



EL-PA6.8

Part Nr. 280193



User Manual

Precautions

- Do not configure the machine or read this user manual while driving.
- Adjust the volume of the audio system to a level where you can still hear traffic sounds.
- Read this manual thoroughly to understand relevant safety tips and warnings regarding the machine. After reading, keep this manual in a safe place for future reference.

Remember: Traffic safety should always be your top priority.

1. If you encounter any issues operating the machine, park the vehicle in a safe location before troubleshooting. Prevent children from operating the machine to avoid personal injury or damage.
2. Do not install or repair the machine while it is powered on. Do not attempt to maintain or repair the machine yourself. If necessary, seek professional assistance.
3. To ensure smooth operation, avoid exposing the machine to humid environments or spilling liquids on it.



Packing List

The package includes the following items. If any item is missing, please contact the authorized seller or manufacturer promptly.

Items	Quantity
EL -PA6.8	1 Pc
User Manual	1 Pc
High-Level Input Cable Harness	1 Pc
High-Level and Power Cable Harness	1 Pc
USB 2.0 cable	1 Pc

Contents

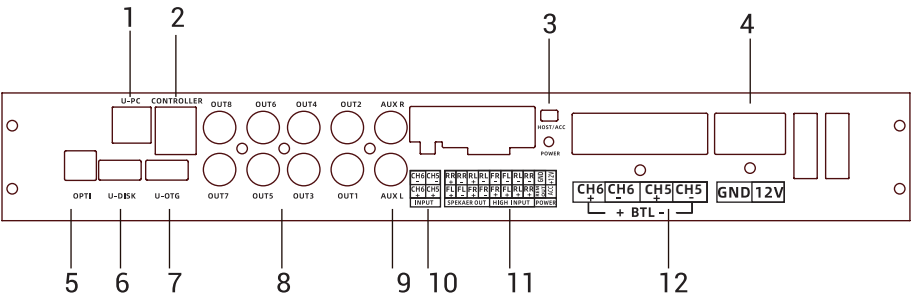
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Part 1: Introduction to Machine Interface

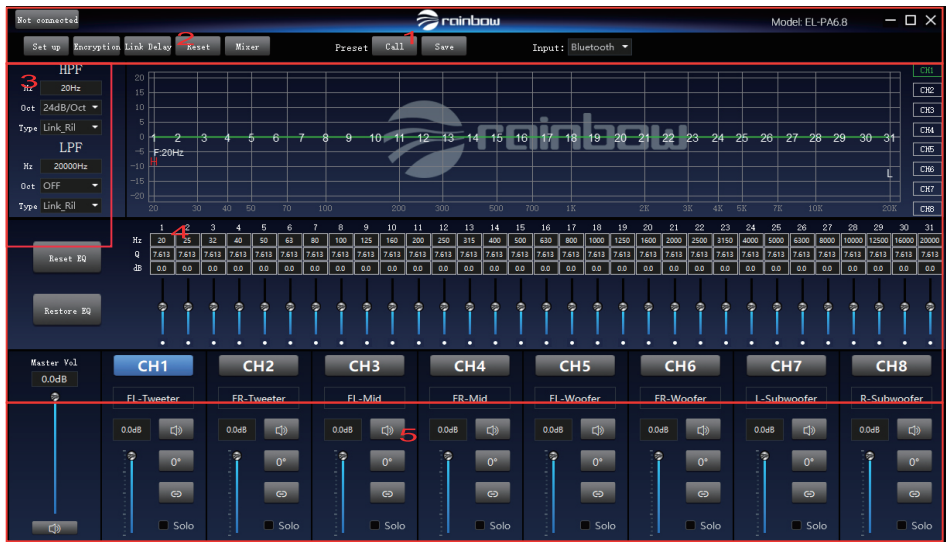


- 1. Tuning software computer cable interface
- 2. Controller interface
- 3. Startup mode selection
- 4. Power connector
- 5. Optical fiber input interface
- 6. Lossless music USB interface
- 7. OTG play
- 8. RCA output interface
- 9. AUX stereo input interface
- 10. High-level input interface
- 11. High-level input and speaker output interface
- 12. High-power speaker output interface

Note: The EL-PA6.8 is compatible with the DRC PRO from Rainbow Audio.

Part 2: Overview of Control Software

PC Software Overview



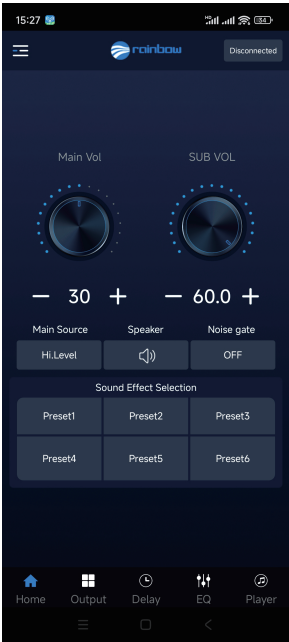
- 1. Main Menu
 - Presets: Load and save presets or entire device data.
 - Audio Source: Select from High-Level, RCA, Bluetooth, Optical, Player, or USB Audio.
 - Noise Gate: Set to Off or select a level from 1 to 7.
- 2. Function Settings
 - General Settings: Update firmware, independently control source volume, switch language (Chinese/English), and view software version information.
 - Encryption: Encrypt tuning data.
 - Reset: Reset or clear output configurations.
 - Mixer: Select mixing and frequency blending options.
- 3. HPF and LPF Settings
 - Select the cutoff frequency, filter type, and slope for the High-Pass Filter (HPF) and Low-Pass Filter (LPF).
 - Configure Noise Gate settings.
 - Reset EQ, bypass EQ, configure PEQ settings, and adjust treble, mid, bass, and sub-bass boost settings.
- 4. EQ Settings
 - Set the cutoff frequency, Q value, and gain for output channels.

Part 2: Overview of Control Software

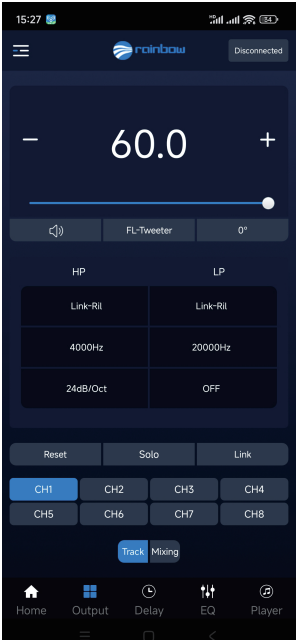
5. Volume Settings

- Adjust the master volume from -60dB to 0dB. Click the speaker icon to mute.
- For individual channels:
Slide the rainbow logo slider up to increase the volume or down to decrease it.
Click the speaker icon to mute.
Switch the phase between 0° and 180°.
Set the delay.
Click 'Solo' to mute other channels.
Click 'Linked' to adjust paired channels simultaneously.

Mobile Software Overview



Home

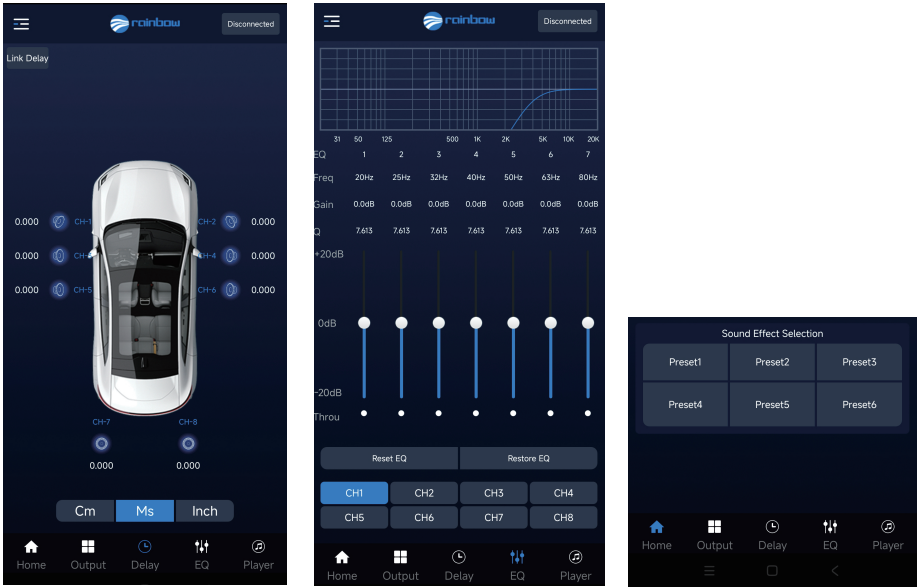


Crossover



EQ

Part 2: Overview of Control Software



Delay

Mix

Presets

1. Home page

Load data, and enhance high, mid, low, and subwoofer volume; select main and auxiliary audio sources; adjust the overall volume.

2. Crossover Page

Fine-tune high-pass and low-pass slopes for each channel; precisely adjust frequency with linked left and right channels; reset output; switch phase; select output types; adjust individual channel volumes.

3. Equalizer Page

Adjust gain, Q Value, and frequency for each channel; reset the equalizer; fine-tune equalization parameters.

4. Delay Page

Adjust the delay for each channel; switch between different delay units.

5. Mix Page

Configure input settings for audio sources.

6. Presets Page

Save, load, or delete customized data.

Part 3: Product Parameters

High-End Components	High-Performance AKM DSP Chip: 269MHz/48kHz/24Bit integrated ADC/DAC: 10-192kHz/24Bit high-end low-noise dual op-amp high-end audio capacitor
Input	6CH High Level, AUX, Optical Fiber (48kHz/16Bit) , integrated digital Bluetooth Supports U disk playback formats: WAV, MP3, APE, FLAC Supports audio input via OTG connection from mobile phones, including 192 kHz/24-Bit music formats and DSD
High-Level Input Mixer	Each channel supports up to 6-way independent input signal mixing
Bluetooth	1. Bluetooth 5.0 2. Bluetooth Protocol: SBC+AAC+BLE+SPP 3. Bluetooth Formats: SBC, AAC
Output	8CH RCA, 6CH High Level
Amplifier Output	Class D amplifier RMS: 6CH × 80 W MAX: 6CH × 150 W, 5CH/6CH: 1 × 300 W (bridged)
Dynamic Range	≥ 102dB
Signal-to-Noise Ratio	≥ 98dB
Total Harmonic Distortion	≤0.03%
Input Sensitivity	RCA: 1-6Vpp, High Level: 8-28Vpp
Frequency Response	20Hz-20kHz
Input Impedance	Low Level Input: 20kΩ, High Level Input: 4.7Ω

Part 3: Product Parameters

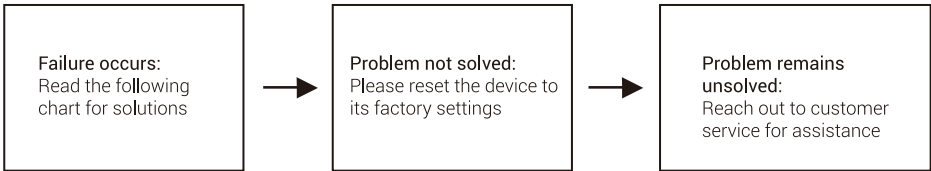
RCA Output Voltage	RCA: 6Vpp
Power Supply	DC 9V-17V (support EV)
Smart Mixing	High-Level, AUX, Optical Fiber, Bluetooth, and OTG
Output Crossover	Each channel is equipped with independent multi-stage HPF and LPF. 1. Type: Butterworth, Linkwitz-Riley, Bessel 2. Crossover Frequency Range: 20Hz-20kHz, Resolution: 1Hz 3. Slope: 6dB/Oct-48dB/Oct
Output EQ	1. 31-Band EQ 2. Frequency Response: 20Hz-20kHz, Resolution: 1Hz 3. Q Value (Slope): 0.429-28.877 4. Gain: - 20.0dB to + 20.0dB, Resolution: 0.1dB
EQ Adjustment	Single Channel Adjustment, Left/Right Linking Adjustment, Delay Linking Adjustment, Gain Linking Adjustment, etc
Output Phase	Each channel can be independently switched between 0° and 180°.
Output Delay	Each Channel: 0.000-20.000ms, 0.00-692cm, 0.00-272inch
Output Volume	Single Channel Output Volume: mute, - 60dB-0dB Single Channel Sub Volume: mute, - 60dB-0dB Master Volume Control: mute, - 60dB-6dB
DRC	Mode Selection, Master Volume Control, Chinese/English Switch, Bass Volume Control, Previous/Next Track, Pause/Play, Track Display, etc
Computer Tuning	Windows, Windows XP, USB, No Driver Required
Mobile APP	Android APP, iOS APP

Part 3: Product Parameters

Operating Temperature	-40°C to 60°C
Storage Temperature	-40°C to 80°C
Sampling Rate	DSP: 269MHz/48kHz/24Bit integrated ADC/DAC: 10-192kHz/24Bit
OTG Playback	192kHz/24Bit music, mobile DSD format
REM Input	High Level (FL + / FL -) or ACC Startup (Optional)
REM Output	+12V (0.1A)
Standby Power	≤0.1W
Gross Weight	1.8 kg
Product Dimensions	Approx. 318mm x 150mm x 50mm
Scene Operation	The device can save 6 preset music scenes

Part 4: Common Troubleshooting

Ensure all cables and interfaces are correctly connected before turning on the power.



Common Troubles & Solutions:

NO.	Fault Phenomenon	Causes & Solutions
1	No Power	Check the power connection; Check the startup mode.
2	No Sound	Check if it is in mute mode; Check if the correct input channel has been selected.
3	Unable to connect USB	Check the USB connection; Check if a "HID-compliant device" has been installed.

注意事项

为了您的安全，请不要在驾驶过程中操作机器或查看本说明书；驾驶车辆时，请将音量调到能清楚听到外界声音水平。开始操作前，请详细阅读本手册，了解本使用手册和机器上的相关安全提示和警告标识，阅读完之后妥善保管，防止丢失。

首先请注意交通安全：

- 1、如您在操作本机器遇到困难时，请将车辆停靠在安全的地方后操作，勿让儿童操作本机器，以免造成人身伤害或者机器损坏。
- 2、在接通电源的情况下请勿安装或维修本机。机内没有用户能维修的地方，请勿自行保养，维护安装本机器，如有需要，请找专业人员打开和维修。
- 3、为了保证机器正常运行，请不要将机器暴露在潮湿的空气中，更不能将液体洒落在机器上。



包装清单

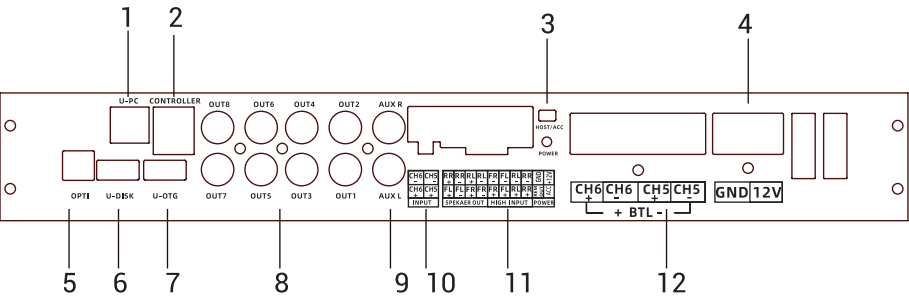
根据您购买的型号，包装箱内应放置如下物件，如有缺少，请尽快通知销售商或厂家。

配件	数量
EL-PA6.8	1 台
用户手册	1 本
高电平输入线	1 条
高电平和电源复合线	1 条
USB 2.0线束	1 条

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第一部分：机器接口简介

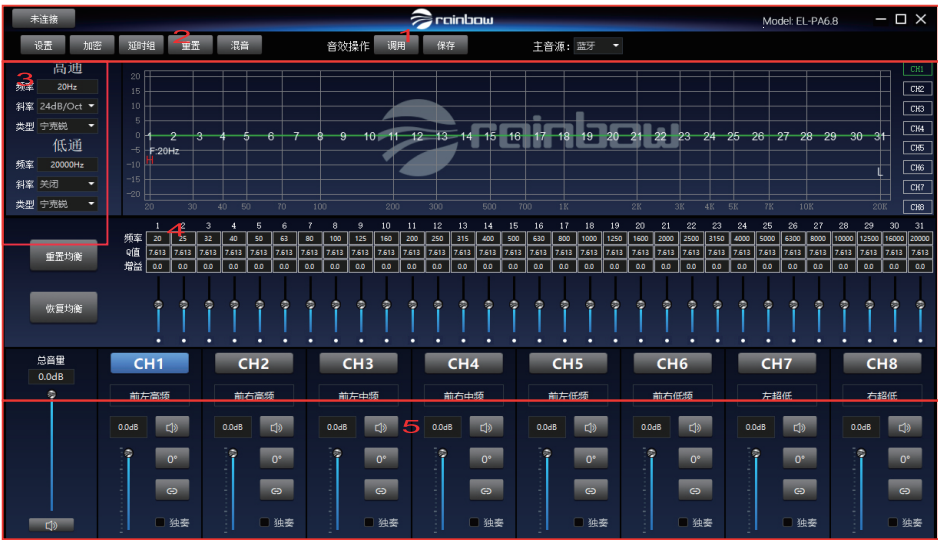


- 1、调音软件电脑连接线接口
- 2、控制器接口
- 3、开机模式选择
- 4、电源接口
- 5、光纤输入接口
- 6、无损音乐USB接口
- 7、OTG播放接口
- 8、RCA输出接口
- 9、AUX立体声输入接口
- 10、高电平输入接口
- 11、高电平输入以及喇叭输出复合接口
- 12、大功率喇叭输出接口

注意：EL-PA6.8 适配 Rainbow Audio 的 DRC PRO 控制器

第二部分：控制软件介绍

一、PC软件使用简介



1、主菜单编辑区

前置：音效数据调用或存档，整机音效数据调用或存档。

主音源：高电平、低电平、蓝牙、光纤、播放器（U-Disk）、USB Audio（OTG）。

噪声门：关闭；选择1-7级门限。

2、功能编辑区

设置：固件更新、输入音源音量独立控制、中英文切换、软件版本查阅。加密：调音数据加密。

重置：重置输出配置、输出配置清空。混音：混音混频选择。

3、滤波器编辑区

选择高通滤波和低通滤波的频率、斜率和类型；噪声门设置；EQ复位、EQ直通、参量均衡设置；高音、中音、低音和超低音增强设置。

4、EQ编辑区

设置输出通道的频率、Q值（响应带宽）和增益（增加或减少节流点附近的频率响应幅度）。

5、音量编辑区域

调节主音量，调节范围是-60dB到0dB，点击喇叭按钮静音总音量。上拉或下拉按钮增加或降低单个通道音量、点击喇叭按钮静音单个通道音量、选择0°或180°相位设置、设置延时。选择“独奏”静音其它通道，选择“联调”同步调节单个或两个通道。

第二部分：控制软件介绍

二、手机软件使用简介



首页



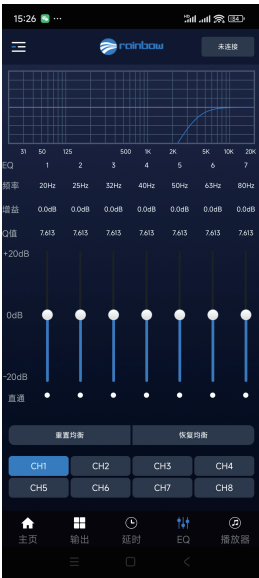
分频器



均衡



延时



混音



存档

第二部分：控制软件介绍

1、主页面

数据调用；高音、中音、低音、超低音增强；主音源和辅助音源选择；总音量大小调节。

2、通道分频器页面

每个通道的高低通斜率调节；正反向切换；输出类型选择；通道音量调节；频率左右通道联调；输出重置。

3、均衡页面

每个通道均可调节增益、Q值、频率；重置均衡；参量均衡。

4、延时页面

可调节每个通道的延时以及延时单位切换。

5、混音页面

可进行音源输入设置。

6、音效数据存档页面

对调节好的数据保存、调用或删除。

第三部分：产品参数指标

技术规格

优质器件	AKM 高性能 DSP 芯片 269MHz/48kHz/24Bit 内置数模转换 ADC/DAC: 10 ~ 192kHz/24Bit 高性能低噪声双运算放大器, 高性能音频电容
输入通道	6 通道高电平、AUX、光纤（支持48kHz/16Bit）, 内置数字蓝牙 支持 U 盘播放格式: WAV, MP3, APE, FLAC 支持通过OTG连接从手机输入音频, 包括192kHz/24Bit音乐格式和DSD 格式
高电平输入合频	每个通道最多支持6路独立输入合频
蓝牙	蓝牙 5.0 蓝牙协议: SBC+ACC+BLE+SPP 蓝牙格式: SBC, AAC
输出通道	8通道低电平 RCA、6 通道高电平
功放输出	D类功放 额定: 6CH × 80 W 峰值: 6CH × 150 W, 5CH/6CH: 1 × 300 W（桥接）
动态范围	≥ 102dB
信噪比	≥ 98dB
总谐波失真	≤ 0.03%
输入灵敏度	RCA: 1 ~ 6Vpp 高电平: 8 ~ 28Vpp
频率响应	20Hz ~ 20kHz
输入阻抗	低电平输入: 20kΩ 高电平输入: 4.7Ω
RCA输出电压	RCA: 6Vpp
电源	DC 9V ~ 17V (支持新能源车)

第三部分：产品参数指标

智能混音	AUX、光纤、蓝牙、OTG等音源选择切换高电平混音音源
输出信号分频器	每路通道输出配有多阶高低通独立滤波器 1、专业滤波类型：巴特沃斯 (Butterworth)、宁克 - 锐 (Linkwitz- Riley)、贝塞尔 (Bessel) 2、滤波分频点:20Hz~20kHz, 分辨率：1Hz 3、滤波斜率（坡度）设置：6dB/Oct ~ 48dB/Oct
输出信号均衡器	1、31段均衡器 2、频率范围：20Hz ~ 20kHz，分辨率1Hz 3、Q值 (斜率或坡度)：0.429 ~ 28.877 4、增益：- 20.0dB ~ 20.0dB，分辨率 0.1dB
均衡器联调模式	独立调节/左右联调/延时联调/增益联调等
输出相位	每个通道独立调节：正相/反向(0/180°)
输出延时	每个通道：0.000 至 20.000 毫秒，0.00 至 692 厘米，0.00 至 272 英寸
输出音量	单通道输出音量：静音、- 60dB ~ 0dB 单通道超低音音量：静音、- 60dB ~ 0dB 总音量调节：静音、- 60dB ~ 6dB
线控扩展	模式选择、总音量选择、中英文切换、低音音量控制、U盘上下曲控制、U盘歌曲暂停/播放、曲目显示等
电脑调音	Windows 系统、XP 系统、USB接口、免驱
手机APP	安卓手机APP、苹果手机APP
使用环境温度	- 40 ~ 60℃
保存温度	- 40 ~ 80℃
系统采样率	DSP：269MHz/48kHz/24Bit 内置 ADC/DAC：10 ~ 192kHz/24Bit

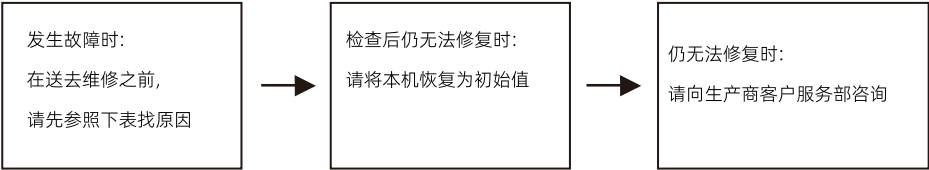
第三部分：产品参数指标

OTG播放	192kHz/24Bit音乐格式, 手机DSD格式
启动 REM 输入	高电平启动（FL+/FL-）、ACC 启动可选
启动 REM 输出	+12V启动电压输出（0.1A）
待机功耗	≤0.1W
毛重	约1.8kg
产品尺寸	约318mm x 150mm x 50mm
场景操作	机器可保存 6 种预置音效

第四部分：常见故障解决

在通电前，应仔细检查连接线是否正常，必须保证所有接口为正常连接。

常见故障判断及处理方法：



故障排除方法：

序号	故障现象	原因及解决方法
1	不通电	电源连接是否正确连接？ 启动方式是否正确连接？
2	无声音	是否启动了静音操作？ 信号输入通道选择是否正确？
3	USB联机不上	USB 连接线有无插到位？ 是否安装了HID兼容设备？