# Mercedes-Benz NTG 5.5 / 6 / MBUX

# **AHD / CVBS Camera interface**

# 4x camera inputs (4-pins asia / aviation)

Compatible with 7", 8", 10" and 12" screens

## Compatible with cars like:

Actros truck
A-class (W177)
B-class (W247)
CLS-Coupé (C257)
Sprinter (W907)
E-class W213 / C238
S-class (facelift from June 2017)

Installation diagram	page 2
Dipswitch settings	page 3-4
Triggers and switch function	page 5
MB Sprinter installation	page 6
Installation, LVDS and power/CAN	page 7-13
MENU settings	page 14-16
Troubleshooting	page 17-18



Article code: 300 218

# Diagram: Interface connections: Radio/navi head unit Yellow: +12V **Black:** ground CAN+ **Blue:** CAN-Grey: • 4P male AVIATION VIDEO THU.B.CAM 12V Himmig AUDIO **4**x

**Triggers** 

Camera

inputs

# **DIP 6 settings**

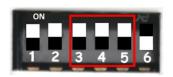




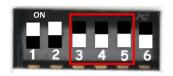
WITH TOUCHSCREEN LCD



**NO TOUCHSCREEN LCD** 



7 and 8 INCH LCD



10 and 12 INCH LCD



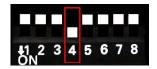
**DUALSCREEN 7 INCH** 



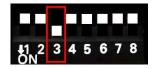
**NOT USED** 

# **DIP 8 SETTINGS**





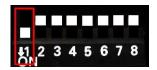
**REAR VIEW CAMERA (V4)** 



**Show FRONT CAMERA after reverse** (time adjust in MENU 5, 10, 15, 20 sec.)



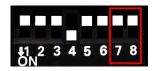
Right side camera (V2)



Left side camera (V1)



**MUST BE UP (OFF)** 



7+8 UP (OFF) for 10 and 12 inch display



7+8 DOWN (ON) for 7 and 8 inch display

It's recommended to reset power after changing DIP settings (black connector).

Remark: turn off the DIPs of video inputs which are not used to avoid black screen.

## **Trigger wires:**

- **Trig-Rear\***: insert +12/24V reverse light signal to activate the rear camera (V4). Signal must be stable, not LED.
- Trig-Right: insert +12/24V to activate CAM2 (V2).
- Trig-Front: insert +12/24V to activate the Front camera (V3).
   Front camera also switches on automatically after reverse, and also by short-press switch button (included).
- Trig-Left: insert +12/24V to activate CAM1 (V1)
- \*Usually the reverse function is detected by CANbus and it's not needed to connect the Trig-REAR wire to reverse signal.

#### Additional power wires:

- ACC OUT: provides 12V while ignition is on (when CANbus is running)
- Manual ACC: connect to 12V ACC only when interface is disconnected from CANbus.

#### **Switching from OEM picture to external sources manually:**

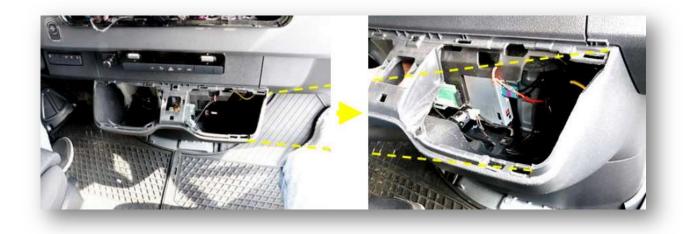
- Video 1/2/4: User may use long-press "CALL-END" key on the steering wheel or external switch (included) to switch from OEM picture to external video sources (OEM  $\rightarrow$  V1 $\rightarrow$ V2 $\rightarrow$ V4 $\rightarrow$ OEM).
- <u>Short-press on external switch</u> to switch fast from OEM picture to <u>Front cam</u> picture.



# **Attention: MB Sprinter interface installation place!**

Place the interface box behind the storage part as mentioned below.





# Example installation MB Sprinter MBUX:

# Remove LCD part:

2x torx screws behind the air vent.



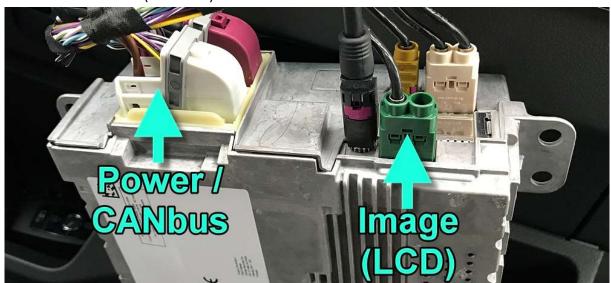
# Take out the LCD part as shown below:



## Take out the headunit:



# Backside of headunit (version 1):





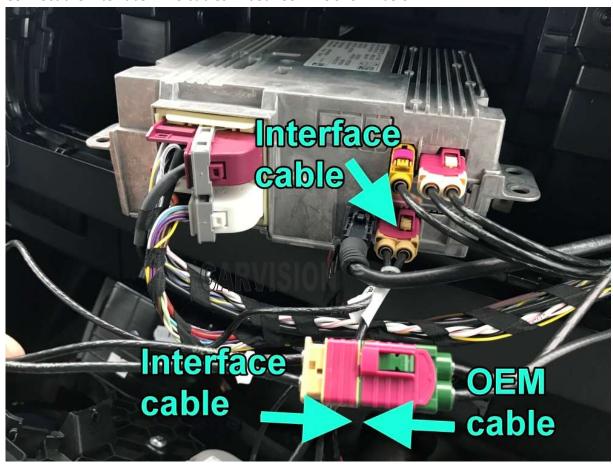
# Backside of headunit (version 2):



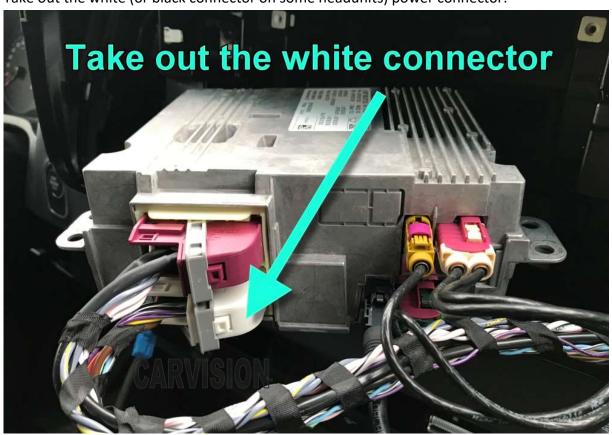
Take out the **GREEN or VIOLET** LCD connector:



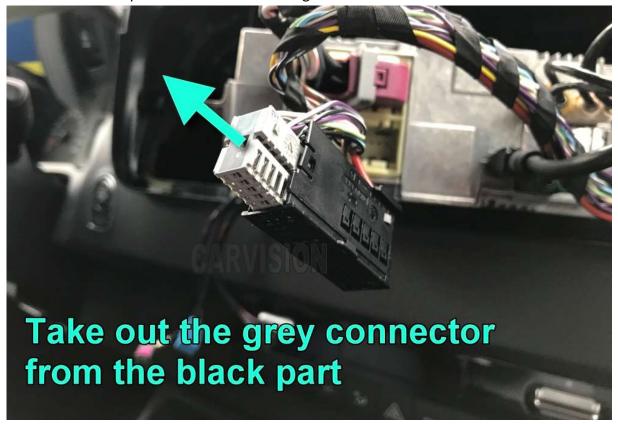
Connect the interface LVDS cables in between like shown below:



Take out the white (or black connector on some headunits) power connector:



Take out the GREY part from the black housing in the white connector:



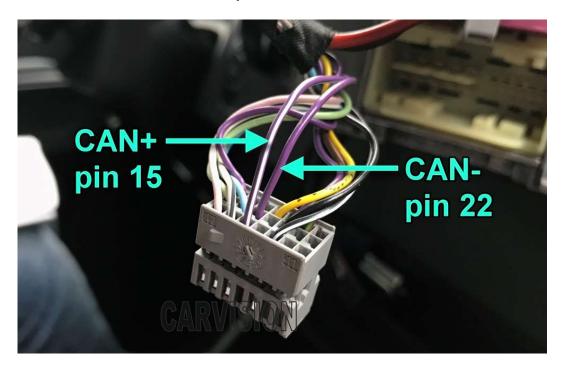
Connect the CANbus wires of the interface (version 1):

Interface: Blue = CAN+ / Grey = CAN-

①

Û

Car wires: Pin 15 = CAN+ / Pin 22 = CAN-

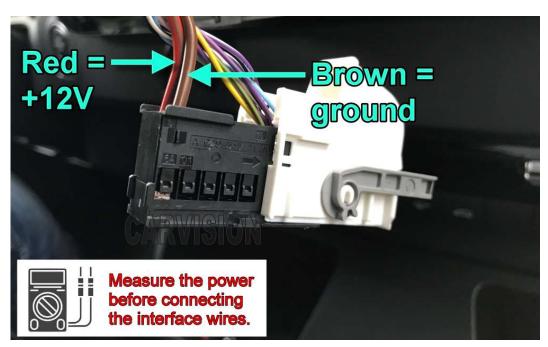


Connect the power wires (version 1):

Interface: Yellow = +12V / Black = ground

Û

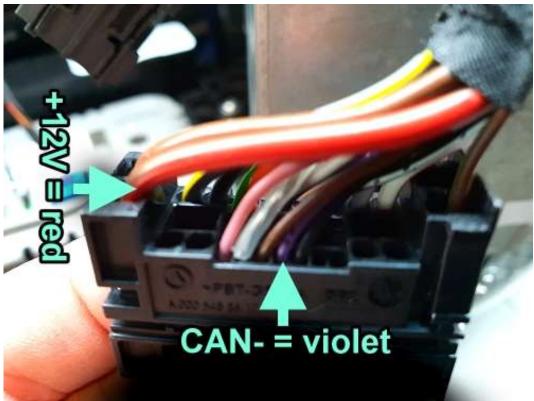
Car wires: Thick red = +12V / Thick brown = ground



# Additionally:

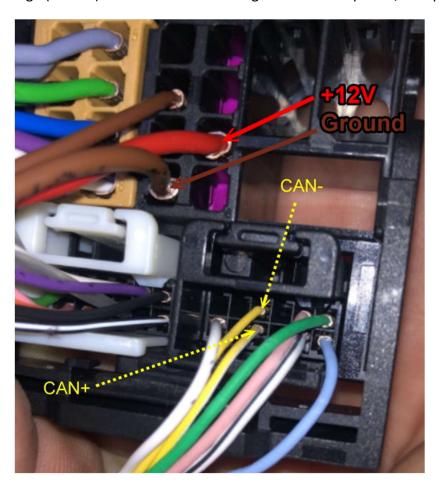
Connect the power and CANbus wires of the interface (<u>head unit version 2</u>) as below:







NTG 5.5 with beige (double) LVDS connector and regular Quadlock power/CAN plug:





## **MENU** settings:

- Activate a camera/video channel and press and hold the MENU button (3 sec.) to show the menu settings.
- Use **UP / DOWN** to change a setting
- Use MENU to jump to the next option



# **REAR CAM (V4) settings:**

Menu of V4-REVERSE	
Brightness	55
Contrast	55
PosH	04
PosV	00
Trigger	Can
InputSource	AutoDetect
Guide-Type	OFF
Guide-PosV	34
GuideL-PosH	37
GuideR-PosH	93
Maxim-CURVE	10
External SW	YES

Brightness: adjust the brightness of the picture
Contrast: adjust the contrast of the picture
PosH: move the picture to left/right
PosV: move the picture to up/down

**Trigger:** CAN: interface switches over if CAN data matches, otherwise trigger wire

needs to be connected.

Wire: use tigger wire to activate the camera/video channel

**InputSource:** AutoDetect: interface detects the inserted video signal automatically.

Other fixed video system settings are: PAL, CVBS, 720P PAL, 720P NTSC, 960P

PAL, 960P NTSC, 1080P PAL, 1080P NTSC.

**Guide-Type**: turn guidelines on/off.

Guidelines options: Dynamic: guidelines turn with the steering wheel (if CAN Data matches).

**Fixed**: static guidelines (always on screen, independent of CAN data).

**Guide-PosV**: adjust the height position of the guidelines

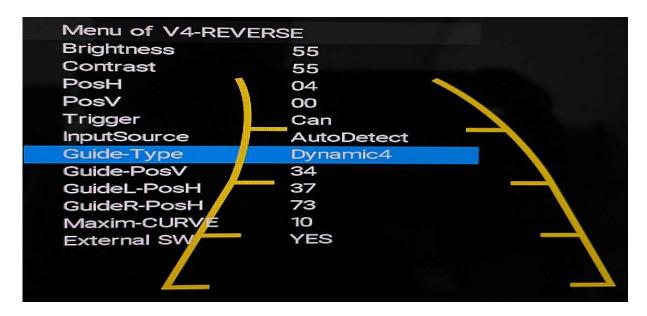
**GuideL-PosH**: adjust the horizontal position of the left guideline **GuideR-PosH**: adjust the horizontal position of the right guideline

Maxim-curve: adjust the maximum curve of the guidelines

**External SW**: activate the rear cam (V4) input by press+hold the external push button.

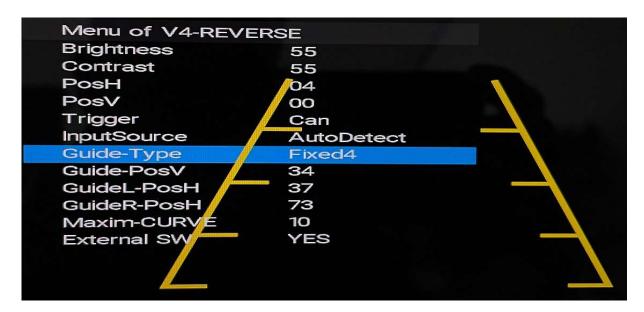
#### **Dynamic guidelines:**

Choose between 6 types of dynamic patterns!



#### **Fixed guidelines**:

Choose between 6 types of fixed patterns!



#### FRONT CAM (V3) settings:

Menu of V3-FRONT	
Brightness	50
Contrast	50
PosH	08
PosV	00
Trigger	10s after REV
InputSource	AutoDetect

**Trigger**: select the desired time to show the <u>Front cam picture automatically after reversing</u>.

**InputSource:** AutoDetect: interface detects the inserted video signal automatically.

Other fixed video system settings are: PAL, CVBS, 720P PAL, 720P NTSC, 960P

PAL, 960P NTSC, 1080P PAL, 1080P NTSC.

## Left (V2) / Right (V1) settings:

Menu of V2-RIGH	IT
Brightness	50
Contrast	50
PosH	08
PosV	00
Trigger	Can
InputSource	AutoDetect

**Trigger:** CAN: interface switches over if CAN data matches, otherwise trigger wire

needs to be connected.

Wire: interfaces switches only over by using the tigger wire to activate the

camera/video channel.

**InputSource:** AutoDetect: interface detects the inserted video signal automatically.

Other fixed video system settings are: PAL, CVBS, 720P PAL, 720P NTSC, 960P

PAL, 960P NTSC, 1080P PAL, 1080P NTSC.

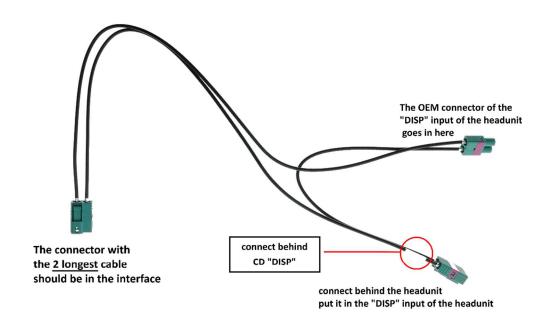
# **Troubleshooting**

#### When you DON'T have OEM image

(only black screen with sound of the radio)



#### #1 Please check the LVDS cable



### #2 Please check the power supply of the interface



Installation with CANBUS: Yellow wire has +12 Volt?

Installation WITHOUT CANBUS: Yellow and purple wire has +12 Volt?

# **Troubleshooting**

#### When you have OEM image.

After putting in reverse, nothing is happening (no rearvie wcamera image, it stays in OEM image)



- #1 Please check black DIP4 (V4) and
- #2 Please insert 12V on Trig-REAR wire
- #3 Check the camera and make sure vdieo is connected to V4 input.

#### Picture adjustment

When you have black/grey border on the side of the picture, use MENU settings to adjust and move the picture to the right position (Position-H / Position-V)