USER MANUAL

**AM/FM MP3/CD Player with
3.5mm AUX Audio Input**
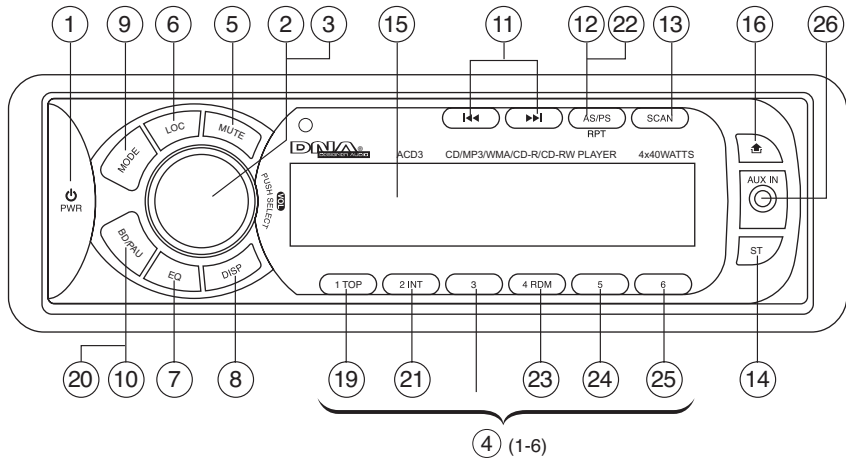
ACD3

LOCATIONS OF CONTROLS

1. POWER ON/OFF (⏻)
2. FUNCTION SELECT BUTTON: BASS/TREBLE/BALANCE/FADER / AUDIO DSP/
   LOUDNESS/CD MULTI/SCROLL/BEEP/STEREO/LOCAL
3. VOL UP/VOL DOWN FOR BASS/TREBLE/BALANCE/FADER / AUDIO DSP/LOUDNESS/CD
   MULTI/SCROLL/BEEP/STEREO/LOCAL
4. PRESET STATIONS (1,2,3,4,5,6)
5. MUTE BUTTON (MU)
6. LOCAL/DISTANT BUTTON (LOC)
7. EQUALIZER CONTROL (EQ)
8. DISPLAY BUTTON (DISP)
9. MODE BUTTON (MODE)
10. BAND BUTTON (BD)
11. AUTOMATIC OR MANUAL TUNING
    (FREQ UP ▶▶| OR FREQ DOWN |◀◀) /
    CD TRACK/SEARCH BUTTON
12. AUTO SEEK SEARCH TUNING (AS/PS)
13. 'SCAN' AUTOMATIC TUNING CONTROL (SCAN)
14. STEREO/MONO SELECTOR (ST)
15. ACTIVE MATRIX DISPLAY
16. PANEL RELEASE BUTTON (▲)
17. CD SLOT
18. CD EJECT BUTTON (▲)
19. TOP BUTTON
20. PAUSE BUTTON
21. INTRO BUTTON (Preview all Tracks)
22. REPEAT BUTTON
23. RANDOM BUTTON
24, 25. 10 TRACK SEARCH DOWN/UP
26. AUX IN
27. RESET BUTTON
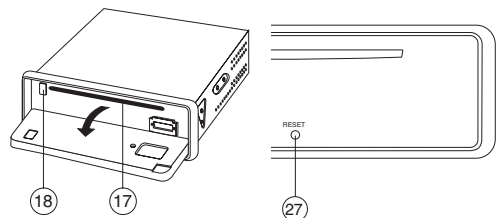
INSTALLATION

PRECAUTIONS
- Choose the mounting location carefully so that the unit will not interfere with the normal driving functions of the driver.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for a safe and secure installation.
- Be sure to remove the front panel before installing the unit.

NOTE: Inclination angle for car radio installation must not exceed 30˚ otherwise the front panel will not open.

1 release screw and bracket 3

2

2 182mm 53mm

3 TAP Bend these claws, if necessary

4
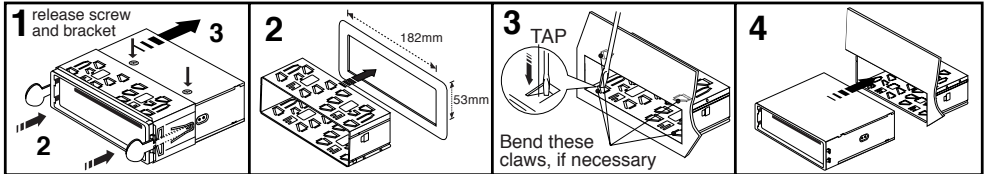
NOTE: Keep the release key in a safe place as you may need it in the future to remove the unit from the car.

# TO SUPPORT THE UNIT
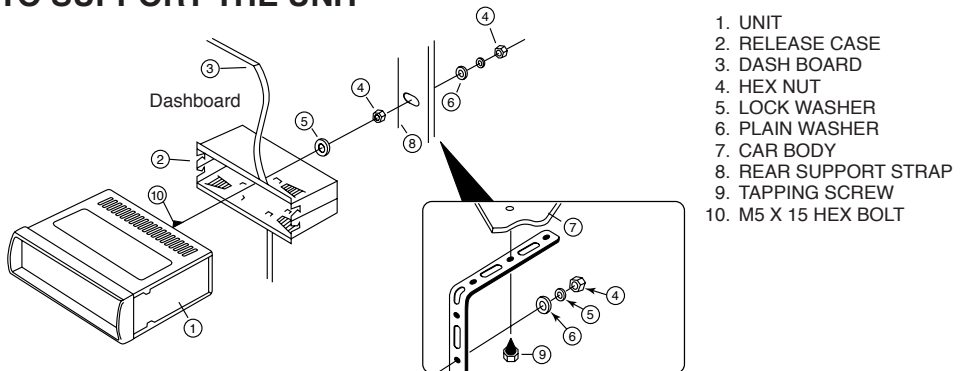
Dashboard

1. UNIT
2. RELEASE CASE
3. DASH BOARD
4. HEX NUT
5. LOCK WASHER
6. PLAIN WASHER
7. CAR BODY
8. REAR SUPPORT STRAP
9. TAPPING SCREW
10. M5 X 15 HEX BOLT

Detaching and attaching the front panel
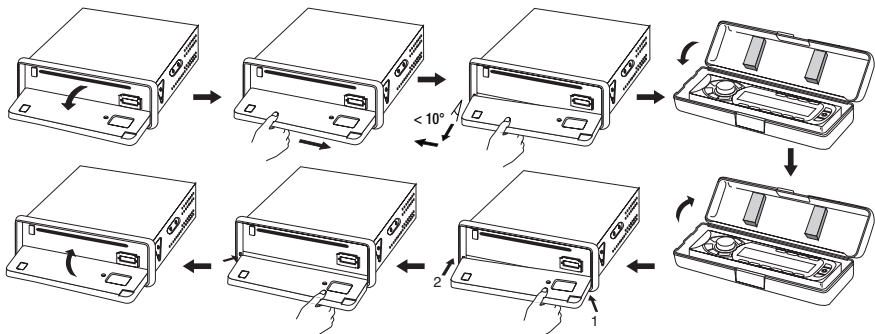The front panel of this unit can be detached in order to prevent the unit from being stolen.

FOLDING DOWN AND DETACHING/ATTACHING THE FRONT PANEL
Before detaching the front panel, be sure to press the ⏻ button (1) to OFF first.
Then press the ⬆ button (16), let the Front Panel arrive in horizontal position and detach the panel by pulling it towards you as illustrated.


< 10°

2

1

Notes:
- Do not press the front panel hard against the unit when attaching it. It can be easily attached by pressing it lightly against the unit.
- When you carry the front panel with you, put it in the supplied front panel case.
- Do not press hard or give excessive pressure to the display window of the front panel when attaching it to the unit.

CLEANING THE CONNECTOR

The unit may not function properly if the connectors between the unit and the front panel are contaminated with dirt. In order to prevent this from happening, detach the front panel by pressing the ⏏ button and clean the connector from time to time.

Clean the connector with a cotton swab together with contact cleaner as illustrated. Be sure to clean them carefully pin by pin and make sure not to damage the connecting points.
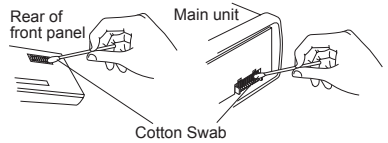
ELECTRICAL WIRE CONNECTIONS

RCA Line Out: Red (right) White (left)

CONNECTOR A
4. MEMORY +12V
5. AUTO ANTENNA OUTPUT
6. DIMMER CONTROL
7. +12V (TO IGNITION KEY)
8. GROUND

Note: (connector A no. 7) must be connected by car ignition key in order to avoid that car battery being drained when the car will be not used for long period.

CONNECTOR B
1. REAR RIGHT SPEAKER (+)
2. REAR RIGHT SPEAKER (-)
3. FRONT RIGHT SPEAKER (+)
4. FRONT RIGHT SPEAKER (-)
5. FRONT LEFT SPEAKER (+)
6. FRONT LEFT SPEAKER (-)
7. REAR LEFT SPEAKER (+)
8. REAR LEFT SPEAKER (-)
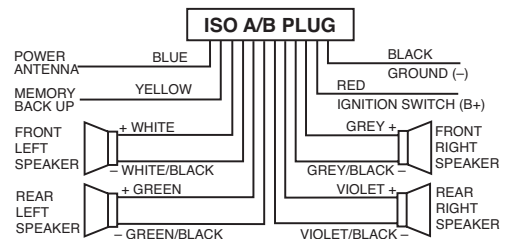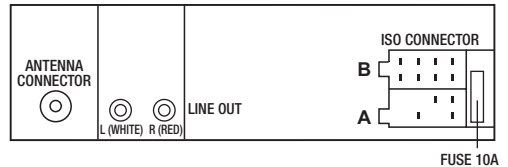
Maintenance
FUSE REPLACEMENT
If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after the replacement, there may be an internal malfunction. In this case, consult your nearest repair center.
Warning
Use the specified amperage fuse for each lead. Use of a higher amperage fuse may cause serious damage.

OPERATION

Basic operation

POWER ON/OFF (⏻)
By pressing ⏻ , the unit is switched on and off. This unit is turned on by pressing any key.

Volume
Turning **VOL** knob (right/left) to increase or decrease the volume.

Attention!
Always set the volume to a level that will allow you, at any time, to clearly hear acoustical signals from emergency service vehicles!

Bass/Treble/Balance/Fader
Turning **VOL** knob (right/left) to adjust VOL/BAS/TRE/BAL/FAD. To select other functions, press the **VOL** knob shortly until the desired functions are shown on the display. Figure 1 shows how to control functions that are selected using the **VOL** knob.
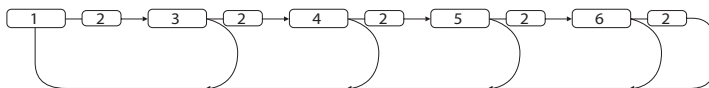

Fig. 1 Selection of sound control functions

1. VOL   2. SEL   3. BASS   4. TRE   5. BAL   6. FAD

Increase or decrease the volume by turning **VOL knob** (right/left). These buttons can be used to adjust the BASS, TREBLE, BALANCE and FADER.

MUTE (MU)
Press **MU** button to mute the sound at once. Press again to return to previous volume level.

EQUALIZER CONTROL (EQ)
Press **EQ** to select between Off/Pop/Rock/Classic/Flat equalizer modes.

DISPLAY (Set the Clock) (DISP)
Selects radio frequency or clock display.
To set the clock:
1. With clock display selected, hold down **DISP** button until clock display starts flashing.
2. Rotate (VOL) to change minutes, (VOL) to change hours.
3. Press **DISP** button to start clock.

Display (DISP)
Press **DISP** button to switch between display informations such as radio frequencies, clock, track and other informations depending on the playing MODE.

Setting the operating mode (MODE)
Press the **MODE** button to switch between radio reception (frequency indicator), CD/MP3 operation (CD) and audio input (AUX).

RESET - Reset the radio
- To reset the car radio to its factory default settings press the RESET button with a pointed object, for example a ball point pen.
- Reset the car radio: - at initial operation,
                                    - after the cable connection,
- If not all function buttons are working.
- When an error message appears in the display.

RESET
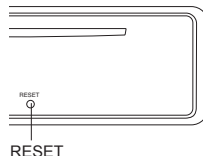
Settings for the multi controller
Via the **VOL** knob you can, in addition, administer settings for the switch on Audio DSP / Loudness / CD Multi / Scroll / Beep / Stereo / Local.
- Hold down the **VOL** knob for approx. 2 seconds and then press it several times to access the following settings:

AUDIO DSP CONTROLS (2)
Press the VOL knob (for more than 2 seconds) to activate Selecting mode for DSP:

2 sec.
`SEL` → `DSP` → (VOL) → `POP --- ROCK --- CLASSIC --- FLAT --- DSP OFF`

LOUDNESS CONTROLS (2)
Press the VOL knob again (for more than 2 seconds) to activate Selecting mode for Loudness Controls:

2 sec.
`SEL` → `DSP` → `SEL` → `LOUD` → (VOL) → `LOUD ON/OFF`

LOUD ON/OFF mode is selected by (VOL) or (VOL) . The bass and treble response will be boosted.

MULTI CD SECTION MODE (2)
Press the VOL knob again (for more than 2 seconds) to activate Selecting mode for MULTI CD Controls:

2 sec.
`SEL` → `DSP` → `SEL` → `LOUD` → `SEL` → `MULT` → (VOL) → `MULT ON/OFF`

CD MULTI ON/OFF mode is selected by (VOL) or (VOL) . CD MULTI ON: Read multi-section CD. CD MULTI OFF: Read first section only.

SCROLL MODE
Press the VOL knob again (for more than 2 seconds) to activate Selecting mode for SCROLL:

2 sec.
`SEL` → `DSP` → `SEL` → `LOUD` → `SEL` → `MULT` → `SEL` → `SCROLL` → (VOL) → `SCROLL 1/2`

SCROLL 1: Unit displays song details but no text scrolling.
SCROLL 2: Unit displays song details and scrolls the text information to the left.

BEEP MODE (2)
Press the VOL knob again (for more than 2 seconds) to activate Selecting mode for BEEP:

2 sec.
`SEL` → `DSP` → `SEL` → `LOUD` → `SEL` → `MULT` → `SEL` → `SCROLL` → `SEL` → `BEEP` → (VOL) → `BEEP ON/OFF`

BEEP ON: BEEP sound be heard from speaker when the buttons are pressed.

STEREO/MONO (2)
Press the VOL knob again (for more than 2 seconds) to activate Selecting mode for Stereo/Mono:

2 sec.
`SEL` → `DSP` → `SEL` → `LOUD` → `SEL` → `MULT` → `SEL` → `SCROLL` → `SEL` → `BEEP` → `SEL` → `STEREO` → (VOL) → `STEREO ON/OFF`

When FM signals are weak or disrupted, select MONO mode to improve listening.

LOCAL/DX (2)
Press the VOL knob again (for more than 2 seconds) to activate Selecting mode for Local/DX:

2 sec.
`SEL` → `DSP` → `SEL` → `LOUD` → `SEL` → `MULT` → `SEL` → `SCROLL` → `SEL` → `BEEP` → `SEL` → `STEREO` → `SEL` → `LOCAL` → (VOL) → `DX/LOCAL`

Select "Local" position in areas with strong signals to let radio stop at only strong stations during manual tuning (LOC appears). Select Distant Position (DX) in areas with weak signals to listen to all stations.

Radio functions

Selecting the band range (BD/PAU)
Press the **BD/PAU** button to switch between (FM1, FM2, FM3, AM1, AM2)

Automatic or manual tuning (freq. up ▶▶ or freq. down ◀◀)
• When pressed for less than 1 second, these keys operate as Manual Tuning mode.
• When pressed longer than 1 second, they operate as SEEK tuning mode.
• If the keys are not pressed for 3 seconds, they will return to SEEK mode.

Programming stations
• Press the **BD/PAU** button to set a band range. In each range you can save six stations.
• Search for the station that you want to save.
• After the search has found a station press one of the station buttons 1-6 for approx. three seconds.
The brief switching off of the sound indicates that the station is saved. The device switches back to radio playback after a few seconds.

Accessing the station
• Select with **BD/PAU** the band range.
• By pressing one of the (**station 1-6)** buttons you access the saved station again.

AUTOMATICALLY STORE STATIONS (AS/PS)
Select six strong stations and store them in current band.
• Select a band (if needed)
• Hold **AS/PS** button for more than three seconds. The new stations replace stations already stored in that band.

Preset Scan
Scan stations stored in current band
• Select a band (if needed)
• Hold **AS/PS** for more than one second but less than three seconds. Radio pauses for five seconds at each station. Press **AS/PS** again to stop scanning when desired station is reached.

'SCAN' AUTOMATIC TUNING CONTROL (SCAN)
This key operates RADIO SCAN. The operation is similar to normal search but holds 5 seconds on every station detected in RADIO SCAN mode.

Select Stereo/mono (ST)
This function will only affect the FM reception. Press **ST** button if the FM reception becomes noisy/hissy. If the station being received is in stereo, it will now be played in mono. Press this button again to return the receiver to normal reception.

Select local/distant (LOC)
Press **LOC** button for listening to strong stations. "LOC ON" indicator will appear on the display. Press this button again (Distant mode) for normal operation.

Playing audio CDs

ASP "Anti shock protection"
The device is equipped with an anti shock function. This function serves to compensate for vibrations, for example on uneven streets, and to provide an uninterupted playback even with device movement. When the device is switched on the memory automatically fills with data:
• *with audio CDs for 10 seconds;*
• *with MP3-CDs for 120 seconds.*

Further information for CD operation
Dampness and high humidity can cause the CD player to malfunction. In this case switch on the vehicle heating to dissipate the dampness before using the device. Do not subject the CD player to any extreemly high or low temperatures.

Inserting and removing CDs
• Press ⏏ button and the front panel will open. Carefully slide the CD or CD-R or CD-RW through the CD slot into the CD compartment. The CD starts playing automatically.
• To remove the CD open the face plate again. Press the ⏏ button. The CD will be ejected. The car radio switches to radio mode.

Attention!
Do not drive with an ejected CD. Immediately remove the CD from the CD slot.
If an ejected CD is not removed within approx. 5 seconds the device will draw it back in, however playback of the CD will not start.

Title skip
By means of the button ▶▶ or ◀◀ you can select the next and/or the previous title. The title number will be shown in the display.

Fast forward/backward
Hold down the buttons ▶▶ or ◀◀ longer to start fast forward or backward.

Playing the song (TOP)
Press **TOP** to play first track.

Stopping a CD
You can stop the playback with the **PAU** button. To continue playback press the **PAU** button once more.

Repeating a title
• Press the **RPT** button. 'RPT' indication is displayed and the selected track will be continually repeated until the Track Repeat mode is cancelled by pressing 'RPT' button again.

Title sampling
• Press the **INT** button. In the display INT will be shown. Appox. 10 seconds from all titles will playback one after the other. A repeat pressing launches the normal playback.

Random playback of all titles
• Press the **RDM** button. In the display RDM is shown. A random controlled playback is started. A repeat pressing launches the normal playback.

Playing MP3-CDs

The basic functions correspond to those of the audio CDs (see previous chapter). However with MP3-CDs you can select the titles and the interpreters directly. These functions and the other MP3 specific functions are definitivly dependent on the MP3-CD. Please bear this in mind when creating these CDs (see the next section).

All conventional codings can be played back. TITLE > INTERPRET > ALBUM NAME > RELEASE YEAR > COMMENTARY.

Note: Creation of MP3-CDs; ID3TAGs
MP3-CDs like data CDs can contain individual titles or directories. Please bear in mind with the creation of an MP3-CD that you do not save titles on the same level as directories but rather only in the directory. A mixture of titles and directories on the same level can result in problems when playing back. With the creation of the MP3 file you can also save the so called "ID3 tag" (for input we recommend an ID3 tag editor). This is a block of information that is contained in the MP3 file. This can be, for example, information about the interpreters, titles, album name, release year and a short commentary. The car radio can read this block of information and show it in the display.

Searching Track:
- Press and hold "AS/PS" to activate Search Track mode.
- Press "VOL" knob. The first digit will flash.
- Rotate "VOL" knob to right or left to select first digit desired.
- Press "VOL" knob. The first digit is fixed and second digit will flash.
- Rotate "VOL" knob to right or left to select second and third digits respectively.
- The selected song will start automatically.

Searching Character:
- Press and hold "AS/PS". Press "AS/PS" again to activate Character Search mode.
- Press "VOL" knob. "A" is displayed.
- Rotate "VOL" knob to right or left to select the desired letter.
- Press "VOL" knob longer than 2 sec.
- Songs with the same character you selected are displayed.
- Rotate "VOL" knob to right or left to select the desired song.
- Press "VOL" knob and the selected song will start.

Searching File Name:
- Press and hold "AS/PS". Press "AS/PS" again to activate Directory Search mode.
- Press "VOL" knob. The first directory is displayed.
- Rotate "VOL" knob to right or left to select the desired directory.
- Press "VOL" knob again. The directory is fixed and the first file name is displayed.
- Rotary "VOL" knob to right or left to select the file you want.
- Press "VOL" knob and the selected song will start.

Playback of the 10 TRACK UP/DOWN SELECT
- Press the **station button 6** to playback the 10 Track up and/or the **station button 5** to playback the 10 Track down.

Note: WMA files
The device can also play WMA files. The operation functions exactly the same as for MP3 files.

Front AUX IN

Convenient easy to use front "AUX IN" input jack, allows easy connection of Portable Media and digital MP3 Players.

Replacing the fuse

The car radio is equipped with a 10 A fuse on the rear panel, which blows if a voltage peak or a short circuit should occur.
- In this case replace the fuse with one of equal value and of the same type as listed in the technical data with the same trip characteristics.
- Before switching the car radio on again remedy the cause of the fuse burnout.

Troubleshooting

The device will not switch on
The ignition is not switched on
- Switch the ignition on by turning the key. One of the fuses is defective.
- Replace the fuse.

The CD will not load or eject
A CD is already inserted into the car radio.
- Remove the CD.

The CD has been inserted the wrong way up.
- Insert the CD with the inscripted side up.

The CD is dirty or defective.
- Clean the CD or insert a different CD.

The temperature in the vehicle is too high.
- Wait until the surrounding temperature has normalized.

Condensation on the laser lens
- Switch the car radio off for a few hours and then try it again.

No sound
The volume is set to minimum.
- Increase the volume.
The cables are not connected correctly.
- Check the cable connections.

Function buttons are not functioning
There is a malfunction with the device.
- Press the RESET button.
The face plate is not correctly installed.
- Check to see that the face plate is installed correctly.

The CD jumps
The mounting angle exceeds 30°.
- Correct the mounting angle.
The CD is very dirty or defective.
- Clean the CD or insert a different CD.

Failure with burnt CDs
Check the burnt CD in another playback device.

The radio and/or the automatic station memory is not functioning
The antenna cable is not connected correctly.
- Check the antenna cable for correct connection.
The station signals are too weak.
- Set the station manually.

Station memory is not functioning
The connection 6 in the ISO block A (Permanent positive) is not connected correctly.
- Check the cable connections.
For this consult the chapter "Connections".

Cleaning

Clean the housing exclusively with a soft damp cloth and a mild detergent. Ensure that moisture cannot permeate into the device during cleaning!

Warning!
Moisture penetrating into the device creates the risk of electric shock! Besides which, the sdevice could become irreparably damaged!

TECHNICAL SPECIFICATIONS

CD/MP3/WMA PLAYER SECTION
Signal to Noise Ratio	> 60 dB
Channel Separation	> 50 dB (1kHz)
Frequency Response	20Hz - 20 kHz

TUNER (FM)
Frequency Range	87.5-108 MHz
Intermediate Frequency	150 KHz
Sensitivity	2.8 µV
Stereo Separation	37 dB
Signal to Noise Ratio	> 50 dB
Channel Step	100 kHz

TUNER (AM)
Frequency Range	522-1710 KHz
Intermediate Frequency	25 KHz
Usable Sensitivity	32 dB

LINE-OUT
Output	1.5V (max.)
Impedance	10k Ohm

GENERAL
Power Supply	12V DC (10.8-15.6V allowable)
Speaker Impedance	4 or 8 ohm
Output Power	40W x 4CH

Note: Specifications and the design are subject to possible modification without notice due to improvement.