ŠkodaAutorádio MS 402
ŠkodaAutoradio
ŠkodaCar radio

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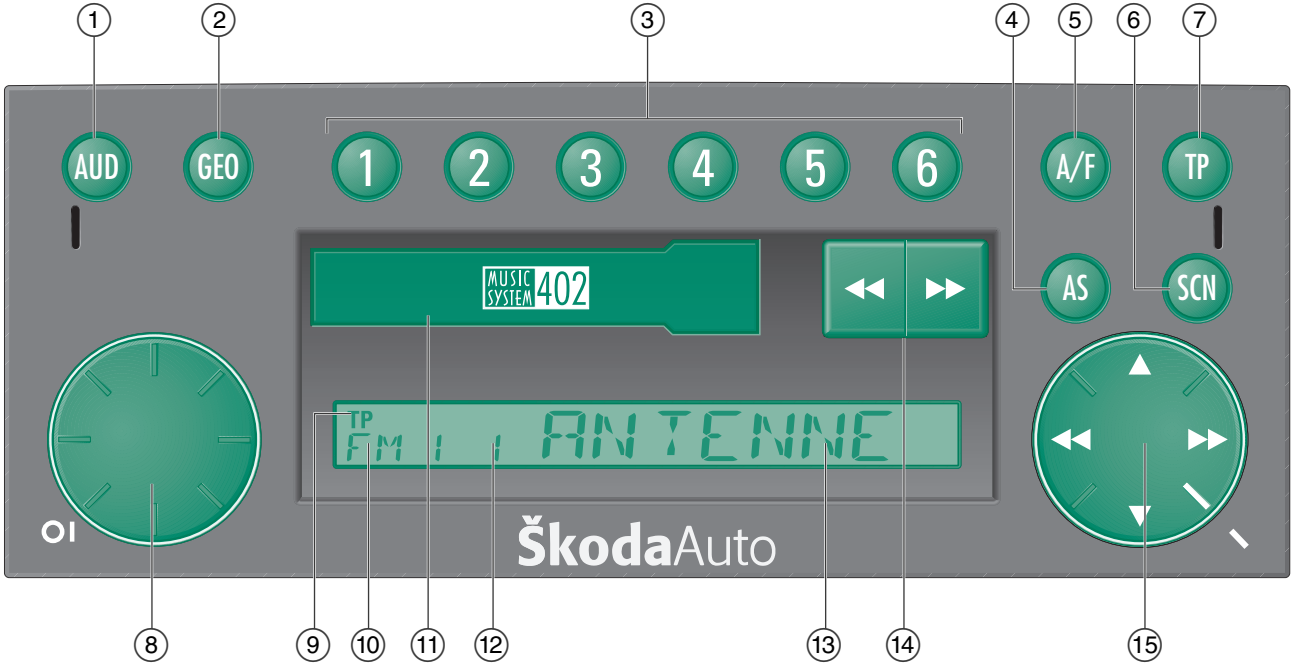
CE

This unit corresponds to the EMV protective requirements (EC directives 89/336 EWG and 93/68/EWG) according to the EN 55013 and EN 55020 norms.

GENERAL VIEW



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① – Tone control 8
Press the tone control buttons and turn the control knob/push button ⑧ to change the setting.
– 1 pressure: bass control (BASS)
– 2 pressures: treble control (TRE)

② – Tone balance button 9
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– 1 pressure: fader (FAD)
– 2 pressures: balance (BAL)

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for 12 FM and 12 AM stations.

④ – AS button..... 6
This button serves for the automatic storage of 6 stations in every range.

⑤ – A/F button..... 6
This button serves for switching over between FM 1/2 and AM 1/2 mode.

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Pressing this button briefly plays stations in radio mode.

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Pressing this button a longer time displays the Setup menu.

⑧ – Control knob/push button 5
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– Tone control: press the tone control button ① then turn the control knob.
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Briefly press the rocker to start a station search cycle in the AM range.
When in the FM range, you can scroll through the memory list.

Display

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⑩ – Wavebands 2
⑫ – Station buttons indication 2
⑬ – Station name 2

Operation while driving

The requirements in today's road traffic call for the full attention of the road users at any time.

The comprehensive and pretentious features of modern car radios offer a lot of information about traffic and road conditions besides an abundance of entertainment.

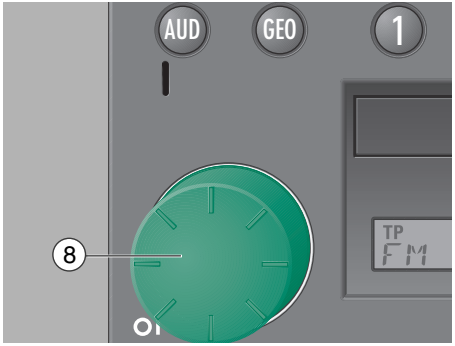
However, the radio system with its many functions should only be operated if the traffic situation allows for this.

For example, changing cassettes or reading a cassette lable while driving has already often led to dangerous situations.

In addition, the volume of the radio system should always be adjusted so that you can still safely hear outside acoustic signals.

Caution
Keep complete control of your vehicle at all times!

Control knob/push button



⑧ – Control knob/push button

This knob/button permits:

- **Switching on/off the radio**
- **Volume control**
- **Tone control**
- **Tone balance control**

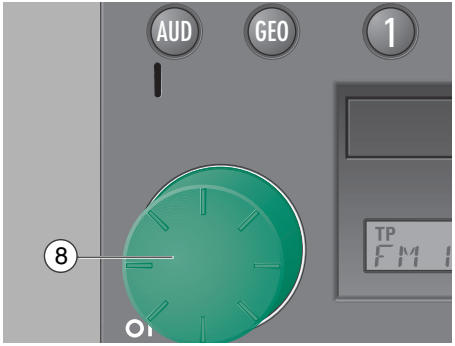
Switching on/off, volume control

Pressing the push button ⑧ switches the radio **on and off**.
The frequency and volume adjusted before switching off are recovered.

If the ignition key is removed from the ignition lock with the radio switched on, the radio is automatically switched off.

If the ignition key is refit into the ignition lock and turned, the radio is automatically switched on.

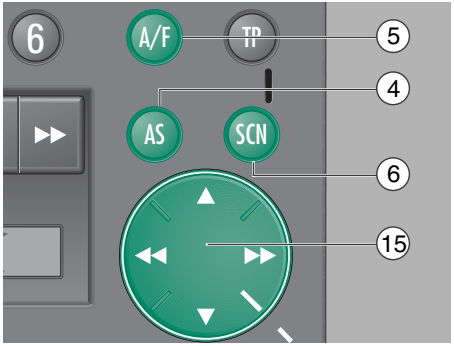
If the ignition key is pulled out, you may switch on the radio by pressing the control knob/push button ⑧ twice.
After about 1 hour the radio is automatically switched off to avoid discharging of the car battery.
You may repeat this operation as often as desired.



If the car radio remains mute after switching on and "SAFE" appears in the display, observe the notes from page 18.

Turning the control knob ⑧ allows you to change the volume, the tone or the tone balance settings.

RANGE SELECTION BUTTON



⑤ – A/F button

Use the A/F button ⑤ to switch between the "FM" and "AM" ranges.

Press the A/F button ⑤ repeatedly to switch between the memory levels "FM1" and "FM2" or “AM1“ and “AM2“.

The display shows "FM1" or "FM2" for the memory levels in the FM range, and "AM1" or "AM2" for the memory levels in the AM range.

AUTOSTORE function

④ – AS button

The AS button ④ allows you to automatically store the strongest stations in a convenient way.

Using the AS function, you may store 6 stations in each of the FM and AM wavebands.

Automatic storing

- Select the "FM1" or "AM1" waveband. If you then press the "TP" button, only traffic radio stations are searched. If AM has been selected, the radio switches automatically to FM.

The "FM2" and "AM2" wavebands should be used for the "AS" function only if you are frequently changing your location or during the holidays.

- Press the AS button ④ for about 2 seconds. "STORE" appears in the display and the 6 strongest stations are stored on the station buttons ① … ⑥. This operation takes several seconds.
- When storing is completed, the radio selects automatically the strongest station.

You may call up the stored stations by pressing the corresponding station button ③.

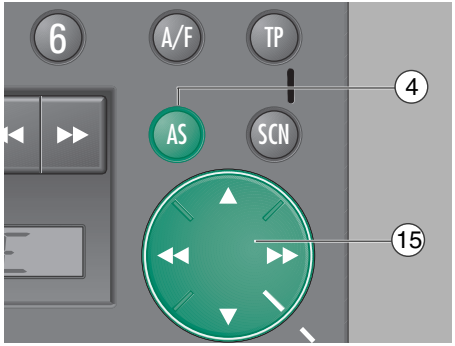
⑥ – SCN button

If you press the SCN button ⑥, all stations in the selected waveband are heard several seconds.

- Press the SCN button ⑥.
- «SCAN» appears in the display. You hear one station after the other for several seconds.

If you wish to hear the current station permanently, press the SCAN button ⑥ again..

Programming RDS stations (IS function)



With the push of a button you may store up to 30 stations in the IS memory. The stored stations then can be called one after the other.

The IS memory is useful if you wish to re-assign the station buttons, or when you are in an unknown reception area and do not wish to delete already stored stations.

Starting the IS search

- Press on ◀◀ or ▶▶ of the rocker ⑮ repeatedly for more than 2 seconds until "IS ON" appears in the display.
- Press the AS button ④ for about 2 seconds. "STORE" appears in the display.
  This operation takes several seconds.
- If no reception is possible, for example in an underground car park or if the aerial is defective, the search function may be endless. In this case you may switch off the search function by pressing one of the station buttons ① … ⑥.

As soon as the IS search is completed, up to 30 stations are stored. You then will hear the station giving best reception.

The intelligent search function first stores the RDS stations (sorted by station name) and then the remaining stations in the order of their volume level.

Calling up the IS memory contents

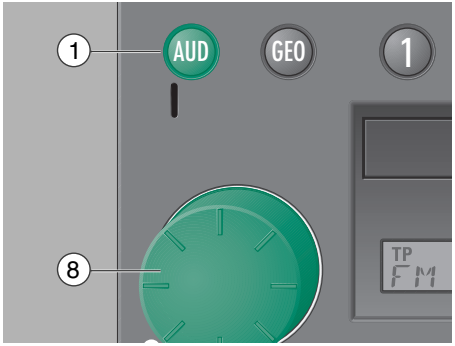
Selecting the IS mode

- Press on ◀◀ or ▶▶ of the rocker ⑮ repeatedly for more than 2 seconds until "IS ON" appears in the display.
- Briefly press on ◀◀ or ▶▶ of the rocker ⑮.

Switching the IS mode off

- Press on ◀◀ or ▶▶ of the rocker ⑮ repeatedly for more than 2 seconds until "IS OFF" appears in the display.

Tone control



① – Tone control button

After pressing the AUD button ①, the following indications appear in the display:

- 1 pressure: bass control "BASS",
- 2 pressures: treble control "TRE".

You may change the tone control setting by turning the control knob/push button ⑧.

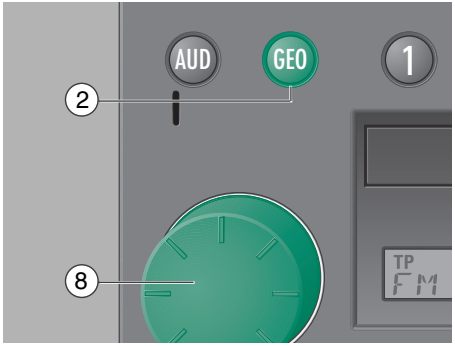
Bass control (BASS)

- Press the AUD button ①. "BASS" and the current setting +6 to –6 appear in the display.
- Turn the control knob/push button ⑧ to the left or the right to adjust the desired setting.
- If you wish to adjust the bass control immediately to its centre setting, press the AUD button ① until "BASS 00" appears in the display.
- When this is done, press the AUD button ① again to store the setting. This will select at the same time the treble control mode.

Treble control (TRE)

- "TRE" and the current setting +6 to –6 appear in the display
- Turn the control knob/push button ⑧ to the left or the right to adjust the desired setting.
- If you wish to adjust the treble control immediately to its centre setting, press the AUD button ① until "TRE 00" appears in the display.
- When this is done, press the AUD button ① again to store the setting.
- To go directly to the treble control mode, press the AUD button ① briefly twice.

Tone balance control



② – Tone balance button

After pressing the tone balance button GEO ②, the following indications appear in the display:

- Fader (FAD)
- Balance (BAL)

Turn the control knob/push button ⑧ to the left or the right to adjust the desired setting.

Fader (FAD)

With this function you may adjust the volume balance of the front/rear loudspeakers.

- Press the GEO button ②.
  "FAD" and the current setting (from FRONT 15 via CENTER to REAR 15) appear in the display.
- Turn the control knob/push button ⑧ to the left or the right to adjust the desired setting.
- If you wish to adjust the Fader control immediately to its centre setting, press the GEO button ② until "CENTER" appears in the display.
- When this is done, press the GEO button ② again to store the setting. This will select at the same time the Balance control mode.

Balance (BAL)

With this function you may adjust the volume balance of the left/right loudspeakers.

- "BAL" and the current setting (from LEFT 15 via CENTER to RIGHT 15) appear in the display.
- Turn the control knob/push button ⑧ to the left or the right to adjust the desired setting.
- If you wish to adjust the Balance control immediately to its centre setting, press the GEO button ② until "CENTER" appears in the display.
- When this is done, press the GEO button ② again to store the setting.
- To go directly to the balance control mode, press the GEO button ② briefly twice.

Information about RDS stations

When storing RDS stations you should press the corresponding station button only when the station name appears in the display. This ensures that all RDS information has been interpreted and stored automatically.

When calling up stored RDS stations, the corresponding station name is displayed. If the stored frequency is too weak for good reception, the radio searches automatically for an appropriate alternative frequency (best station function).

If **non** of the stored alternative frequencies is strong enough for good reception, the desired station cannot be received at the moment. In this case, tune to another station.

Please make sure that the station name is displayed when the station is stored. If a moving text should be displayed, this will be stored instead of the station name.

How does RDS work?

In many European countries, **RDS** is already transmitted by many radio stations. The goal is to provide an overall coverage.

With this system, an inaudible digitized data current is transmitted in addition to the normal FM radio signal, providing the RDS receiver with information in encoded form which controls, among other things, the following functions:

- **Programme identification (PI code)**

With the help of the PI code, the radio recognizes the currently received station.

- **Programme service name (PS code)**

The PS code transmits the station name which is shown in the display.

- **Alternative frequencies (AF code)**

Because of the limited transmission range of the FM waves, the programme of one radio provider is transmitted by several stations on different frequencies. The AF code informs the radio about all alternative frequencies of the same programme. This enables the radio to tune to the frequency which can be received in the best quality.

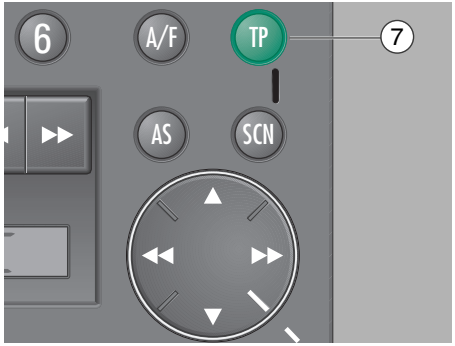
Tuning to another frequency is carried out in an inaudible way.
The station name in the display remains unchanged.

While you are driving, the RDS radio searches permanently for alternative frequencies of the station selected and tunes to this in an automatic and inaudible way.

- **Traffic programme identification (TP code = Traffic programme)**

This information tells the radio that it is currently receiving a traffic programme station.

Traffic programme functions



⑦ – TP button

The TP standby mode allows you to hear only traffic announcements. Even if the volume is set to minimum, the traffic announcements are heard with the programmed volume – **see also page 14**. If the transmission range of the traffic station tuned to is left, the radio will start after about 30 seconds an automatic station search.

Interrupting a traffic announcement

You may wish to interrupt a traffic announcement in certain situations, for example

– if the announcement does not concern your route,
– if the announcement is very long and the part concerning you is already completed.

While an announcement is heard, this will be aborted and the previous mode, for example radio reception or cassette play, is continued. A new traffic announcement will be heard again.

To switch definitely off all traffic announcements, deactivate the TP function.

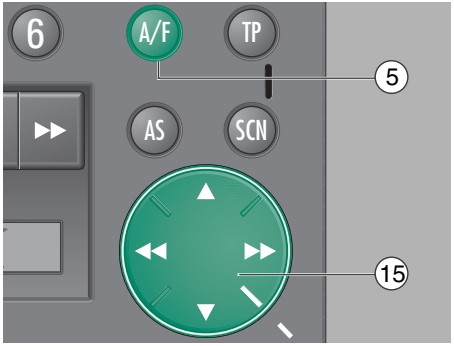
Station buttons

You may store up to 24 stations on the 6 station buttons in connection with the respective memory levels.

FM1/FM2 range = 6 stations each
AM1/AM2 range = 6 stations each

"FM2" means that you are in the second memory level. Press the A/F button ⑤ to switch between the memory levels.

Manual tuning



First press the A/F button ⑤ repeatedly to select one of the memory levels of the "FM1", "FM2", "AM1" or "AM2" ranges.

⑮ – Station search rocker

Press on ▲ or ▼ of the rocker ⑮ to start the manual station search.

- Briefly press one side of the rocker ⑮: "MAN" and the current reception frequency appear in the display.
- Briefly press repeatedly on ▲ or ▼ of the rocker ⑮: The frequency is changed in single steps (50 kHz steps in FM, 1 KHz steps in AM).
- Hold down ▲ or ▼ of the rocker ⑮: the frequency scrolls at high speed.

Manual storing

Manual storing

- Press the station button ③ on which the station is to be stored until the mute function is deactivated (the frequency to be stored appears in the display). The station is stored.

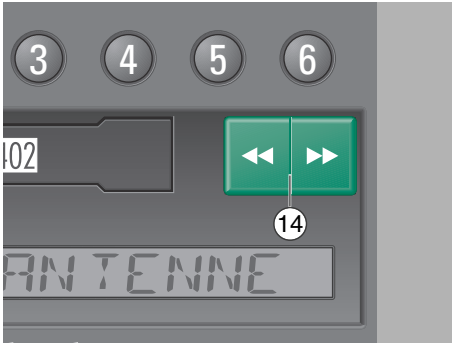
Please make sure that the station name is shown while the station is stored and not a moving text as otherwise the moving text will be stored instead of the station name.

Cassette compartment

Insert the cassette fully into the cassette compartment. When inserting a cassette, the radio switches automatically to cassette play.

The tape run direction is indicated by "PLAY FOR" or "PLAY REV" in the display

Fast forward and rewind



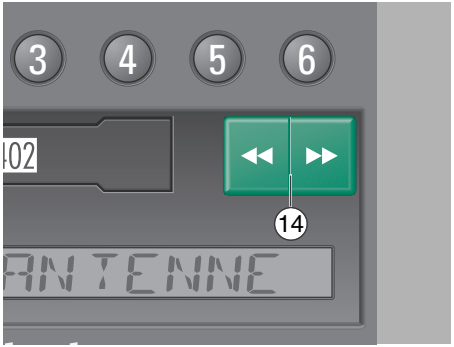
⑭ Fast forward and rewind

Pressing the button ◀◀ or ▶▶ ⑭ selects fast rewind or forward, respectively.

“WIND” appears in the display.

Briefly pressing the button ◀◀ or ▶▶ ⑭ ends the fast forward or rewind function

Reverse function cassette ejection



⑭ Reverse button

- Briefly press the button ⑭ during cassette play to select the other cassette side. The tape run direction is indicated by "PLAY FOR" or "PLAY REV" in the display.

If the cassette side changes automatically during cassette play, the casssette may jam. In this case, select the fast wind or rewind function. If this does not remove the fault, use another cassette.

At tape end, the cassette side changes automatically (Autoreverse)..

Cassette ejection

- Press and hold down the button ⑭ during cassette play to eject the cassette (motor ejection).

Cassette mode and traffic radio programmes

When the TP function is activated during cassette mode, cassette play is automatically interrupted during a traffic announcement so that this can be heard.

If the transmission range of the traffic station tuned to is left, the radio will automatically search a new traffic radio station.

Briefly press the TP button ⑦ if you wish to abort a traffic announcement and to continue cassette play.

A new traffic announcement is heard again.

The Setup menu

Pressing the TP button ⑦ for more than 2 seconds enables you to carry out special settings and special RDS functions.

To select the individual Setup menu items, use the two rockers (see pos. ◀◀ or ▶▶ and ⑮).

It is possible to select the following menu functions.

- **TAVOL**
- **LRN**
- **REG**
- **ONVOL**
- **IGN**
- **PHONE**
- **CODE/SAVE**

Exit the Setup menu

Press the TP button ⑦ or make no adjustment for more than 30 seconds to save your changed settings and to exit the Setup menu.

TAVOL

The TAVOL function enables you to adjust the minimum volume for traffic announcements.
If the current volume is lower than the TAVOL setting, the volume of the traffic announcement will be increased to the TAVOL setting.

- Select TAVOL in the setup menu. "SETUP TAVOL" and the current setting appear in the display.
- Use the control knob/push button ⑧ to select the desired setting. The setting range is 04 – 20.

LRN ON/OFF

If you are driving in a region where the reception of RDS programmes with traffic announcements is poor, you may prevent the automatic station search in radio mode.

"LRN ON" automatic LEARN desired,

"LRN OFF" automatic LEARN not desired.

- Press ▲ or ▼ of the rocker ⑮ to select the desired setting.

REG ON/OFF

If the reception quality gets poor, your car radio first only selects an alternative frequency of the current station.

However, if the reception quality gets so poor that a lose of the station becomes possible, the radio will also accept frequencies of a “related” station.

The "REG ON/REG OFF" function enables you to select whether alternative frequencies with identical programme are to be tuned to with the help of the RDS signal, that is, regional stations are only selected in the case of emergency.

- Select REG ON/REG OFF in the Setup menu.
  "SETUP" and the current setting are displayed. The "REG ON" setting is preset at the factory.
- Press ▲ or ▼ of the rocker ⑮ to select the desired setting.

REG OFF: free change between all regionally related stations.

REG ON: preferred change between identical programmes; in the “case of emergency” also change to a regional programme.

ONVOL

With the ONVOL function you may limit the maximum switch-on volume.
Normally the last adjusted volume will be recovered when switching the car radio on. However, if the switch-off volume is higher then the ONVOL setting, the switch-on volume will automatically be limited to the ONVOL setting.

- Select ONVOL in the Setup menu.
  "SETUP ONVOL" and the current setting appear in the display.
- Use the control knob/push button ⑧ to select the desired setting. The setting range is -- – 47.

IGN ON/OFF

Switching on and off with the ignition switch.

"IGN ON" You may switch the car radio on and off with the ignition switch of the vehicle.

"IGN OFF" You may switch the car radio on and off only with the "IO" button.

- Press ▲ or ▼ of the rocker ⑮ to select the desired setting.

PHONE OFF/ON/IN

The PHONE function enables you to select whether a telephone call is to be heard via the loudspeakers when a mobile telephone is connected.

- Select PHONE in the Setup menu. "SETUP PHONE" and the current setting "ON", "IN" or "OFF" appear in the display.
- Press ▲ or ▼ of the rocker ⑮ to select the desired setting.

"PHONEOFF": no interpretation of the telephone connection.

"PHONE ON": the car radio is automatically muted on reception of a telephone call.

"PHONE IN": the car radio is automatically muted on reception of a teelephone call and the conversation is heard via the loudspeakers.

CODE/SAVE

If "CODE" appears in the display, coding is not activated.

If "SAFE" appears in the display, coding is activated.

The way how to activate and deactivate the coding is described on the the following pages.

Coding

Deactivating the electronic security system

If the electronic security system has locked the car radio for any reason, for example, when the car battery has been disconnected or a fuse has blown, “SAFE” appears in the radio’s display after switching on.

- After about 1 second, "1– – – –" appears in the display.

If you now enter the **correct** code number, the electronic security system can be deactivated.

If is absolutely necessary to follow the order of the operational steps:

- Switch the radio on: "SAFE" appears in the display.
- After about 1 second, "1– – – –" appears in the display (1 stands for the first attempt).
- Use the station buttons ③ to enter the code number which is to be found on the radio card.

Briefly press the station button 1 to enter the first digit of the code number, then **station button 2** for the **second digit**, etc.

- When this is done, press for more than 2 seconds on ◀◀ or ▶▶ of the rocker ⑮ then release the pressure.
- If you have entered the correct code, the frequency will be displayed after a few moments.

The car radio is operational again.

If you should have lost the radio card with the code number, please contact a Skoda service point.

Incorrect code number

If you enter an incorrect code number when attempting to deactivate the electronic security system, "SAFE" appears after about 10 seconds and then “2 – – – –” (2nd attempt) in the display.

You may then repeat once the entire operation. The number of attempts is indicated in the display.

If you enter an incorrect code number again, the radio will be locked for the waiting times indicated in the table below.

Waiting times between attempts:

Attempt (display)	Waiting time (approximately)
1	10 sec.
2	1.5 min.
3	5 min.
4	21 min.
5	1.5 hrs.
6	6 hrs.
7	24 hrs.
8	24 hrs.

Activating the electronic security system

Press the TP button ⑦ to display the Setup menu.

- Select the "CODE/SAVE" function.
- Press ▲ or ▼ of the rocker ⑮.
- "1– – – –" appears in the display.
- Use the station buttons ③ to enter the code number which is to be found on the radio card.
  Briefly press the station button 1 to enter the first digit of the code number, then **station button 2** for the **second digit**, etc.
- When this is done, press for more than 2 seconds on ◀◀ or ▶▶ of the rocker ⑮ then release the pressure.
- If you have entered the correct code, “SAVE” will be displayed after a few moments.

The car radio is locked again.

Tips to cassette mode

The device is provided with an automatic tape type switch-over function. For optimum playback quality we recommend you to use “chromium dioxide” or “metal” cassettes. To ensure a troublefree operation, you should only use cassettes of well-known manufacturers.

If distortions should occur when playing prerecorded cassettes, we recommend you to copy the recording on a cassette of a renowned make.

To prevent distortions due to the cassette itself, we recommend you to use only C-90 or C-60 cassettes.

You should not stick adhesive labels or additional labels on the cassette. During cassette mode, the cassette may get warm and the label detach causing malfunctions.

Never expose cassettes for a long time to very low (below -10° C) or very high (above +50° C) temperatures inside the vehicle. Please consider that the temperature inside the vehicle may be considerably higher than outside the car.

Avoid exposure of the cassettes to direct sunlight. It is best to store the cassettes in their boxes or in the original cassette tray with reel lock available for most vehicles.

If the high frequencies should get lost after long operation (about 100 hrs. according to tape material), the sound head may be soiled by tape abrasion. In this case, clean the sound head using a wet cleaning cassette. Use only cleaning cassettes of a nenowned make and follow the user manual of the cassette manufacturer.

Guarantee

For our car radio systems apply the same guarantee conditions as for new vehicles.

A damage in the sense of the guarantee must not be caused by improper handling of the system or by inexpert attempts of repair. In additioin, no visible damages must exist.

Display
Frequency, station name, waveband, station button, TP (traffic programme), cassette functions.

Max. output power
4 x 20 Watt (max.),
4 x 17 Watt (to DIN at 4 Ohm).

Illumination
Anti-glare illumination of the control elements and the display when the vehicle illumination is switched on (night design). The brightness can be adjusted according to the instrument board illumination.

Waveband selection
By touch buttons.

Cassette player
Wear-resisting high-performance sound head, automatic tape type recognition, rocker for fast forward and rewind and switch-over to radio reception in the case of traffic announcements, automatic change of cassette side at tape end (autoreverse).

Theft protection
Electronic security system locking the radio when the power supply is disconnected. The radio can be put into operation again only by entering the correct code number.

Reception ranges
FM, AM (MW).

Interference suppression
The automatic interference suppression integrated in the radio eliminates most interferences during FM reception.

Special intereference suppression circuits eliminate most interfering impulses generated by the motor and other parts of the electrical system, for example, ventilator, windscreen wiper, etc.

Station selection
Automatic play of the last station tuned to (last station memory) in radio mode.

Six station buttons each for AM1/AM2, FM1/FM2. Direct manual tuning for RDS stations. Manual tuning possible in the direction of high or low frequencies. Microcomputer-controlled stabilization of the transmission frequencies (PLL quarz-tuning).

Traffic radio programme functions
Automatic station search, automatic traffic announcements, switch-over to mono during traffic announcements.

Audio functions
Stereo, active tone control, sound balance control integrated in the radio, multiple loudspeaker system.

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