

Clarion

User's Manual

**RADIO AM/FM/CD PLAYING/
MP3/WMA/AUX-IN/USB/
iPod® CONTROLLER/
BLUETOOTH**

**BEFORE USING YOUR AUDIO
EQUIPMENT, PLEASE READ
THIS MANUAL**



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1.- FUNCTIONS

TUNE

- Memory buttons 12 AM and 18 FM
- Search tuning, ascending or descending way of band

AUDIO

- Electronic audio controls
- Bass and treble controls
- Balance control 4 way
- Loudness
- 3 modes of pre-equalization

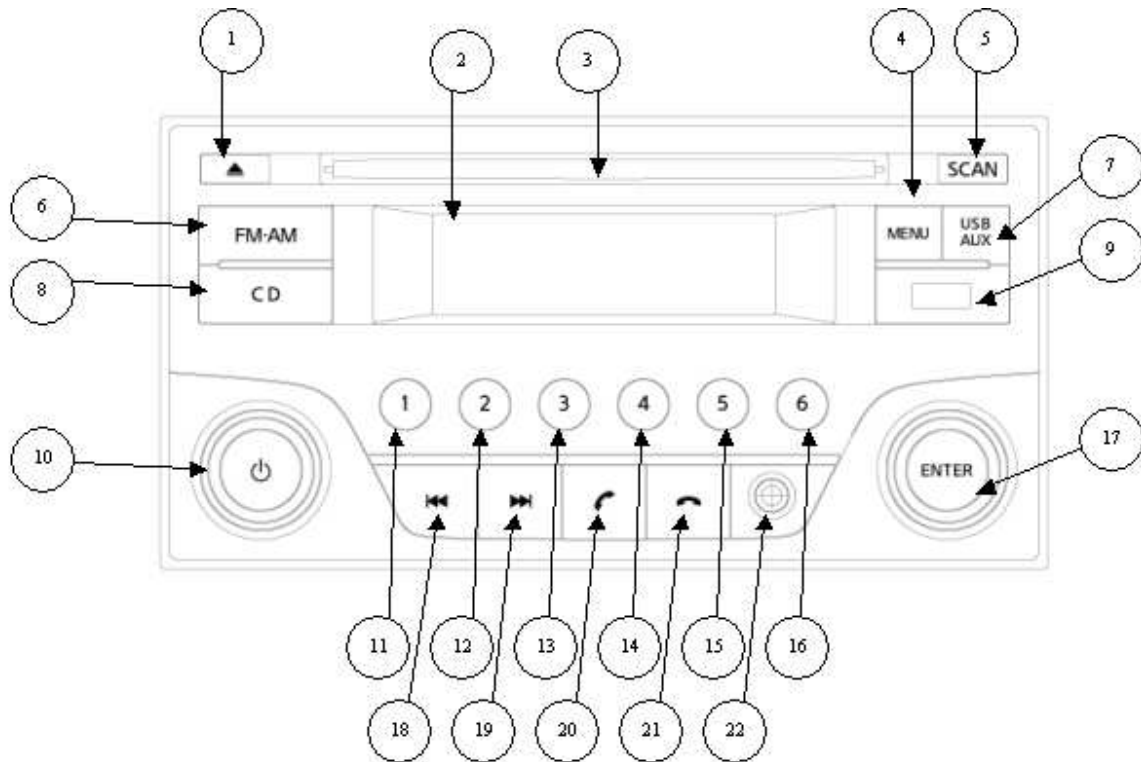
CD PLAYER

- Repeat control
- MP3/WMA searching control
- Forward and Backward
- Random Control function

GENERAL

- Full dot matrix information
- Mode selector Radio/CD/AUX/USB/iPod/BT
- Night illumination reddish orange

2.- OPERATION



3.- QUICK BUTTONS DESCRIPTION

- 1.- CD eject button, if it is loaded inside the unit.
- 2.- LCD digital display, full dot matrix type for display information.
- 3.- Insertion and ejection CD.
- 4.- MENU button active different functions.
- 5.- SCAN, scanning button of station in radio mode and tracks in CD & USB mode.
- 6.- FM/AM selector band frequencies on radio mode.
- 7.- USB/AUX selection button mode USB, AUX, BT AUDIO.
- 8.- CD selection button mode CD.
- 9.- USB input devices input playback and WMA, MP3 and AAC (M4A) files control and also for iPod connection.
- 10.- PWR VOL, On-Off button, second functions and knob volume.
- 11.- 1, Memory button 1 and INF of station AM and FM radio mode and show ID3 information track playing in CD, USB, iPod, BT.
- 12.- 2, Memory button 2 and REPEAT of station AM and FM radio mode and track repeat in CD, USB, iPod mode.
- 13.- 3, Memory button 3 and RANDOM of station AM and FM radio mode and random play track in CD, USB, iPod mode.
- 14.- 4, Memory button 4 of station AM and FM radio mode.
- 15.- 5, Memory button 5 and iPod MENU of station AM and FM radio mode and enter iPod menu.

- 16.- 6, Memory button 6 and BACK of station AM and FM radio mode and BACK menu from iPod.
- 17.- ENTER, FOLDER: Manual change knob of tuning in radio mode and folder change on CD & USB mode.
- 18.- SEEK DOWN: Automatic descending search button of station in radio mode and descending track change in, CD, USB, iPod, BT audio.
- 19.- SEEK UP: Automatic ascending search button of station in radio mode and ascending track change in, CD, USB, iPod, BT audio.
- 20.- CALL: answer call button, pairing BT device, transfer to private mode and make cell phone call with BT connection.
- 21.- HANG: end call button and disconnect BT device.
- 22.- AUX IN: Auxiliary input for playing audio signals from devices such as iPod, MP3 player.

4.-AUDIO SETTINGS

POWER ON – OFF, VOL KNOB.

Push **POWER** knob to turn on and off the unit. Turn right and left to adjust volume level: the minimum 0 and maximum 40, after 5 seconds of the last adjustment, the volume indication in the display will return to the previous mode.

Comfortable turn on function

To protect your ears and speakers, this equipment is designed so when you turn on and previously has been listening at high volume the unit turn an to a comfortable level.

SELECTING AUDIO TUNING TUNE BUTTON 4

Push **MENU** button, every time this button is pushed, on display indicate each audio adjustment mode in the following sequence *BASS, TREBLE, FADER, BALANCE, EQ MODE, LOUD, BEEP, SPEED VOL, AUX VOL, CONTRAST, CLOCK* and whether exist devices bluetooth paired appears *BT AUDIO, CONNECT TO, DELETE TO*.

Adjusting bass

Adjust bass level, push **MENU** button until the display indicated BASS legend, turn the knob **ENTER** to left or right to adjust level desired. The level bass indicated on display minimum -5 and maximum +5, the display return automatically after 5 seconds last adjustment.

Adjusting treble

Adjust treble level, push **MENU** button until the display indicated TREBLE legend, turn the knob **ENTER** to left or right to adjust level desired. The level treble indicated on display minimum -5 and maximum +5, the display return automatically after 5 seconds last adjustment.

Adjusting fader

Adjust fader level, push **MENU** button until the display indicated FADER legend, turn the knob **ENTER** to left or right to adjust level desired. The level fader indicated on display R5 and F5, the display return automatically after 5 seconds last adjustment.

Adjusting balance

Adjust balance level, push **MENU** button until the display indicated BALANCE legend, turn the knob **ENTER** to left or right to adjust level desired. The level balance indicated on display R5 and L5, the display return automatically after 5 seconds last adjustment.

Adjusting equalizer mode

Adjust balance equalizer, push **MENU** button until the display indicated *EQ MODE* legend, turn the knob **ENTER** to left or right to adjust equalizer desired. The option available are *EQ OFF*, *JAZZ*, *CLASSIC*, *ROCK* the display return automatically after 5 seconds last adjustment.

Adjusting loudness

When your are listening to music at low volume level, this feature will enhance the bass and treble response to compensate the characteristics of human hearing.

Push **MENU** button until the display indicated *LOUD*, turn the knob **ENTER** to left or right to adjust ON or OFF, after 5 seconds of the last adjustment, in the display will return to the previous mode.

Adjusting beep tone

This option let hear beep tone of buttons.

Push **MENU** button until the display indicated *BEEP*, turn the knob **ENTER** to left or right to adjust beep on or beep off, after 5 seconds of the last adjustment, in the display will return to the previous mode.

Adjusting Speed Vol

This option let increase or decrease volume level according speed car.

Push button menu the display indicated *SPEED VOL*, turn the knob **ENTER** to left or right to adjust **off, slow, mid or high**, after 5 seconds of the last adjustment, in the display will return to the previous mode.

Adjusting Aux Vol

This option let increase or decrease volume level from external devices.

Push **MENU** button until the display indicated *AUX VOL*, turn the knob **ENTER** to left or right to adjust volume desired, the options are 0 - +3. after 5 seconds of the last adjustment, in the display will return to the previous mode

Adjusting contrast

This option let increase or decrease contrast LCD.

Push **MENU** button until the display indicated *CONTRAST* turn the knob **ENTER** to left or right to adjust contrast desired, the options are contrast 0 – contrast 4, after 5 seconds of the last adjustment, in the display will return to the previous mode.

Adjusting clock

This option let see the time clock in principal LCD

Push **MENU** button the display indicated *CLOCK* turn the knob **ENTER** to left or right to clock on or clock off, after 5 seconds of the last adjustment, in the display will return to the previous mode.

If you want to adjust the clock hour

Push **MENU** button until the display indicated *CLOCK ADJ*, turn knob **ENTER** to Left or right to access option adjust no or adjust yes.

In option adjust yes push **MENU** button press **◀** or **▶** button to select item(minutes, hours) and turn knob **ENTER** to select desired.

THE NEXT ITEM ON MENU ARE POSSIBLE WHEN EXIST BLUETOOTH DEVICES PAIRED.

Adjusting bluetooth

This option is possible while exist bluetooth devices connected.

Let choice if want hear de audio bluetooth without remove volume that set main menu.

Push **MENU** button until *BLUETOOTH* is displayed on LCD, turn the knob **ENTER** and push in order to selection.

BT volume

This feature let have control volume at time that call is present.

Push **MENU** button until BT volume is displayed.

Turn the knob **ENTER** in order to choice level volume desired from 0 to 40.

BT connected to

This function let see the bluetooth devices that have been connected.

Push **MENU** button until to legend *BLUETOOTH CONNECT TO* is displayed on LCD, turn the knob **ENTER** in order to select device which want connect again and press enter button.

Note: in order to make possible this action is necessary that the devices have been paired previously

BT delete

This function let remove the devices connected.

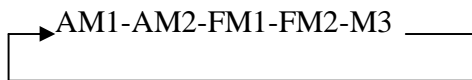
Push **MENU** button until to legend *BLUETOOTH DELETE* is displayed, turn the knob **ENTER** in order to select device which desire delete and press enter button.

5.-RADIO OPERATION

Tuning band selection

For manufactured adjusting the unit turn on in AM1 radio mode, this unit has available 3 FM and 2 AM bands with the ability to save in each 6 stations as tuned, to select and listen when you need it, see memorizing radio stations.

The tuning band changes each time that you press the **FM°AM** button on it you can select the desired band, the display will show the band change, these changes are in the band as following order



Manual search(descending/ascending) radio stations on AM and FM

To manual tune radio station turn the knob **TUNE** to right to select ascending and to the left for select descending the desires radio station.

Automatic search(descending/ascending) radio stations on AM and FM

In radio mode, you can do an automatic search for stations by pushing buttons **◀◀** and **▶▶**, the unit will seek the strongest available, it will automatically search in descending pushing button **◀◀** and ascending pushing button **▶▶** within band selected.

Frequency scanning, SCAN button

Push **SCAN** button to activate SCAN function, the SCAN icon will appear in the display, with this function activated each frequency with strong signal will be played 10 seconds, push this button again to disable this function.

Frequency scanning, SCAN AUTO SAVE

Push **SCAN** button above 2 seconds to activate *AUTOSAVE* function with this function activated each frequency with strong signal will be played 5 seconds and will be saved in the memories available according the in order detection. finally is played in the first station saved in memory 1.

Preset channel calling / memory function

Preset channel calling/memory has the function of storing or calling the received frequency in the preset channel.

Preset channel calling conditions.

When the preset channel button (**1~6**) is short-pressed (under 2 sec.), the stored frequency in the channel is received .

Preset channel memory conditions.

When the preset channel button (**1~6**) is long-pressed (2 sec. or more), a BEEP sound shall be output and the receiving frequency is stored in the channel.

6.-MP3, WMA & AAC (M4A) FILE OPERATION

This section describes the available commands on your unit to play control of MP3, WMA and AAC (M4A), which are available in both CD; USB; iPod devices and BT audio connection.

Seek down and rewind track.

If push button **⏮** when the progress of the current track has not elapsed the first 3 seconds of play, the recoil will be made to the previous track, but if you press the button **⏮** after 3 seconds of play will recoil at the beginning of the track being played.

Fast rewind in same track.

The high speed playing can be activated when keeping pushed the button **⏮** so is possible rewind the playing in same track.

Seek up and forward track

Push button **⏭** in order to pass the next track.

Fast forward in same track

The high speed playing can be activated when keeping pushed the button **⏭** so is possible forward the playing in same track.

Seek up next folder

Turn right the **ENTER** knob for play the next folder.

Seek down previous folder

Turn left the knob **ENTER** for play the previous folder

REPEAT

During playing MP3, WMA or AAC if **RPT** button is pushed the reproduction will be play aleatory form on disc complete, if **RPT** button is pushed again the reproduction will be play only on actual folder.

RANDOM

During playing MP3 WMA or AAC **RDM** button is pushed the reproduction will be play aleatory form on disc complete, if **RDM** button is pushed again the reproduction will be play only on actual folder.

SCAN

Push **SCAN** button to activate SCAN function, the SCAN icon will appear in the display, with this function activated the tracks be played first 10 seconds automatically change next track, if **SCAN** button is pushed again, the function SCAN is disabled.

HOW TO ASSIGN FOLDER No. AND FILE No. OF MP3/WMA AND PLAY SEQUENCE

1. Assign No. 1 to the ROOT folder.
2. Assign No. 2 to the folder which is one level below ROOT in the folder hierarchy.
3. Assign a number to the child folder of the folder No. 2. (The first child folder: No. 3) Assign numbers to the child folders in order of hierarchy level.
4. Assign a number to the brother folder of the folder No. 2. Assign numbers to the child folders of the brother folders.

Even if a folder does not include MP3/WMA files, assign a folder number.

The structure may differ from tree structure displayed by Explorer, etc., depending on sort status of writing software.

Support a eight-level hierarchy.

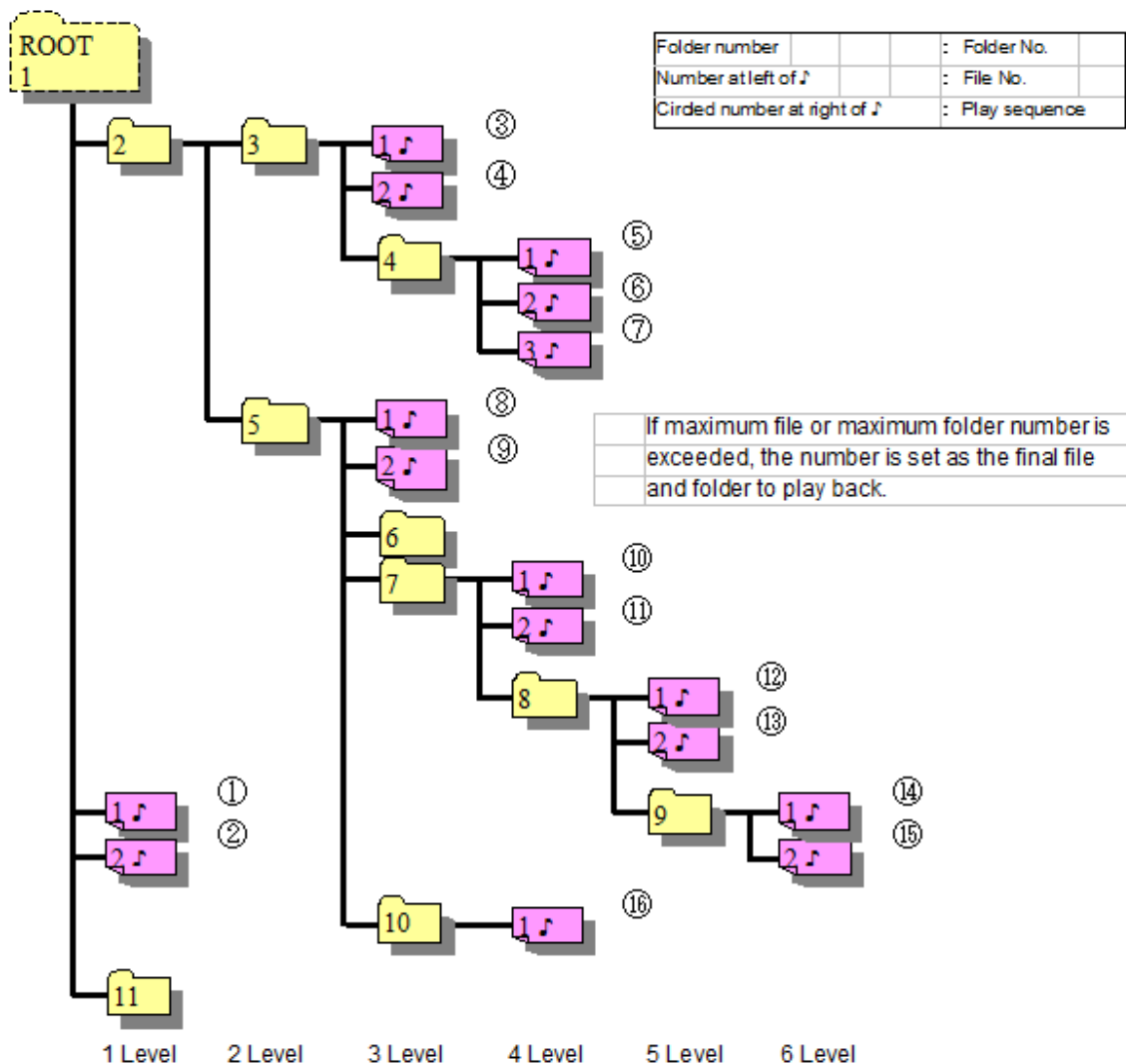
Assignment of file number

1. Assign a file number from No. 1 in order in each folder.

The structure may differ from tree structure displayed by Explorer, etc., depending on sort status of writing software.

Play sequence

1. A playback of the files in the folder with the smallest No. shall be started from the first file in increasing order of number.
 2. When the playback of the final file is completed in the same folder, the playback shall be continued in increasing order of file number by going to the folder including the next file. (A folder without files shall be skipped.).
 3. Repeat 2
- When the playback of the final file in the final folder is completed, return to 1.



7.-USB DEVICE OPERATION

To play (tracks) of MP3, WMA or AAC files from USB device with the unit turn on and any mode function, when you insert the USB device in the USB connector, automatically the radio change at the mode USB, and when it finish uploading information it will start playing tracks MP3/WMA or AAC starting with the files saved in the root directory and alphanumeric priority.

If you are in another mode of function and USB is connected to the unit, push **USB/AUX** button to change to USB restarting playing tracks, in the last place where previously change of mode.

8.- AUX-IN CONNECTION OPERATION

Auxiliary connector 3.5mm audio input signal.

His unit has auxiliary 3.5mm in diameter to enter stereo audio signals coming from devices such as iPod, MP3 player.

Note when connecting a device to the auxiliary input you can only make audio adjustments (*BASS, TREB, BALANCE, FADER, EQ, LOUD VOL*) signal of device through the unit.

The reverse, track selection, etc... depend on connected device. In case which external device are connected to access this feature you must use the **USB/AUX** button.

If external device at first connect unit automatically change to AUX mode, and the user is able the make adjustments only sound features.

9.- iPod OPERATION

Conditions to PLAY.

When switching to the USB (iPod) mode by manipulating the **USB/AUX** button with ACC turned ON.

When USB (iPod) is not connected, the USB (iPod) mode cannot be selected.

When USB (iPod) is connected with ACC or PWR turned ON, the mode is transferred to the USB (iPod) mode.

If USB (iPod) is removed with ACC or PWR turned ON or in the USB (iPod) mode, the unit is transferred to the last mode.

If USB (iPod) is removed in a mode except for USB (iPod) mode, the mode shall be continued.

PLAY release conditions.

When turning ACC or PWR OFF or switching a mode to FM, AM, CD or AUX mode by manipulating the key.

When switching to the CD mode by inserting CD

When switching to the AUX mode by AUX plug in.

When the mode is switched to the last mode by disconnecting USB (iPod)

When PWR is turned ON next with USB (iPod) disconnected after the last mode is the USB (iPod) mode, the next previous mode of USB (iPod) is started up.

FILE UP/DOWN

Seek down and rewind track

Seek down

If push **⏮** button when the progress of the current track has not elapsed the first 3 seconds of play, the recoil will be made to the previous track, but if you press the **⏮** button after 3 seconds of play will recoil at the beginning of the track being played.

Fast rewind in same track

The high speed playing can be activated when keeping pushed the **⏮** button so is possible rewind the playing in same track.

Seek up and forward track

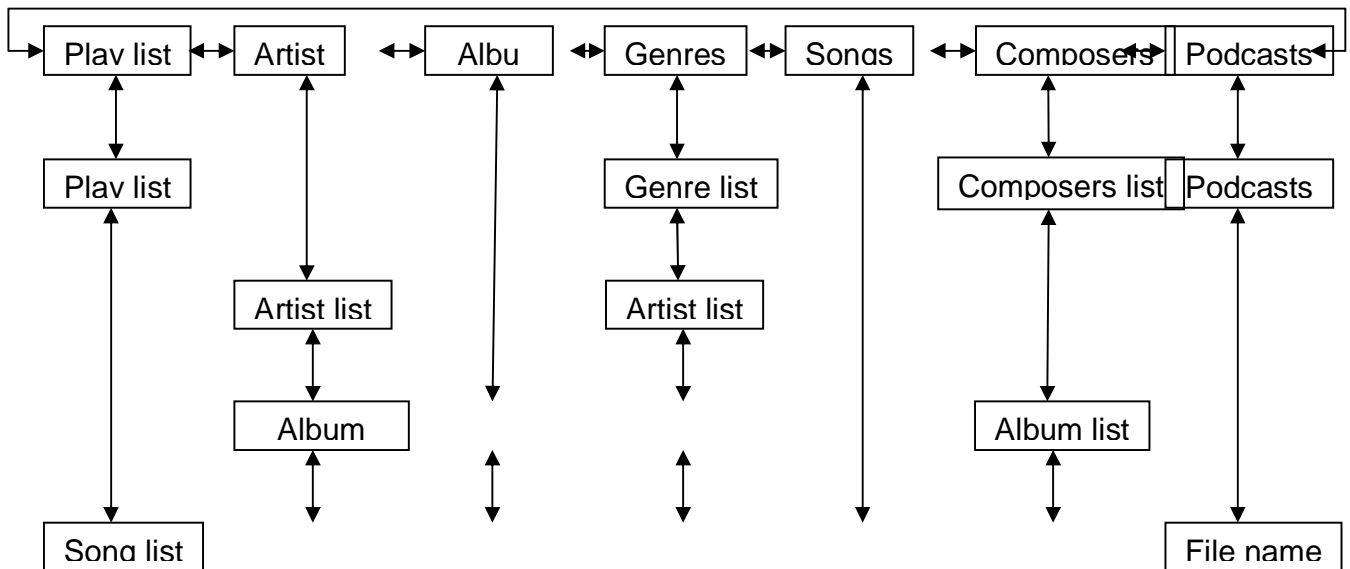
Seek up

Push **⏮** button in order to pass the next track.

Fast forward in same track

The high speed playing can be activated when keeping pushed the **⏭** button so is possible forward the playing in same track.

SELECTING a category/song iPod mode for search any FILE during playing, press **iPod MENU** button to access to "iPod menu".



ID3 FILES

< ACC >

This function apply for iPod.

If **INF** button is pressed display the follow information:

- (1) TITLE → NAME OF TITLE : When is pressed for first time.
- (2) ARTIST → NAME OF ARTIST : When is pressed for second time.
- (3) ALBUM → NAME OF ALBUM : When is pressed for third time.
- (4) CURRENT TIME → XX:XX : When is pressed for fourth time.

After this, the sequence start again.

10.- BLUETOOTH FUNCTION

You must go to menu mobile to the bluetooth function and select the option to add audio devices pressing **CALL** button, after will appear *MY CAR* on your phone and push connect, some cases is necessary write code which radio displayed (example *KEY 00073*), *PAIR OK* and connected to device (name device is displayed on LCD), then 1 minute if not connect device, display return last mode.

CALL ANSWERING

When you have an incoming call you can respond directly from the unit, press the **CALL** button to answer the call and hear through vehicle speakers.

The voice recognition feature, will make pressing the **CALL** button for more than 2 seconds (this function depends on the configuration you have on your mobile phone).

MAKE CALL

When is necessary make call exist different options:

Redial Push **CALL** button until *REDIAL* legend appears on LCD in order to call push again this button.

Call Num Push **CALL** button and turn knob **ENTER** until *CALL NUM* is displayed, push **ENTER** and turn again knob **ENTER** in order to select the first number, push enter and choice second number continuously to the number phone is complete press **CALL** button.

Call list Push **CALL** button and turn knob **ENTER** until *CALL LIST* is displayed, in this option push knob **ENTER** in order to enter to sub menu (*DIALED, RECEIVED, MISSED*) in order to select any option push the knob **ENTER** and choice the number desired.

Phone book Push the **CALL** button and turn the knob **ENTER** until *PHONE BOOK* is displayed, press enter, select the phone number contact than desire call and push the **CALL** button.

In every actions is possible come back to previous menu pushing **BACK** button.

HANG UP OR REJECT A CALL AND DISCONNECT BT MODE

Push the **HANG** button to end and incoming call that we have. Or we can reject a call with the same button.

Push the **HANG** button for more than 2 seconds until the display shows the legends is *DISCONNECT*, so it is like the cell phone will be disconnected from audio equipment.

If is necessary reconnect press **CALL** button again.

AUTOMATIC CONNECTION TO THE RADIO.

The unit with the previously paired and connected phone, every time you turn ON, it automatically starts searching for BT devices, the unit will display the icon logo BT will be showed (BT symbol), the connection between the two devices will be automatic. Once achieved, the connection, the display of logo BT radio shows and the phone.

PLAYING MUSIC VIA BLUETOOTH

If phone paired and connected by bluetooth to the radio, has BT audio profile, the phone's audio files can be played on your unit, you must do the following:

Once the phones is already connected to your unit, you must manipulate the phone to play music files by Bluetooth mode, then automatically the radio will play the audio sent from the phone or pushing **USB/AUX** button, after this the legend BT AUDIO appear on the display.

REWIND AND FORWARD SOUND TRACKS

Also is possible navigate between sound tracks, pushing the rewind and forward buttons, similar to playing CD or USB devices.

INFORMATION SOUND TRACKS

If want look information about track playing, push the **INF** button to display different features as are (TITLE, ARTIST, ALBUM).

If enter a call, the phone mode takes precedence over the BT way audio connection to the radio and at the end of the call, the radio will switch to BT AUDIO mode if this was the previous one, this depends of cell phone configuration.

PRIVATE CONVERSATION FUNCTION BETWEEN PASSAGERS IN THE VEHICLE

While the call is present, if want transfer this one to cell phone and remove the sound from vehicle speakers, press the **CALL** button the legend *PRIVATE* is displayed on LCD in order to return audio to speakers press **CALL** button again and legend *TALKING* is displayed.

11.- TECHNICAL SPECIFICATION.

GENERAL

source power:....13.2 V (10.8 a 15.6)
Current:..... Max.10 A
Impedance speakers: 4 ohms

Tune FM

Frequencies:.....87,5 MHz a 108 MHz
Quiet sensitivity:.....<10 dB mv
Stereo separation:.....>22 dB, 1 kHz
Signal/ noise relation:.....>65 dB

Tune AM

frequencies..... 530~1710KHz (LAM) 522~1620KHz (GOM)
Quiet sensitivity:.....<30 dB μ V
Signal/noise relation:..... >50 dB
Step frequency manual/ automatic: AM_10KHz/10KHz (Southameric), 9KHz/9KHz rest world),
FM_50KHz/50KHz

CD

Signal / Noise relation:.....>70 dB
Separation:.....> 50dB (1KHz)
Frequency response..17 MHz 0 \pm 5, 20 KHz 0 \pm 5

USB

Signal / Noise relation:.....>74 dB
Separation:.....> 50dB(1KHz)
Frequency response..17 MHz 0 \pm 5, 20 KHz 0 \pm 5

AUX

Signal / Noise relation:.....>60 dB, Output 1W, 300 mV Input
Separation:.....> 45dB.(1KHz), Output 1W, 300 mV Input
Frequency response..17 MHz 0 \pm 5, 20 KHz 0 \pm 5

12.- GENERAL CAUTIONS

- 1.- This device is equipped with high-sensitivity in buttons; avoid applying excessive force to operates, as this can damage them and reduce their life.
- 2.- Do not open the covers. The device does not have in its interior parts that can be repaired by the user. If you leaves drop an object inside the unit during installation, checked with your dealer or its authorized service center.
- 3.- Use a soft, dry cloth to clean the control panel, NEVER use rough cloths, thinner, gasoline, alcohol, etc. If the unit is too dirty, apply a bit of warm water with a soft cloth, and carefully remove the dirt.

4.- Do not introduce, strange devices in the auxiliary inputs (screwdrivers, knives, metal objects, etc.) As this may damage the equipment and this damage will not be covered by the warranty.

13.- RECOMMENDATIONS FOR USB DEVICES.

When using USB devices:

1.- Use only USB certified, you can notice that USB device is certified when you have USB logo engraved or printed on the body of device or its packaging

2.-To prevent damage to the unit USB device, we recommend that before remove the USB unit, changing the mode of function or turn off the unit.

3.-This equipment is designed to read USB reading protocol 1.1 and 2.0 verify that the protocol of reading your USB device is compatible with the unit.

4.-If the USB device can not be read by the unit, it may be because the files are not properly been recorded so it is recommended.

4.1.-Format the USB device using the commands from your PC.

4.2.-Create file folders, MP3, WMA or AAC on the hard drive of your PC naming the USB folder and only save MP3, WMA, AAC files on those folders.

4.3.- Save all folders in only one move to your USB

5.- The USB connector is available for connecting only USB devices.

6.- You can connect MP3 and iPod players, to the USB connector of the unit, but must ensure that:

6.1.- Be sure that these devices have no batteries and / or are off.

6.2.- If you can not remove the battery must ensure disconnection of the USB input, before returning to start the vehicle.

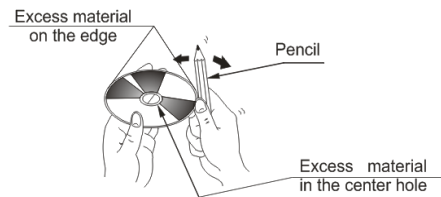
14.- CD'S CARE

1.- This unit is designed and calibrated for use with CD's original. Do not use pirated discs neither second hand.

2.- Do not use compact discs scratched, warped, cracked, and so on. The use of such discs could cause a malfunction or damage to equipment.

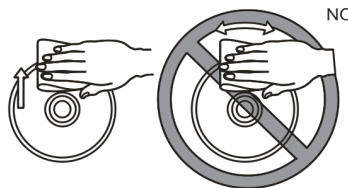
3.- When using a new disc, sometimes the excess material remains on the edge and / or center hole.

4.- When using this kind of disks, it may happen that the disc is not placed in the correct position and the unit can not operate. In this case, please use the disc after you remove the excess material at the edge and / or center hole with a piece of wood, or with a piece of pencil.

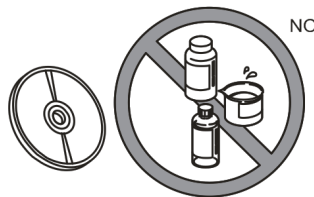


5.- Dirt, dust, scratches, marks and mistreatment in compact discs may cause jumps in playback and deterioration of sound quality, please observe the following directions to the care of their compact discs:

6.- Finger marks, dust and dirt must be carefully removed from the etched surface of compact discs (shiny surface without impressions) with a soft, damp cloth wipe from the inside out disc surfaces.



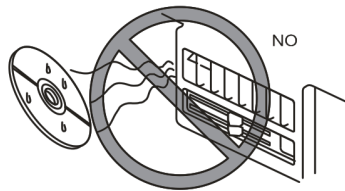
7.-Never use chemicals such as cleaning spray for Discs, household cleaners, or thinner to clean the disks, as these chemicals can cause irreparable damage to the etched surface.



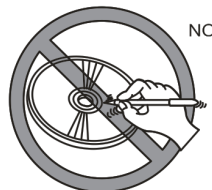
8.- The discs must be placed in their boxes, when not in use.



9.- Do not expose discs to direct sunlight, high temperature or humidity for long periods of time.



10.- Do not stick labels, tapes or papers on the surface of the disc, neither write on them with any kind of marker.



15.- WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.