender amp and in fact are the basic settings used in the development lab when voicing our pedals.

A note about tubes in your amp. For the best tone and response from your DLS (and your whole pedal chain, really) make sure you have good sounding tubes in your amp. In particular, the first tube in the pre-amp stage of your amp is critically important as your DLS will be driving this tube. A cheap or faulty tube can make your DLS sound weak, too gritty, farty, or just plain uninspiring. Do some research on tubes for your amp and experiment with different first stage preamp tubes in conjunction with the DLS to really fine-tune your tone.

Stacking with other pedals

The new Dirty Little Secret was specifically designed to combine well with other pedals. This section gives you ideas on how to incorporate it into your rig.

FUZZ PEDALS!

Some fuzz pedals, particularly fuzz faces and other two-transistor designs, need to be plugged into a cranked tube amp to deliver the goods. Three-transistor fuzzes (like a Tone Bender MkII) or four-transistor fuzzes (like Big Muffs) were designed to sound good into a clean amp. But there is a mojo to a good two-transistor fuzz hitting a cranked amp! But these days we can't always be cranking our amps as much as we'd like to.

The Dirty Little Secret's Super Bass mode was specifically voiced to enhance your fuzz pedals and make them respond as if they were plugged into an early plexi head. Many overdrive pedals and even amplifier gain channels don't respond well to fuzz pedals, especially Fuzz Faces, which usually have gobs of bass output. The sound is indistinct, flubby, woofy, farty. In fact, even later Marshall Super Leads had this problem. Why is that? Well, the problem is not that the Fuzz Face has too much bass, the problem is that the amp or overdrive pedal can't handle all that bass. In later period Super Leads, in order to get more gain and kerrang out of the amp as guitarists started wanting more aggressive sounds, the preamp section had to reduce the amount of low end in order to have more gain and still keep the sound tight. A "split-cathode" (typical of later Super Leads) Marshall typically shaves off a lot of low end right at the first tube stage. So what happens when you plug your Fuzz Face into it is that it pinches off the low end of the fuzz before it can even get into the amp and that's why you end up with a farty, indistinct sound. However, the Super Bass and earlier Super Lead plexi amps had a "shared cathode" configuration for the first preamp stage. This configuration typically has a huge cathode capacitor which let's ALL the signal through. So that's why earlier Super Leads and all Super Bass heads work so great with Fuzz Faces. The new DLS' SB mode was specifically voiced with these insights in mind to give you glorious fuzz pedal response.

Think of the DLS as your virtual pre-amp. And let's think of your actual guitar amp as your "power amp". With that in mind, what types of pedals do most guitarists normally plug into the front of their amp? "All Pedals!" is the quick answer. But some types of pedals might work better in the effects loop of the amp or even fed from the amp mic. So, pedals that you would normally plug in front of an amp, you'd plug in front of the DLS. Pedals that you might prefer to run in the "effects loop" would go between the DLS and your amp. Confused? Let's try an example....

Guitar -> wah -> treble booster -> fuzz -> phaser -> DLS -> delay -> reverb -> amp.

In this example, the treble booster and fuzz is overdriving the DLS, just like you would use these pedals into an actual cranked Marshall. The delay and reverb is between the DLS and the amp, which is our virtual "effects loop". The delay and reverb after the DLS and into your amp (which is set clean), remain clear instead of being distorted and smeared.

Note from the designer

Hi, and thanks for getting a Dirty Little Secret! I'm really stoked on this new version of the DLS and hope you will be too! I managed to pack a lot of Marshall tones in there between the SL and SB modes. It was a tight fit but I managed to cram it all in there! The SB mode solved a problem I've had for years - how to get a Fuzz Face to sound great at any volume. Even my beloved purple Marshalls didn't sound good with a Fuzz Face. After much research and amp modding, I figured out the secret. And I was able to bring that insight into the design of the SB mode on the DLS. Now I (and YOU!) can enjoy great Fuzz Face (or any other fuzz) tone through almost any amp at any volume! And the SL mode. Plug a humbucker guitar into the DLS set to SL mode and tell me if that's not the most fun you've had playing guitar in a while. Woo hoo! I can fly!

Anyways… hope you dig it! Drop me a message at kittycaster@catalinbread.com and tell me what you think!

Peace!

… Howard Gee

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