

5. NAVIGATION (NAV) (Optional for markets/ versions where applicable)

General information

The integrated navigation system (NAV) allows you to reach the selected destination through visual and acoustic instructions. Use of the navigation system is fast, convenient, safe, and above all highly flexible because you can call up already programmed destinations or reference points such as hotels, monuments, public structures, fuel stations or Authorised Alfa Romeo Services.

The instantaneous vehicle position is determined by the GPS system (Global Positioning System) installed on board. The on-board GPS system is fitted with an aerial and a reception module integrated in the I.C.S. system. The system dynamically processes satellite signals, those of a sensor on a wheel and of the gyroscope integrated in the navigation computer.

The Alfa Romeo navigation system helps driver while he drives, by suggesting vocally or graphically, the optimum routing to reach his preset destination.

WARNING: Navigation system suggestions do not excuse driver from his full responsibilities due to his driving behaviour and to his compliance with road and other traffic regulations.

The responsibility for road safety always lies with vehicle driver, and it falls on him in any case.

Warnings

— GPS reception is difficult under trees, among high buildings, in multi-storey car parks, in tunnels and anywhere satellite aerial reception can be hindered.

— The GPS system needs about 15 minutes for activation if it is connected to the vehicle battery.

— The GPS system needs a few minutes to determine the new position of the vehicle if it is turned off and the vehicle is moved with the system off.

— In the lack of satellite information, the system uses the information leading from the gyroscope and from the sensor at the wheel for temporary data analysis.

— The GPS satellite aerial must not be covered with metal or damp objects.

The instantaneous vehicle position is identified in the CD-ROM and shown on the display together with the topographic characteristics of the area memorised on the CD. Access to the data on the CD-ROM requires waiting a few moments in the map displays.

The system constantly compares the data leading from the wheel sensor, the GPS aerial and from the programme to automatically compensate changes in temperature, pressure or any other occurrence which can falsify position detection in any way.

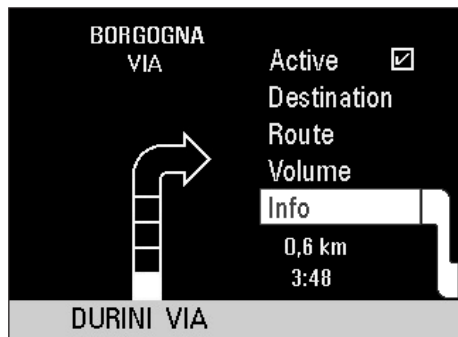
Warnings

— Precise self-adjustment of the navigation system requires approx. 50 km of travel the first time and when tyres are changed.

— Continuous lack of grip at the wheels (for example skidding on ice), the system temporarily detects an incorrect position.

— During precision self-adjustment the position is not detected absolutely completely.

The navigation system is managed completely through the I.C.S., therefore the only operations that may be necessary are replacement of the CD-ROM to set the map of another area or an updated map.

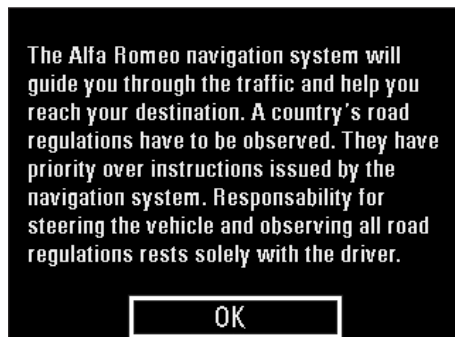


5.A.

Access to the navigation main function page (dwg. 5.A.) is gained pressing button **25** (NAV) after turning on. Each time the I.C.S. is turned on a page will be shown with warnings about care in use of the system (dwg. 5.B) which, to be able to continue using the system must be confirmed pressing knob **11** or one of the main function keys. This page will no longer be displayed as long as the system is on.

Display and functions

- Voice and visual instructions with indications of the distance from the destination.
- Detailed map in different colours and with different scales to clearly show the vehicle position, the route and the destination.



5.B.

— Personalisation of the navigation system with the possibility of entering pre-memorised destinations with road and number.

— Automatic memorising of the last 5 destinations.

— Name of the current road.

— Possibility to choose the route according to personal preference.

— Information about current position.

— Information about arrival times.

— System diagnostics and warnings about possible disturbances.

Drive for navigation CD

The navigation CD-ROM is located on the

left side of the boot and it has an eject key and two warning lights:

- the upper light on means that the power current is on;
- the lower light on means that the CD-ROM is on;
- the lower light flashing means that the CD-ROM is being changed.

Warning

— The navigation system only works with the CD-ROM inserted in its drive.

— The CD-ROM must be removed and changed only for updating the system software, for updating the map or entering maps relating to another region.

Changing the CD

— When the I.C.S. is turned on the drive upper and lower warning lights are lit.

— Press the eject key.

— The previous CD-ROM is ejected and the lower drive led flashes.

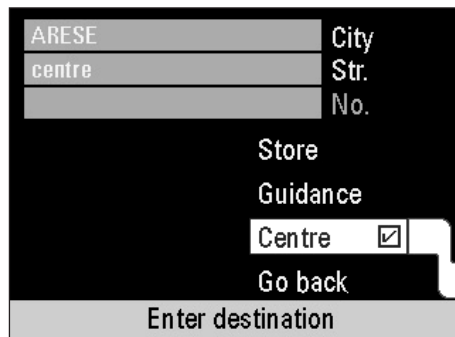
— Insert the new CD-ROM.

Warnings

— When the new CD-ROM is inserted the



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system software is automatically updated to the new map material or to the new functions. During the time required for this operation a stand-by message is displayed. After the updating operation the destination memory is empty.

— The driver is responsible for abiding by current traffic regulations, any instructions on the basis of incorrect maps which induce prohibited driving manoeuvres must NOT be followed.

Software version

The I.C.S. software release number can be checked selecting the climate control display page, then pressing knob **11** for at least 3 seconds.

5.1 DESTINATION ENTRY

Entering the destination is obtained selecting "Destination" with knob **11** and pressing to confirm thereby displaying the "Select destination" page with the options "Street address", "Intersection", "Points of Interest", "Destination memory", "Recent destinations" and "Go back" (dwg. 5.C.).

"Go back"

Selecting "Go back" takes you back to the main page of the navigation functions (dwg. 5.A.).

5.1.1 Entering the "Street address" field

The option "Street address" displays a new

function page for entering the city, street and number, which always show the data concerning the destination calculated last. The same page shows the other functions "Store", "Guidance", "Centre ☐ / ☒ " and "Go back" (dwg. 5.D.).

Entering the city name

The city name is entered moving the cursor to "City" with knob **11** and pressing to confirm. On the "Enter city" page (dwg. 5.E.) the single characters of the town name are selected with knob **11**. The characters selected are enlarged in the zoom field. The blank space between two characters is obtained selecting " _ ".

Quick entry

Each time a character is selected a search takes place for the existence of a city name with the characters entered so far in the memorised list. Only those characters still required still required for completing the name will then appear for selection. The city field is filled as soon as a city is located from the list.

Warnings

— When entering the city name, after entering a few characters, you are advised to select “List” and then the destination directly with knob **11** and activate it.

The number shown at the side of the “List” indicates the number of towns in the list with name corresponding to the characters entered up to now in the town field.

— When entering characters the list appears automatically if the character selector knob is pressed for more than 1 second.

“Delete”

The “Delete” function is selected turning knob **11** to the right makes it possible to:

— delete a character pressing for less than 1 second;



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— delete the whole entry pressing for more than 1 second.

“OK”

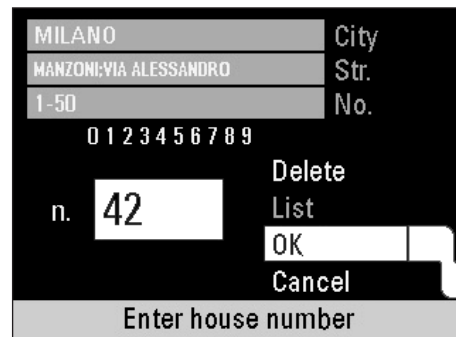
The “OK” function confirms city entry returning to the “Enter destination” function page which now displays the city name.

“Cancel”

With the “Cancel” function you return to the “Enter destination” function page without memorising the data.

Street name entry

The street is entered using knob **11** to move the cursor to “Str.” and confirming. In the “Enter street” page (dwg. 5.F.) the sin-



5.G.

gle characters of the street name are selected with knob **11**. The characters selected are enlarged in the zoom field.

Warnings

— If the street field is not completed, the navigation system automatically leads you to the centre of the city selected indicating this (Centre ☒).

— The navigation always takes you to the centre in the case of very small towns.

Entering the house number

The house number is entered with knob **11** moving the cursor to “No.” and confirming. In the “Enter house number” page (dwg. 5.G.) the options “Delete”, “OK” and “Cancel” are available.



5.H.

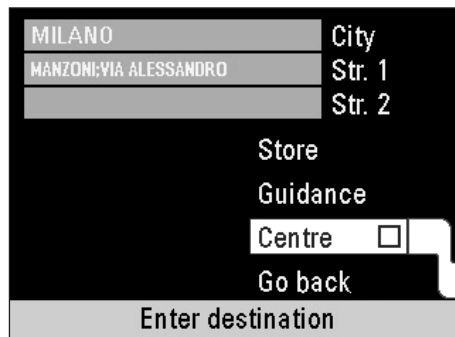
Warning If the house number field is not completed the navigation system assumes the whole street as destination.

“Store”

The “Store” function memorises the information concerning the address entered with the name you want with knob **11**.

The “Store destination” function page brings forward the address, name for store destination, selectable characters, zoom fields and the functions “Delete”, “OK” and “Go back” (dwg. 5.H.).

The “Store as:” field for the destination to be memorised can have a maximum of 14 characters on which it is possible to act using functions “Delete”, “OK” and “Go back”.



5.I.

“Guidance”

Selecting “Guidance” with knob **11** starts the calculation of the destination, followed by display of the main navigation page (dwg. 5.A.).

“Centre ☐ / ☒”

Enabling the option “Centre ☒” leads to the centre of the city selected. This function is enabled automatically if only the destination city name is indicated. If this option is chosen the system automatically moves the cursor to the “Str.” field in which it is possible to enter the street name.

After entering the name of the street you can choose to be guided to the centre or to

the address entered (“Centre ☒”), enabling or disabling the “Centre” function with knob **11**.

“Go back”

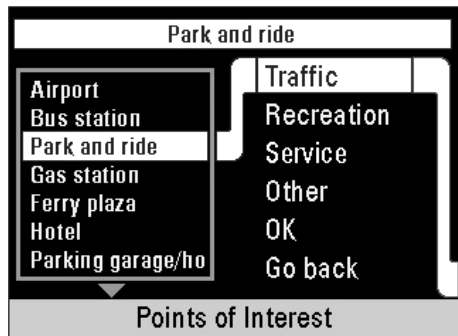
Selecting “Go back” with knob **11** displays the “Select destination” function page again where a new destination can be entered.

5.1.2 Entering the destination “Intersection”

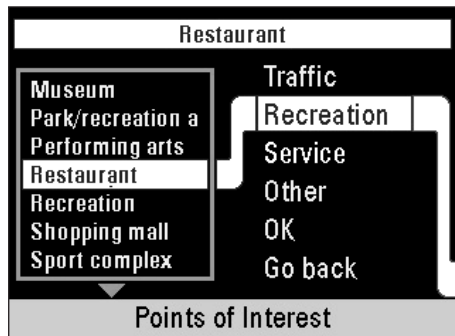
The option “Intersection” displays a new page for entering the city and two streets, the intersection point of which is the required destination. This page also contains the functions “Store”, “Guidance”, “Centre ☐ / ☒” and “Go back” (dwg. 5.I.).

Entering the city name and first street follow the same procedure as described for entering the address fields, while for the name of the second street simply select the name from the list displayed.

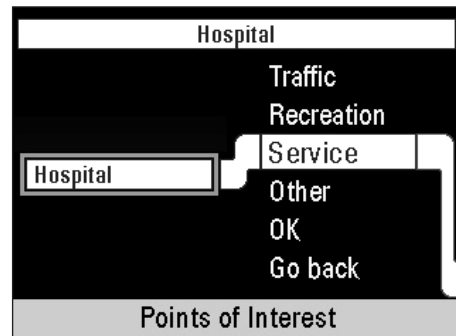
Warning If the name of the 2nd road is not entered, or is not available in the list, the first road is considered as destination.



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5.1.3 Entering the destination "Points of Interest"

With the function "Points of Interest" it is possible to memorise the preferred navigation destinations. Selecting "Points of Interest" a function page is displayed with the items "Traffic", "Recreation", "Service", "Other", "OK" and "Go back" (dwg. 5.J.).

"Traffic"

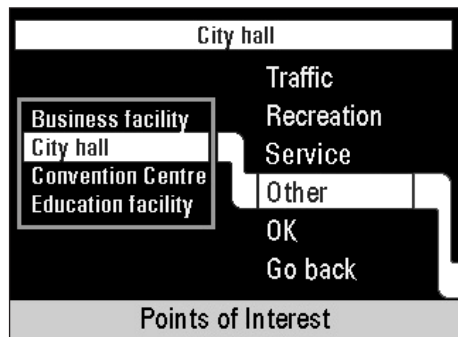
The option "Traffic" displays a list of destinations of this category (hotels, airports or stations etc.) which can be selected with knob **11**. The item selected also appears in the upper window of the function page (dwg. 5.J.).

"Recreation"

The option "Recreation" displays a list of destinations of this category (monuments, museums, sport facilities etc.) which can be selected with knob **11**. The item selected also appears in the upper window of the function page (dwg. 5.K.).

"Service"

The option "Service" displays a list of destinations of this category (mechanical workshops, hospitals, fuel stations etc.) which can be selected with knob **11**. The item selected also appears in the upper window of the function page (dwg. 5.L.).



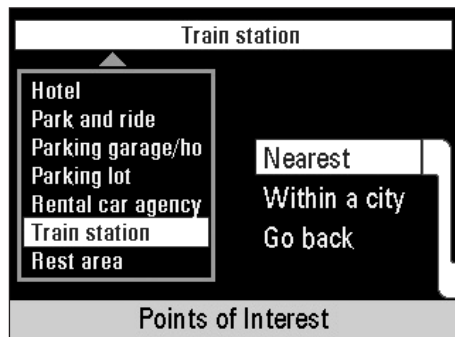
5.M.

“Other”

The option “Other” displays a list of destinations of this category (firms, city hall etc.) which can be selected with knob **11**. The item selected also appears in the upper window of the function page (dwg. 5.M.).

Criteria for choosing and selecting the town for points of interest

Confirming the selection of a point of interest, the cursor automatically moves “OK” and confirming displays the “Points of Interest” function page with the selection criteria “Nearest”, “Within a city” and “Go back” (dwg. 5.N.).



5.N.

“Nearest”

The option “Nearest” displays:

- a list with the points of interest with growing distance in a straight line in relation to your current position starting from the nearest;
- a field with the city address;
- the street of the selected destination;
- the “Info” function;
- the “Go back” function.

The required destination is selected and activated with knob **11** (dwg. 5.O.). The option “Store” memorises the destination in the destination memory. The option “Guidance” calculates the route then dis-



5.O.

playing the main navigation page. The option “Go back” takes you back to the previous “Points of Interest” function page.

The “Info” function displays the “Points of Interest - Info” page with information about the points of interest selected (dwg. 5.P.). The “” symbol is shown only if the telephone number of the point of interest selected is available.

The “Call” option makes it possible to directly call the number shown in the information about points of interest selected.

“Go back” takes you back to the previous page.



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5.R.


"Within a city"


The option "Within a city" displays the function page "Select city" which makes it possible to seek points of interest in a chosen city. This page contains the entry fields for the city name, usable characters, zoom and the options "Delete", "List", "OK" and "Cancel" (dwg. 5.Q.), which are accessed as described in paragraph 5.1.1.

Confirming the selection a list is displayed with the points of interest in alphabetical order among which it is possible to select and activate the required destination with knob **11**.

The option "Store" can then memorise the destination in the destination memory. The option "Guidance" calculates the route then

displaying the main navigation page. The option "Go back" returns to the previous "Points of Interest" function page.

The "Info  " function displays the "Points of Interest - Info" page with information about the points of interest selected (dwg. 5.R.).

The " " symbol is shown only if the telephone number of the point of interest selected is available.

The "Call" option makes it possible to directly call the number shown in the information about points of interest selected.

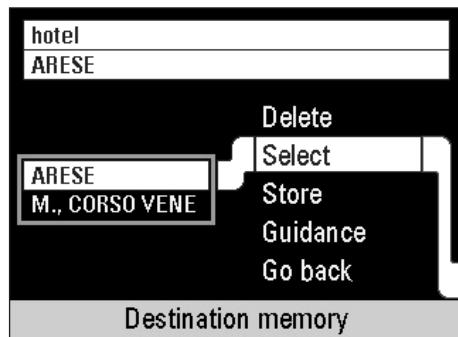
"Go back" takes you back to the previous page.

5.1.4 Entering the destination "Destination memory"

The option "Destination memory" displays the function page "Select destination memory" with the list of memorised navigation destinations of up to a maximum of 20 destinations. The same page also contains the options "Delete", "Select", "Guidance" and "Go back" (dwg. 5.S.).

Selecting from the destination memory

The option of the destination memory takes place selecting the destination through knob **11** and pressing it to confirm. The screen also displays the data about the address and destination for the destination selected. Then



5.S.

selecting "Guidance" starts calculation of the route and it is possible to move to the navigation function page with the arrows.

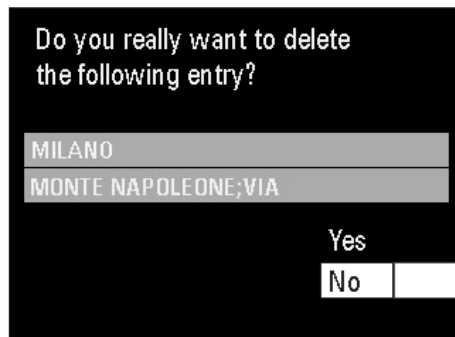
The option "Go back" takes you back to the previous function page.

Deleting items from the destination memory

Deleting items from the destination memory takes place selecting the destination with knob **11** and pressing it to confirm. The highlighted destination is deleted selecting "Delete".

"Yes" (confirm)

The delete operation is protected against accidental actions asking whether you real-



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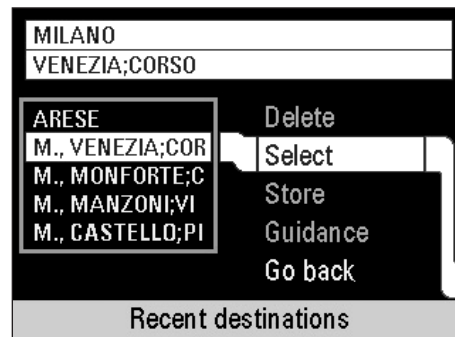
ly intend to proceed. Choosing "No" takes you back to the last function page (dwg. 5.T.).

Warning

If the destination memory already contains 20 items, to enter new destinations it is necessary to delete an item from the existing list. In this case the system shows the warning "Destination memory complete! Clear one item!".

5.1.5 Entering the destination "Recent destinations"

The option "Recent destinations" displays the "Select recent destinations" function page with a list of the last 5 destinations



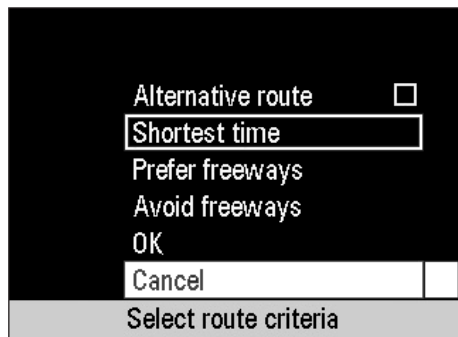
5.U.

entered with the options "Delete", "Select", "Store", "Guidance" and "Go back" (dwg. 5.U.).

The destinations are selected and deleted as described in paragraph 5.1.4.

5.2 ROUTE SELECTION CRITERIA

The criteria selection function makes it possible to affect route calculation according to determinate parameters. The "Select route criteria" screen (dwg. 5.V.) is accessed from the main navigation function page (dwg. 5.A.) selecting "Route" with knob **11**. The selection made remains active for each subsequent calculation until the criteria are modified again. The following possibilities of choice are offered:



5.V.

5.2.1 "Alternative route"

This selection accesses a screen with the following functions:

"Current way" ☐ / ☒

This maintains the route settings preselected automatically by the NAV system. If no alternative route is selected the item selected is ("Current way ☒").

"Next ... km" ☐ / ☒

This can select an alternative route for a number of kilometres to be selected, starting from the current position, using knob **11** and pressing it to confirm. The interval between the km of route changing depends on the distance from the chosen destination. When the

function is selected the \hookrightarrow symbol is displayed on the main NAV menu after the item "Route" to highlight the choice.

"Special route"

With this you select an interval of roads to be avoided on the route to destination. The I.C.S. system offers the possibility of selecting the first and last road from a list of possibilities. This way the alternative route is calculated and the symbol \hookrightarrow is displayed on the main NAV menu after "Route".

"OK"

The function confirms the choice made.

"Cancel"

Selecting "Cancel" the data are not saved and the previous menu is displayed.

5.2.2 "Shortest time"

This allows you to reach your destination as fast as possible.

5.2.3 "Prefer freeways"

This considers the use of freeways in calculating the route.

5.2.4 Avoid freeways

This considers the less possible use of freeways.

5.2.5 "OK"

Pressing "OK" activates the function selected.

5.2.6 "Cancel"

This takes you back to the main navigation page without activating any criteria in calculating the route.

5.3 DESTINATION GUIDANCE AND ORIENTATION HELP

Guidance to destination takes place through voice instructions accompanied by graphic representation of the recommended directions to follow and an arrow showing the direction of the destination.

5.3.1 Voice instructions

The voice instructions guide you to destination advising you in time of all the manoeuvres to be carried out, and in particular first the manoeuvre is announced and then detailed instructions are provided to which access is possible through the REP key **15**.



5.W.

5.3.2 Graphic instructions

On the main navigation page, and on the MAIN page, the bar arrows display all the manoeuvres to be accomplished. The shape of the arrow represents the next manoeuvre/turn left, right, straight on or turn back. The name of the next road to follow is shown above the arrow while the current one is shown under the arrow.

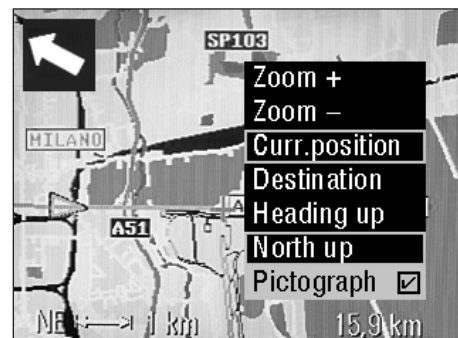
The distance from the next manoeuvre is also indicated highlighting your progress with the gradual filling of the bar arrow. Therefore the clearer the arrow, the nearer you are to performing the suggested manoeuvre (dwg. 5.W.).



5.X.

5.3.3 Map representation

Pressing the MAP key **12** it is possible at all times to move to the colour map page, where the vehicle is shown with a triangular arrow with the tip pointing in the direction of travel (dwg. 5.X.). In the more complex indications, a yellow arrow will show the direction to be followed. The destination to be reached is always shown by a red cross while the items of the route: roads, rivers, railway lines are shown with coloured lines. A pop-up menu on this page makes it possible to activate the functions "Zoom +", "Zoom -", "Curr. position", "Destination", "Heading up", "North up" and "Pictograph ☐ " (dwg. 5.Y.), which can be called pressing knob **11** each time.



5.Y.

"Zoom +"

Selecting "Zoom +" enlarges the visible area of the map and the unit of measurement is shown in the lower window of the monitor (among 50 m, 100 m, 200 m, 500 m, 1 km, 2 km, 5 km, 10 km, 20 km, 50 km and 100 km).

"Zoom -"

Selecting "Zoom -" the visible area of the map is reduced.

Warning Enlarging the visible area of the map is also possible turning knob **11** to the right and reduction turning to the left.

"Curr. position"

Selecting "Curr. position" the visible map

area is taken to the current position in relation to the car.

“Destination”

Selecting “Destination” displays the visible area of the map of the destination and the destination is shown by a red cross.

“Heading up”

Selecting “Heading up” the visible area of the map is shown with the upper edge of the monitor indicating the direction of travel (for scales up to 1 km).

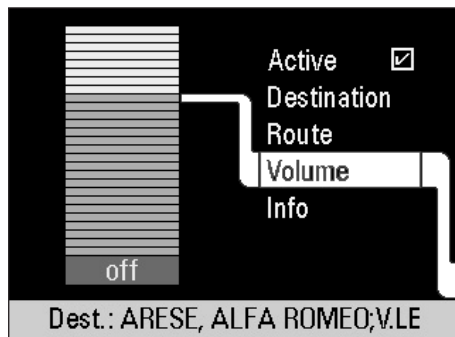
“North up”

Selecting “North up” the visible area of the map is shown with the upper edge of the monitor indicating north (for each scale).

“Pictograph” ☐ / ☒

Activating this function (“Pictograph ☒”) is highlighted with a white arrow in a box at the top of the display, showing the direction of the destination. When you are near your destination, the arrow is coloured.

Travelling on a road not memorised on the navigation CD-ROM, with guidance to destination activated, you will receive a voice message that the “Route is in the direction indi-



cated”. In these conditions, and until you find the suggested route, the main navigation page or the MAIN display show the name of the road and the arrow indicating the direction towards the start of the recommended route.

If the vehicle is outside the territory on the navigation CD-ROM, confirming “Guidance”, appears on the main navigation page and on the MAIN display will show the warning “Route calculation impossible: vehicle off map”.

5.4 VOLUME CONTROL

Volume adjustment is obtained selecting “Volume” with knob **11** and using the bar regulator (dwg. 5.Z.). To end adjustment



press knob **11**. The voice instructions for controlling the volume are repeated cyclically. During a voice instruction the volume can also be changed with knob **21**.

The voice instructions can also be accessed again pressing the REP key **15**.

5.5 INFORMATION PAGE

Through the information page it is possible to access the “Navigation info” function page which is subdivided into 3 sectors, with the current navigation data (dwg. 5.Z.1.).

Upper area

— distance to destination, with guidance to destination activated;

- destination name;
- or
- warning “No destination”.

Centre area

- current position of car;
- town/road;
- latitude (N/S) and longitude (E/W) in degrees (°), minutes (') and seconds (").

Lower area

Satellite reception data x sat./yD-GPS where:

- x number of receivable satellites (from 0 to 6);

- y positioning (0, 2 or 3)

0D-GPS: positioning impossible

2D-GPS: at least 3 satellites are receivable for bidimensional positioning

3D-GPS: at least 4 satellites are receivable for three-dimensional positioning.

The option “Go back” allows you to go back to the main navigation page.

5.6 INDICATION OF DISTANCE FROM DESTINATION AND ARRIVAL TIME

The indication of the distance from destination and the calculated arrival time is displayed on the main navigation page under the option “Info”. The exact calculation of the distance from destination is only shown at the end of processing, otherwise an estimated value is given.

5.7 ACTIVATING/DEACTIVATING THE NAVIGATION FUNCTION

Activation of the navigation function (Active ☒) enables the guidance to destination function with which it is possible to completely enter the destination before calling for the navigation help you require.

Warning Each time guidance to destination is enabled or disabled a new route calculation is made for the current destination.