

## **c.LOGiC lite interfaces**

**C1-CCC**

**C1-CIC/C1-CXC-TV1**

**C1-E65/C1-E65-TV**

**for BMW Professional navigation systems  
with iDrive and 6.5"/8.8" monitor**

Interface-set AV and reverse camera input  
with device control and video-in-motion

**Attention! Before installation, make sure the  
vehicle's navigation system is  
a "Professional", not "Business"!!!**

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## Information

Changes of the vehicle software can cause malfunctions of the interface. We offer free software-updates for 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.

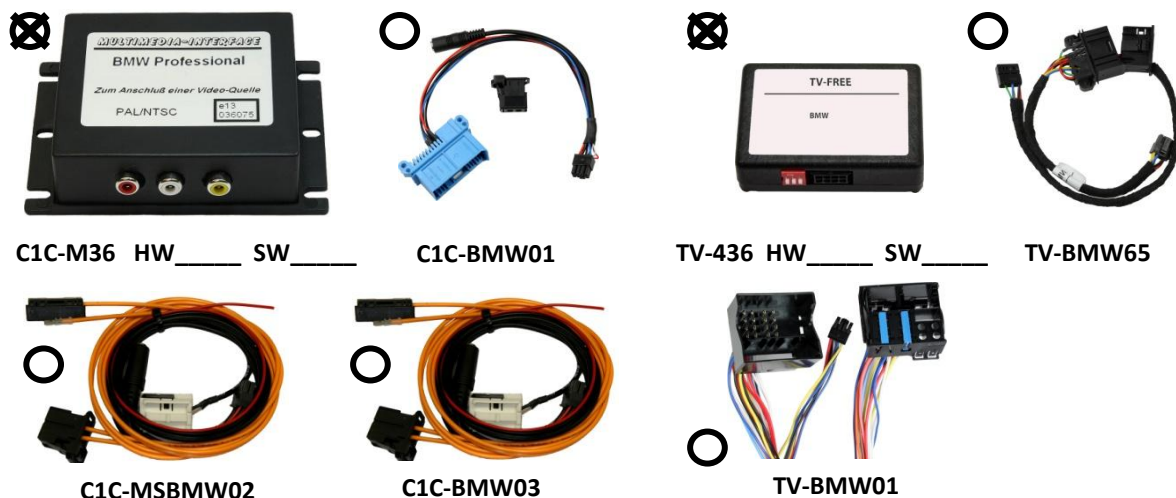
## 1. Prior to installation

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, cross the delivery contents and store this manual for support purposes.*



The necessary components for installation vary depending on the vehicle and accessories. See below table to determine the parts necessary for installation. Product codes of the full set are in **bold letters (C1-xxx)** while the set components (C1C-xxx) are listed below the set.

Options/ Navi Professional version	w/o factory TV- tuner port	with factory TV-tuner port
<b>CCC Navigation (older iDrive, 1-2 buttons)</b> 1series (E87), 3series (E90/91/92), 5series (E60/61), 6series (E63/E64), X5 (E70), X6 (E71) <b>Vehicles from 2009 need additionally harness TV-2X12P!</b>	<b>C1-CCC</b> C1C-M36 C1C-BMW02 TV-436 TV-BMW01	<b>C1-CXC-TV1</b> C1C-M36 C1C-BMW01 TV-436 TV-BMW01
<b>CIC Navigation (newer iDrive, 8 buttons)</b> 3series (E90/91/92), 5series (E60/61), 6series (E63/E64), X5 (E70), X6 (E71)	<b>C1-CIC</b> C1C-M36 C1C-BMW03 TV-436 TV-BMW01	<b>C1-CXC-TV1</b> C1C-M36 C1C-BMW01 TV-436 TV-BMW01
<b>E65 Navigation</b> 7series (E65/E66)	<b>C1-E65</b> C1C-M36 C1C-BMW02 TV-436 TV-BMW65	<b>C1-E65-TV</b> C1C-M36 C1C-BMW01 TV-436 TV-BMW65

If remote function of the interface should be used, additional IR-remote cables and Y-adapters are needed, see chapter **4. Device control**.

## 1.2. Check compatibility of vehicle and accessories

### Requirements

*Vehicle* 1series (E87) **only CCC**, 3series (E90/91/92), 5series (E60/61), 6series (E63/64), 7series (E65/66), X5 (E70), X6 (E71), Z4 (E89)

*Navigation* navigation system **Professional CCC**, E65 or CIC with 6.5" or 8.8" monitor

### Limitations

*factory-TV-tuner* has to be removed if installed

*factory-RSE (E65)* need additional interface, VL-RGB02-C

## 1.3. Checking the DIP switches on the CAN-box

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

Vehicles with CCC or E65 Dip 1 OFF, Dip 2 OFF, Dip 3 OFF



## 2. Installation

**Switch off ignition and disconnect the vehicle from the battery!**

**The interface needs a permanent 12V source. If power source is not taken directly from battery, the connection has to be checked for being start-up proven and stable.**

Complete and correct function of the interface is possible only when, CAN **and** fibre optical connections are made properly. Vehicles without TV icon will be programmed automatically after installation of the interface.

### 2.1. Installation 1series (E87), 3series (E90/E91/E92), 6series (E63/E64), X5(E70), X6(E71) at example 5series (E60/E61)

Needed parts

1. fibre optical interface C1C-M36
2. CAN interface TV-436
3. CAN interface harness TV-BMW01

## 2.1.1. Installation 5series w/o TV-tuner port

→ optical interface-harness C1C-BMW02 for CCC-Navigation or C1C-BMW03 for CIC-Navigation is needed

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Remove trim strip and step by step using a plastic wedge. Do not proceed too quickly to avoid breaking clamps of the trim strip.

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Next remove screws 1 and 2 (see picture)

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Remove climate control panel. Remove CD/DVD drive trim. Trim is fixed by 2 screws on the upper side and plugged to the lower trim. Remove the lower trim (plugged too).

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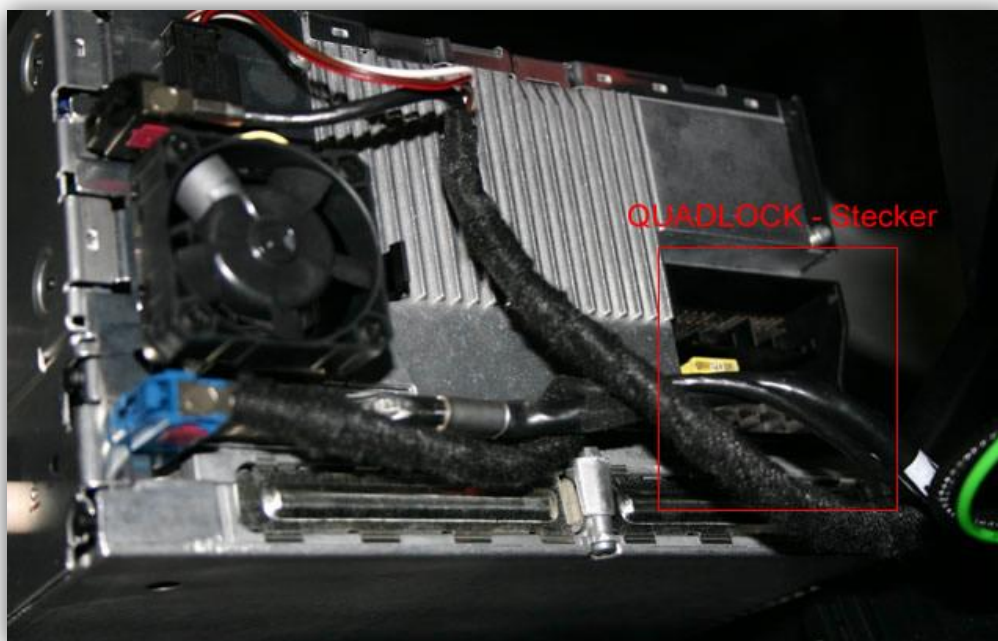
Remove 4 screws and take out navigation computer.

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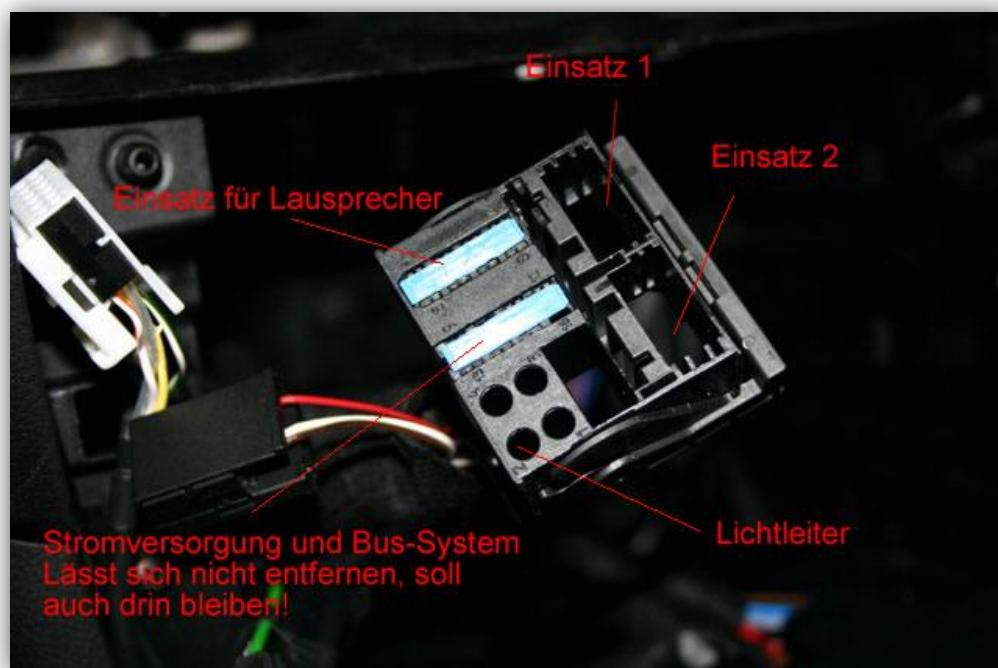




Disconnect Quadlock connector from the back of the navigation computer.



The Quadlock connector includes different chambers. If present, remove the white, black and the optical inserts, from the vehicle harness' Quadlock connector. Plug the vehicle harness' Quadlock connector into the male Quadlock connector of the CAN interface harness TV-BMW01



In the female Quadlock connector there is two compartments for inserts. Plug white insert of the interface harness C1C-BMW0X into compartment for "Einsatz 1".

If white insert in vehicle harness is present, remove video wires from white insert of fibre optical interface harness and connect them to relating chambers in white vehicle harness' insert.

*On CCC navigation (C1C-BMW02):*

White insert („Einsatz 1“): video-signal (red) = PIN 4; signal-ground (black) = PIN 2

*On CIC navigation (C1C-BMW03):*

White insert („Einsatz 1“): video-signal (red) = PIN 2; signal-ground (black) = PIN 12

On vehicles with factory rear-view camera, PIN 2 and PIN 12 are already occupied. In this case connect according to **3.1. Vehicles with factory rear-view camera** .

If no white insert in vehicle harness is present, connect white insert of fibre optical interface-harness C1C-BMW03 with Quadlock connector of the vehicle harness.

Remove optical insert from car side Quadlock connector.

Connect optical insert as shown in chapter **3. Connections** with Quadlock connector from CAN interface harness TV-BMW01.

Connect the Quadlock connector from CAN interface harness TV-BMW01 to the male Quadlock plug of the navigation computer. Connect vehicle Quadlock connector with male Quadlock plug of CAN interface harness TV-BMW01.

Installation 5series with CIC w/o TV-port continue with chapter **4. Device control** .

## 2.1.2. Installation 5series with TV-tuner port (factory TV-tuner removed)

→ optical interface harness C1C-BMW01 is needed

Installation of CAN interface analogue to

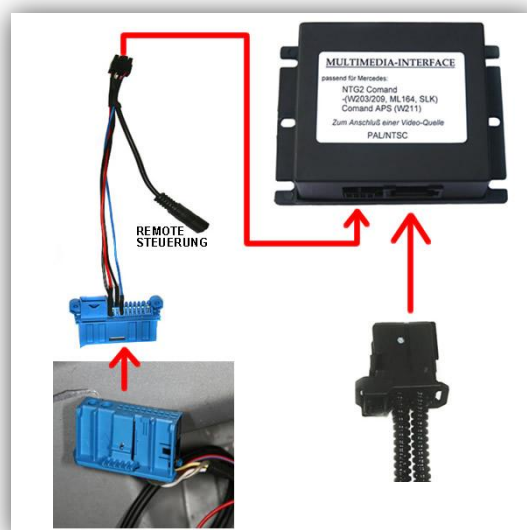
chapter **2.1.1. Installation 5series w/o TV-port** .

Transfer white (if present), black and optical inserts from vehicle Quadlock connector to the Quadlock connector of the CAN interface harness TV-BMW01. Connect the CAN interface harness Quadlock connector to the male Quadlock plug of the navigation computer and the vehicle harness Quadlock connector to the male Quadlock plug of the CAN interface harness.

The blue factory-TV-tuner port is in found in the trunk. Remove fibre optics from the blue TV-port connector. Connect with black connector of fibre optical interface harness C1C-BMW01. Obey the direction arrows on the connector, see

chapter **3. Connections** .

Connect black connector to fibre optical interface. Connect blue plug to relating counterpart of C1C-BMW01 harness.



Factory rear-view cameras if present are connected to the factory TV-tuner.

Obey **3.2. Vehicles with factory rear-view camera and factory TV-tuner** .

Installation 5series with TV-tuner port continue chapter **4. Device control** .

## 2.2. Installation 7series (E65/E66)

Needed parts

1. fibre optical interface C1C-M36
2. CAN interface TV-436
3. CAN interface harness TV-BMW65



## Board monitor removal

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The CAN interface is connected to the backside of the OEM screen.

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Remove 3 TORX screws at the OEM screen.

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Remove cover grill (only plugged). Place soft towel beneath the board monitor to avoid scratches

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Flip down the board monitor. *NOTE:* The OEM screen gets stuck with its connector at the upper side of the cockpit. Insert a hard plastic sheet like a credit card to prevent cockpit from taking damage.

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Remove the black connector at the backside of the screen as shown below.

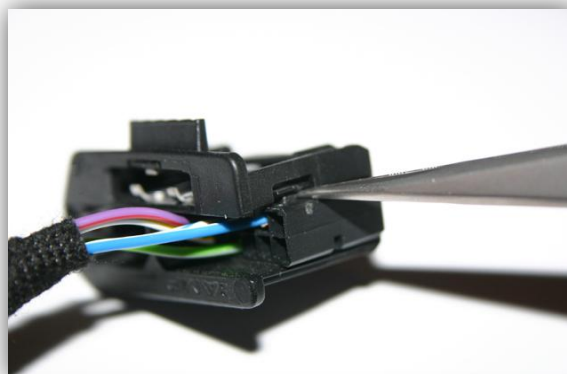
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Remove 12-pin insert from black vehicle harness connector.

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Insert 12-pin insert into black connector of the CAN interface harness TV-BMW65.

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Insert the completed black connector into CAN interface harness TV-BMW65.

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Connect 12-pin insert from CAN interface harness TV-BMW65 into black connector from vehicle harness.

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Insert completed connector into the plug on the backside of the board monitor.

**NOTE:** Pictures do NOT show the fibre optics connected in car!

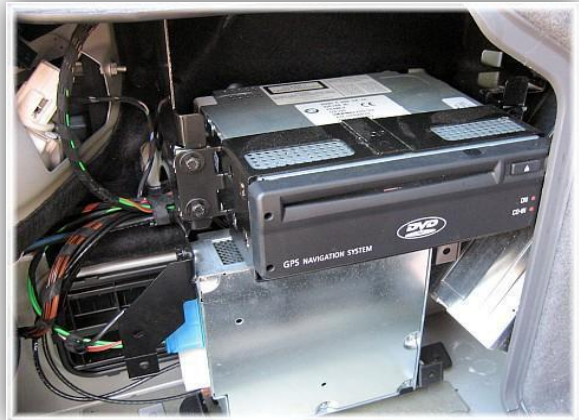
## 2.2.1. Installation 7series w/o TV-Port

→ fibre optical interface-harness C1C-BMW02 is needed

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The fibre optical interface installation is made at the navigation computer, which is located at the left side in the trunk behind a cover and has to be removed.

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The video lead (red - video signal, black - video ground) has to be removed from the white insert of C1C-BMW02. The white insert is not needed for E65/E66 installation.

Connect video lead to green 18-pin AMP connector

Video-signal (red) to chamber 3 of the green 18-pin AMP connector

Video-ground (black) to chamber 11 of the green 18-pin AMP connector

On vehicles with factory rear-view camera, PIN 3 and PIN 11 are already occupied. In this case connect according to [3.1. Vehicles with factory rear-view camera](#).

Remove fibre optics from black 20-pin plug and connect them as shown in [chapter 3. Connections](#). Then reconnect the fibre optics in the black 20-pin connector.

Installation 7series w/o TV-port continue with [chapter 4. Device control](#).

## 2.2.2. Installation 7series with TV-port (OEM-TV-Tuner removed)

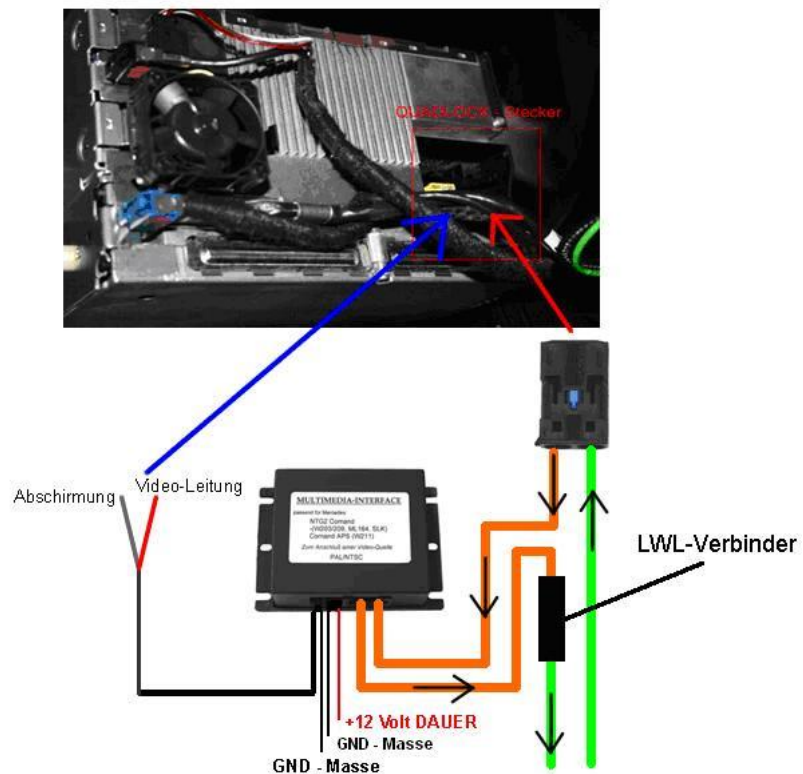
→ fibre optical installation harness C1C-BMW01 is needed

The installation of the fibre optical interface is analogue to

Chapter [2.1.2. Installation 5series with TV-tuner port \(factory-TV-tuner removed\)](#).

## 3. Connections

**Obey the direction arrows of the optical connectors!**



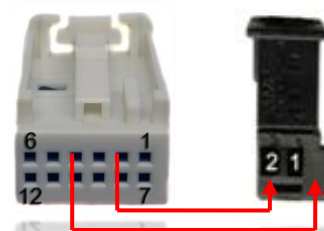
**NEW!**

**Remote signal and rear-view camera input + functions**

<b>4pin Molex connector</b>	pink – remote signal +12V, high when navigation is on grey – connect to ground to activate 2-pin camera-input green – camera power +12V (max 0.5A)
<b>2pin AMP connector</b>	grey – camera video signal black – camera video ground

### 3.1. Vehicles with factory rear-view camera

Transfer video-signal and video-signal ground pins from vehicle connector to the 2pin AMP connector of the fibre optical interface box harness.



Navi	Connector	Video-signal	Video-signal ground
CCC	white 12pin Quadlock	Pin 4	Pin 2
CIC	white 12pin Quadlock	Pin 2	Pin 12
E65	green 18pin AMP	Pin 3	Pin 11
Interface	black 2pin AMP	Pin 1	Pin 2

Connect the 2pin AMP connector with the 2pin AMP male plug of the harness C1C-BMW0x.



Automatic switching to camera video will work from interface mode and from OEM mode.

### 3.2. Vehicles with factory rear-view camera and factory TV-tuner

The factory rear-view camera is connected to the white 18pin AMP connector of the factory TV-tuner. Video-signal on pin 1 (yellow-black), video-signal ground on pin 10 (green). Connect video-signal and video-signal ground analogue to

**3.1. Vehicles with factory rear-view camera** via the 2pin AMP.

### 3.3. Connecting an after-market rear-view camera

Connect video-signal and video-signal ground of the camera analogue to

**3.1. Vehicles with factory rear-view camera** via the 2pin AMP.

Automatical switching to the camera input when reverse gear is engaged is only possible in interface mode.

### 3.4. Special case – vehicles without fibre optical components (very rare)

Vehicles without fibre optical components, which means without CDC, without phone or other fibre optical components have optical wires at the navigation computer, but it can be possible that the ring is not connected to diagnostic connector in the glove compartment. In this case a connector bridge for optical wires is necessary.

## 4. Device control

The c.Logic lite interface for BMW has the possibility to remotely control up to 2 pre-programmed devices. The device list in the device control table shows the pre-programmed remote channels and the related IR-remote cables.

An IR-remote cable STA-xxx must be ordered separately for every device which shall be controlled.

If 2 devices shall be controlled, the 3-Pin AMP Y-cable STA-Y is needed (1 connector to 2 plugs). This is connected to the 3-Pin AMP plug of the interface harness, and gives the opportunity to connect 2 IR remote cables.

The 3-Pin AMP connector of the IR-remote cable has to be connected to the interface harness or the Y-adapter STA-Y, the device specific side to the IR port of the related device.



## 4.1. Installing the IR-sensor additionally

Additionally to the control via OEM navigation, it is possible to install the original IR-sensor of a connected device. By using a Y-adapter (e.g. STA-Y35MM or STA-RJ12) for the IR-Port of the connected device, the controls from navigation AND the devices IR-sensor can be connected and used. If there are 2 devices connected, it's possible to use the IR-remote from one device for both connected devices. The installation of the additional IR-sensor is recommended as the possible controls via navigation are limited, and not all functions may be covered.

## 5. Operation

### 5.1. Activation of the video-in-motion function

On vehicles with CIC (8-button iDrive) the video-in-motion function is permanently active without hurting the navigation performance.

On vehicles with CCC or E65 navigation (1 or 2 button iDrive) press the menu-button or the iDrive wheel for about 3 seconds while in **main menu**. Alternatively it is possible to set dip-switch 1 of the CAN box TV-436 to ON. But then the navigation performance is disturbed on the first few kilometres of driving.

### 5.2. Selecting the interface as current AV source

Select **TV** through iDrive to choose the interface as current AV source.

### 5.3. Assigning device control

After selecting the interface as current AV source, push the iDrive knob to open the device control menu.

Select control levels (setup) DEV1 and (setup) DEV2 one after another and assign related IR-codes as described in device control table.



**Note:** The IR-control channel is preset to RC-Code 41 compatible DVB-T tuners.

### 5.4. Using device control

Choose SELECT/USE DEV1(DEV2) to activate control level 1(2). After selection the menu will close automatically. The iDrive knob, some Multi-function-steering wheel buttons and some navigation buttons (HU) are now available for remote functions in the selected control level (see assignment table for iDrive below).

By pressing the iDrive-MENU-button, the system returns to the factory iDrive functions. By pressing the iDrive knob again, the control level menu opens up again, and the other control level function can be selected and assigned.




## 5.5. Button assignment table iDrive

iDrive Aktion	Gerät			
	DVD	DVC	DVB-T	iPod
<b>MENU long</b>	Setup	Setup	Setup	Setup
<b>MENU short</b>	Return to factory iDrive functions	Return to factory iDrive functions	Return to factory iDrive functions	Return to factory iDrive functions
<b>OPTIONS long *2</b>	Audio	Audio	Info	KCE: Light Bulb, Vlink: Subtitle
<b>OPTIONS short *2</b>	Subtitle	Subtitle	Signal strength	KCE: lower vol, Vlink: Display
<b>ENTER long</b>	Power	Power	Power	Power
<b>ENTER short</b>	OK	OK	OK	OK
<b>NORTH long</b>	Menü / PBC *1	Menü / PBC *1	EPG	Shuffle
<b>NORTH short</b>	Up	Up	Up	Previous chapter
<b>WEST long</b>	Play/Resume	Play/Resume	Exit	Play/Resume
<b>WEST short</b>	Left	Left	Left	Left
<b>SOUTH long</b>	Source	Source	AV	Source
<b>SOUTH short</b>	Down	Down	Down	Next chapter
<b>EAST long</b>	Zoom	Next DVD or DVD selection menu	Scan channels	KCE: increase vol, Vlink: ESC
<b>EAST short</b>	Right	Right	Right	Right
<b>Left turn</b>	Previous chapter	Previous chapter	Previous chapter	Up
<b>Right turn</b>	Next chapter	Next chapter	Next channel	Down
<b>UP long on MFSW *3</b>	Next DVD	Next DVD or DVD selection menu	AV	Next DVD or DVD selection menu
<b>UP short on MFSW *3</b>	Previous chapter	Previous chapter	Previous channel	Previous chapter
<b>DOWN long on MFSW *3</b>	Next DVD	Next DVD or DVD selection menu	Info	Next DVD or DVD selection menu
<b>DOWN short on MFSW *3</b>	Next chapter	Next chapter	Next channel	Next chapter
<b>LEFT long on HU *3</b>	Next DVD	Next DVD or DVD selection menu	AV	Next DVD or DVD selection menu
<b>LEFT short on HU *3</b>	Previous chapter	Previous chapter	Previous channel	Previous chapter
<b>RIGHT long on HU *3</b>	Next DVD	Next DVD or DVD selection menu	Info	Next DVD or DVD selection menu
<b>RIGHT short on HU *3</b>	Next chapter	Next chapter	Next channel	Next chapter

\*1 DVD title menu \*2 not available on all vehicles \*3 multi function steering wheel and head-unit

## 6. Specifications

Operation voltage	10.5 – 14.8V DC
Stand-by power drain	<1mA
Operation power drain	120mA
Power consumption	1.8W
Temperature range	-30°C to +80°C
Weight	95g
Measurements (box only) B x H x T	106 x 30 x 71 mm

CE  12V DC

## 7. Technical Support

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