V1.0

INSTALLATION GUIDE

INCL. START-UP INSTRUCTIONS, CAMERA SETTINGS, GPS RECEPTION, 4G/LTE and much more.

CAR MEDIA SYSTEMS

VN945-MVS-4G

SMART NAVICEIVER

MOBILE INTERNET READY

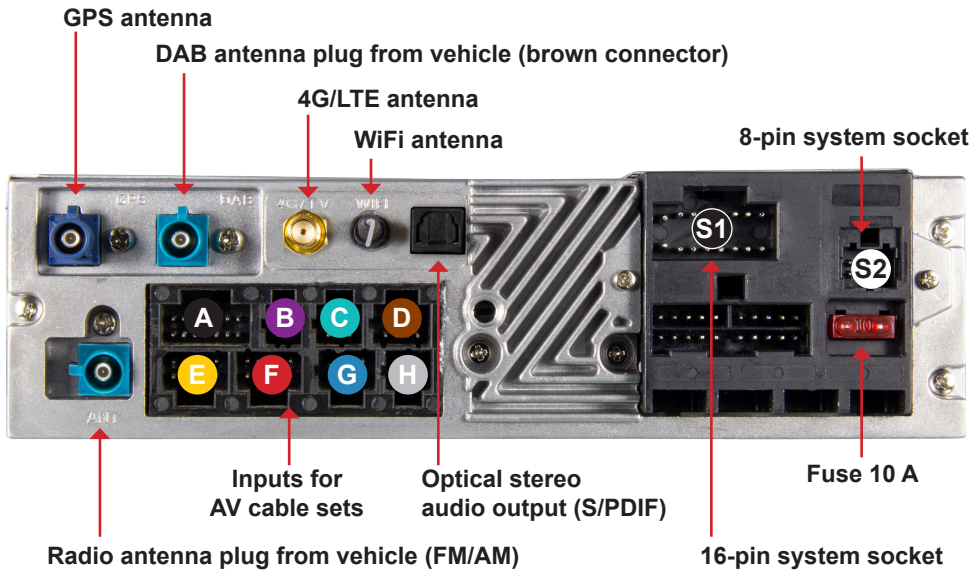
VISION ANDROID™ SERIES

SCOPE OF DELIVERY

ITEM	FIGURE	QUANTITY
Main device **Art. No. VN940-4G**		1
Large built-in console **for Mercedes-Benz Vito W447** **Includes 4 screws, silver-black** **Art. No. VNA-CON-MVS**		1
AV cable set 1 **with audio and video** **connections** **incl. rear view camera** **(14-pin plug)** **Art. No. ZERW-120014-207**	**A**	1
USB port 1 **(4-pin plug)** **Art. No. ZECL-290004-217**	**B**	1
4G/LTE dongle **(6-pin plug)** **Art. No. ZESW-012900-004**	**C**	1
Adapter cable for **factory USB port 2** **(8-pin plug)** **Art. No. ZECL-29008-213**	**D**	1

SCOPE OF DELIVERY

ITEM	FIGURE	QUANTITY
AV cable set 2 with power, audio and video connections, additional camera input (8-pin plug) Art. No. ZERW-120008-210	G	1
Y-adapter for the external microphone and the receiver of the separately available remote control (6-pin plug)	H	1
GPS antenna Art. No. ZESW-011701-007		1
External microphone (Mini jack) Art. No. ZECL-035201-330		1
4G/LTE antenna Art. No. VNA-LTE		1



S Der System-Kabelsatz ist NICHT im Lieferumfang enthalten.

Je nach Fahrzeugtyp müssen die folgenden CAN-Bus Adapter-Sets separat erworben werden:

VNA-CAN-MV-ISO für Fahrzeuge mit ISO-Anschluss
VNA-CAN-MV-QL für Fahrzeuge mit Quadlock Anschluss

Schließen Sie den **schwarzen Stecker (16-pol)** an **S1** und den **weißen Stecker (8-pol)** an **S2** an, welche sich am Kabelbaum des jeweiligen CAN-Bus Dekoder befinden.

B USB port 1 (4-pin plug, purple)

Use this USB port for USB storage media. For example, the cable can be routed into the glove compartment so that the USB socket is accessible there.

C 4G/LTE dongle (6-pin plug, turquoise)

Please note the information on page 10.

D Adapter cable for factory USB port 2 (8-pin plug, brown)

Connect the adapter cable to the connector of the factory USB port.
Use this USB port in conjunction with the Media Connect function to connect your Android smartphone to the Naviceiver.

A AV cable set 1 (14-pin connector, black)

RCA white (FL):	Audio output Front/Left
RCA red (FR):	Audio output Front/Right
RCA white (RL):	Audio output Rear/Left
RCA red (RR):	Audio output Rear/Right
RCA green (SUB):	Audio output Subwoofer
RCA yellow (VIDEO OUT 1):	Video output for external monitor 1
RCA yellow (VIDEO OUT 2):	Video output for external monitor 2
RCA yellow (VIDEO AUX IN):	Video input for an external signal source
RCA yellow (R-CAM IN):	Video input for analog rear view cam Video input for analog HD rear view cam (AHD)*

If necessary, use the CAM +12V and CAM GND connections of the enclosed connection plug G (8-pin plug, blue) to supply power to the camera.

* Only for compatible AHD cameras such as VNA-RCAM-DBJ228HD or VNA-RCAM-CS240HD.

NOTE: Refer to page 13 for more information on camera settings.

E Not in use

F Not in use

G AV cable set 2 for front or additional cameras (8-pin plug, blue)

RCA yellow (F-CAM IN):	Video input for the front or additional cameras
Cable yellow (CAM +12V):	Power supply for cameras
Cable black (CAM GND):	Ground connection for cameras

NOTE: Refer to page 13 for more information on camera settings.

H Y adapter (6-pin plug, grey)

Red jack:	Connection for the IR receiver of the optionally available remote controller **VNA-REM40**
Black jack:	Connection for the included external microphone

IMPORTANT NOTES

This guide is an aid for the professional installation of the device.

Please note the following notes before installation:

- Always handle all parts of the device and the components of your vehicle with care.
- Under all circumstances observe the regulations of the vehicle manufacturer and do not make any changes to the vehicle which could impair driving safety.
- For safety reasons, disconnect the vehicle battery's ground connection before installation.
- Please always pay attention to the correct polarity of the connections.
- Please do not modify any harnesses or connections of the device or the vehicle as this may affect the warranty.
- Make sure that no cables are squashed or cause a short circuit.
- Do not lay cables in front of the airbags, e.g. in the dashboard or in a way that affects their function.

COMPATIBILITY

This device is designed for installation in the following vehicles only:

Mercedes-Benz Vito W447, built from 2014

Depending on the vehicle type, the following CAN bus adapter sets must be purchased separately:

VNA-CAN-MV-ISO for vehicles with ISO connection
VNA-CAN-MV-QL for vehicles with Quadlock connection

RECOMMENDED TOOLS

Torx T25 screwdriver or bit

Cable ties

Plastic mounting wedges

GENERAL INSTALLATION INSTRUCTIONS

GPS antenna

The GPS antenna should be glued horizontally to the dashboard with the adhesive side down. Reception is not possible with a metal-coated pane. Choose a level spot with a clear view of the sky. The location should be about 50 - 70 cm away from the main unit, otherwise the GPS measurement accuracy will decrease. When installing the GPS antenna in the vehicle, the GPS accuracy is determined by the installation position and the body shape of the vehicle. Accuracy is usually lower when the GPS antenna is installed in the dashboard.

Remove the foil on the bottom of the GPS antenna

IMPORTANT NOTE: When using the device for the first time and installing the navigation software for the first time, the search for GPS signals can take up to 30 minutes. After enough GPS satellites have been found to determine the position, they are permanently stored in the device and can therefore be found more quickly. If no GPS satellites are found afterwards or the GPS reception is poor, please note the following:

In order for the navigation software to function properly, sufficient GPS reception must be ensured on the Naviceiver. This is significantly influenced by the installation position of the GPS antenna in the vehicle. Therefore, make sure that the GPS antenna is properly installed in your vehicle to ensure the best possible reception.

Depending on the location or the topographical conditions in the reception area, GPS reception can vary and thus affect the functionality of the navigation software. GPS reception is also dependent on local satellite reception, which could be affected by current or global events.

Under certain circumstances, GPS reception can also be impaired by electronic devices such as smartphones, inductive charging cradle or toll devices (e.g. Telepass, GO-Box etc.) in the vicinity of the GPS antenna. In this case, reposition the electronic devices.

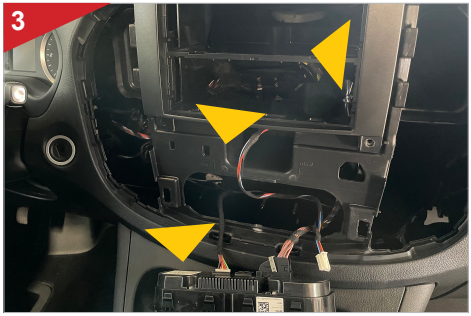
PRE-ASSEMBLY

Before beginning the installation, you must pre-assemble the ESX Smart Naviceiver.

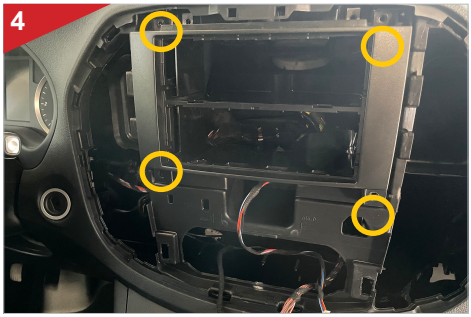
To do this, slide the device through the enclosed mounting panel. The device must then be screwed to the frame with the 4 enclosed Phillips screws 2.5 x 9.5 mm. Only use the screws provided, otherwise the frame and/or the screen may be damaged.

Start by unclipping the outer frame. Use a suitable mounting wedge for this. Then put the frame aside, it is no longer needed.

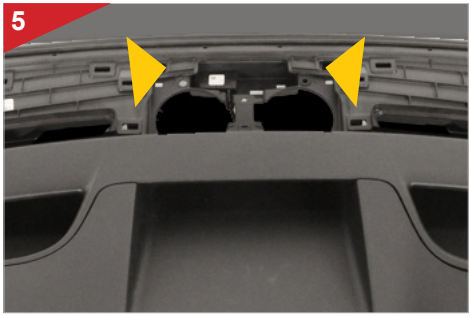
Remove the shelf and the paneling above it. Set these aside, they are no longer needed.



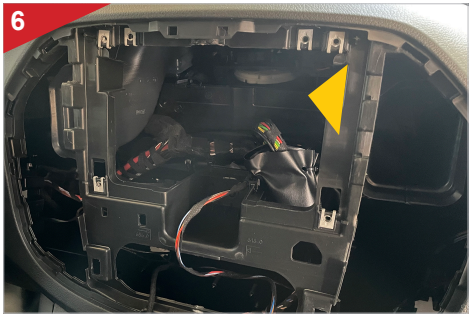
Then pull out the air conditioning control unit and the control panel above it to the front and remove all connection plugs.



Loosen the 4 screws (T25) of the inner frame as marked above. Then put the frame aside, it is no longer needed.



Now position the antennas for GPS and 4G/LTE in the middle under the cover on the windshield. Then lead all connection cables through the dashboard to the center of the radio slot.



Use the openings at the back of the radio slot to route all relevant connection cables to the front.

After you have led all the connection cables out of the radio slot, plug them into the corresponding connections on the ESX Smart Naviceiver, which you first screwed to the large built-in console.

At the back of the ESX installation console, slide the air conditioning control unit and the control panel above it out to the front and allow the elements to click into place.

Then clip the entire built-in console including the ESX Smart Naviceiver into the radio slot. Make sure that the frame is completely locked all around.

Before completing the assembly work, carry out a complete functional test.

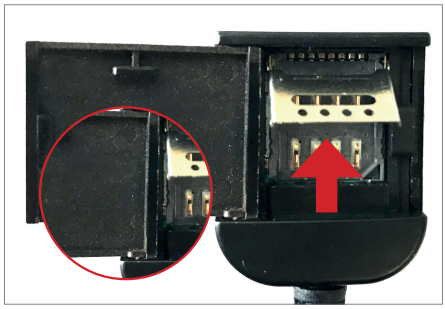
SETUP THE 4G/LTE INTERNET CONNECTION

1. **First lay the two 4G/LTE antennas inside the dashboard towards the windshield, one antenna for the left and one for the right.**

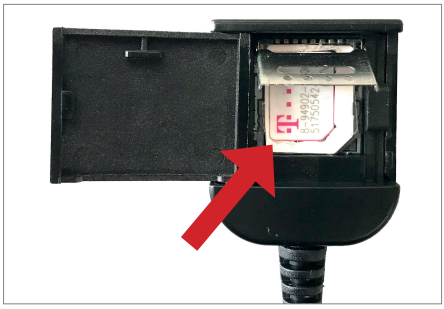
2. **Ideally, you should stick the antennas to the windshield to ensure optimal reception.**

3. **Then insert your SIM card in the 4G/LTE dongle:**

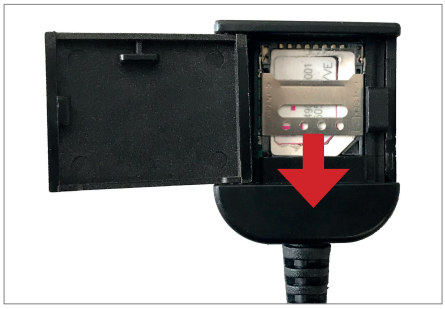
Open the dongle by pushing the flap to the right.



Now open the metal flap carefully with a suitable tool by pushing the flap up.



Then insert your SIM card with the contacts facing down.



Close and lock the metal flap carefully by pushing the flap down.

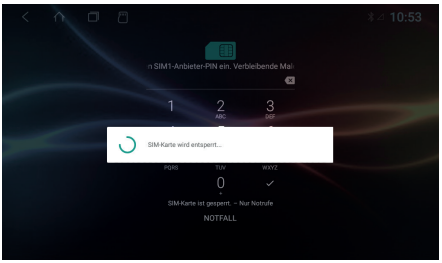
Compatible SIM cards:

Micro SIM

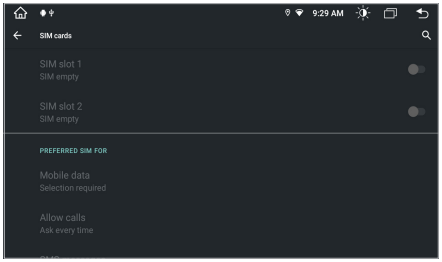
Nano SIM with adapter for Micro SIM

4. Then turn on the device to test the 4G/LTE connection.

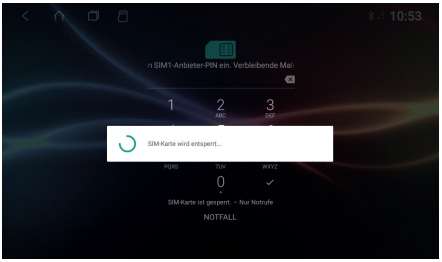
After the device has started, enter your **4-digit PIN code** of the SIM card here. Confirm the entry with the tick.



After successful entry, the SIM card is unlocked.



If the device is successfully connected to the mobile Internet, the 4G symbol appears in the status bar at the top right. The connection can be switched off again under **SIM slot 1** in the **SIM cards** menu.



If the device is turned off, you have to enter the PIN code of the SIM card again after each restart, just like with a smartphone*.

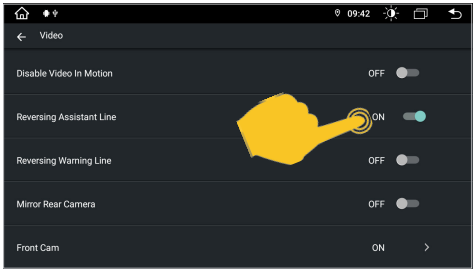
5. After a successful test, install the 4G/LTE dongle in the radio slot or dashboard.

* The SIM card‘s PIN code can be deactivated in standard smartphones. To do this, insert the SIM card in a smartphone and deactivate it accordingly. The steps involved vary depending on the smartphone.

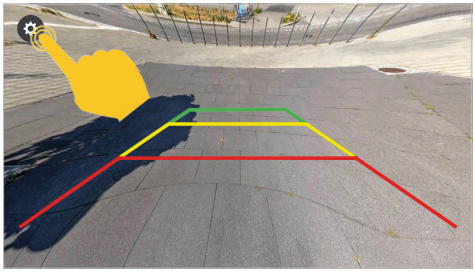
REAR VIEW CAMERA SETTINGS

If you have connected a compatible reversing camera to the camera input of the device, the camera image is automatically displayed when **reverse gear is engaged**. This view is also shown when pressing the **camera direct button**.

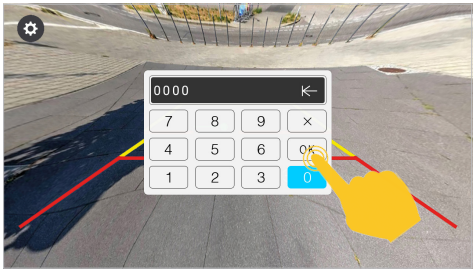
If your rear view camera does not have dynamic guidelines, you can use the device's static parking guidelines.



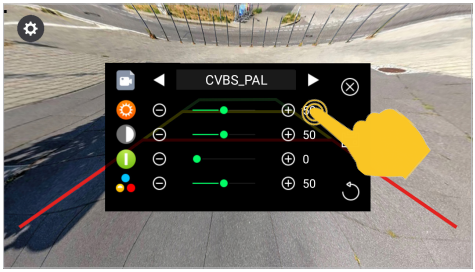
To do this, open the **Car Infotainment** menu in **Settings** and then tap **Video**. Then enable **Reversing Assistant Line**.



If you tap and hold the display, a **gear icon** will appear in the top left corner. Tap to open the camera view settings.



In the following dialog, enter the activation code **0000** and confirm with **OK**.

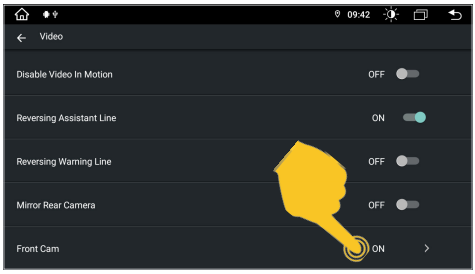


In this menu you can make various image settings for the rear view camera.

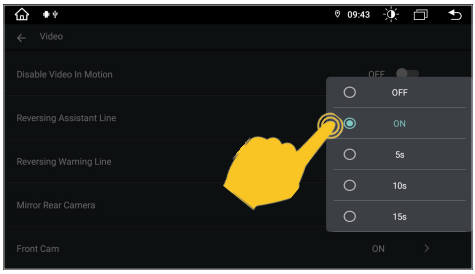
NOTE: If no camera is connected, this view will show **No Signal**.

REAR VIEW CAMERA SETTINGS

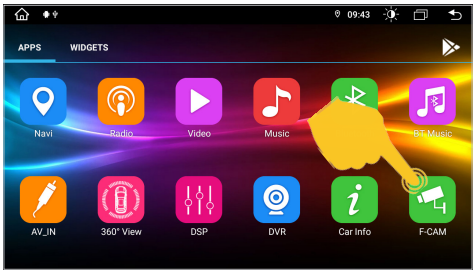
If you have connected a compatible additional camera to the second camera input of the device, this will be displayed via the **F-CAM** app. This view is also shown when you press (twice) the camera direct button, but only if you have previously activated it.



In the **Settings**, open the **Car Infotainment** menu, then tap on **Video**. Activate the corresponding input under **Front Cam**.



If a time selection is made here instead of **ON**, e.g. **5s**, the application closes automatically after 5 seconds and the main screen is shown again.



Tap the **F-CAM** app to see the additional camera view.

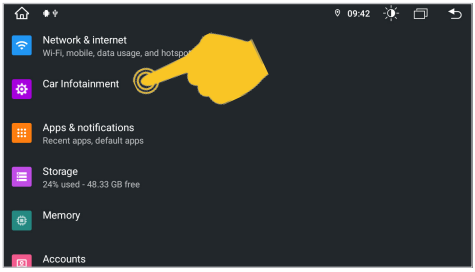
At the top right you can use the **gear icon** to open the settings for the connected camera. With **X** you can close the view.

Alternatively, you can also connect a dual-lens rear view camera with distant view, which you can then use as a rear view mirror camera via the **F-CAM** app.

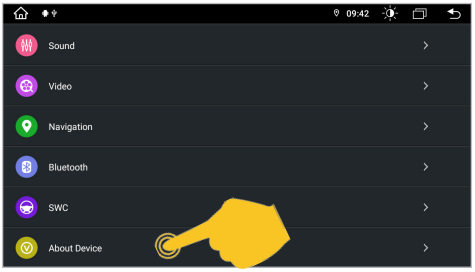
As soon as you then engage reverse gear, the close-up view of the rear view camera is activated again.

HD CAMERA SETTING

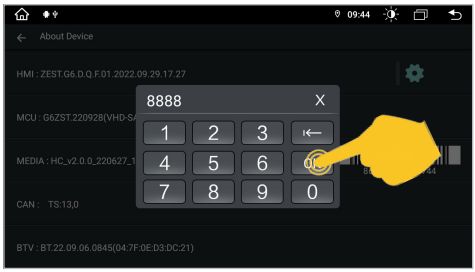
If you are using an ESX HD camera or a compatible AHD camera on cable set „A“ (14-pin plug, black), the settings in the ESX Naviceiver must be changed accordingly.



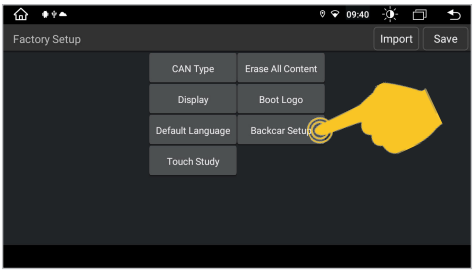
Open the **Settings** from the app menu, then tap on **Car Infotainment**.



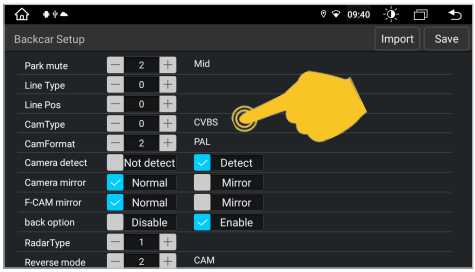
Tap on **About Device** below.



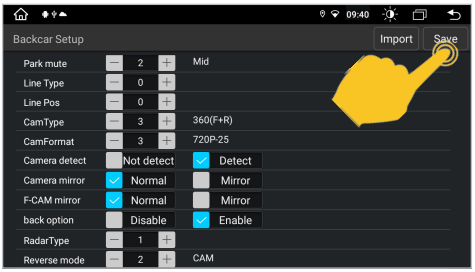
Tap then on the **gear icon** in the top right corner and enter the unlock code **8888**. Confirm with **OK**.



Now tap on **Backcar Setup**.



In the following menu tap on the + under **Cam Type** until **360(F+R)** and under **CamFormat** until **720P-25** can be seen.



Tap Save in the top right to **Save** the setting. The device then restarts.

NOTE: Do not change any other settings in the unlocked menu as specified above, otherwise other device functions could be affected.

CAR MEDIA SYSTEMS

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