r.LiNK Video-inserter
CI-RL5-MIB2-E

Video-inserter with 1 video input and 1 rear-view camera input

Compatible with
VW vehicles
with Composition Color Infotainment
Seat vehicles
with Media System Touch Color Infotainment
Skoda vehicles
with Radio Swing Infotainment

Product features

- **Video-inserter for factory-infotainment systems**
- **1 CVBS video-input for after-market device (e.g. USB-Player, DVB-T2 tuner)**
- **1 CVBS rear-view camera video-input**
- **Automatic switching to rear-view camera input on engagement of the reverse gear**
- **Video-in-motion (ONLY for connected video-sources)**
- **Video-inputs NTSC and PAL compatible**

Contents

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. Labour 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:

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1.2. Checking the compatibility of vehicle and accessories

Compatibility

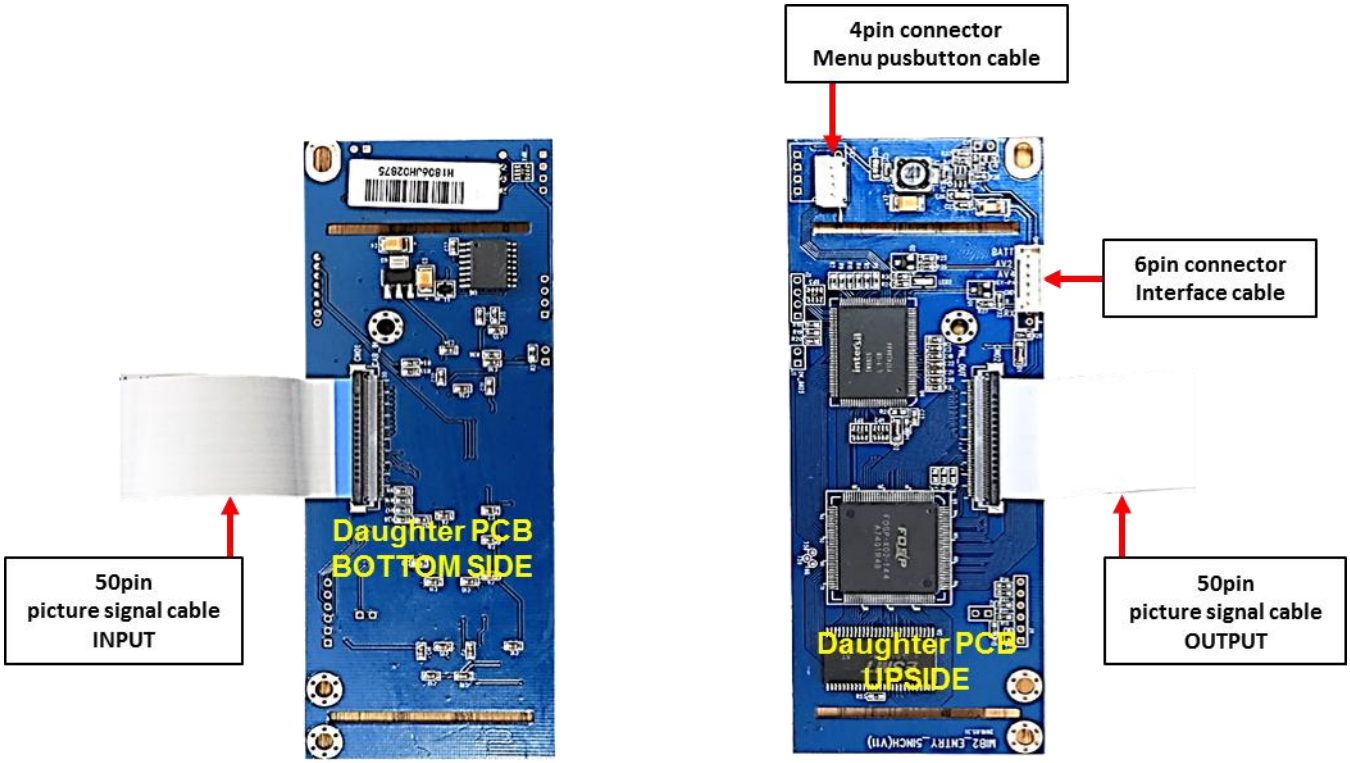
brand	Compatible vehicles	Infotainment systems
Seat	Ibiza (6P) model years since 2016 Leon3 (5F) model years since 2013 Toledo4 (KG) model years since 2016	MIB2 Entry - Media System Touch Color – with 5inch monitor
Skoda	Fabia3 (NJ) model years since 2014 Octavia3 (5E) model years 2012-2017 Rapid (NH1) model years since 2016- Superb3 (3V) model years 2015-2017 Yeti (5L) model years 2015-2016	MIB2 Entry - Radio Swing - 5 inch color monitor and SD-slot without CD-drive
VW	Beetle (5C) model years since 2015- Caddy (2K) model years since 2016- Golf7 Sportsvan model years 2014-2017 Multivan (T6) model years since 2015 Polo5 (6C) model years 2014-2016 Scirocco3 (13) model years since 2016 Sharan (7N) model years since 2016 Touran (5T) model years 2016-2017	MIB2 Entry - Composition Color (Only LG HU) - 5 inch monitor and CD-drive above monitor or without CD-drive.

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.
Factory rear-view camera	Automatically switching-back from inserted video to factory rear-view camera is only possible while the reverse gear is engaged. To delay the switch-back, an additional electronic part is required.

1.3. Anschlüsse - Video-interface (daughter PCB)

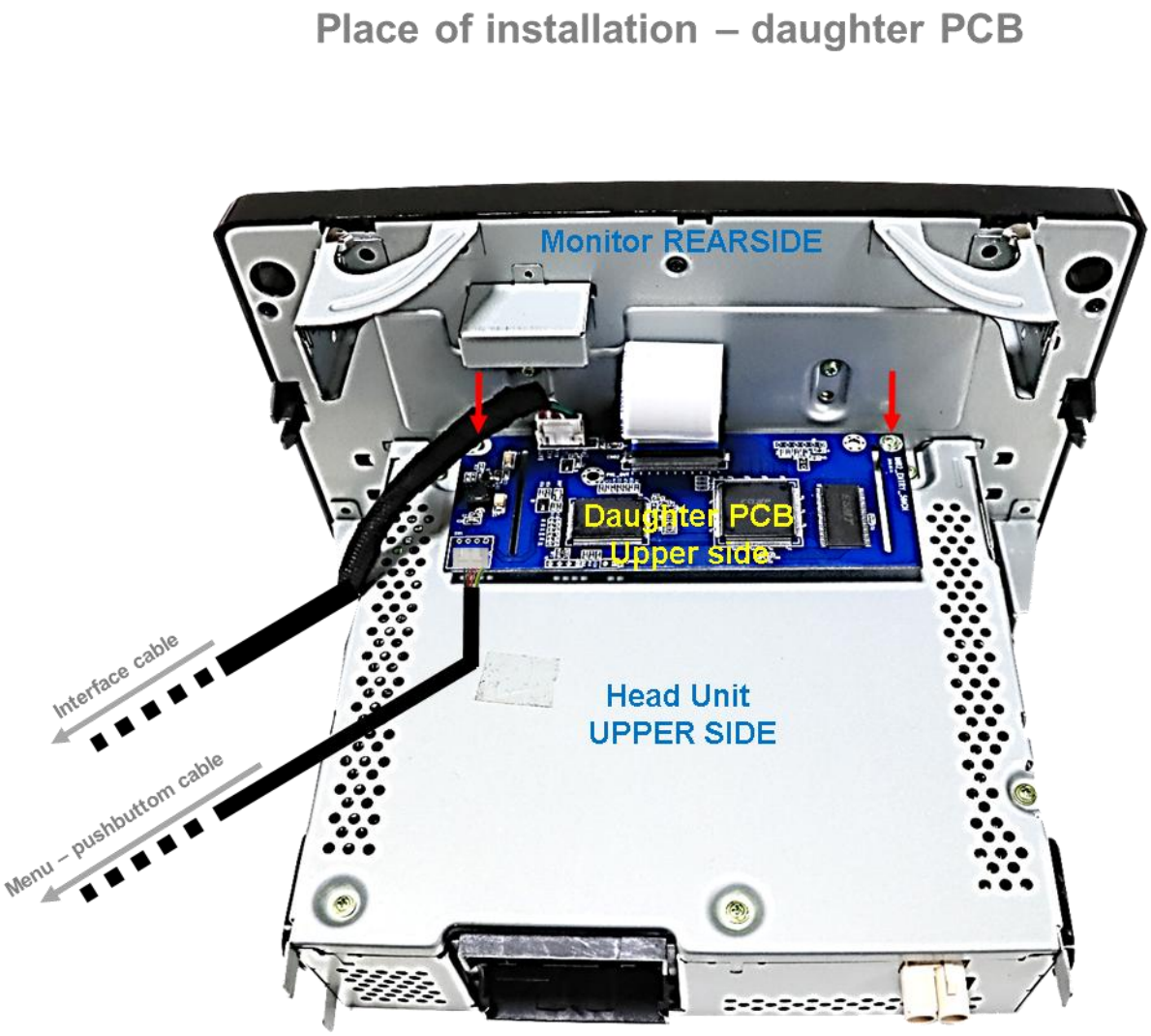
The video-interface (daughter PCB) converts the video signals of connected after-market sources in a factory monitor compatible picture signal which is inserted in the factory monitor, by using separate trigger options.



2. Installation

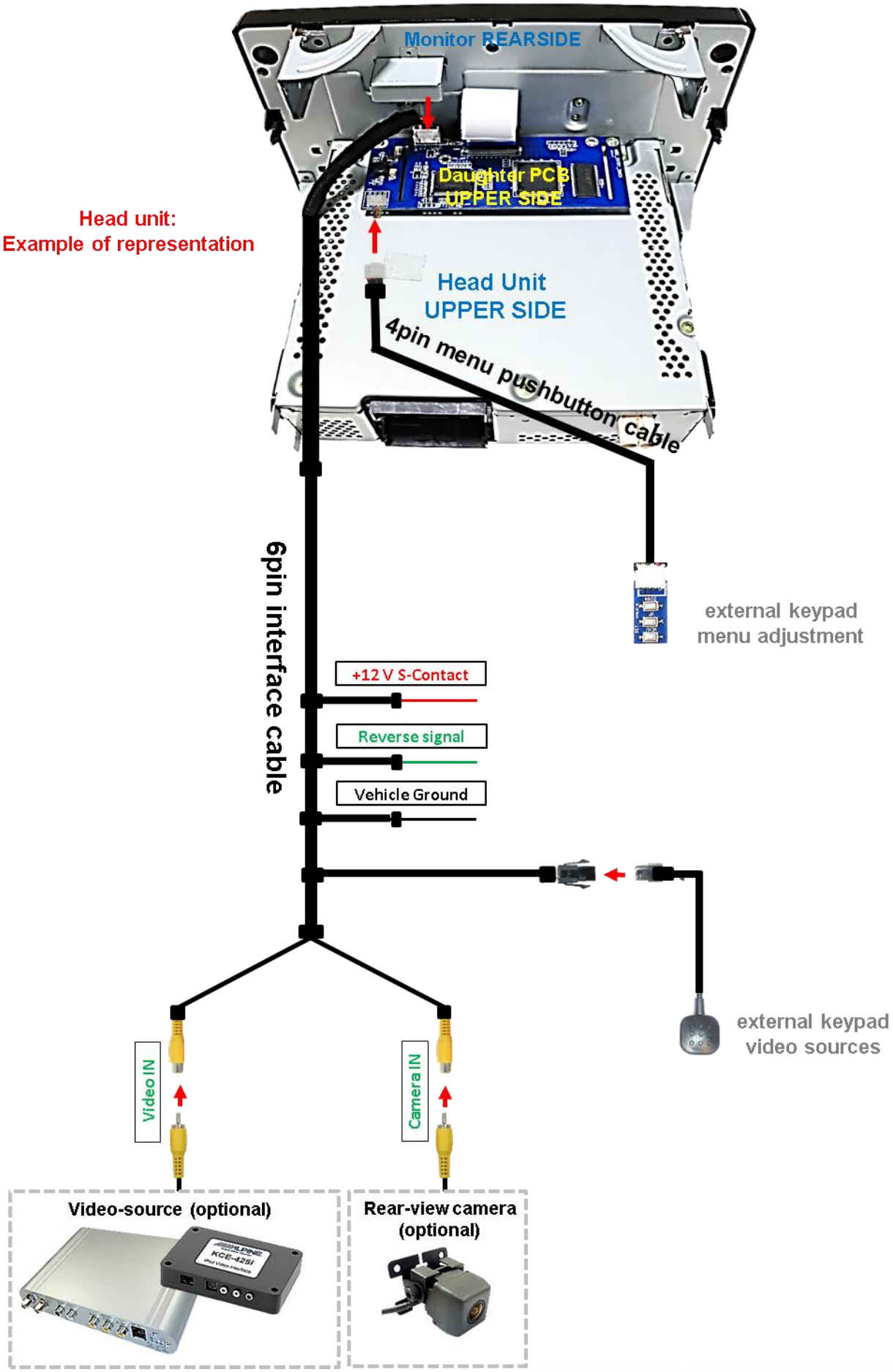
Switch off ignition and disconnect the vehicle's battery! The interface needs a permanent 12V source. If according to factory rules disconnecting the battery is to be avoided, it is usually sufficient to put the vehicle to "Sleep-Mode". In case it does not succeed, disconnect the battery with a resistor lead.
If power source is not taken directly from the battery, the connection has to be checked for being start-up proven and permanent.

2.1. Place of installation



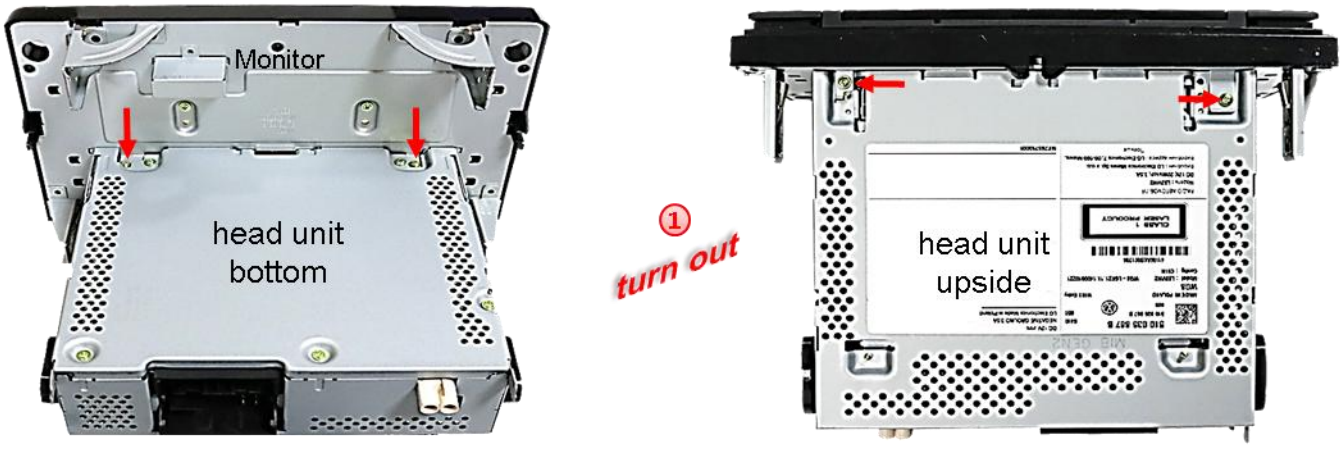
The daughter PCB shell be connected inside the factory monitor and externely fixed on the head unit's upper side, by using enclosed screws and spacers.

2.2. Connection Scheme

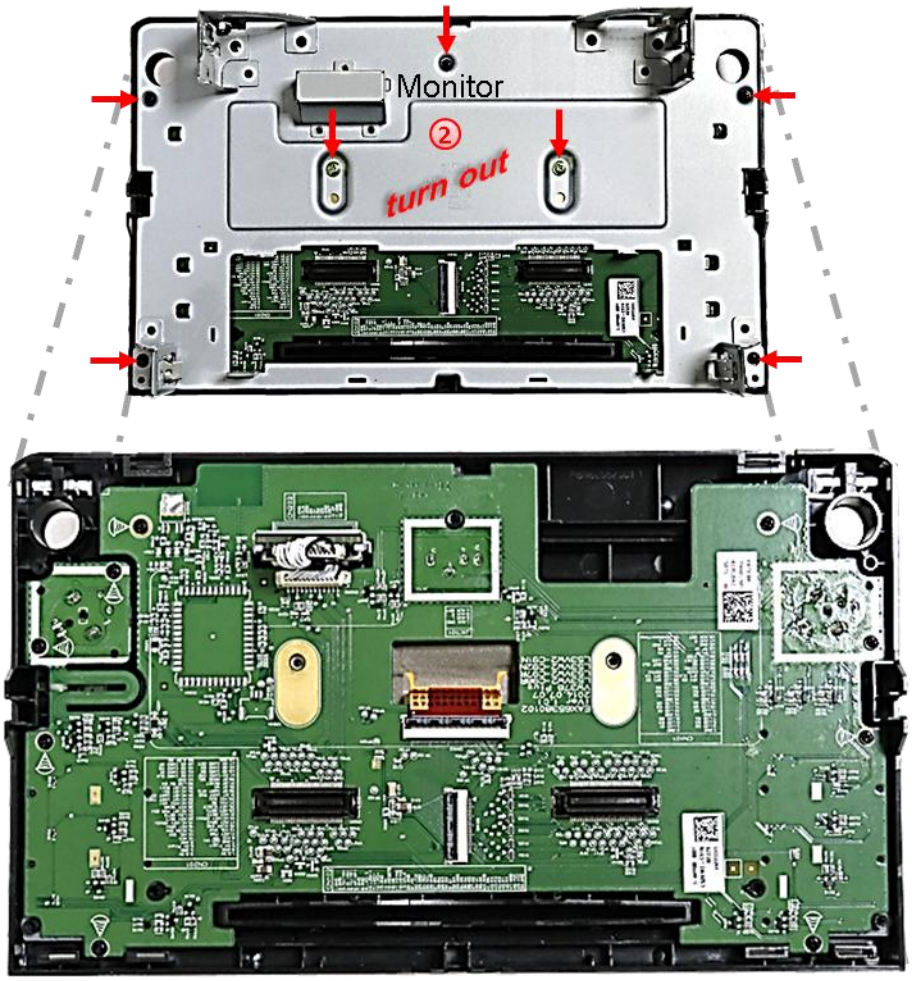


2.3. Installation – VW and Seat (Skoda vehicles: refer to the according chapter!)

2.3.1. Opening the factory monitor

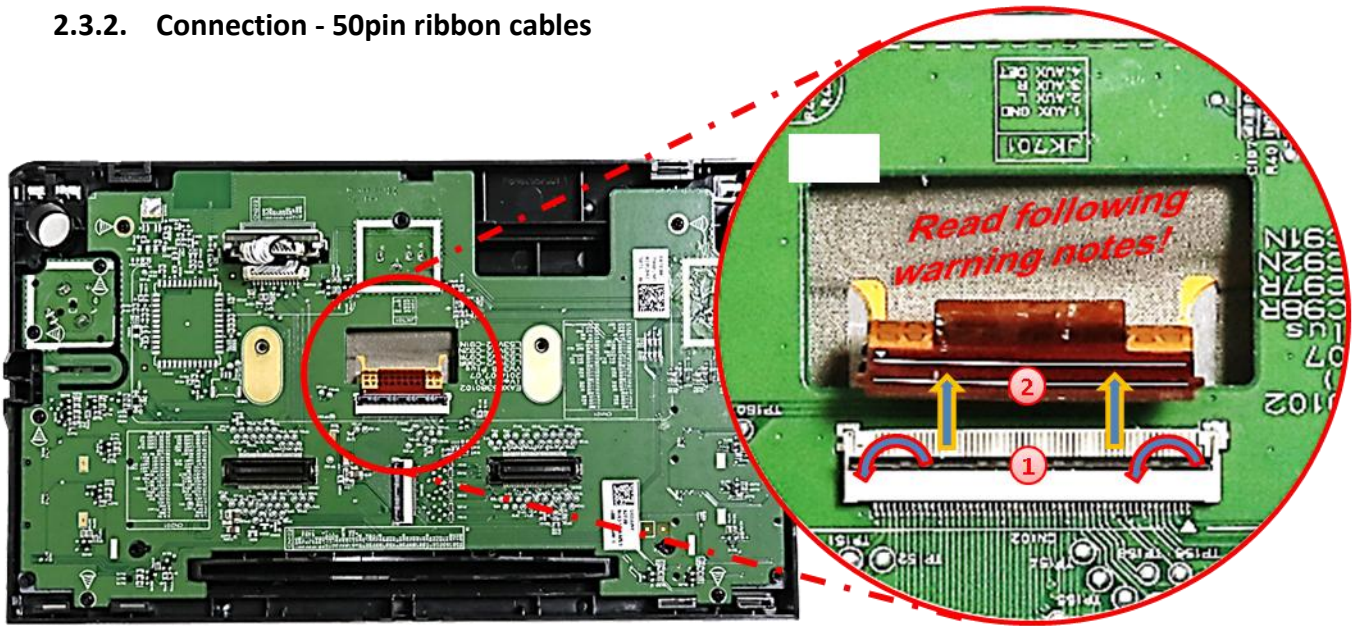


1 Turn out both screws at the **outer** side of the top part of the head unit (red arrows) and both screws at the bottom part of the head unit (red arrows). Remove the head unit from the monitor and lay it aside.



2 Turn out the 7 screws (red arrows) at the rear side of the monitor and remove the metal sheet to set free the mainboard's ribbon cable base with the factory picture signal cable.

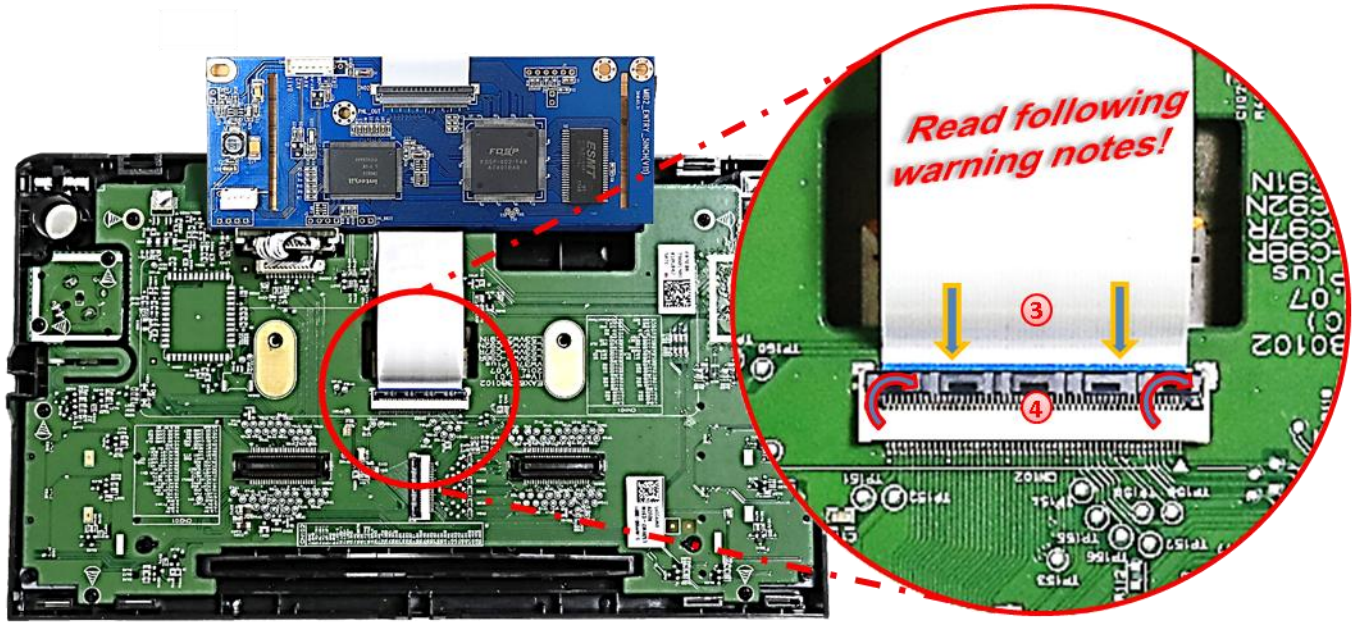
2.3.2. Connection - 50pin ribbon cables



1. Fold upwards the black hinge of the factory ribbon cable base to unlock the original brown colored 50pin ribbon cable of the factory PCB.

2. Carefully pull out the original 50pin ribbon cable in arrow direction.

Note: The original short ribbon cable is made by stiff material. To avoid any breakage it mustn't be folded back to much, either while the installation nor with the final assembly.

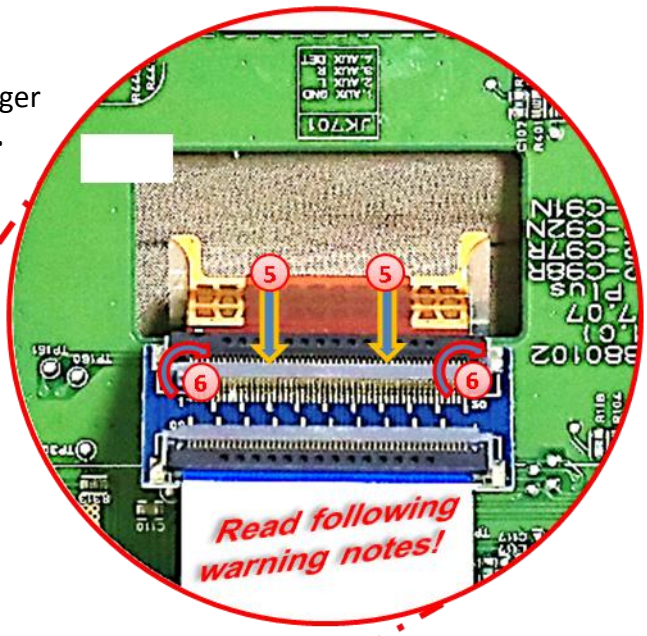


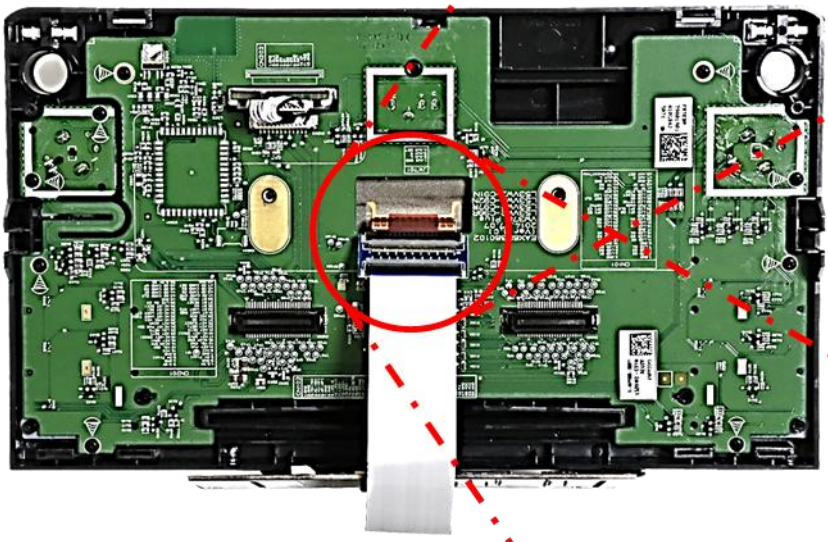
3. Connect the daughter PCB's 50pin ribbon cable **„CAR-IN"** to the previously become free 50pin ribbon cable base of the factory PCB. Make sure that the connector pins are faced to the platinum.

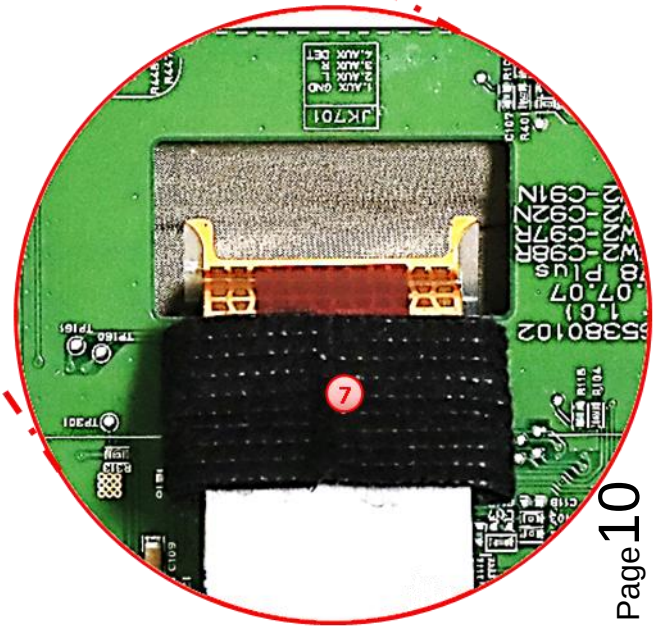
4. After a check of its perfect position, close the ribbon cable base's lock by folding downwards the black hinge, to fix the connection again.

5 Carefully lead the monitor's brown colored 50pin ribbon cable into the preassembled ribbon cable merger of the daughter PCB's 50pin ribbon cable **"PNL-OUT".** Make sure that the connector pins are faced to the merger's platinum.

6 After a check of its perfect position, close the ribbon cable merger's lock, by folding back the black hinge, to fix the connection again.







7 To avoid any kind of vibration-caused short circuits after the connection, it's necessary to isolate both sides of the merger with some kind of smooth issue tape as shown in the picture beside.

2.3.2.1. Warning notes, concerning the installation of ribbon cables

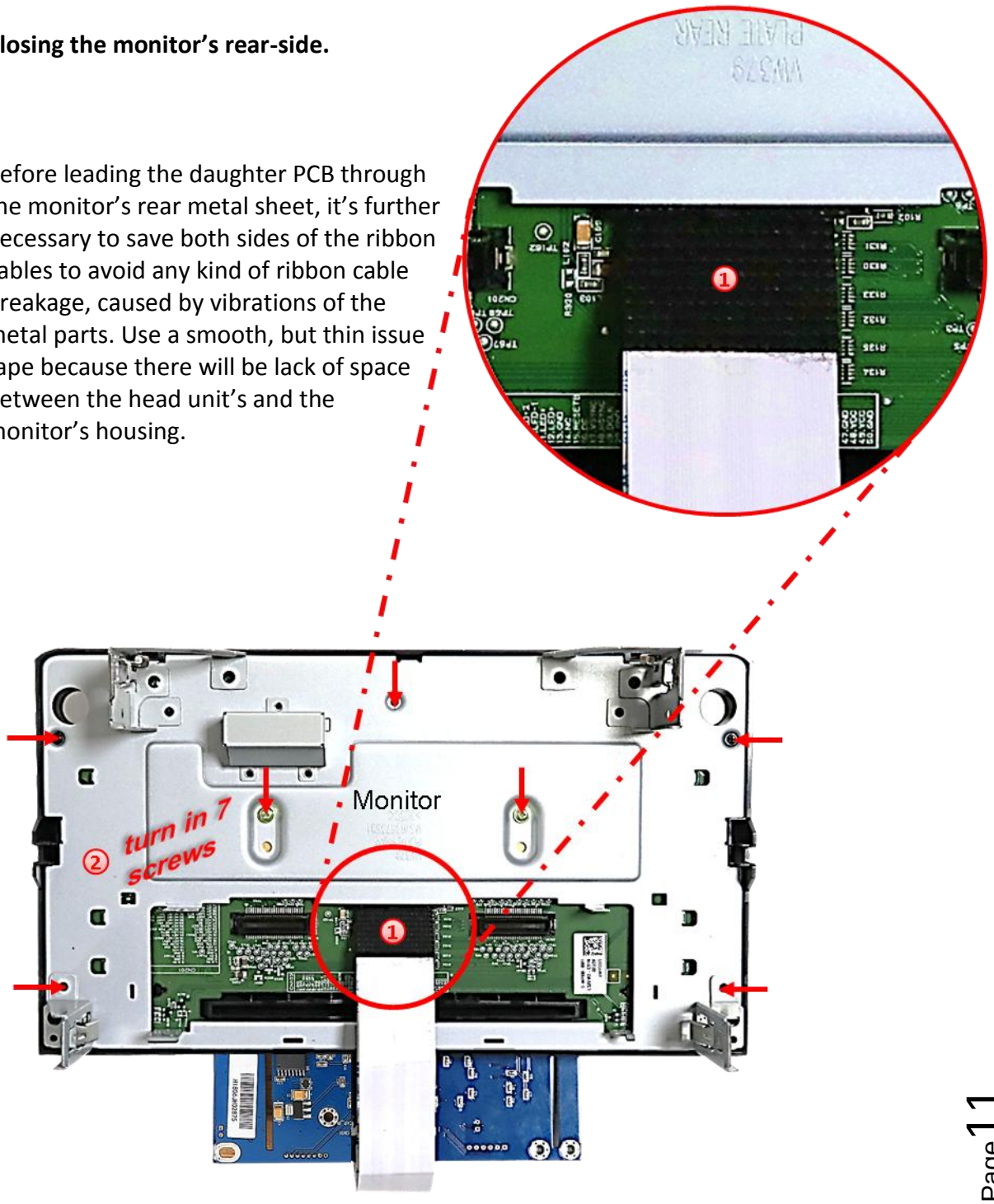
1) The contacting ends of ribbon cables always have to be installed in a straight and precise 180° position to the connector. Each deviation from a perfect contact position will curse faulty contact and even danger of short circuit

2) The ribbon cable's contacting side always has to correspond to the contacting side of the connector, concerning the mounting position.

3) Avoid cable contusion or cable injury caused by sharp-edged metal.

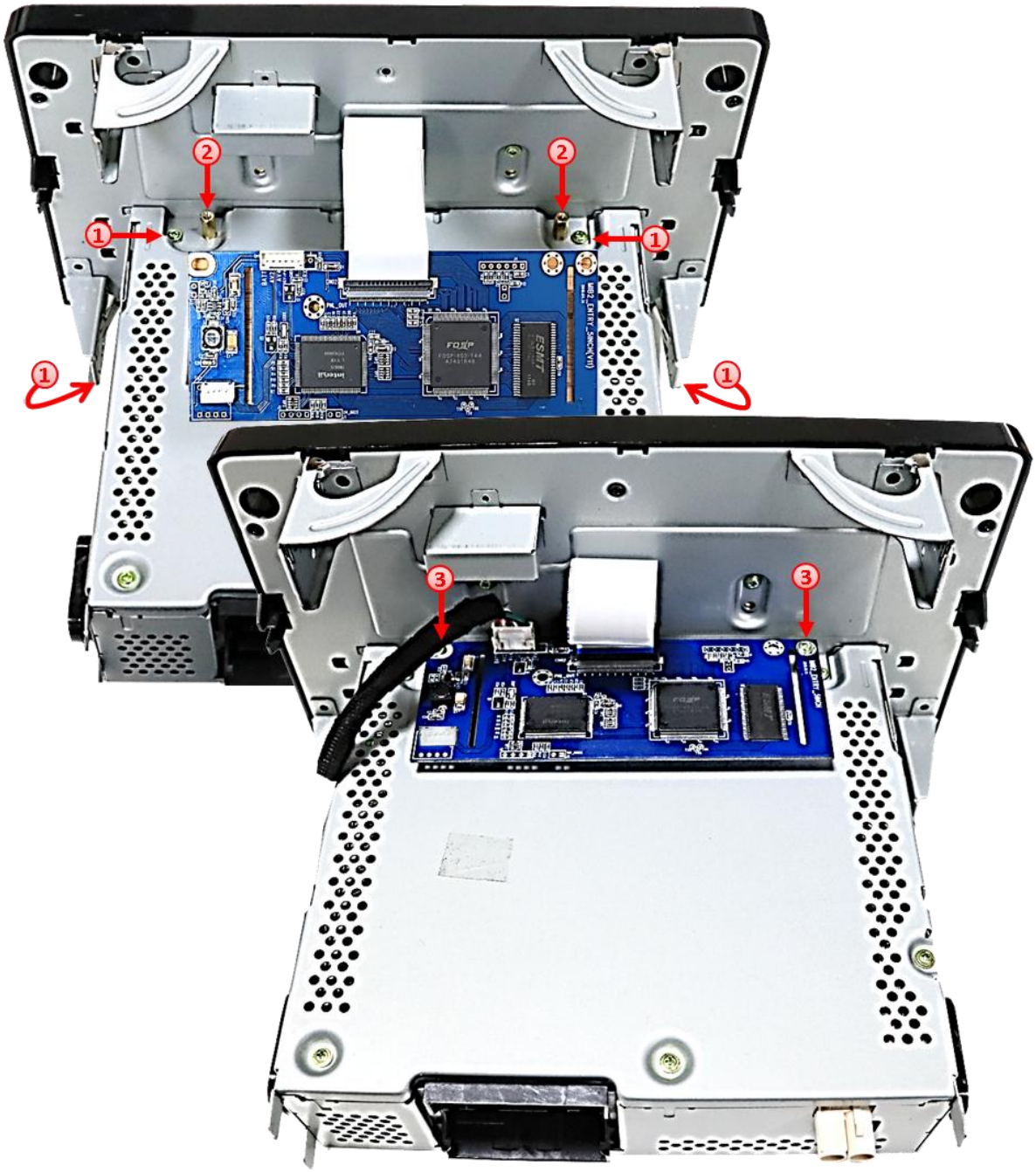
2.3.3. Closing the monitor's rear-side.

1. Before leading the daughter PCB through the monitor's rear metal sheet, it's further necessary to save both sides of the ribbon cables to avoid any kind of ribbon cable breakage, caused by vibrations of the metal parts. Use a smooth, but thin issue tape because there will be lack of space between the head unit's and the monitor's housing.



2. Fix the monitor's rear metal sheet by using the 7 screws.

2.3.4. Reassembly - head unit, monitor and daughter PCB



1. Carefully, plug the head unit into the monitor again and fix it with the 4 screws on its top and its bottom.

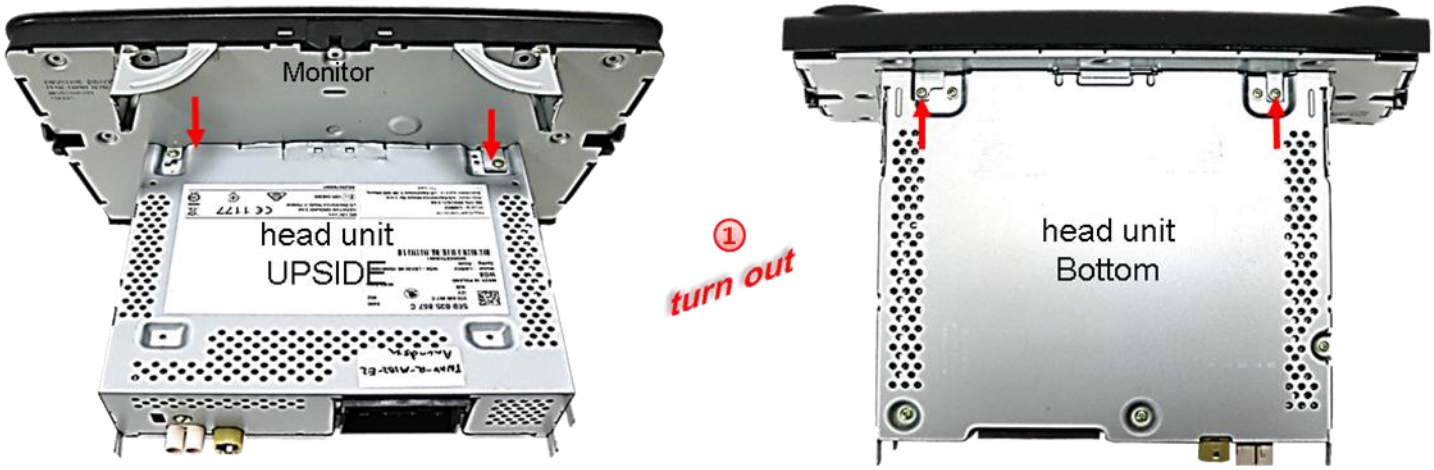
Note: Take special care for the ribbon cables for they won't be injured during the assembly of both parts!

2. Change the original brass screws against the enclosed brass spacers at the position that's shown in the picture.

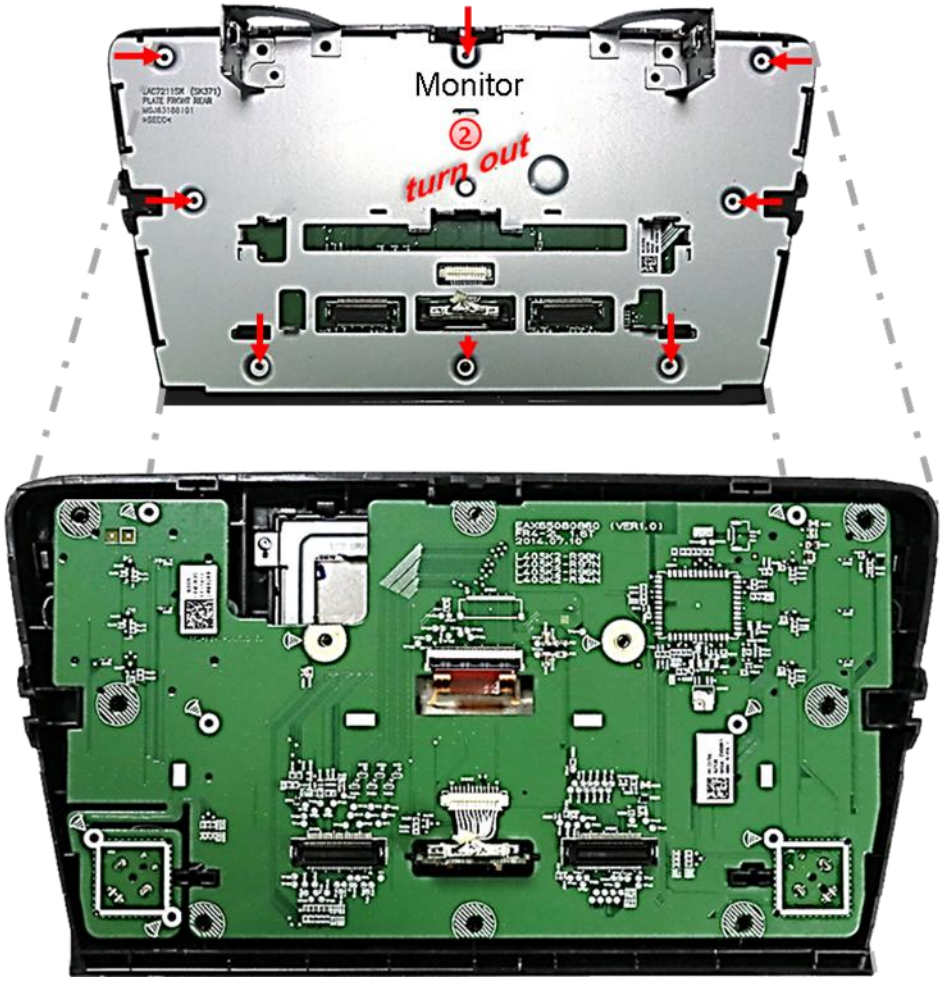
3. Fix the daughter PCB to the brass spacers in the head unit by using the original screws.

2.4. Installation – Skoda vehicles

2.4.1. Opening the factory monitor

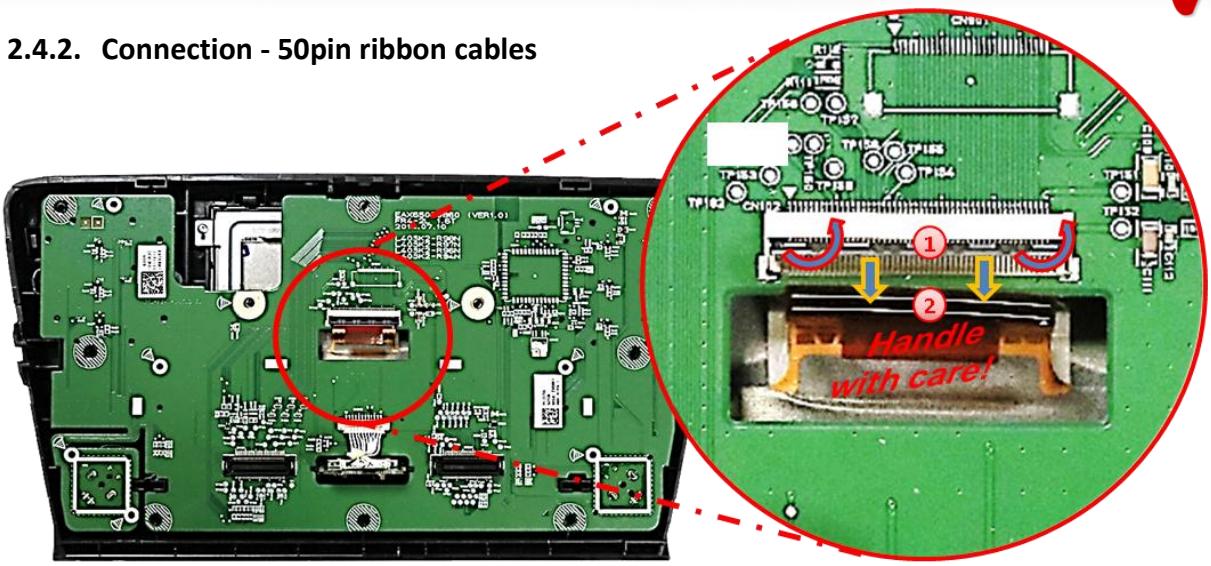


1 Turn out both screws at the **outer** side of the top part of the head unit (red arrows) and both screws at the bottom part of the head unit (red arrows). Separate the head unit from the monitor and lay it aside.



2 Turn out the 8 screws (red arrows) at the rear-side of the monitor and remove the metal sheet to set free the mainboard's ribbon cable base with the factory picture signal cable.

2.4.2. Connection - 50pin ribbon cables



1 Fold upwards the hinge of the factory ribbon cable base to unlock the original brown colored 50pin ribbon cable of the factory PCB.

2 Carefully pull out the original 50pin ribbon cable in arrow direction.

Note: The original short ribbon cable is made by very stiff material. To avoid any breakage it mustn't be folded back to much, either while the installation nor with the final assembly.

The connection of the daughter PCB's 50pin ribbon cable's has to be done, like to see in the installation pictures of VW and Skoda, in the following order:

1. Carefully lead the monitor's brown coloured 50pin ribbon cable into the preassembled ribbon cable merger of the daughter PCB's 50pin ribbon cable **"PNL-OUT".** Make sure that the connector pins are faced to the merger's platinum.

2. After a check of its perfect position, close the ribbon cable merger's lock, by folding back the hinge, to fix the connection again.

3. Connect the daughter PCB's 50pin ribbon cable **„CAR-IN"** to the factory mainboard's free ribbon cable base. Make sure that the connector pins are faced to the platinum.

4. After a check of its perfect position, close the ribbon cable base's lock by folding downwards the hinge, to fix the connection again.

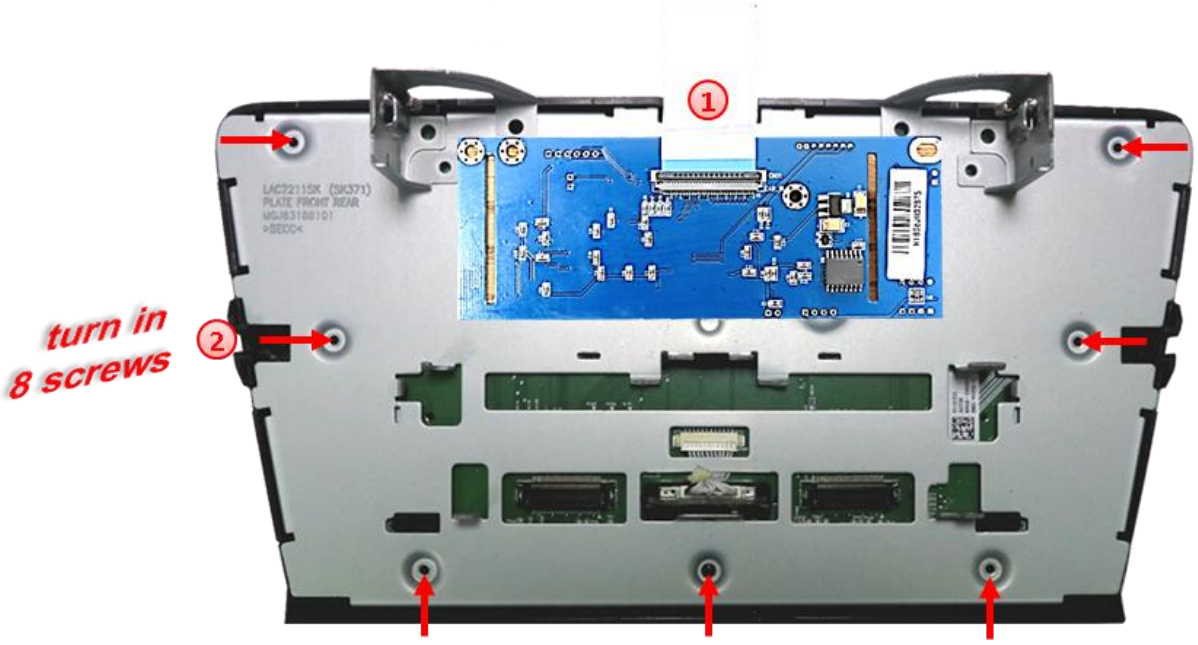
2.4.2.1. Warning notes, concerning the installation of ribbon cables

1) The contacting ends of ribbon cables always have to be installed in a straight and precise 180° position to the connector. Each deviation from a perfect contact position will curse faulty contact and even danger of short circuit

2) The ribbon cable's contacting side always has to correspond to the contacting side of the connector, concerning the mounting position.

3) Avoid cable contusion or cable injury caused by sharp-edged metal.

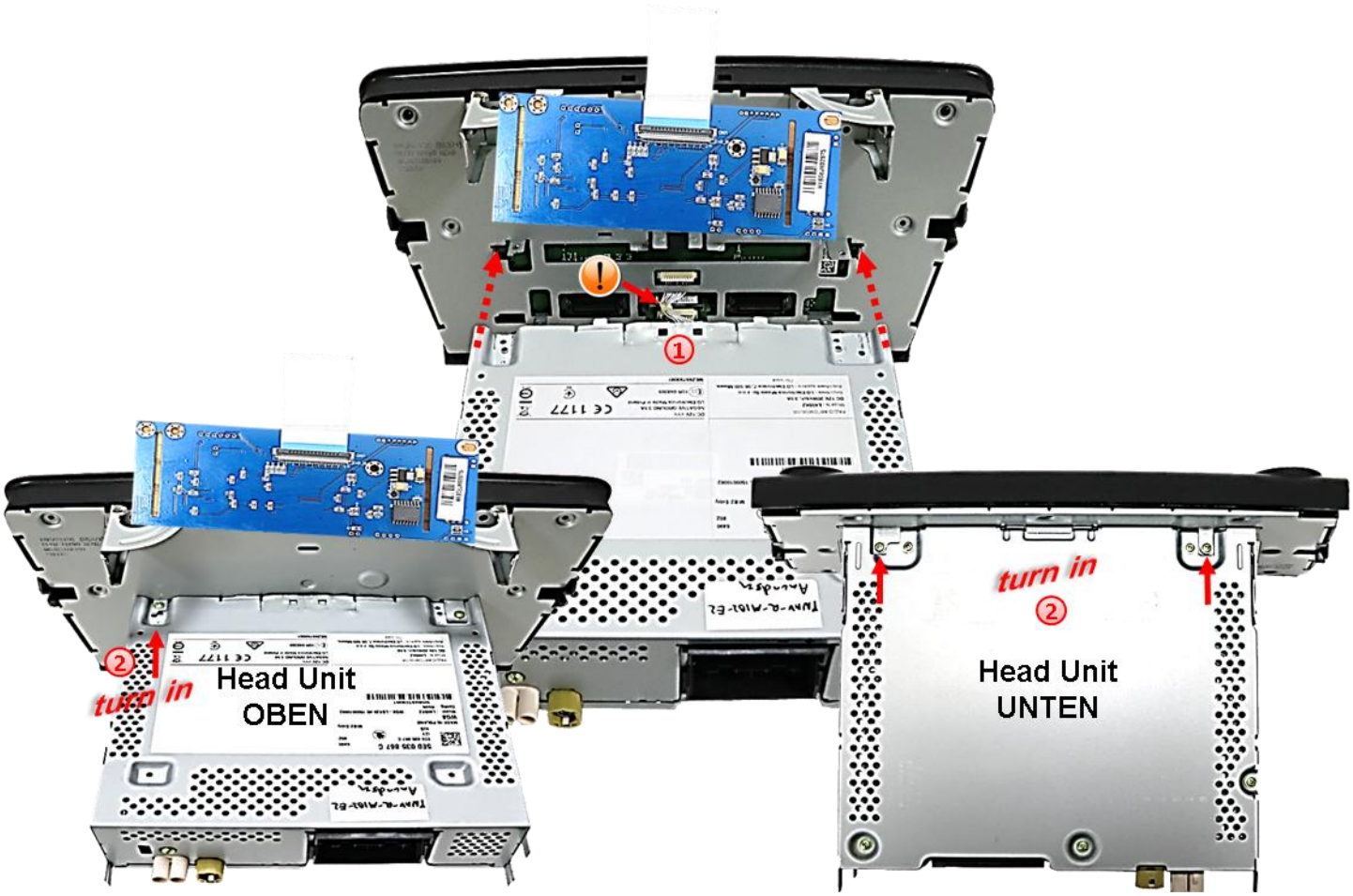
2.4.3. Reassembling – Skoda monitor and head unit



1 Lead the picture signal cable out at an appropriate location and save it against cable damage by using some tape.

Note: For the cable entry, a housing modification could possibly be required.

2 Reassemble the monitor's rear housing part by using the 8 screws.



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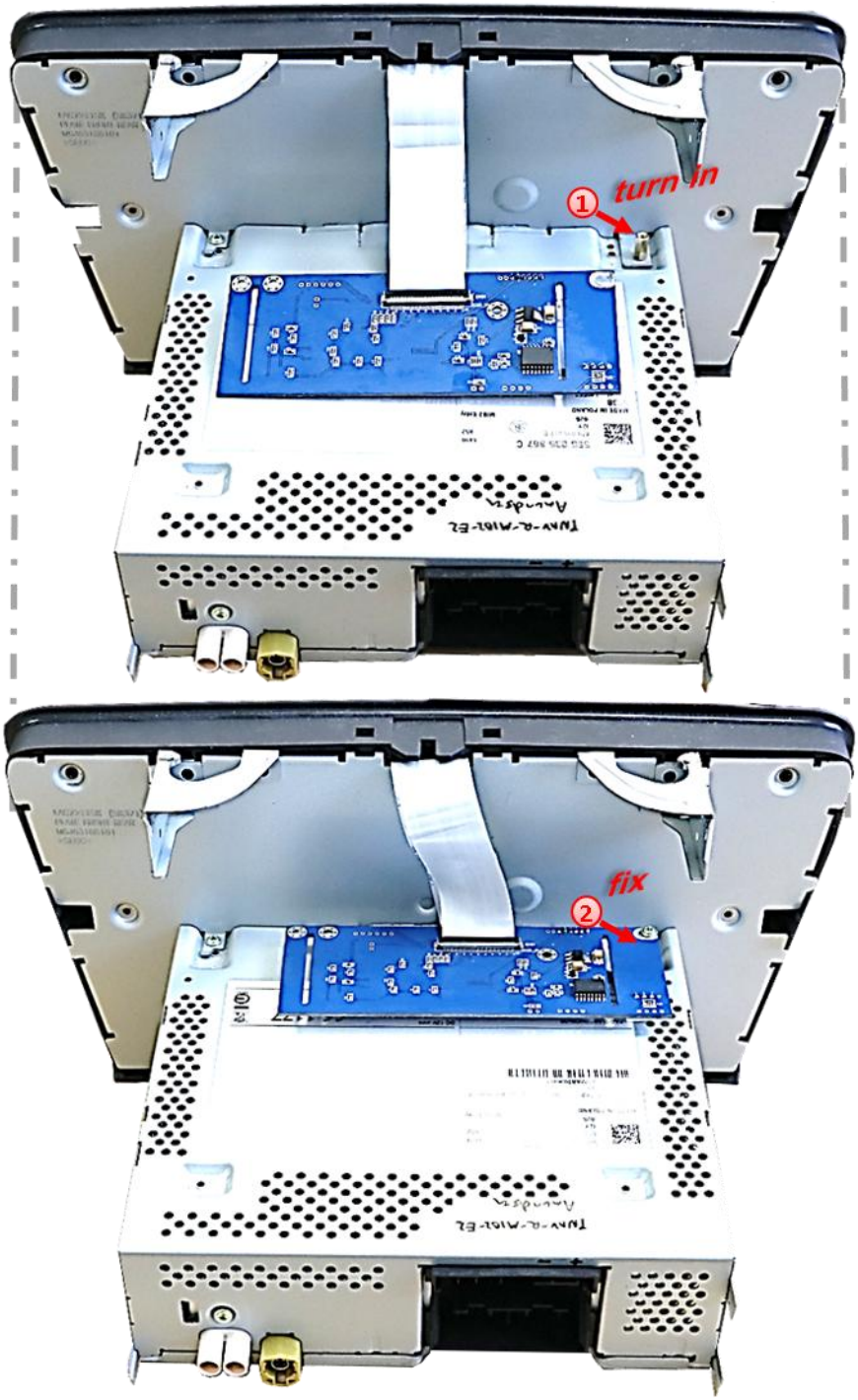
1. Reassemble the head unit housing to the monitor housing.

! Take special care for the perfect fitting of both parts for not to get caught the small white cables of the 12pin connector.

2. Screw in the left screw at the upside and both screws at the bottom of the head unit.

2.4.4. Fixing – daughter PCB

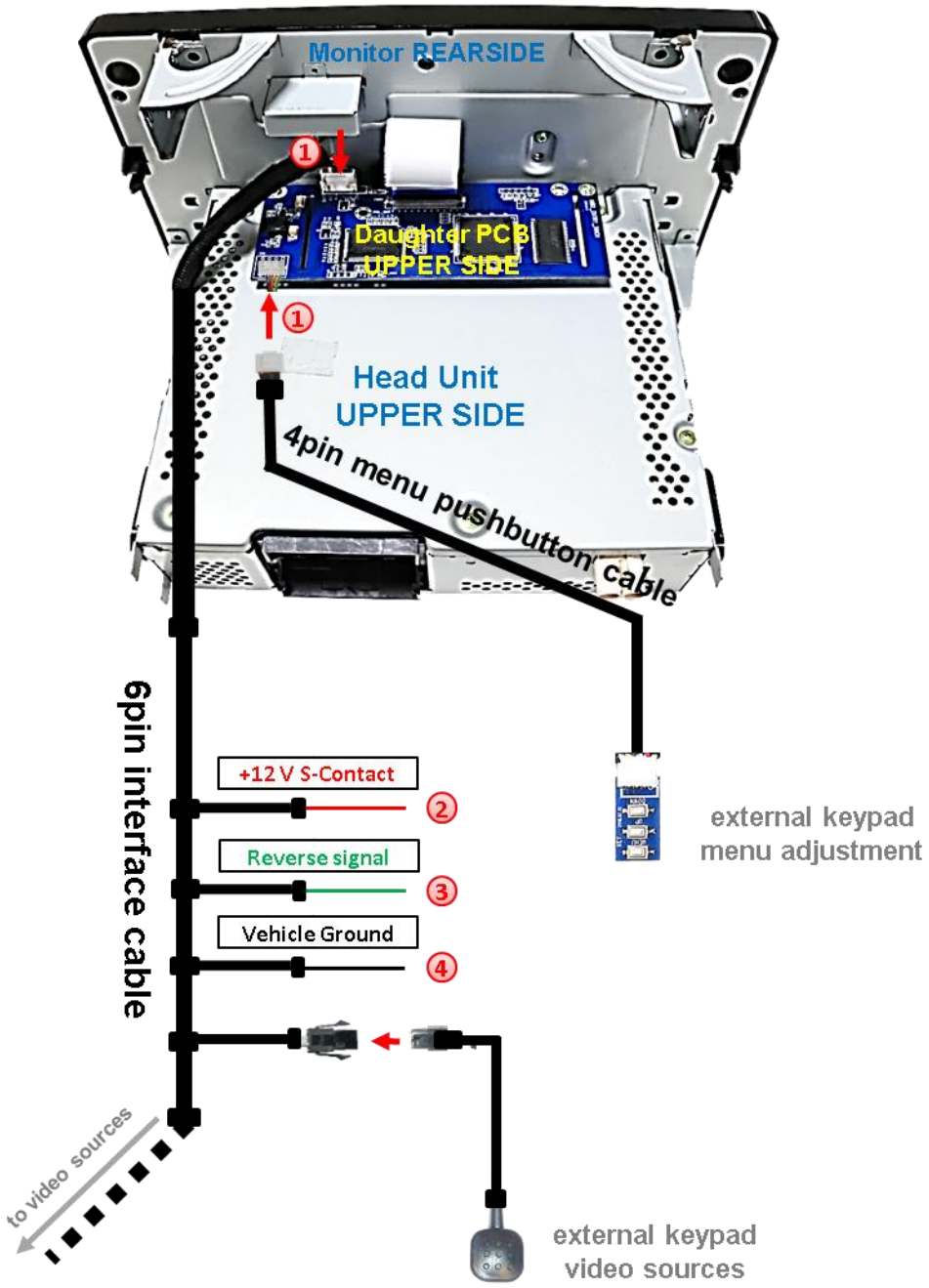
Note: For Skoda head unit installation, the 6pin interface cable and the 4pin pushbutton cable connections have to be done **before** fixing the PCP to the head unit!



1. Change the original brass screw against one of the enclosed brass spacers at the position that's shown in the picture.

2. Fix the daughter PCB to the previously fixed brass spacer in the head unit by using the original screw.

2.5. Cable connection – daughter PCB



1. Connect the 6pin interface cable's 6pin connector and the menu pushbutton cable's 4pin connector to the 6pin and 4pin connectors of the daughter PCB.

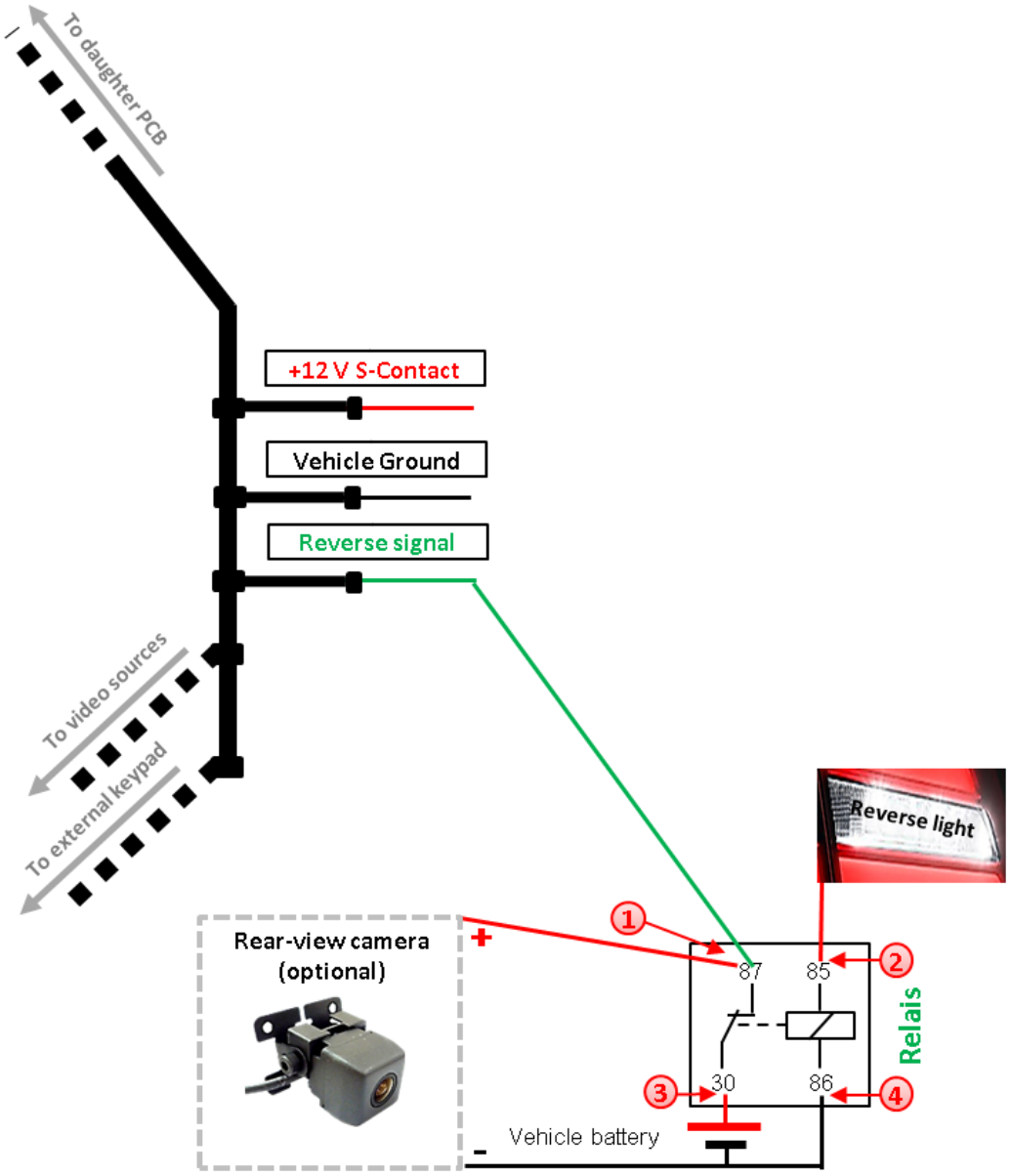
2. Connect the 6pin interface cable's single red colored wire to **S-Contact terminal 86s +12V** (e.g. glove compartment illumination).

3. Connect the 6pin interface cable's single green colored wire to **+12V reverse signal** (see following chapter).

4. Connect the 6pin interface cable's black wire to vehicle Ground.

2.6. After-market rear-view camera:

To switch the interface's rear-view camera input, an external switching signal from the reverse gear light is required. As the reverse gear light signal contains electronic interference, a traditional open relay (e.g AC-RW-1230 with wiring AC-RS5) or filter (e.g. AC-PNF-RVC) is required. Below schema shows the use of a relay (normally open).

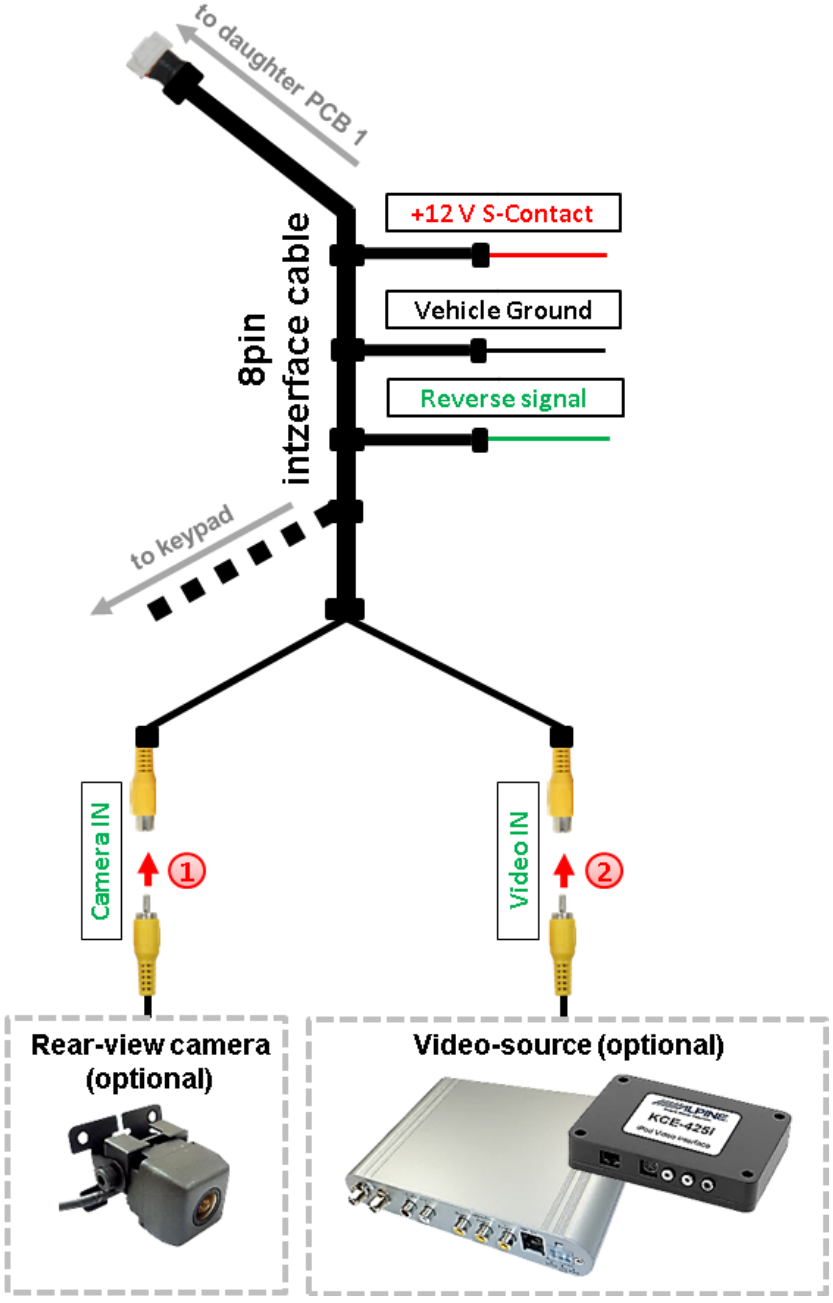


1. Connect the single green colored wire and the rear-view camera's power both to the relay's terminal (**87**).
2. Connect the reverse light's power to the relay's coil terminal (**85**).
3. Connect permanent power to the relay's input terminal (**30**).
4. Connect vehicle's ground to the relay's coil terminal (**86**).

2.7. Connection – video inputs

It is possible to connect one after-market video sources and one after-market rear-view camera to the video-interface.

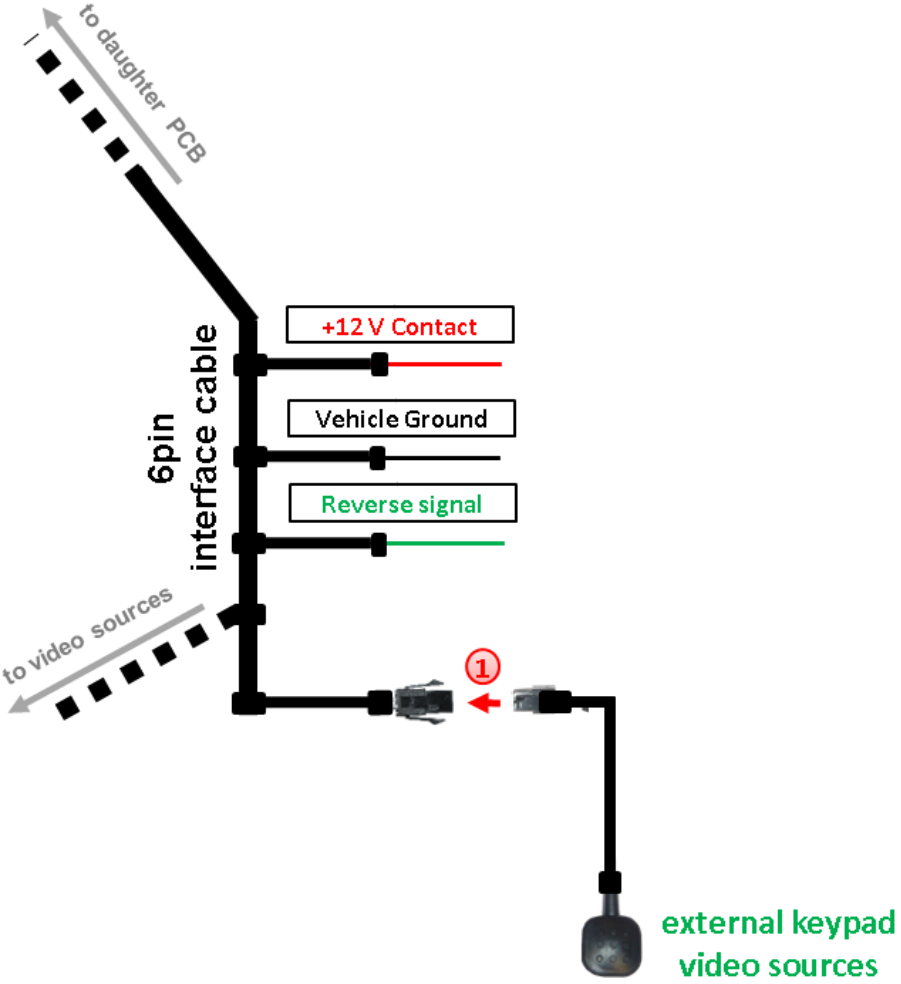
Before final installation, we recommend a test-run to detect an incompatibility of vehicle and interface. Due to changes in the production of the vehicle manufacturer there's always a possibility of incompatibility.



1. Connect the rear-view camera's RCA to the 6pin interface cable's female RCA „**Camera IN**".

2. Connect the RCA of the video source to the 6pin interface cable's female RCA „**Video IN1**".

2.8. Connection – external keypad



1 Connect the keypad's female 4pin connector to the male 4pin connector of the daughter PCB

3. Interface operation by external keypad

Use the external keypad to switch to the connected video source. Each press will switch between the factory video and the connected video source.

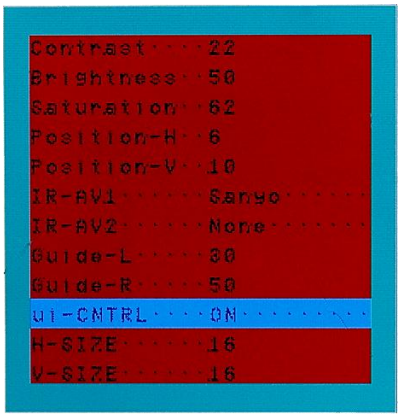
4. Picture settings by pusbuttons menu adjustment

Push buttons
Menu adjustment

The picture settings are adjustable by the 3 push-buttons of the daughjter PCB's menu keypad. Press the 1. button to open the OSD settings menu or to switch to the next menu item. By pressing the other both push buttons the selected value will be changed. To avoid accidental changes during or after the installation, we recommend to disconnect the keypad from the pushbutton cable after the adjustments are done. Adjustments have to be done, while the selected input is visible on the monitor.

Note: The OSD menu is only shown when a working video source is connected to the selected video-input of the interface.

The following settings are available:



Contrast
Brightness
Saturation
Position H (no function)
Position V (no function)
IR-AV1/2 (no function)
Guide L/R (no function)
UI-CNTRL (no function)
Size H/V (picture size horizontal/vertical)

Note: To adjust the reverse picture settings, engage the reverse gear.

5. Specifications

BATT/ACC range	7V - 25V
Stand-by power drain	6mA
Power	90mA @12V
Video input	0.7V - 1V
Video input formats	NTSC / PAL
RGB-video amplitude	0.7V with 75 Ohm impedance
Temperature range	-40°C to +85°C
Dimensions PCB1	132x 11 x 50 mm (W x H x D)

6. FAQ – Trouble shooting Interface functions

For any troubles which may occur, check the following table for a solution before requesting support from your vendor.

Symptom	Reason	Possible solution
No picture/black picture (factory picture).	Not all connectors have been reconnected to factory head-unit or monitor after installation.	Connect missing connectors.
	The ribbon cables have been damaged	Check the ribbon cables and the connectors, Change if necessary.
	Not all connectors have been reconnected to the head unit and the monitor.	Check the connectors and reconnect all disconnected connections.
	No power on video-interface (daughter PCB)	Make sure that the orange colored wire has been connected to +12 V S-Contact.
No picture/black picture/white picture (inserted picture) but factory picture is OK.	No picture from video source.	Check on other monitor whether video source is OK.
	No video-source connected to the selected interface input.	Make sure that the video source has been connected to the according input.
	Ribbon cable connection has been reversed	Make sure that the ribbon cable connection is done correctly: “MONITOR OUT or TO LCD” to panel and “TO PCB” to mainboard
Inserted picture distorted, flickering or running vertically.	Some interfaces can only handle NTSC input.	Check manual whether there is a limitation to NTSC mentioned. If yes, set source fixed to NTSC output.
Camera input picture flickers.	Camera is being tested under fluorescent light which shines directly into the camera.	Test camera under natural light outside the garage.
Camera input picture black.	Camera power taken directly from reverse gear lamp.	Use relay or electronics to "clean" reverse gear lamp power. Alternatively, if CAN-bus box is compatible with the vehicle, camera power can be taken from green wire of 6pin to 8pin cable.
Camera input picture has distortion.		
Not possible to switch video sources by external keypad. Not possible to switch video sources by external keypad.	Pressed too short.	For video source switching a longer press of about 2.5 seconds is required.
Interface does not switch to camera input when reverse gear is engaged.	The grey wire of the 6pin cable doesn’t receive the +12V reverse signal	Apply +12V from the reverse light. Use a relay or electronics to "clean" reverse gear lamp power.

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