CARAUDIO-SYSTEMS CX-401-UNI CAN-bus Interface set Instruction Manual

Contents

CARAUDIO-SYSTEMS CX-401-UNI CAN-bus Interface set

Specifications

- **Product Name:** CAN-bus Interface set CX-401-UNI
- **Interface-box:** CX-401
- **Universal harnesses:** CX-010
- **Device-specific Harnesses:** ARC-104 / ARC-105 / ARC-107
- **Version:** 05.04.2024

Product Usage Instructions

- Take note of the SW-version and HW-version of the CAN-box and store the manual for future support.

Check the Compatibility of the Vehicle

- Ensure compatibility by checking the vehicle functions supported by CX-401, such as ignition, speed signal, reverse gear, lighting,
- PDC acoustic signal, factory sound-system power, onboard computer system control, and steering wheel control for after-market devices.

Setting the DIP Switches

- Set the DIP switches on the CAN-box CX-401 according to the manufacturer/port specifications using the provided device-specific IR control cable (ARC-104 / ARC-105 / ARC-107).

Installation

- Follow the assignment guidelines for the 12-pin Molex connector on the CX-401.

CX-401 LED Functions

- Understand the LED functions on the CX-401 for installation feedback.

Installation with Universal Harness CX-010

- Utilize the universal harness CX-010 for installation purposes.

Installation of Acoustic Signal of Park Distance Control with CX-LS

- Install the acoustic signal feature of park distance control using CX-LS from SW version 1.1.3 onwards.

Steering Wheel Functions

- Familiarize yourself with the steering wheel control functions facilitated by the product.

Onboard Computer Control Citroen and Peugeot for After-Market Radios

- Learn how to control the onboard computer systems of Citroen and Peugeot when using after-market radios.

FAQ

Q: How can I receive software updates for the interface?

A: We offer free software updates for one year after purchase.
To receive an update, send in the interface at your own cost.

Product Features

- Conversion of digital CAN-bus signals into analog signals
- ACC, speed, lights, reverse gear, park distance control (optional cable CX-LS necessary)
- Support/Starting of factory sound systems (not at all vehicles)
- Steering wheel control for after-market devices
- Alpine, Blaupunkt, Clarion, Digitaldynamic, JVC, Kenwood, Pioneer, Zenec
- With a USB update port for software updates by consumer

Information

- Changes/updates of the vehicle’s software can cause malfunctions in the interface.
- We offer free software updates for our interfaces for one year after purchase.
- To receive a free update, the interface must be sent in at its own cost.
- Labor costs and other expenses involved with the software updates will not be refunded.

Prior to installation

- Read the manual prior to installation. Technical knowledge is necessary for installation. The place of installation must be free of moisture and away from heat sources.

Delivery contents

Take down the SW-version and HW-version of the CAN-box, and store this manual for support purposes.

CAN-box
CX-401
HW_____
SW _____

Universal harness CX-010

Harnesses for steering wheel control

ARC-104

ARC-105

ARC-107

Check the compatibility of the vehicle

- The CX-401 provides depending on the vehicle ignition (I), speed signal (S), reverse gear (R), lighting (L), an acoustic signal of park distance control (PDC) as an analog signal, it powers up an existing factory sound-system (SS), allows the using of on-board computer system control (OCS) and supports the control of aftermarket devices by steering wheel (SWC).
- The link to the table shows which harness CX-0xx can be used for which vehicles and which functions of the CX-401 will be supported for this vehicle. **http://www.caraudio-systems.de/can_bus_compatibility.pdf**

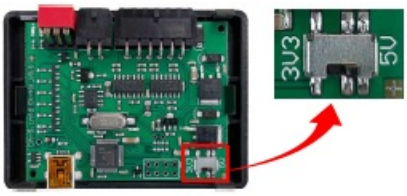
Setting the DIP switches

- To use the steering wheel control is dependent on the manufacturer of the after-market device a device-specific IR control cable is needed (ARC-104 / ARC-105 / ARC-107 included in the set).
- The DIP switches of the CAN-box CX-401 have to be set on the manufacturer/ port. The following table shows the IR control cable and the DIP switch settings for the supported manufacturers.

Harness	Description	DIP1	DIP2	DIP3
ARC-103	Control cable set for Blaupunkt (Mini-ISO connection)	on	off	off
ARC-104	Control cable set for Alpine	off	off	off
	Control cable set for Clarion	on	on	off
	Control cable set for JVC (Mini-Jack connection)	on	off	on
ARC-105	Control cable set for Kenwood (open wire)	on	on	on
	Control cable set for JVC (open wire)	on	off	on
ARC-106	Control cable set for Kenwood (DIN connection)	on	on	on
ARC-107	Control cable set for Pioneer	off	on	on
	Blaupunkt (Mini-Jack connection)	off	on	off
ARC-108	Control cable set for Zenec and Digitaldynamic	off	off	on

The setting of the internal switch for Pioneer devices (as of HW-VER V3.0)

When the steering wheel control with a Pioneer will not work (DIP1 OFF | DIP2 ON | DIP3 ON), then open the housing of the interface and change the switch position from 5V to 3.3V.



Installation

- Switch off the ignition and disconnect the vehicle's battery! If according to factory rules disconnecting the battery has to be avoided, it is usually sufficient to put the vehicle in sleep mode.
- In case the sleep mode does not show success, disconnect the battery with a resistor lead.
- The place of installation of the CX-401 is usually in the radio slot on the vehicle's radio port.

Assignment of the 12-pin Molex on CX-401

Cable colour	Assignment
Pin 1 pink	+12V ACC (Output) max.1.5A
Pin 2 blue	CAN-LOW (Input)
Pin 3 yellow/green (yellow/red)	Speed signal (Output)
Pin 5 red	+ signal PDC (harness CX-LS)
Pin 6 red	+12V Permanent (Input)
Pin 7 orange	Lights (Output) max. 0.1A
Pin 8 yellow	CAN-HIGH (Input)
Pin 9 white	Reverse gear (Output) max. 1.5A
Pin 11 black	Ground signal PDC (harness CX-LS)
Pin 12 black	Ground

CX-401 LED functions

LED	Status	Funktion
Red	Lights	Ignition is ON
Blue	Flashes	CAN Bus is searched
Blue	Lights	CAN Bus found

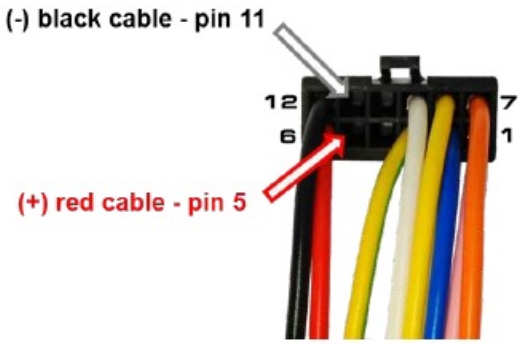
Installation with universal harness CX-010

- **a.)** Connect universal harness CX-010 according to the assignment of 12-pin Molex on CX-401 to harness the after-market device and to the vehicle harness.
- **b.)** Connect the IR-control input of the after-market device to the 4pin Molex IR-control output of CAN-box CX-401 via the control cable ARC-104 / ARC-105 /ARC-107.

Installation of acoustic signal of park distance control with CX-LS (from SW 1.1.3)

- **a.)** Connect the black and red cable of the CX-LS (LSP to CX-028/CX-030/CX-033/CX-010) into the correlative pins of the female 12pin Molex connector of harness CX-0xx:

CX-LS



Steering wheel functions

Button	Function	Vehicle/radio support
VOLUME + / –	Volume up / volume down	All vehicle brands, all radio brands
TRACK + / –	Next track/radio station, previous track/ radio station	All vehicle brands, all radio brands
SOURCE	Source switching	Compatible vehicle brands, all radio brand s
MUTE	Mute ON/OFF	Compatible vehicle brands, all radio brand s
PICK UP PHONE / **HANG UP PHONE**	Answer call/end call	Compatible vehicle brands, all radio brand s
PHONE	Answer call OR end call	Compatible vehicle brands, all radio brand s
VOICE CONTROL	Activation of voice control	Compatible vehicle brands, compatible rad io brands

Onboard computer control Citroen and Peugeot for after-market radios

To control the onboard computer in Citroen and Peugeot vehicles the following functions can be selected by steering-wheel buttons.

- **Select** Menu long pressing “Source” (4s)
- **ESC** short pressing “Source”
- **OK** Vol+
- **Menu up** Wheel up
- **Menu down** Wheel down
- **Menu Right** Track+
- **Menu Left** Track-
- **Mode long pressing** “Tr+” (4s)
- **Dark long pressing** “Tr-” (4s)

Assignment of the steering-wheel buttons:

- **Tr+** picks up the phone
- **Tr-** hang up the phone
- **Wheel up** Tr+
- **Wheel down** Tr-
- The assignments of the remaining steering wheel buttons are identical to the label!

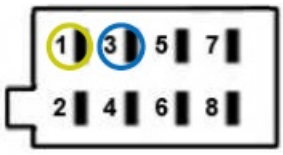
Vehicle-specific assignments – CAN-bus

- As additional support, the following pages give information about some vehicle-specific CANbus pin definitions.
- This information is subject to change and must be verified by the installer.

ALFA ROMEO

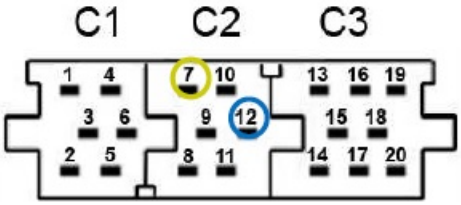
147

- Female 8-Pin ISO connector in radio slot
- **CAN High** – Pin 1
- **CAN Low** – Pin 3



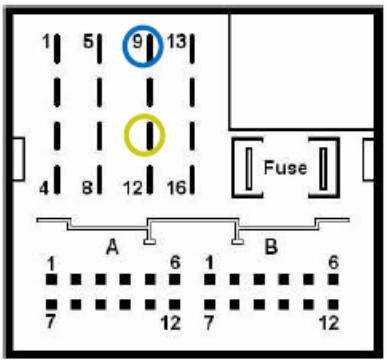
AUDI

- A2, A3, A4, A6 till 01/05
- Female Mini-ISO connector in radio slot
- CAN High – Pin 7
- CAN Low – Pin 12
- BMW



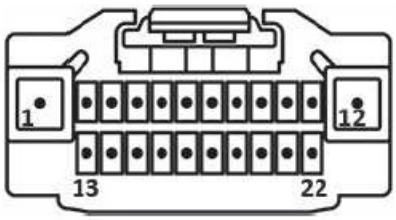
1series E81, 3series E90, 5series E60

- Female Quadlock-connector in radio slot
- CAN High – Pin 11
- CAN Low – Pin 9

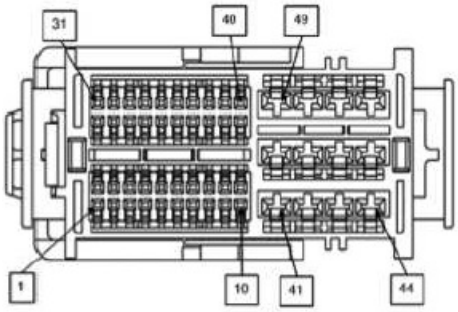


Chrysler

- Chrysler cars with female 22pin connector in radio slot
  - CAN High – Pin 10
  - CAN Low – Pin 13



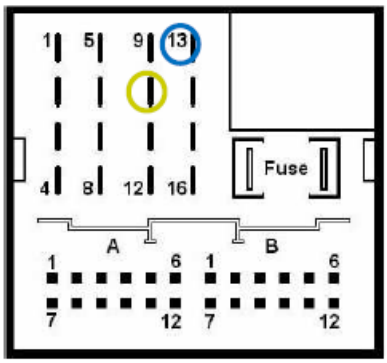
- Chrysler cars with female 52pin connector in radio slot
  - CAN High – Pin 2
  - CAN Low – Pin 12



CITROËN

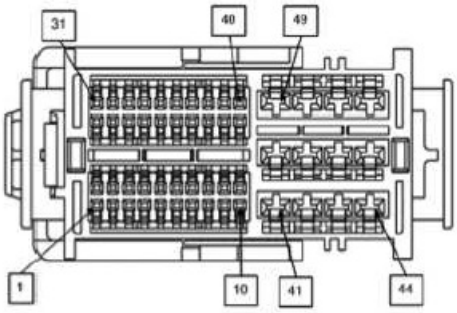
- C4, C5 from 10/04
- Female Quadlock-connector in radio slot

- CAN High – Pin 10
- CAN Low – Pin 13



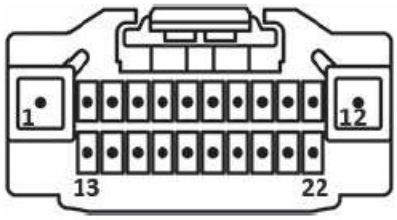
Jumper II

- Female 52pin connector in radio slot
- CAN High – Pin 2
- CAN Low – Pin 12

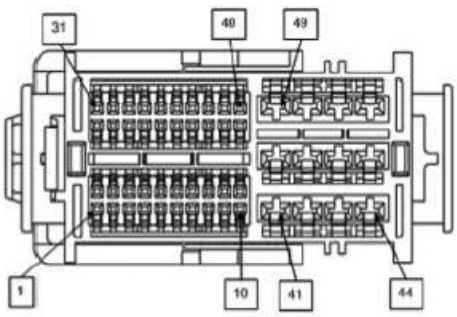


Dodge

- Dodge cars with female 22pin connector in radio slot
  - CAN High – Pin 10
  - CAN Low – Pin 13



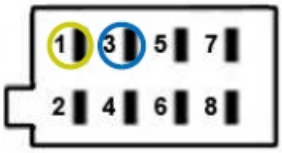
- Dodge cars with female 52pin connector in radio slot
  - CAN High – Pin 2
  - CAN Low – Pin 12



FIAT

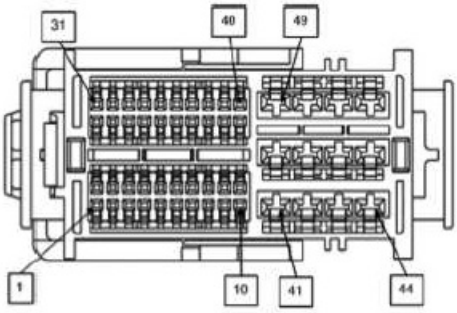
Stilo, 500

- Female 8pin ISO connector in radio slot
- CAN High – Pin 1
- CAN Low – Pin 3



Ducato as of 2013

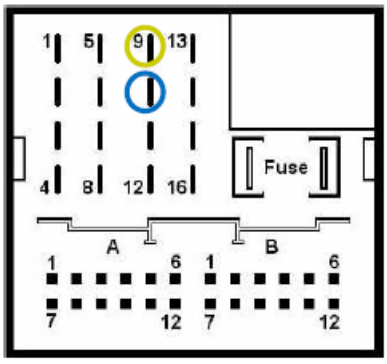
- Female 52pin connector in radio slot
- CAN High – Pin 2
- CAN Low – Pin 12



FORD

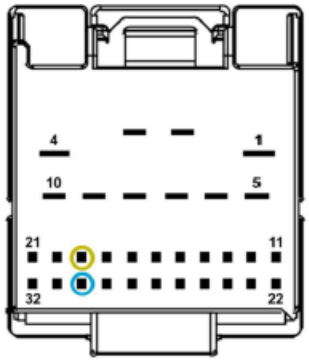
Focus, Focus C-MAX, S-MAX, Mondeo

- Female Quadlock connector in radio slot
- CAN High – Pin 9
- CAN Low – Pin 10



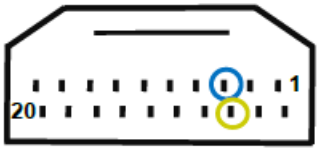
Fiesta, Transit, Transit Custom, Transit Connect

- Female 32pin connector in radio slot
- CAN High – Pin 19
- CAN Low – Pin 30



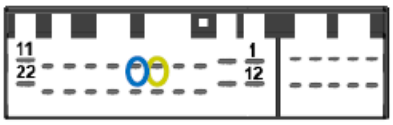
Honda

- Accord (8G), CR-Z, Jazz (2G)
- Female 20pin connector in radio slot
- CAN High – Pin 13
- CAN Low – Pin 3



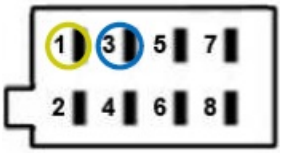
JEEP/CHRYSLER

- Grand Cherokee, 300C
- Female 22-pin connector in radio slot
- CAN High – Pin 5 (white/red)
- CAN Low – Pin 6 (white)



LANCIA

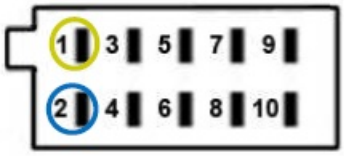
- Ypsilon from 11/03
- Female 8-pin ISO connector in radio slot
- CAN High – Pin 1
- CAN Low – Pin 3



MERCEDES BENZ

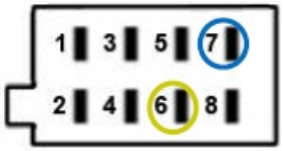
- CLK W208 after facelift, CLK W209 till 03/04,
- E-Class W210 from 09/99, Viano, SL W230 from 07/04
- Female 10pin ISO-connector in radio slot

- CAN High – Pin 1
- CAN Low – Pin 2



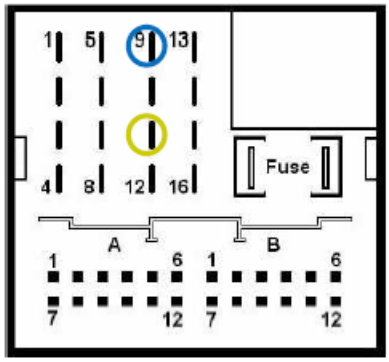
A-Class W169 and B-Class W245 with Audio5,

- all MERCEDES with indoor CAN-bus
- Female 8pin ISO connector in radio slot
- CAN High – Pin 6
- CAN Low – Pin 7



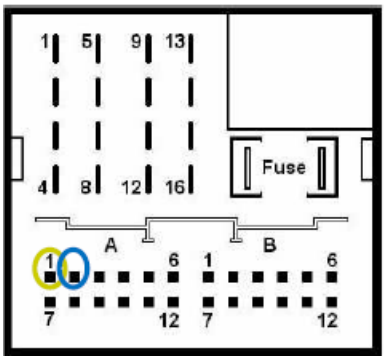
A-Class W169 and B-Class W245 with Audio20,

- C-Class W203 and CLK W209 from 04/04,
- Viano W693
- Female Quadlock-connector in radio slot
- CAN High – Pin 11
- CAN Low – Pin 9



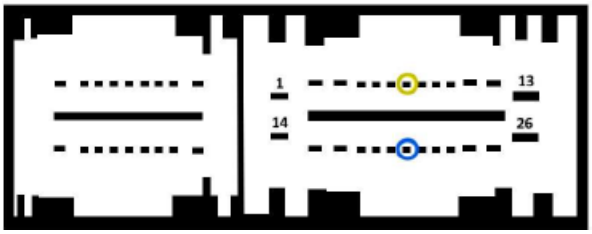
E-Class W211 from 04/03, CLS W219, SLK R171

- Female Quadlock-connector in radio slot
- CAN High – Pin 1 (Kammer A)
- CAN Low – Pin 2 (Kammer A)



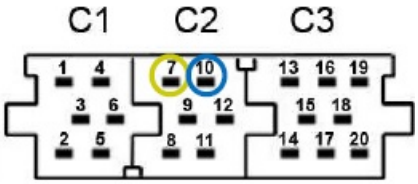
Sprinter W907/W910 from 12/07

- Female 26pin connector in radio slot
- CAN High – Pin 7
- CAN Low – Pin 20



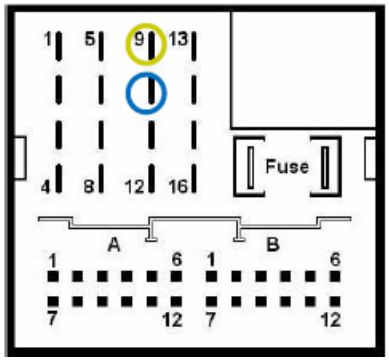
OPEL

- Vectra C till 07/04
- Female Mini-ISO connector in radio slot
- CAN High – Pin 7
- CAN Low – Pin 10



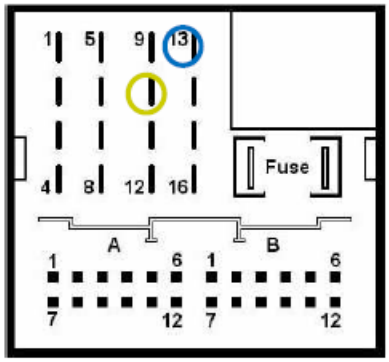
Astra H , Corsa C, Meriva, Tigra Twin Top,

- Vectra C from 08/04
- Female Quadlock-connector in radio slot
- CAN High – Pin 9
- CAN Low – Pin 10



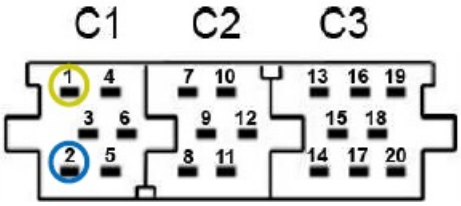
PEUGEOT

- 307, 407
- Female Quadlock-connector in radio slot
- CAN High – Pin 10
- CAN Low – Pin 13



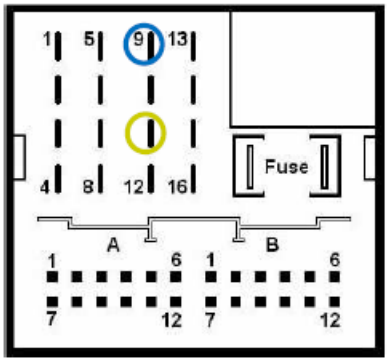
PORSCHE

- Cayenne (9PA), Boxster (987), 911 (997)
- Female Mini-ISO connector in radio slot
- CAN High – Pin 1
- CAN Low – Pin 2



Cayenne (92A), Panamera (970)

- Female Quadlock-connector in radio slot
- CAN High – Pin 11
- CAN Low – Pin 9

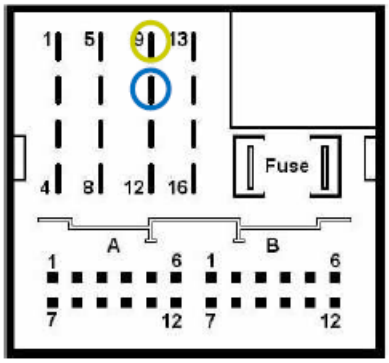


SEAT

Altea

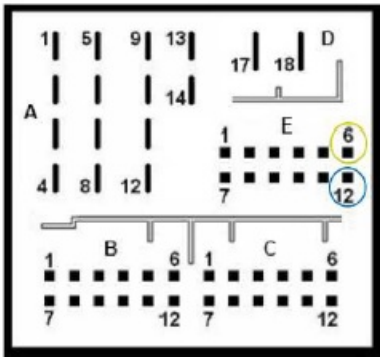
- Female Quadlock-connector in radio slot

- CAN High – Pin 9
- CAN Low – Pin 10



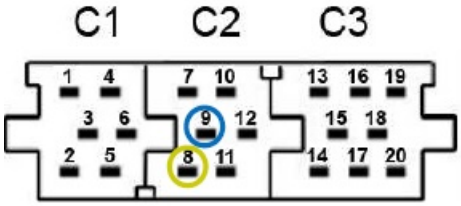
Leon III

- Female Quadlock-connector in radio slot
- CAN High – Pin 6
- CAN Low – Pin 12



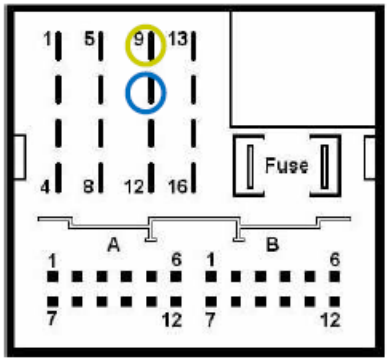
ŠKODA

- Superb, Octavia I
- Female Mini-ISO connector in radio slot
- CAN High – Pin 8
- CAN Low – Pin 9



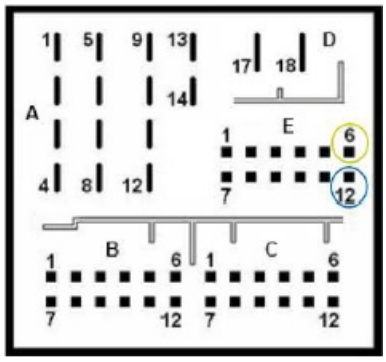
Octavia II

- Female Quadlock-connector in radio slot
- CAN High – Pin 9
- CAN Low – Pin 10



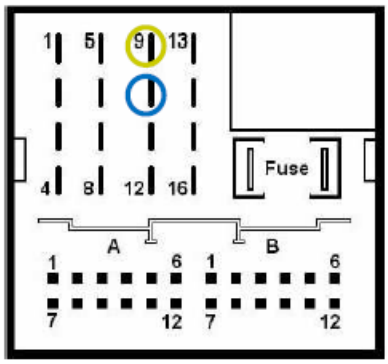
Fabia III

- Female Quadlock-connector in radio slot
- CAN High – Pin 6
- CAN Low – Pin 12



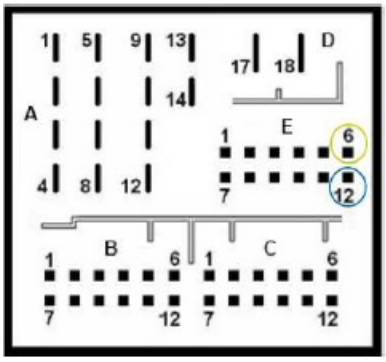
VOLKSWAGEN

- Golf 4, Golf 5, Passat 3B, Caddy, Touran,
- Touareg, T5
- Female Quadlock-connector in radio slot
- CAN High – Pin 9
- CAN Low – Pin 10



Golf 7

- Female Quadlock-connector in radio slot
- CAN High – Pin 6
- CAN Low – Pin 12

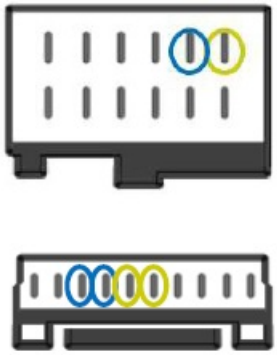


VOLVO S60, V70

- Female 12pin connector in radio slot
- CAN High – Pin 7 (white)
- CAN Low – Pin 8 (green)

XC90

- Female 10-pin connector in radio slot
- CAN High–white cable (double occupied)
- CAN Low–green cable (double occupied)



Specifications

- **Operation voltage** 10.5 – 14.8V
- **Stand-by power drain** <3mA
- **Operation power drain** ~50mA
- CE ⎓12V DC**Power consumption** 0.07-40W
- **Temperature range –**30°C till +80°C
- **Weight** 38g
- **Measurements (box only)** W x H x D 71 x 22 x 50 mm

Capacitance

- ACC max. 1.5A
- Reverse Gear max. 1.5A
- Lights max. 0.1A

Technical Support

- **CAS GmbH**
- **manufacturer/distribution**
- **In den Fuchslöchern 3**
- **D-67240 Bobenheim-Roxheim**
- **email support@casgermany.com**
- Legal disclaimer: The mentioned company and trademarks, as well as product names/codes are registered trademarks ® of their corresponding legal owners.

Documents / Resources

 Manual CAN-bus Interface set CX-401-UNI Steering wheel control Interface-box CX-401 Universal harnesses CX-010 Harnesses device-specific ARC-104 / ARC-105 / ARC-107 Product features	CARAUDIO-SYSTEMS CX-401-UNI CAN-bus Interface set [pdf] Instruction Manual CX-401-UNI, CX-401, CX-010, ARC-104, ARC-105, ARC-107, CX-401-UNI CAN-bus Interface set, CX-401-UNI, CAN-bus Interface set, Interface set, set

References

- User Manual