

DSP setup - And why is this like Brain Surgery!

First of all..... it ISN'T!!! I have had a few encounters in the last couple weeks that are really freaking me out!!! Dealers. Installers, consumers... saying that they cant figure it out...its too hard...it wont connect...it wont save. Blah...Blah,,,Blah. This is for both the DSP150.4D and my DSP88 DSP processors. As a percentage of sales, very few tech support questions on DSP. Just as an FYI

First off the software/applications are very similar in how they function. The only real difference is how many input and output channels (*oh yeah...and one has amplifiers built in to it!!!) After trouble shooting maybe 50 of these over the last 6 months (which is less than 10% of total sales of both of these units!!) I have found some common issues. Which I will go over in this article. But..as a sidebar...once we got the troubled DSP back and tested70% of the time there is NOTHING wrong with DSP. I am NOT saying we are perfectbut ...WE try damn hard!

Here is what I found.

- 1.People are SUPER impatient and don't like learning new things. Even simple things
- 2.People want instant gratification! NOW!!!! NOW!!! NOW!!!!
- 3.If they have used other DSPs that just assumed they all function the same way. And when it isn't the same, or just packaged differently..they throw their hands up in despair.
- 4.Understanding basic audio is OUT THE WINDOW!!!!
- 5.1/3 octave? Parametric? What???
- 6.Whats that? dB? Q?
- 7.Knowing basic theory of how crossovers work and why you would crossover any speaker at any given frequency is an unknown. Butter-worth (isn't that a pancake syrup!!!) LinkWitz-Riley, Bessel? What???
8. Setting gains. On DSP and Amplifier. Chicken or the egg??
- 9.Summing channels?? How many volts in?
- 10.Any basic NORMAL audio tech questions that need SIMPLE tests to help answer and solve any issue.
- 11.Bridging? Can't I just flip the 2CH/4CH switch and be done?? Just hook up the Left + and Right -? Right? That's it?? (NO!!!)
- 12.No one is RTAing their setup. So it is pretty much "Free For All!!!"

Its all so.oo.oo CRAZY!!!!

"We manufacture the BEST in Motorcycle Audio....PERIOD!"

OK...so here are MY rules on tuning ANY DSP device (actually just audio in general!!)

RULE #1 - YOU HAVE TO BE SMARTER THAN THE GEAR!!!!!! PERIOD!!!!!!!!!!!!

Otherwise...STEP AWAY! Its OK if DSP tuning is outside your "Wheel House". Get professional help - like from the people who build it!!

Listen...I do NOT pretend to be a HD Turbo expert!!! I can't rebuild or modify a Harley motor. WAY outside my comfort level.. Way outside MY "Wheel House".. ..WAY WAY outside!!!!

And I have NO problem asking for tech support. BUT....ya gotta ASK!! Call , email, send smoke signals. IF it is super important to you to get resolved QUICKLY (the brain surgery deal!!) then CALL!!! Trust me I can fix it!!!

In my opinion...ANYONE who says he does audio for a living should understand the basic concepts of what the hell they are doing!!!! And DSP is a BIG part of that, ..of ALL audio. It AINT going away. Every BT speaker in the world has been DSP'd all up!!! Your cars are all DSP'd all up!! It is in EVERYTHING we do audio wise. There is no getting around it unless you just want to put your head in the sand and chant "Nah Nah Nah Nah".

Its happening ...with or without you!!! It makes a HUGE difference to any system.

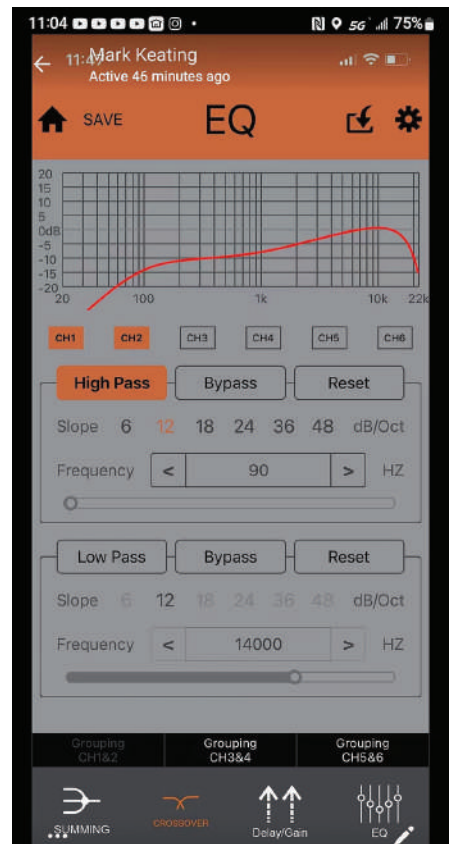
A MUST have kind of deal. In MY humble Opinion!!!

Just so we are clear. I've personally trained dealers/installers on setting up DSP for over 15 years. Todd Ramsey has trained on and about DSP for almost the same amount of time, Brian Schmidt, Ken Ward for at least 10+ years. MCS guys, LP+ , Jason Diegos, Doug Dobson. At least 10 years each. Collectively, I'll bet, we've trained an easy 100,000 retailers/installers. Every 12V retailer in the USA should understand what the hell is going on with DSP!!!!!! At least the basics. So ...IF you don't understand! Then YOU-TUBE it, talk to me, talk to the MCS guys, talk to everyone. It is NOT Brain Surgery!!!! The myth that it takes a ton of time is BS!

FOR EXAMPLE

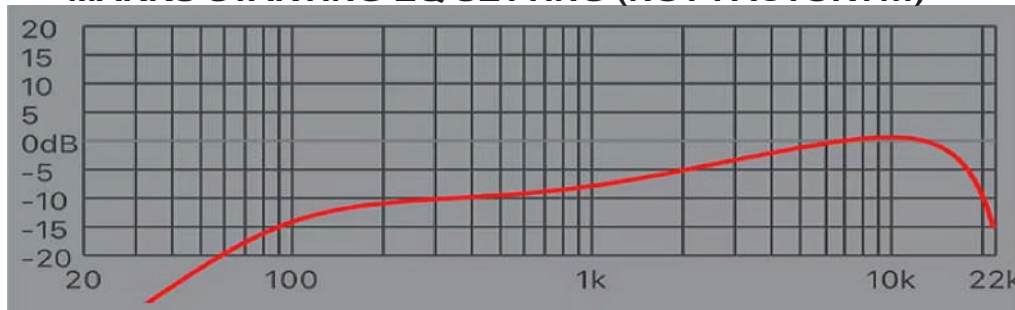
Last night, on FaceBook, Mark Keating had an issue with his DSP150.4D and a 4 speaker Cicada Audio system. He wasn't happy with the way it sounded and asked if I could help out. His issue was that the Cicadas had really no mid bass. Was too bright for him. Clean, clear...but. He loved the speakers....but...seemed really lackluster in the midbass. I said sure. Show me the EQ that is currently being used. That way it gives me an idea of what is going on. See the screen shot below. issue was that the Cicadas had really no mid bass. Was too bright for him. Clean, clear...but. He loved the speakers....but...seemed really lackluster in the mid-bass. I said sure. Show me the EQ that is currently being used. That way it gives me an idea of what is going on.

MARKS STARTING EQ SETTINGS



See the screen shot below.

MARKS STARTING EQ SETTING (NOT FACTORY!!!)



0dB at 10Khz, -5dB at 2Khz, -8dB. -10dB from 500 Hz down to 100Hz

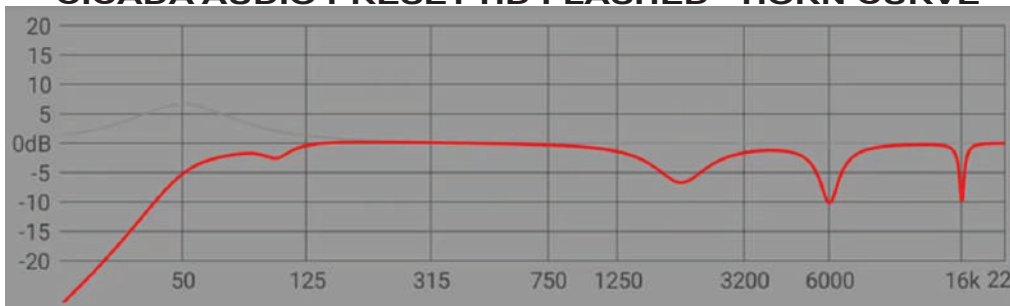
If you look at his EQ curve it is , well...messed up! In my humble opinion!!

Think about it this way ...that 1,000Hz down to 100Hz is actually 0dB. And everything above 5,000Hz is +10dB!!! Ya feel me???? This speaker has been “tuned” to be 10 times brighter than it already is!! And it is a bright speaker to begin with!!

So...,guys!! Looking at the EQ...Is ANYONE surprised that these Cicada speakers have NO midbass? Anyone???? And are REALLY bright! DUH!!!!!! Thanks Captain Obvious!!!! No SH#T!!!!

So..I told Mark to simply go to the EQ page and tap the Audio Preset button at the bottom of the page A Pop Up window appears and I told him to select the bottom Audio Preset - HD FLASHED - HORNS.

CICADA AUDIO PRESET HD FLASHED - HORN CURVE



Then the EQ changes to this. Shown Above. Notice the difference from this curve to the starting EQ curve at the top of the page. Mark has now **GAINED** 10dB of output from 50Hz up to 1,000Hz!! 3 dB is double ! 10dB is 10 times!!!! No small thing!!!! Actually a **HUGE** issue.

I asked Mark how does it sound now? He said “MUCH better”. I told him to live with this setting for a few days and then we will tweak it some more as these PreSets I designed are just to get you going. Not the “cure all ..be all”. Just the **START**. BUT...a pretty **DAMN** good start!!

This conversation with Mark (on Facebook) took ALL of maybe 10 minutes to fix (actually I think 5 min!!). Again... All on Facebook. No phone call, nothing. So anyone that says it takes a long time to tweak a DSP? Not really!!!! Yes....you could dick around for days.... tweaking you’re brains out for weeks, if, you wanted to. **PUSHED ONE BUTTON!!** Whew...Now that was **HARD!!!!**



This conversation with Mark (on Facebook) took ALL of maybe 10 minutes to fix (actually I think 5 min!!). So what am I trying to get to??? Do you homework, know what your getting into!!!

The idea is to be EFFICIENT! Quick. Plus the application has a function that you can email yourself (or anyone) your settings and then load them onto another bike! So,...IF you do a lot of the same system. Lets say...its "Rider" system... a 1 amp and 4 speaker system - Fairing/Bag speakers. And you do this system a lot (like once a week for example....) You could have that as your "go to" system DSP setup and spend less than a minute tuning a bike!!! Because you have a TUNE that you like and works well.

Again...this isn't Brain Surgery or the cure for the Common Cold!!! Its motorcycle audio!!!

What are the reasons that people think or say that my DSP's are hard to use, or whatever? Are they lying? Stupid? Ignorant?

Ahh...none of the above!! Well maybe the 3rd one...ignorant (which is better than being stupid...and proud of it!!!) Listen no one knows everything. I know a LOT...but its because I am old (Cam from Bad Azz bikes said I'm like 400 yrs old!! Jeeezzz ...harsh!!!) And I learn something everyday. So...why the harsh criticism about Cicada DSP's? Why the issues (which again...are not huge, but we hear about them)

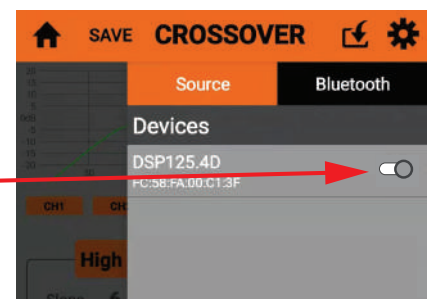
Here what we have found when people have problems:

1. Phone/tablet won't connect?

Solutions:

- Make sure to connect the application ONLY thru the APP. Click the top right "Gear". In there it will say Devices. Make sure it says DSP125.4D And there is a slide switch. Make sure it is slid to the right.

**ALWAYS MAKE SURE YOU ARE CONNECTED!
OTHERWISE WHATEVER "TWEAKING" YOU DID
WAS A WASTE OF TIME AND DID NOTHING!!!**



- Try a different phone. Make sure that IF you are on a Android phone that there are NO Apple phones near by with Bluetooth on!!!!
- If on Android and no connection try a Apple. We have had issues with Apple iPads not connecting..but Apple phones do? Crazy shit! Welcome to "Bluetooth Land"!!!
- IF you have an Android phone make sure "location" is turned on!! Otherwise.. NO DSP will connect to it. Not just mine!!!

...More Solutions:

- IF you are using the DSP150.4D make sure that you are using the CORRECT DSP application. CA AMP (Orange and Black) and NOT CA DSP (Red and Black) If using the DSP88 then you would use CA DSP app.
- If all else fails, power the DSP150.4D amplifier down. Uninstall the CA AMP application, restart phone and THEN reinstall the CA AMP application.
- Is the Blue LED blinking on the BT Dongle? Or Green?? NEVER start with connecting the DSP150.4D as a Bluetooth device on your phone!!!! NEVER!!! You'll know that you will NOT connected (at least for DATA or DSP Tuning) if the GREEN light is on.

2. Tune settings do NOT save!! And do not show up when I turn on my bike

Solutions

- Check to make sure you REALLY are connected as a DSP and NOT as a BlueTooth device (Blue light versus Green light) You want to be BLUE!!!
- Make sure to ALWAYS SAVE and then LOAD which are 2 totally different deals!!! SUPER IMPORTANT!!!!
- SAVE only takes a few seconds. Loading takes 1 full minute, so you'll know.
- Sometimes going back into the app after shutting the bike down, takes almost 15 seconds for the settings to show up. Be patient!!!
- Always save you settings as NEW ones. You CANNOT save over old settings. You can delete old settings, but NOT save over. Old settings...just delete (Swipe left and hit the trash can...its deleted!!!)
- Once you have a setting you like. Make sure to text it or email it to yourself. That way you ALWAYS have it!!!

OTHER ISSUES!!!!

- Make sure you have "Speed Volume" on you HD bike TURNED OFF!!!!
- Make sure to FLASH your Bike to either the RF or SoundZ Flash - This resolves HD removing bass as volume goes up!! That is a BIG DEAL!!!

MAKE SURE YOU WATCH THE 3 VIDEOS ON DSP HERE: <https://cicadaaudio.com/videos>

PAST THIS POINT - CALL US AT 1-480-887-8699