

## **r.LiNK-Interface**

### **RL-CCC-PNP**

**Interface for activation of  
factory rear-view camera input  
compatible with BMW vehicles with  
Professional CCC navigation systems  
and factory PDC behind**

**Full version with Quadlock plug and play harness.**

## Contents

### 1. Prior to installation

- 1.1. Delivery contents
- 1.2. Check compatibility of vehicle and accessories

### 2. Installation

- 2.1. Assignment of the female 12pin connector of harness RLC-CX011
- 2.2. Assignment of the harness PNP-QUAD01
- 2.3. Connection of the RLC-CX011 and PNP-QUAD01 harness
- 2.4. Camera video connection
- 2.5. Coding of rear-view camera
- 2.5.1. Reversing the coding of rear-view camera
- 2.6. Picture settings

### 3. Mode of operation

### 4. Specification

### 5. Technical Support

## 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.*



### 1.2. Check compatibility of vehicle and accessories

#### Requirements

**Vehicle** ONLY! BMW X5 (E70), X6 (E71)

**Navigation** Professional CCC with factory PDC behind

**Installed interface** xxxLOGiC interface

#### Limitations

**Factory-TV-tuner** Optionally available Video switch-box SW-V2X1-MQS is necessary to connect.

**Factory-PDC** The picture of the after-market rear-view camera can only be displayed in full-screen mode. The optical PDC will not be displayed, the acoustical PDC is still available .

## 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.**

### 2.1. Assignment of the female 12-pin connector of harness RLC-CX011

| Cable colour      | Assignment                      |
|-------------------|---------------------------------|
| Pin 1    ● pink   | +12V ACC (output) max.1.5A      |
| Pin 2    ● blue   | CAN-LOW (input)                 |
| Pin 6    ● red    | +12V Permanent (input)          |
| Pin 8    ● yellow | CAN-HIGH (input)                |
| Pin 9    ● green  | Reverse gear (output) max. 1.5A |
| Pin 12   ● black  | Ground                          |

### 2.2. Assignment of the harness PNP-QUAD01

| Cable colour | Assignment              |
|--------------|-------------------------|
| ● blue       | CAN-LOW (output)        |
| ● yellow     | CAN-HIGH (output)       |
| ● red        | +12V Permanent (output) |
| ● black      | Ground                  |
| ● green      | No function             |

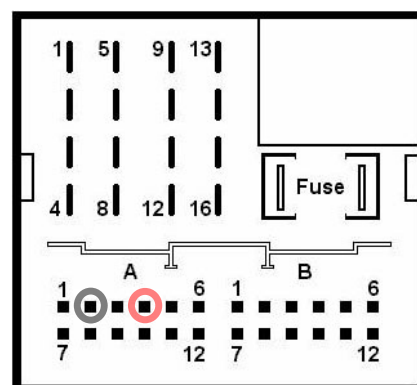
### 2.3. Connection of the RLC-CX011 and PNP-QUAD01 harness

Connect together the following loose wires of the RLC-CX011 and PNP-QUAD01 harnesses:  
yellow with yellow, blue with blue, black with black and red with red.  
Connect the loose green wire on the RLC-CX011 harness to the power supply wire of the rear view camera.

## 2.4. Camera video connection

### Pin-assignment quadlock connector / CAB-TVAS40

| Assignment             | Pin number        |
|------------------------|-------------------|
| ● Red (Video signal)   | Pin 4 (Chamber A) |
| ● Black (Video ground) | Pin 2 (Chamber A) |



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

## 2.5. Coding of rear-view camera

Press button “menu” while in main menu of the CCC for 5 seconds to code the navigation to rear-view camera.

### 2.5.1. Reversing the coding of rear-view camera

The above described coding of rear-view camera can be reversed by pressing the button “menu” for 5 seconds while in main menu of the CCC.

## 2.6. Picture settings

For an acceptable display of the rear-view camera video the PDC function (optical) must be set to OFF and camera function set to ON in the submenu of the CCC.  
(Menu: Settings > Vehicle tires > Shunting Help > Image combinations)

## 3. Mode of operation

After engaging the reverse gear the rear-view camera will be displayed on the monitor automatically. It remains on display until the vehicle reaches a speed of 20km / h. The rear view camera can also be switched on or off manually by the PDC button. Even if the video of the rear-view camera is visible, the acoustic warning signals of the factory parking sensors are active.

## 4. Specifications

|                                   |                  |
|-----------------------------------|------------------|
| Operation voltage                 | 10.5 – 14.8V     |
| Stand-by power drain              | <1mA             |
| Operation power drain             | ~50mA            |
| Power consumption                 | 0.07-40W         |
| Temperature range                 | -30°C till +80°C |
| Weight                            | 38g              |
| Measurements (box only) W x H x D | 71 x 22 x 50 mm  |

CE  12V DC

## 5. Technical Support

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

email [support@caraudio-systems.de](mailto:support@caraudio-systems.de)

**Legal disclaimer:** Mentioned company and trademarks, as well as product names/codes are registered trademarks ® of their corresponding legal owners.