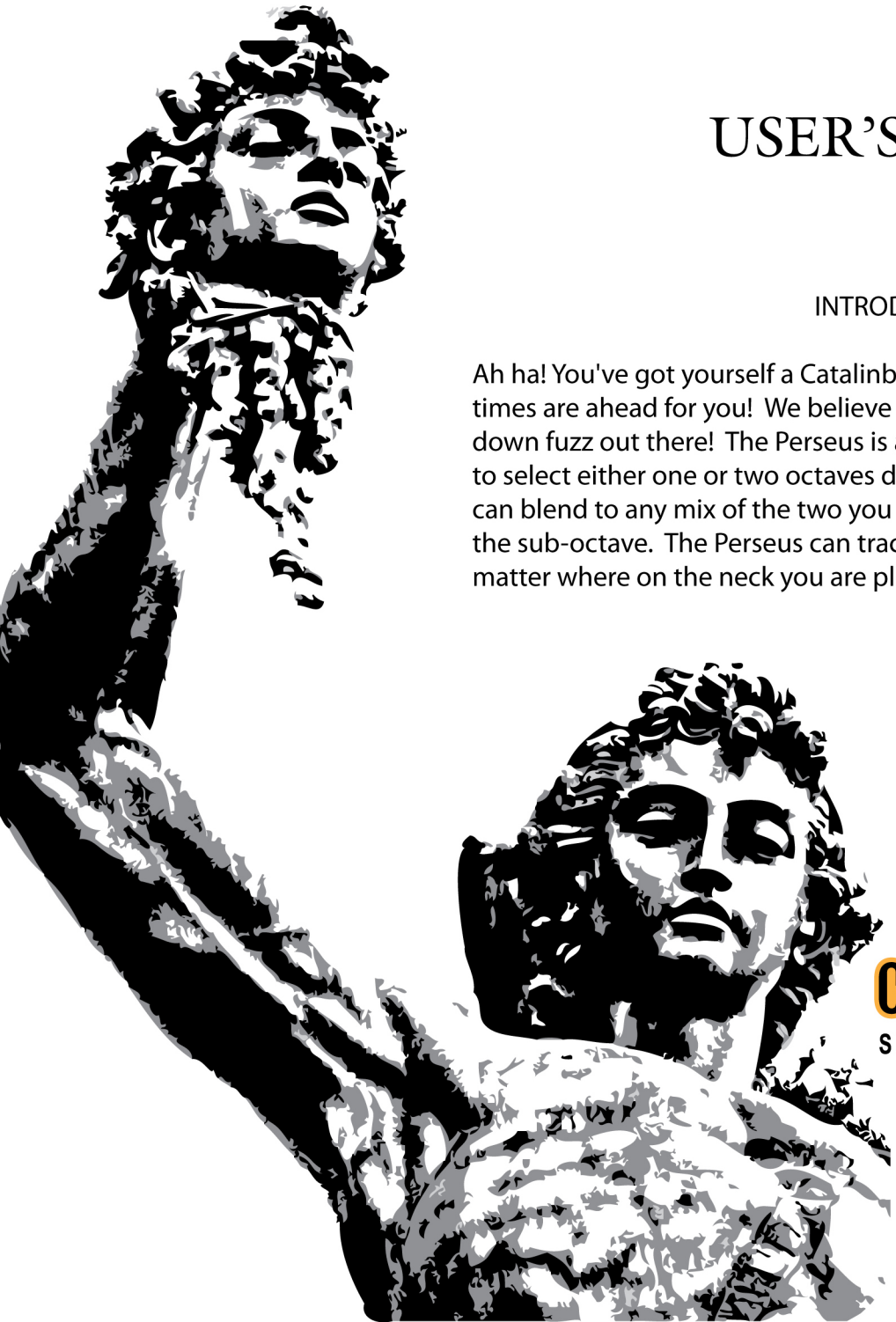
PERSEUS
SUB-OCTAVE FUZZ



USER'S GUIDE

INTRODUCTION

Ah ha! You've got yourself a Catalinbread Perseus Sub-Octave Fuzz! Good times are ahead for you! We believe this is the coolest analog octave-down fuzz out there! The Perseus is an octave-down fuzz that allows you to select either one or two octaves down mixed with a fuzz sound that you can blend to any mix of the two you want, including just the fuzz or just the sub-octave. The Perseus can track the sub-octave note accurately no matter where on the neck you are playing!

catalinbread
SPECIALIZED MECHANISMS OF MUSIC

QUICK START GUIDE

OK, let's get hooked up with the Perseus. While it is easy to use, a few playing tips will help you get the most out of it.

Let's start with the following settings:

Volume: 10:00 (this will give you unity volume i.e. the volume of the pedal on will be roughly the same as with the pedal off).

Cut: 7:00 (full counter-clockwise)

Blend: 10:00

Octave switch: -I

Plug the Perseus into your amp using a clean setting. Now select the neck pickup on your guitar and roll the tone knob all the way down to the darkest setting. This will give you the best tracking with the Perseus. Of course, you may not always want the "best tracking"! More on this later! Now play some single note riffs using a light picking attack while slightly muting the strings. Play up high on the neck, play way down on the low strings. The Perseus will track anywhere on the neck! Just remember to always slightly mute the string for perfect octave tracking.

Try playing one note and holding it.... with a bit of practice, you should be able to get it to sustain almost indefinitely! Now let go of the note. Dead silence! A carefully tuned gating circuit allows you to have your cake and eat it too!

Now try flipping the octave switch to -II.... you'll find the low strings suddenly become very low! :-)

Having fun yet?!

PERSEUS CONTROLS

Let's get a bit more in-depth with the controls now!

Volume
Yup, volume. You'll notice that Perseus has PLENTY of output so you can pummel your amp to your heart's desire! Unity volume is around 10:00.

Cut
Ahh, now what's this knob for? It reduces the bass content of your signal. Why would you want to do that?

Two reasons:
1) To allow you to use the Perseus into a cranked, overdriven amp without "flubbing" out from too much bass;
2) So you can create cool textures for lead playing.

Turn the Cut control full-counterclockwise for maximum bass frequency domination. Turn it clockwise to trim the fat.

If you're playing your Perseus into an amp that is cranked up (say, oh I dunno, how about a Marshall Plexi at full bore :-)), the awesome bass signal from the Perseus may start to "flub" or "fart out" your amp's input. Simply turn the Cut knob clockwise until you get a nice fat sound with no flub! You are the master of your universe.

Or, even if you're playing into a clean amp you might want to use the Cut knob to take down some of the bass frequencies so you'll cut through your band mix more.

This knob may seem simple, but it is very useful!

Blend
This control allows you mix the fuzz and octave sounds in any amount you want.

Full-counterclockwise will let you use just the fuzz sound. That's right, you can use the Perseus as a cool sounding fuzz pedal and use the Cut knob to adjust the fuzz's tone!

Full-clockwise will give you just the octave-down sound! Fire your synth player!

You can get a lot of different textures out of the Perseus with this knob. Fat synth bass lines, reedy lead sounds, and much more!

Octave Switch
This switch allows you to switch between one or two octaves down.

Although the fuzz signal remains the same, you may notice that it seems more prominent on the 2-octave setting. This is because the sub-octave sound is separated from the original octave farther now. On the 1-octave setting, there is more overlap of frequencies so the fuzz sound blends into the octave sound more.

When switching the octave switch you may want to adjust the Blend and Cut controls to get the sound you're after.

On the 2-octave setting, the low notes on your low E string will be so low you can hear each cycle of the sound wave! Woo hoo!

Guitar volume knob
Try turning down the volume knob on your guitar for some different sounds. You'll see that you can get some cool, slightly gate-y sounds this way! If your guitar has hot pickups or humbuckers, you may want to turn the volume knob down just a tad to get the best tracking.

Guitar tone knob
As mentioned in the Quick Start section, the best tracking happens with the tone knob on your guitar rolled all the way back. If you're using the neck pickup, you can usually get away with rolling the tone knob back up on most guitars and still get great octave tracking.

Guitar pickup selector
Your neck pickup will give the best octave tracking.

But.... let's say you want some glitchy octave sounds that seem to jump randomly... flip to the bridge pickup and roll the guitar's tone knob to the brightest setting. Now play. Don't bother with muting the strings. Go ahead and try playing some chords. Like what you hear? Like making fun noises? Then proceed with vigor!

Remember, your guitar's volume, tone, and pickup controls work in conjunction with the Perseus.

STACKING PERSEUS WITH OTHER PEDALS

Generally speaking, the Perseus is best as the first pedal after your guitar. But there are no rules in music. Experiment!

Perseus loves to see pedals after it though! One of our favorite combinations is Perseus -> tremolo -> delay. You can make some big sounds with that!

DESIGNER'S NOTES

I've always liked the idea of analog octave down pedals. But most of them don't track well on the low strings. And some of them don't have enough output or any control over the output volume at all. Of course, with the new offerings in the digital realm, we now have pedals that will track perfectly and even polyphonically to boot! The digital pedals are way cool, but I was still hankering for something funky, greasy, fuzzy... unpredictable, if I want it to be. So I got out the breadboard and started working.

My goals were:

- great octave tracking anywhere on the neck
- but crazy and unpredictable if I want it to be
- a cool fuzz sound to blend in with the octave sound
- almost infinite sustain, yet completely silent when not playing
- one OR two octaves down
- and the ability to sound great into clean amps or dirty amps/overdrive pedals
- well, just something that is fun to play!

I will tell you I was quite happy the day I got a circuit together that did all of that!

The Cut knob came about because I was doing all of my development listening on a small Fender Princeton amp set clean. The circuit was sounding pretty good. Then one day I tested the circuit through a cranked up non-master volume Marshall and I was greeted with a big flubby mess! Onoes! So, I sat back and thought about it for a bit, and decided what we needed with a control that could tighten up the bass frequencies without changing the fundamental tone of the Perseus. I wired it up and plugged back into the cranked Marshall. Yes! I can get a huge fat octave sound with absolutely no flub now even into a cranked, overdriven amp! By the way, this is the same principle as how the famous Rangemaster treble-booster pedal works - it ups the gain and cuts out a lot of bass frequencies allowing it to overdrive a cranked tube amp, generating a lot of midrange harmonics and keeping the bass tight. The general rule of thumb is: the louder you're playing a tube amp the less bass frequencies you need going into it.

The Perseus features an original, discrete silicon transistor fuzz circuit at the beginning that drives the octave dividing circuit and is mixed in to your signal via the Blend knob. From there it goes to a finely-tuned gating circuit that finally feeds the octave dividing circuit. The octave divider chip is the same one used on most of the famous octave-down pedals out there. I carefully tuned the range of all the controls so there are useful, musically sounds at any knob setting!

Oh, and why is this pedal called the Perseus?

"The lowest note in the universe is coming from a black hole in the Perseus Cluster, about two hundred fifty million light years away. What's happening out there is that intergalactic gas has concentrated around a cluster of galaxies, forming a cloud. A massive black hole is sending out jets of particles that crash into the cloud, causing pressure waves to ripple outward. Some astronomers interpret these as sound waves. Of course, even if you call it sound, it's too low for anyone to hear. They estimate the note to be a "B flat," about fifty-seven octaves lower than middle C."

OK, no, the Perseus won't give you 57 octaves below middle C, but it will give you a measly one or two octaves! :-)

I hope you enjoy using the Perseus to create your own sonic galactic events!

... Howard Gee, Catalinbread

PERSEUS

SUB-OCTAVE FUZZ