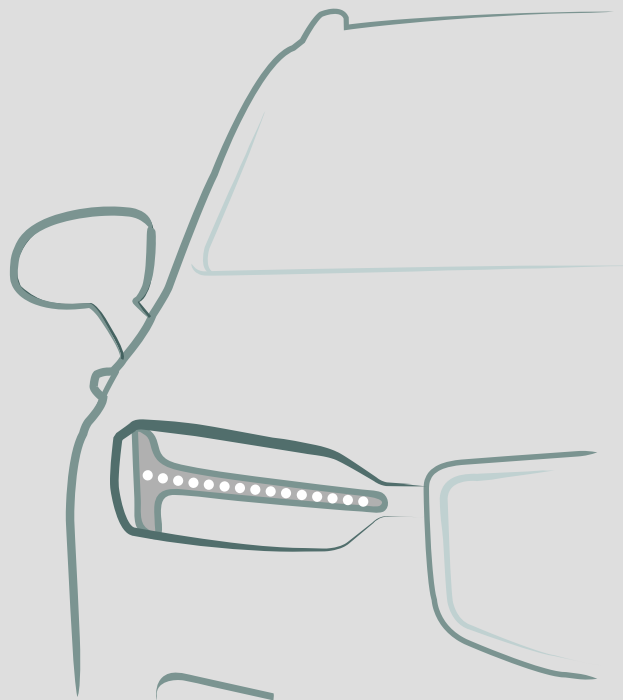




SENSUS NAVIGATION



SENSUS NAVIGATION

Sensus Navigation is a satellite based traffic information and route navigation system.

Development work is constantly in progress to improve our product. Modifications may mean that information, descriptions and illustrations in

this supplement differ from the equipment in the car. We reserve the right to make modifications without prior notice.

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NAVIGATION

Activating and deactivating the navigation system*

The navigation system is activated automatically when the driver's door is opened and is deactivated only when the driver leaves the car and locks it.

Activating navigation



1 Navigation system tile

2 Home button

Show the map image in the centre display by tapping on the top tile (1) on the home view.

If the centre display does not show the navigation system tile – press briefly once on the home button (2) and then tap on the navigation system (1) tile.

Then a map of the current area is shown with the car symbolised by a blue triangle.



Press on this symbol to show the map image across the entire centre display.

WARNING

Observe the following.

- Direct all your attention to the road and make sure that all your concentration is on driving.
- Follow applicable traffic legislation and drive with good judgment.
- Due to weather conditions or time of year affecting the road conditions, some recommendations may be less reliable.

Deactivating navigation

The navigation system cannot be switched off but always works in the background - it is only

switched off when the driver locks and leaves the car.

NOTE

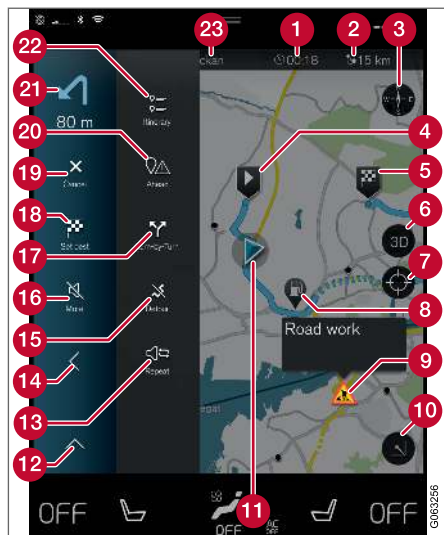
The navigation system is also available when the engine is switched off. When the battery level gets too low the system switches off.

Related information

- Navigation system* in centre display (p. 6)
- Navigation system* in driver display (p. 8)
- Navigation system* in head-up display* (p. 9)
- Control the navigation system* with voice recognition (p. 9)
- Symbols and buttons in the navigation system* (p. 5)

Symbols and buttons in the navigation system*

The map in the centre display shows symbols and colours providing information about various roads and the area around the car and the route. A tool bar with different buttons for different settings is to the left.



Symbols and buttons on the map

- 1 Arrival time/remaining travel time
- 2 Distance to destination
- 3 Compass/changes between north and travel direction up
- 4 Starting
- 5 Destination/final destination
- 6 Changes map display between 2D and 3D
- 7 Reset the map to follow the car
- 8 Point of interest (POI¹)
- 9 Traffic information
- 10 Minimises (expanded view) or maximises the map image (full screen)
- 11 Car on planned route
- 12 Minimises the tools field
- 13 Repeat the current voice guidance
- 14 Minimises the tools field
- 15 Calculate detour
- 16 Voice guidance temporarily On/Off

- 17 Shows list with the itinerary's guidance points
- 18 Specifying destinations/intermediate destinations
- 19 Cancels guidance
- 20 Shows list of the itinerary's points of interest (POI¹) and traffic information
- 21 Next manoeuvre
- 22 Itinerary and Alternative route
- 23 Destination/final destination

Related information

- Information card in navigation system* (p. 6)
- Traffic disruptions on the map (p. 18)
- Real Time Traffic Information (p. 20)
- Showing traffic congestion along route (p. 19)

¹ Point of Interest

Information card in navigation system*

All map icons, such as destination, interim destination and favourites, have an information card that opens after tapping the icon.

Pressing on the information card shows a small card, two presses show a larger card with more information. The information card's content and options vary depending on the type of icon.

With, for example a marked point of interest (POI²), the driver can select:

- **Start navigation** - the position is saved as a destination
- **Add as waypoint** - the position is saved as an intermediate destination (only displayed at the specified destination)
- **Save** - the position is saved in the library
- **Remove from itinerary** - the position is removed if it is included in the itinerary
- **Nearby POI** - points of interest when the car's position appears

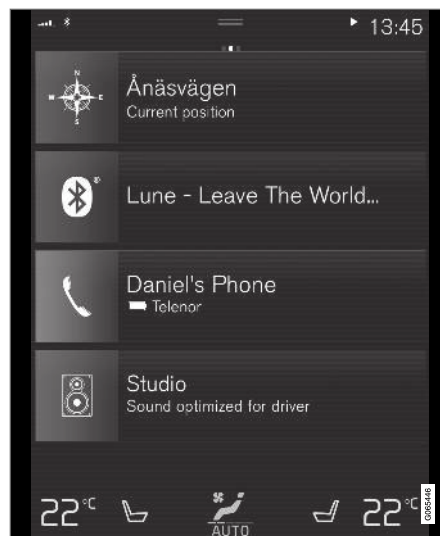
Related information

- Itinerary (p. 15)
- Specify destination with point of interest (p. 12)
- Showing POIs along a route (p. 17)

² Point of Interest

Navigation system* in centre display

The navigation system is presented and operated in several different ways, e.g. via the centre display.



All settings for the navigation system are defined via the centre display. Here, the driver sets how the map is to be displayed or enters a destination.

If the map image is not shown in the centre display – tap on the top tile (for the navigation system).

Where am I?

What geographic position does the car have now?

- Press the map's car symbol (blue triangle) - the information is shown directly on the map.

Find the car symbol on the map

After zooming in and out and moving around on the map, it can sometimes be hard to find your way back to the position of the car. Press the crosshairs to reset the map to follow the car symbol.

North or direction of travel upwards on the map

There are two ways of showing the car's movement in relation to the map. Press the symbols to switch between having north or the direction of travel upwards on the map.

When the map is shown with north upwards, the car symbol moves in the current compass direction on the map. If the car symbol moves to the left on the map, the car is driving westwards.

When the car symbol is pointing upwards, the map rotates under the car symbol, depending on how the car is turning. The compass symbol points towards north (N) on the map, and the centre of the compass shows the direction in which the car is pointing:

Compass symbols	Compass direction
N	North
NE	Northeast
E	East
SE	Southeast
S	South
SW	Southwest
W	West
NW	Northwest

2D or 3D display

Tap on the symbols to shift between 2D and 3D display.

2D

3D

For 3D display, the car's direction of travel is always shown upwards. The map rotates under the car symbol, depending on how the car is turning. The compass symbol indicates which direction north is (N) on the map, and the centre of the compass shows the direction in which the front of the car is pointing. The map scale is not shown in 3D mode.

For 2D display, the map is shown with north upwards, and the car symbol moves in the current compass direction on the map.

Zoom in

Make the map larger by pressing the centre display twice in quick succession or by placing two fingers together on the centre display and drawing them outwards.

Zoom out

Zoom out from the map by tapping once with two fingers on the centre display or dragging two fingers together on the centre display.

Scroll

Place one finger on the map, swipe in the desired direction, and release. The scroll function is only possible with the map maximised, not minimised.

Switching heading display

Maximise the map and press on the map heading at the top of the centre display. Choose between the following displays as the heading on the map:

1. Destination Destination, arrival time (**ETA**) or remaining travel time (**RTA**) and distance to destination (Distance). To select **ETA** or **RTA**, see the section "Settings for route and road navigation".
2. Current position as address (Address) or as coordinates (Coordinates). When coordinates are shown, altitude is also shown (Altitude). To choose between address and coordinates, see section "Map settings".

Related information

- Navigation system settings* (p. 21)
- Navigation system* in driver display (p. 8)
- Navigation system* in head-up display* (p. 9)
- Settings for route and road navigation (p. 22)
- Map settings (p. 22)

Navigation system* in driver display

The navigation system is presented and operated in several different ways, e.g. via the driver display.

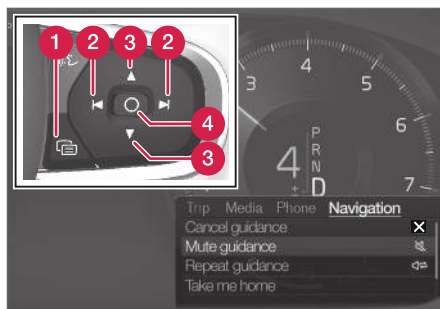


The map is only shown in the 12" driver display.

During driving the driver is guided by voice guidance and instructions on the driver display. Map display in the driver display can also be activated without a set destination.

The right-hand steering wheel keypad and the driver display

The right-hand steering wheel buttons can be used to manage some of the functions in the navigation system, e.g. **Take me home** and **Cancel guidance**. If a message is shown the driver display, it must first be acknowledged or dismissed for the menu to be shown.



- 1 Opening/closing the menu. The menu is closed automatically after a period of inactivity or with certain options.
- 2 Browsing between menus.
- 3 Browsing between menu options.
- 4 Confirm or highlight an option.

Related information

- Activating and deactivating the navigation system* in the driver display (p. 8)
- Navigation system* in centre display (p. 6)
- Navigation system* in head-up display* (p. 9)

Activating and deactivating the navigation system* in the driver display

The navigation system is shown automatically in the driver display when a destination is set. The navigation system can also be shown without specifying a destination.

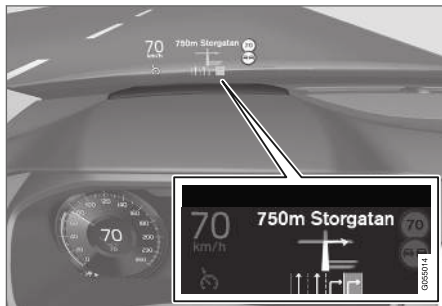
1. Drag down the centre display's top view.
2. Press **Settings**.
3. Press **My Car** → **Displays** → **Driver Display Information**.
4. Press the radio button **Show Map** to show the navigation system in the driver display without an entered destination.

Related information

- Navigation system* in driver display (p. 8)

Navigation system* in head-up display*

The navigation system is presented and operated in several different ways, e.g. via the head-up display.



Navigation system on windscreen.

The driver can receive guidance and information from the navigation system in the head-up display at the bottom of the windscreen.

Whether or not the navigation system should be shown in the head-up display can be set, as well as the position of the information field.

Related information

- Navigation system* in centre display (p. 6)
- Navigation system* in driver display (p. 8)

Control³ the navigation system* with voice recognition

Several navigation system functions can be activated with voice commands.

Press  on the right-hand keypad on the steering wheel and say one of the following commands:

- **"Navigation"** - Initiates a navigation dialogue and shows examples of commands.
- **"Take me home"** - Guidance is given to the Home position.
- **"Go to [City]"** - Specifies a city as a destination. Example "Drive to London".
- **"Go to [Address]"** - Specifies an address as a destination. An address must contain city and street. Example "Drive to 5 King's Road, London".
- **"Add intersection"** - Starts a dialogue where two streets must be specified. The intersection point of the specified streets then becomes the destination.

- **"Go to [Post code]"** - Specifies a post code as a destination. Example "Drive to 1 2 3 4 5".
- **"Go to [contact]"** - Specifies an address from the phone book as a destination. Example "Drive to Robyn Smith".
- **"Search [POI category]"** - Searches for adjacent points of interest (POI) within a certain category (e.g. restaurants)⁴. To have the list sorted along the route - say **"Along the route"** when the results list is shown.
- **"Search [POI category] in [City]"** - Searches for points of interest (POI) within a certain category and city. The list of results is sorted according to the city's central point. Example "Search for restaurant in London".
- **"Search [POI name]"**. Example "Search Kielder Forest".

³ Applies to certain markets.

⁴ The user has the option of calling the POI or specifying it as a destination.

- ◀ ● **"Change country/Change state"^{5,6}** - Changes the search area for navigation.
- **"Show favourites"** - Shows favoured positions in the driver display.
- **"Clear itinerary"** - Erases all the stored intermediate destinations and final destination in an itinerary.
- **"Repeat voice guidance"** - Repeats the last spoken guidance.
- **"Turn off voice guidance"** - Switches off voice guidance.
- **"Turn on voice guidance"** - Starts the switched-off voice guidance.

Addresses

When an address is entered, the search area is defined as the search area preset in the navigation system. It is possible to switch to a different search area. If the new search area uses a different language to the selected system language, the system will automatically switch to a different recognition engine. Therefore, state the address in the language used in the new search area.

Enter destination directly on map

A destination can be specified in different ways in the navigation system* – marking a point on the map with your finger is one of them.

In many cases it is simplest to scroll to the desired position on the map and tap it with your finger.

1. Check that the map view is in max mode.
2. Scroll the map until the desired position is in view.
3. Press and hold the position – an icon is created and a menu opens.
4. Select **Go here** – guidance starts.

Delete the icon.

To erase the icon from the position:

- Select **Delete**

Adjust the position of the icon

To adjust the position of the icon:

- Tap and hold the icon, drag it to the desired position, and release.

Related information

- Itinerary (p. 15)
- Specifying a destination with an address (p. 11)

- Specify destination with free text searching (p. 11)
- Specify destination with point of interest (p. 12)
- Specifying a destination with latest/favourites/library (p. 13)
- Specify destination with Send to Car (p. 14)
- Settings for route and road navigation (p. 22)

⁵ In European countries, "Country" is used instead of "State".

⁶ For Brazil and India, the search area is changed via the centre display.

Specifying a destination with an address

A destination can be specified in different ways in the navigation system* - selecting an address is one of them.

1. When the map is shown, expand the tools field using the down arrow on the left-hand side and press **Set dest.**



> The map image changes to free text searching.

2. Press **Address**.
3. All fields do not need to be filled in. For a journey to a city, for example, it is sufficient to enter just the country and city. Guidance is then given to the city's centre.
4. Select one of the available text field options and type using the centre display keyboard:
 - **Country/State/Province**
 - **City/Territory/Postcode**
 - **Address**
 - **Number**
 - **Junction**

For cars with Volvo On Call* it is also possible to send addresses and destinations to the car's navigation system via the Volvo On Call app and a Volvo On Call service centre⁷.

Related information

- Itinerary (p. 15)
- Enter destination directly on map (p. 10)
- Specify destination with free text searching (p. 11)
- Specify destination with point of interest (p. 12)
- Specifying a destination with latest/favourites/library (p. 13)
- Specify destination with Send to Car (p. 14)
- Settings for route and road navigation (p. 22)
- Information card in navigation system* (p. 6)

Specify destination with free text searching

A destination can be set in different ways in the navigation system* - with free text searching, for example, a search can be made using phone numbers, postcodes, streets, cities, coordinates and points of interest (POI⁸).

The keyboard in the centre display can be used to type most characters and to search for destinations.

1. When the map is shown, expand the tools field using the down arrow on the left-hand side and press **Set dest.**



> The map image changes to free text searching.

2. Enter a search term in the search box or first limit the hits by selecting a filter.
 - > Search hits are shown while characters are being entered.

⁷ Only applies to certain markets.

⁸ Point of Interest

- ◀ 3. **If the search gives the desired result** – tap on a search hit to show its information card and select to continue to use the search hit.

If the search gives too many results – tap on **Advanced filter** and select position to search around, and then select to continue to use the search hit:

- **Around car**
- **Around destination** - only shown if a destination is entered.
- **Along route** - only shown if a destination is entered.
- **Around point on map**

Coordinates

A destination can also be specified with map coordinates.

- Type, for example, "N 58.1234 E 12.5678" and tap **Search**.

The points of the compass **N**, **E**, **S** and **W** can be entered in different ways, e.g. in accordance with the following:

N 58,1234 E 12,5678 (with spaces)
N 58,1234 E 12,5678 (without spaces)

58,1234**N** 12,5678**E** (with the point of the compass **after** the coordinate)

58,1234-12,5678 (with hyphen **without** point of the compass)

You can use a comma [,] instead of a full stop [.] if you prefer.

Related information

- Itinerary (p. 15)
- Enter destination directly on map (p. 10)
- Specifying a destination with an address (p. 11)
- Specify destination with point of interest (p. 12)
- Specifying a destination with latest/favourites/library (p. 13)
- Specify destination with Send to Car (p. 14)
- Settings for route and road navigation (p. 22)

Specify destination with point of interest

A destination can be specified in different ways in the navigation system* - selecting a point of interest (POI⁹) is one of them.

1. When the map is shown, expand the tools field using the down arrow on the left-hand side and press **Set dest.**



> The map image changes to free text searching.

2. Press **POI**.
3. Tap on the desired filter (some options only show a set destination or intermediate destination):
 - **Near the car**
 - **Near the destination**
 - **Close intermediate destinations**
 - **Along route**
 - **Around point on map**
4. Search for and select desired point of interest.

⁹ Point of Interest

5. Select **Start navigation** or **Add as waypoint**.

Many POIs (e.g. restaurants) have subcategories (e.g. fast food).

In the settings for the map you can change which POIs should be shown on the map. That setting does not affect searching for POI as destination - even excluded POIs are shown as alternative destinations.

Certain POIs are first shown on the map when the scale is 1 km (1 mile).

i NOTE

- The symbol for a POI and the number of POIs varies between different markets.
- New symbols may appear and others disappear after a map data update. You can browse the menu system to find all the symbols used in the current map system.

Related information

- Itinerary (p. 15)
- Enter destination directly on map (p. 10)
- Specifying a destination with an address (p. 11)
- Specify destination with free text searching (p. 11)

- Specifying a destination with latest/favourites/library (p. 13)
- Specify destination with Send to Car (p. 14)
- Map settings (p. 22)

Specifying a destination with latest/favourites/library

A destination can be specified in different ways in the navigation system* - selecting from a list is one of them.

1. When the map is shown, expand the tools field using the down arrow on the left-hand side and press **Set dest.**



- > The map image changes to free text searching.
2. Then select one of the following lists, at the top of the screen:
 - **Recent**
 - **Favourites**
 - **Library**

After one alternative in a list has been marked, it is added as a destination by using either the **Start navigation** button or the **Add as waypoint** button.

◀◀ **Last**

Previous searches are listed here. Scroll and select.

Also available as a menu option in the driver display and can be viewed using the right-hand keypad on the steering wheel.

The list can be edited using **Edit**.

Favourites

Favourite marked positions from the **Library** are listed here. Scroll and select.

A position erased from **Favourites** remains in the **Library**, but then with an "extinguished" star. To add a position in **Favourites**, go to **Library** and select the relevant position's asterisk again.

A frequently used destination can be programmed and used with **Set Home address**. An entered **Home** destination is also available as a menu option in the driver display and can be viewed using the right-hand keypad on the steering wheel.

The list can be edited using **Edit**.

Library

Saved positions and itineraries are collected here. The most recently saved appear uppermost on the list.

Tap on a position's star to select/deselect it as a favourite. A position with a highlighted/filled star is also listed under the **Favourites** heading.

Deleting a position in **Library** will also remove it from **Favourites**.

The library can be sorted in various ways:

- **Added** - sorts in chronological order.
- **Name** - sorts in alphabetical order.
- **Distance** - sorts in distance from current position.
- **Received** - positions sent to the car using Send to Car are filtered out. New positions that have not been read have a BLUE cursor which is extinguished when the positions have been read.

Using **Edit**, one or more items in the list can be deleted.

Related information

- Itinerary (p. 15)
- Enter destination directly on map (p. 10)
- Specifying a destination with an address (p. 11)
- Specify destination with free text searching (p. 11)
- Specify destination with point of interest (p. 12)
- Specify destination with Send to Car (p. 14)
- Settings for route and road navigation (p. 22)

Specify destination with Send to Car

A destination can be specified in different ways in the navigation system* – using the Send to Car function is one of them.

Send position to the car

Send to Car is a function that makes it possible to add a destination/position to the car's navigation system using a computer.

Send to Car can also be used from the Volvo On Call* app.

To use Send to Car requires a Volvo ID to be registered to the car.

An example of a map service provider where Send to Car can be used is wego.here.com

Receiving and using a position in the car

For the car to be able to receive data it must be connected to the Internet. If the position is sent to the car with Volvo On Call then the car's built-in modem is used to receive the data, i.e. no separate Internet connection is required.

1. When a position has been received by the car a notification is shown in the centre display. Tap on the notification/symbol.
> An information card is opened.
2. Select the desired use of the position.

Using a saved position

Positions received are saved to the navigation system's library and can be used later.

Related information

- Itinerary (p. 15)
- Enter destination directly on map (p. 10)
- Specifying a destination with an address (p. 11)
- Specify destination with free text searching (p. 11)
- Specify destination with point of interest (p. 12)
- Specifying a destination with latest/favourites/library (p. 13)
- Settings for route and road navigation (p. 22)

Itinerary

The itinerary is the route suggested in the navigation system* when the user has entered a destination.

The first defined position will be the itinerary's **destination**.

The subsequent positions will be the itinerary's **intermediate destinations**.

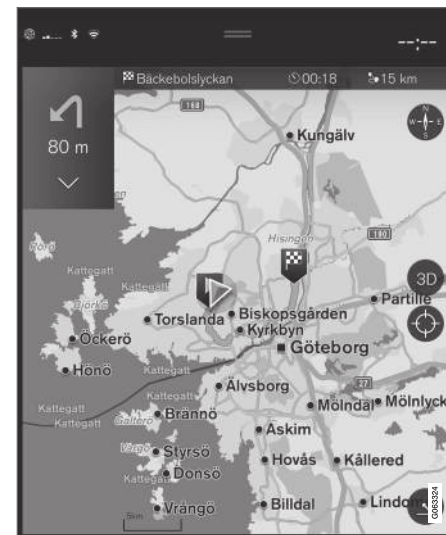
An itinerary, its destination and intermediate destinations can easily be edited afterwards.

Related information

- Show itinerary (p. 15)
- Edit or delete the itinerary (p. 16)
- Show an alternative route (p. 16)
- Showing guidance points in the itinerary (p. 17)

Show itinerary

It is possible to show the itinerary in the navigation system* during road navigation.



1. During guidance, expand the tools field with the down arrow and then the three points.

◀ 2.



Tap on the symbol for **Itinerary** to open the itinerary.

Related information

- Edit or delete the itinerary (p. 16)
- Show an alternative route (p. 16)
- Showing guidance points in the itinerary (p. 17)

Edit or delete the itinerary

It is possible to remove intermediate destinations or the entire itinerary in the navigation system* while guidance is in progress.

1. Expand the tools field with the down arrow first and then with the three points.

2.



Tap on the symbol for **Itinerary** to open the itinerary.

3. Tap on the recycle bin to delete an intermediate destination in the itinerary, or tap on **Clear itinerary** to delete the whole itinerary.

Related information

- Show an alternative route (p. 16)
- Showing POIs along a route (p. 17)
- Showing guidance points in the itinerary (p. 17)

Show an alternative route

It is possible to search for alternative routes in the navigation system* while guidance is in progress.

1. Expand the tools field with the down arrow first and then with the three points.

2.



Tap on the symbol for **Itinerary** to open the itinerary.

3. Press **Alternative routes**.
4. Select an alternative route:

- **Eco**
- **Fast**
- **Scenic**

5. Tap on the map.
 - > The updated route is then shown on the map and guidance resumes.

Related information

- Edit or delete the itinerary (p. 16)
- Showing traffic congestion along route (p. 19)

- Select a detour in the navigation system* (p. 19)
- Settings for route and road navigation (p. 22)

Showing POIs along a route

A list of points of interest (POI¹⁰) along the route can be presented in the navigation system*.



1. Press **Ahead**.
2. Press **POI**.
 - > POIs along the route are shown based on distance.
3. When several POIs are in the same location they are shown as a group. Tap on the group to list POIs.
4. Select a POI.
5. Select one of the information cards alternatives and follow the instructions.

Related information

- Information card in navigation system* (p. 6)
- Map settings (p. 22)

Showing guidance points in the itinerary

A list of the itinerary's future guidance points helps the driver to plan upcoming manoeuvres in good time.

Show a list of turns ahead in the itinerary in the navigation system* by:

1. Expanding the tools field using the down arrow on the left-hand side.
2. Expanding the tools field further with the three points.
3. Tap on the symbol for **Turn-by-Turn** (see illustration).



A list of the itinerary's guidance points is shown instead of the tools field (the list can be scrolled through). Pressing the arrow pointing left minimises the list.

The next guidance point is always placed at the top of the list.

¹⁰ Point of Interest



The position is shown on the map by pressing one of the list's guidance points. A subsequent tap on the cross-hairs symbol (see illustration) resets the map to the guidance view, where the map follows the car.

Traffic disruptions on the map

The navigation system* receives information about traffic events and traffic congestion and shows them on the map.

NOTE

Traffic information is not available in all areas/countries.

Coverage areas for traffic information are being increased continuously.

You can set which traffic-related information should be shown on the map.

Traffic disruptions, such as heavy and slow-moving traffic, roadworks and accidents, are indicated by different symbols if the map has been zoomed in enough.



Roadworks appear as follows. When disturbances are more severe, their extent is also shown with a red line along the side of the road. The line indicates at the same time in which travel direction the disturbance applies - if the disturbance is in both directions the road section is marked with a line on both sides.

Information on traffic disruptions

- Tap on the symbol for traffic disruptions.
 - > An information card is shown. The information can describe for example the position of the disturbance with the street name or road number, and the disturbance's nature, extent or duration.

Avoid traffic disruptions

If there is traffic congestion along the route, the alternative **Avoid** can be selected. The system then calculates an alternative route.

Real Time Traffic Information¹¹

If the car is connected to the Internet, Real Time Traffic Information can also be received with RTTI¹².

Related information

- Traffic settings (p. 23)
- Map settings (p. 22)
- Showing traffic congestion along route (p. 19)
- Real Time Traffic Information (p. 20)
- Information card in navigation system* (p. 6)

¹¹ Only applies to certain markets.

¹² Real Time Traffic Information

Showing traffic congestion along route

A list of traffic disruptions along the route can be produced when a destination is set in the navigation system*.

1. When the map is shown, expand the tools field on the left-hand side with the down arrow and then with the three points.

2.



Press **Ahead**.

3. Press **Traffic**. The Traffic button is grey if there is no traffic event on the route.
 - > Any traffic events along the route are shown based on distance.
4. If more information about the traffic disruption is required, tap on the row and an information card is opened. Select one of the information cards alternatives and follow the instructions.
5. Tap on **Avoid** to avoid the traffic disruption.
 - > The route is recalculated and guidance is given via the alternative route.

Related information

- Traffic disruptions on the map (p. 18)
- Traffic settings (p. 23)
- Information card in navigation system* (p. 6)
- Real Time Traffic Information (p. 20)

Select a detour in the navigation system*

If the driver wants to avoid the nearest segment of a route, e.g. because the road is closed, a detour can be selected.

1. Expand the tools field on the left-hand side with the down arrow and then with the three points.

2.



Press the symbol for **Detour** to show an alternative route with information about its longest/shortest route as well as calculated journey time. Normally only a short detour is proposed which quickly rejoins the original itinerary.

3. If the suggestion is **accepted**: Tap on the sign with detour information. The route is accepted even if you are driving on the road suggested. After the proposal is accepted, guidance is resumed - now with the detour selected as the route. If the suggestion is **not accepted** continue to drive on the original route.

An alternative to the **Detour** function is to diverge from the itinerary's route - the system then updates the route automatically and contin-



- ◀◀ ues guidance to the destination along the most suitable route.

It is also possible to show an alternative route while driving continues.

Related information

- Show an alternative route (p. 16)

Real Time Traffic Information¹³

When the car is connected to the Internet, the driver can access extended traffic information (RTTI¹⁴) concerning congestion, closed roads and anything else that may affect the travelling time.

If the RTTI service has been activated, information on traffic incidents and traffic flow will be retrieved constantly from an Internet service. When a car requests traffic flow information, anonymous data about the traffic flow at the car's position is provided at the same time, which contributes to the function of the service. The anonymous data is only sent when RTTI is activated. No data is provided if this service is not activated.

The service may need to be activated again, e.g. after certain software updates, after workshop visits or when creating a new driver profile.

Current traffic conditions are shown in the navigation system* for motorways, major roads and extra-urban roads, as well as certain intercity routes.

The amount of traffic information shown on the map depends on the distance to the car and is only shown within approximately 120 km (75 miles) from the car's position.

Text and symbols on the map are shown as usual and the traffic flow shows how quickly the traffic is moving on a road compared with the road's speed limit. The traffic flow is shown on the map on each side of the road with one coloured line per travel direction:

- Green - no disruptions.
- Orange - slow traffic.
- Red - congestion/traffic jam/accident.
- Black - road closed.

NOTE

Traffic information is not available in all areas/countries.

Coverage areas for traffic information are being increased continuously.

Related information

- Activating and deactivating Real Time Traffic Information (p. 21)

¹³ Applies to certain markets.

¹⁴ Real Time Traffic Information

Activating and deactivating Real Time Traffic Information¹⁵

With the car connected to the Internet, the driver can access real time traffic information (RTTI¹⁶) in the navigation system*.

RTTI is activated and deactivated as follows:

1. Tap on **Settings** in the centre display's top view.
2. Press **Navigation → Traffic**.
3. Select **Real Time Traffic Information** to activate (replaces normal traffic information with RTTI) or deactivate RTTI.
4. One pop-up window with the heading **Terms and conditions** and one with the heading **Data sharing** are shown if it is the first time RTTI is used.

If the car's Internet connection is disconnected when RTTI is activated then the normal traffic information will be activated automatically. RTTI is reactivated when the Internet connection is reconnected.

Deactivate the green line

To stop displaying the green lines that show that traffic is flowing with no problems:

1. Press **Settings** in the top view.

2. Press **Navigation → Traffic** and uncheck **Show Free Flowing Traffic**.

Related information

- Real Time Traffic Information (p. 20)
- Traffic settings (p. 23)

Navigation system settings*

Settings are selected here to define how the route and other information should be presented in the navigation system.

Settings → Navigation

Settings can be made within the following areas:

- **Map** - manage map content and appearance.
- **Route and Guidance** - manage guidance and route display and calculation.
- **Traffic** - manage information about traffic disruptions.

Related information

- Map settings (p. 22)
- Settings for route and road navigation (p. 22)
- Traffic settings (p. 23)

¹⁵ Applies to certain markets.

¹⁶ Real Time Traffic Information

Map settings

Settings are selected here to define how the map is to be displayed in the navigation system*.

Settings → Navigation → Map

Settings can be made within the following areas:

- **Position Format**
- **Map Display Format**
- **Show Speed Cameras**
- **Show Favourites**
- **Point of Interest (POI)**

Position format

Position Format is used to choose whether the current position should be named/shown with its address or its coordinates:

- **Address**
- **Coordinates and altitude**

Map design

Map Display Format is used to choose how the map's colours should be shown:

- **Day** - bright colours.
- **Night** - dark colours so as not to interfere with night vision.

- **Auto** - the system switches between **Day** and **Night** depending on the light in the passenger compartment.

Speed cameras¹⁷

Show Speed Cameras - indicate whether speed cameras should be shown on the map.

Favourites

Choose whether or not **Favourites** shall be shown on the map.

Point of interest (POI)¹⁸

The POIs to be shown on the map are indicated under **Point of Interest (POI)**. Tap the desired category, e.g. "Transportation", and then select to show all or specific sub categories. Exit the menu by pressing **Back** or **Close**.

Related information

- Navigation system settings* (p. 21)
- Settings for route and road navigation (p. 22)
- Traffic settings (p. 23)
- Showing POIs along a route (p. 17)
- Specify destination with point of interest (p. 12)
- Specifying a destination with latest/favourites/library (p. 13)

Settings for route and road navigation

Settings are selected here to define how the route is to be calculated and the road navigation presented in the navigation system*.

Settings → Navigation → Route and Guidance

Settings can be made within the following areas:

- **Arrival Time Format**
- **Voice Guidance Level**
- **Choose Default Route Type**
- **Route Learning**
- **Avoidance Settings**
- **Suggest Petrol Station**

¹⁷ The function is not available in all markets.

¹⁸ Point of Interest

Time format

Select how arrival time should be specified:

- **ETA**¹⁹ (estimated time of arrival at destination)
- **RTA**²⁰ (remaining time to arrival)

The times shown apply to the time zone of the destination.

Level for voice guidance

1. Press **Voice Guidance Level**.
2. Tap on the voice guidance required:
 - **None** (no automatic voice guidance but the possibility of manually requesting current voice guidance once)
 - **Low** (only one message per guidance point)
 - **Medium** (up to 3 messages per guidance point, with limited information)
 - **Full** (up to 4 messages per guidance point and all available information)

Standard route types

Select the standard type of route preferred:

- **Fast**
- **Eco**
- **Scenic** (motorways are avoided as far as possible, so the journey time may be long)

It is also possible to show an alternative route while driving continues.

Route learning

Select **Route Learning** if data collection to optimise route calculation should be permitted.

Avoid

Press **Avoidance Settings** to open a menu with different options that can be avoided automatically, if possible, when calculating route. For example, select tunnels, areas with congestion charge and ferries.

Suggestions for petrol stations

Press **Suggest Petrol Station** to activate or deactivate suggestions for nearby petrol stations in the driver display when the fuel level is low.

Related information

- Navigation system settings* (p. 21)
- Map settings (p. 22)
- Traffic settings (p. 23)
- Show an alternative route (p. 16)

Traffic settings

Settings are selected here to define how traffic information is displayed in the navigation system*.

Settings → Navigation → Traffic

Settings can be made within the following areas:

- **Show and Handle Traffic Events**
- **Avoid Traffic Events**
- **Show Free Flowing Traffic**
- **Real Time Traffic Information**

Show traffic events

Select whether traffic events should be shown on the map and used for route calculation:

- **None**
- **Major**
- **All**

Avoid traffic incidents

Select whether traffic incidents should be avoided when calculating a route:

- **Never**
- **Ask** (any suggestions for route changes are given during the journey)
- **Always**

¹⁹ Estimated Time of Arrival

²⁰ Remaining Time to Arrival

◀◀ **Show free flowing traffic**

Select **Show Free Flowing Traffic** to show this on the map.

Used Real Time Traffic Information²¹

Select **Real Time Traffic Information** to use Real Time Traffic Information via the Internet (RTTI).

Related information

- Navigation system settings* (p. 21)
- Map settings (p. 22)
- Settings for route and road navigation (p. 22)
- Real Time Traffic Information (p. 20)

Map updates

MapCare is a free-of-charge map update service for Volvo cars equipped with Sensus Navigation*.

General information about updating

Map updates can be made up to twice per year.

There are two ways to update maps. Either via a computer and a USB memory, or directly from the car²² (if the car is connected to the Internet).

The car's map is divided up into a number of pre-defined regions. When updating map data it is not necessary to update all the regions - the driver can choose to only update one or more specific regions.

One or several regions can be updated when the car is connected to the Internet. If a large number of regions - or the whole map - is to be updated, the total quantity of map data can be so large that it is much easier to update via a computer using a USB memory.

i NOTE

If an itinerary stretches over several regions, they should all have the same version number. Otherwise there is the possibility that a calculated route may include an unexpected section of road.

Updating of the map structure

Sometimes the map structure must be changed - this occurs if a region has to be added or when a large region needs to be divided into smaller regions. When this occurs any attempt to update individual regions using a normal procedure will fail and a message will indicate the reason.

Instead, the whole map must be reinstalled via a USB memory. For further information - see Volvo Cars support page (support.volvocars.com) or contact a Volvo dealer.

Updating of the navigation system software

Besides the map data, the navigation system's own software, which is subject to constant development, requires updating now and then. A situation can then arise where the latest updates of map data cannot be supported by the existing software of the navigation system. In which case, a message is shown to inform that the navigation system software must also be updated. This can be done at a Volvo dealer. It is also possible to get help with the map update itself at a Volvo dealer. However, note that even if the map update itself is free-of-charge, the workshop time for performing the update may involve charges.

²¹ Applies to certain markets.

²² Only applies to certain countries.

Frequently asked questions

Question	Answer
Is it possible to change the platform for map data, e.g. from Europe to North America?	Yes, with some exceptions. Contact a Volvo dealer for up-to-date information.
How long does it take to download a map update?	It depends on the map file size and the connection bandwidth. Information about the update's size (MB) is shown on the screen.
How large is an update?	This depends on the market. Detailed information is given with each market map - see Volvo Cars support page (support.volvocars.com).
None of this updating works - what should I do?	Try by visiting Volvo Cars support page (support.volvocars.com) or contact a Volvo dealer.

Related information

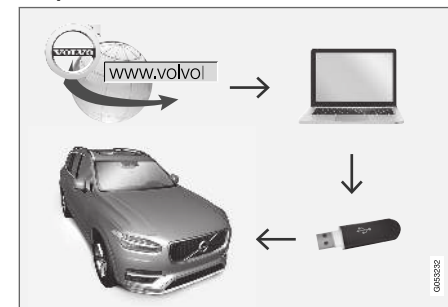
- Updating maps via computer and USB (p. 25)
- Updating maps from an online car (p. 28)

- Frequently asked questions about the navigation system* (p. 29)
- License agreement for navigation system* (p. 30)
- Copyright for the navigation system* (p. 32)

Updating maps via computer and USB

New maps can be downloaded from an Internet-connected computer to a USB memory and then transferred from the USB memory to the car's navigation system*.

Preparations



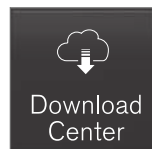
Updating via computer and USB memory

◀◀ **USB memory**

The following requirements apply if a USB memory is to manage an update:

Parameter	Requirements
USB standard (1.0/2.0/3.0):	At least 2.0
File system (Ext2/NTFS/FAT32):	FAT32
Capacity (8/16/32/64 GB):	The size of the map files is market related - see file size under "Detailed information" for each respective market on Volvo Cars support page (support.volvocars.com).

Note current map version



1. Tap on **Download Centre** in the app view.
2. Press **Maps**.
 - > Available map regions are shown.



3. Tap on the arrow to expand the selected region.
 - > Detailed map information is shown.
4. Note the map information under the map image.

Downloading of map data from the Internet to a USB memory

Have the USB memory and noted map information readily available.

1. Go to the Volvo Cars support site (support.volvocars.com) on a computer with Internet connection.
2. Select maps, car model and model year.
3. Click on the region to be updated.
 - > A map image with information on the latest map data for the region is shown.
4. Verify that the map version is newer than the one in the car.
5. Connect a USB memory to the computer and download the update to the USB memory.

Download times can vary depending on the size of the map and the bandwidth of the connection. Verification of correct download to the USB memory stick before map installation in the car

can be made by selecting to check the download in the download program.

Mobile connections via mobile devices or situations where the subscription used may have a monthly data limit are not suitable for use when downloading.

Transferring map data from a USB to the car

The time taken to transfer from USB memory to the car varies depending on map data size. The update can be performed while driving. The navigation system can be used to update a map region, but to update a whole map market, e.g. the EU, the navigation system cannot be used during the update. If installation is not finished when the car is switched off then the update continues when next driving. It is not necessary to perform the update while driving, but the ignition must be switched on. Battery support is recommended if the car is not driven during the update.

Updating

1. Activate the navigation system.
2. Connect the USB memory to the car's USB port. If there are two USB ports then the other one must not be used at the same time.
3. The navigation system automatically detects that an update is available and, during the update of the whole map database, shows on the screen what percentage of the process is complete.
 - > For the update of an individual map region, the update starts immediately.
To start the update of the whole map database, the user must tap on **Confirm** - or on **Cancel** in order to cancel the installation.
4. Tap on **Confirm** - The update of the whole map database starts and information about how the process is proceeding is shown on the centre display.
5. The centre display shows when the transfer is complete - at which point, remove the USB memory.
6. Restart the infotainment system.
7. Verify that the correct map data have been transferred to the car by repeating the steps described under the previous heading "Note current map version".



NOTE

For the installation to start, the following criteria must be met:

- Selected area is included on the system's map. It is only possible to download the Scandinavia area if the system already has a Europe map. If a whole new map is downloaded then it overwrites the previous map.
- The version for the selected area is later than the one in the car.
- Selected area is compatible with the car's software. If the update is not compatible then new software will need to be downloaded.
- Selected area is compatible with the existing map. If the area is not compatible then the map will need to be replaced.

Interruptions

If there is an interruption during an update an explanatory text message is always shown on the centre display.

What happens if...	Answer
The Infotainment system is switched off during the update?	The process pauses and resumes automatically from where it stopped when the system is reactivated, e.g. when the engine is started.
The USB memory is pulled out before the update is complete?	The process pauses and resumes automatically from where it stopped when the USB memory is reconnected to the car.

For further information - see Volvo Cars support page (support.volvocars.com) or contact a Volvo dealer.

Related information

- Updating maps from an online car (p. 28)
- Map updates (p. 24)

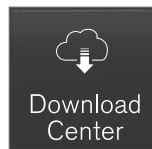
Updating maps from an online car

When the car is connected to the Internet, the navigation system* maps can be updated²³.



The principle of remote updating.

The car must be connected to the Internet.



1. Tap on **Download Centre** in the app view.
 - > The app is started and a figure is shown by **Maps** which indicates how many map updates there are for the specified home region. The figure remains visible until a new search for updates has been performed or until updates have been installed.
2. Press **Maps**.
3. Press **Install** and then **Confirm**.
 - > Installation of selected map/map update is started.

For further information - see Volvo Cars support page (support.volvocars.com) or contact a Volvo dealer.

Automatic updating of map data

Automatic updating can only be selected if the **Auto Software Update** function is activated

under **Settings → System → Download Centre**.

1. Automatic updating of map data can only be selected for the home region. If the home region is not already selected - press the down arrow to expand the region.
 - > Detailed map information is shown.
2. Press **Set as home region**.
3. Tick the box for **Auto update**:.
 - > When the car is connected to the Internet and a map update is available, it is automatically downloaded to the car.

When a map download in progress is cancelled

If a map download has begun but the car is switched off before the download is complete, the process is paused and then resumed automatically when the car is started again and is reconnected to the Internet.

If one or more updates have been deselected or missed, the update files may be too large to be downloaded directly to the car. In this case, you have the option of downloading the files to a USB device for installation in the car.

²³ Only applies to certain countries.

Related information

- Updating maps via computer and USB (p. 25)
- Map updates (p. 24)

Frequently asked questions about the navigation system*

The following are some frequently asked questions concerning the navigation system Sensus Navigation.

The position of the car on the map is wrong

The navigation system shows the position of the car to an accuracy of about 20 metres (65 ft).

There is a greater risk of error when driving on roads lying parallel to another road, on winding roads, on roads with several levels and after driving a long distance without making any distinctive turns.

High mountains, buildings, tunnels, viaducts, over/underpasses etc. also have a negative effect on the reception of satellite signals, which means that accuracy in calculating the position of the car may decrease.

The system does not always calculate the fastest/shortest route

When calculating a route, several factors are taken into account to determine the theoretically best solution. Factors include route distance, road width, road classification, traffic intensity and speed limits. However, an experienced driver with local knowledge can quite possibly select a better route.

The system may for example use toll roads or ferries while the driver has chosen to avoid them

For technical reasons, the system can only use larger roads when calculating a route extending over a long distance.

If you selected to avoid toll roads and motorways, then they are avoided to the greatest possible extent and are only used if there is no other reasonable alternative available.

The position of the car on the map is incorrect after transportation

If the car is transported, for example by ferry or train, or in such a way as to impede the reception of satellite signals, it can take up to 5 minutes before the position of the car is correctly calculated.

The car symbol on the screen behaves illogically after the tyres have been changed

In addition to the satellite receiver, the car's speed sensor and a gyroscope assist in calculating the current position, speed and direction of travel of the car. After fitting the spare wheel or changing between summer and winter tyres the system needs to "learn" the size of the new wheels.

In order that the system shall function optimally it is therefore recommended that the car is driven



- ◀◀ for a while on roads with good satellite reception (good visibility).

The map image does not correspond with the real situation

Factors such as the constant expansion and rebuilding of the road network, new traffic regulations constantly being introduced etc. mean that the map database is not always, in every situation, complete.

Because of this the map data is being constantly developed and updated - check now and again to see if there are any updates.

The car symbol on screen jumps forwards or spins

The system may need a few seconds to sense the position and movement of the car before driving off.

Switch off both the system and the engine. Start again, but remain stationary for a while before starting to drive.

The map information is not up to date

See the answer under the next heading.

Is the latest map information installed?

Map data are updated and improved continuously. In connection with map updates via computer and USB, the current map version in the car can be shown. Check the map version in the car and compare the available map version on the Volvo Cars support site support.volvocars.com.

Related information

- Map updates (p. 24)

License agreement for navigation system*

A license²⁴ is an agreement granting a right to conduct some activity or to make use of another person's right under the terms and conditions of the agreement.

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The Database may contain inaccurate or incomplete information due to the passage of time, changing circumstances, sources used and the nature of collecting comprehensive geographic data, any of which may lead to incorrect results. The Database does not include or reflect information on - inter alia - travel time and may not include neighborhood safety; law enforcement; emergency assistance; construction work; road or lane closures; road

slope or grade; bridge height, weight or other limits; road conditions; special events depending on the navigation system brand you possess.

GOVERNING LAW

This Agreement shall be governed by the laws of the jurisdiction, in which you reside at the date of acquisition of the Database. Should you at that moment reside outside the European Union or Switzerland, the law of the jurisdiction within the European Union or Switzerland where you acquired the Database shall apply. In all other cases, or if the jurisdiction where you acquired the Database cannot be defined, the laws of the Netherlands shall apply. The courts competent at your place of residence at the time you acquired the Database shall have jurisdiction over any dispute arising out of, or relating to this Agreement, without prejudice to HERE' right to bring claims at your then current place of residence.

Related information

- Map updates (p. 24)
- Copyright for the navigation system* (p. 32)

Copyright for the navigation system*

For information about copyright (© Copyright) – see the "License agreement for navigation system" section.

Related information

- Map updates (p. 24)
- License agreement for navigation system* (p. 30)

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