

PERSONAL AUDIO SYSTEM

Operating Instructions



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ZS-BTY52

WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To reduce the risk of fire or electric shock, do not expose this apparatus to dripping or splashing, and do not place objects filled with liquids, such as vases, on the apparatus.

As the main plug is used to disconnect the unit from the mains, connect the unit to an easily accessible AC outlet. Should you notice an abnormality in the unit, disconnect the main plug from the AC outlet immediately.

The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

Excessive sound pressure from earphones and headphones can cause hearing loss.

Do not expose the batteries (battery pack or batteries installed) to excessive heat such as sunshine, fire or the like for a long time.

The nameplate is located on the bottom exterior.

Notice for customers: the following information is only applicable to equipment sold in countries applying EU directives

This product has been manufactured by or on behalf of Sony Corporation, 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan. Inquiries related to product compliance based on European Union legislation shall be addressed to the authorized representative, Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters, please refer to the addresses provided in the separate service or guarantee documents.

For customers in Europe and Australia



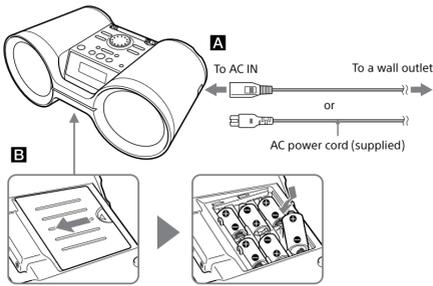
Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Power Sources

Using the AC power cord

Connect the AC power cord **A**, or insert six R14 (size C) batteries (not supplied) into the battery compartment **B**.



Notes

- Replace the batteries when the OPR/BATT indicator **19** dims, or when the unit becomes inoperable. Replace all the batteries with new ones. Before you replace the batteries, be sure to disconnect any USB device and any optional component from the unit.
- To use the unit on batteries, disconnect the AC power cord from the unit and the wall outlet.

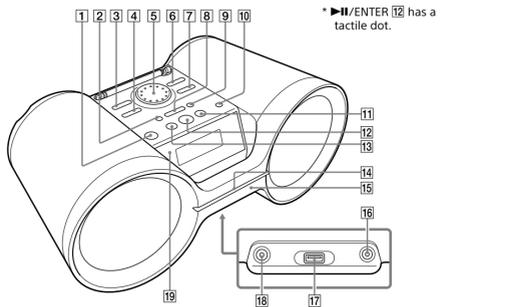
To use the power-management function (European models only)

This unit is equipped with an automatic standby function. With this function, the unit enters standby mode automatically in about 20 minutes when there is no operation or audio signal output. To turn the standby mode on or off, press DISPLAY **9** and ►|ENTER **12** at the same time. Each time you press the button, "AUTO STANDBY ON" or "AUTO STANDBY OFF" appears on the display.

Notes

- The message "AUTO.STBY" starts flashing on the display about 2 minutes before entering standby mode.
- In standby mode, with the AC power cord connected, "STANDBY" appears on the display.
- The automatic standby function is not available in the FM/AM function.

Basic Operations



*►|ENTER **12** has a tactile dot.

Illumination

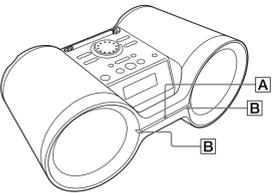
The illumination on the handle has the following two features.

Indication of function change (A)

When you switch to one of four functions, the illumination increases in intensity to notify the user of function change. The illumination is blue for Bluetooth and white for other functions.

Lighting effects for audio output (B)

Lighting effects, in red, are created that synchronize with the music source. You can turn this function on or off as desired (See "Turning off the light sync function").



Before using the unit

To turn the power on or off

Press POWER (or OPERATE) **11**. You can also turn on the power of this unit using the direct power-on function (below). In this manual, operations are mainly explained using the direct power-on function.

To use the direct power-on function

Press USB **7**, BLUETOOTH **4**, RADIO FM/AM **6** or AUDIO IN **3** while the unit is turned off. The power turns on directly in the selected function.

To adjust the volume

Turn VOLUME control **5** clockwise (+) or counter clockwise (–). The volume level of this unit is adjustable in steps from 0 to 31. For the 31st step, "VOL MAX" is displayed.

To listen through headphones

Connect headphones to the ◀ (headphones) jack **18**.

To reinforce the bass

Press MEGA BASS **10**. "MEGA BASS" lights up on the display. To return to normal sound, press the button again.

Turning off the automatic demonstration (Latin American models only)

Since demonstration mode is enabled by default, the demonstration will start automatically in the following cases:

- when the unit is turned off.
- when there is no audio output in the USB function.
- when the Bluetooth connection is not established in the Bluetooth function (when "NO BT" is displayed).
- To turn off the automatic demonstration, press PLAY MODE **2** until "DEMO MODE OFF" appears on the display.

Note
Demonstration mode does not function when operating using batteries.

Turning off the light sync function

The light sync function of this unit creates lighting effects that synchronize with the music source. By default, this function is on but you can turn it off as desired.

Press LIGHT SYNC **9** until "LIGHT SYNC OFF" appears on the display.



To turn on the function, press the button again until "LIGHT SYNC ON" appears while a music source is being output in any function.

Listening to music on a USB device

You can listen to audio files stored on a USB device (a digital music player or USB storage media). Audio files in MP3, WMA and AAC formats* can be played on this unit.

* Files with DRM (Digital Rights Management) copyright protection or files downloaded from an online music store cannot be played on this unit. If you try to play one of these files, the unit plays the next unprotected audio file.

Compatible USB devices
Compatibility requirements for the USB devices are as follows. Before using with this unit, check that your device meets the requirements.

- Compliance with USB 2.0 (Full Speed)
- Supports Mass Storage mode*
 - * Mass Storage mode is a mode that allows a USB device to become accessible to a host device, enabling file transfers. Most USB devices support Mass Storage mode.

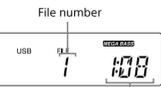
- Connect the USB device to the ◀ (USB) port **17**.
- Press USB **7** to turn on the USB function.

If the USB device does not have a volume label
"STORAGE DRIVE" scrolls once on the display, then "xxxFLDR**" appears on the display.

If the USB device has a volume label
The volume label* scrolls once on the display, then "xxxFLDR**" appears on the display.

* A volume label is a name that you can assign to data storage media or devices.
** "xxx" is the total folder number.

- Press ►|ENTER **12** to start playback.



After the folder name and song title are displayed, the file number and playing time* appear.

* If the playing time is more than 100 minutes, it appears as ":-:--" on the display.

Other operations

To	Do this
Pause playback	Press ► ENTER 12 during playback. To resume playback, press the button again*.
Stop playback	Press ► ENTER 12 to pause playback, and then press POWER (or OPERATE) 11 , BLUETOOTH 4 , RADIO FM/AM 6 or AUDIO IN 3 .
Select a folder	Press ◀ (Folder) + or – 8 .
Skip files	Press ◀◀ 13 or ►► 11 once. You can skip files one by one.
Reverse/Fast-forward	Press and hold down ◀◀ 13 or ►► 11 . Files will be skipped continuously until you release the button.
Find a point in a file	Hold down ◀◀ 13 or ►► 11 during playback, and release the button at the desired point.
Remove a USB device	Press ► ENTER 12 to pause playback, and then press POWER (or OPERATE) 11 , BLUETOOTH 4 , RADIO FM/AM 6 or AUDIO IN 3 to turn off the USB function. Then remove the USB device.

* When playing a VBR MP3/WMA/AAC file, the unit may resume playback from a different point.

Tips

- Playback starts from the last played audio file (Resume play). During pause (Resume stop), the file number and playing time of the current audio file are displayed.
- The total number of folders is displayed when the reading process is completed. Playback of USB device stops after the device is connected, or after switching to the USB function from another function.
- Only the file number is displayed when playback of all audio files ends and the USB device stops.
- To cancel Resume play (to start playback from the beginning of the first MP3/WMA/AAC file), press ►|ENTER **12** to pause playback, and press POWER (or OPERATE) **11**, BLUETOOTH **4**, RADIO FM/AM **6** or AUDIO IN **3**. Then, press ►|ENTER **12** to start playback.
- Note**
Always pause playback and turn off the USB function by pressing POWER (or OPERATE) **11** or a function button other than USB **7** before removing the USB device. Removing the USB device without performing this procedure may corrupt the data on the USB device or damage the USB device itself.

To change play modes

Press PLAY MODE **2** repeatedly while the USB device is playing or paused. You can select normal play mode (playback in sequence of all files on the USB device), folder play mode (▶ for all files in the specified folder on the USB device), repeat play mode (◀ for repeating all files/↺ 1* for repeating one file), or shuffle play mode (SHUF*). For details, see "Selecting play mode" on the back page.

Notes on the USB device

- It may take a long time before playback starts when:
 - the folder structure is complex.
 - the USB device is close to capacity.
- When a USB device is connected, the unit reads all the files on the device. If there are many folders or files on the device, it may take a long time for the unit to finish reading them.
- Do not connect a USB device to the unit through a USB hub.
- With some connected USB devices, after an operation is performed, there may be a delay before it is performed by this unit.
- Operation is not always guaranteed, even if the USB devices meet the compatibility requirements.
- This unit may not support all the functions provided with a connected USB device.
- The playback order on this unit may differ from the playback order on a connected USB device.
- Do not save non-MP3/WMA/AAC files or unnecessary folders to a USB device that contains MP3/WMA/AAC files.
- During playback, folders that contain no MP3/WMA/AAC files are skipped.
- The audio formats supported by this unit are as follows:
 - MP3: file extension ".mp3"
 - WMA: file extension ".wma"
 - AAC: file extension ".m4a" and ".mp4"
 Note that even if the file name has the correct file extension, if the actual file was created in different audio format, this unit may produce noise or may malfunction.
- MP3 PRO format is not supported.
- WMA files encoded in WMA DRM, WMA Lossless and WMA PRO formats cannot be played back.
- AAC files encoded in copyright-protected AAC format cannot be played back.
- This unit supports the AAC-LC (AAC Low Complexity) profile. The HE-AAC (High Efficiency AAC) profile is not supported.
- This unit cannot play audio files on a USB device in the following cases:
 - when the total number of audio files in a single folder exceeds 999.
 - when the total number of audio files on a single USB device exceeds 65,535.
 - when the total number of folders on a single USB device exceeds 256 (including the "ROOT" folder).
 - when the directory level (folder depths) exceeds 8 (including the "ROOT" folder).
 These numbers may vary depending on the file and folder structure.
- Compatibility with all encoding/writing software is not guaranteed. If audio files on the USB device were originally encoded with incompatible software, those files may produce noise or interrupted sound, or may not be played back at all.
- Folder names and file names can be displayed using up to 32 characters, including quotation marks.
- Displayable characters are uppercase letters (A to Z), numbers (0 to 9) and under score (_). Other characters are displayed as ".*".

- This unit conforms to version 1.0, 1.1, 2.2, 2.3 and 2.4 of the ID3 tag format. When a file has ID3 tag information, "song title," "artist name," and "album name" will be displayed. If a file does not have the ID3 tag information, the unit displays as follows:
 - File name instead of the song title.
 - "NO ARTIST" message instead of the artist name.
 - "NO ALBUM" message instead of the album name.

ID3 tag information can be displayed using up to 32 characters.

Listening to music wirelessly on a Bluetooth device

Using the Bluetooth connection, you can listen to music from wirelessly connected Bluetooth devices such as mobile phones, smartphones, music players, etc. This unit supports non-NFC compatible Bluetooth devices (hereafter "Bluetooth device(s)") and NFC-compatible smartphones.



Compatible Bluetooth devices
Compatibility requirements for the devices are as follows. Before using with this unit, check that your device meets the requirements.

- Devices must conform to Bluetooth Standard version 3.0.
 - Devices must support A2DP (Advanced Audio Distribution Profile) and AVRCP (Audio/Video Remote Control Profile).
 - NFC capability (required only when using the NFC pairing function of the unit).
- For the latest information on compatible Bluetooth devices, including NFC-compatible smartphones, check the website below.

For customers in Europe and Russia:
<http://support.sony-europe.com/>

For customers in Latin America:
<http://www.sony-latin.com/index.cfm>

For customers in other countries/regions:
<http://www.sony-asia.com/support>

Pairing

Bluetooth devices must be "paired" with each other beforehand. Once Bluetooth devices are paired, there is no need for pairing again, unless pairing information is cleared. With this unit, up to 9 Bluetooth devices can be paired. If your device is an NFC-compatible smartphone, the manual pairing procedure is not necessary. Use the smartphone with this unit along with the procedures described under "To connect with a smartphone by one touch (NFC)." When using the Bluetooth function, pay attention to the Bluetooth status indicator **8** on the display, which tells you the network status between the unit and your device.

Indications for the Bluetooth function

Status	Bluetooth indicator 8
Bluetooth connection is off	Off
Pairing or communicating	Flashes
Connection is established	Constantly on

To pair with a Bluetooth device

Keep the Bluetooth device and the unit within 1 meter of each other for this operation.

- Press BLUETOOTH **4** to turn on the Bluetooth function.
- Press and hold BLUETOOTH - PAIRING **4** to activate the pairing mode of the unit. When pairing mode is activated, a double-beep will sound and the Bluetooth indicator **8** will flash on the display. If activation fails, press and hold BLUETOOTH - PAIRING **4** again, and try to activate the pairing mode again. To cancel the pairing mode after activation, press BLUETOOTH - PAIRING **4** at least 2 seconds.
- Perform the pairing procedure on the Bluetooth device. Turn on the Bluetooth device and activate the Bluetooth function on your device. For details, refer to the instruction manual of your Bluetooth device.

When the Bluetooth function of your device is activated, your device will search for pairable devices and display a list of detected devices on the device display. Select this unit from the list. This unit appears as "ZS-BTY50/52/55." If "ZS-BTY50/52/55" is not displayed, repeat the procedure from step 2.

If a passcode is required

Some Bluetooth devices may require a 4-digit passcode. If your device requires the passcode, enter "0000."

When pairing of the device is completed and the Bluetooth connection is established, the Bluetooth indicator **8** stops flashing and "BT AUDIO" appears on the display.



If you want to pair with another Bluetooth device, repeat steps 1 to 3.

Notes on pairing with a Bluetooth device

- If you turn off the unit or power off the Bluetooth device before the Bluetooth connection is established, pairing information will not be stored, and pairing will not be completed.
- Pairing mode is canceled after about 5 minutes. If pairing mode is canceled halfway, start over from step 2.
- The operation and display may differ depending on the Bluetooth device or the version of Bluetooth software installed.
- "Passcode" may be called "Passkey," "PIN code," "PIN number" or "Password," etc., depending on the Bluetooth device. For details on the passcode, refer to the instruction manual of your device.

To connect with a smartphone by one touch (NFC)

By touching the unit with an NFC-compatible smartphone, the unit is turned on automatically, and then proceeds to complete pairing and the Bluetooth connection automatically.

Compatible smartphones
Smartphones with a built-in NFC function (OS: Android 2.3.3 or later, excluding Android 3.x)

What is "NFC"?

NFC (Near Field Communication) is a technology enabling short-range wireless communication between various devices, such as mobile phones and IC tags. Thanks to the NFC function, data communication can be achieved easily just by touching the designated touchpoint on the NFC-compatible devices.

- Download and install the app "NFC Easy Connect."

"NFC Easy Connect" is a free app for Android smartphones that can be obtained on Google Play. Search for the app using the keyword "NFC Easy Connect" on the site, or access the download site directly by reading the two-dimensional code below.

Note that "NFC Easy Connect" is free but data communication fees when downloading are charged separately.

Two-dimensional code* for direct access

* Use a two-dimensional code reader app.



Note
The App may not be available in some countries and/or regions.

- Start the app "NFC Easy Connect" on the smartphone. Make sure that the application screen is displayed.
- Touch the smartphone to the N-marked part **15** of the unit until the smartphone vibrates.

Vibration cue is provided when recognized by the unit.



After being recognized by the unit, follow the on-screen instructions displayed on the smartphone, and complete the procedure for Bluetooth connection.

When the Bluetooth connection is established, the Bluetooth indicator **8** stops flashing and the message "BT AUDIO" appears on the display.

Tip
If pairing and the Bluetooth connection fail, do the following:

- Relaunch "NFC Easy Connect" and move the smartphone slowly over the N-marked part **15**.
- Remove the case from the smartphone if using a commercially available smartphone case.

To listen to audio

Keep the Bluetooth device (or NFC-compatible smartphone) and the unit within 10 meters of each other, and check the following before operation.

- The Bluetooth function of the device is activated.
- Pairing and the Bluetooth connection are completed correctly. If not, perform the pairing procedure beforehand. (See "To pair with a Bluetooth device" or "To connect with a smartphone by one touch (NFC)".)

■For a Bluetooth device

- Press BLUETOOTH **4** to turn on the Bluetooth function. The last connected device will be connected automatically.
- Start playback of an audio source such as music, videos, games, etc., on the device. Refer to the instruction manual of your device for details on playback operations.

■For an NFC-compatible smartphone

Start playback of an audio source such as music, videos, games, etc., on the smartphone. Refer to the instruction manual of your smartphone for details on playback operations.

Note

The Bluetooth function turns off when:

- you press POWER (or OPERATE) **11** to turn off the unit.
- you switch to a function other than Bluetooth function.

Tip
If the volume level is low, adjust the volume of the unit first. If the volume level is still too low, adjust the volume level on the connected Bluetooth device or the smartphone.

Tip for the Bluetooth devices
If the last connected device does not connect automatically, reselect the Bluetooth function by pressing BLUETOOTH **4** after POWER (or OPERATE) **11**, USB **7**, RADIO FM/AM **6** or AUDIO IN **3** is pressed. If it still does not connect, select the model name of this unit from the device list (perform step 3 in "To pair with a Bluetooth device").

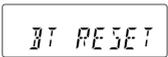
To terminate a Bluetooth connection

You can terminate the Bluetooth connection using any of the following operations.

- For a Bluetooth device
 - Turn off the unit.
 - Turn off the device.
 - Press POWER (or OPERATE) **11**, USB **7**, RADIO FM/AM **6** or AUDIO IN **3**.
 - Disable the Bluetooth function on the device.
- For an NFC-compatible smartphone
 - Touch the smartphone to the N-marked part **15** again.
 - Turn off the unit.
 - Turn off the device.
 - Press POWER (or OPERATE) **11**, USB **7**, RADIO FM/AM **6** or AUDIO IN **3**.
 - Disable the Bluetooth function on the smartphone.

To clear the paired device information stored in the unit

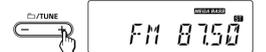
- Press BLUETOOTH **4** to turn on the Bluetooth function.
- Press FM MONO **2**, DISPLAY **9** and TUNE – **8** at the same time. "BT RESET" appears on the display.



- Press ENTER **12** to reset and clear the paired device information. When the paired device information is cleared, "COMPLETE" appears on the display. To cancel this reset operation, press FM MONO **2**, DISPLAY **9** and TUNE – **8** again before pressing ENTER **12**.

Listening to the radio

- Press RADIO FM/AM **6** repeatedly to select the band. Each time you press the button, the indication changes as follows: "FM" ↔ "AM".
- Press and hold TUNE + or – **8** until the frequency digits begin to change on the display.



The unit automatically scans the radio frequencies and stops when it finds a clear station.

If you cannot tune to a station using the automatic tuning mode, press TUNE + or – **8** repeatedly to change the frequency step by step.

When an FM stereo broadcast is received, "ST" lights up on the display.

Tip

If the stereo FM reception is noisy, press FM MONO **2** until "MONO" appears on the display. You will lose the stereo effect, but the broadcast will improve.

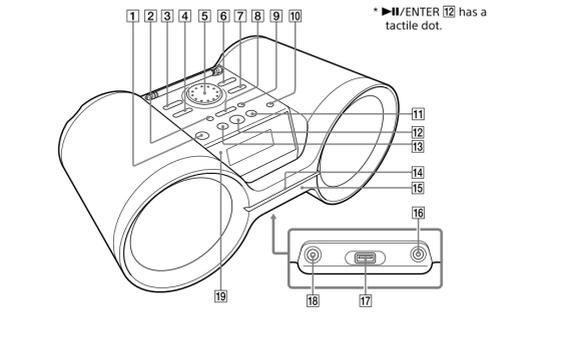


To change the FM/AM tuning interval

The FM/AM tuning interval can be changed if necessary using the following procedure. Note that this function is not available on European, Australian, Taiwan and Latin American models, except for Uruguay, Paraguay, Peru and Chile models.

- Press RADIO FM/AM **6** repeatedly to select the band.
- Press ◀◀ **13** or ►► **11** to select "MANUAL," and then press ENTER **12**. "FM-xx" appears on the display.
- Press and hold RADIO FM/AM **6** until the current tuning step appears. "FM 50K" (for 50 kHz interval) or "FM 100K" (for 100 kHz interval) in

Other Operations



Using the display

You can check information about the currently playing audio file from the USB device using the display.



Tips

- If there are no MP3/WMA/AAC files on the USB device, "NO FILE" appears on the display.
- If MP3/WMA/AAC files are present only on the root of the USB device, "FLDR" appears on the display.

To check file information

Press DISPLAY [9] repeatedly while playing an MP3/WMA/AAC file on the USB device. The display changes as follows:

→ Song title (♪)*
↓ Artist name (♪)*
↓ Album name (♪)*
→ Current file number and playing time**

- * If the file does not have corresponding ID3 information, the file name, "NO ARTIST," and "NO ALBUM" scroll instead of the song title, artist name, and album name, respectively.

** The artist name or album name will change to this in a few seconds.

Selecting play mode

You can set the unit to play tracks repeatedly or in random order while a USB device is playing or paused.

→ Normal play (None)
↓ Single repeat (↔ 1)
↓ All repeat (↔)
↓ Selected folder play (□)
↓ Selected folder repeat play (↔, □)
↓ Shuffle play (SHUF)*

* The "SHUF" indicator flashes for about 3 seconds until shuffle play mode is confirmed by the unit.

Press PLAY MODE [2] repeatedly. Each time you press the button, the indication changes as follows:

→ Normal play (None)
↓ Single repeat (↔ 1)
↓ All repeat (↔)
↓ Selected folder play (□)
↓ Selected folder repeat play (↔, □)
↓ Shuffle play (SHUF)*

* The "SHUF" indicator flashes for about 3 seconds until shuffle play mode is confirmed by the unit.

To repeat	Do this
An MP3/WMA/AAC file	1 Press PLAY MODE [2] repeatedly until "↔ 1" appears.
	2 Press ◀◀ [13] or ▶▶ [11] to select an audio file that you want to repeat.
	3 Press ►II [12].
All MP3/WMA/AAC files on the USB device	1 Press PLAY MODE [2] repeatedly until "↔" appears.
	2 Press ►II [12].
A selected folder	1 Press PLAY MODE [2] repeatedly until "□" (Folder) and "↔" appear.
	2 Select the folder by pressing □ or – [8].
	3 Press ►II [12].

To cancel Repeat Play

Press PLAY MODE [2] repeatedly until "↔" disappears from the display.

To cancel Shuffle Play
Press PLAY MODE [2] repeatedly until "SHUF" disappears from the display.

Tip
During Shuffle Play, you cannot select the previous MP3/WMA/AAC file by pressing ◀◀ [13].

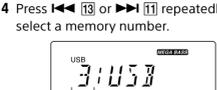
Selecting a memory on the USB device

If the USB device has more than one memory (for example, an internal memory and a memory card), you can select which memory to use and then start playback.

Make sure to select a memory before starting playback as you cannot select a memory during playback.

- Connect the USB device to the ↔ (USB) port [7].
- Press USB [7] to turn on the USB function.
- Press and hold USB • MEMORY SELECT [7].

- Press ◀◀ [13] or ▶▶ [11] repeatedly to select a memory number.



The memory name appears. The name will be displayed in various types, depending on the specifications of the USB device. Proceed to step 5 if only one memory can be selected.

To cancel the memory select operation, press USB • MEMORY SELECT [7] again.

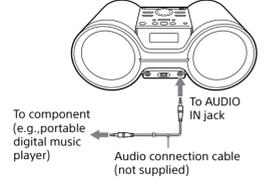
- Press ENTER [12].



Connecting optional components

You can enjoy the sound from an optional component, such as a portable digital music player, through the speakers of this unit.

Be sure to turn off the power of each component before making any connections. For details, refer to the instruction manual of the component to be connected.



- Connect the AUDIO IN jack [16] to the line output jack of the portable digital music player or other component using an audio connection cable (not supplied).
- Turn the connected component on.
- Press AUDIO IN [3] and start playing sound on the connected component. The sound from the connected component is output from the speakers.

To connect the unit to a TV or VCR, use an extension cable (not supplied) with a stereo-mini jack on one end and two phono plugs on the other end.

Notes

- If connected to the monaural output jack of a digital music player, sound may not come through the right speaker of the unit.
- If connected to the line out jack of a digital music player, distortion may occur. If the sound is distorted, connect to the headphones jack instead.
- If connected to the headphones jack of a digital music player, increase the volume of the digital music player, and then adjust the volume of the unit.

On cleaning the cabinet

Clean the cabinet, panel and controls using a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent, such as alcohol or benzine.

On Bluetooth communication

Bluetooth wireless technology operates within a range of about 10 meters.

The maximum communication range may vary depending on obstacles (human body, metal, wall, etc.) or the electromagnetic environment.



■ Optimal performance
■ Limited performance

- The following conditions may affect the sensitivity of Bluetooth communication.
 - There is an obstacle such as a person, metal, or wall between this unit and the Bluetooth device used.
 - Devices or equipment such as wireless LAN devices, microwave oven, cordless telephone, etc., using a 2.4 GHz frequency band, are in use near the unit.
 - The unit is placed on a shelf made of steel.

—Because both the Bluetooth and the wireless LAN (IEEE802.11b/g/n) devices use the same frequency band (2.4 GHz), microwave interference may occur, resulting in communication speed deterioration, noise, or invalid connection if this unit is used near wireless LAN devices. In such cases, do the following.

—Place or use this unit at least 10 m away from the wireless LAN devices.

—If this unit is used within 10 m of other wireless LAN devices, turn off the wireless LAN devices if possible, or place this unit at least 10 m away from the wireless LAN devices.

—Use the Bluetooth device as close to the unit as possible.

- Microwaves emitting from a Bluetooth device may affect the operation of electronic medical devices. Turn off the power on this unit and the Bluetooth device in the following locations, as they may cause an accident.
 - Where inflammable gas is present, in a hospital, train, airplane, or a 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 Bluetooth wireless technology is used, but security may be insufficient, depending on the setting. Be careful when communicating using Bluetooth wireless technology.

- Sony cannot accept any responsibility for leakage of information when using the Bluetooth function of this unit.
- Connection with all Bluetooth devices cannot be guaranteed.

—Bluetooth devices used with this unit must conform to the Bluetooth standard specified by Bluetooth SIG, Inc., and must be certified to comply.

—Even when the connected Bluetooth device conforms to the above mentioned Bluetooth standard, some devices may not be connected or work correctly, depending on the features or specifications of the device.

- Depending on the device to be connected, it may require some time to start communication.

If you have any questions or problems concerning your unit, consult your nearest Sony dealer.

Precautions

On safety

- Should any solid object or liquid fall into the unit, unplug the unit, and have it checked by qualified personnel before operating it any further.

On power sources

- For AC operation, use the supplied AC power cord; do not use any other cord.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time.
- When not using the batteries, remove them to avoid damage that can be caused by battery leakage or corrosion.

On placement

- Do not leave the unit in a location near heat sources, in a place subject to direct sunlight, excessive dust or mechanical shock, or in a car subject to the direct rays of the sun.
- Do not place the unit on an inclined or unstable surface.
- Do not place anything within 10 mm of the rear of the cabinet. The ventilation openings must be unobstructed for the unit to operate properly and prolong the life of its components.
- Since a strong magnet is used for the speakers, keep personal credit cards using magnetic coding or spring-wound watches away from the unit to prevent possible damage from the magnet.

On operation

- Condensation may form on outer surfaces or internally, and cause the unit to malfunction if the unit is suddenly moved from a cold to a warm environment. If condensation forms, turn off the unit, and leave the unit off until the moisture evaporates. Do not use the unit until the condensation has fully evaporated.

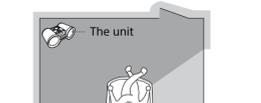
On cleaning the cabinet

Clean the cabinet, panel and controls using a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent, such as alcohol or benzine.

On Bluetooth communication

Bluetooth wireless technology operates within a range of about 10 meters.

The maximum communication range may vary depending on obstacles (human body, metal, wall, etc.) or the electromagnetic environment.



■ Optimal performance
■ Limited performance

- The following conditions may affect the sensitivity of Bluetooth communication.
 - There is an obstacle such as a person, metal, or wall between this unit and the Bluetooth device used.
 - Devices or equipment such as wireless LAN devices, microwave oven, cordless telephone, etc., using a 2.4 GHz frequency band, are in use near the unit.
 - The unit is placed on a shelf made of steel.

—Because both the Bluetooth and the wireless LAN (IEEE802.11b/g/n) devices use the same frequency band (2.4 GHz), microwave interference may occur, resulting in communication speed deterioration, noise, or invalid connection if this unit is used near wireless LAN devices. In such cases, do the following.

—Place or use this unit at least 10 m away from the wireless LAN devices.

—If this unit is used within 10 m of other wireless LAN devices, turn off the wireless LAN devices if possible, or place this unit at least 10 m away from the wireless LAN devices.

—Use the Bluetooth device as close to the unit as possible.

- Microwaves emitting from a Bluetooth device may affect the operation of electronic medical devices. Turn off the power on this unit and the Bluetooth device in the following locations, as they may cause an accident.
 - Where inflammable gas is present, in a hospital, train, airplane, or a 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 Bluetooth wireless technology is used, but security may be insufficient, depending on the setting. Be careful when communicating using Bluetooth wireless technology.

• Sony cannot accept any responsibility for leakage of information when using the Bluetooth function of this unit.

- Connection with all Bluetooth devices cannot be guaranteed.

—Bluetooth devices used with this unit must conform to the Bluetooth standard specified by Bluetooth SIG, Inc., and must be certified to comply.

—Even when the connected Bluetooth device conforms to the above mentioned Bluetooth standard, some devices may not be connected or work correctly, depending on the features or specifications of the device.

- Depending on the device to be connected, it may require some time to start communication.

If you have any questions or problems concerning your unit, consult your nearest Sony dealer.

Troubleshooting

General

The demonstration appears on the display.

- Disable the demonstration function by pressing PLAY MODE [2] until "DEMO MODE OFF" appears on the display.

The power does not turn on when the AC power cord is connected.

- Make sure the AC power cord is connected to the wall outlet securely.

The power does not turn on during battery operation.

- Make sure the batteries are inserted correctly.

"LOW BATTERY" flashes on the display and the unit turns off automatically.

- Replace all the batteries with new ones.

The unit enters standby mode unexpectedly.

- This is not a malfunction. The unit enters standby mode automatically in about 20 minutes when there is no operation or audio signal output. See "To use the power-management function (European models only)."

There is no sound.

- Make sure the appropriate function is selected for the music or sound source you want to listen to.
- Unplug the headphones when listening through speakers.

The sound is noisy.

- Is someone using a mobile phone or other equipment emitting radio waves near the unit? If so, move the unit and the Bluetooth device away from such devices. Devices such as mobile phones, etc. can affect Bluetooth communication.

USB device

Are you using a compatible USB device?

- If you connect an incompatible USB device, the following problems may occur.
 - The USB device is not recognized.
 - File or folder names are not displayed on this unit.
 - Playback is not possible.
 - The sound skips.
 - There is noise.
 - The sound output is distorted.

"OVER CURRENT" appears.

- An abnormal level has been detected in the electrical current from the ↔ (USB) port [7]. Turn off the unit and remove the USB device from the ↔ (USB) port [7]. Make sure there is no problem with the USB device. If this message persists, contact your nearest Sony dealer.

There is no sound.

- The USB device may be connected incorrectly. Turn off the unit and reconnect the USB device. Then turn on the unit.

There is noise, skipping, or distorted sound.

- Turn off the unit and reconnect the USB device. Then turn on the unit again.
- The music data itself contains noise, or the sound is distorted. Noise may have entered during the creation of audio files. Try re-creating audio files and use them to play on this unit.

The USB device cannot be connected to the ↔ (USB) port [7].

- The connector on the USB device or the USB cable is being inserted backwards. Insert it to the ↔ (USB) port [7] in the correct direction.

"READING" is displayed for an extended time, or it takes a long time before playback starts.

- The reading process can take a long time in the following cases:
 - There are many folders or files on the USB device.
 - The file structure is complex.
 - The memory is almost full.
 - The internal memory is fragmented.

To avoid the above problems, we recommend that you adhere to the following guidelines:

- Keep the total number of folders on a USB device to 100 or less.
- Keep the total number of files per folder to 100 or less.

Erroneous display

- The data stored on the USB device may be corrupted. Send the music data to the USB device again.
- This unit can display only numbers and letters of the alphabet. Other characters will not be displayed correctly.

The USB device is not recognized.

- Turn off the unit and reconnect the USB device, then turn on the unit.

- The USB device is not functioning properly. Refer to the USB device operation manual for details on how to deal with this problem.

Play does not start.

- Turn off the unit and reconnect the USB device.

Play does not start from the first track.

- Set the play mode to Normal Play.

MP3/WMA/AAC files cannot be played back.

- The audio files may have inappropriate file extensions. The file extensions supported by this unit are as follows:
 - MP3: file extension ".mp3"
 - WMA: file extension ".wma"
 - AAC: file extension ".m4a" and ".mp4"
- The audio files may have been created in formats other than MP3/WMA/AAC formats.
- The USB storage device uses a file system other than FAT16 or FAT32.*
- The USB storage device is partitioned. Only MP3/WMA/AAC files in the first partition can be played.
- Playback is possible up to 8 directory levels.
- The number of folders on the device exceeds 256 (including the "ROOT" folder).
- The number of files on the device exceeds 65,535.
- The number of files per folder exceeds 999.
- The files are encrypted or protected by passwords.

* This unit supports FAT16 and FAT32, but some USB storage media may not support both file systems. For details, refer to the operation manual of the USB storage device in question or contact the manufacturer.

Specifications

USB section

Supported bit rates

MP3 (MPEG 1 Audio Layer-3): 32 kbps — 320 kbps, VBR

WMA: 48 kbps — 192 kbps, VBR

AAC (MPEG 4 AAC-LC): 16 kbps — 320 kbps, VBR

Sampling frequencies

MP3 (MPEG 1 Audio Layer-3): 32/44.1/48 kHz

WMA: 32/44.1/48 kHz

AAC (MPEG 4 AAC-LC): 32/44.1/48 kHz

Bluetooth section

Communication System

Bluetooth Specification Version 3.0

Modulation method

FHSS

Output

Bluetooth Specification Power Class 2

Maximum communication range

Line of sight approx. 10 m*

Frequency band

2.4 GHz band (2,400 GHz — 2,4835 GHz)

Supported Bluetooth Profiles*2

A2DP (Advanced Audio Distribution Profile)

AVRCP*3 (Audio/Video Remote Control Profile)

Supported codec*4

SBC (Subband Codec)

*1 The actual range will vary depending on factors such as obstacles between devices, magnetic fields around a microwave oven, static electricity, reception sensitivity, aerial performance, operating system, application software, etc.

*2 Bluetooth standard profiles provide the specifications for Bluetooth communication between devices.

*3 Some operations may not be available depending on the device.

*4 Codec: Audio signal compression and conversion format

Radio section

Frequency range

European, Australian, Taiwan and Thai models

FM: 87.5 MHz — 108 MHz (50 kHz step)

AM: 531 kHz — 1,602 kHz (9 kHz step)

Uruguay, Paraguay, Peru and Chile models

FM: 87.5 MHz — 108 MHz (100 kHz step)

87.5 MHz — 108 MHz (50 kHz step)

AM: 530 kHz — 1,610 kHz (10 kHz step)

531 kHz — 1,602 kHz (9 kHz step)

Latin American models except for Uruguay,

Paraguay, Peru and Chile models

FM: 87.5 MHz — 108 MHz (100 kHz step)

AM: 530 kHz — 1,710 kHz (10 kHz step)

Other models

FM: 87.5 MHz — 108 MHz (50 kHz step)

87.5 MHz — 108 MHz (100 kHz step)

AM: 531 kHz — 1,602 kHz (9 kHz step)

530 kHz — 1,610 kHz (10 kHz step)

Intermediate frequency

FM: 128 kHz

AM: 45 kHz

Antennas

FM: Telescopic antenna

AM: Built-in ferrite bar antenna

Radio

The sound is weak or reception is poor quality.

- Replace all the batteries with new ones.
- Move the unit away from any nearby TV.
- For FM reception, extend the aerial to its full length, and reorient it for best FM reception.

For AM reception, reorient the unit itself to find the best reception.

The TV picture is unstable.

- If you are listening to an FM program near a TV with an indoor antenna, move the unit away from the TV.