SONY

Radio Cassette-Corder

Operating Instructions
Xxxxx xxxx

WM-GX654/GX652

WALKMAN

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WALKMAN xxxxxxxx xxxxxxxx

WARNING

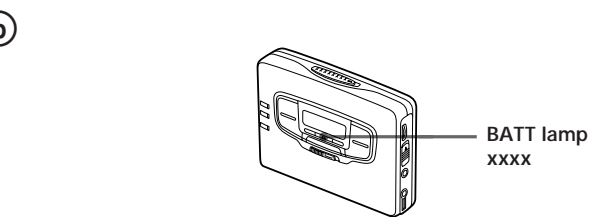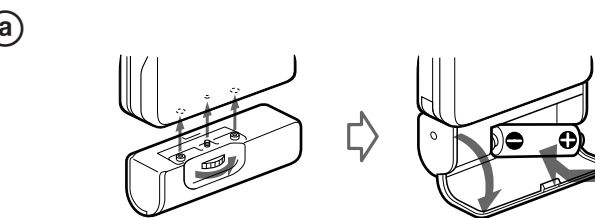**To prevent fire or shock hazard, do not expose the unit to rain or moisture.**

XXXXXXXX

Xxxxx xxxx xxxx

The instructions in this manual are for WM-GX654 and WM-GX652. Before you start reading, check your model number. WM-GX654 is the model used for illustration purposes. Any differences in operation are clearly indicated in the text, for example, "GX654 only".
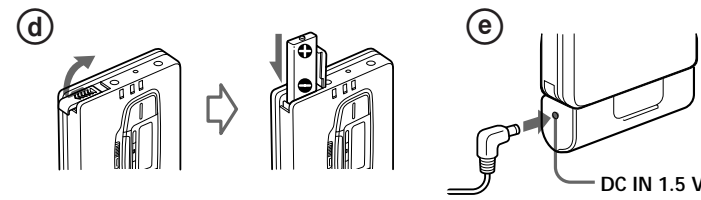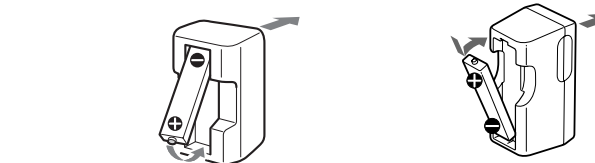
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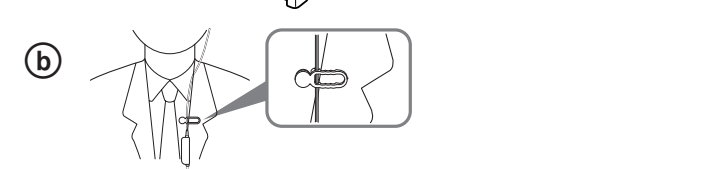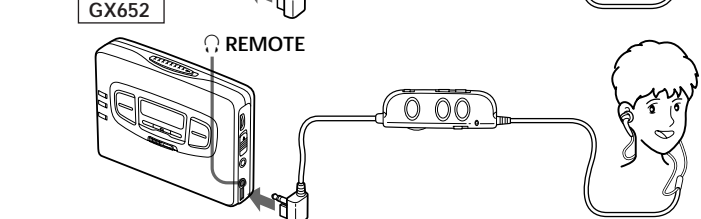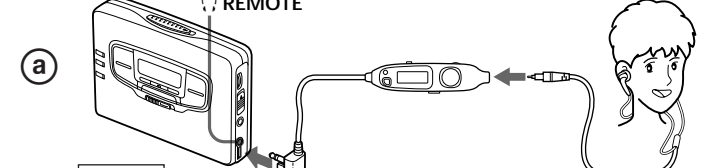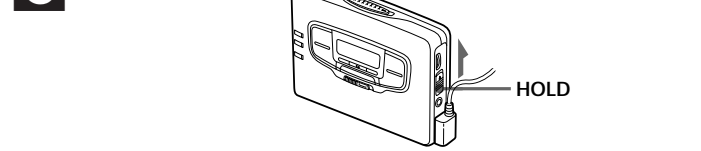GX654   GX652

A

(a)

(b)

(c) Australian and Hong Kong models
xxxx xxxx

Other models
xxxx

BATT lamp
xxxx

B

GX654   REMOTE

GX652   REMOTE

(a)

(b)

C

HOLD

D

(a)

(b)

(c)

VOLUME

OPEN

FF•AMS

REW•AMS

MENU   SET

(PB)
MODE   NR   SOUND   AVLS   FM MODE

MENU   BATT   SET

E

(a)

(b)

(c)

MIC

ISS

REC

Side A
xxxx

Tab for side A
xxxx

d

DC IN 1.5 V
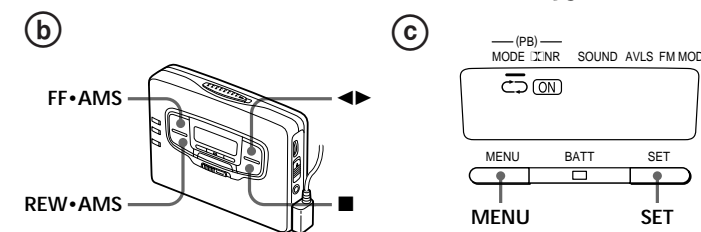
e

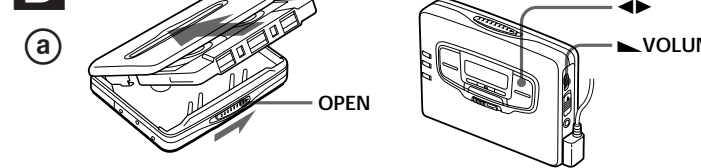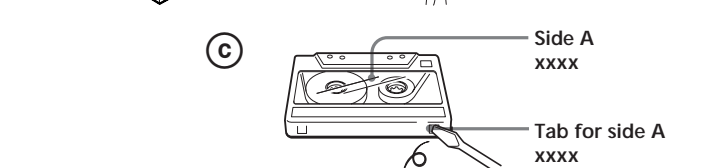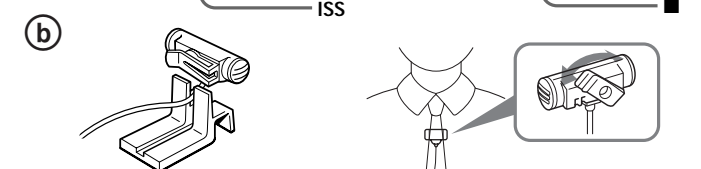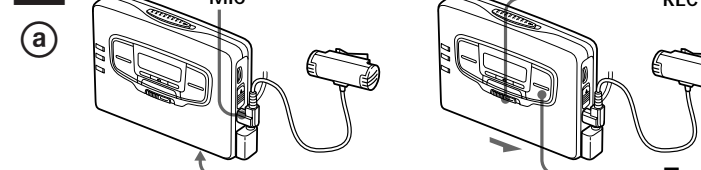## Welcome !

Thank you for purchasing the Sony WM-GX654/GX652 Radio Cassette-Corder.
Some features are:
• You can enjoy low bass sounds by the powerful earphone.
• You can choose from 2 different emphasizing tones: MB (MEGA BASS) and GRV (GROOVE) to adjust to your favorite sound.
• LCD menu function that lets you select and switch functions in the display window of the main unit.
• Auto Memory Scanning function that lets you store and recall up to 16 stations for FM and 8 stations for AM automatically.
• AMS (Automatic Music Sensor) function that searches the beginning of the current and 2 tracks, and succeeding 3 tracks at high speed.
• Useful remote control.

▶Getting Started

Preparing a Power Source

Choose one of the three power sources below; dry battery, rechargeable battery, and mains.

Dry Battery (see Fig. A-Ⓐ)

1 Attach the supplied battery case.

2 Open the battery compartment lid, and insert an R6 (size AA) dry battery (not supplied) like the illustration in this manual.

When to replace the battery (see Fig. A-ⓑ)

Replace the battery with a new one when the BATT lamp dims.

Battery life   (Approx. hours)
                                    (EIAJ*)

	Sony alkaline LR6 (SG)	Sony R6P (SR)
Tape playback	29	8
Radio reception	30	8
MIC recording	10	3.5
Radio recording	6.5	2

* Measured value by the standard of EIAJ (Electronic Industries Association of Japan). (Using a Sony HF series cassette tape)

Note
• The battery life may shorten depending on the operation of the unit.

For maximum performance we recommend that you use an alkaline battery.

Notes
• Do not charge a dry battery.
• When you do not use the Walkman for a long time, remove the battery to avoid any damage caused by battery leakage and subsequent corrosion.
• When the battery becomes weak, the Walkman may not operate normally. Replace the battery with a new one.

Rechargeable Battery (see Fig. A-Ⓒ)

1 Insert the rechargeable battery (NC-6WM) into the charger with correct polarity.

2 Plug in the charger to the mains.
  Australian and Hong Kong models: Full charging takes about 3.5 hours.
  Korean model: The full charging time depends on the voltage of your mains.
  110 V: 10 hours
  220 V: 2.5 hours
  Other models: The full charging time depends on the voltage of your mains.
  120 V: 10 hours
  220-240 V: 2.5 hours
  If the plug does not fit your mains, attach the supplied AC plug adaptor (excluding Chinese model).

3 Insert the fully charged battery into the rechargeable battery compartment (see Fig. A-ⓓ).

When to charge the battery (see Fig. A-ⓑ)

Charge the battery when the BATT lamp dims. You can charge the battery about 300 times.

Battery life   (Approx. hours)
                              (EIAJ*)

Rechargeable battery (NC-6WM)	
Tape playback	8
	36 (with Sony alkaline LR6 (SG))
Radio reception	9
	37 (with Sony alkaline LR6 (SG))
MIC recording	4
	13 (with Sony alkaline LR6 (SG))
Radio recording	3
	9 (with Sony alkaline LR6 (SG))

* Measured value by the standard of EIAJ (Electronic Industries Association of Japan). (Using a Sony HF series cassette tape)

Notes
• The battery life may shorten depending on the operation of the unit.
• Do not tear off the film on the rechargeable battery.
• Use the Sony NC-6WM rechargeable battery only with the supplied battery charger or with the separately sold battery charger for Sony NC-6WM.
• Remove the charger unit from the wall outlet as soon as possible after the rechargeable battery has been charged. Overcharging may damage the rechargeable battery.
• The battery charger and the rechargeable battery may become warm during charging, but it is not a problem.
• Be sure not to short-circuit the battery. When you carry it with you, use the supplied carrying case. If you do not use the carrying case, do not carry with other metallic objects such as keys in your pocket.

House Current (mains) (see Fig. A-Ⓒ) (excluding Korean model)

Remove the rechargeable battery if inserted and attach the battery case. Connect the AC power adaptor AC-E15HG (not supplied) to the DC IN 1.5 V of the battery case and to the mains. Do not use any other AC power adaptor.

Polarity of the plug

Connecting the Earphones (see Fig. B-Ⓐ)

1 Connect the micro plug firmly to the remote control (GX654 only).

2 Connect the remote control to ⌒REMOTE.
  You can put the longer earphone cord behind your neck.

To use the supplied clip (see Fig. B-ⓑ)

Position the earphones cord through the guides on the supplied clip as shown. Fasten the clip to your clothes.

Releasing HOLD (see Fig. C)

The HOLD function locks the Walkman to prevent from operating when you accidentally press a button. If the Walkman is locked, unlock it before operating.

1 Slide HOLD to the opposite direction of the arrow.

To lock the Walkman

Slide HOLD to the direction of the arrow.

To lock and unlock the remote control

See "Using the remote control".

▶Operating the Walkman

Playing a Tape (see Fig. D-Ⓐ)

The Auto Tape Selector automatically selects the tape (normal (TYPE I), CrO₂ (TYPE II), or metal (TYPE IV)) for playback.

1 Insert a cassette.

2 Press ◀▶ to start playing then adjust the volume.
  If the earphones do not fit to your ears or the sound is unbalanced, turn round the earphones a little to fit to your ears firmly.

When adjusting the volume on the Walkman

Set the ◀ VOL control on the remote control at maximum.

When adjusting the volume on the remote control

Set the ▶ VOLUME control on the Walkman to around 6.

To	Press (see Fig. D-Ⓑ)
play the other side	◀▶ during playback
stop playback	■(stop)
fast forward	FF•AMS during stop
rewind	REW•AMS during stop
find the beginning of the next track/ succeeding 3 tracks (AMS*)	FF•AMS once/ repeatedly during playback
find the beginning of the current track/ previous 2 tracks (AMS)	REW•AMS once/ repeatedly during playback
play the same side from the beginning (Rewind Auto Play function)	REW•AMS for two seconds or more during stop
play the other side from the beginning (Skip Reverse function)	FF•AMS for two seconds or more during stop

* Automatic Music Sensor

Notes on AMS
• The beeps differ in relation to the track number being searched. When finding the beginning of the next 3 tracks during AMS operations, beeps "•−−−" (beep followed by three long beeps) are emitted repeatedly. Likewise, when finding the beginning of the previous 2 tracks, beeps "••−−−" are emitted repeatedly. While the remaining tracks are reduced, the number of long beeps are reduced accordingly.
• To operate the AMS, you need a blank of 4 seconds or longer between the tracks. Therefore, if there is noise between the tracks, this function will not detect the blank and will not operate. Likewise, if the recording level is moderately low within a track, this function may inaccurately operate.

To select playback mode (PB) (see Fig. D-Ⓒ)

Press MENU repeatedly in the playback and stop mode to set the cursor to MODE (PB) in the display. Then press SET to select the desired mode.

To play	Select
both sides repeatedly	⟳
both sides once from the side facing the cassette holder	⊃

To play a tape recorded with Dolby* NR (PB) system (see Fig. D-Ⓒ)

Press MENU repeatedly in the playback or stop mode to set the cursor to □□ NR (PB) (Dolby noise reduction) in the display. Then press SET to show "ON".

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol □□ are trademarks of Dolby Laboratories Licensing Corporation.

Recording (see Fig. E-Ⓐ)

You can record radio programmes from the built-in radio, or record with the supplied microphone. In either case, use a new or fully charged battery.

1 Insert a normal (TYPE I) tape with the side you want to record facing the tape holder. When you open the cassette holder, "FWD" will appear in the display window.
  If "REV" is displayed, open and close the cassette holder so that "FWD" appears.

2 Select a recording source:

  To record from the radio
  Tune in to a station you want to record (see "Listening to the Radio"). When recording FM programmes, make sure the earphones are plugged in as they serve as an aerial.

  To record with the microphone
  Connect the supplied microphone to the MIC (PLUG IN POWER) jack. You can use the supplied microphone stand as illustrated (see Fig. E-ⓑ).

3 Slide REC.
  "REC" appears in the display and recording starts after about two seconds.
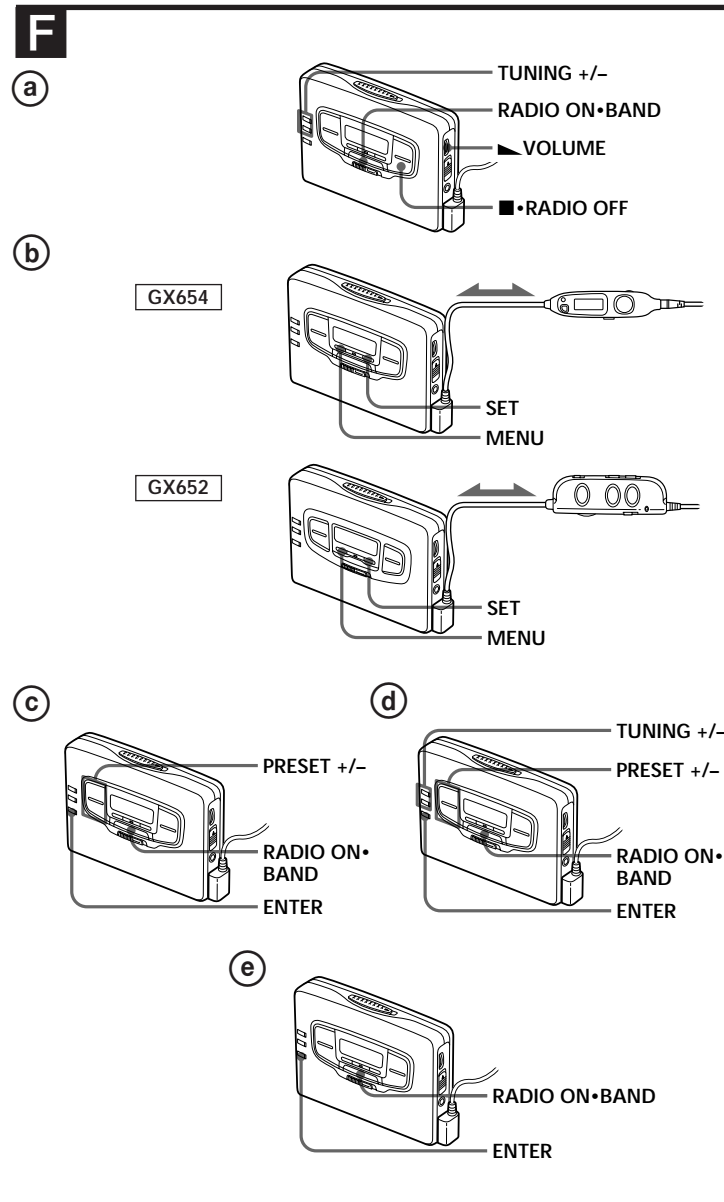 Recording stops at the end of the side.

To stop recording

Press ■.

To reduce noise while recording AM programmes

Set the ISS (Interference Suppress Switch) to the position that reduces noise the most.

To prevent a tape from being accidentally recorded over (see Fig. E-Ⓒ)

Break off the tabs from side A and/ or B. To reuse the tape for recording, cover the tab hole with adhesive tape.

Notes
• Do not use a CrO₂ (TYPE II) or metal (TYPE IV) tape, otherwise the sound may be distorted when you play back the tape, or the previous recording may not be erased completely.
• Do not connect or disconnect the headphones to ⌒REMOTE while recording from the radio. The recording condition may change abruptly, or noise may be recorded.
• When recording with the microphone, do not place it near a lamp cord or a fluorescent lamp to avoid noise interference.
• If a howling effect occurs, turn down the volume.
• While recording, only the ■ (stop) operation functions.
• MB/GRV mode does not affect recording.
• During recording, the LCD menu function is inoperable.

F

a

TUNING +/–
RADIO ON•BAND
VOLUME
■•RADIO OFF

b

GX654

SET
MENU

GX652

SET
MENU

c

PRESET +/–
RADIO ON•
BAND
ENTER

d

TUNING +/–
PRESET +/–
RADIO ON•
BAND
ENTER

e

RADIO ON•BAND
ENTER

G

(PB)
MODE ☆NR   SOUND AVLS FM MODE

MENU   BATT   SET

MENU   SET

H

GX654

◄VOL
REW•PRESET –
REC
SOUND/AVLS
FF•PRESET +
HOLD
■(RADIO OFF)
B(RADIO ON•BAND)

GX652

HOLD indicator
xxxx
FF/REW•PRESET +/–
HOLD
REC
BAND(RADIO ON•
BAND)
■(RADIO OFF)
VOL►

Listening to the Radio (see Fig. **F**-ⓐ)

1 Press RADIO ON•BAND to turn on the radio.

2 Press RADIO ON•BAND repeatedly to select AM or FM.

3 Press TUNING+/– to tune in to the desired station.
If you keep pressing TUNING+/– for a few seconds, the Walkman will start tuning to the stations automatically.

To turn off the radio
Press ■•RADIO OFF .

To improve the broadcast reception
• For AM: The Walkman has a built-in antenna. Reorient the Walkman horizontally to obtain optimum AM reception.
• For FM (see Fig. **F**-ⓑ): Extend the cord of the remote control, the aerial. If the reception is still not good, press MENU repeatedly to set the cursor to FM MODE in the display. Then press SET to choose from "MONO" (monaural), "LOCAL" or none (stereo) mode for best reception.

Note
• Do not remove the power sources while listening to the radio, or the received stations may not be stored.

Presetting Radio Stations

Once you store your favorite stations in memory, you can play them easily. You can preset up to 16 stations for FM and 8 stations for AM of each mode (Eur, JPn, USA).

Tuning in to and Storing Radio Stations Automatically (Auto-Memory Scanning function) (see Fig. **F**-ⓒ)

1 Press RADIO ON•BAND to turn on the radio.

2 Press RADIO ON•BAND repeatedly to select AM or FM.

3 Press ENTER until "A" appears in the display.
The Walkman starts searching and storing stations.

4 After the preset number appears, tune in to a station using PRESET+/–.

Storing Radio Stations Manually (Manual-Memory function) (see Fig. **F**-ⓒ)

You can preset the stations in any order.

1 Turn on the radio and select the desired band.

2 Press ENTER. The frequency digits and a preset number flash in the display.

3 While the frequency digits and the preset number are flashing, tune in to a station you wish to store using TUNING+/–, and select a preset number using PRESET+/–.

4 While the frequency digits and the preset number are flashing, press ENTER.

5 Tune in to a station using PRESET+/–.

Notes
• If you cannot complete step 3 or 4 while the indications are flashing, repeat from step 2.
• If you preset a new station to the same preset number, the previously stored station will be erased .

To cancel the stored station
Follow the procedure above and in step 3, instead of tuning in to a station, press and hold TUNING +/– until "– – – –" is displayed. Press ENTER while "– – – –" is flashing.

Receiving Stations Outside Your Country (see Fig. **F**-ⓒ)

The frequency range differs depending on the area (see the chart "Area indication and frequency range"). If you listen to the radio in an area of different frequency range, change the area indication.

1 Press RADIO ON•BAND to turn on the radio.

2 Press ENTER.

3 Press and hold RADIO ON•BAND until the area indication flashes in the display.

4 Press RADIO ON• BAND repeatedly to select the following area "Eur", "JPn" or "USA" and press ENTER.

5 Tune in to and store stations as necessary following the procedure of the "Listening to the Radio" and "Presetting Radio Stations".

Area indication and frequency range

Area*	Frequency range FM (MHz)	AM(kHz)
Eur	87.5–108.0	531–1,602
JPn	76.0–90.0	531–1,710
USA	87.5–108.0	530–1,710

*Eur : European and other countries
JPn : Japan
USA : USA, Canada and Central
and South America

Using Other Functions (see Fig. **G**)

Emphasizing Bass

1 Press MENU repeatedly in the playback or stop mode to set the cursor to SOUND in the display. Then, press SET to select the desired mode. With each press, the indications change as follows.
MB (MEGA BASS) : emphasizes bass sound
GRV (GROOVE): emphasizes deeper bass sound
No message: off (normal)

For GX654
When using the remote control, see "Using the remote control".

Note
• If the sound is distorted with the mode "GRV", select the mode "MB" or no message.

Protecting Your Hearing (AVLS)

When you set the AVLS (Automatic Volume Limiter System) function to active, the maximum volume is kept down to protect your ears.

1 Press MENU repeatedly in the playback, stop or radio mode to set the cursor to AVLS in the display. Then press SET to show "ⓐ".

To cancel the AVLS function
Press SET so that "ⓐ" disappears.

GX654 only
When using the remote control, see "Using the remote control".

Notes
• If the sound is distorted when you listen to the bass-boosted sound with the AVLS function, turn down the volume.
• The setting is stored as long as the battery is not replaced.

Using the Remote Control (see Fig. **H**)

All buttons on the remote control unless otherwise noted below function identically to those corresponding on the main unit. Read the direction for your model.

To lock the buttons
For GX654
1 Slide HOLD to the direction of the arrow.
When you press any button "Hold" appears in the display.

To unlock, slide HOLD to the opposite direction of the arrow.

For GX652
1 Slide HOLD so that the yellow mark appears.

To unlock, slide HOLD so that the yellow mark is hidden.

Using SOUND (GX654 only)
Press SOUND/AVLS to select the desired mode. With each press, the indications in the display changes as follows:
MB: emphasizes bass sound
GRV: emphasizes deeper bass sound
No message: off (normal)

Using AVLS (GX654 only)
Press and hold SOUND/AVLS for two seconds or more. "ⓐ" appears in the display.

To cancel, press and hold SOUND/AVLS for two seconds or more again.

▶ Additional Information

Precautions

On rechargeable battery and charger
• If the rechargeable battery is new or has not been used for a long time, it may not be charged completely until you use it several times.
• The nameplate indicating the operating voltage, power consumption, etc. is located on the bottom exterior of the battery charger.

On dry batteries
Do not carry the dry or rechargeable batteries with coins or other metallic objects. It can generate heat if the positive and negative terminals of the batteries are accidentally contacted by a metallic object.

On the unit
• Do not drop the unit or give a shock to the unit, or it may cause a malfunction.
• Do not leave the unit in a location near heat sources, or in a place subject to direct sunlight, excessive dust or sand, moisture, rain, mechanical shock, or in a car with its windows closed.
• The LCD display may become hard to see or slow down when using the unit at high temperatures (above 40°C/104°F) or at low temperatures (below 0°C/32°F). At room temperature, the display will return to its normal operating condition.
• If the unit has not been used for long, set it in the playback mode and warm it up for a few minutes before inserting a tape.

On tapes longer than 90 minutes
We do not recommend the use of tapes longer than 90 minutes except for a long continuous recording or playback. They are very thin and tend to be stretched easily.

On the remote control
Use the supplied remote control only for each unit.

On headphones/earphones
Road safety
Do not use headphones/earphones while driving, cycling, or operating any motorized vehicle. It may create a traffic hazard and is illegal in some areas. It can also be potentially dangerous to play your headsets at high volume while walking, especially at pedestrian crossings.
You should exercise extreme caution or discontinue use in potentially hazardous situations.

Preventing hearing damage
Do not use headphones/earphones at high volume. Hearing experts advise against continuous, loud and extended play. If you experience a ringing in your ears, reduce volume or discontinue use.

Caring for others
Keep the volume at a moderate level. This will allow you to hear outside sounds and to be considerate to the people around you.

Maintenance

To clean the tape head and path
Use the cleaning cassette CHK-1 (not supplied) every 10 hours of use.

Note
• Use only the recommended cleaning cassette.

To clean the exterior
Use a soft cloth slightly moistened in water. Do not use alcohol, benzine or thinner.

Note
• Clean the headphones/earphones plug and microphone plug periodically.

Troubleshooting

The cassette holder does not open.
• If the tape is playing, stop and then slide OPEN.
• This condition may occur when you remove the power sources during playback, or when you use exhausted dry or rechargeable battery. Set the power sources again or replace the exhausted battery with a new one.

The volume is not turned up.
If "ⓐ" appears for AVLS display, press SET so that "ⓐ" disappears.

A beep sounds and recording is not possible when REC is slid.
• If the tab of the tape is broken off, cover the tab hole with adhesive tape.
• If "REV" appears, open the cassette holder then close it so that "FWD" appears.

The display on the remote control is not normal (GX654 only).
Disconnect the remote control from the Walkman, then connect it again.

The radio and playback operates but recording is not possible.
This condition may occur when the batteries become weak. Replace the batteries with new ones.

Specifications

Radio section

Frequency range (For "Eur" indication)
FM: 87.5–108 MHz
AM: 531–1,602 kHz

Tape section

Frequency response
(Dolby NR off)
Playback: 20–18,000 Hz
Recording/playback: 100–8,000 Hz
Output
Headphones (□REMOTE jack)
Load impedance 8–300 ohms
Power output
4 mW + 4 mW (16 ohms)

General

Power requirements
1.5 V
Rechargeable battery
One R6 (size AA) battery
Dimensions (w/h/d)
Approx. 109 x 78.6 x 26.4 mm
(4³/₈ x 3¹/₈ x 1¹/₁₆ inches) incl.
projecting parts and controls
Mass
Approx. 150 g
Approx. 215 g (7.6 oz) incl.
rechargeable battery and cassette
Supplied accessories
Battery case (1)
Stereo earphones with remote
control (1)
Clip (1)
Battery charger (1)
AC plug adaptor (1) (excluding
Australian, Hong Kong, Chinese,
and Korean models)
Rechargeable battery (NC-6WM,
1.2 V, 600 mAh, Ni-Cd) (1)
Rechargeable battery carrying
case (1)
Carrying pouch (1)
Stereo microphone (1)
Microphone stand (1)
Sony R6P(SR) battery(1)
(tourist model only)

Design and specifications are subject to change without notice.