

TV-Free Universal video-in-motion Interface

TF-U401

Non p and p version compatible with low speed CAN

Legal Information

By law, watching moving pictures while driving is prohibited, the driver must not be distracted. We do not accept any liability for material damage or personal injury resulting, directly or indirectly, from installation or operation of this product. This product should only be used while standing or to display fixed menus or rear-view-camera video when the vehicle is moving, for example the MP3 menu for DVD upgrades.

Changes/updates of the vehicle's software can cause malfunctions of 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 own cost. Labor cost for and other expenses involved with the software-updates will not be refunded.

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1. 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.

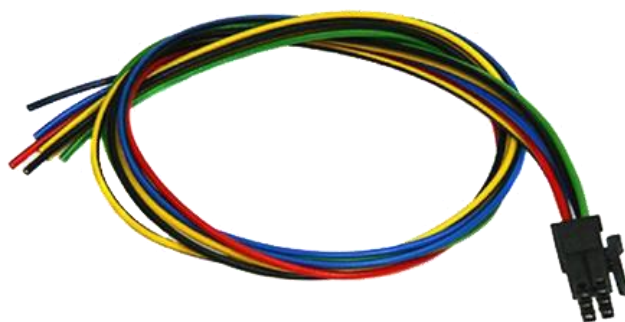
1.1. Delivery contents

Take down the SW-version and HW-version of the interface-boxes, and store this manual for support purposes!

CAN-box TV-401
HW_____ SW_____



Harness
TV-UNI



1.2. Pin-assignments

Pin-assignment harness TV-UNI

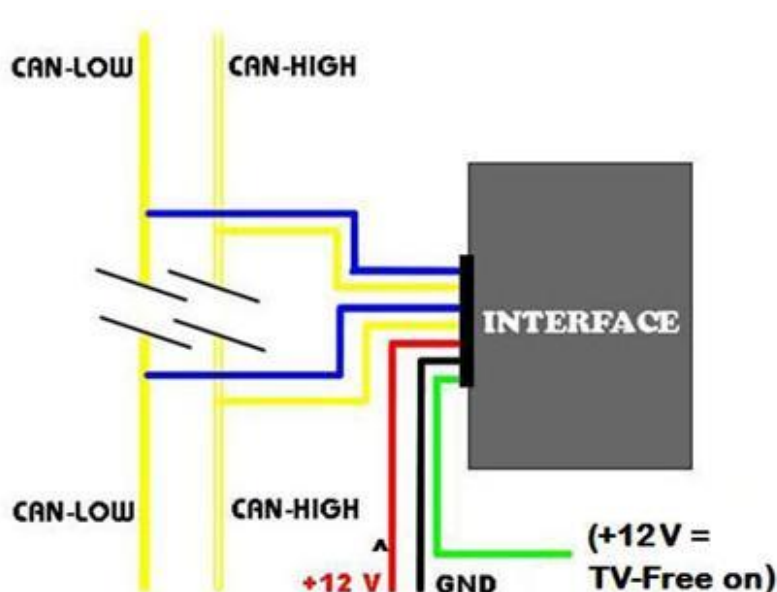
Cable colour	Assignment
● Yellow	CAN-HIGH – toward the navigation unit
● Blue	CAN-LOW – toward the navigation unit
●● Yellow/Black	CAN-HIGH – toward the vehicle's harness
●● Blue/Black	CAN-LOW – toward the vehicle's harness
● Red	+12V permanent
● Black	Ground
● Green	Activation of the video-in-motion function (+12V = TV-free activated)

2. Installation

Switch off 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.

Install the interface at the CAN bus connection of the respective navigation system. Separate the two CAN BUS cables (CAN-HIGH and CAN-LOW) from the navigation system and connect them to harness TV-UNI (see picture below).

Connect the **red wire** to **+12V permanent** and connect the **black wire** to **ground**. The **green wire** is used to **activate the video-in-motion function** (+12 V = activated).



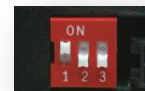
Vehicles with BMW Professional CCC/CIC:



Place of installation is at the back side of the navigation unit.

<i>Compatible vehicles</i>	BMW 1series (E81/82/87/88), 3series (E90/91/92/93), 5series (E60/61), 6series (E63/64), X5 (E70), X6 (E71), Z4 (E89) Mini R56 from about 10/2006
<i>Navigation</i>	Navigation system Professional CCC (older 1/2-button iDrive or CIC (newer 8-button iDrive) with 6.5" or 8.8" monitor

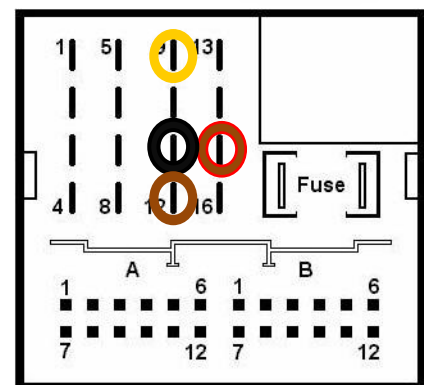
Vehicles with CIC Dip 1 ON, Dip 2 OFF, Dip 3 OFF



Vehicles with CCC Dip 1 OFF, Dip 2 OFF, Dip 3 OFF



Cable colour	Assignment
●● Brown/Red	+12V permanent 15
● Brown	Ground Pin 12
● Black	CAN HIGH Pin 11
● Yellow	CAN LOW Pin 9



On vehicles with CIC the video-in-motion function is activated permanently without disturbing the navigation performance.

On vehicles with CCC press the menu-button or the iDrive wheel for about 3 seconds while in **main menu** to activate/deactivate the video-in-motion function. When the ignition is off, the video-in-motion interface will be automatically disabled.

Alternatively for CCC it is possible to set dip-switch 1 of the CAN box TV-401 to ON. But then the navigation performance is disturbed on the first few kilometres of driving.

Vehicles with BMW E65 Professional



Place of installation is at the back side of the navigation unit.

Compatible vehicles

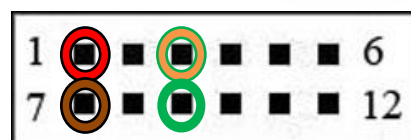
BMW 7series (E65/66)

All vehicles

Dip 1 ON, Dip 2 OFF, Dip 3 OFF



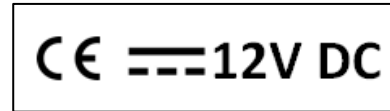
Cable colour	Assignment
● Red/Black	+12V permanent Pin 1
● Brown/Black	Ground Pin 7
● Orange/Green	CAN HIGH Pin 3
● Green	CAN LOW Pin 9



The video-in-motion function is activated permanently without disturbing the navigation performance.

3. Specifications

Operation voltage	10.5 – 14.8V
Stand-by power drain	>1mA
Operation power drain	~60mA
Power consumption	~0,72W
Temperature range	-30°C bis +80°C
Weight	44g
Measurements (box only) B x H x T	70 x 20 x 47 mm



4. Technical support

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