



IRON-AP1200SE



User's Manual

Precautions

For your safety, please do not operate the machine or check this manual while driving; please turn the volume to a level where you can clearly hear the outside sound when driving the vehicle. Before starting operation, please read this manual in detail to understand this manual and related safety tips and warning signs on the machine. After reading, keep it in a safe place to prevent loss.

First, pay attention to traffic safety:

1. If you encounter difficulties in operating the machine, please park the vehicle in a safe place and do not allow children to operate the machine to avoid personal injury or damage to the machine.
2. Do not install or repair this machine with the power on. There is no place in the machine that can be repaired by the user. Please do not maintain or install the machine yourself. If necessary, please request a professional to open and repair it.
3. In order to ensure the normal operation of the machine, please do not expose the machine to humid air, let alone spill liquid on the machine.



Packing list

According to the model you purchased, the following items should be placed in the box. If it is missing, please inform the seller or manufacturer as soon as possible:

Items	Quantity
IRON-AP1200SE Machine	1 Pc
User's Manual	1 Pc
1.5m USB 2.0	1 Pc
150mm high level input wire	1 Pc
150mm speaker wire (2×6P)	1 Pc
150mm speaker wire (2×8P)	1 Pc
Mounting bracket kit	1 Pc

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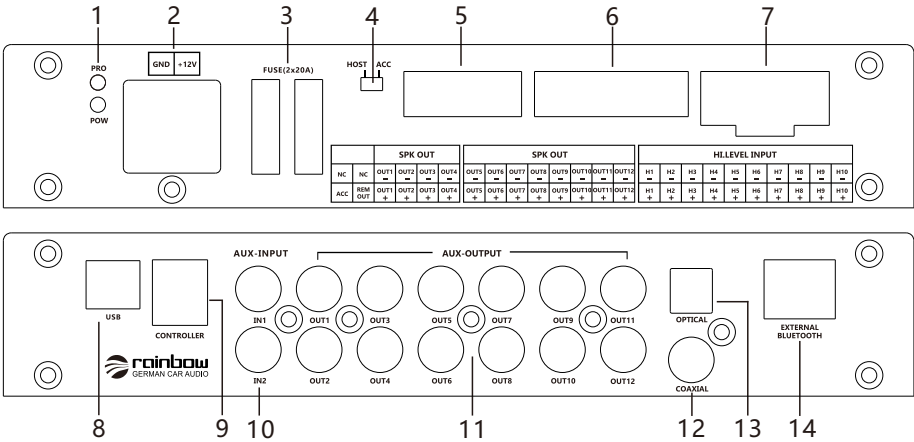
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Part 1: Introduction to Machine Interface



- 1. Power and protection indicators
- 2. Power interface
- 3. 2×20A fuse interface
- 4. Machine start mode switch
- 5. REM and high level output interface

SPK OUT					
NC	NC	OUT1	OUT2	OUT3	OUT4
		-	-	-	-
ACC	REM OUT	OUT1	OUT2	OUT3	OUT4
		+	+	+	+

- 6. High level output interface

SPK OUT							
OUT5	OUT6	OUT7	OUT8	OUT9	OUT10	OUT11	OUT12
-	-	-	-	-	-	-	-
OUT5	OUT6	OUT7	OUT8	OUT9	OUT10	OUT11	OUT12
+	+	+	+	+	+	+	+

- 7. High level input interface

HI.LEVEL INPUT									
H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
-	-	-	-	-	-	-	-	-	-
H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
+	+	+	+	+	+	+	+	+	+

- 8. USB2.0 interface
- 9. Controller interface
- 10. Low level input interface
- 11. Low level output interface
- 12. Coaxial input interface
- 13. Optical input interface
- 14. External Bluetooth interface

Part 2: Introduction to Control Software

PC software Introduction



1. Main menu editing area

Load or save computer scenes; load or save whole machine scenes; switch between Chinese and English, advanced, firmware update, restore factory settings, view version number and restore factory settings; device temperature display channel delay setting, mixer adjustment, encrypt data; 6 groups of preset sound effects recall and storage; main source selection operation.

2. Filter unit editing area

Selection of high-pass and low-pass filter frequencies, slopes and types.

3. Output EQ editing area

The output channel's equalization settings, frequency, Q value (response bandwidth) and gain (increasing or decreasing the frequency response near this frequency point), can pass through, restore and reset equalization, graphic equalization or parametric equalization, switch to set EQ operation with or without link debugging.

4. Volume adjustment area

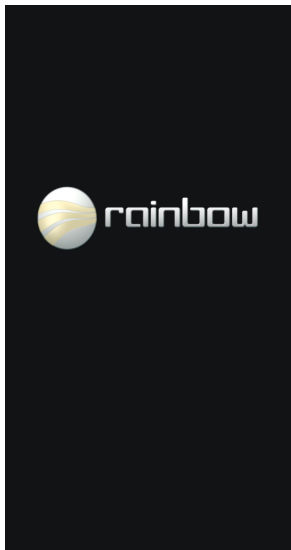
Volume adjustment range: OFF, -59dB to 6dB, click the speaker button to directly mute the volume.

5. Output channel editing area

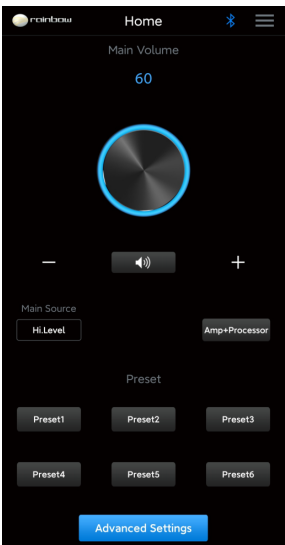
Set the volume, mute, phase of the output channel, link setting and solo selection.

Part 2: Introduction to Control Software

Mobile software Introduction



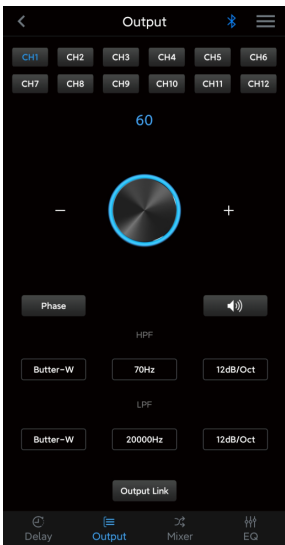
Start page



Home



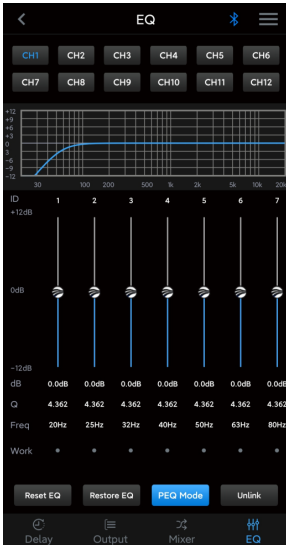
Delay



Output



Mixer



EQ

Part 2: Introduction to Control Software

1. Start page of the software

2. Home page interface

Can encrypt data, view the model and version number of the device and software; master volume adjustment, mute selection; main source selection and processor amplifier switch; storage and recall 6 sets of preset scenes.

3. Delay interface

Sound field positioning output channel delay adjustment, click delay to enter the channel delay setting.

4. Output interface

Set output channel volume, phase and mute, adjustable filter type, frequency and slope setting, output link debugging.

5. Mixer interface

10 high level, 2 AUX, Bluetooth left and Bluetooth right, optical fiber left and optical fiber right mixing selection and adjustment, the adjustment range: 0~100.

6. EQ interface

Corresponding to the adjustment of the output channel EQ curve (gain, Q value and frequency), can pass through, restore and reset equalization, graphic equalization or parametric equalization, switch to set EQ operation with or without link debugging.

Part 3: Product Parameter Index

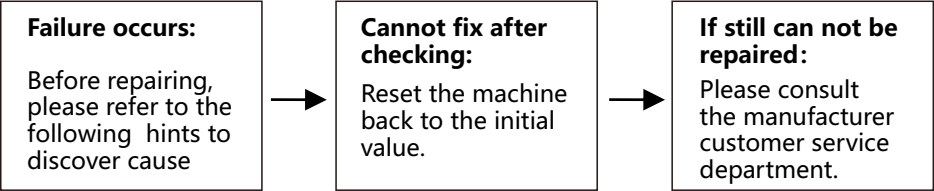
Product Data	
Dynamic Range	≥100dB
S/N Ratio (RCA)	≥98dB
THD	≤0.05%
Freq. Response	20Hz~20kHz
Input Impedance	Low level: 20kΩ; High level: 240Ω
Low Level Output Impedance	100Ω
Peak Power	12×100W
Signal Input Range (max)	RCA: 6.5Vpp; High level: 28Vpp
Signal Output Range (max)	RCA: 6.5Vpp
Operating Temperature	-20 ~ 70℃
Supply Voltage	DC 9V~16V
REM Input	High level input: H1 +/H1- or ACC on function (optional)
REM Output	+12V starting voltage output (0.2A)
Standby Power Consumption	≤0.1W
Weight	Approx. 2.93kg
Dimension	240 (L) *189 (W) *50 (H)mm

Functional Parameters	
Input Signal Type	10-channels high level, 2-channels low level , external Bluetooth, optical/coaxial
Output Signal Type	12-channels low level, 12×100W peak power
Output Signal Gain	Gain range: mute, -59.0dB ~ 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 to 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 Delay: 0.000 to 20.000 ms, 0 to 692 cm, 0 to 273 inch
Scene Operation	The machine can save 6 preset music scenes

Part 4: Common Troubleshooting

Before power on, carefully check the cable normally connected. We must ensure all interfaces with correct connection.

Common Fault Diagnosis and Treatment



Troubleshooting Methods:

No.	Fault Phenomenon	Reason & Solutions
1	No Power	① Check the power connection ② Check the start-up mode connection
2	No Sound	① Whether or not in mute mode ② Whether or not choose the right input signal channel
3	Unable to connect USB	① Check the USB connection ② 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
IRON-AP1200SE主机	1台
用户手册	1本
1.5m USB 2.0	1条
150mm高电平输入线	1条
150mm喇叭线（2×6P）	1条
150mm喇叭线（2×8P）	1条
安装支架配件包	1包

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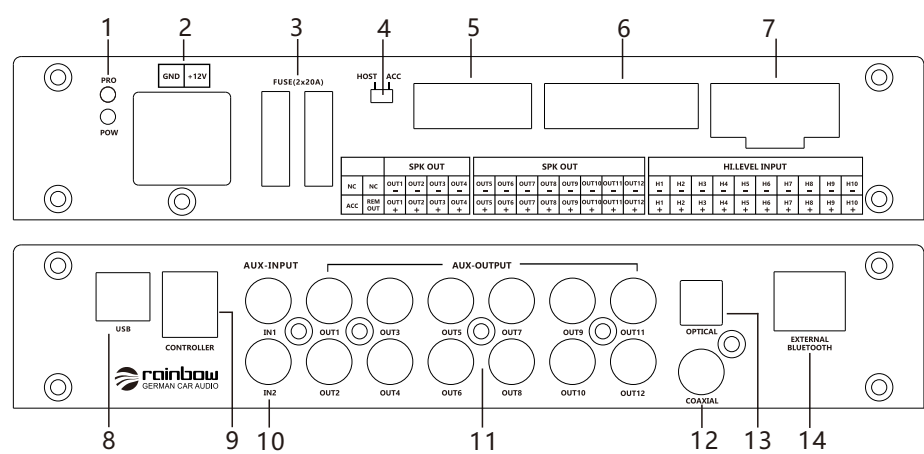
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第一部分：机器接口简介



- 1、电源和保护指示灯
- 2、电源接口
- 3、2×20A保险丝接口
- 4、机器启动方式开关
- 5、REM及高电平输出接口

SPK OUT					
NC	NC	OUT1	OUT2	OUT3	OUT4
		-	-	-	-
ACC	REM OUT	OUT1	OUT2	OUT3	OUT4
		+	+	+	+

- 6、高电平输出接口

SPK OUT											
OUT5	OUT6	OUT7	OUT8	OUT9	OUT10	OUT11	OUT12				
-	-	-	-	-	-	-	-				
OUT5	OUT6	OUT7	OUT8	OUT9	OUT10	OUT11	OUT12				
+	+	+	+	+	+	+	+				

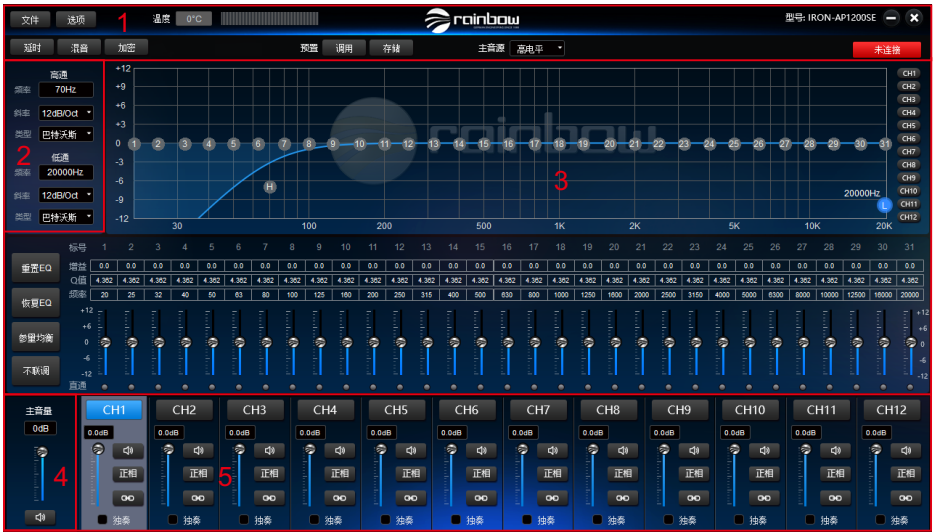
- 7、高电平输入接口

HI.LEVEL INPUT									
H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
-	-	-	-	-	-	-	-	-	-
H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
+	+	+	+	+	+	+	+	+	+

- 8、USB2.0接口
- 9、线控器接口
- 10、低电平输入接口
- 11、低电平输出接口
- 12、同轴输入接口
- 13、光纤输入接口
- 14、外置蓝牙接口

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、固件更新、恢复出厂设置、查看帮助和版本；设备温度显示；通道的延时设置、混音调节、数据加密；6组预置音效的调用和存储；主音源选择操作。
- 2、滤波器编辑区
高通和低频滤波器的频率、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，图示均衡或参量均衡，联调或不联调切换设置EQ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、正反相选择、联调设置以及独奏选择。

第二部分：控制软件简介

二、手机软件使用简介



启动页



主页



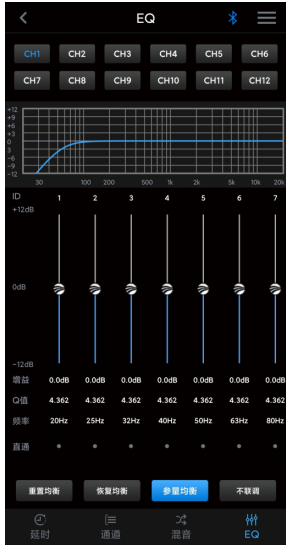
延时



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，静音设置；主音源选择和处理器功放开关；6组预置场景的存储和调用。

3、延时界面

声场定位输出通道延时调节，点击延时进入延时设置。

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10个高电平，2个AUX, 蓝牙左及蓝牙右，光纤左及光纤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，图示均衡或参量均衡，联调或不联调切换设置EQ操作。

第三部分：产品参数指标

技术规格

动态范围	≥100dB
信噪比（RCA）	≥98dB
总谐波失真	≤0.05%
频率响应	20Hz~20kHz
输入阻抗	低电平：20kΩ；高电平：240Ω
低电平输出阻抗	100Ω
峰值功率	12×100W
信号输入范围（最大）	RCA： 6.5Vpp；高电平： 28Vpp
信号输出范围（最大）	RCA： 6.5Vpp
使用环境温度	-20~70℃
电源	DC 9V~16V
REM输入	高电平信号输入： H1+ /H1-或ACC启动可选
REM输出	+12V启动电压输出（0.2A）
待机功耗	≤0.1W
重量	约2.93kg
产品尺寸	240(长) *189(宽) *50(高)mm

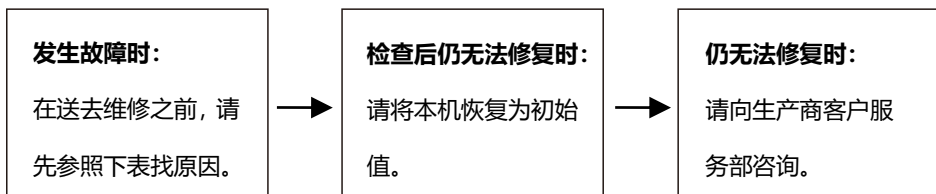
功能参数

输入信号类型	10通道高电平、2路低电平、外置蓝牙、光纤/同轴
输出信号类型	12通道低电平、12×100W峰值功率
输出信号增益	增益范围：静音， -59.0dB ~ 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：关闭，6dB/Oct ~ 48dB/Oct
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 °/180 °） 延时：0.000至20.000毫秒、0至692厘米、0至273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？

