



**fireball**



# **FIREBALL-6.8 MKII**

**DSP with 8-Ch Class AB Amplifier**

**OWNER'S**


**MANUAL**

**WARNING!**

PLEASE READ CAREFULLY BEFORE USING

# Introduction & Troubleshooting

## 1.Statement

Thank you for purchasing  DSP amplifier. We strongly recommend using the services of a professional installation studio to install the DSP amplifier. The correct configuration of the system and the qualifications of specialists will allow you to maximize the potential of your DSP amplifier, avoid unpleasant situations, as well as eliminate connection errors and possible malfunctions

This manual mainly introduces the product functions, uses and operation methods of DSP auto tuning amplifier. The manual is only used as the user's operation guide, not as the basis for maintenance service. Due to the continuous improvement of the products upgrade, we reserve the right to change the design and specifications without prior notice. The product illustration and appearance effect in the manual are for reference only. Please refer to the actual product.

## 2.Tips

As part of our quality system control, each product is carefully packed before leaving the factory. After unpacking, please check the product carefully for physical damage. To facilitate future packing and ensure product safety during transporting. Please keep all packing materials and article. In case of physical damage to the machine, please inform us immediately so as to provide formal document for the damage.

## 3. Accessories

According to the model you purchased, the following accessories should be placed in the packing box. If there is any shortage, please inform the seller or manufacturer as soon as possible:

- DSP Amplifier – 1 No
- Wiring Harness – 2 No
- PC USB Cable – 1 No
- Instruction Manual – 1 No
- External wiring controller(To be purchased separately) – 1 No



# SAFETY INSTRUCTIONS

- 1. THE PURCHASED DEVICE IS ONLY SUITABLE FOR AN OPERATION WITH A 12V ON-BOARD ELECTRICAL SYSTEM OF A VEHICLE.** Otherwise fire hazard, risk of injury and electric shock consists.
- 2. PLEASE DO NOT MAKE ANY OPERATION OF THE SOUND SYSTEM, WHICH DISTRACT YOU FROM A SAFE DRIVING.** Do not make any procedures, which demand a longer attention. Perform these operations not until you have stopped the vehicle on a safe place. Otherwise the risk of accident consists.
- 3. ADJUST THE SOUND VOLUME TO AN APPROPRIATE LEVEL, THAT YOU ARE STILL ABLE TO HEAR EXTERIOR NOISES WHILE DRIVING.** High performance sound systems in vehicles may generate the acoustic pressure of a live concert. The permanent listening to extreme loud music may cause the loss of your hearing abilities. The hearing of extreme loud music while driving may derogate your cognition of warning signals in the traffic. In the interests of the common safeness, we suggest to drive with a lower sound volume. Otherwise the risk of accident consists.
- 4. DO NOT COVER COOLING VENTS AND HEAT SINKS.** Otherwise this may cause heat accumulation in the device and fire hazard consists.
- 5. DO NOT OPEN THE DEVICE.** Otherwise fire hazard, risk of injury and electric shock consists. Also this may cause a loss of the warranty.
- 6. REPLACE FUSES ONLY WITH FUSE WITH THE SAME RATING.** Otherwise fire hazard and risk of electric shock consists.
- 7. DO NOT USE THE DEVICE ANY LONGER, IF A MALFUNCTION OCCURS, WHICH REMAINS NOT REMEDIED.** Refer in this case to the chapter TROUBLE SHOOTING. Otherwise risk of injury and the damage of the device consists. Commit the device to an authorized retailer.
- 8. INTERCONNECTION AND INSTALLATION SHOULD BE ACCOMPLISHED BY SKILLED STAFF ONLY.** The interconnection and installation of this device demands technical aptitude and experience. For your own safeness, commit the interconnection and installation to your car audio retailer, where you have purchased the device.
- 9. DISCONNECT THE GROUND CONNECTION FROM THE VEHICLE'S BATTERY BEFORE INSTALLATION.** Before you start with the installation of the sound system, disconnect by any means the ground supply wire from the battery, to avoid any risk of electric shock and short circuits.
- 10. CHOOSE AN APPROPRIATE LOCATION FOR THE INSTALLATION OF THE DEVICE.** Look for an appropriate location for the device, which ensures a sufficient air circulation. The best places are spare wheel cavities, and open spaces in the trunk area. Less suitable are storage spaces behind the side coverings or under the car seats.

11. **DO NOT INSTALL THE DEVICE AT LOCATIONS, WHERE IT WILL BE EXPOSED TO HIGH HUMIDITY AND DUST.** Install the device at a location, where it will be protected from high humidity and dust. If humidity and dust attain inside the device, malfunctions may be caused.
12. **MOUNT THE DEVICE AND OTHER COMPONENTS OF THE SOUND SYSTEM SUFFICIENTLY.** Otherwise the device and components may get loose and act as dangerous objects, which could cause serious harm and damages in the passenger room.
13. **ENSURE CORRECT CONNECTION OF ALL TERMINALS.** Faulty connections may could cause fire hazard and lead to damages of the device.
14. **THE MOUNTING HOLES.** If you drill the mounting holes for the installation into the vehicle's chassis, ensure by any means, not to damage, block or tangent the fuel pipe, the gas tank, other wires or electrical cables.
15. **DO NOT INSTALL AUDIO CABLES AND POWER SUPPLY WIRES TOGETHER.** Ensure while installation not to lead the audio cables between the head unit and the processor together with the power supply wires on the same side of the vehicle. The best is a areal separated installation in the left and right cable channel of the vehicle. There with a overlap of interferences on the audio signal will be avoided. This stands also for the equipped bass-remote wire, which should be installed not together with the power supply wires, but rather with the audio signal cables.
16. **ENSURE THAT CABLES MAY NOT CAUGHT UP IN CLOSE-BY OBJECTS.** Install all the wires and cables like described on the following pages, therewith these may not hinder the driver. Cables and wires which are installed close-by the steering wheel, gear lever or the brake pedal, may caught up and cause highly dangerous situations.
17. **DO NOT SPLICE ELECTRICAL WIRES.** The electrical wires should not be bared, to provide power supply to other devices. Otherwise the load capacity of the wire may get overloaded. Use therefor a appropriate distribution block. Otherwise fire hazard and risk of electric shock consists.
18. **DO NOT USE BOLTS AND SCREW NUTS OF THE BRAKE SYSTEM AS GROUND POINT.** Never use for the installation or the ground point bolts and screw-nuts of the brake system, steering system or other security relevant components. Otherwise fire hazard consists or the driving safety will be derogated.
19. **ENSURE NOT TO BEND OR SQUEEZE CABLES AND WIRES BY SHARP OBJECTS.** Do not install cables and wires not close-by movable objects like the seat rail or may be bent or harmed by sharp and barbed edges. If you lead a wire or cable through the hole in a metal sheet, protect the insulation with a rubber grommet.
20. **KEEP AWAY SMALL PARTS AND JACKS FROM CHILDREN.** If objects like these will be swallowed, the risk of serious injuries consists. Consult promptly a medical doctor, if a child swallowed a small object.

# TECHNICAL SPECIFICATIONS

## AUDIO

|                        |                              |
|------------------------|------------------------------|
| RMS Power:             | 25W * 8CH @4Ω, 50W * 8CH @2Ω |
| Frequency Response:    | 20Hz~20kHz                   |
| DSP Processor:         | Cirrus Logic                 |
| Signal Converter A/D : | Cirrus Logic                 |
| Signal Converter D/A:  | Cirrus Logic                 |
| Bluetooth :            | Built in Bluetooth 5.1       |

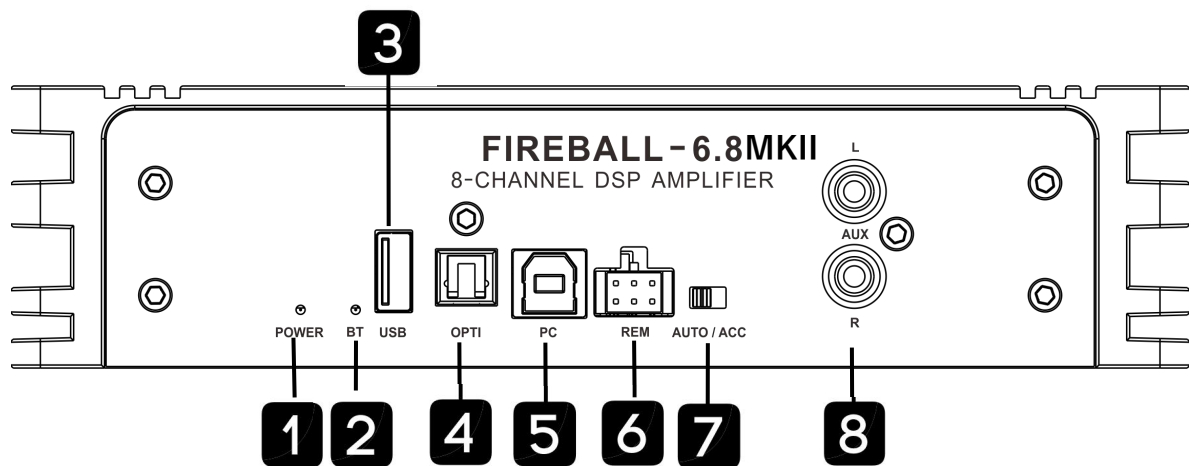
## INPUT AND OUTPUT

|                            |                      |
|----------------------------|----------------------|
| High level speaker input:  | 6CH                  |
| Low level AUX input:       | 2CH                  |
| High level speaker output: | 8CH                  |
| Low Level RCA Output       | 8CH                  |
| DSP RCA output:            | 8CH (RMS 4V)         |
| High input impedance:      | 13 Ω                 |
| Low input sensitivity:     | 0.5-2.5V             |
| High input sensitivity:    | 4-10V                |
| Optical Input:             | Yes                  |
| Sampling Rate:             | 24Bit/192KHz ADC/DAC |
| EQ/Delay:                  | 31Band EQ/15ms       |
| Filtering Crossing Point:  | 20-20KHz             |
| Signal to Noise Ratio      | 91dB                 |

## GENERAL REQUIREMENTS – PC Software

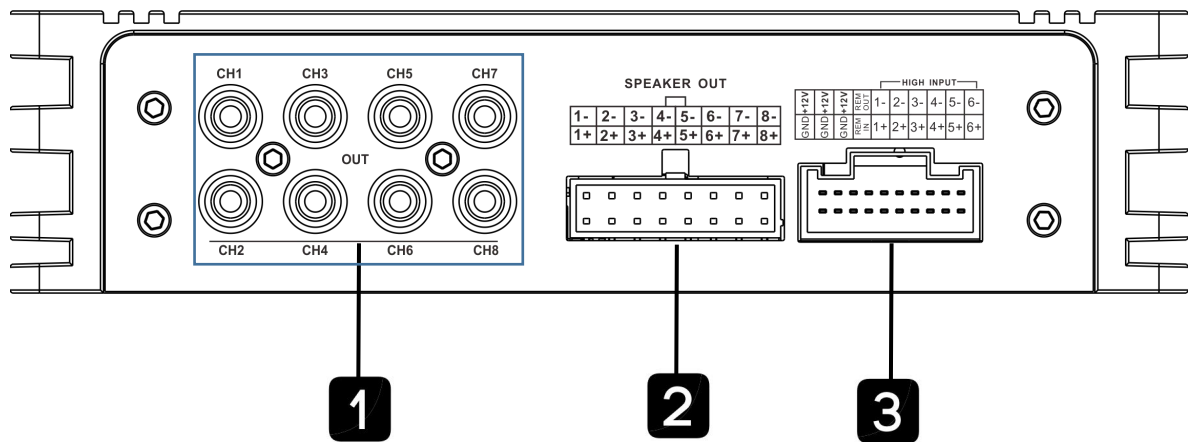
|                            |   |
|----------------------------|---|
| PC connections:            | USB 2.0   |
| Software/PC requirements:  | Microsoft Window (32/64bit):<br>(XP, Vista, Windows 7, Windows 8, Windows 10) |
| Operate temperature range: | -30~70°C  |
| Size:                      | 195(L)x131(W)x46.5(H)mm   |
| Weight (Kgs)               | 1.3 Kgs   |

# DESCRIPTION OF OPERATION



- 1 POWER**  
Power indicator light.
- 2 BT**  
Bluetooth indicator light.
- 3 USB**  
U disk or sound card (PC/Android/iPhone) sound source.
- 4 Optical INPUT**  
This terminal support Optical fiber input.
- 5 PC**  
This USB input is suited for the connection with a PC/laptop computer to manage the functions of the DSP software to set-up the DSP functions of the amplifier.
- 6 REMOTE**  
This terminal is connected with the external Remote controller(purchased separately).
- 7 AUTO/ACC**  
Used to select Auto input and ACC input.
- 8 AUX IN**  
This RCA interface support AUX audio source input.

# DESCRIPTION OF OPERATION

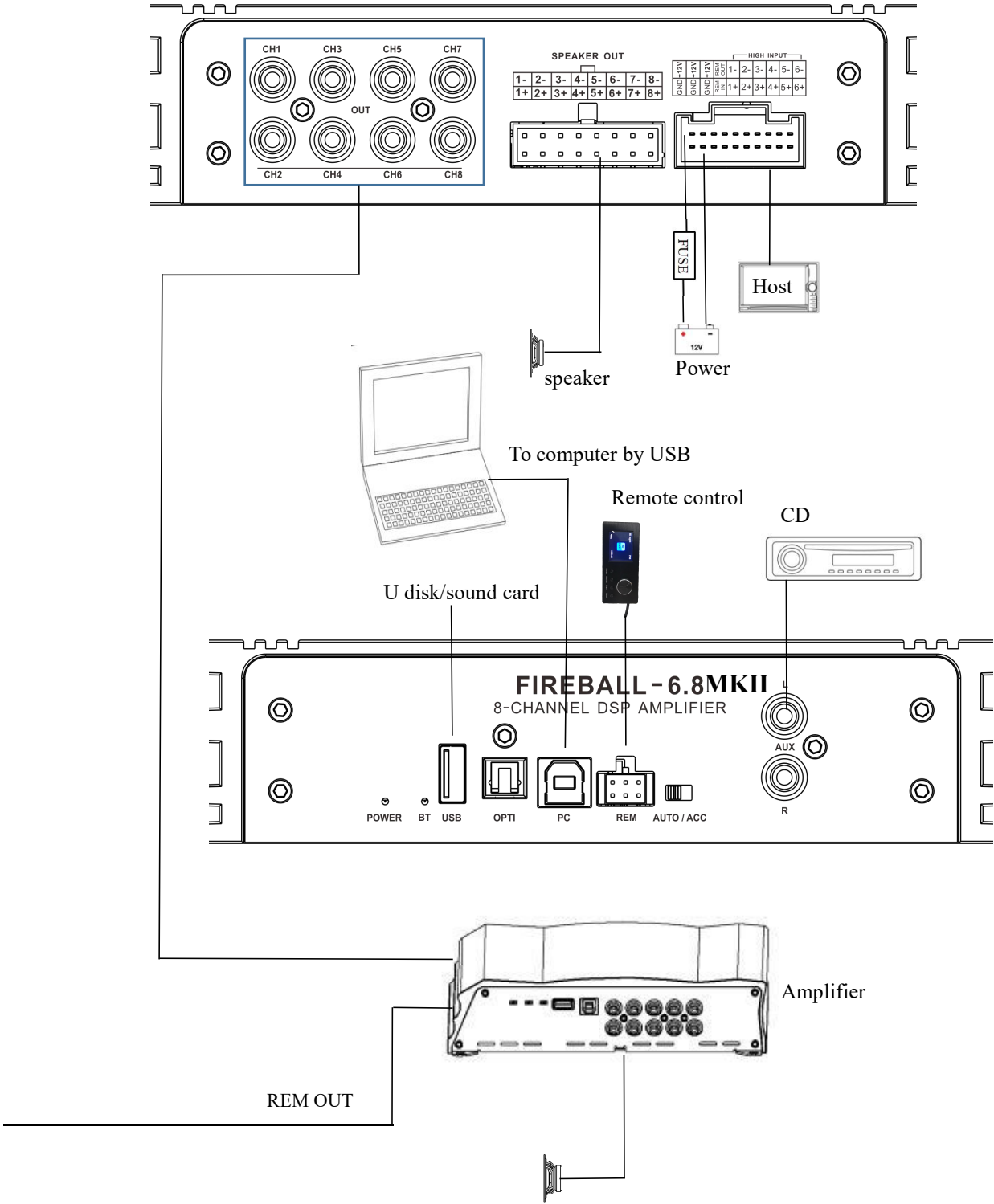


**1** **OUT**  
8CH DSP RCA output.

**2** **SPEAKER OUTPUT CH1-8:**  
8-channel speaker output. Connect here speakers (2 - 4 Ohms) according to your sound system.

**3** **POWER IN AND HI INPUT**  
With 12V power in. REM IN.  
6-channel speaker input

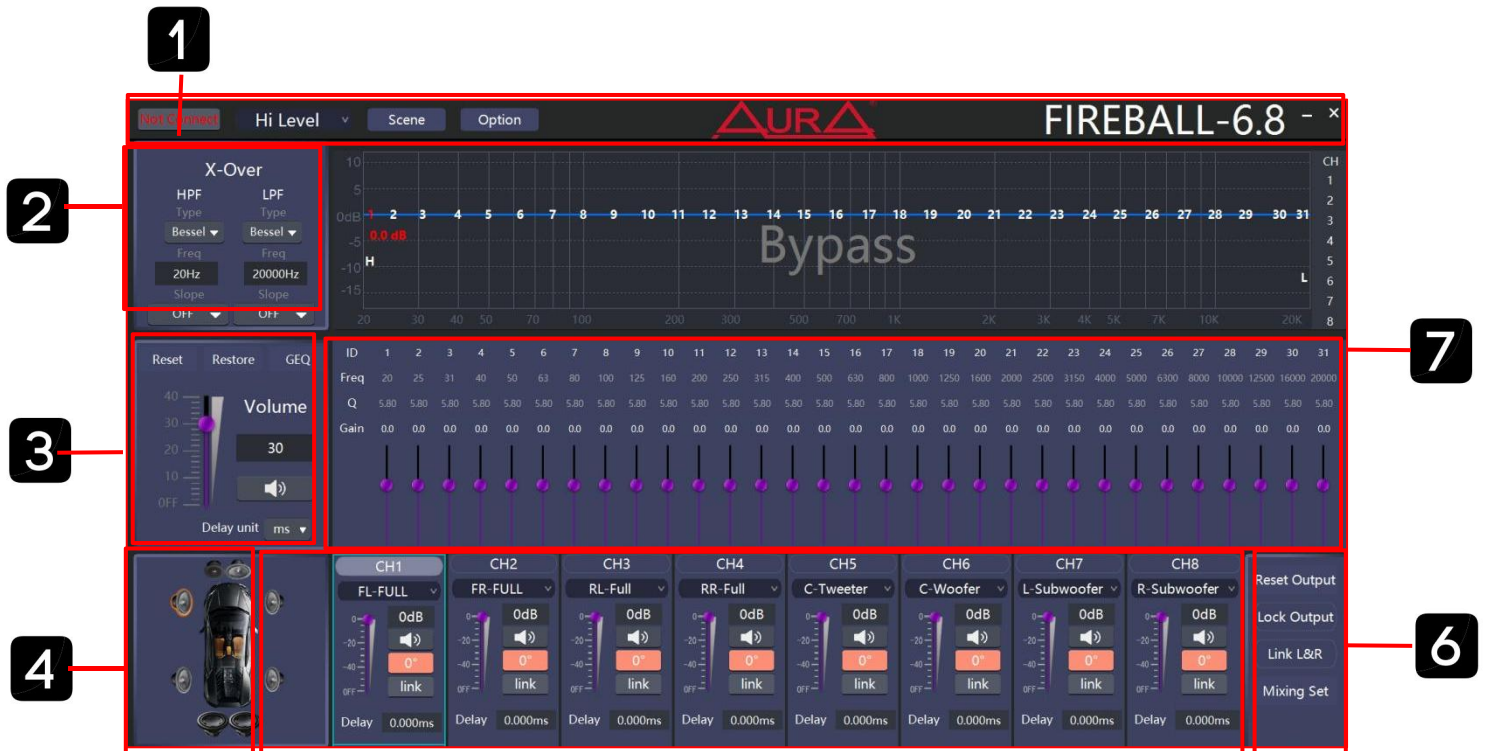
# WIRING DIAGRAM





# PC TUNING SOFTWARE

Please download the PC software from <https://www.enigmatech.co.in/amplifier-fireball> . Connect USB end to the computer using the given PC cable. Open the software, the main page is as follows:



## 1 FUNCTIONAL AND MULTILINGUAL

The PC software to control the DSP provides a clear GUI with the most important functions

## 2 EXTENSIVE FILTER SECTION

Besides the separately adjustable slope for high and low pass filters, different filter characteristics can be selected. Each channel can also be set separately and the output signal to AUX can be freely configured.

## 3 CAR SPEAKER

Select car speaker to choose channel.

## 4 MAIN VOLUME

Control main volume, mute, select delay unit and separate full control of all channels including bypass function.

## 5 CHANNEL

This section contains the core of the software. Each channel can be processed here individually or linking any channel synchronously. Among other things, the volume or the phase position can be controlled here.

## 6 QUICK ADJUSTMENT

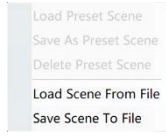
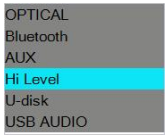
This area contains reset EQ, restore EQ, bypass EQ, graphic EQ, reset output, lock output, link channel tuning.

## 7 EQ CONTROL

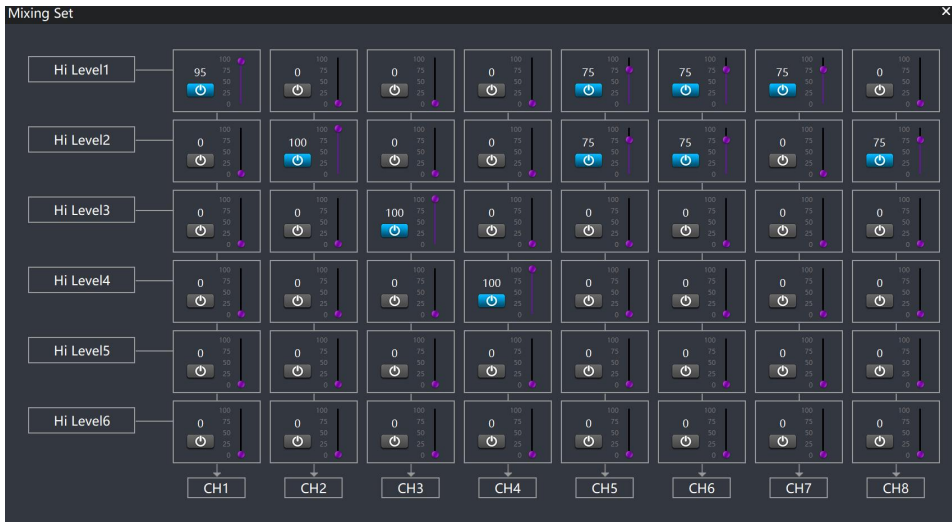
The equalizer section leaves nothing to be desired: graphical real-time display, adjustable Q-factor, Gain and Frequency point.

**Main Area:**

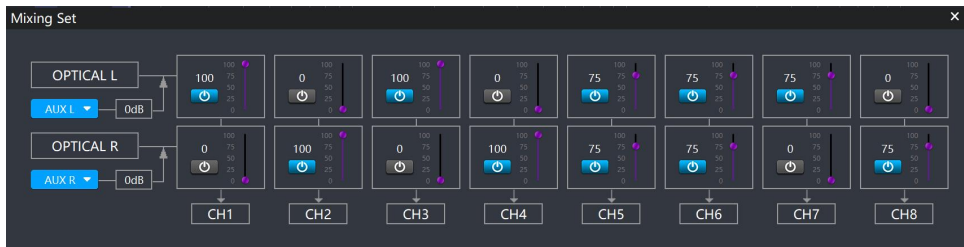
1. Source Selection
2. Scene: Load Save File or Save file
3. Options: Firmware Upgrade, Language Change



2. **Mixing Set** : Click on Mixing set and adjust as per each source selection. Ex Hi Level as source will display as below.

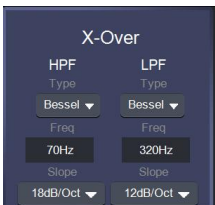


3. Optical Input will have this kind of Mixing set



4. To adjust HPF/LPF type, Frequency setting,

Slope setting, use this area.



Setup: Channel High & Low Pass Filter Setup  
Adjustable: Filter Type,  
Frequency point and Q Value (Gradient or Slope),  
slope between 6dB/Oct – 48dB/Oct.

5. Master Volume Control, Time Delay/GEQ/Reset/Restore



**Reset EQ:** This will restore the parameters of the 31-band equalizer to the original pass-through mode (the frequency of the equalizer, the Q value and the gain are restored to the initial value).

**Restore EQ:** Use this to switch between the currently designed equalizer state parameters and the pass-through mode (the gain of all equalization points is restored to 0 dB, the frequency and value are unchanged).

**Click PEQ Mode to switch GEQ Mode.** The Q value and frequency cannot be adjusted in the PEQ Mode interface.

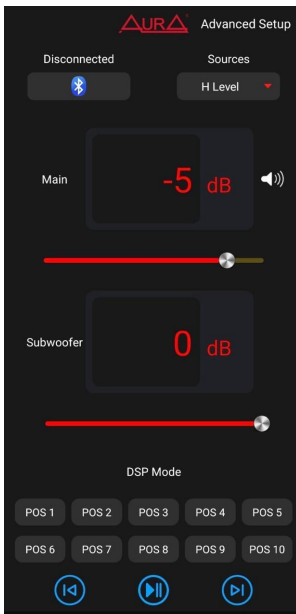
6. Use this area to set each channel Volume , Slope, Phase selection, Link, Time Delay.



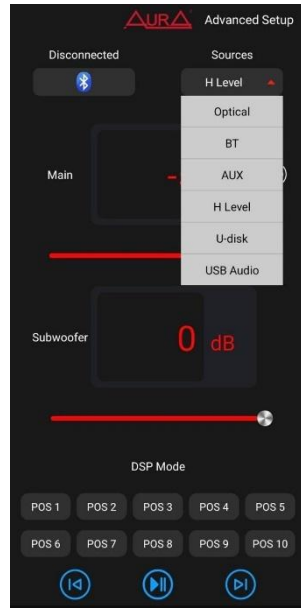
## Mobile Phone App Introduction – Android and IOS.

Mobile phone app can be downloaded from App Store for IOS and Android -Play Store.

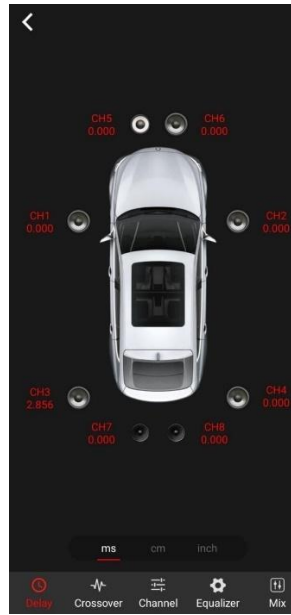
App name - Aura Fireball-6.8 DSP



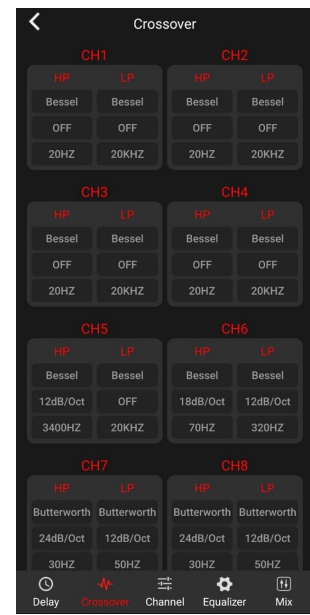
Main Page- Home  
Master Volume



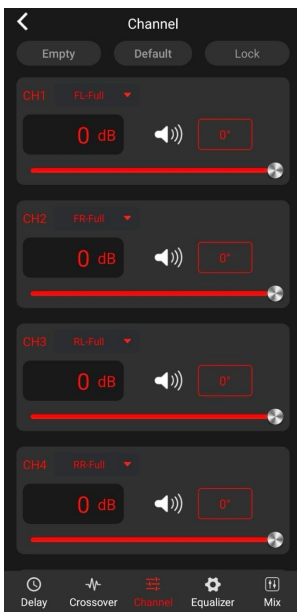
Source Selection



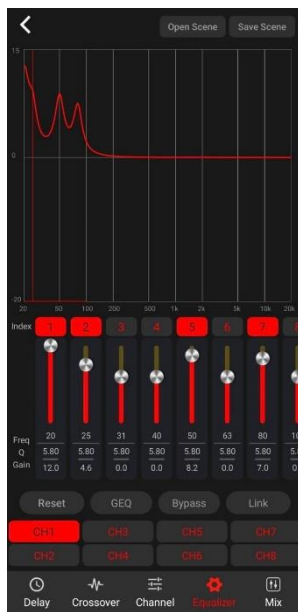
Time Delay by each  
Channel



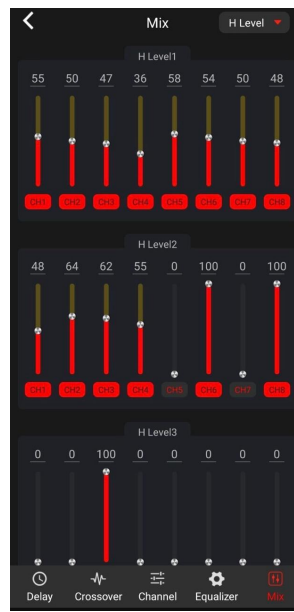
Crossover/Frequency/Slope



Channel Volume/Phase  
Slope



31-Band EQ Adjustment  
Reset/GEQ/Bypass



Mixing set by Source

## WARRANTY

This product has one year warranty . To ensure your warranty policy keep your original receipt proofing the date of purchase. Any damage to the product as a result of misuse, abuse, accident, incorrect wiring, improper installation, alteration of date code or barcode labels, revolution, natural disaster, or any sneaky stuff because someone messed up, repair or alteration outside of our factory or authorized service centers and anything else you have done that you should not have done is not covered. This warranty is limited to defective parts and specifically excludes any incidental or consequential damages connected there with.

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