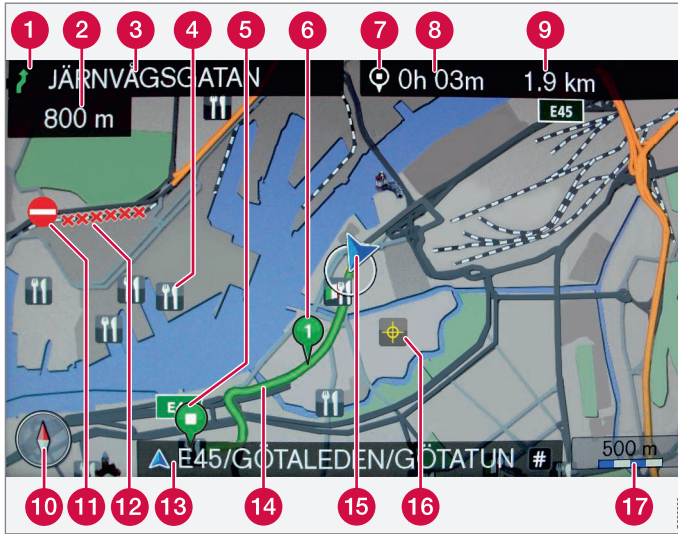









SENSUS NAVIGATION



Text and symbols on the screen

- 1 Event at next guidance point
- 2 Distance to next guidance point
- 3 Name of next road/street
- 4 Facility/point of interest (POI)
- 5 Planned route final destination
- 6 Planned route intermediate destination
- 7 Symbol for destination/final destination
- 8 Calculated arrival time at final destination
- 9 Calculated remaining distance to destination
- 10 Compass
- 11 Traffic information
- 12 Section covered by traffic information
- 13 Current road/street name - at car's current position (15)
- 14 Planned route
- 15 The car's current position
- 16 Stored location
- 17 Map scale

Road type	Colour / paint
Motorway	 Orange
Primary road	 Dark grey
Smaller primary road	 Grey
Ordinary road	 Light grey
Local road	 White

SENSUS NAVIGATION



Sensus Navigation is a satellite based traffic information and route guidance 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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INTRODUCTION

Introduction

This supplement is a supplement to the normal owner's manual for the car.

In the event of uncertainty regarding any of the car's functions, consult the owner's manual in the first instance. For answers to additional questions it is recommended to contact a dealer or a representative of Volvo Car Corporation.

The specifications, design features and illustrations in this supplement are not binding. We reserve the right to make modifications without prior notice.

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Options/accessories

All types of option/accessory are marked with an asterisk: *.

In addition to standard equipment, the supplement also describes options (factory fitted equipment) and certain accessories (retrofitted extra equipment).

The equipment described in the supplement is not available in all cars - they have different equipment depending on adaptations for the needs of different markets and national or local laws and regulations.

In the event of uncertainty over what is standard or an option/accessory, contact a Volvo dealer.

Owner's Manual in mobile devices



i NOTE

The Owner's manual is available for download as a mobile application (applies for certain car models and mobile devices), see www.volvocars.com.

The mobile application also includes video and searchable content and easy navigation between different sections.

Sensus Navigation

Basic description and overview of Sensus Navigation.

The navigation system calculates the route, travel time and distance to the selected destination. The system gives guidance and instructions for junctions, etc. If there is a deviation from the planned route outline during the journey then the system automatically calculates a new route outline.

The navigation system can be used without a destination being selected.

The system is supplied with default settings, but starts with the settings last used.

Volvo Sensus Navigation uses reference system WGS84, which gives longitude and latitude positions.

Points to remember

The navigation system provides road information which guides to a preset destination. However, not all of the recommended guidance is always

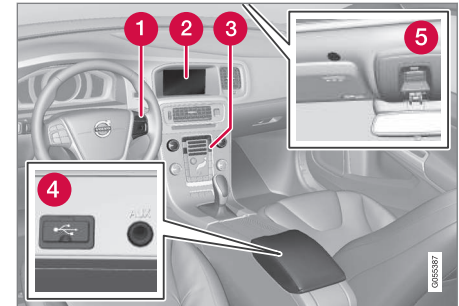
reliable, since situations may arise that lie outside the capacity and judgement of the navigation system, such as sudden changes in the weather.

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.

System overview



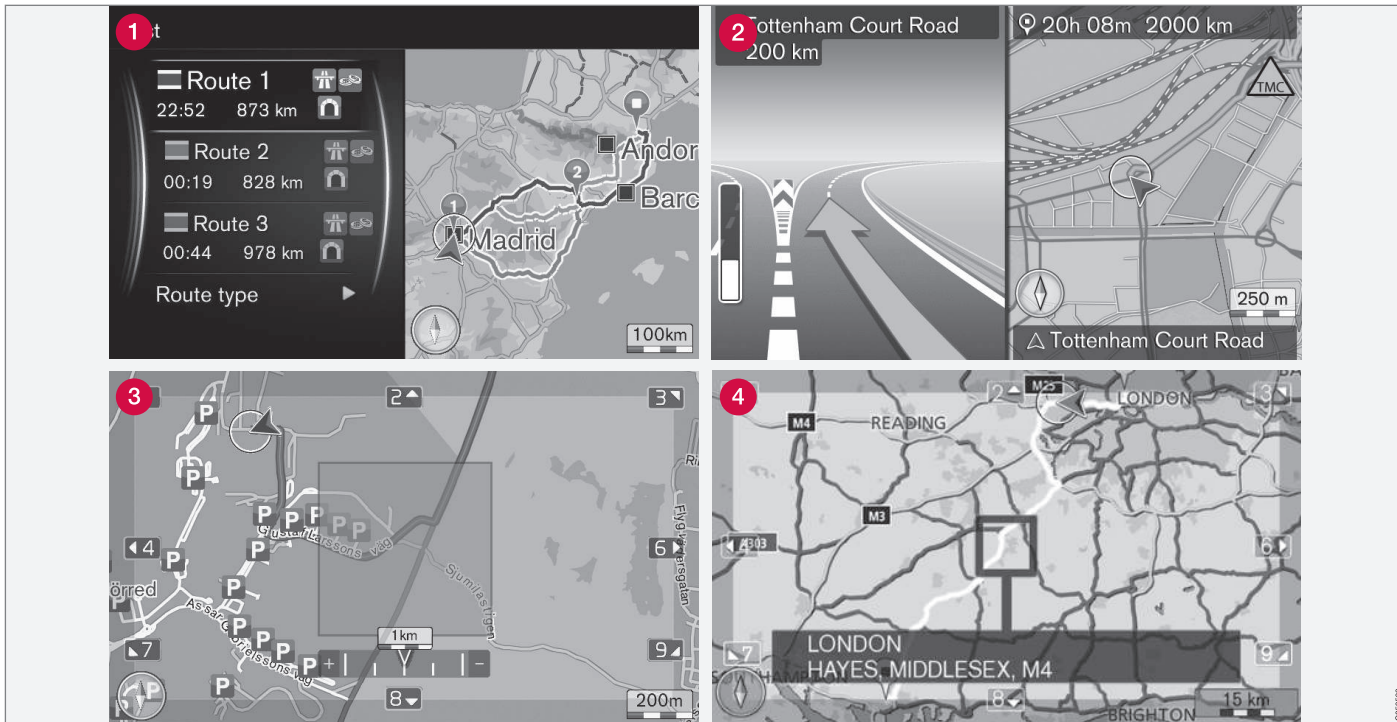
- 1 Keypad in the steering wheel for menus, volume and voice recognition.
- 2 The screen displays maps and provides detailed information on route type, distance, menus, etc.
- 3 Control panel in centre console for activation of the navigation system, menus and volume.
- 4 USB connection.
- 5 Microphone for voice recognition.

Navigation system audio uses the front loudspeakers.

Remote control* can be used for all functions in the navigation system. The remote control's buttons have the same functions as the buttons in the centre console or steering wheel keypad.

* Option/accessory, for more information, see Introduction.

Map overview



Examples of map images for the current position. Itinerary, junction map and scroll mode are some of the views the screen can show. NOTE: the illustrations are schematic - details may vary depending on software version and market.

The appearance of the screen depends on geographic position and the settings made, e.g. map scale and which POI options are selected to be shown.

Explanations for the text, signs and symbols that may appear on the display are available on the front of the cover.

- 1 Three alternative route outlines can be calculated when an Itinerary is set, see (p. 24).
- 2 Detailed junction map - the left-hand section of the screen shows a detailed enlargement of the next junction. The situation is always supplemented with a voice message, see (p. 24).
- 3 Avoid a particular area, see (p. 24).
- 4 Scroll mode, see (p. 10).

Related information

- Navigation - operation (p. 10)
- Navigation - voice recognition (p. 13)

Navigation - operation

Basic operation of Sensus Navigation and examples of use.

The navigation system can be operated from the centre console, steering wheel buttons, remote control* and partly with voice recognition. For basic operation of the system, see section "Audio and media - operating the system" in the owner's manual.

Activate Sensus Navigation

- Press the **NAV** button in the centre console.
 - > After a short time a map of the current geographic area is shown where the car is symbolised by a blue triangle.

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.

The navigation system cannot be deactivated, but instead operates in the background - it is not

deactivated until the remote control key is removed from the ignition switch.

NOTE

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

Menus

In addition to the system's normal source menu and shortcut menu (see owner's manual, section Menus in Audio and media - operating the system) there is a scroll menu for the navigation system.

In Scroll mode a crosshair is moved over the map image with the centre console's numerical keys.



Scroll mode with crosshair¹.

Activate/deactivate scroll mode

- Activate - press one of the numerical keys **0-9**.
- Deactivate - press **EXIT** or **NAV**.

Scroll

- Press one of the numerical digit keys **1-2-3-4-6-7-8-9** - a directional arrow is shown in the margins combined with the number that will be used to scroll the map in the desired direction.

Zoom

- Turn the **TUNE** knob.

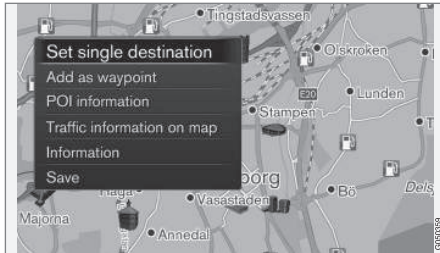
Centring the map

- 5 JKL**
- Pressing the number **5** in Scroll mode centres the map around the car's position.

If an Itinerary with Waypoints is activated, the map is centred around each respective Waypoint with each additional press.

¹ Select whether the position of the crosshair/cursor should be shown with name or GPS coordinates, see (p. 27).

Scroll menu



1. In scroll mode, press **OK/MENU**.
 - > A menu opens for the point on the map to which the centre of the crosshair is pointing.

2. Select function:
 - **Set single destination** - Deletes any previous destinations in the itinerary, and starts guidance on the map.
 - **Add as waypoint** - Adds the selected point to the itinerary.
 - **POI information** - shows name and address on the screen for the POI located closest to the crosshair. For more information on POI options, see (p. 16).
 - **Traffic information on map** - Allows you to view traffic messages² around the selected location.
 - **Information** - Shows information available about the selected location.
 - **Save** - allows you to store the highlighted location in the memory, to then be able to specify as destination (p. 16).
4. Highlight e.g. **Near the car** and confirm with **OK/MENU**.
 - > A list of hits is shown.
5. Highlight e.g. **Nearest tourist attraction** and confirm with **OK/MENU**.
 - > A list of hits is shown.
6. Highlight the desired alternative in the list and confirm with **OK/MENU**.
 - > A pop-up menu is shown.
7. Highlight **Set single destination** and confirm with **OK/MENU**.
 - > Guidance starts - follow the instructions.

See also examples of voice recognition control (p. 13) of the navigation system.

Related information

- Sensus Navigation (p. 7)
- Navigation - character wheel and keyboard (p. 12)
- Navigation - menu overview (p. 39)
- Navigation - fault tracing (p. 42)
- Navigation - map and system information (p. 38)

Example

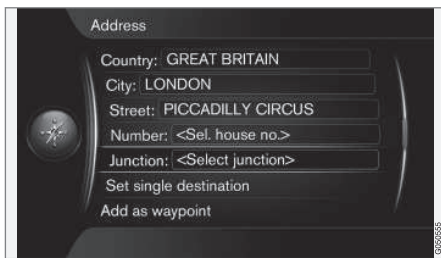
Guidance to desired point of interest (POI):

1. If the map view is not shown - press **NAV**.
 - > The map view is shown.
2. Press **NAV**.
 - > The shortcut menu is opened.
3. Highlight **Set point of interest** and confirm with **OK/MENU**.

² The service is not available for all areas/markets.

Navigation - character wheel and keyboard

Use the character wheel or the centre console keypad for entering text and selecting options. For example, enter information about an address or a facility.



Screen view with text field or optional text.

Activate an option

After marking a desired function/menu bar using the **TUNE** knob, press **OK/MENU** to see the next level of functions/options.

Enter with the character wheel



Character wheel.

1. Mark a text field.
2. Press **OK/MENU** to call up the character wheel.
3. Select the characters using the **TUNE** knob and enter them by pressing **OK/MENU**.

Enter with the numerical keys



Numerical keyboard³.

Another way of entering characters is using the centre console's buttons **0-9**, ***** and **#**.

9 WXYZ When **9** is pressed, a bar appears with all characters⁴ under the buttons, e.g. **w, x, y, z** and **9**. Quick presses on the button move the cursor through these characters.

- Stop using the cursor on the desired character to select it - the character is shown on the enter line.
- Delete/change using **EXIT**.

³ NOTE: The figure is schematic - details may vary depending on car model and market.

⁴ The character for each button may vary depending on market.

More options

i NOTE

Faded characters cannot be selected in combination with the currently input characters.

In the character wheel's inset menu there are further options that have more characters and digits:

- **123/ABC + OK/MENU** - the character wheel switches between numbers and characters.
- **MORE + OK/MENU** - alternative characters are shown in the wheel.
- **=> + OK/MENU** - the cursor moves to the list on the right-hand side of the screen, where selections can be made using **OK/MENU**.
- **Postcode + OK/MENU** - the cursor moves to the list on the right-hand side of the screen, where selections can be made using **OK/MENU**, see Specify destination with postcode (p. 16).

List of options



List that matches entered characters.

A search will list the possible options based on input information.

The digit "149" in the screen's top right-hand corner means that the list contains 149 possible options that match the entered letters "LON".

No list

An empty list and the characters "****" in the screen's top right-hand corner mean that the number of available options with current entered characters is greater than 1000 - when the amount is less, the current options are shown automatically.

To reduce the number of options in the list:

- Enter more characters on the text line.

Related information

- Navigation - operation (p. 10)

Navigation - voice recognition

Example of voice recognition control of the navigation system.

For a basic description of voice recognition, see section "Audio and media - voice recognition" in the owner's manual.

The following dialogues are only examples. The system's response may vary depending on the situation.

Start guidance

The following dialogue with voice commands starts guidance in accordance with the specified itinerary.

- Say: "**Start route guidance**".
 - > The system replies: "**Starts guidance**".

Stop guidance

The following dialogue with voice commands stops guidance.

1. Say: "**Cancel route guidance**".
 - > The system replies: "**Are you sure you want to stop guidance?**".
2. Say: "**Yes**".
 - > The system replies: "**Stops guidance**".

Specify destination with point of interest (POI)

The following dialogue with voice commands starts guidance to the nearest filling station. The



INTRODUCTION

- ◀◀ scenario also works for other points of interest such as e.g. hotels and restaurants.
 1. Say: "**Nearest filling station.**"
 - > The system replies: "**Select a line number, or say next page.**"
 2. Say the line number where the desired filling station is specified (e.g. line 5): "**5**".
 - > The system replies: "**Number 5 accepted. Do you want to specify the destination shown as an intermediate destination?**"
 3. Say: "**Yes**".
 - > The system replies: "**Intermediate destination 5 has been specified. Do you want to start guidance?**"
 4. Say: "**Yes**".
 - > The route is calculated and guidance starts.

More commands

More commands for voice recognition control of the navigation system can be found in the normal view for **MY CAR** by pressing **OK/MENU** and then selecting **Settings → Voice control settings → Command list → Navigation commands**.

Related information

- Navigation - operation (p. 10)

SPECIFY DESTINATION, ITINERARY AND
ROUTE

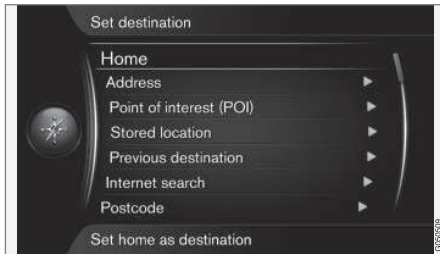
Navigation - specify destination

Specify destination in the navigation system.

Each time a destination is specified it is possible to save it as "stored location" or "home", which is then easily accessible when a destination shall be specified. The navigation system gives guidance to a destination, and it is possible to add four waypoints in the itinerary. For many destinations, the navigation system can also give further information with the **Information** menu option.

With the car connected to the Internet it is possible to use the app "Send to Car" to send map destinations from a browser and via Volvo On Call* mobile app to the navigation system, see owner's manual and support.volvocars.com.

To access the following alternative methods for specifying destinations, in the normal view for the navigation source, press **OK/MENU** and select **Set destination**.



¹ Requires connected mobile phone, see owner's manual.

Specify destination with home

Note that the destination must have been saved previously to be specified.

- In the normal view for the navigation source, press **OK/MENU** and select **Set destination → Home**.
 - > Guidance starts.

Specify destination with address

It is sufficient to only enter a city/town in order to obtain an itinerary with guidance - it guides to the centre of the city/town.

i NOTE

The definition of city or area may vary from country to country and even within the same country. In some cases, it refers to a municipality and in others it refers to a district.

- 1. In the normal view for the navigation source, press **OK/MENU** and select **Set destination → Address**.

- 2. Fill in one or more of the following search options:
 - **Country:**
 - **City:**
 - **Street:**
 - **Number:**
 - **Junction:**
- 3. If more information about the destination is required, select **Information** and then the required information:
 - **Map** - Shows where on the map the location can be found - sometimes with additional information.
 - **Call number**¹ - Calls the facility if a telephone number is given.
 - **Online info.**¹ - Supplementary information is downloaded from the Internet.
- 4. To store the address in the memory, select **Save** and then as **Stored location** or as **Home**.

* Option/accessory, for more information, see Introduction.

- Specify as intermediate destination or as single destination:
 - **Add as waypoint** - adds the address to the itinerary.
 - **Set single destination** - Deletes any previous destination in the itinerary and starts guidance to the current destination.

Specify destination with point of interest (POI)

POI (Point of Interest) also denominated as point of interest and facility.

The map database contains a large number of searchable POI² options which can be specified as destinations.

- In the normal view for the navigation source, press **OK/MENU** and select **Set destination** → **Point of interest (POI)**.

- Search for point of interest using the following:
 - **By name** - leads directly to the character wheel and refers to searching of POI options with their proper name, e.g. "Peppes Bodega". The search area is the whole of the current map area, e.g. EUROPE, see Maps - content (p. 38).
 - **By category** - enables limited searching of POI options - select to enter their category (e.g. bank/hotel/museum), proper name, country and/or city/town.
 - **Near the car** - refers to searching of POI options around the car's current position.
 - **Along the route** - refers to searching of POI options along the set itinerary.
 - **Near the destination** - refers to searching of POI options in the vicinity of the destination.
 - **Around point on map** - refers to searching of POI options with the scroll function's crosshair - see (p. 10).

If more information about the destination is required, select **Information** and then the required information.

- To store the address in the memory, select **Save** and then as **Stored location** or as **Home**.

- Specify as intermediate destination or as single destination:
 - **Add as waypoint** - adds the address to the itinerary.
 - **Set single destination** - Deletes any previous destination in the itinerary and starts guidance to the current destination.

Specify destination using previous destination

- In the normal view for the navigation source, press **OK/MENU** and select **Set destination** → **Previous destination**.

- Select a destination in the list.

If more information about the destination is required, select **Information** and then the required information.

Here it is also possible to delete a destination, select **Delete** or **Delete all**.

- Specify as intermediate destination or as single destination:
 - **Add as waypoint** - adds the address to the itinerary.
 - **Set single destination** - Deletes any previous destination in the itinerary and starts guidance to the current destination.

² To select which POI options should be shown on the map, see section Points of interest (POI) on map (p. 27).

◀ Specify destination using previously stored location

Collected here are the destinations stored with the menu option **Save → Stored location**.

Note that the destination must have been saved previously.

1. In the normal view for the navigation source, press **OK/MENU** and select **Set destination → Stored location**.

2. Open saved destination:

- **Routes** - e.g. recorded section of road.
- **Other** - e.g. saved locations.

If more information about the destination is required, select **Information** and then the required information.

Here it is also possible to edit or delete a saved destination, select **Edit**, **Delete** or **Delete all**.

3. Specify as intermediate destination or as single destination:
 - **Add as waypoint** - adds the address to the itinerary.
 - **Set single destination** - Deletes any previous destination in the itinerary and starts guidance to the current destination.

Specify destination with Internet search

Requires connection to the Internet, see owner's manual.

1. In the normal view for the navigation source, press **OK/MENU** and select **Set destination → Internet search**.

2. Follow the on-screen instructions.

Specify destination with postcode

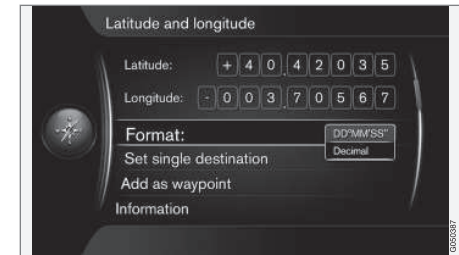
1. In the normal view for the navigation source, press **OK/MENU** and select **Set destination → Postcode**.

2. Type in the postcode, and country if required.

If more information about the destination is required, select **Information** and then the required information.

3. To store the destination in the memory, select **Save** and then as **Stored location** or as **Home**.
4. Specify as intermediate destination or as single destination:
 - **Add as waypoint** - adds the address to the itinerary.
 - **Set single destination** - Deletes any previous destination in the itinerary and starts guidance to the current destination.

Specify destination with latitude and longitude



1. In the normal view for the navigation source, press **OK/MENU** and select **Set destination → Latitude and longitude**.

2. First decide which method the GPS coordinates should be specified with, select **Format**:

- **DD°MM'SS"** - position with Degrees, Minutes and Seconds.
- **Decimal** - position with Decimals.

3. Type in the position.

If more information about the destination is required, select **Information** and then the required information.

4. To store the address in the memory, select **Save** and then as **Stored location** or as **Home**.

- Specify as intermediate destination or as single destination:
 - **Add as waypoint** - adds the address to the itinerary.
 - **Set single destination** - Deletes any previous destination in the itinerary and starts guidance to the current destination.

Specify destination using point on map



Cursor position specified with GPS coordinates. To change to showing name, select **Settings → Map options → Position information**.

- In the normal view for the navigation source, press **OK/MENU** and select **Set destination → Select point on map**.
- Locate and specify desired point on map using the crosshair, see section Menus (p. 10).

- To store the address in the memory, press **OK/MENU** and select **Save** and then as **Stored location** or as **Home**.
 - > The destination is stored as a symbol/icon on the map if the **Stored location on map** function is selected, see section Map options (p. 27).
- Specify as intermediate destination or as single destination:
 - **Add as waypoint** - adds the address to the itinerary.
 - **Set single destination** - Deletes any previous destination in the itinerary and starts guidance to the current destination.

Specify destination with travel guide

Search with travel guide (Travel guide) means that prepared suggestions are available to choose from with varying themes, e.g. restaurants, scenic roads or sights and landmarks.

A travel guide is stored in a USB memory, which must be fitted in the car's USB connector in the tunnel console's rear storage compartment.

- In the normal view for the navigation source, press **OK/MENU** and select **Set destination → Travel guide**.

If the menu option is not visible on the screen then there are no suggestions in the area the car is currently in, or a USB device is not connected.

- Select travel guide via one of the following categories:
 - **Restaurants**
 - **Tourist attractions**
 - **Hotels**
 - **Tourist routes**
 - **Other**
- If available in the travel guide, it is possible to view details and images, as well as to play back audio, select:
 - **Details**
 - **Photos**
 - **Play audio**
- Set **Start guidance**.

Related information

- Navigation - character wheel and keyboard (p. 12)
- Navigation - operation (p. 10)
- Navigation - itinerary (p. 21)

Navigation - points of interest (POI) symbols













Shown here are examples of how symbols for different points of interest (POI) may appear.

To set which POI symbols should be shown on the map, see section Points of interest (POI) on map (p. 27).

i	NOTE
•	The symbol for a POI and the number of POIs varies between different markets.
•	Symbols may appear and others disappear in conjunction with updating the map data - you can browse through all the symbols for the relevant map system in the menu system under Settings → Map options → POI symbols → Selected .

Examples of POI symbols, grouped according to society function:

	Car dealer/repair
	Petrol station
	Car repair
	Parking

	Tourist attraction
	Golf
	Cinema
	Amusement park Recreation
	Restaurant
	Bar or cafe
	Shopping centre
	Hotel
	Railway transport Railway station Railway access
	Airport
	Bus station
	Ferry terminal

	Government or community facility Government office
	Police/emergency
	Library
	Hospital or health care facility
	Pharmacy
	Cash dispenser ATM/Bank exchange
	Post office
	Education facility

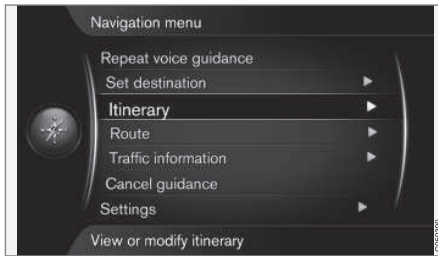
Related information

- Navigation - specify destination (p. 16)
- Navigation - map options (p. 27)
- Navigation - guidance options (p. 29)
- Navigation - map and system information (p. 38)
- Navigation - importing/exporting stored locations (p. 31)

Navigation - itinerary

Arrange an itinerary and start guidance to navigate to desired destination.

An Itinerary is created when a destination is saved. The system handles one itinerary at a time with a maximum of 4 waypoints.



A destination must be specified for the itinerary to be activated.

1. In the normal view for the navigation source, press **OK/MENU** and select **Itinerary**.
2. If a waypoint is required in the itinerary, select **Add another waypoint**.

A maximum of 4 waypoints can be added to the itinerary. The order can be adjusted, see section "Adjust itinerary" below.

3. If information about a waypoint is required, highlight the waypoint, press **OK/MENU** and select **Information**.

4. Set **Start guidance**.
 - > Current itinerary is activated and guidance is started unless the Route suggestion(p. 22) function is activated.
5. If the Route suggestion function is activated, select route.
 - > Current itinerary is activated and guidance is started.

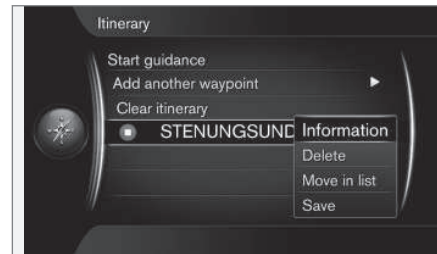
Stop guidance

- In the normal view for the navigation source, press **NAV** and select **Cancel guidance**.
 - > Guidance is interrupted.

Resume guidance

- In the normal view for the navigation source, press **NAV** and select **Resume guidance**.
 - > Guidance continues where it was stopped.

Adjust itinerary



1. Highlight the waypoint and confirm with **OK/MENU**.

2. Select what shall be adjusted and make the changes:
 - **Delete** - deletes the waypoint.
 - **Move in list** - changes order in the itinerary (see next heading).
 - **Save** - saves the waypoint.

Change the order of waypoints

1. Select the waypoint to be moved and confirm with **OK/MENU**.
2. Highlight **Move in list** and confirm with **OK/MENU**.
3. Turn **TUNE** to move the waypoint up/down in the list. When the desired location has been reached, confirm with **OK/MENU**.

Delete itinerary

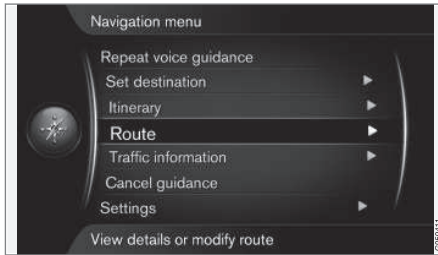
- In the normal view for the navigation source, press **NAV** and select **Itinerary** → **Clear itinerary**.
 - > Current itinerary including all waypoints is deleted.

Related information

- Navigation - specify destination (p. 16)
- Navigation - route (p. 22)
- Navigation - importing/exporting stored locations (p. 31)

Navigation - route

The route can be shown in detail or as an overview and alternative routes can be selected. It is possible to record the route in order to save it in the system's memory.

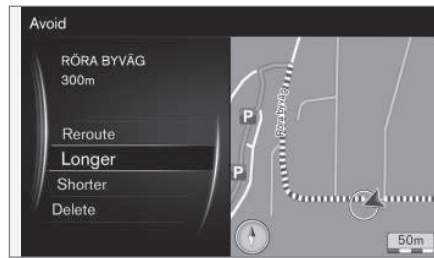


Route - avoid

With this function the driver can select to avoid the next approaching section of a route. The function only works where alternative streets/roads are available, otherwise the highlighting, or parts of it, is ignored.

1. In the normal view for the navigation source, press **OK/MENU** and select **Route** → **Avoid**.

2. Select desired action:



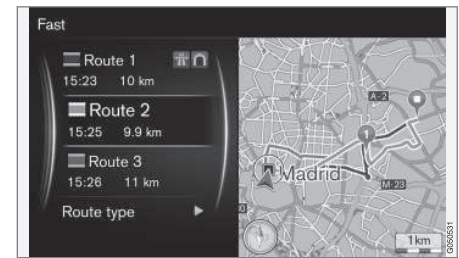
Highlighted subsection.

- **Reroute** - the system calculates another route in which consideration has been taken of the section to be avoided.
- **Longer** - subsection to avoid is extended.
- **Shorter** - subsection to avoid is shortened.
- **Delete** - highlighted subsections are deleted and the route is restored to the original version.

Alternative routes

1. In the normal view for the navigation source, press **OK/MENU** and select **Route** → **Alternative routes to destination**.

2. Select a suggested route or **Route type**:



- **ECO with traffic adaption** - low fuel consumption³ prioritised.
- **Fast** - short travel time prioritised.
- **Fast with traffic adaption** - short travel time with minimal traffic queues³.
- **Short** - short route prioritised. The route can also be set via smaller roads.

³ Coordinated with information from the Traffic radio.

Route overview

- In the normal view for the navigation source, press **OK/MENU** and select **Route → Route overview**.
 - > Information is shown about the route's intermediate destinations and final destination.



Detailed route information

Shown here are the elements contained in each section between two waypoints, e.g. exits and junctions.

1. In the normal view for the navigation source, press **OK/MENU** and select **Route → Detailed route information**.
 - > Information is shown about the route's intermediate destinations and final destination.



Detailed subsection on a route.

2. Zoom in/out on the map and scroll the route:
 - **Next** - scrolls to next subsection.
 - **Previous** - scrolls to previous subsection.
 - **Zoom in/Zoom out** - enlarges/reduces the map image of the current subsection.

Map of the remaining route

This function shows the remaining distance for the route.

- In the normal view for the navigation source, press **OK/MENU** and select **Route → Map of remaining route**.
 - > A map image is shown containing the itinerary's remaining distance from the car's current position.



For functionality and available functions, see section Menus (p. 10).

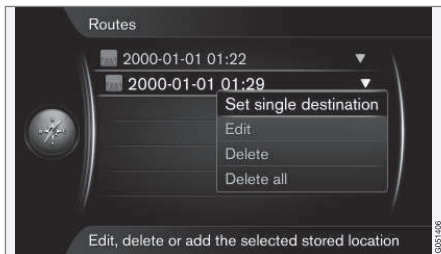
Record a route

Record and store the route in the navigation system's memory.

1. In the normal view for the navigation source, press **OK/MENU** and select **Route → Record route**.
 - > Recording is started. The REC symbol is shown on the screen while recording is in progress.

- ◀ 2. To stop recording, press **OK/MENU** and select **Route** → **Stop recording**.
 > The recorded route is saved.

Recorded routes can be opened in the menu **Set destination** → **Stored location** → **Routes**.



Recorded files can be exported/transferred to a USB memory⁴ in order to e.g. be copied to another vehicle's GPS navigator. For more information, see (p. 31).

Related information

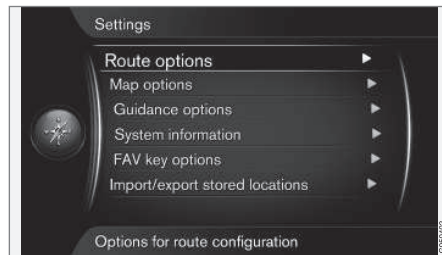
- Navigation - itinerary (p. 21)
- Navigation - operation (p. 10)
- Navigation - traffic information (p. 34)
- Navigation - fault tracing (p. 42)

⁴ Connected in the centre console's rear storage compartment.

⁵ Coordinated with information from the Traffic radio.

Navigation - route options

Settings for route options include route type and number of route proposals, amongst other things.



Route type

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Route options**.
2. Select type of route:
 - **Fast with traffic adaption** - short travel time with minimal traffic queues⁵.
 - **Fast** - short travel time prioritised.
 - **Short** - short route prioritised. The route can also be set via smaller roads.
 - **ECO with traffic adaption** - low fuel consumption⁵ prioritised.

Reroute on request

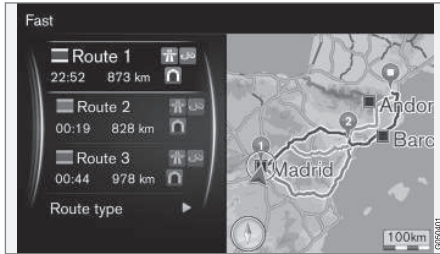
Option for recalculating route due to traffic information.

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Route options** → **Reroute on request**.
2. Select functionality:
 - Box selected - recalculation of route must be confirmed with **OK/MENU** or ignored with **EXIT**.
 - Box unselected - automatic recalculation of route.

Route proposals

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Route options** → **Route proposals**.

2.



Route proposals.

Select setting for use of route suggestion:

- **1** - starts guidance immediately in accordance with specified itinerary.
- **3** - the system suggests 3 alternative routes, of which one alternative route must be selected before guidance starts. Note that there is a slightly longer delay before guidance starts because the system has to calculate 3 suitable routes.

Use carpool lane⁶

Sometimes private passenger cars are allowed to use lanes normally intended for local buses, commercial vehicles and taxis - this is provided that the passenger car is carrying one or more passengers. With this function activated, lanes of this

type are also included in the calculation of a suitable route.

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Route options** → **Use carpool lane**.
2. Select setting for use of carpool lane:
 - **Never**
 - **For 2 persons**
 - **Over 2 persons**

Use express lane⁶

Sometimes private passenger cars are allowed to use lanes normally intended for local buses, commercial vehicles and taxis - this is provided that the passenger car is classed as a "green car" or similar. With this function activated, lanes of this type are also included in the calculation of a suitable route.

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Route options** → **Use express lane**.
2. Select setting for use of express lane:
 - **Box selected** - express lane used in route calculations.
 - **Box unselected** - express lane not used.

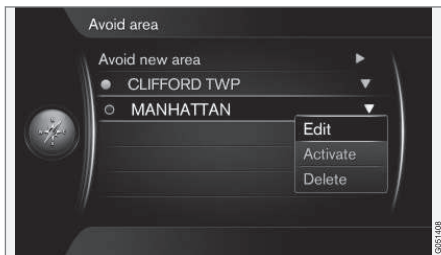
Avoid area⁶

Motorways cannot be deselected. Motorways are always used alternative route during route calculation.

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Route options** → **Avoid area**.
 2. Select area to avoid along the route (if the area is already in the list as previously specified area - proceed to next step):
 - **Select area on map** - select desired area on map, for more information see "Create restricted area" below.
 - **From stored location** - select from saved locations.
- > The selection is added in the list with areas to avoid.

⁶ The function is only available if such information is included in the map data.

3.



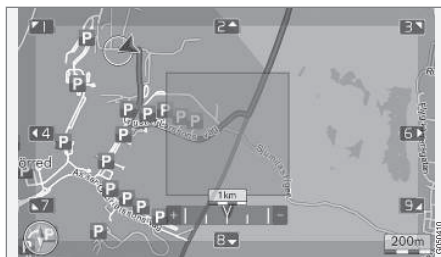
Highlight the area in the list you wish to avoid, press **OK/MENU** and select **Activate**.

Here it is also possible for **Edit**, **Deactivate** and **Delete** areas.

> The area is avoided during route calculation.

Create restricted area

An area that shall be avoided is selected by highlighting directly on the map with a square box.



1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Route options** → **Avoid area** → **Select area on map**.
2. Scroll the map until the cursor is in the desired area.
3. Press **OK/MENU**.
> A red box is created.
4. Turn **TUNE** to adjust the size of the box.
5. Press **OK/MENU** when the box covers the desired area.
> The area is stored in the list of areas to avoid.

For the area not to be included in route calculation the area must be activated, see section "Avoid area" above.

Avoid certain traffic interruptions ⁶

– In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Route options**:

- **Avoid motorways**
- **Avoid toll roads**
- **Avoid tunnels**
- **Avoid ferries**
- **Avoid car trains**
- **Avoid vignette obligation**

i	NOTE
<ul style="list-style-type: none"> • If an itinerary is entered when these selections are made then there may be a certain delay after an option has been ticked/unticked since the itinerary must be recalculated. • If tunnels, toll roads and motorways are not selected then these are avoided as far as possible and are only used if no other reasonable alternative is available. 	

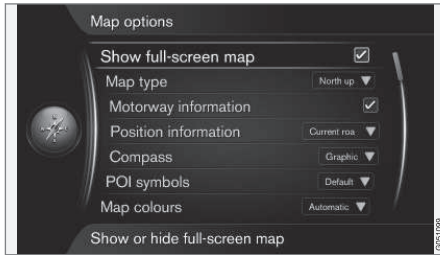
Related information

- Navigation - traffic information (p. 34)
- Navigation - itinerary (p. 21)
- Navigation - specify destination (p. 16)
- Navigation - operation (p. 10)

⁶ The function is only available if such information is included in the map data.

Navigation - map options

Settings can be made here for how the map should be shown and what should be shown.



Full screen map

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Map options** → **Show full-screen map**.
2. Select map size:
 - Box selected - shows map across whole screen.
 - Box unselected - car-related information such as e.g. passenger compartment temperature and media being played back are shown in the bottom and top of the screen.

Map position

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Map options** → **Map type**.
2. Select how the map should be shown on the screen:
 - **North up** - the map always shows North at the top of the screen. The car symbol moves in the relevant direction on the screen.
 - **Map heading up** - the car symbol is in the centre and always points up on the screen. The map image rotates under the car symbol in relation to how the road bends.
 - **3D map basic** - the map is viewed diagonally from above with the car symbol in the centre and direction of travel upward on the screen.
 - **3D map enhanced** - same as the previous option but with different objects, buildings, etc. added into the map image.

Information along a motorway

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Map options** → **Motorway information**.

2. Select function:
 - Box selected - when the car is on a motorway the three (3) next exits that have e.g. a rest area or petrol station are shown. The list is sorted with the closest exit at the bottom of the list.
 - Box unselected - function switched off.

Information about current position

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Map options** → **Position information**.
2. Select position information:
 - **Current road** - the screen shows the name of the road/street where the car/cursor is located.
 - **Lat/Long** - the screen shows the coordinates for the location where the car/cursor is located.
 - **None** - the screen shows no information for the location where the car/cursor is located.

Compass

There is a compass on the screen's map image that shows the direction in which the front of the car is pointing.



The red tip of the compass needle points north and the white end points south. A text-based compass direction can also be selected as an alternative to the graphic compass.

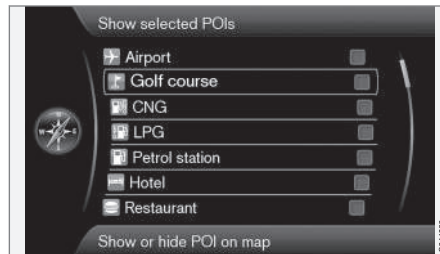


1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Map options** → **Compass**.
2. Select whether compass direction should be shown with a compass needle or with letters:
 - **Graphic** - a compass needle indicates the compass direction.
 - **Text** - the letters **N** for north, **W** for west, **S** for south or **E** for east indicate compass direction.

The map image's compass direction - **north** or **direction of travel** upward on the screen - can also be adjusted, see section "Map mode compass direction" above.

Points of interest (POI) on map

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Map options** → **POI symbols**.



Marked POI options are shown on the map.

2. Select which POI symbols should be shown on the map.
 - **Default** - POI specified with the function **Selected** is/are shown.
 - **Selected** - select with the **TUNE** knob + **OK** for each POI required on the screen.
 - **None** - no POI is/are shown.

To avoid making the map image difficult to read, the number of POI options that can be viewed simultaneously on the screen is limited - zooming into an area provides the opportunity to view several POI options.

Map colours

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Map options** → **Map colours**.
2. Select setting for map colours:
 - **Automatic** - a light sensor detects whether it is day or night and adapts the screen automatically.
 - **Day** - the colours and contrast of the screen become clear and sharp.
 - **Night** - the colours and contrast of the screen are adapted to provide the driver with optimum night vision.

Stored location on map

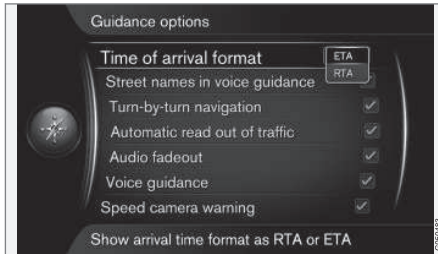
- In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Map options** → **Stored location on map**.
 - > All stored positions are shown.

Related information

- Navigation - route options (p. 24)
- Navigation - guidance options (p. 29)
- Navigation - map options (p. 27)
- Navigation - points of interest (POI) symbols (p. 20)
- Navigation - importing/exporting stored locations (p. 31)

Navigation - guidance options

Settings can be made here for how guidance should be presented.



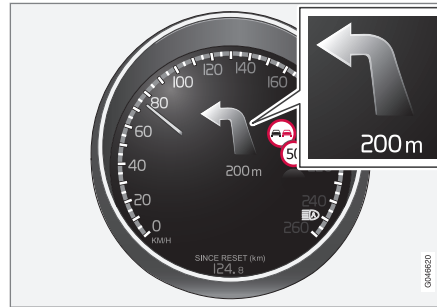
Arrival time or Remaining travel time

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Guidance options** → **Time of arrival format**.
2. Select option for display of time:
 - **ETA** - shows the estimated arrival time
 - **RTA** - shows the remaining time until arrival.

Street names in voice guidance

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Guidance options** → **Street names in voice guidance**.
2. Select what voice guidance should include:
 - Box selected - distance and direction, as well as names of streets and roads.
 - Box unselected - distance and direction.

Navigation with Turn-by-turn⁷



1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Guidance options** → **Turn-by-turn navigation**.

2. Select setting for display in combined instrument panel:
 - Box selected - shows next manoeuvre in the itinerary and the distance to it.
 - Box unselected - no display.

Automatic reading out of traffic

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Guidance options** → **Automatic read out of traffic**.
2. Select setting for reading out of traffic information:
 - Box selected - important traffic disruptions on the route are read out.
 - Box unselected - no reading out.

Automatic audio adaptation

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Guidance options** → **Audio fadeout**.
2. Select setting for map audio adaptation:
 - Box selected - Audio and media system, e.g. radio, is muted when voice guidance reads out information.
 - Box unselected - no audio adaptation.

⁷ Only applies to certain model variants.

◀ Voice guidance

During guidance, when the car approaches a junction or exit, a voice message gives distance and type of next manoeuvre. At the same time a detailed map of the junction is displayed. The voice guidance message is repeated closer to the junction. To repeat a message - press twice on the **OK/MENU** button.

The volume can be adjusted with the audio unit's volume button (during ongoing voice message).

i NOTE

There is no voice guidance during a current call with a Bluetooth-connected mobile phone.

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings → Guidance options → Voice guidance**.
2. Select setting for voice guidance:
 - Box selected - distance and type of next manoeuvre are read out.
 - Box unselected - no voice guidance.

Simple voice guidance

With voice guidance there are three (3) instructions given before each guidance point - one preparatory, one immediately before

and then the last one when the manoeuvre should be performed. With Simple voice guidance activated there is only one (1) instruction given for each guidance point.

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings → Guidance options → Use simple voice guidance**.
2. Select setting for voice guidance:
 - Box selected - one (1) voice guidance instruction for each guidance point.
 - Box unselected - no voice guidance.

Safety camera

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings → Guidance options → Speed camera warning**.
2. Select function:
 - Box selected - warning with acoustic signal and symbol when the car approaches a safety camera.
 - Box unselected - no warning.

i NOTE

The type of information permissible for inclusion on the map is stipulated in national legislation. For current information, see www.volvocars.com/navi.

i NOTE

- Pay attention that the posted maximum permissible speed may sometimes be changed and accordingly deviate from the navigator's database.
- The driver always has the responsibility that the traffic and speed regulations in force are followed.

Signal for stored location

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings → Guidance options → Stored location notification**.
2. Select between stored positions:
 - Box selected - an acoustic signal when the car approaches a user-stored location.
 - Box unselected - no acoustic signal.

Speed restriction⁸

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Guidance options** → **Show speed limits**.
2. Select function:
 - Box selected - speed limit in force is shown with a sign in the combined instrument panel⁹.
 - Box unselected - no notification in the combined instrument panel.

Signal for POI in a guided round tour

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Guidance options** → **Travel POI notification**.
2. Select function:
 - Box selected - an acoustic signal when the car approaches a POI that is included in a Travel guide (p. 16).
 - Box unselected - no acoustic signal.

Signal for guided round tour

1. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Guidance options** → **Guided tour notification**.

2. Select function:
 - Box selected - an acoustic signal when the car approaches a Travel guide (p. 16).
 - Box unselected - no acoustic signal.

Related information

- Navigation - traffic information (p. 34)

Navigation - importing/exporting stored locations

Import and/or export stored routes and locations.

For the import of POIs, the file format must be .gpx.

1. Connect the USB memory in the tunnel console's storage compartment.



2. In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **Import/export stored locations**.
3. Select what should be imported or exported.

⁸ Only cars without the Road sign information function.

⁹ Only when speed information is available in map data.



NOTE

- Adding POI files to the map database requires a certain amount of computer knowledge!
- File format for POI files and how the files are downloaded from the Internet are determined by the respective manufacturer/distributor. Consequently there is no standardised process for downloading POI files from the Internet - and for this reason this owner's manual does not show an exact step-by-step description.
- If you have any questions - contact a Volvo dealer.

Related information

- Navigation - specify destination (p. 16)
- Navigation - itinerary (p. 21)
- Navigation - route (p. 22)
- Navigation - points of interest (POI) symbols (p. 20)

TRAFFIC INFORMATION

Navigation - traffic information

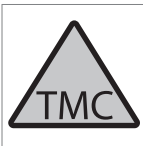
The navigation system continuously receives traffic information transmitted via Traffic Message Channel (TMC) which is used for dynamic road directions. When situations that can affect the journey occur (e.g. accidents, road works) this is shown on the screen, and when a destination has been specified there is a recalculation of the route. Recalculation can take place automatically or require confirmation, see Reroute on request (p. 24).

TMC is a standardised coding system for traffic information. The receiver automatically searches for the correct frequency.

i NOTE

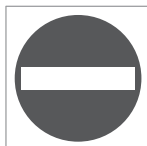
TMC is not available in all areas/countries. The system's coverage area is under constant construction and updating may sometimes be necessary.

The traffic information is presented differently depending on whether the destination is specified or not specified.



This symbol on the screen indicates that traffic information is available within the current reception area. Symbol colour indicates the importance of the information:

- RED - the information is read out and the position is shown on the map.
- YELLOW - no reading out, the position is shown on the map.



This symbol marks the position of a traffic problem, for more information, see section Traffic information - with specified destination > Traffic information on map.

i NOTE

Traffic information is not available in all areas/countries.

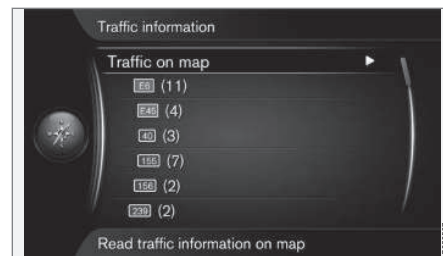
The traffic information transmission areas are constantly being expanded.

Activate/deactivate

1. In the normal view for the navigation source, press **OK/MENU** and select **Traffic information**.
2. Select in the box to activate traffic information, or deselect the box to deactivate.

Traffic information - without specified destination

The function allows you to show traffic problems without the destination having been selected.



Opens the scroll function on the map.

Traffic information on map

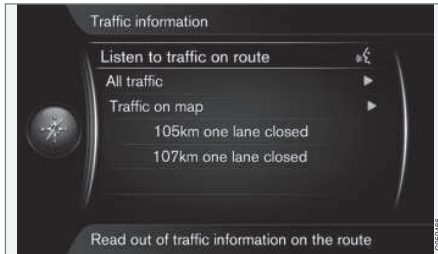
1. In the normal view for the navigation source, press **OK/MENU** and select **Traffic information** → **Traffic on map**.
2. Search for traffic problems with the scroll function, see description below in the section Traffic information - with specified destination > Traffic information on map.

All traffic

1. In the normal view for the navigation source, press **OK/MENU** and select **Traffic information** → **Traffic on map**.
> A list of all traffic messages within the reception area is shown.
2. Select what should be shown, see description below in the section Traffic information - with specified destination > All traffic.

Traffic information - with specified destination

The function shows traffic problems when the destination has been entered.



Listening to traffic information along the route

- In the normal view for the navigation source, press **OK/MENU** and select **Traffic information** → **Listen to traffic on route**.
 - > Current traffic messages along the itinerary will be read out.

All traffic

1. In the normal view for the navigation source, press **OK/MENU** and select **Traffic information** → **All traffic**.
 - > A list of all traffic messages within the reception area is shown. Traffic information is first grouped according to country (in border areas), then road number and then street name.

2. Select a traffic problem (road/street) and confirm with **OK/MENU**.
 - > Traffic problems are listed, with the most serious disruption at the top, e.g. total stop in a lane.
3. Select a traffic problem and confirm with **OK/MENU**.
 - > Additional information about the traffic problem is shown, as well as position on map. The map image is centred around the position of the traffic problem.



Traffic problem on map.

Traffic information on map

1. In the normal view for the navigation source, press **OK/MENU** and select **Traffic information** → **Traffic on map**.
2. Scroll the map until the traffic event/symbol for which detailed information is required is positioned in the crosshair.
 - > A yellow frame around the symbol is lit.

3. Confirm the selection by pressing **OK/MENU**
 - > Available information is shown, e.g.
 - street name/road number
 - country
 - nature of the problem
 - extent of the problem
 - duration of the problem.

If there are several traffic problems within the crosshair frame then the one closest to the centre of the crosshair is shown first.

Figures such as "2/5" in the upper part of the screen mean that the information shown is number 2 of a total of 5 messages within the crosshair - remaining messages are browsed to using repeated short presses on **OK/MENU**.

Direct listed information



TRAFFIC INFORMATION

1. In the normal view for the navigation source, press **OK/MENU** and select **Traffic information** → **Traffic on map**.
 - > Direct listed traffic problems (two in the previous illustration) indicate that the information affects the current itinerary.
2. Select a traffic problem and confirm with **OK/MENU**.
 - > Additional information about the traffic problem is shown, as well as position on map. The map image is centred around the position of the traffic problem.



Traffic problem on map.

Extent of traffic problem

Certain traffic problems are not just tied to one single position, but can cover a longer section.

In addition to the symbol for the position of the traffic problem, the current distance is also highlighted with a row of red crosses "xxxxx".

- The length of the highlighting corresponds to the extent (distance) of the traffic problem.
- Driving direction is indicated by the side of the road that is highlighted.



Traffic problem with its extent.

Size of area for traffic information

The map scale determines how much traffic information can be shown. The larger the map area that is shown on the screen, the greater the number of traffic disruptions that can be shown.

Related information

- Navigation - guidance options (p. 29)
- Navigation - specify destination (p. 16)
- Navigation - itinerary (p. 21)

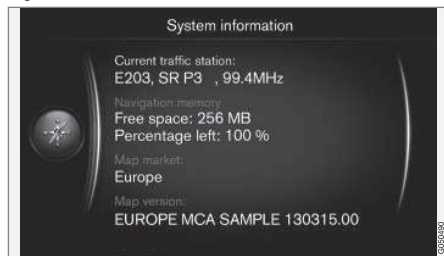
MAP AND SYSTEM INFORMATION

Navigation - map and system information

Volvo offers a number of maps that cover different parts of the world. A map consists of map data and road data with related information.

During the update, new information is transferred to the navigation system and old outdated information is deleted.

System information



- In the normal view for the navigation source, press **OK/MENU** and select **Settings** → **System information**.
 - > An excerpt from the current status in the navigation system is shown, e.g. current transmitter of traffic information and operative map data, as well as map version.

Maps - content

Maps are developed with enhanced information and are updated continuously.

i NOTE

Map data does not have 100 percent coverage in all areas/countries.

The system's coverage area is under constant construction and updating may sometimes be necessary.

See support.volvocars.com for information about maps and other information related to Sensus Navigation.

Map areas

The car's navigation system varies depending on market. Should you need to modify the map area - contact a Volvo dealer for information on how to proceed.

Updating the maps

Updated map data is downloaded from the Internet¹ to a USB memory². The transfer of the downloaded update to the car's navigation system then takes place via the car's USB connection, which is located in the tunnel console's rear storage compartment.

i NOTE

Before update of the car's map data is started:

- First read through the information and instructions from the Internet related to the download and update of map data.

In the event of any questions about updating - contact a Volvo dealer or see www.volvocars.com/navi.

¹ See information on support.volvocars.com.

² The USB memory must have at least 20 GB of space available.

Updating

Follow the onscreen instructions in order to update the navigation system - this shows the progress of the update process as well as approximate time remaining.

i NOTE
A number of the Infotainment functions are disabled or reduced during updating.

1. Start the engine.
2. Connect the USB memory containing the update to the car's USB connector and follow the onscreen instructions.
 - > The screen shows **Map update finished**. All of the navigation system's functions can be used again.

i NOTE
In certain cases, updating map data may also add new functions, which are not described in this manual.

Continue an interrupted update

If the update is not finished when the engine is switched off then the process continues where it left off next time the engine is started, providing the USB memory is still connected. If the USB

memory is not connected - start the engine and then connect the USB memory.

The screen shows **Map update finished** when the update is completed.

Related information

- Navigation - license agreement and copyright (p. 44)
- Navigation - fault tracing (p. 42)
- Sensus Navigation (p. 7)

Navigation - menu overview

Overview of possible options and settings in the navigation system's menus.

Three of the menu levels are shown. There may be more submenus, which are then described in their respective section.

- Open the menu system by pressing **OK/MENU** in the normal view for the navigation source.

Repeat voice guidance	(p. 29)
Set destination	(p. 16)
Home	(p. 16)
Address	(p. 16)
Country:	
City:	
Street:	
Number:	
Junction:	
Set single destination	
Add as waypoint	
Information	
Save	



MAP AND SYSTEM INFORMATION



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Related information

- Navigation - operation (p. 10)
- Sensus Navigation (p. 7)

Navigation - fault tracing

Below are examples of what can be interpreted as the navigation system not working as it should.

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.

There is a greater chance of error when driving on roads lying parallel to another road, on winding roads, on roads on 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 GPS 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 outline, distance, width of road, type of road, number of right or left turns, roundabouts etc. are all taken into account in order to produce the best theoretical route. A more efficient selection of route may be possible based on experience and knowledge of the area.

^A See the Favourites section in the owner's manual.

The system uses toll roads, motorways and ferries even though I chose to avoid them

For technical reasons, the system can only use major roads when calculating a route outline 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 GPS signals, it can take up to 5 minutes before the position of the car is correctly calculated.

The position of the car on the map is incorrect after the car battery has been disconnected

If power has been cut from the GPS antenna, it can take more than 5 minutes for the GPS signals to be received correctly and the position of the car to be calculated.

The car symbol on screen behaves erratically after a tyre change

In addition to the GPS receiver, the car's speed sensor and a gyro assist in calculating the current position 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 for the system to work optimally it is recommended to turn the steering wheel to full lock a few times while driving, in a suitable location.

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 complete.

The information stored in the maps is constantly being developed and updated. To download the latest map data, see Updating the maps (p. 38). See also support.volvocars.com for further information on maps, etc.

The scale of the map sometimes changes

There is no detailed map information in certain areas. The system then automatically changes the degree of magnification.

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.

I shall go on a long trip but do not want specify a particular route outline to the cities I plan to travel through - How do I most simply create an itinerary?

Specify the destination directly on the map using the hairline cross. The system automatically guides you to the final destination even though you are driving beside the intermediate destinations.

My map information is not up-to-date

The information stored in the maps is constantly being developed and updated. To download the latest map data, see Updating the maps (p. 38). See also support.volvocars.com for further information on maps, etc.

How can I easily check which map version is used?

Search in the menu system for **Settings** → **System information** in order to obtain information about version and the geographic area covered, see (p. 38).

Related information

- Navigation - map and system information (p. 38)
- Navigation - route (p. 22)
- Navigation - route options (p. 24)

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Related information

- Navigation - map and system information (p. 38)
- Sensus Navigation (p. 7)

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