

Troubleshooting Guide

What might appear to be a malfunction in your unit may just be the result of slight misoperation or miswiring. Before calling service, first check the following table for possible problems.

PROBLEM	POSSIBLE CAUSE	SOLUTION
No sound. (No sound from one side.)	<ul style="list-style-type: none"> Input (or output) cables are disconnected. Protection circuit may be activated. Volume is too high. 	<ul style="list-style-type: none"> Connect the input (or output) cables. Check connections by referring to "Power indicator". Replace the fuse and use lower volume. After check the speaker cord and fixing the cause of the short, replace the fuse.
(Blown fuse.)	<ul style="list-style-type: none"> The speaker cord is shorted. 	
The output level is too small (or too large).	The input sensitivity adjusting control is not set to the correct position.	Adjust the control correctly referring to "Controls".
The sound quality is bad. (The sound is distorted.)	<ul style="list-style-type: none"> The speakers wire are connected with wrong ⊕ / ⊖ polarity. A speaker wire is pinched by a screw in the car body. The switches may be set improperly. 	<ul style="list-style-type: none"> Connect them properly checking the ⊕ / ⊖ of the terminals and wires well. Connect the speaker wire again so that it is not pinched by anything. Set switches properly by referring to "System examples".

Specifications

Specifications subject to change without notice.

	KAC-6201	KAC-5201
Audio Section		
Max Power Output	350 W × 1	250 W × 1
Rated Power Output (4 Ω)		
Normal (20 Hz – 20 kHz, 0.08 % THD).....	60 W × 2	40 W × 2
Bridge (1 kHz, 0.8 % THD).....	150 W × 1	120 W × 1
Rated Power Output (2 Ω)		
Normal (1 kHz, 0.8 % THD)	75 W × 2	60 W × 2
Frequency Response (+0, –1 dB)	10 Hz – 45 kHz	5 Hz – 50 kHz
Signal to Noise Ratio	100 dB	100 dB
Sensitivity (MAX) (rated output)	0.2 V	0.2 V
(MIN) (rated output)	5.0 V	5.0 V
Input Impedance	10 kΩ	10 kΩ
Low Pass Filter (12 dB/oct.)	80 Hz	80 Hz
High Pass Filter (12 dB/oct.) (KAC-6201 only)	150 Hz	
General	KAC-6201	KAC-5201
Operating Voltage (11 – 16 V allowable)	14.4 V	14.4 V
Current Consumption (1 kHz, 10% THD)	19 A	16 A
Dimensions (W × H × D)[mm]	228 × 59 × 228	228 × 59 × 160
[inch]9 × 2-5/16 × 9	9 × 2-5/16 × 6-5/16
Weight	2.6 kg (6.1 lbs)	2.1 kg (4.6 lbs)

Safety precautions

▲WARNING

To prevent injury or fire, take the following precautions:

- When extending the ignition, battery, or ground wires, make sure to use automotive-grade wires or other wires with a 3mm² (AWG12) or more to prevent wire deterioration and damage to the wire coating.
- To prevent a short circuit, never put or leave any metallic objects (such as coins or metal tools) inside the unit.
- If the unit starts to emit smoke or strange smells, turn off the power immediately and consult your Kenwood dealer.
- Do not touch the unit during use because the surface of the unit becomes hot and may cause burns if touched.

▲CAUTION

To prevent damage to the machine, take the following precautions:

- Be sure the unit is connected to a 12V DC power supply with a negative ground connection.
- Do not open the top or bottom covers of the unit.
- Do not install the unit in a spot exposed to direct sunlight or excessive heat or humidity. Also avoid places with too much dust or the possibility of water splashing.
- When replacing a fuse, only use a new one with the prescribed rating. Using a fuse with the wrong rating may cause your unit to malfunction.
- To prevent a short circuit when replacing a fuse, first disconnect the wiring harness.

NOTE

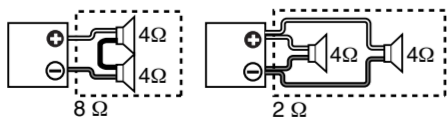
- If you experience problems during installation, consult your Kenwood dealer.
- If the unit does not seem to be working right, consult your Kenwood dealer.

■ Cleaning the unit

If the front panel gets dirty, turn off the power and wipe the panel with a dry silicon cloth or soft cloth.

▲CAUTION

Do not wipe the panel with a hard cloth or a cloth dampened by volatile solvents such as paint thinner and alcohol. They can scratch the surface of the panel and/or cause the indicator letters to peel off.



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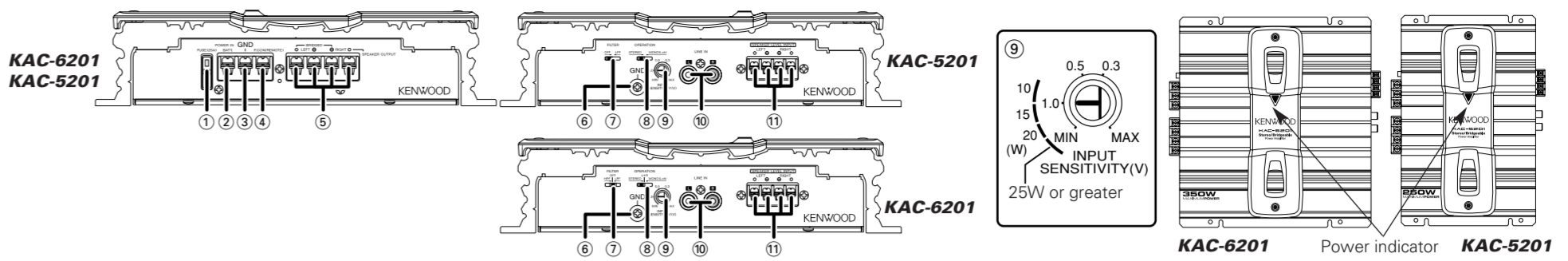
KAC-6201 KAC-5201

POWER AMPLIFIER INSTRUCTION MANUAL

放大器 使用説明書

KENWOOD CORPORATION

Controls



Operations of the following control and switches are required in accordance with the center unit and speakers connected with this unit.

- Fuse**
25 A × 1 : KAC-6201
15 A × 1 : KAC-5201
NOTE
If you can't find the specified capacity fuse at your store etc., consult your Kenwood dealer.
- Battery terminal**
- Ground terminal**
- Power control (REMOTE) terminal**
- SPEAKER OUTPUT terminals**
 - Stereo Connections:**
When you wish to use the unit as a stereo amplifier, stereo connections are used.
 - Bridged Connections:**
When you wish to use the unit as a high-output monaural amplifier, bridged connections are used. (Make connections to the LEFT channel (+) and the RIGHT channel (-) SPEAKER OUTPUT terminals.)
- RCA cable ground lead terminal**
▲CAUTION
Do not use this terminal for power source grounding. This unit will be damaged if the power source grounding wire is connected to this terminal.
- FILTER switch**
These switches allow filtering of the speaker output signals.
 - HPF (High Pass Filter) position (KAC-6201 only)**
Only frequencies of 150 Hz or higher are output. (Frequencies below 150 Hz are cut.)
 - LPF (Low Pass Filter) position**
Only frequencies of 80 Hz or lower are output. (Frequencies above 80 Hz are cut.)
The Lch and Rch will be mixed before output even if the operation switch is set to STEREO.
- OPERATION switch**
This switch allows selection of the amplification method of input signals.

- STEREO position**
The amplifier can be used as a stereo amplifier.
- L+R position (KAC-6201 only)**
The input left and right signals are combined before being amplified. Use this position when the unit is used for subwoofer speakers or the L+R (monaural) sound is required.
- MONO (Lch) position**
Amplifies the signal input from the left side only. Set to this position and make bridged connections to use as a high-power monaural amplifier. (The input right signal is not output.)
- INPUT SENSITIVITY control**
Set this control according to the pre-output level of the center unit connected with this unit, or to the maximum power output of the genuine-accessory car stereo.
Use the diagram on the right as a guide.
NOTE
For the pre-output level or the maximum power output, refer to the "Specifications" in the instruction manual of the center unit.
- LINE IN terminal**
- Speaker level input terminals**

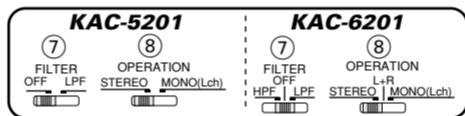
Power indicator

When the power is turned on, the Power indicator lights.
If the Power indicator does not light when the power is turned on, the protection function may be activated. Check whether there is any indication of trouble.

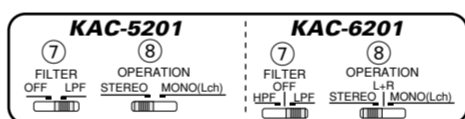
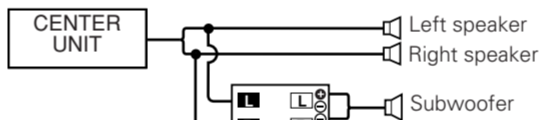
- The protection function is activated in the following situations:**
This unit is equipped with a protection function for protecting this unit and your speakers from various accidents or problems that can occur.
When the protection function is triggered, the Power indicator goes off and the amplifier stops operating.
 - When a speaker wire may be short-circuited.
 - When a speaker output contacts ground.
 - When the unit malfunctions and a DC signal is sent to the speaker output.
 - When the internal temperature is high and unit won't operate.
 - When a ground wire of the center unit (cassette receiver, CD receiver, etc.) or this unit is not connected to a metal part serving as an electrical ground passing electricity to the battery's negative ⊖ terminal.

System examples

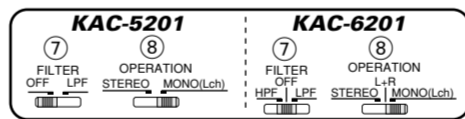
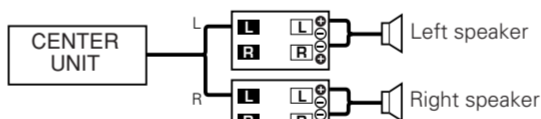
■ 2-channel system



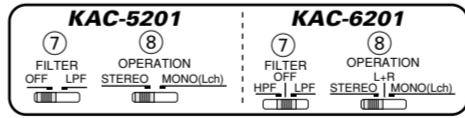
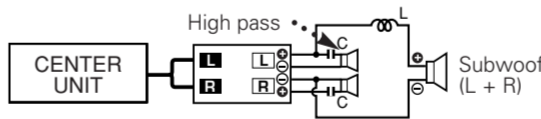
■ Subwoofer system



■ 1-channel system



■ Tri-mode



Principle of Tri-mode

Method of frequency band division using a coil and capacitor ... in case of 6dB/oct. slope
Coil (L): Passes low frequencies and blocks high frequencies. (Low pass)
Capacitor (C): Passes high frequencies and blocks low frequencies. (High pass)

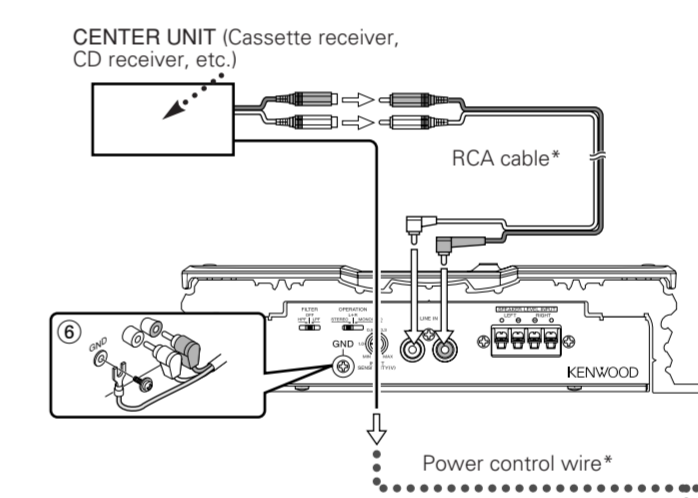
Example:

When it is required to set a crossover frequency of 120 Hz using speakers with an impedance of 4 ohms.
fc=Cut of Frequency (Hz)
R=Speaker Impedance (Ω)

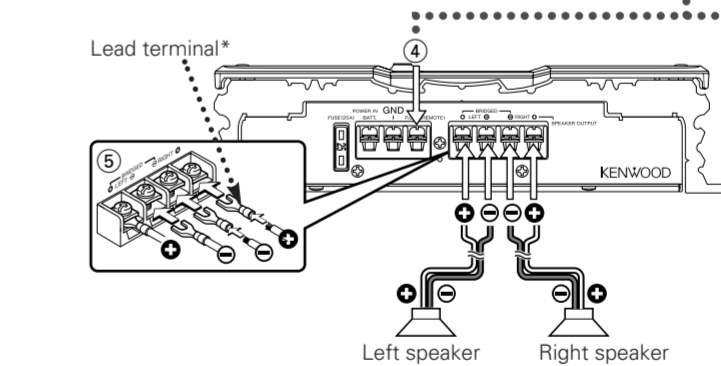
Connection

NOTE For safe installation, read "Installation procedure" before starting work.

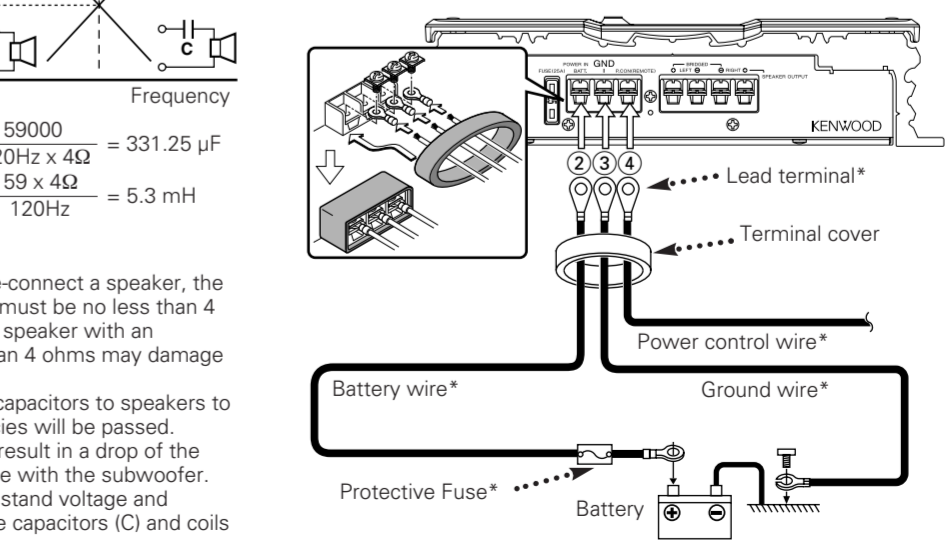
■ RCA cable connection



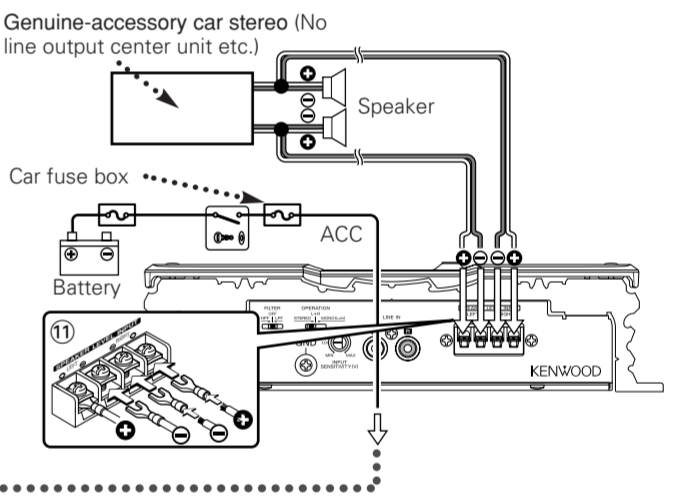
■ Speaker stereo connection



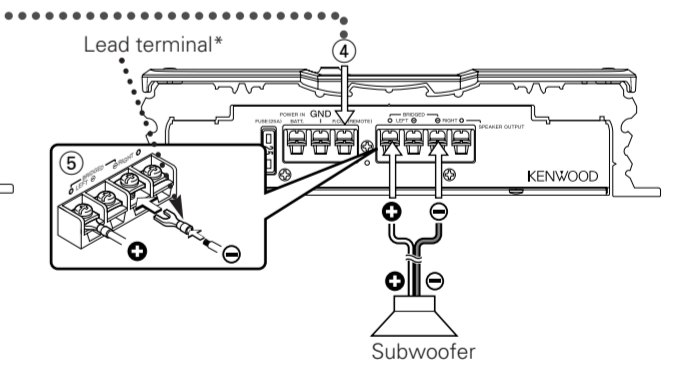
■ Power wire connection



■ Speaker level input connection



■ Speaker bridge connection



© B64-2562-00/00 (MV)

Installation procedure

- Remove the ignition key and disconnect the negative ⊖ terminal of the battery to prevent short circuits.
- Set the unit according to the intended usage.
- Connect the input and output cables of the units.
- Connect the speaker wires.
- Connect the power wire, power control wire and grounding wire following this order.
- Install the unit in the car.
- Connect the negative ⊖ terminal of the battery.

▲WARNING

To prevent fire caused by a short in the wiring, connect a fusible link or breaker nearby the battery's positive terminal.

▲CAUTION

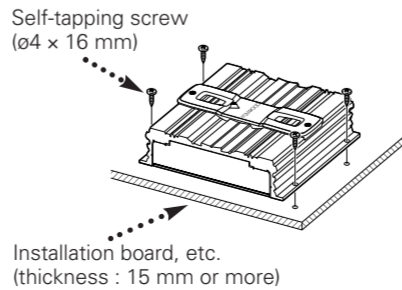
- Be sure to turn the power off before changing the setting of any switch.
- If the fuse blows, check wires for shorts, then replace the fuse with one of the same rating.
- Check that no unconnected cables or connectors are touching the car body. Do not remove caps from unconnected cables or connectors to prevent short circuits.
- Connect the speaker wires to appropriate speaker connectors separately. Sharing the negative wire of the speaker or grounding speaker wires to the metal body of the car can cause this unit to fail.
- After installation, check that the brake lamps, wipers, and wipers work properly.

■ Speaker level input terminals (11)

- The genuine-accessory car stereo shall have a maximum power output of no more than 40 W.
- Do not connect the speaker output leads from a power amplifier (Optional) to the speaker level input terminals of this unit, for this may cause malfunction or damage.
- Do not connect cables and leads to both RCA cable input jacks and the speaker level input terminals simultaneously, for this may cause malfunction or damage.
- Connect the power control lead to a power supply which can be turned ON/OFF by the ignition key switch (ACC line). With this connection, shock noise may be generated when the power of the genuine-accessory car stereo is switched ON/OFF.

■ Power terminal (2③④)

Connect to their respective terminals the power supply wire, and ground wire, all of which pass through the associated terminal cover. Once the connections are complete, place the cover on the terminal section.



故障檢修

有時被認為是故障的現象，其實是因微小的操作或配線失誤而造成。在要求維修之前，請參照下表將事故檢查為盼。

現象	原因	排除方法
沒有聲音（一側無聲音）	● 輸入（或輸出）纜線未連接。 ● 保護線路可能被觸發。	● 連接輸入（或輸出）纜線。 ● 參考“電源指示燈”一節，檢查連接狀況。
（保險絲跳斷）	● 音量過大。 ● 揚聲器電路短路。	● 請更換保險絲，減小音量。 ● 確認揚聲器線，解除短路原因後，更換保險絲。
輸出水平過低（或過高）	輸入敏感度調節不當，沒有位於適當位置。	調節該控制器。請參考“控制”。
聲音質量很差（聲音失真）	● 揚聲器纜線的極性 ⊕/⊖ 連接錯誤。 ● 揚聲器纜線的一根被車體螺釘壓緊。 ● 開關的設定可能不妥。	● 請將纜線的極性 ⊕/⊖ 連接正確。 ● 重新連接纜線，使之不再受螺釘壓迫。 ● 請參考“系統配置實例”，將開關正確設置。

規格

規格可能會變更，恕不另行通知。

音頻部	KAC-6201	KAC-5201
最大功率輸出	350 W × 1	250 W × 1
額定輸出功率 (4 歐姆)		
普通 (20 Hz - 20 kHz · 0.08% THD)	60 W × 2	40 W × 2
橋路 (1 kHz · 0.8% THD)	150 W × 1	120 W × 1
額定輸出功率 (2 歐姆)		
普通 (1 kHz · 0.8% THD)	75 W × 2	60 W × 2
頻率響應 (+0 · -1 dB)	10 Hz ~ 45 kHz	5 Hz ~ 50 kHz
信噪比	100 dB	100 dB
敏感度 (最大) (額定輸出)	0.2 V	0.2 V
(最小) (額定輸出)	5.0 V	5.0 V
輸入阻抗	10 kΩ	10 kΩ
低頻通過過濾 (12 dB/oct.)	80 Hz	80 Hz
高頻通過過濾 (12 dB/oct.) (只限於 KAC-6201)	150 Hz	
共同	KAC-6201	KAC-5201
使用電壓 (允許 11-16 伏)	14.4 V	14.4 V
電流消耗 (1 kHz · 10% THD)	1.9 A	1.6 A
尺寸 (W × H × D)	228 × 59 × 228	228 × 59 × 160
(英寸)	9 × 2.5/16 × 9	9 × 2.5/16 × 6.5/16
重量	2.8 kg (6.1 lbs)	2.1 kg (4.6 lbs)

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KAC-6201 KAC-5201

放大器

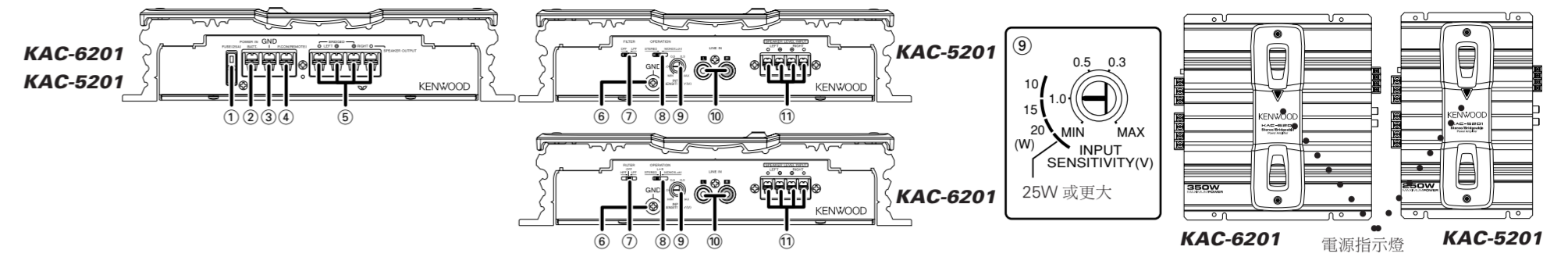
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控制



▲ 注意

該端子不能作為電源的接地端子。如果將電源地線連接到此端子就會損壞本機。

⑦ FILTER (過濾器) 開關

這些開關可以過濾揚聲器的輸出信號。
● HFP (高頻通過) 位置 (只限於 KAC-6201) 只讓那些等於或高於 150 Hz 的信號通過 (低於 150 Hz 的信號被過濾掉)。

● LPF (低頻通過) 位置

只讓那些等於或低於 80 Hz 的信號通過 (高於 80 Hz 的信號被過濾掉)。
即使當操作開關位於 STEREO (立體聲) 時，左右聲道的信號在輸出前將被混合。

● OFF (關閉) 位置

未經過濾的信號原樣輸出。

⑧ OPERATION (操作) 開關

本開關可以用來選擇輸入信號的放大方法。
● STEREO (立體聲) 位置 放大器可以作為立體聲放大器使用。

● L+R 位置 (只限於 KAC-6201)

輸入的左右聲道信號在放大之前被混合。當裝置被用於副低音揚聲器或者需要 L+R (單聲道) 效果時，可以使用此位置。

根據本機所連接的中心裝置和揚聲器等條件，需要進行以下控制及開關切換操作。

① 保險絲

25 A × 1: KAC-6201
15 A × 1: KAC-5201

註

萬一在銷售店等找不到指定容量的保險絲的話，請與 KENWOOD 專銷公司聯係。

② 電池端子

③ 接地端子

④ 電源控制 (REMOTE) 端子

⑤ 揚聲器輸出端子

● 立體聲連接端子:

當您希望本機作為立體聲放大器時，必須使用立體聲連接端子。

● 橋路連接端子:

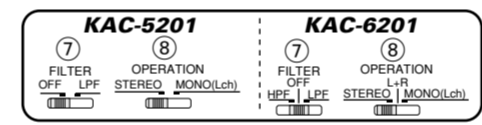
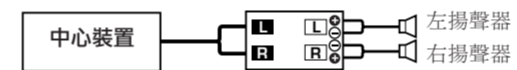
當您希望本機作為大功率單聲道放大器使用時，可以進行橋路連接。(連接 LEFT 聲道 (+)、RIGHT 聲道 (-) 及 SPEAKER OUTPUT 端子)

⑥ RCA 纜線接地頭

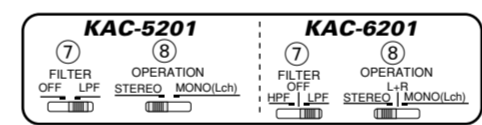
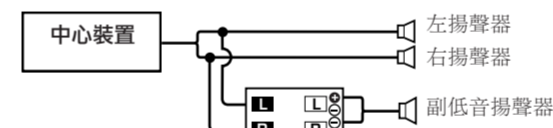
當使用具有接地引線的 RCA 纜線時，將接地引線連接到此端子。

系統配置實例

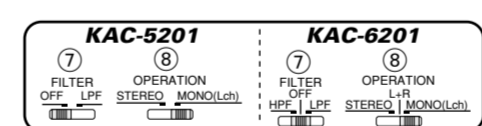
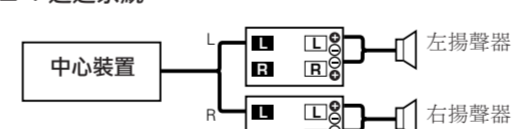
■ 2 通道系統



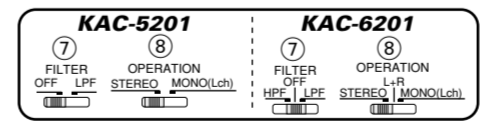
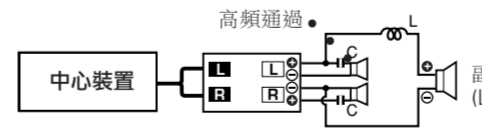
■ 副低音揚聲器系統



■ 1 通道系統



■ 三模式



三模式的原理

使用線圈及電容進行頻率區分的方法... 在 6dB/oct. 的條件下
線圈 (L): 讓低頻通過，阻塞高頻 (低頻通過)
電容 (C): 讓高頻通過，阻塞低頻 (高頻通過)

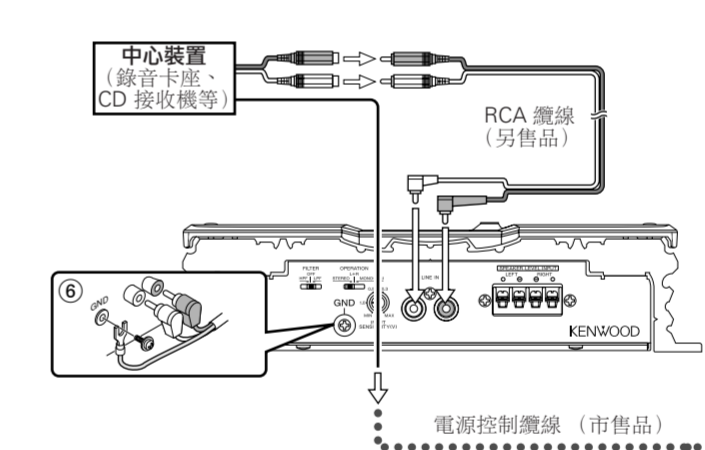
實例

當使用的揚聲器的阻抗為 4 歐姆，所需要的交叉頻率為 120 Hz 時。
fc = 阻斷頻率 (Hz)
R = 揚聲器阻抗 (Ω)

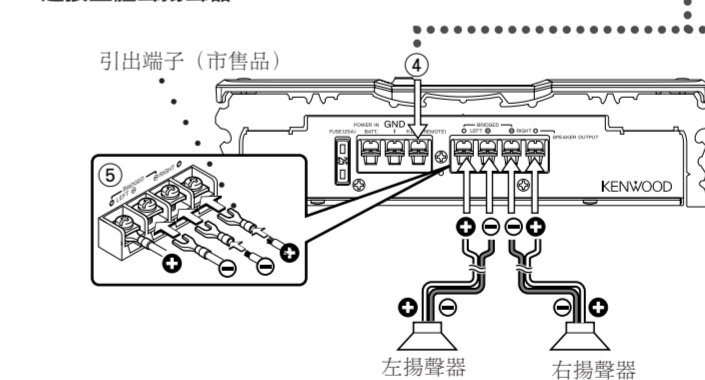
連接

註 為了安全安裝，請在開始操作之前，務必閱讀「安裝步驟」說明。

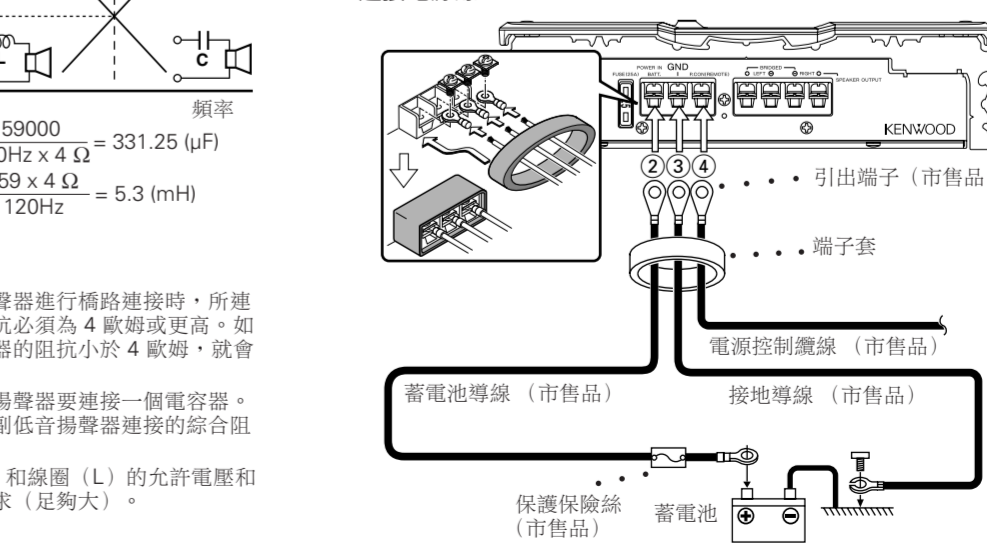
■ 連接 RCA 纜線



■ 連接立體聲揚聲器



■ 連接電源線



▲ 注意

● 當您將本機與揚聲器進行橋路連接時，所連接的揚聲器的阻抗必須為 4 歐姆或更高。如果所連接的揚聲器的阻抗小於 4 歐姆，就會損壞本機。
● 對於高頻通過的揚聲器要連接一個電容器。否則，將造成與副低音揚聲器連接的綜合阻抗下降。
● 確保電容器 (C) 和線圈 (L) 的允許電壓和額定電流符合要求 (足夠大)。

安全注意事項

▲ 警告

● 為了防止受傷和火災，請遵守下列注意事項。

- 當延長蓄電池導線和接地導線時，請使用車輛用導線或 3mm² (AWG12) 以上的導線，以防止導線劣化和被覆面的損傷。
- 為了防止短路等事故，請勿將金屬物品 (硬幣、工具等) 掉落在裝置中。
- 萬一裝置冒煙或有異味時，請立即關閉電源，並與 KENWOOD 經銷商洽談。
- 在使用中請盡量不要接觸機器表面。因為機器在使用中表面發熱會燙傷人體。

▲ 注意

為了防止裝置發生故障，請遵守下列注意事項，正確操作和使用。

- 請以負接地的 12V 直流電源向本裝置供電。
- 請勿打開頂部和底部的蓋子。
- 請勿將本裝置安裝在曝露於直射陽光、高溫或高濕、水可能飛濺的或有灰塵的地方。
- 更換保險絲時，請更換規定容量相同的保險絲。如使用不同容量的保險絲，可能會造成裝置的故障。
- 更換保險絲時，為了防止短路事故，請先拔下電源線束再進行更換。

註

- 安裝有困難時，請與 KENWOOD 經銷商洽談。
- 如果仍不能恢復正常時，請與 KENWOOD 經銷商洽談。

■ 裝置的保養

如果外表髒污時，請關閉電源，使用干燥的抹布或柔軟的布匹擦拭。

▲ 注意

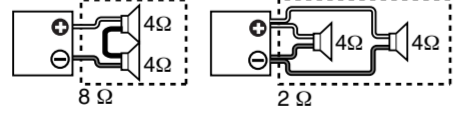
請勿使用硬布或塗料稀釋劑、酒精等揮發性溶劑，以免損壞外表面或將所附指示字樣擦掉。

■ 接線

- 如果發動機運轉時從揚聲器中發出噪音，可以在電池的每根導線上加一個線路噪音過濾器 (選購件)。
- 使用絕緣圈，以防纜線直接接觸貼片的邊緣。
- 將接地線連接到車架的金屬部位，車架起到車輛電氣接地的作用，將電流傳遞到電池的負極 (-)。如果接地線沒有連接就不要打開電源開關。
- 應務必在蓄電池附近的電源連接線上設置保險絲。保險絲的規格應該與本機的保險絲容量相同或者略大。
- 對於電源連接線和接地線，請使用電流量大於本機保險絲容量的汽車用 (防火) 電源連接線。(請使用截面積為 3mm² (AWG12) 或者以上的電源連接線。)
- 當使用多個功率放大器時，電源導線的電流量及保險絲的容量要大於各個放大器的最大使用電流之和。

■ 揚聲器選擇

- 準備連接的揚聲器的額定功率要大於放大器的最大輸出功率。如果揚聲器的額定功率小於放大器的最大輸出功率則會導致揚聲器冒煙以至損壞。
- 所連接的揚聲器的阻抗必須為 2 歐姆或更高 (立體聲連接時)；或者 4 歐姆或更高 (橋路連接)。當多個揚聲器被連接時，則必須計算揚聲器的綜合阻抗，再將適當的揚聲器與放大器相連接。



安裝步驟

1. 拔取點火鑰匙，拆掉電池負極 (-) 端子，以防短路。
2. 根據使用目的，設置本機到妥當位置。
3. 連接本機的輸入和輸出纜線。
4. 連接揚聲器纜線。
5. 按順序連接電源線，電源控制纜線及地線。
6. 將本機安裝到車中。
7. 連接電池的負極 (-)。

▲ 警告

為了防止短路所引起的火災，在電池的正極附近連接保險絲或斷電器。

▲ 注意

- 在變更開關的設定時，必須首先切斷電源。
- 當保險絲熔斷後，要檢查纜線是否有短路，並更換上相同規格的保險絲。
- 檢查是否有尚未連接的纜線或與車體相接觸的端頭。未連接纜線及其端頭的保護層不可拆卸，以防短路。
- 揚聲器的纜線要分別連接到各自的端子。共用揚聲器的負極纜線或將揚聲器端子接地到汽車的金屬部分，都會導致本機停止工作。
- 安裝之後，請檢查汽車的剎車燈、方向指示燈、雨刷等是否正確動作。
- 揚聲器水平輸入端子 (11)
- 車內原裝立體聲的最大輸出功率不得大於 40 瓦。
- 不要將揚聲器的輸出引線從功率放大器 (選購件) 連接到本機的揚聲器的輸入端子。否則，將造成誤動作或損壞。
- 不可同時連接纜線和引線到 RCA 纜線輸入端子及揚聲器輸入端子。否則，將造成誤動作或損壞。
- 將電源控制導線連接到起動鑰匙可以控制開關 (ACC 線) 的電路上。在這樣連接的場合，當車內原裝立體聲電源開關時，可能產生沖擊噪音。

■ 電源端子 (2)(3)(4)

將電源控制線、電源線、地線同時穿過端子套分別連接到各自對應的端子。當連接完畢後，將端子套套緊於端子上。

■ 附件

零件名稱	外觀	項目數量
端子套 (電源端子)		1
自攻絲螺絲 (φ 4 x 16 mm)		4

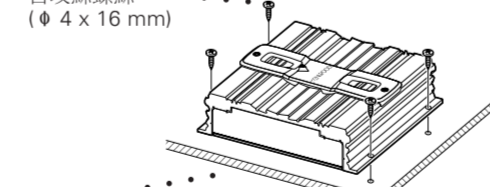
安裝

因為放大器中不包含需要隨時操作的部件，所以可以安裝在遠離駕駛位置的不造成障礙的位置。通常，可供參考的安裝地點大致為行李箱等處。

▲ 注意

- 不可將本裝置安裝在絨毯底下，否則，蓄熱會導致本裝置損壞。
- 將本裝置安裝在熱量容易散發的地點。一旦安裝完畢，不可在其上放置其它物品。
- 機器使用過程中，機體表面會發熱昇溫。所以其安裝地點應該是人體、樹脂及其它熱敏感物質不易觸及的地方。
- 在車座、行李箱底部或車子其它部位打洞時，應確認其背面沒有會受到損壞的物件，諸如油箱、剎車用配管或線路管套等，千萬不可擦傷或損壞這些物品。
- 不可安裝在駕駛室儀表板、尾部底板或保險氣囊等部件之上。
- 將本機安裝在車內時，應確保固定牢靠，且不會對駕車造成妨礙。如果因為沖擊造成本機脫落且撞及人體或保險部件，就會導致傷害或事故。
- 在本裝置安裝之後，應該確認電氣設備，比如剎車燈、轉向信號燈以及雨刷等操作正常。

自攻絲螺絲 (φ 4 x 16 mm)



安裝基板，等 (厚度: 不小於 15 mm)

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