

RECOIL[®]

R46

Digital Signal Processor 4-Channel
Inputs & 6-Channel Outputs

User Manual

CONGRATULATIONS!

Thank you for purchasing the Recoil R46. The R46 is 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 R46 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

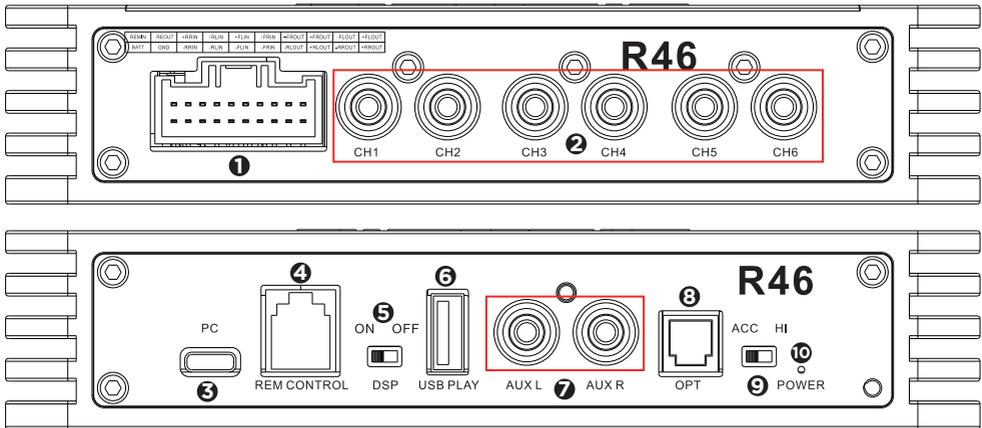
- Inputs: 4 x RCA, 4 x high level, 1 x optical SPDIF
- Outputs: 4 X high level & 6 x RCA
- Power Rating (14.4V): RMS 4 X 25 Watts @ 4Ohm / Peak 4 X 50 Watts @ 4Ohm
- 31 bands parametric EQ adjustments
- Full gain, phase & time delay control of each channel
- Multiple slope and class independent crossovers
- Six preset favorite DSP tuning effects
- AD and DA signal converters of the latest generation
- Built-in USB driver & Bluetooth® audio streaming
- Windows PC software tuning
- Plug & play OEM harness (sold separately)
- Dimensions: 6.78" x 4.2" x 1.38" (172.4mm x106.6mm x 35mm)

SPECIFICATION

Model	R46
Inputs	4 x RCA / Cinch
	4 x Highlevel speaker input
	1 x Optical SPDIF (12 - 48 kHz)
	1 x Remote In
Input Sensitivity	0.35V - 3.2V
Input Impedance	22k-Ohms
Bluetooth Streaming	Yes
Outputs	6 x RCA / Cinch
	1 x Remote Out
Power Rating	RMS 4 x 25 Watts @4-Ohm
	Peak 4 x 50 Watts @4-Ohm
Output Voltage	1V RMS
Frequency Response	10 Hz -22,000 Hz
DSP Resolution	24 Bit
Sampling Rate	48 kHz

DSP type	Audio Signal Processor
DSP Tuning	Windows PC Software & APP
Signal Converters	DAC-CS4344
Signal-to-Noise Ratio	86dB
Total Harmonic Distortion (THD+D)	<0.1%
Operating Voltage	10-16 Volts
Current Idling	0.37A
Remote Turn-On	REM / DC
Max. Remote Output Current	500 mA
Fuse	15A
Dimensions	6.78" x 4.2" x 1.38"
	172.4mm x 106.6mm x 35mm

CONNECTORS



❶ OEM T-Harness Connector

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

❸ PC USB

Connects the Recoil DSP R46 to your PC for tuning.

❷ Line Output

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

❹ Remote Controller Port

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

5 Bypass Switch

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

7 Line Input

RCA inputs for connecting pre-amplifier signals.

9 Remote Turn-On Selector

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

6 USB PLAY

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

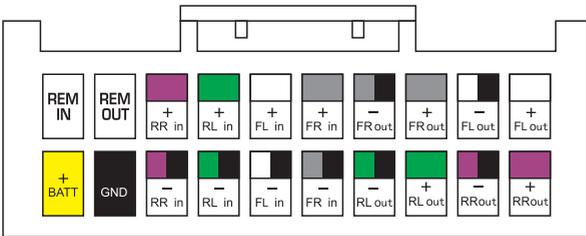
8 Optical Input

Optical input for digital stereo signals (SPDIF format).

10 Power LED

This is the LED indicator for DSP amplifier power on status.

WIRING DIAGRAM



INSTALLATION



1 Remove head unit from dash



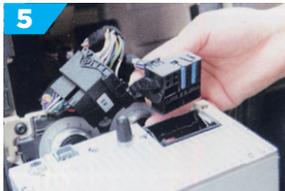
2 Disconnect wiring harness from head unit



3 Install proper harness for your vehicle



4 Reconnect wiring harness



5 Locate harness for the vehicle



6 Pull through R46 wiring harness to head unit



COMPUTER TUNING INTERFACE



TUNING REFERENCE

- Increase Subwoofer Bass: +60-80Hz
- Increase Upper Bass: +125Hz
- Increase Mid-Range: +200-400Hz
- Increase High Freq.Tones: +1KHz
- Increase Upper Vocals: +3KHz
- Enhance Vocal Thickness:+4-8KHz
- Extend Audible High Freq,+12-16KHz
- Subwoofer Bass:-60-80Hz
- Upper Bass:-125Hz

- Mid-Range:-400-500Hz
- Mid to High Freq.-1250-200Hz
- Vocal Adjustment:-3KHz
- High freq.Precision: -4-8KHz
- Audible High Freq.Top end: -12-16KHz
- Reduce Mid-Bass:-160-200Hz
- Reduce Upper Mid-Bass:-200Hz
- Reduce Lower Mid-Range: -250Hz

INSTALLATION

- 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 R46 .
- 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 R46 requires the wiring harness that is included with the R46, we do not recommend using different wiring harnesses as you risk damage to the R46.

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: 6x RCA/ Cinch

6 x Highlevel speaker input

1 x Optical SPDIF (12 - 48 kHz)

1 x Remote In

输入灵敏度: 0.35V - 3.2V

输入阻抗: 22k-Ohms

蓝牙流媒体功能: Yes

信号输出: 6 x RCA / Cinch

1 x Remote Out

内置功放功率: 4 x 50 Watts @4-hm

输出信号强度: 1V RMS

频率相应范围: 10 Hz -22,000 Hz

DSP分辨率: 24 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: DAC-CS4344

信号输入信噪比: 86dB

信号输入THD+N: <0.1%

信道隔离度: > 90 dB

工作电压范围: 10-16 Volts

电流消耗: 500 mA

触发输出方式: REMDC

最大输出触发信号: 500 mA

保险片: 15A

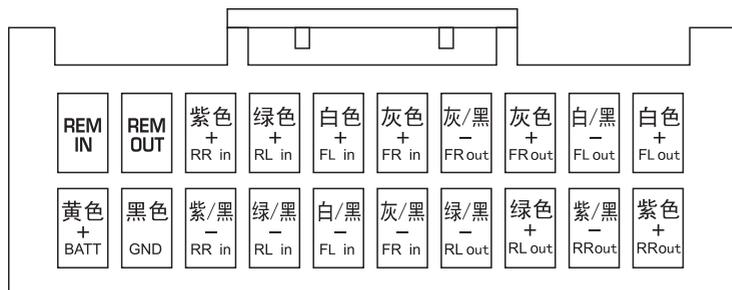
尺寸: 6.78" x 4.2" x 1.38"/172.4 x 106.6 x 35mm

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



1

拆卸原车主机

2

T型线束的白色插头
接入DSP功放

3

专车专用尾线参照

4

原车音响尾线连接

5

专车专用尾线连接

6

完成按线效果参照

7

专用功放位置安排

8

无损连接功放参照

9

安装完成完美体现

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。

电脑调音PC界面



EQ调音小技巧:

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

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, 可享受免费维修服务。
- 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、缺失、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	