

EZDSP PRO MANUAL

Thank you for purchasing a EZDSP PRO System Tuning Processor for your automotive sound system. This product has been designed and manufactured to exacting standards in order to ensure years of musical enjoyment in your vehicle. For maximum performance, we highly recommend that you have your EZDSP PRO installed by an authorized dealer. Your authorized dealer has the training expertise and installation equipment to ensure optimum performance from this product without compromising your vehicle's functionality. Due to the complexity of modern vehicle systems, we do not recommend self-installation unless you have extensive experience in automotive electrical systems. Should you decide to install this product yourself, please take the time to read this manual thoroughly to familiarize yourself with its installation requirements and setup procedures. If you have any questions regarding the instructions in this manual or any aspect of the product's operation, please contact your authorized dealer for assistance. If you need further assistance, please contact at info@edgeholdings.com.

Installation Applications

This product is designed for operation in vehicles with 12 volt, negative-ground electrical systems. Using this product in systems with positive ground and/or voltages other than 12 volts may result in damage to the product and will void the warranty. This product is not certified or approved for use in aircraft.

Safety Considerations

- Install this product in a dry, well-ventilated location that does not interfere with your vehicle's safety equipment (air bags, brake/seat belt systems, etc.).
- Securely mount this product so that it does not come loose in the event of a collision or sudden jolt to the vehicle.
- Check before drilling to make sure that you will not be drilling into a gas tank, brake line, wiring harness or other vital vehicle system.
- Do not run system wiring outside or underneath the vehicle. This is an extremely dangerous practice, which can result in severe damage/injury.
- Protect all system wires from sharp metal edges and wear by carefully routing them, tying them down and using grommets and loom where appropriate.



7TH BUILDING, NO.59 CHUANG FU ROAD, XIAO GANG
INDUSTRIAL ZONE, NINGBO 315800, CHINA

Tel +86.574.873.88888

Fax +86.574.876.77777

www.edgeholdings.com

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What's Included

- (1) EZDSP PRO processor
- (1) 8-Channel RCA Level Input Harness with Power/Ground/REM Wire
- (1) 8-Channel High Level Input Harness with Power/Ground/REM Wire
- (1) 8-Channel RCA Level Output Harness
- (1) A Bag of Mounting Accessories
- (1) Installation manual

Product Overview

The EZDSP PRO digital signal processor is engineered to deliver the ultimate in system tuning capabilities, in an easy-to-use format. Armed with a state-of-the-art 24-bit DSP processor, it gives you the ability to do DSP tuning and signal summing via app. Using the downloadable EZDSP PRO app on your smartphone or tablet.

Specifications:

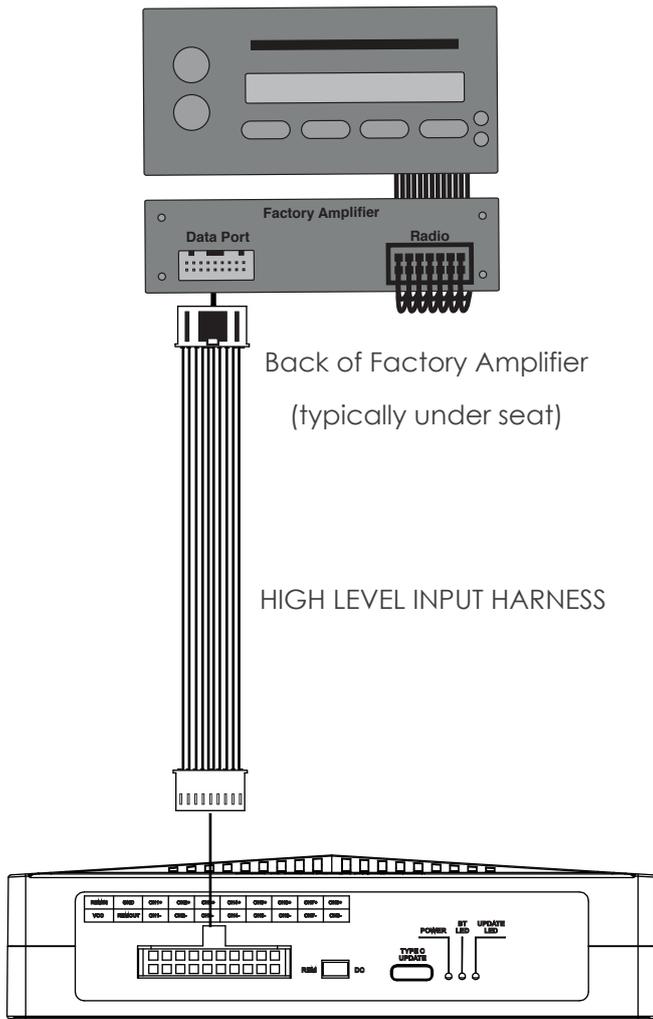
- Signal Input: 8 High-Low Level Inputs
- Signal Output: 8 RCA Outputs
- Output Impedance: 200 Ohms
- Frequency Response: 20Hz – 20kHz +/- 0.5dB
- Input Voltage: 0.02V – 8V
- Input Impedance: 20k Ohms
- Output Voltage: Up to 8V
- THD+N: <1.0%
- Signal-to-Noise: >100 dBA (A-weighted)
- Digital Signal Processing (DSP):
Speed: 147 MIPS Precision: 32-Bit Accumulators: 72-bit
- Digital to Analog (DAC): Precision: 24-Bit
- Dynamic Range: 108 dB
- Digital to Analog (DAC): Precision: 24-Bit
- Dynamic Range: 108 dB
- THD+N: -98 dB
- Analog to Digital (ADC): Precision: 24-Bit
- Dynamic Range: 105 dB
- THD+N: -98 dB
- Operating Voltage: 9 – 16 VDC
- Crossover Frequency: Variable: 20 Hz to 10 kHz
- Crossover Slope: Selectable Slope: 6/12/18/24/36/48 dB/Octave
- EQ Frequency Controls: Selectable Q: 0.05 to 20.0
- Dimensions (H x W x D): 1.26" x 4.04" x 5.12" (32 mm x 102.5 mm x 130 mm)



INPUT CONFIGURATIONS

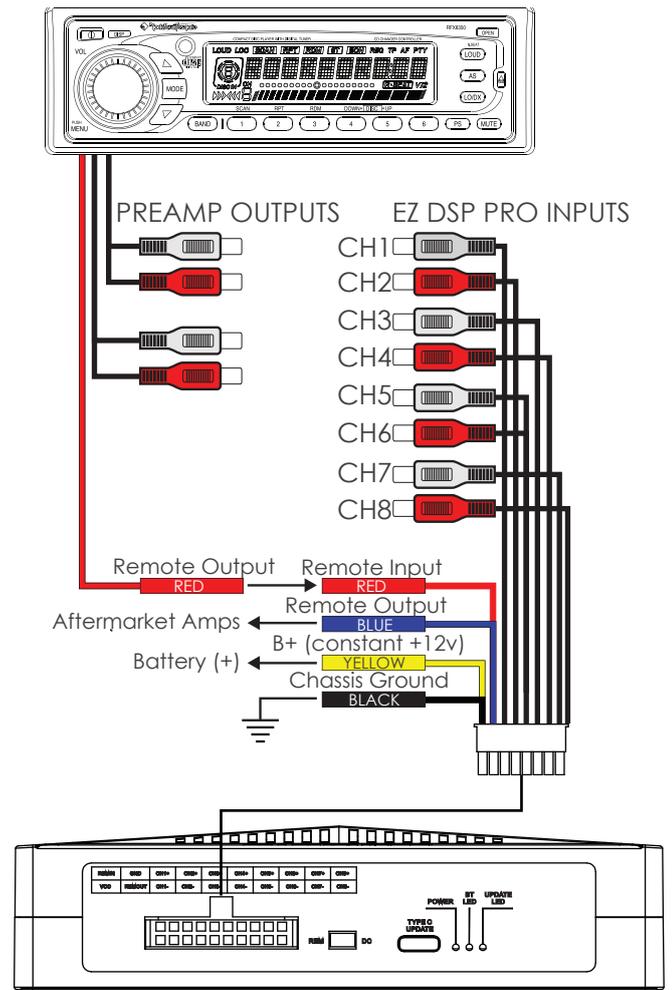
FACTORY RADIO

Allows for installation of aftermarket amplifier in virtually any vehicle with a factory radio using high level inputs.

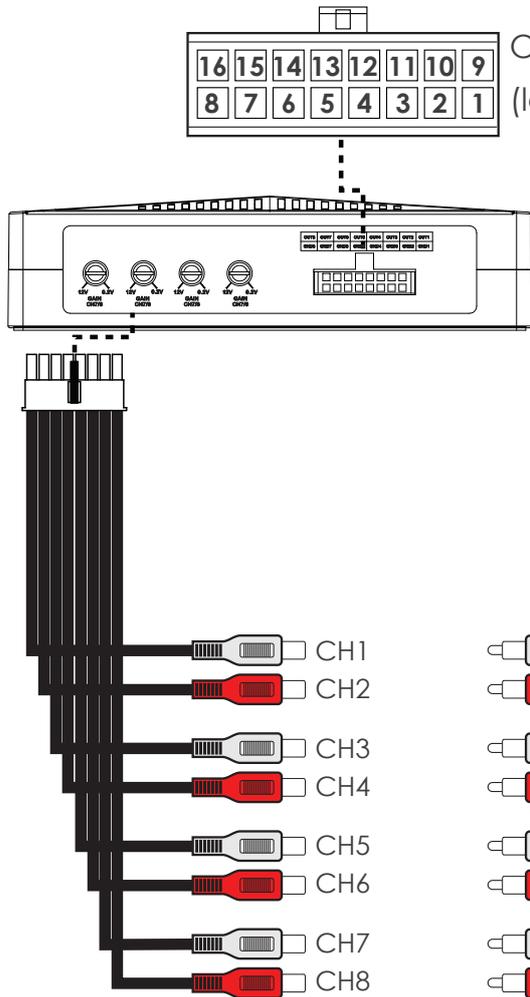


AFTERMARKET RADIO

Allows for installation of aftermarket amplifier in virtually any vehicle with an aftermarket radio using low level inputs.

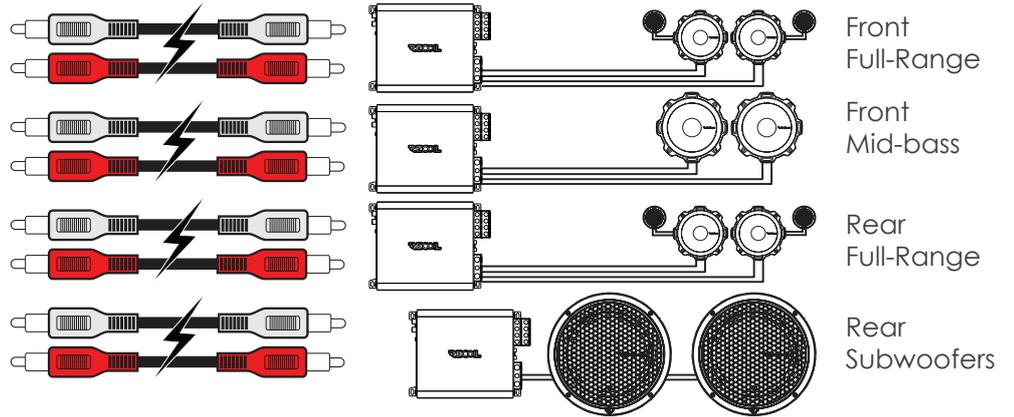


OUTPUT CONFIGURATION

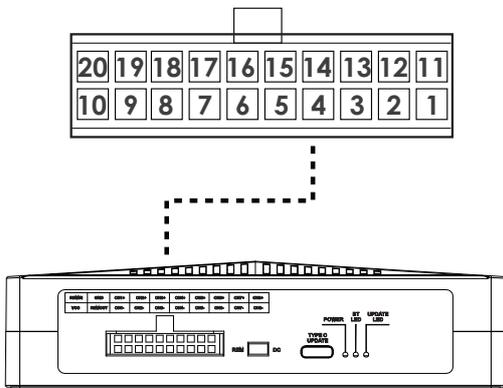


OUTPUT
(looking into wired end)

Pin	Wire	Function	Pin	Wire	Function
1	Black	CH8 (-)	9	Blue	CH8 (+)
2	Black	CH7 (-)	10	Blue	CH7 (+)
3	Black	CH6 (-)	11	Blue	CH6 (+)
4	Black	CH5 (-)	12	Blue	CH5 (+)
5	Black	CH3 (-)	13	Blue	CH4 (+)
6	Black	CH3 (-)	14	Blue	CH3 (+)
7	Black	CH2 (-)	15	Blue	CH2 (+)
8	Black	CH1 (-)	16	Blue	CH1 (+)



INPUT
(looking into wired end)



Pin	Wire	Function	Pin	Wire	Function
1	Black	CH8 (-)	11	Blue	CH8 (+)
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5	Black	CH3 (-)	15	Blue	CH4 (+)
6	Black	CH3 (-)	16	Blue	CH3 (+)
7	Black	CH2 (-)	17	Blue	CH2 (+)
8	Black	CH1 (-)	18	Blue	CH1 (+)
9	Blue	REM Out	19	Red	REM In
10	Black	Ground	20	Yellow	B+ Constant

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DOWNLOAD APP

1. Search for "EZDSP PRO" APP at Apple Store or Google Play Store.
2. Or scan QR code to download



iOS app



Android app

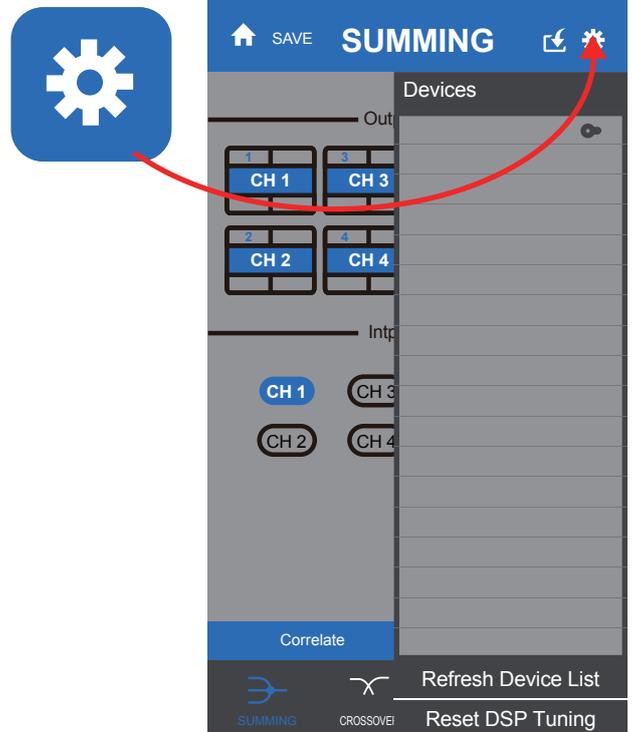
CONNECTION

On the Settings page you can see what source(s) you are using and pick between them. You can also see all the Bluetooth devices that you may have paired. And choose between those also.

Down at the bottom are 2 settings:

Refresh Device list - This will be useful when you set up this up with your installer/tuner and you. You can choose yourself or your installer can pick himself.

Reset DSP Tuning - This is useful if you don't like your DSP Settings and want to do a clean setup all over again.



SUMMING SETTINGS

Some factory system has dedicated outputs for high and mids. You can use EZDSP PRO to sum those signals to create a full range output.

- 1: You need to know the signal of each channel input.
- 2: Choose the output channel.
- 3: Choose the input channels you want to sum. The input channels you choose will be shown in the text box of output channel.
4. If you select "Assign" button, the 8-channels of input signal will be assigned to 8-channels output automatically.

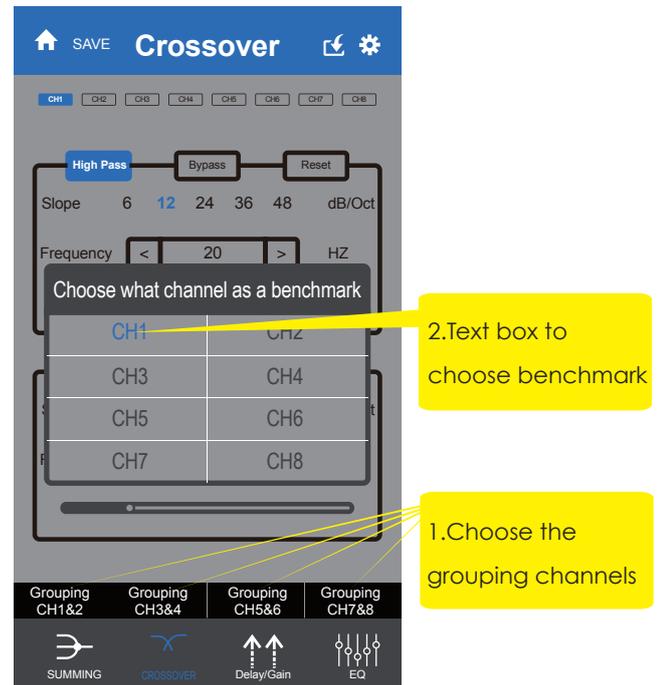
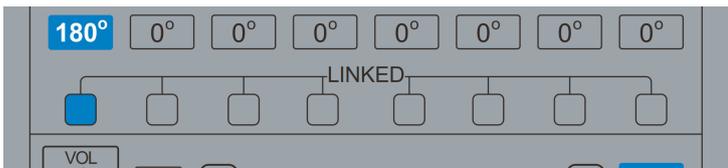


GROUP SETTINGS

1. You can do group tuning for Crossover and EQ.
2. Choose the grouping channels you want tune.
3. It brings you the text box to choose which channel as a benchmark.

LINK SETTINGS

You can LINK any or all 8 channels together for Gain/Mute/Phase settings. Just select the channels you want to link.



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CROSSEVER SETTINGS

Knowing the basic starting xover frequencies for each speaker. Start setting the xover's up. For this example we will assume a fully active system with a 2-way front system NO rear fill speakers and subwoofers 5/6 Channel.

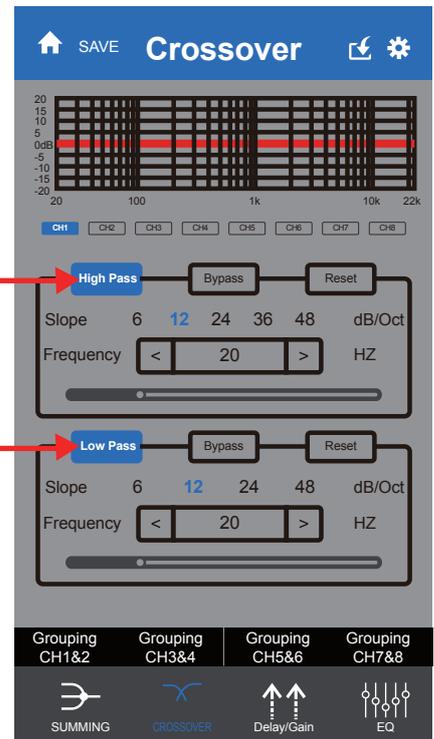
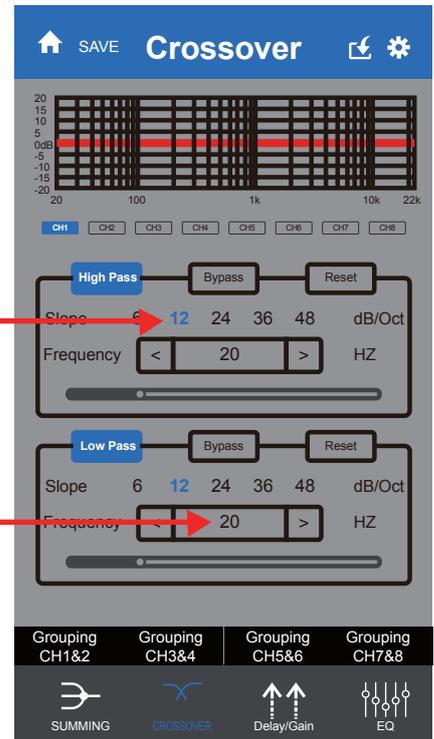
With this 6 channel "ACTIVE" system start with the tweeters crossover at 3,500Hz. Choose a crossover slope. 6dB, 12dB, 24dB, 36dB or 48dB. For this example we'll use 12dB. Touch the WHITE dot on the slider.

Slide the dot to the left or right to change xover frequency. To get to a more specific crossover frequency, you can tap the center rectangle with the frequency shown and type in the exact frequency.

Since this is an example we will use typical STARTING frequencies which may NOT be the final settings.

- TWEETERS - HIGH PASS - 3,500Hz
- MIDRANGE - BANDPASS - 350Hz - 3,500Hz
- SUBWOOFER - LOWPASS - 60Hz

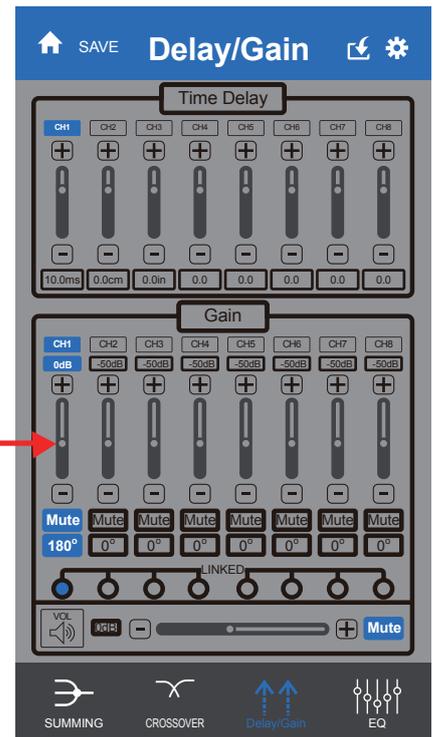
Use the same method as above, To create a bandpass use BOTH the High Pass filter AND the Low Pass filter to CREATE a BandPass. In reality that is how ALL Band Pass filters are created. A combination of High and Low Pass.



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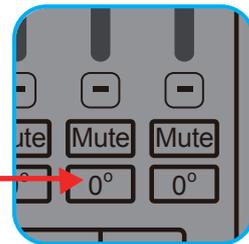
GAIN SETTINGS

MAKE SURE that ALL your amplifiers are NOT connected. Now PRE SET the individual gain controls channel by channel. Setup ALL channels - tweeters, midrange/ midbass, woofers to -6dB. Set MASTER level to -6dB also. With the EZDSP PRO GAINS set up this way...plus your presetting the amplifiers input gain controls. You'll still have over 12dB of gain to work with BEFORE increasing GAIN on each of the amplifiers. Once this is done save that setting. THIS IS just for initial setup. When you get near the end of setup you can read just the gain settings here, on the DSP AND on the amplifiers.



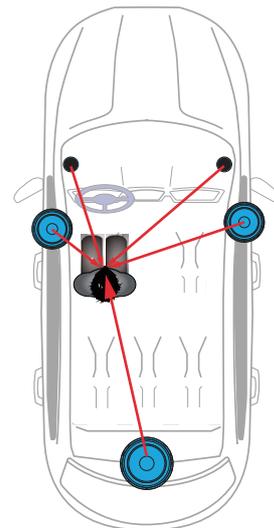
PHASE SETTINGS

This is also the best time to make sure ALL speakers are in phase. There are FREE Polarity apps on-line that can help you do this. AGAIN super important that all speakers are ACOUSTICALLY in phase. You can easily adjust phase from this screen, just tap the bottom BLUE rectangle with the O inside - This will switch the speaker 180 Out of Phase" which may put it back INTO phase. You should hear The difference, use a phase meter to make sure.



TIME DELAY SETTINGS

Once you have done Gains, EQ, and checked to make sure all speakers are in phase. It's time to do time delay settings. Get speakers that are at different physical dimensions away from your ears to be time coherent. Meaning move them electronically, so they seem to be in the same time/distance dimension.



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Thereby creating the illusion of stereo imaging and soundstage where the sound does not appear to be coming from the left or right, but in front of you and out on the hood of the vehicle. Plus the woofer sounding like it is under the dash, even though the woofer is actually in the trunk of the vehicle.

EQ SETTINGS

This is where ALL the "magic" happens. There are 31 bands of Parametric Equalizer adjustments. Which means that YOU can select whatever frequency you need to fix, or bands of frequencies and easily solve the peaks or dips in your system setup. You can LOCK the EQ on this page also. This makes it SO you don't accidentally change an EQ setting while adjusting something else.

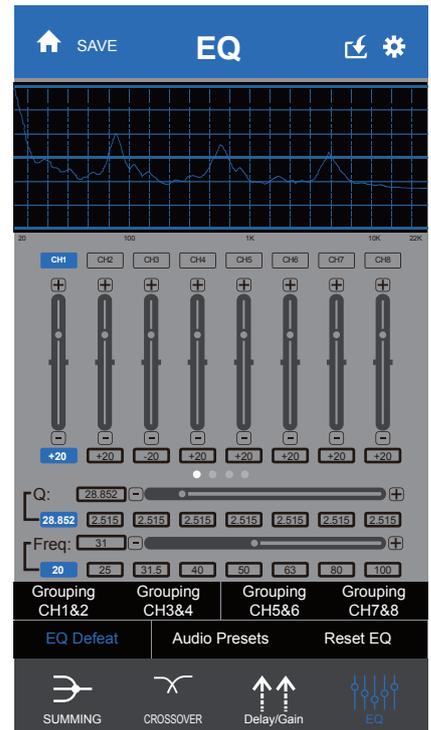
FREQUENCY:

Each of the 31 Bands can be changed to ANY frequency you need it to be. Click inside the BLUE boxes at the bottom of each frequency and type the frequency, Q or Boost desired. Since there are 31 bands of adjustment, SCROLL Left to Right.

Q ADJUSTMENT:

Q (or width) of the frequency being adjusted. Q's of 1 are very wide, Q of 18 is very narrow. As shown below on the APP itself. To change Q simply slide the light blue "Q" bar. Or TAP + /- SPECIAL

NOTE: An RTA is an ABSOLUTE necessity to adjust ANY audio system that has an equalizer, especially 1/3 octave



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SAVE SETTINGS

This is SUPER important. ALWAYS save settings! Once you select SAVE on ANY page it will bring you to the "New Settings" text box as shown to the left. You have a choice of Basic Tuning Presets And Advanced Tuning Presets. The difference is that the BASIC setting ... ANYONE can access. ADVANCED ONLY you can access. It is best to first save in BASIC and then once refined in your tuning SAVE in ADVANCED.

SYNC SETTINGS

To sync to EZDSP PRO, go back to the SAVE button on the top of each pages blue bar. Click on SAVE and look at your saved settings. Pick the one you want to be THE setting. Lets say it is the 66666 saved file that is shown highlighted to the left. Since it is highlighted it is THE selection.

UPLOAD SETTINGS

To upload data from EZDSP PRO the APP, click on the top bar with the white outlined box and arrow pointing down.

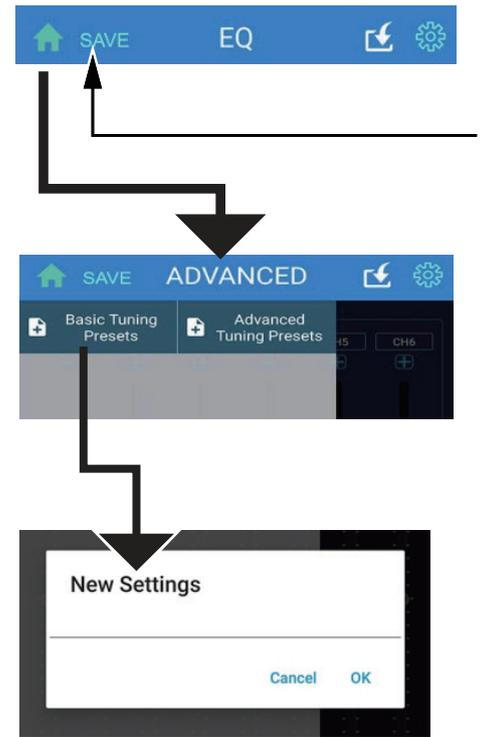


SHARE SETTINGS

If you want to share the DSP settings with others, go to your save list and click the SHARE button at the right of your selected file.



NOTE: Please make sure you have already set up email account in your phone firstly.



DELETE: If you dislike a memory and want it removed, simply Select the memory and swipe to the LEFT and it is now deleted.

