

This high performance radio set is a combined radio-cassette player with remote control (satellite) on the right of the steering wheel and a jack socket on the front face of the radio-cassette player for connecting a portable Compact Disc player.

Sound is distributed by 2 loud speakers or 2 loud speakers and 2 tweeters (depending on equipment level).

For security reasons this set is coded. In effect, each time +APC contact is cut, a 4 figure code must be entered, which is provided by the manufacturer, in order to operate the radio.

NOTE : *The radio coding can be disarmed by an operation explained later (see page 86 7).*

ATTENTION

When preparing a new vehicle, the "scrambled mode" operation must be cancelled. Make sure that the customer has the code when performing operations on the vehicle

The operational characteristics of this radio-cassette player are :

- A high performance radio tuner with a PLL frequency synthesiser and micro processors enabling numerous data to be processed and stored, and in Autostore in particular, enabling the best station transmitting your FM programme to be automatically selected.
 - 5 wave bands - Medium Wave (PO) - Long Wave (GO) - FM1 - FM2 - FM (Autostore),
 - 5 pre-selected stations for each waveband,
 - electronic search of stations in increasing or decreasing frequency
 - INFO system for traffic information (depending on country),
 - automatic switching from mono to stereo (when reception is not good),
 - 3 sensitivity levels (one automatic and two which can be selected from the front panel),
- A cassette player with an auto-reverse function enabling the tape playing direction to be changed automatically at the end of the tape, or, when the tape is playing, by pressing the "reverse" key
 - "Hard Permalloy" playback head with automatic metal/chrome selection when cassette is inserted
 - "Dolby B" noise reduction key,
 - radio can be heard while tape on fast forward or rewind,
 - frequency can be adjusted while tape playing,
 - direction of play indicator
- 2 audio frequency amplifiers capable of producing an effective output of 2 x 6 watts.
 - electronic volume control,
 - righthand and lefthand speaker balance,
 - continuous treble and bass control,
 - bass accentuation key
- 3 5 mm diameter jack socket for connecting a CD player on the front face of the radio.

For security reasons the radio operates in the following manner when it arrives from the factory :

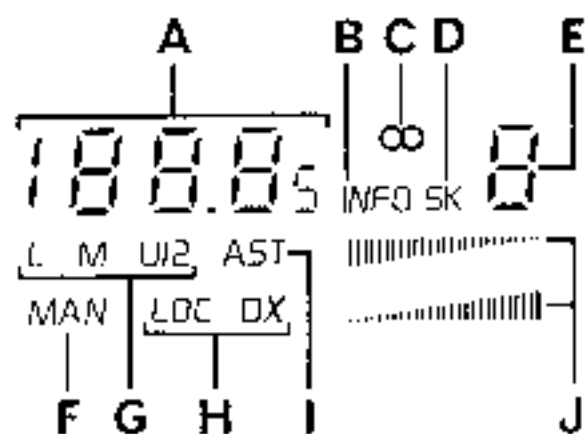
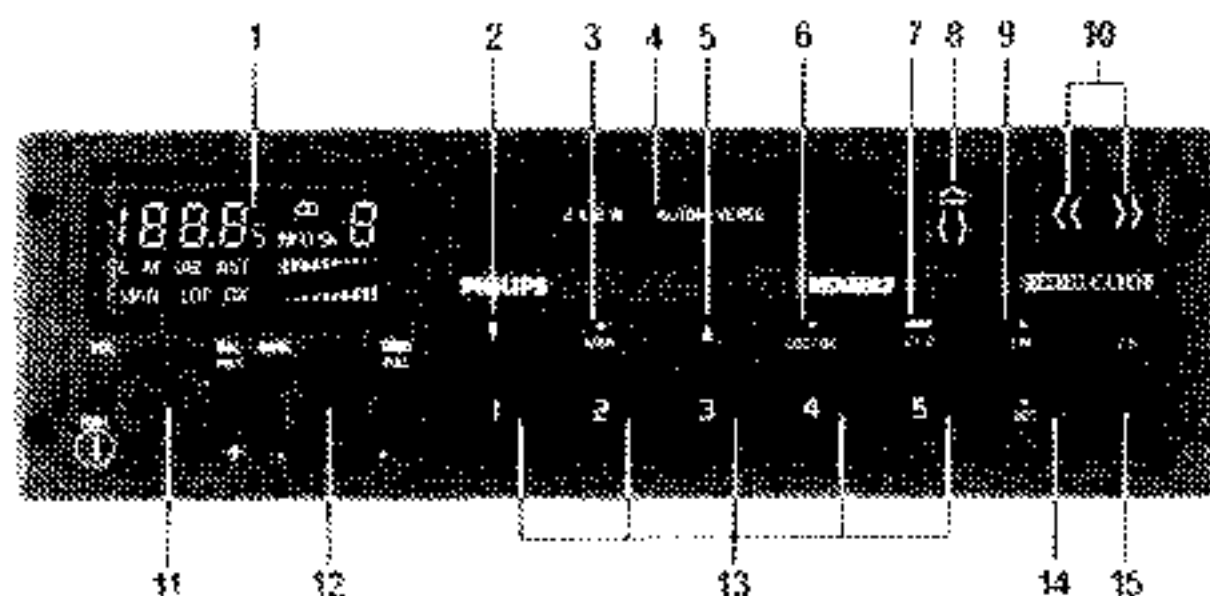
When the radio is switched on bleeps are heard every 2 seconds over the radio or cassette sound for two minutes. The display alternates every second between displaying the radio frequency and the word "Cod".

When the radio frequency is displayed, all functions are operational. After 2 minutes the set is silent and the word "Cod" is permanently displayed.

This operation mode is known as the "scrambled mode"

To cancel this scrambled mode, enter the code when the display shows "Cod" (see page 86 6)

RADIO



1 DISPLAY

- A - Frequency to which the radio is tuned
- B - "INFO" indicator (depending on version).
The symbol illuminates if the "road traffic information function of key 7 is activated.
- C - "Stereo" indicator.
- D - Tell-tale indicating that radio is tuned to a station which can broadcast road traffic information irrespective of position of key 7.
- E - Active pre selected station number (P1 to P5)

- F - Manual station search mode indicator
- G - Wave band indicators : LW (GO), MW (PO), U1 (FM1), U2 (FM2)
- H - Automatic search sensitivity level indicators

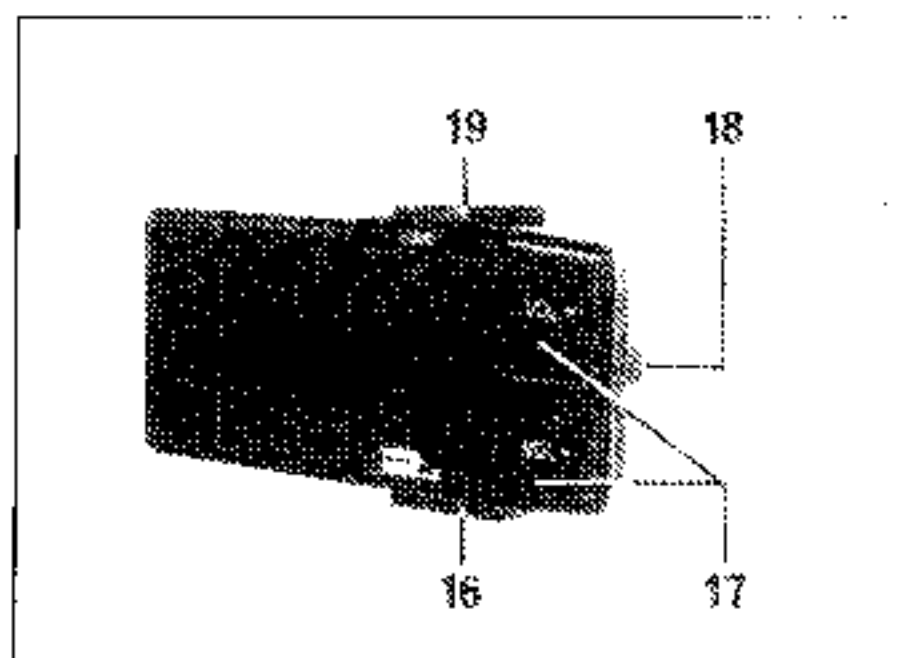
LOC illuminated: normal sensitivity level

DX illuminated: search sensitivity increased to pick up weak stations
- I - Autostore wave band indicator (automatic programming in FM wave band).
- J - Reception level/track level indicator.
 - Radio playing :
 - Poor reception of station displayed.
 - Average reception of station displayed.
 - Good reception of station displayed.
 - Cassette playing :
 - top track playing
 - bottom track playing

- 2 Frequency search in downward direction
- 3 Manual /automatic station search key. Mode changes each time key is pressed. Manual mode selected as default when set is switched on
- 4 Cassette compartment
- 5 Frequency search in upwards direction
- 6 Automatic search sensitivity level switch.
 - LOC : Normal sensitivity level for stopping automatic search.
The electronic search function stops only when it locates stations received at a sufficient level to permit easy listening
 - DX : Increased sensitivity levels for stopping automatic search
The electronic search function stops at all stations received even if sound quality is not the best
- 7 Depending on version.
 - INFO key
Road traffic information function
Press to switch on or off.
Selects stations broadcasting road traffic information (only for certain countries).
 - Waveband selection key U1 (FM1) and U2 (FM2).
- 8 Multifunction key
 - Change of tape direction
 - Cassette ejection.
- 9 Waveband selection key depending on version
 - L (GO), M (PO).
 - U1 (FM1), U2 (FM2), L (GO), M (PO).
- 10 Tape fast forward/rewind keys.
- 11 On/off, volume and balance control
- 12 Treble and bass adjustment control

- 13 Multifunction keys :
 - Brief pressure: pre-selection recall
 - Hold down: (longer than 2 seconds), stores stations except for Autostore.
 - Entering confidential code.
- 14 Autostore (AST) key or automatic programming in FM
 - Brief pressure: selection of autostore waveband (less than 2 seconds).
 - Hold down: starts automatic programming in FM (longer than 2 seconds).
- 15 Jack for connection of a compact disc player (CD)

SATELLITE



- 16
 - Brief pressure: (less than 2 seconds)
Automatic frequency search in upwards direction only
 - Hold down (longer than 2 seconds)
Automatic programming in FM (Autostore).
- 17 Keys (+ / -) for adjusting volume
- 18 Pre-selection tumblewheel (P1 to P5).
- 19 L-M-FM AST key.
Changes waveband each time key is pressed :
FM1 (U1), FM2 (U2), FM Autostore (AST),
GO (L) and PO (M).

The code is a four-figure number between 0000 and 9999

It is shown on the detachable part of the warranty booklet or on the vehicle invoice

This code is programmed during manufacture of the radio set and cannot be altered except by the user.

The user may make his code operational or may cancel it (see page 86-7).

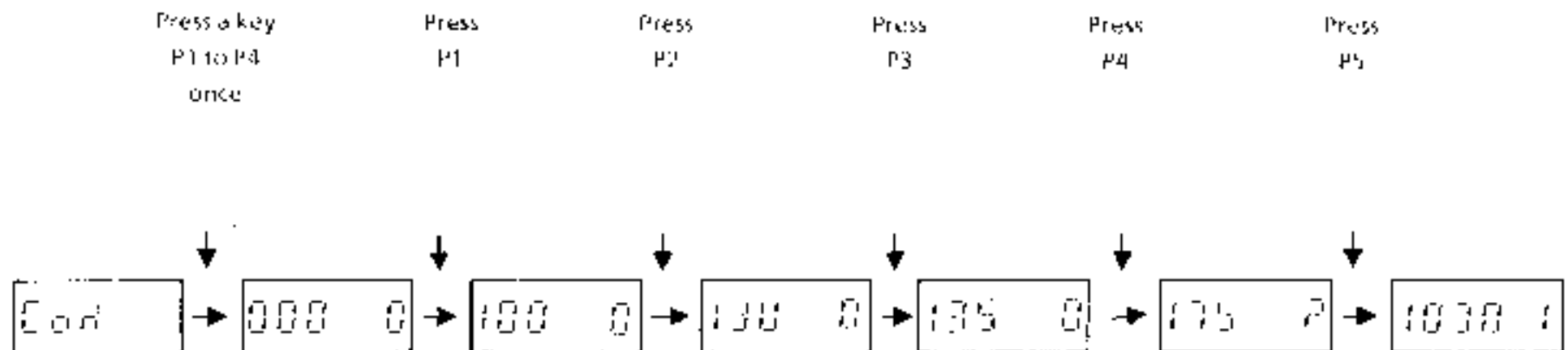
PROCEDURE FOR ENTERING THE CODE

- After power supply has been cut off.
- To cancel the scrambled code.
 - a) Press key **11** to switch on the radio, "Cod" should appear on the display
 - b) Press one of the keys **13** for pre-selection P1 to P4, so that four zeros appear.
 - c) To enter the four figure code :
 - Press key P1 until the first figure of the code appears, then release the key,
 - Repeat the operation with P2 for the 2nd figure, P3 for the 3rd figure and P4 for the 4th figure.
 - Note :** Continued pressure on the keys P1 to P4 runs through the figures from 0 to 9 continually.*
 - d) Press key P5 to validate the code

When the code is validated a bleep will be heard and the frequency corresponding to the pre-selection P1 in the FM1 wave band is displayed

Volume returns at a pre-set average level.

Example : You wish to enter code 1352



IMPORTANT

If the code entered is incorrect, an error bleep is heard and the message "Cod" is displayed.

The code can be re-entered following the above method, but the radio must be left switched on and you must wait for one minute before recommencing the operation.

If this new attempt is unsuccessful, the operation can be repeated with the radio left on, but the waiting period between each operation (for wrong entries) are of increasing length (2, 4, 8, 16, and 32 minutes).

PASSING FROM CODED TO NON-CODED MODE AND FROM NON-CODED TO CODED MODE.

The operation mode of the radio can be changed at any time. To do this, the access code must be entered as follows :

- When the radio is switched off, press key **P5** then, keeping this key depressed, press key **11** (On/Off) until the word "Cod" appears on the display **1A**.
- Release the keys and 4 zeros will appear on the display.
- Enter the code after operations c) and d) described overleaf.

When the code is validated, the radio indicates what mode it is in

- **Code deactivated :**
2 "BLEEPS" are heard before the last frequency listened to appears on the display.
- **Code activated :**
1 "BLEEP" is heard before the last frequency listened to is heard

NOTE : If the general power supply has been interrupted, when the radio is switched on, the display indicates the state in which the radio is set.

If the radio is coded, "Cod" is briefly displayed before the last frequency listened to appears.

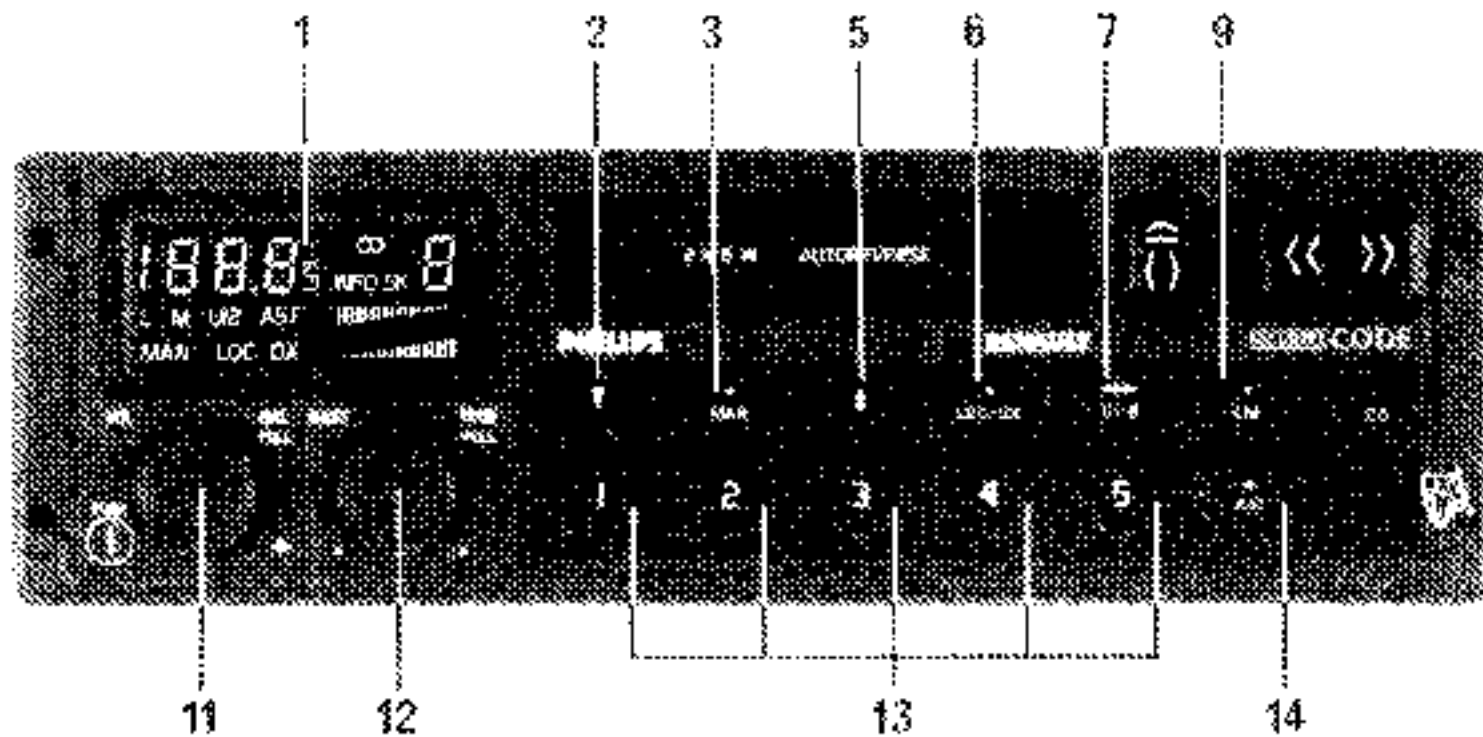
If the radio is not coded, the frequency is displayed immediately

MESSAGES DISPLAYED

When the radio is switched on , several messages may be displayed :

<div style="border: 1px solid black; padding: 5px; text-align: center;"> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px 5px;">Cod</div> <div style="font-size: 1.5em;">/</div> <div style="border: 1px solid black; padding: 2px 5px;">1030</div> <div style="font-size: 1.5em;">/</div> <div style="border: 1px solid black; padding: 2px 5px;">Cod</div> <div style="font-size: 1.5em;">/</div> </div> </div>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; padding: 2px 5px;">Cod</div> <div style="font-size: 2em; margin: 0 10px;">→</div> <div style="border: 1px solid black; padding: 2px 5px;">1030</div> </div> </div>	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <div style="border: 1px solid black; padding: 2px 5px;">1030</div> </div>
<p>Scrambled mode</p> <p>The scrambled mode only operates if no code has been entered.</p> <p>The radio operates in scrambled mode for two minutes then goes quiet.</p> <p>When the code is entered (see pages 86-6) the scrambled mode is cancelled.</p>	<p>Coded mode</p> <p>The user may operate the radio as normal (power supply cut) when the radio is switched on again. The radio briefly displays "Cod" then returns to the last frequency listened to</p> <p>In the case of general power supply interruption (battery disconnected) the code must be re-entered (see page 86-6) .</p>	<p>Non-coded mode</p> <p>The user may cut the power supply and switch the radio on again, the radio returns to the last frequency listened to.</p> <p>Also, in the case of general power supply interruption (battery disconnected) the radio returns to the frequency stored under pre-set P1 for the U1 (FM1) wave band, without re-entering the code</p>
	<p>See above to change from coded to non-coded mode.</p>	<p>See above to change from coded to non coded mode</p>

RADIO



ON/OFF

Press key 11

When the radio is switched on, it returns to the last station listened to (except when the power supply has been cut off)

ADJUSTING THE SOUND LEVEL

Volume : Turn control 11 or use keys 17 on the satellite

Balance : Pull and turn control 11.
Push back after adjustment

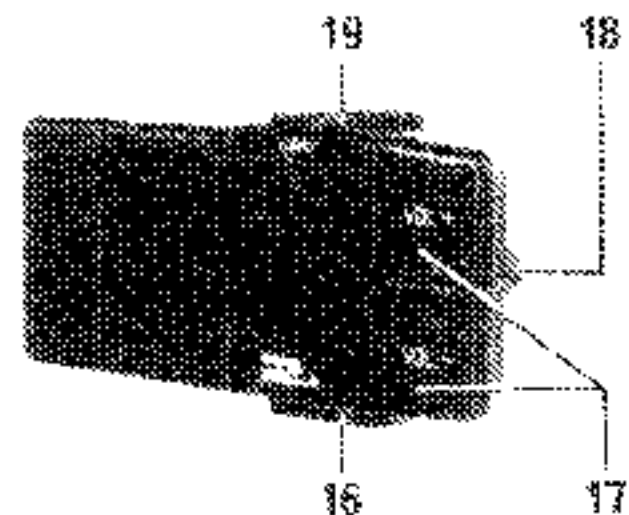
Bass: Turn control 12.

Treble: Pull and turn control 12.
Push back after adjustment

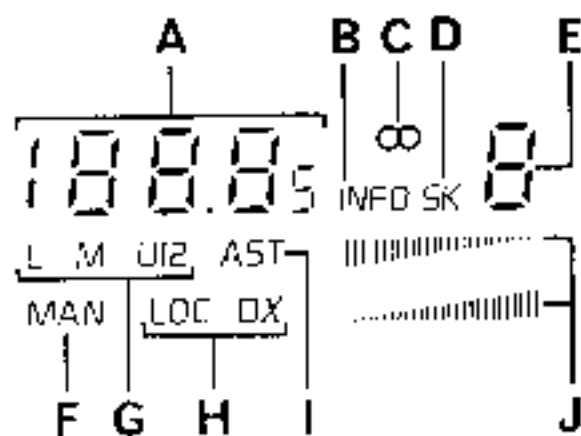
MANUAL FREQUENCY SEARCH

The manual mode is active whenever the system is switched on (tell tale 1F illuminated on display)

Select the waveband . Keys 7, 9 or 14 on radio or 19 on the satellite



- Brief pressure on key 2 or key 5 : frequency changes one step (50 kHz in FM, 1 kHz in MW, 1 kHz in LW).
- Continuous pressure on key 2 or key 5 : rapid run through of frequencies as long as the key is depressed



AUTOMATIC FREQUENCY SEARCH

Press key 3 to select automatic frequency search mode (tell-tale 1F extinguished)

Select the waveband: key 7, 9 or 14 on the radio or 19 on the satellite.

- Brief pressure on key 2 or key 5 : upwards or downwards search
- Brief pressure on key 16 on the satellite : upwards search only

NOTE : In areas with weak/poor reception there is a risk that the radio will not find a station to which it is tuned.

In this case, press key 6 to increase the level of sensitivity: warning light DX 1H will appear on the display.

An automatic search may then be started.

PRESELECTIONS

• Programming :

Select the waveband : key 7, 9 or 14 on the radio or 19 on the satellite.

Search manually or automatically for a station

Press the pre-selection key 13 required. The sound will switch off. Maintain pressure on the key until a bleep is heard and sound is heard again. The frequency displayed is programmed.

Reminder :

Briefly press the key 13 selected or turning tumble wheel 18 having selected wave band.

AUTOMATIC PROGRAMMING IN FM (Autostore)

The automatic storing (Autostore) extends the automatic search function

This consists of initiating, in a single operation, the selection and storing of the five strongest FM stations in the region without having to know their wave lengths

The automatic programming time and number of stations found depends on geographical location

The starting frequency for automatic programming is that on the display 1

If fewer than 5 stations are memorised, the pre-selection slots which have not been filled will be allocated the value 000

Procedure:

- Press key 14 on the radio or key 16 on the satellite for more than 2 seconds ; the AST symbol flashes.

Wait for the final bleep to signal the end of automatic programming, sound to be heard and the first pre-selection station to be displayed

USING THE RADIO IN THE "ROAD TRAFFIC INFO" MODE* (according to "ARI" standard)

• For countries which do not have a road traffic information system :

If your radio has the INFO key 7, it is important to check that the tell-tale 1B is not illuminated.

Incorrect use in the INFO mode is shown by :

- you will be unable to hear the station selected;
- the automatic search function is triggered and is interrupted by bleeps at 30 second intervals.

In this case de-activate the INFO mode by maintaining pressure on key 7.

• For countries with a road traffic information system : (according to "ARI" standard)

If your radio is tuned to a station broadcasting traffic information, the SK tell-tale 1D will light up when you are in an area covered by this station, whether your radio is in the normal mode or the INFO mode (tell-tale 1B illuminated or extinguished).

Operating the INFO mode on the radio :

Activate the INFO mode by continuous pressure on key 7 (INFO tell tale 1B illuminated) and one of two things will occur :

- If the radio is already tuned to a traffic information station, SK tell tale 1D will illuminate and the programme will be heard ;
- If the radio is not tuned to a traffic information station, the radio will be silent and after 5 seconds the radio will search automatically, which is indicated by a bleep.

Programming :

The INFO stations are programmed in the same way conventional non-INFO stations, in memories P1 to P5 in the FM wave band, by substituting the stations pre-selected in the normal FM mode

Changing "INFO" stations

- Automatic search; 2 cases:
 - a) the current INFO station is not satisfactory, start the automatic search by pressing key 5, the radio automatically tunes to the next INFO station in the region.
 - b) the signal received becomes weak and after 5 seconds a local station broadcasting on a stronger wave length will automatically be searched for, accompanied by a bleep. If no station is found, the search will be continued indefinitely and bleeps will still be heard. De-activate the INFO mode at this point by pressing key 7.
- Manual search:

If you know the frequency of an INFO station (for example having seen the frequency on one of the signs along the motorway) you can go directly to it; please see the paragraph entitled "Manual Search of Frequencies" on the Radio Operation page. Once the station has been selected, activate the INFO mode by maintaining pressure on key 7 .

Message broadcasting during cassette or CD playback. (INFO mode active, tell-tale 1B illuminated)

If you wish to hear traffic messages whilst listening to a cassette or CD, select the INFO station frequency beforehand.

The message will then be broadcast instead of the cassette or CD sound (at a minimal sound level). At the end of the message, cassette or CD playback resumes.

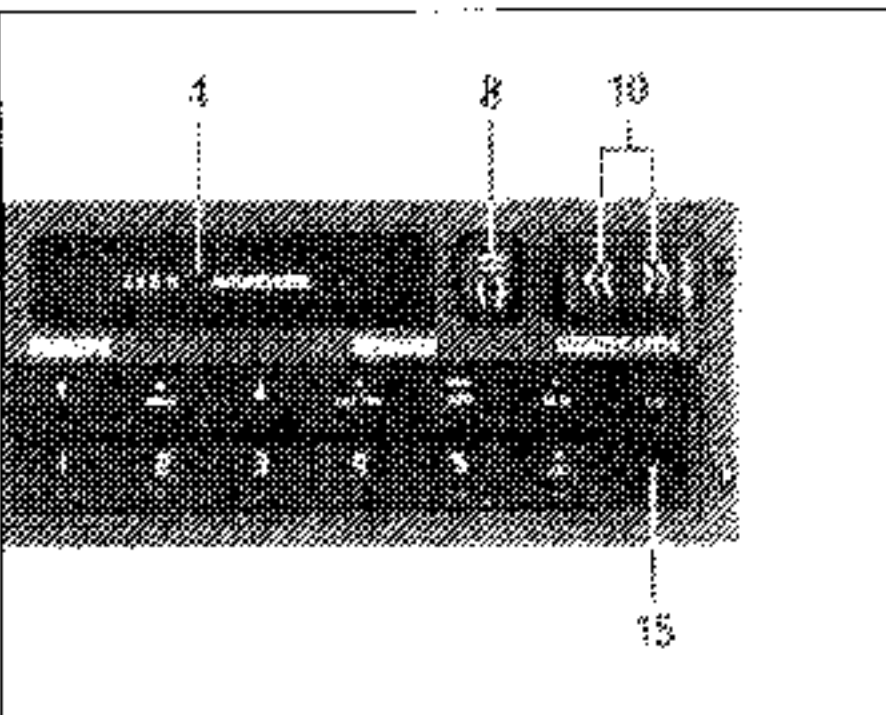
De-activating the INFO mode.

To leave the INFO mode, press key 7 (INFO tell-tale 1B extinguishes).

Note: pressing key 14 or one of the pre selection keys 13 de-activates the INFO mode.

* The radio is fitted with INFO key 7 depending on country or version.

CASSETTE PLAYER



Insert a cassette into compartment **4**, making sure that the tape head is on the right hand side.

the radio will stop playing; the frequency will continue to be displayed and it is still possible to change the radio frequency

- the cassette will play in the direction indicated by one of the tell-tales **11**.

Changing the direction of play

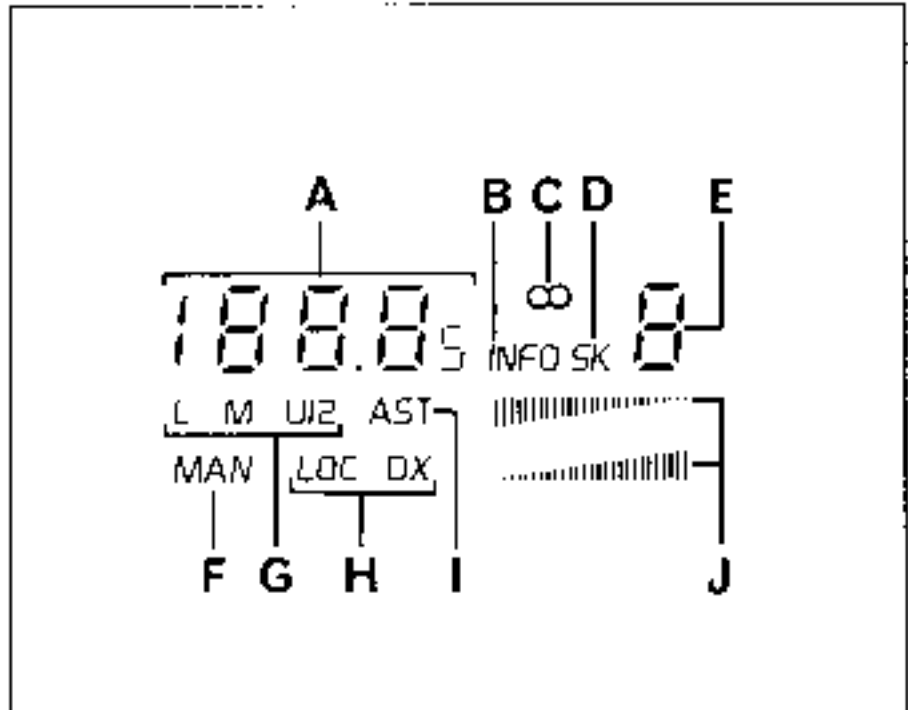
Lightly press key **8**, the direction of play is indicated by tell-tales **11**.

Fast winding

Press one of the keys **10** according to which direction you wish the cassette to play :

- Top track : tell-tale illuminated
 - » fast forward
 - « rewind
- Bottom track : tell-tale illuminated
 - » rewind
 - « fast forward

When key **10** is depressed, the radio will be heard again until the end of the fast forward operation



Stopping the fast forward or rewind operation:

Press key **10** again (it will not be possible to press the other key)

To stop the cassette playing:

Press in key **8** fully and the cassette will stop playing, the cassette will be ejected and the radio programme being broadcast before the cassette was inserted will be heard.

NOTE : The playback head is automatically disengaged when the power supply is cut or a CD is inserted.

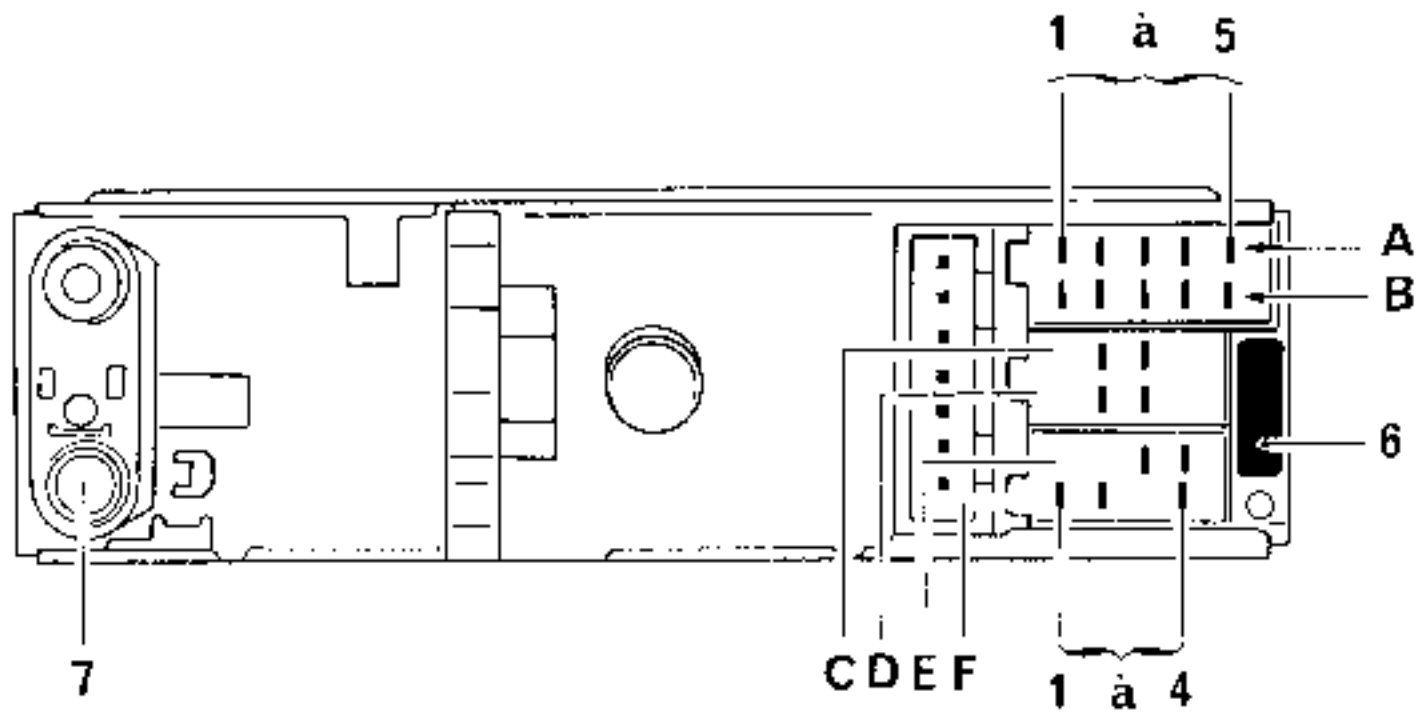
USING THE CD SOCKET

A portable CD player may be connected to the radio.

When the jack plug is inserted in the socket **15**, the radio or cassette will automatically switch off and the play back head will be disengaged.

It is, however, still possible to adjust the radio frequencies and listen to radio traffic information bulletins on sets provided with the INFO system (see "Using the Radio in the INFO mode").

The volume and tuning levels may be adjusted by keys **17** on the satellite or key **11** on the radio.



95912

A/B Satellite connection

- A1 Not used
- A2 Earth screen cable
- A3 } to satellite
- A4 }
- A5 }
- B1 Not used
- B2 Not used
- B3 } to satellite
- B4 }
- B5 }

C/D Speaker connection

- C2 + front right hand
- C3 + front left hand
- D2 - front right hand
- D3 - front left hand

E/F Feed connection

- E3 Electric aerial
- E4 + accessories
- F1 + lights
- F2 + permanent
- F4 Earth
- 6 3 A fuse
- 7 Aerial socket

TUNER

- Wave bands MW 531 to 1 611 kHz.
 LW 144 to 288 kHz.
 FM 87,5 to 108 MHz.
 ASF 87,5 to 108 MHz
- Intermediate frequencies 10,7 MHz in MW - LW and FM
- FM sensitivity 6 μ V (for S/B 26 dB to 94 MHz).
 Automatic search with 3 levels of sensitivity.
- I.A.C. System Interference suppression in FM.
- S.D.S. System Automatic switch over to mono when the signal received by the aerial weakens
- S.D.R. System Treble frequency cut off when FM field weak.
- M.D.S. / M.D.R. System Automatic switching to SDS and SDR circuits when multi-track distortion occurs.

"AUTO-REVERSE" CASSETTE PLAYER

- Playback head "Hard PERMALLOY"
- Tape speed 4 /6 cm/s.
- Wow and flutter 0.35 % WRMS
- Signal / noise ratio > 43 dB.
- Stereo separation > 24 dB

AUDIO FREQUENCY AMPLIFIER

- Output (4 Ω : 14,4 V) 2 x 6 W \pm 1 dB for D \leq 10 %
- Frequency response 30 Hz to 15 kHz
- Bass \pm 10 dB to 100 Hz
- Treble \pm 10 dB to 10 kHz
- "Loudness" Correction + 4 dB to 100 kHz.

CD INPUT

- Sensitivity 125 mV with maximum power, 10%.
- Admittance \leq 1,5 V
- Frequency response 30 Hz to 15 kHz.

