



# NBF8.1A

## User Manual



# 8" ACTIVE SUBWOOFER

# YOUR SPEAKER

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## Dear Customer,

Congratulations on purchasing our Nakamichi mobile system product for your sound system.

This product has been designed and manufactured to Nakamichi's exacting standards to ensure many years of audio enjoyment. For the best performance, we recommend that you have your Nakamichi product installed by an authorized Nakamichi dealer.

If you would like to install this product on your own, we recommend for you to go through this manual to familiarize yourself with all the installation requirements and procedures.

If you encounter any issues or if you have any questions on the operation of this product, please contact your nearest authorized Nakamichi dealer for assistance, or you may also contact us through our website or social media channels.

## Installation of Your Product

In today's modern vehicles, it is very easy to cause damage to existing systems through improper installation. Please follow and scrutinize all wiring diagrams to ensure that you have connected everything in its proper place.

If you find yourself uncomfortable or unfamiliar with understanding the wiring and installation diagrams or testing instructions, do contact your nearest Nakamichi dealer to perform the installation for you.

## Safety Warnings and Considerations

- Clean only with a dry cloth or other similar materials.
- Install your product in a dry, well-ventilated location that does not interfere with your vehicle's safety equipment.
- Do not block any ventilation openings when installing this product.
- Do not mount the product in the engine compartment of your vehicle or in any areas of extreme heat such as mufflers, silencers, exhaust pipes or other heat producing apparatus.
- Securely mount the product so that it does not come loose in the event of a collision or as a result of repeated vibrations that might occur during normal operation.
- Installation of the apparatus must be done with great care to prevent damage to your vehicle's fuel lines, power, and other electrical wiring, hydraulic brake lines, and other systems. If possible, always visit your nearest Nakamichi dealer to perform the installation.
- Do not run any wiring outside or underneath the vehicle. Keep all wires inside the vehicle.
- Take the necessary precautions when making connections to the vehicle's battery to avoid any potential shock.
- Protect all system wires from sharp edges by carefully routing them, always use rubber grommets to protect wiring and cables whenever you are installing them through metal openings.
- Secure all wiring using cable ties or wire clamps to protect them from moving parts and sharp edges.
- This apparatus shall not be exposed to dripping or splashing, and no object filled with liquids, shall be placed on the apparatus.

# YOUR SPEAKER

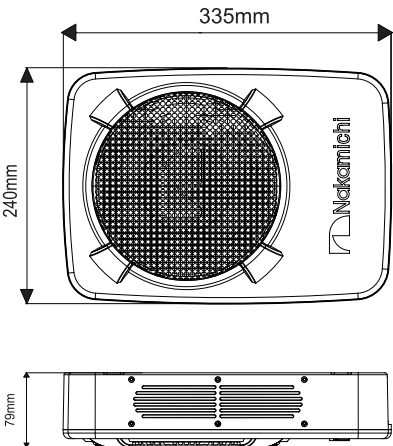
- Refer **al** servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as the power input terminals are damaged, liquid has been **spilled** or objects have **fallen** into the apparatus, the apparatus has been exposed to rain or moisture, does not operate **normally**, or has been dropped.
- Fuses shall be replaced **only** with the correct type and fuse value, and **only** when the apparatus is powered off.
- Exposure to high sound pressure levels may lead to permanent hearing loss. Take every precaution to protect your hearing.
- This product is designed **specifically** for use with 12 volt, negative- ground electrical systems **only**. Using this product in systems with positive ground and/or voltages other than 12V may result in damage to the product and your system.

## ACCESSORY LIST

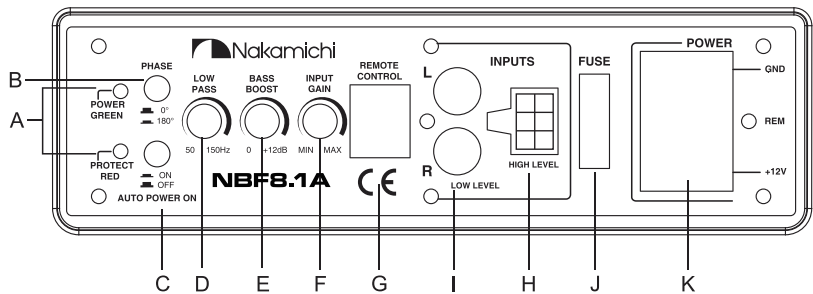
|   |       |
|---|-------|
| 1. User Manual  | 1 pcs |
| 2. Mounting Screw Bag (Ø3 x 10 mm x 2 pcs, Ø4 x 20 mm x 4 pcs, Gasket x 4 pcs, Ø4x6mmx4pcs) | 1 pc  |
| 3. 3.0mm Wrench   | 1 pc  |
| 4. High Level Input Cable   | 1 pc  |
| 5. Wired Remote Control   | 1 pc  |
| 6. Mounting BKT   | 4pcs  |
| 7. Magic Tape (80x40mm)   | 2pcs  |
| 8. FUSE (20A)   | 1 pc  |

## SPECIFICATIONS

|                              |              |
|------------------------------|--------------|
| N-power                      | 120W         |
| Max Power                    | 1200W        |
| THD                          | <0.4%        |
| Signal-to-noise Ratio        | >90dB        |
| Frequency Response           | 20Hz-150Hz   |
| Input Sensitivity,high Level | 4V           |
| Input Sensitivity,low Level  | 110mV        |
| Low Pass Filter              | 50Hz - 150Hz |
| Bass Boost                   | 0dB -12dB    |
| Subsonic Fiter               | 20Hz (Fixed) |
| Fuse Rating                  | 20A          |
| Subwoofer                    | 8" , 3.6Ω    |
| Dimensions (L X W X H)       | 335x240x79mm |



# PANEL CONTROLS AND FEATURES



## A. POWER STATUS LED

This bi-color LED glows green when power is on and no problems are present. If one of the protection circuits comes on, it will change to red.

## B. PHASE SHIFT

Use this switch to help compensate for time alignment problems in the system. Such problems usually result from having the subwoofer at a different distance from the listener than the other speakers in the system.

## C. AUTO POWER ON

The auto power on(on/off) is for high level (speaker level) connections. When the switch is in the "ON" position, the subwoofer auto power on when there is signal input.If the amplifier detected no signal input, the amplifier will auto turn off. If you prefer to use the remote turn on/off connection, the switch is in the off position.

**Note: Please connect the remote terminal to the remote output of head unit as Fig.2 when you hear the unit turn on/off pop noise from the subwoofer.**

## D. LOW PASS FILTER

This control permits you define the frequency range you want the subwoofer amplifier to receive. The subwoofer will reproduce all sound below the frequency you set.

**Note: The low pass filter frequency can be higher or lower than the standard. There have +/-20% tolerance.**

## E. BASS BOOST

The bass boost feature will increase the sound level in the bass frequencies.

## F. INPUT GAIN CONTROL

After you have installed your system, turn this control to minimum.

Turn the head unit on (and the subwoofer will turn on via the remote connection). Turn the head unit volume to about 2/3 full level.

Slowly turn up the subwoofer input gain control until you hear a small amount of distortion. Then reduce the level until the distortion is completely gone. Level the control at this setting.

## G. REMOTE LEVEL CONTROL PORT

Attach the included remote level control to control the volume level of the subwoofer independently.

## H. HIGH LEVEL (speaker level) INPUTS

If your head unit does not have RCA outputs you can use the speaker outputs for the audio source for the subwoofer. Use the supplied cable and wire harness and connect the outputs properly as shown in the connection diagram in this manual.

## I. LOW LEVEL RCA INPUTS

Low level inputs are the recommended way to introduce the audio signal to the subwoofer if RCA outputs are present on your head unit or other signal source (such as a sound processor).

## J. FUSE

Do not use a fuse with a different value and never replace the fuse with a wire or coin.

## K. POWER INPUT TERMINAL

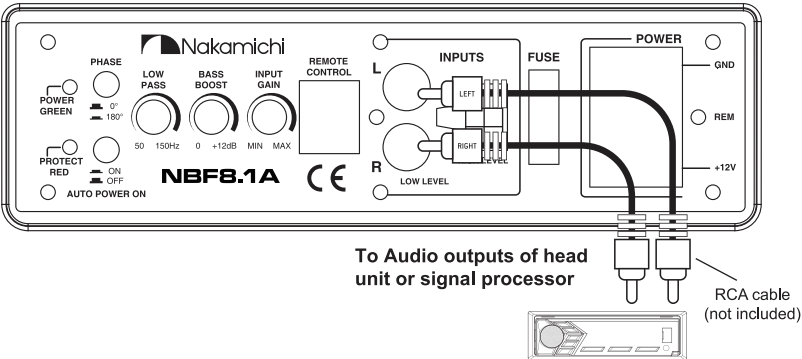
# WIRING

## LOW LEVEL INPUT WIRING

Low-level (RCA) input wiring is preferred for best audio performance. Most trunk and under-seat installations will require a 6-12 feet RCA cable. Always use a high quality cable.

**NOTE: Do not connect both the high level and low level inputs from your receiver to your amplifier at the same time!**

Fig.1

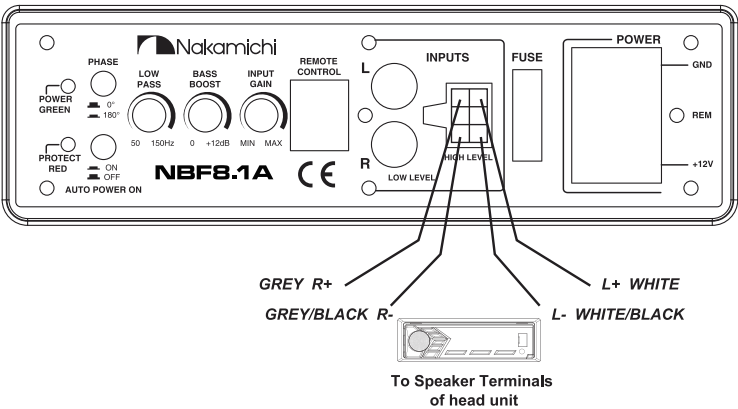


## HIGH LEVEL INPUT WIRING

The high level input(s) should only be used when your receiver lacks RCA outputs. If the RCA outputs are not present, connect the speaker outputs from the receiver to the high level input connector of the amplifier. Be sure to observe polarity to avoid audio phase problems.

**NOTE: Do not connect both the high level and low level inputs from your receiver to your amplifier at the same time!**

Fig.2



## POWER CONNECTIONS

Connect the ground terminal to the closest point on the chassis of the vehicle. Use 8 gauge (or heavier) wire to connect the ground cable.

Connect the remote terminal to the remote output of head unit using 16 gauge (or heavier) wire.

Connect an empty fuse holder within 16" (40 cm) of the car battery, and run 8 gauge (or heavier) cable from this fuse to the amplifier location. Then connect the fuse holder to the "BATT+" (+12V) connection on the subwoofer rear panel.

# WIRING

Fig.3

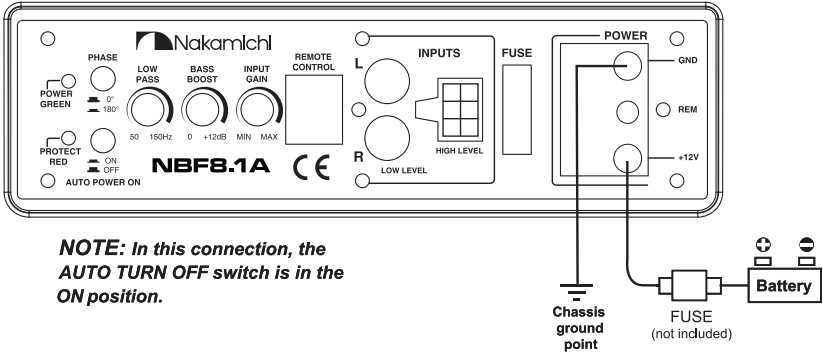
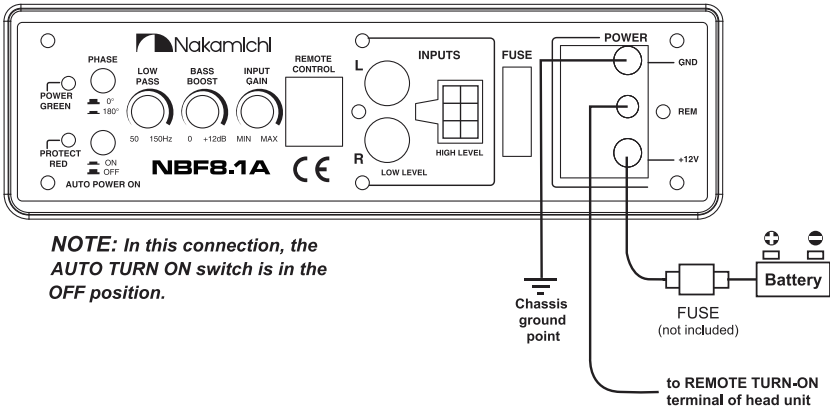
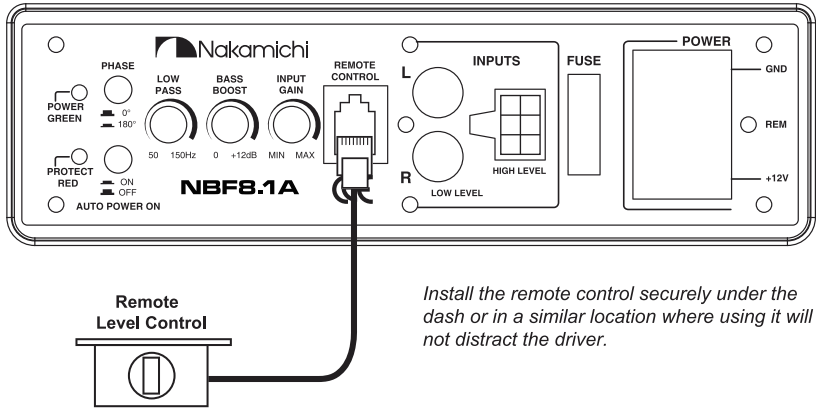


Fig.4



## Remote Level Control Connection

Fig.5



Install the remote control securely under the dash or in a similar location where using it will not distract the driver.

# TROUBLESHOOTING

If you experience operation or performance problems with this product, compare your installation with the electrical wiring diagram on the previous pages. If problems persist, read the following troubleshooting tips which may help eliminate the problems.

| SYMPTOM   | POSSIBLE REMEDY  |
|---|--|
| <b>Products will not power up.</b>                          | Check to make sure you have a good ground connection.<br>Check that the Remote Input (Turn-On) has at least 5VDC.<br>Check that there is battery power on the (+) terminal.<br>Check that there is at least 12v.<br>Check all fuse, replace if necessary.<br>Make sure that the Protection LED is not illuminated. IF it is lit shut off the amplifier briefly, and then repower it.   |
| <b>Protection LED comes on when amplifier is powered up</b> | Turn down the volume control on the head unit to prevent overdriving.<br>Check that there is good air circulation around the amp.  |
| <b>No output.</b>   | Check that all fuses are OK.<br>Check that unit is properly grounded,<br>Check that the Remote Input (Turn-On) has at least 5VDC.<br>Check that the RCA audio cables are plugged into the proper inputs.   |
| <b>Low output.</b>  | Reset the Level Control.<br>Check the Crossover Control settings.  |
| <b>High hiss in the sound.</b>                              | Disconnect all RCA inputs to the power sub's control panel. If the hiss disappears, then plug in the component driving the amplifier and unplugs inputs. If the hiss disappears at this point, go on until the faulty/noisy component is found.<br>It is best to set the amplifier's input level control as low as possible. The best subjective signal-to-noise ratio is achieved in this manner. Try to set the head unit as high as possible (without distortion) |
| <b>Squealing noises present.</b>                            | Check for improperly grounded RCA interconnects.   |
| <b>Distorted sound.</b>                                     | Check that the Input Level Control is set to match the signal level of the head unit.  |
| <b>Engine noise (static type)</b>                           | 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.  |
| <b>Engine noise (alternator whine)</b>                      | Check that the RCA grounds are not shorted to the vehicle chassis<br>Check that the head unit is properly grounded.  |

# 你的產品

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## 尊敬的客戶，

恭喜您購買了適用於您的音響系統的 Nakamichi 移動系統產品。

該產品的設計和製造符合 Nakamichi 的嚴格標準，可確保多年的音頻享受。為了獲得更佳性能，我們建議您由授權的 Nakamichi 經銷商安裝 Nakamichi 產品。

如果您想自行安裝此產品，我們建議您通讀本手冊以熟悉所有安裝要求和過程。

如果您遇到任何問題或對本產品的使用有任何疑問，請聯繫離您最近的 Nakamichi 授權經銷商以尋求幫助，或者您也可以通過我們的網站或社交媒體渠道與我們聯繫。

## 產品安裝

在當今的現代車輛中，很容易因安裝不當而損壞現有系統。請遵循並仔細檢查所有接線圖，以確保已正確連接所有部件。

如果您不熟悉接線和安裝圖或測試說明而感到不舒服，請與最近的 Nakamichi 經銷商聯繫以進行安裝。

## 安全警告和注意事項

- 僅用乾布或其他類似材料清潔。
- 將產品安裝在乾燥，通風良好的位置，不會干擾車輛的安全設備。
- 安裝本產品時，請勿阻塞任何通風口。
- 請勿將產品安裝在車輛的發動機艙內或任何過熱的地方，例如消聲器，消音器，排氣管或其他生熱設備。
- 牢固安裝產品，以免在碰撞或正常操作期間可能反復振動的情況下鬆動。
- 必須非常小心地安裝設備，以防止損壞車輛的燃油管路，電源和其他電線，液壓制動管路以及其他系統。如果可能，請始終與您最近的中道經銷商聯繫以進行安裝。
- 請勿在車輛外部或下方佈線。將所有電線保持在車內。
- 連接車輛電池時，請採取必要的預防措施，以免造成任何潛在的電擊。
- 小心佈線以保護所有系統電線免受尖銳邊緣的傷害，無論何時通過金屬開口安裝它們，請始終使用橡膠墊圈來保護電線和電纜。
- 使用電纜紮帶或線夾固定所有佈線，以防止其受到運動部件和尖銳邊緣的傷害。
- 請勿將本設備暴露在滴水或飛濺的液體上，也不要在其上放置裝有液體的物品。
- 將所有服務交給合格的服務人員。當設備以任何方式損壞時，例如電源輸入端子損壞，液體濺入或有物體掉入設備，設備被雨淋或受潮，無法正常工作或已被刪除。
- 保險絲只能用正確的類型和保險絲值更換，並且只能在設備斷電時更換。
- 暴露於高聲壓級可能會導致永久性聽力損失。採取一切預防措施來保護您的聽力。
- 本產品專門設計用於12伏負接地電氣系統。在正接地和/或12V以外的電壓的系統中使用本產品可能會損壞產品和系統。

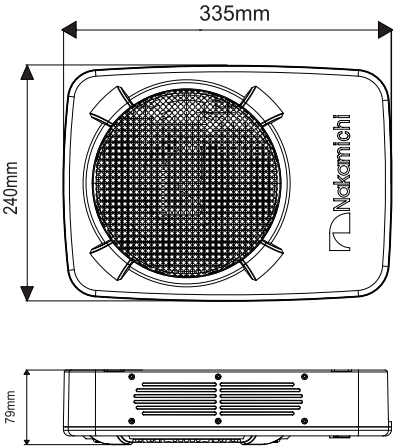


# 附件清單

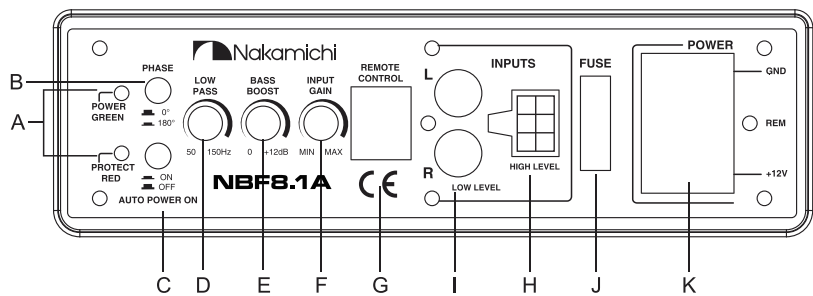
|  |    |
|--|----|
| 1. 使用說明書                                       | 1本 |
| 2. 螺絲包 (2顆Ø3x10mm, 4顆 Ø4x20mm, 4顆Ø4x6mm, 4片墊圈) | 1包 |
| 3. 扳手 (3mm)                                    | 1個 |
| 4. 高電平輸入線                                      | 1條 |
| 5. 線控  | 1套 |
| 6. 安裝支架  | 4片 |
| 7. 魔術貼   | 2張 |
| 8. 20A保險絲                                      | 1個 |

# 規格描述

|            |              |
|------------|--------------|
| 額定功率       | 120W         |
| 最大功率       | 1200W        |
| 總諧波失真      | <0.4%        |
| 信噪比        | >90dB        |
| 頻率響應       | 20Hz-150Hz   |
| 高電平輸入靈敏度   | 4V           |
| 低電平輸入靈敏度   | 110mV        |
| 低通濾波器      | 50Hz-150Hz   |
| 低音提升       | 0dB-12dB     |
| 高通濾波器      | 20Hz         |
| 保險絲額定值     | 20A          |
| 主動低音喇叭, 負載 | 8", 3.6Ω     |
| 尺寸 (長x寬x高) | 335x240x79mm |



# 面板控件和功能



## A. 電源狀態指示燈

當電源開啟時，電源指示燈顯示綠色，則運作正常;保護指示燈顯示紅色，則保護電路開啟。

## B. 相位轉換開關

在不同的位置，通過轉換0或180度相位可以得到最大的低音效果。

## C. 自動開關機控制開關

電源自動開關（ON/OFF）僅應用於高電平輸入連接。當開關處於“ON”位置時，在主機開機時，有源音箱將會自動開啟；在主機關閉時，有源音箱將會自動關閉。如果使用主機 REMOTE 線來控制有源音箱開關時，此開關必須處於“OFF”位置。

注意：開關主機時，如果聽到有開關機衝擊聲，此時自動開關機開關要設定在“OFF”位置。改用主機的 REMOTE 線來控制開關機。

## D. 低通濾波器電位器

此電位器用來調節低通濾波器的頻率範圍，有源音箱將播放所設定頻率範圍內的低音。

注意：低通濾波器的實際頻率有可能高于或低于設定值，誤差在±20%左右。

## E. 低音提升電位器

此電位器用來提升低音的聲壓。

## F. 音量電位器

開機前要把音量電位器調到最小位置。主機調到合適音量后，慢慢調大有源音箱的音量電位器，直到出現較小失真時，這時再調小音量即可。

## G. 遠程低音音量控制端口

附件配有帶線遠程遙控器，遙控線插入此端口后，遙控器電位器可以獨立控制低音音量。

## H. 高電平輸入端口

附件配有高電平輸入線，如果主機沒有 RCA 輸出端口，這時主機的功放信號可以通過高端輸入線，輸入到高電平輸入端口。高電平輸入線的連接方法參考圖 . 2。

## I. 低電平輸入端口

主機的低電平信號可以通過 RCA 音頻線輸入到有源音箱的 RCA 端口，低電平輸入線的連接方法參考圖 . 1。

## J. 保險絲插座

保險絲的規格要用標稱值，不要用銅導線類代替保險絲。

## K. 電源輸入端子

電源線的連接方法參考圖 . 3、圖 . 4。

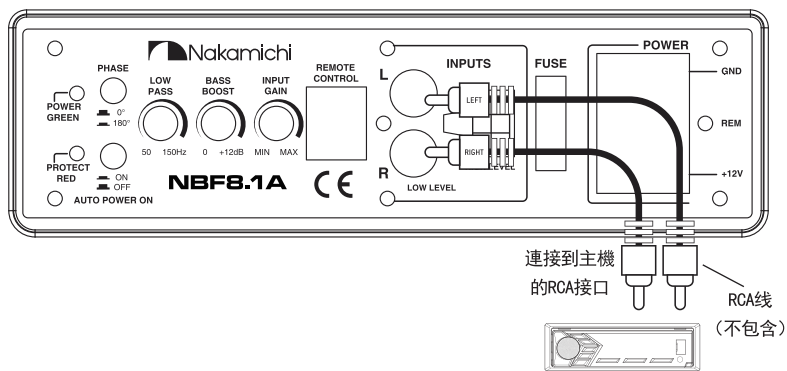
接線

低電平輸入接線

低電平輸入連接可以得到最好的低音效果，RCA連接線（附件不提供）。爲了減小失真和干擾，建議用高品質的RCA連接線。

注意：高電平和低電平不要同時輸入

圖. 1

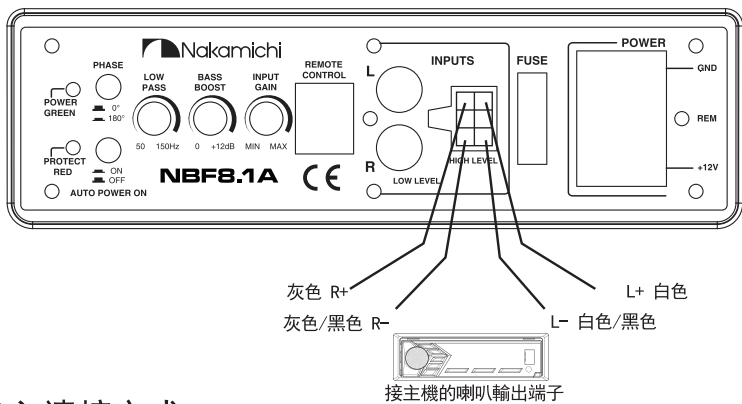


高電平輸入接線

如果主機沒有RCA輸出端口，這時主機的功放信號可以通過高端輸入線，輸入到高電平輸入端口。

注意：高電平和低電平不要同時輸入！

圖. 2



電源輸入連接方式

- 1. 地線端子：連接地線端子到離有源音箱最近的汽車底板上，接地線用8AWG線（或大于8AWG）。
- 2. 遙控端子：控制端子要用16AWG線（或大于16AWG）連接到主機의REMOTE輸出端子。
- 3. +12V端子：首先用40釐米左右長8AWG(或大于8AWG)的線，連接保險盒（不帶保險絲）一端到汽車電瓶的正極，保險盒的另一端用8AWG的線連接到有源音箱的+12V輸入端子。確認連接無誤后，在保險盒里插入標稱規格的保險絲。

接線

圖. 3

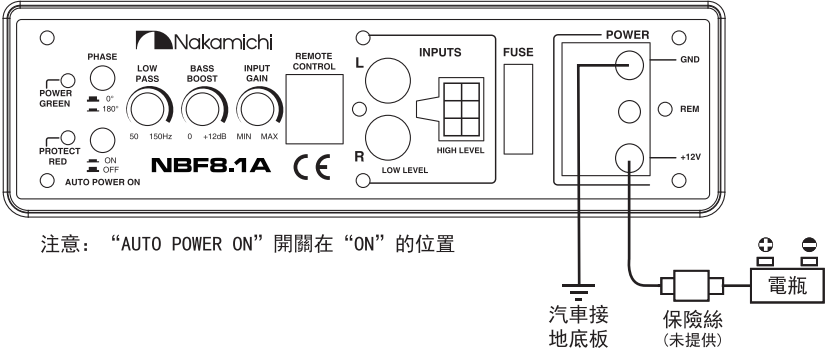


圖. 4

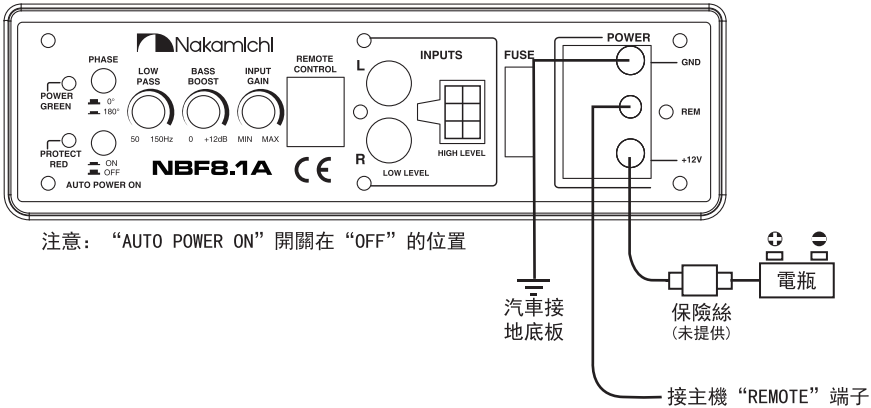
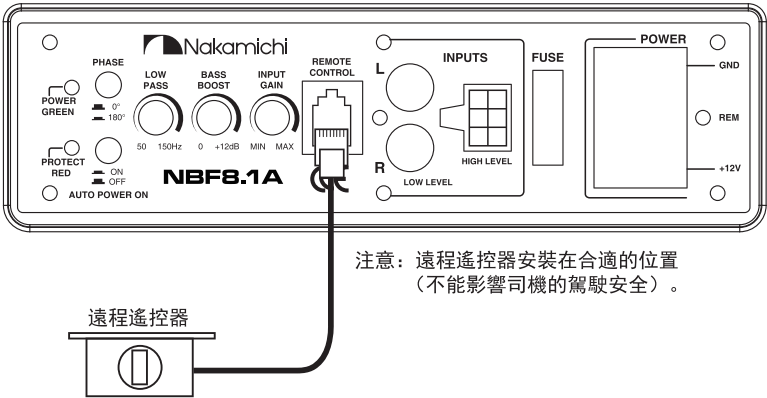


圖. 5



遇見操作或性能上的問題，如果前面的介紹和說明還未能幫到你成功解決，請閱讀下面的故障排除技巧，希望能幫助你解決問題。

故障現象

故障原因

|                   |  |
|-------------------|--|
| 产品不能啟動            | <div><div>1. 檢查功放電源地線是否連接良好。</div><div>2. 檢查電瓶正極電壓是否加在功放的電源端子正極。</div><div>3. 檢查REMOTE電壓不要低于5VDC。</div><div>4. 檢查電源端子正極電壓不要低于+12V。</div><div>5. 檢查保險絲是否損壞（開路）。</div><div>6. 確認保護指示燈是否亮起，如指示燈亮起則重新啟動功放。</div></div> |
| 产品啟動後保護指示燈亮起或过热保护 | <div><div>1. 調低音量電位器以防止過載保護。</div><div>2. 檢查濾波器電位器大小是否合適。</div></div>  |
| 产品無輸出             | <div><div>1. 檢查保險絲是否損壞（開路）。</div><div>2. 功放是否正確接地。</div><div>3. 功放啟動電壓不要低于5VDC。</div><div>4. 檢查RCA音頻線或高電平輸入線是否正確連接到功放。</div></div>   |
| 产品輸出低             | <div><div>1. 重新設定音量電位器。</div><div>2. 檢查濾波器電位器是否在正確的位置。</div></div>   |
| 播放音樂時有嘶嘶聲         | <div><div>1. 斷開功放的信號輸入線，如果嘶嘶聲消失就是信號源有問題，此時要確認信號線是否連接良好，或信號線質量是否有問題，否則主機可能有問題。</div><div>2. 盡可能把功放音量電位器開小，同時盡可能把主機音量開大（不要失真）。</div></div>   |
| 有嘯叫聲              | <div><div>1. 檢查RCA的地線是否連接好。</div></div>  |
| 失真                | <div><div>1. 檢查功放音量電位器是否過大了，功放音量電位器要配合好主機音量。</div><div>2. 檢查濾波器電位器大小是否合適。</div></div>  |
| 引擎聲（靜態）           | <div><div>1. 主要是RCA信號線質量太差的原因，要換用質量好的RCA信號線，並要遠離電源線。</div></div>   |
| 引擎聲（發電機火花聲）       | <div><div>1. 檢查RCA信號線，其地線不能連接到汽車底盤。</div><div>2. 檢查主機是否正確接地。</div></div>   |



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