SONY®

4-733-364-**11**(1)

6/5 Channel Class-D Amplifier with DSP

Operating Instructions	GB
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Owner's Record

The model and serial numbers are located on the bottom of the unit.
Record the serial number in the space provided below.
Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. XM-GS6DSP

Serial No. _____

* 4 7 3 3 3 6 4 1 1 * (1)

XM-GS6DSP

To use the unit safely, see "Installation and Connections" (page 6) for details.

The nameplate indicating operating voltage, etc., is located on the bottom of the chassis.

Warning

FOR THE CUSTOMERS IN THE USA. NOT APPLICABLE IN CANADA, INCLUDING IN THE PROVINCE OF QUEBEC.

POUR LES CLIENTS AUX ÉTATS-UNIS. NON APPLICABLE AU CANADA, Y COMPRIS LA PROVINCE DE QUÉBEC.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

This device complies with Part 15 of the FCC Rules and Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:
(1) This device may not cause interference; and
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that is deemed to comply without maximum permissive exposure evaluation (MPE).

Important notice

Caution

IN NO EVENT SHALL SONY BE LIABLE FOR ANY INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR OTHER DAMAGES INCLUDING, WITHOUT LIMITATION, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWNTIME, AND PURCHASER'S TIME RELATED TO OR ARISING OUT OF THE USE OF THIS PRODUCT, ITS HARDWARE AND/OR ITS SOFTWARE.

Dear customer, this product includes a radio transmitter.
Please check your vehicle operation manual or contact the manufacturer of your vehicle or your vehicle dealer, before you install this product into your vehicle.

Emergency calls

This BLUETOOTH car handsfree and the electronic device connected to the handsfree operate using radio signals, cellular, and landline networks as well as user-programmed function, which cannot guarantee connection under all conditions. Therefore do not rely solely upon any electronic device for essential communications (such as medical emergencies).

On BLUETOOTH communication

- Microwaves emitting from a BLUETOOTH device may affect the operation of electronic medical devices. Turn off this unit and other BLUETOOTH devices in the following locations, as it may cause an accident.
  – where inflammable gas is present, in a hospital, train, airplane, or petrol station
  – near automatic doors or a fire alarm
- This unit supports security capabilities that comply with the BLUETOOTH standard to provide a secure connection when the BLUETOOTH wireless technology is used, but security may not be enough depending on the setting. Be careful when communicating using BLUETOOTH wireless technology.
- We do not take any responsibility for the leakage of information during BLUETOOTH communication.

If you have any questions or problems concerning your unit that are not covered in this manual, consult your nearest Sony dealer.

Features

- Sony 5-speaker system with 4.1ch DSP connection supported.
- Sony 3-way component speaker connection supported.
- Bluetooth® connection with your iPhone/Android™ smartphone supported.
- Maximum power output of 100 W per channel (FRONT/REAR at 4 Ω) and 300 W per channel (SUB at 4 Ω).
- This unit can be used as a bridging amplifier with a maximum output of 1,100 W (SUB at 2 Ω).
- Built-in LPF (low-pass filter) (REAR/SUB), HPF (high-pass filter) (FRONT/REAR), and Low boost circuit (SUB).
- Protection circuit and indicator provided.
- Direct connection can be made with the speaker output of your car audio unit if that is not equipped with the line output (High level input connection).
- Hi-level Sensing Power On feature allows this unit to be activated without the need for a REMOTE connection.
- Pulse power supply* for stable and regulated output power.

* **Pulse power supply**
This unit has a built-in power regulator which converts the power supplied by the 12 V DC car battery into high speed pulses using a semiconductor switch. These pulses are stepped up by the built-in pulse transformer and separated into both positive and negative power supplies before being converted into direct current again. This is to regulate fluctuating voltage from the car battery. This light-weight power supply system provides a highly efficient power supply with a low impedance output.

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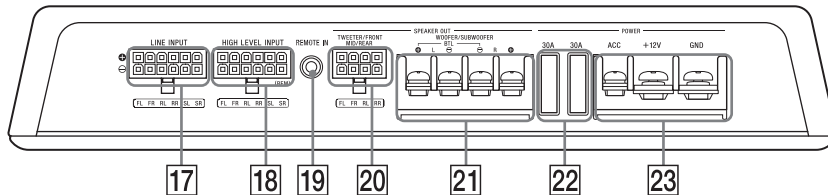
Operation

Location and Function of Controls

Control panel side
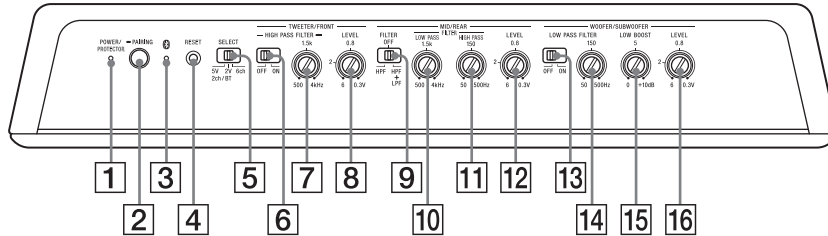
Connector panel side

[1] **POWER/PROTECTOR indicator (green)**
 – Lights up when the unit is turned on.
 – Flashes when the unit detects an abnormality. See "Troubleshooting" (page 21) for solutions to problems.

[2] **PAIRING button**
 Press and hold for 2 seconds to enter the pairing standby mode.
 Press and hold for 7 seconds to turn off the BLUETOOTH functions (BLUETOOTH off mode). (Available only when the SELECT switch is set to the "2V" or "5V" position.)

[3] **(BLUETOOTH) indicator (blue)**
 – Flashes quickly in pairing standby mode.
 – Flashes slowly in BLUETOOTH standby mode.
 – Lights up when BLUETOOTH connection is established.

[4] **RESET button**
 Resets the unit to the factory defaults (the DSP settings and BLUETOOTH pairing information stored on the unit are also erased).
 Press with a pointed object such as a ballpoint pen.

[5] **SELECT (input select) switch**
 Selects "2ch/BT" or "6ch" mode depending on the use/non-use of the DSP. When selecting the "2ch/BT" mode, also select the sensitivity "2V" or "5V" depending on the pre-output level of your car audio unit (page 10).

TWEETER/FRONT (tweeter/front speaker) section:

[6] **HIGH PASS FILTER switch**
 Turns the high-pass filter on/off.

[7] **HIGH PASS FILTER control**
 Adjusts the cut-off frequency (500 Hz – 4 kHz).

[8] **LEVEL control**
 Adjusts the input level (0.3 V – 6 V). Turn it clockwise when the output level of the audio device seems low.

MID/REAR (midrange/rear speaker) section:

9 FILTER switch

Selects "HPF" (high-pass filter) or "HPF+LPF" (high-pass and low-pass filters) according to the speaker system.

10 LOW PASS FILTER control

Adjusts the cut-off frequency (500 Hz – 4 kHz).

11 HIGH PASS FILTER control

Adjusts the cut-off frequency (50 Hz – 500 Hz).

12 LEVEL control

Adjusts the input level (0.3 V – 6 V). Turn it clockwise when the output level of the audio device seems low.

WOOFER/SUBWOOFER (woofer/subwoofer) section:

13 LOW PASS FILTER switch

Turns the low-pass filter on/off.

14 LOW PASS FILTER control

Adjusts the cut-off frequency (50 Hz – 500 Hz).

15 LOW BOOST control

Boosts the frequencies around 40 Hz to a maximum of 10 dB (0 dB – 10 dB).

16 LEVEL control

Adjusts the input level (0.3 V – 6 V). Turn it clockwise when the output level of the audio device seems low.

17 LINE INPUT connector

18 HIGH LEVEL INPUT connector

19 REMOTE IN jack

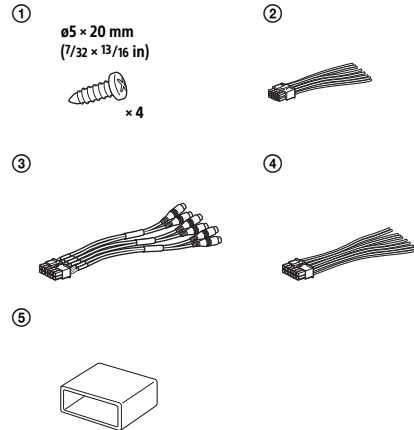For a wired remote control (not supplied)

SPEAKER OUT section:

20 TWEETER/FRONT/MID/REAR connector

21 WOOFER/SUBWOOFER terminals

POWER section:

22 Fuse (30 A)

23 ACC (accessary) terminal

+12V terminal

GND (ground (earth)) terminal

Installation and Connections

Parts for Installation and Connections

①
ø5 × 20 mm
(7/32 × 13/16 in)
× 4

②

③

④

⑤

This parts list does not include all the package contents.

Installation

- Select the mounting location where it is easy to press the PAIRING button on the unit.
- Choose the mounting location carefully so the unit will not interfere with the normal movements of the driver and it will not be exposed to direct sunlight or hot air from the heater.
- Do not mount the unit in a confined space such as under the floor carpet that will obstruct heat dissipation.

Mounting the unit

First, place the unit where you plan to install it, and mark the positions of the 4 screw holes on a mounting board (not supplied). Then drill a 3 mm ($1/8$ in) pilot hole at each mark and mount the unit onto the board with the supplied mounting screws. The mounting screws are all 20 mm ($13/16$ in) long, so make sure that the mounting board is thicker than 20 mm ($13/16$ in).
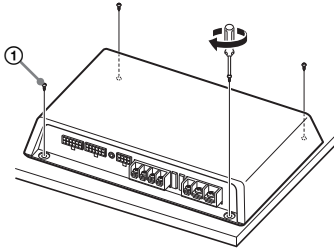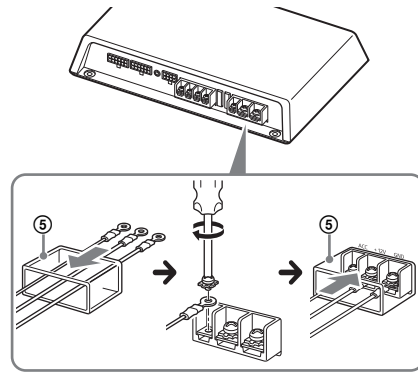
Connections

- Before making any connections, disconnect the ground (earth) terminal of the car battery to avoid short circuits.
- Be sure to use speakers with an adequate power rating. If you use small capacity speakers, they may be damaged.
- Do not connect the ⊖ terminal of the speaker system to the car chassis, and do not connect the ⊖ terminal of the right speaker with that of the left speaker.
- Install the input and output cords away from the power supply wire. Running them close together may generate interference noise.
- This unit is a high powered amplifier. Therefore, it may not perform to its full potential if used with the speaker cords supplied with the car.
- If your car is equipped with a computer system for navigation or some other purpose, do not remove the ground (earth) wire from the car battery. If you disconnect the wire, the computer memory may be erased. To avoid short circuits when making connections, disconnect the +12 V power supply wire until all the other wires have been connected.

Making the terminal connections

Pass the wires through the cap, connect the wires, then cover the terminals with the cap.

Note
When you tighten a screw, be careful not to apply too much torque as doing so may damage the screw (the torque value should be less than 1 N•m).

Power connections

- Connect the +12 V power supply wire only after all the other wires have been connected.
- Be sure to connect the ground (earth) wire of the unit securely to a metal point of the car. A loose connection may cause a malfunction of the amplifier.
- When using a car audio unit without a remote output (REMOTE OUT) for the amplifier, connect the remote input (REM) terminal to the accessory power supply.
- Use a power supply wire with a fuse (60 A) attached.
- All power wires connected to the positive battery post should be fused within 450 mm (17 3/4 in) of the battery post, and before they pass through any metal.
- Make sure that the car's battery wires connected to the car (ground (earth) to chassis) are of a wire gauge at least equal to that of the main power wire connected from the battery to the amplifier.
- During full-power operation, a current of more than 60 A will run through the system. Therefore, make sure that the wires to be connected to the +12 V and GND terminals of this unit are at least 8-Gauge (AWG-8) or have a sectional area of more than 8 mm^2 (11/32 in^2).

Making power connections
Power connection wires (not supplied) are required.
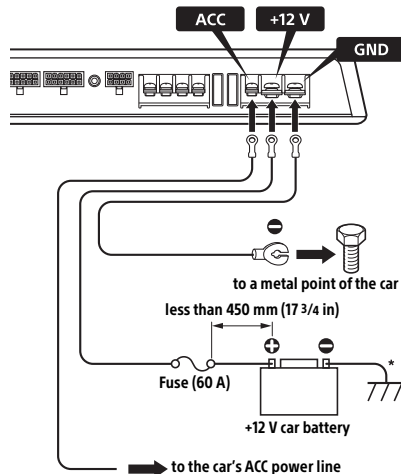
* Ground (earth) to chassis.

REMOTE connections

For the line input connections A (page 10), B (page 11) or C (page 11) only.
Connect the remote out (REMOTE OUT) from your car audio unit to the appropriate position.

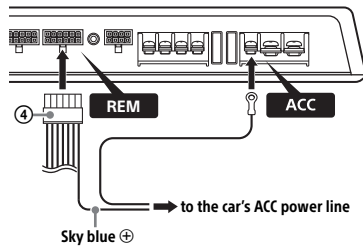### When your car's ignition has an ACC position

Connect the remote out (REMOTE OUT) from your car audio unit to the remote input (REM) terminal via the high level connector ④ (sky blue lead ⊕), and connect the ACC terminal to the car's ACC power line.
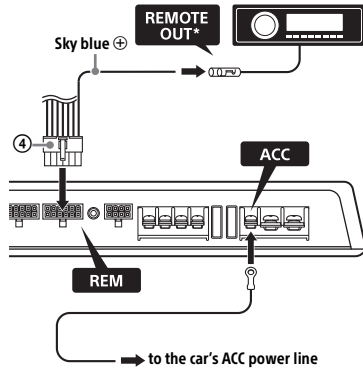
* The REMOTE connection is not necessary when making the high level input connection D (page 12), E (page 12) and F (page 13).
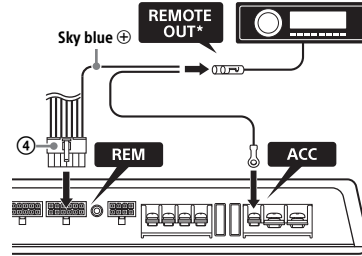
If your car audio unit has no REMOTE OUT

Connect the ACC terminal to the ACC power line, and connect the remote input (REM) terminal to the ACC power line via the high level input connector ④ (sky blue lead ⊕).

When your car's ignition has no ACC position

Connect the remote out (REMOTE OUT) from your car audio unit to the ACC terminal, and connect the remote out (REMOTE OUT) from your car audio unit to the remote input (REM) terminal via the high level input connector ④ (sky blue lead ⊕).

* With this connection, a BLUETOOTH device cannot be played while the car audio is turned off.

If your car audio unit has no REMOTE OUT

Connect the high level input connector ④.
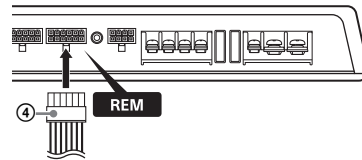
Input connections

Set the SELECT switch to the appropriate position according to the speaker system.

2ch/BT mode and 6ch mode

Select "2ch/BT" or "6ch" mode depending on the use/non-use of the DSP.
When selecting the "2ch/BT" mode, also select the sensitivity "2V" or "5V" depending on the pre-output level of your car audio unit.

| Mode	For
6ch (Through mode)	→ using this unit as a 6ch amplifier (no built-in DSP is used)*1. For details on the connections, see: – "B Line input connection (for Subwoofer BTL system/6ch mode)" (page 11). – "E High level input connection (for Subwoofer BTL system/6ch mode)" (page 12). → using this unit with a 3-way speaker system. With this connection, a 3-ways speaker system can be driven without a crossover network. For details on the connections, see: – "C Line input connection (for 3-way speaker system/6ch mode)" (page 11). – "F High level input connection (for 3-way speaker system/6ch mode)" (page 13).
2ch/BT (DSP mode)*2*3	→ encoding 2ch input signals into 4.1ch output signals (the built-in DSP is used). For details on the connections, see: – "A Line input connection (with DSP enabled/2ch mode)" (page 10). – "D High level input connection (with DSP enabled/2ch mode)" (page 12). → playing a BLUETOOTH device by operating the "Sony	Music Center" application. For details, see "Playing a BLUETOOTH Device" (page 16).
2V	Setting the sensitivity "2V" or "5V" of the "2ch/BT" mode. Normally, use this unit set to "2V".
5V	When using a car audio unit with a high pre-output level, set to "5V" if the sound is distorted while increasing the volume.

*1 While a bridged subwoofer connection is made, this unit functions as a 5ch amplifier.
*2 When adjusting the volume balance of the front speakers, rear speakers and subwoofer while the unit is in 2ch mode (DSP mode), operate your iPhone/Android smartphone to adjust the [Fader], [Balance] and [Subwoofer Level] settings of the "Sony | Music Center" application.
*3 The sound settings of the DSP (page 17) can be made by the "Sony | Music Center" application on the iPhone/Android smartphone. Before setting, operate your iPhone/Android smartphone to establish the BLUETOOTH connection with this unit (page 15).

A Line input connection (with DSP enabled/2ch mode)
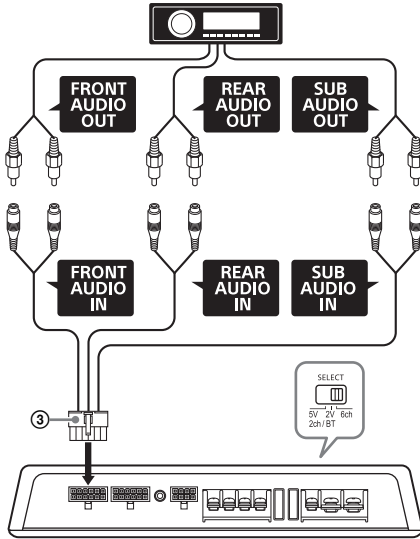
With the speaker connection 1 (page 14)
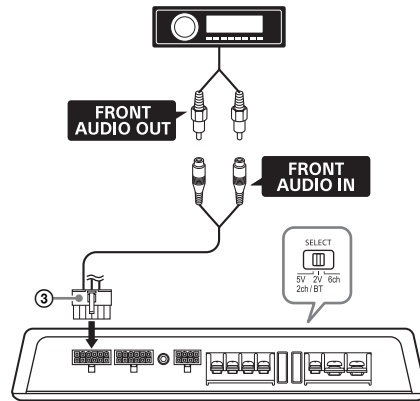
Notes
- When making this connection, set the SELECT switch to the "2V" position.
- Set the SELECT switch to the "5V" position if the sound is distorted when increasing the volume of the car audio unit (only for car audio unit with a pre-output level of 5 V).

B Line input connection (for Subwoofer BTL system/6ch mode)

With the speaker connection **1** or **2** (page 14, 14)

Notes
- When making this connection, set the SELECT switch to the "6ch" position.
- Make sure the signal to SUB AUDIO IN is monaural. SUB AUDIO IN of this unit does not support stereo signal input.

C Line input connection (for 3-way speaker system/6ch mode)

With the speaker connection **3** (page 15)
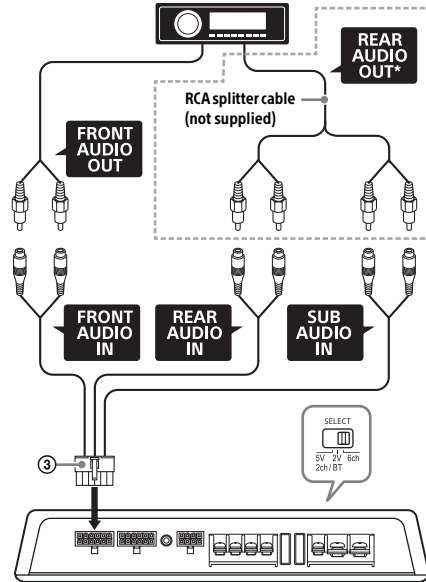
Note
When making this connection, set the SELECT switch to the "6ch" position.

* Use an RCA splitter cable (not supplied) to branch the signals from REAR AUDIO OUT to REAR AUDIO IN and SUB AUDIO IN.

D High level input connection (with DSP enabled/2ch mode)

With the speaker connection **1** (page 14)

White
Front speaker output (left)
White/striped

Gray
Front speaker output (right)
Gray/striped

④

E High level input connection (for Subwoofer BTL system/6ch mode)

With the speaker connection **1** or **2** (page 14, 14)

White
Front speaker output (left)
White/striped

Gray
Front speaker output (right)
Gray/striped

Green
Rear speaker output (left)
Green/striped

Purple
Rear speaker output (right)
Purple/striped

Brown
Sky blue
Subwoofer output
Brown/(black) striped
Brown/(blue) striped
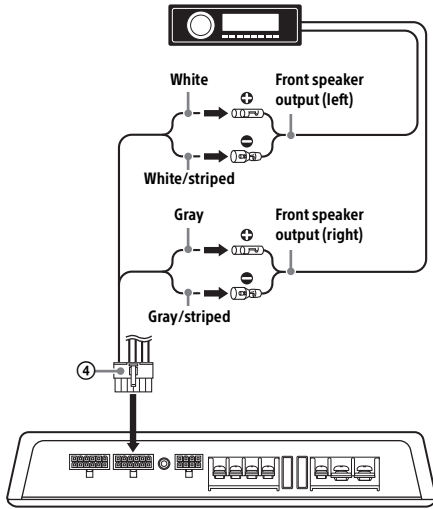
④
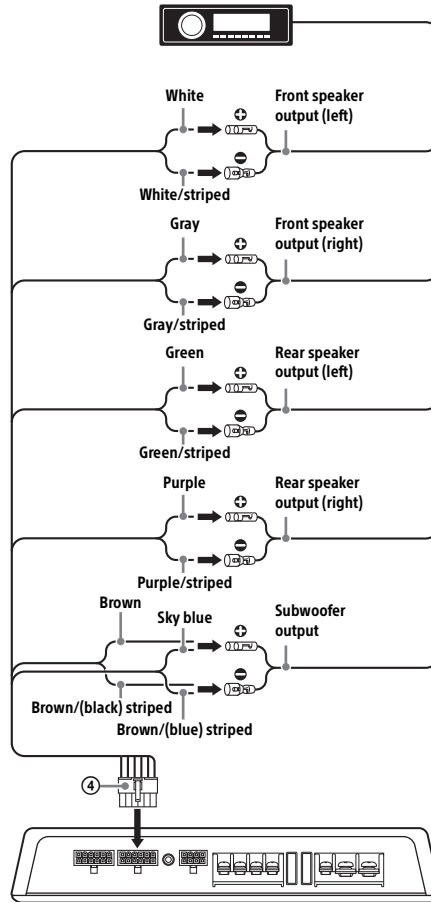
Note
If subwoofer outputs are not equipped to your car audio unit, use this unit as a 4ch amplifier, or make the connection in 2ch mode (D) instead.

F High level input connection (for 3-way speaker system/6ch mode)

With the speaker connection 3 (page 15)
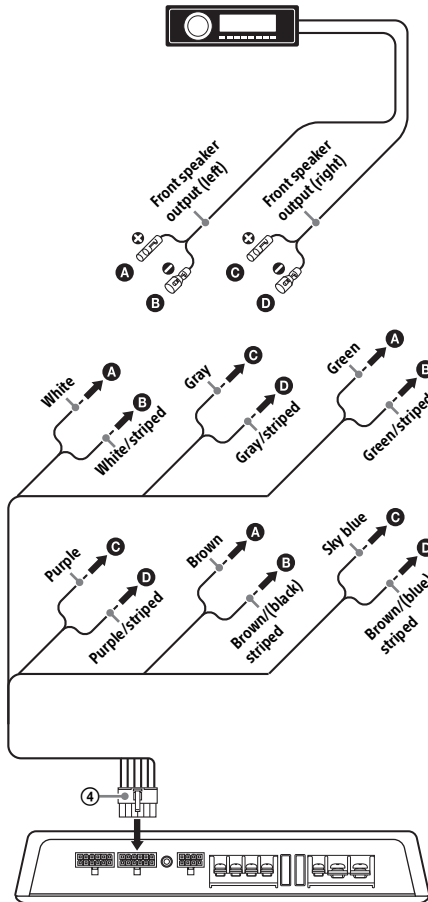
High level input cord connection

Connect the cords properly to speakers.

HIGH LEVEL INPUT

1	FL	Front speaker (left)	⊕	White
2			⊖	White/striped
3	FR	Front speaker (right)	⊕	Gray
4			⊖	Gray/striped
5	RL	Rear speaker (left)	⊕	Green
6			⊖	Green/striped
7	RR	Rear speaker (right)	⊕	Purple
8			⊖	Purple/striped
9	SL	Subwoofer (left)	⊕	Brown
10			⊖	Brown/(black) striped
11	SR	Subwoofer (right)	⊕	Sky blue
12			⊖	Brown/(blue) striped

Speaker connections

Set the HIGH PASS FILTER switch, FILTER switch and LOW PASS FILTER switch on the control panel to the appropriate positions according to the speaker system.

Also, refer to the manual supplied with your speakers for further details.

1 4.1ch speaker system with a bridged subwoofer connection

With the input connection A or B (page 10, 11)

Notes
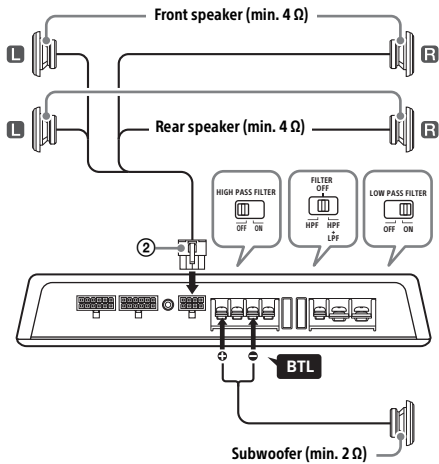- When making this connection, set the filter switches to the following positions:
  - HIGH PASS FILTER: OFF
  - FILTER: OFF
  - LOW PASS FILTER: ON
- When adjusting the volume balance of the front speakers, rear speakers and subwoofer while the unit is in 2ch mode (DSP mode), operate your iPhone/Android smartphone to adjust the [Fader], [Balance] and [Subwoofer Level] settings of the "Sony | Music Center" application.

2 2-way speaker system with a bridged subwoofer connection

With the input connection A or B (page 10, 11)

Note
When making this connection, set the filter switches to the following positions:
- HIGH PASS FILTER: ON
- FILTER: HPF+LPF
- LOW PASS FILTER: ON

3 3-way speaker system

With the input connection C (page 11)
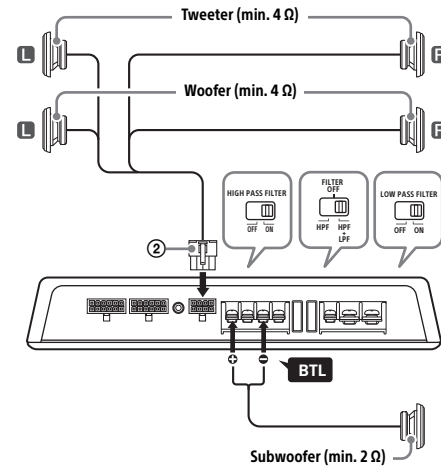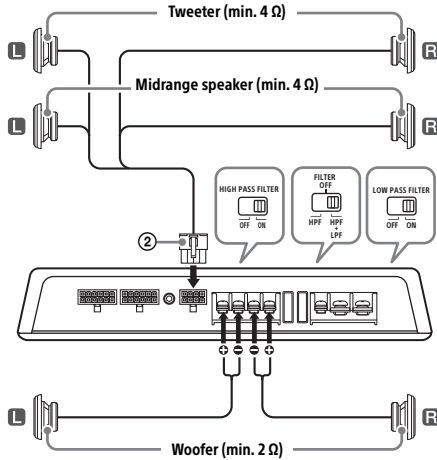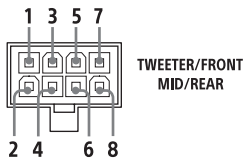Using Sony 3 Way Component Speaker System
XS-GS1631C is recommended.

Note
When making this connection, set the filter switches to
the following positions:
– HIGH PASS FILTER: ON
– FILTER: HPF+LPF
– LOW PASS FILTER: ON

Speaker cord connection

Connect the cords properly to speakers.

TWEETER/FRONT
MID/REAR

|				
1	FL	Front speaker (left)	⊕	White
2			⊖	White/striped
3	FR	Front speaker (right)	⊕	Gray
4			⊖	Gray/striped
5	RL	Rear speaker (left)	⊕	Green
6			⊖	Green/striped
7	RR	Rear speaker (right)	⊕	Purple
8			⊖	Purple/striped

BLUETOOTH

Preparing a BLUETOOTH Device

You can enjoy music on a BLUETOOTH compatible
device such an iPhone/Android smartphone
(hereafter "BLUETOOTH device" if not otherwise
specified). For details on connecting, refer to the
operating instructions supplied with the device.
Before connecting the device, turn down the
volume of the BLUETOOTH device; otherwise, a
loud sound may result.
(Available only when the SELECT switch is set to the
"2V" or "5V" position.)

Pairing and connecting with a BLUETOOTH device

When connecting a BLUETOOTH device for the first
time, mutual registration (called "pairing") is
required. Pairing enables this unit and other devices
to recognize each other.
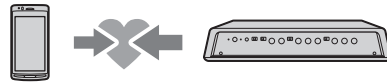
1 Place the BLUETOOTH device within 1 m
(3 ft) of this unit.

2 Press and hold PAIRING for 2 seconds.
The 🅱 indicator flashes quickly while the unit is
in pairing standby mode.

3 Perform pairing on the BLUETOOTH
device so it detects this unit.

4 Select [XM-GS6DSP] shown in the display
of the BLUETOOTH device.
If your model name does not appear, repeat
from step 2.

5 If passkey input is required on the
BLUETOOTH device, input [0000].
When pairing is made, the 🅱 indicator flashes
slowly.

6 Select this unit on the BLUETOOTH device
to make the BLUETOOTH connection.
The 🅱 indicator lights up when the connection
is established.

Note
While connected to a BLUETOOTH device, this unit
cannot be detected from another device. To enable
detection, press PAIRING to enter the pairing standby
mode and search for this unit from another device.

To start playback
For details, see "Playing a BLUETOOTH Device" (page 16).

To disconnect the paired device
Perform step 2.

Connecting with a paired BLUETOOTH device

To use this unit with BLUETOOTH, connection with a paired device is required. Some paired devices will connect to this unit automatically.

Operate the BLUETOOTH device to make the BLUETOOTH connection with this unit (page 15).

Playing a BLUETOOTH Device

You can play contents on a connected BLUETOOTH device that supports BLUETOOTH A2DP (Advanced Audio Distribution Profile).
(Available only when the SELECT switch is set to the "2V" or "5V" position.)

To play the BLUETOOTH device, installing the "Sony | Music Center" application to your iPhone/Android smartphone is required.
Download the latest version of "Sony | Music Center" application from the App Store for iPhone or from Google Play for Android smartphone.

1 Operate the BLUETOOTH device to make the BLUETOOTH connection with this unit (page 15).

2 Launch the "Sony | Music Center" application.

3 Start up your audio playback application on the BLUETOOTH device.

4 Operate the BLUETOOTH device to start playback.

To adjust the volume
During playback, adjust the volume of your iPhone/Android smartphone, or adjust the sound settings of the "Sony | Music Center" application.

To switch to the line input connection (in 2ch mode)
Select [Audio In] on the "Sony | Music Center" application.

To turn off the BLUETOOTH functions
Press and hold PAIRING for 7 seconds.
The BLUETOOTH pairing information stored on the unit is erased.

Tip
If the car's ignition is turned off while the BLUETOOTH connection is established, this unit reconnects automatically to the last-connected BLUETOOTH device when the car's ignition is turned to on.

Settings

DSP Settings

You can configure the DSP settings using the "Sony | Music Center" application with the "Advanced car audio setting" app embedded in as a plug-in.
(Available only when the SELECT switch is set to the "2V" or "5V" position.)

Sony | Music Center with iPhone/Android smartphone

Downloading the latest version of the "Sony | Music Center" application is required from the App Store for iPhone or from Google Play for Android smartphone.

Notes
- For your safety, follow your local traffic laws and regulations, and do not operate the application while driving.
- "Sony | Music Center" is an app for controlling Sony audio devices which are compatible with "Sony | Music Center", by your iPhone/Android smartphone.
- What you can control with "Sony | Music Center" varies depending on the connected device.
- To make use of "Sony | Music Center" features, see the details on your iPhone/Android smartphone.
- For further details on "Sony | Music Center," visit the following URL: http://www.sony.net/smcqa/
- Visit the website below and check the compatible iPhone/Android smartphone models.
  For iPhone: visit the App Store
  For Android smartphone: visit Google Play

About the "Advanced car audio setting" application

"Advanced car audio setting" is a plug-in application enabling you to configure further sound settings by the "Sony | Music Center" application. Downloading the latest version of the "Advanced car audio setting" application is required from the App Store for iPhone or from Google Play for Android smartphone.

Establishing the Sony | Music Center connection

1 Make the BLUETOOTH connection with your iPhone/Android smartphone (page 15).

2 Launch the "Sony | Music Center" application.
Connection to iPhone/Android smartphone starts.
For details on the operations on iPhone/Android smartphone, see the Help of the application.

If the device number appears
Make sure that the number is displayed (e.g., 123456), then select [Yes] on the iPhone/Android smartphone.

Configuring the DSP settings

1 Operate your iPhone/Android smartphone to activate the "Sony | Music Center" application, then touch the [Settings] icon.
Alternatively, touch [Advanced car audio setting] to enter the setting mode.

2 Tap [Sound].

3 Tap the desired setup item, then make the sound settings.

The following items can be set.

Equalizer (equalizer)
Selects an equalizer curve from 10 equalizer curves or off:
[Off], [R&B], [Rock], [Pop], [Hip-Hop], [EDM], [Jazz], [Soul], [Country], [Karaoke], [Custom].
The equalizer curve setting can be memorized for each source.

  * [Karaoke] reduces the vocal sound but cannot fully remove it during playback. Also, using a microphone is not supported.

Listening Position (listening position)
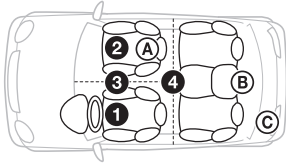
Front/Rear Position (front/rear position)
Simulates a natural sound field by delaying the sound output from speakers to suit your position:
❶ [Front Left] (front left),
❷ [Front Right] (front right),
❸ [Front] (center front),
❹ [All] (center of your car),
[Custom] (position set by "Advanced car audio setting" of "Sony | Music Center")
[OFF] (no position set)
Adjust Position (adjust position)
Fine-tunes the listening position setting: [+3] – [Center] – [-3].
(Available only when [Front/Rear Position] is not set to [Off] or [Custom].)
Subwoofer Position (subwoofer position)
Ⓐ [Near] (near),
Ⓑ [Normal] (normal),
Ⓒ [Far] (far)
(Available only when [Front/Rear Position] is not set to [Off] or [Custom].)

Balance (balance)
Adjusts the sound balance: [15] – [0] – [-15].
Alternatively, adjust the setting point to the left/right in the "BAL/FAD/SW Level" setting of "Advanced car audio setting".

Fader (fader)
Adjusts the relative level: [15] – [0] – [-15].
Alternatively, adjust the setting point to up/down in the "BAL/FAD/SW Level" setting of "Advanced car audio setting".

Subwoofer Level (subwoofer level)
Adjusts the subwoofer volume level: [-11.0] – [0.0] – [10.0].
Alternatively, touch SW Level +/– in the "BAL/FAD/SW Level" setting of "Advanced car audio setting".

Additional Information

Precautions

- This unit is designed for negative ground (earth) 12 V DC operation only.
- Use speakers with an impedance of 2 Ω to 8 Ω (SUB), and 4 Ω to 8 Ω (FRONT/REAR).
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers.
- Avoid installing the unit in areas subject to:
  – high temperatures such as from direct sunlight or hot air from the heater
  – rain or moisture
  – dust or dirt.
- If your car is parked in direct sunlight and there is a considerable rise in temperature inside the car, allow the unit to cool down before use.
- When installing the unit horizontally, be sure not to cover the fins with the floor carpet, etc.
- If this unit is placed too close to the car audio unit or antenna (aerial), interference may occur. In this case, relocate this unit away from the car audio unit or antenna (aerial).
- If no power is being supplied to the car audio unit, check the connections.
- This power amplifier employs a protection circuit* to protect the transistors and speakers if the amplifier malfunctions. Do not attempt to test the protection circuits by covering the heat sink or connecting improper loads.
- Do not use the unit on a weak battery as its optimum performance depends on a good power supply.
- For safety, keep your car audio unit volume moderate so that you can still hear other sounds.

* **Protection circuit**
This amplifier is provided with a protection circuit that operates in the following cases:
– when the unit overheats
– when a DC current is generated
– when the speaker terminals are short-circuited.
The POWER/PROTECTOR indicator will blink, and the unit will shut down. If this happens, take out the cassette tape or disc, turn off the connected equipment, and determine the cause of the malfunction. If the unit has overheated, wait until it cools down before use.

If you have any questions or problems concerning your unit that are not covered in this manual, please consult your nearest Sony dealer.

About iPod

- You can connect to the following iPod models. Update your iPod devices to the latest software before use.

Compatible iPhone/iPod models

| Compatible Model	Bluetooth®
iPhone 8 Plus	✓
iPhone 8	✓
iPhone 7 Plus	✓
iPhone 7	✓
iPhone SE	✓
iPhone 6s Plus	✓
iPhone 6s	✓
iPhone 6 Plus	✓
iPhone 6	✓
iPhone 5s	✓
iPhone 5c	✓
iPhone 5	✓
iPhone 4s	✓
iPod touch (6th generation)	✓
iPod touch (5th generation)	✓

- "Made for iPod," and "Made for iPhone," mean that an electronic accessory has been designed to connect specifically to iPod or iPhone, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod or iPhone may affect wireless performance.

If you have any questions or problems concerning your unit that are not covered in this manual, consult your nearest Sony dealer.

Maintenance

Fuse replacement

When replacing the fuse, be sure to use one matching the amperage stated above the fuse holder. If the fuse blows, check the power connection and replace both the fuses. If the fuse blows again after replacement, there may be an internal malfunction. In such a case, consult your nearest Sony dealer.
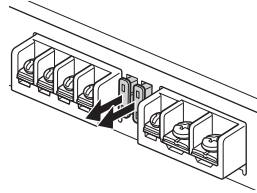
Warning
Never use a fuse with an amperage rating exceeding the one supplied with the unit as this could damage the unit.

Specifications

AUDIO POWER SPECIFICATIONS

CTA2006 Standard
Power Output: 45 Watts RMS × 4 at 4 Ohms, 90 Watts RMS × 2 at 4 Ohms < 1% THD+N
SN Ratio: 83 dBA (FRONT/REAR), 80 dBA (SUB) (reference: 1 Watt into 4 Ohms)

Wireless Communication

Communication System:
    BLUETOOTH Standard version 3.0
Output:
    BLUETOOTH Standard Power Class 2
        (Max. Conducted +1 dBm)
Maximum communication range[1]:
    Line of sight approx. 10 m (33 ft)
Frequency band:
    2.4 GHz band
        (2.4000 GHz – 2.4835 GHz)
Modulation method: FHSS
Compatible BLUETOOTH Profiles[2]:
    A2DP (Advanced Audio Distribution Profile) 1.3
    AVRCP (Audio Video Remote Control Profile) 1.5
    SPP (Serial Port Profile)
Corresponding codec:
    SBC (.sbc), AAC (.m4a)

[1] The actual range will vary depending on factors such as obstacles between devices, magnetic fields around a microwave oven, static electricity, reception sensitivity, antenna (aerial)'s performance, operating system, software application, etc.
[2] BLUETOOTH standard profiles indicate the purpose of BLUETOOTH communication between devices.

General

Circuit system:
    Class D Amplifier,
    Pulse power supply
Inputs:
    RCA pin jacks,
    High level input connector
Input level adjustment range (in 6ch mode):
    0.3 V – 6 V (RCA pin jacks),
    3 V – 12 V (High level input)
Outputs:
    Speaker output connector,
    WOOFER/SUBWOOFER terminals
Speaker impedance:
    4 Ω – 8 Ω (Speaker output connector),
    2 Ω – 8 Ω (WOOFER/SUBWOOFER terminals)

Maximum output:
    5 Speakers:
        100 W × 4 (FRONT/REAR at 4 Ω),
        1,100 W × 1 (SUB BTL at 2 Ω)
    6 Speakers:
        100 W × 4 (FRONT/REAR at 4 Ω),
        300 W × 2 (SUB at 2 Ω)
Rated output (supply voltage at 14.4 V, 20 Hz – 20 kHz, 1% THD):
    6 Speakers:
        45 W × 4 (FRONT/REAR at 4 Ω),
        90 W × 2 (SUB at 4 Ω)
Frequency response:
    20 Hz – 20 kHz ($^{+0.5}_{-3.0}$ dB) (FRONT/REAR),
    20 Hz – 10 kHz ($^{+0.5}_{-3.0}$ dB) (SUB)
Harmonic distortion:
    0.1% at 1 W, 1 kHz (FRONT/REAR at 4 Ω),
    0.08% or less at 45 W, 1 kHz (SUB at 4 Ω)
Low-pass filter:
    500 Hz – 4 kHz, 12 dB/oct (REAR),
    50 Hz – 500 Hz, 12 dB/oct (SUB)
High-pass filter:
    500 Hz – 4 kHz, 12 dB/oct (FRONT),
    50 Hz – 500 Hz, 12 dB/oct (REAR)
Low boost:
    0 dB – 10 dB (40 Hz) (SUB)
Power requirements:
    12 V DC car battery (negative ground (earth))
Power supply voltage:
    10.5 V – 16 V
Current drain:
    At rated output: 36 A
        45 W × 4 (FRONT/REAR at 4 Ω),
        90 W × 2 (SUB at 4 Ω)
    ACC Input: 1 mA
    Remote input: 1 mA
Dimensions:
    Approx. 295 mm × 51 mm × 199.5 mm
    (11 5/8 in × 2 1/8 in × 7 7/8 in) (w/h/d) not incl.
    projecting parts and controls
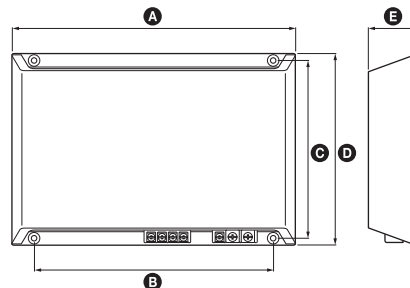
Ⓐ 295 mm (11 5/8 in)
Ⓑ 248 mm (9 7/8 in)
Ⓒ 184.8 mm (7 3/8 in)
Ⓓ 199.5 mm (7 7/8 in)
Ⓔ 51 mm (2 1/8 in)

Mass:
Approx. 2.7 kg (8.5 lb) not incl. accessories
Package contents:
Main unit (1)
Mounting screws (4)
High level input cord (1)
RCA input cord (1)
Speaker output cord (1)
Protection cap (1)

Your dealer may not handle some of the above listed accessories. Please ask the dealer for detailed information.

Design and specifications are subject to change without notice.

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Google, Google Play and Android are trademarks of Google LLC.

Troubleshooting

The following checklist will assist in the correction of most problems which you may encounter with your unit. Before going through the checklist below, refer to the connection and operating procedures.

The POWER/PROTECTOR indicator does not light up.
➜ The fuse is blown.
– Replace the fuse with a new one.
➜ The ground (earth) wire is not securely connected.
– Fasten the ground (earth) wire securely to a metal point of the car.
➜ The voltage going into the remote input (REM) terminal is too low.
– Turn on the car audio unit if it is not turned on.
– Use a relay if the system employs too many amplifiers.
➜ Check the battery voltage (10.5 V – 16 V).

The POWER/PROTECTOR indicator flashes quickly.
➜ Turn off the power switch. The speaker outputs have shorted.
– Rectify the cause of the short.
➜ Turn off the power switch. Make sure the speaker cord and ground (earth) wire are securely connected.

The POWER/PROTECTOR indicator flashes slowly (once every second).
➜ The thermal protector has activated, and the speaker outputs will be decreased.
– Make sure the impedance of connected speakers is appropriate.

The unit becomes abnormally hot.
➜ The unit heats up abnormally.
– Use speakers with suitable impedance:
2 Ω – 8 Ω (stereo), 4 Ω – 8 Ω (when used as a bridging amplifier).
➜ Make sure to place the unit in a well ventilated location.

Alternator noise is heard.
➜ The power connecting wires are installed too close to the RCA pin cords.
– Keep the wires away from the cords.
➜ The ground (earth) wire is not securely connected.
– Fasten the ground (earth) wire securely to a metal point of the car.
➜ Negative speaker wires are touching the car chassis.
– Keep the wires away from the car chassis.

The sound is muffled.
→ Check that the filter settings and the cut-off frequency adjustment are appropriate according to the speaker system. For details, see "Input connections" (page 10) and ""Speaker connections" (page 14).

The sound is too quiet.
→ The LEVEL adjustment control is not appropriate. Turn the LEVEL adjustment control in the clockwise direction.

BLUETOOTH function

The indicator does not light up.
→ The selected connection mode on the unit is not appropriate.
– Check that the SELECT switch is set to the "2V" or "5V" position.

This unit cannot be detected from BLUETOOTH devices.
→ Press PAIRING to set this unit to pairing standby mode before pairing the BLUETOOTH devices.
→ This unit may not be detected from a BLUETOOTH device already connected to other BLUETOOTH devices.
– Operate the BLUETOOTH device to release the connections with other BLUETOOTH devices, then search for this unit.
→ If the device is already paired, detect this unit from the BLUETOOTH device while the indicator on the unit is flashing quickly.

Connection is not possible.
→ The connection is controlled from the BLUETOOTH device.
– Operate the BLUETOOTH device to connect to this unit.

The device name of this unit does not appear.
→ Depending on the status of the BLUETOOTH device, it may not be possible to obtain the device name of this unit.

The volume of the connected BLUETOOTH device is low (high).
→ Volume level will differ depending on the BLUETOOTH device.
– Adjust the volume of the connected BLUETOOTH device or this unit.

The sound skips during playback of a BLUETOOTH device.
→ Reduce the distance between this unit and the BLUETOOTH device.
→ If the BLUETOOTH device is inside a case which interrupts the signal, remove the case from the BLUETOOTH device during use.
→ Several BLUETOOTH devices or other devices which emit radio waves are in use nearby.
– Turn off the other devices.
– Increase the distance from the other devices.
→ The playback sound stops momentarily when the connection with the cellular phone is being made on the BLUETOOTH device. This is not a malfunction.

This unit cannot be controlled from the BLUETOOTH device.
→ Check that the connected BLUETOOTH device supports AVRCP.

Some functions do not work.
→ Check that the connected BLUETOOTH device supports the functions in question.

Pairing failed due to a timeout.
→ Depending on the connecting BLUETOOTH device, the time limit for pairing may be short.
– Try completing the pairing within the time.

Cannot pair.
→ If the pairing information of the unit is on the connecting BLUETOOTH device, the unit may not be able to pair with a previously paired BLUETOOTH device after initializing the unit. In this case, delete the pairing information of the unit from the BLUETOOTH device, and then pair them again.

BLUETOOTH function cannot operate.
→ Turn off the car audio unit, then turn the car audio unit on again.

Sony | Music Center operation

Application name does not match the actual application in "Sony | Music Center".
→ Launch the application again from the "Sony | Music Center" application.

If these solutions do not help improve the situation, consult your nearest Sony dealer.

Support Site

If you have any questions or for the latest support information on this product, please visit the website below:

Customers in the United States/Canada:
http://esupport.sony.com/

Customers in Asia Pacific/Middle East:
http://www.sony-asia.com/section/support
http://www.sony-asia.com/caraudio/