

**CS9100 Installation in Lexus
LX570(2008-09)*, LS460(2007-09)*, LS600h L(2008-09)* Cars
Using the NAV2NAV Adaptor**





Disconnect the negative terminal of the accumulator before installing the CS9100 to avoid errors in the ECU.

Before you connect the device, be sure to activate the appropriate protocol of the **NAV2NAV** adapter using the **DIP** switches (**Fig. 1, 2**).



Figure 1

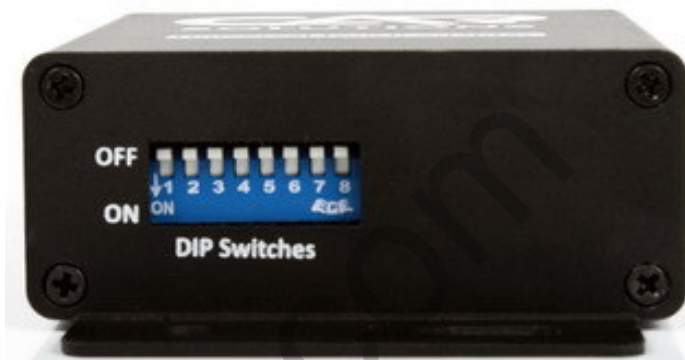


Figure 2

Set the **DIP** switches (**Fig. 2**) on your **NAV2NAV** adapter according to the following **table 1**.

Table 1

DIP Switch #	1	2	3	4	5	6	7	8
Switch Setting	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF

Modify GVIF cable before you connect GVIF – interface to the **PARKING ASSIST** module. Interchange the positions of **LX IN** and **LX OUT** connectors (**Fig. 3**) on the GVIF cable. Retrieve the metal pins from the plastic connector (**marked with a green circle in Fig. 3**) and interchange their positions observing color marking. In this case **LX OUT** connector will not be used. You can detach it completely.

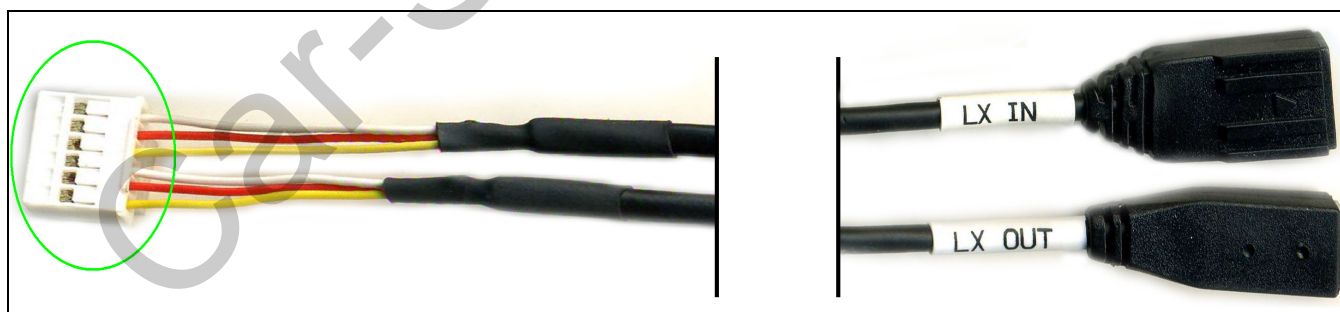


Figure 3

Dismount the glove box from the dashboard. Carefully disconnect all wires that are attached to the glove box. Mount the **CS9100** navigation system in the glove box (**Fig. 4, 5**). Cut a rectangular hole in the back wall of the glove box to fit the connectors of the **CS9100** system and “sink” it deeper in the glove box. Such installation ensures easy access to the navigation system and memory card, which is necessary for further updates of the navigation maps. Mount the **NAV2NAV** adaptor on the back wall of the glove box, using double-sided duct tape or tapping screws.

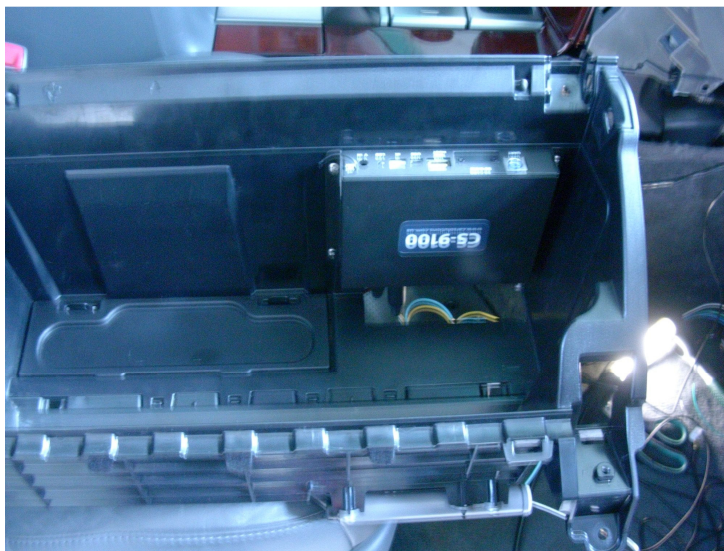


Figure 4



Figure 5

When you finish mounting of the navigation system and the adaptor **NAV2NAV**, disconnect all connectors from the **PARKING ASSIST** module (Fig. 7, 8), which can be found under the interior fan. **PARKING ASSIST** module location is shown in Fig. 6 (can differ in other cars). Connect the **CS9100** navigation system to the **NAV2NAV** adaptor connector (Fig. 1), the GVIF interface, and the **PARKING ASSIST** module wiring (Fig. 9) according to Table 2 or the connection diagram.

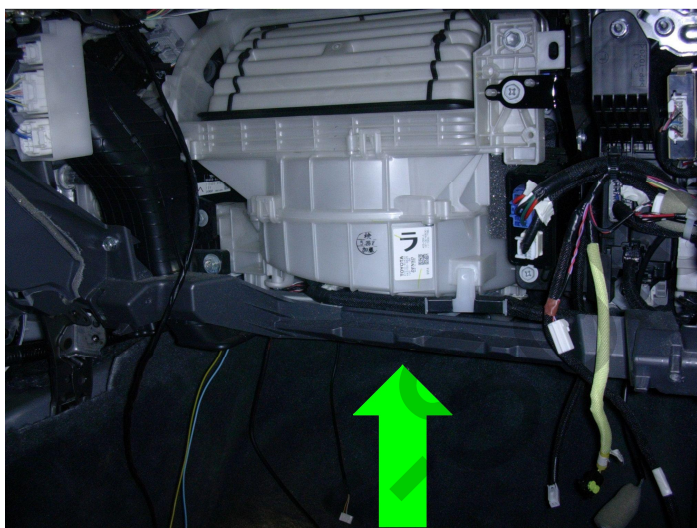


Figure 6



Figure 7



Figure 8



PARKING ASSIST module location is shown as in Lexus LX570. Check service manual to locate it in other models.

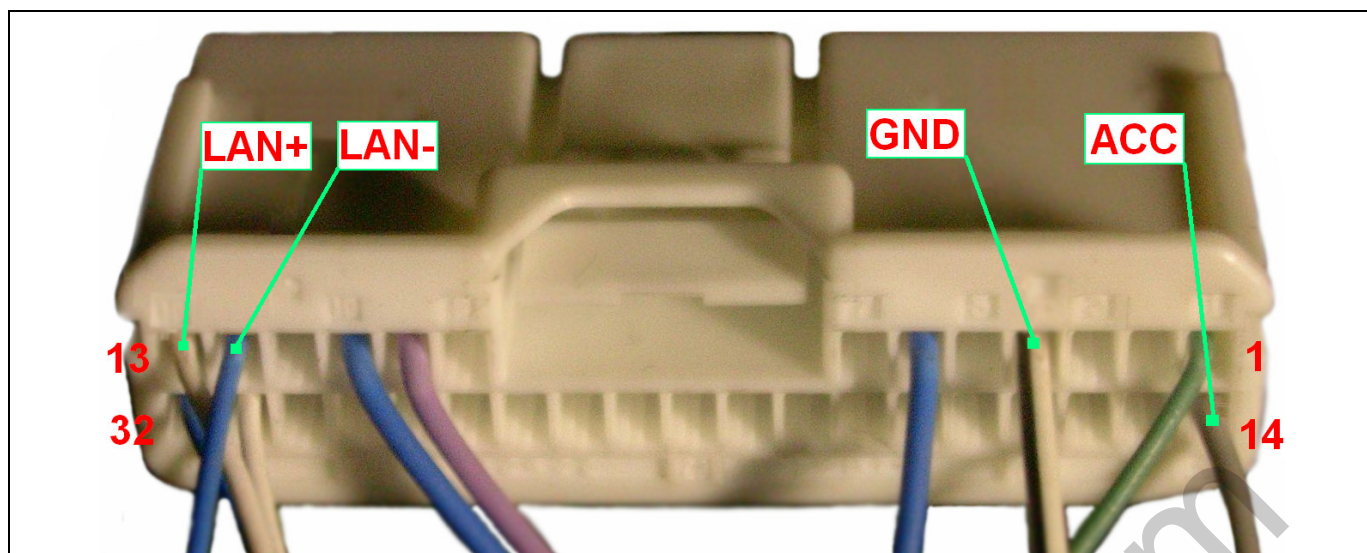


Figure 9

Pinout of the PARKING ASSIST connector from the side where wires are attached.

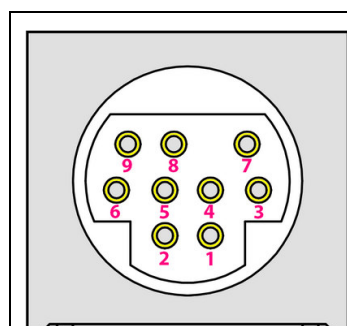


Figure 10

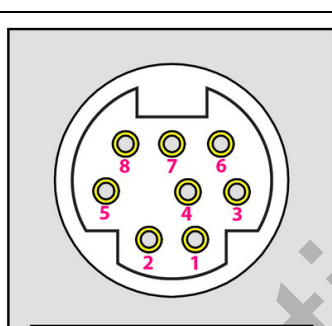


Figure 11

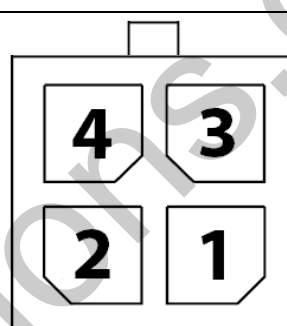


Figure 12

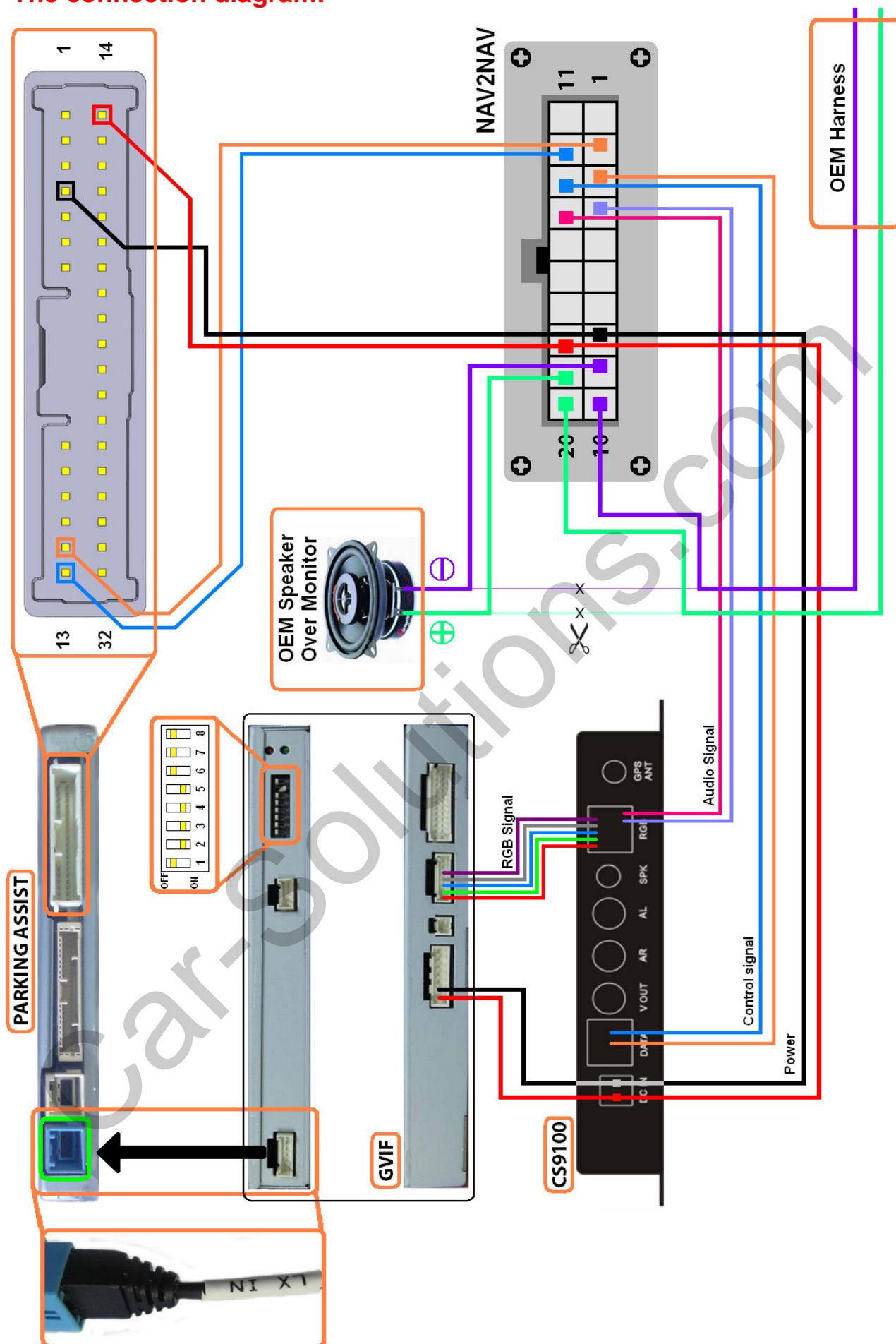
Figures 10, 11, 12 illustrate the pin layout of the RGB, DATA, and DC IN connectors of CS9100.

Connectors are shown from the side where wires are attached.

Table 1

Contact purpose	GVIF interface (not included in CS9100 package)	PARKING ASSIST connector (Fig. 9)	NAV2NAV adaptor connector (Fig. 1)	CS9100 connectors (Fig. 10, 11, 12)
ACC	Red wire (Power)	14	18	4 (Fig. 12) Red wire
GND	Black wire Power)	4	8	2 (Fig. 12) Black wire
Tx (from CS9100)			3	3 (Fig. 11) White wire
Rx (from CS9100)			13	4 (Fig. 11) Brown wire
AUX+			14	9 (Fig. 10) Brown wire
AUX-			4	Shield (pic. 10) Black wire
LAN Tx-		12	2	
LAN Tx+		13	12	
Video RED	Red wire (RGB IN)			1 (Fig. 10) Pink wire
Video GREEN	Green wire (RGB IN)			2 (Fig. 10) Green wire
Video BLUE	Blue wire (RGB IN)			5 (Fig. 10) Yellow wire
Video SYNCHRO	White wire (RGB IN)			4 (Fig. 10) Grey wire
Video VGND	Black wire (RGB IN)			3 (Fig. 10) Black wire
Vol In+			20	
Vol In-			10	
Vol Out+			19	
Vol Out-			9	

The connection diagram:



The wire marking on the diagram is used for illustration purpose only, and does not match the actual coloring of CS9100 wires.

In this type of installation sound from CS9100 can be played back via car onboard audio systems in several ways:

1. Via additional speaker, included in the **CS9100** package.
2. Via the car original speaker. Connect the onboard speaker to the **NAV2NAV** adaptor according to **Table 2** or the connection diagram. In this case the **NAV2NAV** adaptor switches the sound from the navigation system to car onboard audio system.
3. With the aid of FM transmitter integrated into the GVIF – interface. Download full manual from our website for detailed information on this procedure.
4. By connecting the CS9100 line output to the car's AUX input.



When you connect the GVIF interface to the **PARKING ASSIST** module, make sure that the guiding rails on the **LX IN** connector slide completely inside the socket (**Fig. 13, 14**). Otherwise image will not appear on the multi-display.



Figure 13



Figure 14

CS9100 Navigation System Image Activation

Once you finish all setup procedures, connect again the negative terminal of the accumulator (if you disconnected it) and switch on the ignition. The on-board computer and all new equipment will switch on. Press **AUDIO** button (**Fig. 15**) **twice** to see the **CS9100** image. Press **MAP** to see the original navigation system image.



Figure 15

How to install the GPS antenna

Removal of the original navigation system allows you to connect **CS9100** to the car's original GPS antenna. The best way to do this is to desolder the plastic socket (fig. 16) from the original wiring and solder a 10cm coaxial cable fitted with a SMA Male connector (fig. 17) with the wiring. The **CS9100** navigation system is fully compatible with the original antenna in all specifications.

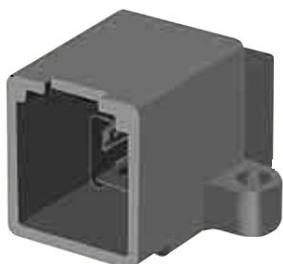


Figure 16



Figure 17

Rear spoiler is the best place for aftermarket GPS antenna installation (fig. 18) (cable length allows for it). If there is no rear spoiler in your car you can use a fin-shaped antenna (not included in the package) (fig. 19). You can also install antenna under the windshield, on or under the plastic panel (fig. 18)

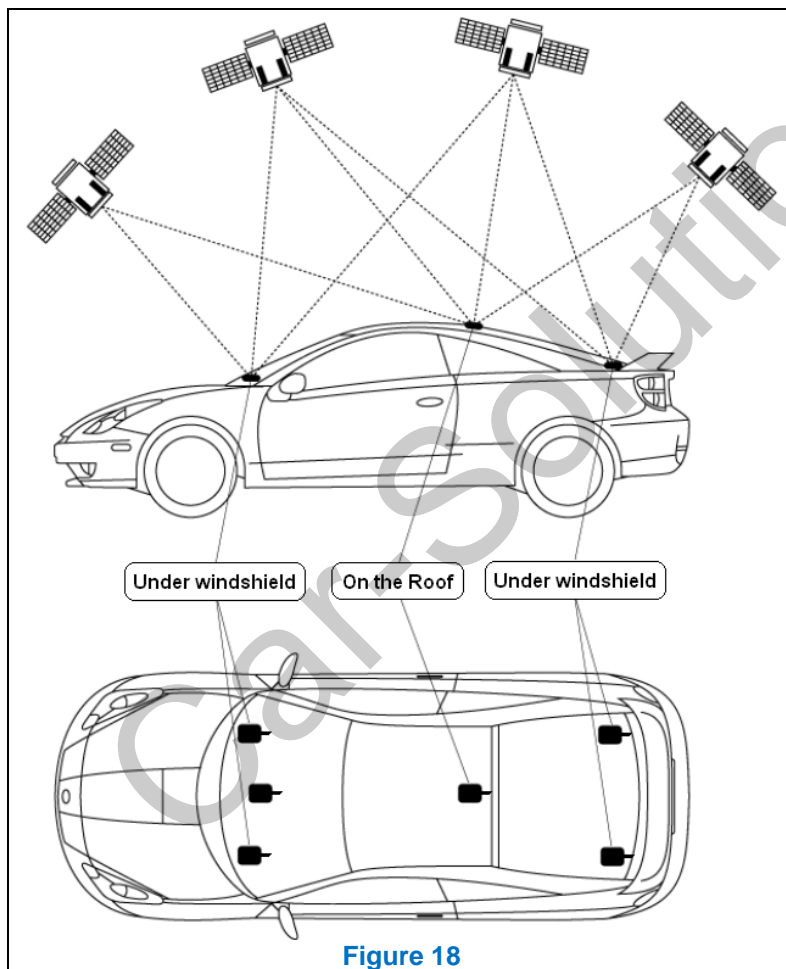


Figure 18

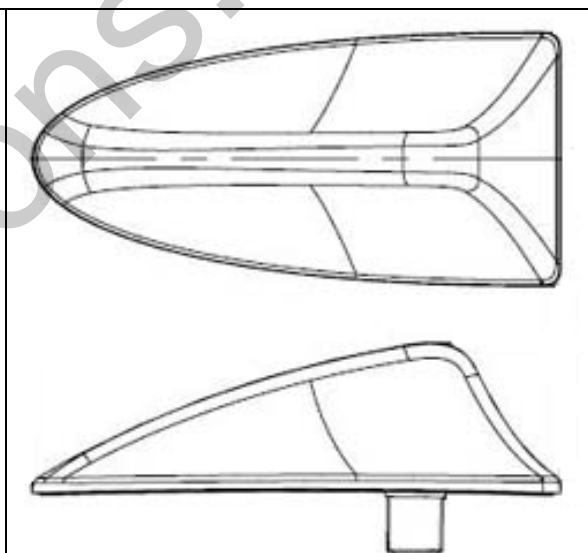


Figure 19



Figure 20

- ⚠ When installing GPS antenna in a concealed position, make sure there is no metal above it.
- ⚠ Install GPS antenna with the magnetic base down (fig. 20)
- ⚠ If your car windshield and windows are made of thermal glass, fix GPS antenna on the roof or rear spoiler.

When you switch on the **CS9100** navigator for the first time, you can perform all setup procedures using the remote control or a USB mouse. If **CS9100** does not respond to the remote control synchronize them. Press **Return** and **Home** buttons simultaneously and hold for 1s. Synchronous flashing of LEDs indicates a successful synchronization. When you connect **CS9100** for the first time make sure appropriate control protocol is activated:

1. Use the remote control to enter **Settings** in the main menu.
2. Choose **System Config** (Fig. 21).
3. Go to the **Panel I** tab.
4. Choose the **Kenwood** protocol (Fig. 22). Press **SAVE**.



Figure 21

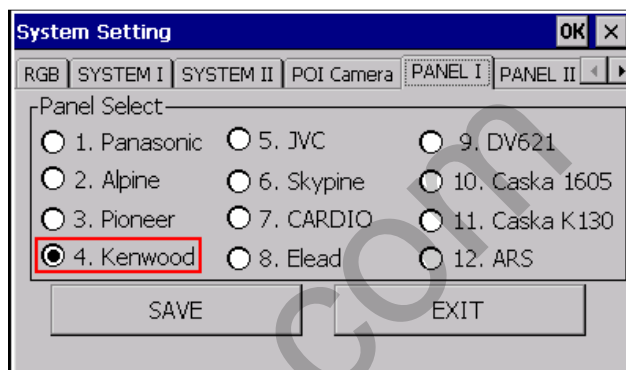


Figure 22

To be able to control the navigation system using the original touch panel without the remote control, you'll need to calibrate it:

1. Use the remote control to enter **Settings** in the main menu.
2. Choose **Calibration**.
3. Use a stylus from a PDA or any other non-sharp object to click on the marks that appear on the screen. (Fig. 23)
4. Press **EXIT**.

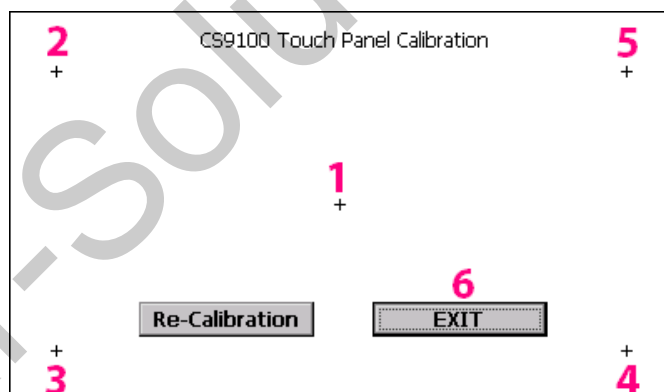


Figure 23

Once you finish all setup procedures you can activate **Autorun** of the navigational software (or any other software) in the **Settings** menu (Fig. 21).

 *** This solution fits only for cars with an external PARKING ASSIST module.**

 **GVIF is not included into the CS9100 package.**

 **NOTE that this manual illustrates installation of CS9100 in Lexus LX570 car with HDD based original navigation system and original PARKING ASSIST module.**

 **Drag-and-drop functionality is not supported by the touch screen because of limited internal control protocols of the car.**