User Manual

ACT550 - ACT550/DAB+

Dual Zone AV Media Player

ACT550/DAB+ Only

TABLE OF CONTENTS

1. Before Use

> ⚠️ **WARNING**
>
> - **Avoid using this product if it might hinder driving safety.**
>
> - **Do not operate any function that takes your attention away from safe driving.**

> ⚠️ **CAUTION**
>
> **General:**
> - Keep this manual handy as a reference for operating procedures and precautions.
>
> - Protect the equipment from moisture.
>
> **Volume setting:**
> - Always keep the volume low enough so you can hear sounds outside of the vehicle.
>
> **Remote control:**
> - PULL OUT THE INSULATION SHEET BEFORE THE FIRST USE.
>
> - Remove the battery if the remote control is not used for a month or longer.
>
> - Do not recharge, disassemble, heat or dispose of the battery on a fire.
>
> - Do not store the battery with metallic materials.
>
> - In the event of battery leakage, wipe the remote control completely clean and install a new battery.
>
> - Comply with the environmental regulations that apply in your country/area regarding batteries disposal.
>
> - When replacing the battery, make sure that the position of the new one is correct (with positive (+) and negative (-) poles facing the proper directions).

> ☞ **How to read this manual**
>
> - Operations explained mainly using buttons of the faceplate.
> - **[XX]** indicates the selected items (buttons).
> - The 🔘 symbol points out functions only available in the ACT550/DAB+ Equipment.

2. The ACT550 - ACT550/DAB+ Equipment

The ACT550 - ACT550/DAB+ Equipment plays different audio and video sources independently in the driver and passenger areas (Dual Zone). For this, it has controls on the front panel, remote control and external control via CAN bus (if the vehicle has the necessary equipment).

Main characteristics:

- Dual Zone.
- Analogue Radio AM/FM RDS.
- ᴰᴬᴮ⁺ Digital Radio DAB+ Receiver.
- Digital audio and video playing from USB devices and SD Cards.
- Audio playing from iPhone, iPod and iPad devices through the USB connection.
- Microphone inputs for driver and guide.
- IR remote control.
- Hands-free function compatible with Bluetooth devices.
- Remote audio playing compatible with Bluetooth devices.
- External control by CAN bus.
- Auxiliary audio and video inputs and outputs.
- Radio line output.
- Integrated audio amplifier 20 W per loudspeaker.

☞ **Note!**

Each zone, driver (DRV) or passenger (PSG) has its own volume control and source selection key (SRC). The rest of controls are common for both areas.

☞ **DIVX**

This DivX Certified® device has passed rigorous testing to ensure it plays DivX® video.

To play purchased DivX movies, first register your device at vod.divx.com. Find your registration code in the DivX® VOD section of your device USB/SD Car Settings menu.

Covered by one or more of the following U.S. patents:

7,295,673; 7,460,668; 7,515,710; 8,656,183; 8,731,369; RE45,052.

DRIVER ZONE (DRV)

PASSENGER ZONE (PSG)

POWER

MUTE

DRV VOLUME KNOB

RESET BUTTON

SD CARD SLOT

DRV SOURCE SELECTOR

LCD SCREEN

PSG SOURCE SELECTOR

USB PORT

PSG VOLUME KNOB

Figure 1 – ACT550 – ACT550/DAB+ Front Panel

POWER

☞**Note!**

Before the first use:

✓ Pull out the battery insulation sheet protruding from the bottom of the remote control.

✓ Press the key **[550]** to link the remote control to the **ACT550 - ACT550/DAB+** Equipment.

DRIVER ZONE VOLUME AND SOURCE SELECTION CONTROLS (DRV)

PASSENGER ZONE VOLUME AND SOURCE SELECTION CONTROLS (PSG)
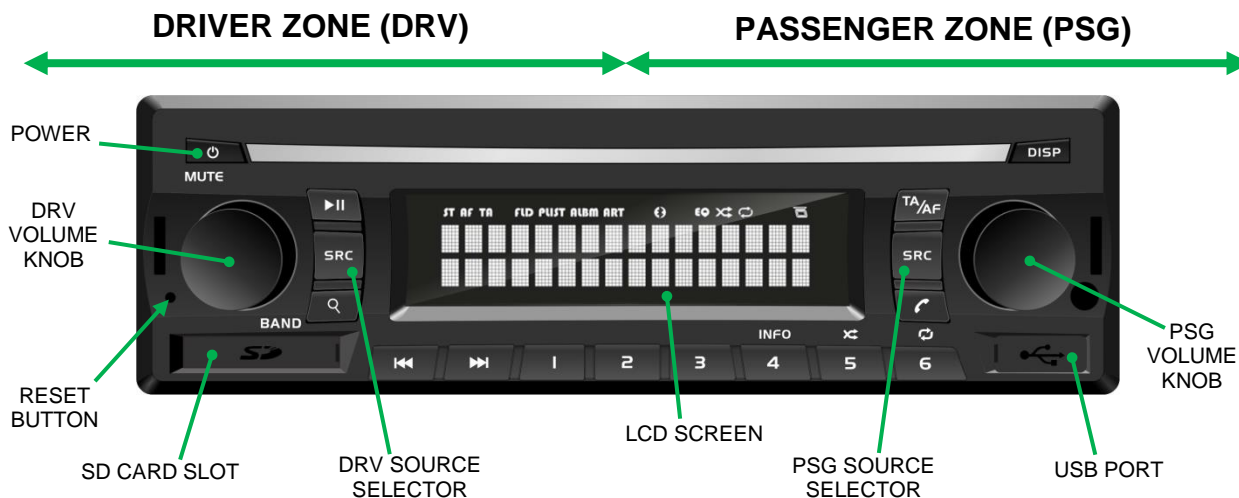
LINK THE REMOTE CONTROL TO THE
ACT550 - ACT550/DAB+ EQUIPMENT

Figure 2 – Remote Control

2.1. Replacement of the Battery of the Remote Control

To replace the remote control battery:

1. On the back of the remote control, press the tab on the side of the battery cover.
2. Slide and remove the cover.
3. Install a battery type CR2025 with positive (+) and negative (-) poles facing the proper position.
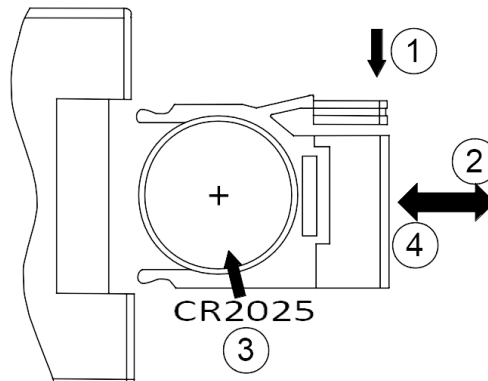4. Push the cover into place. Make sure it is fully seated.

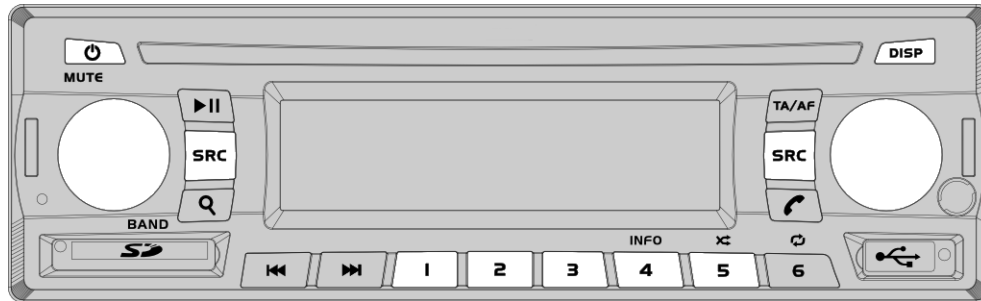Figure 3 – Replacement of the Battery of the Remote Control

3. Basic Operation

Figure 4 – Basic Controls

Table 1 – Basic Controls

TO	ACTION
Turn on/off the equipment	1. Put the vehicle ignition to ACC. 2. Press **[⏻]** / **[MUTE]** to turn on the equipment. 3. Press and hold **[⏻]** / **[MUTE]** to turn off the equipment.
Adjust the volume	Turn the **[VOLUME]** knob or press the **[VOLUME]** keys on the remote control.
Select a zone	Press the **[VOLUME]** knob or the **[SEL]** key on the remote control, for the concerned zone (driver or passenger). The icons **D** (Driver) o **P** (Passenger) on the LCD screen indicate the active zone at all times.
Select a source	Press **[SRC]** repeatedly for the concerned zone until select the desired source: ▪ **Radio AM/FM/DAB+** (AM/FM/DAB+ radio tuner). The LCD screen displays the name of the currently selected band: Radio(FM), Radio(AM), dab+ Radio(DAB). ▪ **Media (USB)** (USB media player). ▪ **Media (SD)** (SD card media player). ▪ **AV AUX** (Auxiliary Input). ▪ **Remote Audio** (*only available in the driver zone*).
Silence the speakers	Press **[⏻]** / **[MUTE]**. To release: ▪ Press **[⏻]** / **[MUTE]** again to return to previous volume. ▪ Turn the **[VOLUME]** knob or press the **[VOLUME]** keys on the remote control.
Turn on the passenger screens	Press **[DISP]** to turn on/off manually the passenger screens. The icon " ∗ " on the LCD screen indicates that the passenger screens are ON.

☞ **Note!**

For the remote control works with the ACT550 – ACT550/DAB+ equipment, link the remote control with the equipment by pressing **[550]**.

☞ **Note!**

Some controls may not be available in the vehicle controls.

3.1. Restore the Factory Settings

To restore the values of the factory settings:

1. Switch off the equipment.
2. Press and hold **[DISP]** while switching on the equipment **[⏻]**.

3.2. Reset of the Equipment

☞ **Note!**

Perform a reset only if the equipment no longer responds to user controls.

To perform a reset, press the button **[RESET]** located on the left of the front panel (refer to Figure 1).

3.3. Reset and Restore the Factory Settings

☞ **Note!**

Perform a reset and restore the factory settings only if the equipment no longer responds to user controls.

1. Press **[RESET]** + **[DISP]** simultaneously for 5 seconds.
2. Release the button **[RESET]** while holding the key **[DISP]** until 3 beeps are heard.

3.4. Equipment Firmware Version

To display the equipment firmware version:

1. Switch off the equipment.
2. Press and hold the key **[1]** while turnning on the equipment pressing **[⏻]**.
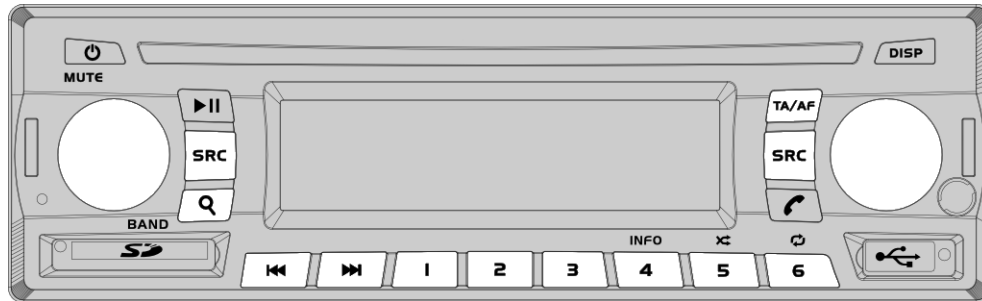
    The firmware version is displayed in the LCD screen.

4. Radio (AM/FM/DAB+)

Figure 5 – Radio Controls

4.1. Select a Frequency Band

With the Radio source selected, press **[🔍]** / **[BAND]** repeatedly to select a frequency band: FM, AM or
🔲 DAB+.

> ☞ **Note!**
>
> Each frequency band has associated 6 memory positions.

4.2. Tune a Radio Station

With the Radio source selected:

- **Radio Station Auto tuning (SEEK)**: press **[◄◄/►►]** to tune automatically to the next or previous station in the AM/FM or 🔲 DAB+ bands.

- **Radio Station Manual tuning (TUNE)**: press and hold **[◄◄/►►]** to activate the manual tuning. Press **[◄◄/►►]** repeatedly (or press **[◄◄/►►]** on the remote control) to adjust the tuning frequency in the AM and FM bands.

- 🔲 **DAB+ ensembles auto tuning (SEEK ENSEMBLE)**: press and hold **[◄◄/►►]** to tune automatically to the next or previous ensemble in the DAB+ band.

> ☞ **Note!**
>
> In the DAB+ band, each frequency broadcasts multiple stations packaged in what is known as a DAB ensemble. Once an ensemble has been tuned, its different stations can be selected without tuning the radio again.

> ☞ **Note!**
>
> The **"ST"** icon on the LCD screen indicates stereo audio reception.

POL. IND. "LOS OLIVOS"
C/ CALIDAD, 66
28906 GETAFE
Tel: +34 91 665 26 26
Fax: +34 91 665 23 24
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4.3. Radio Stations Continuous Scan

With the Radio source selected:

1. Press and hold **[🔍]** / **[BAND]** to start the continous scan:

   ➢ In the AM/FM band, the scan stops for a few seconds when the equipment finds a valid station, and next continues the scan.

☞ **Note!**
With the AM or FM band selected, if the **TA** function is activated, the radio will only stop at those stations broadcasting traffic news and information.

   ➢ 📻 In the DAB+ band, the equipment will start scanning all available stations. When the scanning process is complete, the first valid station found will be automatically selected.

☞ **Note!**
📻 With the DAB+ band selected, the equipment will continue to scan for new stations in the background.

2. Press **[🔍]** / **[BAND]** to stop the scan.

4.4. Tune and Memorize the Best Stations

☞ **Note!**
Function only available in the AM and FM bands.

This function performs a scan of the selected frequency band and memorizes the best stations in the 6-position memory.

With the source Radio selected:

1. Press and hold **[SRC]** to access the **"Radio Settings"** menu.
2. Press the **[VOLUME]** knob repeatedly to select "**AUTO MEM SCAN**".
3. Press **[🔍]** to start the stations scan and memorization process.
4. Press **[🔍]** to stop the process at any time.

4.5. Radio Stations Memory Management

With the Radio source selected:

- **Memorize a tuned radio station:** press and hold any memory button **[1]** to **[6]** (or the keys **[1]** to **[6]** on the remote control).
- **Select a memorized radio station:** press **[1]** to **[6]** (or the keys **[1]** to **[6]** on the remote control) corresponding to the memory where the radio station is memorized.

☞ **Note!**

With the AM/FM band selected, the LCD screen will display the number of the selected memory along with the frequency of the radio station.

📻 With the DAB+ band selected, if the station is available, the LCD screen will display the number of the selected memory along with the name of the station. If the station is no longer available, the equipment will return to the previously tuned station.

4.6. RDS Functions

With the Radio source selected, the FM band activated and the RDS system activated (refer to Section 4.8 Radio Settings):

- **AF Function**: press and hold **[TA/AF]** to activate or deactivate automatic retuning to alternative frequencies.
- **TA Function**: press **[TA/AF]** to enable or disable the search for stations broadcasting news and traffic announcements.

"AF" and/or **"TA"** icons light up on the LCD screen when the corresponding function is ON.

☞ **RDS System**

The radio data system **(RDS)** provides additional information relating to an FM radio station.

☞ **AF Function**

In case of loss of signal from a FM station, the **AF** function searches for an alternative frequency for the same FM station. If after a while, it has not located an alternative frequency the search stops automatically.

☞ **TA Function**

It allows searching a station broadcasting traffic news or announcements.

4.7. 📻 DAB+ Functions

1. With the Radio source selected, the RDS system activated in FM (refer to Section 4.8 Radio Settings), and the DAB+ band activated:

   ➢ **Service Following Function**: press and hold **[TA/AF]** to activate or deactivate automatic retuning to alternative stations.

   ➢ **"AF"** icon lights up on the LCD screen when the function is ON.

☞ **Service Following Function**

If a station in the DAB+ band loses its signal, the **Service Following** scans for an alternative station (broadcasting the same content) for the same one. If an alternative DAB+ station is not located, the device automatically tries to switch to an FM station that is also broadcasting the same content. If an alternative frequency has not been found after a while, the scan stops automatically.

2. With the Radio source selected and the DAB+ band activated, the following modes of information are displayed by default on the lower line of the LCD:

   ➢ **DLS Mode**: it is active when the radio tuner has received the DLS (Dynamic Label System) from the current station. The DLS system allows seeing in real-time information related to the broadcasted content (name of the song, name of the program...).

   ➢ **ENSEMBLE Mode**: it is active when the radio tuner has not received the DLS from the current station. This mode displays the name and frequency of the tuned ensemble.

   Alternatively, other information modes can be accessed by pressing **[▶II]** (after 2s, returns to default mode).

   ➢ **SNR Mode**: displays the signal level of the selected station.

   ➢ **ENSEMBLE Mode**: displays the name and frequency of the selected ensemble when the DLS mode is active.

☞ **DAB+ Data Service System**

Equivalent to the RDS function for FM radio stations, the DAB+ Data Service system provides extra information related to the selected radio station.

POL. IND. "LOS OLIVOS"
C/ CALIDAD, 66
28906 GETAFE
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Fax: +34 91 665 23 24
N.I.F. ES-A-28905065

4.8. Radio Settings

With the Radio source selected:

1. Press and hold **[SRC]** to enter the menu.

2. Press the **[VOLUME]** knob repeatedly to select the desired parameter.

3. Turn the **[VOLUME]** knob (o press the **[VOLUME]** keys on the remote control) to select the value for the desired function. Refer to Table 2.

4. If not operation is done for a few seconds, the equipment automatically returns to the main screen.

Table 2 – Radio Settings

PARAMETER	VALUE	DESCRIPTION
AUTO MEM SCAN (available only with AM/FM bands activated)	-	Search and automatically memorizes the six radio stations with better signal. Press **[🔍] / [BAND]** to start a search.
REGION	ASIA / EUROPA / AMERICA	Select the geographic area.
RDS SYSTEM	ON/OFF	Activate or deactivate the RDS system.
AF REGIONAL	ON	Automatic retuning between any station, regional or national.
	OFF	Automatic retuning between national stations only.
SEEK PI	ON/OFF	Activate or deactivate the SEEK PI function.
dab+ LINK REGIONAL	ON	Automatic retuning between DAB+ stations and FM stations, regional or national.
	OFF	Automatic retuning between DAB+ stations and FM stations, national only.
dab+ LINK DAB ➜ FM	ON/OFF	Activate or deactivate the automatic retuning from DAB+ stations to FM stations.

POL. IND. "LOS OLIVOS"
C/ CALIDAD, 66
28906 GETAFE
Tel: +34 91 665 26 26
Fax: +34 91 665 23 24
N.I.F. ES-A-28905065

4.9. How the Reception of Radio Works

AM, FM and 🔘 DAB+ radio signals are broadcast from transmitter towers located around your city. They are intercepted by the radio antenna on your vehicle. This signal is then received by the radio and sent to the vehicle speakers.

When a strong radio signals has reached the vehicle, the precise engineering of your radio system ensures high quality reproduction. However, in some cases the signal coming to the vehicle is not strong and clear. This can be due to factors such as the distance from the radio station, closeness of other strong radio stations or the presence of buildings, bridges or other large obstructions in the area.

AM and 🔘 DAB+ signals reception is usually better than FM reception:

- In the case of the AM signal, radio waves are transmitted at low frequency. These long, low frequency radio waves can follow the curvature of the earth rather than travelling straight out into the ionosphere. In addition, they curve around obstructions so that they can provide better signal coverage.

- 🔘 In the case of the DAB+ signal, the compression and coding system used to convert the analogue signal into a digital signal makes the transmission immune to interference caused by buildings, mountains or atmospheric conditions that normally disturb the reception of the FM signal.

Because of this, clear AM and 🔘 DAB+ broadcasts can be clearly received at greater distances than FM broadcasts.
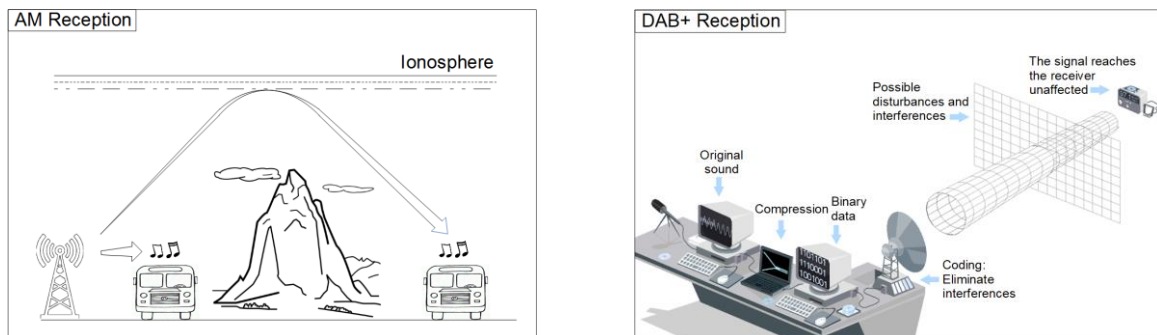

Figure 6 – AM and 🔘 DAB+ Reception

FM broadcasts are transmitted at high frequency and do not bend to follow the earth's surface. Because of this, FM broadcasts generally begin to fade at short distances from the station. Also, FM signals are easily affected by buildings, mountains, or other obstructions.

Figure 7 – FM Reception

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C/ CALIDAD, 66
28906 GETAFE
Tel: +34 91 665 26 26
Fax: +34 91 665 23 24
N.I.F. ES-A-28905065
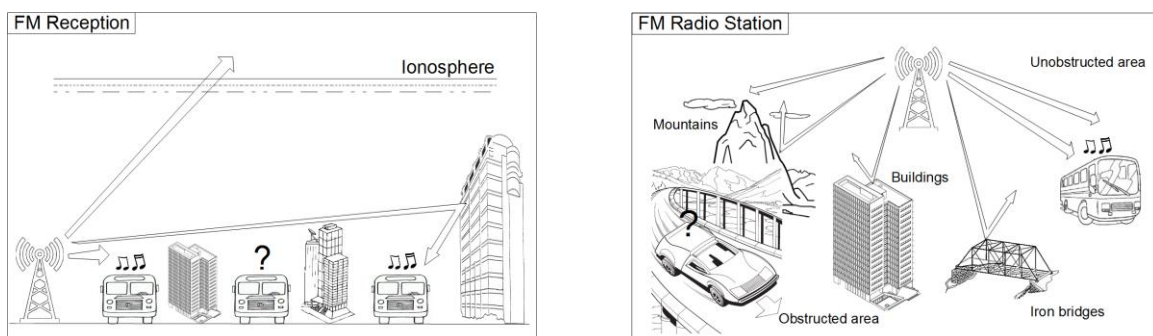
These can result in certain listening conditions, which might lead you to believe a problem exists with your radio. The following conditions are normal and do not indicate radio trouble:

- Fading – As the vehicle moves away from the radio station, the signal will weaken and sound will begin to fade. When this occurs, it is suggested that you select another stronger station.

- Flutter/Static – Weak FM signals or large obstructions between the transmitter and the radio can disturb the signal causing static or fluttering noises to occur. Reducing the treble level may lessen this effect until the disturbance clears.

- Station Swapping – As a FM signal weakens, another more powerful signal near the same frequency may begin to play. This is because the radio is designed to lock onto the clearest signal. If this occurs, select another station with a stronger signal.

- Multi-Path Cancellation – Radio signals being received from several directions can cause distortion or fluttering. This can be caused by a direct and a reflected signal from the same station or by signals from two stations with close frequencies. If this occurs, select another station until the condition has passed.
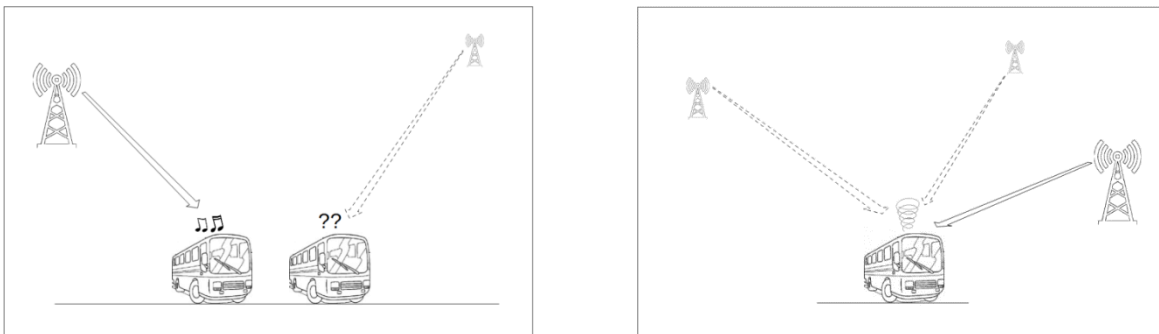
Figure 8 – FM Reception Conditions

The radio allows managing the above described unfavourable situations by means of different strategies intended to minimize cases of poor reception:

- In the case of the FM signal, the RDS function retunes to **alternative frequencies (AF)** allowing the above situations to be managed automatically by selecting alternative frequencies for the same station to minimize cases of poor reception.

- In the case of the DAB+ signal, the Service Following function allows managing these situations by automatically switching to an alternative station in another DAB+ ensemble or to an equivalent station in the FM band.

However, if a station does not provide the required information within the RDS (alternative frequencies list) or DAB+ (DAB→DAB or DAB→FM list of links) or does not have adequate coverage of radio stations, the radio will not be able to act in situations of poor reception described above.

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C/ CALIDAD, 66
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Fax: +34 91 665 23 24
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5. Media (USB / SD Card)
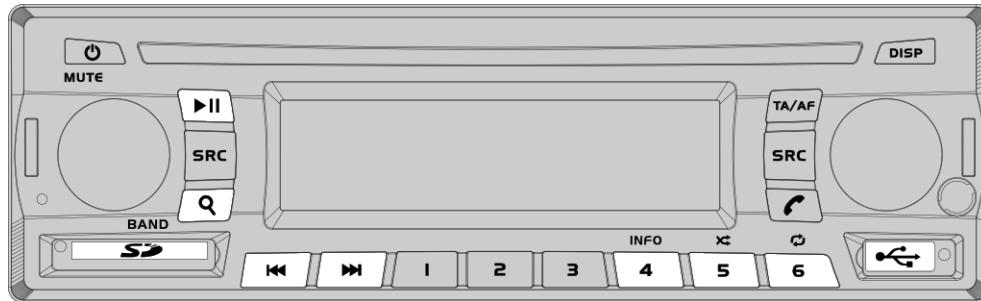
Figure 9 – USB / SD Card Controls

5.1. Play the Content on a Device

With the USB or SD Card source selected:

1. Insert a **SD card**, connect a **USB** storage device or a **USB Apple device**.
2. Playback automatically starts, playing the first element of the device or the last item played.
3. Control the playback as indicated in the Table 3.

Table 3 – USB / SD Card Playback Controls

TO	ACTION
Play / pause playback	Press **[▶ll]**.
Reverse / forward to the next item	Press **[l◀◀/▶▶l]**.
Change playback speed	▪ Press and hold **[l◀◀/▶▶l]** (or press **[◀◀/▶▶]** on the remote control): (x2). ▪ Press **[l◀◀/▶▶l]** (or press **[◀◀/▶▶]** on the remote control): (x4), (x8), (x16).
Activate / deactivate random play	Press **[⤨]** (or press and hold **[MODE]** on the remote control).
Change playback mode	Press **[↻]** (or press **[MODE]** on the remote control) to switch between the different repeat modes: ▪ **REP 1:** repeat the current file. ▪ **REP DIR:** repeat all files in the current folder. ▪ **REP ALL:** repeat all files in the current device.
Change the LCD screen information	Press **[INFO]** to switch between the different information modes: ▪ File name and time of track. ▪ File name and time to finish. ▪ Folder and file name.

☞ **Note!**

Continuous playback of images or video in the driver's area is not allowed.

5.2. Content Selection from the LCD Screen

When an external driver monitor is not available, the contents can be selected from the equipment LCD screen.

> ☞ **Note!**
>
> **"Driver Monitor"** parameter must be disabled (**OFF**) (refer to Section 10, General Settings).

With the USB or SD Card source selected:

1. Press **[Q]** to enter the content selection menu.
2. Press **[Q]** repeatedly to surf through the various levels of the contents of the device:
   List of files ➔ List of folders ➔ Type of files: AUDIO / IMAGE / VIDEO.
3. Use **[I◄◄/►►I]** keys to select the level and file to be played.
4. Press **[►II]** to play the selected item.

> ☞ **Note!**
>
> The selection of content from a device type iPod is only possible if an external display associated to any area (driver or passenger) is available or if it is allowed by the device interface.

5.3. Content Selection from the Driver Monitor

When an external driver's monitor is available, the contents can be selected from this monitor.

> ☞ **Note!**
>
> **"Driver Monitor"** parameter must be enabled (**ON**) (refer to Section 10, General Settings).

With the USB or SD Card source selected:

1. Press **[Q]** to enter the content selection menu.
2. Press **[Q]** repeatedly to surf through the various levels of the contents of the device:
   List of files ➔ List of folders ➔ Type of files: AUDIO / IMAGE / VIDEO.
3. Use the **[VOLUME]** knob to select the level and file to be played.
4. Press **[►II]** to play the selected item.

In USB/iPod mode:

1. Use the **[VOLUME]** knob to select an item.
2. Press **[►II]** to enter or play the selected item.
3. Press **[Q]** to go back in the content menu.

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C/ CALIDAD, 66
28906 GETAFE
Tel: +34 91 665 26 26
Fax: +34 91 665 23 24
N.I.F. ES-A-28905065

5.4. Content Selection from the Passenger Monitor

With the USB or SD Card source selected, using the remote control and visualizing the passenger screen:

1. Press **[MENU]** on the remote control to enter the content selection menu.
2. Press **[MENU]** repeatedly on the remote control to surf through the various levels of the contents of the device: *List of files ➜ List of folders ➜ Type of files: AUDIO / IMAGE / VIDEO.*
3. Use the keys **[▲ ► ▼ ◄]** on the remote control to select an item.
4. Press **[ENTER]/[►ıı]** to enter or play the selected item.

In USB/iPod mode:

1. Use the **keys [▲ ► ▼ ◄]** on the remote control to select an item.
2. Press **[ENTER]/[►ıı]** to enter or play the selected item.
3. Press **[MENU]** on the remote control to go back in the content menu.

5.5. USB / SD Card Settings

With the USB or SD Card source selected in the **passenger zone, using the remote control and visualizing the passenger screen**:

1. Press **[SETUP]** to enter the settings menu.
2. Use **[▲ ► ▼ ◄]** and **[ENTER]** key to surf the different settings. Refer to Table 4 for the available settings.
3. Press **[SETUP]** again to exit the settings menu.

☞ **Note!**

USB and SD Card sources have independent settings.

The settings menu is only accessible via the remote control and the passenger screen.

Table 4 – AV Playback Settings

MENU	PARAMETER	VALUE	FACTORY VALUE
SYSTEM SETUP	TV SYSTEM	NTSC / PAL / AUTO	PAL
	SCREEN SAVER	ON /OFF	OFF
	VIDEO	INTERLACE-YUV / TV-RGB / P-SCAN YPBPR / PC-VGA / S-VIDEO / CVBS	S-VIDEO
	TV TYPE	4:3PS / 4:3LB / 16:9	4:3PS
	PASSWORD	---	UNDEFINED
	RATING	1 KID SAFE / 2 G / 3 PG / 4 PG13 / 5PG-R / 6 R / 7 NC-17 / 8 ADULT	8 ADULT
	DEFAULT	RESTORE (RESTORE THE FACTORY VALUES)	---

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MENU	PARAMETER	VALUE	FACTORY VALUE
LANGUAGE SETUP	OSD LANGUAGE	ENGLISH / GERMAN / SPANISH / FRENCH / PORTUGUESE / ITALIAN / RUSSIAN / CHINESE	ENGLISH
	AUDIO LANG	CHINESE / ENGLISH / JAPANESE / FRENCH / SPANISH / PORTUGUESE / LATIN / GERMAN	ENGLISH
	SUBTITLE LANG	CHINESE / ENGLISH / JAPANESE / FRENCH / SPANISH / PORTUGUESE GERMAN / OFF	ENGLISH
	MENU LANG	CHINESE / ENGLISH / JAPANESE / FRENCH / SPANISH / PORTUGUESE / GERMAN / LATIN	ENGLISH
	DIVX® VOD	DIVX LICENSE	---
AUDIO SETUP	AUDIO OUT	SPDIF/OFF - SPDIF/RAW - SPDIF/PCM	SPDIF/PCM
	MIC SETUP	AUTO / OFF	AUTO
	KEY	-4 to +4	0
	ECHO	OFF / 2 to 8	4
	MIC VOL	OFF / 2 to 8	6
VIDEO SETUP	BRIGHTNESS	0 to 12	6
	CONTRAST	0 to 12	6
	HUE	-6 to +6	0
	SATURATION	0 to 12	0
	SHARPNESS	0 to 8	0
SPEAKER SETUP	DOWNMIX	LT / RT – STEREO – VSS - OFF	VSS
	SUBWOOFER	OFF / ON	ON
	CENTER DELAY	0 to 4	0
	REAR DELAY	0 to 12	6
	FRONT	LARGE / SMALL	LARGE
DIGITAL SETUP	OP MODE	LINE OUT / RF REMOD	LINE OUT
	DYNAMIC RANGE	OFF – 2/8 – 4/8 – 6/8 – FULL	OFF
	DUAL MONO	STEREO / MONO L / MONO R/ MIX MONO	MIX MONO

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C/ CALIDAD, 66
28906 GETAFE
Tel: +34 91 665 26 26
Fax: +34 91 665 23 24
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6. Hands-Free and Remote Audio
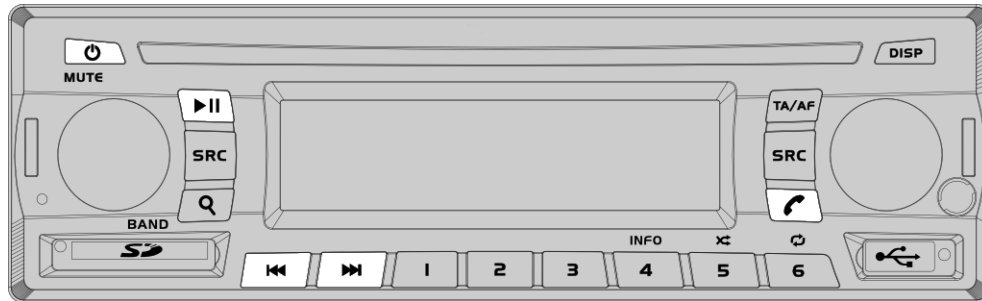
Figure 10 – Hands-Free and Remote Audio Controls

> ☞ **Note!**
>
> The Hands-Free and Remote Audio service is only available for the driver zone.

> ☞ **Note!**
>
> The source Driver/Guide Microphone overrides the Hands-Free service. If an incoming or outgoing call takes place, the driver zone will not switch to Hands-Free mode while any microphone is active.
>
> During a call, it is not possible to switch to another source in the driver zone.

6.1. Pair a Device

With the equipment powered on:

1. Activate the Bluetooth function of the device to pair (for instance a smartphone).
2. From the menu of the device to pair, search for devices.
3. Select **"ACTIA BT"**.
4. The icon "⁎" on the LCD screen indicates that pairing has been successful.

6.2. Unpair a Device

To remove pairing with a device:

1. From any source, press and hold **[☎]** for 3 seconds.
2. Two seconds later, the icon "⁎" on the LCD screen will turn off indicating that there is no paired device.

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Fax: +34 91 665 23 24
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6.3. Use of the Microphone

> ⚠️ **CAUTION**
>
> When activate the Driver microphone during a call, the conversation may be transmitted to other diffusion systems to which the microphone is connected.

> ☞ **Note**
>
> No need to activate the Driver microphone to talk during a phone call.

> ☞ **Note**
>
> The driver microphone must be an ACTIA or compatible model.

6.4. Make a Phone Call

With a paired phone:

1. Enter the desired number from the phone and initiate the call.
2. The equipment automatically switches to **Hands-Free mode in the driver zone** and a ringtone is audible from the speakers of that zone.
3. Talk into the Driver microphone.
4. To end the call, press **[📞]**.

> ☞ **Redialling**
>
> To make a phone call to the last number dialled; press **[📞]** twice consecutively from any source.

6.5. Receive a Phone Call

With a paired phone:

1. The equipment automatically switches to the **Hands-Free mode in the driver zone** when there is an incoming call, and a ringtone is audible from the speakers of that zone.
2. To answer the call press **[📞]** or the **[VOLUME]** knob of the driver zone.
3. To reject the call press **[⏻]**.
4. Talk into the Driver microphone.
5. To end the call press **[📞]** or the **[VOLUME]** knob of the driver zone.

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C/ CALIDAD, 66
28906 GETAFE
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Fax: +34 91 665 23 24
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6.6. Playback of Remote Audio

With the Remote Audio source selected and a paired audio player device, control the playback as indicated in the Table 5.

Table 5 – Remote Audio Playback Controls

TO	ACTION
Play / Pause playback	Press [▶❚❚].
Reverse / Forward to another element	Press [◄◄/►►❘].
Fast Reverse / Forward	Press and hold [◄◄/►►❘].

☞ **Note**

Before select another source, pause Remote Audio playback.

7. AUX (Auxiliary Input)

To play contents from an auxiliary source, select the auxiliary source:

1. Turn on the device connected to the auxiliary input.
2. Start and control the playback from the auxiliary device.

☞ **Note!**

If an auxiliary video source is available, activate the passenger zone screens by pressing **[DISP]** (or **[DISPLAY]** on the remote control).

☞ **Note!**

Auxiliary video signal will only be active on the driver monitor for one minute. To activate it again, press the **[VOLUME]** knob of the driver zone.

8. Microphone

From any zone or source:

1. Turn on the microphone to activate the MIC source.
2. Turn the **[VOLUME]** knob (or press the **[VOLUME]** keys on the remote control) to adjust the microphone level.
3. Turn off the microphone to return to the previous source.

☞ **Note!**

The driver microphone overrides the microphone guide.

It is not possible to use two microphones simultaneously to talk to the passengers.

☞ **Note!**

If the equipment is off and a microphone is activated, it will automatically turn on and select the corresponding microphone source.

When turning off the microphone, the equipment will turn off again.

9. Audio Settings (Any Source)

From any source:

1. Press and hold **[VOLUME]** (or **[SEL]** on the remote control) to enter the menu.
2. Press **[VOLUME]** repeatedly (or **[SEL]** on the remote control), to select the desired parameter.
3. Turn the **[VOLUME]** knob (or press **[VOLUME]** keys on the remote control) to select the value of a parameter. Refer to Table 6.
4. If no operation is selected for a few seconds, the equipment will automatically return to the main screen.

Table 6 – Audio Settings

PARAMETER	VALUE	DESCRIPTION
BALANCE	-15 to +15	Adjust the output balance of the left and right speakers.
BASS	-15 to +15	Adjust the gain of the bass frequency range.
MIDDLE	-15 to +15	Adjust the gain of the middle frequency range.
TREBLE	-15 to +15	Adjust the gain of the treble frequency range.
EQUALIZER	ROCK – OPERA – POP VOICE – FLAT	Select between different pre-defined equalization profiles.

☞ **Note!**

When selecting a pre-defined equalization profile, the BASS, MIDDLE and TREBLE parameters change depending on the profile.

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C/ CALIDAD, 66
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Tel: +34 91 665 26 26
Fax: +34 91 665 23 24
N.I.F. ES-A-28905065

10. General Settings

To access the general settings menu of the equipment:

1. Press and hold **[▶ıı]** to access the general settings menu.

2. Press repeatedly **[VOLUME]** (or **[SEL]** on the remote control), to select the desired parameter.

3. Turn the **[VOLUME]** knob (or press the **[VOLUME]** keys on the remote control) to adjust the value of a parameter. Refer to Table 7.

4. If no operation is selected for a few seconds, the equipment will automatically return to the main screen.

Table 7 – General Settings

PARAMETER	VALUE	DESCRIPTION
Stby AV Bypass	ON (default value)	With the equipment off. Redirection of the AV auxiliary input to the passenger auxiliary output **activated**.
	OFF	With the equipment off. Redirection of the AV auxiliary input to the passenger auxiliary output **deactivated**.
Driver Monitor	ON	The driver area has one monitor.
	OFF (default value)	The driver area has no monitor.
Guide MIC Zone	DRV + PSG (default value)	The guide microphone is heard in driver and passenger areas.
	PSG	The guide microphone is only heard in the passenger area.
P.Monitor Time	0 seconds (default value)	Passenger monitors ON/OFF time (open/close).
D.Monitor Time	10 seconds (default value)	Maximum time allowed to display video contents on the driver monitor.
Radio Mode	Session	Radio AM/FM/DAB+ source settings are not saved in memory. Each time the vehicle is set to OFF, they will be reset to factory settings.
	Permanent	Radio AM/FM/DAB+ source settings are saved in memory. The configuration is kept even if the vehicle is set to OFF.
Hands Free Mode	FL	Hands-free audio will only be heard through the left speaker in the driver area (Front Left).
	FL + FR	Hands-free audio will be heard through the speakers in the driver area (Front Left and Front Right).
	FR	Hands-free audio will only be heard through the right speaker in the driver area (Front Right).

11. Maintenance

11.1. Cleaning the Equipment

Wipe off dirt on the front plate with a dry silicon or soft cloth.

11.2. Slots of SD Card and USB Port

- Whenever possible, keep the slots with the covers.
- Remove the cap carefully when using these slots. Do not pull the cover.

POL. IND. "LOS OLIVOS"
C/ CALIDAD, 66
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Tel: +34 91 665 26 26
Fax: +34 91 665 23 24
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12. Troubleshooting

SYMPTOM	SOLUTION
Sound cannot be heard in a particular zone.	- Make sure that the source is selected to play in the area. - Make sure that the Mute function is not activated. - Adjust the volume to an appropriate level. - If the source is USB, SD Card or Remote Audio, verify that the reproduction is in PLAY status.
The functions of the radio AF and TA are not activated.	Make sure that RDS is activated in the radio settings.
The AF and/or Service Following function does not work correctly, do not make jumps to alternative frequencies.	- Make sure that the AF function is active. The AF icon must be on the LCD screen. - Check the AF REGIONAL and/or dab+ LINK REGIONAL parameter of radio settings. - Check the parameter dab+ LINK DAB →FM of radio settings.
The guide microphone is not heard in the driver area.	Make sure that the microphone is set to mode "DRV + PSG".
When you select a video from a USB device or SD Card, this does not play and skip to the next video.	Make sure the video player supports the video format.
When you turn on the equipment with a USB or SD Card device connected, the connected device is not recognized.	Some USB or SD Card devices do not allow detection at start-up. Remove the device and reinsert.
The equipment does not respond to the remote control.	Check remote control battery. Replace if necessary.
The equipment does not respond to any button.	- Reset the equipment according to Section 3.2. Reset of the Equipment. - If the problem keeps on, reset and restore the configuration according to Section 3.3. Reset and Restore the Factory Settings. - If the problem is not solved, contact the technical service.
The remote control does not work when selecting USB/SD Card.	Make sure that content is being selected from the passage zone using the passage monitor.

13. Technical Specifications

13.1. Electrical Specifications

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
POWER SUPPLY INTERFACES						
POWER SUPPLY INPUT						
VSS	DC supply voltage	-	11	24	30	V
ISS	DC supply load current	VSS = 24 V	-	-	10	A
		VSS = 14 V	-	-	10	A
ISS STBY	DC supply standby load current	ACC = 0 V	-	-	45	mA
ANTENNA POWER OUTPUT						
Vo	DC output voltage	Output enabled	11.8	12	12.3	V
		Output disabled	-	0	-	V
Io	DC output current	Output enabled	-	-	300	mA
RELAY POWER OUTPUT						
Vo	DC output voltage	VSS = 24 V Output enabled	-	0	-	V
		VSS = 24 V Output disabled	-	Z	-	V
Io	DC output current	VSS = 24 V Output enabled	-	-	200	mA
USB POWER OUTPUT						
Vo	DC output voltage	-	-	5	-	V
Io	DC output current	-	-	-	1.2	A
INPUTS						
MICROPHONE INPUT						
Vin	Input peak voltage	f = 1 kHz Zo = 600 Ω	-	5.5	-	mVp
Zin	Input impedance	-	2	-	-	kΩ
BW	Bandwidth	A = ±3 dB	200	-	4000	Hz
STEREO AUDIO INPUT (AUDIO LINE-IN)						
Vin	Input peak-to-peak voltage	f = 1 kHz Zo = 600 Ω	-	-	3.3	Vpp
Zin	Input impedance	-	-	27	-	kΩ
BW	Bandwidth	A = ±3 dB	20	-	20000	Hz

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
OUTPUTS						
STEREO AUDIO OUTPUT (AUDIO LINE-OUT)						
Vo	Output rms voltage	f = 1 kHz Zin = 10 kΩ	-	0.5	0.7	VRMS
Zo	Output impedance	-	-	-	600	Ω
BW	Bandwidth	A = ±3 dB	20	-	20000	Hz
SNR	Signal Noise Ratio	f = 1 kHz Zin = 10 kΩ	80	-	-	dB
THD	Total Harmonic Distortion	f = 1 kHz Zin = 10 kΩ	-	-	0.5	%
RADIO STEREO AUDIO OUTPUT (RADIO LINE-OUT)						
Vo	Output rms voltage	f = 1 kHz Zin = 10 kΩ	-	0.5	0.7	VRMS
Zo	Output impedance	-	-	-	600	Ω
BW	Bandwidth	A = ±3 dB	300	-	15000	Hz
SNR	Signal Noise Ratio	f = 1 kHz Zin = 10 kΩ	80	-	-	dB
THD	Total Harmonic Distortion	f = 1 kHz Zin = 10 kΩ	-	-	0.5	%
SPEAKER OUTPUTS (POWER AUDIO OUTPUT)						
ZL	Speaker load	VSS = 28 V	4	-	-	Ω
Po	Output RMS power	f = 1 kHz ZL = 4 Ω THD = 1% VSS = 28 V	-	15	-	W
		f = 1 kHz ZL = 4 Ω THD = 10% VSS = 28 V	-	20	-	W
		f = 1 kHz ZL = 4 Ω THD = 10% VSS = 14 V	-	10	-	W
XT	Crosstalk between channels	f = 1 kHz ZL = 4 Ω THD = 1% VSS = 28 V	60	-	-	dB
BW	Bandwidth	A = ±3 dB	20	-	20000	Hz

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
VIDEO INTERFACES						
CBVS VIDEO OUTPUT						
Vo	Output peak-to-peak voltage	Zin = 75 Ω	-	-	1	Vpp
Zo	Output impedance	-	-	75	-	Ω
Hres	Horizontal resolution	NTSC	-	480	-	lines
		PAL	-	576	-	lines
SNR	Signal Noise Ratio	Zin = 75 Ω	60	-	-	dB
CBVS VIDEO INPUT						
Vin	Output peak-to-peak voltage	Zo = 75 Ω	0.8	-	1.2	Vpp
Zin	Output impedance	-	-	75	-	Ω
Hres	Horizontal resolution	NTSC	-	480	-	lines
		PAL	-	576	-	lines
DIGITAL INTERFACES						
ACC AND DIMMING INPUTS						
VIH	High level input voltage	State = input active	11	-	32	V
VIL	Low level input voltage	State = input inactive	0	-	7.5	V
Iin	Leakage Current	State = input active	-	-	5	mA
MUTE INPUT						
VIH	High level input voltage	State = input inactive	11	-	32	V
VIL	Low level input voltage	State = input active	0	-	0.6	V
Iin	Input Leakage Current	State = input inactive	-	-	5	mA

13.2. Mechanical Specifications

PARAMETER	VALUE
Installation Size (W x H x D)	182 mm x 53 mm x 160 mm
Maximum weight	1.2 kg

POL. IND. "LOS OLIVOS"
C/ CALIDAD, 66
28906 GETAFE
Tel: +34 91 665 26 26
Fax: +34 91 665 23 24
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13.3. Playable Files

13.3.1. Video

CONTAINER	VIDEO CODEC	AUDIO CODEC	RESOLUTION
AVI (.avi, divx)	MP4V DivX® MPEG-1 MSVC	Dolby Digital(AC3) WMA/PCM/LPCM AAC LC (2ch) MPEG-Audio (MP1/MP2/MP3)	720*480/576 (30 fps)
MPG (.mpg/.mpeg)	MPEG-1/MPEG-2	Dolby Digital(AC3) LPCM MPEG-Audio (MP1/MP2/MP3)	720*480/576 (30 fps)
DAT (.dat)	MPEG-1/MPEG-2	Dolby Digital(AC3) LPCM MPEG-Audio (MP1/MP2/MP3)	720*480/576 (30 fps)
FLV (.flv)	H.263	LPCM/MP3	720*480/576 (30 fps)
VOB (.vob)	MPEG-1/MPEG-2	Dolby Digital(AC3)	720*480/576 (30 fps)
MP4/MOV (.mp4/.mov/.divx)	DivX® MP4V	Dolby Digital(AC3) WMA/LPCM AAC LC (2ch) MPEG-Audio (MP1/MP2/MP3) uLaw/aLaw	720*480/576 (30 fps)
OGGVorbis (.ogg)	---	OGG	Does not support the following formats: 1. OGG with Video 2. OGG with Audio Vorbis outside format. 3. AVI with Vorbis. It supports the following specifications: Sampling rate (sampling rate): 8, 11.025, 16, 22.05, 24, 32, 44.1, 48 kHz. Bitrate: 45 ~ 500 kbps. Many versions Vorbis have the yyyy / mm / dd format to distinguish the version. From 2001 onwards the previous version is not supported.
ASF (.asf)	---	WMA	Only supports WMA, including specifically WMA7, WMA8, WMA9 (CBR, VBR) (Only supports 353 format) Sample rate: 8 kHz ~ 48 kHz. Bitrate: 16 kbps ~ 320 kbps.

13.3.2. Audio

CODEC	BIT RATE	SAMPLING RATE
MP3	16 kbps ~ 320 kbps	8 kHz ~ 48 kHz
WMA7, WMA8, WMA9 (only CBR VBR) (only supports 353)	16 kbps ~ 320 kbps	8 kHz~ 48 kHz
AAC (only supports AAC LC (2ch))	16 kbps ~ 320 kbps	8 kHz ~ 48 kHz

13.3.3. Picture

FORMAT	SUPPORT MODE	RESOLUTION
Jpeg	• based on DCT sequential • based on DCT progressive	• Colour model: YCbCr / YIQ colour map. • Grayscale images: Does not support CMYK.
Bitmap	---	Bit depth to 1/4/8/24 BMP supports uncompressed format.

13.4. Apple Compatible Devices

DEVICE	MODEL		GENERATION / VERSION
iPod	1.	iPod Touch	5ª - 4ª - 3ª - 2ª - 1ª
	2.	iPod Classic	---
	3.	iPod with video	---
	4.	iPod Nano	7ª - 6ª - 5ª - 4ª - 3ª - 2ª - 1ª
iPhone		---	5C - 5S – 5 - 4S - 3GS - 3G
iPad	5.	iPad	4ª - 3ª - 2ª (iPad 2) - 1ª
	6.	iPad Air	---
	7.	iPad Mini	2ª - 1ª

13.5. FM Tuner

PARAMETER	VALUE
Frequency span	76.0 MHz to 107.9 MHz
Supported regions	EUROPE, ASIA, AMERICA
Usable sensitivity (Signal/Noise ratio = 30dB)	4 dBuV / 75 Ω

13.6. AM Tuner

PARAMETER	VALUE
Frequency span	522 kHz to 1710 kHz
Supported regions	EUROPE, ASIA, AMERICA
Usable sensitivity (Signal/Noise ratio = 20dB)	28 dBuV / 75 Ω

13.7. 🔘 DAB+ Tuner

PARAMETER	VALUE
Frequency span	Band III: 174 MHz to 240 MHz
Supported regions	EUROPE, ASIA, AMERICA

13.8. USB Devices

PARAMETER	VALUE
USB standard	USB 1.1, USB 2.0 (High speed)
Maximum capacity	1 TB
Maximum output current	1.2 A
File system	FAT16/32

13.9. SD Card Devices

PARAMETER	VALUE
SD Card standard	SD, SDHC
Maximum capacity	32 GB
File system	FAT16/32

13.10. Remote Connection

PARAMETER	VALUE
Standard	Bluetooth V4.0
Frequencies range	2.402 GHz to 2.480 GHz
Communication maximum range	In a straight line, approximately 10 m
Profile	HFP (Hands-free profile) A2DP (Audio Advanced Distribution Profile) AVRCP (Audio Video Remote Control Profile)
Number of devices	8 (the last device has the priority)
Maximum output power	1.64 dBm

13.11. Environmental Conditions

PARAMETER	VALUE
Operating temperature	-20°C to +70°C
Storage temperature	-40°C to +85°C

13.12. Versions

PARAMETER	VALUE
Hardware	A1 20190309
Software	03.07.****

POL. IND. "LOS OLIVOS"
C/ CALIDAD, 66
28906 GETAFE
Tel: +34 91 665 26 26
Fax: +34 91 665 23 24
N.I.F. ES-A-28905065

14. Installation and Connection

Use the interface diagram included in the package.

External antennas for AM/FM and dab+ DAB+ reception are needed for a proper Radio operation.

☞ **Recommended AM-FM Antenna**

ACTIA Systems recommends the use of its electronic **AM-FM Antenna**, reference **8390454**, with the following features:

- Frequency Range: AM (520 kHz – 1620 kHz), FM (87 MHz – 108 MHz)
- Impedance: 75 Ω
- Voltage: 12 VDC
- Polarization: Vertical
- Emission: Omnidirectional
- Gain: AM 3.5 dBi - FM 8.5 dBi
- Temperature: -30°C to +80°C

☞ dab+ **Recommended DAB+ Antenna**

ACTIA Systems recommend the use of a **DAB+ Antenna**, with the following features:

- Frequency Range: DAB+ BIII (174 – 240 MHz)
- Impedance: 50 Ω
- Voltage: 5 VDC - 12 VDC
- Polarization: Vertical
- Emission: Omnidirectional
- Gain: 2 dBi

⚠ **WARNING**

Choose the mounting location carefully so that the equipment will not interfere with the normal driving functions of the driver.

⚠ **CAUTION**

Avoid installing the equipment 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.

⚠ **CAUTION**

Use only the supplied mounting hardware for a safe and secure installation.

ACTIA DO BRASIL Indústria e Comércio Ltda.
Avenida São Paulo, 555
Bairro São Geraldo, Porto Alegre, RS, Brasil
CEP: 90230-161
Telefone:+55 51 3358-0200
www.actia.com

ACTIA DE MÉXICO S.A. de C.V.
Avenida Central 176
Nueva Industrial Vallejo, Gustavo A. Madero
07700 Ciudad de México, D.F.
Tel: 01 55 5119 2350
www.actia.com.mx

ACTIA SYSTEMS, S.A.U.
Polígono Industrial LOS OLIVOS,
C/ Calidad 66, 28906 Getafe, Madrid - España
Tel: +34 91 665 26 26
www.actia.com