Installation Manual for Experience Line

EL-W8A MK2 8” Active Aluminum Subwoofer 300 Watts Part Nr. 280084

Please read installation manual carefully before beginning installation!

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Dear Music Lover,

We congratulate you on your purchase of our superior product and thank you for placing your trust in rainbow. With over 30 years of engineering expertise in car audio speakers and belief in Golden Spiral for product design, rainbow has created a wide range of products that reproduce life-like sound with all the details and emotions you can hope for. Rainbow guarantees outstanding quality and we wish you many pleasant hours enjoying your favorite music with our high-performance products. We have put together this installation manual with great consideration of different mechanical and acoustical features to help you better understand and operate rainbow products. And we'd love to hear your questions, feedback and improvement suggestions via email info@rainbow-audio.de.

Best wishes,
Your Rainbow Team

Safety Instruction

Attention

Please read all warnings found in this manual. This information is included and highlighted to inform you of the potential risks of personal injury or damage to property.

Our products are intended for those who want to upgrade their car audio systems and enjoy unbeatable sound performance in cars. The relevant safety regulations regarding related auto parts, the regulations of internal vehicle safety, as well as the regulations of the authorized vehicle manufacturers should be followed diligently.

Hearing Damage

Continuous exposure to sound pressure levels over 85 dB may cause permanent hearing loss. High-powered auto sound system could produce sound pressure levels over 130 dB, which may cause damage to hearing. Use common sense and avoid such risks.

Volume and Driver Awareness

Use of audio components can impair your ability to hear necessary traffic sounds and may constitute a safety hazard while driving your automobile.

Rainbow accepts no liability for hearing loss, bodily injury or property damage as a result of use or misuse of this product.

Installation Notice

Do not use your automobile until the subwoofer has been secured to the interior framework. Failure to do so may turn a component into a dangerous, flying projectile during a sudden stop or accident.

Do not drill or drive screw through any vehicle interior or carpeted floor before inspecting the underside for potential punctures to control lines or cables. Be sure to avoid all fuel lines, brake lines, electrical cables or oil lines when planning the installation.

We recommend disconnecting the battery before beginning installation of the loudspeaker system. Please ask your car dealer if disconnecting the battery is feasible without any problems.

Always be meticulous when removing interior trim panels. Car manufacturers use a variety of fastening devices that can be damaged in the disassembly process.

If sheet metal must be cut or removed, contact your authorized car dealer for professional advice. By damage to supporting body structures the safety certificate may be withdrawn.

Shock Hazard!

Do not touch the connectors while the system is running.

Mechanical Installation

Choosing a location

The first step of a favorable installation is to select the best mounting location for the subwoofer. This subwoofer is normally installed inside the trunk.

Warranty

All rainbow products come with a year's warranty on all parts, starting from the date of purchase from the authorized retailer. Only the first buyer is entitled to this warranty policy, which would be invalid in case of products being transferred.

The warranty covers all material and manufacturing defects, however it does not cover mechanical defects, defects caused by electrical overload and foreign interference by unauthorized people.

Mechanical Defects

Defects resulting from damage to components during installation, dirt or metal shavings in the open magnetic system, and inappropriate installation by using devices not conforming to the intended range of application.

Electrical Defects

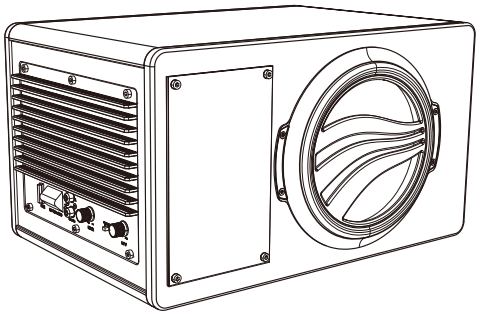
Damage resulting from electrical and thermal overload and/or inadmissibly high power supply, and clipping distortion.

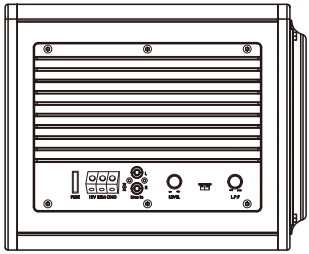
Electromechanical Defects

Damage resulting from running the loudspeaker system at an excessively high volume or in an improper enclosure like trunk and the results caused thereof, such as burned voice coils, broken lead wires and accidents, acts of God or other situations for which rainbow can not be held accountable. In particular, normal wear and tear is not covered by warranty.

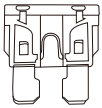
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WHAT'S IN THE BOX



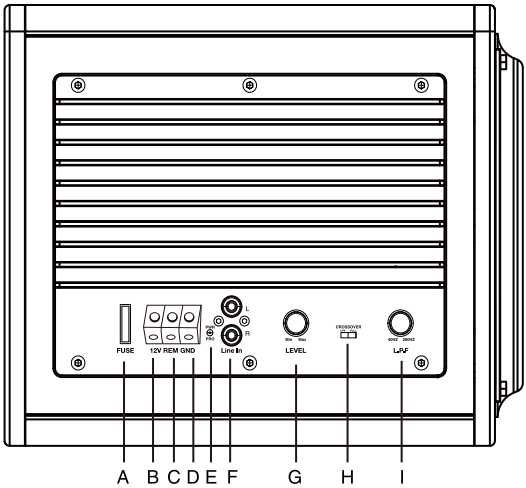


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POWER AMPLIFIER PANEL CONTROLS AND FUCNTIONS



POWER AMPLIFIER PANEL CONTROLS AND FUNCTIONS

A : FUSE LINE

B : POWER INPUT TERMINAL POSITIVE

C : CONTROL LINE

D : NEGATIVE POLE

E : POWER AND PROTECTION INDICATORS

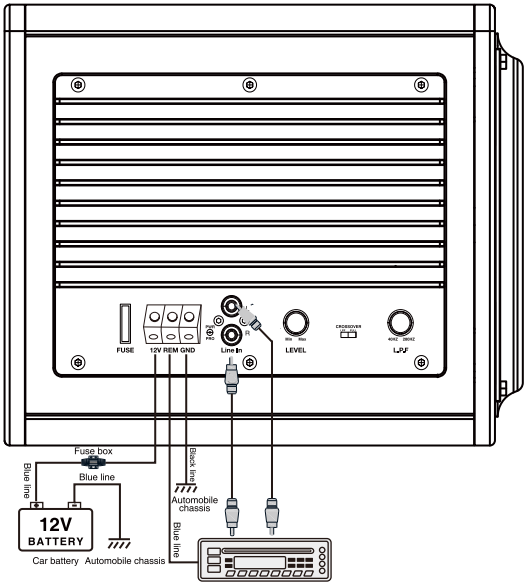
F : LOW LEVEL SIGNAL INPUT PORT

G : VOLUME ADJUSTMENT SWITCH

H : PHASE SWITCH

I : FREQUENCY RANGE ADJUSTMENT SWITCH

LINE LEVEL INPUT WIRING DIAGRAM



TECHNICAL SPECIFICATIONS

Technical specifications	
Max power	300 W
RMS power	150 W
THD	≤5%
S/N	≥88dB
Power supply voltage (VDC)	10 - 16V
Frequency response	30Hz - 300Hz
Input sensitivity	100mV - 3V
Fuse rating	20A
Low pass filter	40Hz - 280Hz
Crossover slope	12 dB/octave
Phase switch	0° or 180°
Dimensions (L x W x H)	430 x 288 x 250mm

TROUBLESHOOTING GUIDE

SYMPTOM	POSSIBLE REMEDY
Amplifier will not power up	Check to make sure you have a good ground connection. Check that the remote input (turn-on) has at least 5VDC. Check that there is battery power on the (+) terminal. Check that there is at least 10V. Check all fuse, replace if necessary. Make sure that the protection LED is not illuminated. If it is lit, shut off the amplifier briefly, and then repower it.
Protection LED comes on when amplifier is powered up	Check for short circuits on speaker leads. Turn down the gain control on the head unit to prevent overdriving. Stop signal input, and reset the amplifier. If the protection LED still comes on, then the amplifier is faulty and needs servicing.
No output	Check that all fuses are OK. Check that unit is properly grounded. Check that the remote input (turn-on) has at least 5VDC. Check that the RCA audio cables are plugged into the proper inputs. Check all speaker wiring.
Low output	Reset the gain control. Check the crossover control settings.
High hiss in the sound	Disconnect all RCA inputs to the sub's control panel. If the hiss disappears, then plug in the component driving the amplifier and unplug its inputs. If the hiss disappears at this point, go on until the faulty/noisy component is found. It is best to set the amplifier's gain control as low as possible. The best signal-to-noise ratio is achieved in this manner. Try to set the head unit as high as possible (without distortion) and the amp input level as low as possible.
Squealing noise is present	Check for improperly grounded RCA interconnections.

Distorted sound	Check that the gain control is set to match the signal level of the head unit. Always try to set the input level as low possible. Check that all crossover frequencies are properly set.
Amplifier gets very hot	Check that the minimum speaker impedance for the amp model is correct. Check that there is good air circulation around the amp. In some applications, it may be necessary to add an external cooling fan.
Engine noise (static type)	This is usually caused by poor quality RCA cables, which can pick up radiated noise. Use only the best quality cables, and route them away from power cables.
Engine noise (alternator whine)	Check that the RCA grounds are not shorted to the vehicle chassis. Check that the head unit is properly grounded.

亲爱的音乐爱好者：

祝贺您购买了我们的优质产品，感谢您对彩虹的信任。彩虹拥有超过30年的汽车音响产品开发技术和生产经验，并遵循拥有两千多年历史的黄金分割率，制造出富有音乐感、声音自然动听的音响器材。彩虹汽车音响音质卓越，性能优良，让您尽情享受音乐之美。我们结合了不同的机械和汽车声学特点编写了这本安装手册，帮助您更好地了解和使用彩虹产品。如您有任何疑问、反馈和改善建议，请发邮件至info@rainbow-audio.de，我们将不胜感激。

最美好的祝愿
彩虹团队

安全指南

注意

请仔细阅读用户手册中的警示，我们在此注明并强调这些信息是为提醒您免受潜在的人身伤害或设备损坏。

如您想要升级汽车音响系统、乐享旅程，彩虹产品一定是您的不二之选。汽车零部件相关安全守则，车内安全守则和授权汽车生产商相关守则都须严格遵守。

听力损害

长时间聆听高于85分贝音量的声音可能会造成永久性听觉损失。而大功率音响系统产生的声音高于130分贝，可能会损伤听力。请合理调节系统音量及聆听时间，避免以上风险。

音量和安全驾驶

驾驶时，使用音响系统可能会让你听不清周围的交通声，进而引发交通事故。
彩虹对因产品使用不当引起的听力损伤、身体伤害或产品性能损坏概不负责。

安装须知

低音炮未在车内固定好之前，不要驾驶汽车。否则，在急刹车或汽车事故时，扬声器元件可能成为危险的抛射物。

在车内或者铺有地毯的底板上钻孔、打钉之前一定要检查底部，以免损坏控制线。布置安装时，确保一定要避开刹车线、电线、油管。

建议在开始安装扬声器系统之前取下汽车蓄电池。请咨询您的汽车经销商这样操作是否可行，不会引发任何问题。

拆卸内饰板时须格外小心。汽车生产商使用的多种紧固装置都可能在拆卸过程中被损坏。

如需切割或拆卸金属板，请联系授权汽车经销商，获取专业建议。支撑结构损坏，可能会导致安全证书被撤回。

触电危险！

音响系统运行时，不要触摸接线端口。

机械安装

选择安装位置

成功安装的第一步要为低音炮选择一个最佳安装位置，这款低音炮一般情况下会安装在后备箱内。

质保

彩虹承诺为所有产品提供 1 年的法定质保期，确保所有部件在保修期内良好运行。保修期从授权经销商处购买产品之日开始计算。只有一手客户享受质保政策，保修权不可转让。

保修对象涵盖材料及生产缺陷。而机械损坏、电压过载引起的损坏、非授权人员对产品维修或拆卸造成的故障损坏皆不属于保修范围。

机械损坏

安装过程中损坏零部件、灰尘或金属碎屑落入开放式磁缝中、以及安装时使用了与产品特性不匹配的设备造成的损坏。

电器损坏

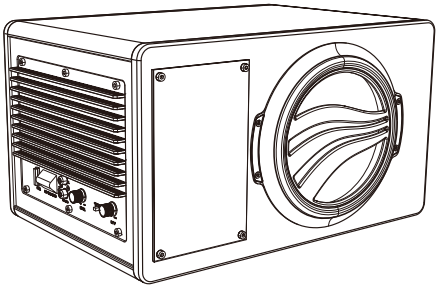
因电压过载、热过载、过大的功率输出和放大器削波失真造成的损坏。

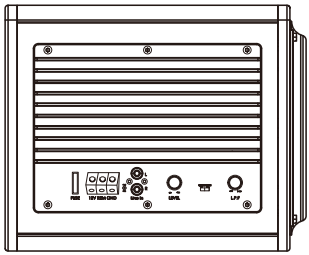
机电损坏

因音响系统音量过大或箱体体积不适宜（如尾箱用作箱体）引起的音圈烧毁、导线断裂，或车祸、不可抗力等事故引起的产品及零部件损坏。尤其注意，正常的磨损不属于保修范围。

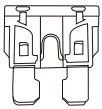
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包装内容



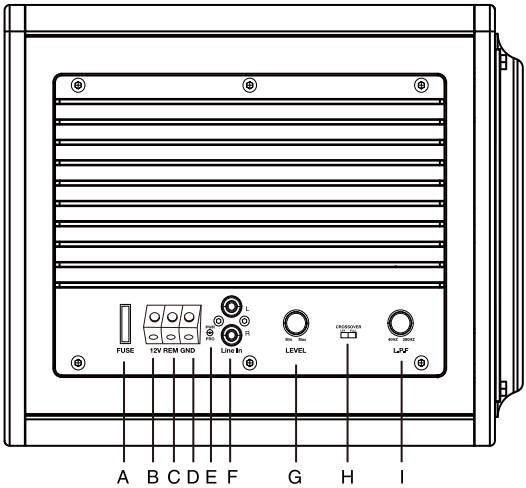


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功放面板和功能描述



A : 保险丝

B : 电源输入正级

C : 控制线

D : 负极

E : 电源和保护指示灯

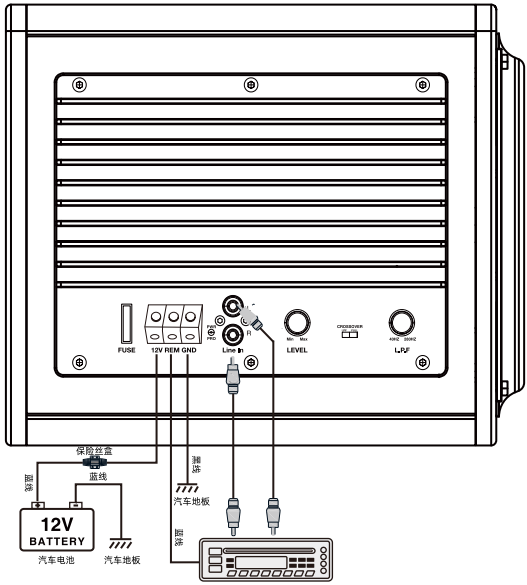
F : 低电平输入信号接口

G : 功放增益

H : 相位调节

I : 低通分频点

低电平输入接线图


FUSE
12V REM GND
Line In
LEVEL
LPF
保险丝盒
蓝线
12V
BATTERY
汽车电池
汽车地板
汽车地板

技术资料

技术参数	
峰值功率	300 W
额定功率	150 W
总谐波失真	≤5%
信噪比	≥88dB
供电电压(VDC)	10 - 16V
频率响应	30Hz - 300Hz
输入灵敏度	100mV - 3V
保险丝额定值	20A
低通滤波	40Hz - 280Hz
分频斜率	12 dB/octave
相位	0° or 180°
尺寸（长 x 宽 x 高）	430 x 288 x 250mm

故障排除

故障现象	故障原因
产品不能启动	1. 检查功放电源地线是否连接良好。 2. 检查REMOTE电压不要低于5VDC。 3. 检查电瓶正极电压是否加在功放的电源端子正极。 4. 检查电源端子正极电压不要低于+10V。 5. 检查保险丝是否损坏（开路）。 6. 确认保护指示灯是否亮起，如指示灯亮起则重新启动功放。
产品启动后保护指示灯亮起或过热保护	1. 检查喇叭接线端子是否短路。 2. 调低音量电位器以防止过载保护。 3. 卸掉喇叭连接线，重新启动功放，如保护指示灯亮则功放已损坏，需要维修。
产品无输出	1. 检查保险丝是否损坏（开路）。 2. 功放是否正确接地。 3. 功放启动电压不要低于5VDC。 4. 检查RCA音频线或高电平输入线是否正确连接到功放。 5. 检查喇叭线是否连接良好。
产品输出低	1. 重新设定音量电位器。 2. 检查虑波器电位器是否在正确的位置。
播放音乐时有嘶嘶声	1. 断开功放的信号输入线，如果嘶嘶声消失就是信号源有问题，此时要确认信号线是否连接良好或信号线质量是否有问题，否则主机可能有问题。 2. 尽可能把功放音量电位器开小，同时尽可能把主机音量开大（不要失真)。
有啸叫声	1. 检查RCA的地线是否连接好。
失真	1. 检查功放音量电位器是否太大了，功放音量电位器要配合好主机音量。 2. 检查虑波器电位器大小是否合适。
产品发烫	1. 检查喇叭阻抗是否低于功放的标示阻抗。 2. 检查功放的安装位置是否通风良好。
引擎声(静态)	1. 主要是RCA信号线质量太差的原因，要换用质量好的RCA信号线，并要远离电源线。
引擎声(发电机火花声)	1. 检查RCA信号线地线不能连接到汽车底盘。 2. 检查主机是否正确接地。