INSTRUCTION
MANUAL

MediaDAB HD
DAB SYSTEM
rev. 1.18

FULL DIGITAL AUDIO	R·D·S RADIO DATA SYSTEM	FIRMWARE upgradeable	SPEECH SYNTHESIS	WIRELESS remote control ready
STEERING WHEEL COMMANDS	CANBUS steering wheel connection	RESISTIVE steering wheel connection	GMLAN steering wheel connection	Plug & Play harness ready

MediaDAB is a Paser Srl trademark, registered in Italy.

All registered trademarks belong to the legitimate owners.

INTRODUCTION

MediaDAB HD is a DAB receiver and its compatibility is exetended to a lot of vehicles and OEM radio.
The module is connected in series to the radio antenna and thanks to the FM RDS technology it can manage an high quality sound and also transmit all the information to the radio display.

The device is equipped with a speech synthesis system, this feature provides an high quality level of safety because all the operations made by the interface are indicated to the customer.
MediaDAB HD is upgradeable via USB.
Device functions are totally manageable from your car steering wheel commands or by a wireless remote (optional).

CHARACTERISTICS

- DAB/DAB+ Receiver
- User Menu displayed in the radio display through RDS.
- Menu Labels Speech Synthesis
- Compatible with additional wireless remote
- Steering Wheel Commands management
- FM modulator with 8 different selectable frequencies

PACKAGE

- 1 user manual
- 1 unit
- 1 free wires harness

General Information

Size	87x133x35 mm
Weight	< 190 gr (without cables)

Technical Information

|	
Power Input	12/24 Volt
Max Power Input	30 Volt
Min Power Input	8 Volt
Power Consumption	190 mA
Standby Power Consumption	<7 mA
Working Temperature Range	-20 +70 C

TROUBLESHOOTING

- The radio band frequency is disturbed.
- Select a different radio frequency as descried in the MENU SET UP in sub menu FREQUENCY at page 16.

- The audio is distorted and it is too low.
- Verify that the antennas plugs are correctly connected.

- After the connection of the module the steering wheel commands don't manage any functions.
- Verify the correct connection of MediaDAB HD to the power cables of the vehicle.
- Make a RESET of MediaDAB HD as described at page 6 of this manual.
- Verify that the CANBUS, GMLAN or Resistive connections were done correctly.
- Verify that the vehicle is in the compatibility list.
- Verify that in case of resistive vehicle protocol, the self learning procedure was done correctly.

- It's not possible to carry out the self learning procedure for the resistive steering wheel commands.
- Make the self learning procedure of the steering wheel commands being sure to keep pressed each buttons for minimum 2 seconds.
- Verify the vehicle compatibility consulting the connections attachment.

- When the car is off, MediaDAB HD doesn't switch off.
- Verify the ignition connections, if the vehicle is CANBUS the connection of the ignition wire is not required, if the vehicle is Resistive verify that the ignition wire is correctly connected .

- MediaDAB HD is correctly working but it is not possible to enter the menu with the steering wheel commands.
- Verify the available configuration as described at pages 9 and 10. Attention some models of swc don't have the long pressure condition.

INSTALLATION

MediaDAB HD is easy to install but we suggest to require the support of a qualified technician.
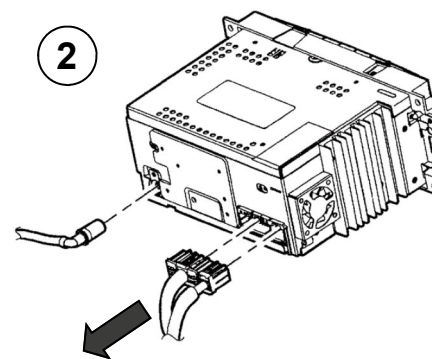**Please turn off the key before starting to install the module.**

1. First of all you need to remove the OEM radio.
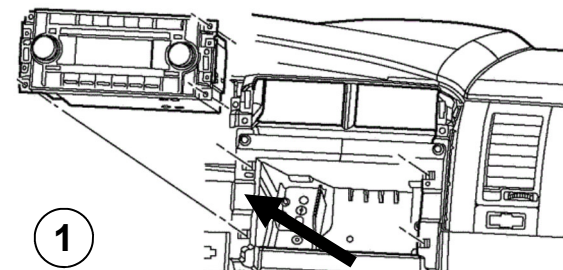
2. Disconnect the radio connector.
ATTENTION! IF THE RADIO HAS A SECURITY CODE PROTECTION PLEASE BE SURE THAT IS AVAILABLE BEFORE DISCONNECT THE RADIO CONNECTOR.

3. Please verify the steering wheel commands protocol in order to understand which kind of connection is to be made.
MediaDAB HD can manage CANBUS, GMLAN and R-Ladder steering wheel commands protocols.

Steering wheel connection are explained in the attached document, in order to understand the logic please see the diagram at page 4.

If the vehicle is not equipped with steering wheel commands the interface management could be done with a wireless remote (optional) as explained at page 8.

POWER AND STEERING WHEEL COMMANDS CONNECTIONS

Power and steering wheel connections are located in the 22 poles connector as indicated.
Connect RED cable to the car radio 12/24 VDC positive.
Connect BLACK cable to the ground.
Connect MediaDAB HD BLUE-YELLOW cable to a positive ignition output.
The BLUE-YELLOW wire must not be connected if the vehicle uses CANBUS or GMLAN protocol.
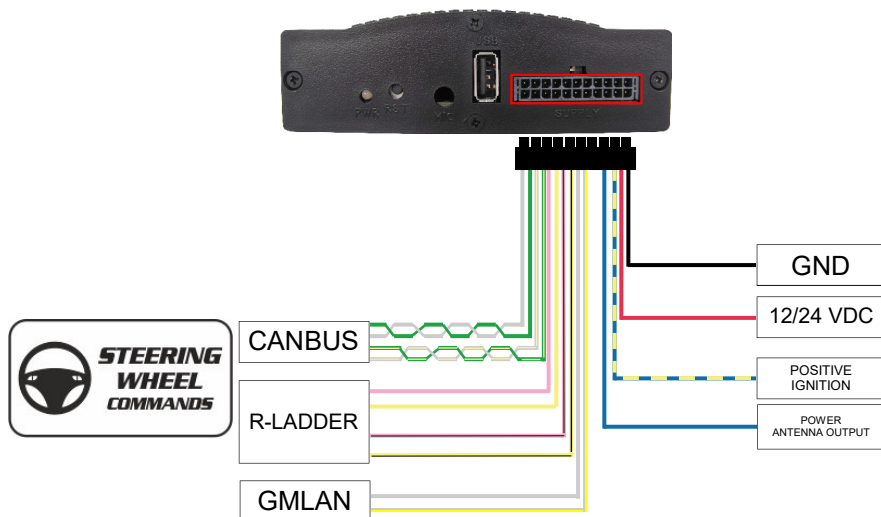
Connect steering wheel interface wires in series to the OEM wires, for example in a car that uses CANBUS protocol is necessary to cut the CAN H wire and connect GREEN wire to the car side and GREEN/YELLOW to the radio side, the same must be done with CAN L and WHITE and WHITE/YELLOW wires.

	WIRE COLOUR		FUNCTION
CANBUS WIRES		GREEN	CAN H INPUT
		WHITE	CAN L INPUT
		GREEN / YELLOW	CAN H OUTPUT
		WHITE / YELLOW	CAN L OUTPUT
R-LADDER WIRES		PINK	V1 INPUT
		YELLOW	V2 INPUT
		PINK / BLACK	V1 OUTPUT
		YELLOW / BLACK	V2 OUTPUT
GMLAN WIRES		GREY	GMLAN INPUT
		GREY / YELLOW	GMLAN OUTPUT

MEANINGS

CHANNELS are the radio stations stored in the DAB receiver..
CLEAR FAVOURITE this option allows to delete all the channels memorized as favourite.
SCAN is the operation managed by MediaDAB HD during the channels research.
PRUNE is the operation that allows to clear channels listed but not yet available.
POWERSCAN (PWR SCAN) if enabled this function manages a SCAN each time the device is activated.
RESTORE allows to reset the DAB module of the device.
RDS MODE changes the RDS version used: normal (8 characters) and estende (64 characters)
DLS Dynamic texts.
**RSSI** Signal intensity.
SNR Signal to noise ratio.
MSC Signal quality.

MAIN MENU	SUB-MENU 1	SUB-MENU 2	SUB-MENU 3
(OFF)			
DAB	CHANNEL LIST	CHANNELS LIST BACK EXIT	
	FAVOURITE LIST	FAVORITES LIST BACK EXIT	
	MANAGEMENT	ADD/REM FAV CLEAR FAVOURITES SCAN BACK EXIT	
	DISPLAY	DLS RSSI SNR MSC BACK EXIT	
	BACK EXIT		
SETUP	DAB	PWR SCAN (ON/OFF) RESTORE BACK EXIT	
	FREQUENCY	87.70MHz 87.90MHz 88.10MHz 88.30MHz 88.50MHz 88.70MHz 88.90MHz 89.10MHz BACK EXIT	
	VOICE	LANGUAGE	ENGLISH LANG2 LANG3 BACK EXIT
		WELCOME MSG (ON/OFF) MENU MSG (ON/OFF) EVENTS MSG (ON/OFF) BEEPS (ON/OFF) BACK EXIT	
		VERSION	BACK EXIT
		UPGRADE VOICE	INSERT KEY BACK EXIT
		BACK EXIT	
	SYSTEM	VERSION	BACK EXIT
		UPGRADE SYSTEM	INSERT KEY BACK EXIT
		RDS TEXT (ON/OFF) BACK EXIT	
	BACK EXIT		
EXIT			

Now connect the harness to the MediaDAB HD and the OEM connector back to the radio.

OEM Harness
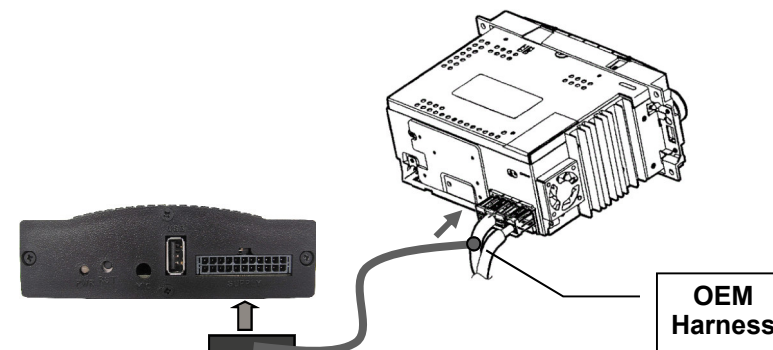
Connect the antenna adapter in series to the car antenna.
Below is described a FAKRA antenna connection.

INPUT 1   INPUT 2
OUTPUT 1   OUTPUT 2

CONNECT TO THE
CAR ANTENNA
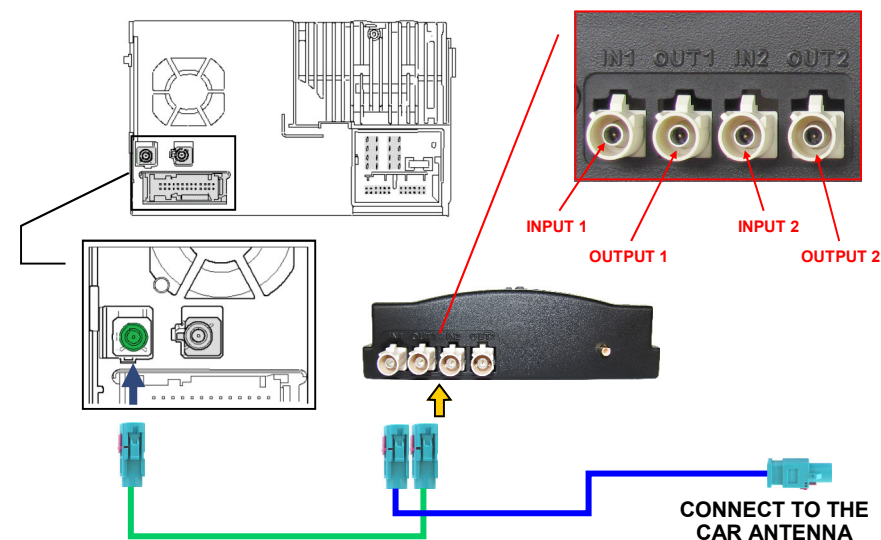
Different antenna adapters are available such as ISO, DIN, GT5.

ATTENTION! RESPECT ALWAYS ANTENNA INPUT/OUTPUT CONFIGURATION

DAB ANTENNA CONNECTION

The DAB antenna connection can be done by the SMB connector available on the rear side of the interface.

Follow the antenna instruction and connect it as showed below.

GND
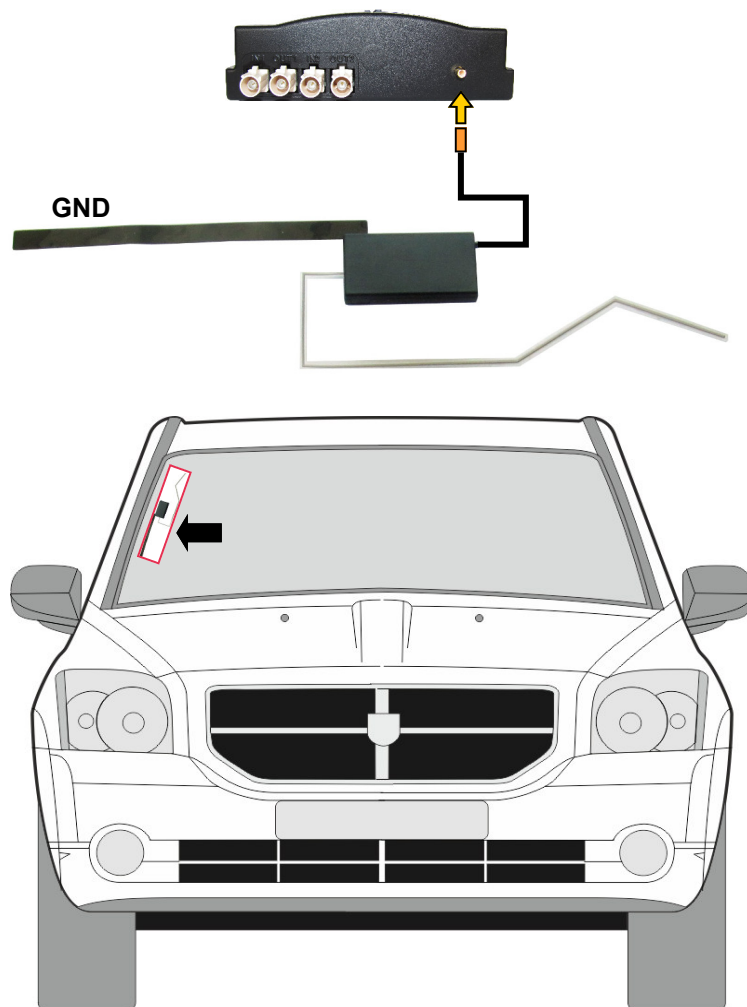
MENU

MediaDAB HD has a user-menu that is displayed on the radio display through the RDS; the same menu is pronounced by the vocal synthesis.

The menu can be run down by a remote control (optional) or by the steering wheel commands (for the compatible versions).

To enter the menu with the remote control, **please check the function at page 13**. With the steering wheel commands, the user can enter the menu by pressing for a long the SRC button or, if this button it is not available, by doing the sequence SEEK - / SEEK + / SEEK - / SEEK +.

To scroll down the menu headings, the user can use the remote control indicators buttons or the
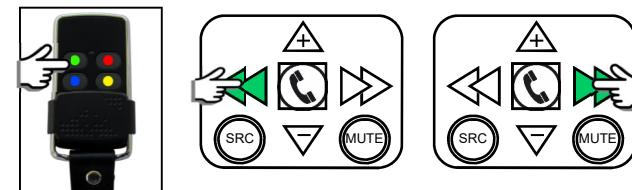
steering wheel commands, by pressing the seek buttons.

To entry into the sub-menus or to confirm a choice, please do a short pressure on the remote control on button A or, through the steering wheel commands, please do a short pressure on the
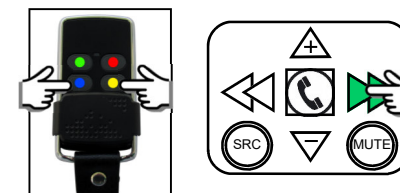
SRC button. If this button is not available, please do the sequence SEEK - / SEEK +.

The menu managing allows to do all desired settings.
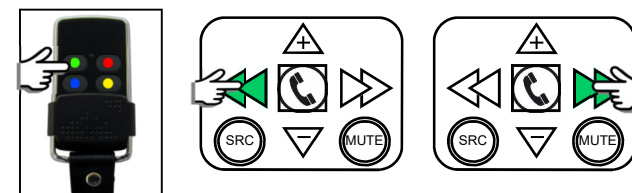
All possible handlings are displayed on the radio display and pronounced by the vocal synthesis too.

The menu includes various sub-menus.

Menu organization is tree-shaped and it's handled as described in the following table.

Remote control can be optional or included . It depends on the item code required

Configuration 2: ⊖ ⊕ ◄◄ ►► SRC **Short Pressure**

⊖ ⊕ ◄◄ ►► SRC **Long Pressure**

FUNCTION	CARS WITHOUT LONG PRESSURE BUTTON INFORMATION	CARS WITH LONG PRESSURE BUTTON INFORMATION
ON/OFF	⊖ ⊕ ⊖ ⊕	⊖ ⊕ ⊖ ⊕
Volume +	⊕	⊕
Volume -	⊖	⊖
Next Channel	►►	►►
Previous Channel	◄◄	◄◄
Next Favourite	◄◄ ►►	►►
Previous Favourite	►► ◄◄	◄◄
MENU FUNCTIONS		
Menu	SRC SRC SRC SRC	SRC
Next Menu	►►	►►
Previous Menu	◄◄	◄◄
Select	SRC	SRC
DAB FUNCTIONS		
Scan	SRC SRC SRC	SRC SRC SRC
Add to favourite channels	⊖ ⊕	⊖ ⊕
Remove from favourite channels	⊕ ⊖	⊕ ⊖

ACTIVATION AND TUNING

Once that all connections are done turn on the key:
The LED will switch on fixed GREEN.

By default the system will transmit on the frequency 87.7 Mhz, then set this frequency as favorite
.
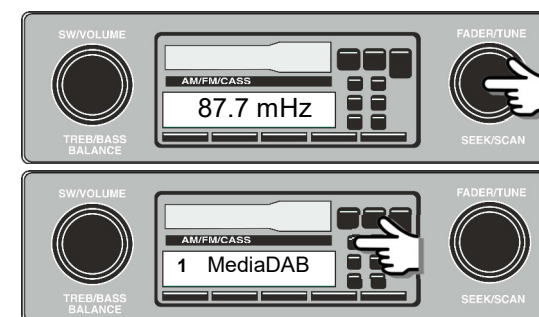
Each time that the key will turned on the system will switch on automatically and the speech sysn-
thesis system will pronunce the welcome message:
"MediaDAB WISH YOU GOOD LISTENING".
Reproduction will start immediately and RDS text will be shown on the radio and car display.
.
To switch off the module press in sequence from the steering wheel VOL+ VOL—VOL+ VOL - :
The same sequence could be use to switch on again the interface.
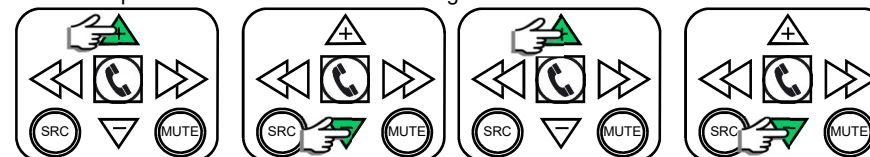
⚠ **In case of an incorrect working of the steering wheel commands functions, please make a RESET of MediaDAB HD, as described below, by pressing the button of the unit till the LED of the module switch OFF.**

Menu headings and files titles contained into the audio sources are displayed thanks to Media-DAB HD RDS handling function.

So, with the RDS function activated, all operations are also visualized on the radio display and, in case of OEM radio, they are visualized also on the vehicle display (if the OEM radio can write also on this one).

The displayed menu headings are the same for all the languages and they are set by default in English.

REMOTE FUNCTIONS

Remote control allows us to manage all the functions available with the steering wheel commands. Below please find the functions manageable.

ON	SHORT PRESS OF BUTTON D
OFF	SELECT OFF FUNCTION FROM THE MENU or LONG PRESS OF BUTTON D
Next Channel	SHORT PRESS OF BUTTON C
Previous Channel	SHORT PRESS OF BUTTON B
Next Favourite	LONG PRESS OF BUTTON C
Previous Favourite	LONG PRESS OF BUTTON B
Enter Menu	LONG PRESS OF BUTTON A
Menu scroll ahead	SHORT PRESS OF BUTTON C
Menu scroll back	SHORT PRESS OF BUTTON B
Menu confirmation	SHORT PRESS OF BUTTON A

A   D
B   C

ON	LONG PRESS OF BUTTON M
OFF	PRESS OF BUTTON M THEN OK
Next Channel	SHORT PRESS OF BUTTON >>I
Previous Channel	SHORT PRESS OF BUTTON I<<
Add Favourite	SHORT PRESS OF BUTTON ➕
Remove Favourite	SHORT PRESS OF BUTTON ➖
Next Favourite	SHORT PRESS OF BUTTON 🟢
Previous Favourite	SHORT PRESS OF BUTTON 🔴
Enter Menu	SHORT PRESS OF BUTTON M
Menu scroll ahead	SHORT PRESS OF BUTTON >>I
Menu scroll back	SHORT PRESS OF BUTTON I<<
Menu confirmation	SHORT PRESS OF BUTTON OK
SCAN	LONG PRESS OF BUTTON ▶▮

BATTERY CR2025

CONTROL OF THE FUNCTION BY STEERING WHEEL COMMANDS

MediaDAB HD can be controlled by the supplied remote control but also by the steering wheel commands (according to compatibilities).

Obviously, according to the different buttons available on the steering wheel the user can control MediaDAB HD
.

Not all CANBUS cars have long pressure button information and for this reason, where possible, some sequences are used in order to execute additional functions.

Configuration 1: ⊖ ⊕ ◁◁ ▷▷ **Short Pressure**
⊖ ⊕ ◁◁ ▷▷ **Long Pressure**

FUNCTION	CARS WITHOUT LONG PRESSURE BUTTON INFORMATION	CARS WITH LONG PRESSURE BUTTON INFORMATION
ON/OFF	⊖ ⊕ ⊖ ⊕	⊖ ⊕ ⊖ ⊕
Volume +	⊕	⊕
Volume -	⊖	⊖
Next Channel	▷▷	▷▷
Previous Channel	◁◁	◁◁
Next Favourite	◁◁ ▷▷	▷▷
Previous Favourite	▷▷ ◁◁	◁◁
MENU FUNCTIONS		
Menu	▷▷ ◁◁ ▷▷ ◁◁	▷▷ ◁◁ ▷▷ ◁◁
Next Menu	▷▷	▷▷
Previous Menu	◁◁	◁◁
Select	▷▷ ◁◁	▷▷ ◁◁
DAB FUNCTIONS		
Scan	NOT AVAILABLE	NOT AVAILABLE
Add to favourite channels	⊖ ⊕	⊖ ⊕
Remove from favourite channels	⊕ ⊖	⊕ ⊖