

dvbLOGiC DVB-T Tuner

DVB-RNSE

Compatible with navigation systems Audi Navi Plus RNS-E

Only for vehicles WITHOUT factory rear-view camera

Product features

- full plug and play vehicle-specific dual DVB-T Tuner
- with two active DVB-T glass-mount antennas
- integrated into and controllable by vehicle infotainment
- AV-input with IR-control channel (optionally USB-AV-port DVBU-XXX instead AV-input)
- control of after-market devices by OEM buttons, e.g. DVD-player, USB/iPod devices, ...
- after-market rear-view camera input
- automatic switching to rear-view camera input (optional coding necessary to switch from OEM-modes)
- 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 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

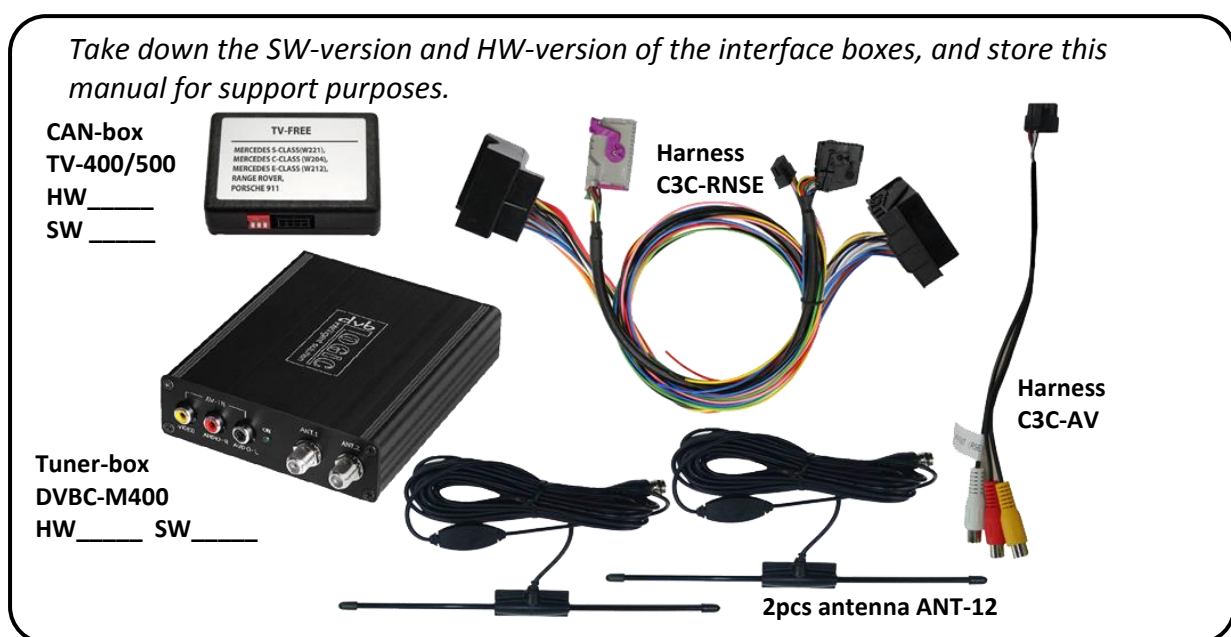
By law, watching moving pictures while driving is prohibited, the driver must not be distracted. We do not accept any liability for material damage or personal injury resulting, directly or indirectly, from installation or operation of this product. This product should only be used while standing or 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	
<i>Vehicle</i>	Audi, Lamborghini
<i>Navigation</i>	Audi Navi Plus RNS-E all-in-one navigation 16:9
Limitations	
<i>Factory-TV-tuner</i>	Must NOT be installed.
<i>Teletext</i>	Teletext of the dvbLOGiC can only be used with the optionally available DVB-IRSET remote control set.
<i>After-market rear-view camera</i>	Only compatible with NTSC-cameras. Automatic switching to camera from OEM mode only works after coding the head-unit to rear-view camera per diagnosis computer (Only possible on RNS-E with minimum software 550 and till year 2010).
<i>Video-in-motion function</i>	Navigation does NOT work while VIM is activated.

1.3. Setting the dip switches of the CAN-box TV-400/500

TV-400

All vehicles	dip 1 OFF, dip 2 OFF, dip 3 OFF
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TV-500

Vehicle/ navigation	Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6
All vehicles	OFF	OFF	OFF	OFF	OFF	OFF

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

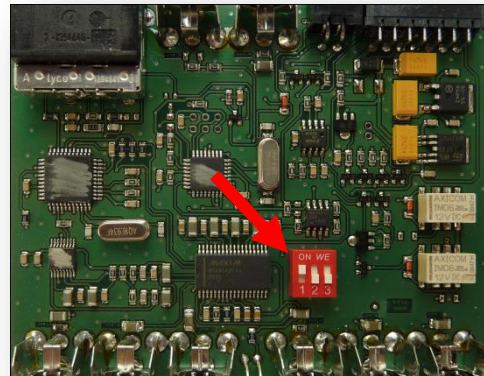
Dip 5 – CAN-bus termination resistor on the vehicle side

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

1.4. Setting the dip switches of the tuner-box DVBC-M400

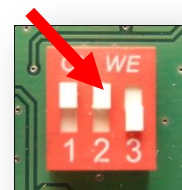
The default dip switch settings of the tuner-box need to be changed **ONLY** if an after-market rear-view camera shall be connected or if the AV of the dvbLOGiC shall be deactivated. The dip switches are located **inside** the tuner-box. For changes it is necessary to open the box. Default settings are:

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 on engaged reverse gear, set dip2 = ON (up).



dip switches of tuner-box

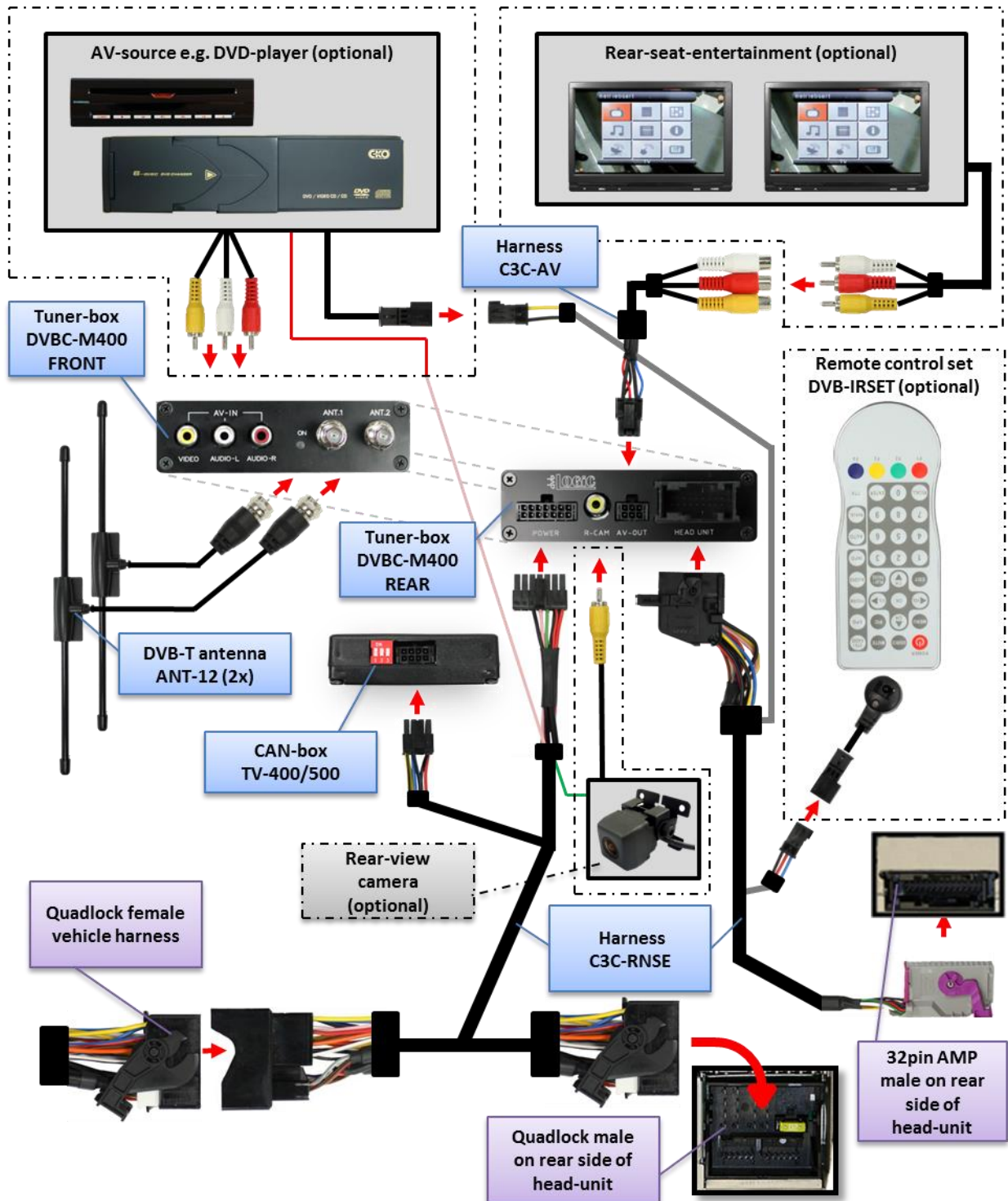
Note: With after-market cameras, automatic switching works only from dvbLOGiC mode. For automatic switching from OEM modes, it is necessary to code the head-unit to rear-view camera per diagnosis computer.

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).



2. Connection schema

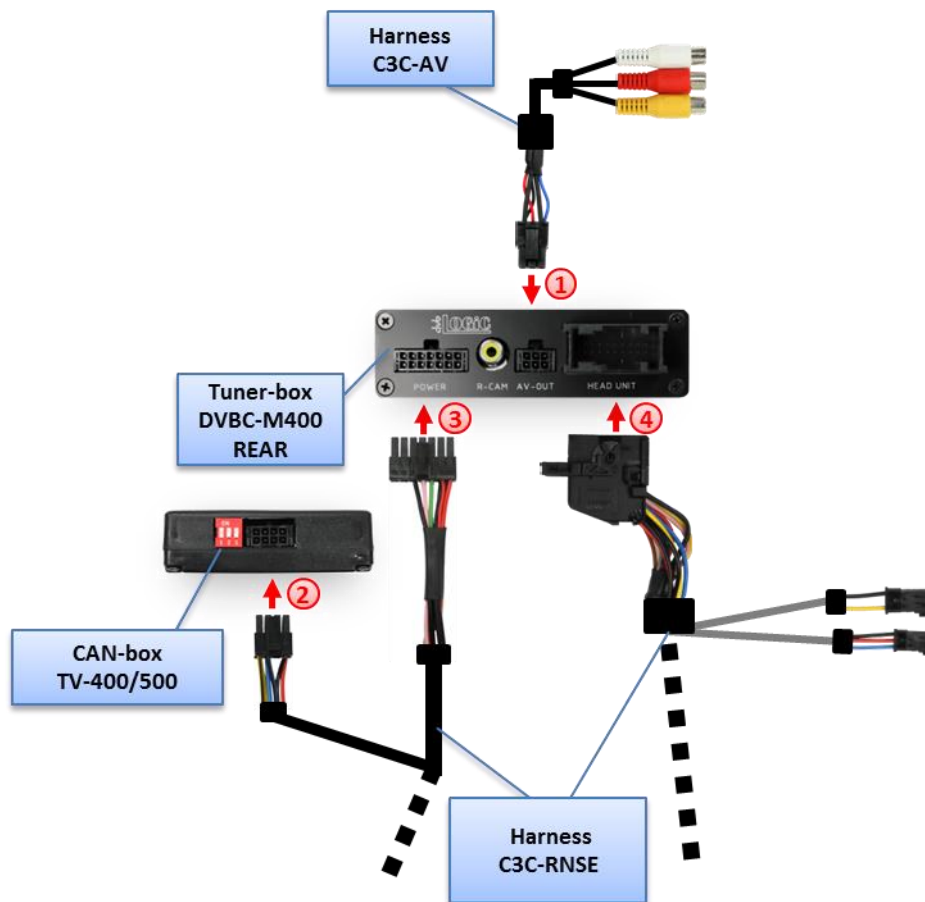


3. Installation

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 head-unit.

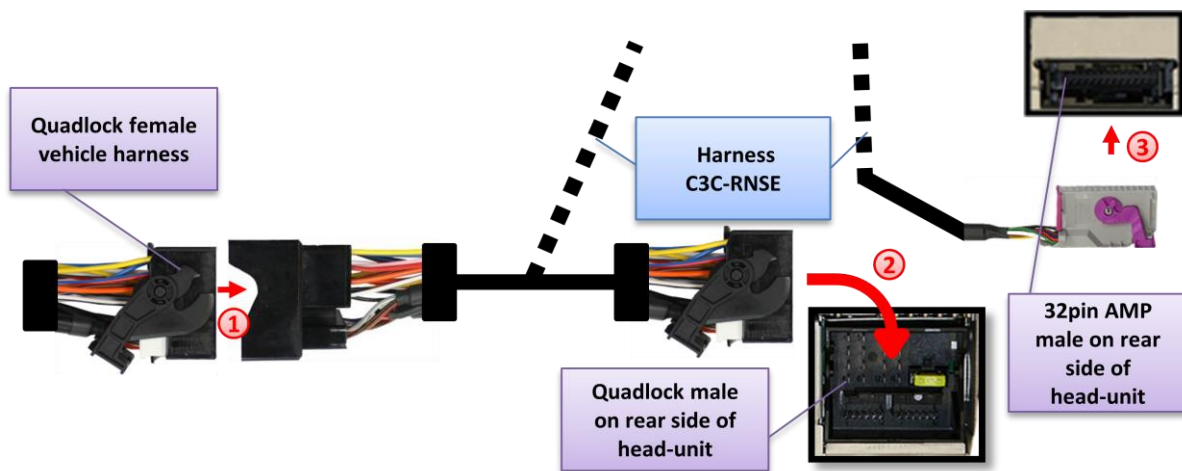
3.1. Interconnecting tuner-box, CAN-box and harnesses



- ① Plug harness C3C-AV into 6pin Molex of tuner-box DVBC-M400.
- ② Plug harness C3C-RNSE into 8pin Molex of CAN-box TV-400/500.
- ③ Plug harness C3C-RNSE into 14pin Molex of tuner-box DVBC-M400.
- ④ Plug female 18pin AMP-connector of C3C-RNSE into male 18pin AMP-socket of tuner-box DVBC-M400.

3.2. Connections to head-unit

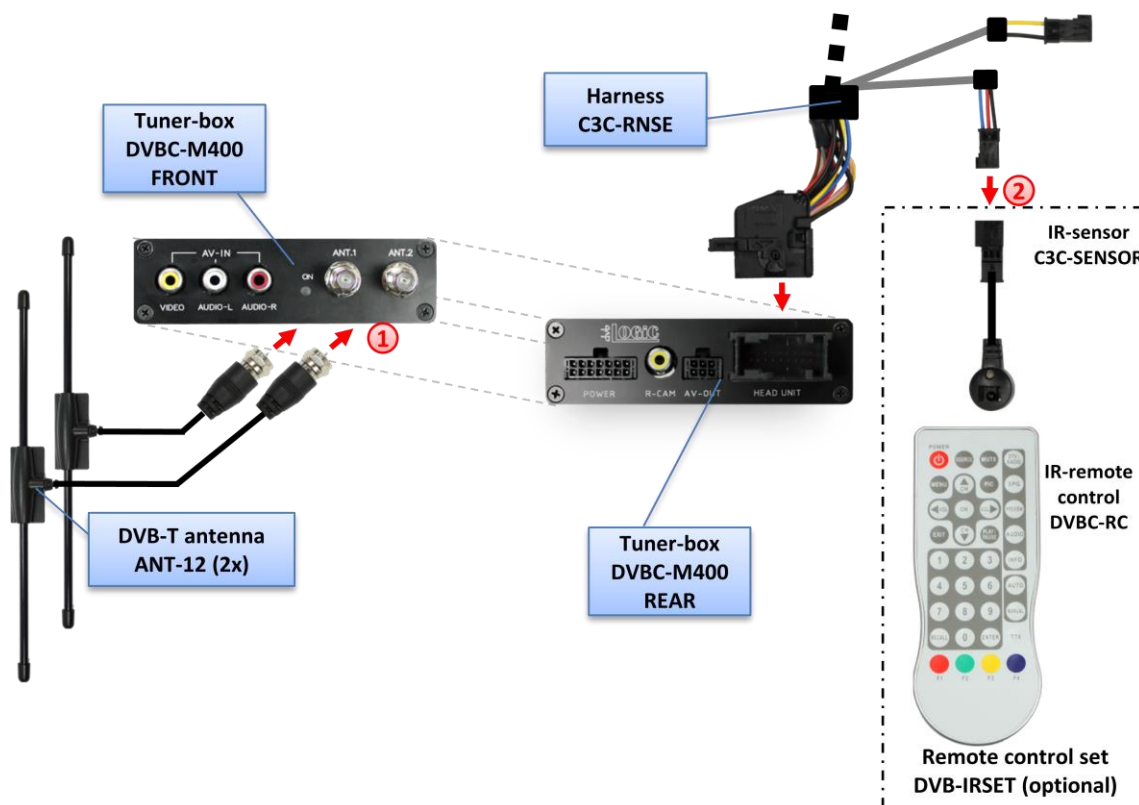
Remove the head-unit from the dash-board.



- ① Transfer female Quadlock connector from the back of the head-unit to male Quadlock connector of harness C3C-RNSE.
- ② Plug female Quadlock connector of C3C-RNSE into male Quadlock socket of head-unit.
- ③ Plug female 32pin AMP-connector of C3C-RNSE into male 32pin AMP-socket of head-unit.

Note: If the 32pin AMP-socket of the head-unit is already occupied, the vehicle probably has a factory rear-view camera or a factory TV-tuner. In case of a factory tuner, it must be uninstalled: disconnect the female 32pin AMP-connector of the factory harness and disconnect all wires from the factory TV-tuner. In case of a factory rear-view camera you have ordered/received the wrong product, call for support.

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 DVBC-M400.

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 DVB-IRSET consists of the external C3C-SENSOR IR-sensor and the DVBC-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-RNSE and locate the sensor in an accessible place.

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

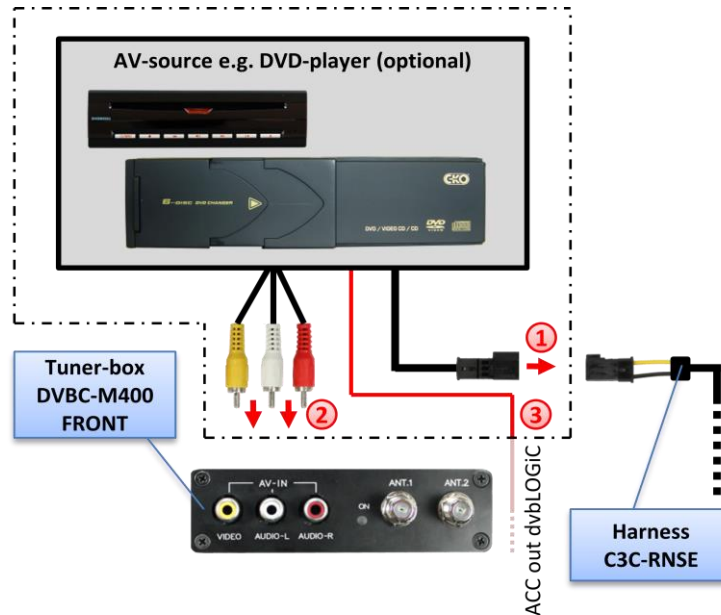
3.4. Connecting peripheral devices

It is possible to connect an after-market AV-source, 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.

3.4.1. 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 (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.

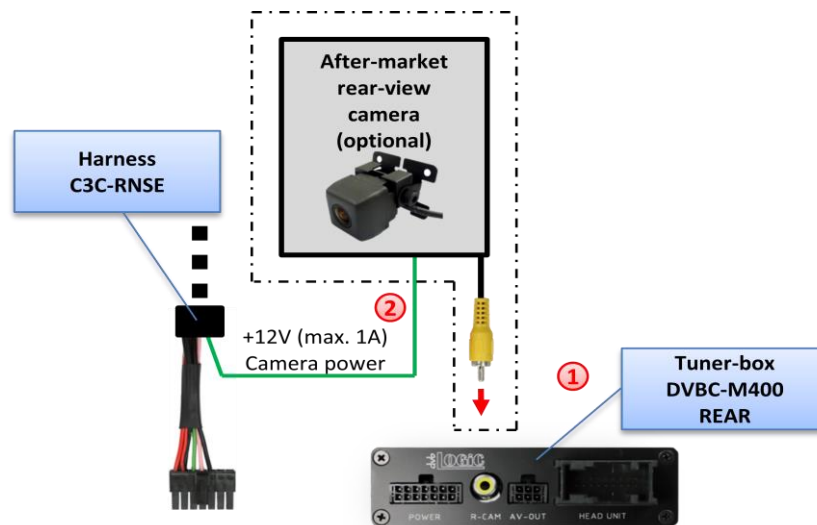


- ① Using the respective STA-xxx IR-control cable, interconnect the yellow female 3pin AMP connector of harness C3C-RNSE and the IR-port of the AV-source.
- ② Using an RCA-cable, interconnect the female RCA-port AV-IN of the tuner-box DVBC-M400 with the AV-output of the AV-source.
- ③ The pink ACC-output wire (+12V max 1A) of harness C3C-RNSE can be connected to the ACC-input wires of the connected device to switch it on. It carries +12V when the head-unit is running.

3.4.2. 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.

3.4.3. After-market rear-view camera

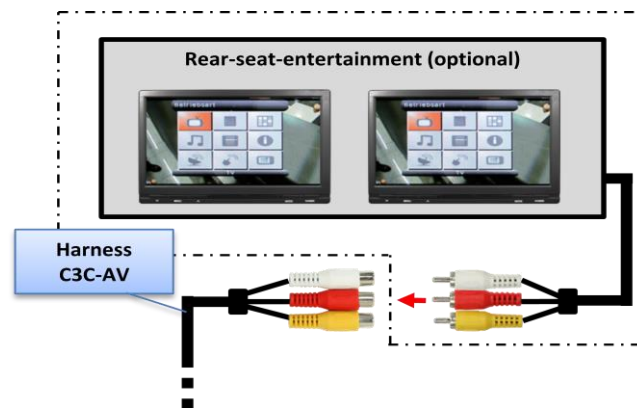


- ① Connect the video RCA of the after-market rear-view camera to female RCA connector R-CAM IN of tuner-box DVBC-M400.
- ② Connect the green wire of C3C-RNSE to the camera power supply (+12V max. 1A) The green wire is high (+12V) when reverse gear is engaged. Connect the loose white-brown wire of the female Quadlock connector of harness C3C-RNSE to the green wire of harness C3C-RNSE, too.

Note: Automatic switching on reverse gear from OEM mode to camera input only works after coding the head-unit per diagnosis computer (Only possible on RNS-E with minimum software 550 and till year 2010).

If coding is done by diagnosis PC, code rear-view camera to value 1 in channel 04, controller 56. After coding the vehicles needs to be locked for at least 66 minutes to reach general sleep mode.

3.4.4. After-market rear-seat-entertainment



- ① Using RCA-cables, connect the rear-seat-entertainment to the female RCA-connector VIDEO OUT of tuner-box DVBC-M400.

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 function is activated by long-pressing the “next track” button when in TV-mode. As confirmation, the head-unit’s button illumination will blink a few times slowly. Repeat to deactivate, confirmation are a few fast blinks. While the video-in-motion function is active, the navigation will not work. After ACC is switched off, the video-in-motion function will be automatically deactivated.

4.2. Selecting the dvbLOGiC as current AV-source

Push the **CD/TV** button of the head-unit 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, long-press the **knob** to switch between internal DVB-T (AV1) and AV-IN (AV2).



Note: If the AV-input is deactivated (see chapter 1.4.2.), it is not possible to switch to the dvbLOGiC’s AV-input AV-IN (AV2).

4.4. Assigning device control for connected AV-source

After selecting the dvbLOGiC as current AV source, switch to the dvbLOGiC's AV-input. Now longpress key **SETUP**. The FIS will display "TV 2" and "RC01". Turn right knob until the device-related IR-code as described in device control table (appendix A) is reached. Push right knob to confirm the assignment.

Note: The IR-control channel is preset to RC-Code 09 for the optional USB-AV-port (DVBU). If the AV-input is deactivated (see chapter 1.4.2.), it is not necessary, nor possible to assign device controls.

4.5. Remote functions

The button assignment table shows which functions of dvbLOGiC and additionally connected devices can be executed by head-unit buttons. Once DVB-T or AV-input mode is activated, the head-unit 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 Audi Navi Plus RNS-E						
Head-unit button	Internal DVB-T	DVBU optional USB-port	DVD-player	DVD-changer	iPod®-control	Analog-tuner
1	CH -	TRACK -	TRACK -	TRACK -	TRACK -	CH -
1 long	EPG	POWER	PBC	PBC	SHUFFLE	FM
2	CH +	TRACK +	TRACK +	TRACK +	TRACK +	CH +
3	OK	OK / PLAY	OK	OK	OK	MODE
4	↑	↑	↑	↑	↑	VOL +
5	↓	↓	↓	↓	↓	VOL -
6	→	→	→	→	→	CH +
6 long	SCAN	VOL+	PLAY	PLAY	PLAY	SCAN
7	←	←	←	←	←	CH -
7 long	POWER	VOL-	AV	DISC	EJECT	MODE
8	EXIT	EXIT	STOP	STOP	PLAY	MUTE
9	MENU	SETUP	SETUP	SETUP	LIGHT	ADJUST

4.6. Picture settings

To enter the picture settings menu **longpress** the **RETURN** button.

The picture settings menu always starts with the brightness settings. The respective current picture value is displayed on the instrument panel.

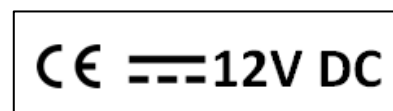
Press the **knob** to change from brightness to colour and contrast (after contrast, the interface starts again with brightness).

Turn the **knob** to change the current picture value. To quit the settings menu press **RETURN**-button.



5. Specifications

Operation voltage	10.5 – 14.8V DC
Stand-by power drain	<1mA
Operation power drain	~500mA
Power consumption	~6W
Temperature range	-30°C to +80°C
Weight	328g
Measurements (box only) B x H x T	140 x 30 x 105 mm



6. Technical Support

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