

dvbLOGiC DVB-T Tuner

DT1-NTG1

Compatible with Mercedes Benz Comand APS NTG1 navigation systems

Product features

- Full plug and play vehicle-specific dual DVB-T Tuner + USB-AV-Player
- DVB-T-Tuner MPEG4 compatible (HD)
- USB-AV-Player for USB-media (audio, video, photo) up to 2TB (FAT32 and NTFS)
- Support of all common Audio & Video formats (e.g MKV, MOV, MPEG-1/2/4, H.264)
- USB-AV-Player with last position memory for Audio and Video playback
- with two active DVB-T glass-mount antennas and USB extension with installation socket
- integrated into and controllable by vehicle infotainment
- AV-input with IR-control channel
- control of after-market devices, e.g. DVD-player, DAB+ tuner
- after-market rear-view camera input
- automatic switching to rear-view camera input (only from dvbLOGiC mode)
- rear-view camera power (+12V max 1A)
- rear-seat-entertainment AV-output for AV-sources connected to the dvbLOGiC
- optional remote control for full DVB-tuner and USB-AV-player functions/rear-seat-entertainment
- power on remote out trigger signal (+12V max 1A) to switch on connected devices
- video-in-motion

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Legal Information

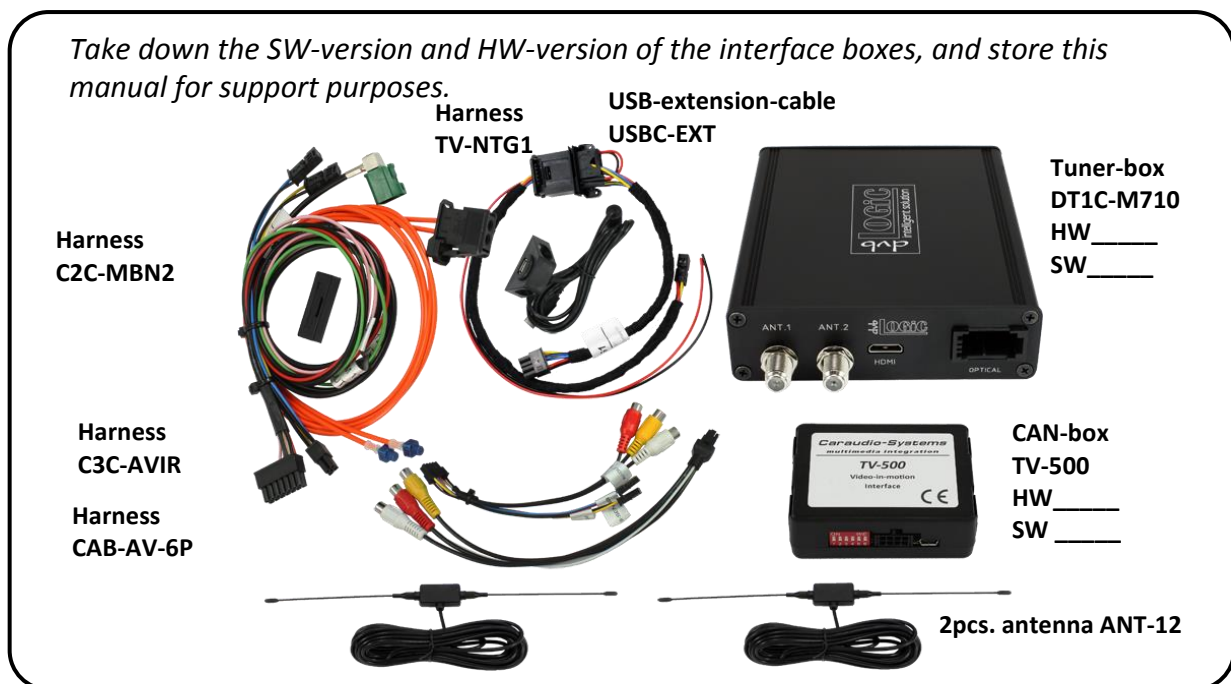
By law, watching moving pictures while driving is prohibited, the driver must not be distracted. We do not accept any liability for material damage or personal injury resulting, directly or indirectly, from installation or operation of this product. This product should only be used while standing or 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



If remote function for a peripheral device shall be used, additional an IR-remote cable and Y-adapter are needed, see chapter [AV-source](#) .

1.2. Check compatibility of vehicle and accessories

Requirements

Vehicle Maybach (all vehicles with green Fakra connector on rear side of the Comand)

Mercedes Benz CLS-Coupe (W219) from 10/2004 till 03/2008, E-class (W211) till 05/2008, SLK-class (R171) from 03/2004 till 03/2008

Navigation Comand APS NTG1 **with green Fakra connector on rear-side**
From approx week 6 of 2004 it was left out on Mercedes vehicles which were delivered w/o factory TV-tuner or factory RVC.

Limitations

Factory-TV-tuner Must NOT be installed. If uninstalled, optical ring must be closed.

Teletext Teletext of the dvbLOGiC can only be used with the optionally available C3-IRSET remote control set.

After-market rear-view camera Automatic switching to camera only from dvbLOGiC mode as the Comand does not support camera functions.

1.3. Setting the dip switches of the CAN-box TV-500

Vehicle/ navigation	Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6
Video-in-motion permanent	ON	OFF	OFF	OFF	OFF	OFF
Video-in-motion selective*	OFF	OFF	OFF	OFF	OFF	OFF

* With dip1 to OFF the included green cable is used to activate the video-in-motion function.

Note: Dip switch functions of the TV-500

Dip 1 – activation TV-free

Dip 2 – no function

Dip 3 – no function

Dip 4 – no function

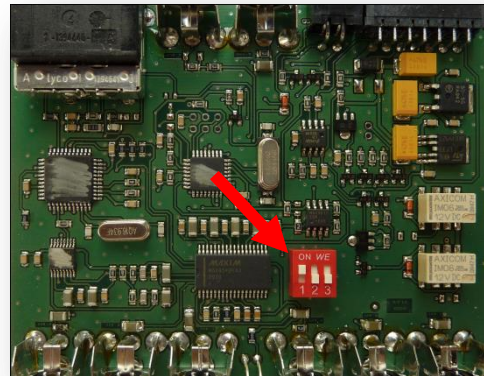
Dip 5 – CAN-bus termination resistor on the vehicle side

Dip 6 – CAN-bus termination resistor on the head-unit side

1.4. Setting the dip switches of the tuner-box DT1C-M710

The default dip switch settings of the tuner-box need to be changes ONLY if an after-market rear-view camera shall be connected or if the AV of the dvbLOGiC shall be deactivated. The dip switches are located **inside** the tuner-box. For changes it is necessary to open the box. Default settings are:

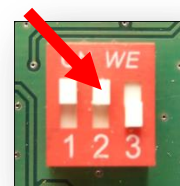
dip1 = ON, dip2 = OFF, dip3 = OFF



1.4.1. Automatic switching to rear-view camera

If an after-market rear-view camera shall be connected, in order for the dvbLOGiC to automatically switch to its camera input when reverse is engaged, set dip2 = ON (up).

Note: Automatic switching to after-market rear-view camera works only from dvbLOGiC mode.



dip switches of tuner-box

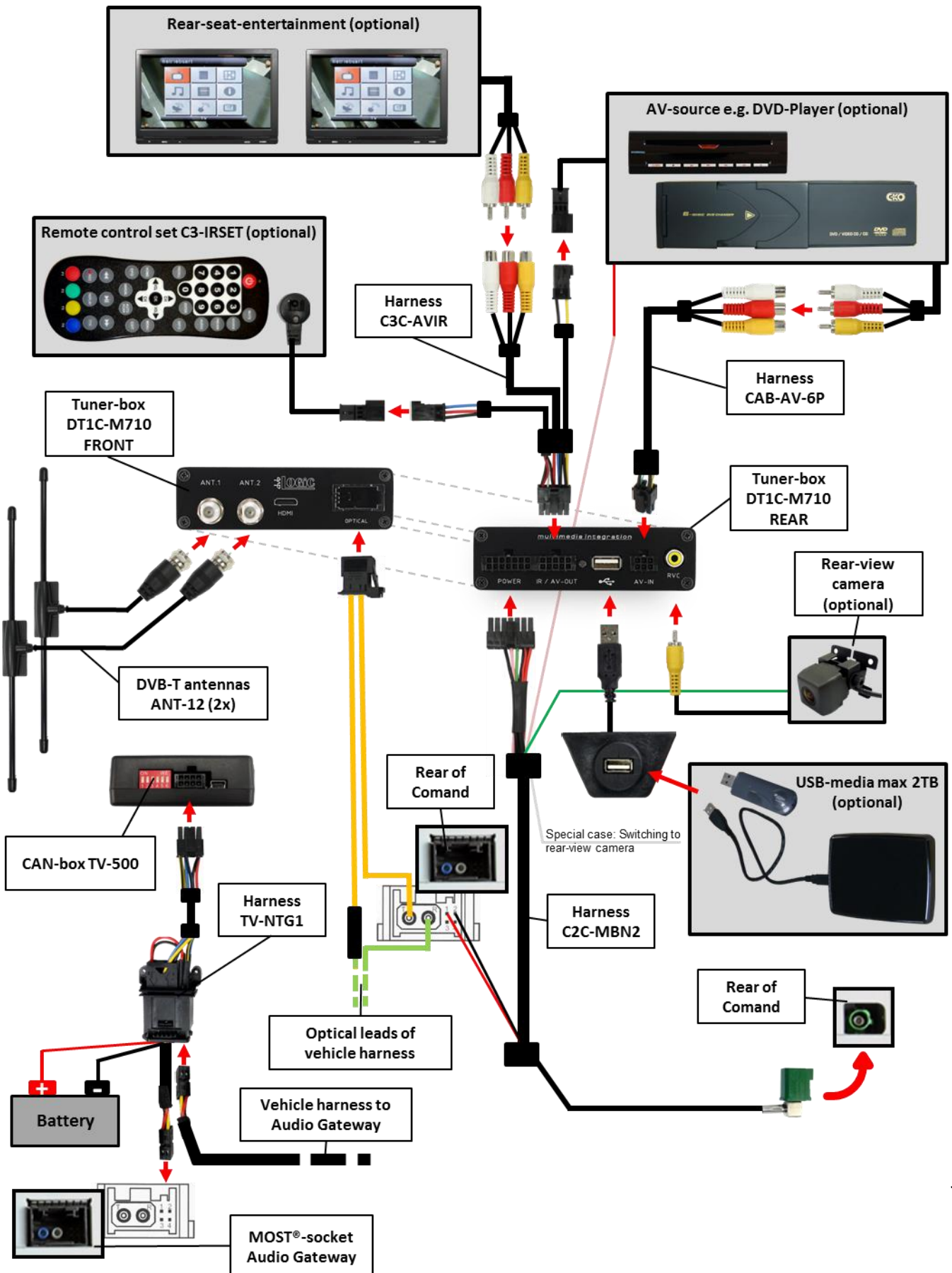
1.4.2. Deactivating dvbLOGiC AV input

If no peripheral AV-source shall be connected to the dvbLOGiC, we recommend to disable the AV-input, to avoid customers switching by mistake to black/no picture of the AV-input. In order to disable the AV-input of the dvbLOGiC, set dip1 = OFF (down).



dip switches of tuner-box

2. Connection schema



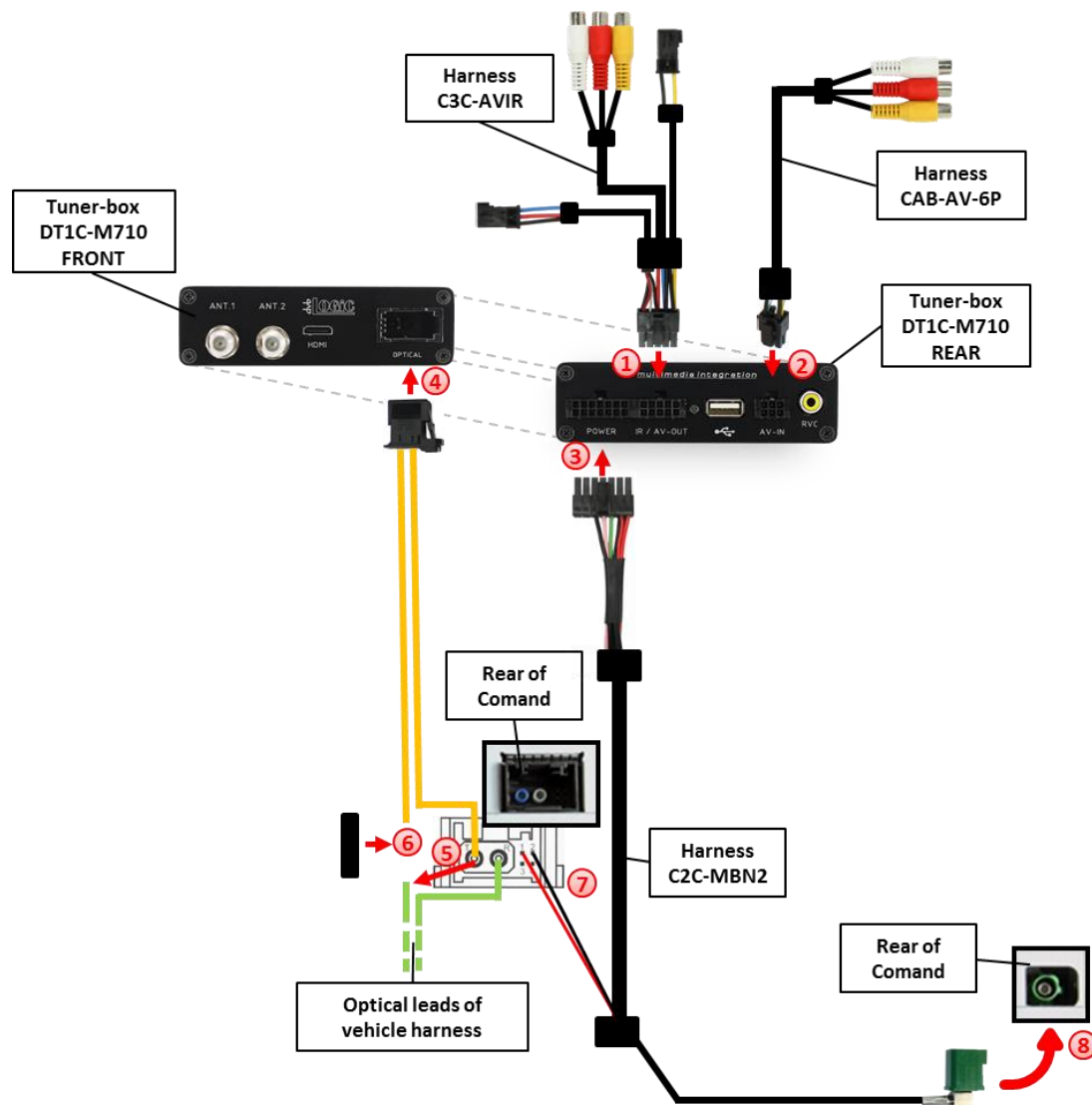
3. Installation

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.

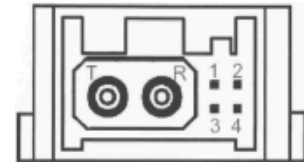
Place of installation is behind the Comand head-unit and at the Audio-Gateway which is located at the left hand side of the trunk (E-class and CLS) or behind the back seat on the driver side (SL-class).

3.1. Connecting the tuner-box

Remove the Comand from the dash-board.



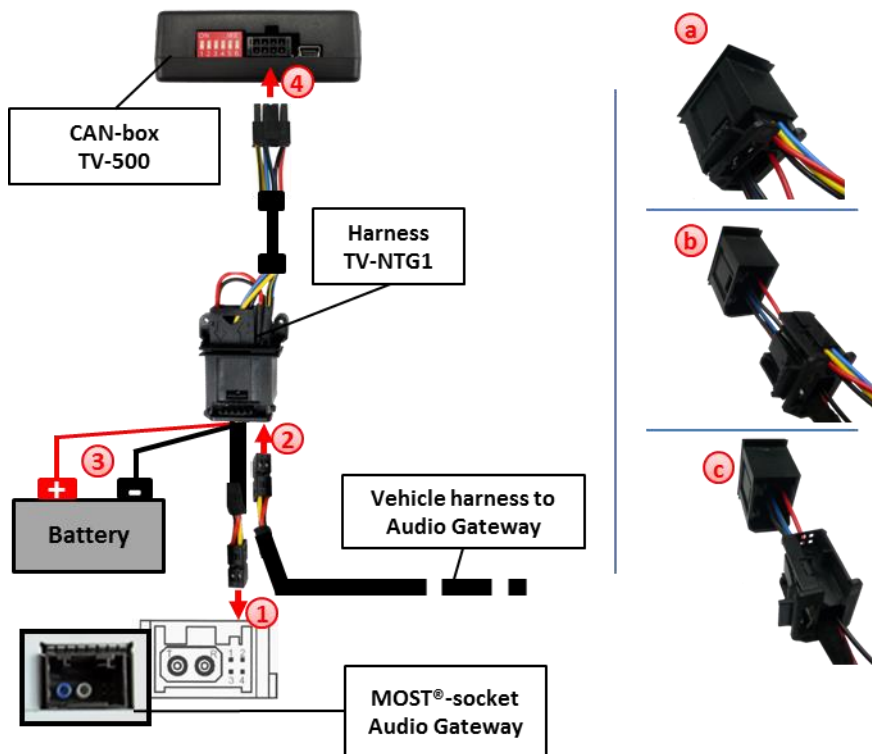
- ① Plug harness C3C-AVIR into 10pin Molex of tuner-box DT1C-M710.
- ② Plug harness CAB-AV-6P into 6pin Molex of tuner-box DT1C-M710.
- ③ Plug harness C2C-MBN2 into 14pin Molex of tuner-box DT1C-M710.
- ④ Plug male MOST®-connector of C2C-MBN2 into female MOST®-socket of tuner-box DT1C-M710.
- ⑤ Remove the black MOST®-connector which contains the optical leads from the rear of the Comand. Remove the optical insert from the black connector. Remove the vehicle harness' optical output lead (T) and connect the optical input lead of C2C-MBN2 (see arrow on MOST®-connector) instead.
- ⑥ With the included optical bridge, connect the removed vehicle harness' optical output lead to the optical output lead of the C2C-MBN2 (see arrows on MOST®-connector).
- ⑦ Connect the red (black) wire of the C2C-MBN2 to pin 1 (pin 2) of the black MOST®-connector's analogue wires.
- ⑧ Plug female Fakra connector of C2C-MBN2 into male Fakra connector of the Comand.



Alternative installation: Instead of installing the tuner box in the front, it is possible to connect it in the rear of the vehicle. In this case the MOST®-connections are done to the same type black MOST®-connector of the Audio-Gateway. Power wires have to be connected to separate permanent +12V. The Fakra-connector can be connected to the Comand using the optionally available 6m Fakra-extension CAB-FAK-MA600.

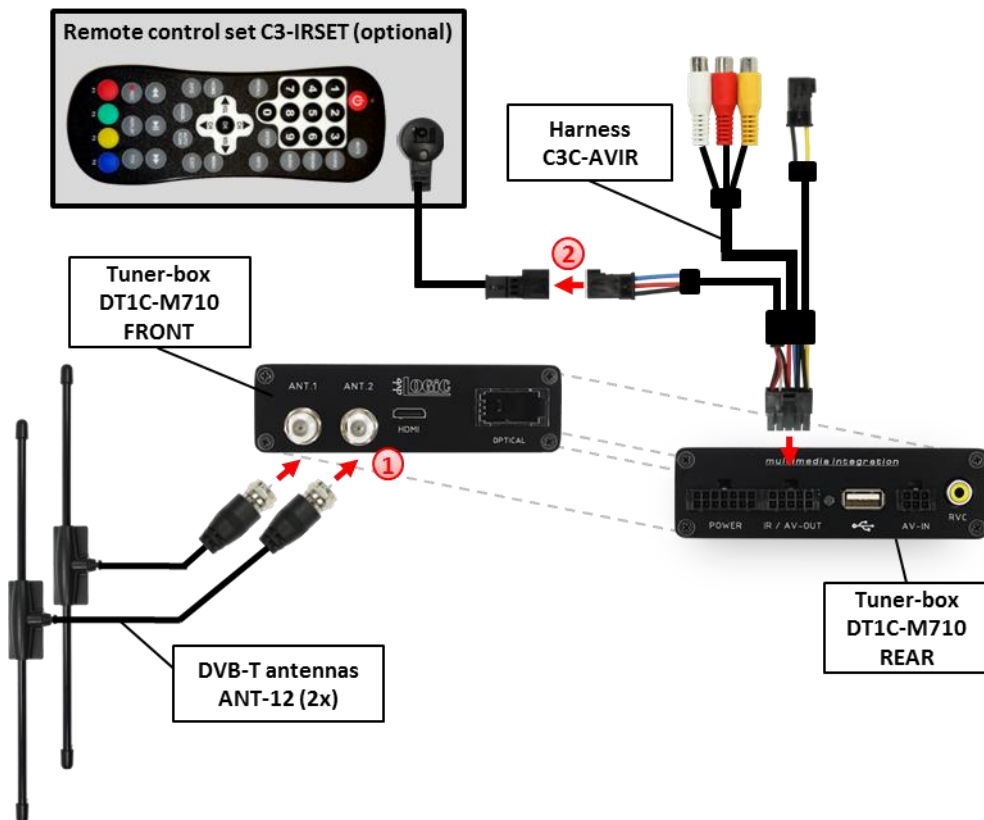
3.2. Connecting the CAN-box

Locate the Audio Gateway.



- ① Remove the black MOST®-connector which contains the optical leads and analogue wires from the Audio-Gateway. Remove 4pin insert of the vehicle harness from the black MOST®-connector and plug in instead the 4pin insert of harness TV-NTG1. Reconnect the black MOST®-connector. Also see **a** to **c**.
- ② Unplug the large black connector of TV-NTG1 and plug in 4pin insert like shown in **a** to **c**. Plug back large black connector.
- ③ Connect red (black) wire of TV-NTG1 to +12V (ground) permanent power.
- ④ Connect TV-NTG1 to CAN-box TV-500.

3.3. Antennas and optional IR-remote control set



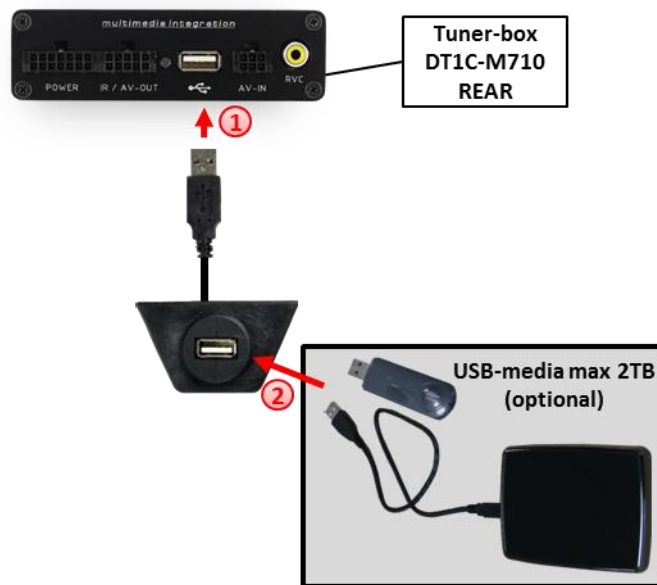
- ① Mount antennas ANT-12 and connect them to the female f-plug connectors on front of tuner-box DT1C-M710.

We strongly recommend to first test the reception quality of the chosen mounting position of the antennas before final installation! See “Appendix C – Antenna positioning” for additional information.

- ② The C3-IRSET consists of the external C3C-SENSOR IR-sensor and the C3C-RC IR-remote control and can be used to control the dvbLOGiC’s internal DVB-T tuner functions additionally to the control through the navigations buttons. Connect the C3C-SENSOR to the female black/red/blue 3pin AMP connector of harness C3C-AVIR and locate the sensor in an accessible place.

Note: To use the teletext function of the dvbLOGiC’s internal DVB-T tuner, the C3-IRSET is necessary to enter the page numbers.

3.4. USB-AV-Player



- ① Connect the USB extension USBC-EXT to the USB-port on the rear of the tuner-box DT1C-M710.
- ② Connect USB-media (up to 2TB, FAT32 and NTFS) to the USB-port of the USB-extension USBC-EXT.

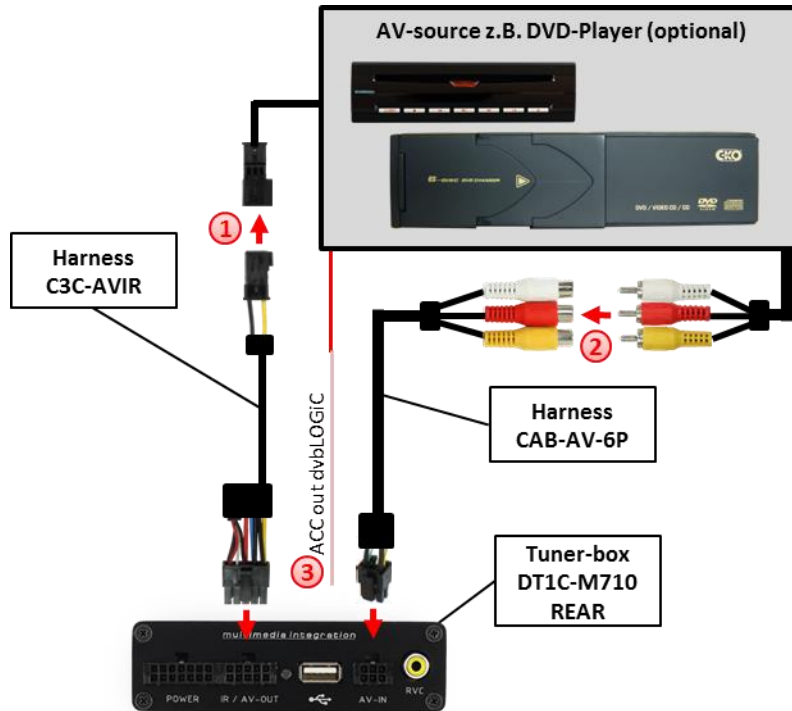
3.5. Connecting peripheral devices

It is possible to connect an after-market AV-source, an after-market rear-view camera and rear-seat-entertainment to the dvbLOGiC Tuner.

Before final installation of the peripheral devices, we recommend to test-run the dvbLOGiC functions to detect incompatibility of vehicle, navigation, factory accessories or peripheral devices as soon as possible.

3.5.1. AV-source

The dvbLOGiC has the possibility to connect and remotely control by navigation buttons a pre-programmed device. The device list in the device control table 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.

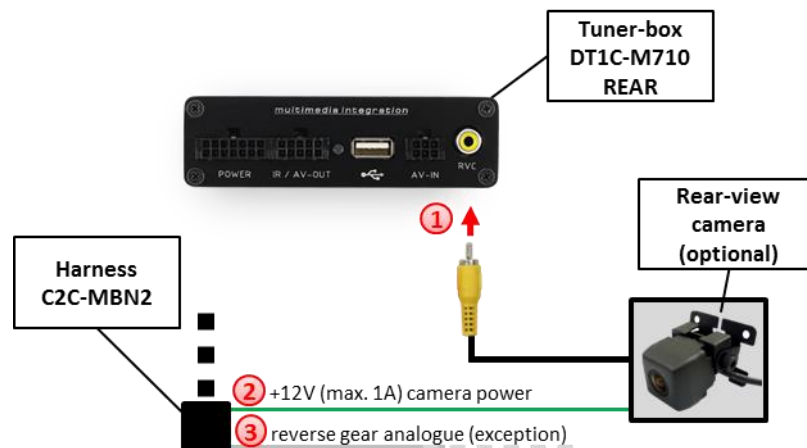


- ① Using the respective STA-xxx IR-control cable, interconnect the yellow female 3pin AMP connector of harness C3C-AVIR and the IR-port of the AV-source.
- ② Using an RCA-cable, interconnect the female RCA-port of harness CAB-AV-6P with the AV-output of the AV-source.
- ③ The pink ACC-output wire (+12V max 1A) of harness C2C-MBN2 can be connected to the ACC-input wires of the connected device to switch it on. It carries +12V when the navigation computer is running.

3.5.2. Installing AV-source's 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 the respective Y-adapter (e.g. STA-Y35MM or STA-RJ12) for the IR-Port of the connected device, the controls of navigation AND device's IR-sensor can be connected and used simultaneously. Installation of the IR-sensor is recommended as the controls via navigation are limited, and not all functions may be covered.

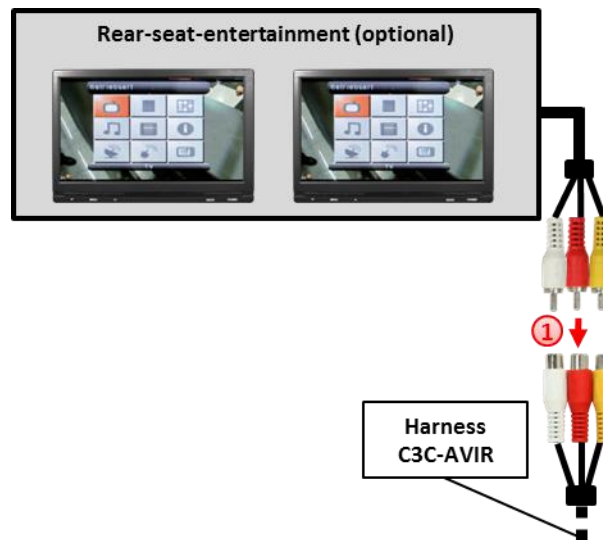
3.5.3. After-market rear-view camera



- ① Connect the video RCA of the after-market rear-view camera to the the female RCA connector R-CAM IN of tuner-box DT1C-M710.
- ② Connect the green wire of C2C-MBN2 to the camera power supply (+12V max. 1A)
 - The green wire is high (+12V) when reverse gear is engaged.
 -
- ③ On some vehicles the reverse light signal doesn't exist on the CAN-bus. Connect the white wire of harness C2C-MBN2 to reverse light signal (+12V of reverse light) if the dvbLOGiC doesn't switch to the rear-view camera automatically.

Note: Automatic switching to after-market rear-view camera works only from dvbLOGiC mode.

3.5.4. After-market rear-seat-entertainment



- ① Using RCA-cables, connect the rear-seat-entertainment to the female RCA-connector VIDEO OUT of harness C3C-AVIR.

Note: As the output is a full output, not shared with the video signal for the navigation system, splitting the video with an RCA Y-cable might give a good enough picture for two rear-seat-entertainment monitors. If not, or if connecting more than two monitors, use a video splitter.

4. Operation

4.1. Activation of the video-in-motion function

The video-in-motion can be activated and deactivated by Dip 1 or alternatively by the included loose green cable of harness TV-NTG1 in connection with a switch (not included in delivery).

Video-in-motion permanent

With dip1 to ON the video-in-motion function is activated permanently without disturbing the navigation performance.

Video-in-motion selective

With dip1 to OFF the included green cable of harness TV-NTG1 is used to activate the video-in-motion function.

Connect a switch to the green cable and connect the green cable to +12V ACC.

- +12V = TV-Free is activated
- 0V = TV-Free is not activated

Note: The loose white cable of harness TV-NTG1 is not required and must be isolated.

4.2. Selecting the dvbLOGiC as current AV-source

Push the **VIDEO** button of the Comand and then select **TV** to choose the dvbLOGiC as current AV-source.

4.3. Switching between internal DVB-T and AV-input

After selecting the dvbLOGiC as current AV source, push "5"-button long to switch from internal DVB-T to AV-input. Repeat to switch back to internal DVB-T.

Note: If the AV-input is deactivated (see chapter "Deactivating dvbLOGiC AV input"), it is not possible to switch to the dvbLOGiC's AV-input.

4.4. Assigning device control for connected AV-source

After selecting the dvbLOGiC as current AV source, push “2”-button long. When released, a message “RC2” appears. Now push button “*”-button followed by the device-related IR-code as described in device control table (appendix A). Push **OK** to confirm the assignment.

Note: If the AV-input is deactivated (see chapter “Deactivating dvbLOGiC AV input”), it is not necessary, nor possible to assign device controls.

4.5. Button assignment table

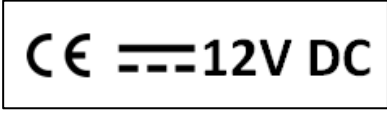
The button assignment table shows which functions of dvbLOGiC and additionally connected devices can be executed by Comand buttons. Once DVB-T or AV-input mode is activated, the Comand button in the left column will execute the function described in the corresponding device column. The function description equals the remote control buttons of the optional dvbLOGiC remote control or the additional device. On the additional device the writing may vary (e.g. AV instead of Source).


Button assignment table dvbLOGiC Mercedes Benz Comand APS NTG1						
COMAND button	Internal DVB-T	DAB tuner	DVD-player	DVD-changer	iPod®-control	Analog-tuner
1	AUTO	SCAN	PLAY	PLAY	PLAY/PAUSE	SCAN
2	↑	↑	↑	↑	↑	VOL +
3	EPG	FAV	STOP	STOP	POWER	FM
4	←	←	←	←	←	CH -
4 long	INFO		DISPLAY	DISPLAY		DISPLAY
5	OK	OK	OK	OK	ENTER	MODE
6	→	→	→	→	→	CH +
6 long	AUDIO		AUDIO	AUDIO	MUTE	FM
7	EXIT	FAV+/-	PBC	DISC	SHUFFLE	MUTE
7 long	MANUAL		SUB	SUB		MUTE
8	↓	↓	↓	↓	↓	VOL -
9	MENU	SETUP	SETUP	SETUP	LIGHT	MODE
0		SOURCE	AV	AV	EJECT	DISPLAY
0 long	POWER	POWER	POWER	POWER	POWER	POWER
<<	CH -	↓	TRACK -	TRACK -	TRACK -	CH -
>>	CH +	↑	TRACK +	TRACK +	TRACK +	CH +

Additionally to the Comand buttons, the steering-wheel buttons UP and DOWN can be used for remote functions. DOWN-button has the same function as “<<” on the Comand and UP-button has the same function as “>>” on the Comand.

5. Specifications

Operation voltage	10.5 – 14.8V DC
Stand-by power drain	<1mA
Operation power drain	<1200mA
Power consumption	<16,5W
Temperature range	-30°C to +80°C
Weight	333g
Measurements (box only) B x H x T	140 x 30 x 105 mm



CE  12V DC

6. Technical Support

Caraudio-Systems Vertriebs GmbH
manufacturer/distribution
In den Fuchslöchern 3
D-67240 Bobenheim-Roxheim

email support@caraudio-systems.de

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