Manual

v.LOGiC Interface

V3-CCC

For the E-series BMW and Mini with navigation system or radio and 6.5" or 8.8" monitor with 10pin BMW LVDS connector

Manual

Product features

- Plug and play media-controller with controls by factory infotainment (iDrive)
- Own on-screen display and setup
- On 8.8" 24:10 ultrawide monitor 6 picture format modes (2 split-modes with factory video, 4:3, 16:9, zoom and full screen)
- On 6.5" 16:9 monitor 2 picture format modes, 4:3 and full screen
- 3 AV-inputs
- Controls of after-market devices (e.g. DVD-player, DVD-changer, ...) by factory infotainment (iDrive, see STA + Database for supported devices)
- 2 trigger outputs (+12V max. 1A), separately adjustable switching events (CAN, ACC, rear-view camera, reverse gear, external navigation)
- Video-in-motion for all video-sources
- Rear-view camera input
- Automatic switching to rear-view camera input on engagement of reverse gear from all operation modes
- Automatic return from rear-view camera input, adjustable in OSD (reverse gear or delay up to 20km/h)
- AV3 can be used for front camera, automatic on parking operation, automatic return at 20km/h
- Manual switching to rear-view camera
- Manual return from rear-view and front camera (cancellation of automatic switching)
- Adjustable parking guide lines for front- and rear-view camera, activation by OSD
- Picture-in-picture mode combining after-market rear-view and front camera picture(s) with factory parking sensor graphics
- Compatible with all factory video accessories (e.g. rear-view camera, Top-View, nightvison, DVD-changer, TV-tuner)
- Rear-seat-entertainment output for AV-sources connected to the v.LOGiC
- USB update-port for software-updates by consumer

Optional upgrades

- IR-remote control set, control of v.LOGiC and the most important functions of all connected AV-sources (see STA + Database for supported devices)

Contents

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.

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.*

Interface-box
V3C-M631
HW_____ SW_____

Harness
V3C-BMW03

LVDS cable
V3C-LVDS10

Audio-harness
V3C-AUDIO

Video-harness
V3C-VIDEO

1.1. Check compatibility of vehicle and accessories

Requirements	
Vehicle	**1series** (E81/82/87/88), **3series** (E90/91/92/93), **5series** (E60/61), **6series** (E63/64), **X5** (E70), **X6** (E71), **Mini** from approx 10/2006 til approx 08/2010
Navigation	E-series and Mini with navigation system or radio with 6.5" or 8.8"monitor with 10pin BMW LVDS connector
Audio-AUX	A factory audio-AUX input is required. On some head-units it is already activated. If not, it is necessary to code the head-unit to audio-AUX by diagnosis computer or with our optional available OBD-coders. The following OBD-coders are available: OBD-ASK-X-01 for Business-navigation M-ASK OBD-RAD2-X-01 for radios OBD-CCC-X-01 for Professional navigation CCC

1.2. Setting the dip switches of the interface-box V3C-M631

Dip 1 and 2 on the back of the interface-box V3C-M631 are used to set the monitor type. The default setting is:

Vehicle/ navigation	Dip 1	Dip 2
BMW CCC/M-ASK	OFF	OFF

If this setting is incorrect, set dip 1 to ON. It is rarely possible that other combinations of dip 1 and 2 causes the correct setting of the monitor type.

After each change of the dip switch settings you have to execute a power reset of the v.LOGiC interface-box!

Note: Dip 3 has no function. For monitors with the note "TPO" set Dip 1 usually to ON.

1.3. LED's of the interface-box V3C-M631

V 🔵	valid input source
B 🟢	CAN ok
P 🔴	valid signal

2. Connection schema

After-market navigation (optional)

Side view of the factory monitor

LVDS cable V3C-LVDS10

Interface-box V3C-M631 REAR

multimedia integration

ON

VIDEO   LVDS-OUT   AUDIO

Video-harness V3C-VIDEO

Audio-harness V3C-AUDIO

Touch-screen (optional)

Abmessung B = 153mm
Sichtbare Größe B = 148mm
Sichtbare Größe H = 82mm
Abmessung H = 90mm
Abstand zum Anschluss = 81mm

AV-source 2 (optional)

iPod

ALPINE KCE-425i

●● AV2

●● AV1/3

AV-source 1 (optional)

iPod

ALPINE KCE-425i

IR-cable STA-Y (optional)

AV-source 3 (optional)

iPod

ALPINE KCE-425i

Rear-view camera (optional)

Interface-box
V3C-M631
FRONT

10pin BMW
LVDS female
vehicle harness

v.LOGiC

POWER | FW UPDATE | LVDS-IN

iPod
(optional)

⬤🔴🟢 Remote control

+12V switching
outputs

Reverse gear
analogue

Remote control set
C3-IRSET (optional)

Quadlock female
vehicle harness

Harness
V3C-BMW03

Quadlock male
on rear side
of CCC

RCA-Y-cable
(optional)

Rear-seat-entertainment (optional)

3. Installation

Switch off ignition and disconnect the vehicle's battery! The interface needs a permanent 12V source. If according to factory rules disconnecting the battery is to be avoided, it is usually sufficient to put the vehicle is sleep-mode. In case the sleep-mode does not show success, disconnect the battery with a resistor lead.
If power source is not taken directly from the battery, the connection has to be checked for being start-up proven and permanent.

Prior to wire and device installation we suggest to connect and test correct function of all after-market and factory infotainment equipment!

Carry out and test necessary codings of factory equipment prior to the rest of the installation.

The interface is installed on the backside of the factory monitor and on the backside of the navigation computer.

3.1. Connecting interface-box and harnesses
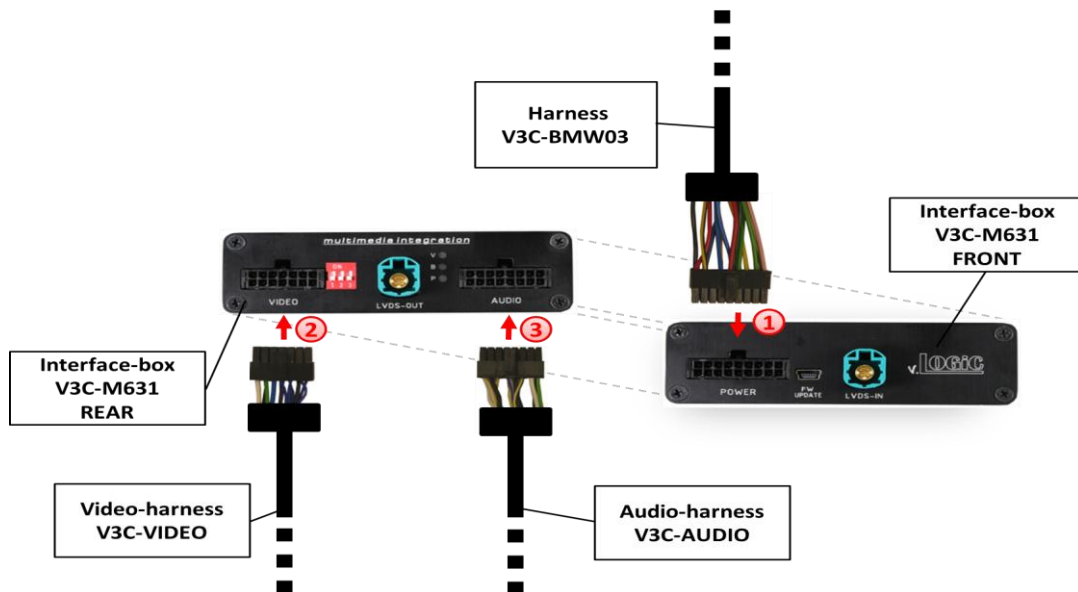
① Connect female 18pin Micro-Fit connector of harness V3C-BMW03 to the male 18pin Micro-Fit connector (POWER) on the front of the interface-box V3C-M631.

② Connect female 14pin Micro-Fit connector of the video-harness V3C-VIDEO to the male 14pin Micro-Fit connector (VIDEO) on the rear of the interface-box V3C-M631.

③ Connect female 16pin Micro-Fit connector of the audio-harness V3C-AUDIO to the male 16pin Micro-Fit connector (AUDIO) on the rear of the interface-box V3C-M631.

3.2. Connection to the factory monitor
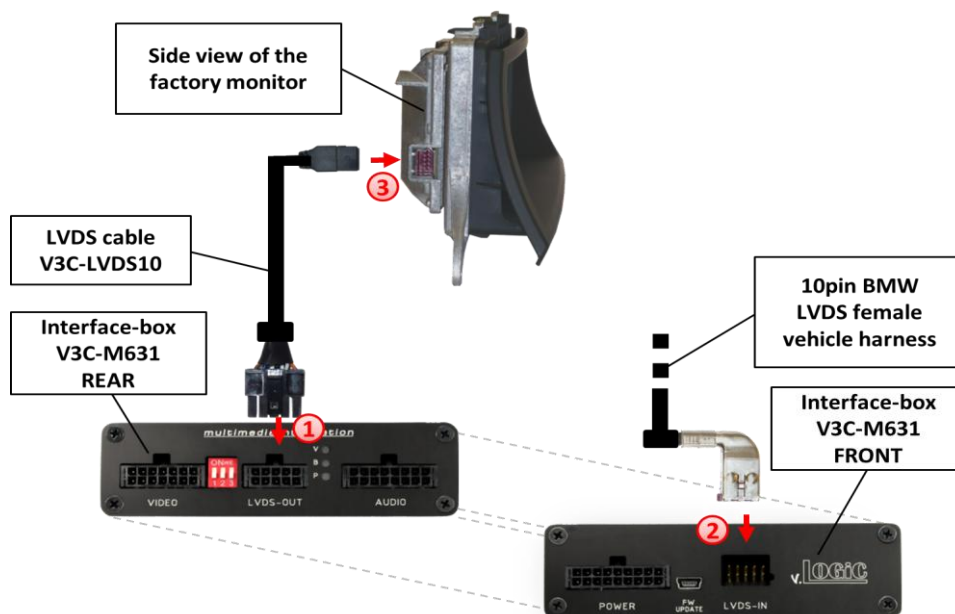
① Connect the female 10pin Micro-Fit connector of the LVDS cable V3C-LVDS10 to the male 10pin Micro-Fit connector (LVDS-OUT) on the rear of the interface-box V3C-M631.

② Remove the female 10pin BMW LVDS connector of the vehicle harness at the side of the factory monitor and connect it to the male 10pin BMW LVDS connector (LVDS-IN) on the front of the interface-box V3C-M631.

③ Connect the female 10pin BMW LVDS connector of the LVDS cable V3C-LVDS10 to the male 10pin BMW LVDS connector of the factory monitor.

3.3. Quadlock connector
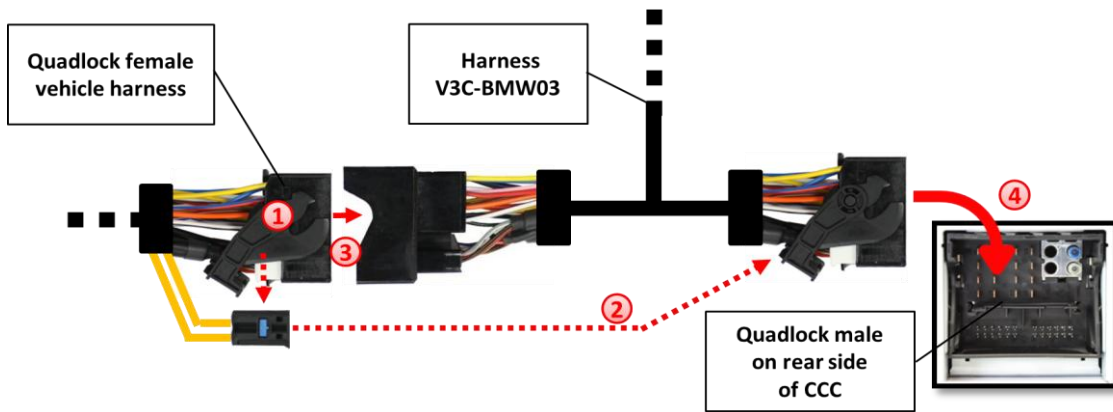
① Remove the female Quadlock connector of the vehicle harness from the rear of the navigation computer.

② Remove optical leads from the female Quadlock connector of the vehicle harness and insert them into the female Quadlock connector of harness V3C-BMW03 at the same position.

③ Connect female Quadlock connector of vehicle harness to the male Quadlock connector of harness V3C-BMW03.

④ Connect female Quadlock connector of harness V3C-BMW03 to the male Quadlock connector of the navigation computer

3.4. Connection to the vehicle-AUX-input
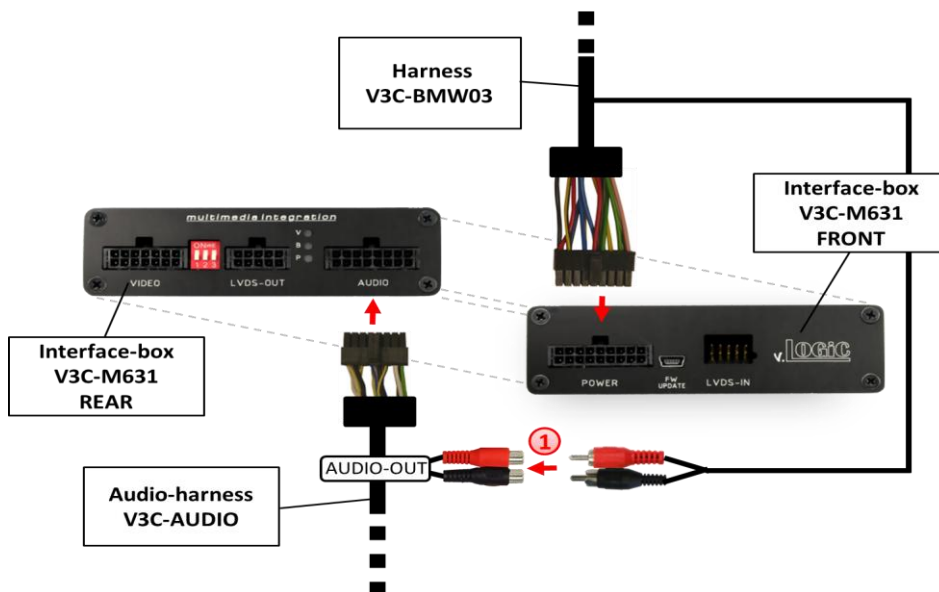
① Connect the audio-RCA of harness V3C-BMW03 to the female RCA-connectors AUDIO OUT of the audio-harness V3C-AUDIO.

Note: If connecting a rear-set-entertainment an optional RCA Y-cable is plugged in between, see chapter "Rear-seat-entertainment"

3.5. Optional IR-remote control set

The optional IR-remote control set C3-IRSET consists of the external C3C-SENSOR IR-sensor and the C3C-RC IR-remote control and can be used to control the v.LOGiC's functions (see appendix B) additionally to the control through the navigations buttons.
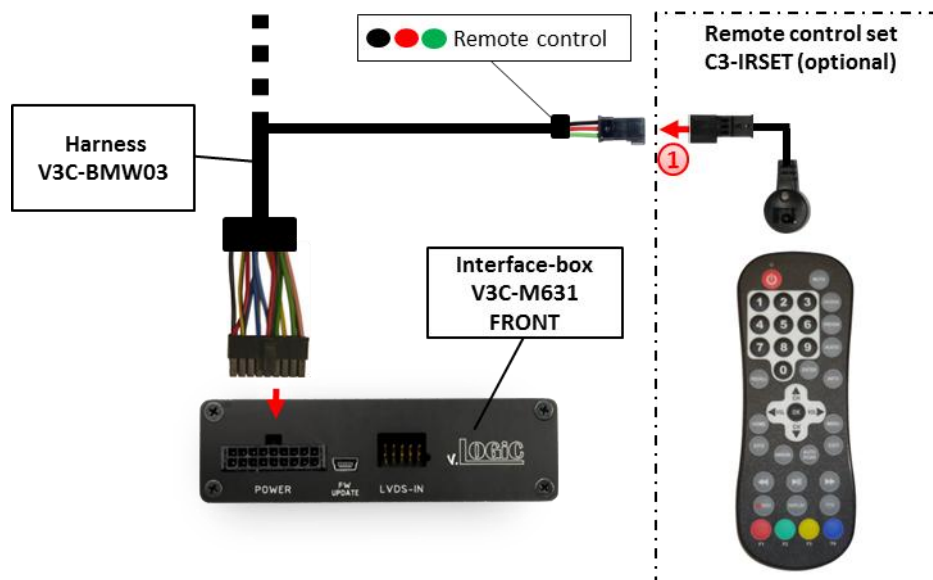
① Connect the IR-sensor C3C-SENSOR to the female black/red/green 3pin AMP connector of harness V3C-BMW03 and locate the sensor in an accessible place.

Note: Connected after-market devices (e.g. DVB-T tuner, DVD-player, usbLiNK) can be controlled with their own IR remote-control (if NEC standard) using the IR-sensor C3C-SENSOR. All IR-signals with exception of longpresses will be forwarded to the corresponding device.

3.6. Connecting peripheral devices

It is possible to connect 3 after-market AV-sources, therefrom optional an iPod and an after-market front camera, an after-market rear-view camera, an after-market navigation and rear-seat-entertainment to the v.LOGiC interface.

Before final installation of the peripheral devices, we recommend a test-run to detect incompatibility of vehicle and interface. Due to changes in the production of the vehicle manufacturer is always the possibility of incompatibility.

3.6.1. AV-source(s)

The v.LOGiC interface has the possibility to connect and remotely control by navigation buttons 3 pre-programmed devices. The device list in the device control table (appendix A) shows the pre-programmed remote channels and the related IR-remote cables STA-xxx which must be ordered separately for the control of the device.
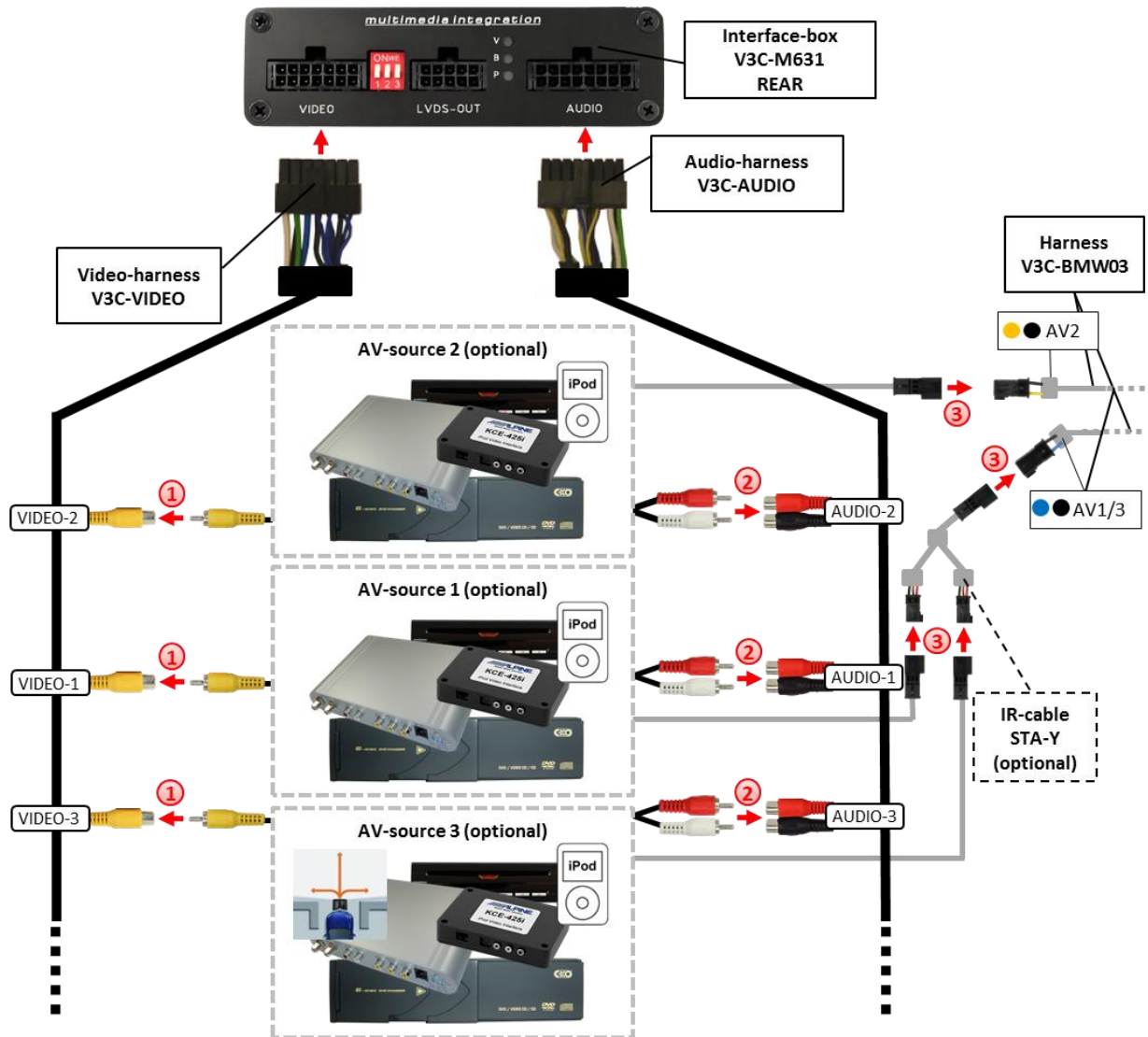
① Connect video RCA of AV-source 1 to female RCA connector VIDEO-1, the video RCA of AV-source 2 to female RCA connector VIDEO-2 and video RCA of AV-source 3 to female RCA connector VIDEO-3 of the video-harness V3C-VIDEO.

② Connect audio RCA of AV-source 1 to female RCA connectors AUDIO-1, the audio RCA of AV-source 2 to female RCA connectors AUDIO-2 and audio RCA of AV-source 3 to female RCA connectors AUDIO-3 of the audio-harness V3C-AUDIO.

③ Using the respective STA-xxx IR-control cable, interconnect the blue-black (yellow-black) female 3pin AMP connector of harness V3C-BMW03 and the IR-port of the AV-source 1 (AV-source 2). If 3 AV-sources are connected, connect the optionally available IR-control cable STA-Y between the blue-black female 3pin AMP connector and the IR-ports of the AV-sources 1 and 3.

3.6.2. After-market front camera

3.6.2.1. Connection to the after-market front camera
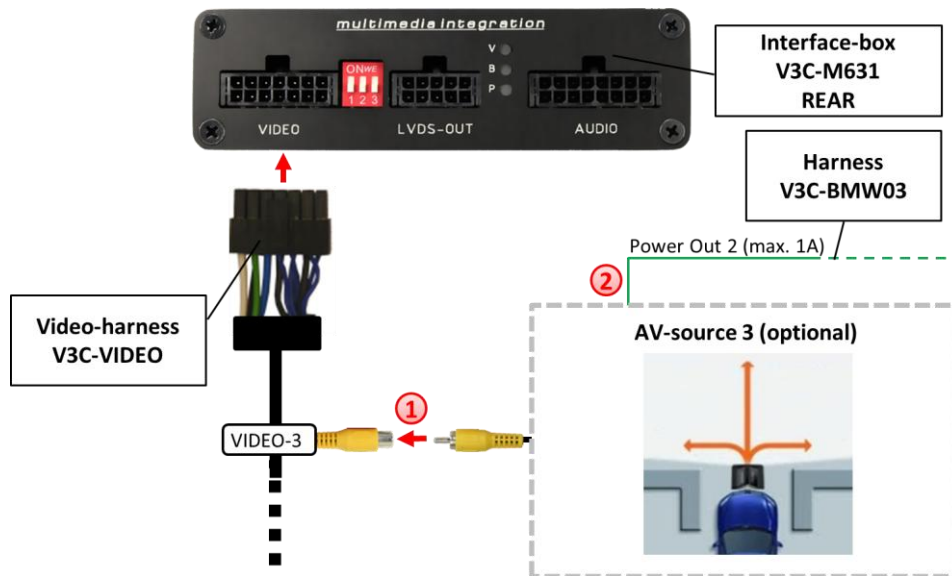
① Connect the video RCA of the after-market front camera to the female RCA connector VIDEO-3 of the video-harness V3C-VIDEO.

② The green wire of harness V3C-BMW03 can be used for +12V electric power supply (max. 1A) of the after-market front camera. Configure in the OSD-menu "MISC", menu item "POWER OUT 2" the designated electric power supply (see chapter "Configurable switching outputs").

Note: The after-market front camera is always connected to AV3.

3.6.2.2.   Settings for connecting an after-market front camera

You have to configure some settings in the OSD-menus INPUTS and MISC if you want to connect an after-market front camera (Operation of the OSD: see chapter "OSD-Operation").
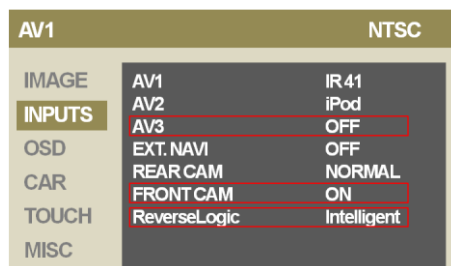
OSD-menu	Menu item	Setting	Explication
INPUTS	AV3	OFF	The front camera is connected to AV3
	FRONT CAM	OFF	No front camera connected
		ON	Switches to front camera if parking process is enabled and reverse gear is released
		LINES	As per ON + Display of lines
		PDC PIP	As per ON + Display of front camera combined with PDC-display
		PIP + LINES	As per ON + Display of front camera combined with PDC-display and lines
	ReverseLogic	Intelligent	The front camera only works with this setting! Enabled while parking process and up to 20 km/h or together with PDC if existing
MISC	OEM PDC CAR	Horizontal	PDC-display of the vehicle is horizontal
		Vertical	PDC-display of the vehicle is vertical

Note: You can adjust the displayed lines by pressing the iDrive to north and south.
You can deactivate the enabled parking process by pressing the iDrive or by enabling other modes (e.g. radio). After deactivation you can't enable the parking process again until the vehicle is diving faster than 20km/h, the ignition is switched off and on or the PDC will be disabled and enabled again, if existing.

3.6.3. After-market rear-view camera

3.6.3.1. Connection to the after-market rear-view camera
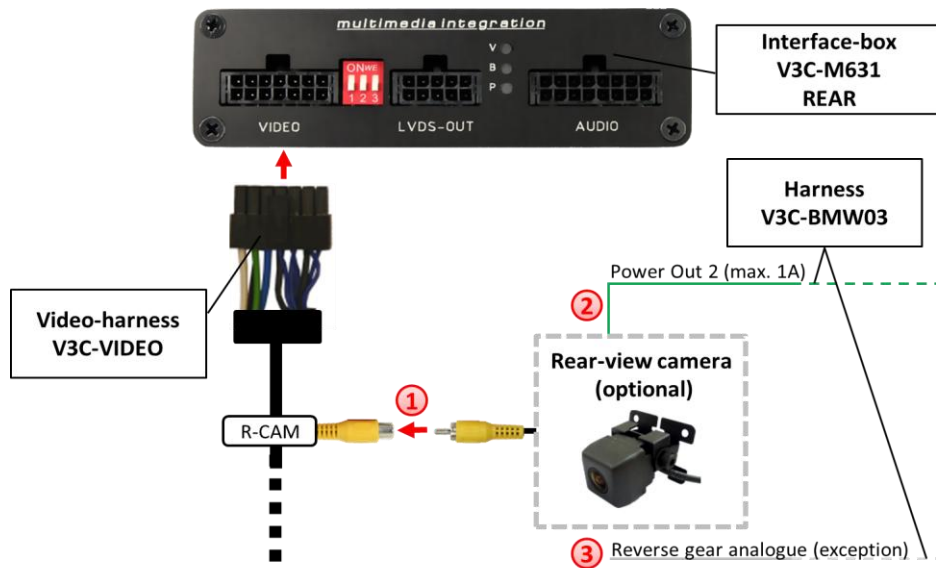

① Connect the video RCA of the after-market rear-view camera to the female RCA connector of the video-harness V3C-VIDEO.

② The green wire of harness V3C-BMW03 can be used for +12V electric power supply (max. 1A) of the after-market rear-view camera. Configure in the OSD-menu "MISC", menu item "POWER OUT 2" the designated electric power supply (see chapter "Configurable switching outputs").

③ On some vehicles the reverse light signal doesn't exist on the CAN-bus. Connect the white wire of harness V3C-BMW03 to reverse light signal (+12V of reverse light) if the v.LOGiC doesn't switch to the rear-view camera automatically after the described OSD-setup (see next chapter).

3.6.3.2. Settings for connecting an after-market rear-view camera

You have to configure some settings in the OSD-menus INPUTS and MISC if you want to connect an after-market rear-view camera (Operation of the OSD: see chapter "OSD-Operation").
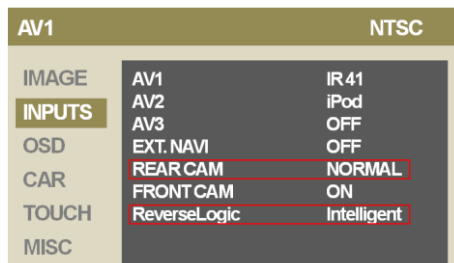
OSD-menu	Menu item	Setting	Explication
INPUTS	REAR CAM	OFF	No rear-view camera connected
		SOURCE	Rear-view camera only manually selectable
		OEM	If a factory rear-view camera is existing! v.LOGiC turns off, if PDC or reverse gear is enabled and it displays factory rear-view camera and/or PDC-display
		NORMAL	Switches to rear-view camera if reverse gear is engaged and/or PDC-display is displayed
		LINES	As per NORMAL + Display of lines
		PDC PIP	As per NORMAL + Display of rear-view camera combined with PDC-display
		PIP + LINES	As per NORMAL + Display of rear-view camera combined with PDC-display and lines
	ReverseLogic	Intelligent	Enabled while reverse gear is engaged and up to 20 km/h or together with PDC if existing
		Gear only	Enabled while reverse gear is engaged
MISC	OEM PDC CAR	Horizontal	PDC-display of the vehicle is horizontal
		Vertical	PDC-display of the vehicle is vertical

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Note: You can adjust the displayed lines by pressing the iDrive to north and south.
You can deactivate the enabled parking process by pressing the iDrive or by enabling other modes (e.g. radio). After deactivation you can't enable the parking process again until the vehicle is diving faster than 20km/h, the ignition is switched off and on or the PDC will be disabled and enabled again, if existing.

3.6.4. Rear-seat-entertainment

① Connect the video RCA of the rear-seat-entertainment to the female RCA connector VIDEO-OUT of video-harness V3C-VIDEO.

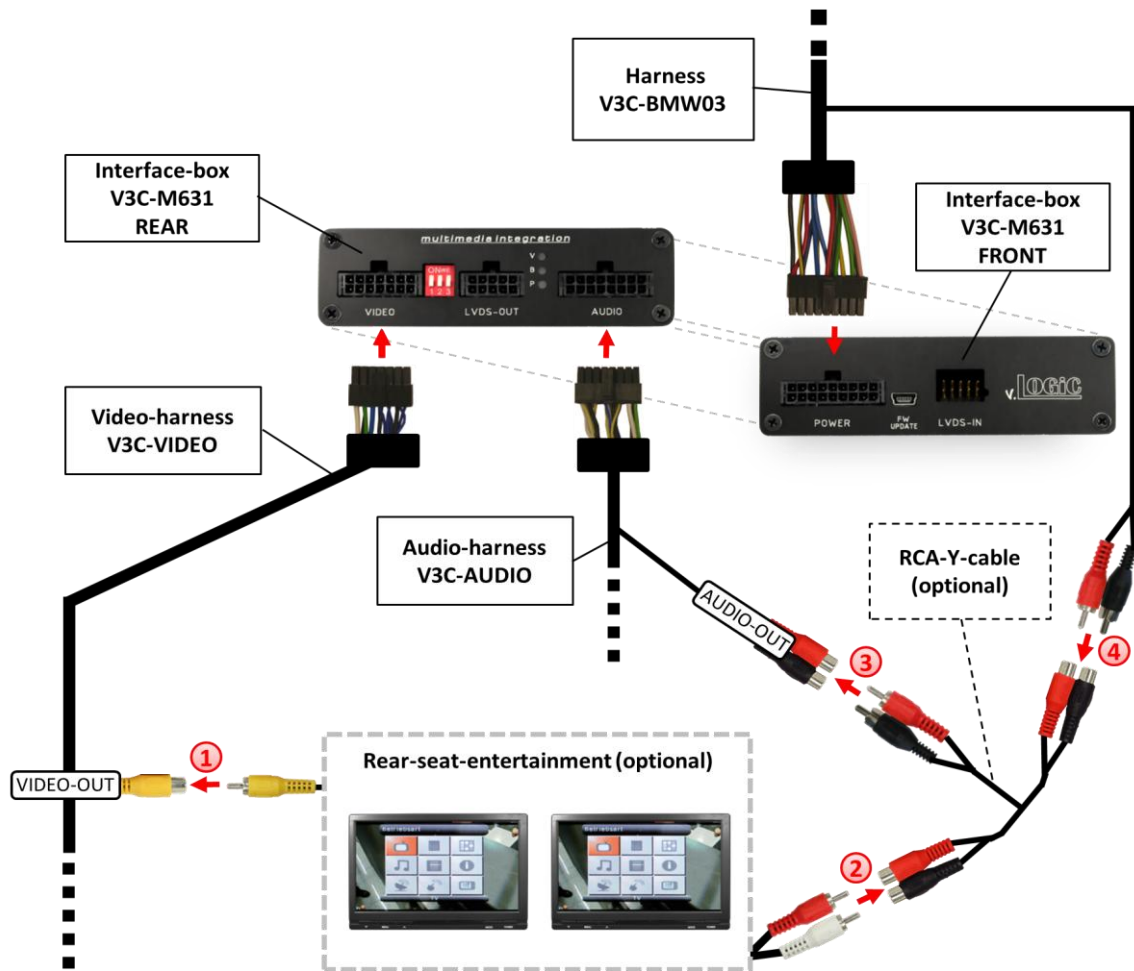② Connect the audio-RCA of the rear-seat-entertainment to the female RCA connectors of the optional RCA-Y-cable.

③ Connect the audio RCA of the optional RCA-Y-cable to the female RCA connectors AUDIO OUT of the audio-harness V3C-AUDIO.

④ Connect the audio RCA of harness V3C-BMW03 to the female RCA connectors of the optional RCA-Y-cable.

Note: The last source keeps active on rear-seat-entertainment if you switch the navigation to OEM mode.

3.6.5. Configurable trigger outputs
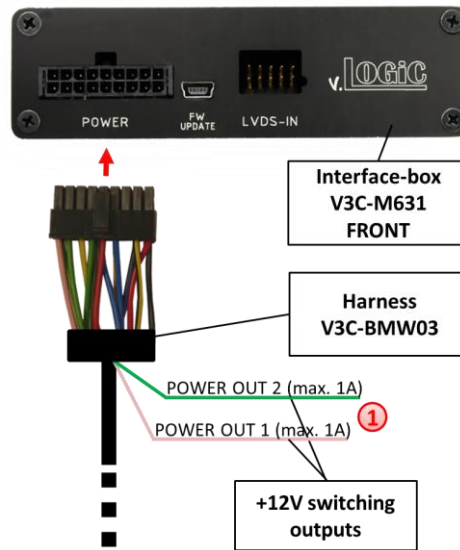
① You can configure the both +12V trigger outputs separately. The pink wire is POWER OUT 1 and the green wire is POWER OUT 2.

Note: You can configure the both trigger outputs in the OSD-menu MISC separately (Operation of the OSD: see chapter "OSD-Operation").
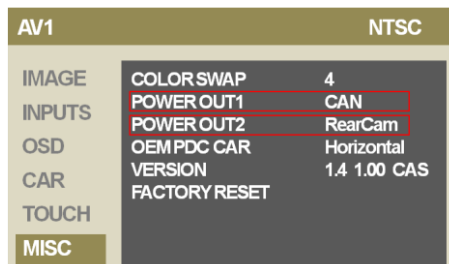
OSD-menu	Menu item	Setting	Explication
MISC	POWER OUT1 (pink)* POWER OUT2 (green)*	CAN	+12V when the v.LOGiC is on (red LED on)
		Ignition	+12V when ignition is on
		RearCam	+12V when the rear-view camera input (AV4) is activated
		Ext. Navi	+12V when an after-market navigation is configured and its input is activated
		Reverse Gear	+12V when reverse gear is engaged
		Visible	+12V when v.LOGiC-picture is visible
		Active	No function

*Default setting pink = Ignition
*Default setting green = RearCam

3.7. Picture settings

3.7.1. Picture format

You can change the picture format by **long pressing** the **CD-button** (8-button iDrive), by **pressing** the **MENU-button** for **2-3 sec.** (1- and 2-button iDrive) or by **long pressing** the **Menu-button** (2-button iDrive in Mini) while in the respective AV-mode. The following options are available

8.8" 24:10 ultrawide monitor:
◦ 16:9　　　　　= 24:10 v.LOGiC full screen mode
◦ Split Left　　= 16:9 v.LOGiC-picture on left side, factory picture on right side
◦ Split Right　= 16:9 factory picture on the left side, v.LOGiC-picture on the
　　　　　　　　　right side
◦ 4:3　　　　　= 4:3 v.LOGiC-picture central
◦ Zoom1　　　= 16:9 v.LOGiC-picture central (default setting)
◦ Zoom2　　　= 18:10 v.LOGiC-picture central

6.5" 16:9 monitor:
◦ 16:9　　　　　= 24:10 v.LOGiC full screen mode
◦ 4:3　　　　　= 4:3 v.LOGiC-picture central

Note: The picture format will be retained for each AV-source separately.

3.7.2. Picture settings

You can change the picture settings in the OSD-menu IMAGE (Operation of the OSD: see chapter "OSD-Operation").

AV1		NTSC
IMAGE	BRIGHTNESS	50%
INPUTS	CONTRAST	50%
	SATURATION	50%
OSD	HUE	80%
CAR	SHARPNESS	0%
TOUCH		
MISC		

◦ Brightness
◦ Contrast
◦ Saturation
◦ Hue
◦ Sharpness

Note: The picture settings will be retained for each AV-source separately.

4. Operation

4.1. OSD – On-screen display

You can change the basic configurations of the v.LOGiC in the OSD (on screen display).

AV1		NTSC
IMAGE	BRIGHTNESS	50%
INPUTS	CONTRAST	50%
	SATURATION	50%
OSD	HUE	80%
	SHARPNESS	0%
CAR		
TOUCH		
MISC		

4.1.1. OSD – Operation

You can control the OSD by iDrive.

4.1.1.1. 8-button iDrive

Options

Options

OK

Back + leaving OSD

Long press = enter/ leave OSD
Short press= leave OSD + back to the main menu

Options

Long press = enter/ leave OSD
Short press= leave OSD + back to the main menu
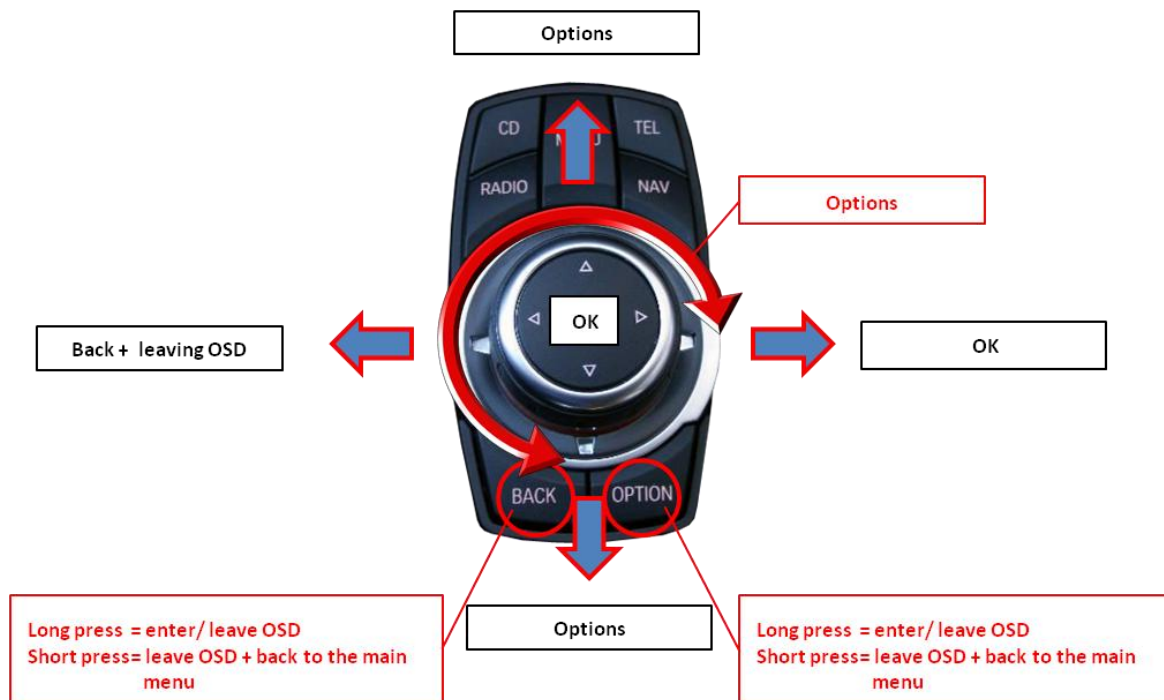
4.1.1.2. 1- and 2-button iDrive

On vehicles with 1- and 2-button iDrive it is only possible to select the OSD in the factory modes (radio, navi,…)!!!
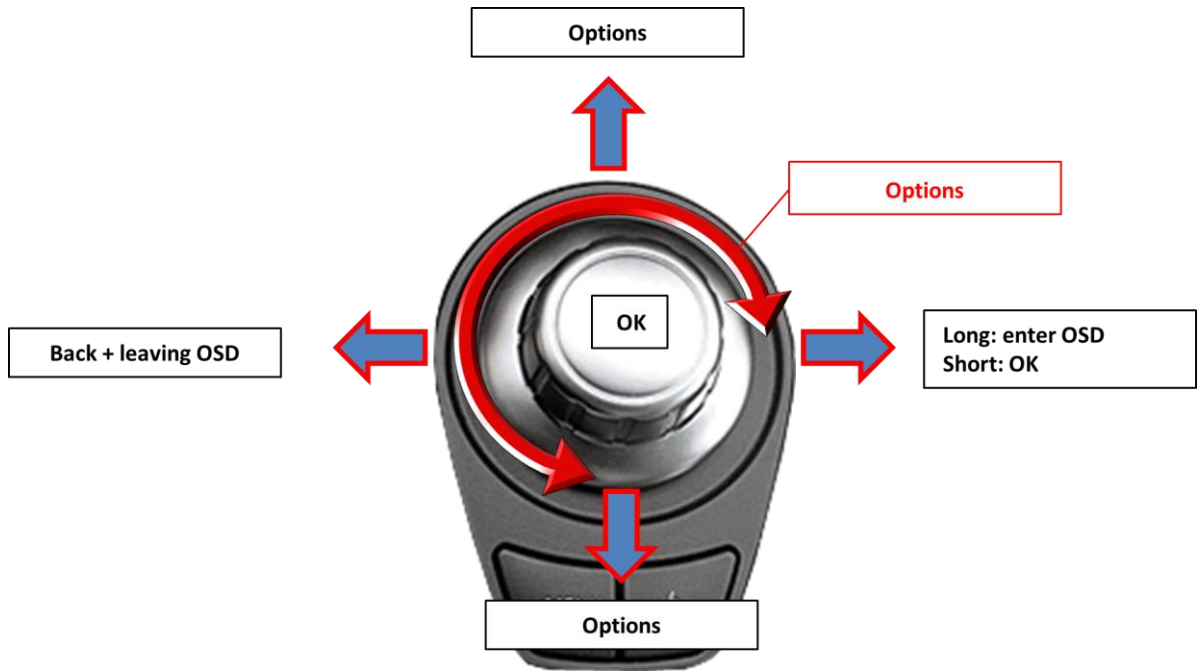
Note: On some older vehicles the control by turning the iDrive (iDrive high with turn stop) doesn't operate.

4.1.1.3. 2-button iDrive in Mini
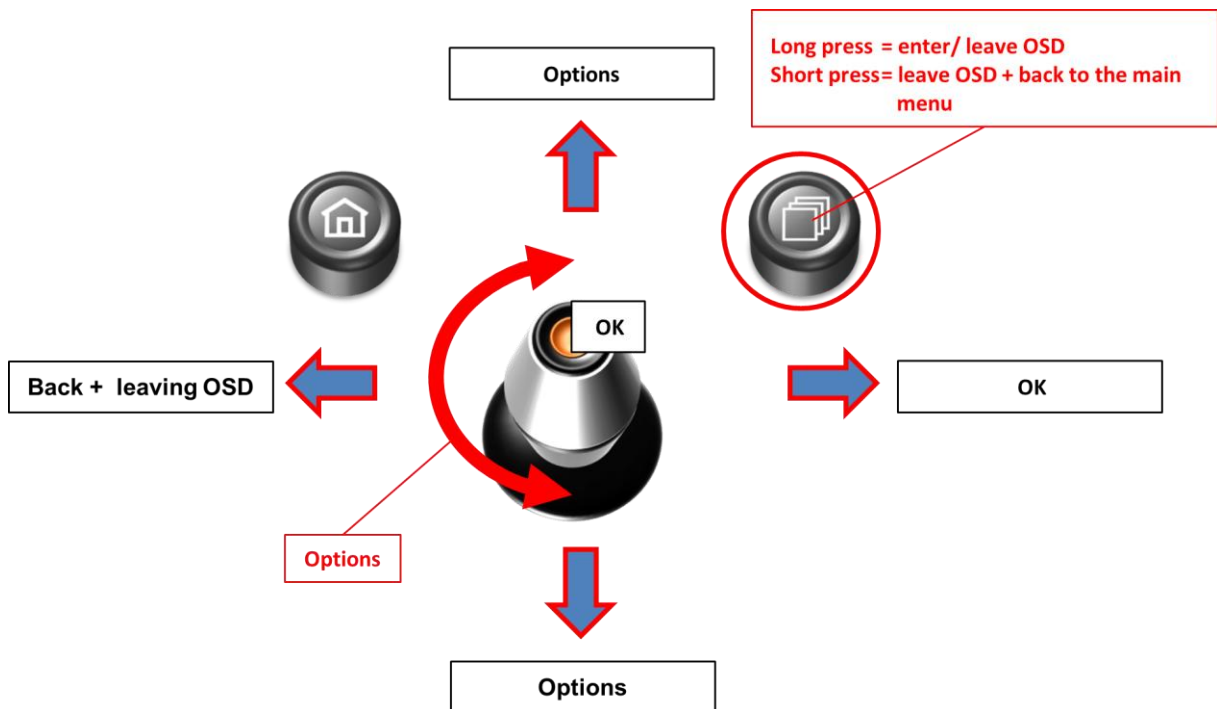
4.1.2. OSD – Additional setting options

The following settings in the OSD-menus OSD and MISC can be configured over and above the described settings in this manual (Operation of the OSD: see chapter "OSD-Operation"):
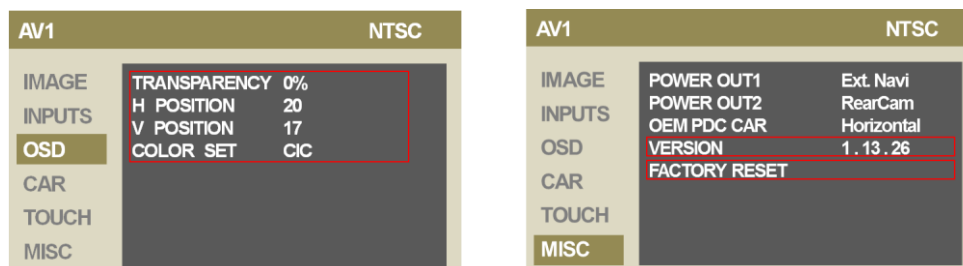
OSD-menu	Menu item	Setting	Explication
OSD	TRANSPARENCY	0-100%	Transparency of the OSD-background
	H POSITION	0-xxx	Horizontal position of the OSD
	V POSITION	0-xxx	Vertical position of the OSD
	COLOR SET	8 different	Colour setting of the OSD
MISC	VERSION	X.XX.XX	Displays the current SW-version
	FACTORY RESET		Resetting to factory settings

4.2. Video-in-motion function

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

4.3. Selecting the v.LOGiC as current AV-source

In **BMW** in the vehicle`s **Entertainment** menu activate **AUX** and in **Mini** in the vehicle's **CD/Multimedia** menu, activate **AUX front** by iDrive and after it **long press CD** button (8-button iDrive) respectively **long press MENU** button (1- and 2-button iDrive + Mini) to choose the v.LOGiC as current AV-source.

Short press CD button respectively **MENU** button to switch the AV-sources. Each short press will switch to the next enabled input. If all inputs are enabled the order is:

Factory-video → AV1 → AV2 → AV3 → AV4 (R-CAM) → RGB → factory-video → …

Inputs which are not enabled are skipped.

4.4. Assigning device controls

You can assign the device controls in the OSD-menu INPUTS (Operation of the OSD: see chapter "OSD-Operation"). Assign related IR-codes AV1 for AV-source 1, AV2 for AV-source 2 and AV3 for AV-source 3 as described in device control table (see appendix A)

Note: The IR-control channel AV1 is preset to IR-Code 41 compatible DVB-T tuners and AV2 is preset to IR-Code 09 for the usbLiNK.

If you connect an AV-source without control you have to assign any IR code for the respective AV-input (AV1/2/3) because in the setting „OFF" there is no picture visible.

4.5. Controlling of the connected AV-sources

The picture shows which functions of the connected devices can be executed by iDrive. Once an AV-input is activated the iDrive action will execute the function described in the picture. The function description equals the remote control buttons of the device's remote control. On the additional device the writing on the remote control buttons may vary (e.g. AV instead of Source).

4.5.1.1. Controlling by 8-button iDrive

Controlling of AV-sources:
DVB-T / DVD / usbLiNK / iPod®

Short = Switch AV-sources
Long = Switch picture format

Short = leave OSD + back to the main menu
Long = enter / leave OSD

Short = ⬆ / ⬆ / ⬆ / ⬆
Long = Menu/ PBC/ Exit/ Call the folder of the current track up

Short = VOL–/ ⏮/ ⬅/ Back
Long = Exit/ Play/ Vol-/ ⏪

Short = VOL +/ ⏭ / ➡/ Enter
Long = Scan/ Zoom(Disc)/ Vol+/ ⏩

Turn = CH+-/ ⏮ ⏭ / ⬆⬇ / ⬆⬇

Short = OK/ Enter/ OK/Play/ Enter
Long = Power/ Power/ Power/ Play

Short = ⬇ / ⬇ / ⬇ / ⬇
Long = AV /AV/ Source/ AV
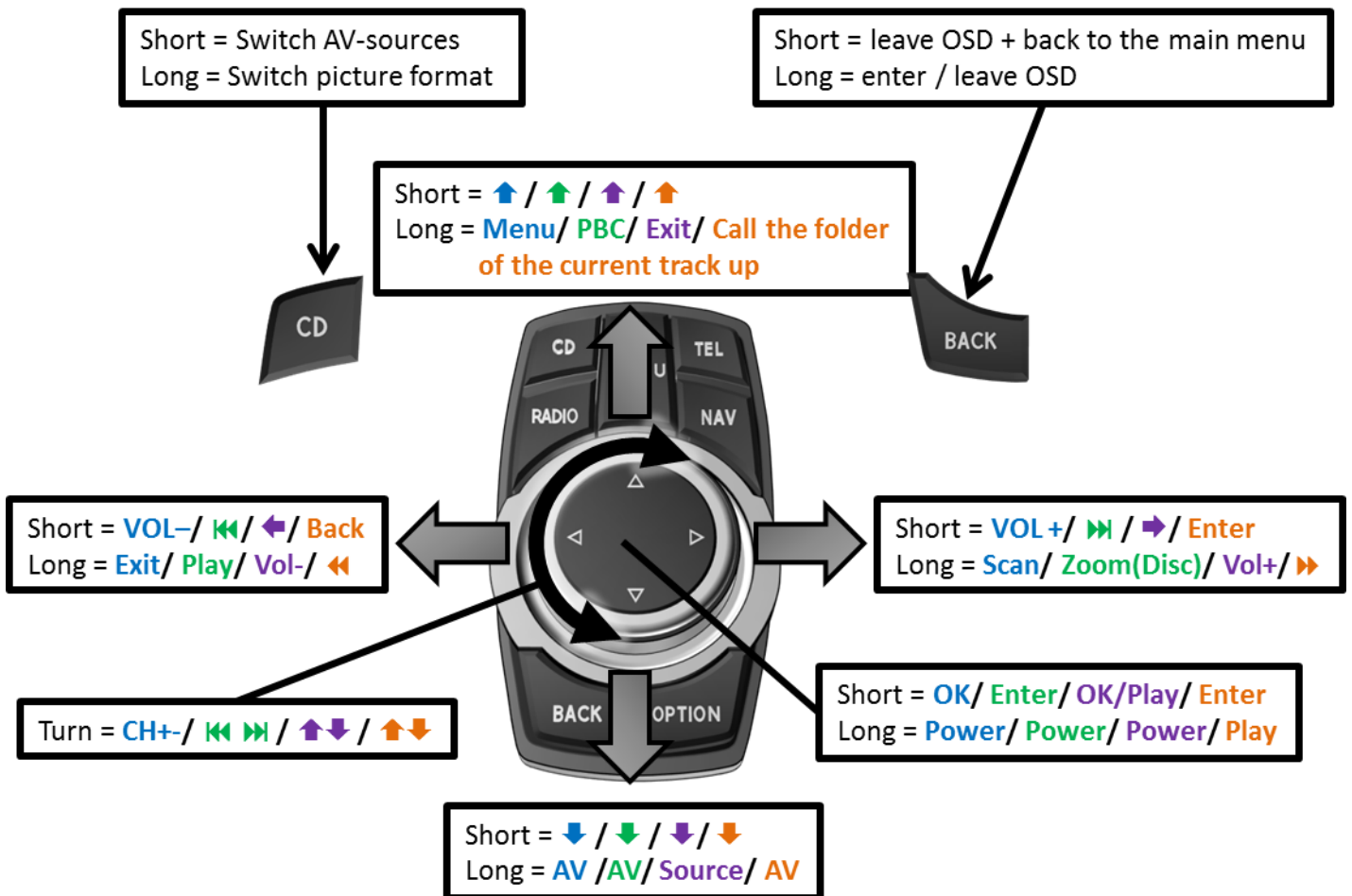
Note: A few functions could be different on some connected devices.

4.5.1.2.   Controlling by 1- and 2-button iDrive

Controlling of AV-sources:
DVB-T / **DVD** / **usbLiNK** / **iPod**®
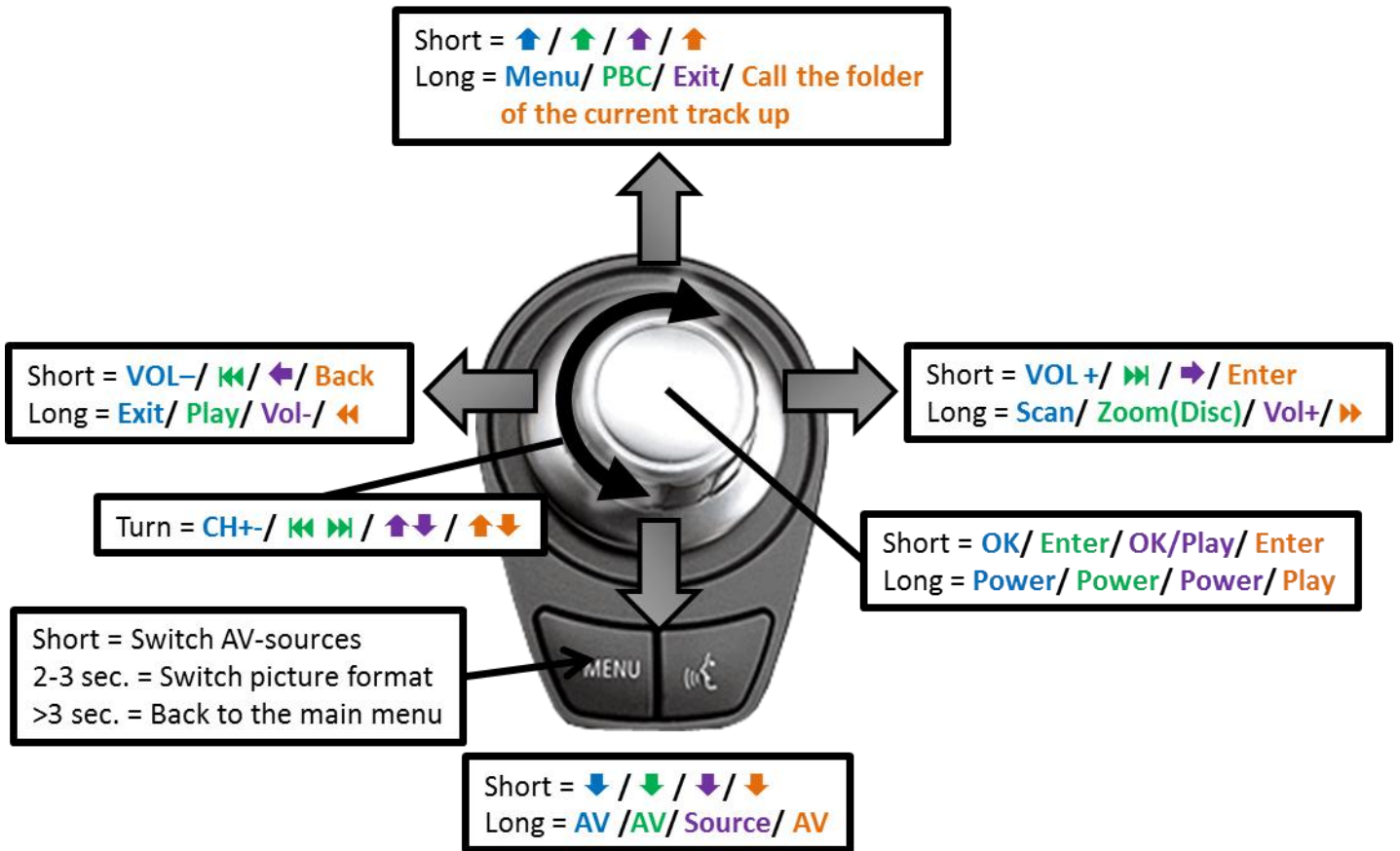

Short = ⬆ / ⬆ / ⬆ / ⬆
Long = **Menu**/ **PBC**/ **Exit**/ **Call the folder**
of the current track up

Short = **VOL–**/ ⏮ / ⬅ / **Back**
Long = **Exit**/ **Play**/ **Vol-**/ ⏪

Short = **VOL +**/ ⏭ / ➡ / **Enter**
Long = **Scan**/ **Zoom(Disc)**/ **Vol+**/ ⏩

Turn = **CH+-**/ ⏮ ⏭ / ⬆⬇ / ⬆⬇

Short = **OK**/ **Enter**/ **OK/Play**/ **Enter**
Long = **Power**/ **Power**/ **Power**/ **Play**

Short = Switch AV-sources
2-3 sec. = Switch picture format
>3 sec. = Back to the main menu

Short = ⬇ / ⬇ / ⬇ / ⬇
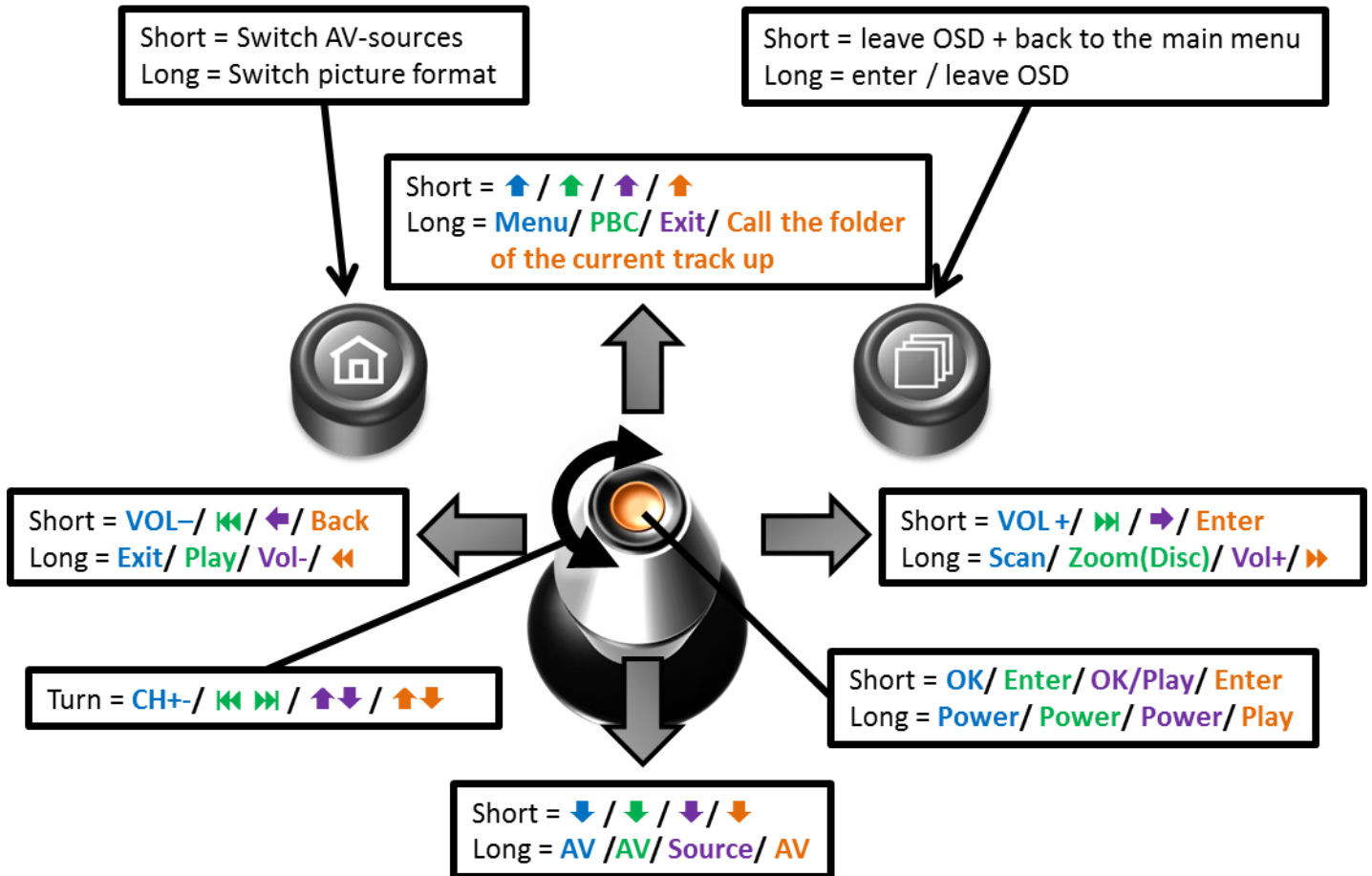Long = **AV** /**AV**/ **Source**/ **AV**

Note: On some older vehicles the control by turning the iDrive (iDrive high with turn stop) doesn't operate.

A few functions could be different on some connected devices.
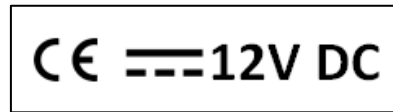
4.5.1.3. Controlling by 2-button iDrive in Mini

Controlling of AV-sources:
DVB-T / DVD / usbLiNK / iPod®

Short = Switch AV-sources
Long = Switch picture format

Short = leave OSD + back to the main menu
Long = enter / leave OSD

Short = ⬆ / ⬆ / ⬆ / ⬆
Long = Menu/ PBC/ Exit/ Call the folder of the current track up

Short = VOL–/ ⏮/ ⬅/ Back
Long = Exit/ Play/ Vol-/ ⏪

Short = VOL +/ ⏭ / ➡/ Enter
Long = Scan/ Zoom(Disc)/ Vol+/ ⏩

Turn = CH+-/ ⏮ ⏭ / ⬆⬇ / ⬆⬇

Short = OK/ Enter/ OK/Play/ Enter
Long = Power/ Power/ Power/ Play

Short = ⬇ / ⬇ / ⬇/ ⬇
Long = AV /AV/ Source/ AV

Note: A few functions could be different on some connected devices.

5. Specifications

Operation voltage	10.5 – 14.8V DC
Stand-by power drain	<0,1mA
Operation power drain	190mA
Power consumption	2,6W
Temperature range	-20°C to +80°C
Weight (box only)	285g
Measurements (box only) B x H x T	141 x 30 x 105 mm

CE ---12V DC

6. Connections (interface-box)

Male 14pin Micro-Fit connector
Male 16pin Micro-Fit connector
Interface-box V3C-M631 REAR
Male 18pin Micro-Fit connector
Male 10pin BMW LVDS connector
Male 10pin Micro-Fit connector
Female update-connector Mini USB
Interface-box V3C-M631 FRONT
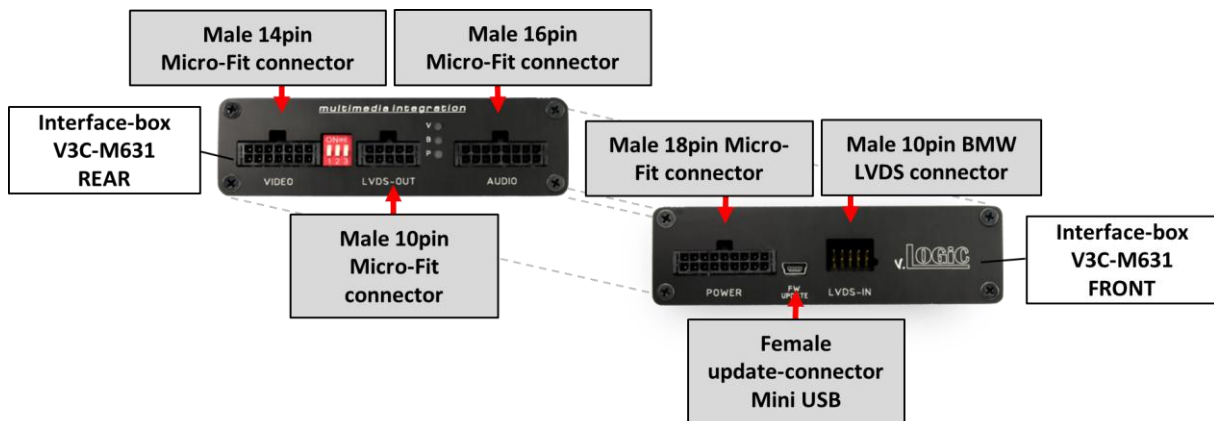
7. Technical Support

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