







## CAN-Bus Steering Wheel Control Interface

### Vehicle Compatibility

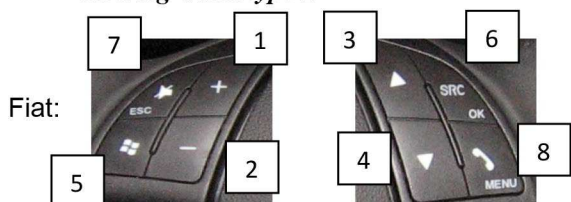
- Alfa
- Fiat
- Lancia
- Citroen Jumper (2007-)
- Peugeot Boxer (2006-)
- Ford KA
- Iveco Daily

### Features Supported

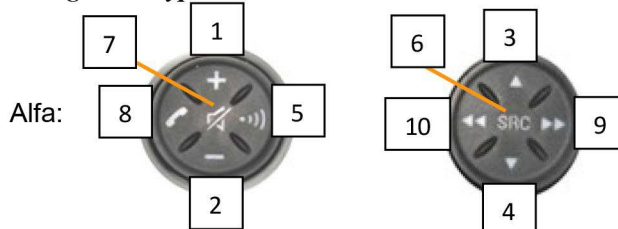
-  Ignition
-  Reverse
-  Illumination
-  Speed
-  Park Brake
-  Mute












### Steering Wheel Remote Control

*steering-wheel type 1*



*steering-wheel type 2*



Steering Wheel Key	Command
1	 Volume +
2	 Volume -
3	 Track +
4	 Track -
5	 Push to Talk (PTT)
6	 Source
7	 Mute
8	 Short Press: Answer Call  Long Press: Reject Call/Hang Up
9	 Preset +
10	 Preset -

Functions are vehicle dependent

### OEM Radio Removal



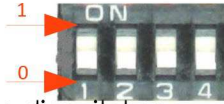
#### Tools



Universal Release Keys  
(not included)

# Setting the dipswitches

## Radio



Set the corresponding dipswitches as per the below table

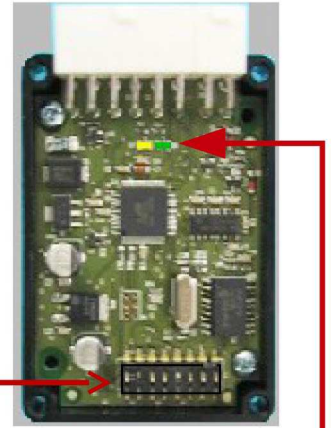
DIP switches	1	2	3	4
– Audiovox	0	0	0	0
– Blaupunkt	1	0	0	0
– Alpine	0	1	0	0
– Kenwood	1	1	0	0
– JVC	0	0	1	0
– Blaupunkt II <sup>*1)</sup>	1	0	1	0
– Clarion	0	1	1	0
– Macrom	1	1	1	0
– Zenec	0	0	0	1
– Eclipse	1	0	0	1
– Zenec II <sup>*2)</sup>	0	1	0	1
– Axion II	1	1	0	1
– Grundig/Axion <sup>*3)</sup>	0	0	1	1
– Sony	1	0	1	1
– Pioneer	0	1	1	1
– Becker	1	1	1	1

Colour	Description
Green	CAN-Bus Active
Yellow	Ignition Output enabled

\*1) For all Blaupunkt radio devices of group 2

\*2) For Zenec ZE-NC514 only

\*3) For Axion radios of group 1 and Grundig radios



## Vehicle

### Vehicle Group 1

- Citroen Jumper (II. Gen., 2007-2011)
- Citroen Jumper (III. Gen., 2011-)
- Fiat Ducato (III. Gen. (250), 2006-2011)
- Fiat Ducato (IV. Gen., 2011-)
- Iveco Daily IV (2006-2011)
- Iveco Daily V (2011-)
- Peugeot Boxer (II. Gen. (250), 2006-2011)
- Peugeot Boxer (III. Gen., 2011-)

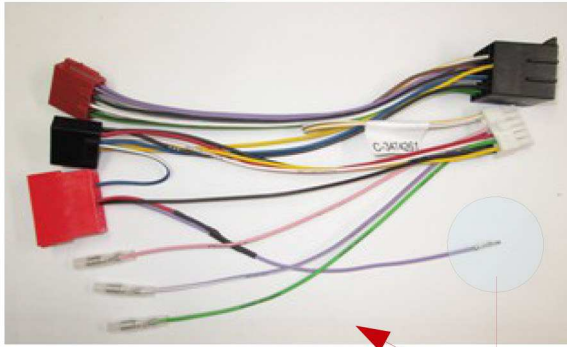
### Vehicle Group 2

- Alfa 147 (937, 2006-2010)
- Alfa 156 (932, 2002-2005)
- Alfa 159 (939) 2005-2011)
- Alfa Brera (939, 2005-2010)
- Alfa GT (937, 2004-2010)
- Alfa Giulietta (940, 2010-)
- Alfa Mito (955, 2008-)
- Alfa Spider (939, 2006-2010)
- Fiat 500 (150, 2005-)
- Fiat Bravo (II. Gen., 198, 2007-)
- Fiat Croma (II. Gen., 194, 2005-2010)
- Fiat Doblo (I. Gen., 223, 2004-2010)
- Fiat Doblo (II. Gen., 263, 2010-)
- Fiat Fiorino (III. Gen., 225, 2008-)
- Fiat Grande Punto (III. Gen., 199, 2005-)
- Fiat Idea (350, 2003-)
- Fiat Linea (110, 2007-)
- Fiat Multipla (186, 2004-)
- Fiat Panda (II. Gen., 169, 2003-)
- Fiat Punto (III. Gen., 199, 2005-2012)
- Fiat Punto (2012-)
- Fiat Punto Evo (2010-)
- Fiat Stilo (2004-2008)
- Fiat Qubo (300, 2008-)
- Ford KA (II. Gen., RU8, 2009-)
- Lancia Delta (III. Gen., 844, 2008-)
- Lancia Musa (350, 2004-2007)
- Lancia Ypsilon (843, 2003-2011)
- Lancia Ypsilon (846, 2011-)

#	Vehicle Type	DIP 5 – 8			
		5	6	7	8
1	Vehicle Group 1 <i>Function Output 8: Parking Brake</i>	1	0	0	0
2	Vehicle Group 2 <i>Function Output 8: Parking Brake</i>	0	1	0	0



## Vehicle Harness



Must be connected to pin 3 of the 4 pin molex connector

Wire Colour	Signal
Pink	Speed
Purple	Reverse
Green	Park Brake

### **attention**

*no CAN on the radio*

*OBD connector*

CAN High	Pin 1	orange / black
CAN Low	Pin 9	orange / white

## Amplifier Adjustment



LED    Sens.    Vol.

### **Adjustment:**

After installation, you have to adjust the sensitivity and volume of the box. (You need a screwdriver to perform.)

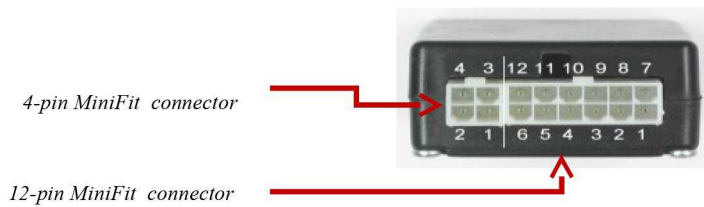
Turn the sensitivity to the left (minimum) and set the adjustment for volume into middle position.

Please start a mobile phone call now, by using the cars „blue&me“ system and hold-on. Turn up the sensitivity slowly to the right until the NF-Signal is accepted , amplified and transfered to the front speaker.

Now, turn the adjustment for volume to the right or to the left to set the preferred volume level..

In case the incoming NF-signal level is too high, the red LED is lightning. Turn down the signal level in your phone- or telematic control box. This can also be done, if the signal is to weak.

# Inputs and Outputs



## 12 Pin Connector Configuration

Pin	Signal	Type	Description	Note
1	Kl. 31	In	ground	
2	Kl. 31	In	ground	
3	Kl. 58	Out*)	illumination	output 0 V: illumination off / output 12 V: illumination on
4	R	Out *)	reverse	output 0 V: $\Delta$ off / output 12 V: $\Delta$ on
5	BTP 3.15	Out	Becker® remote control	remote control of Becker® navigation (chamber C3, Pin15)
6	CAN L	In	CAN LOW	
7	Kl. 30	In	+ 12V battery plus	interface is designed for 12V d.c. voltage
8	Mute / HB	Out	mute parking brake	output ground is according to switch setting
9	Kl. 15 / ACC	Out *)	ACC / ignition	output 0 V: ignition off / output 12 V: ignition on
10	Speed	Out *)	rectangular signal, proportional to speed	rectangular signal 0 .. 12 Volt, approx. 1 Hz per km/h
11	BTP 3.16	Out	Becker® remote control	remote control of Becker® navigation (chamber C3, Pin16)
12	CAN H	In	CAN HIGH	

## 4 Pin Connector Configuration

Pin	Signal	Type	Description	Note
1	Kl. 31	Out	ground	
2	RC5 out	Out	remote control system digital	
3	RC3 in	In	steering-wheel key input analog	
4	RC3 out	Out	remote control systems analog	

\*) **The maximum rate of current per output is 180 mA.** Also, the **total current** of all outputs together **must not exceed 200 mA**. Otherwise, the interface could be damaged. In case a higher current is needed (ACC, reverse signal) a relay with a coil resistance of min. 75  $\Omega$  or min. 150  $\Omega$  by use of two relays. We advise to use our ER70.

Steering-wheel key in vehicle	Radio Function	Alpine		Pioneer		Kenwood		Clarion		Blaupunkt			Sony		Phonocar		Eclipse		Grundig		Axion			JVC		Macrom		Zenec		Audiovox	
		Radio	CD	Radio	CD	Radio	CD	Radio	CD	Radio	CD	Group 1	Group 2	Group 3	Radio	CD	Radio	CD	Radio	CD	Radio	CD	Group 1	Group 2	Radio	CD	Radio	CD	Radio	CD	
+	Vol +	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
-	Vol -	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Track +	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Track -	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Preset +	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
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▶	Seek +	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Seek -	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Band	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Preset +	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Preset -	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Folder +	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Folder -	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Folder +	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Folder -	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Seek +	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Seek -	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Folder +	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	accept call (*)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Reject call (*)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Tel. (*)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Source	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Mute	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Band	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Power	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	push to talk (PTT)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Preset +	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Seek +	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
▶	Folder +	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

✓ : available

(\*): Only if supported by the radio device

Axion Gruppe 1/ Group 1: CR1122D  
 Axion Gruppe 2/ Group 2: DVD1030 NAV  
 JVC Gruppe 1/ Group 1: KD-SH1000 und ältere Geräte  
 / and older devices  
 JVC Gruppe 2/ Group 2: KD-R821BT

Blaupunkt Gruppe 1/ Group 1: Orlando MP46 und ältere Geräte / and older devices  
 Blaupunkt Gruppe 2/ Group 2: Madrid 210, Toronto 410BT  
 Blaupunkt Gruppe 3/ Group 3: San Francisco 300