# Radio
# CDR 500

**OPEL** ⦵

Delco Electronics

CDR 500

CODE

UML   AS   TP   RDS

1   2   3   4   5   6

AIRBAG

# English

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# Short Overview

The radio CDR 500 enables reception of VHF, medium and long wave wavebands. It is equipped with a traffic radio decoder (TP) and receives data for Radio Data System (RDS). Six radio station keys enable the storage of a total of 30 radio stations.

The unit is equipped with a CD drive unit for playing standard CD's.

## Operating Elements

| no. | symbol | denotes |
|---|---|---|
| ❶ | OI | on/off: depress |
| | ◢ | volume control: turn |
| | ▶◁ | left/right balance: pull and turn |
| ❷ | Jſ | bass: turn |
| | | treble: pull and turn |
| ❸ | ⫽ | front/back fader: turn |
| ❹ | - | CD aperture |
| ❺ | ▲ | eject key and CD/radio |
| ❻ | - | unlock operating console |
| ❼ | - | LED unlock key |
| ❽ | [1]-[6] | radio station keys |
| ❾ | [RDS] | Radio Data System |
| ❿ | [TP] | traffic radio |
| ⓫ | ▶ | forward search key |
| ⓬ | ◀ | reverse search key |
| ⓭ | [AS] | automatic radio station allocation |
| ⓮ | [UML] | change waveband |
| ⓯ | - | detachable operating console |

## Steering Wheel Remote Control

| no. | symbol | denotes |
|---|---|---|
| ⓰ | → | radio: advance one station CD: restart |
| ⓱ | ◀ | reverse search key |
| ⓲ | ▶ | forward search key |
| ⓳ | + | increase volume |
| ⓴ | — | reduce volume |
| ㉑ | O | radio/CD selection mode |

## Display

The display in the vehicle (see vehicle operating instructions) is also used for external display of information from the radio. Two basic types of displays can be installed in the vehicle.
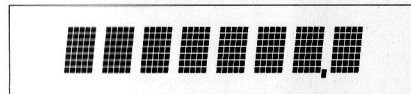


*8 digit display*
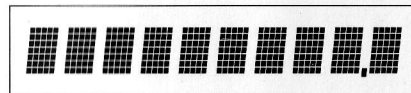


*10 digit display*

The displays of the 10 digit display are described in these operating instructions.

The displays of the 8 digit display correspond to those of the 10 digit display with the exception of the waveband and certain radio functions.

# Theft Prevention

## Coding

The unit is equipped with a safety system against theft. A coded radio is of no value to the thief and therefore you should code your unit (see the section "Coding" on page 32) and do not leave the Radio or Car pass with the code number in the vehicle.

The radio is coded before it leaves the plant.

## Detachable Operating Console

The unit has a detachable operating console as an additional theft protection. A LED in the release key ❻ for the operating console blinks ❼ after switching off the radio and the car ignition.

Take the operating console in its case when you leave your car. The unit will only work with its original operating console. Should this be lost, a replacement operating console must be first adapted by appropriate coding (see section "Adaptation of the Operating Console" on page 33).

## Removing the Operating Console

Press the release key ❻ and detach the operating console ❻ .

## Refitting the Operating Console

Put the operating console back into the recess and press on both sides to lock.

# On/Off Switch

**OI**  Depress knob ❶ to turn the radio on or off.

## Automatic Switch-On

If the unit has been turned on by depressing knob ❶ , it is turned off by switching off the ignition and removing the key, or simply by turning the ignition off (in some types of cars). The radio comes on again automatically when the ignition is turned on.

You can deactivate and reactivate this automatic switch-on by the following steps:

• Switch ignition on.
• Turn radio off with knob ❶ .
• Keep radio station keys [1] and [3] ❽ depressed.
• Turn radio on. The message *"IGNI ON"* is shown on the display. Release the depressed radio station keys only after the confirmation signal has given.

The message *"IGNI OFF"* is shown on the display. The unit may now only be turned on and off with knob ❶ .

The same steps as described above are followed to reactivate the automatic switch-on. The message *"IGNI ON"* is shown on the display.

The automatic switch-on is activated when the unit has been disconnected and then connected again to the operating voltage.

## Automatic CD Play-Back

If a CD has been inserted into the unit when switched off (see section "Insert CD" on page 29), the unit will switch on automatically and play the CD.

## Automatic Switch-Off

The unit will automatically switch off one hour after the car ignition has been turned off. The automatic switch-off function is independent of the automatic switch-on.

# Volume Control

### ◢ Set volume

• Turn knob ❶ .

### ◥◣ Set Balance left/right

• Pull knob ❶ .
• Turn knob.

### 🔳 Set Fader forward/back

• Depress retractable knob ❸ .
• Turn the knob.
  The knob retracts out.
• Depress the knob to return it to retracted position.

When switching on the set, the radio is set to the volume level you last adjusted, if this level did not exceed the factory set basic volume level.
If the volume level was higher, the radio is set to it´s basic level.

## Automatic Volume Control

The volume is regulated in accordance with the speed of the vehicle. You can regulate this volume control.

### Set Volume Regulation

• Keep **[UML]** ⓮ key depressed until the confirmation signal is given.
• Set the desired volume increase using the search buttons ⓫ and ⓬ .
  *"SD-VOL 0"* or *"SD-VOL +1"* to *"SD-VOL +5"* appears on the display.
• Depress the **[UML]** ⓮ key again until the confirmation signal is given in order to store the setting.

The automatic volume regulation is not active in the setting *"SD-VOL 0"*.

If you do not depress any key within 10 seconds, then the previous setting will remain stored.

# Tone Control

You can adjust the tone using the retractable knob ❷. You can adjust the bass and the treble independently from each other. The knob retracts into the neutral position (middle setting).

## ♩  Adjustment of the Bass

- Depress the retractable knob ❷.
  The knob retracts out.
- Turn the knob (to the left to reduce the bass; to the right to increase the bass).
- Depress the knob to return it to its retracted position.

## ♪  Adjustment of the Treble

- Depress the retractable knob ❷.
  The knob retracts out.
- Pull the knob out further.
- Turn the knob (to the left to reduce the treble; to the right to increase the treble).
- Depress the knob to return it to its retracted position.
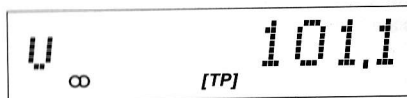
# Radio

## Select Waveband

Turning the radio on will automatically select the waveband previously tuned. A different waveband can be selected using the [UML] ⑩ key.
Depress the [UML] key repeatedly until the desired waveband is selected.

Depressing the key once from the VHF waveband (Very High Frequency) will select the MW waveband (Medium Wave). Depressing the key again will select the LW waveband (Long Wave). Depressing the [UML] key again will switch back to the VHF waveband again.

The waveband currently selected is shown on the display ("U", "U AS", "M", "M AS" or "L").

```
U                101.1
  oo      [TP]
```

*Frequency Display of a VHF Radio Station*

## Manual Adjustment to the Transmitter Frequency

- Touching the search key ⑫ will drop the frequency by 100 kHz.
- Touching the search key ⑪ will raise the frequency by 100 kHz.

## Start Radio Station Search

Depress search key ⑪ or ⑫ until the automatic search starts. Reception of the next radio station will be selected.

Keeping one of the search keys depressed will sweep the frequency band as long as the key is released again.

The reception remains dormant until a radio station is locked in. If the RDS function has been activated, reception of the next RDS transmitter station will be selected.

## Use of the RDS Function

*"What is RDS?"*



*R*ädio
*D*ata
*S*ystem

**RDS** is a service of the public radio institutions which has been introduced Europewide to facilitate the search for the desired VHF radio station and its interference-free reception.

In addition to the programs transmitted, RDS transmitters also radiate a digital data telegram containing information which is automatically interpreted by RDS receivers.

If RDS is switched on, the designation of the radio station is shown on the display.

Each RDS station transmits at several frequencies. The radio receiver continually compares the signal quality of these frequencies during travel and changes frequencies to maintain reception of the strongest frequency at all times (best reception of the selected radio station). The radio station designation on the display remains unchanged.

### Activate RDS

• Select the VHF waveband
• Depress **[RDS]** ❾ .
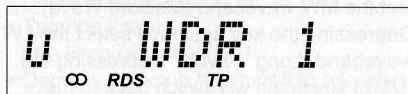


*Display: RDS activated*

The symbol *"RDS"* is displayed. The search function will now only react to RDS transmitters. The radio will automatically select the frequency as well as the radio station which can be received best.

If the radio station set is not a RDS transmitter, then a MEMORY search will be conducted and the VHF additional memory will be automatically updated (see section "Update VHF Additional Memory", page 28).

### Deactivate RDS

Depress **[RDS]** ❾ key again.

The symbol *"RDS"* is no longer displayed. The frequency is displayed instead of the radio station designation. The radio no longer determines the best reception frequency for that radio station.

### Display the Frequency of a RDS Transmitter.

Depress the **[UML]** ⓮ key (approx. 1 second) until the display switches from the radio station designation over to the reception frequency.
The frequency is displayed for approx. 5 seconds.

### Selection of Regional Radio Stations

Some RDS radio stations transmit regional programs. They can be allocated to each radio station key so that alternative transmitter frequencies should be selected for only those regional programs previously heard.

Keep the radio station keys depressed, i.e. **[1]** to **[6]** ❽ , for those which are to be allocated to regional programs, until the confirmation signal is given.
*"REG ON"* will be displayed.

Repeat the same steps to deactivate this function.
*"REG OFF"* will be displayed.

# Traffic Announcements

The functions for traffic radio are international and are designated by the symbol **TP** = Traffic Program. Reception of a radio station with traffic is shown on the display by the symbol *"TP"*.

### Activate Traffic Radio (TP)

• Select VHF waveband.
• Depress key **[TP]** ❿ .

The symbol *"[TP]"* is shown on the display. The symbol *"[   ]"* is shown on the display when search is being conducted or if the reception of the radio station is not possible.

When a CD is being played, the play-back is interrupted by traffic announcements. The traffic radio function (TP) can also be activated during CD play-back. In this case, the designation of the radio station last heard is displayed for 5 seconds. If the reception had been that of a radio station not transmitting traffic radio, then the strongest traffic radio transmitter will be searched.

If traffic radio is activated and a transmitter is selected not transmitting traffic radio, then the strongest traffic radio transmitter will be searched.

With the automatic radio station memory activated by the **[AS]** ⓭ key, the sweep will be continued until at least one traffic radio transmitter has been found, provided the traffic radio function has been activated beforehand. After memorizing, the radio will switch over to a memory slot with a traffic radio transmitter, provided there is one available.

### Deactivate Traffic Radio

Depress the **[TP]** ❿ key again. The symbol *"[   ]"* will no longer be displayed.

If a traffic announcement is given, the button **[TP]** must be depressed twice in order to deactivate the traffic radio.

The alternatives TP on or TP off are not memorized when allocating transmitters to the radio station keys.

## Adjustment of the Volume for Traffic Announcements

The volume for the traffic announcements can be preset and independently of the normal volume level for the radio.

```
PROG
TP-VOL    +2
       [TP]
```
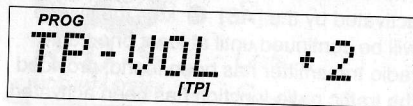
*Preset the volume level for traffic announcements.*

- Depress the **[TP]** ⑩ key (approx. 3 seconds) until the confirmation signal is given.
  The preset volume will appear on the display, for example "TP-VOL +1".
- The desired setting between -3 and +3 can be selected using the search keys ⑪ and ⑫.
- Keep the **[TP]** ⑩ key depressed again until the confirmation signal is given.
  The setting is then memorized.

If you do not depress the **[TP]** key within 10 seconds, the unit will revert to the normal operation without memorizing any change in the setting.

During traffic announcement playback you can adjust the volume with the ❶ key. The radio returns to the volume set only by increasing the volume after the traffic announcement has finished.

## Hearing Traffic Announcements only

If you only want to hear the traffic announcements, turn traffic on. Turn knob ❶ to the left until the normal sound volume is reduced to zero.

Only the traffic announcements are then heard at the preset volume.

## Interrupt Traffic Announcements

Depress the **[TP]** ⑩ key for a short time, in order to interrupt the traffic announcements (for example during CD play-back). The traffic radio function remains activated.

# RDS-EON

An extension of RDS is the EON function. EON is an abbreviation for: **E**nhanced **O**ther **N**etworks (support of other transmitters).

With RDS-EON, certain Transmitting Institutions offer the possibility of hearing traffic announcements even by reception of non-traffic radio transmitters. The radio unit interprets information from RDS data from alternative radio stations transmitting traffic radio.

Non-traffic radio transmitters with associated RDS-EON are treated as traffic radio transmitters by the radio unit.
The symbol "EON" (10 digit display) or "TP" (8 digit display) is displayed for these transmitters.

## Hearing Traffic Announcements via RDS-EON

Depress key **[TP]** ⑩ . The symbol *"[TP]"* is displayed. When a traffic announcement is given, the radio unit will switch over to a traffic radio transmitter which is in the EON network.

After the announcement, the unit will revert to the radio station previously heard. During the traffic announcement, the designation of the radio station is shown on the display.

The RDS-EON function is also in operation during CD play-back if the traffic radio (TP) has been activated.

# Radio Station Keys

There are memory slots available for a total of 30 radio stations:

6 x U (VHF)
6 x M (MW)
6 x L (LW)
6 x U AS (VHF, automatic storage)
6 x M AS (MW, automatic storage)

## Memorize Radio Station

• Select desired waveband.
• Tune to desired radio station.
• Keep one of the radio station keys depressed **[1]** to **[6]** ❽ until the radio station selected can be heard again. During the search, the radio station is displayed which was previously stored and allocated to that key.

The radio station set is thus stored and allocated to this radio station key. The memory slot selected is shown on the display.

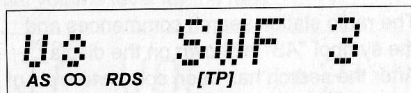## Automatic Storage of Radio Stations

• Select desired wavelength.
• Keep **[AS]** ⑬ key depressed until the confirmation signal is given.

The radio station search commences and the symbol *"AS"* is shown on the display. After the search has been completed, six of the strongest transmitters in that waveband are stored. They are allocated to the AS memory slots of the radio station keys. RDS transmitters will automatically be preferentially stored and allocated to the first memory slots.

When the traffic radio function (TP) is turned on either before or during automatic storage of radio stations, the unit will recall a memory slot with a stored traffic radio transmitter (not necessarily memory slot 1).

## Recall Stored Radio Station

- Select desired waveband.
- Depress one of the radio station keys [1] to [6] ❽ for a short time.

```
U3      SWF 3
AS ⊂⊃ RDS    [TP]
```

*Radio station on button 3, waveband VHF-AS (automatic storage).*

If you want to recall a radio station stored with AS:

- Select desired waveband.
- Depress [AS] ⓭ key for a short time.
- Depress one of the radio station keys [1] to [6] ❽ for a short time.

## Use of VHF Additional Memory

In addition to the radio station buttons, the unit has an additional memory for VHF in which all VHF radio stations are stored which can be received. This memory can be "paged through" using the search keys.

The VHF additional memory can be re-assigned either manually or automatically using the automatic storage (AS).

## Paging Through the VHF Additional Memory

- Turn the RDS function on.
- Depress one of the search keys ⓫ or ⓬ for a short time.

The frequencies or designations of those radio stations are given on the display which are stored in the VHF additional memory.

## Update VHF Additional Memory

Keep the [RDS] ❾ key depressed until the confirmation signal is given. The display shows *"MEMORY-U"* for a short time, followed by *"MEMO"* and the frequencies (sequentially).

The memory sweep is completed after approx. 30 seconds and the radio will then return to its normal mode of operation, whereby the strongest transmitter received will be selected.

The radio stations allocated to the radio station keys will not be replaced by this function.

A further possibility is to recall the function of the automatic storage (AS) of radio stations. This function will replace the radio stations which were allocated to the AS memory slots for those radio stations.

# CD Operation

## Insert CD

Insert the CD (lettered side up) into the slot until the CD is automatically received and taken. The display shows *"T-- CD"* during this.

After the CD has been accepted, the player begins with first track on the CD. On the display, initially the total number of tracks on the CD is shown *"Txx CD"*, followed by *"T 1 CD"*.
After the last track has been played, play-back of the CD begins again, starting with the first track.

If the CD has been inserted incorrectly, the display will show *"ER-CD"*.

## Interrupt CD Play-Back

- Depress eject key **5** for a short time. The radio unit will revert from CD mode to radio operation.
- Depress eject key again for a short time to return the unit to CD play-back mode.
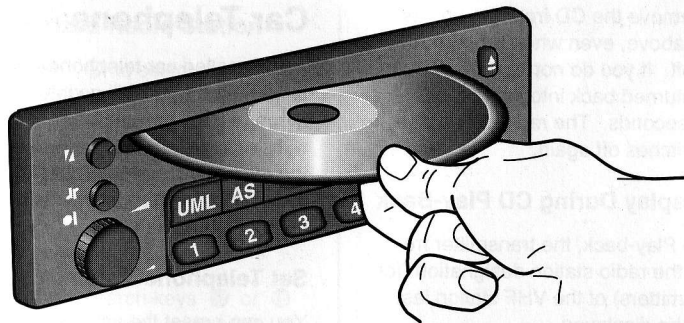
## Title Selection

Depress search keys **11** oder **12** for a short time and until the number for the desired track appears on the display. If you depress the search key ◄ for a short time, the track just played will be repeated.

## Use of Search

Keep search key **11** oder **12** depressed until the desired track on the CD has been reached.

The display will show the number of the track as well as its duration in minutes and seconds, e.g. *"3 02-42"*. A fast play-back, initially at 10 times and then at 30 times the normal speed occurs at a reduced volume level.

## Eject CD

Depress eject key **5** until *"EJECT CD"* is displayed. The CD is ejected and the radio unit reverts to the radio mode of operation.

If you do not take the CD out of the unit within approx. 20 seconds, it will be returned into the CD player again (to protect the CD from damage).
In this case, the unit will remain in radio mode. The display will show the symbol *"CD IN"*.

You can remove the CD from the unit as described above, even when the radio is switched off. If you do not take the CD out, it will be returned back into the unit after approx. 5 seconds. The radio unit subsequently switches off again.

## Radio Display During CD Play-Back

During CD Play-back, the transmitter frequency or the radio station designation (for RDS transmitters) of the VHF station last heard can be displayed.

Depress the **[UML]** ⑭ key for a short time. The desired information will be displayed for 5 seconds, e.g. "U1 101.2".

During these 5 seconds, a different radio station can be recalled, or a search can be started using the search keys.

If the traffic radio (TP) function is active, or if it is activated during play-back of a CD, the radio unit will automatically search for the strongest traffic radio transmitter if the radio station last heard can no longer be received.

# Car Telephone

If an installed car telephone is connected to the unit, the radio will go into telephone mode when a call comes in. The display will show "MESSAGE". In order to utilize the telephone mode, the car telephone must be connected to the radio by an authorized Opel dealer.

## Set Telephone Volume Level

You can preset the volume level for the telephone and independently from the normal volume for the radio unit.

- Turn radio off.
- Keep **[TP]** ⑩ key depressed and turn the radio on again.
  The confirmation signal will be given. The preset volume level will appear on the display, e.g. "MS-VOL + 1".
- Select the desired setting between -3 and +3 using the search keys ⑪ and ⑫ .
- Again keep the **[TP]** key depressed until the confirmation signal is given.
  The setting will be stored.

If the **[TP]** key is not depressed within 10 seconds, the unit will revert to its original setting without storing any changes.

The volume level can be adjusted during an incoming call by using the knob ❶ .

## Interchanging of Incoming Calls and Traffic Announcements

When the traffic radio is activated (symbol "[TP]" on the display) and a telephone call is received during a traffic announcement, the incoming call will be given precedence. By use of the button **[TP]** ⑩ , you are able to interchange in such cases between the running traffic announcement and the telephone call.

# Steering Wheel Remote Control

Not included on all vehicles.

## Adjust Volume

- Depress key ✚ ⑲ to increase the volume.
- Depress key ➖ ⑳ to decrease the volume.

## Mode Switch

Depress key ◯ ㉑ to interchange between radio operation and CD play-back operation.

## Tune Radio Station

Depress one of the search keys ⑰ or ⑱ for a short time in order to activate the automatic search function or to page through the VHF memory. The radio remains dormant until a transmitter has been locked in.

Keep one of the search keys depressed in order to manually tune to a radio station.

## Recall Memorized Radio Station

Depress key ➡ ⑯ to select the desired radio station from the allocated keys in the memory. Each depression of the key will advance the selection by one stored radio station from the waveband in current selection.

## Select CD Track

Depress one of the search keys ⑰ or ⑱ to advance to the next track on the CD. If you depress the search key ◀ once for a short time, play-back of the track currently being played will be repeated.

## Use of CD Search

Keep one of the search keys depressed until the desired track on the CD has been found.

## CD Repeat

Depress key ➡ ⑯ . Play-back of the CD starts again at the first track.

# Coding

Secure your unit by coding it. A coded radio is of no value to the thief. The code number is to be found in the radio or car pass.

The coding of the unit is only possible when the ignition is turned on.

If the unit is detached from the operating voltage, for example by removal of the unit (theft) or detachment of the battery, it is electronically safeguarded.

Only you can put the unit back into operation by entering the correct code (see "Putting the Unit back into Operation", page 33).

Should the theft protection be dispensed with, e.g. by sale of the unit, it must first be decoded (see "Decoding the Unit", page 33).

In order that the attempt to put the unit into operation by trial and error be not made, waiting times take effect following unsuccessful decoding attempts. The number of remaining decoding attempts is shown on the display.
During the waiting period, the radio must remain switched on.

The waiting time after the first two unsuccessful attempts is approximately 20 seconds, after which the waiting time increases to 10 minutes following the third attempt. Following the ninth unsuccessful attempt, the waiting time has reached to 640 minutes.

The unit will lock after the tenth unsuccessful attempt ("SAFE" is shown on the display). A replacement against invoice by an authorized Opel dealer is then necessary.

It is therefore recommended to let an authorized Opel dealer put the unit back into operation after the sixth unsuccessful attempt.

## Check Coding

The following function can be used to check whether the unit is coded or not.

The coded unit indicates "CODE" on the display for a short period every time after it is turned on and provided the ignition is switched on.
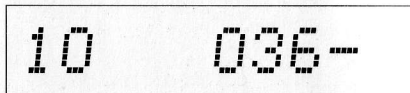
## Coding the Unit

The theft protection is activated by coding the unit.

- Switch on the ignition.
- Turn the radio off.
- Turn radio on while keeping the **[AS]** ⓯ key depressed. The display shows "CODE" and after 3 seconds "- - - -" appears.
- Enter the first digit of the code number using the radio station key **[1]** ❽. Each depression of the key will raise the digit on the display by one.
  Depress the key as often as necessary to reach the correct digit in the first position of the display.
- Enter the next three digits of the code number using the radio station keys **[2]** and **[4]** ❽.
- Keep the **[AS]** key depressed until the confirmation signal is given.
  The radio subsequently goes out of dormant mode.

The correct way to proceed is highlighted by the following example:

Example: code number: 0 3 6 5

| radio station key | display | | | |
|---|---|---|---|---|
| depress key [1] 1 x | 0 | - | - | - |
| depress key [2] 4 x | 0 | 3 | - | - |
| depress key [3] 7 x | 0 | 3 | 6 | - |
| depress key [4] 6 x | 0 | 3 | 6 | 5 |

```
10        036-
```

*Code number entry; the fourth position is still missing.*

## Putting the Unit back into Operation

When the operating voltage has been interrupted because the unit has been removed or the battery disconnected, the unit goes into a special "safe" mode. The unit remains dormant in this mode.

If you then want to return the unit to operating mode, the following steps must be carried out.

• Switch the ignition on, turn radio unit off.
• Keep the **[AS]** ⑬ key depressed and turn the radio on. Initially *"SAFE"* will be shown on the display, followed by *"10 - - - -"*. The number 10 indicates the number of attempts left to enter the correct code number.
• Enter the code number given in the radio pass using the radio station keys **[1]** to **[4]** ⑧ as described in "Coding the Unit". Overwrite the code number if an incorrect entry is made, i.e. the whole number must be re-entered.
• When the correct code number is visible on the display, depress the **[AS]** ⑬ key until the confirmation signal is given. If the code number is correct, the unit will go out of dormant mode.
• If the code number entered is incorrect and the **[AS]** key for confirmation has been depressed, the display will show *"9 SAFE"*, after the waiting time *"9 - - - -"*. The correct code number can then only be entered after allowing for the waiting time to elapse.

## Decoding the Unit

The theft protection is cancelled when the unit is decoded.

Proceed as described in "Coding the Unit". After the unit has been successfully decoded, the unit will go out of dormant mode.

The radio unit is thus no longer protected against theft, and can be put back into operation following an interruption of the operating voltage.

### Adaptation of the Operating Console

The radio unit will only operate using the original operating console. If this is lost, a replacement operating console must first be adapted to the unit by coding.

• Set operating console ⑮.
• Switch the radio unit on.

The radio is in dormant mode and the display will show *"PANEL"*. To adapt the new operating console, conduct those steps which are described in the section "Coding the Unit".

# General Information

## Consult an authorized Opel dealer should functional interferences occur.

## VHF Reception

In spite of the high technical quality, VHF reception in vehicles can differ from that with stationary receivers (HiFi equipment). Interferences can therefore also occur in the reception from RDS transmitters.

The technical causes of such interferences can be found in the operating instructions for the vehicle.

## Handling of CD's

Avoid fingerprints when inserting the CD into the unit. Return the CD to the CD box immediately after removal from the unit, in order to protect it from damage and dirt.

Protect CD's from heat and direct sunshine.

## Interruption of Voltage Supply

The memorized data but not the radio station designation will remain stored if the battery is changed. The unit can be electronically locked by the theft protection. Enter the code number in order to return the unit to normal operation (see "Putting the Unit back into Operation", page 33).

If the code number is lost, consult an authorized Opel dealer. The return to operation of the unit will only be carried out upon proof of identity and will be invoiced.

These Operating Instructions have been printed on chlorine free bleached paper, as a contribution to the protection of the environment.