



EL-AP300D



User's Manual

Precautions

Please do not configure the machine or read this user manual while driving the vehicle. Turn the volume of the audio system to a level where you can hear traffic sounds. Please read this manual in detail to understand relevant safety tips and warning signs on the machine. After reading, please keep this manual well for reference.

Traffic safety always comes first.

1. Should you have trouble operating the machine, you could park the vehicle in a safe place for troubleshooting. Prevent children from operating the machine, so as to avoid personal injury or machine damage.
2. Do not install or repair the machine with power on. Please do not maintain or repair the machine yourself. If necessary, please request a professional for assistance.
3. In order to ensure smooth operation, please do not expose the machine to a humid environment, let alone spill liquid on it.



Packing list

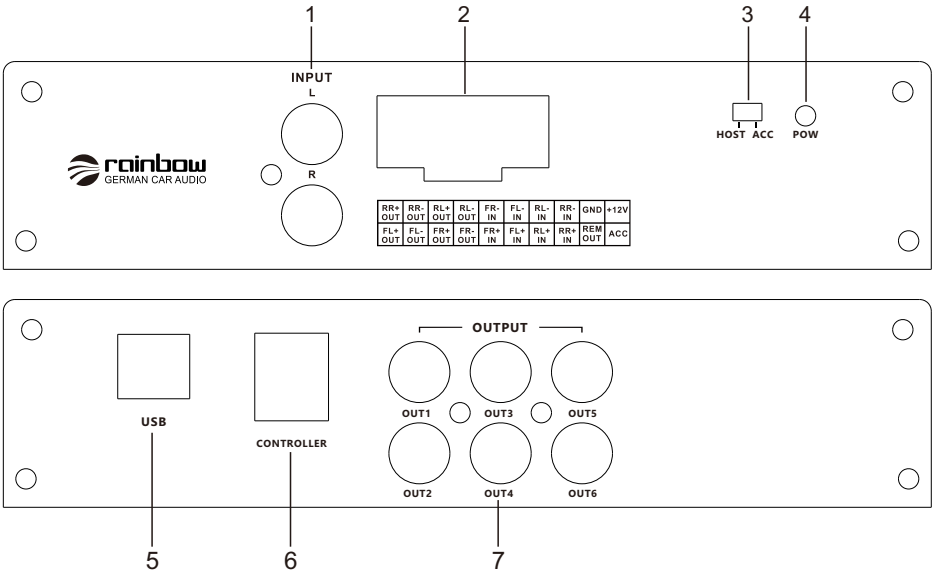
The package contains the following items. If anything is missing, please inform the authorized seller or manufacturer as soon as possible.

Items	Quantity
EL-AP300D Machine	1 Pc
User's Manual	1 Pc
1.5m USB 2.0	1 Pc
Mounting bracket kit	1 Pc

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Part 1: Introduction to Machine Interface



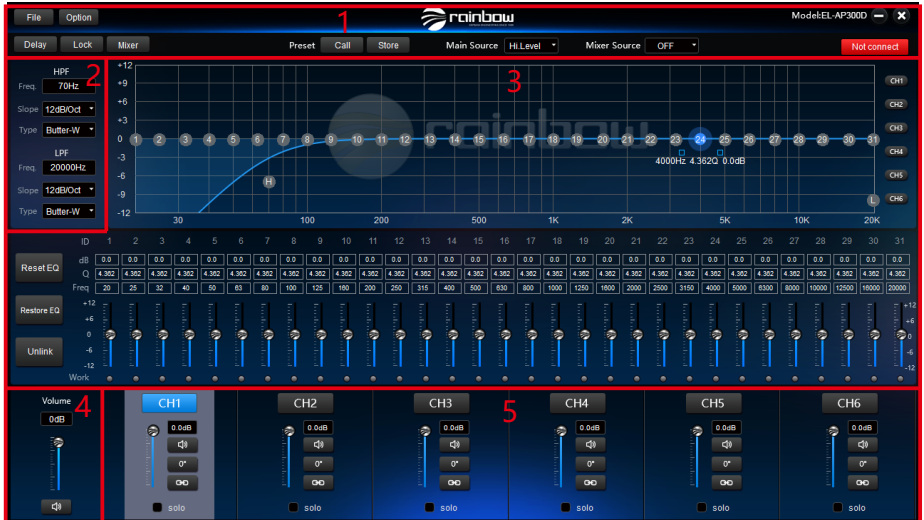
- 1. Low level input interface
- 2. High level input and output and power interface

RR+ OUT	RR- OUT	RL+ OUT	RL- OUT	FR- IN	FL- IN	RL- IN	RR- IN	GND	+12V
FL+ OUT	FL- OUT	FR+ OUT	FR- OUT	FR+ IN	FL+ IN	RL+ IN	RR+ IN	REM OUT	ACC

- 3. Machine startup mode switch
- 4. Power indicator
- 5. USB2.0 interface
- 6. Controller interface
- 7. Low level output interface

Part 2: Introduction to Control Software

PC Software Introduction



1. Main menu settings

Load or save PC preset or the whole machine preset; switch between Chinese and English, Advanced (Master attenuation and noise gate) , update firmware, reset machine, view version number, channel delay setting, data encryption; 6 preset sound effects selection and storage; main source and mixer source selection setting.

2. Filter settings

Select frequencies, slopes and types of high-pass and low-pass filters.

3. EQ settings

Equalizer setting for output channel (frequency, Q value, and gain), pass through, restore and reset equalizer, joint tuning or solo tuning switch.

4. Volume settings

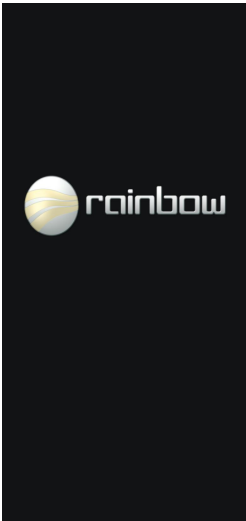
Setting range: OFF, -59dB to 6dB, click speaker button to mute.

5. Output channel settings

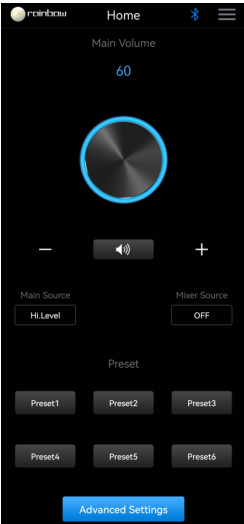
Set the volume, mute, phase shift for the output channel, joint tuning method selection and solo selection.

Part 2: Introduction to Control Software

Mobile Software Introduction



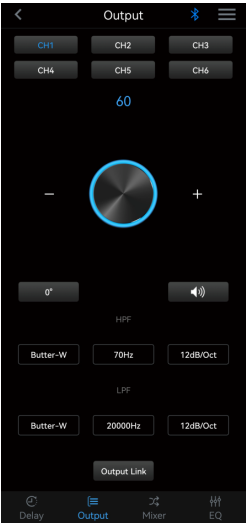
Start page



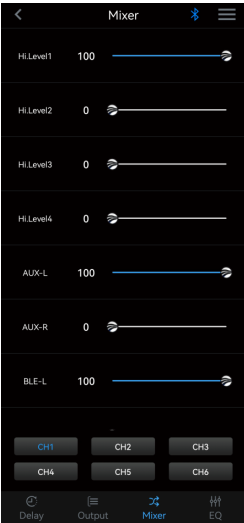
Home



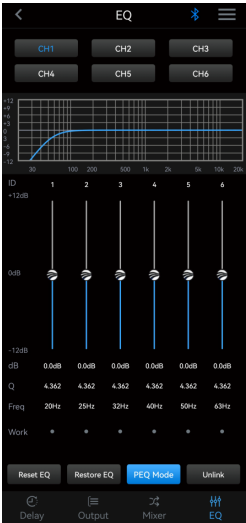
Delay



Channel



Mixer



EQ

Part 2: Introduction to Control Software

1. Start page of the software

2. Home page

Encrypt data, view the model and version number of the machine and the software; master volume adjustment, main audio source selection, storage and selection of 6 preset sound effects, switch to advanced interface.

3. Delay page

Delay setting for the output channel, click "DELAY" button for delay setting.

4. Channel page

Adjust output channel volume, phase and mute the channel; set types, frequencies and slopes of high-pass and low-pass filters; joint tuning for output channels.

5. Mixer interface

4 high-level, 2 AUX, bluetooth left and bluetooth right mixing selection and adjustment, adjustment range: 0~100.

6. EQ page

Adjust EQ curve (gain, Q value and frequency); pass through, restore and reset equalizer, joint tuning or solo tuning switch.

Part 3: Product Parameters

Technical Specifications

Dynamic Range	$\geq 100\text{dB}$
S/N Ratio (RCA)	$\geq 98\text{dB}$
THD	$\leq 0.05\%$
Freq. Response	20Hz~20kHz
Input Impedance	RCA: 20k Ω ; High level: 18 Ω
Low Level Output Impedance	51 Ω
Peak Power	4 $\times$ 70W
Input Range (max)	RCA: 6Vpp; High level: 26Vpp
Output Range (max)	RCA: 6Vpp; High level: 40Vpp
Operating Temperature	-20 ~ 60 $^{\circ}\text{C}$
Supply Voltage	DC 9V~16V
REM Input	High level input FL+/FL- or ACC on function (optional)
REM Output	+12V starting voltage (0.2A)
Standby Power	$\leq 0.1\text{W}$
Net Weight	Approx.0.93kg
Dimension	178 (L) *150 (W) *40 (H)mm

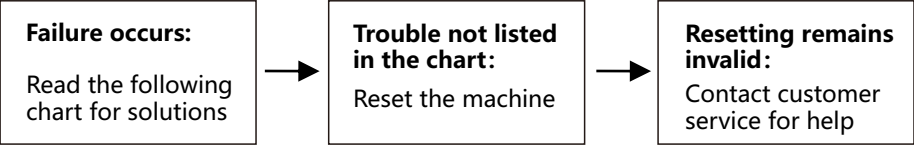
Functional Parameters

Input Signal Type	4-channels high level, 2-channels low level, built-in Bluetooth
Output Signal Type	6-channels low level, power: 4 $\times$ 70W
Output Signal Gain	Gain range: mute, -59.9dB~0.0dB
Output Signal EQ	31-band equalizer 1. Frequency range: 20Hz~20kHz, resolution: 1Hz 2. Q value (slope): 0.404~28.852 3. Gain: -12.0dB~+12.0dB, resolution: 0.1dB
Output Signal X-Over	Each channel has an independent multi-stage filter 1. Types: Linkwitz-Riley, Butterworth and Bessel 2. Crossover point: 20Hz~20kHz, resolution: 1Hz 3. Slope setting: 6dB/Oct~48dB/Oct and OFF
Output Phase and Time Alignment	Phase and delay adjustments are available for each output channel, parameter range Phase: in-phase or reverse-phase Time: 0.000~15.000ms, 0~205cm, 0~519 inch
Scene Operation	The machine can save 6 preset music scenes

Part 4: Troubleshooting Guide

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

Troubleshooting Process:



Common Troubles & Solutions:

No.	Fault Phenomenon	Causes & Solutions
1	No Power	Check the power connection; Check the start mode switch.
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

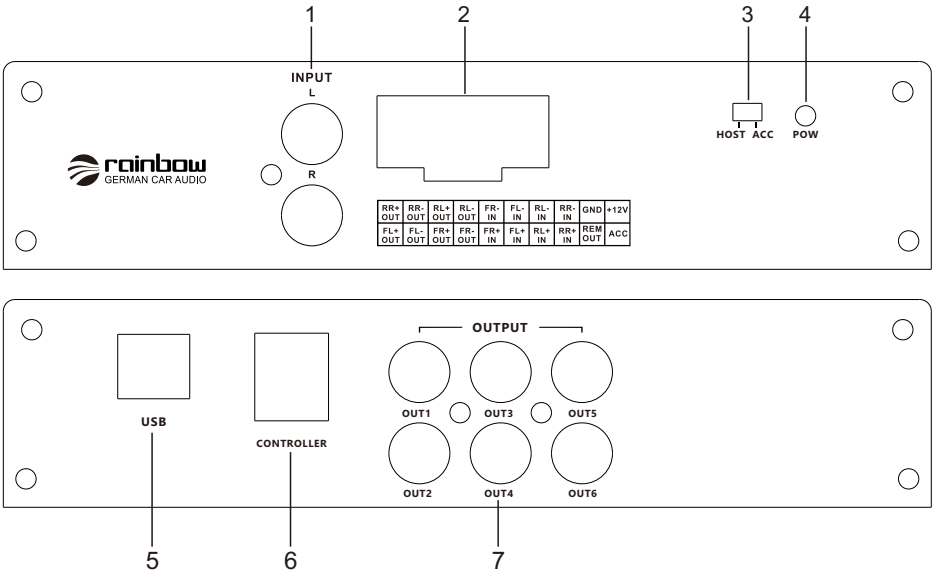
根据您购买的型号，包装箱内应放置如下物件，如有缺少，请尽快通知销售商或厂家：

配件	数量
EL-AP300D主机	1 台
用户手册	1 本
1.5m USB 2.0	1 条
安装支架配件包	1 个

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第一部分：机器接口简介



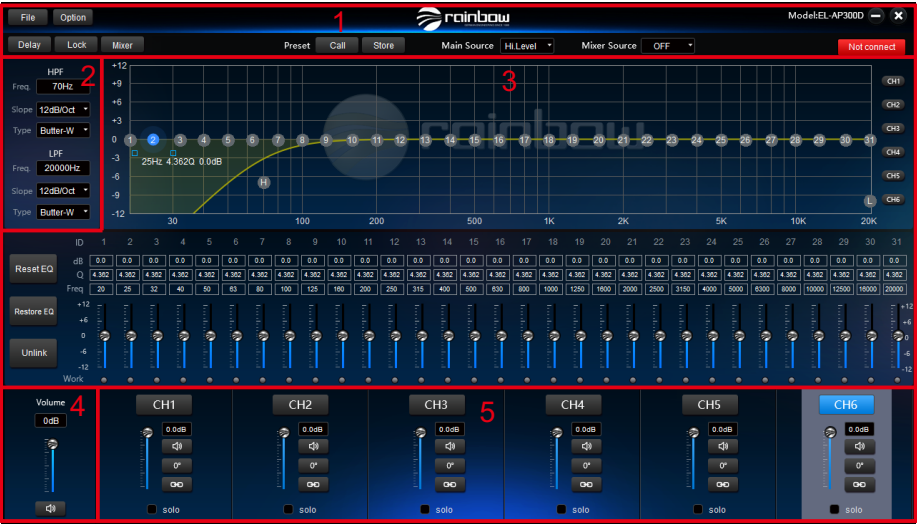
- 1、低电平输入接口
- 2、 高电平输入输出及电源接口

RR+ OUT	RR- OUT	RL+ OUT	RL- OUT	FR- IN	FL- IN	RL- IN	RR- IN	GND	+12V
FL+ OUT	FL- OUT	FR+ OUT	FR- OUT	FR+ IN	FL+ IN	RL+ IN	RR+ IN	REM OUT	ACC

- 3、 机器启动方式开关
- 4、 电源指示灯
- 5、 USB2.0接口
- 6、 控制器接口
- 7、 低电平输出接口

第二部分：控制软件简介

一、PC软件使用简介



1、主菜单编辑区

加载或另存电脑上场景文件，加载或保存整机场景；中英文切换、高级（主音源衰减和噪声门）、固件更新、恢复出厂设置、查看版本；通道的延时设置、数据加密；6组预置音效的调用和存储；主音源和混音音源选择操作。

2、滤波器编辑区

高通和低通滤波器的频率、斜率以及类型的选择。

3、输出EQ编辑区

输出通道的均衡设置，频率、Q 值（响应带宽）和增益（增加或减少该频率点附近的频响幅度），可直通、恢复和重置均衡，联调或不联调切换等操作。

4、主音量调节区

音量调节范围：关闭，-59dB ~ 6dB，点击喇叭按钮可直接静音总音量。

5、输出通道编辑区

输出通道的音量、静音、正反相设置、联调方式选择以及独奏选择。

第二部分：控制软件简介

二、手机软件使用简介



启动页



主页



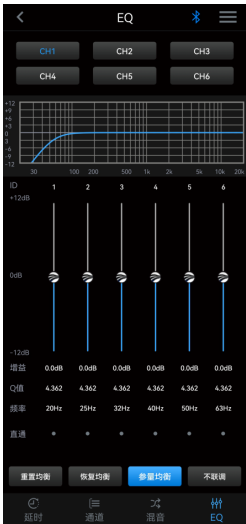
延时



通道



混音



EQ

第二部分：控制软件介绍

1、软件的启动页面

2、主页界面：

可对数据加密，查看设备和软件的型号和版本号；对主音量大小进行调节；主音源选择、6组预置场景的存储或调用和切换至高级界面。

3、延时界面：

声场定位输出通道延时调节，点击“延时”按键进入延时设置。

4、通道界面：

设置输出通道音量、相位和静音；可调节滤波类型、频率和斜率，输出联调设置。

5、混音界面：

可进行4个高电平，2个AUX, 蓝牙左及蓝牙右的混音选择和调节，调节范围：0~100。

6、EQ界面：

对应输出通道EQ曲线的调节（增益、Q值和频率），可直通、恢复和重置均衡，联调或不联调切换等操作。

第三部分：产品参数指标

技术规格

动态范围	$\geq 100\text{dB}$
信噪比 (RCA)	$\geq 98\text{dB}$
总谐波失真	$\leq 0.05\%$
频率响应	20Hz ~ 20kHz
输入阻抗	低电平: 20k Ω ; 高电平: 18 Ω
低电平输出阻抗	51 Ω
峰值功率	4 $\times$ 70W
信号输入范围 (最大)	RCA: 6Vpp; 高电平: 26Vpp
信号输出范围 (最大)	RCA: 6Vpp; 高电平: 40Vpp
使用环境温度	-20 ~ 60 $^{\circ}\text{C}$
电源	DC 9V ~ 16V
REM 输入	高电平信号: FL+/FL-或 ACC 启动可选
REM 输出	+12V 启动电压 (0.2A)
待机功耗	$\leq 0.1\text{W}$
净重	约 0.93 (千克)
产品尺寸	178(长) $\times$ 150(宽) $\times$ 40(高)mm

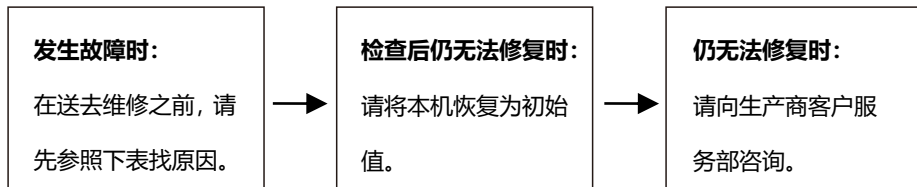
功能参数

输入信号类型	4 通道高电平、2通道低电平、内置蓝牙
输出信号类型	6 通道低电平、4 $\times$ 70W 功率
输出信号增益	增益范围: 静音, -59.9dB ~ 0.0dB
输出信号均衡器	每通道 31 段均衡器 EQ 1、频率范围: 20Hz ~ 20kHz, 分辨率 1Hz 2、Q 值 (斜率或坡度): 0.404 ~ 28.852 3、增益: -12.0dB ~ +12.0dB, 分辨率 0.1dB
输出信号分频器	每路通道配有多阶的高低通独立滤波器 1、专业滤波类型: 宁克-锐 (Linkwitz-Riley)、巴特沃斯 (Butterworth)、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, 关闭
输出相位和延时	每路通道可进行相位和延时调整, 参数范围: 相位: 正相或反相 (0 $^{\circ}$ /180 $^{\circ}$) 延时: 0.000 至 15.000 毫秒、0 至 205 厘米、0 至 519 英寸
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	① 电源连接是否正确连接？ ② 启动方式是否正确连接？
2	无声音	① 是否启动了静音操作？ ② 信号输入通道选择是否正确？
3	USB 联机不上	① USB 连接线有无插到位？ ② 电脑设备管理器的人体学输入设备内有无发 现名为 “HID-compliant device” 的设备。

