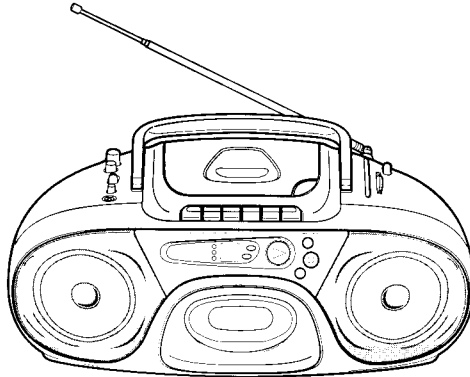


SANYO

INSTRUCTION MANUAL

MCD-Z160F

CD Radio Cassette Recorder



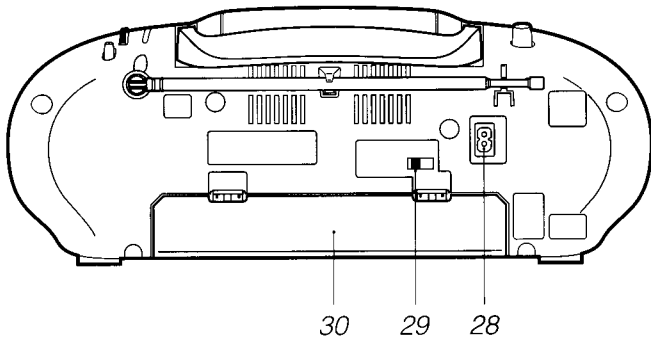
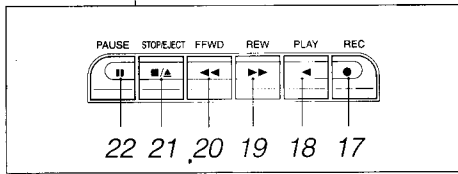
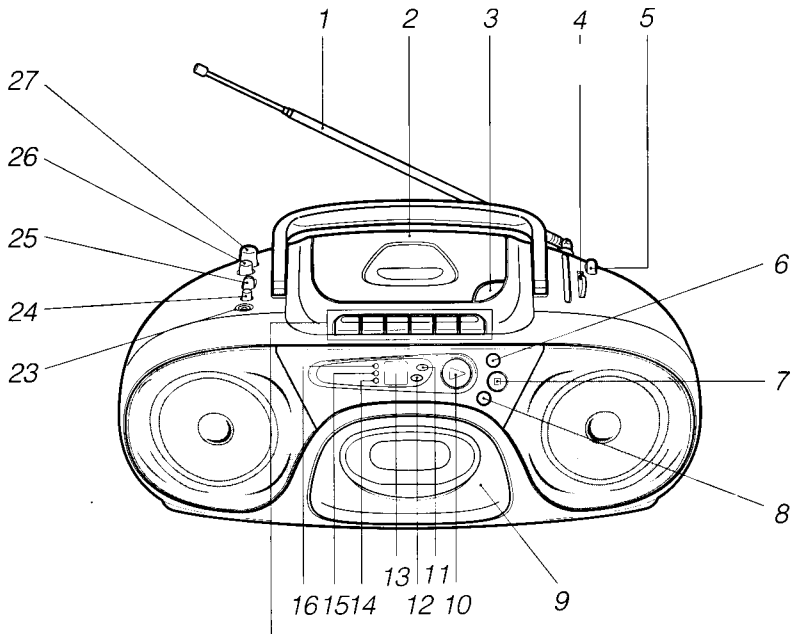


Fig.1

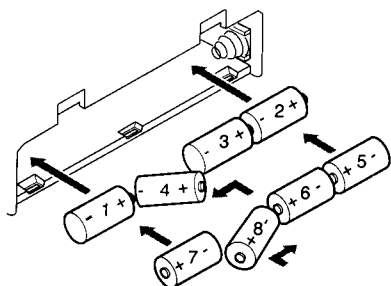


Fig.2

COMPACT
disc
DIGITAL AUDIO

Fig.3

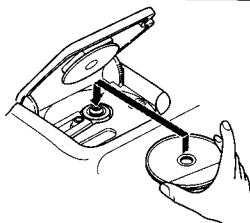


Fig.4

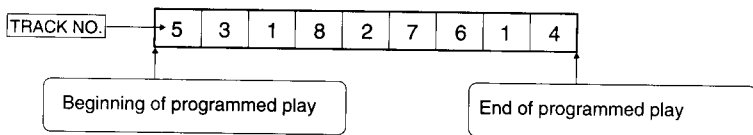
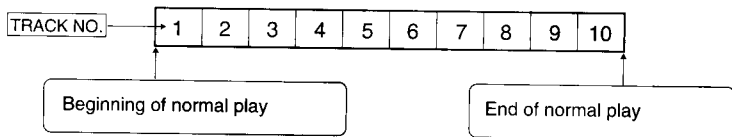


Fig.5

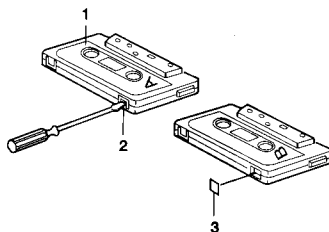


Fig.6

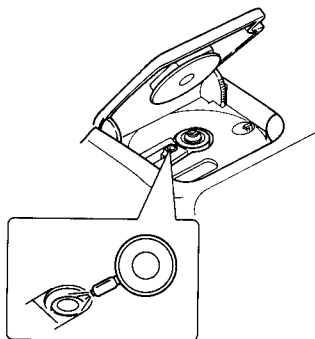
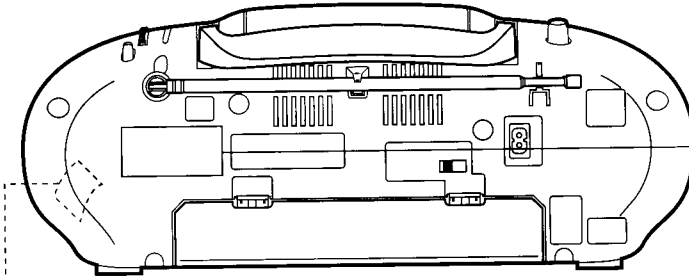


Fig.7

CAUTION

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED IN THE OPERATING INSTRUCTIONS MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

THE COMPACT DISC PLAYER SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT PROPERLY QUALIFIED PERSONNEL.



CAUTION - INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL - USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDSÆTTELSE FOR STRÅLING.

VARNING - OSYNLIG LASER STRÅLNING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.

VORSICHT - UNSICHTBARE LASERSTRAHLUNG TRITTT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.

VARO! Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso äiteeseen.



CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

- The rating label is located on the bottom of the unit.

FOR SAFE AND EFFICIENT OPERATION

- Do not damage the mains lead.
- When not in use, disconnect the mains lead from the outlet.
Grasp the plug, not the mains lead, when disconnecting the unit.
- If water should enter the unit, electrical shock or malfunction may result. Use in an area where there is low humidity and little dust.
- Do not disassemble or alter the unit in any way.
- Do not use the unit in areas where extremes in temperature occur (below 5°C or exceeding 35°C), or where it may be exposed to direct sunlight.
- Because of the CD player's extremely low noise and wide dynamic range, there is a tendency to set the volume on the amplifier higher than necessary. Doing so may produce an excessively high output from the amplifier which can cause damage to your speakers.
Please be careful in this regard.
- Sudden changes in the surrounding temperature can cause dew to form on the optical pickup lens inside the unit. Under this condition the unit may be unable to operate properly. If this should occur, remove the disc and allow the player to adjust to the surrounding temperature.
- This unit must be operated in a horizontal position.

- Do not install this equipment in a confined space, such as a book case or built in cabinet.
 - The apparatus shall not be exposed to dripping or splashing.

CONTROLS (Fig. 1)

1. Telescopic aerial
2. CD compartment lid
3. CD lid opening button [CD OPEN]
4. Tuning control [TUNING]
5. Band switch [BAND]
6. Skip/Search button [▶▶| SKIP/SEARCH]
7. Stop/Clear button [STOP/CLEAR]
8. Skip/Search button [SKIP/SEARCH |◀◀]
9. Cassette compartment lid
10. Play/Pause button [PLAY/PAUSE]
11. CD repeat button [REPEAT]
12. CD memory button [MEMORY]
13. CD track display [CD TRACK NO.]
14. CD memory indicator [MEMORY]
15. CD repeat indicator [REPEAT]
16. CD play indicator [CD PLAY]
17. Record button [REC]
18. Play button [PLAY]
19. Rewind button [REW]
20. Fast forward button [FFWD]
21. Stop/Eject button [STOP/EJECT]
22. Pause button [PAUSE]
23. Stereo headphones socket [PHONES]
24. Bass expander switch [BASSXPANDER]
25. Function switch [FUNCTION]
26. Tone control [TONE]
27. Volume control [VOLUME]
28. AC input socket [AC INPUT]
29. Beat cancel switch [BEAT CANCEL]
30. Battery compartment lid

POWER SUPPLY

AC power operation

Connect one end of the mains lead to the [AC INPUT] socket and the other end to the AC outlet.

NOTES:

- When the mains lead is connected to the unit, the installed batteries will be automatically disconnected.
- The FUNCTION switch is mounted on the secondary side. The unit is not disconnected from mains, even switched off.

Battery power operation

1. Open the battery compartment lid by pushing down on the tabs.
2. Install 8 "C" size batteries (not supplied). Refer to the polarity diagram on the back of the unit. Match the (+) and (-) marks on the diagram to the (+) and (-) marks on the batteries. (Fig.2)
3. Replace the lid.

CAUTION

WHEN INSTALLING BATTERIES

To prevent battery electrolyte leakage, which may result in injury and damage to the unit or other objects, observe the following precautions:

1. All batteries must be installed with the proper polarity (see diagram on the back of the unit).
2. Do not mix new with old or used batteries.
3. Only use batteries of the same type and brand.
4. Remove the batteries when they are not to be used for a long period time.

BEFORE OPERATION

Stereo headphones socket

Insert the miniplug from a pair of headphones (not supplied) into the [PHONES] socket. When the headphones are plugged in, speakers are automatically disconnected.

Bass expander switch (BASSXPANDER)

ON (Button in): Increase the bass output level.

OFF (Button out): For normal bass output level.

RADIO OPERATION

1. Set [FUNCTION] to RADIO.
2. Select the desired radio band with [BAND].
 - FM ST.
For FM reception. The unit will automatically switch to stereo when an FM stereo broadcast is received.
 - FM
For FM reception. To receive weak (noisy) FM broadcasts, the reception may be improved, but the sound will be monaural.
 - AM
For AM reception.
3. Tune in a desired station by turning [TUNING].
4. Adjust [VOLUME], [TONE] and [BASSXPANDER] as desired.

Aerials

For FM reception, pull out the telescopic aerial and determine the direction, length and angle for optimum reception.

For AM reception, the aerial inside the unit is somewhat directional, rotate the unit to improve AM reception.

COMPACT DISC OPERATION

- Both 8cm and 12cm discs can be played in this unit.

NOTE:

Place only one disc at a time in the CD compartment.

- Only disc bearing the logo in Fig.3 can be played in this unit.

Handling compact discs

- Always place the compact disc in the CD compartment with the label facing upward. Compact discs can be played on only one side.
- Fingerprints and dust should be carefully wiped off the disc's signal surface (opposite the labeled side) with a soft cloth. Gently wipe in a straight motion from the inside to the outside of the disc.
- Discs should be returned to their cases after used to avoid serious scratches that could cause the player to skip.
- Do not expose a disc to direct sunlight, high humidity, or high temperatures for extended periods of time to prevent warping the disc.
- Do not stick paper or write anything with a ballpoint pen on a disc.
- Do not use cleaners or antistatic sprays on discs, like those used for phonograph records.

LOADING A DISC

1. Set [FUNCTION] to CD.
" - " lights.
2. Press [CD OPEN]. The lid will open.
3. Place a disc carefully on the turntable in the CD compartment, with the label side facing up (Fig.4).
4. Close the lid.
[CD TRACK NO.] will show the total number (max.19) of tracks on disc.

NOTES:

- If a disc is loaded upside down, or if no disc is loaded, the CD player will not operate.
- Opening the CD compartment lid while a CD is played could scratch the disc. Always press [STOP/CLEAR] and wait for the disc to stop rotating before opening the CD compartment lid.

NORMAL PLAY

1. Press [PLAY/PAUSE]. Play will begin with track number 1. [CD TRACK NO.] will show the track number.

NOTE:

- To start play from the designated track, press [►►| SKIP/SEARCH] until desired track number is indicated and track number will flash. Then press [PLAY/PAUSE] Play will start from the selected track.
2. Adjust [VOLUME], [TONE] and [BASSXPANDER] as desired.
 3. Press [STOP/CLEAR] to stop play at any time.
When the last track has played, the CD player will automatically stop.

Pause

1. Press [PLAY/PAUSE] during play.
Play will temporarily stop, [CD PLAY] will flash.
2. Press [PLAY/PAUSE] again to resume play. The (CD PLAY) will remain on.

Track search

1. In the play mode, press and hold down [▶▶| SKIP/SEARCH] or [SKIP/SEARCH |◀◀] to lower the volume level and quickly advance or return to any part of the disc. The number will flash.
2. Release [▶▶| SKIP/SEARCH] or [SKIP/SEARCH |◀◀] to return the volume to normal level and resume play. The number will remain on.

NOTE:

If [▶▶| SKIP/SEARCH] is pressed during the pause mode, no sound will be heard, and the pause mode will continue when the button is released.

Track skip

1. Press and release [▶▶| SKIP/SEARCH] or [SKIP/SEARCH |◀◀] repeatedly during play to quickly locate the beginning of a track.
2. [CD TRACK NO.] will show the number of the selected track. Play will continue from the beginning of the new track.

NOTE:

If [▶▶| SKIP/SEARCH] or [SKIP/SEARCH |◀◀] is pressed when the unit is in pause mode, when the button is released, the unit will remain in the pause mode.

PROGRAMMED PLAY

With programmed play, up to 16 tracks on a disc can be memorized and played in any order. [CD TRACK NO.] will show the track number 1-19.

In this example, tracks 1 - 8 on a 10-track disc are entered into the unit's program memory, for play in the order shown in Fig. 5.

Example program

1. Press [STOP/CLEAR].
2. Press [▶▶| SKIP/SEARCH] repeatedly until [CD TRACK NO.] shows "5". The number will flash.
3. Press [MEMORY]. The number will remain on. [MEMORY] will light.
4. Press [SKIP/SEARCH |◀◀] repeatedly until [CD TRACK NO.] shows "3". The number will flash.
5. Press [MEMORY]. The number will remain on.
6. Repeat steps 2 - 3 to memorize tracks 1, 8, 2, 7, 6, 1 and 4.

NOTE:

A track number can be entered more than once.

7. Checking the program
After the last track number has been entered, press [MEMORY] to view the memorized track numbers, in the order they were entered and last display will display "0".
8. Press [PLAY/PAUSE]. Programmed play will begin with the first programmed track.
9. When the last programmed track has finished playing, the CD player will stop, unless [REPEAT] has been pressed (see REPEAT PLAY).

NOTE:

If you want to add a program number, select the track number, and press [MEMORY]. It is not possible to change a programmed entry, or to add an entry between the programmed selections.

Ending programmed play

Press [STOP/CLEAR] twice (during programmed play), or once (during the stop mode), to clear the program memory.

REPEAT PLAY

During normal play

1. Press [REPEAT] before pressing [PLAY/PAUSE] or during the play mode. [REPEAT] will light, and all of the tracks on the disc will be played repeatedly.
2. To cancel the repeat play, press [REPEAT] again. [REPEAT] will go off.

NOTE:

If [STOP/CLEAR] is pressed, repeat play will be canceled.

During programmed play

Press [REPEAT] before pressing [PLAY/PAUSE] or during programmed play. [REPEAT] will light and all of the programmed tracks will be played repeatedly.

One track repeat play

1. Program a track desired.
2. Press [REPEAT].
3. Press [PLAY/PAUSE].

IMPORTANT NOTE

If an abnormal display or an operating problem occurs, disconnected the mains lead and remove all batteries. Wait at least 90 seconds, then reconnected the mains lead and reinstall the batteries.

CASSETTE TAPE OPERATION

HELPFUL HINTS

Preventing Accidental Erasure (Fig. 6)

Whenever a recording is made, the sound previously recorded is erased automatically. To protect valuable recordings from accidental erasure, the unit and cassette are equipped with standard safety features. To keep the recorded material permanently, break out the tab on the back of the cassette with a screwdriver. To protect side A (1) from accidental erasure, break out right side tab (2). To protect side B from accidental erasure, break out the left side tab. To record on a cassette from which the tab has been removed, simply attach adhesive tape (3) over the tab opening.

NOTE:

[REC] cannot be pressed when the cassette tab is removed.

PREPARATION FOR PLAYBACK AND RECORDING

NOTE:

- Do not use the endless tape.
- Use the normal tape (TYPE 1).

Pause

Press [PAUSE] to temporarily stop the tape during playback or recording. Press it again to continue

Fast Forward and Rewind

To fast wind or rewind the tape, press [REW/FFWD]. Press [STOP/EJECT] when the desired section of the tape is reached. When the end of the tape has been reached, [REW/FFWD] will release automatically.

Full automatic stop

This unit has a full-release stop system, to protect the tape and prevent pinch roller damage. When the end of the tape is reached in Playback, Recording, Fast forward or Rewind, the tape mechanism will automatically stop.

PLAYBACK

1. Set [FUNCTION] to TAPE.
2. Press [STOP/EJECT] and insert a prerecorded cassette into the cassette compartment with the tape side facing up.
3. Press [PLAY].
4. Adjust [VOLUME], [TONE] and [BASSXPANDER] as desired.
5. Press [STOP/EJECT] to stop playback at any time. When the end of the tape has been reached, [PLAY] will release automatically.

RECORDING

WARNING

UNAUTHORIZED RECORDING OF COPY-RIGHTED MATERIAL MAY VIOLATE APPLICABLE COPY-RIGHT LAWS. SANYO ASSUMES NO RESPONSIBILITY FOR THE UNAUTHORIZED DUPLICATION, USE OR OTHER ACTS WHICH INFRINGE UPON THE RIGHTS OF COPYRIGHT OWNERS.

Automatic Level Control (ALC) recoding

The ALC circuit adjusts the recording input level automatically. No adjustment are required.

Preparation

Press [STOP/EJECT] and insert a cassette into the cassette compartment with the tape side facing up.

A) Recording from the built-in radio

1. Tune in a program as described in the "RADIO OPERATION" section.
2. Press [PAUSE].
3. Press [REC]. [PLAY] will lock down at the same time.
4. During recording, the sound can be monitored through the speakers. [VOLUME], [TONE], and [BASSXPANDER] will not affect the recording. Adjust them as desired.
5. Press [PAUSE].
6. Press [STOP/EJECT] to stop recording at any time.

Beat cancel switch (BEAT CANCEL)

When recording a radio program, an irritating "whistling" sound may sometimes be heard. If this occurs, select position 1, 2 or 3. Leave the switch in the position that gives the best results.

B) Recording from a compact disc

Synchronous recording (CD-TO-TAPE SYNCHRO DUBBING)

This recording system starts disc play and cassette recording at the same time.

Recording from Track No. 1

1. Set [FUNCTION] to CD.
2. Load a disc into the CD player.
3. Press [REC]. Recording will start at the beginning of track number 1.
4. Press [STOP/EJECT] to stop recording at any time.

When the disc play finishes, the disc will automatically stop, but [REC] does not pop up and the tape running not stop, press [STOP/EJECT], otherwise the tape is erased.

Recording programmed track

1. Program the unit as described in the "PROGRAMMED PLAY" section
2. Press [REC]. Recording will start from the programmed track.

Recording from playing track

When you want to record music as you listen, press [REC]. Recording starts automatically from the beginning of the track.

MAINTENANCE

Cleaning the unit

Do not use volatile chemicals on this unit (insecticides, etc.). Clean by lightly wiping with a soft cloth.

Cleaning the tape heads

When dust or reddish-brown oxide builds up on the tape deck heads, pinch roller and capstan, the following problems may result:

- Poor sound quality during playback
- Distorted, poor quality recordings
- Erratic tape speed during recording or playback

To ensure playback and recording with good-quality sound, use a cleaning tape (available from your local audio dealer) to clean the head block of the deck after about every 10 hours of use.

Cleaning the CD player lens (Fig. 7)

If dust is on the lens, blow the dust away by using a blower. (Please consult your dealer.)

The lens should never be touched. However, if a finger-print does get the lens, wipe it gently by using a cotton swab moistened with isopropyl alcohol. (Please consult your dealer.)

CAUTION:

Do not apply excessive pressure; you might damage the lens.

Apply alcohol sparingly. Only a small amount is needed. Use of too much alcohol may cause some to enter the unit, which may cause damage.

SPECIFICATIONS

(Cassette Section)

Recording system:
AC bias, 4 track stereo
Erasing system:
Magnet erase
Tape speed:
4.75 cm/sec.
Fast forward and rewind time:
110 sec. (C-60 tape)
Frequency response:
80 - 12,000 Hz (Normal tape)

(CD Section)

Channels:
2 channels
S/N ratio:
70 dB
Wow & Flutter:
undetectable
Sampling frequency:
44.1 kHz
Quantization:
16 bits linear/ch
Pick up light source:
Semi-conductor laser
Pick up wave length:
790 nm
Laser output:
Continuous wave max. 0.6mW

(Radio Section)

Tuning ranges:
FM: 87.5 - 108 MHz
AM: 526.5 - 1,606.5 kHz
Aerials:
Built-in ferrite bar and telescoping rod
aerials

(General)

Power output:
2.5W/ch (DC max.)
Speaker:
10 cm x 2, 8ohms
Terminal impedance:
PHONES: 32 ohms
Power source:
AC: 230 - 240V, 50 Hz
DC: 12 V, (8 "C" size batteries)
Dimensions:
412 x 158 x 239 mm (W x H x D)
Weight (approx.):
3.2kg (including batteries)

Specifications subject to change without notice.

SANYO

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