



**RECOIL**<sup>®</sup>

# **P610/P610-PRO**

Digital Signal Processor 6-Channel  
Inputs & 10-Channel Outputs

## **User Manual**

## CONGRATULATIONS!

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Thank you for purchasing the Recoil P610/P610-PRO. They are a unique combination of a four channel amplifier and a digital signal processor in one piece. To ensure many years of great performance from your new DSP amplifier, we highly recommend you have your new P610/P610-PRO installed by an authorized Recoil Audio dealer.

Please take a few moments to thoroughly read this entire manual to make sure that you fully understand all the benefits from this new addition to your audio system. If there is any question, please contact us support@recoilaudio.com.

## FEATURES

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- Inputs: 6 x RCA, 6 x high level, 1 x optical SPDIF
- Outputs: 10 x RCA
- Power Rating: RMS 4 X 25 Watts @ 4Ohm / Peak 4 X 50 Watts @ 4Ohm(P610)
- Power Rating: RMS 4 X 40 Watts @ 4Ohm / Peak 4 X 80 Watts @ 4Ohm(P610-PRO)
- Powerful Audio DSP with 32 Bit high resolution / 48k Hz sampling rate
- AD and DA signal converters of the latest generation
- 9.5 Volt pre-output signal
- Built-in Bluetooth® Audio Streaming
- Windows PC software and App tuning
- Plug & play OEM harness (sold separately)
- Dimensions: 45mm x 126mm x 204mm (1.77" x 4.96" x 8.03")
- Optional DRC (sold separately)

## SPECIFICATION

Model	P610	P610-PRO
Inputs	6 x RCA / Cinch	6 x RCA / Cinch
	6 x Highlevel speaker input	6 x Highlevel speaker input
	1 x Optical SPDIF (12 - 48 kHz)	1 x Optical SPDIF (12 - 48 kHz)
	1 x Remote In	1 x Remote In
Input Sensitivity	RCA / Cinch 2-4 Volts	RCA / Cinch 2-4 Volts
	High level 5-20 Volts	High level 5-20 Volts
Input Impedance	10k-Ohms	10k-Ohms
Bluetooth Streaming	Yes	Yes
Outputs	10 x RCA / Cinch	10 x RCA / Cinch
	1 x Remote Out	1 x Remote Out
Power Rating	RMS 4 x 25 Watts @4-Ohm	Peak 4 x 40 Watts @4-Ohm
	Peak 4 x 50 Watts @4-Ohm	Peak 4 x 80 Watts @4-Ohm
RCA Outputs Voltage	Up to 3.5 Volts	Up to 3.5 Volts
Frequency Fesponse	20 Hz -22,000 Hz	20 Hz -22,000 Hz
DSP Resolution	32 Bit	32 Bit
Sampling Rate	48 kHz	48 kHz
DSP type	Audio Signal Processor	
DSP Tuning	Windows PC Software & APP	
Signal Converters	A/D: AK7735 (Hi-Level) AK5358 (AUX)	
	D/A: AK7735 (Hi-Level) CS4344 (CH5-10)	
Signal-to-Noise Ratio Digital Input	116 dB (A-weighted)	
Signal-to-Noise Ratio Analog Input	106 dB (A-weighted)	
Total Harmonic Distortion (THD+N) Digital Input	< 0.0005 %	
Total Harmonic Distortion (THD+N) Analog Input	< 0.005 %	
Crosstalk	> 90 dB	
Operating Voltage	10-16 Volts	
Current Draw	510 mA	
Remote Turn-On	REM / DC	
Max. Remote Output Current	500 mA	
Fuse	15A	
Dimensions (H x W x D)	45mm x 126mm x 204mm	
	1.77" x 4.96" x 8.03"	

## CONNECTORS

**① OEM T-Harness Connector**

4-channel speaker level inputs & outputs, plus power, ground, remote input & output.

**② 2-Channel Speaker Level Input**

Optional two channels of speaker level input

**③ Remote Controller Port**

Plug optional digital remote controller (DRC) with this port via RJ45 cable. The DRC is sold separately.

**④ Mode Selector**

You can save up to six tuning modes in this DSP P610 device. This is the selector for you to switch among the six modes.

**⑤ Bypass Switch**

This is the switch for signal to bypass DSP. So that you can compare the sound performance through or bypass DSP.

**⑥ MODE/BT LED**

This is the LED indicator for modes selection and Bluetooth LED connection.

**⑦ Line Input**

RCA inputs for connecting pre-amplifier signals.

**⑧ USB PLAY**

This is the port for USB flash driver to play MP3 music.

**⑨ PC USB**

Connects the Recoil DSP P610 to your PC for tuning.

**⑩ Line Output**

10-Channel line outputs for connecting amplifiers. Make sure that the remote output is used to turn on these devices.

**⑪ Coaxial Input**

Coaxial input for digital stereo signal (SPDIF format).

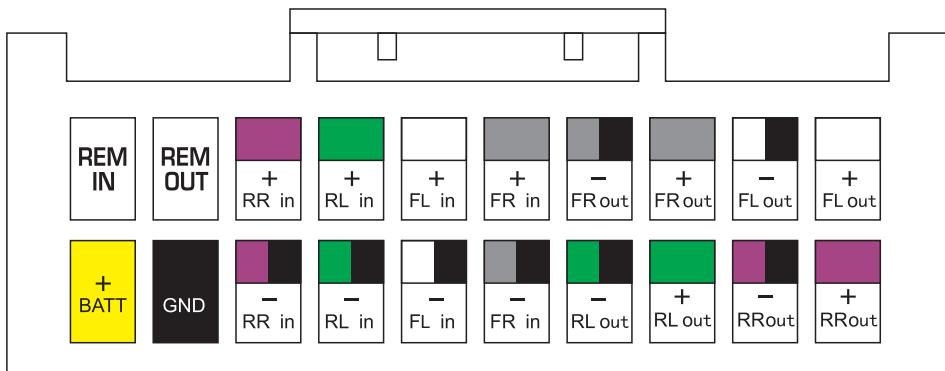
**⑫ Optical Input**

Optical input for digital stereo signals (SPDIF format).

**⑬ Remote Turn-On Selector**

Select the remote turn-on mode between REM and DC.

## WIRING DIAGRAM



## INSTALLATION



1 Remove head unit from dash



2 Disconnect wiring harness from head unit



3 Install proper harness for your vehicle



4 Reconnect wiring harness



5 Locate harness for the vehicle



6 Pull through P610 wiring harness to head unit



7 Pull through P610 wiring harness to installation location



8 Connect P610 harness to headunit wiring harness



9 Perfect installation

## COMPUTER TUNING INTERFACE



## TUNING REFERENCE

- Please ensure proper installation for best results. Refer to the installation visual guides in the instruction manual BEFORE installation.
- We do not recommend playing music at maximum volume when driving. You may risk hearing and equipment damage, as well as distracted driving.
- Make sure all surfaces and connection points are dry before installing your new DSP .
- If your car already has an existing amplifier or after market amplifier, please consult with your Recoil Audio dealer for best installation set up.
- The P610 requires the wiring harness that is included with the DSP, we do not recommend using different wiring harnesses as you risk damage to the DSP.

## TROUBLE SHOOTING

The wiring plug does not match the original	The wiring harness is dedicated for special vehicles. Please confirm your model and the model of high and low matching, and inform local dealers or agents
There are murmurs in the use of the product	Please make sure that the host connection wire is properly connected and check for loose. There are still murmurs to check if there is any connection with CD or DVD. Still unable to resolve the local dealers or agents.
The work indicates that the class is not bright and has no sound	Please check whether the tail line is properly connected and check whether the original car has its own amplifier or not.
There is no electricity for the original engine and the machine	Check whether the original owner's surface power cord is connected, and whether the grounding black line is connected to the original engine housing and restore the original engine location.

## 性能参数

信号输入: 6 x RCA / Cinch

6 x Highlevel speaker input

1 x Optical SPDIF (12 - 48 kHz)

1 x Remote In"

输入灵敏度: RCA / Cinch 2-4 Volts

High level 5-20 Volts

输入阻抗: 10k-Ohms

蓝牙流媒体功能: Yes

信号输出: 10 x RCA / Cinch

1 x Remote Out

内置功放功率: 4 x 50 Watts @4-Ohm(P610)

内置功放功率: 4 x 80 Watts @4-Ohm(P610-PRO)

RCA输出信号: Up to 3.5 Volts:

频率相应范围: 20 Hz -22,000 Hz

DSP分辨率: 32 Bit

取样率: 48 kHz

数字信号处理器类型: Audio Signal Processor

DSP调音方式: Windows PC Software & APP

数/模和模/数转换芯片: A/D: AK7735 (Hi-Level)

AK5358 (AUX)

D/A: AK7735 (Hi-Level)

CS4344 (CH5-10)

数字信号输入信噪比: 116 dB (A-weighted)

模拟信号输入信噪比: 106 dB (A-weighted)

数字信号输入THD+N: < 0.0005 %

模拟信号输入THD+N: < 0.005 %

信道隔离度: > 90 dB

工作电压范围: 10-16 Volts

电流消耗: 510 mA

触发输出方式: REM / DC

最大输出触发信号: 500 mA

保险片: 15A

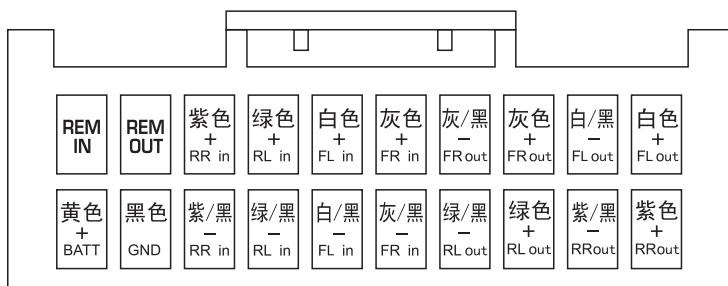
尺寸: 45 x 120 x 204mm/1.77 x 4.72 x 8.03"

## 用前须知

### 注意事项

- 为了您的安全, 请不要在驾驶过程中操作机器。
- 驾驶车辆时, 请将音量调到能清楚听到外界声音水平。
- 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。
- 为了保证机器正常运行, 请不要将机器安放在以下环境中;阳光直射或热源附近、潮湿环境或水源附近、多尘场所等。
- 请勿擅自拆卸、改装本机器, 否则易出现问题。
- 调音结束后请将参数配置保存到模式中, 避免断电后参数配置被清除。

## 尾线说明



尾线接线定义图

## 安装流程图



## 电脑调音PC界面



**EQ调音小技巧：**

声音浑浊减60-80Hz;  
低音压耳减125Hz;  
中音过厚减400, 500Hz;  
中频打耳朵减1250-2000Hz;  
人声太突出减3KHz;  
高频刺耳减4-6KHz;  
齿音太重减8KHz;  
高音发毛减12-16KHz;  
低频不丰满加60-80Hz;  
力度不足加125Hz;  
人声单薄加200-400Hz;  
声音发虚加1K附近;  
人声位置偏后, 提3KHz;  
声音不亮, 不通透加4-8KHz;  
空间感不足加12-16KHz;  
低音太硬减160-200Hz;  
男声喉音重减200Hz;  
鼻音重减250Hz;

**手机调音PC界面****获取DSP P610/P610-PRO应用程序**

扫描二维码，下载安卓系统的DSP C.APK安装包或iTunes下载  
DSP P610应用程序。



安卓



苹果

**注意事项**

- 请正确的安装本产品。安装前请详细参考说明书中的安装施工图。
- 建议您开车时，不要最大音量播放音乐。为充分享受音乐带给您的愉悦，适当的音量才最具效果。
- 禁止用湿手拔插主机信号端。
- 如原车带有分频音响功放，安装本产品要先咨询当地的经销商和代理商，以正确的连接方式提升音质效果。
- 本品需要使用专车专用尾线，严禁以其他类产品尾线代替，以免发生危险。
- 因为本产品的性能和功能而发生的变更，可能会不做另行通知，请您谅解。

### 简单故障分析和排除

线束插头与原车不符	线束为专车专用,请确定您的车型,并咨询当地经销商或代理商
产品在使用过程有杂音	请确定主机连接线正确连接,检查有无松动。排除后仍有杂音请检查搭地黑线有无与CD或DVD壳体连接。仍无法解决请返货当地经销商或代理商。
工作指示类不亮无声音	请检查尾线是否都已经正确连接好,检查原车有无自带功放或有无改装功放
原车主机与本机均无通电	检查原车主面电源线是否接上,接地黑线是否与原车主机外壳连接上,恢复原车主机位置。

## 产品保修卡

### 产品保修说明

保修服务只限制在正常使用情况下出现的本机故障,由于产品本身质量问题引起的非人为损坏的故障,凭发票和保修卡按照三包规定将享受下列三包服务:

- 1、自购买之日起一年内发生故障,可享受免费保修服务。
- 2、维修时请携带保修卡及有效购机发票。
- 3、保修卡需加盖售机单位公章方可有效。
- 4、维修更换下来的零配件,恕不交还用户。
- 5、本卡中的内容如有与国家规定不符之处,以国家规定为准。

### 不实行保修的情况

- 1、不能出示有效发票和本卡,或有涂改痕迹与本产品不符的。
- 2、没按照说明书上安装使用而造成的产品故障。
- 3、由于车体碰撞、缺落、雷击造成产品故障的。
- 4、事故、灾害、战争等不可抗拒因素造成损失的。
- 5、自行拆卸本产品或擅自打开电路板更改线路造成损坏的。
- 6、不符合三包相关规定的情况或超过三包有效期的。

### 售后服务

如用户在使用过程出现的问题,请与当地经销商或代理商联系。凭本卡保修,请妥善保管。

## 保修卡

产品型号	
用户姓名	
联系电话	
销售单位	
购机日期	



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