This unit is a radio-cassette player (or audio unit) with:

- a remote control (satellite) located on the right hand side of the steering wheel, which has the same functions as the main controls on the audio radio which is also used for entering the confidential code (see below),

· a remote display unit located in the dashboard.

It is also designed to operate a CD player in the vehicle luggage compartment.

Sound is distributed in the vehicle by speakers which are located for optimum sound quality.

For security reasons, each radio is coded.
Each time ı before ignition feed is cut, a code must be entered (four figures) which is supplied by the manufacturer to allow the system to operate.

IMPORTANT: when preparing a new vehicle, the scrambled mode operation must be cancelled (see page **86-3**). Before any operation on the vehicle, check that the customer has the confidential code.

OPERATIONAL SPECIFICATIONS

- A high performance radio tuner, with PLL frequency synthesiser and microprocessors, allowing processing and storing of many types of information, in particular, in **Autostore**, automatic selection of the best stations broadcasting your **FM** programmes:
    - five wave bands L (GO) - M (PO) - U1 (FM1) - U2 (FM2) - U AST (Autostore on FM),
    - **AST (Autostore)** : automatic storing of the six best received stations on FM,
    - six preselections per wave band,
    - manual or automatic electronic search for stations in increasing or decreasing frequencies,
    - **automatic mono / stereo switching,**
    - two levels of stop sensitivity for electronic searching may be selected from the front panel,
    - for FM, decoding of the RDS sub-carrier :
        - automatic monitoring of preset stations on the same network,
        - **"clear"** display of the programme name,
        - selection of a particular type of programme (classical music, news, sport, ...),
        - **"Traffic information"** function,
        - broadcast of urgent messages.

- A cassette reader with **"autoreverse"** system allowing automatic tape direction reversal at the end of the tape:
    - **"Hard Permalloy"** tape reading head with automatic Chrome / Ferrous switching when the cassette is inserted,
    - track search in fast forward and rewind (from the satellite only),
    - **Dolby B button** ÷ noise reduction,
    - tape head withdrawn when the cassette is stopped,
    - radio may be heard during fast winding.

- Four low frequency amplifiers, each delivering a power of 25 Watts :
    - electronic adjustment of volume, balance and fader,
    - left - right speaker balance,
    - front - rear speaker balance,
    - **"Loudness"** key for sound relief,
    - separate control of bass and treble.

- A remote liquid crystal display showing the time, external temperature and radio / cassette / CD functions.

- A CD player reading 12 cm discs :
    - sequential access to each track on the disc (from the satellite only),
    - fast forward / reverse within each track with accelerated playback,
    - **"random"** playback mode.
    - **"scanning"** of the current disc (listen to the first 10 seconds of each track),

PREPARATION OF RADIOS ON NEW VEHICLES

For security reasons, when the radio leaves the factory, it will operate in the following way.

When the radio is turned on, beeps will be heard every **3 seconds** over the radio, cassette or CD sound, for **2 minutes**.

The display alternates every second between displaying the message which shows the active mode status (radio, cassette or CD) and the message "CODE".
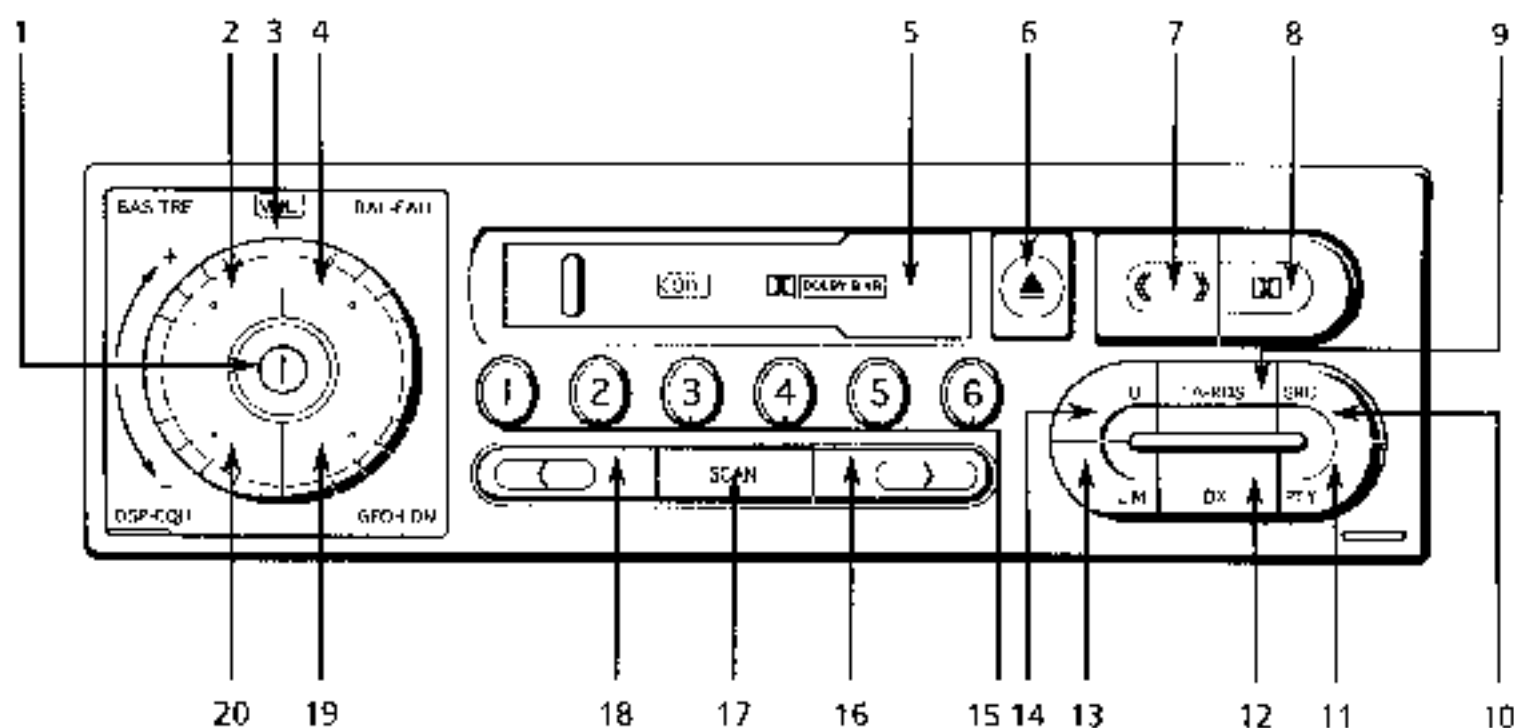
While the active mode message is displayed all functions will be operational.

After **2 minutes**, the radio will be silent and the display will permanently show "CODE".

This mode of operation is called "scrambled mode".

To cancel the scrambled mode, enter the code when the radio displays "CODE" (see page **86-11**).

AUDIO UNIT

12129S

1 Radio, cassette, CD player, satellite and remote display On/Off button.

2 Bass and treble adjustment mode selection button; adjustments are then made using control 3 on the panel or buttons 23 on the satellite.

3 + /- control for making various adjustments; "**step by step**" or more quickly if the control is held down
   - Turn the control to the right to:
     - increase the volume,
     - adjust right / left balance to the right,
     - adjust front / rear balance (Fader) to the front,
     - increase the levels of bass and treble.

   - Turn the control to the left to:
     - decrease the volume,
     - adjust right / left balance to the left,
     - adjust front / rear balance (Fader) to the rear,
     - decrease the levels of bass and treble.

   - Turn the control to one side or the other when the corresponding mode is selected:
     1 -to show the sequence of :

     - the list of the types of programme offered by the PTY system,
     - the various listening positions depending on the occupants of the vehicle,
     - the different "**ambience**" styles offered,
     - the different pre-programmed graphic equaliser modes.

     2 - to make a choice.

4 Left/right or front/rear (fader) balance adjustment mode selection button ; adjustments are then made using control **3** on the panel or buttons **23** on the satellite.

5 Cassette reader compartment.

6 Cassette ejection button.

7 Multifunction button:

- Reverses tape direction while the tape is playing - brief press (less than **2 seconds**).

- A long press activates the automatic volume control (AVC) depending on the vehicle speed; a pre-set mode can be selected using one of the first three preselection buttons **15**.

8 Button for turning dynamic noise reduction function on and off when the cassette reader is playing (**Dolby B**).

9 Multifunction button:

- Cancellation / activation of RDS mode which automatically monitors stations, by pressing and holding the button (more than **2 seconds**).

- Selection of "**Traffic information**" mode by briefly pressing the button. Selects stations broadcasting traffic information.

10 Active source selection button : radio/cassette reader/**CD**/radio/...

11 Selection button for PTY mode which allows selection of a particular type of programme (news, classical music, sport, ...) a list of which may be consulted using control **3** on the front panel or buttons **23** on the satellite.

12 Automatic search stop sensitivity selection button:

- **LOC** : Normal search stop sensitivity. The electronic search will only stop on stations received with a sufficient clarity to allow comfortable listening.

- **DX** : Increased search stop sensitivity. The electronic search will stop at all stations received, even if clarity is not optimal.

13 Wave band selection button - **AM** : GO (L) or PO (M).

14 Wave band selection button - **FM** : U1 (FM1), U2 (FM2) or AST (Autoprogramming in FM).
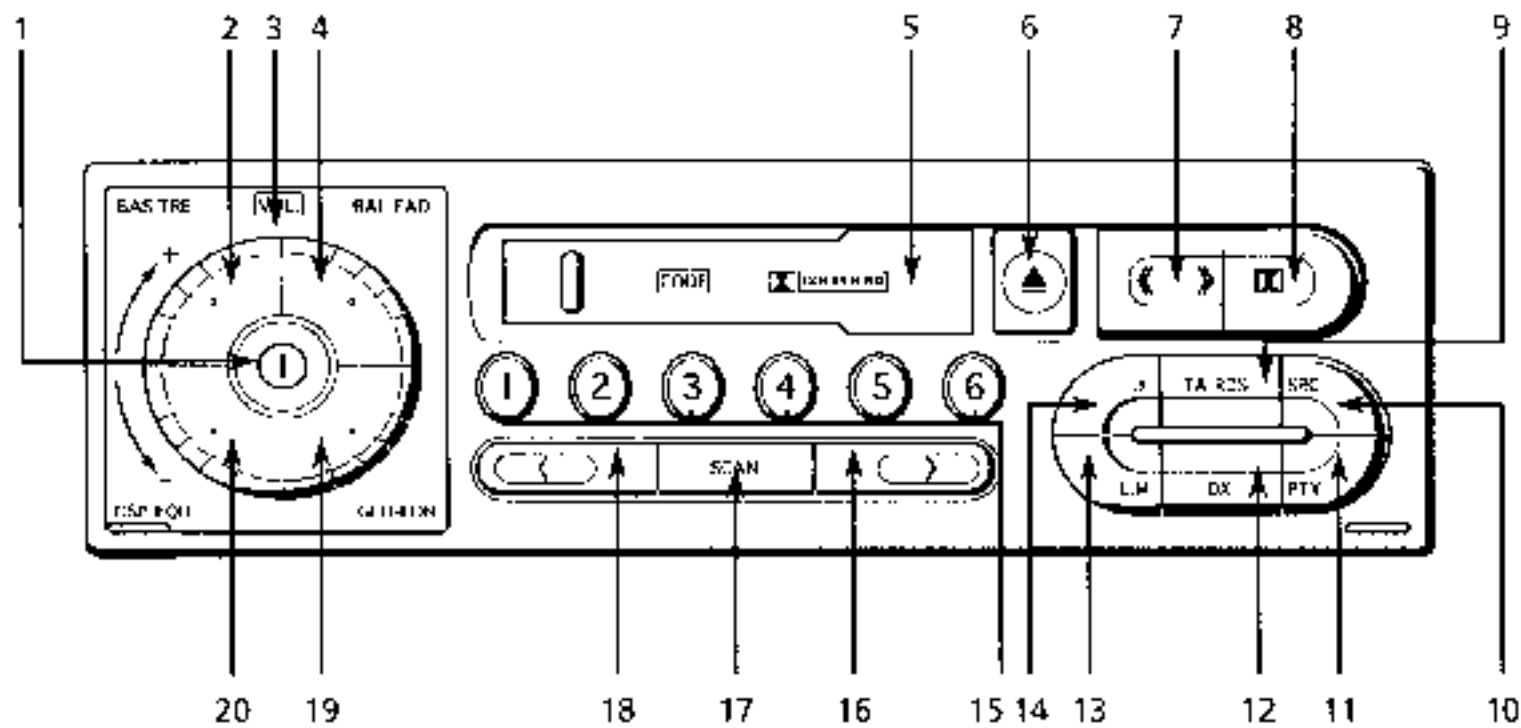
12129S

15   Multifunction buttons:

- Radio mode:
  - Recall of radio station preselections (**15-1** to **15-6**) by briefly pressing the button (less than **2 seconds**).
  - Memorising radio stations by continued pressure (longer than **2 seconds**).

- CD mode:
  - Selection of one of the six discs in the player by brief pressure on the corresponding button (**15-1** to **15-6**).

- Automatic volume control mode (AVC) :
  - When the automatic volume control mode depending on the vehicle speed is active, one of the three pre-set modes is selected by pressing one of the first three preselection buttons (**15-1** to **15-3**).
  - The automatic volume control mode depending on the vehicle speed is cancelled by pressing the fourth preselection button (**15-4**).

16   Multifunction button:

- Radio mode:
  Manual search for a station in increasing frequency.

- Cassette mode:
  Fast winding / stop winding (brief press).

- CD mode:
  Fast forward with accelerated playback within a track on the current disc.

17   Multifunction button:

- Radio mode:
  Starts (or stops) "scanning" of preselected stations in the active FM wave band.

- CD mode:
  - A brief press starts (or stops) **"scanning"** of the start of each of the tracks on the current disc.
  - A long press starts (or stops) **"random"** track playback.

18   Multifunction button:

- Radio mode:
  Manual search for a station in decreasing frequency.

- Cassette mode:
  Fast rewinding / stop rewinding (brief press).

- CD mode:
  Fast backwards playback with accelerated playback within a track on the current disc.

19   Multifunction button:

- Operation of **"selection of vehicle occupant listening position "** (GEO) ; the selection is then made using control **3** on the front panel or buttons **23** on the satellite.

- When the mode is active, pressing button **19** again selects the **Loudness** function. This is then activated (or deactivated, depending on its previous state) by control **3** on the front panel or buttons **23** on the satellite.

20   Multifunction button:

- Activates the **ambience style selection mode (DSP)** ; the selection is then made using control **3** on the front panel or buttons **23** on the satellite.

- Pressing button **20** again activates the **preprogrammed equaliser settings selection mode (EQU)** ; the selection is then made using control **3** on the front panel or buttons **23** on the satellite.

DISPLAY
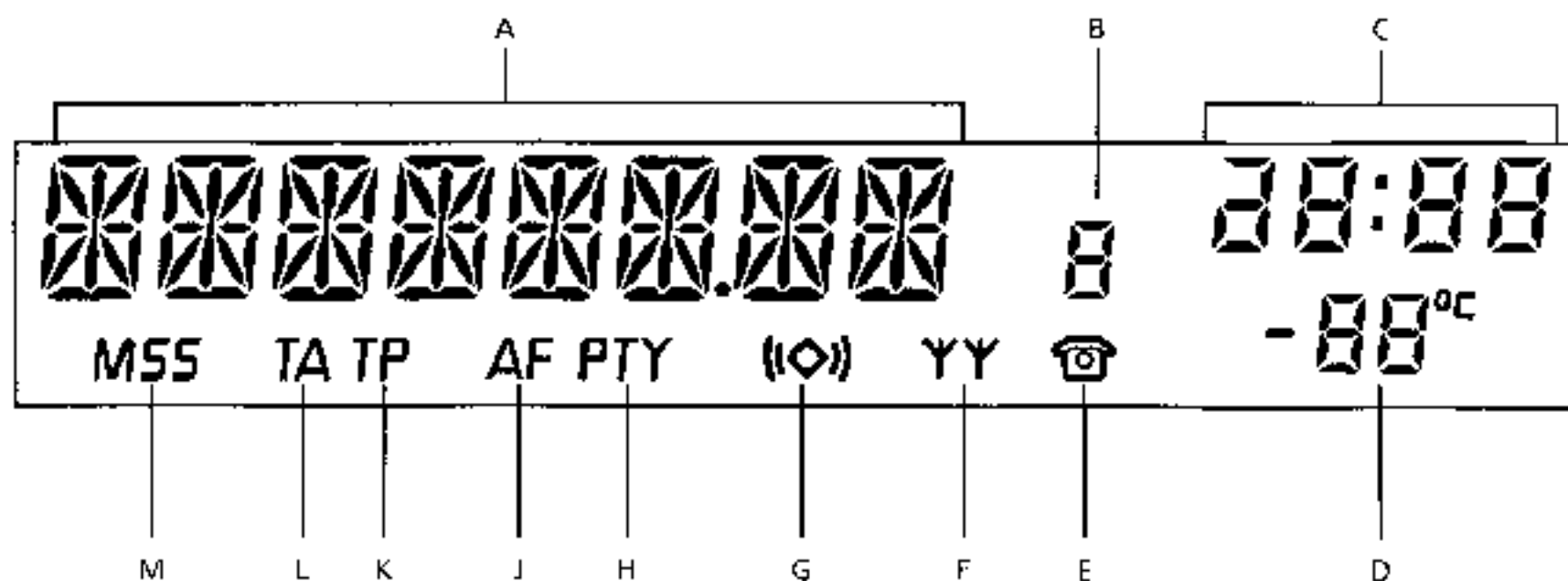
A   Various messages : the display gives a permanent indication of the active mode (radio, cassette, CD player, audio adjustments, security code, ...).
NOTE : When the ignition is turned on, if the radio set is not on, the date is displayed at **A**.
To adjust the date, see the following page.

B   Active preselection (1 to 6).

C   Clock display. To set the clock, see the following page.
NOTE : on certain vehicles, the clock may be cancelled. To do this, press and hold down the two adjustment buttons, **together**, for more than **2 seconds**.

D   External temperature display.

E

F   Warning lights for use with a car phone (GSM).
For more information, refer to the specific documentation.

G

H   Warning light showing that the programme type selection mode (PTY) has been activated by button 11.

J   Indicator for automatic station monitoring mode. This shows that button 9 has been pressed (and held down).

K   Indicator showing that a station is liable to broadcast road traffic information (Traffic Information). This appears, regardless of the status (active or inactive) of the "Traffic information" mode.

L   "Traffic information" mode operation indicator. This shows that button 9 has been pressed (briefly).

M   Not used.

Adjusting the time and the date

This is done using the two buttons in the lower right hand corner of the display's plastic surround.

- Pressing and holding the left hand button activates the adjustment mode (resetting).

- The selection of the information to be modified (hours, minutes, day, month or year) is obtained by brief presses on the left hand button. This selects in succession, hours, minutes, day, month then year. The selected information flashes on the display.

- Modification of a value, while it is flashing, is carried out using the right hand button; either by successive presses to give a "step by step" change to the value, or by pressing and holding the button to change the value quickly.

- Validation of a value is carried out when another value is selected to be modified; by a brief press on the left hand button.

- Validation of the complete set of values is made by a long press on the left hand button.

SATELLITE (remote control unit)
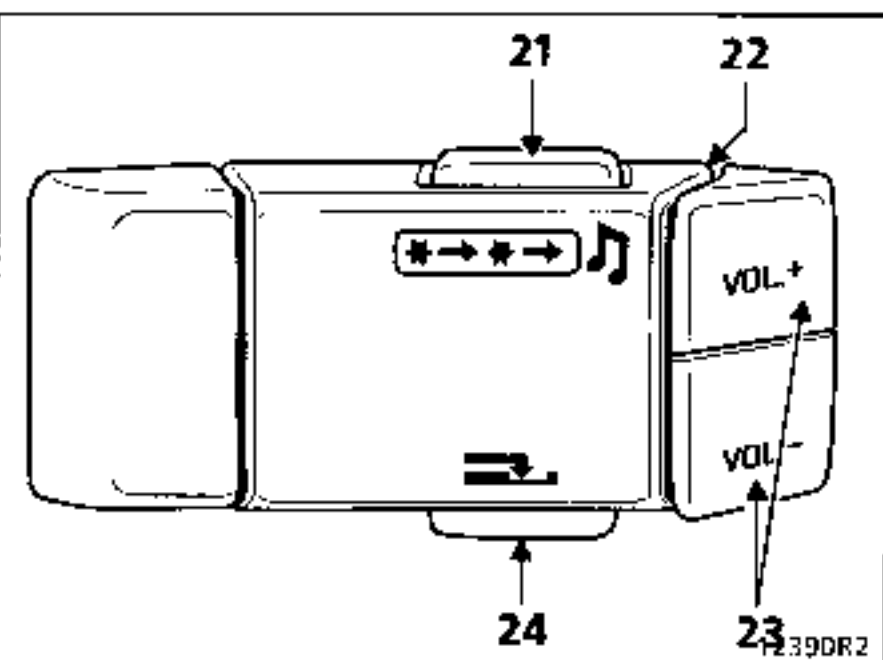
21 Change wavelength or source each time the button is pressed according to the following sequence:

GO (L) / PO (M)

CD player

FM1 (U1) / FM2 (U2)

Cassette reader

Autoprogramming in FM (AST)
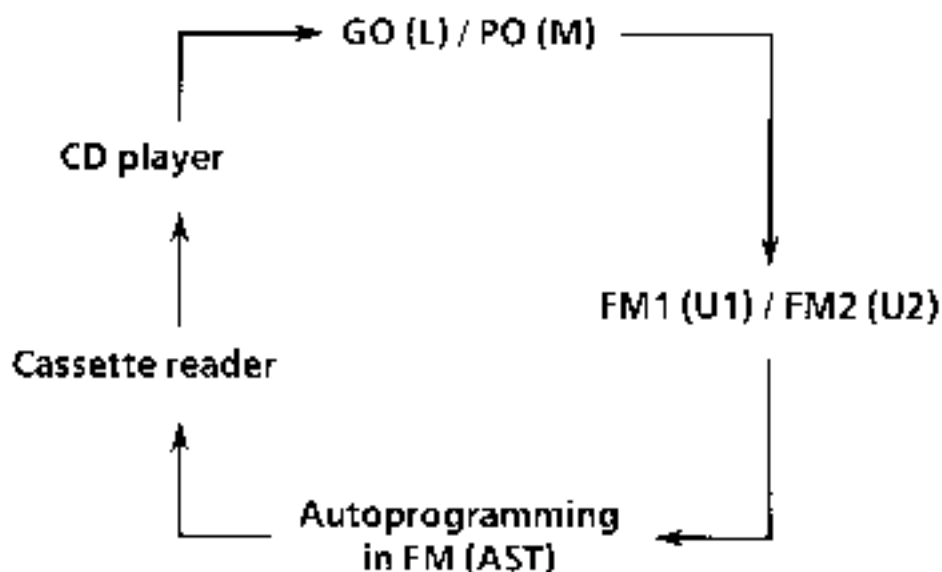
22 Tumblewheel

- **Radio mode**
  Change the preselection in the active wave band (**1 to 6**).
  NOTE : in the case of grouped wave bands (L and M or **FM1** and **FM2**), the six preselections from one are shown, then the six preselections from the other.

- **Cassette mode**
  Forwards the cassette to the next track or previous track and starts playback at the start of that track.

- **CD mode**
  Selection of a track on the CD being played with playback beginning again at the start of the chosen track.

- **Mode for entering the confidential code**
  Entering the four code figures.

23 **+ / - command to :**

- Adjust:
  - the volume,
  - right / left balance,
  - front / rear balance (**fader**),
  - bass,
  - treble.

- Run through:
  - the list of programme types offered by the PTY system,
  - the various listening positions depending on the vehicle occupants (**GEO**),
  - the different **ambience** styles offered (**DSP**),
  - the different preprogrammed equaliser modes (**EQU**).

- Cut/restore sound by simultaneously pressing the two buttons ("**MUTE**" function).

  NOTE : during cassette or CD playback, the cassette or CD player operation is suspended (pause).

24 **Mode radio**

- **Brief press**: starts automatic search for a station in increasing frequency

- **Long press**: starts automatic programming for FM or **Autostore (AST)**.

Cassette mode

- **Brief press**: reverses the tape direction.

- **Long press**: starts automatic programming for FM (**AST**), as long as the set was tuned to an FM station, before the source was changed.

CD mode

- **Brief press** : selects one of the CDs in the cassette in the CD player.

- **Long press**: starts automatic programming for FM (**AST**), as long as the set was tuned to an FM station, before the source was changed.

Mode for entering the confidential code

- **Brief press**: validation of the various code figures.

- **Long press**: validation of the code.

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

It is shown on the detachable part of the **PV des Mines** stuck on the warranty booklet or, for export, on the vehicle invoice.

Programmed in the unit at the time of manufacture, this code may not be modified by the user.

PROCEDURE FOR ENTERING THE CODE

- **After cutting + before ignition feed.**

- **To cancel scrambled mode operation**

  a) Press button **1** to turn the set on, the message "CODE" is shown briefly on the display (at the end of 2 minutes operation in scrambled mode) before being replaced by "0000", where the first "0" is flashing.

  b) To enter the four figures of the code:
     - adjust the first figure of the code which is flashing using the satellite tumblewheel **22**,
     - briefly press button **24** on the satellite to validate the figure and allow the next figure to flash,
     - repeat these two operations until all four code figures are displayed.

 c) Press and hold button **24** on the satellite to validate the code.

The set will beep when the code has been validated and a frequency corresponding to the last heard station will be displayed.

The volume will return to an average preset level. The settings for tonality and balance will return to their "average" settings.

Example :
A flashing figure is shown between inverted commas ("0").
To enter code **1352** :
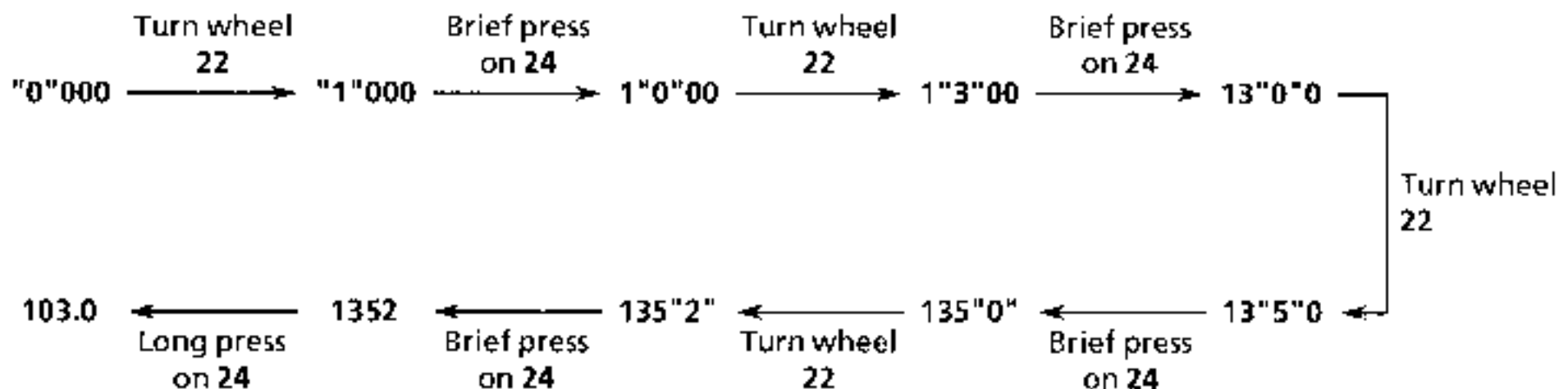
IMPORTANT :

If the code entered is incorrect, the set will beep and the message "CODE" will be displayed.
The code may only be entered using the method described above when the display shows four zeros once more. For this, **the set must be left turned on for one minute.**
If the second attempt is unsuccessful, new attempts may be made, keeping the set turned on, but the delays between each operation (if a mistake is made) will increase: **2, 4, 8, 16** and **32** minutes.

ON / OFF

Press button 1.

When the power is turned on, the last heard programme is restored (radio, cassette or CD).

Special note:

A system may be used to allow the set to be used without turning the vehicle ignition on (+ before ignition feed).

This function has a time limit of **10 minutes** at the end of which period the set will automatically turn off to avoid discharging the battery.

5 seconds before this timed period expires, beeps are heard and the display flashes.

When + before ignition operation is interrupted by pressing button **1**, pressing the same button again restarts the timed period of **10 minutes**.

ADJUSTING SOUND LEVELS

VOLUME : control **3** on the front panel or buttons **23** on the satellite.

Special notes:

● *Protection in the event of "high temperatures"*

If the temperature inside the set rises abnormally, its internal protection circuit is activated.

The display flashes and the volume level decreases every **2 minutes**. The operator cannot prevent this process.

Normal operation resumes as soon as the temperature has dropped.

● *Cutting the sound (MUTE)*

The sound may be cut completely by simultaneously pressing buttons **23** on the satellite. The message "MUTE" is displayed at **A**.

Repeating the action returns the volume to its previous level.

The sound is automatically cut when a telephone call* is received or when the voice synthesiser * broadcasts a message.

The message "SPEECH" is displayed at **A**.

If this occurs during playback of a cassette or CD, playback is suspended and the set is paused.

Playback resumes as soon as the phone call is ended (handset put back on hook) or the voice synthesiser message is complete.

● *Automatic volume control depending on the vehicle speed ("AVC" mode)*

This set has a system which adjusts the volume level depending on the vehicle speed to cover road noise.

Three settings are programmed into the first three preselection buttons (buttons **15-1** to **15-3**).

Pressing and holding button **7** for more than **2 seconds** activates the "AVC" mode. The display shows the active setting : "AVC 1",
"AVC 2" or "AVC 3".

From this point, only the first four preselection buttons are operational (**15-1** to **15-4**) :

- one of the three preset settings may be selected using one of the buttons **15-1** to **15-3**,

- button **15-4** deactivates the "AVC" mode. The display shows "**AVC OFF**", but if no adjustment is made within **4 seconds**, it is automatically cancelled.

* if fitted to the vehicle

SPATIAL SOUND DISTRIBUTION

Left/right balance

Select the adjustment mode using button **4** then adjust using control **3** on the front panel or buttons **23** on the satellite.

Front / rear balance (Fader)

When the left / right adjustment mode is active, pressing button **4** again switches to front / rear balance adjustment mode ; adjustment is made as above.

As soon as button **4** is pressed, the display indicates the function selected and its setting.

After **4 seconds** with no action, the display returns to the previous message.

Adjustment scales

Left / right balance	
▷ 9̶B̶0̶ ◁	fully left
▷ 9̶B̶9̶ ◁	centre
▷ 0̶B̶9̶ ◁	fully right

Front / rear balance	
▽ 9F0 △	fully front
▽ 9F9 △	centre
▽ 0F9 △	fully rear

Selection of the listening position ("GEO" mode)

The "GEO" mode allows a listening position to be selected depending on the number of occupants of the vehicle.

Pressing button **19** for the first time activates this adjustment mode.

Several positions are proposed:

`- GEO OFF - (&] - (?] - (&] - (&& -`

A position is selected using control **3** on the front panel or buttons **23** on the satellite.

NOTE : when the "GEO" mode is active, the next press on button **19** activates or deactivates the **Loudness** function. For more details, refer to the specific paragraph.

All the previous adjustments are unique and do not depending on the active source. They are recalled each time the set is turned on.

If + before ignition feed is cut, the left / right and front / rear balance settings return to the "centre" setting.

The listening position selection mode is deactivated ("GEO OFF").

TONALITY

Bass

Select the adjustment mode by pressing button **2** then make the adjustment using control **3** on the front panel or buttons **23** on the satellite.

Treble

When the bass adjustment mode is active, pressing button **2** again switches to treble adjustment mode ; adjustment is made as above.

As soon as button **2** is pressed, the display shows the function selected and its setting.

After **4 seconds** with no action at the buttons, the current adjustment mode is cancelled and the display returns to the previous message.

Adjustment scales

Bass	Treble	
BASS--9	TREB--9	min
BASS 0	TREB 0	average
BASS+9	TREB+9	max

Loudness

This system accentuates the treble and bass frequencies at low listening levels to compensate for the characteristics of the human ear.

When the listening position selection mode (GEO) is active, the next press on button **19** selects the Loudness function.

The display indicates the status of the function (active or not) by one of the messages "**LOUD OFF**" or "**LOUD ON**".

The status may then be modified using control **3** on the front panel or buttons **23** on the satellite.

NOTE : "**Loudness**" is automatically activated (when -I before ignition feed is cut).

Ambience styles ("DSP" mode)

Six ambience styles are preprogrammed in the "**DSP**" mode.

This mode of operation may however be cancelled to give "**normal**" listening.

Activate the ambience style selection mode (DSP) by pressing button **20**.

The display shows the style currently selected (or that the function is not active).

A selection must be made within **8 seconds** using control **3** on the front panel or buttons **23** on the satellite.

The list follows the following sequence:
"**HALL**" ⇔ "**LIVE**" ⇔ "**CHURCH**" ⇔ "**STADIUM**" ⇔ "**DISCO**" ⇔ "**DSP OFF**" ⇔ "**HALL**" ⇔ "**LIVE**" ⇔ ...

Equaliser (EQU)

When the "DSP" mode is active, , pressing button **20** again changes to the preprogrammed equaliser settings selection mode.

The display indicates which setting is currently selected (or that the function is not active).

A selection must be made within **8 seconds** using control **3** on the front panel or buttons **23** on the satellite.

The list follows the following sequence:
"EQ POP" ⇔ "EQ JAZZ" ⇔ " EQ ROCK" ⇔
"EQ VOICE" ⇔ "EQ OFF" ⇔ "EQ POP" ⇔ ...

Special notes

The adjustments for bass and treble depend on the active source; they may differ for radio, cassette or CD functions.

These adjustments are recalled when the set is turned on.

Following cutting of ┤ before ignition feed:

- tonality settings return to their "average" levels,

- the **Loudness** function is activated,

- the **equaliser** function and the "GEO" mode are deactivated.
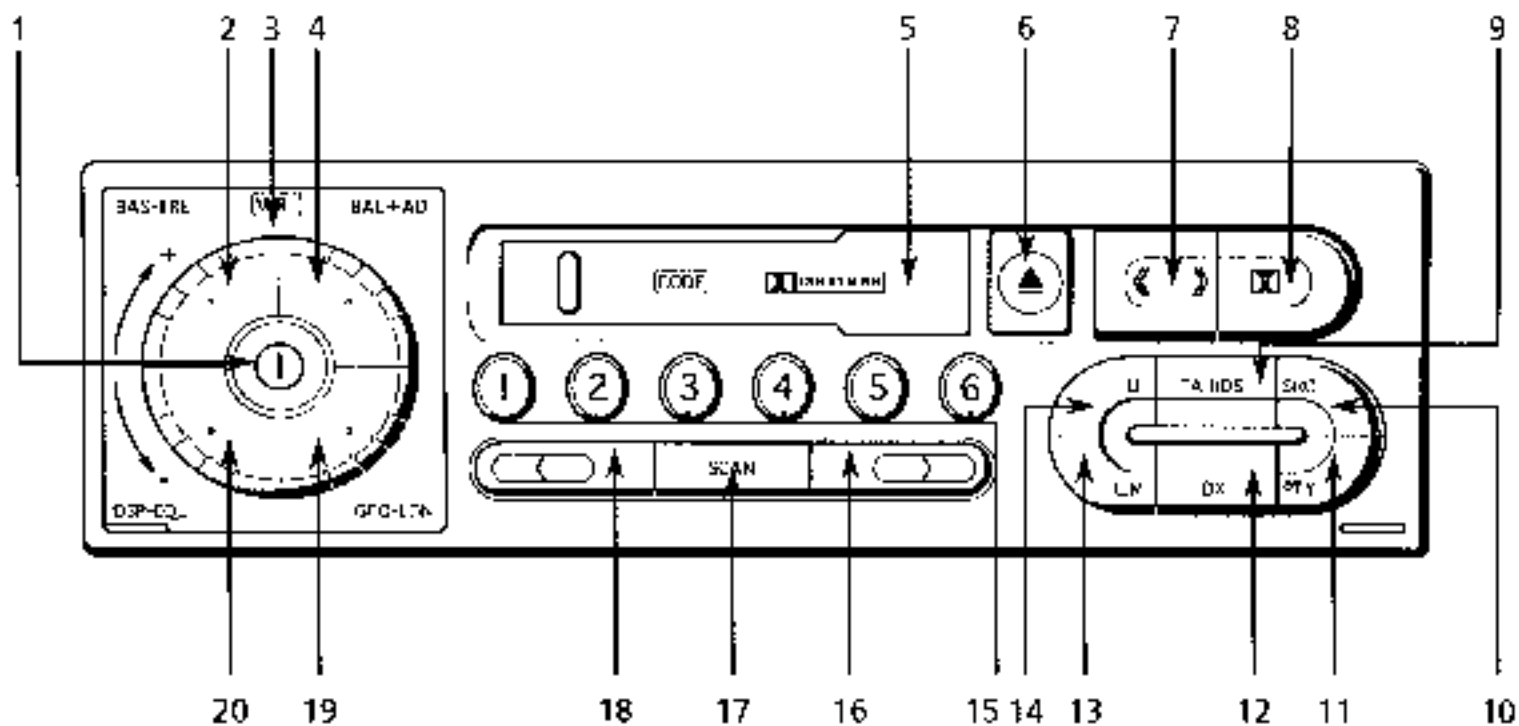
121295

SELECTION OF THE WAVE BAND

Using the radio front panel

Press :

- button **13** to select one of the wave bands AM :
  M (PO) or L (GO),

- button **14** to select one of the wave bands FM :
  U1 (FM1), U2 (FM2) or AST (**Autoprogramming
  in FM**).

Using the satellite

Press button **21** to select one of the wave bands :
L (GO) / M (PO), FM1 (U1) / FM2 (U2) or
FM Autostore (AST).

The two wave bands GO (L) and PO (M) are
grouped, as are FM1 and FM2.

You may pass from one to the other by running
through the preselections by rotating the
tumblewheel **22**.

MANUAL FREQUENCY SEARCH

This may be in increasing or decreasing
frequencies from the front panel.

Select the wave band as described above:

- Briefly pressing button **16** or **18** : the frequency
  changes one step (**100 kHz for FM, 9 kHz for PO
  and 1 kHz for GO**).

- Press and hold button **16** or **18** : the frequencies
  change quickly for as long as the button is
  depressed.

AUTOMATIC SEARCH

This can only be carried out from the satellite.

Select the wave band as described above:

Briefly press button **24** on the satellite to start automatic searching with increasing frequencies only.

For AM (PO or GO), the message "SEARCH ▶" is displayed at **A**.

If no station is received with a sufficient level of clarity after scanning the complete band, the original frequency will be heard once more.

For FM, the search stop sensitivity level is displayed:

- "LOC   ▶" or "DX   ▶" if the "Traffic information" mode is not selected,

- "LOC   INFO" or "DX   INFO" if the "Traffic information" mode is active.

Search sensitivity levels

For the first automatic search started after turning the set on, the message "**LOC ▶**" (or "**LOC INFO**" if the "Traffic information" mode is selected) is displayed and remains for the duration of the search.

This is carried out as follows:

- the first search is carried out at the first level (LOCAL),

- if no station is selected, the search will start again at a higher sensitivity level (DX — average reception) which will only be memorised for **one minute** ; if the following search is not started within the minute, it will start once again at the LOCAL level,

- if, once more, no station is selected, the set returns to the starting frequency.

For FM, the sensitivity level DX may be intentionally selected by pressing button **12**.

The message "**DX**" is briefly displayed.

Any automatic searches then started will only be carried out at this level with the indication "DX ▶" (or "DX   INFO" if "Traffic information" mode is selected).

Under these conditions, pressing button **12** selects the lower level once more (**LOCAL**). The message "**LOC**" is briefly displayed.

The set will return to **LOCAL** sensitivity if an automatic search is not started within **1 minute**.

PRESELECTIONS

Programming

Select a wave band as described above.

Search for a station manually or automatically.

Press the desired preselection button **15** ; the sound turns off.

Hold the button down until a beep is heard and the sound returns.

The frequency displayed is programmed.

Recall

Briefly press the required button **15** or turn the tumblewheel **22** on the satellite, after selecting a wave band.

"Scanning" stations (SCAN)

This function allows each preselected station in the active wave band to be heard, one after the other, each for **10 seconds**.

Start the scan by pressing button **17**.

The starting preselection is the one shown on the display.

During the scan, the number of the preselection heard is shown flashing at B on the display.

By pressing button **17** again, the scan will stop and broadcast the station displayed at that moment.

AUTOMATIC PROGRAMMING IN FM (Autostore)

Automatic memorisation (AST) is an extension of the automatic search command.

In one single operation this function searches and memorises the six strongest stations in the region, without knowing their wavelengths.

If less than six stations are found, the preselections which could not be filled are allocated the value "87.5".

Process

Automatic programming is started by pressing and holding button **24** on the satellite:

- in radio mode, regardless of the active FM wave band (an error beep is heard if one of the AM wave bands was selected),

- in cassette or CD mode if the last frequency heard was in FM.

A beep is heard:

- in radio mode the sound is cut and the message "**AST**" is displayed at **A**,

- in cassette or CD mode the sound continues, but the message "**AST**" is displayed at **A**.

At the end of automatic programming, the system beeps once more:

- in radio mode the sound returns to the station memorised in the first preselection (**15-1**) for AST,

- in cassette or CD mode the message present before automatic programming began returns to the display.

NOTE : the active source may be changed during automatic programming, without affecting the process.

USE IN RDS MODE (Radio Data System)

The **RDS** system allows certain stations to transmit inaudible information (**RDS codes**) together with the normal FM signal.

This unit uses RDS information for the following features:

- "clear" display of the RDS station name, instead of its frequency ("**PS**" code),

- automatic monitoring, during a journey, of a preset station by tuning in to stations which broadcast the same programme but are received with a stronger signal ("**AF**" signal),

- selection of a particular type of programme such as classical music, news or sport for example ("**PTY**" code),

- selection of stations broadcasting road traffic information ("**TP**" code),

- broadcasting of road traffic information from other stations on the same network (station groups) by using the "**EON**" system,

- broadcasting of urgent messages.

NOTE : RDS cannot operate correctly in areas where RDS transmission is still at an experimental stage or when signals are too weak.

Displaying the programme name

When the set is tuned to an RDS station, during a manual search or an automatic search in the **FM** wave band, the frequency is displayed briefly before being replaced by the name of the station.

This brief period is used by the set to decode the "**PS**" code from the **RDS** station.

When the preselection is changed, this name is displayed immediately.

Automatic monitoring - principle of operation ("AF" mode)

For this mode to operate, the set must be tuned to an RDS station, memorised in one of the 18 FM wave band preselections.

An RDS station broadcasts a list of all the stations broadcasting the same programme as itself (alternative frequencies — AF).

During a journey, these stations are systematically monitored by the set which will tune to the one whose signal is received the clearest.

This process is not obvious on the display as the name of the programme remains the same.

When the station is no longer received with enough clarity to allow the set to use the RDS information which is being sent for 5 seconds, the system begins an automatic search to locate another station which is broadcasting the same programme.

During this period the message "SEARCH" and the programme name are alternately displayed.

If the system finds the programme, it remains on the new frequency. The name of the programme reappears at A and broadcast begins again.

Otherwise the set returns to the original frequency but without the display of RDS information (station name is not displayed) ; the preselection is deactivated (warning light B extinguishes).

In this case:

- either the original programme is broadcast once more with poor listening quality,

- or, in this region, the frequency corresponds to another programme ; this may be heard clearly.

● **Turning automatic monitoring on or off ("AF" mode)**

It is turned on or off by pressing and holding button **9** for more than **2 seconds**.

The "AF" warning light illuminates at **J** on the display to show that the function is active.

- It illuminates permanently when automatic monitoring is operating normally.

- It flashes:

    ● when the function is activated but the set is not tuned to an RDS station,

    ● when no other station is able to be found; there are several reasons for this:
        - signal received from the other stations is too weak,
        - poor reception of the list of alternative frequencies,
        - original station does not transmit the list of alternative frequencies.

- **Automatic search and memorisation of RDS stations**

After selecting the function by pressing and holding button **9**, the procedures are the same as for non RDS stations.

NOTE : in automatic programming (AST), if the set finds less than six RDS stations with the correct reception level, the preselection positions are filled by non RDS stations. When these are recalled, the warning light J will flash.

- **Recall of preselections**

- **"AF"mode activated**

When a preselected RDS station is recalled, the frequency memorised is displayed and is very quickly replaced by the programme name.

If the signal for this station is weak or its identification code is not the same (because the region has changed, for example), the set will search for a new suitable frequency; the message "SEARCH" is displayed during the search, alternating with the programme name.

When the set tunes into a new frequency, the name of the programme is displayed; the frequency will have changed.

If the set does not find a suitable frequency to which it can be tuned, the frequency (and not the name of the programme) which was preselected in the beginning reappears on the display but the preselection is deactivated (warning light B extinguishes).

In this case:

- either broadcast of the original programme begins again with a poor level of sound quality (or no sound at all, just "noise"),

- or this frequency corresponds to another programme (as the region is now different) and this is broadcast under good conditions.

- **"AF"mode de-activated**

When a preselected RDS station is recalled, the frequency memorised is displayed and is very quickly replaced by the programme name.

If the station to which the set is tuned has a different identification code to that memorised for the initial frequency (because the region has changed, for example), the new name will be displayed when the signal received is strong enough.

● Listening to regional stations ("Regional" mode)

National RDS stations may offer specific regional programmes at certain times of the day. These regional RDS stations may have the same identification code or a different one.

The list of alternative frequencies may be common to all regional stations in the same network or each may have its own list of alternative frequencies.

If the list of frequencies is common, the set will change frequency fairly regularly. The signal received will remain strong. The listening quality will therefore be good if the programmes broadcast are all the same.

This automatic monitoring may be disruptive if the programmes broadcast are different. In this case, deactivate the automatic monitoring mode by pressing and holding button **9**.

There are also regional RDS stations which have their own existence, independent of any national station; they only broadcast to a well-defined region.

They have their own particular identification code and a specific list of alternate frequencies.

When the automatic monitoring mode ("AF" mode) is active, the radio remains tuned to a regional RDS station when this is available.

Turn the "AF" mode on by pressing and holding button **9**. Warning light J illuminates on the display.

If a regional RDS station has been stored in one of the preselection buttons (buttons **15-1** to **15-6**), the set could search for another regional station in the same network using the corresponding alternative frequency list. This is however not automatic; each new press on the appropriate button **15** starts a search for another station on the list (on condition that the level of reception is good).

Broadcast of urgent messages

When the set receives the signal from a station broadcasting an urgent message, a double beep is heard (except in AM).

The radio, cassette or CD sound is cut.

The display shows "ALARM" at A while the urgent message is broadcast then returns to the previous display.

NOTE : when an urgent message is being received, it is not possible to change mode, wave band or frequency, nor to reduce the volume to below the preset limit for the broadcast of traffic information messages.

Programme type selection mode (PTY code)

The PTY code is another type of information transmitted by RDS stations in parallel to the normal FM signal.

It allows the set to recognise the type of programme broadcast by a station (classical music, news, sport...).

This mode of operation allows only certain RDS stations to be selected during an automatic search of the FM wave band.

A list of several types of programme (several PTY codes, in fact) is stored in the set when it is made: "NEWS" / "AFFAIRS" / "INFO" / "SPORT" / "EDUCATE" / "DRAMA" / "CULTURE" / "SCIENCE" / "VARIED" / "POP M" / "ROCK M" / "M O R" / "LIGHT M" / "CLASSICS" / "OTHER M" / "NEWS" / "AFFAIRS" / ...

- Activate the "PTY" selection mode by pressing button 11.
  Warning light H illuminates and the last type of programme selected appears on the display.

- In the next 4 seconds, the list of different types may be shown using control 3 on the front panel or buttons 23 on the satellite so that the programme type to be selected for an automatic search may be modified. The last displayed at A will be selected.

  NOTE : if no buttons are pressed within 4 seconds, the display returns to the previous message and the last type of programme is retained.

- Start an automatic search using button 24 on the satellite.
  During the search, the message "SEARCH" is displayed, alternating with the type of programme selected. For example : "SEARCH" / "NEWS" / "SEARCH" / "NEWS" / ...
  When a satisfactory station is found, its name is shown at A after the programme type has been displayed for 4 seconds.
  If no station is found, the message "NONE" is displayed at A for 4 seconds then the set returns to the original frequency.

- When the "PTY" mode is active, pressing button 11 again cancels the mode. The warning light H extinguishes.

Notes:

- If an automatic search is not started within 1 minute, the "PTY" programme type selection mode is cancelled.

- In the same way, pressing one of buttons 10,13,14 or 15 on the front panel or the equivalent controls on the satellite immediately deactivates the "PTY" mode.

- When the "Traffic information" and "PTY" modes are both activated, the automatic search gives priority to the one which was selected last.

Use in "Traffic information" mode ("TA" code)

This system allows broadcast of road traffic information messages. It uses "TP" (Traffic Programme) and "TA" (Traffic Announcement) codes broadcast by the RDS stations, in parallel to the normal FM signal.

The "TP" code allows the radio set to recognise stations which will broadcast traffic information. If the set is tuned to such a station, warning light K illuminates on the display.

The road traffic information messages are however only heard, when the "INFO" mode ("TA" code) is active; warning light L is then illuminated on the display.

● **Setting the "INFO" configuration**

Activate the "INFO" mode by briefly pressing button 9, warning light L illuminates on the display.

Two cases may arise:

- The set is already tuned to a station which can broadcast traffic information (warning light K illuminated) and the programme continues.

- The set is not tuned to a station which can broadcast traffic information (warning light K extinguished), warning light L flashes on the display.
  An automatic search may be started by briefly pressing button 24 on the satellite to select an "INFO" station. The message "LOC INFO" is displayed at A during the search.

The set will now broadcast messages concerning road traffic by interrupting the radio programme being heard, or cassette or CD playback.

● **Broadcast of messages**

While traffic information is being heard, the message "TRAFFIC" is displayed at A.

Messages concerning road traffic are heard at a preset minimum volume level, which can be altered during broadcast of the messages.

This volume level is memorised if it is above the minimum level (a maximum level does however apply) and the following messages will be heard at this new volume level.

Pressing button 9 during broadcast of a traffic information message returns the sound to the same level as before the message began. The "INFO" mode is not cancelled.

● **Broadcast of messages during cassette or CD playback**

If road traffic information is required during playback of a cassette or CD, before changing the active source, select the frequency of an "INFO" station and activate the "INFO" mode.

When a message is received, the cassette or CD player "pauses" and playback is suspended. At the end of the message cassette or CD playback resumes.

Under these conditions of use, when the "INFO"station signal weakens, the set will search automatically (approximately 10 seconds after warning light K has extinguished).

It automatically tunes to the "INFO" station with the strongest signal in the region.

● **Changing " INFO " station**

- In automatic search:
  Briefly press button 24 on the satellite.
  The display shows "LOC INFO" during the search then the set tunes to the next "INFO" station in the region.

- In manual search:
  If the frequency of an "INFO" station is known (from signs at the edge of the road, for example), the station may be accessed directly. To do this, refer to the section "Manual station search". Once the station has been selected, activate the "INFO" mode by briefly pressing button 9.

● **Programming**

The "INFO" stations are programmed as for conventional "non INFO" stations into the preselections 1 to 6 in the FM wave band; they substitute the stations preselected in normal FM mode.

Activate the "INFO" mode by briefly pressing button 9 before starting an automatic search or automatic programming.

NOTE : for automatic programming, if the set finds less than six stations which are capable of broadcasting traffic information, the preselections are filled by "non INFO" stations.

● **Broadcast of messages from other stations**

The **EON** (Enhanced Other Networks) system is an RDS service which groups stations in a common network.

If the radio is tuned to a station which is linked to others in the EON system, it will broadcast traffic information messages from the current station together with those from the other stations.

NOTE : the EON system cannot be cancelled.
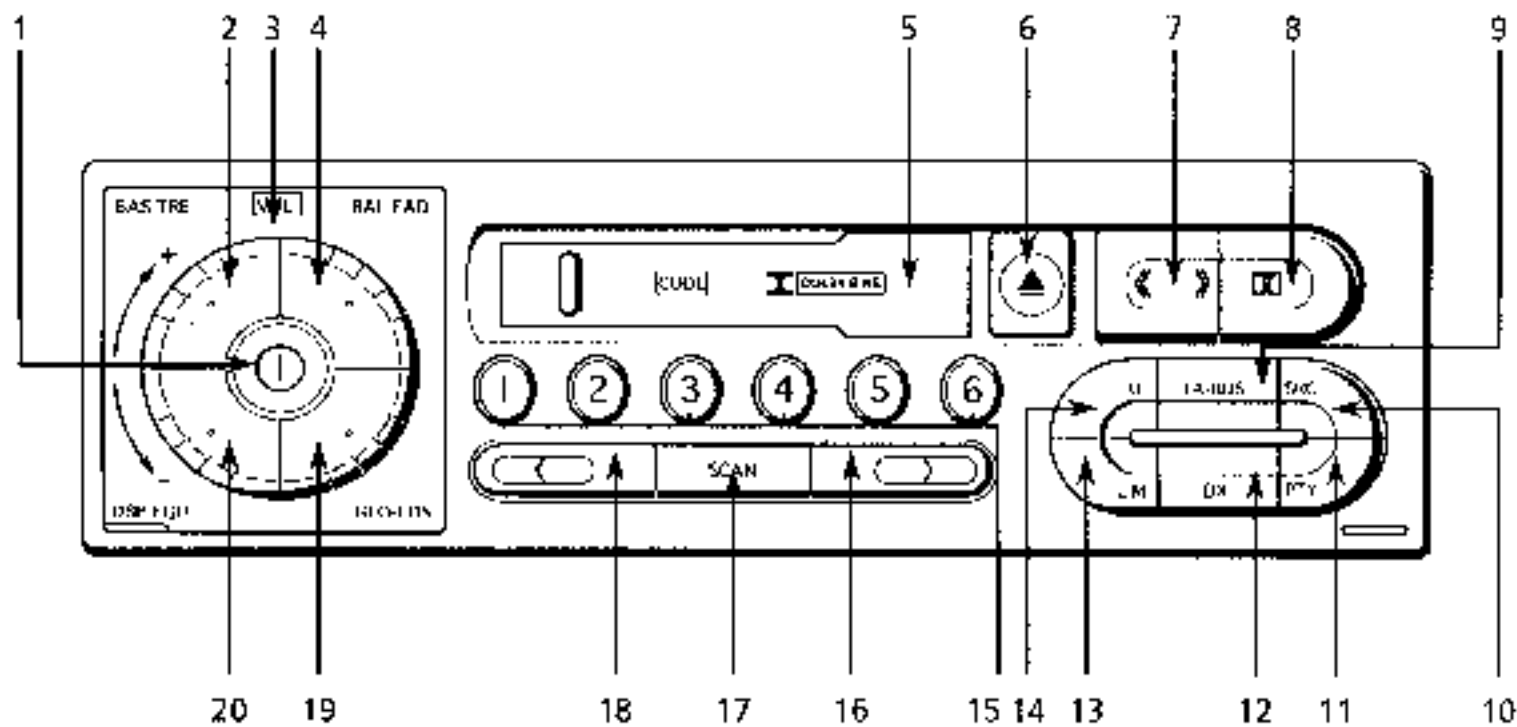
121295

The insertion of a cassette into compartment **5** causes:

- radio or **CD** playback to stop, depending on the active source,

- the tape quality to be briefly displayed (ferrous or chrome); one of the messages "**CASS FER**" or "**CASS CR**" is displayed at **A**,

- the cassette to be played in the last used direction; the tape direction is shown on the display by one of the symbols :

"**CASS**   " or "**CASS**   ".

Access to cassette mode

If there is already a cassette in compartment **5**, button **10** selects the cassette mode and starts playback in the last-used direction.

This selection may also be made using button **21** on the satellite.

Reading a cassette

To adjust the listening levels, refer to the section "**Radio operation**".

If a cassette was recorded using noise reduction (Dolby B), pressing button **8** gives optimum reproduction.

The message "**DOLBY ON**" is displayed briefly at **A**.

Pressing this button again deactivates the function and the message "**NO DOLBY**" is displayed briefly at A.

Changing the tape direction

The system changes the tape direction:

- automatically at the end of the tape,

- by pressing button **7**,

- by briefly pressing button **24** on the satellite.

The tape direction is shown on the display.

Fast winding

- Press button **16** to start fast winding.
  Pressing the button again **"gently"** stops fast winding and starts cassette playback.
  At the end of the tape, the tape stops and playback begins on the other side.

- Press button **18** to start rewinding.
  Pressing the button again **"gently"** stops rewinding and starts cassette playback.
  At the start of the tape, the tape stops and playback begins on this same side.

During fast winding, the radio will be heard.

The radio mode is completely functional with corresponding messages on the display (see paragraph **"Radio operation"**).

Track search

Tumblewheel **22** on the satellite allows a particular track to be selected on the side being played.

- Turn the tumblewheel one notch upwards to start playback at the beginning of the **current** track; the message "PREV 1" is displayed at **A**.

- Turn the tumblewheel (n + 1) upwards to start playback at the beginning of the **nth previous** track ; the message "PREV n + 1" is displayed at **A**.

- Turn the tumblewheel one notch downwards to start playback at the beginning of the next track; the message "NEXT 1" is displayed at **A**.

- Turn the tumblewheel (n + 1) downwards to start playback at the beginning of the nth next track ; the message "NEXT n" is displayed at **A**.

Notes:
- The value n (or n + 1) reduces each time a new track is played.
- It is between **1** and **10**.

Stopping track search

- Turning the tumblewheel the same number of notches in the other direction stops the fast winding and starts playback on the same side.

- Briefly pressing button **24** on the satellite stops the fast winding and starts playback on the other side.

Stopping playback

- *Broadcast of messages from the voice synthesiser**

When the voice synthesiser broadcasts a message, playback is interrupted, the tape head is withdrawn; the message "SPEECH" is displayed at A.
At the end of the message, playback resumes.

- *Broadcast of traffic information messages*

If the "INFO" mode is active (warning light L illuminated) and if the station to which the radio was tuned before changing source was an "INFO" station, broadcast of a traffic information message will stop playback and the tape head is withdrawn.
At the end of the message, playback resumes.

- *Broadcast of an urgent message*

When the radio receives a signal from a station broadcasting an urgent message, a double beep is heard and cassette player operation is interrupted; "ALARM" is displayed at A.
At the end of the message, playback resumes.

- *Cutting sound*

Pressing buttons **23** simultaneously on the satellite stops playback and the tape head is withdrawn; the message "MUTE" is displayed at A.
Repeating the action starts playback again.

- *Receiving a telephone call (if the vehicle is equipped)*

When a telephone call is received, the sound is cut automatically, and the cassette player pauses (tape head is withdrawn).
The message "SPEECH" is displayed at A.
At the end of the communication (handset put back on hook), playback resumes.

- *Changing source*

Pressing button **10** on the front penal or button **21** on the satellite activates the CD or radio mode without ejecting the cassette.
Playback and fast winding are interrupted and the tape head is withdrawn.

- *Ejection*

The cassette is ejected by pressing button **6**.
The set returns to radio mode, broadcasting the last heard programme.

Notes:

When the power is turned off or when CD mode is selected, the tape head is automatically withdrawn.
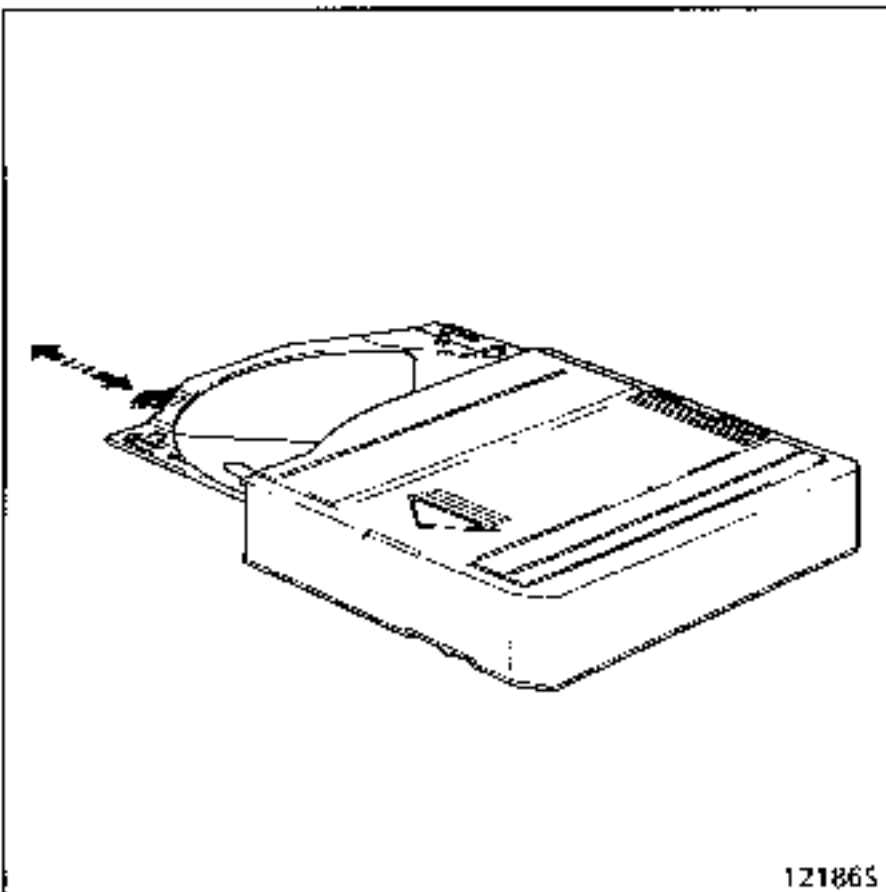
The cassette may be ejected from compartment **5** even when the power is turned off.

The CD player is located in the luggage compartment on the right hand side of the vehicle.

12184R
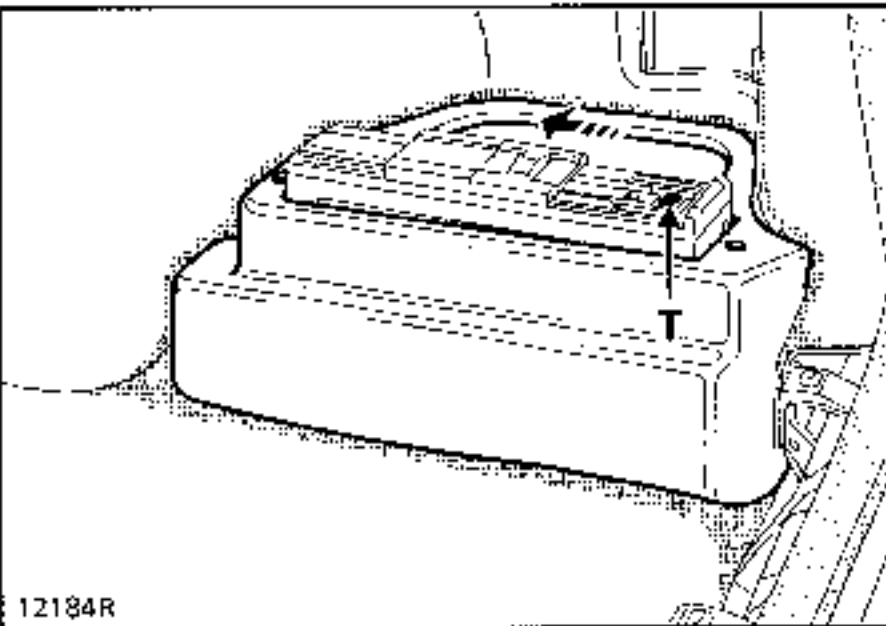
Operation

● Slide back the cover to open the **CD** player.

● Press button T to eject the cassette.
This contains six "**CD holders**" each of which can hold one CD.

121865

● To change a CD, release its "holder" by pulling the corresponding lever.
Fit a new CD into the holder with the printed side upwards.
Slide the CD and holder assembly into the cassette.
Ensure it is fully inserted until it locks.

● Fit all the holders into the cassette, even if they are empty.

● Now insert the cassette fully into the player (follow the arrow marked on the cassette).

● Close the sliding cover.
This should always be closed to prevent the entry of water, dust or fumes which could damage the equipment or, at the very least, reduce its performance.

The system now performs a self-test.

NOTE : Removing (or inserting) the CD cassette is possible even if the system is off or the vehicle ignition is off.

Access to CD mode

Select the CD mode using button **10** on the front panel or button **21** on the satellite.

The CD mode cannot be selected if there is no CD in the cassette or the CD cassette is not in the player.

If the CD mode is selected when the system is carrying out its self-test, it remains silent and the message "**CD CHECK**" is displayed at A.

Normal CD player operation resumes at the end of the self-test.

If there is no disc in the cassette or the cassette is not in the player, another source must be selected (radio or cassette) to release the system.

Selection and playback of a CD

● When the CD mode is selected, playback of the last disc heard is started again if the cassette has not been removed from the player.
Otherwise the system looks at the discs in increasing order (from 1 to 6) and the first one found is selected

● It is however possible to select a different CD:

- either by pressing one of the six preselection buttons 15 ; each of these is allocated to the corresponding disc in the cassette (1 to 6),

- or by briefly pressing button 24 on the satellite.
Each time the button is pressed, the number of the CD changes in increasing order, starting from the current disc (after disc n°6, the system returns to n°1 and so on).

The message "LOAD CD" is displayed at A and the number of the disc selected is displayed at B.
Playback then begins with the first track on the disc.

The message "TR 1 CD disc n° "is displayed at A and B.

1 is the number of the track heard. It changes as the CD is played through.

If the system detects no disc in the required position (no CD present or CD incorrectly fitted on the holder), a beep is heard.

The message "NO CD disc n°" is briefly displayed at A and B and playback continues with the current disc.

The detection of a fault with the disc (scratches...) is normally made when the CD is loaded.
The message "ERR CD" is briefly displayed and the following CD is played.
The faulty disc can no longer be selected.

NOTE : to adjust the listening levels, refer to the section "Radio operation".

Fast forwarding / reverse

During playback, press button 16 for fast forward playback or button 18 for fast reverse, both with accelerated playback.

Fast playback continues as long as the button is held down.

The message ">> track n° CD disc n°" is displayed at A and B and changes when each new track is found.

If the search reaches the start of the CD, playback starts at the beginning of the first track.

Track search

Each time tumblewheel 22 is turned the number of the track changes on the display and playback begins at the start of the corresponding track.

In this way a particular track on the current disc may be reached.

To do this, turn the tumblewheel the number of notches required (upwards or downwards), checking the track display.

Turning tumblewheel 22 one notch upwards restarts playback at the start of the same track.

When the last track on the disc is reached, the sequence returns to the first track (and vice versa).

Random playback

A long press (more than 2 seconds) on button **17** selects the random playback mode.

The playback of various tracks on the disc is no longer in increasing order, but according to a random sequence.

The message "RD   track n°   CD disc   n°" is displayed at A and B.

When all the tracks on the current disc have been played, the player selects the next disc in the player and random playback of this disc begins.

● *Track search*

  - Turning the tumblewheel one notch upwards starts playback of the current track.

  - Turning the tumblewheel in any other way starts playback of another randomly selected track on the disc.

● *Cancelling the mode*

  - Changing source using button **10** on the front panel or button **21** on the satellite does not deactivate the random mode.
    Thus, when the CD player is active again, random playback will resume.

  - This playback mode is deactivated by pressing and holding button **17** again.

    NOTE : if the operation of the audio system is cut by pressing button **1** during ransom playback, when the set is turned on again, this mode is deactivated. The message "TR track n° CD disc n°" is displayed.

"Scanning the disc (SCAN function)

This function is used to familiarise yourself with the contents of the selected CD by playing the first **10 seconds** of each track.

Briefly pressing button **17** activates the function.

The message "TR track n° CD disc n°" is displayed at A and B, where the number of the track flashes and changes for each new track heard.

After listening to the first **10 seconds** of the last track, scanning continues with the first track on the same disc.

● *Cancelling the mode*

  - Briefly pressing button **17** again cancels the function and allows the rest of the current track to be played.

  - This function is automatically cancelled:

    ● when another disc in the player is selected by pressing one of the preselection buttons **15**,

    ● if another source is activated by button **10** on the front panel or button **21** on the satellite before returning to CD mode.

● *Protection of the CD player*

  If the temperature inside the equipment increases abnormally, its internal protection circuit is activated.

  The message "HI TEMP" is displayed at A and CD player operation is paused.

  When the temperature returns to the correct level, normal CD player operation resumes with playback of the current disc.

Stopping playback

- *Broadcast of messages from the voice synthesiser (if fitted)*

When the voice synthesiser broadcasts a message, playback is interrupted and the CD player pauses.

The message "SPEECH" is displayed at **A**.

At the end of the message, playback resumes.

- *Broadcast of traffic information messages*

If the "INFO" mode is active (warning light **L** illuminated) and if the station to which the radio was tuned before changing source was an "INFO" station, broadcast of a traffic information message will stop playback.

The CD player pauses.

At the end of the message, playback resumes.

- *Broadcast of an urgent message*

When the radio receives a signal from a station broadcasting an urgent message, CD player operation is interrupted; "ALARM" is displayed at **A**.

At the end of the message, playback resumes.

- *Cutting sound*

Pressing buttons **22** simultaneously on the satellite stops playback.

The CD player pauses.

The message "MUTE" is displayed at **A**.

Repeating the action starts playback again.

- *Changing source*

Pressing button **10** on the front panel or button **21** on the satellite activates the radio mode or the cassette mode. The CD player pauses.

Playback is interrupted.

NOTE: When the CD player is selected once more, if the CD cassette was not removed from the player, playback will commence where it was stopped, otherwise the first track on the first disc that the system finds is heard.

AUDIO UNIT

To reach the various connectors at the rear of the
audio unit, it must be released from its location in
the dashboard.

To do this, slide the two parts of the removal tool
M.S. 1411 into the holes provided for this purpose
in the front panel of the set, ensuring the
direction marked on each part of the tool is
observed (left or right).
Push them in until they lock.
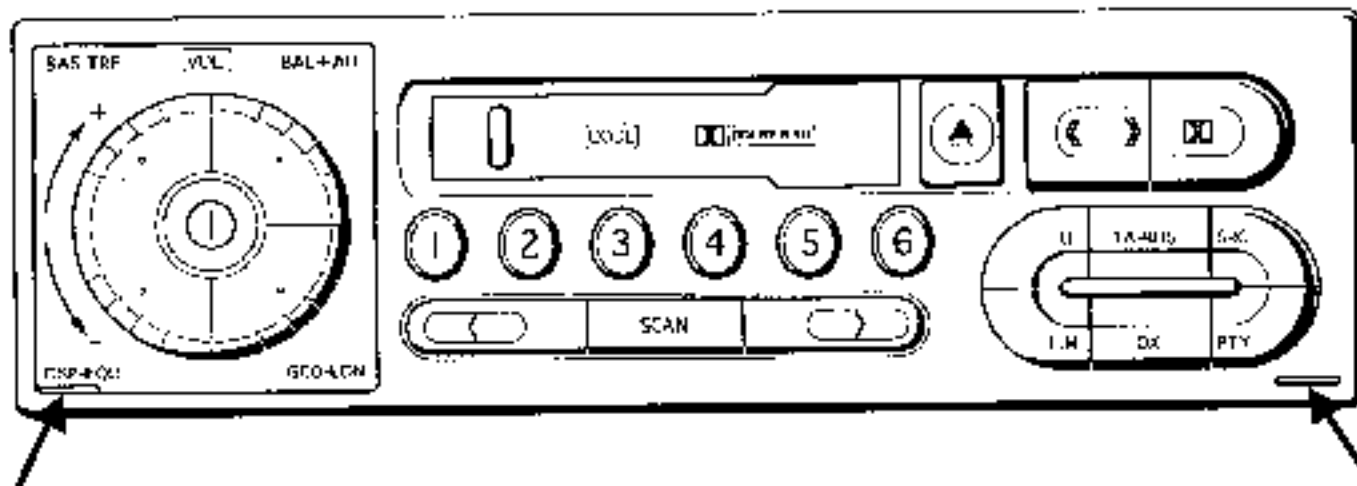
12129

IMPORTANT:
Ensure the two parts of tool M.S. 1411 are cor-
rectly fitted, as if they are fitted the wrong way
round neither the tool nor the radio will be able
to be removed from the dashboard.

CD PLAYER

The CD player is located in the vehicle luggage compartment.

To remove it:

- slacken the two side mountings for the plastic trim (P) and release it,

12184S
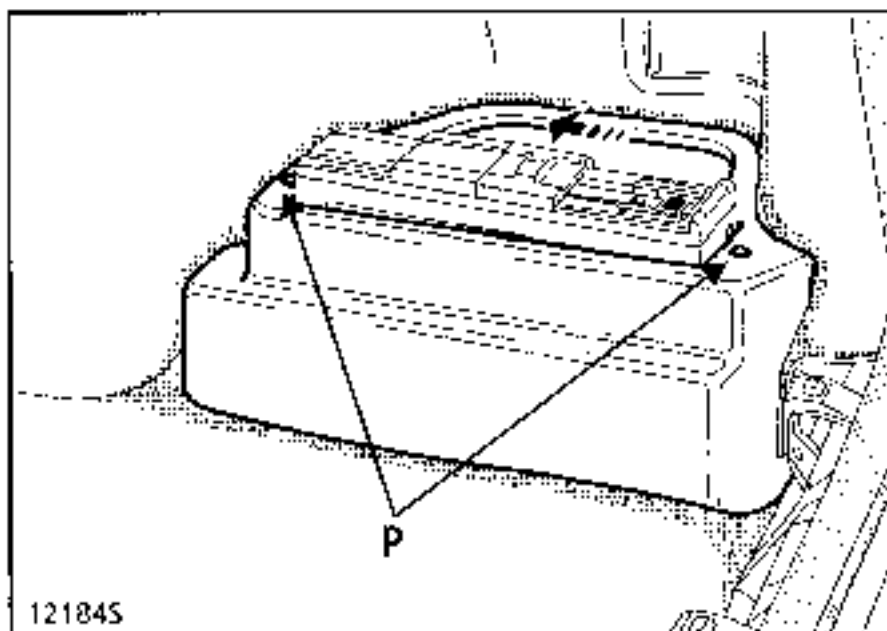
- remove the two mounting bolts holding the CD player on its metal support,

12185R

- release the CD player from its support to disconnect the ISO connector for the wire connecting the CD player / radio,

- remove the CD player.

AERIAL AMPLIFIER

Vehicles fitted with a radio as standard have an aerial amplifier.

This aerial differs depending on the whether the vehicle has radio telephone pre-equipment or not.

There are three possible configurations:

- a "simple" basic aerial, with no amplifier, for vehicles which are not fitted with a radio as standard,

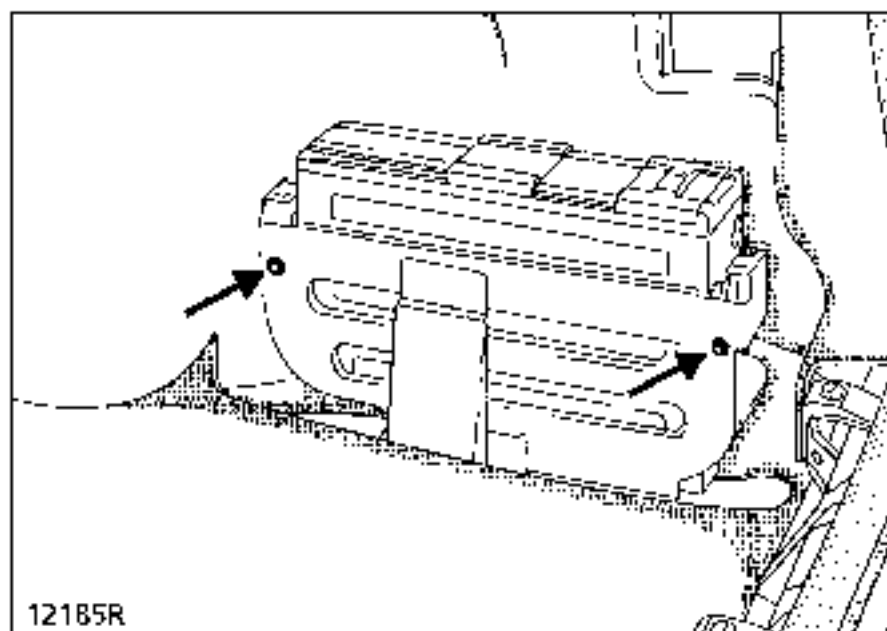- an aerial amplifier fitted with a feed clip and a single coaxial output for the radio aerial,

- an aerial amplifier fitted with a feed clip and two coaxial outputs ; a black plug for the radio aerial and a red plug for the radio telephone aerial (GSM only).

In the latter two cases, the aerial base is part of the amplifier unit.

NOTE : the feed wire to the clip comes from track 5 on the connector (A) at the rear of the audio unit (see below "Audio unit connections").

It is not required for the radio telephone to operate correctly.

Removal

Inside the vehicle, unclip the plastic cover at the rear of the headlining.

From the outside:

- unscrew the aerial from its mounting,

PRNS600
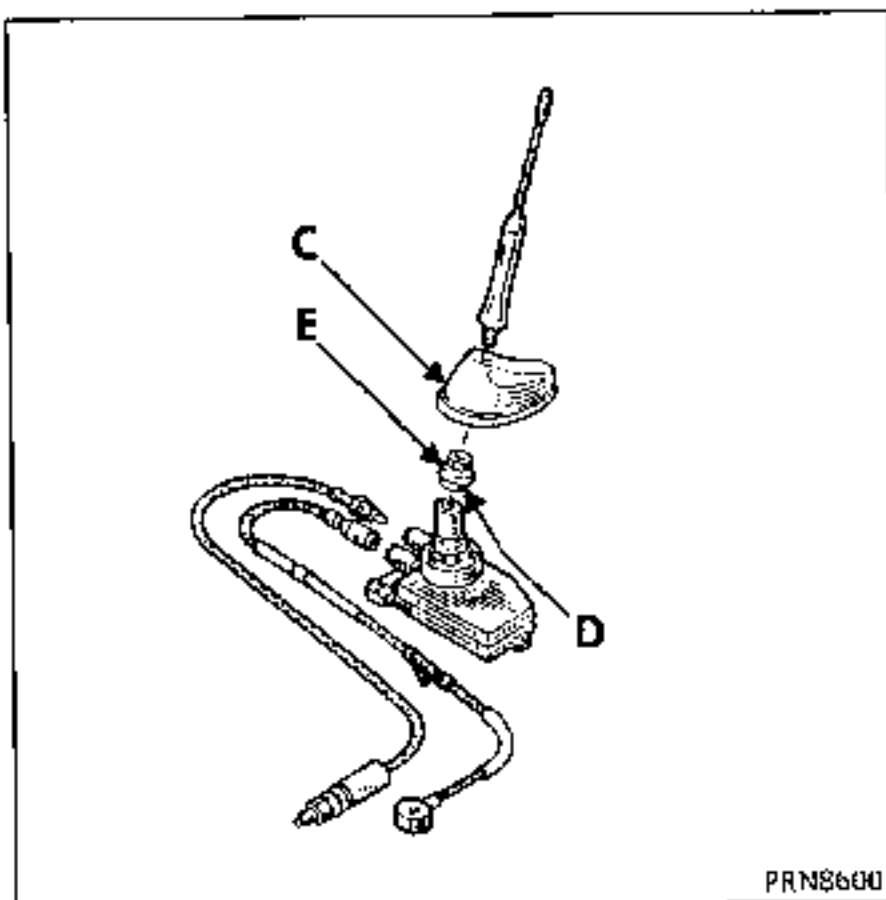
- remove the cover (C) over the base of the aerial and the rear screen washer jet,

- slacken nut (E) mounting the aerial base.

NOTE : a rubber washer (D) inside the nut ensures the connection is sealed. Remember to reposition the washer on refitting.

11628R
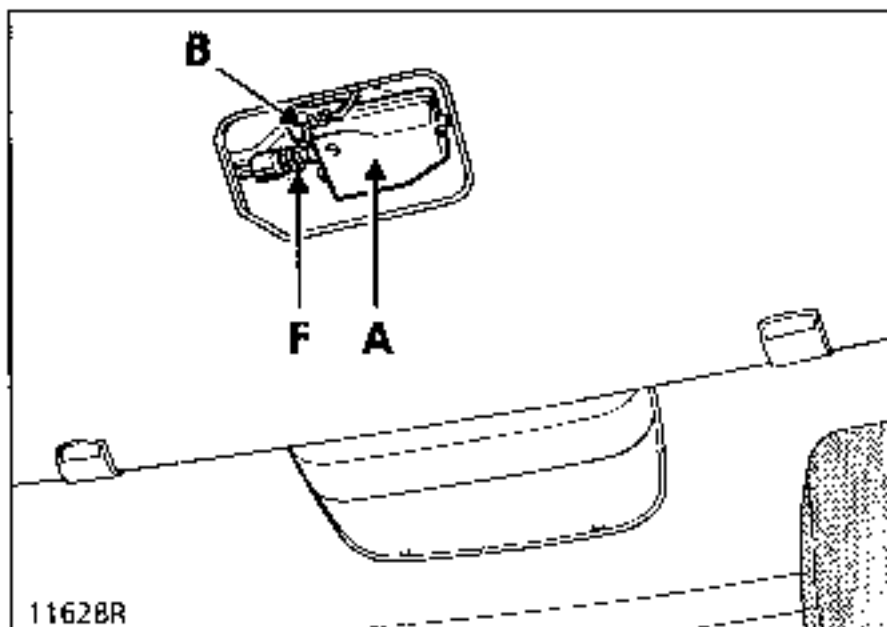
Release the aerial amplifier unit (A) from inside the vehicle.

Disconnect the coaxial cable(s) and the feed clip (B) to remove the unit.

Special note for connecting plugs for coaxial cable on the amplifier unit

These are fitted with an automatic locking system.

To disconnect the coaxial cable, hold the plug by the knurled section (F) and push it in :

- towards the unit in the case of the radio aerial coaxial cable(black plug),

- towards the cable in the case of the radio telephone coaxial cable(red plug).
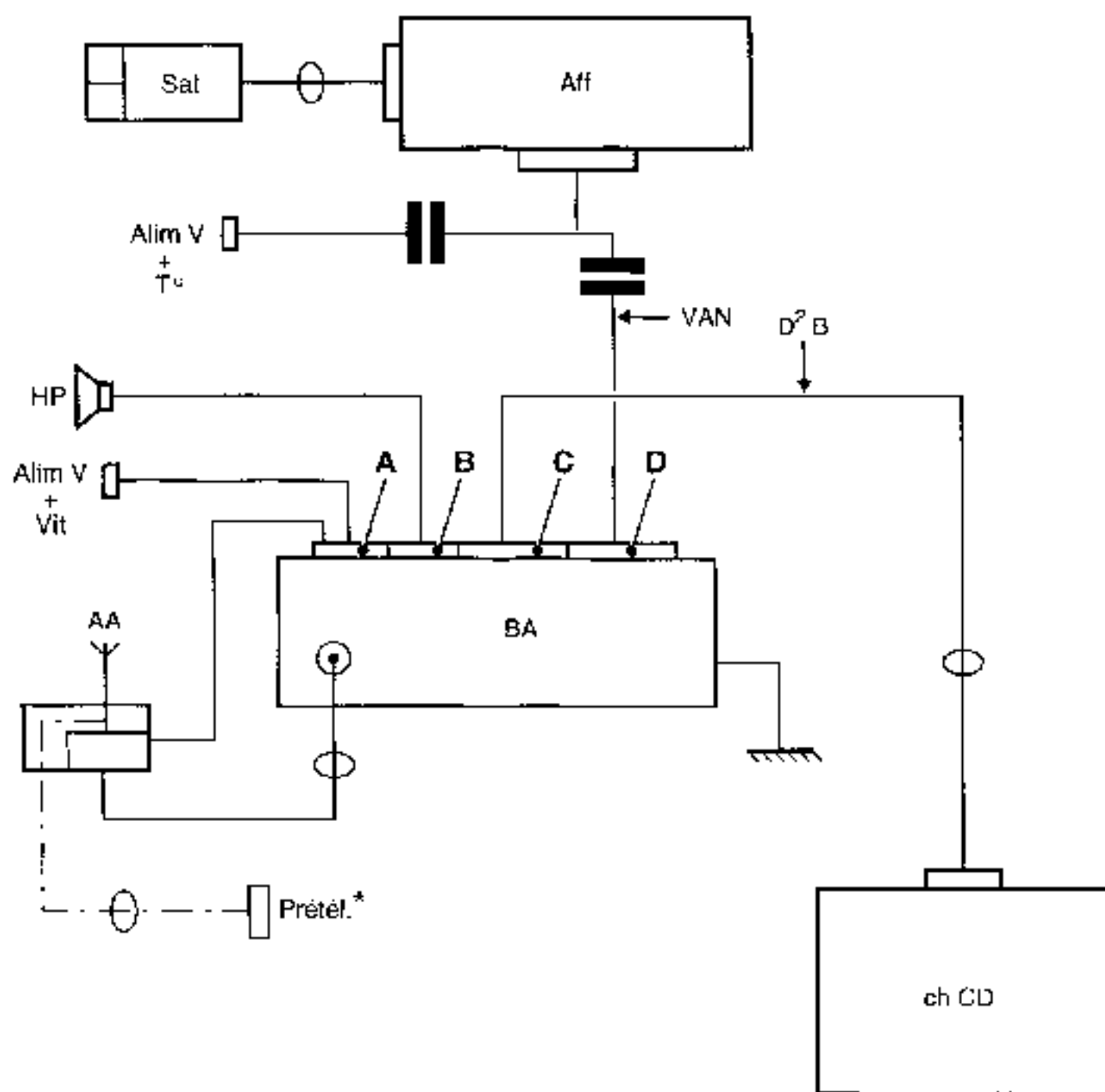
121875

Sat	:	Satellite or remote control
Aff	:	Remote display
BA	:	Audio unit with connectors A, B, C, D
Prétél*	:	GSM* radio telephone pre-equipment
ChCD	:	CD player
Alim V	:	Vehicle feed
HP	:	Speakers
AA	:	Aerial with amplifier and duplexer*
T°	:	External temperature information
Vit	:	Vehicle speed information
VAN	:	Communication connection between remote display and audio unit
D²B	:	Communication connection between CD player and audio unit

* Depending on equipment

AUDIO UNIT
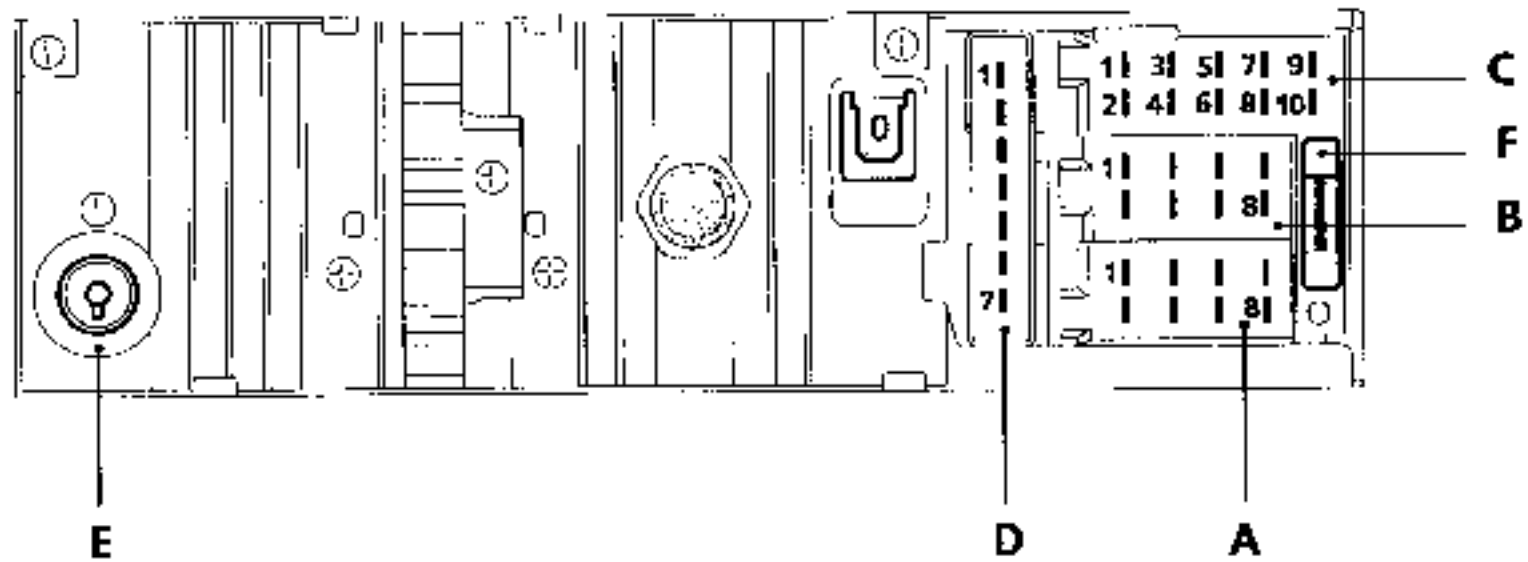
12130R

Connector (A) : feed

Track	Allocation
1	Vehicle speed information
2	Headphones socket
3	Radio sound cut-out (MUTE)
4	I before ignition
5	+ amplified aerial
6	I side lights (lighting)
7	+ accessories
8	Earth

Connector (B) : speakers connection

Track	Allocation
1	I Rear right speaker
2	- Rear right speaker
3	+ Front right speaker
4	- Front right speaker
5	+ Front left speaker
6	- Front left speaker
7	+ Rear left speaker
8	- Rear left speaker

F   10 Amp fuse
M Earth clip

Connector (C): CD player connection

Track	Allocation
1	Electronic earth for CD player communication connection
2	(+) data for CD player communication connection (data)
3	(-) data for CD player communication connection (data)
4	Earth
5	I before ignition feed (track 4 of connector A)
6	Not connected
7	+ aerial (track 5 of connector A)
8	Right hand audio input
9	Left hand audio input
10	Audio input earth

Connector (D) : display connection

Track	Allocation
1	Not connected
2	Not connected
3	Not connected
4	(+) data for VAN communication connection (data)
5	(-) data for VAN communication connection (data)
6	Not connected
7	Earth

Connector (E) : aerial

REMOTE DISPLAY
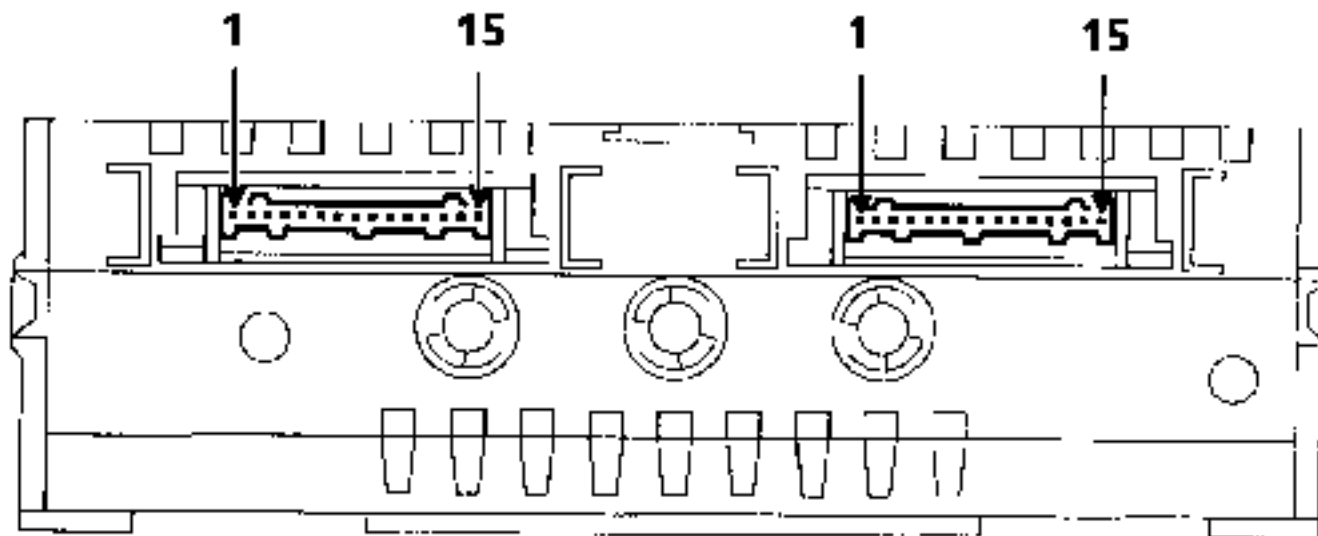
12132R

15 track blue connector

Track	Allocation
1	External temperature sensor information
2	0 V External temperature sensor
3	(+) data for VAN communication connection (data)
4	(-) data for VAN communication connection (data)
5	Earth
6	Side lights
7	+ rheostat lighting
8	+ accessories
9	+ before ignition
10	Not used
11	Not used
12	Not used
13	Not used
14	Not used
15	Not used

15 track red connector

Track	Allocation
1	Not connected
2	Not connected
3	Not connected
4	Not connected
5	Not connected
6	Not connected
7	Not connected
8	Not connected
9	+ before ignition
10	To satellite
11	To satellite
12	To satellite
13	To satellite
14	To satellite
15	Screening

- The connection between the display and the audio unit is by a **VAN** type communication connection.
Even if one of the three wires in the **VAN** connection became unable to function, the connection would remain perfectly operational.

- If the display does not communicate with the audio unit, the audio unit still remains functional.

- If the audio unit does not communicate with the display, the display remains illuminated but nothing is shown on it (no segments illuminated).

- If there is no satellite, the system remains completely operational but the code cannot be entered.

- There is no external temperature display when the sensor is not connected (all the segments concerned on the display remain extinguished).

DISPLAY TEST

To enter into display **test** mode, press buttons **23** simultaneously on the satellite, then, while keeping them depressed, press button 21 on the satellite.

12390R2
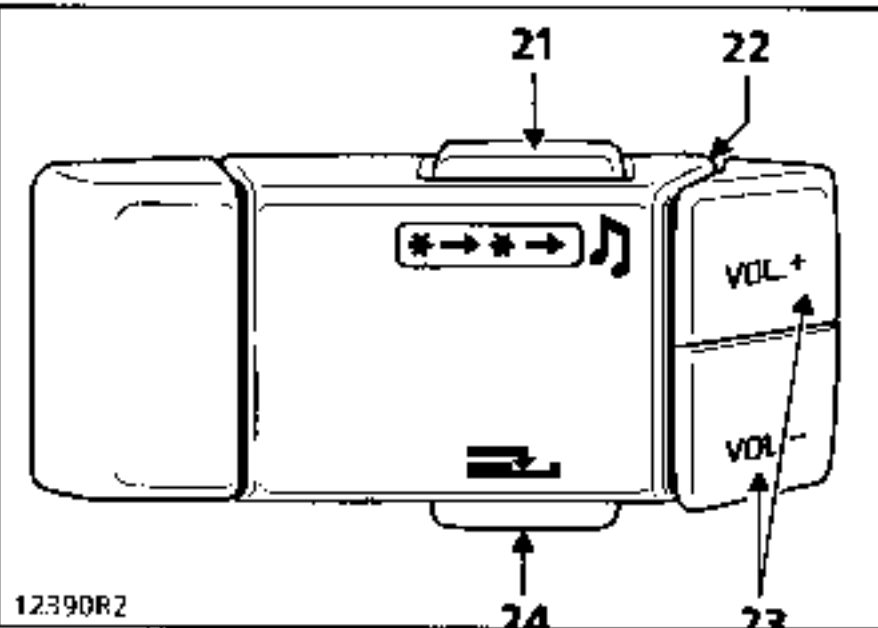
One of two cases will arise:

1) Ignition key in "+ accessories" position and radio off

All the segments and all the warning lights on the display will illuminate together.

If they are all correct, the following display will be seen.

1213151
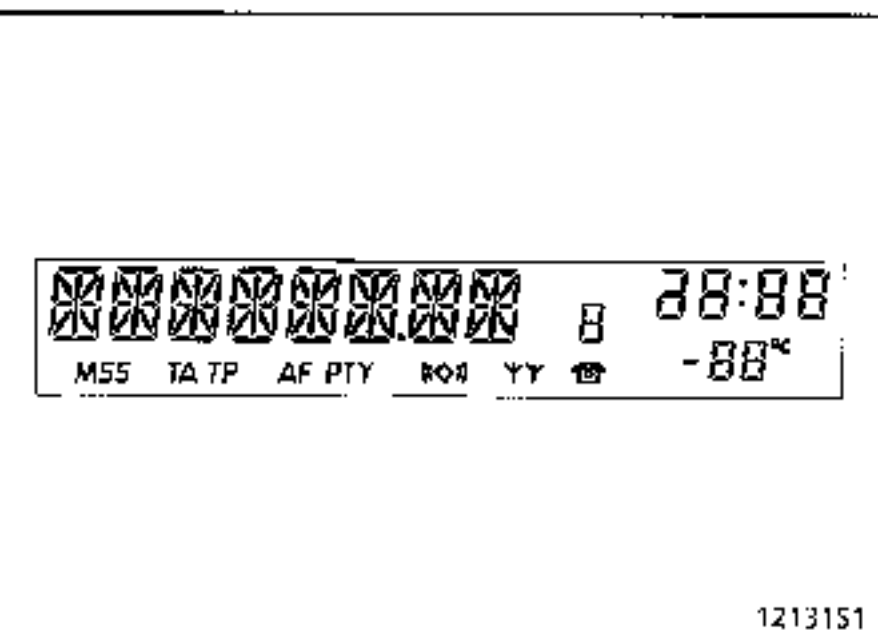
To leave **test** mode, turn the vehicle ignition off.

2) Radio operating

All the segments and all the warning lights on the **radio display** will illuminate together, for **2 seconds.**

The segments which are specific to the clock and external temperature displays are not tested and continue to indicate the values for these functions.

After **2 seconds**, the display returns to the message present before test mode was entered.

NOTE : this test may be carried out, regardless of the active mode (radio, cassette or CD).

CUSTOMER COMPLAINTS

- Ignition off, button **1 On/Off** does not illuminate when it is pressed, or ignition key in **"accessories"** position, **button 1** does not illuminate.

- **The display is extinguished**, ignition key in **"accessories"** position and after pressing button **1 On/Off** , the button illuminates but the display remains extinguished.

- The display illuminates, **"CODE"** is briefly displayed, then four zeros with the first figure flashing, but the first figure cannot be displayed.

- The display illuminates, shows **"CODE"** and remains on this message.

- After turning the set on using the On/Off button, a frequency is displayed but there is no reception.

- The audio unit buttons do not illuminate when the side lights are turned on (except the **On/Off** button)

- Everything is operational before turning the side lights on, but as soon as they are turned on, the remote display extinguishes.

Ignition off, button 1 On/Off
does not illuminate when it is pressed
or
ignition key in "accessories" position,
button 1 does not illuminate.

Check:
- the **10 Amp** fuse at the back of the radio,
- the **15 Amp** fuse F1 on the passenger compartment fuse board (see **vehicle wiring diagram**); replace if necessary.
- the audio unit feeds:
  . earth,
  . + permanent.

If the button still does not illuminate follow the repair procedure on the "**Diagnostic fiche**" at the end of the document.
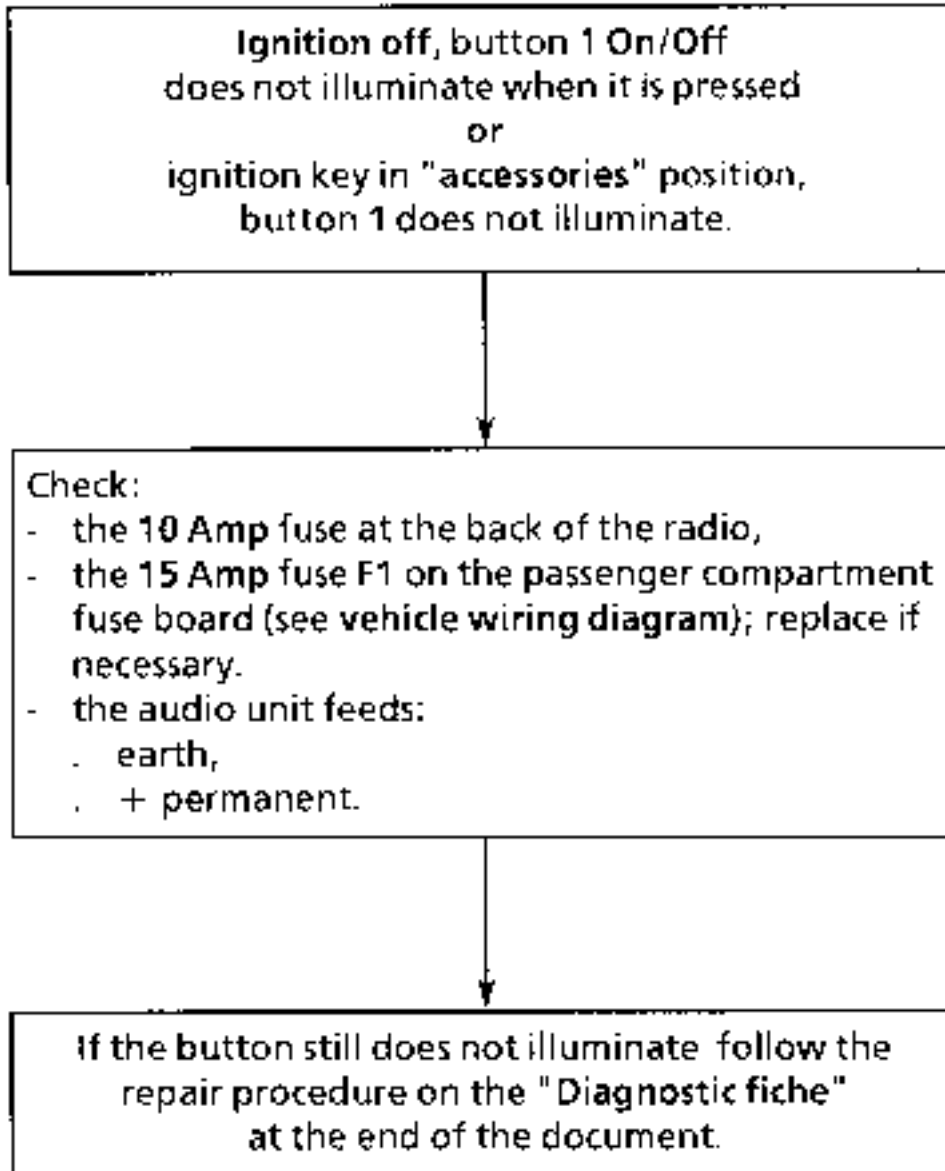
The display is extinguished, ignition key in "accessories" position and after pressing button **1** On/Off, the button illuminates but the display remains extinguished (side lights off).

↓

Check the condition of the three display bulbs. ──incorrect──▶ Replace the bulbs

↓ correct

Check the connection of connector **D** at the rear of the audio unit and the condition of the connections (see previous pages "**Connections**"). ──incorrect──▶ Repair.

↓ correct

Check the connection of the blue connector at the rear of the display and the condition of the connections. ──incorrect──▶ Repair.

↓ correct

Check the continuity of the lines:
- between track **3** of the blue connector for the display and track **4** of connector D at the rear of the audio unit,
and
- between track **4** of the blue connector for the display and track **5** of connector D at the rear of the audio unit. ──incorrect──▶ Repair.

↓ correct

(**A**)

(A)

Check the earth on track **5** of the blue connector for the display. →incorrect→ Check the continuity of the line between track **5** of the blue connector for the display and track **7** of connector D.

→incorrect→ Repair.

↓correct

Check the continuity of the line between track **7** of connector D and track B2 of the additional radio / passenger compartment wiring connection (black 6 tracks).

→incorrect→ Repair.

↓correct

Check the earth on track **B2** of the additional radio / passenger compartment wiring connection (black 6 tracks)

→incorrect→ Repair.

↓correct

Check for **12volts** between track 5 (earth) and track 9 on the blue display connector. →incorrect→ Check the continuity of the line between track **9** of the blue connector for the display and track B1 of the additional radio / passenger compartment wiring connection (black).

→incorrect→ Repair.

↓correct

Check the continuity of the line between track B1 of the additional radio / passenger compartment wiring connection (black 6 tracks) and the output from fuse **F1 15 Amps** (see wiring diagrams).

→incorrect→ Repair.

↓correct   ↓correct

Replace the display.
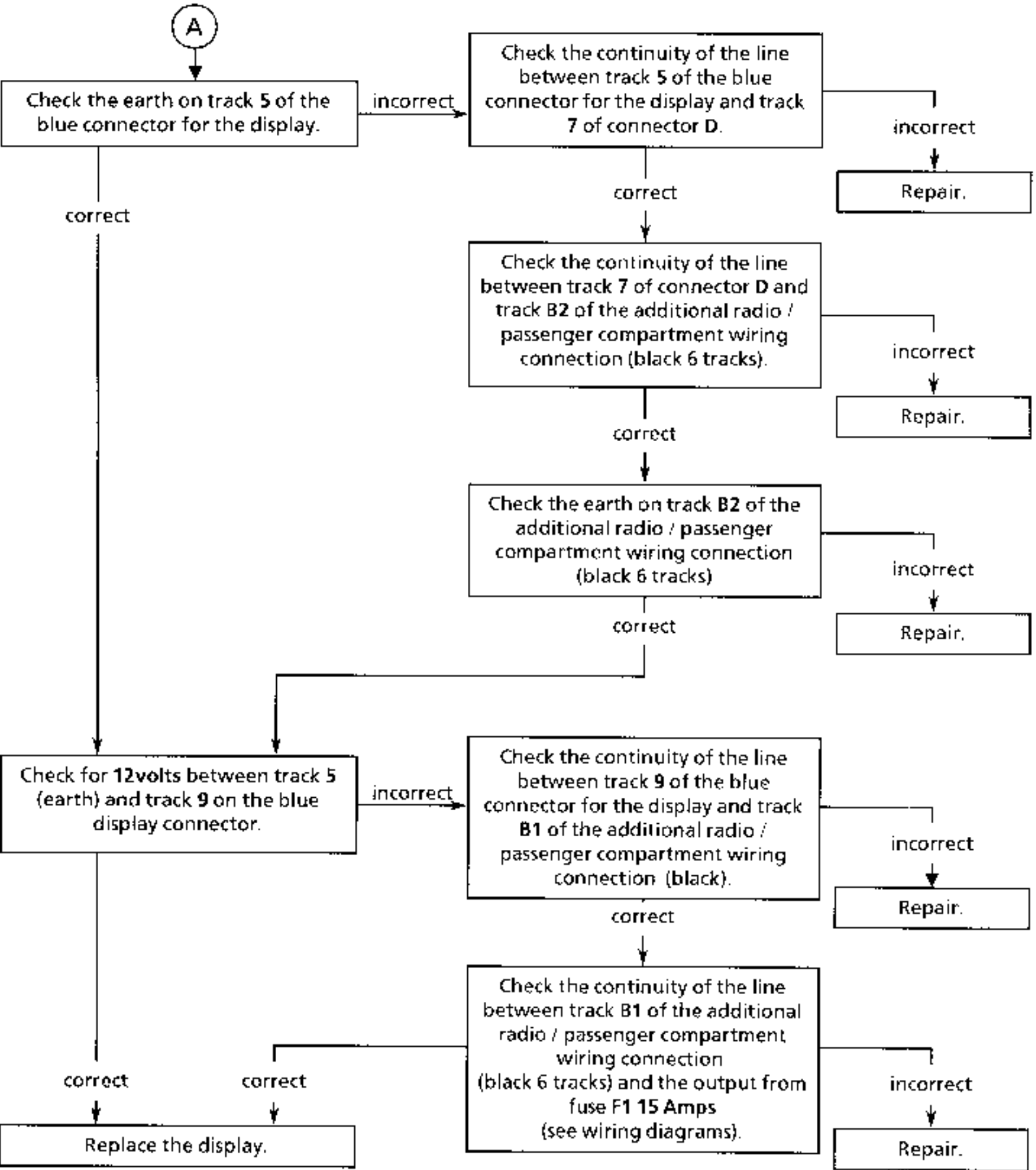
The display illuminates, shows "CODE" briefly then four zeros where the first figure flashes.

The display illuminates, shows "CODE" and remains on this message.

An incorrect code has been entered.
Leave the set on and wait for
1 to 32 minutes until the four zeros appear on the display again, with the first figure flashing.
Check the confidential code. Check with the Customer Relations service for example for France.

The first figure of the code cannot be displayed using the satellite tumblewheel or validated using button **24** on the satellite.
(see section "**Procedure for entering the code**").

Check the connection of the red connector behind the display and the condition of the connections.

correct

incorrect

Replace the satellite.

Repair.

If the fault persists, follow the repair procedure on the "**Diagnostic fiche**" at the end of the document.

After turning the set on using button **1 On/Off** , a frequency is displayed but there is no reception.

Manually tune to an FM station which is well received in the area.

Good reception but there is radio interference.

Check:
- the aerial earth,
- the aerial coaxial cable,
- the aerial amplifier unit.

Sound is heard, but high degree of interference.

Still no reception

Tune to a **GO (L)** station which is well received in the area.

Test with a cassette or CD

No reception

Good reception ⇒ fault with FM.

Check:
- the aerial coaxial cable is correctly connected,
- the aerial coaxial cable.
- the aerial amplifier unit.

(Test using another aerial, another coaxial cable and another amplifier unit).

Still no sound

Check the connection of connector B (see section **"Connections"**) at the rear of the radio and check the condition of the connections. Does the fault persist?

yes

no

Check the connection of the various speakers and the condition of the connections.
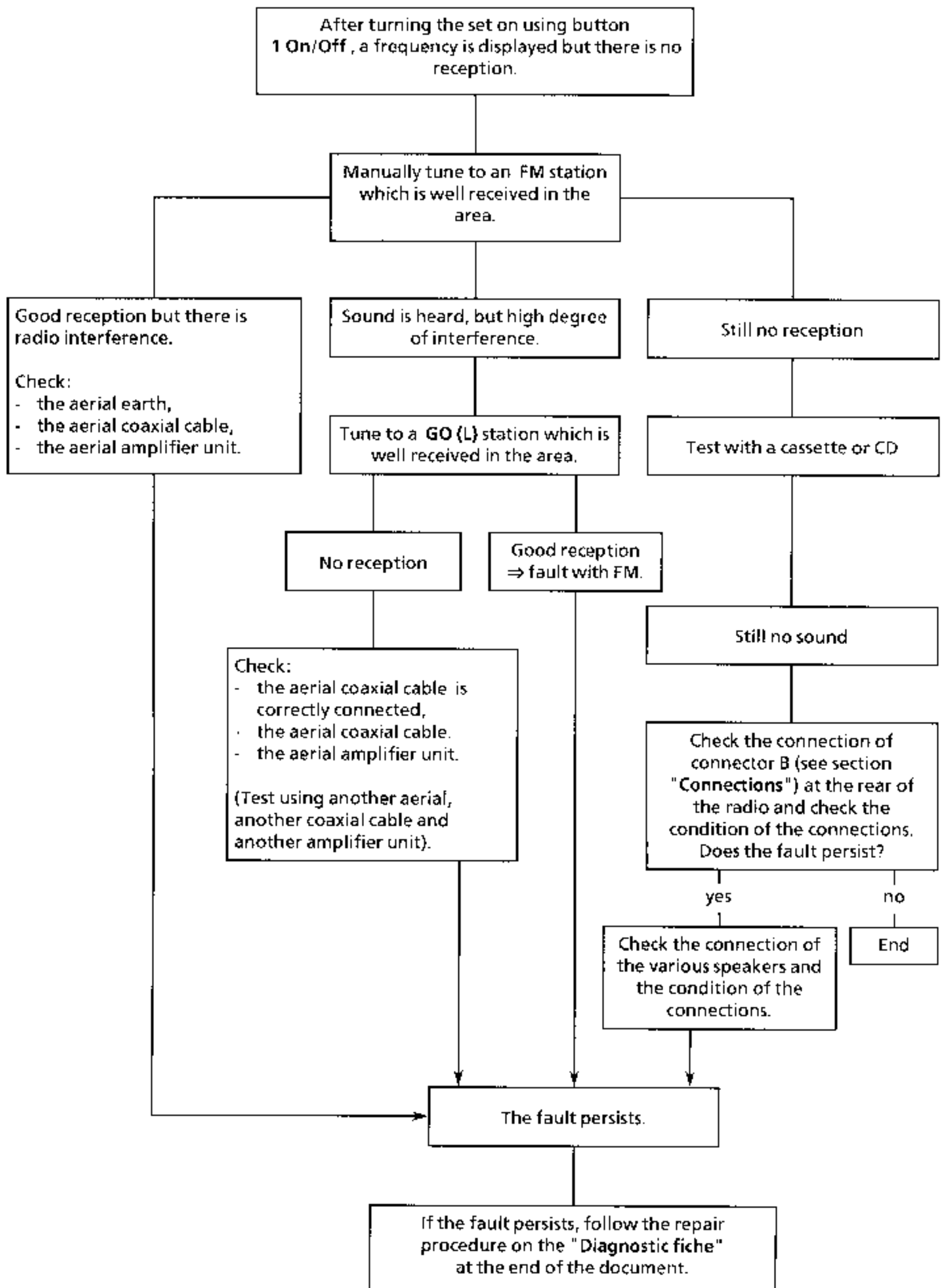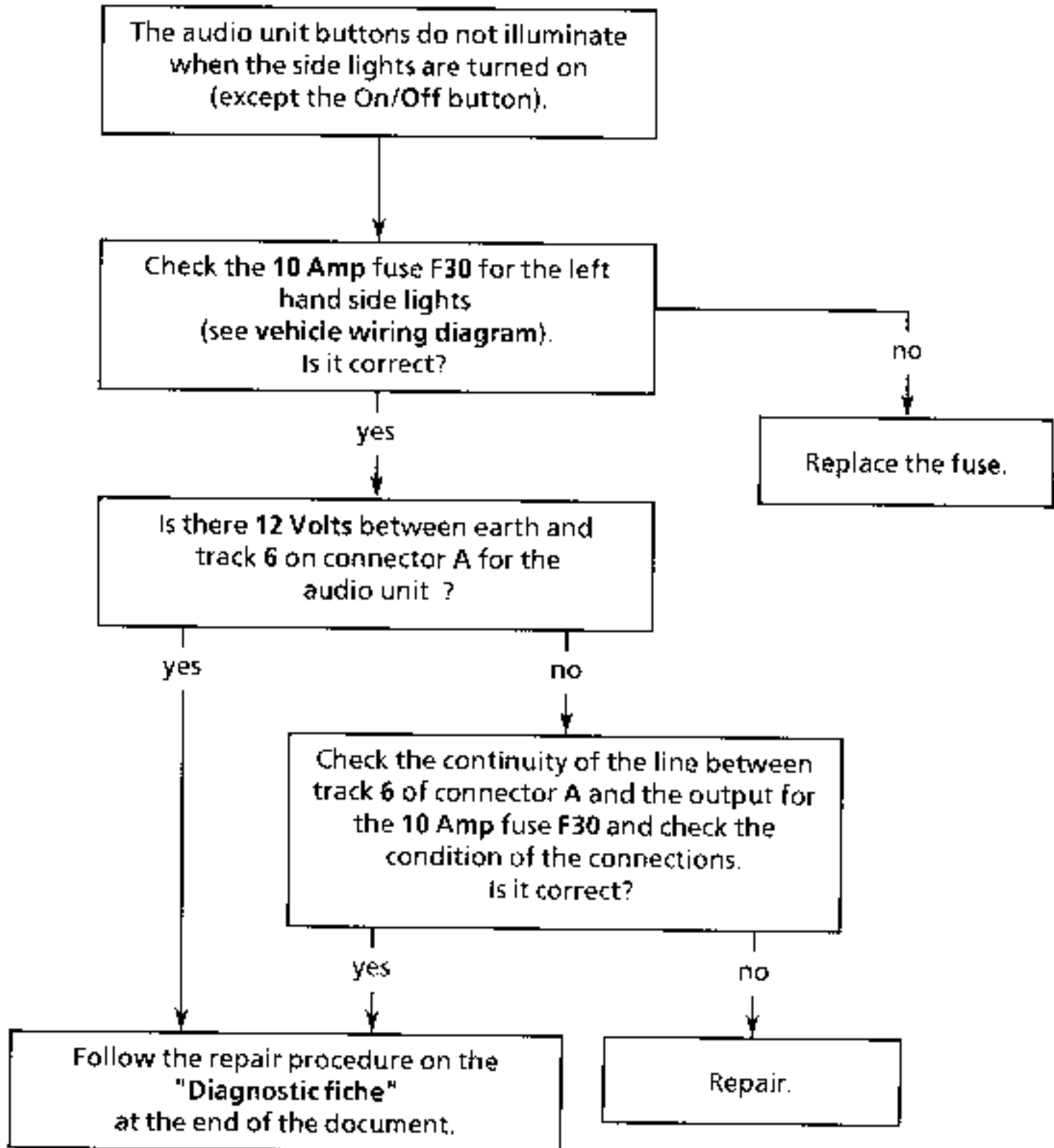
End

The fault persists.

If the fault persists, follow the repair procedure on the "Diagnostic fiche" at the end of the document.

The audio unit buttons do not illuminate when the side lights are turned on (except the On/Off button).

↓

Check the **10 Amp** fuse **F30** for the left hand side lights (see **vehicle wiring diagram**). Is it correct?

→ **no** → Replace the fuse.

yes

↓

Is there **12 Volts** between earth and track **6** on connector **A** for the audio unit ?

yes ← → **no**

no ↓

Check the continuity of the line between track **6** of connector **A** and the output for the **10 Amp** fuse **F30** and check the condition of the connections. Is it correct?

yes ← → **no**

Follow the repair procedure on the **"Diagnostic fiche"** at the end of the document.

Repair.

Everything is operational before turning the side lights on, but as soon as they are turned on, the remote display extinguishes.

Check for a voltage (side lights on) at track 7 of the blue display connector and check the condition of the connections.
Is this correct?

yes

no

Replace the display.

Check the connection of the connector at the rear of the lighting rheostat and the condition of the connections.
Is this correct?

no

Repair.
Does the fault persist?

yes

yes

no

End

Check the continuity of the line between track 3 on the lighting rheostat connector and track 2 on the clock / temperature unit connector.
Is this correct?

no

Repair.
Does the fault persist?

yes

yes

no

Replace the lighting rheostat.

End

1. Tuner

- **Wave bands**

PO - (M)	:	531 to 1 602 kHz
GO - (L)	:	153 to 281 kHz
FM	:	87.5 to 108 MHz
AST	:	87.5 to 108 MHz

- **FM sensitivity**

  10.7 MHz for FM
  450 KHz for PO and GO

- **Intermediate frequency**

  2 µV (for S/B 30 dB at 98.1 MHz)
  Automatic search at 2 sensitivity levels.
  Autostore search at 2 sensitivity levels (search from bottom of wave band).

2. " Autoreverse " cassette reader

- "Full logic" electric mechanism
- Soft keys - satellite - Loudness - Autoreverse
- Reading head   "Hard Permalloy"
- Tape speed   4.76 cm/s
- Wow and flutter   0.1 % WRMS
- Signal/ noise ratio   56 dB without Dolby* with JIS - A filter
  66 dB with Dolby B* and CCIR / ARM filter
- Cross talk   55 dB at 1 kHz with 1 kHz band pass filter
- MSS system   Track search: forward/ reverse fast search for the start of tracks.
- Dolby N.R.*   Type B

3. Low frequency amplifier

- Output (4 Ohms : 14.4 V)   4 x 25 W
  4 x 18 W for 10 % distortion
- Frequency response   30 Hz to 20 kHz
- Digital balance   Right/ Left
- Digital mixing   Front/ Rear
- Bass correction $\perp$ 12 dB at 100 Hz
- Treble correction $\pm$ 12 dB at 10 kHz
- Loudness $\perp$ 8 dB at 100 Hz
  $\pm$ 6 dB at 10 kHz

4. CD player

- Crosstalk   65 dB
- Signal / noise ratio   80 dB with JIS - A filter

* Registered trade mark of Dolby Inc. Laboratories.

MUST BE ATTACHED TO THE EQUIPMENT

OBLIGATORY FOR APPLICATION OF THE WARRANTY

DIAGNOSTIC FICHE: RADIO – DISPLAY – CD PLAYER

COMPANY NAME: .... **TEL :** .... **FAX :** ....

COMPANY ADDRESS: ....

CONTACT NAME: ....

FULL DESTINATION PARTS DEPARTMENT CODE NO. : .... **Date :** ...... /. ... /. ...

VEHICLE : Type .... **Fabrication No.(** ⬛ **)** **Delivery date:** ../ ... ./. .. ...

RADIO : Make: .... **Fabrication No.(*) or Type (*) :** ....

CODE : .... **Serial No.(*) :** ....

WARRANTY: YES / NO (Reply YES only for contractual warranty)

CUSTOMER COMPLAINT:

WORKSHOP DIAGNOSIS

GENERAL ☐ Does not come on ☐ no sound or weak sound
☐ Security code refused (Have you checked with customer relations department by MEMO?)

On certain radios, the code may only be entered using the satellite

RADIO ☐ Poor reception in: ☐ FM ☐ FM RDS ☐ G.O. ☐ P.O.
☐ Interference in : ☐ FM ☐ FM RDS ☐ G.O. ☐ P.O. Engine ☐ Running ☐ Off

Specify circumstances: ....
☐ Button: .... does not operate

CASSETTE ☐ Inserting ☐ Ejecting difficult or impossible
☐ Sound weak
☐ Damages tape
☐ Autoreverse broken
☐ Poor running (wowing)
☐ Button: .... does not operate

COMPANY STAMP WITH DATE

C.D. ☐ Inserting ☐ Ejecting difficult or impossible
☐ No sound
☐ Button: .... does not operate

AMPLIFIER ☐ Balance does not operate ☐ Front/rear ☐ Left / Right
☐ Speaker does not operate ☐ Front LH ☐ Front RH
☐ Rear LH ☐ Rear RH
(Check headphones switch)
☐ Equaliser does not operate ☐ Loudness ☐ bass ☐ treble

DISPLAY ☐ Does not come on ☐ Display fault ☐ Clock / Temperature

SATELLITE ☐ Satellite operating fault . Does the radio work when the satellite is disconnected? ☐ Yes ☐ No

OTHER FAULTS - SPECIFY:

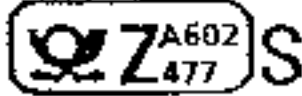(*) Look for type and serial numbers: see page 86-53

FAULT FINDING : Refer to the Workshop Repair Manual concerned

WARRANTY PROCEDURE - SEE DITG : 8/3 - 8/4 - 8/5 - 8/6 - 8/10

PHILIPS

PHILIPS | 22 DC 679/62 | ◄———————————————— Type

77 00 803 648

Z A602 477 S

9022 216 65725

MADE IN FRANCE

| FD 02 90 44 550 3890 | ◄———————————— Serial No.

BLAUPUNKT

BLAUPUNKT

77 00 818 275 Ind

| FD 9128 | ◄———————————— Fabrication Code

7 640 495 . 091

| BP0495N2450828 | ◄———————— Serial No.

Made in Germany

PIONEER

———————————————— Type

◯ PIONEER   CDX-91EROS

SPEC NO./NO. DE LOT

SERIAL NO./NO. DE SERIE   0 B   000031

PIONEER ELECTRONIC CORP.

———————————————— Serial No.

RENAULT   7700 841 007

ALPINE / LUXMAN

A42

77 CO ... ...

AL .. .. ———————————— Serial No.

C€

MC9RN410 .. ———————————— Type

MADE IN JAPAN