

## USE AND FEATURES

**UNICO DUAL** was born principally to recover the steering wheel commands functions dedicated to the car radio.  
This module allows you to control a wide range of aftermarket car radio directly by OEM steering wheel commands.

UNICO DUAL has others functionality that are important for the integration of the aftermarket systems in the car.

### AMPLI WAKE UP

This feature permits to control of the OEM amplifier so to recover all the functions of the system without bypassing the OEM device.

This function is active by default; see the table of compatibilities to know the car compatible models.

### PARKING SENSORS RECOVER

This function permits to recover the OEM parking sensors. Many cars with parking sensors lose the function if the OEM car radio is substituted with an aftermarket one. This trouble is due because the parking sensor's beeps are managed by the OEM car radio.

By setting the option 2 as parking sensors output and by connecting a buzzer to the related wire, the function is completely recovered.

This function isn't active by default; see the table of compatibilities to know the car compatible models.

### SETTINGS MANAGING

Some vehicles have some regulations, like: hour setting, date setting, power ignition setting etc, that you can set through the OEM car radio. By changing the OEM car radio with an aftermarket one, this function is lost.

UNICO DUAL permits to recover this function.

Read the section named SETTINGS to know the car models on which is possible to do this operation and how to do it.

## TROUBLESHOOTING

The unit doesn't work and the LED is off.

Verify that the power supplying wires are correctly connected .

The unit is correctly connected but the LED is off and the unit doesn't work .

Verify the connection of the CANBUS wires .

The unit is correctly connected and the LED flashes RED quickly.

The unit can't do the CANBUS synchronization; please, contact the manufacturer.

The unit is correctly connected and the LED flashes RED irregularly.

Verify the connection of the CANBUS wires.

The unit is correctly connected and the LED is lighted on RED fix.

The unit has done the CANBUS synchronization but it doesn't recognizes the vehicle;

## MANUAL OF INSTALLATION AND USE

# UNICO DUAL PLUS

## Adapter for CAN BUS - KBUS and RESISTIVE protocol Steering Wheel Commands dedicated to aftermarket car radios rev. 1.12

### UNICO DUAL PLUS

**UNICO DUAL PLUS** is an **UNIVERSAL** adapter for the OEM steering wheel commands connection.

Its compatibility extends to a wide range of vehicles having **CAN BUS - KBUS** and **Resistive** protocols and to the most famous aftermarket car radios available on market.

This feature is REVOLUTIONARY!

In facts, the same interface is able to connect, by few and simple operations, the CAN BUS or KBUS or Resistive systems.

The function is totally managed by a microprocessor able to self-recognize the steering wheel commands protocol. The CAN BUS - KBUS protocol setting is managed in SELF-SELECTION.

The Resistive setting is made by following a simple procedure that assign to the unit the functions of the buttons available on the steering wheel.

The present unit allows you to do the integrations in that vehicles in which are available different communication systems; for example, when the car has the steering wheel commands Resistive and the services such as lights, power ignition, odometer etc, in CAN BUS protocol.

A complete sort of plug and play cables accomplishes this excellent product.



### DIP SWITCHES

**UNICO DUAL PLUS** has 4 dip switches. Dips 1 and 2 must be set before the installation.

Dips 3 and 4 are necessary only to manage special functions for some cars.

It's important to make the right dip switches setting in order that the unit works properly.

RESISTIVE PROTOCOL	DIP 1 ON	
CAN BUS / K-BUS PROTOCOL	DIP 1 OFF	
HYBRID PROFILE: RESISTIVE STEERING WHEEL COMM., CANBUS SERVICES OUTPUTS	DIP 1 e 2 ON	
OPTIONS MANAGING (SEE AT PAGES 6 /7)	DIP 3 ON	
UNIT UPGRADING	DIP 4 ON	



**ATTENTION! YOU ALWAYS MUST TO SET DIP 3 and 4 IN POSITION "OFF" AFTER THE SETTING IS DONE**



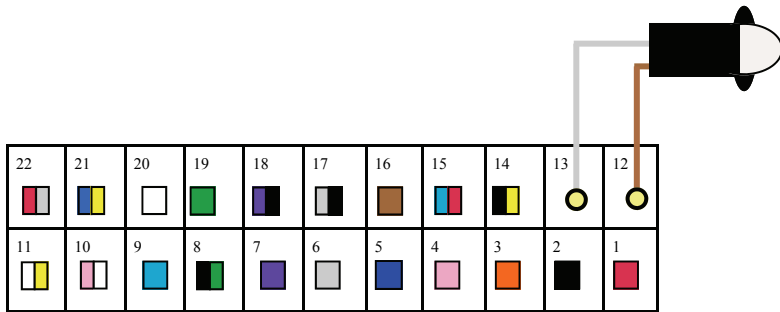
**SET THE DIP SWITCHES WITH UNICO DUAL PLUS IN "POWER SUPPLYING OFF" MODE**

### WARRANTY

THIS PRODUCT IS GUARANTEED FOR TWO YEARS AGAINST ANY MANUFACTURING DEFECT.  
PURCHASE INVOICE IS REQUIRED AS A VALIDITY OF THE GUARANTEE

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## WIRES DESCRIPTION



POS.	COLOUR	FUNCTION
1	RED	12V
2	BLACK	GND
3	ORANGE	LIGHTS OUTPUT
4	PINK	RESISTIVE INPUT
5	BLUE	REVERSE OUTPUT
6	GREY	AUX 1 (WITH RESISTANCE 1.5k IN SERIES)
7	VIOLET	RADIO RESISTIVE OUTPUT
8	GREEN/BLACK	AUX 3 (WITH RESIST. 560 ohm TO THE GND)
9	LIGHT BLUE	AUX 4 (WITH RESIST. 3.3 k TO THE GND)
10	PINK/WHITE	AUX 5 (WITH RESIST. 1 k TO THE GND)
11	YELLOW/WHITE	HANDBRAKE OUTPUT
12		INFRARED CATHODE
13		INFRARED ANHODE
14	YELLOW/BLACK	AUX 6 (WITH RESIST. 4.7 k TO THE GND)
15	RED/BLUE	AUX 7 (WITH RESIST. 220 ohm TO GND)
16	BROWN	RADIO CODE OUTPUT
17	GREY/BLACK	GND
18	VIOLET/BLACK	K-BUS
19	GREEN	CAN H
20	WHITE	CAN L
21	BLUE/YELLOW	STK OUT
22	RED/GREY	ODOMETER

CBL007UNAL22	ALPINE ADAPTER
CBL007UNBL12	BLAUPUNKT ADAPTER
CBL007UNCL12	CLARION / JVC ADAPTER
CBL007UNKE11	KENWOOD ADAPTER (WITH S-VIDEO)
CBL007UNP112	PIONEER SONY ADAPTER
CBL007UNPN21	PANASONIC / KENWOOD (NO S-VIDEO) ADAPTER



**ATTENTION! THE INFRARED LED AND THE ADAPTERS NOT INCLUDED IN THE KIT ARE SUPPLIED SEPARATELY**

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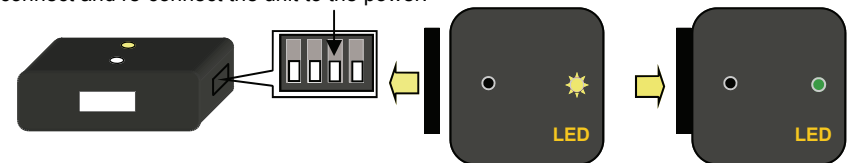
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## OPTIONS MANAGING

This operation can be done for every option described here below.

OPTION	DEFAULT STATUS 1	STATUS 2	STATUS 3	STATUS 4	STATUS 5
	1 RED LED FLASHING	2 RED LED FLASHINGS	3 RED LED FLASHINGS	4 RED LED FLASHINGS	5 RED LED FLASHINGS
SEEK	SEEK ALWAYS AVAILABLE	SEEK AVAILABLE AFTER 10 SEC AFTER VOLUM	SEEK AVAILABLE OVER 3 KM/H	SEEK AVAILABLE UNDER THE CAR AUDIO DASHBOARD MENU (MERCEDES)	
HANDBRAKE (GND)	OUTPUT AVAILABLE WITH HANDBRAKE ON	HANDBRAKE OUTPUT AVAILABLE UNDER 3 Km/h	HANDBRAKE OUTPUT AVAILABLE UNDER 20 Km/h	HANDBRAKE MANAGED AS PARKING SENSORS SIMULATION (PSA / BMW) FREELANDER OPEL INSIGNIA	HANDBRAKE MANAGED AS MUTE OUTPUT (FIAT)
SPEED PULSE	ODOMETER FREQUENCY 23000 IMPULSES FOR MILE	ODOMETER FREQUENCY 11500 IMPULSES FOR MILE	ODOMETER FREQUENCY 8000 IMPULSES FOR MILE	ODOMETER FREQUENCY 4000 IMPULSES FOR MILE	
PHONE	PHONE MODE WITH TWO PHONE BUTTONS	PHONE MODE WITH ONE PHONE BUTTON	PHONE MODE NOT ENABLE		
AMPLIWAKE UP	AMPLIWAKE UP ACTIVE	AMPLIWAKE UP NOT ACTIVE			
RESISTIVE OUTPUT MANAGING	RESISTIVE OUTPUT MODULATE	RESISTIVE OUTPUT CONTINUOUS			
DISPLAY WRITING	FUNCTION AVAILBLE VW/MB/OPEL/MAZDA	FUNCTION NOT AVAILABLE			
BACK GEAR OUTPUT	BACK GEAR OUTPUT ON	POSITIVE OUTPUT WHILE CAR DRIVING BELOW 10 Km/h SPEED (FUNCTION ACTIVATED BY INSERTING BACKGEAR)			

Once the configuration is done to exit and memorize the changes please set e dip 3 OFF then disconnect and re-connect the unit to the power.



After this operation the led of the module will light GREEN.

**IF THE CAR HAS NOT THE STEERING WHEEL COMMANDS, PLEASE USE THE BUTTON OF THE UNIT. TO SCROLL THE OPTIONS (YELLOW BLINKS OF THE LED) PRESS QUICKLY THE BUTTON OF THE UNIT.**

**ONCE REACHED THE OPTION WE WANT TO CHANGE PLEASE KEEP PRESSED THE BUTTON OF THE UNIT TO INCREASE THE STATUS OF THE OPTION (RED BLINKS OF THE LED).**

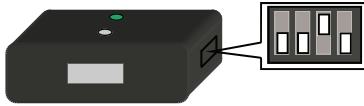
Once the configuration is done to exit and memorize the changes please set e dip 3 OFF then disconnect and re-connect the unit to the power.

## OPTIONS MANAGING

UNICO DUAL manages some functions by default. Sometime the user's requirements are different to the settings pre-set by the manufacturer. To change them has been included a procedure to modify manually a series of options.

To modify the default settings it is necessary that UNICO DUAL has recognized the CANBUS net. In case of hybrid protocol (Resistive and CANBUS) it is necessary to have done the memorization of the steering wheel buttons.

To enter the Options managing menu, it is necessary to set the dip switch 3 on "ON"; do this operation with the unit **not powered**.



As soon as UNICO DUAL is powered the led will flash YELLOW and then it will flash once (or more) RED. The YELLOW flashes represent the number of the option; the RED flashes indicates the option status. The options available are mentioned in the table below:

OPTION
1 SEEK (1 YELLOW lighting)
2 HANDBRAKE (2 YELLOW lightings)
3 ODOMETER (3 YELLOW lightings)
4 PHONE (4 YELLOW lightings)
5 AMPLIWAKE UP (5 YELLOW lightings)
6 RESISTIVE INPUT MANAGING (6 YELLOW lightings)
7 DISPLAY WRITING (7 YELLOW lightings)
8 BACKGEAR OUTPUT (8 YELLOW lightings)

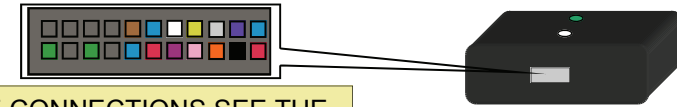
the first option concerns the SEEK buttons behaviour; it's shown by one YELLOW flash, followed by a pause and by a series of RED flashing that inform about the status. To modify the default option to another function, it is necessary to press the SEEK + button; this button increases, at every pressure, the number of the led's YELLOW flashing. SEEK — decreases it.



After option we want to change is display, by pressing VOLUME + button, we will increase the number of RED lightings, changing consequently the status of the option.



## CANBUS - KBUS DIAGRAM



FOR THE CONNECTIONS SEE THE CANBUS - KBUS TABLE

### CAN BUS - KBUS SELF-LEARNING AND FUNCTIONS

The selection of the CAN BUS - KBUS protocol is carried out in SELF-LEARNING; Once the connections between the unit and the connector are done, UNICO DUAL PLUS does, in a few time, the synchronization, operation shown by short RED lightings of the UNICO DUAL's LED.

As soon as the vehicle is recognized, the LED will blink GREEN.

It's necessary infact to select the radio protocol needed (see RADIO TABLES).

## HOW TO SET THE RADIO PROFILE

On default the unit offers the first profile available that is the CLARION, the GREEN LED make's one flashes. With the attached table select the radio needed so verify how many flashes it must to do the LED related to the radio of interest.

If the radio we want to set it's the first one just press SEEK + to confirm the selection, the LED will light on GREEN.

To select a different radio press VOLUME + on the steering wheel to increase the number of flashings of the LED or VOLUME - to decrease.

Once the radio desired is selected to confirm the choice press SEEK + on the steering wheel. the LED will light on GREEN as confirmation.

The logic of the flashes of the LED follows this behaviour:

LED GREEN flash meaning= units

LED RED flash meaning= tens

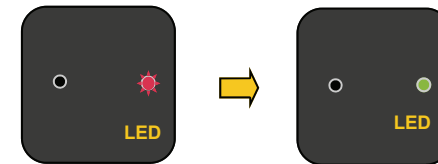
For example 5 GREEN flashes of LED , indicate the radio in the 5th position.

2 RED flashes of the LED, indicate the radio in position 20.

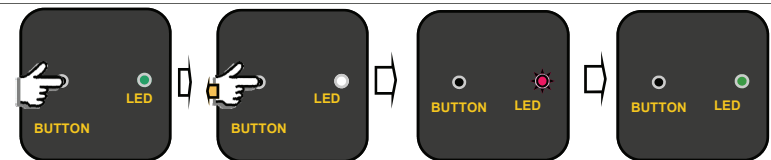
1 RED flash of the LED followed by 2 GREEN flashes of the LED indicate the radio in position 12.

Once the radio of interest is selected to confirm the choice press SEEK + on the steering wheel.

The led of the unit will light GREEN



## IF YOU WANT TO RE-INSTALL UNICO DUAL PLUS IN A NEW VEHICLE, AFTER THE



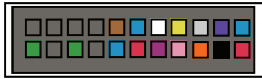
PRESS AND KEEP PRESSED THE BUTTON

WHEN THE LED TURNS OFF, RELEASE THE BUTTON

THE LED WILL LIGHT RED FOR FEW SECONDS

THEN THE LED WILL LIGHT GREEN: THE UNIT IS SET

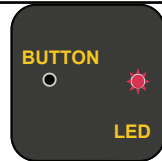
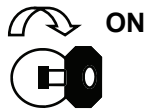
## RESISTIVE DIAGRAM



FOR THE CONNECTIONS, SEE THE RESISTIVE TABLE

## RECOGNIZING PROCEDURE

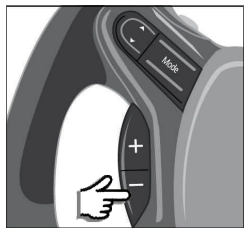
Once done the connections, turn on the ignition to supply power to UNICO DUAL PLUS; the LED will flash RED quickly, indicating that the condition "no button pressed" is memorized.



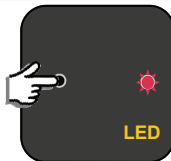
Now we need to assign control functions to each of the buttons/levers of the vehicle's steering wheel command. The allocation of functions follows the sequential logic described in table FUNCTIONS.

The first function available is VOLUME —. Each time you press a steering wheel button/lever, UNICO DUAL PLUS LED emits a short flash to indicate the successful storage of the function.

For each button pressed the LED will blink RED to indicate that the function is associated.

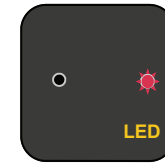
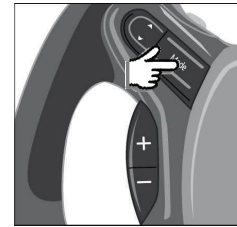


To skip a function simply press quickly the button UNICO DUAL PLUS.



It's possible to manage till 8 buttons/levers.  
If 8 buttons/levers aren't available, is necessary to exit manually to the setting mode.

To exit the procedure, you must press and keep pressed one of the memorized buttons till the LED light YELLOW. As soon as you release the button the LED will blink GREEN.



## HOW TO SET THE RADIO PROFILE

It's necessary now to select the radio protocol needed (see RADIO TABLES).

On default the unit offers the first profile available that is the CLARION, the GREEN LED make's one flashes. With the attached table select the radio needed so verify how many flashes it must do the LED related to the radio of interest.

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For example 5 GREEN flashes of LED , indicate the radio in the 5th position.

2 RED flashes of the LED, indicate the radio in position 20.

1 RED flash of the LED followed by 2 GREEN flashes of the LED indicate the radio in position 12.

Once the radio of interest is selected to confirm the choice press SEEK + on the steering wheel.

The led of the unit will light GREEN

COMMENTS:

Unit is ready to work when LED light GREEN, now if you press any button recognized the LED light will be YELLOW.

In case of anomaly, do the procedure of RESET

To **RESET the unit, press and keep pressed the button till the LED flashes RED.**

