

# XM Satellite Radio Receiver

## Operating Instructions

### Owner’s Record

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

Model No. XT-XM1  
Serial No. \_\_\_\_\_  
XM Radio ID \_\_\_\_\_

You need to subscribe for XM™ Satellite Radio Service to listen to the radio broadcast.



## XT-XM1

Sony Corporation © 2002 Printed in Japan

### Welcome!

- Thank you for purchasing the Sony XM Satellite Radio Receiver. The receiver allows you to:
- Receive XM Satellite Radio programming (with subscription) by connecting a Sony master unit\* compatible with the Sony BUS system.
  - Connect and use an optional CD or MD changer.
  - Receive up to 100 channels of XM programming.
  - Display channel name, artist name, and song title for most XM channels.
  - Store favorite XM channels.
  - Search XM channels by category.

*\* Some master units may not be connected to this receiver. (For details, please consult your nearest Sony dealer.)*

### Specifications

|                      |                                                                                                                                      |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Frequency            | 2332.5 – 2345.0 MHz                                                                                                                  |
| Power requirements   | 12 V DC car battery (negative ground)                                                                                                |
| Outputs              | BUS control output<br>Audio output                                                                                                   |
| Inputs               | Antenna input (Satellite, Terrestrial)<br>BUS control input<br>Audio input                                                           |
| Dimensions           | 224 × 37.8 × 160 mm<br>(8 <sup>7</sup> / <sub>8</sub> × 1 <sup>1</sup> / <sub>2</sub> × 6 <sup>3</sup> / <sub>8</sub> in)<br>(w/h/d) |
| Mass                 | Approx. 1.0 kg<br>(2 lb 4 oz)                                                                                                        |
| Supplied accessories | Parts for installation and connection (1 set)                                                                                        |

Design and specifications are subject to change without notice.

### Introducing XM™ Satellite Radio

There’s a world beyond AM and FM. XM Satellite Radio. Up to 100 channels. Coast-to-Coast Coverage. Digital quality sound. With many commercial-free music channels. Plus, the best sports, comedy, talk, news and entertainment, including USA Today, Discovery Radio, NASCAR, Sesame Workshop, CNNfn. Questions? Visit [www.xmradio.com](http://www.xmradio.com). The future is waiting.

### How to Subscribe

Listeners can subscribe by visiting XM on the Web at [www.xmradio.com](http://www.xmradio.com) or by calling XM’s Listener Care at (800)852-9696. Customers should have their Radio ID ready; it is located on the side of this unit, and you can also check it in the display of this unit (see “Displaying the XM Radio ID”).

**Technology.** It is prohibited to copy, decompile, disassemble, reverse engineer or manipulate any technology incorporated in receivers compatible with the XM Satellite Radio system. Furthermore, the AMBE® voice compression software included in this product is protected by intellectual property rights including patent rights, copyrights, and trade secrets of Digital Voice Systems, Inc. The user of this or any other software contained in an XM Radio is explicitly prohibited from attempting to copy, decompile, reverse engineer, or disassemble the object code, or in any other way convert the object code into human-readable form. The software is licensed solely for use within this product.

## Getting Started

### Resetting the master unit

Before operating the XM receiver for the first time, reset the master unit. If the unit is not reset in this manner, it may not function properly. For details on how to reset it, refer to the operating instructions of the master unit.

### Caution

For the following master units, press the Repeat (REP) button of the master unit for two seconds after turning the XM on and select “setup 2.” Without this procedure, the master unit will not display tuning-in information from the receiver correctly. Except for the following master units, “setup 1” is selected in the factory settings.

**CDX-C8050X**  
**CDX-M750**  
**CDX-M650**  
**CDX-M610**  
**CDX-M600**  
**MDX-C800REC\***  
**MDX-C8500X**  
**XR-M550**

*\* You may observe flickering in parts of the display while performing operations. This is not malfunction.*

**Note**  
*Resetting the master unit will erase the clock setting and some stored contents of the master unit.*

## WARNING

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.

If you have any questions or problem concerning this product, consult your nearest Sony dealer.  
If you have any questions or problem concerning the XM Satellite radio service including the broadcast, consult XM.  
The XM Radio ID (XM-ID) is required when consulting XM. It is located on the bottom of the main unit, and you can also check it in the display of this unit (see “Displaying the XM Radio ID”).

Initial Operations

Listening to a program

The XM receiver is controlled by the master unit. Button locations vary with different master unit models. Please refer to the master unit instruction manuals.

1 To select XM:

- Press the Source button until “XM1” is displayed, then press the Mode button repeatedly (the display will show “XM1,” “XM2” and “XM3”) to select the band.
- or-
- Press the Source button until “XM” is displayed.\*1
- or-
- Press the Source button until “MD” is displayed, then press the Mode button to select XM. For master units which can control more than one MD changer, press the Mode button repeatedly (the display will show “MD1,” “MD2,” etc.) until the receiver is found.\*2

2 Press the Seek +/- button to select the desired channel.

Pressing and holding the SEEK +/- button will quickly step through the channels.

\*1 Channel number is displayed “CH xxx.”  
\*2 Channel number is displayed “XM xxx.”

Note  
“LOADING” is indicated while the receiver is reading the information.

If your master unit's operation is **A**, see “Basic Operations **A**.”

If your master unit's operation is **B** or **C**, see “Basic Operations **B**.”

Basic Operations A

Display items

The XM Satellite Radio information (Channel Name, Channel Number, Artist Name/Program Name and Song Title) is available on the display.

Press the Display (DSPL) button.

Each time you press the Display (DSPL) button, the item changes as follows:

Channel Name → Channel Number → Artist Name/Program Name → Song Title → Clock\* → Channel Name

\* Clock will not appear depending on the master unit. Refer to the operating instructions of the master unit.

- Notes
- If you select a channel while Artist Name/Program Name or Song Title is displayed, the Channel Name will be displayed for 2 to 3 seconds and then returns to the previous display.
  - If there is no information about Artist Name/Program Name or Song Title, “- - - -” will be displayed.
  - The display indicates up to 16 characters. If the Auto Scroll function is set to on, names exceeding 16 characters will be scrolled. When the Auto Scroll function is set to off (factory setting), names will be scrolled only when the Scroll (SCRL) button or the Display (DSPL) button is pressed and a display item is changed.

Using category search to locate channels

Each XM channel is associated with a category that describes the type of music or programming is played on the channel. Examples of categories include “rock,” “jazz,” “news,” and so on. Users unfamiliar with XM’s program may use the radio’s search-by-category function to select channels.

without the Disc/Preset +/- button

- Press the CAT (LIST or BTM) button to enter category search mode.  
The category of the current channel is displayed. With some master units, the CAT (LIST or BTM) button is only equipped on the card remote commander.
- Press the CAT (LIST or BTM) button repeatedly until you find the desired category.
- Press the Seek +/- button repeatedly until you find the desired channel in that category.  
The display shows “CAT SRCH” to indicate that the radio is in category search mode. While in this mode, you will only be able to tune to channels in the selected category. Other categories can be chosen if the CAT (LIST or BTM) button is pressed within 5 seconds after the desired channel appears.

with the Disc/Preset +/- button

- Press the CAT (LIST or BTM) button to enter category search mode.  
The category of the current channel is displayed. With some master units, the CAT (LIST or BTM) button is only equipped on the card remote commander.

- Press the Disc/Preset +/- button repeatedly until you find the desired category.

- Press the Seek +/- button or the ENTER button repeatedly until you find the desired channel in that category.  
The display shows “CAT SRCH” to indicate that the radio is in category search mode. While in this mode, you will only be able to tune to channels in the selected category. Other categories can be chosen if the Disc/Preset +/- button is pressed within 5 seconds after the desired channel appears.

To exit from category search mode and return to normal mode, press any button other than the Seek +/- button or the CAT (LIST or BTM) button.

Note  
The radio automatically returns to normal mode if no key is pressed within 5 seconds.

Storing favorite channels

You can preset up to 6 channels per band (XM1, XM2 and XM3).

- Select a band and tune in a channel that you want to store.
- Press a number button for 2 seconds.  
The display shows “MEMORY” if the radio successfully stores the channel into the preset. The display shows “FAILURE” if the radio fails to store the channel into the preset. With some master units, the number buttons are only equipped on the card remote commander.

XM1 1 ↔ 2 ... 6 ↔ 1 XM2 1 ↔ 2 ... 6 ↔ 1 XM3 1 ↔ 2 ... 6 ↔ 1 XM1 1 ↔ 2 ... 6 ↔ 1

Basic Operations B

Display items

The XM Satellite Radio information (Channel Name, Channel Number, Artist Name/Program Name and Song Title) is available on the display.

Press the Display (DSPL) button.

Each time you press the Display (DSPL) button, the item changes as follows:

Channel Name → Channel Number → Artist Name/Program Name → Song Title → Channel Name

For MEX-5DI, press the ENTER button of the remote control to change the display item.

- Notes
- If you select a channel while Artist Name/Program Name or Song Title is displayed, the Channel Name will be displayed for 2 to 3 seconds and then returns to the previous display.
  - If there is no information about Artist Name/Program Name or Song Title, “- - - -” will be displayed.
  - During XM Satellite Radio reception, Spectrum Analyzer, Dual Information, Motion Display function of the master unit cannot be operated.
  - The display indicates up to 8 characters. The characters on the display cannot be scrolled even when the Auto Scroll function of the master unit is set to on.
  - You cannot display the clock during XM Satellite Radio reception on a master unit. The clock is shown by pressing the Display (DSPL) button.

Using category search to locate channels

Each XM channel is associated with a category that describes the type of music or programming is played on the channel. Examples of categories include “rock,” “jazz,” “news,” and so on. Users unfamiliar with XM’s program may use the radio’s search-by-category function to select channels.

- Press the Repeat (REP) button to enter category search mode.  
The category of the current channel is displayed. With some master units, the Repeat button is only equipped on the remote control.
- Press the Disc/Preset +/- button repeatedly until you find the desired category.
- Press the Seek +/- button repeatedly until you find the desired channel in that category.  
The display shows “CAT SRCH” to indicate that the radio is in category search mode. While in this mode, you will only be able to tune to channels in the selected category. Other categories can be chosen if the Disc/Preset +/- button is pressed within 5 seconds after the desired channel appears.

To exit from category search mode and return to normal mode, press any button other than the Seek +/- button.

Note  
The radio automatically returns to normal mode if no key is pressed within 5 seconds.

Storing favorite channels

You can preset up to 20 channels.

- Tune in a channel that you want to store.
- Press the Shuffle (SHUF) button.  
The radio will show a list of presets, starting with preset number 1. A preset number will be shown if a channel has already been stored into that preset. With some master units, the Shuffle button is only equipped on the remote control.
- Press the Disc/Preset +/- button to select a preset number.  
With some master units, the Disc/Preset +/- button is only equipped on the remote control.
- Press the Disc/Preset + (Disc +) button or Shuffle (SHUF) button for 2 seconds.  
The display shows “MEMORY” if the radio successfully stores the channel into the preset. The display shows “FAILURE” if the radio fails to store the channel into the preset.

Note  
The radio automatically returns to normal mode if no key is pressed within 5 seconds.

Receiving a stored channel

- Press the number button on which the desired channel is stored.
- Press the Disc/Preset +/- button to select the preset number.  
Pressing and holding the Disc/Preset +/- button will quickly step through the channels stored into the preset.

Note  
The radio automatically returns to normal mode if no key is pressed within 5 seconds.

Displaying the XM Radio ID

- During XM Satellite Radio reception, press the Seek +/- button to select “CHANNEL 1.”
- Press the SEEK – (down) button.  
“RADIO ID” is indicated for 2 seconds and the XM Radio ID number is indicated for 10 seconds. These will be displayed alternately.

To cancel the XM Radio ID display, press the Seek +/- button to select a channel.

Receiving a stored channel

- Press Disc/Preset +/- button to select the preset number.
- Press the Shuffle (SHUF) button. Press the Disc/Preset + (DISC +) button to select the preset number and then press the Seek +/- button to start.

Note  
The radio automatically returns to normal mode if no key is pressed within 5 seconds.

Displaying the XM Radio ID

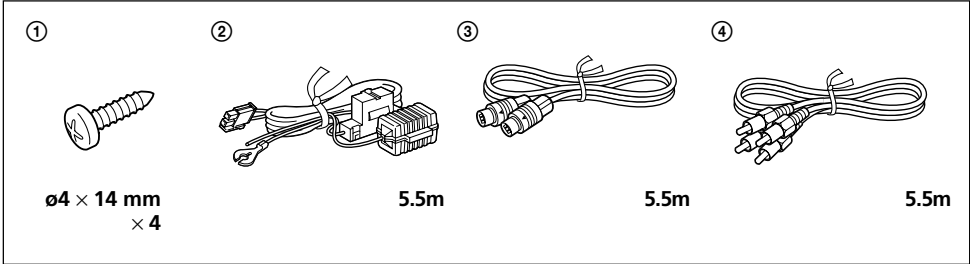
- During XM Satellite Radio reception, press the Seek +/- button to select “CHANNEL 1.”
- Press the SEEK – (down) button.  
“RADIO ID” is indicated for 2 seconds and the XM Radio ID number is indicated for 10 seconds. These will be displayed alternately.

To cancel the XM Radio ID display, press the Seek +/- button to select a channel.

Installation

Parts list

The numbers in the list are keyed to those in the instructions.

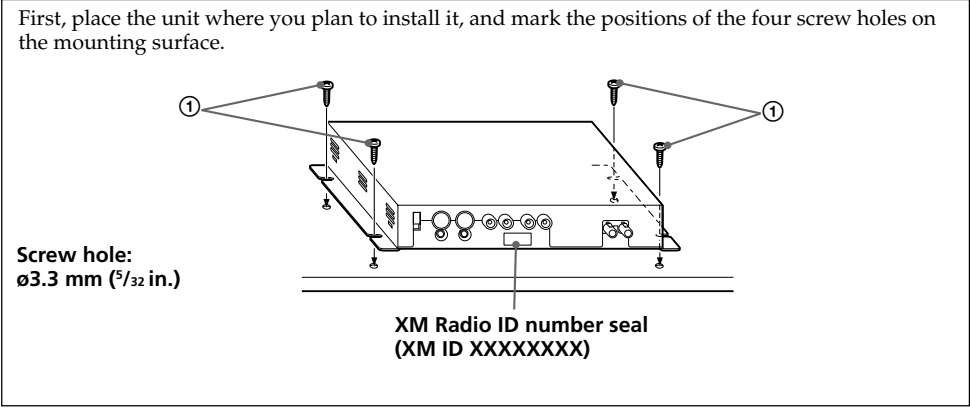


Precautions

- Choose the mounting location carefully, observing the following:
  - The unit is not subject to temperatures exceeding 55°C (131°F) (such as in a car parked in direct sunlight).
  - The unit is not subject to direct sunlight.
  - The unit is not near heat sources (such as heaters).
  - The unit is not exposed to rain or moisture.
  - The unit is not exposed to excessive dust or dirt.
  - The unit is not subject to excessive vibration.
  - The fuel tank should not be damaged by the tapping screws.
  - There should be no wire harnesses or pipes under the place where you are going to install the unit.
  - The spare tire, tools or other equipment in or under the trunk should not be interfered with or damaged by the screws or the unit itself.
- Be sure to use only the supplied mounting hardware for a safe and secure installation.
- Use only the supplied screws.

Installing the unit

- Mount the unit either inside the trunk or under a seat.
- 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 install the unit under the floor carpet, where the heat dissipation from the unit will be considerably impaired.



- Notes
- Use only the supplied screws.
  - Be sure not to damage the fuel tank or brake line with the tapping screws.

Fuse replacement

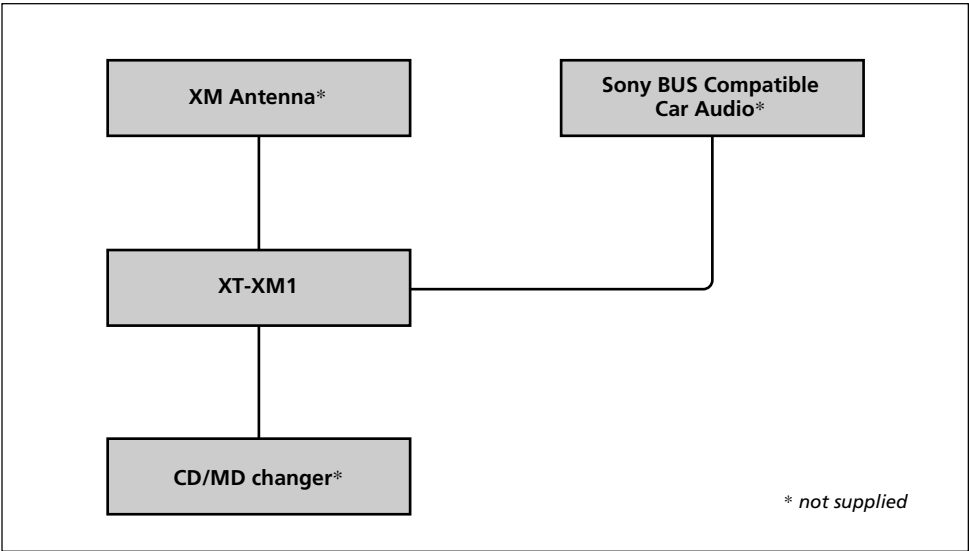
If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction.

Warning

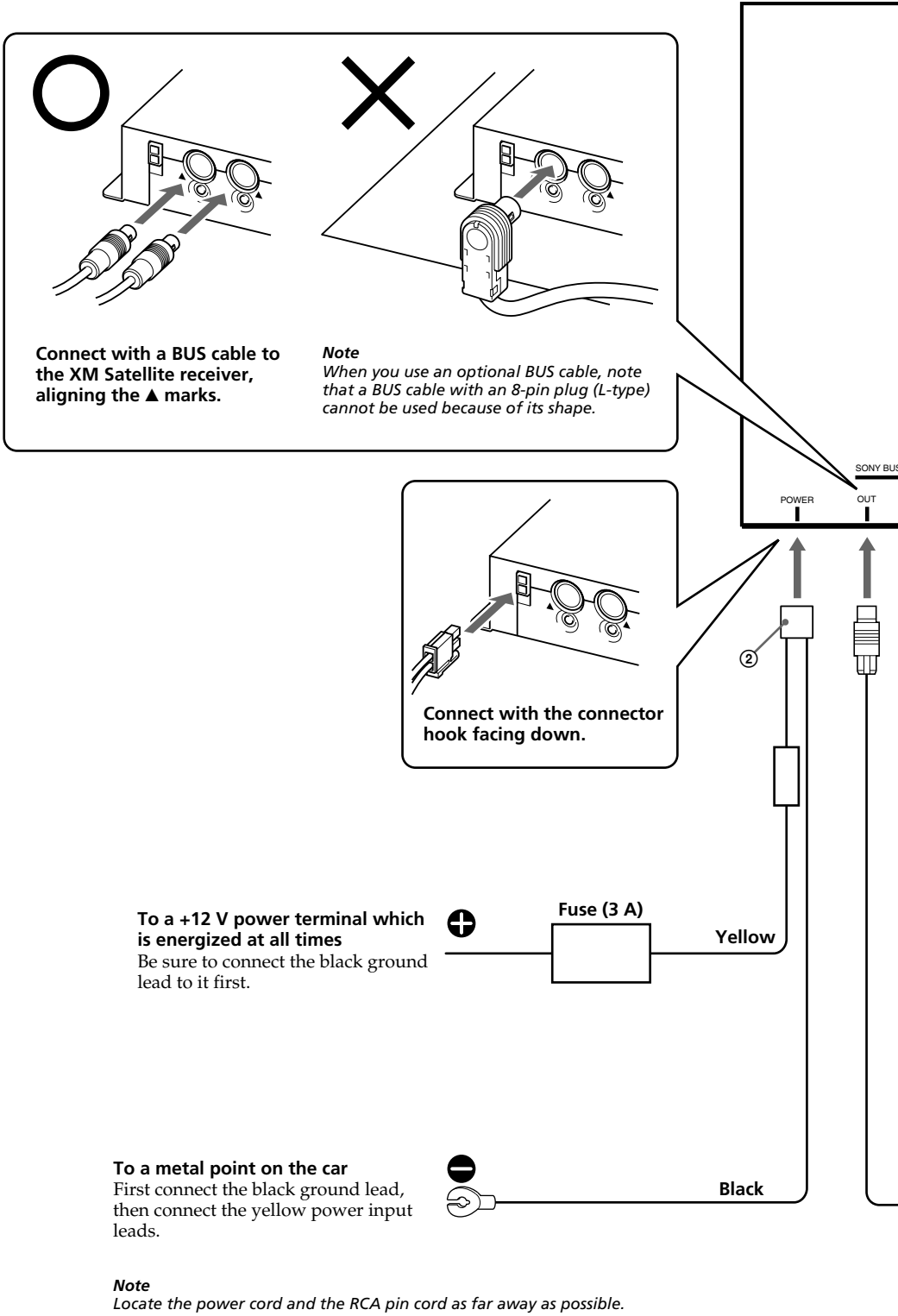
Use a fuse with the specified amperage rating.  
Use of a higher amperage fuse may cause serious damage.

Connection

Connection example

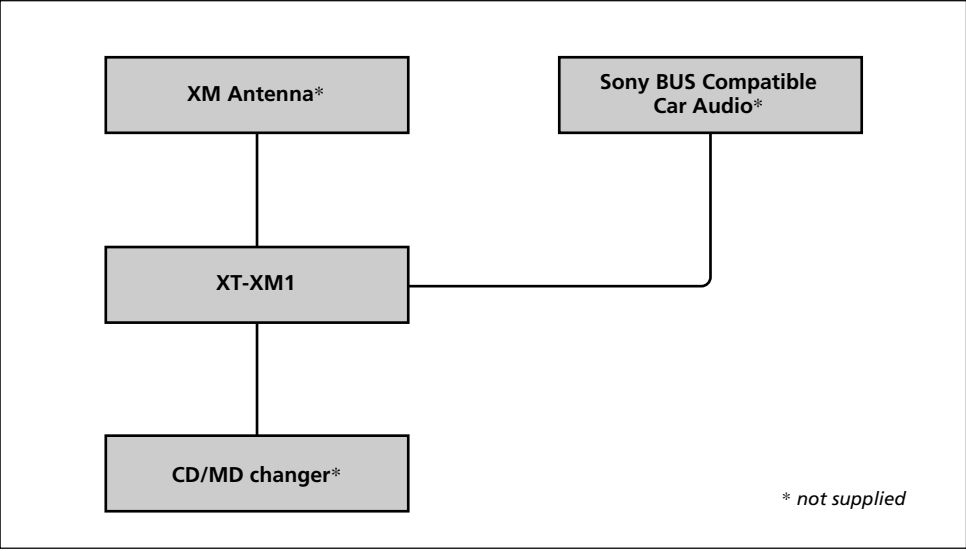


Connection diagram



# Connection

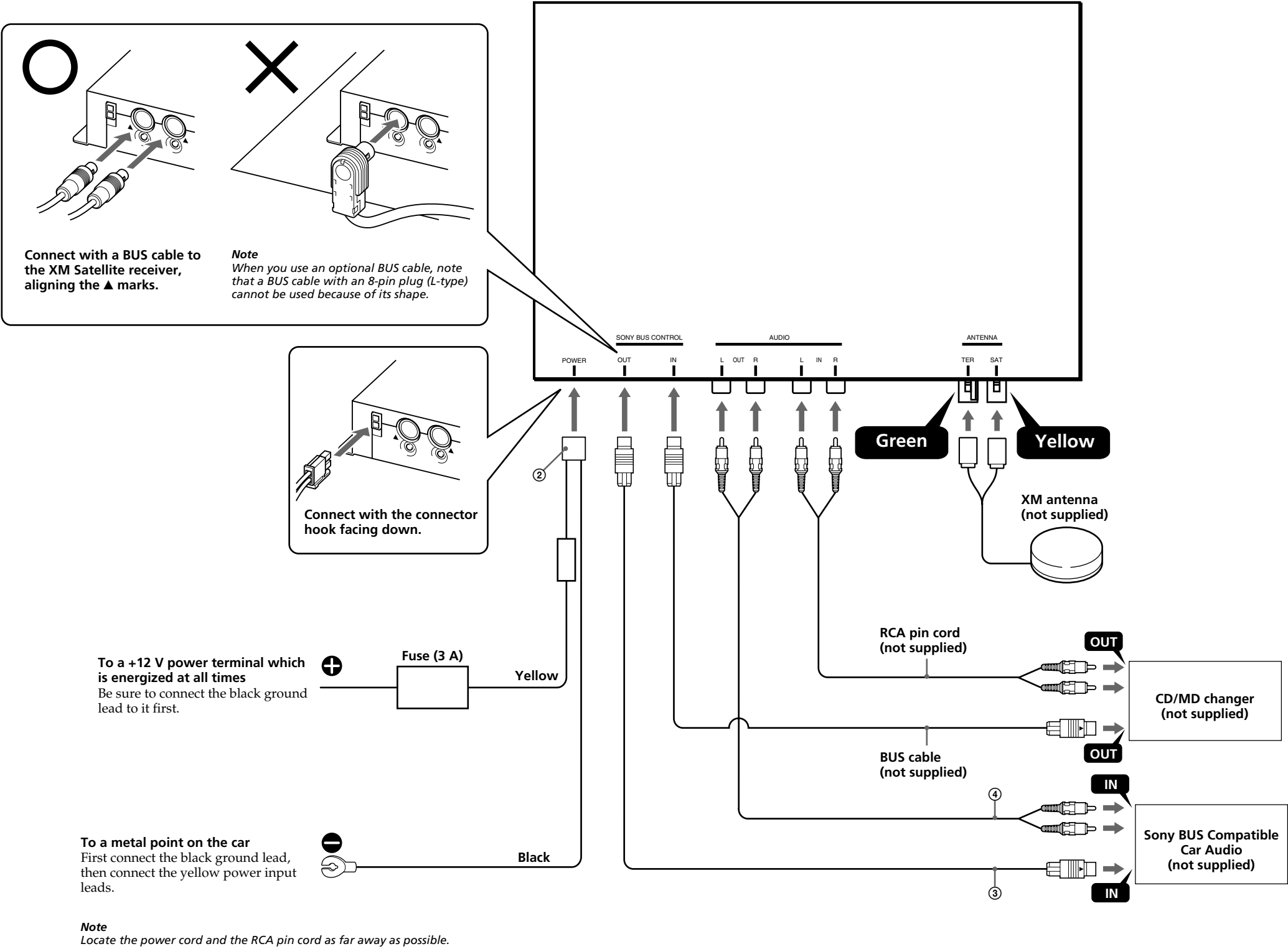
## Connection example



## Cautions

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, turn the car ignition off to avoid short circuits.
- Connect the **yellow** power input cord only after all other cords have been connected.
- **Run all ground leads to a common ground point.**

## Connection diagram



Cautions

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, turn the car ignition off to avoid short circuits.
- Connect the **yellow** power input cord only after all other cords have been connected.
- **Run all ground leads to a common ground point.**

Additional Information

Troubleshooting

Should any problem persist after you have made the following checks, consult your nearest Sony dealer. Consult XM if you have any questions or problems concerning the broadcast service of the XM Satellite radio.

The information on the display cannot be changed during XM Satellite Radio reception.

- Refer to “Caution” in “Getting Started.”

No sound.

- Adjust the volume control of the master unit.
- Cancel the attenuate function on the master unit.
- The connecting cords are not connected properly.

The sound is impaired by noise.

Locate cords and cables such as an antenna cord, a BUS cable, an RCA pin cord, or a power cord so as they do not interfere with each other.

The channels cannot be received.

Check the connections of the receiver and the antenna.

Advisory Messages (for users of Basic Operations A)

When a problem occurs with the receiver, an error message will be displayed on the master unit.

CHECK ANTENNA

The antenna is not connected properly.  
→ Check the connections of the receiver and the antenna.

UPDATING

You have not subscribed to XM, or the channel is not authorized.  
→ You need to subscribe to XM.

NO SIGNAL

XM signal is too weak.  
→ Move to another area where your system can receive the signal.

OFF AIR

The channel is not broadcasting now.  
→ Select another channel.

LOADING

The receiver is reading the channel information.  
→ Wait until the receiver completes receiving the information.

“-----”

Depending on the station, Artist Name/Program Name, Song Title and Category Name does not transmit. In this case, “-----” is displayed. This is not an error.

“CH ---”

The channel to be tuned-in is void due to a change by the broadcast service, or the reception is not good.

Advisory Messages (for users of Basic Operations B)

When a problem occurs with the receiver, an error message will be displayed on the master unit.

ANTENNA

The antenna is not connected properly.  
→ Check the connections of the receiver and the antenna.

UPDATING

You have not subscribed to XM, or the channel is not authorized.  
→ You need to subscribe to XM.

NO SIGNAL

XM signal is too weak.  
→ Move to another area where your system can receive the signal.

OFF AIR

The channel is not broadcasting now.  
→ Select another channel.

LOADING

The receiver is reading the channel information.  
→ Wait until the receiver completes receiving the information.

“----”

Depending on the station, Artist Name/Program Name, Song Title and Category Name does not transmit. In this case, “----” is displayed. This is not an error.

“CH ---”\* or “XM ---”\*

The channel to be tuned-in is void due to a change by the broadcast service, or the reception is not good.

\* Depending on the master unit, either “CH ---” or “XM ---” appears. For details, refer to the “Initial setting” on the other side of these instructions.

