



v.LiNK Video-inserter

CI-VL-RGB01-R

**Universal interface for vehicles with
analogue RGB navigation computer and
navigation monitor as separate units,
e.g. for Volvo vehicles with
RTI navigation systems until about 2009**

Video-inserter with video- and rear-view camera input

Product features

- **Universal video-inserter**
- **1 video-input for after-market devices (e.g. DVD-player, DVB-T tuner, ...)**
- **Rear-view camera input**
- **Automatic switching to rear-view camera input when reverse gear is engaged**
- **Video-in-motion (ONLY for inserted video)**

Contents

1. Prior to installation

- 1.1. Delivery contents
- 1.2. Checking the compatibility of vehicle and accessories

2. Installation

- 2.1. Place of installation
- 2.2. Connection schema

3. Identification of RGB- and synchronisation wires

4. Detection by cutting wires

5. Vehicle-specific experience

6. 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.

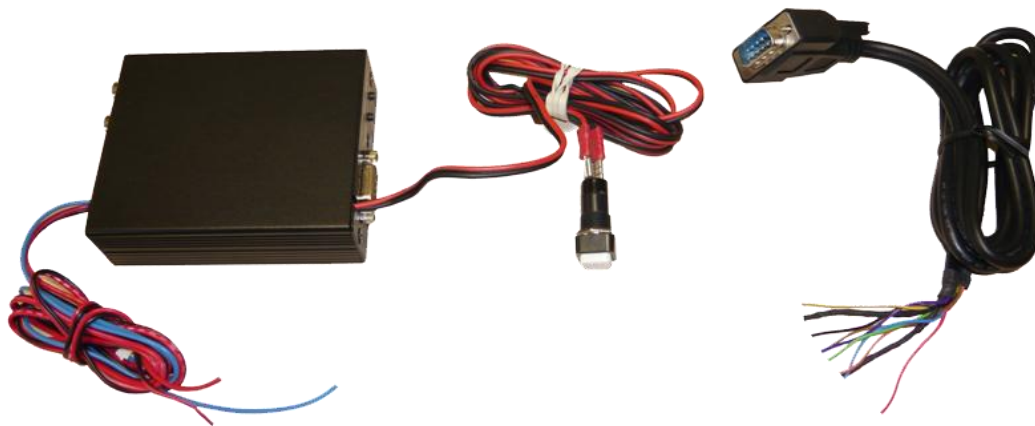
Changes/updates of the vehicle's software can cause malfunctions of the interface. We offer free software-updates for our interfaces for one year after purchase. To receive a free update, the interface must be sent in at own cost. Labor cost for and other expenses involved with the software-updates will 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 serial number of the interface and store this manual for support purposes: _____

1.2. Checking the compatibility of vehicle and accessories

Requirements

Vehicle Vehicles with navigation PC and navigation monitor as separate units and analogue RGB picture signal

Limitations

Video only The interface inserts ONLY video signals into the infotainment. For sound use the possibly existing factory-audio-AUX-input or a FM-modulator.

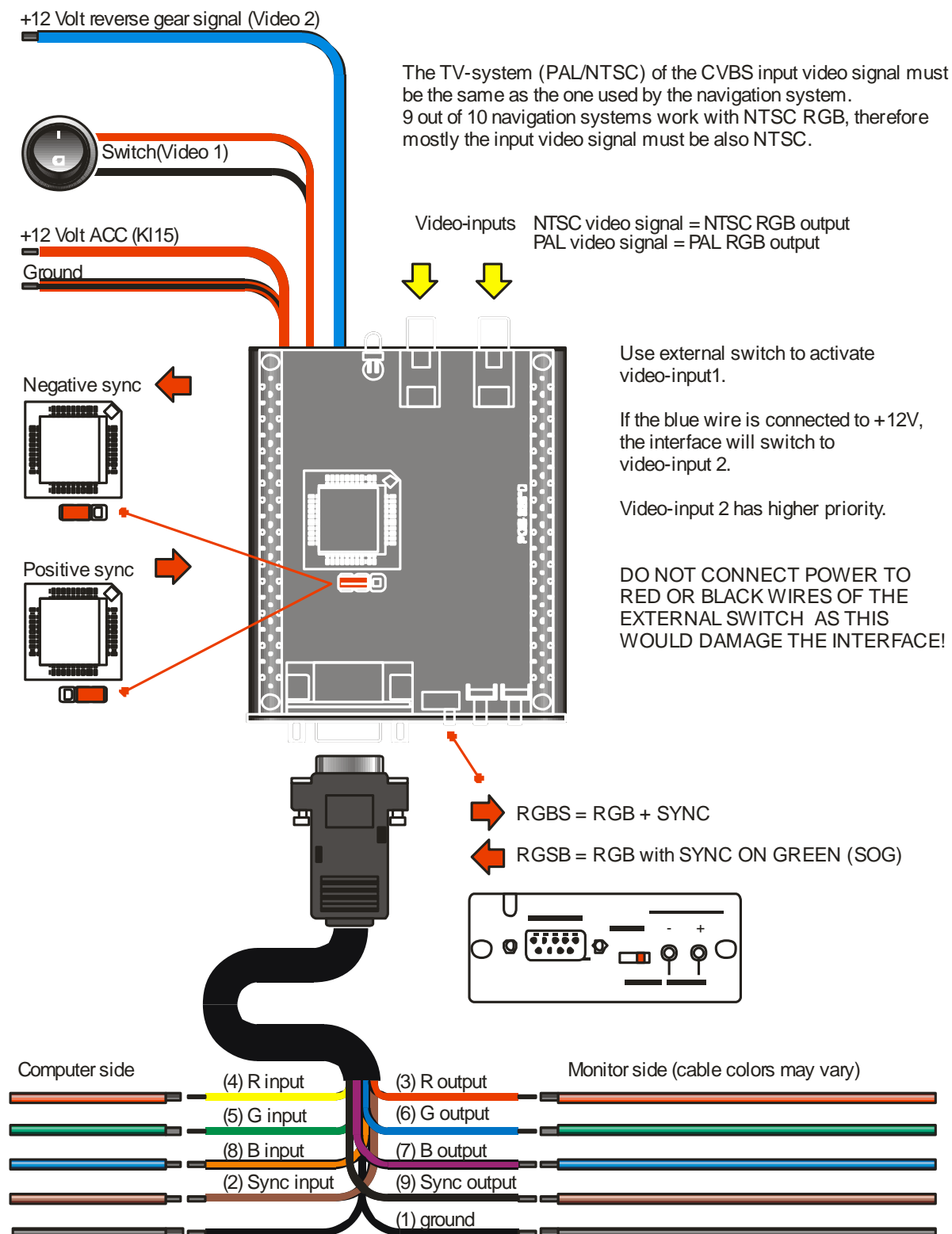
2. Installation

Switch off ignition and disconnect the vehicle's battery! The interface needs a permanent 12V source. If according to factory rules disconnecting the battery is 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. Place of installation

The interface is installed into the RGB wires between factory monitor and head-unit.

2.2. Connection schema

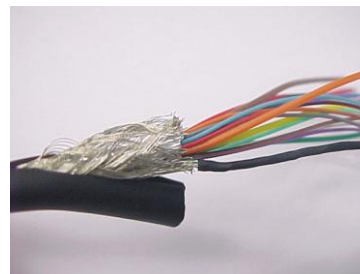


3. Identification of RGB- and synchronisation wires

On navigation systems which are compatible with VL-RGB01-R, navigation computer and – monitor are separate units which are connected by a cable which contains an RGB-signal. To install the interface, the cable must be found and the necessary wires must be identified.

Visibility search – no measuring, no cutting

RGB (RED GREEN BLUE) are separate signals in separate wires. Most often there is a shielding around the RGB wires to protect them from external distortion. The picture shows an example of a shielding.



Synchronisation

Besides the RGB-signal wires, also the synchronisation wire, which is required to achieve a stable picture, must be found. Mainly it is located close or next to the RGB wires. With Jumper J1 which is located inside the interface box, a choice of negative (default) or positive synchronisation can be made.

Sync-on-green (synchronisation in green)?

In some cases, there is no separate synchronisation wire. Then the synchronisation signal is sent together with the green colour signal wire. This is called synchronisation on green (SOG – sync-on-green).

If the picture is distorted after cutting the green signal wire, it is determined, that the synchronisation is on green and it is not needed to search for a separate synchronisation wire.

On the face of the VL-RGB01-R is a selector switch which must for sync-on-green be set to RGSB. For separate synchronisation wire system, select RGBS (default).

Detection by measuring

Before cutting wires to identify RGB and synchronisation wires, it is possible to eliminate some wires as signal wires by measuring.

Wires with +12V are never an RGB- or synchronisation wire. The same is valid for ground carrying wire (an RGB-wire has in operating mode never 0 Volt AC or 0 Ohm).

4. Detection by cutting wires

Below is shown, how an RGB picture changes, when one or more RGB- or synchronisation wire(s) are cut/disconnected.

All wires connected



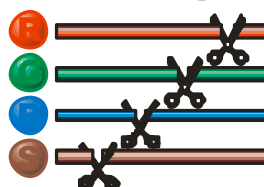
R+G+B+Sync



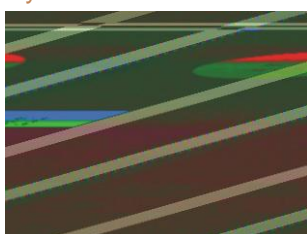
All wires cut



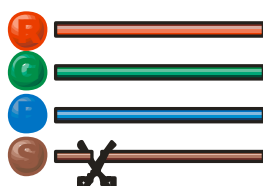
R+G+B+Sync



Synchronisation wire is cut



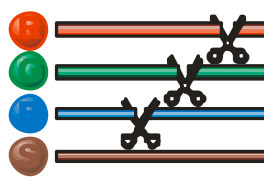
R+G+B+Sync



Red & Green & Blue wires are cut



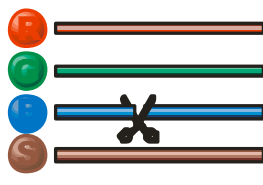
R+G+B+Sync



Only Blue wire is cut



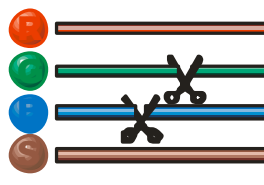
R+G+B+Sync



Blue & Green wires are cut



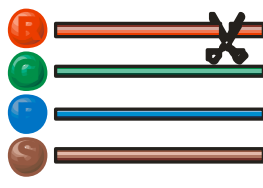
R+G+B+Sync



Only Red wire is cut



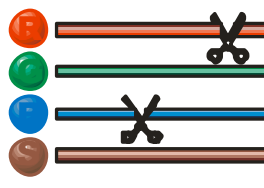
R+G+B+Sync



Red & Blue wires are cut



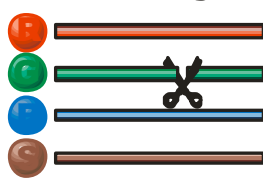
R+G+B+Sync



Only Green wire is cut



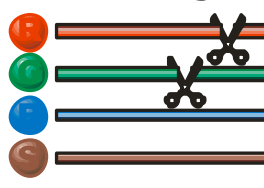
R+G+B+Sync



Green & Red wires are cut



R+G+B+Sync



5. Vehicle-specific experience

From customer feedback, we have created the below table with cable colors and pinnings in specific vehicles. We take no responsibility on the accuracy of this information. We will add future feedback about vehicles which are not listed if provided.

Vehicles	Connector type	TV-sys	Sync-type	Video-signal			
				Red	Green	Blue	Sync
Lexus GS300 2003	10pin (monitor)			Red	Green	Black	White
Nissan Navara, Qashqai, Pathfinder	White 24pin	NTSC	RGSB (SOG)	Pin 24	Pin 23	Pin 22	SOG
Renault	24pin		RGSB (SOG)	Pin 24	Pin 23	Pin 22	SOG
Renault Scenic 2010	White 24pin		RGSB (SOG)	Pin7 yellow	Pin 20 red	Pin 8 brown	SOG
Renault Laguna/Espace 2008-2011 with Carminat DVD	White 32pin		RGSB (SOG)	Pin 15	Pin 30	Pin 14	SOG
Toyota Landcruiser 2005	20pin	NTSC	RGSB sync negative	Yellow	White	Red	Green
Toyota some vehicles	White 10pin	NTSC	RGBS	Pin2 Red	Pin 7 Green	Pin 3 Blue	Pin 8 Brown
Volvo V70 2008-, S80 2008-, XC60 2008-2009, some XC90	6pin		RGBS	Violet	Yellow	Green or grey	Brown
Volvo S80 2009	6pin		RGBS	Blue	Green	White	Yellow
Volvo C70 2008-2009, some XC90	6pin	NTSC	RGBS positive	Red	Green	Blue	Yellow
Volvo some XC90 2009 (3 variants)	Grey 10pin		RGBS	Black	Green	White	Yellow
Volvo V50 2009, C70 2011	Grey 10pin		RGBS	Pin 1	Pin 2	Pin 6	Pin 8

