

Technics®



ST-G30

Music Server

Operating Instructions

Music is borderless and timeless, touching people's hearts across cultures and generations.
Each day the discovery of a truly emotive experience from an unencountered sound awaits.
Let us take you on your journey to rediscover music.

Rediscover Music™

Technics

Delivering the Ultimate Emotive Musical Experience to All

At Technics we understand that the listening experience is not purely about technology but the magical and emotional relationship between people and music.

We want people to experience music as it was originally intended and enable them to feel the emotional impact that enthuses and delights them.

Through delivering this experience we want to support the development and enjoyment of the world's many musical cultures. This is our philosophy.

With a combination of our love of music and the vast high-end audio experience of the Technics team, we stand committed to building a brand that provides the ultimate emotive musical experience by music lovers, for music lovers.

Director
Michiko Ogawa

A handwritten signature in black ink that reads "Michiko Ogawa". The signature is written in a cursive style with a long, sweeping underline that extends to the right.

LEGAL NOTICE

Recording and playback of content on this (or any other) device may require permission from the copyright owner. Panasonic has no authority to and does not grant you that permission and explicitly disclaims any right, ability or intention to obtain such permission on your behalf. It is your responsibility to ensure that your use of this or any other device complies with applicable copyright law in your country.

Thank you for purchasing this product.

Please read these instructions carefully before using this product, and save this manual for future use.

- About descriptions in these operating instructions
 - Pages to be referred to are indicated as “⇒ ○○”
 - The illustrations shown may differ from your unit.

For the United Kingdom and Ireland customers

Sales and Support Information

Customer Communications Centre

- For customers within the UK: 0333 222 8777
- For customers within Ireland: 01 447 5229
- Monday–Friday 9:00 am – 5:00 pm, (Excluding public holidays).
- For further support on your product, please visit our website: www.technics.com/uk/

Features

Hi-Fi-Grade Data Transmission

Equipped with a silent SSD, the Digital Noise Isolation Architecture reduces noise and jitter to the lowest possible levels. The Optimally Activated Circuit System sends high-quality music data to the player. For a USB-DAC, the Low Noise USB Transfer reduces the processing load on the player side and ensures stable USB output power to achieve extremely accurate data transfers.

Bit-Perfect CD Ripping

Bit-Perfect Ripping not only readjusts read error characteristics and performs read retries, but also carries out comparative verification using correct hash values. The internal CD drive is manufactured entirely in-house. It is enclosed in a silent shelter and mounted at the centre of the casing. This Rigidly-Mounted Sheltered Drive minimises the generation of vibrations and noise and enables accurate reading of CD data.

Usability Optimised for Network Audio

The ST-G30 features a user interface that allows a variety of operations, such as managing a music library from a smartphone app, editing the tags and settings of various parameters, thus providing comfortable operation without using a PC. It lets you immerse yourself fully in the music. The internal SSD is removable to allow for future upgrades.

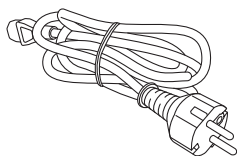
Table of contents

Safety precautions	08	Please carefully read the "Safety precautions" of this manual before use.
Installation	11	Installation
Control reference guide	12	Main unit (Front/Rear)
Connections	14	Connection with the music server, Devices/AC mains lead, etc.
Preparation	18	Before operating this unit, Importing music from CDs or USB devices
Playback	20	Play back music stored on the SSD of this unit.
Advanced operations	22	Importing music from a PC, Back up/Restore
SSD	23	You can replace the SSD.
Troubleshooting	24	Before requesting service, read the troubleshooting.
Others	26	Playable media, Specifications, etc.

Accessories

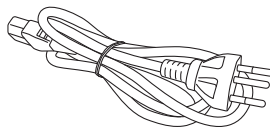
Except for Switzerland

AC mains lead (1)
K2CM3YY00041



For Switzerland

AC mains lead (1)
K2CS3YY00033



- Product numbers provided in these operating instructions are correct as of January 2016.
- These may be subject to change.
- Do not use AC mains lead with other equipment.

WARNING

Unit

- To reduce the risk of fire, electric shock or product damage,
 - Do not expose this unit to rain, moisture, dripping or splashing.
 - Do not place objects filled with liquids, such as vases, on this unit.
 - Use only the recommended accessories.
 - Do not remove covers.
 - Do not repair this unit by yourself. Refer servicing to qualified service personnel.
 - Do not let metal objects fall inside this unit.
 - Do not place heavy items on this unit.

AC mains lead

- To reduce the risk of fire, electric shock or product damage,
 - Ensure that the power supply voltage corresponds to the voltage printed on this unit.
 - Insert the mains plug fully into the socket outlet.
 - Do not pull, bend, or place heavy items on the lead.
 - Do not handle the plug with wet hands.
 - Hold onto the mains plug body when disconnecting the plug.
 - Do not use a damaged mains plug or socket outlet.
- The mains plug is the disconnecting device. Install this unit so that the mains plug can be unplugged from the socket outlet immediately.
- Ensure the earth pin on the mains plug is securely connected to prevent electrical shock.
 - An apparatus with CLASS I construction shall be connected to a mains socket outlet with a protective earth connection.

Small object

- Keep the screws out of reach of children to prevent swallowing.

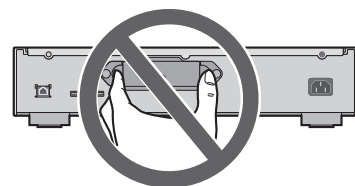
CAUTION

Unit

- This unit utilizes a laser. Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- Do not place sources of naked flames, such as lighted candles, on this unit.
- This unit may receive radio interference caused by mobile telephones during use. If such interference occurs, please increase separation between this unit and the mobile telephone.
- This unit is intended for use in moderate and tropical climates.

Placement

- Place this unit on an even surface.
- To reduce the risk of fire, electric shock or product damage,
 - Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure this unit is well ventilated.
 - Do not obstruct this unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.
 - Do not expose this unit to direct sunlight, high temperatures, high humidity, and excessive vibration.
- Do not lift or carry this unit by holding any of its levers. Doing so may cause this unit to fall, resulting in personal injury or malfunction of this unit.
- Do not lift or carry this unit by holding the recessed portions on its SSD mount.



Safety information for customers in Norway

NORSK

ADVARSEL

Produkt

- For å redusere faren for brann, elektrisk støt eller skade på apparatet:
 - Utsett ikke produktet for regn, fukt, drypping eller sprut.
 - Ikke plasser objekter som er fylt med væske, som vaser, på apparatet.
 - Bruk kun anbefalt tilbehør.
 - Fjern ikke deksler.
 - Reparer ikke denne enheten selv, overlat service til kvalifisert servicepersonell.

Vekselstrømnett

- Nettstøpselet er trukket ut fra denne enheten. Installer denne enheten slik at nettstøpselet umiddelbart kan trekkes fra stikkontakten.

FORSIKTIG

Produkt

- Dette produktet anvender en laser. Betjening av kontroller eller justering eller andre inngrep enn de beskrevet i denne bruksanvisning kan føre til farlig bestråling.
- Plasser ikke åpen ild, slik som levende lys, oppå apparatet.
- Denne enheten er beregnet for bruk i moderate og tropiske klimaer.

Plassering

- For å redusere faren for brann, elektrisk støt eller skade på apparatet:
 - Ikke plasser apparatet i en bokhylle, et innebygget kabinett eller et annet lukket sted. Pass på at produktet er godt ventilert.
 - Apparatets ventilasjonsåpninger må ikke dekkes til med aviser, duker, gardiner eller lignende.

Disposal of Old Equipment and Batteries

Only for European Union and countries with recycling systems



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries must not be mixed with general household waste.



For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points in accordance with your national legislation.

By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment.

For more information about collection and recycling, please contact your local municipality.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

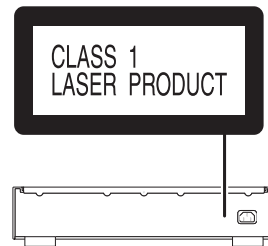


Note for the battery symbol (bottom symbol):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

DANGER - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. FDA21 CFR/CLASS IIIb
CAUTION - CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM. IEC60825-1/CLASS 3B
ATTENTION - RAYONNEMENT LASER VISIBLE ET INVISIBLE, CLASSE 3B. EN CAS D'OUVERTURE, EVITER L'EXPOSITION AU FASCEAU.
FORSIGTIG - SYNLIG OG USYNLIG LASERSTRÅLING KLASSE 3B, NÅR LÅGET ER ÅBENT, UNDGÅ AT BLIVE UDSAT FOR STRÅLEN.
VARO - AVATTAESSA OLET ALTTIINA LUOKAN 3B NÄKYVÄÄ JA NÄKYMÄTÖNTÄ LASERSÄTEILYÄ. VARO ALTISTUMISTA SÄTEELLE.
VARNING - KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLNING NÅR DENNA DEL ÄR ÖPPNAD. UNDVIK EXPOSITION FÖR STRÅLEN.
VORSICHT - SICHTBARE UND UNSICHTBARE LASERSTRÄHLUNG KLASSE 3B. WENN ABDECKUNG GEÖFFNET, NICHT DEM STRAHL AUSSETZEN.
注意 - 打开时有可见及不可见激光辐射。避免光束照射。
注意 - ここを開くとクラス3Bの可視及び不可視レーザー放射が出る ビームの目又は皮膚への被曝は危険! 見たり触れたりしないこと
VQL2Q40

(Inside of product)
(Produktets inside)



(Back of product)

Installation

- Turn off all equipment before connection and read the appropriate operating instructions.

Unit care

- Pull out the AC mains lead from the outlet before maintenance. Clean this unit with a soft cloth.
- When dirt is heavy, wring a wet cloth tightly to wipe the dirt, and then wipe it with a soft cloth.
- Do not use solvents including benzine, thinner, alcohol, kitchen detergent, a chemical wiper, etc. This might cause the exterior case to be deformed or the coating to come off.

To dispose or transfer this unit

This unit may contain private information. Before disposing of or transferring this unit, perform the following to delete the data, including personal or secret information.

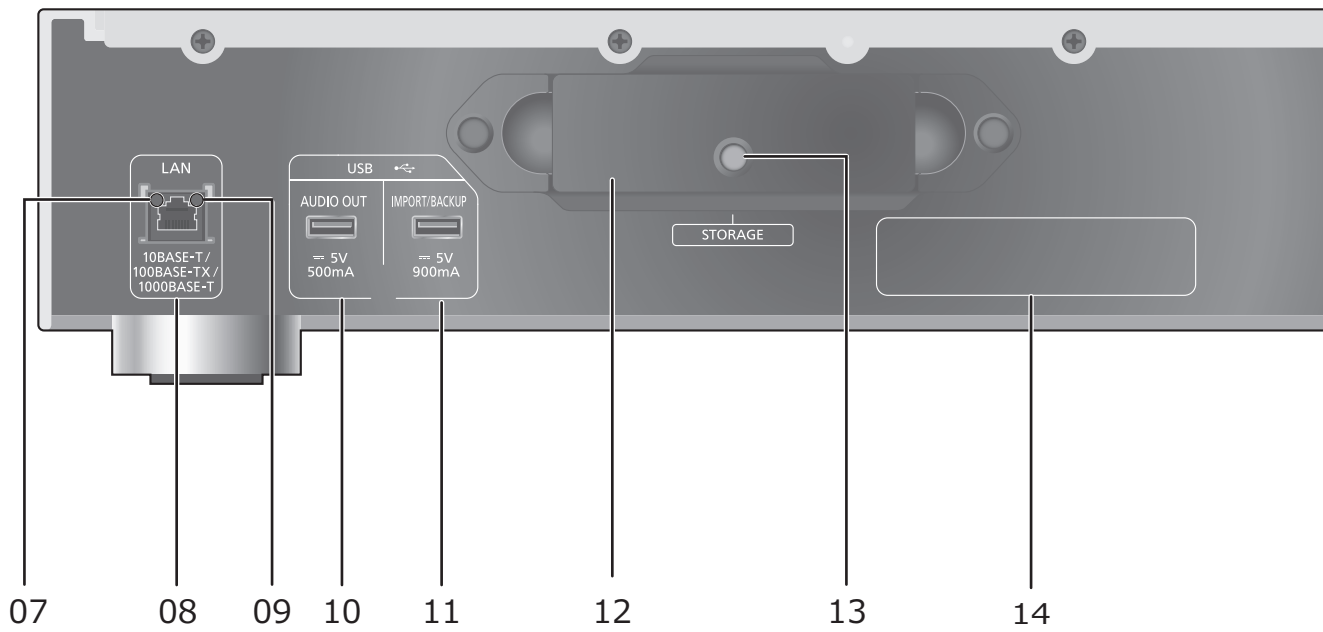
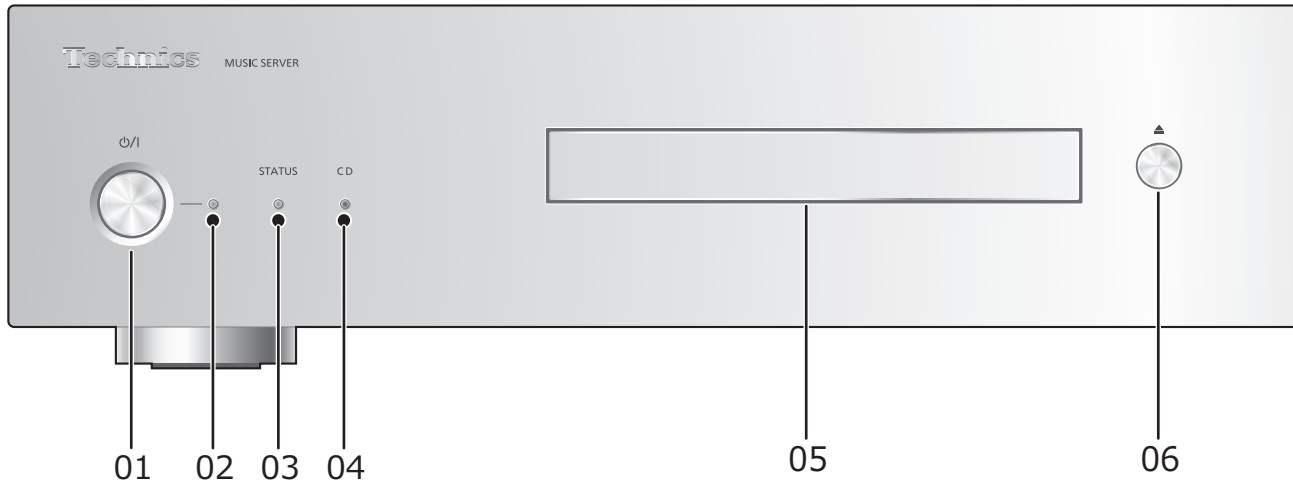
(⇒ 24, “To return all settings to the factory defaults”, “To delete music and settings stored on the SSD”)

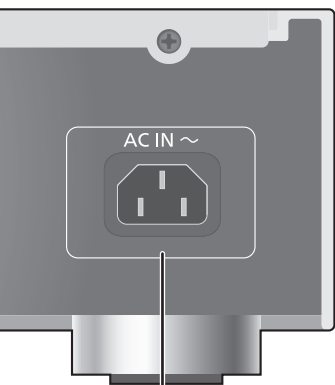
- Dispose of this unit in accordance with local laws and regulations.
- The customer is responsible for the management of personal information imported on the SSD of this unit.

Storage of the SSD

Do not store the SSD in the following locations, as this may cause malfunctions:

- Extremely hot locations
- Locations with drastic temperature changes
- Locations exposed to direct sunlight
- Locations where static electricity or electromagnetic waves are generated
- Humid or dusty locations





15

01 Standby/on switch (⏻/⏻)

- Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

02 Power indicator

- Blue: The unit is on.

03 STATUS indicator

This is a two-colour LED indicator that shows the SSD status.

- It flashes blue when this unit is on.

OFF	Not possible to access SSD
Lights up (blue)	Possible to access SSD
Lights up (red)	Importing from USB / Downloading from Technics Tracks / Backing up / Restoring
Flashing (red)	The SSD is not formatted

04 CD indicator

This is a two-colour LED indicator that shows the CD status.

- It flashes blue when you insert a CD into this unit.

OFF	No CD
Lights up (blue)	Possible to access the CD
Lights up (red)	Recording CD music
Flashing (red)	Incompatible CD

05 CD tray

06 Opens/closes the CD tray

- The tray opens or closes after the CD indicator flashes.

07 Network connection indicator

OFF	Disconnected
Lights up (yellow)	Connected
Flashing (yellow)	Making a connection

08 LAN terminal (⇒ 16, 17)

09 Network communication speed indicator

OFF	Disconnected/10 Mbps connection
Lights up (Orange)	100 Mbps connection
Lights up (green)	1 Gbps connection

10 USB terminal (≡ DC 5 V 500 mA AUDIO OUT) (⇒ 20)

- Connects to a device with a built-in USB-DAC.

11 USB terminal (≡ DC 5 V 900 mA IMPORT/BACKUP) (⇒ 19)

- Connects to a USB memory device or USB HDD (Hard Disk Drive).

12 Storage tray (STORAGE)

- You can remove the tray to attach and remove the SSD. (⇒ 23)

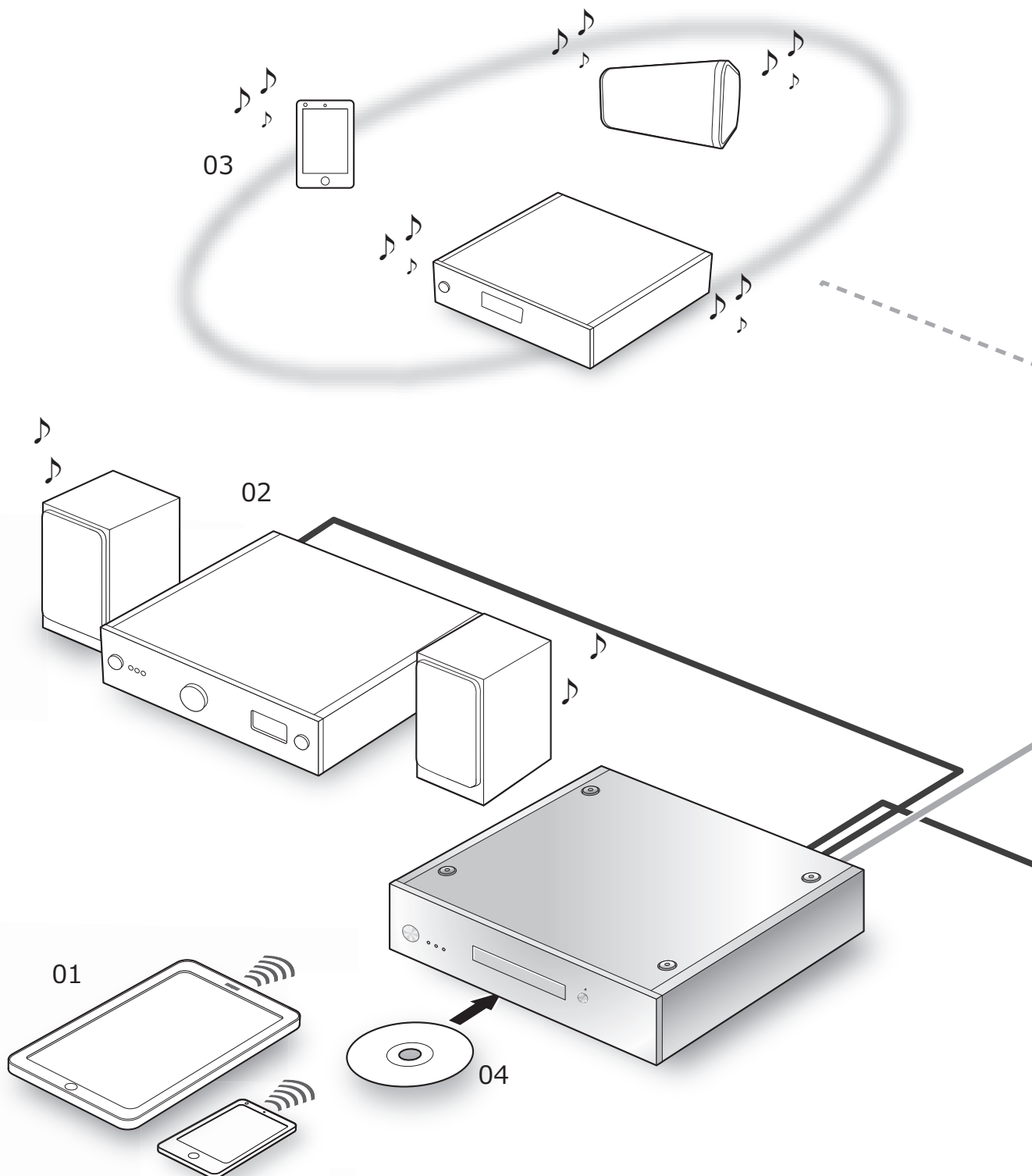
13 Fixing screw

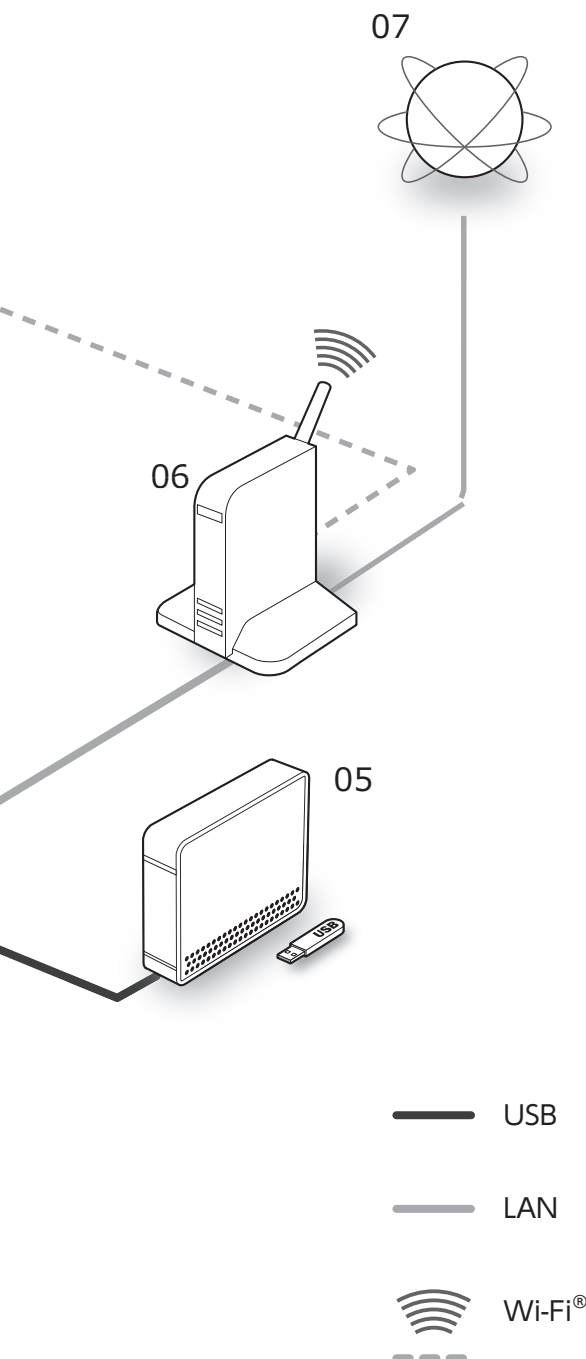
14 Product identification marking

15 AC IN terminal (~) (⇒ 16, 17)

Connection with the music server

This unit is a Hi-Fi music server. It stores and automatically organises music data, and transmits the data to wide-ranging audio devices. After saving music data to the SSD of this unit, you can enjoy the music by connecting this unit to a player or amplifier with a built-in USB DAC (digital-to-analog converter). In addition, using the DLNA function, you can play back the music on the SSD of this unit with a device such as a network player or tablet.





01 Smartphone/Tablet

Download the “Technics Music App” to operate this unit.

- Before operating this unit (⇒ 18)

02 Device with a built-in USB-DAC

Connect an amplifier/DA converter with a USB cable to output music data stored on this unit.

- Enjoying music with USB audio connections (⇒ 20)

03 Network player/smartphone/ wireless speaker

Connect with DLNA to output music data stored on this unit.

- Enjoying music with DLNA (⇒ 21)

04 CD

- Recording music from CDs (⇒ 19)

05 USB devices

Music on USB devices can be saved to the SSD of this unit. You can also back up music stored on the SSD to USB devices.

- Importing music from USB devices (⇒ 19)

06 Broadband router

Connect to this unit with a LAN cable.

- Connections (⇒ 16, 17)

07 Internet

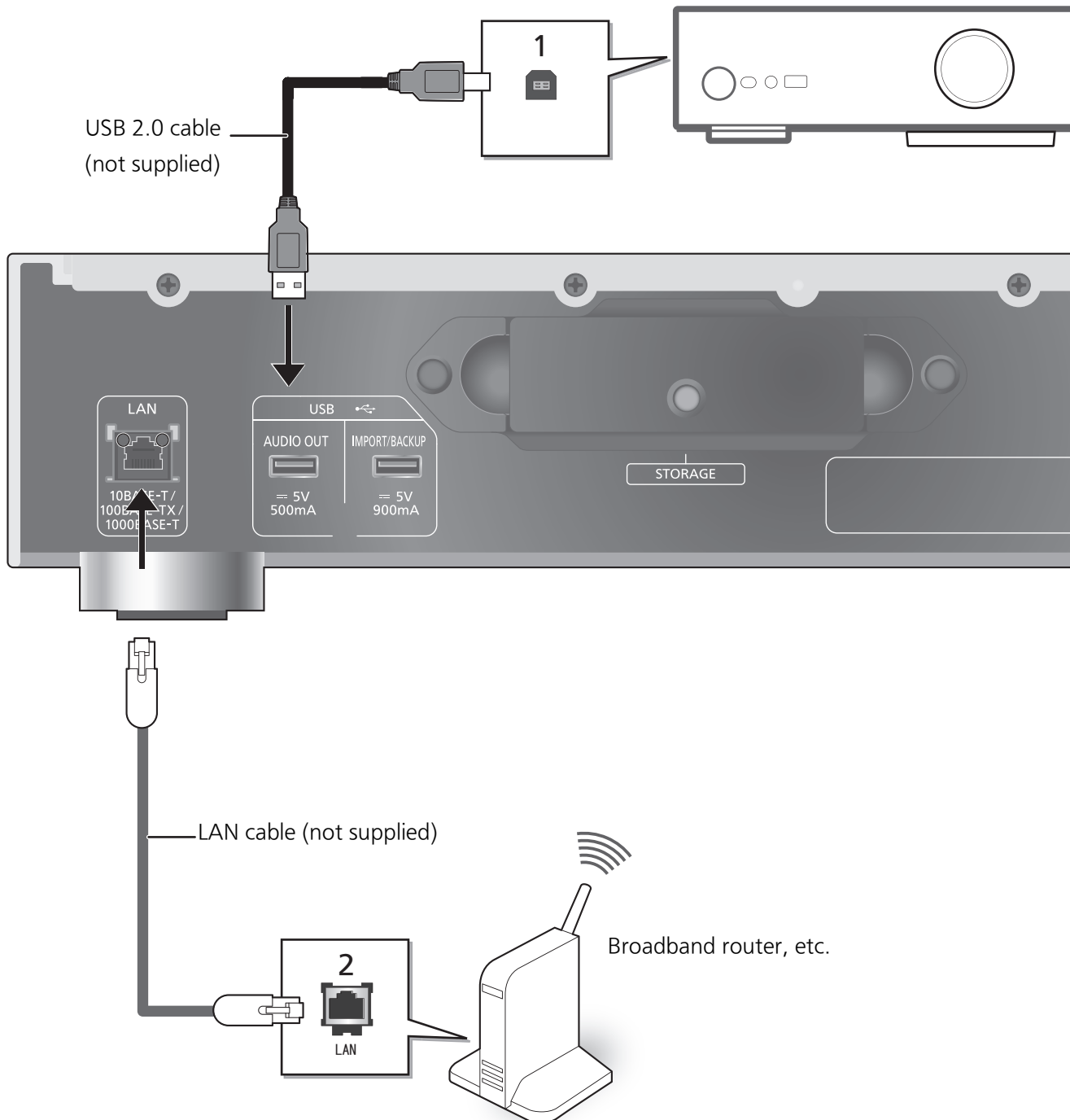
You can download music tracks from an online high-res music store, or automatically retrieve title information from the Gracenote database.

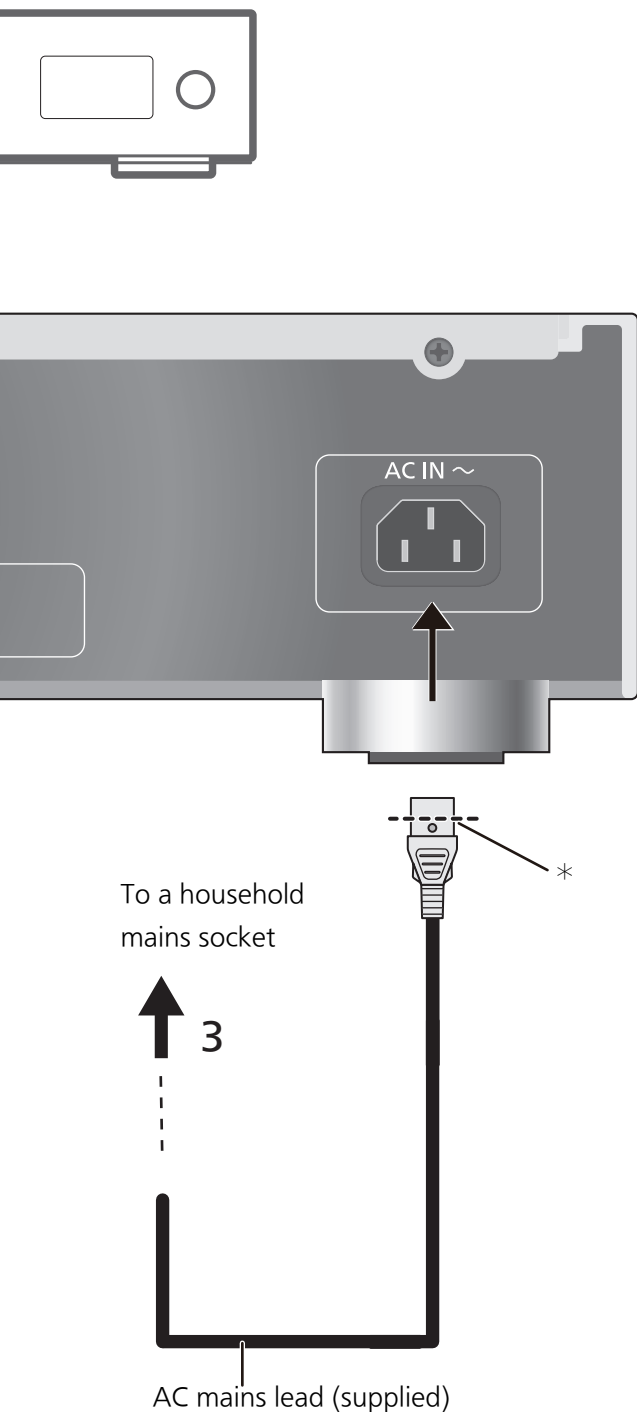
- Before operating this unit (⇒ 18)

Connections

Devices/AC mains lead, etc.

- Use only the supplied AC mains lead.
- Do not connect the AC mains lead until all other connections are complete.
- Insert the plugs of the cables to be connected all the way in.
- Do not bend cables at sharp angles.





1 Connect the device with a built-in USB-DAC.

This unit will output audio signals, allowing you to play back music files.

- See the operating instructions for connected equipment for operational details.
- The USB connection is not required for the playback of music using the DLNA function.

2 Wired LAN connection

Normally, just connecting a LAN cable will complete the setup.

- Use category 7 or above straight LAN cables (STP) when connecting to peripheral devices.

3 AC mains lead connection

Connect only after all other connections are completed.

Note

- This unit consumes a small amount of AC power (⇒ 30) even when the unit is in standby mode. Remove the plug from the main electrical outlet if you will not be using the unit for an extended period of time. Place the unit so the plug can be easily removed.
- While the AC mains lead is disconnected, the LAN cable must be connected or disconnected.
- Inserting any cable other than a LAN cable in the LAN port can damage the unit.

* Insert the AC mains lead up to a point just before the round hole.

Control this unit with its dedicated app



Purchase music from online high-res music store



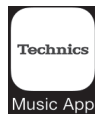
Download purchased music

■ Getting the app ready for use

Before using this unit, you need to install “Technics Music App”(free of charge), an app specifically designed for Technics products, on your smartphone or tablet.

Technics Music App

- iOS: App Store
- Android: Google Play™



For information on the operations and on-screen displays of “Technics Music App”, refer to its user guide, which can be downloaded from the website below.

www.technics.com/support/

■ Connecting your smartphone or tablet to a wireless LAN network

Use a smartphone or tablet on which “Technics Music App” is installed to control and configure this unit via a network. Enable the Wi-Fi setting of the smartphone or tablet, and connect it to the same network as this unit.

■ When using online high-res music store

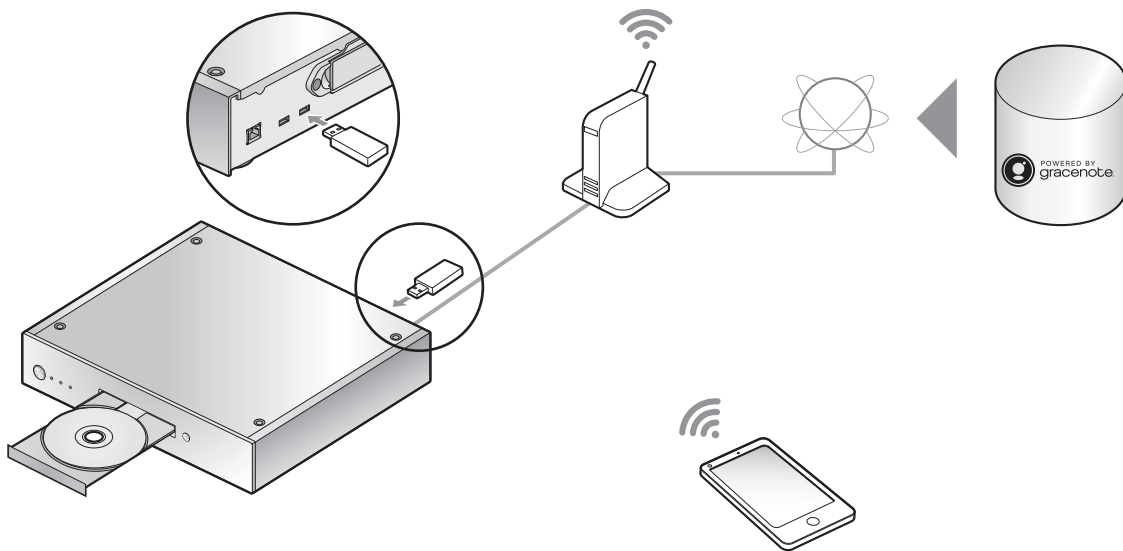
Technics Tracks* is a music download service specializing in high quality lossless audio. You can purchase music files with your computer, smartphone or tablet.

- User registration is required to use Technics Tracks. Refer to the website below for details.

<https://tracks.technics.com/>

* For the United Kingdom, Germany, Canada (as of January 2016)

- You can automatically download the music files purchased at an online high-res music store to the SSD of this unit. For details, refer to the user guide for “Technics Music App”.
- High-res music services are subject to change or termination.



You can insert a CD or USB device and Import music.

- This unit cannot play back CDs.
- For information on compatible CDs and USB devices (⇒ 26)

Preparation

- Connect the device on which the app "Technics Music App" is installed to the same network as this unit.

■ To make a recording of a CD

1 Press [⏻/I] on this unit to turn it on.

2 Press [▲] to open the CD tray, and insert the CD.

To close the CD tray, press [▲] again.

- The CD can be accessed once the CD indicator lights up blue.

3 Start "Technics Music App" to record music from the CD.

- Go to the "ST-G30 Menu" first to perform this step. For details, refer to the user guide for "Technics Music App".
- If this unit is connected to a network, the CD's title information will be automatically retrieved from the Gracenote database.

■ To import from a USB device

1 Press [⏻/I] on this unit to turn it on.

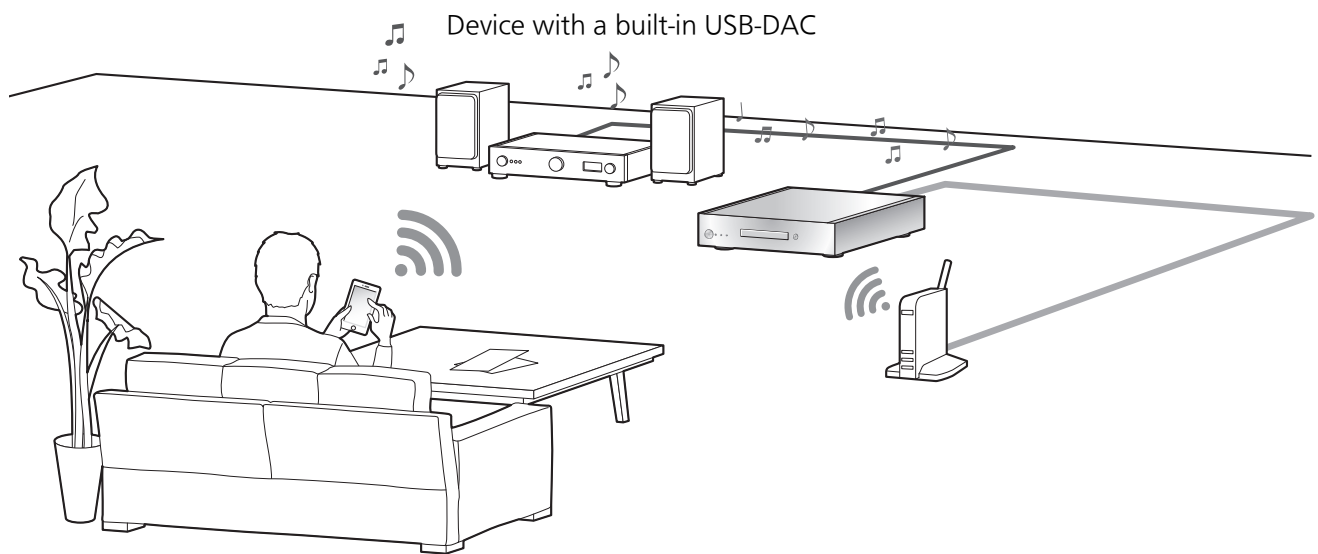
2 Connect the USB device to the USB terminal [IMPORT/BACKUP] on the back of this unit.

3 Start "Technics Music App" to import music from the USB device.

- Go to the "ST-G30 Menu" first to perform this step. For details, refer to the user guide for "Technics Music App".

Note

- If you turn off this unit or disconnect the USB device during importing, the music being imported will not be saved.
- Depending on the conditions of use, importing may not be performed correctly.
- Please note that even if content is not imported correctly due to any defects, Panasonic will not be responsible for compensation for such content, losses arising out of the imported content, or any direct or indirect damage caused by such importing. The same also applies to repairing this unit.



You can connect this unit to a player or amplifier to play back music stored on the SSD of this unit, without using a computer.

- You cannot play back music that are stored on devices other than the SSD of this unit.
- About supported format, refer to “File format” (⇒ 31)

Preparation

- Connect this unit to a player or amplifier. (⇒ 16, 17)
- Connect the device on which the app “Technics Music App” is installed and the player or amplifier to the same network as this unit.

1 Start the app “Technics Music App”.

- If a screen prompting you to display the menu screen for ST-G30 appears, tap “Display On”.
- Tap “🏠” to return to the “Music Source” screen.

2 Tap “Music Server”, and then tap “Technics ST-G30*****”.

- “*****” stands for a digit that is unique to each set.
- Tap “🏠” to return to the “Music Source” screen.

3 Tap “🔊”, and then tap the speaker set that you want to use.

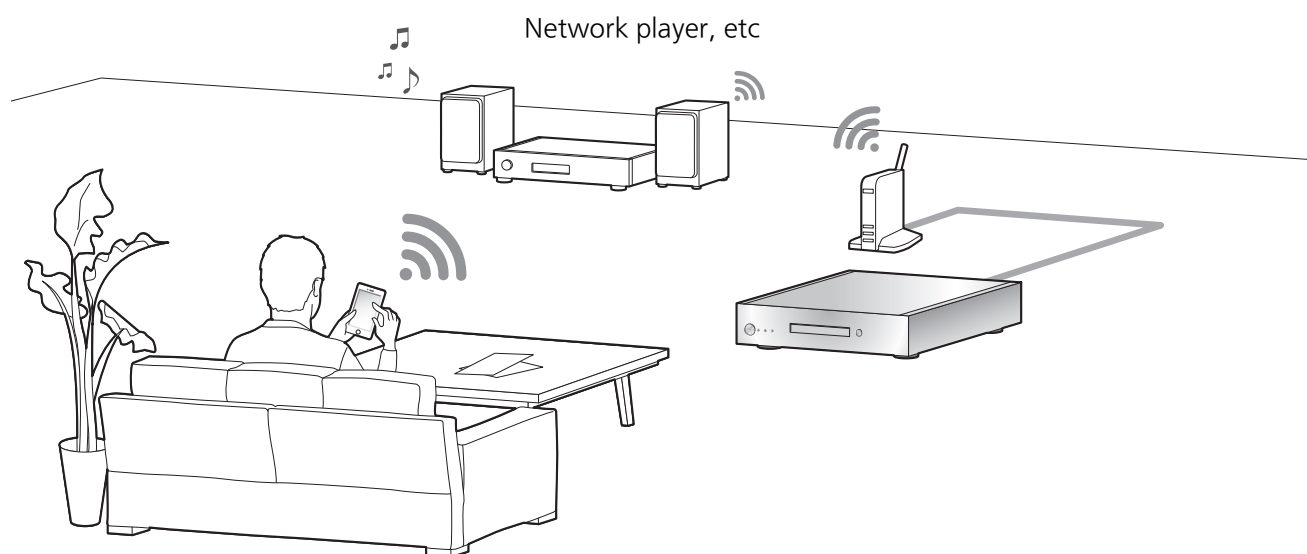
- A Technics model number or “USB-DAC” will appear under “USB-AUDIO”.

4 Select a song.

- For details, refer to the user guide for “Technics Music App”.

Note

- Depending on the connected device, this function may not work correctly.




You can play back music stored on the SSD of this unit with the DLNA function.

- About supported format, refer to “File format” (⇒ 31)


Preparation

- Connect the device on which the app “Technics Music App” is installed and the network player or tablet to the same network as this unit.

1 Start the app “Technics Music App”.

- If a screen prompting you to display the menu screen for ST-G30 appears, tap “Display On”.
- Tap “” to return to the “Music Source” screen.

2 Tap “Music Server”, and then tap “Technics ST-G30*****”.

- “*****” stands for a digit that is unique to each set.
- Tap “” to return to the “Music Source” screen.

3 Tap “”, and then tap the speaker set that you want to use.

- A model number will appear under “DLNA”.

4 Select a song.

- For details, refer to the user guide for “Technics Music App”.

Note

- Depending on the contents and the connected equipment, operations or playback may not be possible.

Importing music from a PC

You can operate a computer to access the ST-G30 over a network to save and edit folders and tracks.

Preparation

- Connect a computer containing the music that you want to import to this unit to the same network as this unit.

Example with Windows 7

- 1 Open any folder, and click "Network".
- 2 Double-click the "ST-G30-*****" icon displayed in the "Computer" list in the folder.
 - It may take time until the icon for this unit's name appears in the "Computer" list. If the icon is not displayed, click "Refresh "Network"" on the address bar of the folder. (Depending on the type or version of your OS, this refresh button may not be available. In that case, wait for a few minutes until the icon appears.)
 - You may be required to enter a user name and password. In that case, enter the following:
User name: User
Password:
The one you set for "Technics Music App"
– "User name" cannot be changed.
– There is no default setting for "Password".
– "Password" can be changed.
 - For details, refer to the user guide for "Technics Music App".
- 3 Save the desired music on the computer to the "share" folder.

Note

- The screen differs depending on the OS.
- For more details, check the support site below as well as these operating instructions.
www.technics.com/support/

Back up / Restore

You can back up the SSD's data to a USB device or restore backup data to the SSD.

- 1 Press [⏻/I] on this unit to turn it on.
- 2 Connect the USB device to the USB terminal [IMPORT/BACKUP] on the back of this unit.
- 3 Start "Technics Music App" to back up/restore music.
 - For details, refer to the user guide for "Technics Music App".

Note

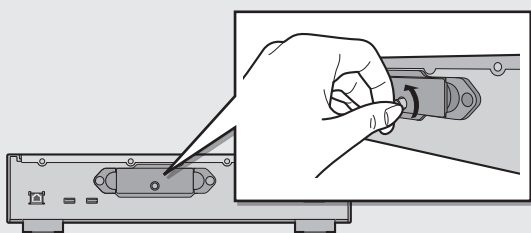
- If you turn off this unit or disconnect the USB device during back up, the music being imported will not be saved.
- Depending on the data size, it may take time until the backup or restoration is complete.

You can replace the built-in SSD of this unit. Pull out the SSD tray from this unit to replace the SSD.

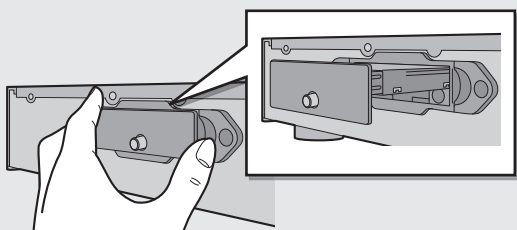
- For information on the handling of the SSD, refer to “SSD” (⇒ 27).
- Before installing or removing the SSD, be sure to turn off this unit and pull out the mains plug from the outlet. Not doing so may cause malfunctions.
- We recommend creating a backup of your important data to prevent its loss before replacing the SSD. (⇒ 22)

Follow the steps below to replace the SSD.

- 1 After pulling out the main plug from the mains outlet, rotate the fixing screw on the back of this unit to loosen it.

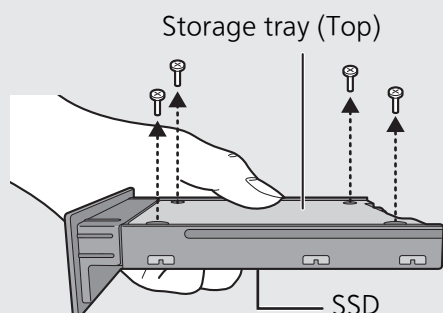


- 2 Hold both ends of the storage tray to pull it out straight.



- 3 Remove all the screws (M3 × 4, Silver), and take out the SSD.

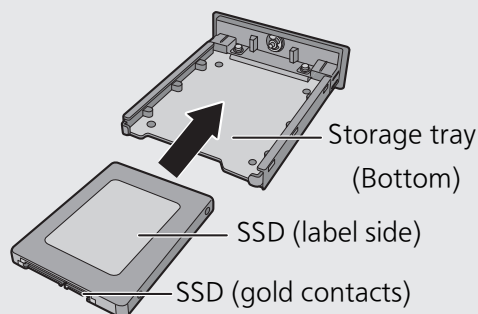
- Use a cross-slot screwdriver to remove the screws. Choose a cross-slot screwdriver that matches the size of the screws.
- Do not tighten the screws with excessive force. Doing so will strip their threads, making it impossible to use the screws again.



Hold the SSD with one hand to prevent it from falling.

- 4 Turn the storage tray over with the bottom side facing up, and attach the new SSD.

- Be careful about the orientation of the SSD and storage tray.

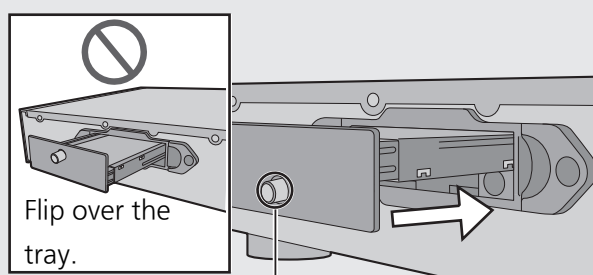


- 5 Turn the storage tray over with the top side facing up, and tighten the screws (M3 × 4, Silver).

- In the same way as in Step 3, hold the SSD with one hand to prevent it from falling.

- 6 Insert the storage tray into this unit, and tighten the fixing screw.

- After inserting the storage tray, tighten the fixing screw firmly until the tray is secure.



Check the fixing screw position.

- 7 Format the SSD with “Technics Music App”. (⇒ 24)

For details, refer to the user guide for “Technics Music App”.

Note

- Be careful not to touch the gold contacts on the SSD.

Before requesting service, make the following checks. If you are uncertain about some of the check points, or if the solutions indicated in the following guide does not resolve the issue, then consult your dealer for instructions.

Heat buildup of this unit

This unit becomes warm when used for a long time. This is not a malfunction.

Do you have the latest firmware installed?

Panasonic is constantly improving the unit's firmware to ensure that our customers are enjoying the latest technology.

Check the support site below
www.technics.com/support/

To return all settings to the factory defaults

When the following situations occur, reset the memory:

- There is no response when buttons are pressed.
- 1 **Disconnect the mains plug.**
 - Before proceeding to Step 2, wait for at least 3 minutes.
 - 2 **Connect the mains plug while pressing and holding [⏻].**

The main unit will turn off after all the indicators on its front side flash.

 - All settings will return to the factory defaults. It is necessary to set the memory items again.

To delete music and settings stored on the SSD

Follow the steps below to delete music or settings stored on the SSD of this unit.

- You want to clear and reset the memory contents.
- 1 **Start the app "Technics Music App".**
 - 2 **Tap "ST-G30 Menu", and then tap "Technics ST-G30*****".**
 - "*****" stands for a digit that is unique to each set.

- 3 **Tap "Settings", and then tap "Initialize".**
- 4 **Tap "Delete account information" to delete your account information.**
 - To clear account information, select "OK".
- 5 **Select "Format SSD" in Step 4, and repeat the same operation.**

General

The unit does not work.

Operations are not done properly.

- One of the unit's safety devices may have been activated.
- 1 **Press [⏻] on the unit to switch the unit to standby.**
 - If the unit does not switch to standby, press [⏻] on the unit for at least 5 seconds. The unit is forcibly switched to standby. Alternatively, disconnect the AC mains lead, wait for at least 3 minutes, then reconnect it.
 - 2 **Press [⏻] on the unit to switch on. If the unit still cannot be operated, consult the dealer.**

A "humming" sound can be heard during playback.

- An AC mains lead or fluorescent light is near the cables. Keep other appliances and cords away from the cables of this unit.
- A strong magnetic field near a TV or other device may adversely affect the audio quality. Keep this unit away from such devices.
- The speakers may output noise when a device nearby is emitting powerful radio waves, such as when a mobile phone is on a call.

No sound.

- Adjust the volume of the connected device (amplifier, etc.).
- Check to see if the cable connections to the input and output terminals are incorrect. If this is the case, turn off this unit and reconnect the cables correctly.

- Insert the plugs of the cables to be connected all the way in.

Playback does not start.

- Depending on your environment or connected devices, it may take some time.

The settings are reset to the factory defaults.

- Updating the firmware may reset the settings.

The sound is interrupted.

- Depending on your environment, the audio may be interrupted during playback. Check the operating instructions of the connected device and the connection to the device.

Disc

Recording does not start.

- Make sure that the disc is compatible with this unit. (⇒ 26)
- There is moisture on the lens. Wait for about an hour and then try again.
- Recording to unfinalised CD-R and CD-RW discs is not possible.
- WMA/MP3 is not supported. Refer to “CDs” (⇒ 26) for information about the discs this unit can play back.

Network

Cannot connect to the network.

- Confirm the network connection and settings. (⇒ 16, 17)
- Make sure that the multicast function on the wireless router is enabled.
- Make sure that the devices, smartphone and tablet are connected to the same network as this system.
- Turn off and on the network connection of the smartphone, tablet or connected device, and reconnect it to this unit.

Playback does not start.

The sound is interrupted.

- If the signal is interrupted, changing the location and angle of the broadband router may improve the signal reception of the connected device.
- If several wireless devices are simultaneously using the same wireless network as this unit, try turning off the other devices or reducing their wireless network usage.
- If playback has stopped, check the playback status on the smartphone, tablet or connected device.

USB

This unit does not recognize the USB connection correctly.

- Check to see if another device can detect your USB device.
- If you connect USB HDD to this unit, use the USB cable that is supplied with the HDD.

The USB device responds slowly.

- Large-capacity USB devices may respond slowly.

SSD

The SSD is not detected.

- Check to see if the SSD is attached correctly. (⇒ 23)

The STATUS indicator is flashing red.

- When you replaced the SSD, you might have forgotten to format the new one. Before using a new SSD, be sure to format it on this unit. (⇒ 24)

CDs

- A disc with the CD Logo.



- This unit can record discs that conform to the CD-DA format.
- This unit may not be able to record some discs due to the condition of the recording.
- Before recording, finalise the disc on the device it was recorded on.

USB device

- This unit does not guarantee connection with all USB devices.
- This unit does not support USB device charging.
- This unit supports USB memory devices formatted in FAT12, FAT16, FAT32 or NTFS.
- This unit supports an HDD formatted in FAT32 and NTFS. If the HDD is not recognized, the power to the HDD may not be supplied. Supply power from an external source.
- This unit supports USB 3.0 Super Speed.
- USB memory may not be recognised by this unit when connected using the following:
 - a USB hub
 - a USB extension cable
- It is not possible to use USB card reader/writers.
- Not all files on the USB device may be read if there are some files not supported.
- About supported format, refer to “File format” (⇒ 31)
- If you turn off this unit, disconnect the USB cable, or expose the USB device to vibrations or impacts (by moving or rotating it, for example) or to static electricity while the USB device is in operation (during importing, for example), the imported music may be lost or malfunctions may result. Please also read the operating instructions for the USB device.

SSD

■ SSD (Solid State Drive)

SSD is a precision device sensitive to vibrations, shocks, and dust.

Depending on the installation environment or handling of the SSD, it may sustain partial damage, or in the worst case, lose its importing and transmission capabilities.

In particular, do not expose the SSD to vibrations and shocks or remove the storage tray while this unit is in operation. Please also keep in mind that an accidental event such as a power failure may cause damage to the content being imported or transmitted.

SSD is for temporary storage.

Use the SSD of this unit for temporary storage of music files. We recommend that you regularly back up the music files that are important to you.*
Panasonic is not liable for any losses of or damage to music files arising out of any defects.

Make a backup if anything seems wrong with the SSD.

Defects in the SSD may cause abnormal noise continuously while importing, transmission or a backup is in progress, or noise in the audio. Continued use of the SSD in such conditions may deteriorate its performance and eventually make it impossible to use it again.
If you encounter such problems, back up your data to a USB device as soon as possible, and request a repair.

- It is not possible to recover content (data) imported on a malfunctioning SSD.

* For details, refer to the user guide for "Technics Music App".

■ Replacement SSD

- Use a recommended replacement SSD. You can check our latest catalogues or website for information on our recommended SSDs.
www.technics.com

- Panasonic cannot provide information about the compatibility of SSDs and recommended SSDs except for those recommended by Panasonic.

■ Notes on the installation and removal of the SSD

- Panasonic cannot be held liable for malfunction or damage resulting from the use of a non-recommended SSD or improper installation or removal. Check the type of the SSD and the instructions for installing and removing it in advance, and attach it correctly.
- Please note that sound quality may change even if you replace the SSD with one that is recommended by Panasonic according to the instructions provided by Panasonic.
- Panasonic cannot be held liable for the loss of data resulting from malfunctions or for compensation for data, losses or any direct or indirect damage resulting from improper installation. Please also note that this provision also applies when the SSD is sent in for repair.
- We recommend creating a backup before replacing the SSD.

■ Notes on handling

Condensation

If, for example, condensation forms on the SSD after it is suddenly brought into a warm room, leave it without installing it to the main unit until it adjusts to the ambient temperature of the room (about 2 to 3 hours).

Storage location

Do not place or store in the following locations:

- Dusty locations
- Hot locations
- Locations with drastic temperature changes
- Humid locations
- Locations exposed to direct sunlight
- Locations where static electricity or electromagnetic waves are generated (these may damage the imported content that is important to you)

App Store is a service mark of Apple Inc.
Google Play and Android are trademarks of Google Inc.
DLNA, the DLNA Logo and DLNA CERTIFIED are trademarks, service marks, or certification marks of the Digital Living Network Alliance.
DSD is a trademark of Sony Corporation.
MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson.
“Wi-Fi®” is a registered trademark of Wi-Fi Alliance®.
Windows is a trademark or a registered trademark of Microsoft Corporation in the United States and other countries.
<p>FLAC Decoder Copyright (C) 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009 Josh Coalson Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ul style="list-style-type: none"> – Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. – Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. – Neither the name of the Xiph.org Foundation nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission. <p>THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS “AS IS” AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE FOUNDATION OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.</p>

This product incorporates the following software:

- (1) the software developed independently by or for Panasonic Corporation,
- (2) the software owned by third party and licensed to Panasonic Corporation,
- (3) the software licensed under the GNU General Public License, Version 2.0 (GPL V2.0),
- (4) the software licensed under the GNU LESSER General Public License, Version 2.1 (LGPL V2.1), and/or
- (5) open source software other than the software licensed under the GPL V2.0 and/or LGPL V2.1.

The software categorized as (3) - (5) are distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY, without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. For details, read the Licence file in the shared folder on this product by accessing it from another device, such as a computer.

At least three (3) years from delivery of this product, Panasonic will give to any third party who contacts us at the contact information provided below, for a charge no more than our cost of physically performing source code distribution, a complete machine-readable copy of the corresponding source code covered under GPL V2.0, LGPL V2.1 or the other licenses with the obligation to do so, as well as the respective copyright notice thereof.

Contact Information:
 oss-cd-request@gg.jp.panasonic.com

The source code and the copyright notice are also available for free in our website below.
<http://panasonic.net/avc/oss/>

Gracenote® End User License Agreement

This application or device contains software from Gracenote, Inc. of Emeryville, California ("Gracenote"). The software from Gracenote (the "Gracenote Software") enables this application to perform disc and/or file identification and obtain music-related information, including name, artist, track, and title information ("Gracenote Data") from online servers or embedded databases (collectively, "Gracenote Servers") and to perform other functions. You may use Gracenote Data only by means of the intended End-User functions of this application or device.

This application or device may contain content belonging to Gracenote's providers. If so, all of the restrictions set forth herein with respect to Gracenote Data shall also apply to such content and such content providers shall be entitled to all of the benefits and protections set forth herein that are available to Gracenote.

You agree that you will use Gracenote Data, the Gracenote Software, and Gracenote Servers for your own personal non-commercial use only. You agree not to assign, copy, transfer or transmit the Gracenote Software or any Gracenote Data to any third party. **YOU AGREE NOT TO USE OR EXPLOIT GRACENOTE DATA, THE GRACENOTE SOFTWARE, OR GRACENOTE SERVERS, EXCEPT AS EXPRESSLY PERMITTED HEREIN.**

You agree that your non-exclusive license to use the Gracenote Data, the Gracenote Software, and Gracenote Servers will terminate if you violate these restrictions. If your license terminates, you agree to cease any and all use of the Gracenote Data, the Gracenote Software, and Gracenote Servers. Gracenote reserves all rights in Gracenote Data, the Gracenote Software, and the Gracenote Servers, including all ownership rights. Under no circumstances will Gracenote become liable for any payment to you for any information that you provide. You agree that Gracenote, Inc. may enforce its rights under this Agreement against you directly in its own name.

The Gracenote service uses a unique identifier to track queries for statistical purposes. The purpose of a randomly assigned numeric identifier is to allow the Gracenote service to count queries without knowing anything about who you are. For more information, see the web page for the Gracenote Privacy Policy for the Gracenote service.

The Gracenote Software and each item of Gracenote Data are licensed to you "AS IS." Gracenote makes no representations or warranties, express or implied, regarding the accuracy of any Gracenote Data from in the Gracenote Servers. Gracenote reserves the right to delete data from the Gracenote Servers or to change data categories for any cause that Gracenote deems sufficient. No warranty is made that the Gracenote Software or Gracenote Servers are error-free or that functioning of Gracenote Software or Gracenote Servers will be uninterrupted. Gracenote is not obligated to provide you with new enhanced or additional data types or categories that Gracenote may provide in the future and is free to discontinue its services at any time.

GRACENOTE DISCLAIMS ALL WARRANTIES EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT. GRACENOTE DOES NOT WARRANT THE RESULTS THAT WILL BE OBTAINED BY YOUR USE OF THE GRACENOTE SOFTWARE OR ANY GRACENOTE SERVER. IN NO CASE WILL GRACENOTE BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES OR FOR ANY LOST PROFITS OR LOST REVENUES.



Gracenote, the Gracenote logo and logotype, and the "Powered by Gracenote" logo are either a registered trademark or a trademark of Gracenote, Inc. in the United States and/or other countries.

■ GENERAL

Power supply	AC 220 V to 240 V, 50/60 Hz
Power consumption	29 W
Power consumption in standby mode (Off mode)	Approx. 0.3 W
Dimensions (W×H×D)	430 mm × 98 mm × 391 mm
Mass	Approx. 11.0 kg
Operating temperature range	0 °C to + 40 °C
Operating humidity range	35 % to 80 % RH (no condensation)

- Mass and dimensions are approximate.

■ DISC SECTION

Support Disc	8 cm/12 cm CD, CD-R, CD-RW
Support Format	CD-DA
Wave Length	783 nm (CD)
Laser Power	CLASS 1
[NORSK]	
Bølgelengde	783 nm (CD)
Laserstyrke	KLASSE 1 Ingen farlig stråling sendes ut

No hazardous radiation is emitted with the safety protection

■ TERMINALS SECTION

Ethernet interface	LAN (1000 BASE-T / 100 BASE-TX /10 BASE-T)
USB AUDIO OUT	USB 2.0 High-speed DC 5 V MAX, 500 mA USB Audio Class 2.0, Asynchronous mode
USB IMPORT/BACKUP	USB 3.0 Super-speed DC 5 V MAX, 900 mA USB Mass Storage class File system FAT12, FAT16, FAT32, NTFS

■ SSD SECTION

Capacity	512 GB built in (User data area 460 GB*1)
Form factor	2.5 inch Thickness 7 mm*2
Interface	Serial ATA 6 Gbps
Input Voltage	5 V

*1 Some portions of the capacity are used for data management. Therefore, the capacity a user can use is less than 512 GB

*2 Storage tray supported thickness Max 9.5 mm

- The usable built-in memory/SSD space is generally calculated as 1 GB=1,000,000,000 bytes. Computers and certain software that perform calculations using the equation 1 GB=1,024x1,024x1,024=1,073,741,824 bytes display a smaller value for the usable space.

■ File format

This unit supports the following file formats.

USB AUDIO OUT

File format	Extension	Sampling frequency	Bit rate Number of quantisation bits
PCM		32/44.1/48/88.2/96/176.4/192/352.8/ 384 kHz	16/24/32 bit
DSD	.dff/.dsf	2.8 MHz/5.6 MHz/11.2 MHz	

DLNA

File format	Extension	Sampling frequency	Bit rate Number of quantisation bits
MP3	.mp3	32/44.1/48 kHz	16 to 320 kbps
AAC	.m4a/.aac	32/44.1/48/88.2/96 kHz	16 to 320 kbps
WMA	.wma	32/44.1/48 kHz	16 to 320 kbps
WAV	.wav	32/44.1/48/88.2/96/176.4/192 kHz	16/24 bit
FLAC	.flac	32/44.1/48/88.2/96/176.4/192 kHz	16/24 bit
AIFF	.aiff	32/44.1/48/88.2/96/176.4/192 kHz	16/24 bit
ALAC	.m4a	32/44.1/48/88.2/96/176.4/192 kHz	16/24 bit
DSD	.dff/.dsf	2.8 MHz/5.6 MHz/11.2 MHz	

- Specifications are subject to change without notice.

Headquarter Address:
Panasonic Corporation
Kadoma, Osaka, Japan

Importer for Europe:
Panasonic Marketing Europe GmbH
Panasonic Testing Centre
Winsbergring 11, 22525 Hamburg, Germany



Panasonic Corporation
Web Site: <http://www.panasonic.com>

