

TV-Free Video-in-motion Interface

TF-LR

**compatible with Land Rover
touch-screen navigation systems**

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.

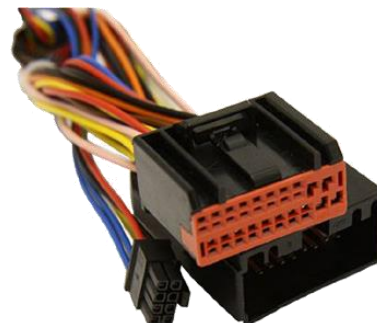
1.1. Delivery contents

Take down the SW-version and HW-version of the interface boxes, and store this manual for support purposes.

CAN-box TV-500
HW _____ SW _____



Harness
TV-LR



1.2. Check compatibility of vehicle and accessories

Requirements

<i>Vehicle</i>	Range Rover (Vogue) L322 (2005-2009), Range Rover Sport L320 (2005-2009), Discovery3 L319 (2004-2009), Range Rover (Vogue) L322 (2010-2012), Range Rover Sport L320 (2010-2011), Discovery3 L319 (2010-2011)
<i>Navigation</i>	Touch-screen navigation version 1 and 2



1.3. Setting the Dip-switches of the Can-Box TV-500

1.3.1. For vehicles with touch-screen navigation version 1



Vehicle/ navigation	Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6
Vehicles without rear-view camera or with after-market rear-view camera	ON*	OFF	OFF	OFF	ON	ON
Vehicles with factory rear-view camera	ON*	ON	OFF	OFF	ON	ON

* 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 – factory rear-view camera existing

Dip 3 – TV icon simulation

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

1.3.2. For vehicles with touch-screen navigation version 2



Vehicle/ navigation	Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6
Vehicles without rear-view camera	ON*	OFF	OFF	OFF	ON	ON
Vehicles with rear-view camera	ON*	ON	OFF	OFF	ON	ON

* 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 – rear-view camera existing

Dip 3 – TV icon simulation

Dip 4 – no function

Dip 5 – termination resistor CAN-Bus

Dip 6 – termination resistor CAN-Bus

Setting dip 2 to ON codes the factory rear-view camera input which is located on the brown Fakra male connector of the factory monitor. When reverse gear is engaged, the navigation will automatically switch to this input. On vehicles with factory rear-view camera set Dip 2 to ON, too.

1.4. Pin-assignments

Pin-assignment vehicle connector Range Rover Vogue

Cable colour	Assignment
● Yellow/White	CAN-HIGH Pin 9
● Yellow/Blue	CAN-LOW Pin 10

Pin assignment vehicle connector Sport & Discovery

Cable colour	Assignment
● Yellow/White	CAN-HIGH
● Yellow	CAN-LOW

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 TV-500 (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	Trigger output (+12V DC 500mA)

2. 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.

Instruction for Range Rover Vogue:

1. Place of installation is at the radio module, a hide-away box which is located behind the glove box. Remove the plastic cover below the glove box.
(If the radio module is not located behind the glove box, it is located behind the factory navigation monitor).
2. Transfer female system-connector of vehicle harness from rear of radio module into harness TV-LR.
3. Plug female system-connector of TV-LR into male socket of radio module.



Instruction for Range Rover Sport and Discovery 3/4:

1. Place of installation is at the radio module behind the factory navigation monitor. In order to remove the radio unit, remove the plastic cover and the 4 screws that hold the unit in place.
2. Transfer female system-connector of vehicle harness from rear of radio module into harness TV-LR.
3. Plug female system-connector of TV-LR into male socket of radio module.



3. 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.

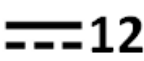
Connect a switch to the green cable and connect the green cable to +12V ACC.

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

Note: The loose white cable is not required and must be isolated.

4. 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

CE  12V DC

5. Technical Support

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