



Control Unit For 6 Discs CD-
Changer, Car Stereo Radio RDS
E.O.N. FM/MW/LW(optional)
With Autoreverse Cassette
Player.

OWNER'S MANUAL

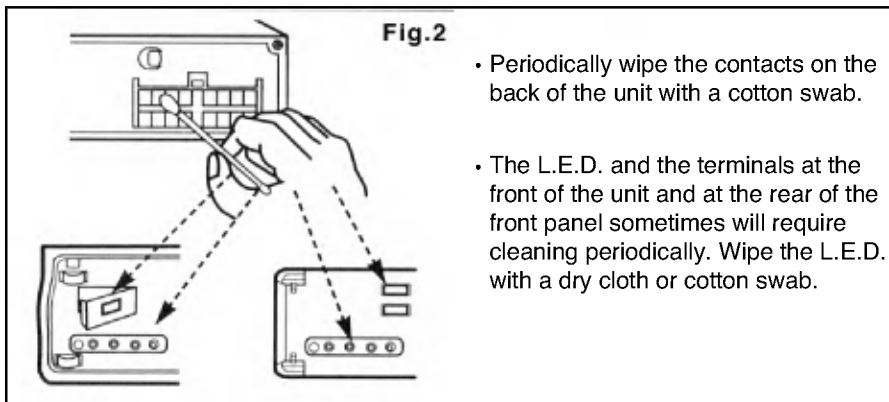
2/773

of this new unit,
OWNER'S MANUAL



CAUTION

- There is the transit protection pad in the cassette compartment. Be sure to remove the pad and push the eject button before operation.
- Be careful not to touch the left side panel of the unit when removing the unit from the installation sleeve, since it may be hot. On this side the cooling ribs are located.
- The unit is designed to operate only on 12 volt DC negative ground electrical system.
- When you replace the fuses, be sure to use a fuse of specified amperage for each wire as mentioned in chapter "Connections". Using a fuse of higher amperage could cause serious damage to the unit.



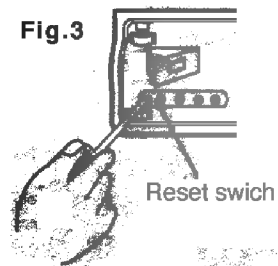
RESET Switch

Press the RESET switch.

If your unit shows abnormal symptoms such as the failure of the unit to power on, the lack of operation even when buttons are pushed, or abnormal display indications, Press the RESET switch more than 2 seconds with a thin pointed object, such as a pencil tip.

Since pressing the RESET switch erases all control settings, you will have to make the respective settings again afterwards. Settings are also erased when the car's battery is disconnected, as when replacing the battery, thus requiring settings to be made again after reconnection of the battery.

Note: Press the reset switch after the connection of wiring.



WIRE CONNECTIONS

Main connector

Connect the main connector to the female connector on the back of the car radio.

Antenna Connection

Insert the plug of the car antenna cable into the jack at the rear of the unit as shown on diagram of page 3.

Ground Connection

- Connect the black ground lead (3) to a metal part of the vehicle and secure it using the screw provided.
- If the connection is loose, or if the cord is connected to something other than a metal part of the car, noise or malfunction may result.

Power Supply Connection:

Connect the power cord terminals in the following way:

Power Supply Lead (2. Red): connect the red power supply wire to the 12V+ terminal controlled by the car ignition switch.

Memory Back-up Lead (1. Yellow): connect it directly to a 12V + terminal. The unit will not work if this lead is not connected.

Line Out Jack (9)

Connect the output LINE OUT, RCA x2 behind the car radio with the input LINE IN of an additional amplifier (if installed).

Power Antenna Lead/External Amplifier Remote Turn-on Lead

You will find a separate lead, blue (4) with a male terminal suitable to many automatic antenna. This lead is not to be used with non-automatic antenna.

If an automatic car antenna is used, when connecting the lead, the antenna will be automatically extended when the main switch is turned on.

This can also be used as a remote turn-on wire connection for amplifiers that have a remote sensing lead. Using this connection will allow simultaneous turning on/off of the radio and an external amplifier.

Connect the CD Changer

Your car radio works as control unit for a CD Changer which you can buy, if not yet done, later. The suitable cord (10) shown on Fig.4, will be provided together with the CD changer.

Connection Precautions

- Do not bring the connecting cords near places whose temperature will rise when the vehicle is driven.
- Be sure that the connectors are locked into position.

SPEAKERS CONNECTION

This stereo car radio is not designed to utilize the vehicle's chassis as the electrical return path from the speaker to the radio. Always use two conductor wire between each speaker and your stereo unit.

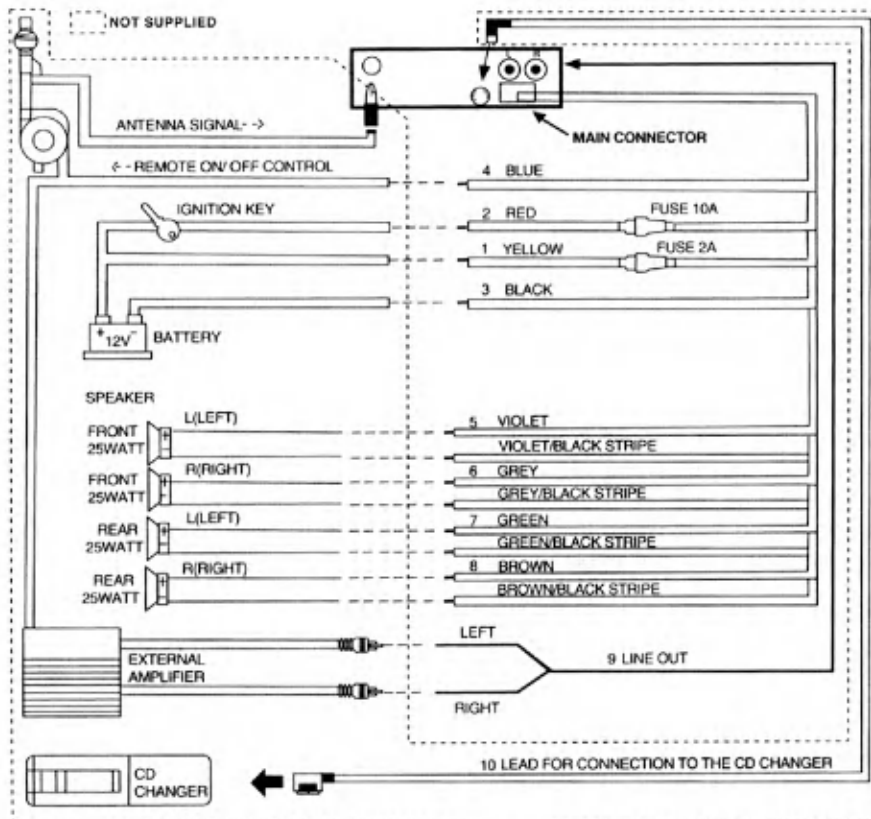
4-Speakers connection

Use only 4-Ohm impedance speakers. Refer to the following connections diagram

Precautions during connection

- Do not connect leads near parts which could overheat during car operation.
- Check all connections before switching on the car radio.
- Be sure no speakers lead is connected to the metal chassis of the car.

Fig.4



INSTALLATION

1. Hex bolt
2. Spring washer
3. Plain washer
4. lapping screw
5. Metal mounting

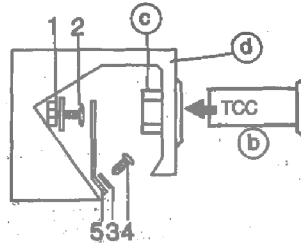


Fig. 5

PROCEDURE (Fig. 6/7)

1. Remove the case DIN-Sleeve (c) from the car radio (b).
2. Insert the DIN-Sleeve into the dashboard (d) and then fix it firmly by bending the claws with a screwdriver.
3. Connect the connector and the antenna to the car radio and slide it into the case DIN-sleeve.

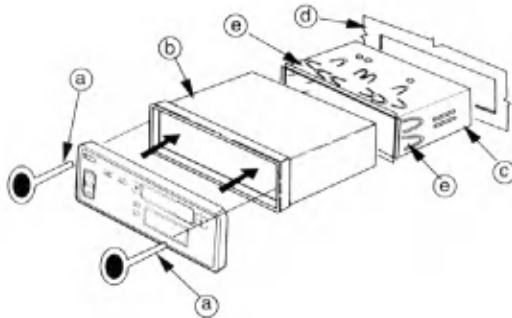


Fig. 6

TO RELEASE THE CAR RADIO:

Insert the extraction pivot (a) as shown in Fig.7 until you fix it into the sleeve (insert the extraction pivot up-slanting).

To release the car radio, pull the two pivots towards your.

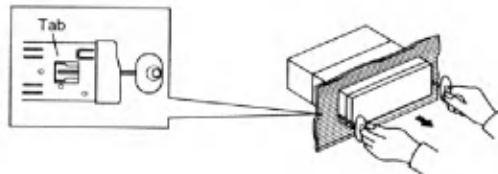


Fig. 7

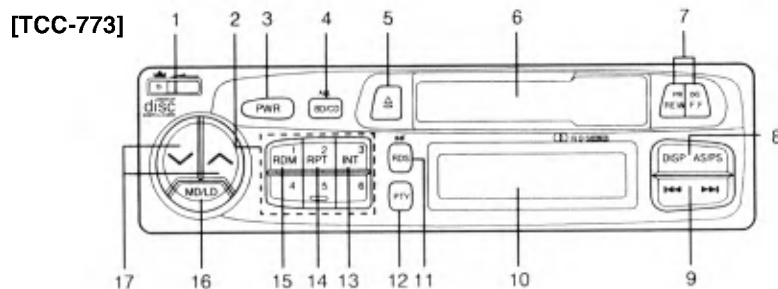
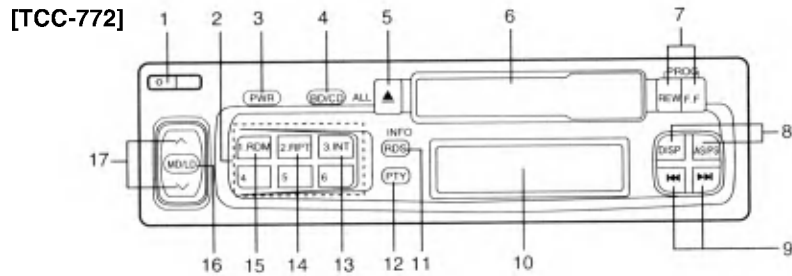
NOTES:

- Use only the parts included with the unit to ensure proper installation. The use of unauthorized parts can cause malfunctions.
- Consult with your nearest car audio dealer if installation requires the drilling of holes or other modifications of the vehicle.
- Do not use the front panel as a way of gripping the unit during installation and wiring. The front panel may come away and the unit may drop on the floor.
- If installation angle exceeds 30° from horizontal, the unit might not give its optimum performance.



Fig. 8

LAYOUT OF CONTROLS



1. Front panel disengagement button
2. Preset buttons (1 -6)
3. Power on button PWR
4. ALL Button + BAND Selection + CD Listening
5. CasseDe Eject BuHon
6. Cassette Compartment
7. Fast Forward/Reverse Direction Change Buttons
8. DISP/ILL Button (illumination):
OPTIONAL + Auto-Store/preset Scanner Button
9. Up/down Tuning + CD Forward/Reverse
10. Liquid Crystal Display
11. RDS button (alternative frequencies RDS) + INFO (traffic information)
12. PTY Button + REG Button
13. INT Button (scanning)
14. RPT Button (repeat)
15. RDM Button (random)
16. MODE/LOUDNESS Button
17. Level control buttons

DISP BUTTON (display)

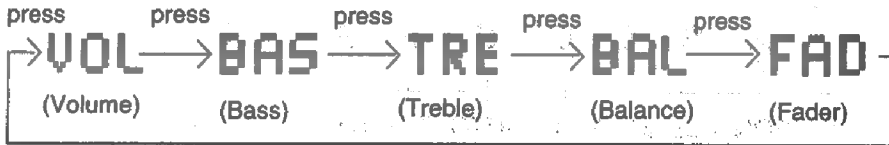
By pressing the DISP. button (8) continuously, you can monitor the following information while listening to a CD, cassette or the radio.

When listening to the radio, the information displayed varies according to whether you are tuned or not into a RDS station.

	RDS	NON RDS
Radio	NAME -> FREQ. -> TIME -> PTY	FREQ. -> NO CLOCK -> NO PTY
CD	NAME -> FREQ. -> TIME -> CD -> PTY	FREQ. -> NO CLOCK -> CD -> NO PTY
Tape	NAME -> FREQ. -> TIME -> TAPE -> PTY	FREQ. -> NO CLOCK -> TAPE -> NO PTY

MODE SELECT BUTTON

Press the MODE button to change the control of volume, bass, treble, balance and fader.



LEVEL UP/DOWN BUTTONS (; / ;)

- After you have selected the proper mode by using the mode button, control the desired function by pushing the level up/down (; / ;) buttons within 3 seconds. After you finish selecting modes, the unit returns to the initial mode.
- Operating display in all modes:
A numeric display and bar display is converted by pushing the Level up/down (; / ;) buttons, so you can see easily as shown below.

Function	Level	Display
VOL (Volume)	Zero → Max →	00, 02, 04 99, 100 Down up
TRE/BAS (Treble)/(Bass)	Low → Up →	-10, -8, ...-4, -2, 0, +2, +4... +8, +10 LOW up
BAL (Balance)	Left ← 1 → Right 10L 1 10R	Centre L=R
FAD (Fader)	Front ← 1 → Rear 10F 1 10R	Centre R=F

Lighting (ILL): OPTIONAL

Press button ILL for more than 2 seconds to change the colour of the car radio lighting. The colour changes from green to orange each time the button is pressed.

Loudness button (LD)

When button (16) is pressed for more than 2 seconds, the bass and treble are increased for a better sound at low volume. "LUO" appears on the display when this function is inserted.

VOLUME MEMORIZATION

If button PWR is kept pressed for more than 2 seconds when the car radio is switched on, the volume level of that moment will be memorized. Each time you switch the car radio on, that volume level is automatically presetted.

CD CHANGER OPERATION

If the CD changer is connected as described in sections concerning connection, proceed as follows:

1. Insert a CD in th.B magazine with the sticker upwards.
2. Insert the magazine into the CO changer.
3. Swich the car radio on.
4. Press button CD for more than 2 seconds to enable the CD functions; one of the discs will be automatically reproduced.
5. Press one of the buttons from 1 to 6 to select another CD.
6. Press one of the buttons ♪/⏮/⏭ (forward or review) to select another except of music from the disc being played (Check that the AUTO indicator is not visualized).
7. When one of the ♪/⏮/⏭ buttons is kept pressed, you will obtain the search/listening of a special point of the piece during rewind or forward. As soon as the button is released, reproduction will restart from that point.

Note: Remember that is not possible to listen to a CD when a tape is in. Eject it before listen to a CD.

■ Button RDM

Press for more than 2 seconds to listen to the pieces of a CD in random order. The indicator RDM lights up when the function is inserted.

■ Button RPT (Repeat)

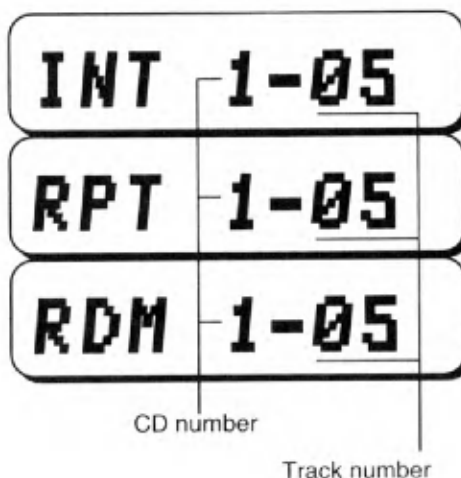
Press this button for more than 2 seconds to repeat a piece of the disc. The indicator RPT lights up when the function is inserted.

■ Button SCN (scan)

Press this button for more than 2 seconds to listen to the first 10 seconds of each piece of the CD being listende to. The indicator INT lights up when the function is inserted.

■ ALL button

Press for more than 2 seconds to extend the Random, Repeat, Scan functions to all the pieces of all the compact discs. The "ALL" indicator appears on the display when this function is activated



LISTENING TO THE RADIO

Basic Operation

1. Press the POWER button to turn the power on.
2. Press the BAND select button to select the desired frequency band.
3. Press the Tuning $\left[\text{F} \right]$ / $\left[\text{M} \right]$ buttons to tune to the desired station.
4. Adjust the Volume and Tone using level up/down($\left[\text{V} \right]$ / $\left[\text{T} \right]$) buttons and Mode button.

NOTE: When the power is on, if a cassette tape is inserted in the cassette compartment, tape playback starts automatically.

Type of search selection

- If the AUTO indicator is lit up on the display, the $\left[\text{F} \right]$ / $\left[\text{M} \right]$ buttons enable automatic search, in increasing or decreasing frequency.
- If the AUTO indicator is not lit up on the display, the $\left[\text{F} \right]$ / $\left[\text{M} \right]$ buttons allow manual search, in increasing or decreasing frequency.
- To switch from manual to automatic, press the two ends of the $\left[\text{F} \right]$ / $\left[\text{M} \right]$ button both together.

Setting the Preset Stations

You can preset a total of 30(24) stations, 18FM, 6MW and 6LW(OPT10NAL) using the 6 Preset buttons. Consequently, by storing the frequencies of broadcast stations

that you listen to offers, you can quickly select the broadcast station you desire.

1. Select the desired band using the BAND select button.
2. Tune to a desired station using Tuning $\left[\text{F} \right]$ / $\left[\text{M} \right]$ buttons.
3. Press one of the Preset buttons (1-6) for more than 2 seconds. The station has now been stored at one of the preset buttons.
4. Repeat steps 2 and 3 for each of the remaining five preset buttons.

Auto-Store (AS)

Six stations in the selected band can be stored automatically.

1. Turn the power ON.
2. Select the desired band of stations to be received.
3. Press AS/PS button for more than 2 seconds, and then this function implements with a beep sound.
4. The selected band is automatically scanned and the 6 strongest stations are stored. Then the preset stations are displayed repeatedly.
5. Press the AS/PS button to stop scanning the preset stations.

How to Perform Preset Scanning (PS)

1. Store a station for each one of 1 to 6 preset buttons.
2. When the AS/PS button is pressed, the preset stations are monitored in sequence for 5 seconds each. The station number is shown in the preset station indicator.
3. When the desired station is received, press the AS/PS button a'gain to stop scanning.

TAPE PLAYBACK

- 1 Turn the power on.
2. Insert a cassette tape with the exposed tape side to the right. If a radio broadcast is being received, cassette playback automatically begins.
3. To reverse tape direction, press the (REW/FF) buttons.
4. The tape direction automatically reverses when the tape end has been reached.
5. To stop playback, press the EJECT button and remove the cassette tape.

NOTE: Load the cassette tape with the exposed side to the right.

EJECT Button

Depress this button to eject a cassette and turn on the radio. Do not turn off the radio when rewinding as the cassette could be damaged. The tape could jam into the mechanism.

Cassette Compartment

Playback starts automatically after a cassette is inserted.

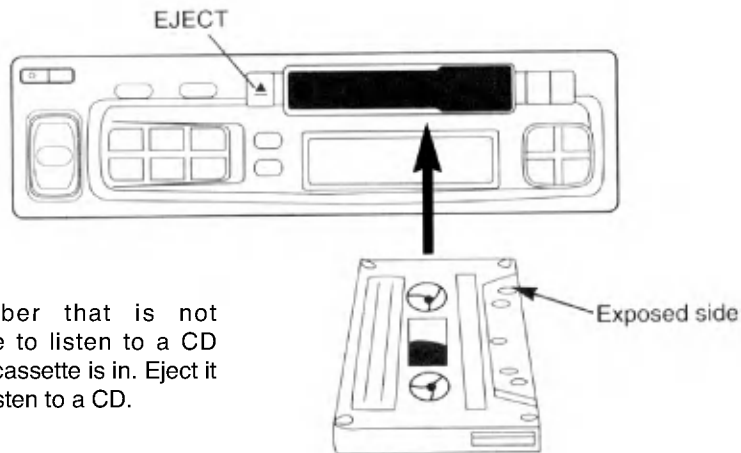


Fig. 15

Note: Remember that it is not possible to listen to a CD when a cassette is in. Eject it before listening to a CD.

Fast Forward/Rewind Direction Buttons

When the car radio reaches the end of one side of cassette, it will automatically reverse, and playback of the other side of cassette will start.

- The REW or FF buttons are for the rewinding and fast forwarding of the cassette (to right or left). At the end of the cassette the motion stops automatically and the playback begins.
- The tape direction buttons (TAPE /TAPE) light on the LCD during the above operations.
- **PROG (REW/FF)**
Tape direction can be reversed at any time by pressing PROG button (REW/FF together).



RDS (Radio Data System)

WHAT IS RDS?

RDS (Radio Data System) is a system which is gradually being introduced in the FM wave band in many countries. It consists of an imperceptible set of data transmitted in addition to the normal radio signal, These data contain various information including indication of the broadcasting station, information on traffic and a list of alternative frequencies for the RDS stations being received.

- The list of alternative frequencies can be examined by the RDS radio to see whether the signal received from another transmitter, for the same station, is better than the one being listened to. In all cases the radio is automatically tuned to the best receivable frequency.
- The greatest advantage offered by the RDS system is an easier tuning into the required station, above all during a long journey. Once tuned into the ROS station, the radio maintains the best possible reception from the station by retuning itself to the alternative frequencies.

Let us get familiar with the RDS codes.

AF = Alternative frequencies of a same broadcasting station.

INFO = Information on road traffic.

TP = Programmes transmitting traffic information.

PI = Identifier code of the RDS broadcasting station.

PTY = Search for particular types of musical or spoken programmes etc. (only in those countries where such function is available).

E.O.N. = Information from other radio broadcasting stations connected (only in those countries where such function is available).

Reception of RDS stations

When driving in areas where the RDS signal is transmitted by various relays of the same radio station, if you are tuned into a RDS station, then by pressing the RDS/INFO button (11) in sequence, you can enable or disable the following functions as you wish:

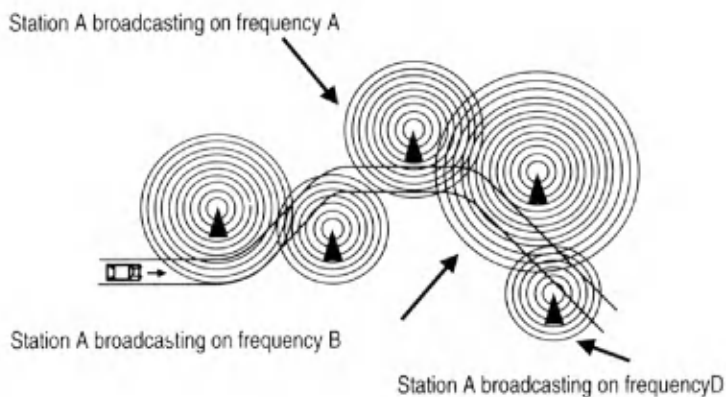
Press -> **AF** enabled, press -> **INFO** enabled, press -> **AF** disabled,

Press -> **INFO** disabled and so on in succession.

In order to make sure that a function is enabled or disabled, merely check on the liquid crystal display whether relative INFO or AF indicator is lit up or not.

- If AF flashes on the display, it means that the car radio is still collecting all the alternative frequencies for that broadcasting station. As soon as the AF indicator stops flashing, the ROS function is fully operative.

- If quality of reception is not good, the car radio automatically switches to another stronger frequency of the same broadcasting station by comparing the AF and PI codes. Hence no matter where you are, you can listen to the same programme without interruption.
- If quality of reception is often impaired, without any alternative frequency being found from among the AF alternative frequencies, there are two possibilities:
 1. After 120 seconds, the message 'SEEK-PI' appears on the display. The car radio will search for the same broadcasting station by comparing the PI codes and ignoring the AF code.
 2. If you do not want to wait for the 120 seconds, you can press the $\text{⏏} / \text{⏏}$ buttons for more than 2 seconds in order to immediately activate the SEEK PI search.
- If not even the "SEEK-PI" search is able to identify a station connectable by means of the PI code, it means that the broadcasting station in question is out of the range of action. Hence you should press the $\text{⏏} / \text{⏏}$ buttons with one touch to activate the "SEARCH" for tuning into a new broadcasting station.



Remarks:

- In certain zones, crowded with radio stations, it could happen that other broadcasting stations are transmitting on the same alternative frequencies of the station being listened to. As the car radio compares all the alternative frequencies until identifying the strongest frequency, it could happen that other broadcasting stations are received for a few seconds during this check. If this nuisance occurs, it is advisable to disable the AF function and/or to tune into another broadcasting station.
- When the chain of transmitters sending the same programme finishes, no RDS system is able to find another frequency of the same programme. In this case, tune to a new station.
- Certain RDS stations do not support the alternative frequencies AF. Normally RDS stations with only one transmission frequency, use the RDS signal only and exclusively to make the name of the broadcasting station to appear on the display. None of the other functions are available.

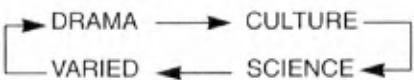
Preset buttons	DISPLAY LCD
1	POP M
2	ROCK M
3	M.O.R.M
4	LIGHT M
5	CLASSICS
6	OTHER M

Musical programmes

Each numeric preset button corresponds to one of the following kinds of music:

Spoken programmes:

Each numeric preset button corresponds to one of the following types of programme:

Preset button	DISPLAY LCD
1	NEWS
2	AFFAIRS
3	INFO
4	SPORT
5	EDUCATE
6	Each time this button is pressed, the wording changes as follows:  <pre> graph TD DRAMA --> CULTURE CULTURE --> SCIENCE SCIENCE --> VARIED VARIED --> DRAMA </pre>

- To disable the PTY function, press the PTY button (12) once more; the indicator PTY disappears.
- When the type of programme you require is unavailable, you will be informed after the search with a double hip.
- The PTY data are transmitted by the broadcasting stations. If the types of programme do not correspond to the above described scheme, the car radio is not to blame, rather it is the broadcasting station at fault.

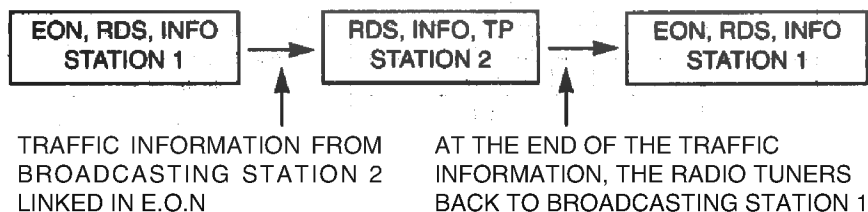
RDS STAT10N TRANSMITTING E.O.N. INFORMATION

(only available in certain countries)

Traffic information from other networks

- If you are tuned into an E.O.N. ROS station, the indicator EON lits up.
- If you wish to hear traffic information from other stations, press button INFO/AF (11) until INFO appears on the display. The two wordings INFO and EON will now appear on the display.
- When a station connected to the EON system transmits traffic information, the radio will automatically tune to that station indicating the station's name. At the end of the information, the radio tunes back to the original station.

“EXample”



Type of programme PTY from other networks

- If you are tuned into an E.O.N.RDS station, the indicator EON lights up.
- When a type of programme is selected by pressing the PTY button (see page 13), the radio will start searching in all the networks connected to EON for that specific type of programme.
- During the search for the type of programme, the indicator PTY flashes and lights up immediately when all the programmes of the same type have been collected in the network selected as occurs in the other networks. The PTY function is now ready for use.
- If the PTY information is not available on the selected station and likewise unavailable in none of the other networks, the radio will inform you with two lips.
In this case, disable function PTY by pressing the PTY button (12).
- Currently the PTY function is only available in certain countries; where it is not available, it must be deactivated.
If you cannot use it at the present moment, you will be able to do so when the radio broadcasting corporations start transmitting PTY information at a later date.

Alternative frequencies from other networks

The list of alternative frequencies of each broadcasting station is also automatically updated through the stations connected in E.O.N.

All the stations which you have memorized on the PRESET buttons, will be updated in each individual case during your journey.

The E.O.N. function allows a quicker identification of the alternative frequencies on all stations connected.

Display of time

When the time data are transmitted, they can be displayed by pressing the DISP button in sequence.

N.B.

- If the station transmits an incorrect time, an incorrect time will appear.
- Certain stations do not have this function. If the time is not received, the message “NO CLOCK” appears on the LCD.

DETACHABLE FRONT PANEL

The front panel of this unit can be detached to prevent theft.

Detaching the Front Panel

1. Shift the RELEASE button to the left in order to release the extractable front panel.

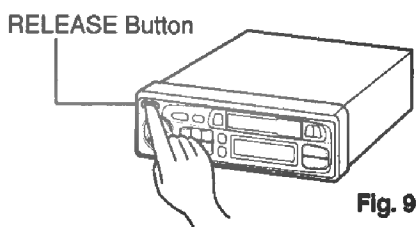


Fig. 9

2. Hold the left part of the front panel and pull it towards you gently.

NOTE: Take care not to put pressure on the display or control buttons, or drop the Front Panel.

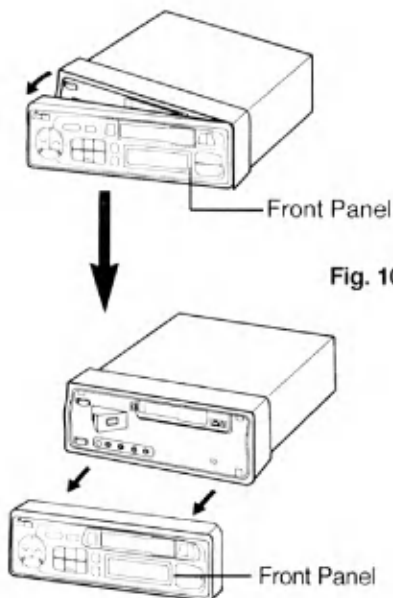


Fig. 10

3. Place the Front Panel in the supplied protective case.

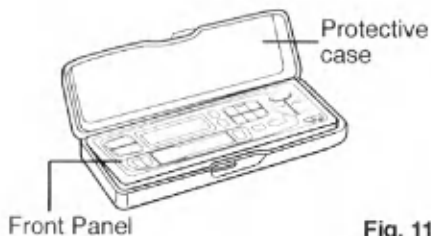


Fig. 11

Attaching the Front Panel

- Push the front panel against the main unit to reattach it.

NOTES:

- When replacing the front panel, do not put pressure on the display or control buttons.
- The control buttons may not work properly if the front panel is not attached properly. If this occurs, gently press the front panel.

Precautions when Handling the Front Panel

- Do not leave the front panel in any area exposed to high temperatures or direct sunlight.
- Do not drop the front panel or otherwise subject it to strong impact.
- Do not allow such volatile agents as benzene, thinner, or insecticides to come into contact with the surface of the front panel.
- Never try to disassemble the front panel.

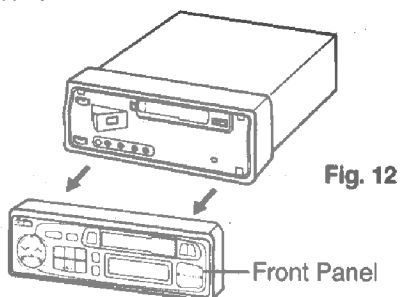


Fig. 12

Specifications

■ Tape Player

Tape Drive System	Full Auto Reverse
Tape Speed	4.75 cm/sec.
Wow/Flutter	0.35% (WRMS)
S/N Ratio	50 dB
Frequency Response	40-14,000 Hz

■ Tuner

FM

Frequency Range	65.0-74.0 MHz,87.5-108 MHz
S/N Ratio	60 dB
Distortion (T.H.D.0.5W)	1%
Channel Separation	30 dB

AM(MW)

Frequency Range	522-1,620 Hz (OPTIONAL` 520-1,720 kHz /520-1,620 kHz)
S/N Ratio	45 dB
Distortion (T.H.D.0.5W)	1%
AGC	70 dB

LW(OPTIONAL)

Frequency Range	144`128 kHz
S/N Ratio	45 dB
Distortion (T.H.D.0.5W)	1%











■ General

Output Power	4 × 25W (Max.)
Power Source	DC 12-15V
Speaker Impedance	4 × 4
Ground System	Negative
Dimension (W x H x D)	183 × 53 × 154 mm
Weight	1.6 kg

Note: Due to continuous improvements, the features and designs are subject to change without notice.

ERROR INDICAT10N (with CD changer connected)

To ensure years of listening pleasure, electronic safeguards have been built into CD player. These safeguards appear as messages on the display and indicate the following.

	Cause
	- Solution
 E-01	E1 - Loader not present - Press the Eject button and/or Reset, then try again.
 E-02	E2 - The loader is not ejected. - Press the Eject button and/or Reset, then try again.
 E-03	E3 - Loading is not complete within 8 sec - Consult your dealer.
 E-04	E4 - The ejection is not complete within 8 seconds - Press the Eject button and/or Reset, then try again.
 E-05	E5 - The CD lifter does not move. Consult your dealer.
 E-06	E6 - The player (pick-up) does not move within 8 seconds - Consult your dealer.
 E-07	E7 - The focus does not take place within 3 seconds - Consult your dealer.
 E-08	E8 - The CD does not turn at proper speed - Press the Eject button and try again.
 E-09	E9 - The playback is not coupled within 8 seconds - Press the Eject button and try again.
 E-10	E10 - Use is not possible owing to high temperature. - Wait for the temperature to become steady.