ON
TP
CD
Rad
Nav
harman/kardon
Info
OK
LAST DESTINATION
DESTINATION
P.O.I.
Traffic Pro

Navigation System

Operation guide

Manual de usuario

Mode d'emploi

harman/kardon®

Our company and staff congratulate you on the purchase of your new **harman/kardon** navigation system. Your selection of our product is a demonstration of your trust in our company name.
Your new navigation system offers many of different features. We have prepared these instructions to familiarize you with the operation of your AM/FM/CD/Navigation system.
When operating the navigation system, please always remember that you are on the road.

Notre entreprise et son équipe vous félicitent de l'achat de votre système de navigation **harman/kardon**. Votre choix nous démontre la confiance en nos produits.
Votre système de navigation vous offre des différentes possibilités de comande. Nous avons préparé ces instructions afin de vous familiariser avec l'utilisation de votre système de AM/FM/CD/navigation.
N'oubliez pas qu'en manipulant votre système de navigation, vous trouvez dans la circulation routière..

Gracias por su confianza y felicitaciones por la compra de su sistema de navegación **harman/kardon**.
Su sistema de navegación dispone de un gran número de modalidades de servicio difrentes. Estas instrucciones le ayudará a familiarizarse con las modalidades de servicio de su sistema de AM/FM/CD/ navegación.
Por favor, al operar su autorradio, no se olivede Usted Jamás de que está participando en el tráfico.

Errors and technical modifications expected
Erreurs et modifications techniques réserveés
Salvo error u omisión y modificaciones técnicas

⚠ Warning

Danger of accident

- Do not program the navigation unit while driving.

▷ Destinations should only be entered when the vehicle is stationary.

▷ Use of the navigation unit is only advised if the traffic conditions are suitable and you are absolutely sure that its use presents no risk, distraction or inconvenience to you, your passengers or other road users.

⚠ Warning

Danger of accident

- Do not ignore traffic laws.

▷ The requirements of the traffic laws take precedence over instructions you may receive from the navigation unit. It is possible that you may receive inaccurate or incorrect instructions due to changes in traffic routes, e.g. due to road construction or deviating data. Therefore, you must always observe the actual road signs and traffic regulations.

⚠ Warning

Danger of accident

- Do not misuse the unit.

▷ The navigation system serves solely as an aid to navigation. In particular, the navigation system must not be used as an orientation aid at times of poor visibility. The volume of the radio and the navigation system should be adjusted so that noises external to the vehicle are still audible.

▷ Turn the unit off immediately if a serious malfunction occurs.

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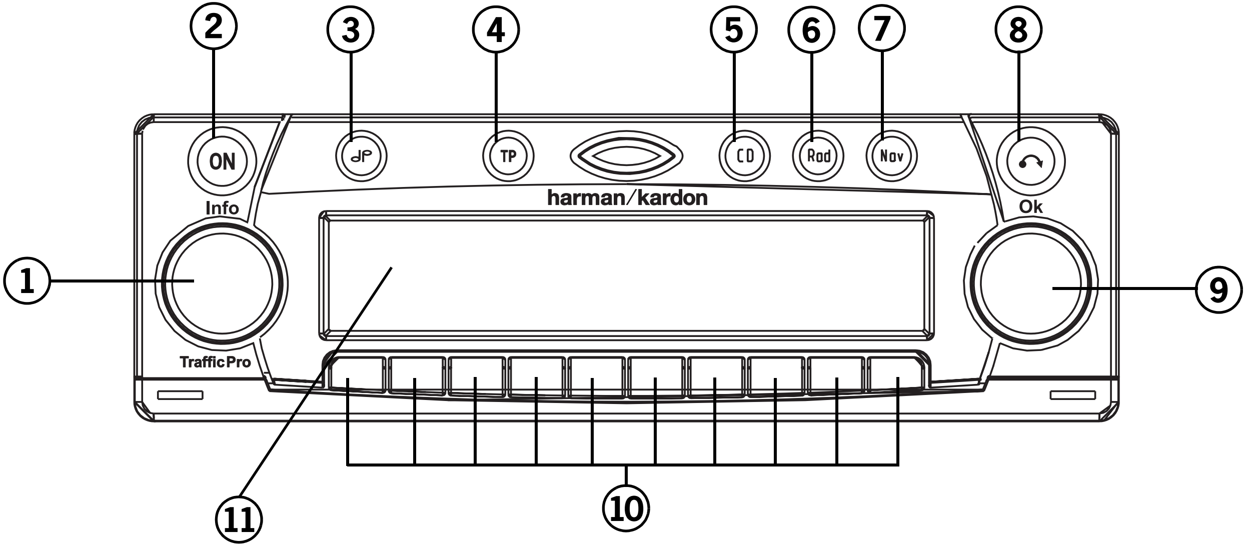
1. Keyboard Overview


②
③
④
⑤
⑥
⑦
⑧
ON
TP
CD
Rad
Nav
harman/kardon
Info
Ok
①
⑨
TrafficPro
⑪
⑩

① Left control knob ● (Info)

② On / off switch (ON)

③ Tone key (♪)

④ Traffic program key (TP)

⑤ Select CD mode (CD)

⑥ Select radio mode (Rad)

⑦ Select navigation mode (Nav)

⑧ CD eject key (↷)

⑨ Right control knob ● (OK)

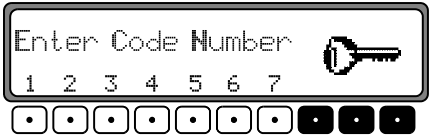
⑩ Multifunction keys

⑪ Display

2. Anti-theft device

2.1. Entering the Code Number

If the car radio is disconnected from the power supply, it will be theft-protected upon reconnection. After turning on with the ON key, the display shows the following text: Enter Code Number.

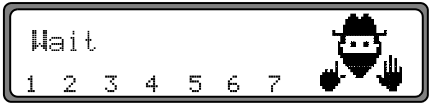


Use the multifunction keys 1 - 7, to enter the five-digit code number.

Enter the code number using the multifunction keys. The unit automatically turns itself on once the fifth digit is entered and if all other digits were entered correctly.

Note
It is essential that the CODE CARD be kept in a safe place outside the vehicle. This will prevent unauthorized use. The provided stickers should be attached to the inside of the vehicle windshield/windows.

If an incorrect code number is entered, the prompt CODE will be displayed once again. If an incorrect code number is entered three times in a row, the unit will display WAIT, and it will be blocked for approximately 60 minutes.

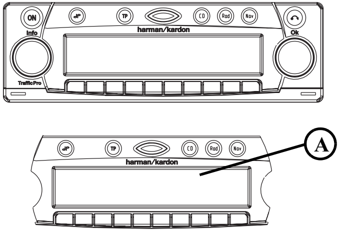


Three further incorrect entries block the unit for an additional 60 minutes.

Note
The blocking time will elapse only while the unit is turned on.

2.2. Removing the detachable faceplate

As an effective anti-theft device, the detachable faceplate (**A**) may be removed from the unit. Press ⏏ briefly (CD remains in the unit). The display folds forwards.
The portable component can then be removed by pulling it forward and away from the unit.



The volume is limited to a certain level after the display is folded down. After 20 seconds, a tone indicates that the control component is folded down. The unit then switches itself off.

⚠ Warning

Danger of accident

▷ Do not remove detachable faceplate while driving for safety reasons!

Note
After removal, please insert the detachable faceplate in the accompanying protective cover.
Do not touch the metal contacts on the detachable faceplate or on the radio.

2.3. Inserting portable panel

Insert the detachable faceplate into the lower left catch and then engage it in the lower right catch. Then fold up the detachable faceplate and engage it in the upper catches.
The detachable faceplate can also be placed flat against the unit and pushed into place.
To ensure proper operation, ensure that the detachable faceplate is firmly engaged in all four catches.

If a new detachable faceplate or one from another unit is used, the code number must be entered as described above to activate the unit.

3. General Operation

3.1. Switching On/Off

Press the ON key.
Additional options for switching on / off: Ignition.
To turn the unit on through the ignition key, the unit must have been switched off via the ignition. After switching off the ignition, the unit can be prevented from switching off by pressing ON within 3 seconds.

Note
With the ignition off, the unit can be turned on using the ON key. However, the unit turns itself off automatically after 1 hour.

3.2. Adjusting the volume

Turn the left control knob ⊙. The volume increases or decreases.

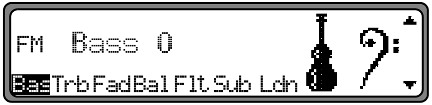
⚠ Warning

Danger of Accidents – Health Warning

- Excessive volume poses dangers and risks.
- ▷ Adjust the volume to a level that will allow you to still hear traffic noises (horns, sirens, etc.).

3.3. Activating the Tone Menu

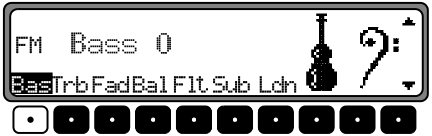
Press ♪. This activates the tone menu.
The following parameters may be adjusted: Bas (Bass), Trb (Treble), Fad (Fader), Bal (Balance), Flt (linear setting) Sub (Subwoofer) and Ldn (Loudness).



Settings for the bass, treble, fader, balance and loudness are saved separately for wavebands AM, SW, FM, for traffic reports, navigation messages, for telephone, CD and CDC use.

Adjusting the bass

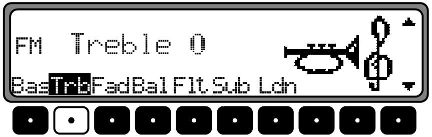
Press ♪ followed by the multifunction key Bas.



Set the desired bass level using the right control knob ⊙.

Setting the treble

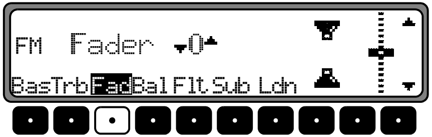
Press ♪ followed by the multifunction key Trb.



Set the desired treble level using the right control knob ⊙.

Fader

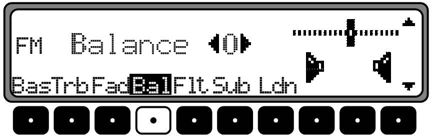
Press ♪ followed by the multifunction key Fad.



Use the right control knob ⊙ to set the desired fader setting.

Setting the balance

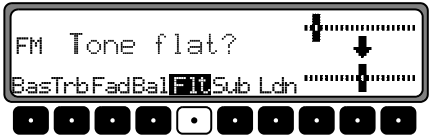
Press ♪ followed by the multifunction key Bal.


FM Balance ◀0▶
BasTrbFadBalFltSubLdn

Set the desired balance level using the right control knob ◉.

Linear setting

Briefly press ♪.

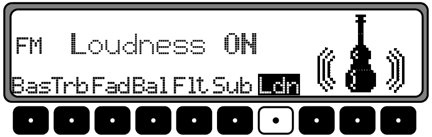

FM Tone flat?
BasTrbFadBalFltSubLdn

Press multifunction key Flt briefly- Tone flat will appear. By pressing the multifunction key Flt again you can set the tone for the currently selected signal source (e.g. FM) to an average value.

Switching loudness on / off

When Loudness is enabled, bass and treble frequencies will be boosted at low listening levels.

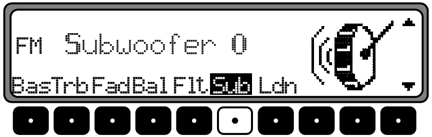
Press ♪ followed by the multifunction key Ldn.


FM Loudness ON
BasTrbFadBalFltSubLdn

Use the multifunction key Ldn to select loudness On (ON) or loudness Off (OFF).
For wave bands AM and SW, Loudness is turned off.

Setting the subwoofer level

Press ♪ followed by the multifunction key Sub.


FM Subwoofer 0
BasTrbFadBalFltSubLdn

Use the right rotary control ◉ to set the desired subwoofer volume level.

Note
The subwoofer output is a full-range, non fading output

4. Using Navigation

What is navigation?

The term "navigation" (lat. navigare = to travel by sea) is generally understood to mean the determination of a vehicle’s location, the determination of its direction and its distance from the desired destination and the required route. Stars, prominent landmarks, compasses and satellites etc. are used as navigation tools.

TrafficPro uses a comparison of its sensor system with the data of a digital map and the help of the GPS (Global Positioning System) receiver to determine location. It determines the direction and distance from the destination by means of a digital street map, a navigation computer and sensors. A speedometer and reverse signal are also used to calculate the route.

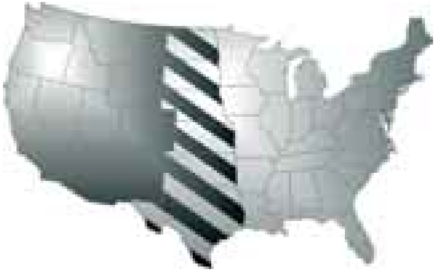
For safety reasons, route guidance is provided predominantly in spoken form , supported by a direction indicator on the display.

Safety Instructions

- All traffic rules must be observed at all times.
- Observation of traffic signs and local traffic regulations must always take precedence over instructions given by TrafficPro.
- Traffic guidance is restricted to passenger vehicles. Special driving recommendations and regulations for other vehicles (e.g. commercial vehicles) are not included.
- Destinations may only be entered when the vehicle is stationary.

Navigation CD

Your TrafficPro is shipped with two navigation CDs. One CD contains data for the western half of the USA and the other contains data for the eastern half of the USA.



Data for North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas are contained on both CDs (the striped area on the illustration).

The navigation CDs contain a digitized street map. Highways, state and county roads, as well as local streets are detailed in this street map. Larger cities and communities are mapped in detail. For smaller towns and communities, the regional and unclassified roads or through-roads and the town centers are included.

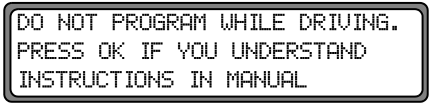
One-way streets, pedestrian zones, no-turn intersections and other traffic regulations are taken into account as much as possible. There may be discrepancies between the data on the navigation CD and the actual local situation, due to continuous changes to road systems and traffic regulations.

4.1. General instructions

- Radio or CD operation continues in navigation mode.
  The distance to the next message and estimated time of arrival are shown on the right side of the display.
- When route guidance is active, press Rad to enter radio mode. Press CD to switch to CD mode.
  The Navigation menu automatically displays when navigation announcements are given.
- When entering the address, only those letters, digits and symbols needed to make a coherent address are displayed.
  The entries are automatically completed.
  Spaces (e.g. as in New York) must be entered using the underscore character (_).
  Letters, numbers and symbols can be selected by pressing the multifunction keys 1 to 9. Select the individual symbols by pressing the appropriate multifunction keys repeatedly.
  You can also use the right control knob ⊙ for your selection. This mode of selection will be used in the remainder of this guide.
- Nav quits the current menu and displays the previous menu.
- The system recalculates the route if a deviation is made.
- Press the left control knob ⊙ to hear the current navigation announcement.
- During a navigation announcement, you can adjust the volume with the left control knob ⊙ and the tone by pressing the ♪ key (see also page 9).
- Briefly press the left control knob ⊙ to request additional information during route guidance, or the current position when route guidance is not active. See “Information during route guidance” on page 21.
- You can interrupt the current navigation announcement by pressing the left control knob ⊙.
- If you press and hold the left control knob ⊙ for more than 2 seconds during a navigation message, the navigation audio messages are deactivated and route guidance will only be shown on the display.
  Briefly press the left control knob ⊙ to reactivate the navigation audio announcements.
- The scroll marks ▲ and ▼ indicate a selection list through which you can scroll using the right control knob ⊙.
  You can select the entry displayed in bold type by pressing the right control knob ⊙.

4.2. Confirm Warning

Before you can use the navigation system, a warning appears.



DO NOT PROGRAM WHILE DRIVING.
PRESS OK IF YOU UNDERSTAND
INSTRUCTIONS IN MANUAL

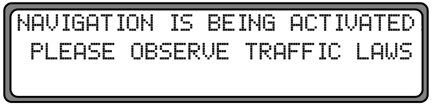
When you confirm the receipt of this warning you state that you have read and understood the user guide and that you are aware of the dangers associated with the use of this navigational equipment.

Press the right control knob ⊙ to confirm the selection.

4.3. Selecting Navigation

Press Nav.

If necessary, confirm the warning as described above.

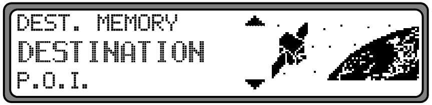


NAVIGATION IS BEING ACTIVATED
PLEASE OBSERVE TRAFFIC LAWS

Next, the main navigation menu appears.

Note:
When starting navigation mode for the first time, you must load the navigation CD.
If calibration of the navigation system is not yet completed, the system will prompt you to take a drive for calibration (see Installation Guide).
Navigation mode requires the navigation CD containing the data for the destination.
When you enter a destination, the navigation CD is required. During route calculation, the prompt CD will flash on the display. Once calculation is completed, the prompt CD will disappear, you can remove the navigation CD and insert an audio CD.

4.4. Main Navigation Menu

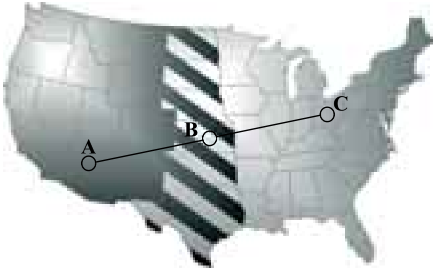


Select
DESTINATION,
DEST. MEMORY,
P.O.I.,
LAST DESTINATIONS,
by turning the right control knob ●, and confirm by pressing the control knob.

- DESTINATION
  Accesses the destination entry menu.
  See “Entering a Destination” on page 11.
- DEST. MEMORY
  Contains previously stored destinations.
  See “Destination memory” on page 23.
- P.O.I.
  Menu for selecting regional and interregional destinations of special interest and local points of interest. Points of interest include gas stations, airports or hospitals, for example. See “P.O.I.” on page 23.
- LAST DESTINATIONS
  A list of the last 50 destinations is displayed. Select your destination with the right control knob ●. Before you confirm your selection with the right control knob ●, you may request destination information by pressing the left control knob ●. Stopovers are not saved as final destinations.

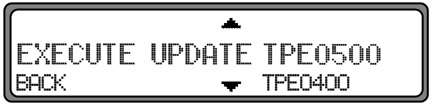
4.5. Entering a Destination

In the Main Navigation Menu, select DESTINATION with the right control knob ● and press it to confirm. The navigation data for the USA is stored on two CDs (see page 9).



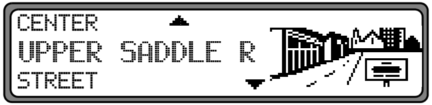
When you calculate a route from a place contained on the USA West CD (**A**) to a destination stored on the USA East CD (**B**), you need to enter a useful destination in one of the following states: North Dakota, South Dakota, Nebraska, Kansas, Oklahoma or Texas. Once you have reached this intermediary destination, or once you reach one of the aforementioned states, you may switch CDs and enter your final destination (**C**).

Note:
If you switch navigation CDs you will see a display similar to this:

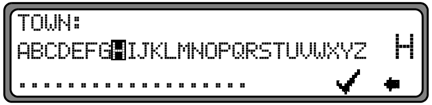

```
            ▲
EXECUTE UPDATE TPE0500
BACK        ▼ TPE0400
```

Using the right control knob ⊙, select EXECUTE UPDATE and press the control knob to confirm.
The system checks the radio and navigation software and loads all data required for navigation.
The display shows a progress bar.
When switching CDs, the ignition should be on and the vehicle should be stationary. After a short time the system restarts the navigation software and you need to confirm the warning message (see ”Confirm Warning” on page 10).

Entering the Destination

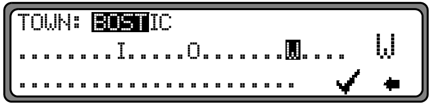

```
CENTER       ▲
UPPER SADDLE R
STREET        ▼
```

The name of the town of the last destination entered is displayed.
If you wish to select a destination within the displayed location, immediately select STREET (Street) or CENTER.
If your destination lies in another town, press the right control knob ⊙ to enter the name of the town where the new destination is located.


```
TOWN:
ABCDEFGHIJKLMNOPQRSTUVWXYZ  H
....................      ✓  ←
```

Select the letters one by one with right control knob ⊙ and press it to confirm. The selected letter appears enlarged on the right side of the display.

Use multifunction key ← to delete the last confirmed letter.
If necessary, delete the complete entry by pressing multifunction key ← for more than 2 seconds.

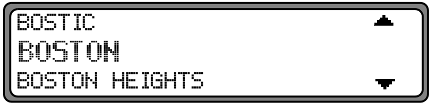

```
TOWN: BOSTIC
........I.....O.......W....  W
.......................   ✓  ←
```

Entered letters are displayed inversely. To speed up selection, the display shows the name of the location most similar to the letters you have entered so far. Also, the unit offers only letters for your selection that make sense in completing the location name. If all other possibilities are eliminated, the unit completes the place name automatically.

To accept the entry, press and hold the right control knob ⊙ for more than 2 seconds or select the small check mark ✓ and briefly press the right control knob ⊙.

If the complete place-name was previously entered or was automatically completed, the program moves either to the place-differentiation list or to the entry of road or center.
If the desired location offers no streets or only the center for selection, the program switches directly to the route menu.

If an incomplete location entry was confirmed, the location selection list appears.



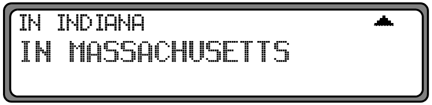
BOSTIC ▲
BOSTON
BOSTON HEIGHTS ▼

The location name most similar to the entry appears in bold type in the location selection list.
The scroll marks indicate that more places are available in an alphabetically sorted list.

Make your selection by turning the right control knob ⊙ and press the knob to confirm. (See “General instructions” on page 10.)

If the entry is unique, the program switches to street or center entry. If the desired city/town offers no streets or only the center for selection, the program switches directly to the route menu.

The location differentiation list is displayed if the selection is ambiguous.

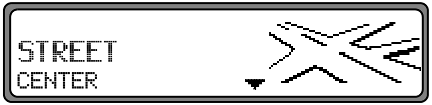


IN INDIANA ▲
IN MASSACHUSETTS

Select the required state name using the right control knob ⊙ and press it to confirm.
The program switches to street or center entry.
If the desired location offers no streets or only the center for selection, the program switches directly to the route menu.

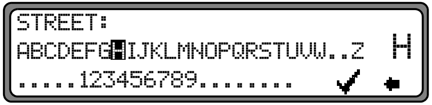
Entering a street for the destination

Note:
Geographic designators (N, S, etc.) always follow the street names (e.g. E. Carson St. will be displayed as `CARSON ST E`).



STREET
CENTER ▼

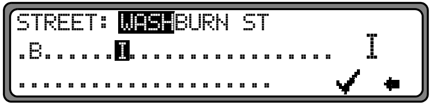
Select `STREET` with the right control knob ⊙ and press the control to confirm.



STREET:
ABCDEFGHIJKLMNOPQRSTUVW..Z H
.....123456789........ ✓ ◄

Select the letters one by one with right control knob ⊙ and press the control to confirm. The selected letter appears enlarged at the right of the display.

Use multifunction key ◄ to delete the last confirmed letter.
If necessary, delete the complete entry by pressing multifunction key ◄ for more than 2 seconds.



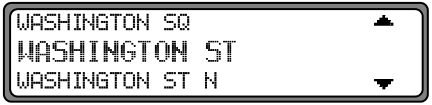
STREET: WASHBURN ST
.B......I................. I
.... ✓ ◄

Entered letters are displayed inversely. To help, the street name most similar to the entry so far is displayed. Also, the unit offers only letters for your selection that make sense in completing the location name.
If no other entries are available, the unit completes the street name.

To accept the entry, press and hold the right control knob ⊙ for more than 2 seconds or select the small check mark ✓ and briefly press the right control knob ⊙.

If the complete road-name was previously entered or was automatically completed, the program switches either to the road differentiation list or to the route menu.

If an incomplete location entry was confirmed, the street selection list is displayed.



WASHINGTON SQ ▲
WASHINGTON ST
WASHINGTON ST N ▼

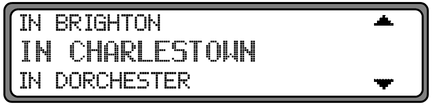
The street name most similar to the entry appears in bold type in the street selection list.

The scroll marks indicate that more streets are available in an alphabetically sorted list.

Select the street by turning the right control knob ◉ and press the control to confirm.

If the entry is unique, the program switches to the route menu.

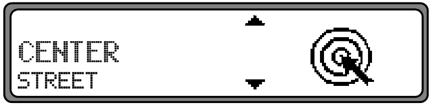
The street differentiation list appears if the selection is ambiguous.


IN BRIGHTON ▲
IN CHARLESTOWN
IN DORCHESTER ▼

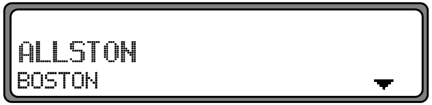
Select the desired street with the right control knob ◉ and press it to confirm.

The program switches to the route menu.

Entering the Destination City/Town Center

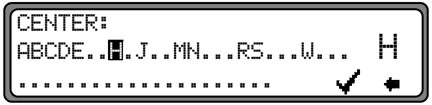

CENTER ▲
STREET ▼

Select CENTER with the right control knob ◉ and press the control to confirm.
If the place you chose only has one center, the program switches immediately to the route menu.
If there are fewer than 10 centers, the center list is displayed.


ALLSTON
BOSTON ▼

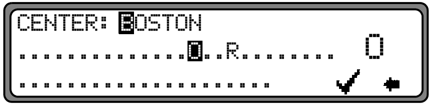
Select the center by turning the right control knob ◉ and press the control to confirm.

If there are more than 9 centers, the program switches to center entry.


CENTER:
ABCDE..█.J..MN...RS...W... H
.... ✓ ←

Select the letters one by one with right control knob ◉ and press the control to confirm. The selected letter appears enlarged at the right of the display.

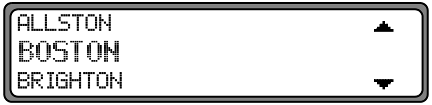
Use multifunction key ← to delete the last confirmed letter.
If necessary, delete the complete entry by pressing multifunction key ← for more than 2 seconds.


CENTER: BOSTON
.............█..R........ O
.... ✓ ←

Entered letters are displayed inversely. For your help, the system displays the center name most similar to the entry so far. Also, the unit offers only letters for your selection that make sense in completing the location name. If no other entries are available, the unit completes the name of the center.

To accept the entry, press and hold the right control knob ◉ for more than 2 seconds or select the small check mark ✓ and briefly press the right control knob ◉.

If the complete center name was previously entered or was automatically completed, the program will switch to the route menu.
The program switches to the list of centers if your selection is ambiguous.

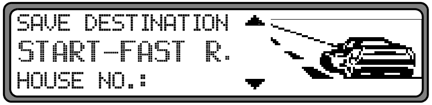

ALLSTON ▲
BOSTON
BRIGHTON ▼

The center name most similar to the entry appears in bold type in the center list.
The scroll mark indicates that more centers are available in an alphabetically sorted list.

Select the center by turning the right control knob ⊙ and press the control to confirm.
The program moves to the route menu.

Note:
If you press the right control knob ⊙ for longer than 2 seconds without previously entering a letter, the list of the possible location centers will immediately appear.

4.6. Route Menu



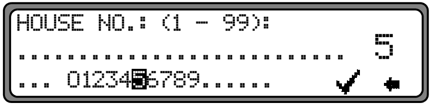
SAVE DESTINATION ▲
START-FAST R.
HOUSE NO.: ▼

Select
SAVE DESTINATION,
START-FAST R., (START-SHORT R.)
HOUSE NO.:,
INTERSECTION
ROUTE SETTINGS
by turning the right control knob ⊙, and confirm by pressing the control.

- SAVE DESTINATION
  accesses the input menu for the destination memory (Page 16).
- START-FAST R. or START-SHORT R.
  begins route guidance. Simultaneously, a prompt appears indicating the currently selected route option (-SHORT R. for a short route and -FAST R. for a fast route).
- HOUSE NO.:
  Here, you can enter the house number for the specified destination street.
  This function is only available if the information is stored on the navigation CD.
- INTERSECTION
  An intersecting street may also be defined as the destination here.
  This function is only available if the information is stored on the navigation CD.
- ROUTE SETTINGS
  Select specifications such as fast route, short route, freeway, ferries and toll roads here.

Entering street number for destination street

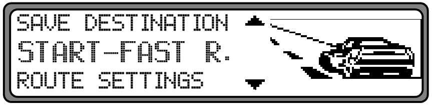
Select HOUSE NO.: in the route menu with the right control knob ⊙, and press the knob to confirm.



HOUSE NO.: (1 - 99):
.... 5
... 0123456789...... ✓ ←

Using the right control knob ⊙, enter the street number for the destination street and press for more than 2 seconds to confirm the entry. To confirm, you may also select the small check mark ✓, then briefly press the right control knob ⊙.

Due to system characteristics, route guidance is only available into the specified street number range displayed in parentheses in the illustration above.



SAVE DESTINATION ▲
START-FAST R.
ROUTE SETTINGS ▼

Select START- to start route guidance.
Select SAVE DESTINATION to jump to the destination memory menu.

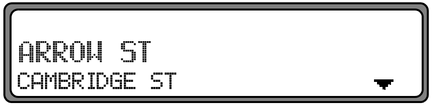
Select ROUTE SETTINGS to choose the route settings.

Choose by turning the right control knob ◉ and press to confirm the selection.

Selecting intersection for destination street

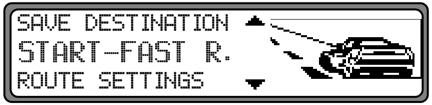
If the house number is not available on the digitized map, you may enter a nearby intersection for guidance.

In the route menu, use the right control knob ◉ to select INTERSECTION, then press the control to confirm.



ARROW ST
CAMBRIDGE ST

Select the intersection for the destination street by turning the right control knob ◉ and press the control to confirm.



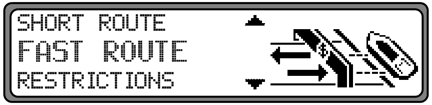
SAVE DESTINATION
START-FAST R.
ROUTE SETTINGS

Select START- to start route guidance.
Select SAVE DESTINATION to jump to the destination memory menu.
Select ROUTE SETTINGS to change the route settings.

Choose by turning the right control knob ◉ and press the knob to confirm the selection.

Selecting the route settings

Select ROUTE SETTINGS in the route menu with the right control knob ◉, and press the knob to confirm.

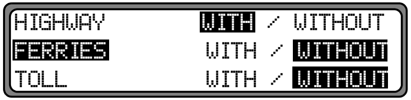


SHORT ROUTE
FAST ROUTE
RESTRICTIONS

- FAST ROUTE
  If selected, the program calculates the shortest possible journey time.
- SHORT ROUTE
  If selected, the program calculates the shortest possible distance.

  Note:
  The setting "SHORT ROUTE" is often recommended for larger cities or metropolitan areas.

- RESTRICTIONS
  Provides options for avoiding highways, ferries or toll roads.



HIGHWAY WITH / WITHOUT
FERRIES WITH / WITHOUT
TOLL WITH / WITHOUT

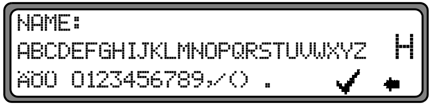
Make your selection by turning the right control knob, and change any settings by pressing the right control knob ◉.
Press the control for more than 2 seconds to accept all settings and quit the menu.

Note:
It is possible that routes without the use of interstate highways may not be calculable. In this case, you will receive a message.

Storing specified destination in destination memory

It is not absolutely necessary to store a destination in the destination memory for route guidance. However, it saves repeated manual entry if the destination is required again at a later date.

Select SAVE DESTINATION in the Route Entry menu and press the right control knob ◉ to confirm.

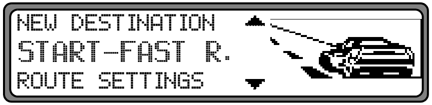


NAME:
ABCDEFGHIJKLMNOPQRSTUVWXYZ
ÄÖÜ 0123456789,/() .

Any name of your choice consisting of up to 14 characters may be entered for the specified destination and then automatically stored in the destination memory after pressing the right control knob ◉ for more than 2 seconds. See "Destination memory" on page 23.
To store, you may also select the small check mark ✓ and briefly press the right control knob ◉.

If you do not wish to enter a name of your choice, press and hold the right control knob ⊙ for more than 2 seconds to store the previously entered destination in the destination memory.

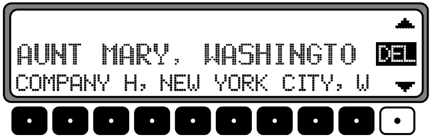
The last destination entered can be filed at any position by turning the right control knob ⊙. The memory position is confirmed by briefly pressing the right control knob ⊙.
A total of 50 destinations can be saved.


NEW DESTINATION
START-FAST R.
ROUTE SETTINGS

For final storage in the destination memory, either start route guidance or switch the program to new destination entry by selecting NEW DESTINATION.

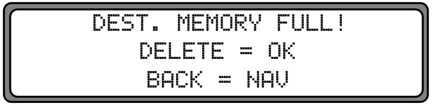
Deleting stored destinations

Select destination memory (see page 23).


AUNT MARY, WASHINGTO DEL
COMPANY H, NEW YORK CITY, W

Select the destination to be deleted using the right control knob ⊙ and press DEL.

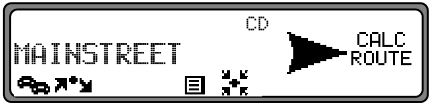
Destination memory full


DEST. MEMORY FULL!
DELETE = OK
BACK = NAV

Occurs, when the destination memory is full.

Select either DELETE by pressing the right control knob ⊙ to jump to the destination memory to delete a destination or BACK by pressing the Nav button to cancel saving.

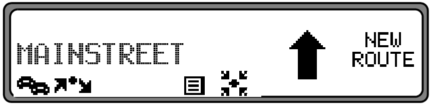
4.7. Route guidance calculation


CD
MAINSTREET
CALC ROUTE

The message "Calculating route" indicates that the distance is being calculated. This may take several seconds.

After the first route guidance announcement, the prompt CD will continue to flash on the display until the route is completely calculated. When a distant destination is entered, it is recommended that you wait until CD has stopped flashing before departing.

Recalculating route.

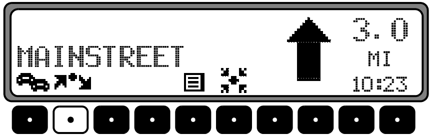

MAINSTREET
NEW ROUTE

If the current route is not followed due to road blocks, detours, unintentionally driving in the wrong direction or failing to observe the recommendations, the system immediately calculates a new route. During this re-calculation, the display shows NEW ROUTE.

4.8. Stopover

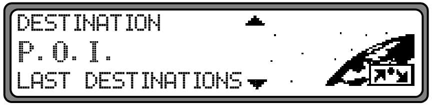
If, on your way to your destination you must make a stopover (e.g. find a gas station), this function will allow you to navigate to a stopover while route guidance is active.

Entering a stopover



MAINSTREET
3.0
MI
10:23

Press multifunction key ↗•↘.

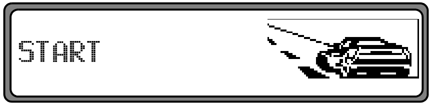


DESTINATION
P.O.I.
LAST DESTINATIONS

Using the right control knob ◉, make a selection and press the control to confirm.

- DEST. MEMORY
  (see page 23) Selecting a stopover from the destination memory.
- DESTINATION
  (see page 11) allows the entry of a stopover with the precise specification of the address.
- P.O.I.
  (see page 23) enables the selection of special destinations as stopovers via LOCAL AREA, NEARBY DESTINATION and TOWN, e.g. gas stations or airports.
- LAST DESTINATIONS
  Selecting a stopover from the “Last Destination” memory.

Starting route guidance to stopover

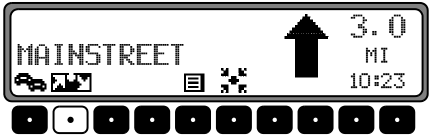


START

To start route guidance to the stopover, press the right control knob ◉.
The route is calculated and route guidance begins.

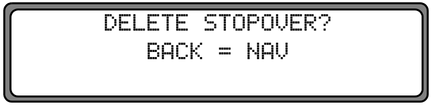
Note:
During route guidance to a stopover, ↗•↘ is displayed inversely.

Deleting a stopover



MAINSTREET
3.0
MI
10:23

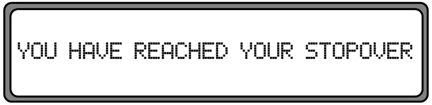
Press multifunction key ↗•↘.



DELETE STOPOVER?
BACK = NAV

To delete the stopover, press the right control knob ◉ within 8 seconds.

Stopover reached



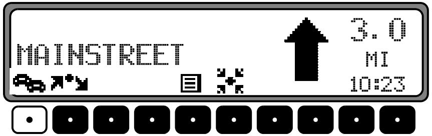
YOU HAVE REACHED YOUR STOPOVER

After the message YOU HAVE REACHED YOUR STOPOVER, route guidance to the main destination begins automatically.
After this message you need to insert the navigation CD.

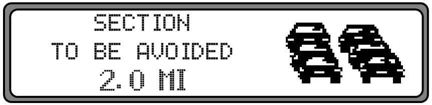
4.9. Traffic jam

This function allows you to block route sections ahead from the nearest junction and to calculate a detour route when a traffic jam or road block is directly ahead.

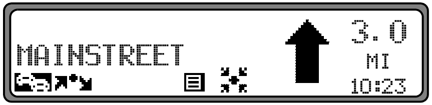
Entering length of traffic jam


MAINSTREET 3.0 MI 10:23

Press multifunction key 🚗.

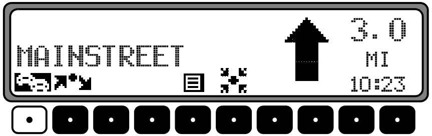

SECTION
TO BE AVOIDED
2.0 MI

Use the right control knob ● to select your estimate of the length of the traffic jam and press the control to confirm.

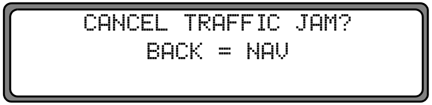

MAINSTREET 3.0 MI 10:23

The display shows 🚗 inversely and the unit recalculates the route.

Cancel guidance around traffic jam


MAINSTREET 3.0 MI 10:23

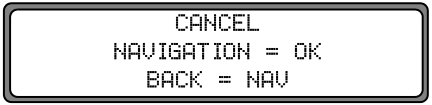
Press multifunction key 🚗.


CANCEL TRAFFIC JAM?
BACK = NAV

To delete guidance around a traffic jam, press the right control knob ● within 8 seconds.

4.10. Canceling route guidance

Press Nav .


CANCEL
NAVIGATION = OK
BACK = NAV

Route guidance is canceled by pressing the right control knob ● within 8 seconds.

Otherwise, route guidance continues.

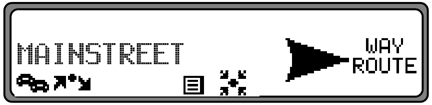
4.11. Notes on route guidance

After entering the destination (address), the system calculates the route and announces:
"We may begin now“, if you are located on a road contained on the digital map. If you are in a parking lot, garage or another location not detailed on the map, OFF ROAD will appear on the right side of the display and route guidance will begin when you reach the nearest road detailed on the digitized map.

You will receive navigation recommendations by voice messages and screen displays.

Press the left control knob ◉ to have the current recommendation repeated.

If the route to be traveled is not clear, e.g. at an intersection where a change in direction is not specified, the travel direction can be displayed by pressing the right control knob ◉.



Please follow the direction indicated by the arrow.
The display appears for 8 seconds after the right control knob ◉ is pressed.

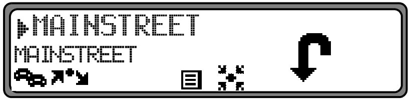
⚠ Warning

Danger of accident

- Do not ignore traffic laws.
- ▷ If a driving recommendation contradicts the applicable traffic laws, the laws will always take precedence!

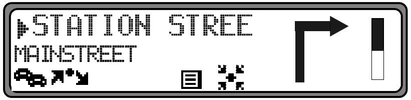
For clarification, the following contains some examples of possible driving recommendations:

- "Please make a U-turn if possible."



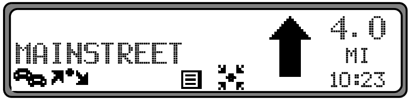
You are driving in the wrong direction and should turn around at the earliest opportunity.

- "Please take a right in 300 yards."



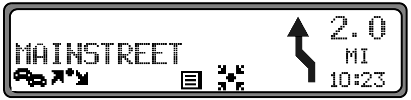
The arrow ▶ points to the next street into which you should turn.
The progress bar on the right shows the distance and the black part decreases as you approach the intersection.

- "Please follow the road."



This display tells you that you should follow the course of the road on which you are currently traveling.

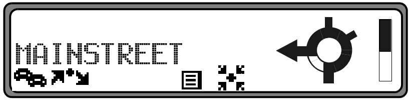
- "Prepare to turn left" or
  "Move into left-hand lane."



This recommendation prepares you for the next turn to be taken.
However, "move into the left-hand lane" does not mean that you should compromise safety by doing so immediately!

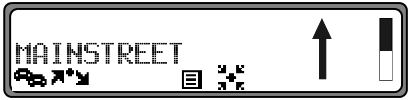
Note:
At intersections and roundabouts, only the ends of the roads to be passed are displayed.

- "Please leave the roundabout at the third exit on the right."


MAINSTREET

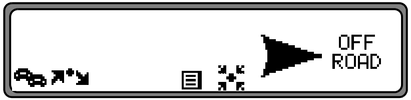
This display shows you which exit (marked with the arrow) you must take at the roundabout.

- "Now drive straight ahead."


MAINSTREET

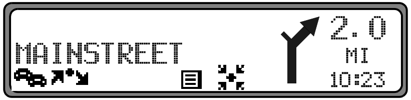
At this point, you must drive straight ahead.

- "Please follow the arrows."



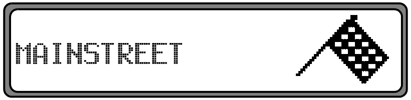
This display tells you that you are on a non-digitized street (e.g. parking lot, garage) that is not included in the digital street map. The arrow indicates the direction of the destination as the crow flies.

- "Keep right after 2 Miles."


MAINSTREET
2.0
MI
10:23

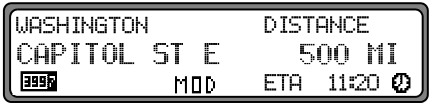
Keeping to the right means that the road will fork and you should follow the indicated direction.

- "You have reached your destination."

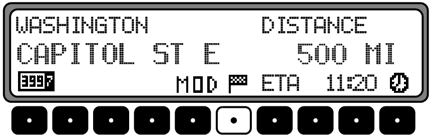

MAINSTREET

The specified destination has been reached and route guidance is terminated.

4.12. Information during route guidance


WASHINGTON
DISTANCE
CAPITOL ST E
500 MI
MOD
ETA
11:20

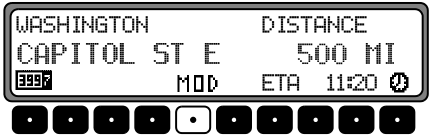
Press the left control knob ◉.
The destination, the distance and the estimated time of arrival are displayed.


WASHINGTON
DISTANCE
CAPITOL ST E
500 MI
MOD
ETA
11:20

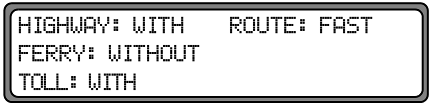
If a stopover was specified, the stopover, the distance and the estimated time of arrival are displayed. The main destination can be displayed with multifunction key 🏁.

To return to route guidance, press the left control knob ◉ again or wait for 8 seconds.

Displaying route settings

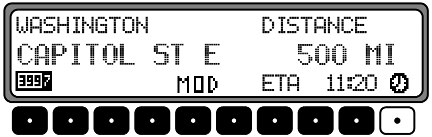

WASHINGTON DISTANCE
CAPITOL ST E 500 MI
MOD ETA 11:20

During route guidance, press the left control knob ●.
Press multifunction key MOD .

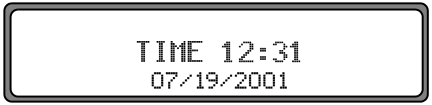

HIGHWAY: WITH ROUTE: FAST
FERRY: WITHOUT
TOLL: WITH

The route settings are displayed.
After 8 seconds, the system returns to the route guidance display.

Requesting current time


WASHINGTON DISTANCE
CAPITOL ST E 500 MI
MOD ETA 11:20

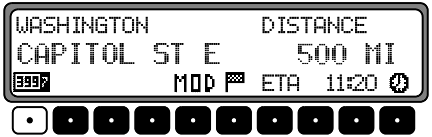
During route guidance, press the left control knob ●.
Press multifunction key 🕐 .


TIME 12:31
07/19/2001

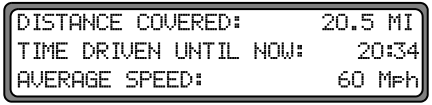
Current time and current date are displayed. After 8 seconds, the system returns to the route guidance display.

Requesting trip duration and miles traveled

During route guidance, press the left control knob ●.


WASHINGTON DISTANCE
CAPITOL ST E 500 MI
MOD ETA 11:20

Press multifunction key 3997 .

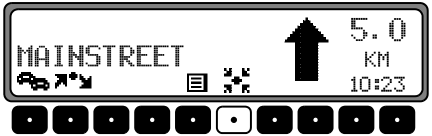

DISTANCE COVERED: 20.5 MI
TIME DRIVEN UNTIL NOW: 20:34
AVERAGE SPEED: 60 Mph

The trip duration, miles traveled and the average speed are displayed. Press the right control knob ● or Nav to return to the route guidance display.

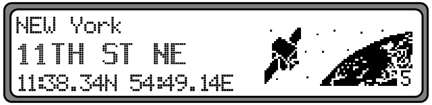
The information for trip duration, miles traveled and average speed can also be requested after your trip as previously described, provided that the destination flag waves once the destination is reached.

Requesting current position

During route guidance, the current position can be requested.


MAINSTREET 5.0
KM
10:23

Press multifunction key ✲ .

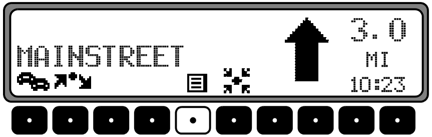

NEW York
11TH ST NE
11:38.34N 54:49.14E
5

The current position with street name (if available), degrees of longitude and latitude and the number of satellites received are displayed.
Pressing the right control knob ● will return you to the route guidance display.

Note:
The current position can be requested even when route guidance is not active; just press the left control knob ●.

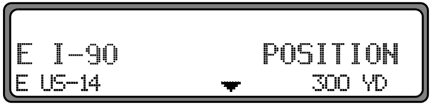
Requesting road list

During route guidance, the planned route list can be requested.



MAINSTREET 3.0 MI 10:23

Press multifunction key ▤.



E I-90 POSITION

E US-14 300 YD

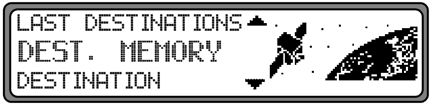
The current road and the road names up to the destination are displayed. Scroll through the route list by turning the right control knob ●.

Press the right control knob ● to return you to the route guidance display.

Note:
After entering the destination, it will take a short time (depending the distance from the destination) until the route list is compiled.
If the vehicle is "off road" at the moment of destination entry, the route list cannot be created until a stored road is reached.

4.13. Destination memory

In the Main Navigation Menu, select DEST. MEMORY with the right control knob ● and press the control to confirm.

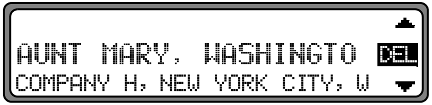


LAST DESTINATIONS

DEST. MEMORY

DESTINATION

The destination memory contains personally saved destinations.
Once saved, there is no need to manually enter the destination.



AUNT MARY, WASHINGTO DEL

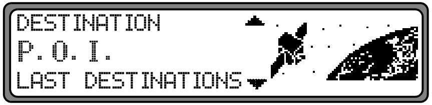
COMPANY H, NEW YORK CITY, W

Select the destination using the right control knob ● and press the knob to confirm.

Then start route guidance.

4.14. P.O.I.

Menu for selecting points of interest from a predetermined list. Points of interest include gas stations, airports or hospitals, for example.

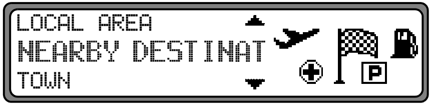


DESTINATION

P.O.I.

LAST DESTINATIONS

Using the right control knob ●, select P.O.I. in the main Navigation menu or in the stopover selection menu and press the control to confirm.



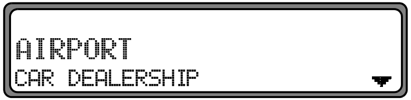
LOCAL AREA

NEARBY DESTINAT

TOWN

Use the right control knob ● to make a selection and confirm.

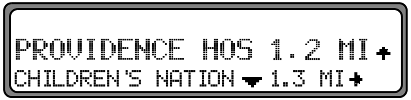
- Points of interest LOCAL AREA / NERRBY DESTINATION
  You can select points of interest within the current surroundings of the vehicle or points of interest near the destination.



AIRPORT

CAR DEALERSHIP

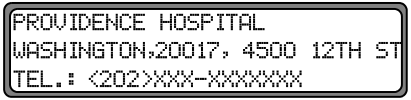
Use the right control knob ⊙ to select a category and press the control to confirm.



```
PROVIDENCE HOS 1.2 MI ↓
CHILDREN'S NATION ▼ 1.3 MI ↓
```

A maximum of 20 destinations is listed according to proximity. The mileage indication relates to the direct distance (as the crow flies) between the point of interest and the current location.
The arrows following the distance information indicate the distance as the crow flies to the respective point of interest (e.g. ↑ point of interest lies in the direction of travel, ↓ point of interest lies opposite the direction of travel). When traveling on a limited-access highway, it is best to choose a POI located in the direction of travel.

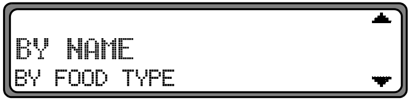
Select the desired destination with the right control knob ⊙.
Pressing the left control knob ⊙ to list information about the selected destination (e.g. a hospital).



```
PROVIDENCE HOSPITAL
WASHINGTON,20017, 4500 12TH ST
TEL.: (202)XXX-XXXXXXX
```

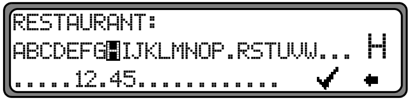
Confirm the selection with the right control knob ⊙. The system jumps to the route menu.

Note:
If you select category `RESTAURANT`, another menu appears.



```
                      ▲
BY NAME
BY FOOD TYPE          ▼
```

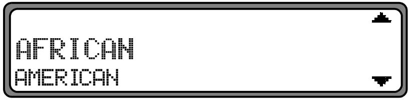
If you select `BY NAME`, all available restaurants will be displayed in a list. If there are more than 9 items in the list, you will be prompted to enter text.



```
RESTAURANT:
ABCDEFG█IJKLMNOP.RSTUVW... H
......12.45...........  ✓  ←
```

Enter the restaurant and confirm. Confirm the point of interest in the list by pressing the right control knob ⊙.

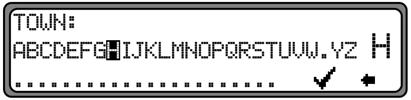
Select `BY FOOD TYPE` to display a list with the different ethnic foods (i.e. Chinese).



```
                      ▲
AFRICAN
AMERICAN              ▼
```

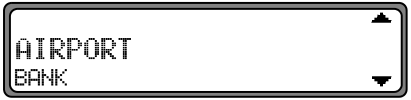
Select the desired category with the right control knob ⊙.
The display shows only the restaurants belonging to this category.

- Points of interest `TOWN`
  You may select any point of interest in the locations contained on the navigation CD.



```
TOWN:
ABCDEFG█IJKLMNOPQRSTUVW.YZ H
.....................  ✓  ←
```

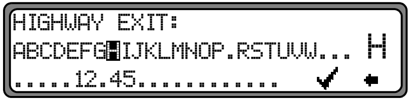
Use the right control knob ⊙ to select the town name and press the control to confirm.
Then select the town from the town selection list with the right control knob ⊙ and press again to confirm.



```
                      ▲
AIRPORT
BANK                  ▼
```

The points of interest for the selected town are displayed.
Use the right control knob ⊙ to select a category and press the control to confirm.

A list with points of interest is displayed or, if the list contains more than 9 entries, you will be prompted to enter text.



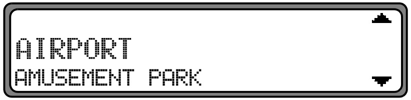
```
HIGHWAY EXIT:
ABCDEFG█IJKLMNOP.RSTUVW... H
......12.45...........  ✓  ←
```

Enter the point of interest and confirm. Confirm the point of interest in the list by pressing the right control knob ⊙.

The system jumps to the route menu.

Note:
A list of possible points of interest displays immediately when you press the right control knob ● for more than 2 seconds without having selected any letters.

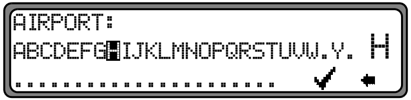
- Point of interest NATIONWIDE
  Definite special point of interest categories are shown and may be selected.



AIRPORT
AMUSEMENT PARK

Use the right control knob ● to select a category and press the control to confirm.

A list with points of interest is displayed or, if the list contains more than 9 entries, you will be prompted to enter text.



AIRPORT:
ABCDEFG█IJKLMNOPQRSTUVW.Y. H
.... ✓ ←

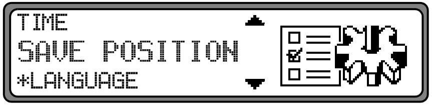
Enter the point of interest and confirm. Confirm the point of interest in the list by pressing the right control knob ●.

The system jumps to the route menu.

Note:
A list of possible points of interest displays immediately when you press the right control knob ● for more than 2 seconds without having selected any letters.

4.15. System settings

Press, in the Main Navigation Menu, Nav .
The system settings menu is called up.



TIME
SAVE POSITION
*LANGUAGE

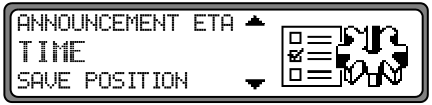
Select
TIME,
SAVE POSITION,
*LANGUAGE,
ANIMATION,
MEASURING UNIT,
ANNOUNCEMENT ETA
by turning the right control knob ●, and confirm by pressing the control.

- TIME
  The system's internal clock can be set to the local time.
- SAVE POSITION
  The current position can be saved and saved in the destination memory.
- *LANGUAGE
  Language setting for the navigation system.
- ANIMATION
  The Animation display can be turned on or off.

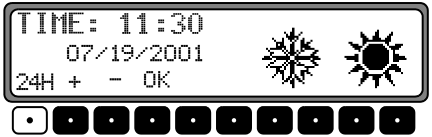
- MEASURING UNIT
  The unit display can be set from meters to yards.
- ANNOUNCEMENT ETA
  Announcement of the estimated time of arrival can be turned on or off.

Setting time

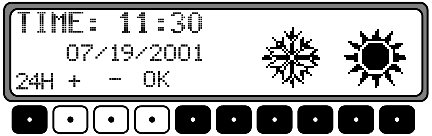
In order to achieve correct navigation on routes with time-sensitive guidance and to calculate the estimated time of arrival, it is necessary to set the GMT time transmitted from satellites to the current time zone.


ANNOUNCEMENT ETA
TIME
SAVE POSITION

Set and confirm TIME in the System Settings menu.


TIME: 11:30
07/19/2001
24H + - OK

Use the multifunction key 24H to change the time display from the 24-hour to the 12-hour display.

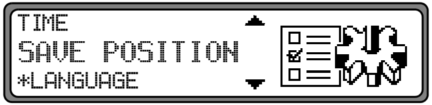

TIME: 11:30
07/19/2001
24H + - OK

Use the multifunction keys + or − and the time is changed in half-hour intervals.

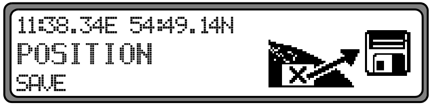
Press the right control knob ⊙ or multifunction key OK to apply the time setting.
The program jumps back to the System Settings menu.

Note:
The calculated time of arrival is based on the time zone where the trip originated

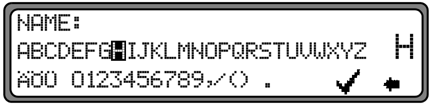
Storing location


TIME
SAVE POSITION
*LANGUAGE

Set and confirm SAVE POSITION in the System Settings menu.


11:38.34E 54:49.14N
POSITION
SAVE

The display shows the current coordinates (degrees of longitude and latitude) for the position.
Re-confirm by pressing the right control knob ⊙.


NAME:
ABCDEFGHIJKLMNOPQRSTUVWXYZ H
ÄÖÜ 0123456789,/() . ✓

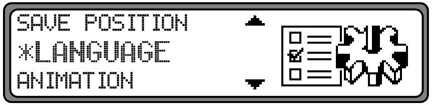
Enter the name of the position.
Press the right control knob ⊙ for more than 2 seconds to confirm the name entered. To confirm, you may also mark the small check mark ✓ and briefly press the right control knob ⊙.
The destination memory is automatically requested (see page 23).
Select the desired position in the destination memory with the right control knob ⊙ and press to confirm.

Requesting location

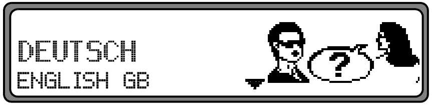
Request destination memory (see page 23) and select the destination using the right control knob ⊙.

If the position is outside a digitized area, the driver is guided along the digitized route nearest to the destination. You will hear the announcement "Your destination is nearby." Follow the direction arrows to reach the destination.

Setting the language

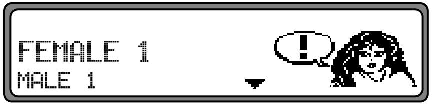

SAVE POSITION
*LANGUAGE
ANIMATION

Set and confirm `*LANGUAGE` in the System Settings menu.


DEUTSCH
ENGLISH GB
?

Select the language with the right control knob ●. The language selection is applied when the control is pressed, and the language is installed.

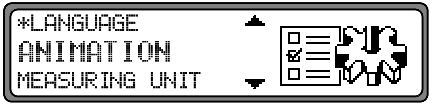
You can choose a male or a female voice for certain languages.


FEMALE 1
MALE 1
!

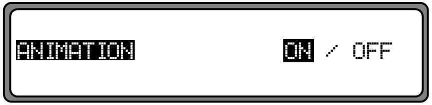
Select the voice with the right control knob ●. The voice is applied and installed by pressing the control. The system returns to the system settings menu after installation is confirmed.

Note:
In every language, menu entry `*LANGUAGE` is preceded by an asterisk (*). This way you can always recognize which entry in the System Settings menu means language. This may be of use if, e. g. an unknown language was set.

Animations


*LANGUAGE
ANIMATION
MEASURING UNIT

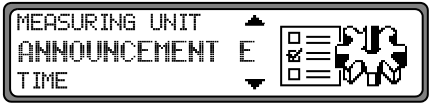
Set and confirm `ANIMATION` in the System Settings menu.


ANIMATION
ON / OFF

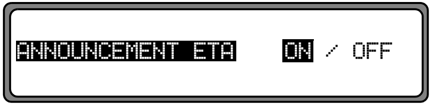
You can select between animations `ON` and `OFF` by briefly pressing the right control knob ●.
Press and hold the right control knob ● to accept the setting.

The system returns to the system settings menu.

Switching announcement of the estimated time of arrival on /off


MEASURING UNIT
ANNOUNCEMENT E
TIME

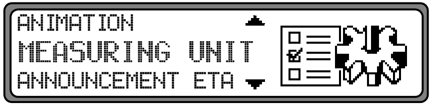
Set and confirm `ANNOUNCEMENT ETA` in the System Settings menu.
ETA stands for **E**stimated **T**ime of **A**rrival.


ANNOUNCEMENT ETA
ON / OFF

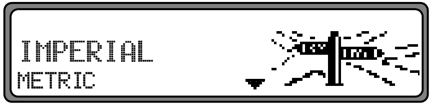
You can select between ETA announcement `ON` and `OFF` by briefly pressing the right control knob ●.
Press and hold the right control knob ● to apply the setting.

The system returns to the system settings menu.

Selecting the units


ANIMATION
MEASURING UNIT
ANNOUNCEMENT ETA

Set and confirm `MEASURING UNIT` in the System Settings menu.


IMPERIAL
METRIC

Select the units using the right control knob ◉.
The units are applied by pressing the control.

The system returns to the system settings menu.

Note:
`METRIC` is for calculation in meters and kilometers.
`IMPERIAL` is for calculation in yards and miles.

5. Radio Mode

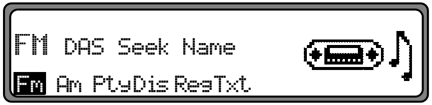
Note:
If you live in an area where RDS/RBDS broadcast is unavailable, you may enable FM and AM manual tuning which will display radio frequencies rather than station type and call letters according to the procedures titled “Manual FM tuning” on page 31 and “Manual AM tuning” on page 32.

5.1. Switching to radio mode

Press Rad.
The last selected waveband is recalled.

5.2. Switch on radio menu mode.

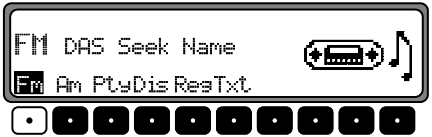
Once you are in radio mode, press Rad again to access the menu.



The radio menu mode is activated and displayed. The unit switches back to radio mode if no key is pressed within the next 8 seconds.

5.3. Selecting the FM waveband

In radio menu mode, press `Fm` .



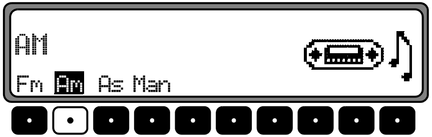
The last selected station and tuning mode are displayed.

By pressing repeatedly, you can choose between the following tuner modes:

- `DAS Seek Qual.` (see page 45)
- `DAS Seek Name` (see page 45)
- `Stations RDS` (see page 45)
- `Stations Fix` (see page 45)

5.4. Selecting the AM waveband

In radio menu mode, press `Am` .



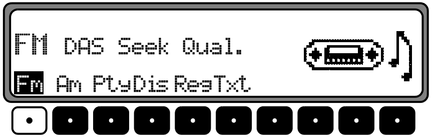
The last station received is selected.

5.5. Setting options for station selection

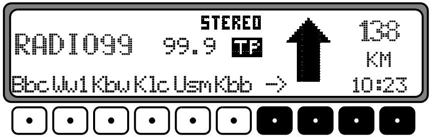
The desired station can be selected via dynamic autostore (FM), autostore (AM), station search, scan search, manual tuning, and preset keys.

Dynamic auto store (FM-DAS)

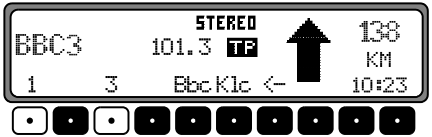
In radio menu mode, press `Fm` repeatedly, until `DAS Seek Qual.` or `DAS Seek Name` is displayed.



In `FM DAS` mode, abbreviated names for the receivable stations are displayed above the multifunction keys depending on the settings. In the `DAS Seek Qual.` mode, stations are arranged in descending signal strength order; in `DAS Seek Name` mode, they are arranged alphabetically



Set the desired station by pressing the key directly below the station designation.



Multifunction key –> indicates that the key can be pressed to display and select additional stations.

If station names are being misused to transmit advertising or messages, this station is indicated with L-1... L-Z (L = Local) instead of the abbreviated station name. This prevents constant switching in the lower display line. When a station is selected, it is identified by a star (i.e. L*1).
The first time the unit is operated, or when power supply was interrupted it may take the radio some time to evaluate the station signals. The display will appear incrementally as the evaluation progresses.

Station search FM - DAS

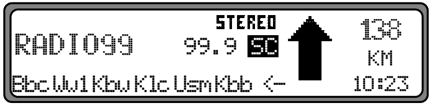
Turn the right control knob ● left or right. The radio displays the receivable and identified stations in descending/ascending order.

AM transmitter search

Turn the right control knob ● to the left/right in desired waveband. The radio searches for reception frequencies in descending or ascending order, respectively, of frequency.

Scan search

On the desired waveband (FM, AM) press the right control knob ●, SC will be displayed.

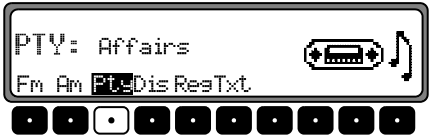


An automatic station search begins. The first run is performed on an insensitive level, stopping only at strong stations; all further runs at more sensitive level capturing weaker stations to fill any remaining preset locations. Receivable stations can be heard for 8 seconds. Press the right control knob ● to stop the search at a certain station.

Note:
With FM DAS, Scan Search is conducted in alphabetical order.

Program type selection (PTY)

In radio menu mode, press Pty .



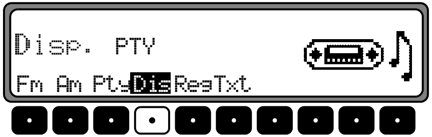
Then, using multifunction key Pty select the desired PTY (see page 45).

Note:
Only the currently available PTYs may be selected.

If a PTY is selected in FM DAS mode, only the stations with this particular PTY can be selected.
If you select NO PTY in FM-DAS mode, all stations will once again be displayed.

Switching PTY display on / off

Select radio menu mode.



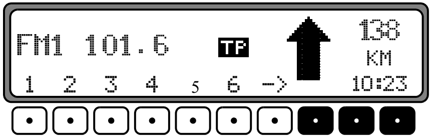
Use multifunction key Dis to select either PTY (PTY display on) or Frequency (PTY display off).

Recalling/storing FM stations

In radio menu mode, use multifunction key Fm to select the Stations RDS or Stations Fix mode.

- Stations RDS (see page 45)
- Stations Fix (see page 45)

Storing: 12 frequencies or programs can be stored per waveband.
In order to store the desired station or program, tune to the station then press and hold multifunction key 1 - 6 or 7 - 12 until you hear a signal tone.



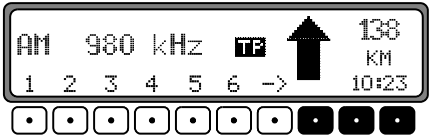
To access memory locations 7 - 12, press multifunction key -> .

Recall: Momentarily press multifunction key 1 - 6 or 7 - 12 . The stored station is recalled.

Recalling/Storing AM station

To store: Up to 12 stations can be stored on the station keys. Tune the desired station and press and hold the multifunction key until you hear a signal tone.

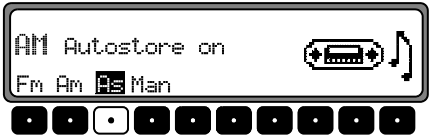
To access memory locations 7 - 12, press multifunction key -> .



Recall: Momentarily press multifunction key 1 - 6 or 7 - 12 . The stored station is recalled.

AM autostore

In the desired waveband, press Rad .

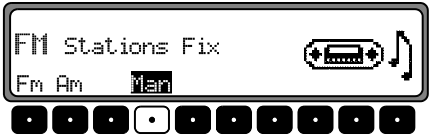


Press multifunction key As repeatedly until Autostore on appears.

Press multifunction key As until Seek Autostore appears.
The 6 stations with the strongest signal will be stored on the station keys in the order of their signal quality.
In order to quit the autostore function, use multifunction key As to turn off the autostore function (Autostore off). The radio returns to the station preset mode.

Manual FM tuning

In radio menu mode, use multifunction button Fm to select the Stations Fix mode.



Press multifunction key Man twice.

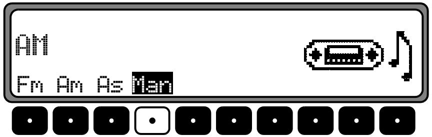
Next, turn the right control knob ●.

Tuning will be in increments of 100 kHz.

The display will show that manual tuning is currently active with MAN. If the right control knob ⊙ is not turned within a short time, MAN will disappear from the display and manual tuning is turned off.

Manual AM tuning

In the AM waveband, press Rad.

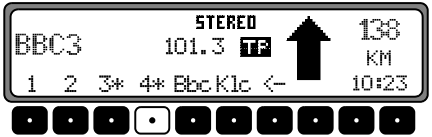


Press multifunction key Man twice.
Then turn the right control knob ⊙.
Tuning will be in increments of 9 kHz.

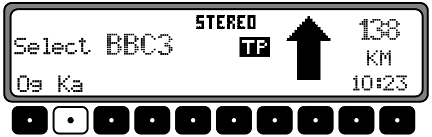
The display will show that manual tuning is currently active with MAN. If the right control knob ⊙ is not turned within a short time, MAN will disappear from the display and manual tuning is turned off.

5.6. Regionalization

The RBDS/RDS diversity function is independent of region. Under these conditions, the RBDS/RDS diversity function may switch among various regional programs with different broadcast contents. If this should be the case, directly select the special regional sub-program.
If several regional programs are transmitted by one station, this can only be realized when the station is selected.
Stations with additional regional programs are indicated with a star (i.e. 4*).



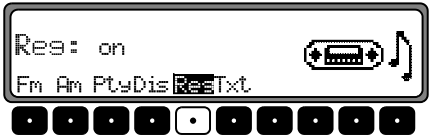
Upon selection of one of these stations (e.g. 4*), all receivable regional sub-programs for this station will be displayed.
Then select the desired regional sub-program (e.g. Ka).



If, despite the RBDS/RDS diversity function, the reception of a regional sub-program is inferior, bear in mind that regional sub-programs are transmitted for the most part over only a few frequencies. Therefore, the unit has fewer frequencies with stronger signals to switch to.

Switching regionalization on/off

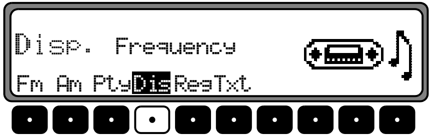
Select radio menu mode.



Use multifunction key Reg to turn regionalization on (ON) or off (OFF).

Switching frequency display on / off

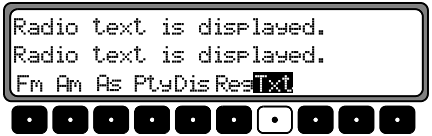
Select radio menu mode.



Use multifunction key Dis to select Frequency (Frequency display on) or PTY (Frequency display off).

5.7. Switching radio text display on / off

Select FM radio menu mode. Use multifunction key Txt to switch on radio text.


Radio text is displayed.
Radio text is displayed.

The car radio filters information from the data transmitted by the station and displays as radio text.
Radio text cannot be displayed unless the selected station transmits radio text.
Unfavorable reception conditions, including interference, can garble or even block a radio text display.

In order to quit the radio text mode, press Rad.

⚠ Warning

Danger of accident

- Do not read Radio text while driving.
- ▹ Please read the radio text only when the vehicle is stationary.
- ▹ As the radio text contents change constantly and may distract the driver, radio text should only be read when the vehicle is not in motion.

5.8. Traffic Program (TP)

If an RBDS/RDS diversity station transmits TP announcements, it is possible to have CD, CDC, and AM operation interrupted so that the transmitted TP announcements can be played. Moreover, you can listen to one FM station while receiving TP announcements transmitted by another FM station.
There are two ways to select a TP transmitter:
- **automatic tracking**
- **direct programming**

Automatic tracking always uses the current FM station as TP-transmitter. If the selected FM station has poor signal quality or cannot function as a TP transmitter, the unit applies specified criteria to search for a new TP transmitter.

Direct programming makes it possible to have a TP transmitter different from the current FM station. For example, one FM station and TP announcements transmitted by another FM station can be received simultaneously.
If reception from the programmed TP transmitter is poor, the unit switches to automatic tracking until the programmed TP transmitter is receivable.

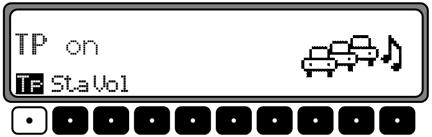
If an RBDS/RDS station is equipped with traffic programming, this is indicated by TP in the display.

An inverse TP appears on the display to indicate that the TP is active.

Activating/Quitting the TP Menu

Activating: Press the TP key (not during a traffic announcement).

Press multifunction key TP.

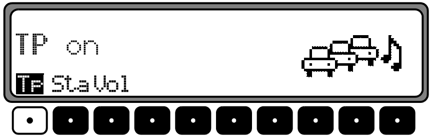

TP on

Quitting: Press TP, otherwise the TP menu will be automatically be terminated after 8 seconds without actuation.

Setting automatic tracking

In all modes and wavebands, automatic tracking can be activated by pressing TP for more than 2 seconds.

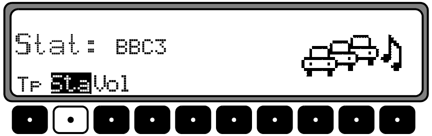
To activate automatic tracking in the TP menu, press multifunction key TP repeatedly until TP on appears.



Note:
If a TP transmitter was already programmed directly, it will once again be selected as the TP transmitter.

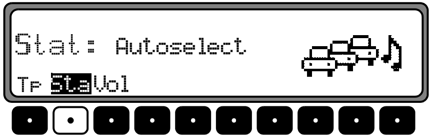
Selecting / Deleting Direct Programming

Activate the TP menu.
Selecting: Press multifunction key Sta .



Use the right control knob ◉ to select the desired TP transmitter. After a short delay without actuation, the selected transmitter is applied.

Deleting: Press multifunction key Sta .



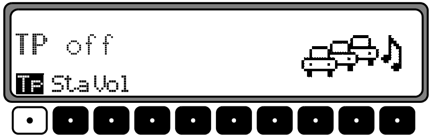
Select Autoselect with the right control knob ◉ and press the control to confirm. After a short delay and without actuation, direct programming is deleted.

Quit the TP menu.

Deactivating the TP

In all modes and wavebands, TP can be turned on or off by pressing TP for more than 2 seconds. The display changes from the inverse symbol to TP.

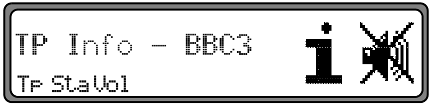
To deactivate TP in the TP menu, press multifunction key TP repeatedly until TP off appears.



TP is deactivated after returning to the normal display.

Switching Mute on/off

After selecting a TP transmitter, the mute function can be activated by briefly pressing TP.



Thereafter, only traffic announcements and navigation announcements will be passed through. After pressing TP again, muting is canceled.

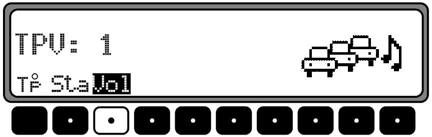
Interrupting TP announcements

During a TP announcement, briefly press TP.

The current announcement is interrupted and the system will automatically return to the previously selected mode.

TP announcement volume

Activate the TP menu. Press multifunction key Vol .



You can select four different settings (0 - 3) with the right control knob ⊙. This means that the volume can be raised to a fixed value according to the setting.

- Setting 0 - no increase
- Setting 1 - slight increase
- Setting 2 - strong increase
- Setting 3 - strong increase

⚠ Warning

Danger of accident

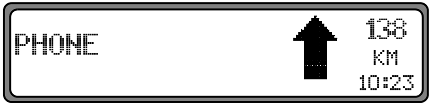
- Too high a volume poses dangers and risks.

▷ Adjust the volume to a level that will allow you to still hear traffic noises (horns, sirens, etc.).

5.9. Telephone Muting

The telephone characteristics can be set in the user menu (Page 41) if a telephone system is installed in the vehicle and the mute function lead for the car telephone is connected to the car radio.

If mute is selected, the radio is muted when a call is received.
If audio signal is selected, the telephone call is connected through the radio unit when a call is received (ignition must be on).
However, this is only possible if, in addition to the telephone, a hands-free unit with loudspeaker output is installed and connected to the radio. In both cases PHONE will be displayed.



6. CD mode

⚠ Warning

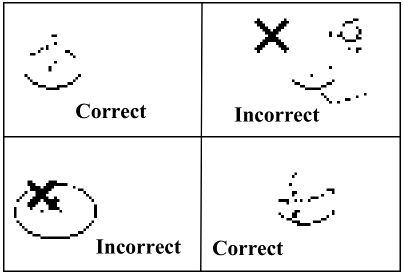
Danger of accident

- to the eyes caused by invisible laser rays when the unit cover is opened or damaged.
- ▷ Do not remove the unit covers and do not use the unit if the covers are damaged.
- ▷ The CD laser optics are a Class 1 laser product. There are no user-serviceable components in the unit. For safety reasons, any maintenance work must be performed exclusively by qualified service personnel.

Instructions for the Compact Disc (CD)

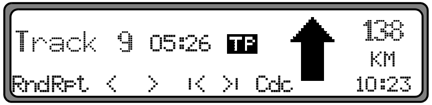
Sound interruptions may occur if the CD is soiled. In order to ensure the highest tone quality, please note the following:

- Always touch the CD at the edges only. Keep the disc clean and never touch the surface.
- Never stick anything on the CD.
- Protect the CDs against direct sunlight and from heat sources such as heaters etc.
- Before playing the CD, you should clean it with a special, commercially available cleaning cloth, wiping from the center outwards. Solvents such as petrol, thinners or other commercially available cleaners and anti-static sprays must not be used.



6.1. Inserting / Ejecting CDs

Press and hold ⏏; the faceplate folds down and the CD slot becomes visible. Insert the disc into the CD slot with the printed side upwards. The CD is automatically drawn into the player and the unit begins to play the disc from the first track. Fold the faceplate up again.
Once the last track is played, the unit will start playing the CD again from the first track.
If there is already a CD in the slot, press CD. If the CD changer was the last selected unit, use the multifunction key Scd to switch to CD operation.



To eject a CD, press and hold ⏏; the display folds down and the CD is ejected. Remove the CD. Then fold the display up again.

⚠ Warning

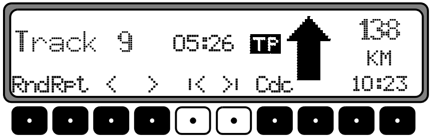
Danger of accident

- ▷ Do not open detachable faceplate while driving for safety reasons.

Note
When the unit is turned off, the CD will not be ejected, but will remain in the CD slot.

6.2. Skipping to the next/previous track

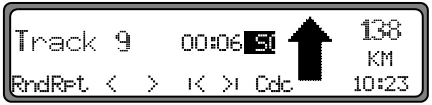
Press multifunction key >I (next) or >I (back).


Track 9
05:26
TP
138
KM
RndRpt
<
>
I<
>I
Cdc
10:23

Press the multifunction keys repeatedly to skip several tracks forward or reverse. The unit switches to the first track once the last track is finished. Analogously, it switches from the first track to the last track.
If a title has been playing for more than 10 seconds when the skip key is pressed, the unit will skip back to the beginning of the current track.

6.3. Scan search

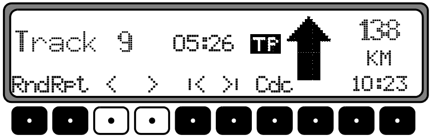
Press the right control knob ◉, and SC will appear in the display.


Track 9
00:06
SC
138
KM
RndRpt
<
>
I<
>I
Cdc
10:23

All following CD tracks are played for 10 seconds each. Press the right control knob ◉ again to terminate the scan search.

6.4. Fast Forward / Rewind

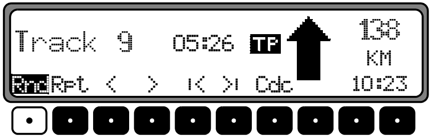
By pressing the multifunction key > (audible) fast forward is activated; conversely, by pressing the multifunction key < (audible) fast rewind is activated.


Track 9
05:26
TP
138
KM
RndRpt
<
>
I<
>I
Cdc
10:23

Fast forward / rewind terminates when you release the multifunction key.

6.5. Random Play

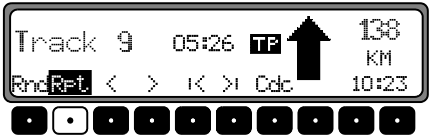
Press the multifunction key Rnd to activate the random generator. The tracks on the current CD are then played in random order. The prompt Rnd is displayed inversely.


Track 9
05:26
TP
138
KM
Rnd
Rpt
<
>
I<
>I
Cdc
10:23

If you press the multifunction key Rnd again, the random play function is deactivated.

6.6. Repeating a track

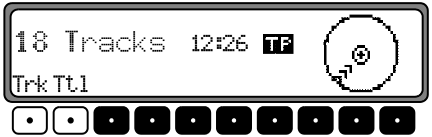
Press the multifunction key Rpt to turn on the track repeat function. The prompt Rpt is displayed inversely.


Track 9
05:26
TP
138
KM
Rnd
Rpt
<
>
I<
>I
Cdc
10:23

If you press the multifunction key Rpt again, the track repeat function is switched off.

6.7. Number of tracks and total playing time

In CD mode, press CD. Press the multifunction key Trk to briefly display the elapsed time for the tracks already played.



Press the multifunction key Ttl to briefly display the number of tracks and the total playing time of the current CD.

6.8. Temperature Protection Circuit

A temperature protection circuit in this unit protects the laser diode against overheating.
When the protection circuit is activated, Temp is displayed for 8 seconds and the unit switches back to radio mode.

The single CD operation can be restarted after a short cool-down phase. However, if the temperature is still too high, the unit again switches back to the previously selected signal source.

7. CD Changer Mode

⚠ Warning

Danger of accident

- to the eyes caused by invisible laser rays when the unit cover is opened or damaged.

▷ Do not remove the unit covers and do not use the unit if the covers are damaged.

▷ The CD changer is a Class 1 laser product. There are no user-serviceable components in the unit. For safety reasons, any maintenance work must be performed exclusively by qualified service personnel.

Operational readiness of CD changer

If a CD changer is connected to the car radio, it is ready for operation when loaded with a CD magazine containing CDs. Close the sliding door after loading. All further control is performed from the car radio control panel.

CD Magazine - Loading / Unloading

To remove the CD magazine, open the sliding door on the changer and press the eject key.
The magazine is ejected and can be removed.
When inserting CDs into the magazine, please note the instructions printed on the magazine.

Note
Incorrectly inserted CDs will not be played.

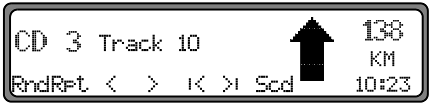
Note
To allow for the fastest possible changing of CDs, the magazine should be loaded in order, beginning with Compartment 1.

7.1. Playing CDs

Press CD. If the unit was last set to CD changer operation or if there is no CD (or navigation CD) in the CD drive, the CD changer menu is now active.

If CD operation was last selected, use multifunction key Cdc to switch to CD changer operation.

The CD is played from the last track played when it was previously turned off.
Stored CDs can be selected by turning the right control knob ●. During the selection time the display shows Loading CD X. Then, the display shows the magazine compartment number or the name of the CD and the number of the current track on the selected CD.



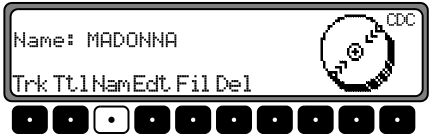
If no CD is loaded in the selected magazine compartment (i.e. Compartment 2), NO CD 2 will briefly appear on the display.
Once the last track of a CD is played, the next CD will automatically be selected and played.

For further operation see refer to CD Mode (Page 36):

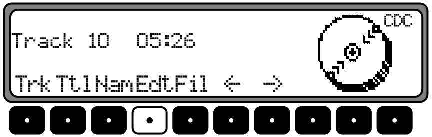
- ”CD mode” on page 36
- ”Skipping to the next/previous track” on page 37
- ”Scan search” on page 37
- ”Fast Forward / Rewind” on page 37
- ”Number of tracks and total playing time” on page 38
- ”Random Play” on page 37

7.2. Naming a CD

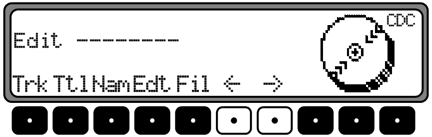
In CD changer mode, press CD. Then press `Nam`.


Name: MADONNA
CDC
Trk Ttl Nam Edt Fil Del

To enter a name or change an existing name, press the multifunction key `Edt`.


Track 10 05:26
CDC
Trk Ttl Nam Edt Fil ← →

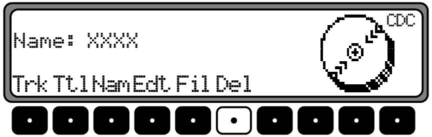
Using the multifunction keys `<-` and `->` select the desired position (inverse editing symbol).


Edit --------
CDC
Trk Ttl Nam Edt Fil ← →

Using the right control knob ●, select the desired letter and press the control to confirm.
Press the right control knob ● to move to the next position.

A maximum of 8 characters can be entered.
Once you exit the CDC menu, the name is saved.

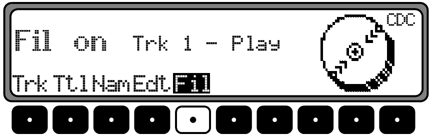
To delete an existing name, press `Nam`.
Use the right control knob ●, to select the name to be deleted.


Name: XXXX
CDC
Trk Ttl Nam Edt Fil Del

You can now delete the name by pressing the `Del` multifunction key.

7.3. CD Filter Function

In CD changer mode, press CD. Then press the multifunction key `Fil`.


Fil on Trk 1 - Play
CDC
Trk Ttl Nam Edt Fil

The individual titles of the current CD can be selected using the right control knob ●. It is then possible to select between `Play` (track not filtered) and `Skip` (track filtered out) by pressing the right control knob ●.

In order to switch the filter function on or off, repeatedly press the multifunction button `Fil`; The filter function is switched on (`Fil on`) or off (`No Fil`).

Note
The filter function can only be activated when the selected CD is named.

8. User menu

8.1. Requesting/quitting user menu

After requesting the user menu, the following basic settings can be selected on two planes according to your personal preference.

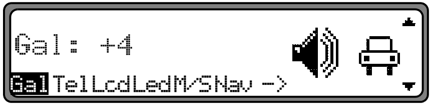
First plane:

- Gal - Speed dependent volume control (GAL)
- Tel - Telephone characteristics
- Lcd - Adjusting display
- Led - Adjusting flashing diode
- M/S - Adjusting reception optimization
- Nav - Adjusting navigation announcements

Second plane:

- Aux - aux input setting
- Cmp - compass display setting
- BeV - Adjusting signal tone volume

The user menu is requested by pressing the ♪ key for more than 2 seconds.

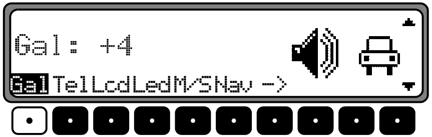

Gal: +4
Gal Tel Lcd Led M/S Nav ->

In order to access the second plane of the user menu, press the -> multifunction key.
Press the ♪ key again to quit the user menu.

GAL (Gal) setting

The GAL is a car radio control circuit, which automatically adjusts the car radio volume to the vehicle speed. This compensates for the driving noise produced at higher speeds.

Request the user menu. Press multifunction key Gal. With the right control knob ⊙, select either 0 or +15.


Gal: +4
Gal Tel Lcd Led M/S Nav ->

With the GAL settings, the beginning of volume adjustment can be specified according to vehicle speed. The setting is stored automatically.

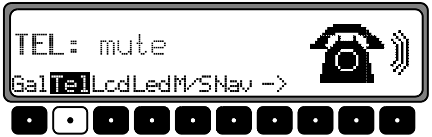
Explanation:

- 0 - No volume increase
- +1 - Volume adjustment is initiated at low speed
- +15 - Volume adjustment is initiated at higher speed

Telephone mute characteristics (Tel)

If the vehicle has a telephone system with hands-free unit, the call can be heard through the car audio system. Thus, there is no need for the usually required additional speaker. However, the signal cables (AF - telephone input and ground - telephone input) must be connected to the car radio (see page 46).

For selection, request user menu. Press multifunction key Tel to select audio signal or mute.


TEL: mute
Gal Tel Lcd Led M/S Nav ->

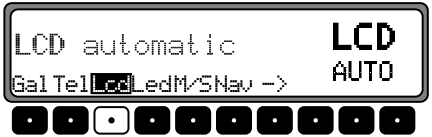
- mute - Telephone mute setting
- audio signal - Route call through radio

Display setting (Lcd)

The display setting allows you to select from three different display versions.

- Negative Display Setting (negativ)
- Positive Display Setting (positiv)
- Automatic Display Setting (automatic) – the display setting will be positive or negative depending upon the vehicle illumination.

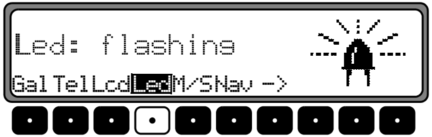
For selection, request the user menu. Press multifunction key `Lcd` to select `negativ`, `positiv` or `automatic`.



The setting is stored automatically.

Flashing diode (LED) setting

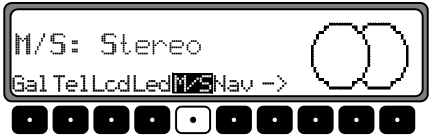
The flashing of the LED (flashes when unit is off) can be turned on or off using this function.
Request the user menu. Press multifunction key `Led` to select either `blinking` (LED on) or `off` (LED off).



The setting is stored automatically.

Setting reception optimization (M/S)

You can choose from two different reception optimization settings to suppress reception-dependent interference and reflections.
Request the user menu. Press multifunction key `M/S` to make your selection from `Stereo`, `Mono` and `Auto`.



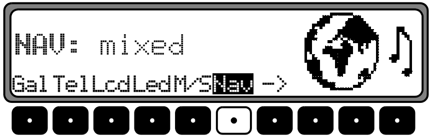
- `Auto`: Setting for normal operation - i.e., the system switches from stereo to mono and back depending upon reception level (provides the optimum setting for almost all reception areas).
- `Stereo`: Setting for exceptional reception conditions - i.e. the unit is constantly set to stereo.
- `Mono`: Setting for reception conditions in which reflections constantly occur - i.e., the unit is set constantly to mono.
  The setting is effective immediately and is also retained after power is turned off.

Setting navigation announcements (Nav)

With this function you can select how to hear navigation announcements.

- `only`: The current audio source is turned off and only the navigation announcements can be heard.
- `mixed` - The volume of the current audio source is lowered. The navigation announcement is set to the same volume as the current audio source but is still adjustable within a range of +/-6 dB. If the audio source volume is then changed, the navigation announcement volume is adjusted accordingly.
- `independ` - The current audio source and the navigation announcements can be set to different levels.

For selection, request the user menu. Press multifunction key `Nav` to make your selection from `only`, `mixed` and `independ`.

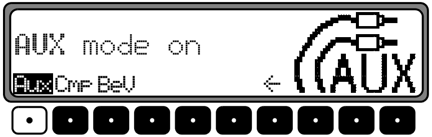


The setting is stored automatically.

AUX input (Aux)

This can be used to switch on the CD changer AF connections if no CD changer is connected. An external unit (Discman, Walkman, etc.) can then be connected.

For selection, request user menu. By pressing the multifunction key `->` request the second plane of the user menu. Using the multifunction button `Aux` select either `AUX mode on` (on) or `Aux mode off` (off).

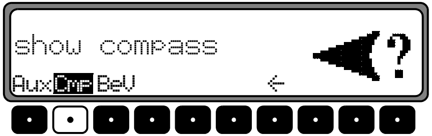


The setting is stored automatically.
In CD mode, press the `Aux` multifunction button in order to select AUX mode.

Compass display

If route guidance is not active, it is possible to display a compass on the right side of the display.

For selection, request user menu. By pressing the multifunction key `->` request the second plane of the user menu. Using the multifunction key `Cmp` select either `show compass` (compass is displayed) or `hide compass` (compass is not displayed).
If the compass display is switched off, 9 multifunction buttons are assigned transmitter abbreviations in FM - DAS mode (route guidance not active).

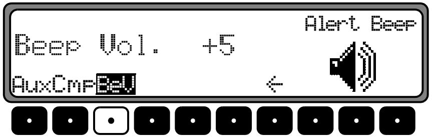


The setting is stored automatically.

Signal tone volume

The volume of signal tones (e.g. storage confirmation) can be set using this function.

For selection, request user menu. By pressing the multifunction key `->` request the second plane of the user menu. Press multifunction key `BeV`. With the right control knob ●, select either `0` (Low) or `+5` (Loud).



The setting is stored automatically.

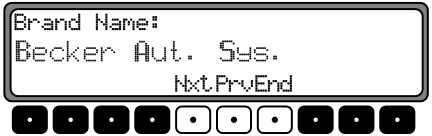
9. Service Menu

9.1. Requesting /Quitting the Service Menu

The following information can be called up in the Service menu.

- Model-No.: - Display of the model number
- Serial-No.: - Display of the serial number
- Changer Reset- Reset for CDC (if present). For Reset, press multifunction button Res.
- GAL - Display of the current GAL adjustment
- Radio Software - Display of radio software status
- Radio Bolo - Display of radio Bolo status
- Navi Rom - Display of Navi Rom/Lib status
- Navi Flash - Display of Navi Flash status
- RTC Value - Display of RTC value

In order to select the service menu, press Nav and multifunction key 10 simultaneously in radio mode.



Use multifunction keys Nxt and Prv or turn the right control knob ⊙ to select the individual items.

To quit the service menu, press End .

9.2. Triggering a Reset

If a malfunction of the unit should occur that renders the unit inoperable or if the unit is defective in any other way, trigger a restart of the internal unit software (reset) with the following key combination:

In order to trigger a reset, press multifunction key 1 or 3 and TP simultaneously.

The navigation CD must be inserted after a reset of the unit software.

10. General instructions

RBDS SYSTEM

This car radio is capable of receiving RBDS signals (RBDS = Radio Broadcast Data System) on the VHF band. RBDS is a technology for transmitting inaudible additional information in the VHF broadcasting range. This means that the station broadcasts information which can be evaluated by the car radio.

DAS Seek Qual. level

On level `DAS Seek Qual.`, all receivable and identifiable RBDS programs are stored in a list sorted according to signal strength. The dynamic autostore, search and scan search functions use this list.

DAS Seek Name level

On level `DAS Seek Name`, all receivable and identifiable RDS programs are stored in a list sorted alphabetically by name. The dynamic autostore, search and scan search functions use this list.

RBDS Stations level

On level `Stations RDS` only identified RBDS stations can be saved. The unit constantly switches to the best receivable transmission frequency for the station. During the search for `Stations RDS` the unit will stop only at identifiable stations.

Stations Fix Level

At the level `Stations Fix` frequencies can be assigned to the station keys. There is no RBDS evaluation. The search function on
`Stations Fix` is equivalent to manual FM tuning (Page 31).

PTY (Program Type)

Specific types of programs, such as sports, pop music, classical music etc., can be selected using the PTY function.
The PTY is transmitted by the RBDS station, provided this function is installed at the broadcaster. You can display the selected transmitter’s program type or perform a search for a specific PTY transmitter.

Examples of program types:

`NEWS`	News service
`SOFT`	Easy Listening
`INFORM`	Information programs
`NOSTALGA`	Nostalgia
`SPORTS`	sports news
`JAZZ`	Jazz
`TALK`	Talk
`CLASSICL`	Classical
`ROCK`	Rock
`R&B`	R&B
`CLS ROCK`	Classic rock
`SOFT R&B`	Soft R&B
`ADLT HIT`	Adult contemporary
`LANGUAGE`	Language
`SOFT RCK`	Soft rock
`REL MUSC`	Religious music
`TOP 40`	Top 40
`REL TALK`	Religious talk
`COUNTRY`	Country
`PERSNLTY`	Personality
`OLDIES`	Oldies
`PUBLIC`	Public
`WEATHER`	Weather forecast
`PTY 24-28`	not specified

11. Technical Data

Wavebands:
FM 87.9 MHz - 107.9 MHz
AM 530 kHz - 1700 kHz

Frequency range:
20 Hz - 20 kHz for CD operations
30 Hz - 15 kHz for FM
50 Hz - 2.5 kHz for AM

Output:
4 x 18 Watt

Line cross section:
0.75 mm² min.

Loudspeaker impedance:
min. 4 Ω

Line out:
4 x analog Line Out (Va max 3Veff at 10 kΩ)

GAL:
Speed dependent volume control; the adjustment is performed in 8 to 19 steps of 1.25 dB, dependent on current setting.

Antenna:
Impedance 50 Ω

AF telephone input:
Max. input voltage 8 V (if interference occurs, a commercially available 1 : 1 transmitter should be connected into the signal cable).

AUX input:
16 kΩ input impedance, max. input voltage 1.7 Veff

Telephone Mute:
Low active level < 2 Volt

Supply voltage:
12 Volt

Playable CDs:
Only CDs which comply with DIN EN 60908 can be used.
8 cm CDs with adapter are not recommended.

NOTICE

Dear listener,

In conformance with current EC/US guidelines, any person may operate this radio receiver.

This unit conforms to the current valid EC/US or harmonized national regulations. This designation is your guarantee that the unit conforms to the applicable specifications concerning electromagnetic compatibility. Interference caused by your unit affecting other electrical/electronic devices, as well as interfering influences on your unit from other electrical/electronic devices are largely prevented.

Current valid designations are:

- **CE symbol** for issue according to European guideline 89/336/EWG with the application of the following European standards: EN 55013
  EN 55020

- This device comlies with part 15 of the FCC rules. Opertion is subject to the condition that this device does not cause harmful interference. This product complies with DHHS rules 21 CFR subchapter J applicable to the date of manufacture.

We need to hear from you!

Traffic Pro from Harman Kardon is the most highly refined example of a sophisticated new breed of fully integrated car navigation system.

Instead of a cumbersome bolt-on to an already fully populated dash, Traffic Pro neatly replaces your car's tuner and CD deck with an upgraded audio system and a powerful GPS computer. Instead of asking you to choose between the music you love and the directions you need, Traffic Pro gives you the benefit of both, simultaneously.

Traffic Pro™ Product Registration

harman/kardon®
Power for the Digital Revolution®

For Customer and Technical Support
800.422.8027
or www.hktrafficpro.com

Thank you for choosing Harman Kardon.

LIMITED TWO-YEAR WARRANTY

Harman Kardon Traffic Pro

(Applies to USA only)

WHO IS PROTECTED BY THIS WARRANTY?

Your Harman Kardon warranty protects the original owner and all subsequent owners for a period of two (2) years (parts and labor) for all electronic components from any failure as a result of an original manufacturing defect so long as: (1) your Harman Kardon product was originally purchased within the fifty United States or by military personnel from an authorized military outlet, (2) the dealer from whom the product was purchased was authorized by Harman Kardon to sell such products at the time of original purchase and (3) the original, dated Bill of Sale is presented whenever service is required during the warranty period. This warranty is only valid for service within the United States and does not apply to products purchased elsewhere; other purchasers should contact their local Harman Kardon distributor for warranty information.

WHAT DOES THE HARMAN KARDON WARRANTY COVER?

Except as specified below, this warranty covers all defects in original materials and workmanship. The following are not covered: damage caused by accident, misuse, abuse, neglect, product modification; damage occurring during shipment; damage caused by failure to follow instructions in the owner's guide, including failure to perform recommended periodic or routine maintenance; damage resulting from repairs by someone not authorized by Harman Kardon; units used for other than car use; units not used for their intended purpose; claims based upon any misrepresentations by the seller; and any Harman Kardon product on which the serial number has been altered, defaced or removed.

WHO PAYS FOR WHAT?

During the period of this warranty, subject to the above conditions, Harman Kardon will pay all of the labor and material expenses to repair a warrantable defect.

HOW CAN WARRANTY SERVICE BE OBTAINED?

In the event that your Harman Kardon product(s) should require service, you should first contact either the Harman Kardon dealer from whom the product was purchased or an authorized service center. For the name of a Harman Kardon service center, visit our Web site at www.hktrafficpro.com, write us directly at Traffic Pro National Service Center at 16 Park Way, Upper Saddle River, NJ 07458, or call (800) 422-8027. We may direct you to an authorized service center for Harman Kardon products or ask you to send the product to us for repair. In either case, you will have to present your original Bill of Sale to establish warranty coverage. Do not send your product to us without prior authorization from our Customer Service Department. You are responsible for transporting your product to either Harman Kardon or an authorized service center and for payment of all shipping charges; however, Harman Kardon will pay the return shipping charges (in the event you return the product to us) if the repairs are covered by warranty. If you experience difficulty in transporting your product or are in need of packing materials, please advise us and we may be able to suggest alternative procedures and/or provide adequate packing materials.

LIMITATION OF IMPLIED WARRANTIES: All implied warranties, including fitness for a particular purpose and merchantability, are limited in duration and length to the warranty period for your product.

LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES:

Harman Kardon is not responsible for an incidental or consequential damage of any kind. Our liability is limited to the repair or replacement, at our option, of a defective product.

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary, from state to state.

NOTE: In the event that there is a difference between this warranty and the provisions in any advertisements, product brochure, or packaging cartons, the terms of this warranty will prevail.

Harman Kardon continually strives to update and improve existing products, as well as create new ones. The specifications and construction details in this and related Harman Kardon publications are, therefore, subject to change without notice.

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(800) 422-8027
P/N: TRAFPRO PR/WARR 10/01

Harman Kardon is a registered trademark of Harman Kardon, Inc.

PLEASE MAKE NOTE OF THE FOLLOWING INFORMATION AND RETAIN FOR YOUR RECORDS

Product Name: ______________________________ Model Number: ______________________________

Store Name: ______________________________ Date of Purchase: ______________________________

PLEASE DETACH HERE

For assistance with the installation, calibration and/or operation of your Harman Kardon Traffic Pro, please contact our

Traffic Pro™ Hotline
800.422.8027

or online at:

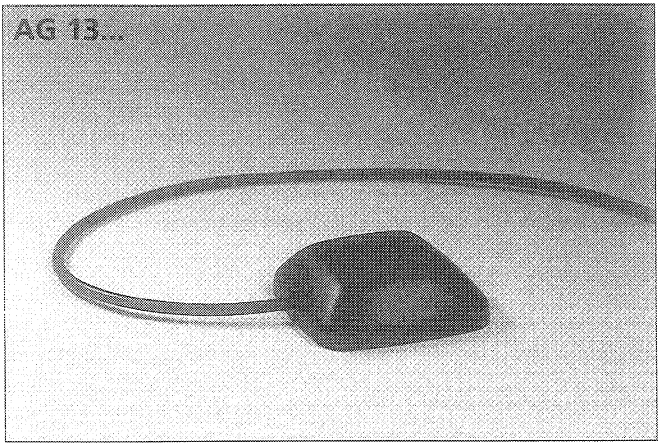
www.hktrafficpro.com

harman/kardon®
A Harman International Company

250 Crossways Park Drive, Woodbury, NY 11797
Part No. TRAFPROINSERT

AG 13...

Montagehinweis
Mounting instructions
Instructions de montage



GPS-Aufsatzantenne
Top-mounted GPS Antenna
Antenne GPS

D

- Geringe Abmessungen
- GPS-Zweig aktiv
- Störfest gegenüber Mobilfunksignalen
- Kompatibel zu sämtlichen Navigationssystemen
- Interne Stromstabilisierung

Kundenspezifisch
Bitte bei Bestellung angeben!

1. Befestigungsarten
   - Magnethalter auf Blech
   - Klebepad auf Montageplatte
   - Kletthalter
2. Kabellänge und Anschluß

GB

- Small size
- Active GPS path
- Resistant to interference from other mobile radio equipment
- Compatible with all car navigation systems
- Internally stabilised power supply

Customer-specific features
Please specify when ordering!

1. Mounting type:
   - Magnetic foot for mounting on metal
   - Adhesive pad for mounting on flat surface
   - Velcro fastener
2. Cable length and connector type

F

- Dimensions réduites
- Branche GPS active
- Protégée contre les parasites générés par des téléphones mobiles
- Compatible avec tous les systèmes de navigation
- Stabilisation interne du courant

Options spécifiques
À préciser lors de la commande !

1. Modes de fixation
   - Support aimanté sur tôle
   - Pastille autocollante sur panneau
   - Bande Velcro
2. Longueur du câble et connecteur

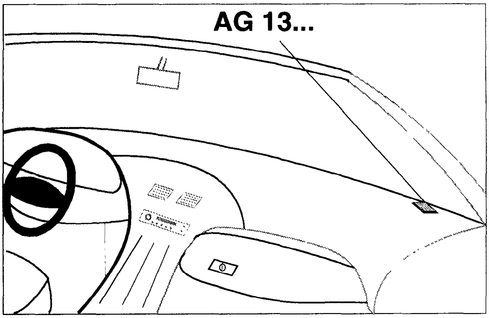
CE

Einbauort - *Fitting position - Emplacement de montage*

Die Haftflächen am Fahrzeug und an der Antenne müssen vor dem Aufsetzen gereinigt werden. Antennenkabel im Auto verlegen.
Inneneinbau: Antenne darf nicht durch Metallflächen vor dem Empfang abgeschirmt werden. Also nicht direkt unter dem Dach anbringen sondern im Bereich der Front- bzw. Heckscheibe.
Einbaulage: siehe Foto.
Anmerkung: Metallisierte Scheiben können zu Funktionsstörungen führen.

For adhesive mounting, clean the mounting surfaces on the car and the antenna before mounting. Lay the cable inside the car.
Inside mounting: *take care that the antenna is not shielded by any metal parts. Do not mount the antenna directly under the roof; a better position is close to the windscreen or the rear window.*
Mounting position: *see picture on cover.*
Note: *Windscreens coated with a metal film may cause poor reception.*

Les surfaces adhésives sur le véhicule et sur l'antenne doivent être également nettoyées avant la mise en place.
Installation à l'intérieur : *la réception de l'antenne ne doit pas être gênée par les surfaces métalliques. Il ne faut donc pas installer l'antenne directement sous le toit, mais au niveau du pare-brise ou de la lunette arrière.*
Installation : *voir illustration.*
Remarque : *les vitres métallisées risquent de provoquer des défauts de fonctionnement.*



Der Inneneinbau wird empfohlen. Empfohlene Einbaulage auf dem Armaturenbrett.
We recommend installing the antenna inside the car. The best position is on top of the dashboard.
L'installation à l'intérieur est recommandée. Position de montage conseillée: sur le tableau de bord.

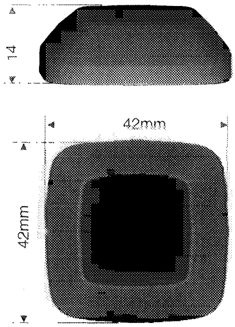
Gefahrenhinweise - *Safety Instructions - Consignes de sécurité*

Halten Sie Magnet-Antennen von Datenträgern (Disketten, Scheckarten, Magnetkarten etc.) elektronischen und feinmechanischen Geräten fern.
Aus gleichem Grund müssen Personen mit Herzschrittmachern die Nähe der Antenne (Brusttasche) meiden. Verwenden Sie die Antenne nicht in explosionsgefährdeten Räumen — Magnete können Funkenbildung hervorrufen.

Keep magnetic antennas well away from data media (disks, cheque cards, magnetic cards, etc.), electronic and fine mechanical apparatus.
Persons with heart pacemakers should avoid the antenna for the same reason. Do not use the antenna in rooms where there is a risk of explosion. It can generate sparks.

Eloigner l'antenne magnétique des supports de données (disquettes, cartes bancaires, cartes magnétiques, etc.), des appareils électroniques et mécaniques de précision.
Pour la même raison, les personnes portant des stimulateurs cardiaques doivent éviter l'antenne. Ne pas utiliser l'antenne dans les locaux sujets à explosions. Les aimants peuvent entraîner la formation d'étincelles.

Nicht waschanlagentauglich
Not car wash proof
Ne résiste pas au passage en station de lavage



(D)

1. Antenne auf Dach oder Kofferraumdeckel aufsetzen.
2. Kabel durch Tür, Fenster oder Kofferraum führen.

(GB)

1. Place the antenna on the roof or the boot lid.
2. Feed the cable through a door, a window or the boot.

(F)

1. Poser l'antenne sur le toit ou sur le capot du coffre.
2. Passer le câble par une porte, une fenêtre ou le coffre.

Technische Daten
Technical Data
Caractéristiques techniques

Antenne - *Antenna* - *Antenne*

Strahler-*Rod*-*Émetteur*	Keramikpatch - Ceramic patch - Pastille céramique

Frequenzbereich-*Frequency range*-*Bande de fréquence*

GPS	1575,42 MHz

Elektrische Eigenschaften-*Electrical features*

Verstärkung - *Amplification - Amplification*	>28 dB
Gewinn-*Gain*-*Gain*	> 4,5 dBic
Rückflußdämpfung-*Return loss*-*Atténuation de réflexion*	> 10 dB
Rauschzahl-*Noise factor*-*Facteur de bruit*	< 1,8 dB
Betriebsspannung-*Operating voltage* *Tension d'alimentation*	3,5 -5,5 VDC
Stromaufnahme-*Current consumption*-*Consommation courant*	18 mA
Phantomspeisung-*Remote feed voltage*-*Téléalimentation*	ja, *yes, qui*

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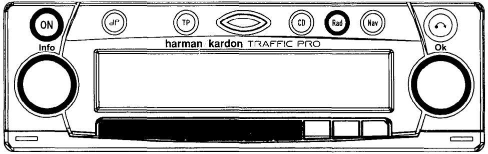
Traffic Pro™ Quick-Start Guide

harman/kardon

This Quick-Start Guide is provided to allow you to begin to use your new Harman Kardon Traffic Pro immediately. We encourage you, however, to carefully read the supplied "Operation Guide" in order to fully realize the many features and benefits we've designed into this sophisticated multifunction unit.

These instructions assume that your Traffic Pro has been properly installed and initialized, with the navigation computer already calibrated to your vehicle. If this is not the case, please refer to the Installation and/or Operation Guide(s), contact your authorized Harman Kardon Traffic Pro retailer, visit our Web site at www.hktrafficpro.com, or call us at 800.422.8027.

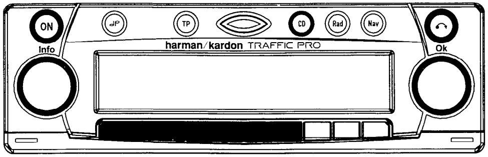
Tuner Quick Start



1. If the unit is not already on, press the "ON" button on the faceplate of your Traffic Pro.
2. Press the "Rad" button to activate the Tuner mode. The band and station last tuned will then be automatically recalled.
3. The left knob controls the volume.
4. The right knob can be used to search for other stations in the band. Turning it in either direction will cause the tuner to search up or down the band and automatically stop at the next receivable station.
5. The first six keys along the bottom of the display become preset station buttons, and the seventh key provides access to an additional six preset locations for a total of twelve presets per band.
6. To assign a station to a preset location, tune to the desired station manually, then press and hold the desired preset location until you hear a "beep," indicating that the station has been memorized to that location.
7. To change bands (e.g., FM to AM), press the "Rad" button again while you are in the Tuner mode, and then select the desired band by pressing the appropriately marked key.

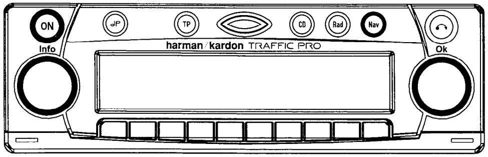
Note: There are many different options available for the way your Traffic Pro tuner operates, including the ability to automatically load preset stations according to signal strength, to identify station programming by content, and to automatically switch to radio traffic broadcast announcements even when listening to CDs. Availability of some of these features will vary from location to location. Please refer to the comprehensive "Radio Mode" section of the Operation Guide for details.

CD Quick Start



1. If the unit is not already on, press the “ON” button on the faceplate of your Traffic Pro.
2. Press the “CD” button to activate the CD mode, and begin playback if there is a music CD in the drive.
3. To load a CD, press the ↷ button at the upper right of the Traffic Pro faceplate. The front panel will swing down. Press it a second time to eject any CD currently in the drive. Insert the desired CD into the illuminated slot and close the front panel to begin playback.
4. The left knob controls the volume.
5. The right knob is used to select individual tracks on the CD in either direction, depending on the way you turn the knob.
6. The keys below the display provide access to the following functions (from left to right):
    a. Random Play (“Rnd”) – Shuffles the tracks on the CD so they play in random order.
    b. Repeat (“Rpt”) – Continuously repeats the current track until deselected.
    c. Rewind (“ ”) – Moves backwards within the *current* track.
    d. Fast Forward (“ ”) – Moves forward through the *current* track.
    e. Skip Backward (“I< ”) – Returns to the start of the current track. Repeatedly pressing this button allows previous tracks to be selected in order. This button duplicates the counter-clockwise function of the right knob in the CD mode.
    f. Skip Forward (“ >I”) – Moves to the start of the next track. Repeatedly pressing this button allows subsequent tracks to be selected in order. This button duplicates the clockwise function of the right knob in the CD mode.
    g. CD Changer (“Cdc”) – Provides access to an optional Harman Kardon CD changer. If there is no CD changer connected, this function will not appear.

Navigation Quick Start



1. If the unit is not already on, press the “ON” button on the faceplate of your Traffic Pro.
2. Press the “Nav” button to select the Navigation mode.
3. Read the caution note and if you understand it and agree to it, confirm by pressing the right knob. **Do not attempt to perform navigation data entry while driving – serious injury and/or death may result.**
4. To enter a destination by address, press the right knob when “Destinati[on]” is displayed in the center and in **BOLD** type (this is the default).

    You may also scroll the display by turning the right knob to select one of the following alternative destination types:

    a. “P.O.I.” (Points of Interest) – A wide variety of preprogrammed destinations, including gas stations, ATMs, airports, hotels, restaurants, etc.
    b. “Dest. Memory” (Destination Memory) – Personal destinations you may have previously stored in the Traffic Pro for later recall.
    c. “Last Destinati[ons]” – Traffic Pro keeps the last 50 destinations you’ve navigated to in memory for convenient recall.

    To choose any of these alternative selections, rotate the right knob until your choice is displayed in the center and in **BOLD** type in the display, then press the right knob to confirm your selection. *Traffic Pro will verbally request the navigation disc if it is not already present in the drive. Eject any music CD and insert the navigation CD.* Traffic Pro will read the CD for a few moments.

    The input process when using any of these alternatives is similar to that used to enter a destination by address, so, once you are familiar with that method, you should be able to easily operate Traffic Pro in any of these alternative modes.

5. To continue entering a destination by address, Traffic Pro now prompts you to select from one of the following:

    a. Town – Traffic Pro defaults to display the name of the town last used for navigation, but you may press the right knob to select it in order to enter a different town name. *Note that if the town name you entered exists in more than one state, Traffic Pro will ask you to select from a list of states and/or counties containing that town name.* After you have entered the town name, Traffic Pro will request the street name or offer to take you to the center of town. If no streets are programmed into the database for the selected town, Traffic Pro will automatically route you to the town center.
    b. Street – If the address you wish to find is within the displayed town name, you may just select “Street” and enter the street name.

    Confirm your address-type selection by rotating the right knob and then pressing it when your selection is displayed in the center and in **BOLD** type.

6. Enter the information requested by rotating the right knob to highlight the desired letter and pressing it to confirm each letter. Spaces are entered by selecting the underscore (__) character and you may correct input errors by using the “←” key. *To speed your data entry, Traffic Pro will only display allowed letters rather than the entire alphabet once you have begun the entry process, and it will auto-complete the entry once you have narrowed it down to just one option.*
7. Select the “OK” key once you have completed your entry.
8. Traffic Pro will display “Start-Fast R[oute]” by default. Acknowledge this option by pressing the right knob, and Traffic Pro will immediately begin calculating your route.

    There are additional options available besides “Start-Fast R[oute].” You may also select:

    a. House number – Entering an exact address will narrow your final destination down to a specific block.
    b. Intersection – Allows you to specify an intersection by choosing from a list of crossing street names.
    c. Save Destinati[on] – Allows you to save the destination for future recall. Traffic Pro will ask you for a destination name.
    d. Route Settings – Allows you to choose between Short Route and Fast Route, and also to specify additional restrictions, such as avoiding or using highways, toll roads and ferries. Your selection(s) will be saved as a user preference.

9. If you are not on a street that is contained in Traffic Pro's database (e.g., you're in a parking lot), the unit displays an arrow pointing to your destination and you may begin driving. Once you reach a street contained in the database, turn-by-turn driving directions will start automatically. If you are already on a street contained in the database, Traffic Pro will prompt you to begin driving once the route calculations begin.

   Route calculations are complete when the small CD indicator in the display stops flashing. At this time, you may eject the navigation CD and insert a music CD of your choosing since the navigation data is stored in Traffic Pro's internal memory.

10. Traffic Pro provides ample verbal warning for upcoming turns and offers progressive alerts:
    a. "Prepare to take a [left or right]" is an indication to move to the appropriate lane.
    b. "Please take a [left or right] in 'x' yards" tells you the turn is imminent, and, finally...
    c. "Now take a [left or right]" is announced just before you reach the desired turn.

    Alerts will be provided in a timely fashion, and they will be provided earlier if you are on a limited-access highway to give you time to react safely. An adequately wide vocabulary is available to accurately convey the required information. **Always obey local driving regulations and respect current road and traffic conditions.**

11. You may, at any time while navigating, press the left knob for current instructions, and the Estimated Time of Arrival (ETA) to your final destination.

Note: Traffic Pro is an extremely sophisticated navigation computer offering many additional operating modes and user options. This Quick-Start Guide is designed to allow you to begin using your Traffic Pro right away, but, for maximum enjoyment and utility, we strongly encourage you to review the Operation Guide in its entirety.

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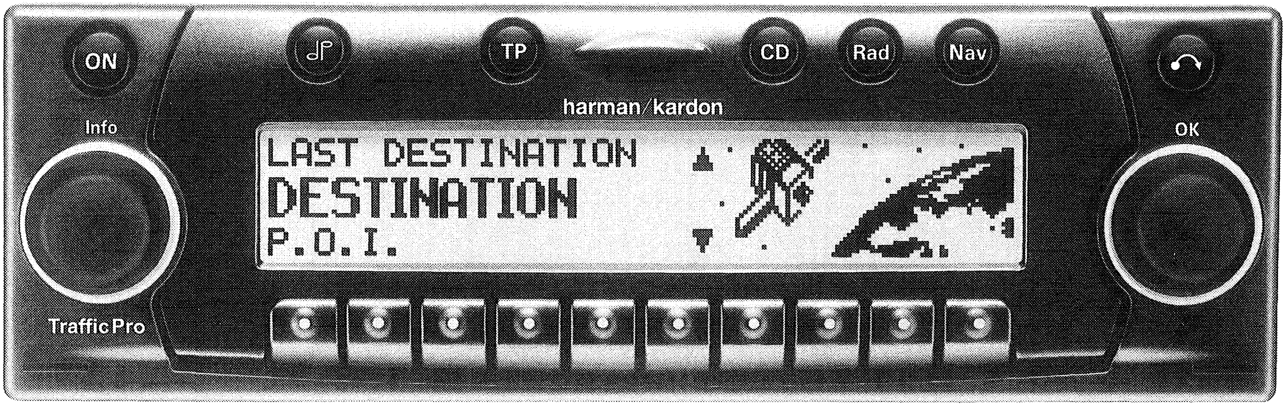
ON
TP
CD
Rad
Nav
harman/kardon
Info
OK
LAST DESTINATION
DESTINATION
P.O.I.
Traffic Pro

Navigation System

Installation guide

Instrucciones de montaje

Instructions de montage

harman/kardon®

Contents

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2. ”Safety and installation instructions” on page 1
3. ”Installation of the GPS antenna” on page 2
4. ”Connecting the reverse signal” on page 8
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6. ”Connecting the speed signal (GAL)” on page 8
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11. ”Service Mode” on page 16

1. Symbols used in the installation guide

⚠ denotes instructions which are important for your safety and the safety of others.

☞ denotes instructions which are important for the installation and function of the unit.

2. Safety and installation instructions

☞ The installation of TrafficPro should only be carried out by a qualified installation professional.

- Disconnect the vehicle battery before installation of the unit.

⚠ Note the safety instructions of the vehicle manufacturer (airbags, immobilisers etc.).

- When routing the cables, ensure that they do not interfere with the safe operation of the vehicle and that they are protected from damage.
- Before installation, park the vehicle in a safe and level place and remove the ignition key.

3. Installation of the GPS antenna

⚠ People with pacemakers should avoid physical contact with the magnetic antenna and should not carry the antenna on their person, as this may affect the function of the pacemaker.
Keep the magnetic antenna away from data storage media (disks, credit cards, magnetic cards etc.) and electronic and precision engineering equipment, as this may cause data to be deleted.
Do not use the antenna in areas at risk of explosion.
It is important to secure the antenna so that it cannot become detached in a collision or sudden brake maneuver.

Possible installation positions

- Inside the vehicle

☞ The antenna should only be installed under a non-metallised windshield.

☞ When selecting the installation position, ensure that the antenna has a clear view in all directions, and that it is not covered by the windshield wipers. Obstructions caused by the hood, window crossbeams and roof should be avoided as far as possible.

a. Secure the antenna to the base plate (1) using the magnet attached to the antenna.

b. Remove protective strip from top of adhesive tape (2) and stick to the centre of the base plate bottom.

c. Remove protective strip from bottom of adhesive tape (2) and stick the antenna and base plate onto the vehicle dashboard beneath the windshield at the installation position.

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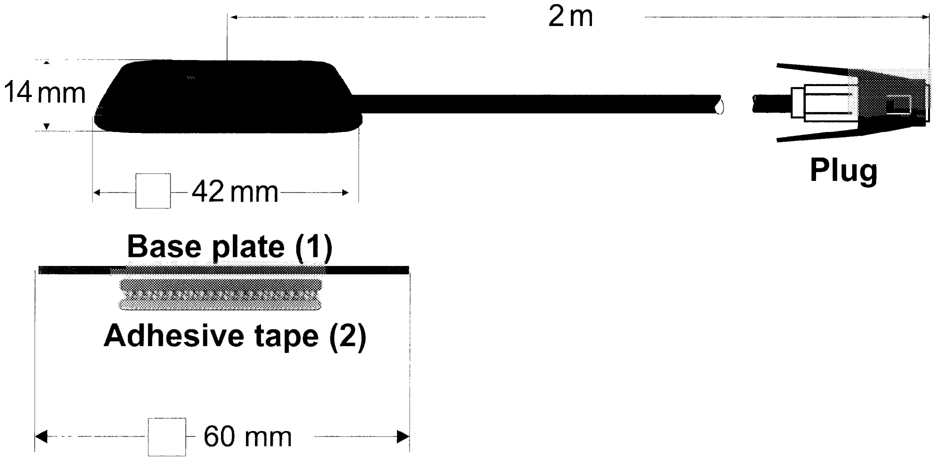


☞ GPS reception can be affected by windshields with integrated antenna, windshield heating or thermally insulated windshield. Some thermally insulated windshield are coated with titanium or silver oxide. Installation of the GPS antenna in the vehicle interior can considerably impair the function of the navigation system under these conditions.

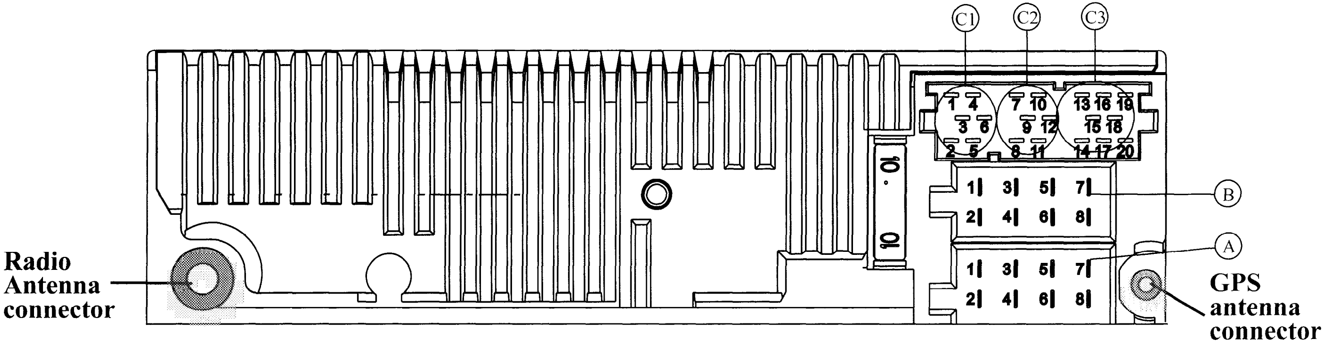
- Outside the vehicle

a. Attach the antenna to a flat, pre-washed metal surface using the magnet attached to the antenna.

b. Then guide the antenna cable into the vehicle interior.

⚠ The maximum vehicle speed for the antenna if magnetically attached is 110 mph. The antenna must be removed or specially secured at higher speeds.
The antenna is not suitable for car-wash facilities.

4. Connections



Socket A

1 Speed Signal (GAL) - (grey/brown)
2 Reverse Lamp Signal (brown)
3 Telephone Mute (grey)
4 Permanent positive (yellow)
5 Control output for retractable or amplified antenna/ amplifier (blue)
6 Illumination (orange)
7 Switched Positive (red)
8 Ground (black)

Socket B

1 Loudspeaker rear right + (violet/black)
2 Loudspeaker rear right - (violet)
3 Loudspeaker front right + (grey/black)
4 Loudspeaker front right - (grey)
5 Loudspeaker front left + (white/black)
6 Loudspeaker front left - (white)
7 Loudspeaker rear left + (green/black)
8 Loudspeaker rear left - (green)

Socket C1

1 Line output rear left + (long RCA pigtail with red stripe)
2 Line output rear right + (long RCA pigtail with white stripe)
3 Line output - (signal ground)
4 Line output front left +(short RCA pigtail with red stripe)
5 LineOut front right + (short RCA pigtail with white stripe)
6 Subwoofer Line output +

Socket C2

7-12 CD Changer connections

Socket C3

13 Telephone hands-free speaker input + (red)
14 Telephone hands-free speaker input - (black)
15-17 CD Changer connections
18 CD Changer connection / Auxiliary input - (signal ground)
19 CD Changer connection / Auxiliary input left +
20 CD Changer connection / Auxiliary input right +

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Power, speaker and signal connections:

- **Telephone mute**: Connect Pin 3 (grey) to the ”mute” connection of the vehicle’s telephone (if equipped) which provides a ground signal when the phone is activated.

- **Permanent positive**: Connect Pin 4 (yellow) to the lead in the vehicle’s radio connector that provides +12VDC at all times.

- **Power antenna/amplifier turn-on**: Connect Pin 5 (blue) to the lead in the vehicle’s radio connector that activates the vehicle’s retractable or amplified antenna. If the vehicle is equipped with aftermarket or factory installed amplifiers, connect this lead to the ”remote turn-on” lead of the amplifier(s).

- **Illumination**: Connect Pin 6 (orange) to the lead in the vehicle’s radio connector that provides +5 - +12VDC when the vehicle’s parking lights are activated.

- **Switched Positive**: Connect Pin 7 (red) to the lead in the vehicle’s radio connector which provides +12VDC when the ignition key is turned to the ACC or IGN position.

- **Ground**: Connect Pin 8 (black) to the lead in the vehicle’s radio connector which has a direct connection to the vehicle’s chassis. Alternately, you may connect this wire directly to the vehicle’s chassis (bare metal).

- **Reverse Lamp Signal**: TrafficPro must receive a signal from the vehicle to determine whether the vehicle is moving forward or in reverse. Pin 2 in Socket A (brown) must be connected to a wire which provides **+12- +16 VDC when the vehicle is placed in reverse and ground (0VDC) at all other times**. The reverse signal wire in your vehicle may be located at the transmission or shift linkage or at a reverse lamp.
  Route a separate wire from the location where TrafficPro will be mounted to either reverse lamp in the rear of the vehicle. Connect the wire to the reverse lamp connection which provides **+12VDC-+16VDC when the transmission is placed in reverse and ground (0VDC) at all other times**. Connect the other end of the wire to pin 2, socket A in TrafficPro’s connector (brown).
  Alternately, you may connect the reverse signal wire to the reverse sensor on the transmission or shift linkage, which provides **+12VDC-+16VDC when the transmission is placed in reverse** rather than the reverse lamp. If you choose

this location, you must route the wire into the vehicle's interior through a factory-installed rubber grommet or you must install a grommet to protect the wire from damage or short circuit.

- **Speed Sensor (GAL):** TrafficPro must also receive a signal from the vehicle to determine the speed at which the vehicle is travelling. This signal must be a **0Hz – 4kHz square wave pulse of less than 1.5V when the vehicle is at rest and from 5V-16V when the vehicle is moving.**
  If your vehicle's radio is equipped with a speed-sensitive volume control (the volume is automatically adjusted up or down depending on speed) the GAL wire may be located in the radio's power connector.
  If your vehicle is not equipped with speed-sensitive volume control, the GAL wire will be located in the electronic speedometer's connector. **For the location and color of the GAL wire located at the speedometer, please call the TrafficPro Hotline.**
  Connect a wire to the vehicle's speed sensor at either of the locations specified above and connect the other end of the wire to pin 1, socket A (grey/brown) of TrafficPro.

  ☞ If your vehicle is not equipped with an electronic speedometer or speed-sensitive volume control, or if your vehicle uses an inductive sensor to send speed information to the speedometer, TrafficPro may not be compatible with your vehicle. If you suspect such incompatibility, please call the TrafficPro Hotline for confirmation.

- **Socket B**: Connect Pins 1-8, observing proper polarity, to each of the vehicle's speakers using the wires provided at the vehicle's radio connector. Alternately, you may extend each of these wires and connect them directly to the speakers if you are installing speakers.

  ☞ Do not connect TrafficPro to a speaker system that uses a common ground connection for the speakers. Each speaker must have a separate + and – connection.

- **Socket C1**: Connect the RCA type jacks to the inputs of aftermarket amplifiers or signal processors.
- **Socket C2**: Connect socket C2 to the CD changer (sold separately) using the cable provided with the CD changer.

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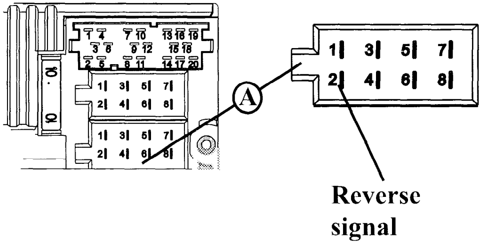
- **Socket C3**: The plug for socket C3 is included with the CD changer (sold separately) and is also available as an accessory if an auxiliary input or telephone hands free audio input is required. Please call the TrafficPro Hotline.
- **Telephone hands-free interface**: Connect Pins 13 and 14 (red and black) to the hands-free speaker output of your telephone (if equipped). The telephone conversation will be heard through the vehicle's speaker system.
- **CD Changer connection**: Connect Pins 15-17 to the CD Changer (sold separately) using the connector provided with the CD Changer.
- **Auxiliary input**: Connect the RCA type connectors to the line-level output of an external source unit.
- **Radio antenna and GPS antenna:** Connect the GPS antenna to the antenna socket adjacent to Socket A. Connect the radio antenna to the antenna socket opposite Socket A. If your vehicle is equipped with a Motorola type antenna connector, you must use the adapter provided with TrafficPro.

5. Connecting the reverse signal

If the switch on the gearbox or shift linkage is accessible:

- Connect a separate lead to the activated contact.
  Connect the lead to socket A pin 2 (brown).
  Low - level = ground, high - level = 12 V - 16 V

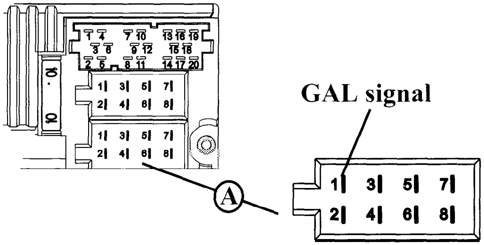


If the switch is not accessible:

- Check which lead is routed to the reversing lamp. Then, if necessary, remove the inner cover for the reversing light.
  Connect a separate lead to the activated lead of the reversing lamp and connect to socket A pin 2.

6. Connecting the speed signal (GAL) (electronic speed signal is required for TrafficPro operation)

- Attach a wire to the wire in the vehicle that provides a speed signal (often located in the factory radio harness or in the speedometer harness) and connect the other end of the wire to Socket A, pin 1 (grey/brown).



☞ A 0 to 4kHz square wave signal less than 1.5VDC when the vehicle is stopped and from 5VDC to 16VDC when the vehicle is moving must be provided by the vehicle's speed sensor. If you do not know the location of the speed signal in your vehicle. please call the TrafficPro Hotline.

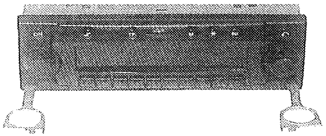
7. Installation / Removal of the Traffic Pro

- Installation:
  A universal mounting for DIN installation slots is integrated into Traffic Pro. An installation frame or sleeve is not required. The unit is inserted into the installation slot and secured with the slides supplied.
  To install, complete all electrical connections. Then push the unit into the installation slot. Subsequently, insert slides into the openings on the front of the unit until the first detent position (Fig. A). Next lock the radio in by pulling on both slides as shown in Fig. B. Subsequently, remove the slides.

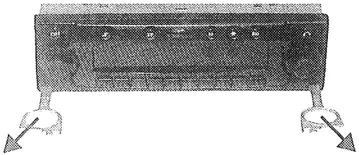
  ☞ The installation angle of the unit must not exceed 0° - 35° (vertical).

- Removal:
  To remove the unit, it must first be unlocked. For this purpose, push in both slides to the second detent position, as shown in Figure A. Subsequently, withdraw the unit with both slides. (Fig. C). Then remove the slides by pressing the springs on the right and left sides of the unit.
  If the unit was previously installed in another vehicle, it may be necessary to adjust the springs on the unit before installation. To adjust the springs, insert slide as shown in Fig. D and subsequently adjust as shown in Fig. E (Gently press slide in the direction of 1 while at the same time moving the slide in the direction of 2).

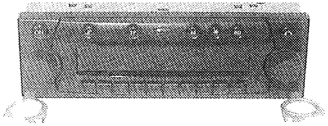
Ⓐ

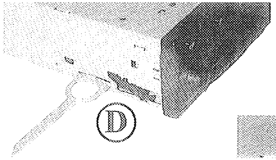


Ⓑ

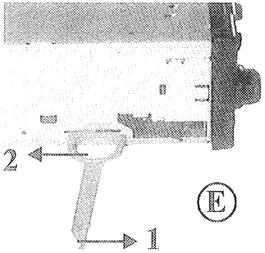


Ⓒ





Ⓓ

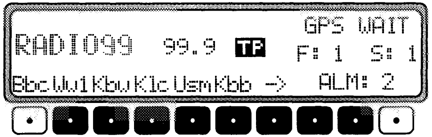


Ⓔ

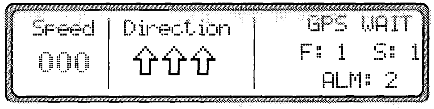
8. Initializing GPS and Performing the Sensor Test

- Connect the battery.

- Switch on the vehicle ignition to initialize the GPS and to perform the sensor test. Switch on Traffic Pro.
  Enter code (see the operation guide for a detailed description).

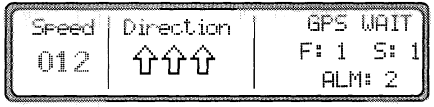

RADIO99 99.9 TP
GPS WAIT
F: 1 S: 1
Bbc Wu1 Kbu K1c Usm Kbb ->
ALM: 2

- Press the 1 multifunction button and the 10 multifunction button simultaneously.

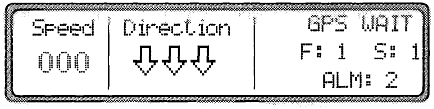

Speed 000
Direction ⇧⇧⇧
GPS WAIT
F: 1 S: 1
ALM: 2

- This calls up the menu for the initial GPS start-up and for the sensor test.

- Drive the vehicle forwards or backwards at varying speeds to confirm operation of the speed signal test.


Speed 012
Direction ⇧⇧⇧
GPS WAIT
F: 1 S: 1
ALM: 2

☞ The number under Speed must change (even at a low speed).
The number under Speed must not increase when idling or pressing the accelerator when the vehicle is parked.


Speed 000
Direction ⇩⇩⇩
GPS WAIT
F: 1 S: 1
ALM: 2

- Engage the reverse gear for the reverse signal function test.

☞ The arrows under Direction must change direction on engaging the reverse gear.

- When initializing GPS, the vehicle must be parked outdoors, while ensuring that it has a clear view in all directions (not in the immediate vicinity of buildings).

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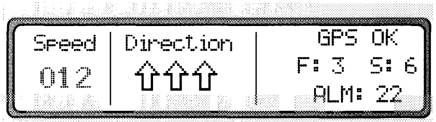
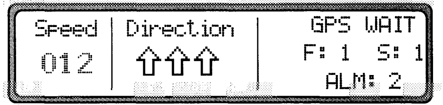
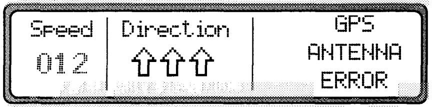

Speed
012
Direction
⇧⇧⇧
GPS OK
F: 3 S: 6
ALM: 22

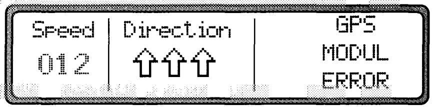
Information on the GPS reception is given in the right-hand part of the display.
Four different messages may appear:
-GPS OK: GPS reception is already available.


Speed
012
Direction
⇧⇧⇧
GPS WAIT
F: 1 S: 1
ALM: 2

-GPS WAIT: It is necessary to wait for GPS reception. You must wait until GPS OK is displayed.

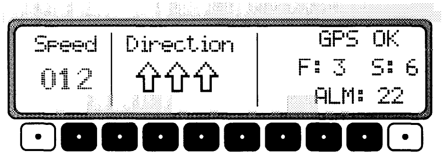

Speed
012
Direction
⇧⇧⇧
GPS
ANTENNA
ERROR

-GPS ANTENNA ERROR: The GPS antenna is not properly connected.


Speed
012
Direction
⇧⇧⇧
GPS
MODUL
ERROR

-GPS MODUL ERROR: If this message is displayed for more than one minute, please contact the Traffic Pro hotline.

☞ You must wait until GPS OK, F: 2 (or F: 3) and ALM: 22 (or a higher value) is displayed.
This procedure (first reception of the necessary GPS data) may take a few minutes. The unit must remain switched on for the duration of this procedure. The vehicle must not be moved. If after 5 minutes there has been no change in the values, the parked position (clear view in all directions as far as possible) or the installation location of the GPS antenna must be checked.


Speed
012
Direction
⇧⇧⇧
GPS OK
F: 3 S: 6
ALM: 22

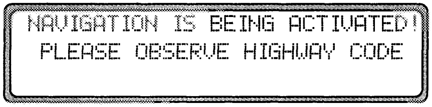
- Once GPS OK is displayed, you may quit the menu for initial GPS start-up and for the sensor test by simultaneously pressing the 1 multifunction button and the 10 multifunction button.

9. Installation of the Navigation Software

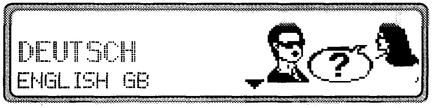
- Press the **Nav** button.

- Insert the Navigation CD to install the software for the navigation system.

- After the navigation software has been installed, the display shown to the right appears followed by the language selection display also shown on the right.



NAVIGATION IS BEING ACTIVATED!
PLEASE OBSERVE HIGHWAY CODE

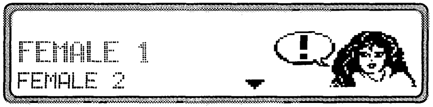


DEUTSCH
ENGLISH GB

- Select the language using the right rotary knob ●. Confirm your language selection by pressing the knob.

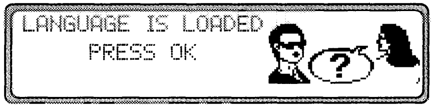
  You can choose either a male or a female voice for some languages.

  Select the voice using the right rotary knob ●. Confirm your choice by pressing the knob.



FEMALE 1
FEMALE 2

  The display shown to the right appears when the language and voice selections have been loaded into memory. Then press the right rotary knob ● to confirm.



LANGUAGE IS LOADED
PRESS OK

☞ The language selection can be changed at a later time, as described in the operating guide.

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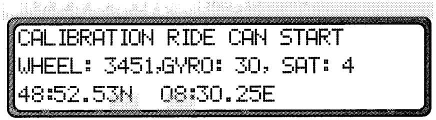
10. Calibration

After installing Traffic Pro, initializing the GPS, performing the sensor test and choosing a language aqnd voice, a calibration ride is required. During the ride, the speed signal (GAL) is automatically adapted to the vehicle-specific data and the gyro sensor is automatically adapted to the installation position of the unit.
The distance to be covered depends on the type of vehicle and the local conditions.

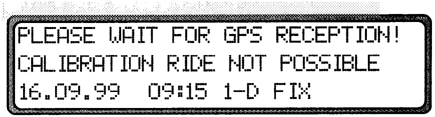
☞ The navigation system is only ready for operation after completion of the calibration ride. The main navigation menu is displayed. Final precision is only achieved after a further ride.

- The adjacent display appears after the confirmation of the language and voice selections.



```
CALIBRATION RIDE CAN START
WHEEL: 3451,GYRO: 30, SAT: 4
48:52.53N  08:30.25E
```

If that GPS reception has deteriorated as a result of changing the vehicle position and due to obstructions. The adjacent display appears.



```
PLEASE WAIT FOR GPS RECEPTION!
CALIBRATION RIDE NOT POSSIBLE
16.09.99  09:15 1-D FIX
```

☞ Adequate GPS reception must be ensured for the calibration ride. This means at least 2-D FIX. With GPS FIX 3-D the calibration will be quicker. However: a lower accuracy of the GPS signal (2-D FIX) does not lead to a poorer calibration, but instead will mean that the time and distance needed for the calibration will increase.

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If, even after sveral minutes, the display with the request CALIBRATION RIDE CAN START does not appear, you should check the GPS reception conditions again (as under Service Mode in the Section "Function test of GPS antenna (GPS INFO)" on page 17).
As soon as the display with the request CALIBRATION RIDE CAN START appears, you may start the calibration.

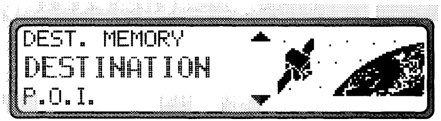
☞ A calibration ride can also be performed in a non-digitised area. The insertion of the Navigation CD is not absolutely necessary after the navigation software has been installed. Without the Navigation CD inserted, no location is displayed.

- The basic requirement for a calibration ride is: **driving 0.2 miles in a straight line, then turning by at least 60 degrees and then driving 0.2 miles in a straight line again, and turning again.**

☞ The direction you turn is of no significance. If these conditions cannot be fulfilled due to the road or the fact that you do not always have optimum GPS reception, this will not lead to a poorer calibration, but will simply mean the time and distance necessary for the calibration ride will be longer.

☞ If the unit is switched off during the calibration ride, language installation is requested when the unit is switched on again. Reinstallation can be skipped by pressing the **Nav** button.

- When calibration has been completed the main navigation menu is displayed.



DEST. MEMORY

DESTINATION

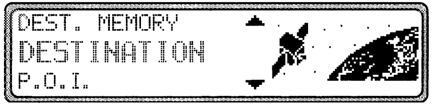
P.O.I.

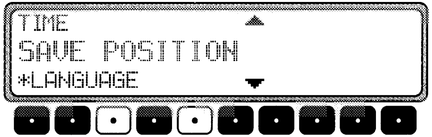
- For correct navigation on routes with time-dependent traffic guidance, the time should be set correctly as described under "System settings" in the operation guide.

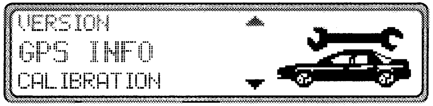
11. Service Mode

In Service Mode, various functions can be checked in detail and the calibration can be modified.

- Switch on the unit (see operation guide).
  Enter code (see operation guide).
- If the unit has already been calibrated, select the main navigation menu by pressing the Nav button.
  If the unit has not been calibrated, proceed as described in the after next point.
- Press the Nav button again to access the system settings.
- Press and hold the 3 multifunction button. Then press the 5 multifunction button. This calls up the Service Mode.







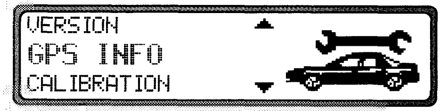
The following functions can be selected in the Service Mode:

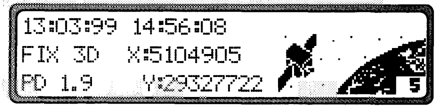
- GPS INFO - GPS function test
- CALIBRATION - function for deleting the calibration or for setting a calibration
- CALIBRATION RIDE - display for calibration ride
- MODULE TEST - internal component test
- SENSORS - sensor function test
- SPEECH TEST - voice test
- DEMO - demo mode selection
- VERSION - the status of the Navigation CD is displayed

By turning the right rotary knob ●, select the desired entry (large letters) and press to confirm.

Function test of GPS antenna (GPS INFO)

In Service Mode, select GPS-INFO with the right rotary knob ● and press to confirm.
If Traffic Pro is functioning properly and with GPS reception, the number of satellites received (e.g. 5), the date and time (e.g. 13.03.99 14:56:08) and the type of positioning currently possible FIX: (e.g. 3D) are displayed.


VERSION
GPS INFO
CALIBRATION

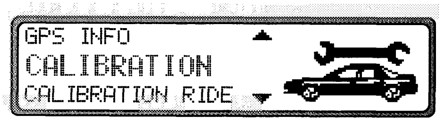

13:03:99 14:56:08
FIX 3D X:5104905
PD 1.9 Y:29327722
5

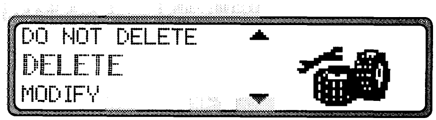
☞ At least FIX 2D is required for quick and successful calibration. A certain amount of time may be required to reach this value (do not move the vehicle during this period).

In order to quit the GPS test, press the Nav button. The unit switches back to the Service Mode.

Changing the calibration (CALIBRATION)

Deleting the calibration:
If the navigation system is removed from one vehicle and installed in another, it must be recalibrated. However, to do so, the current calibration data must be deleted.
In the Service Mode, select CALIBRATION using the right rotary knob ● and press to confirm.
Using the right rotary knob ● select DELETE and press to confirm. The calibration is deleted and the unit returns to the Service Mode.


GPS INFO
CALIBRATION
CALIBRATION RIDE


DO NOT DELETE
DELETE
MODIFY

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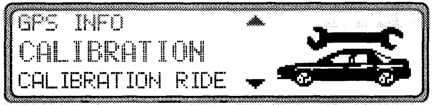
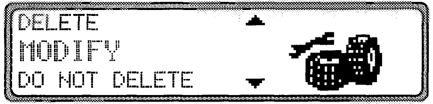
Calibration setting:

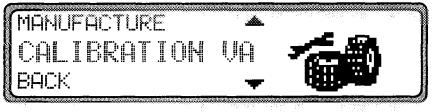
☞ **Calibration settings should only be made when the values to be entered are known. The unit cannot perform correct route calculations if incorrect values are entered.**


GPS INFO
CALIBRATION
CALIBRATION RIDE

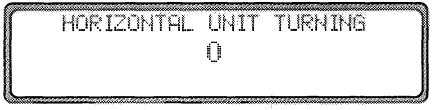
It is possible to provide calibration settings manually.
In the Service Mode, select CALIBRATION using the right rotary knob ● and press to confirm.


DELETE
MODIFY
DO NOT DELETE

Using the right rotary knob ● select MODIFY and press to confirm.

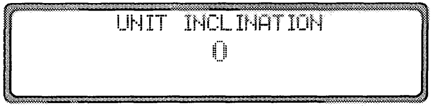

MANUFACTURE
CALIBRATION VA
BACK

Using the right rotary knob ● select CALIBRATION VALUES and press to confirm.


HORIZONTAL UNIT TURNING
0

Unit rotation can be selected in degrees by turning the right rotary knob ● and pressing to confirm.

☞ Unit rotation corresponds to horizontal rotation. A positive value means rotation of the front of the unit towards the driver (LHD).


UNIT INCLINATION
0

The unit inclination can now be selected in degrees by turning the right rotary knob ● and pressing to confirm.

☞ Unit inclination corresponds to vertical inclination. A positive value means upward inclination of the front of the unit.

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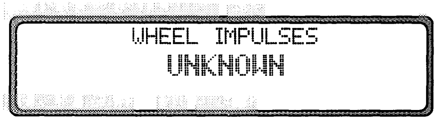
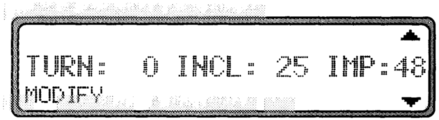
The number of wheel impulses per wheel revolution (if known) can then be selected by turning the right rotary knob ● and pressing to confirm.



WHEEL IMPULSES
UNKNOWN

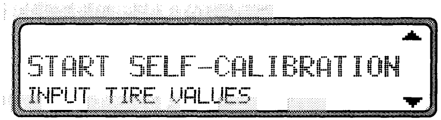
☞ If the number of wheel impulses per wheel revolution is not known, UNKNOWN must be selected. It is then not possible to enter tire data.

The previously entered data is displayed again. If the data entered is correct select line with data by turning the right rotary knob ● and then press to confirm.
If correction is necessary, select MODIFY by turning the right rotary knob ● and press to confirm. The values can then be re-entered.

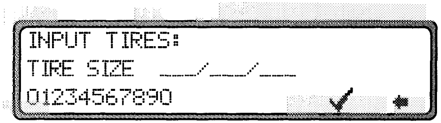


▲
TURN: 0 INCL: 25 IMP:48
MODIFY ▼

Once the previously entered data has been confirmed, the tire data can be entered or self-calibration can be started.
To enter the tire data, select INPUT TIRE VALUES by turning the right rotary knob ● and press to confirm.
Enter the correct tire size using the right rotary knob and confirm the entry by pressing for more than 2 seconds.



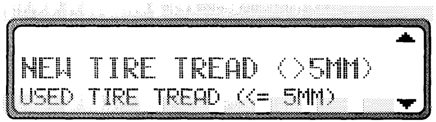
▲
START SELF-CALIBRATION
INPUT TIRE VALUES ▼



INPUT TIRES:
TIRE SIZE ___/___/___
01234567890 ✓ ◆

☞ The letter "R" cannot be entered. 3 numbers must be entered before and after the slashes. Insert a "0" for any missing numbers.
Example: Specification in vehicle registration papers: 185/55R15 81T
Input into unit: 185/055/015

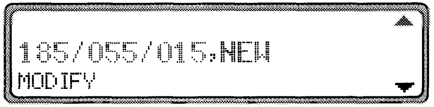
Then select between NEW TIRE TREAD and USED TIRE TREAD by turning the right rotary knob ● to enter the approximate tread depth value.

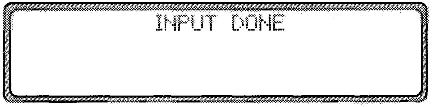


▲
NEW TIRE TREAD (>5MM)
USED TIRE TREAD (<= 5MM) ▼

Press the right rotary knob ● to confirm the selection.

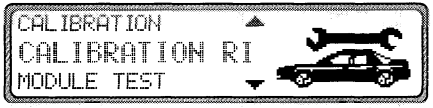
The previously entered data is displayed again. f the data entered is correct select line with data by turning the right rotary knob ● and then press to confirm.
If correction is necessary, select MODIFY by turning the right rotary knob ● and press to confirm. The values can then be re-entered.
After confirming the tire data or the previously confirmed point START SELF CALIBRATION, the adjacent display appears.
After a short time, the unit switches to the main navigation menu or the calibration ride is requested.

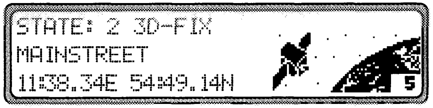

185/055/015:NEW
MODIFY


INPUT DONE

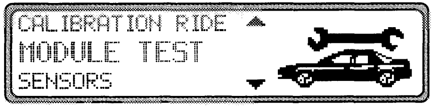
☞ The unit is now in calibration status 2. Absolute precision is, however, only achieved as of calibration status 3.

Status of calibration ride (CALIBRATION RIDE)
In the Service Mode, select CALIBRATION RIDE using the right rotary knob ● and press to confirm.
The calibration status (e.g. STATUS: 2) and the type of positioning (e.g. 3D) are displayed. After completing calibration, the street on which you are currently driving is displayed (provided that it is digitised) instead of WHEEL and REVERSE.


CALIBRATION
CALIBRATION RI
MODULE TEST


STATE: 2 3D-FIX
MAINSTREET
11:38.34E 54:49.14N

Testing the system components (MODULE TEST)
A test program automatically tests the internal components of the navigation system.
In the Service Mode, select MODULE TEST using the right rotary knob ● and press to confirm. If OK is displayed, press the Nav button.
The unit switches back to the Service Mode.


CALIBRATION RIDE
MODULE TEST
SENSORS

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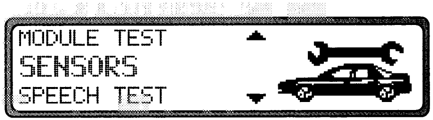
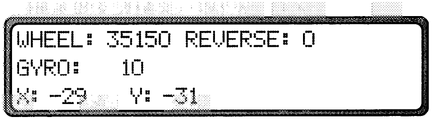
Function test of the GAL signal, reverse signal, internal sensors (SENSORS)

- In the Service Mode, select SENSORS using the right rotary knob ● and press to confirm.



MODULE TEST ▲
SENSORS
SPEECH TEST ▼

- Move the vehicle several feets forwards or backwards for the GAL signal function test.



WHEEL: 35150 REVERSE: 0
GYRO: 10
X: -29 Y: -31

☞ The number after WHEEL: should increase (even at a low speed).
The number after WHEEL: should not increase if idling or pressing the accelerator when the vehicle is parked.

- Engage the reverse gear for the reverse signal function test.

☞ The number after REVERSE: should change from 0 to 1 (1 to 0).

- Drive around a corner to test the function of the internal sensors.

☞ The values after X: and Y: should change.

In order to quit the sensor test, press the Nav button. The unit switches back to the Service Mode.

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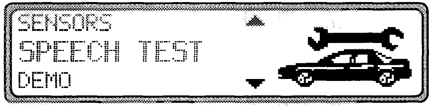
Testing the voice (`SPEECH TEST`)

A test program is used to test the voice.

- In the Service Mode, select `SPEECH TEST` using the right rotary knob ⊙ and press to confirm.
  The announcement "Please insert Navigation CD" is given.
  By pressing the right rotary knob ⊙, the announcement can be repeated.
  After completing the test, press the Nav button. The unit switches back to the Service Mode.

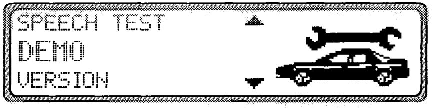


```
SENSORS
SPEECH TEST
DEMO
```

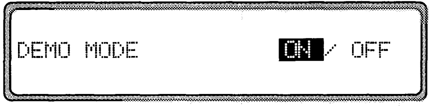
Demo Mode (`DEMO MODE`)

The demo mode is intended for demonstration purposes. Apreprogrammed location will serve as the starting point for navigation.

- In the Service Mode, select `DEMO MODE` using thc right rotary knob ⊙ and press to confirm.
  Select between `ON` and `OFF` by briefly pressing the right rotary knob ⊙. By holding down the right rotary knob ⊙, the selection is confirmed.
- You can now enter a destination as described in the operation guide.
- To switch off the demo mode cancel the simulated route guidance and repeat steps to go into the service menu. Select `OFF` by briefly pressing the right rotary knob ⊙. By holding down the right rotary knob the selection is confirmed.
  ATTENTION: To turn ignition off and on does not switch off the demo mode



```
SPEECH TEST
DEMO
VERSION
```



```
DEMO MODE          ON / OFF
```

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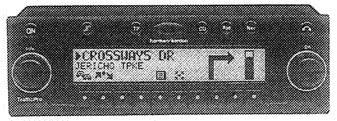
Traffic Pro™

CD / Radio / GPS Navigation System



KEY CONTACTS

Web Site Addresses	www.hktrafficpro.com www.harmankardon.com
Technical Support	800.422 8027
Product Service	800.422.8027
Product Info/Literature	516.682.6435

DEMO MODE

The demo mode is intended for in-store demonstration purposes.
A preprogrammed location will serve as the starting point for navigation.

- Power up unit and key in security code.
- Insert navigation CD.
- Press "NAV."
- Press multifunction keys 3 and 5 together.
- Rotate right knob and select "DEMO MODE."
- Press "OK" for DEMO MODE "ON."
- Press and hold "OK" to save.
- Press "NAV" button twice and go to the main menu.
- Enter destination
- Press "OK."

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Traffic Pro™

CD / Radio / GPS Navigation System

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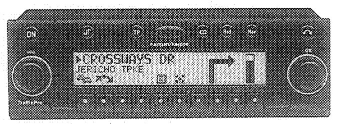
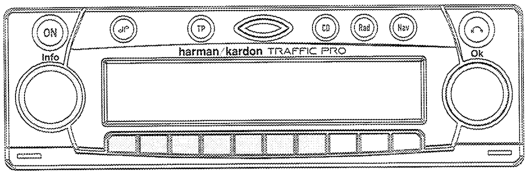


QUICK-START GUIDE

This Quick-Start Guide is provided to allow you to begin to use your new Harman Kardon Traffic Pro immediately. We encourage you, however, to carefully read the supplied "Operation Guide" in order to fully realize the many features and benefits we've designed into this sophisticated multifunction unit.

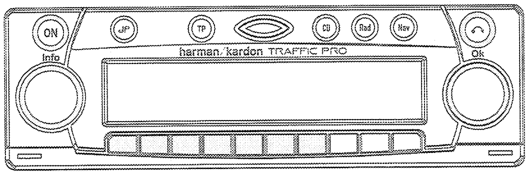
These instructions assume that your Traffic Pro has been properly installed and initialized, with the navigation computer already calibrated to your vehicle. If this is not the case, please refer to the Installation and/or Operation Guide(s), contact your authorized Harman Kardon Traffic Pro retailer, visit our Web site at www.hktrafficpro.com, or call us at 800.422.8027.



TUNER QUICK START

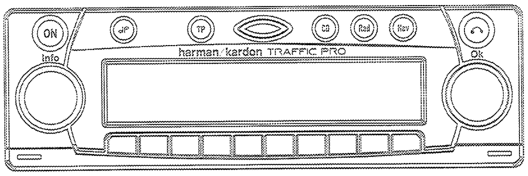
1. If the unit is not already on, press the "ON" button on the faceplate of your Traffic Pro.
2. Press the "Rad" button to activate the Tuner mode. The band and station last tuned will then be automatically recalled.
3. The left knob controls the volume
4. The right knob can be used to search for other stations in the band. Turning it in either direction will cause the tuner to search up or down the band and automatically stop at the next receivable station.
5. The first six keys along the bottom of the display become preset station buttons, and the seventh key provides access to an additional six preset locations for a total of twelve presets per band.
6. To assign a station to a preset location, tune to the desired station manually, then press and hold the desired preset location until you hear a "beep," indicating that the station has been memorized to that location.
7. To change bands (e.g., FM to AM), press the "Rad" button again while you are in the Tuner mode, and then select the desired band by pressing the appropriately marked key.

Note: There are many different options available for the way your Traffic Pro tuner operates, including the ability to automatically load preset stations according to signal strength, to identify station programming by content, and to automatically switch to radio traffic broadcast announcements even when listening to CDs Availability of some of these features will vary from location to location. Please refer to the comprehensive "Radio Mode" section of the Operation Guide for details



CD QUICK START

1. If the unit is not already on, press the "ON" button on the faceplate of your Traffic Pro.
2. Press the "CD" button to activate the CD mode, and begin playback if there is a music CD in the drive.
3. To load a CD, press the ⏏ button at the upper right of the Traffic Pro faceplate. The front panel will swing down. Press it a second time to eject any CD currently in the drive. Insert the desired CD into the illuminated slot and close the front panel to begin playback.
4. The left knob controls the volume.
5. The right knob is used to select individual tracks on the CD in either direction, depending on the way you turn the knob.
6. The keys below the display provide access to the following functions (from left to right):
    a. Random Play ("Rnd") – Shuffles the tracks on the CD so they play in random order.
    b. Repeat ("Rpt") – Continuously repeats the current track until deselected.
    c. Rewind ("<") Moves backward within the *current* track.
    d. Fast Forward (">") – Moves forward through the *current* track.
    e. Skip Backward ("|<") – Returns to the start of the current track. Repeatedly pressing this button allows previous tracks to be selected in order. This button duplicates the counterclockwise function of the right knob in the CD mode.
    f. Skip Forward (">|") – Moves to the start of the next track. Repeatedly pressing this button allows subsequent tracks to be selected in order. This button duplicates the clockwise function of the right knob in the CD mode.
    g. CD Changer ("Cdc") – Provides access to an optional Harman Kardon CD changer. If there is no CD changer connected, this function will not appear.



NAVIGATION QUICK START

1. If the unit is not already on, press the "ON" button on the faceplate of your Traffic Pro.
2. Press the "Nav" button to select the Navigation mode.
3. Read the caution note and if you understand it and agree to it, confirm by pressing the right knob. **Do not attempt to perform navigation data entry while driving – serious injury and/or death may result.**

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Traffic Pro

CD/Radio/GPS Navigation System

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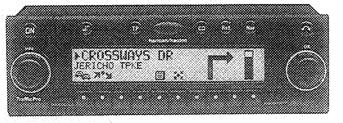

QUICK-START GUIDE

This Quick-Start Guide is provided to allow you to begin to use your new Harman Kardon Traffic Pro immediately. We encourage you, however, to carefully read the supplied "Operation Guide" in order to fully realize the many features and benefits we've designed into this sophisticated multifunction unit.

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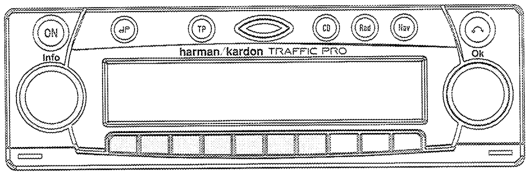
TUNER QUICK START



1. If the unit is not already on, press the "ON" button on the faceplate of your Traffic Pro.
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Note: There are many different options available for the way your Traffic Pro tuner operates, including the ability to automatically load preset stations according to signal strength, to identify station programming by content, and to automatically switch to radio traffic broadcast announcements even when listening to CDs. Availability of some of these features will vary from location to location. Please refer to the comprehensive "Radio Mode" section of the Operation Guide for details.

4. To enter a destination by address, press the right knob when "Destinati[on]" is displayed in the center and in **BOLD** type (this is the default). You may also scroll the display by turning the right knob to select one of the following alternative destination types:

   a. "P.O.I." (Points of Interest) – A wide variety of preprogrammed destinations, including gas stations, ATMs, airports, hotels, restaurants, etc.

   b. "Dest. Memory" (Destination Memory) – Personal destinations you may have previously stored in the Traffic Pro for later recall.

   c. "Last Destinati[ons]" – Traffic Pro keeps the last 50 destinations you've navigated to in memory for convenient recall.

   To choose any of these alternative selections, rotate the right knob until your choice is displayed in the center and in **BOLD** type in the display, then press the right knob to confirm your selection. *Traffic Pro will verbally request the navigation disc if it is not already present in the drive. Eject any music CD and insert the navigation CD.* Traffic Pro will read the CD for a few moments.

   The input process when using any of these alternatives is similar to that used to enter a destination by address, so, once you are familiar with that method, you should be able to easily operate Traffic Pro in any of these alternative modes.

5. To continue entering a destination by address, Traffic Pro now prompts you to select from one of the following:

   a. Town – Traffic Pro defaults to display the name of the town last used for navigation, but you may press the right knob to select it in order to enter a different town name. *Note that if the town name you entered exists in more than one state, Traffic Pro will ask you to select from a list of states and/or counties containing that town name.* After you have entered the town name, Traffic Pro will request the street name or offer to take you to the center of town. If no streets are programmed into the database for the selected town, Traffic Pro will automatically route you to the town center.

   b. Street – If the address you wish to find is within the displayed town name, you may just select "Street" and enter the street name.

   Confirm your address-type selection by rotating the right knob and then pressing it when your selection is displayed in the center and in **BOLD** type.

6. Enter the information requested by rotating the right knob to highlight the desired letter and pressing it to confirm each letter. Spaces are entered by selecting the underscore (_) character and you may correct input errors by using the " ← " key. *To speed your data entry, Traffic Pro will only display allowed letters rather than the entire alphabet once you have begun the entry process, and it will auto-complete the entry once you have narrowed it down to just one option.*

7. Select the "OK" key once you have completed your entry.

8. Traffic Pro will display "Start-Fast R[oute]" by default. Acknowledge this option by pressing the right knob, and Traffic Pro will immediately begin calculating your route. There are additional options available besides "Start Fast R[oute]." You may also select:

   a. House Number – Entering an exact address will narrow your final destination down to a specific block.

   b. Intersection – Allows you to specify an intersection by choosing from a list of crossing street names.

   c. Save Destinati[on] – Allows you to save the destination for future recall. Traffic Pro will ask you for a destination name.

   d. Route Settings – Allows you to choose between Short Route and Fast Route, and also to specify additional restrictions, such as avoiding or using highways, toll roads and ferries. Your selection(s) will be saved as a user preference.

9. If you are not on a street that is contained in Traffic Pro's database (e.g., you're in a parking lot), the unit displays an arrow pointing to your destination and you may begin driving. Once you reach a street contained in the database, turn-by-turn driving directions will start automatically. If you are already on a street contained in the database, Traffic Pro will prompt you to begin driving once the route calculations begin.

   Route calculations are complete when the small CD indicator in the display stops flashing. At this time, you may eject the navigation CD and insert a music CD of your choosing since the navigation data is stored in Traffic Pro's internal memory.

10. Traffic Pro provides ample verbal warning for upcoming turns and offers progressive alerts:

   a. "Prepare to take a [left or right]" is an indication to move to the appropriate lane.

   b. "Please take a [left or right] in 'x' yards" tells you the turn is imminent, and, finally...

   c. "Now take a [left or right]" is announced just before you reach the desired turn.

   Alerts will be provided in a timely fashion, and they will be provided earlier if you are on a limited-access highway to give you time to react safely. An adequately wide vocabulary is available to accurately convey the required information. **Always obey local driving regulations and respect current road and traffic conditions.**

11. You may, at any time while navigating, press the left knob for current instructions and the Estimated Time of Arrival (ETA) to your final destination.

Note: Traffic Pro is an extremely sophisticated navigation computer offering many additional operating modes and user options This Quick-Start Guide is designed to allow you to begin using your Traffic Pro right away, but, for maximum enjoyment and utility, we strongly encourage you to review the Operation Guide in its entirety

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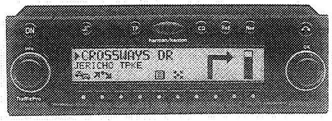


KEY FEATURES

LAST DESTINATION
DESTINATION
P.O.I.

GENERAL

Traffic Pro has 8MB of onboard RAM, allowing navigation data to be loaded into memory for lightning-fast access and route recalculation. Once Traffic Pro has loaded the information from the navigation CD, you can remove it and play your favorite music CD while navigating.

Dot-Matrix Display – Easy to read even in brightly lit locations.

Display Color - Backlighting is reversible and can be activated using the vehicle's dash light switch.

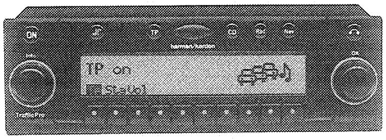
ETC – Easy-to-operate, soft-key menu operation.

Double Security – Security code-protected + detachable front panel.

Language Selectable -- Voice prompts can be delivered in 5 languages.

Aux Input – Allows connection of additional sources such as MP3 players (accessory harness required).

GAL – Speed-sensitive volume (audio output increases proportionately to vehicle speed).



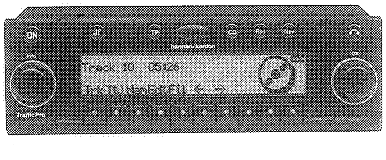
TUNER

Station Search – Stations can be searched in ascending or descending numerical order when in DAS mode.

PTY – When RDBS is available, stations can be selected by type (News, Sports, Rock).

Auto-Store – Presets can be stored at the touch of a button.

Station Memory – 48 Preset stations can be stored.



COMPACT DISC PLAYER

Direct Track Access A specific track can be accessed by selecting the track number (when optional CD changer is connected).

Programmable Disc Title – Compact disc title can be programmed (when optional CD changer is connected).

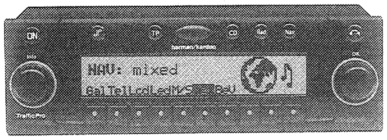
Random Play – Track order can be played randomly.

Audible Search – Allows user to audibly search through a specific track.

Display CD Track Time – Number of tracks and total playing time can be displayed.

CD-Changer Control – A Harman Kardon CD changer can be purchased and controlled from the front panel of Traffic Pro.

NAVIGATION



Easy and Safe – Turn-by-turn voice prompts allow user to keep his or her eyes on the road.

Simultaneous Operation – Allows user to listen to CD or radio while navigating. Music is automatically muted during voice prompts.

Favorite Destination Storage – 50 personal destinations can be stored for repeated use.

Destination Memory – Last 50 destinations are automatically stored and can be easily recalled.

P.O.I. – Point of interest can be accessed via menu operation (includes gas stations, ATMs, hotels and much more).

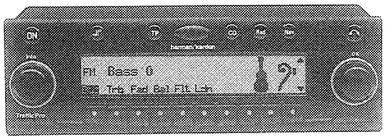
Info-Key – Displays remaining distance, arrival time, destination and vehicle position.

Modes of Route Computation – User can select short/quick route, with/without highways, with/without tolls.

Upgradability – Intelligent software architecture allows for upgrades, when offered, to the operating system and digital maps.

Software Design Efficiency – Innovative navigation software compilation allows all content to be stored on two CD-ROMs, facilitating easy operation.

ADDITIONAL FEATURES



35 x 4-Watt Amplifier – Onboard high-output amplifier delivers optimum system design flexibility.

2 Front, 2 Rear and 1 Subwoofer/Center Line Outputs – Preamp-level outputs allow for easy connection to separate power amplifiers.

Telephone Hands-Free Speaker Input – Allows use of vehicle speakers for hands-free mobile phone operation (optional connector required).

Adjustable System Controls – User can adjust bass, treble, balance, fader and loudness control from tone control menu.

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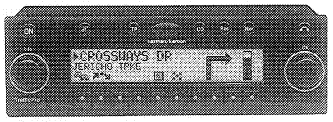

FAQs

Answers to the Questions Most Frequently Asked About Traffic Pro

The questions below have been divided into five categories:
Installation, Operation, CD-ROM, Navigation and General.

INSTALLATION

Please regard the following information only as supplementary to the assistance found in the installation guide.

1. **Which connections are necessary for the navigation system?**
   — GPS antenna (supplied as standard equipment)
   — Speed signal (from the speedometer)
   — Reverse signal

2. **Where can the GPS antenna be positioned?**
   The GPS antenna should be mounted on top of the dashboard in clear view of the windshield.

3. **How long is the connection cable for the GPS antenna?**
   A GPS antenna with a 2.2-yard (2-meter) cable is supplied with the standard equipment.

4. **What installation angle is permitted for Traffic Pro?**
   Maximum 35°

5. **Is it possible to use the normal radio antenna for GPS reception instead of the supplied GPS antenna?**
   No, a special antenna is needed for GPS reception in all cases.

6. **Can a different GPS antenna be used?**
   Combi-antennas (GPS, GSM, radio) are available on the market – note connection plugs.

7. **Can navigation be started immediately after installation?**
After you have connected the device, the vehicle must be placed out in the open so that satellite reception is ensured. With the navigation system switched on and the CD-ROM inserted, wait until "Calibration ride can start" appears in the display (this may take 10–30 minutes). Then, drive the vehicle on digitized roads until the address input mode appears in the display (for example, "distance 328–547 yards [300–500 meters]"). See also Calibration Guide.

TIP: During the calibration run, drive in a town with digitized roads and frequent curves and junctions; this will enable the system to recognize its location and the vehicle properties more quickly

8. **Can the device, after having been installed, be reinstalled without difficulty into a new vehicle?**
Yes. Because the device contains all the necessary components in the DIN housing (except the GPS antenna), removal and reinstallation are extremely easy.

9. **Does the system also function in older vehicles?**
This system will function in most vehicles that provide an electronic speed signal.

OPERATION

1. **How is data inputted?**
You can input data using the right-hand rotary control or by selecting from a list. These input methods enable you to input the required data very quickly.

2. **Are there input aids?**
Yes, a few examples:

As soon as you have entered the first letters of the location, a selection is made in the database. This limits all the possible location names to these letters. You can have all of these indicated in the display (sequentially) at the push of a button.

As soon as the sequence of letters clearly indicates a place name in the database, it is given in the display and you have the opportunity to confirm this by pressing a button.

The destination input "last 50 entered" can be called up if required.

50 Destinations can be stored.

3. **How long does it take to calculate the route?**
   On average, a few seconds.

4. **Does the navigation system impair the operation of the radio or the CD player?**
   No. As soon as you have finished entering the destination and the route has been calculated, you can operate the car radio as usual.

5. **Can you use the navigation system without having to look at the LCD display?**
   Yes. The navigation concept is designed so that the driver is not forced to look at the display. Instructions via the loudspeakers inform the driver in detail about the current route, without unnecessary distraction.

6. **In addition to the audible navigation instructions, are there visual instructions?**
   Yes. However, these instructions (current road, next road, direction arrow) only serve as a backup to the audible instructions.

7. **Can the volume of the navigation announcement, the traffic announcement and the music be controlled separately?**
   Yes. Whenever the respective announcement is being made, you can adjust the volume during the announcement.

8. **Can the navigation system be used with Traffic Program active (TP on) in the background without listening to music?**
   Yes.

9. **What priorities are given to the announcements?**
   The following priorities are given:
   1. Navigation announcements (have priority)
   2. Telephone mute

10. **Can different languages be selected for the navigation announcements?**
    Yes. Currently, German, French, English, Spanish, Italian, Dutch, Swedish or Danish can be chosen.

11. **Can different voices be chosen?**
    Yes, a male or female voice can be selected.

12. **Can house numbers be entered?**
    Yes, provided they are in the database.

CD-ROM – DIGITAL ROAD MAP

1. **What is stored on the CD?**

   Digital road map of the continental U.S., navigation software and system software

2. **Is there a route planner?**

   Yes. Because you can save 50 destinations, you have the option of calling up all destinations in the relevant sequence. In addition, you can enter a stopover ("STOP") or – if possible – direct the route via a freely selectable location ("VIA").

3. **How can I get updated data?**

   An updated CD-ROM is published once each year

4. **Will additional data follow on the CDs?**

   Yes, we will continually update the software and expand the data density for each new CD.

5. **Is the CD compatible with CDs for other navigation systems?**

   No. Each navigation CD contains the operating software for its device only; therefore, the CDs are not interchangeable.

NAVIGATION

1. **Which units help the system to determine the location?**

   — GPS antenna (+ receiver)
   — CD-ROM data
   — Gyroscope (see "Specialist Terms")
   — Speedometer signal

2. **How does the system determine the location?**

   The device compares the GPS data with the data from the speedometer signal/gyroscope and the data on the CD.

3. **How does the system determine the route?**

   The navigation system calculates either a fast or a short route. In addition, the attributes with/without motorway/ferry/toll can be set.

4. **How accurate is navigation using the Traffic Pro navigation system?**

   The instructions are precise according to the requirements and the situation, and the system has been optimally geared to these features. Instructions to turn are always given in good time.

5. **Does the device always know where it is, even if it is switched off?**
   Yes. After the calibration phase, the system always knows where it is, even when switched off.

6. **Do others know where I am?**
   No. The GPS signal is exclusively unidirectional (as are, for example, radio signals).

7. **What is the orientation reliability like in multistory car parks?**
   If you are in a nondigitized multistory car park, the system will only inform you that you are outside the digital road network and will indicate the compass direction or linear distance to the destination. As soon as you are on the road again, and the system has automatically made appropriate adjustments, you can continue following your route as usual. If the multistory car park is known, the instruction "on leaving.." is given.

8. **Does the CD always have to be left in the drive?**
   No. After the system has loaded the necessary data from the CD into the working memory, the CD can be removed from the drive. The system can then be used like a CD radio.

9. **Is there always enough space in the memory?**
   One day's journey (621-1/2 miles [1000 kilometers]) can readily be downloaded into the working memory. The shorter the route, the larger the relative corridor. "Corridor" is the term for the space for detours to the right and left of the route.

10. **What happens if you leave the corridor?**
    An instruction requests the driver to insert the navigation CD, if it is not in the device.

11. **What happens if the driver does not follow a driving recommendation?**
    As soon as an instruction has been ignored, the system immediately calculates a new route.

12. **What happens if you leave the digital road network?**
    The navigation system requests that you follow the compass arrow. During this time, the system always indicates the direction towards the destination.

13. **When are navigation announcements made and how often?**
    The announcements are always made in good time. If you are on a motorway, the system will inform you of the exit earlier than in a town. The driver will always be given the necessary time either to follow the announcement or to make his or her own decision. The announcements come in a number of stages (e.g., "Attention, prepare to..."/"and now ..").

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CD / Radio / GPS Navigation System

14. **What happens if the driver has failed to catch the navigation announcement?**

    The user has the opportunity to have the current announcement repeated as often as required (see "left rotary control" in the Operating Guide).

15. **What happens to the navigation announcements if the radio or CD is playing in the foreground and the volume is adjusted?**

    Whenever an announcement is being made, the volume of the music being played is turned down and the navigation announcement cuts in so that it can be heard clearly.

16. **On which loudspeakers are announcements heard?**

    On all the connected speakers.

17. **What do the navigation announcements sound like, for example?**

    "Please keep to the right."
    "Please keep to the right in 547 yards (500 meters)."
    "Please turn to the right in 328 yards (300 meters)."
    "Please turn left into the next road."
    "Please turn left into the second road."
    "If possible please turn around."
    "Please follow the road for 5/8 of a mile (one kilometer)."
    "Attention, please prepare to turn left."
    "Now turn left."

18. **What announcements does the system make if two turns need to be made in close succession?**

    "Please take first road on the left and then turn right immediately!"
    is one example.

19. **What announcements does the system make at roundabouts?**

    It might say, "In the roundabout, please take the 3rd road on the right"
    and then "Please turn right now."

20. **Does changing tires for summer/winter have any effect?**

    No, because the Traffic Pro Navigation System constantly recalibrates itself.

21. **Can other information also be called up?**

    Yes, the following data can be called up (however, order may differ):
    Name of the current road
    Name of the next road, in a town
    Destination town and road
    Miles still to be covered
    GPS data (for determining the location)
    ETA, route, selected mode, traffic-jam function, stopover

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GENERAL

1. **In the future, will the digital traffic program (Traffic Message Channel) be incorporated?**
   The device is designed for TMC. If the digital traffic program is made available for our navigation system, you can purchase this feature with a new CD (integrated as of CD version 4.0).

2. **Can the system be integrated into the vehicle data-bus system?**
   No.

3. **Does the system test itself?**
   Yes. Traffic Pro automatically performs numerous diagnoses and signals hardware faults, should any occur.

4. **How large is the GPS antenna?**
   L x W x H: 2" x 2" x .8" (52mm x 52mm x 20mm)

5. **Can the device be connected to sound systems?**
   Yes, but only via the loudspeaker outputs.

6. **Can the same route be followed back?**
   Not directly. The device calculates every route anew; however, it is highly likely that the route back will be the same as the original, unless a better route is available due to a more advantageous traffic situation.

SPECIALIST TERMS

GPS: Global Positioning System
GPS is a satellite navigation system developed by the U.S. Department of Defense. GPS is understood to mean the satellite-assisted (definitive) determination of a location on the earth. In total, 24 satellites at an altitude of approximately 12-1/2 miles (20 kilometers) are available, with at least four being necessary to determine the location correctly. The satellites circle the earth once every 12 hours in six different orbits. They are owned by the U.S. Department of Defense (costing approximately 12 thousand million dollars) and were originally used only for military purposes. Based on the time each individual signal needs to reach the receiver, it is possible to determine the distance from the satellite and, thus, through a total of four signals, a location on the earth's surface can be determined. In principle, only three signals are necessary, but the Traffic Pro navigation system also evaluates the fourth.

- Functions on the earth's entire surface
- Typical accuracy approximately 33–55 yards (30–50 meters)
- 24 Satellites at a height of 12-1/2 miles (20 kilometers)

- Selective availability
- 3 Satellites are needed to calculate a 2-dimensional position

Gyroscope

(Greek: gyros = ***circle,*** skopein = ***view, look at***)

This component is used to determine the vehicle's rotational movement. Thanks to the gyroscope, the system is able to ensure reliable location determination, even if the GPS connection is not available (e.g., in a tunnel), based on the movements of the vehicle and simultaneous comparison with the data on the CD-ROM. The system can thus determine, for example, the definitive position on the road or intersection if there is a curve to the right. Indispensable in air and space travel.

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