

Camera interface

RL-SC14-TF

Interface for activation of factory front- and rear-view camera input for Volvo with Sensus 2014 navigation system

**Video input to connect a front and rear-view camera
incl. video-in-motion**

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 RLC-TV514
HW _____ SW _____



Harness
TV-VOL02

1.2. Check compatibility of vehicle and accessories

Requirements

Vehicle Volvo

Navigation Sensus as of 2014

Limitations

Vehicles with lane pilot, distance assistant and city safety system The included green cable is used to activate the video-in-motion function (+12V = activated).

Lane pilot, distance assistant and city safety system do **not** work while TV-free is activated!

1.3. Setting the DIP-switches of the Can-Box RLC-TV514

Fahrzeug/ Navigation	DIP 1	DIP 2	DIP 3	DIP 4	DIP 5	DIP 6
Vehicles WITHOUT extra equipment (lane pilot, distance assistant, city safety system) and rear-view camera	ON	OFF	ON	OFF	ON	ON
Vehicles WITHOUT extra equipment (lane pilot, distance assistant, city safety system) and with rear-view and front-camera	ON	ON	ON	OFF	ON	ON
Vehicles WITH extra equipment (lane pilot, distance assistant, city safety system) and rear-view camera	OFF	OFF	ON	OFF	ON	ON
Vehicles WITH extra equipment (lane pilot, distance assistant, city safety system) and with rear-view and front-camera	OFF	ON	ON	OFF	ON	ON

Note: DIP switch functions of the CAN-box RLC-TV514

DIP 1 – Activation TV-free

DIP 2 – Coding front camera

DIP 3 – Coding rear-view camera

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. Pin-assignments

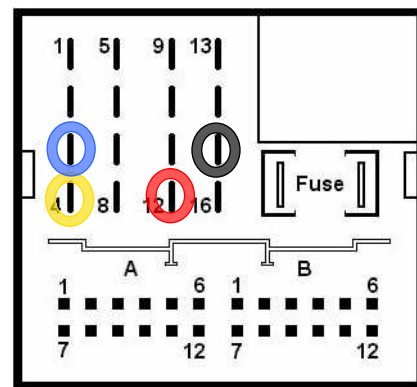
Assignment

+12V permanent Pin 12

Ground Pin 15

CAN HIGH Pin 4

CAN LOW Pin 3

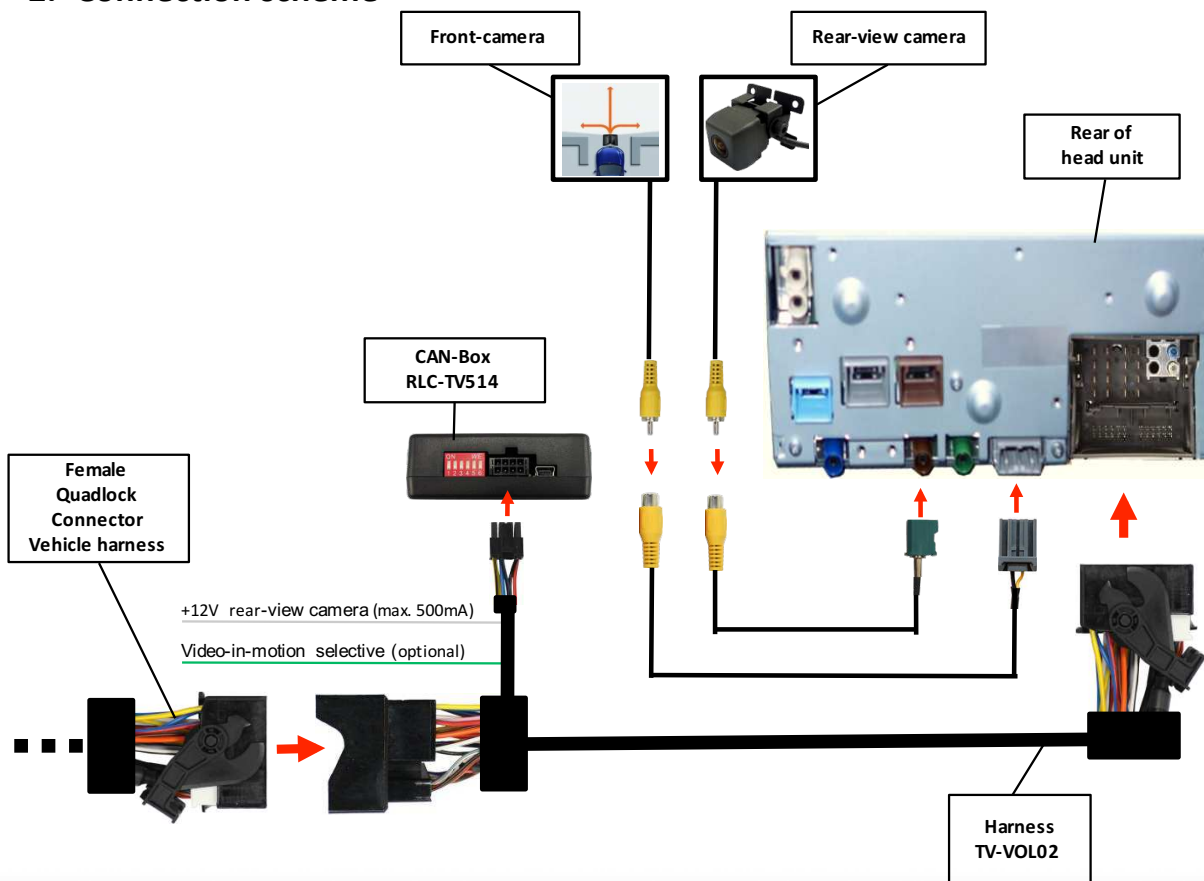


**No liability for vehicle wire colors and pin definition!
Possible changes by the vehicle manufacturer. The given information must be verified by the installer.**

Pin-assignment of the CAN-box RLC-TV514 (Molex 8pin)

Cable colour	Pin-No.	Assignment
● Yellow	Pin 4	CAN-HIGH – connection to the head-unit
● Blue	Pin 3	CAN-LOW – connection to the head-unit
●● Yellow/Black	Pin 8	CAN-HIGH – connection to the vehicle
●● Blue/Black	Pin 7	CAN-LOW – connection to the vehicle
● Red	Pin 1	+12V permanent
● Black	Pin 5	Ground
● Green	Pin 6	Activation of the video-in-motion function (+12V = TV-free activated)
● White	Pin 2	+12V rear-view camera (max. 500mA)

2. Connection scheme

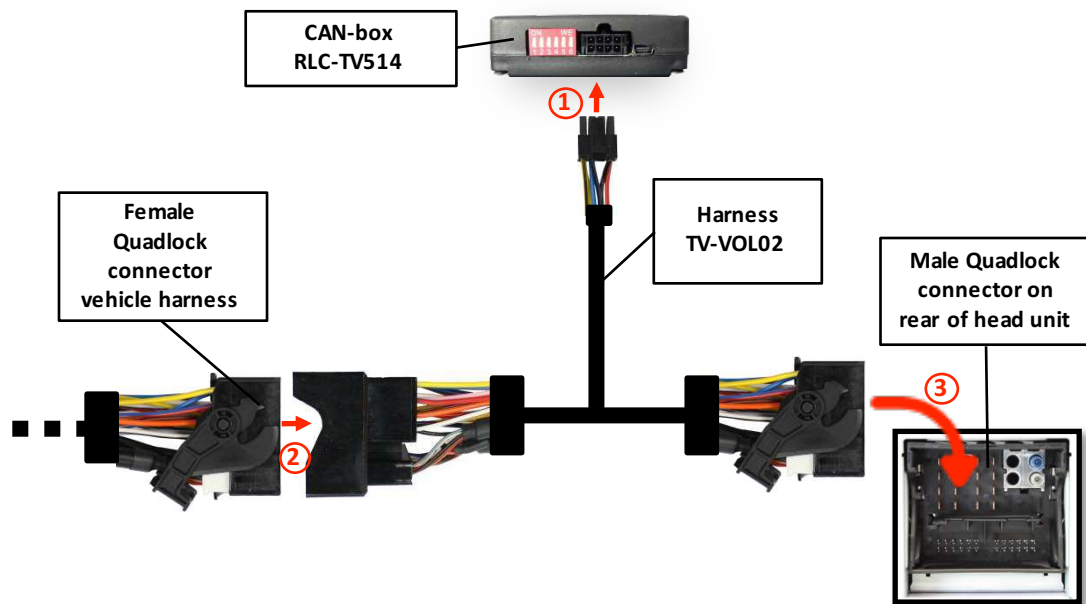


3. Installation

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.

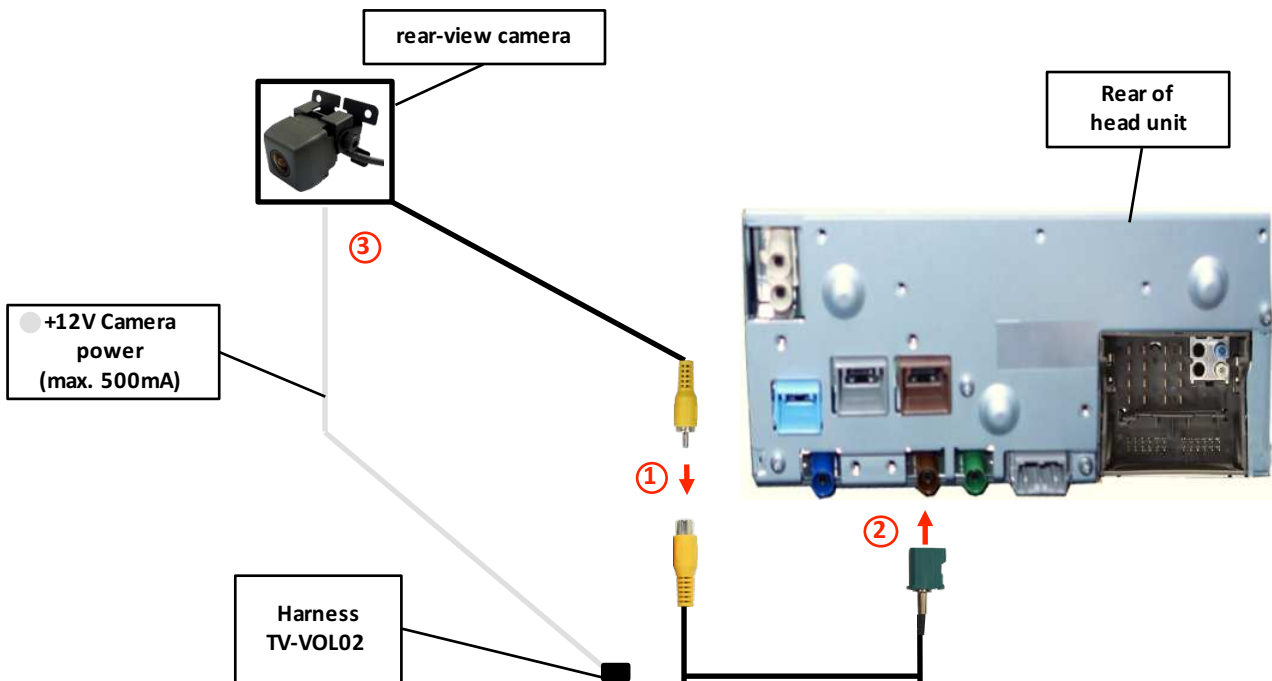
Note: The interface is installed on the backside of the navigation unit.

3.1. Interconnecting CAN-Box, harness and factory navigation unit



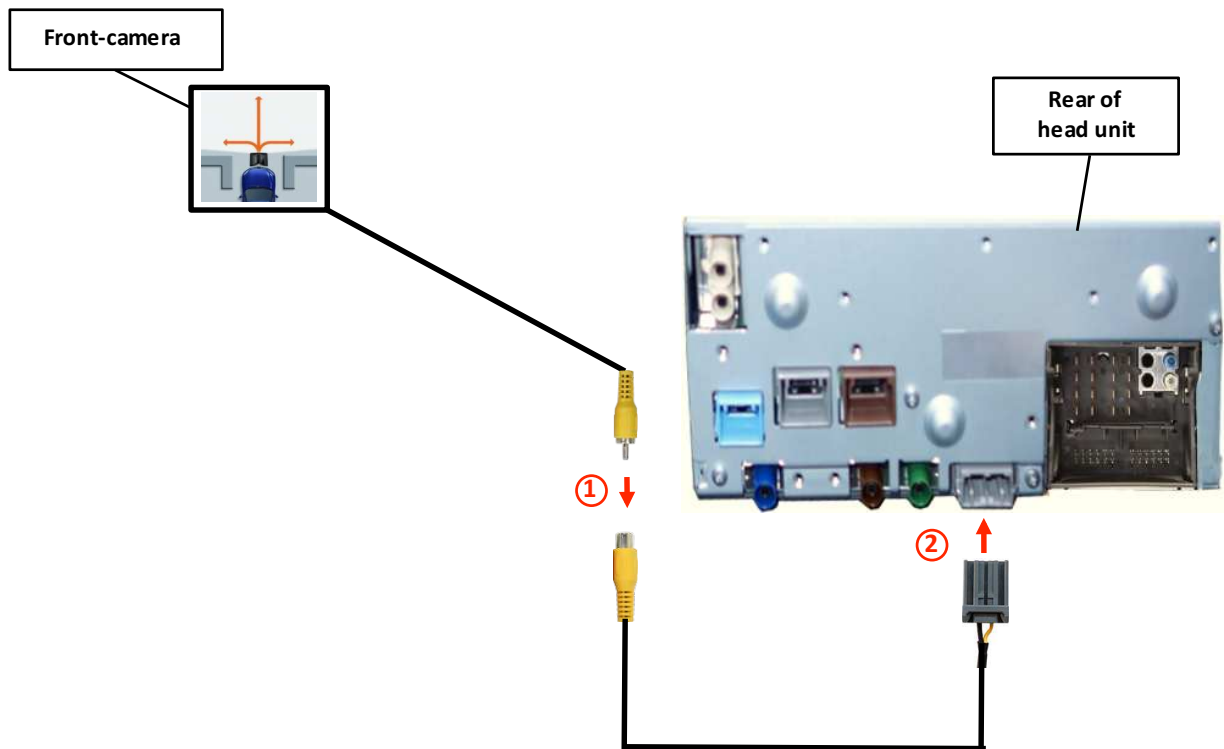
- ① Connect female 8pin Molex connector of harness TV-VOL02 to male 8pin Molex connector of CAN-box RLC-TV514.
- ② Transfer female Quadlock connector of vehicle harness from rear of the head-unit into male Quadlock connector of harness TV-VOL02.
- ③ Plug female Quadlock connector of harness TV-VOL02 into male Quadlock connector on the rear of the head-unit.

3.2. Connections to rear-view camera



- ① Connect the video RCA of the rear-view camera to the female RCA connector of the adapter cable from the RL-SC14-TF set.
- ② Connect the green Fakra plug of the adapter cable from the RL-SC14-TF set to the brown Fakra socket of the head unit.
- ③ Connect the white cable of harness TV-VOL02 to the camera power supply (+12V max 500mA). The white cable gets power when reverse gear is engaged. By leaving the rear camera level or from a speed of 20 km/h the power is switch off again.

3.3. Connections to front camera



- ① Connect the video RCA of the front camera to the female RCA connector of the adapter cable from the RL-SC14-TF set.
- ② Connect the grey 5pin plug of the adapter cable from the RL-SC14-TF set to the grey 5pin socket of the head unit.

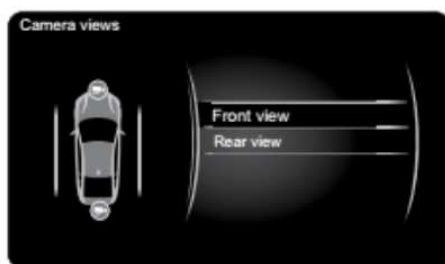
4. Activation of rear-view and front camera

The rear-view camera activate automatically whenever the reverse gear is engaging. The camera will be deactivated once a speed off 20 km/h is reached. Alternatively, activation / deactivation can be done manually via the camera menu or via the softkey (see graphic).

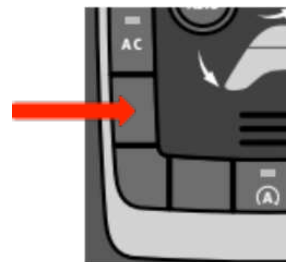
The front camera can be activated / deactivated only manually via the camera menu or via the softkey (see graphic).

Softkey rear-view camera function: → rear-view camera → off → ..

Softkey front- and rear-view camera funktion:→ rear-view camera→ front camera → off →..



Camera menu



Softkey

5. 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 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

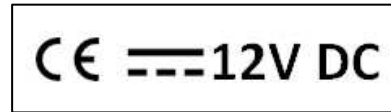
With DIP1 to OFF the included green cable is used to activate the video-in-motion function.

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

- +12V = Video-in-motion is activated
- 0V = Video-in-motion is not activated

6. Specifications

Operation voltage	10.5 – 14.8V
Stand-by power drain	<2mA
Operation power drain	~60mA
Power consumption	~0,08W
Temperature range	-30°C to +80°C
Weight	44g
Measurements (box only) W x H x D	76 x 27 x 54 mm



7. Technical Support

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