

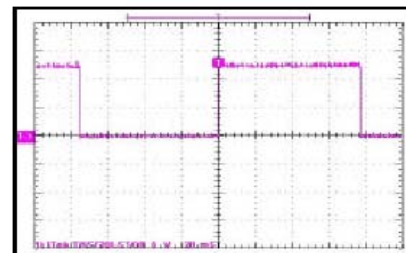
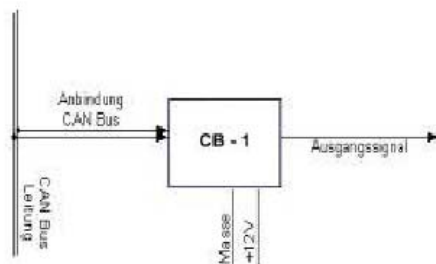
CAN-Bus Interface CB-1

Technical data.

Outputs.



Frequency: approx. 6 Hz per km/h
Output voltage: 0 .. 12 V square wave
min. speed: 3 km/h



CB 1 suits:

Alfa Romeo, Audi, BMW, Chrysler, Citroen, Fiat, Ford, Jaguar, Landrover, Mercedes Benz, Mini, Opel, Peugeot, Porsche, Renault, Rover, Saab, Seat, Skoda, Smart, Volvo, VW

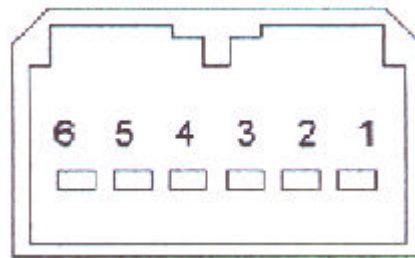
Function.

The CAN Bus interface is designed to provide a vehicle speed signal for vehicles using a CAN Bus system. It is programmed to automatically detect the vehicle type and it will give a frequency output of approximately 6 Hz per km/h.

Fitting.

The CAN Bus uses two wires for data transmission. One is called CAN High and the other called CAN Low (sometimes marked as CAN+ and CAN- respectively). The CAN connections on the CAN Bus interface should be connected on to the appropriate CAN Bus connections with an insulated solder joint. Do not cut the CAN Bus wires.

Module Information.



<i>Pin</i>	<i>I/O</i>	<i>Description</i>	<i>Colour</i>
1	Input	Ground	black
2	Input	Module Power +12 V	red
3	Output	Speed signal 0 V .. 12 V	orange
4	Output	-----	green
5	Input	CAN High	yellow
6	Input	CAN Low	blue

Attention: very important informations!!!

The CB-1 reads only CAN Bus information and converts it to a rectangular and speed proportional signal.

Installing the CB-1 means connecting it to vehicles which are due to the manufacturers standards.

Please see into the vehicles manual to be sure that installing the CB-1 cannot interfere other electronic systems.

Installation notes.

1. We recommend that the High and Low CAN Bus connections are picked up from the automatic gearbox ECU, where possible, as this has the least amount of data flowing in the system. Note: it is also possible on some vehicles to pick up the CAN wires at the ignition switch, e. g. Mercedes.
2. Because manufacturers continually change the pin configuration of the plugs, it is advisable to pick up Pos and Neg for powering the interface from an alternative supply, preferably a good ignition controlled regulated supply. A good earth is absolutely essential.
3. The CAN Bus interface is at times blamed for faults which are not of its making. It only reads data, it does not write data to the vehicle system. In addition, it has such a high internal impedance that it cannot affect the vehicle operation. However, there is an unwritten law with garages that states the last thing fitted to the vehicle must be the cause of any problem! The CB-1 is supplied with a plugin loom so the simplest answer to this type of response is to just unplug the interface. It is then disconnected from the system. If the problem still exists then, of course, it is not being caused by the interface unit.
4. It would be practice to unplug the 6-wire loom from the CB-1 box and then make connections, so removing any possibility of shorting. When completed, reconnect the plug to the CB-1 box.
5. Connecting the CB-1 close to the ECU, approximately 10 cm away from the plug will allow room for the connectors. While the power wires can be extended, it is not advisable to extend the CAN High and Low leads. If there is a need to extend the signal lead (orange), please ensure that it is run to its destination avoiding being close to equipment that might give off pulses which could be picked up by this wire, such as ignition or heater fans, etc. Common sense tells you that each wire can become an aerial for extraneous signals within a vehicle environment.

How can I find CAN High and CAN Low?

Important notice:

All connections are for guidance only. Vehicle manufacturers can vary wiring from model to model. It is advisable to check the vehicle wiring diagramm.

This notice is valuing for the following pages.

Vehicle	ECU locations	Wire colours
Alfa 147, 156, 166 (166: ---> see attached drawing)	ECU inside black waterproof box under bonnet. Passenger side at back of engine bay. Transmission Control Unit under metal kick panel on floor at front of passenger footwell.	CAN High is green CAN Low is brown
Audi A4, A6 (---> see attached drawing)	On ECU, Pin 58 is CAN Low. Pin 60 is CAN High. If you are unable to locate the above at the ECU, you can find the orange/brown and the orange/black wires on the larger of the looms under the steering column panel on the right hand side.	CAN High is orange/black CAN Low is orange/brown
BMW (---> see attached picture)	All control units under bonnet inside waterproof box under filter element. Passenger side at back of engine bay. Note: BMW have recently changed their CAN Bus system, so there is an old and new reference.	Newer models: CAN High is yellow/red CAN Low is yellow/brown colours can vary to: CAN High is yellow/black CAN Low is yellow/brown
BMW X5	On engine ECU, plug 4.	CAN High is yellow/black CAN Low is yellow/brown
Chrysler Grand Cherokee (with Mercedes engine)	On ECU behind battery.	CAN High is green/white CAN Low ist white
Citroen Berlingo	ON ECU near battery.	CAN High is brown CAN Low is green
Citroen C5 (---> see attached picture)	Located under bonnet. Note there are two seperate sets of white/grey twisted wires on the C5. Check that the white wire is marked with the circuit number '9000'.	CAN High is white CAN Low is grey
Citroen Xsara	Located on the rear side under the bonnet and has 3 connectors. The twisted pair of wires can be found in the central 48-way plug. CAN High – Terminal H4 CAN Low – Terminal H3	CAN High is brown CAN Low is green
Fiat Stilo	On engine.	CAN High is pink/black CAN Low is pink/white
Ford Mondeo Ghia	On diagnostic socket on right hand side, near steering wheel.	CAN High is red/grey CAN Low is red/blue
Jaguar S-Type	16-pol diagnostic plug: PIN 2 = J1850 Bus+ PIN 10 = J1850 Bus- (PIN 5 = ground)	With SCP-Bus: CB-7 !!!
Jaguar S-Type R and 3.0 Exec. (built febr. 2002 and later)	On the diagnostic plug. PIN 6 = CAN High PIN 14 = CAN Low	CAN High is yellow CAN Low is green
Jaguar XK8/XKR	All control units under bonnet inside waterproof box. Passenger side at back of engine bay.	CAN High is yellow CAN Low is green
Jaguar XK8 Bj. 1999 and older (--> see attached drawing)	ECU can be found underneath waterproof plastic box.	
Jaguar X-type	Under dash, drivers side, near the door pillar. On diagnostic plug. PIN 6 = CAN High PIN 14 = CAN Low	CAN High is yellow CAN Low is green

Vehicle	ECU locations	Wire colours
Landrover Freelander	Twisted pair of wires behind speedo head.	CAN High is yellow/black CAN Low is yellow/brown
Mercedes Benz C-Class + SLK + CLK	ECU inside black waterproof box under bonnet. Passenger side at back of engine bay. Transmission Control Unit under metal kick panel on floor at front of passenger footwell.	CAN High is white, or green with white tracer CAN Low is green
Mercedes Benz CDI 200 (W203) (--> see attached picture)	The twisted pairs of wires can be found in the fuse box.	
Mercedes Benz E-Class (W210) until Bj 2001	Twisted wires can be found at the ignition on the steering column. PIN 1 is green/white, PIN 2 is green.	CAN High is white or green/white Can Low is green
Mercedes Benz E-Class (W211) since Bj. 2002	The twisted wires can be found in the engine department on the middle 2-way black connector on the ESP unit. It can also be found underneath the passengers door loom (plastic cover has to be lifted).	CAN High is green/white Can Low is green
Mercedes Benz G-Class Model 2000	CAN Bus wires are located on the transmission-ECU.	
Mercedes Benz M-Class	ECU for transmission, situated under steering column and has "CAN H.L." marked on it.	CAN High is white CAN Low is green
Mercedes Benz S-Class + ML 420	Locate body control ECU (all ECUs are in the same place). Look for a 2-pin plug which is situated between 2 large plugs. The small plug has wires which are green and green with a white tracer. These are H.L. CAN Bus. If there is no pulse, change the yellow and blue wires over. Alternatively, on the passenger side there is a plastic compartment, twisted wires can be found there.	CAN High is green/white Can Low ist green
Mercedes Benz V-Class & Vito (---> see attached picture)	Wires can be found on the rear side of speedo head.	CAN High is green/white Can Low is green
Mercedes Sprinter	Remove the glove box. Running along the bulkhead is the wiring loom. Free off the cable ties that retain it and then locate the twisted pair of wires.	CAN High is green/white CAN Low is green
Hint: for all Mercedes with electronical ignition key	Whenever you have problems finding can wires it is good alternative to look behind ignition lock.	
Mini (BMW)	Remove rev counter by unscrewing 2 Torx screws on top bracket. CAN High and CAN Low can be found on the plastic connector.	CAN High is yellow/black CAN Low is yellow/brown
MCC Smart (---> see attached drawing)	CAN Low CAN High can be found at the rear side of speedo head.	CAN High is brown/red CAN Low is white/black
Opel Zafira	The wires are a twisted pair with a black cover so, in most cases, you will only see a thick black wire. Should be visible on the ABS connector or engine ECU connectors.	CAN High is green CAN Low is white

Vehicle	ECU locations	Wire colours
Peugeot 307	Several twisted wires can be found in the fuse box underneath steering column.	CAN High is green CAN Low is grey
Peugeot 406	Just above fuse box under the dash there are 4 fuses in a row. Unclip and pull out. 26 pin connector.	CAN High is red CAN Low is green
Peugeot 607	The transmission ECU is located on the left side in the engine compartment underneath a plastic cover. It is the most upper unit, fixed with an elastic strap.	CAN High is red CAN Low is pink
Porsche Boxster	ECU mounted on the bulkhead in the boot of the car. Twisted wires can also be found in the radio console.	CAN High is black/red/yellow CAN Low is black/red/blue
Renault Espace 2002	Inside the fusebox, take out the centre black box, find twisted pair of wires.	CAN High is pink CAN Low is violet
Renault Laguna MK2 (since Bj. 2001) (---> see attached picture)	The wires are available in the diagnostic socket in the centre consul, colours are white and lilac.	
Renault Megane	On the OBD plug, Pin 6 and 14, brown and pink wires.	
Rover 75 (---> see attached drawing)	Engine management system is located in engine bay. PIN 79 = CAN Low PIN 68 = CAN High Or twisted pair of wires at speedo head.	CAN High is yellow/black CAN Low is yellow/brown
Saab 9-5 (---> see attached picture)	ECU is located in engine bay. Pin 66 is CAN High. Pin 19 is CAN Low.	CAN High is green CAN Low is white
Seat Leon	ABS connector located at passenger side at rear of engine bay.	CAN High is orange/black CAN Low is brown/orange
Skoda Octavia	Just above break pedal, inside centre consul find main loom.	CAN High is orange/black CAN Low is orange/brown
VW Sharan (---> see attached picture)	Located under battery plastic cover next to windscreen washer.	CAN High is orange/black CAN Low is orange/brown

ATTENTION:

These instructions are only hints!

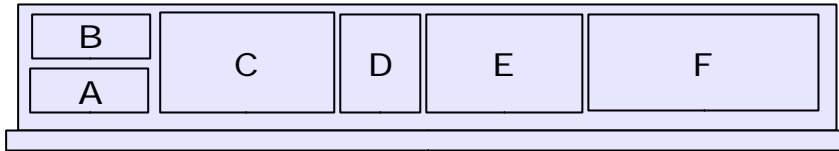
Car manufacturers are able to change or integrate wire or pin plugs. If you want to be sure, you have to study the wiring diagramm or consult a contract reparation center. We can only give you restricted and not finally maken suggestions about the location of CAN connections in vehicles.

CAN-Bus Interface CB-1

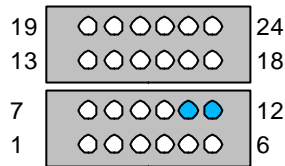
Application information.

MERCEDES BENZ / ALFA 166

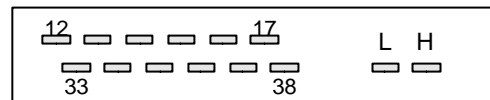
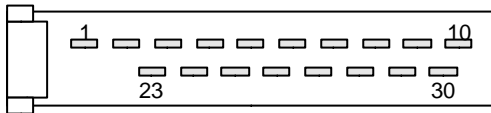
Engine Control Unit



Connector D
pin 11 = CAN +
pin 12 = CAN -



5-Gear-Automatic:

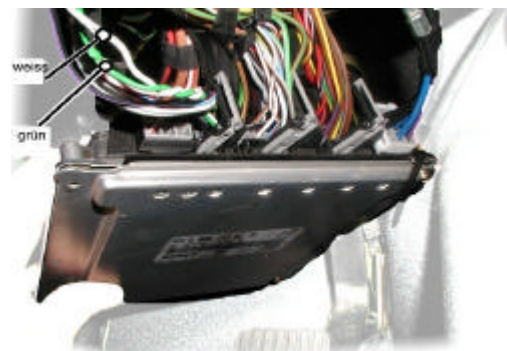


Make sure, that the voltage supplying is steady!

Pin	Description
30	Ground
29	+ 12 V
L	CAN -
H	CAN +

MERCEDES VITO CDI ECU

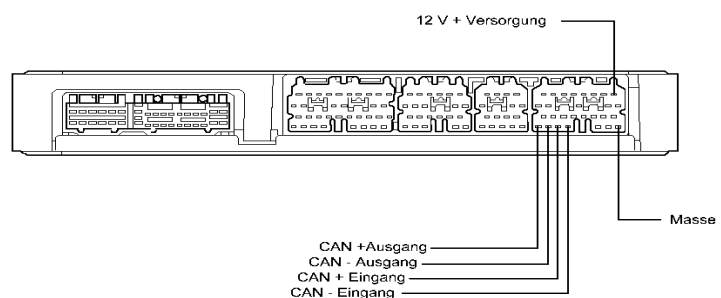
CAN High	white
CAN Low	green



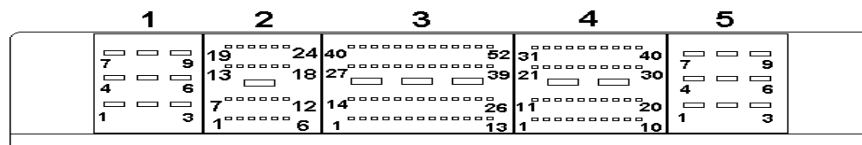
JAGUAR XK8/XKR/XJR

If the control unit diverges from the following picture, take the connections analog the Mercedes/Alfa.

Make sure, that the voltage supplying is steady!

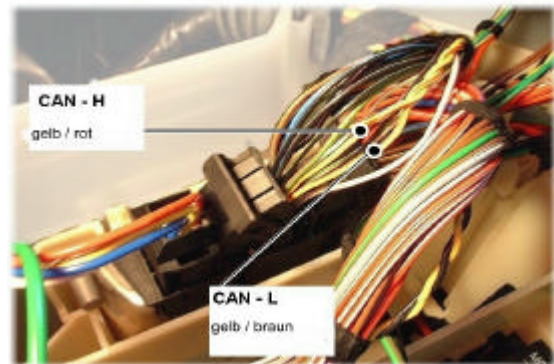


BMW



Plug No.	Pin No.	Description
2	3	CAN HIGH (5er)
2	4	CAN LOW
4	36	CAN HIGH (3er)
4	37	CAN LOW
1	6	Ground
1	8	12 V +

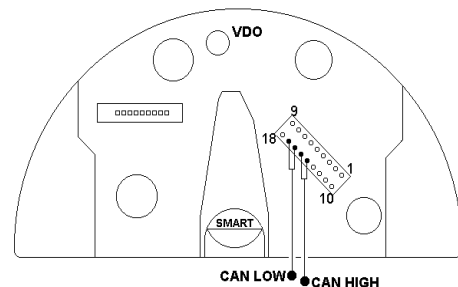
Some BMW-Models can have two CAN bus systems: then the speedsignal is at the same place as the ECU connection is. (The second CAN bus is for the travelling gear control system only.)



SMART

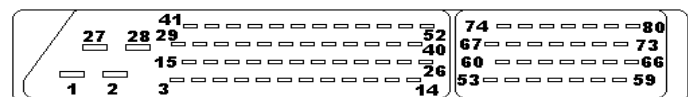
Rear side of speedo head

Wire colour	Pin no.	Description
Brown/red	14 or 15	CAN High
White/black	16 or 17	CAN Low



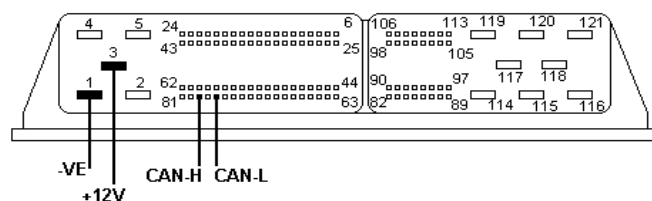
ROVER 75

Wire colour	Pin no.	Description
Yellow/black	65	CAN High
Yellow/brown	79	CAN Low



AUDI

Pin no.	Description
79	CAN High
77	CAN Low
1	Ground
3	+12 V



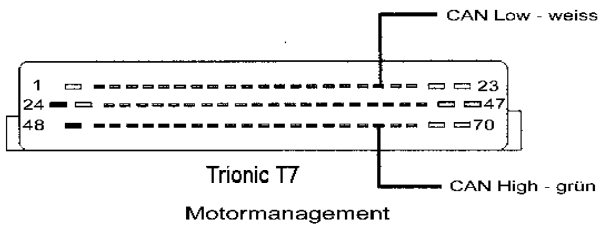
VOLKSWAGEN

VW Sharan TDI ECU

Description	Wire colour
CAN Low	Orange/brown
CAN High	Orange/black



SAAB 9 - 5

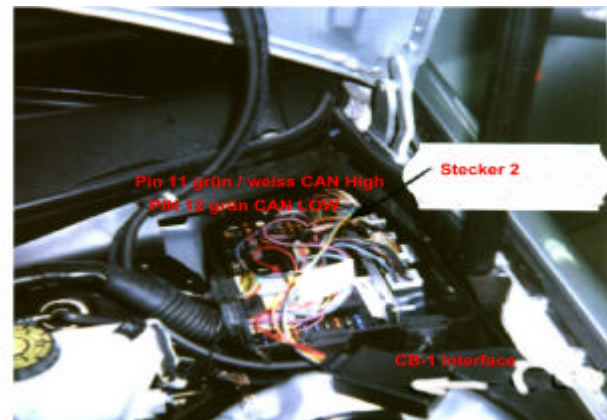


Pin no.	Description	colour
19	CAN Low	white
66	CAN High	green
25 or 62	Ground	
23 or 43	+12 V	



Mercedes Benz CDI 220 (W 203)

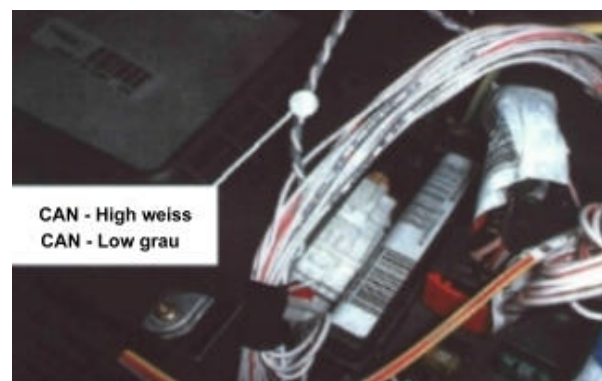
Pin no.	Description	colour
11	CAN Low	green
12	CAN High	Green/white



CITROEN C5

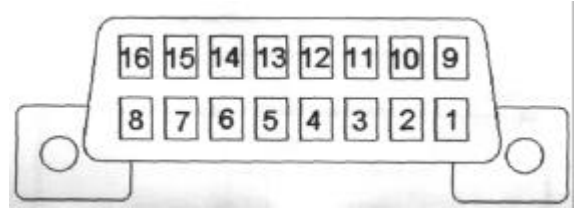


ECU



CAN BUS connection

RENAULT Laguna MK2 (since Bj 2001)



The OBD2 is in the
center consol.
OBD2 plug:
CAN Low = Pin 14
CAN High = Pin 6