

**Vehicle Applications**

MERCEDES BENZ

2015 - 2016 A-class (W176)  
 2015 - 2016 B-class (W24)  
 2015 - 2017 C-class (W205)  
 2015 - 2016 E-class (W212)

2015 - 2016 CLA (C117)  
 2015 - 2016 CLS (W218)  
 2015 - 2016 GLA (X156)  
 2015 - 2016 GLC (X205)

**Product Features**

- Rear-view camera input with Dynamic Guide Lines
- Control by factory infotainment
- On-screen display and setup
- 2 trigger outputs (+12V max. 1A), separately adjustable switching events (CAN, ACC, rear-view camera, reverse gear)
- Front camera input
- Front camera input can also be used as an Auxiliary Video Input (***Crux part# AUX-MB2, OBD2 Audio Aux coding, may be required to create an Auxiliary Audio Input (Sold separately).***)
- Automatic switching to rear-view camera input on engagement of reverse gear from all operation modes
- Forced rear-view camera option
- Manual return from rear-view and front camera (cancellation of automatic switching)
- Compatible with all factory video accessories (e.g. rear-view camera, DVD-changer, etc.)
- Plug & Play installation

**Navigation / Radio Compatibility**

- COMAND Online NTG5/5.1, Audio20 NTG5/5.1 with 4pin HSD LVDS connector on the monitor

**Parts Included**



Interface Box



MB-78N Harness



Power/CAN Harness



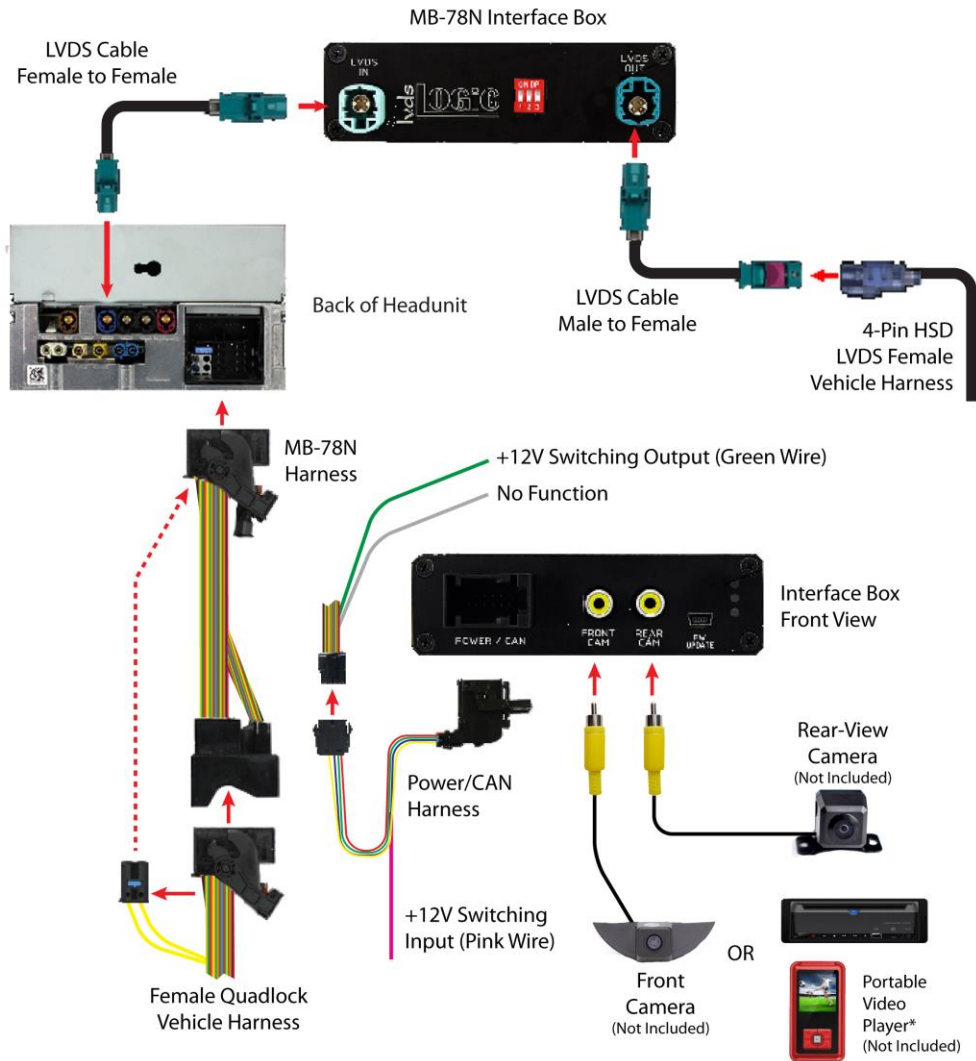
LVDS1 OUT (Female to Female)



LVDS IN (Male to Female)



**Wiring Diagram**



\*Crux Part# AUX-MB2 may be required for vehicles without an Auxiliary Audio Input available.

**Installation Instructions**

**Setting the DIP switches of the Interface Box.**

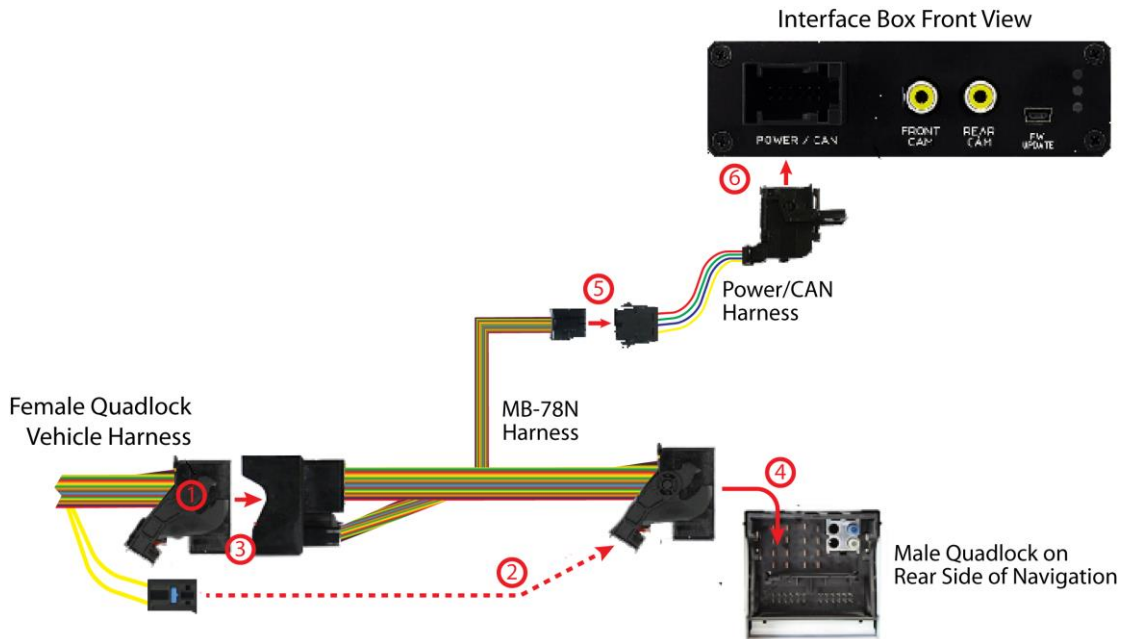
DIP 1 on the back of the interface box is used to set the monitor type. DIP 2 and 3 must be set to OFF.

Device	DIP 1	
COMAND Online NTG5/5.1	ON	7 inch Display
Audio20 NTG5/5.1	OFF	6 inch Display

**After each change of the DIP switch settings you have to execute a power reset of the interface box!**



**Connecting Interface box and harnesses**



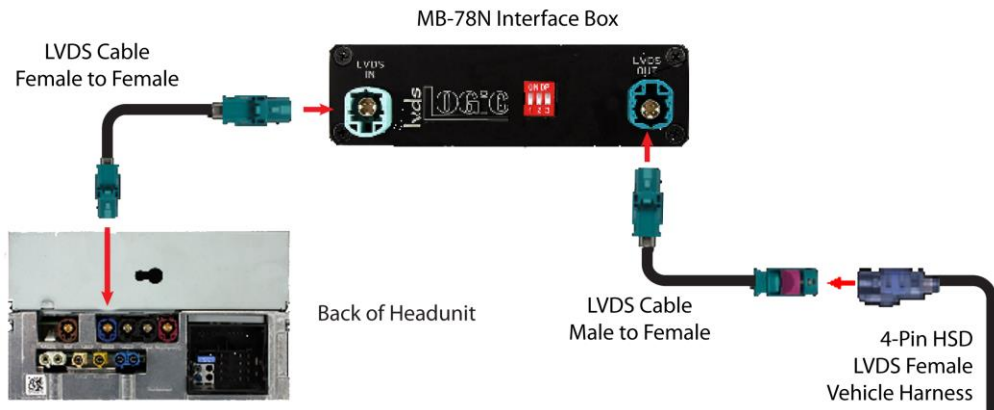
- 1 Remove the female Quadlock connector of the vehicle harness from the rear of the headunit.
- 2 Remove optical leads from the female Quadlock connector of the vehicle harness and insert them into the female Quadlock connector of MB-78N harness at the same position.
- 3 Connect the female Quadlock connector of vehicle harness to the male Quadlock connector of MB-78N harness.
- 4 Connect the female Quadlock connector of MB-78N harness to the male Quadlock connector of the navigation computer.
- 5 Connect the female 8 pin molex connector of the MB-78N harness to the male 8 pin molex connector of the Power/CAN harness.
- 6 Connect the female 12pin AMP connector of the Power/CAN harness to the front side of the VRFMB-78N interface box.



**LEDs of the Interface box**



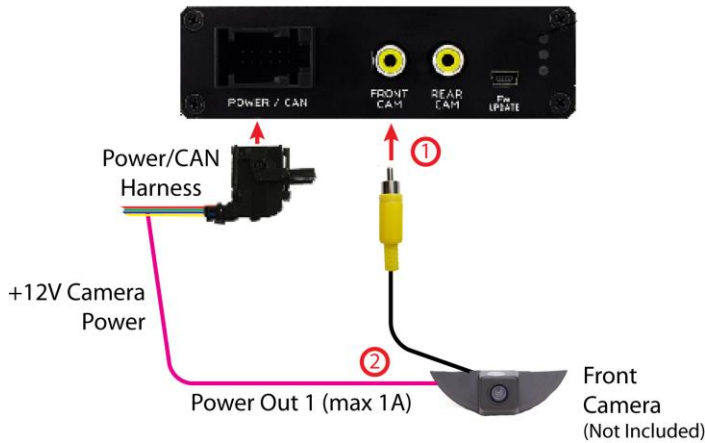
**LVDS Connection**



- 1 Connect the female 4pin HSD LVDS connector of the LVDS cable to the male 4pin HSD LVDS connector (LVDS-IN) on the rear of the VRFMB-78N interface box.
- 2 Remove the Blue female 4pin HSD LVDS connector of the vehicle harness at the back of the head unit and connect it to the male 4pin HSD LVDS of the LVDS cable.
- 3 Connect the female 4pin HSD LVDS connector of the LVDS cable to the male 4pin HSD LVDS connector (LVDS-OUT) on the rear of the VRFMB-78N interface box.
- 4 Connect the female 4pin HSD LVDS connector of the LVDS cable to the Pink male 4pin HSD LVDS connector on the rear of the head unit.



**Connection to the aftermarket front camera**



- 1 Connect the video RCA of the after-market front camera to the female RCA connector “FRONT CAM” of the interface box.
- 2 The Pink wire of the Power/CAN harness can be used for +12V electric power supply (max. 1A) of the aftermarket front camera. Configure in the OSD-menu “MISC”, Menu item “POWER OUT 1” the designated electric power supply (see chapter “Configurable switching outputs”).



**Settings for connecting an aftermarket front camera**

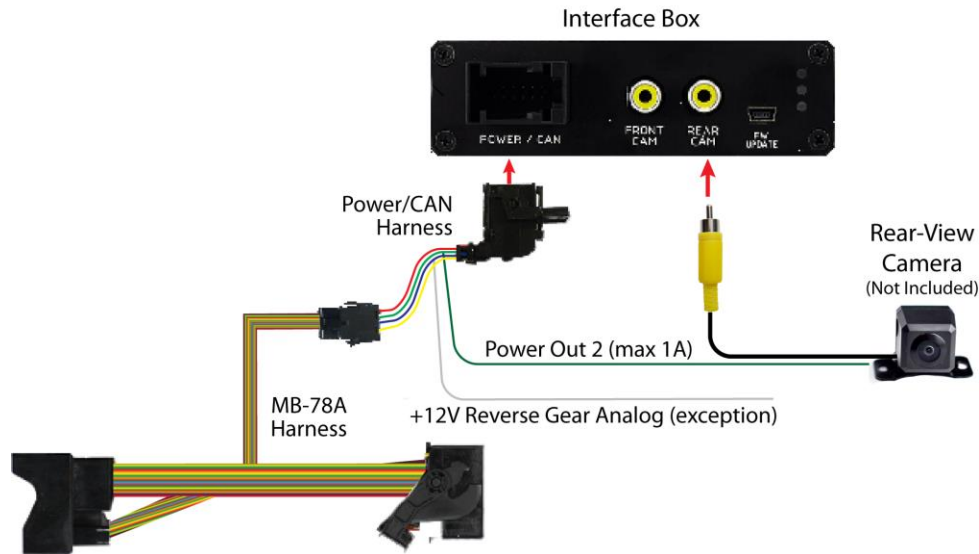
You have to configure some settings in the OSD-menu’s INPUTS and MISC if you want to connect an aftermarket front camera (Operation of the OSD: see chapter “OSD-Operation”).



OSD Menu	Menu item	Setting	Description
INPUT	FVC	OFF	No front camera connected
		ON	Switches to front camera if parking process is enabled and reverse gear is released
OPTION	PARK LOGIC	RGearOnly	Enabled while parking process
		RGearSpeed	Enabled while parking process and up to 18 mph
		RGearTime	Enabled while parking process and up to 20 seconds

**Note:** You can deactivate the enabled parking process by pressing the “Hands-free Mode OFF” or “Right Arrow” button on the steering wheel controls. After deactivation you cannot enable the parking process again until the vehicle is driving faster than 18 mph or the ignition is switched off.

**Connection to the aftermarket rear view camera**



- 1 Connect the video RCA of the after-market rear view camera to the female RCA connector “REAR CAM” of the interface box.
- 2 The Green wire of harness Power/CAN harness can be used for +12V power supply (max. 1A) of the after-market rear view camera. Configure in the OSD-menu “MISC”, menu item “POWER OUT 2” the designated power supply (see chapter “Configurable switching outputs”).



**Settings for connecting an aftermarket rear view camera**

You have to configure some settings in the OSD-menus INPUTS and MISC if you want to connect an aftermarket rear view camera (Operation of the OSD: see chapter “OSD-Operation”).

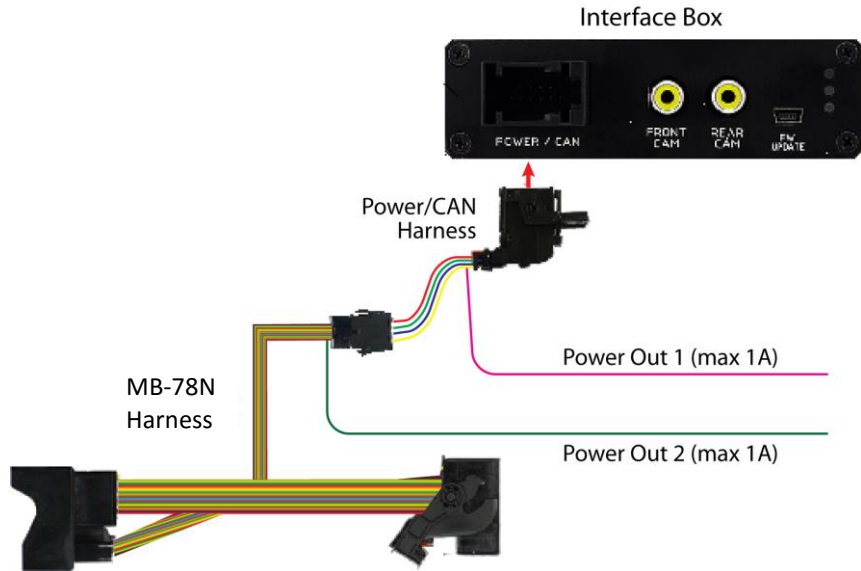


OSD Menu	Menu item	Setting	Explication
INPUT	RVC	OFF	No rear-view camera connected
		ON	Switches to rear view camera if reverse gear is engaged and/or PDC display is displayed
		OEM	If a factory rear view camera is present. The interface turns off, if reverse gear is enabled and it displays factory rear view camera
OPTION	PARK LOGIC	RGearOnly	Enabled while parking process
		RGearSpeed	Enabled while parking process and up to 18 mph
		RGearTime	Enabled while parking process and up to 20 seconds
	RVC LINES	OFF	Dynamic guide lines deactivated
		ON	Dynamic guide lines activated

**Note:** You can deactivate the enabled parking process by pressing the “Hands-free mode OFF” or “Right Arrow” button on the steering wheel. After deactivation you cannot enable the parking process again until the vehicle is driving faster than 18 mph or the ignition is switched off.



**Configurable Trigger Outputs**



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You can configure both +12V trigger outputs separately. The Pink wire is POWER OUT 1 and the Green wire is POWER OUT 2.

**Note:** You can configure the both trigger outputs in the OSD-Menu MISC separately (Operation of the OSD: see chapter "OSD-Operation").



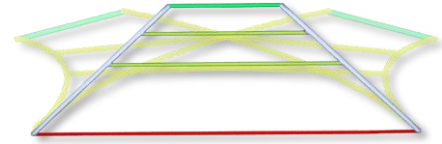
OSD Menu	Menu item	Setting	Description
OPTION	POWER OUT1 (Pink)	CAN	+12V when the interface is on (Red LED on)
		ACC	+12V when ignition is on
		CAM	+12V when the rear-view camera input is activated
	POWER OUT2 (Green)	RGEAR	+12V when reverse gear is engaged
		AVS	+12V when interface video-source is active
		OFF	Trigger output deactivated





**Dynamic Guide Lines**

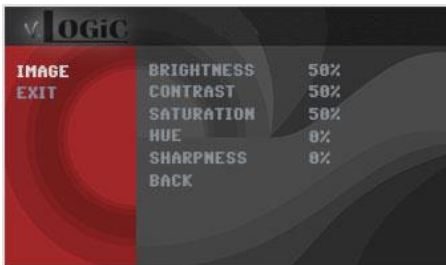
You have to configure some settings in the OSD menu OPTION if you want to activate the Dynamic Guidelines (Operation of the OSD: see chapter “OSD-Operation”).



OSD Menu	Menu item	Setting	Description
OPTION	RVC LINES	OFF	Dynamic Guide Lines deactivated
		ON	Dynamic Guide Lines activated
	CAR TYPE	A/B/C/CLA/CLS/E/GLA/GLC	Vehicle type selection

**Picture settings**

You can change the picture settings in the OSD Menu IMAGE (activation only from interface AV level possible).



- Brightness
- Contrast
- Saturation
- Hue
- Sharpness

**Note:** The picture settings will be retained for each AV-source separately.



**Operation**

**OSD – On-Screen Display**

You can change the basic configurations of the interface in the OSD (on screen display).

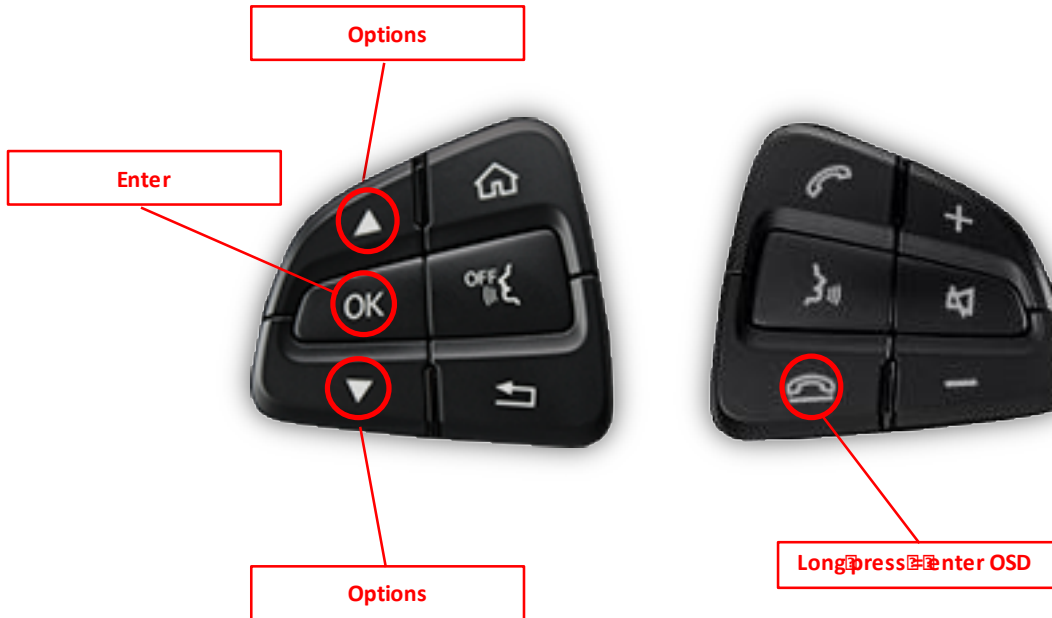


**OSD – Operation**

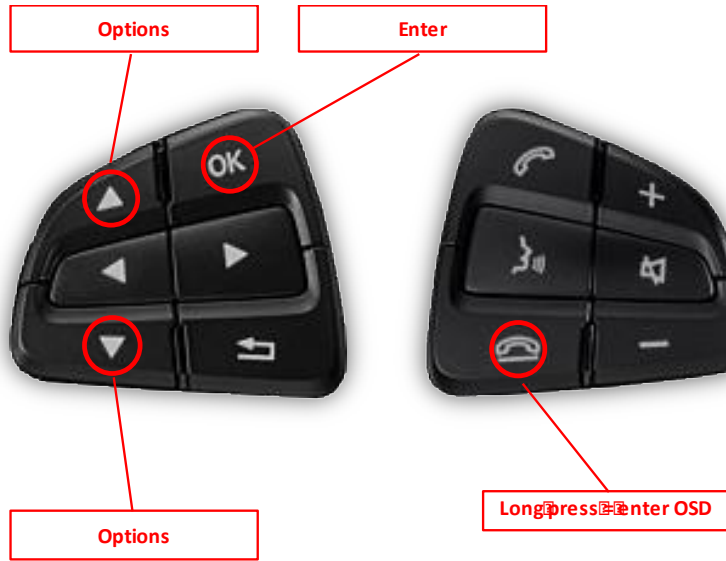
You can control the OSD by steering wheel buttons. Set the instrument cluster screen to “NAVI” before you start the OSD control.



**Mercedes Steering Wheel Controls version 1**



**Mercedes Steering Wheel Controls version 2**



**OSD – Additional setting options**

The following settings in the OSD menu OPTION and OSD can be configured over and above the described settings in this manual (Operation of the OSD: see chapter “OSD-Operation”):



OSD Menu	Menu item	Setting	Description
OSD	POS. X	0-xxx	Horizontal position of the OSD
	POS. Y	0-xxx	Vertical position of the OSD
	SIZE	SMALL	Small OSD menu windows
		LARGE	Large OSD menu windows
	OSD TIMEOUT	2-20	Time setting for automatic OSD shutoff
INFO	VERSION	X.XX.XX	Displays the current SW version
OPTION	FACTORY RESET		Resetting to factory settings



**Video-In-Motion function**

It is possible to activate and deactivate the video-in-motion in the OSD menu “OPTION” (Operation of the OSD: see chapter “OSD-Operation”).



OSD Menu	Menu item	Setting	Description
OPTION	VIM	ON	Video-in-motion activated
		OFF	Video-in-motion deactivated

The Video-In-Motion function is permanently active without disturbing the navigation performance.

**Selecting the interface as current video source**



A **Long press** of the “Hands-free Mode OFF” OR a **Long press** “Right Arrow” button will choose the interface as current video source.

A **Short press** of the “Hang-Up” button will switch the video sources (cameras). Each short press will switch to the next enabled input. If all inputs are enabled the order is:

*FRONT CAM → REAR CAM → ...*

Inputs which are not enabled are skipped.