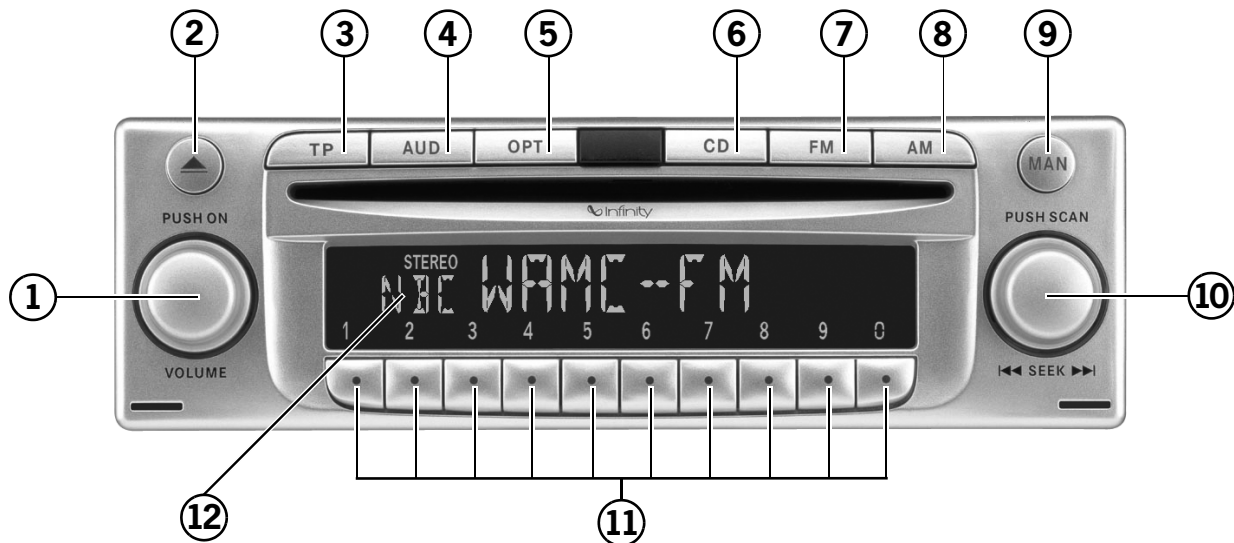


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1. Arrangement of controls



① Volume control – on / off switch

② CD eject button (▲)

③ Mute button (TP)

④ Sound button (AUD)

⑤ Sub-menu selection button (OPT)

⑥ CD button (CD)

⑦ FM radio button (FM)

⑧ AM radio button (AM)

⑨ Manual frequency setting button (MAN)

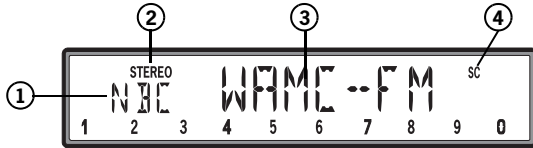
⑩ Right rotary control/push button

⑪ Multifunction buttons

⑫ Display

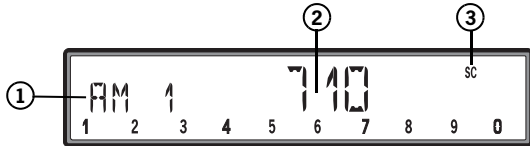
2. Display - Overview

Display for radio - FM



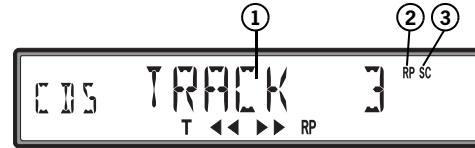
- ① BEST – station display / memory location number
- ② Abbreviation for stereo - reception
- ③ Set station
- ④ Abbreviation for active scan search

Display for radio - AM



- ① Memory location number
- ② Set station
- ③ Abbreviation for active scan search

Display for CD operation



- ① Current track
- ② Abbreviation for random play
- ③ Abbreviation for active scan function

3. General operation

3.1. Switching on/ off

- Volume control – press on/off button.
- With the ignition key.
If the unit was switched off via the ignition, the unit will switch on, when the ignition is switched on again. After switching off the ignition, the unit can be prevented from switching off by pressing the volume control within 3 seconds.

Note

When the ignition is switched off, the unit can be switched on by pressing the volume control button, but it will switch off automatically after 1 hour.

3.2. Adjusting the volume

Turn volume control to right / left. The current volume level appears briefly on the display.



3.3. Sound settings

The following functions can be called up: **BASS**, **TREB** (Treble) and **BAL** (Balance – volume distribution left/right).

Bass and treble settings (values from -9 to +9) for the AM/FM wavebands and CD mode are stored separately. The setting for balance is stored commonly for all modes (values from -9 to +9). After 6 seconds without any action, or by pressing **OPT**, **CD**, **AM**, **FM** or **TP**, the current setting can be quit. The new setting is stored.

Bass (BASS)

Press **AUD** repeatedly until **BASS** appears.



Set the desired bass level by turning the right rotary control/push button.
If the right rotary control/push button is pressed, the treble level adjustment is accessed.

Treble (TREB)

Press **AUD** repeatedly until **TREB** appears.



Set the desired treble level by turning the right rotary control/push button.
If the right rotary control/push button is pressed, the balance adjustment is accessed.

Balance – Volume distribution left/right (BAL)

Press **AUD** repeatedly until **BAL** appears.



Set the desired balance by turning the right rotary control/push button.
If the right rotary control/push button is pressed, the bass adjustment is accessed.

Linear adjustment (LINEAR)

The tone values for the set signal source (e.g. radio/FM) are set to 0 (mean value) - LINEAR.

Press and hold button **AUD** for more than 4 seconds.



All tone values for signal sources radio and CD are set to 0 (mean value) - ALL LINEAR.

Press and hold button **AUD** for more than 8 seconds.



Switching mute function on/off (MUTE)

With the mute function, the sound is muted in all modes and wavebands.

To activate the mute function, press **TP**.



The mute function is cancelled by pressing **TP** again or by turning the volume control.

4. Radio operation

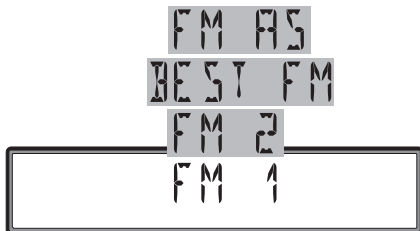
4.1. FM operation

4.1.1. Switching on FM modes

The following modes can be set:

- FM 1 (FM memory level 1)
- FM 2 (FM memory level 2)
- BEST FM (function “Best Station”)
- FM RS (FM autostore function)

Press **FM** repeatedly until the desired FM mode is selected.



When changing between the various FM modes, the last selected station remains set.

Station search FM (FM1, FM2)

The radio searches in descending/ascending order of frequency.

To activate station search, turn the right rotary control/push button to the left/right.

Note

The station search can also be started at FM RS.

Scan search FM (SC)

An automatic station search can be started. The first run is performed on an insensitive plane, all further runs on a sensitive plane. Receivable stations can be heard for 8 seconds.

Press the right rotary control/push button, and the abbreviation **SC** is displayed.



Press the right rotary control/push button if you wish to keep the received program.

Note

Scan search begins at the currently set frequency. Once the scan begins, it will continue until either a station or program is retained or until another mode is selected.

Manual frequency tuning FM (MAN)

To activate manual tuning, press **MAN**.



Set the desired frequency by turning the right rotary control/push button. The tuning steps for FM and BEST FM are in 200 kHz increments.

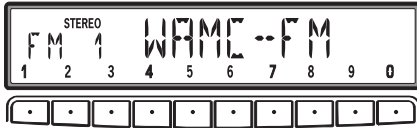
On the left side of the display, **MAN** indicates that manual tuning is active.

To exit the manual tuning feature, press **MAN** again.

Requesting/storing FM stations

Storing: 10 frequencies or programs can be stored on FM 1 and on FM 2.

Press a multifunction button for 3 seconds in order to store the desired transmitter. A signal tone confirms the selection.



Request: Press multifunction button **1** - **0**. The stored station is called up.

4.1.2. BEST FM (Best Station) function

The BEST FM function is a memory that automatically stores stations in order of their signal quality (reception quality).

This memory is constantly updated.

To call up function BEST FM press **FM** repeatedly until the display shows **BEST FM**.



Once the BEST FM function is activated, the best station is always displayed to the left of the general display. Press the right rotary control/push button in order to select this station.

Transmitters with a better or worse reception quality can be selected by turning the right rotary control/push button to the left or the right. The selected station is set by pressing the right rotary control/push button.

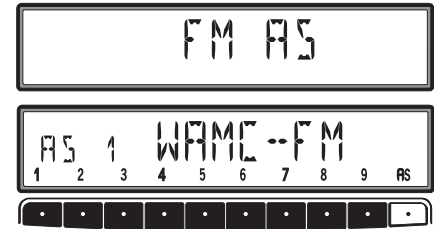
Note

Once a station is selected, it takes about 8 seconds before the best station is again displayed on the BEST station display.

4.1.3. FM autostore (AS)

The 9 current stations with the strongest signal will be stored on station buttons **1** - **9** in the order of their signal quality.

Press **FM** repeatedly until **FM AS** is displayed.



To perform an autostore scan, press multifunction button **AS** repeatedly until **AS-SEEK** is displayed.



The autostore memory level is identified on the display with **AS**.

To select the stored stations, press **1** - **9**.

4.1.4. RBDS functions

RBDS - General:

This car radio is capable of receiving RBDS signals (RBDS = Radio Broadcasting Data System) on the VHF bands. RBDS is a technique for the transmission of inaudible information in the VHF broadcasting range. This means that the broadcaster sends information to be analyzed by the auto radio.

All receivable RBDS stations are displayed with their RBDS station names.

If all criteria for evaluating RBDS information are not met, the unit will only display the frequency.

The information transmitted by the stations contains also alternate frequencies. Alternate frequencies have the same program content as the set station.

Using these alternate frequencies, the radio can conduct an evaluation and constantly tune into the best-quality frequency with the same program content.

PTY (Program Type):

RDS stations can broadcast the station's program type (does not apply to all stations)

Examples of program types:

- NEWS - News service
- SOFT - Soft music
- INFORM - Information programs
- NOSTALGIA - Nostalgia
- SPORTS - Sports reports
- JAZZ - Jazz music
- TALK - Talk
- CLASSICAL - Classical
- ROCK - Rock music
- R & B - R & B
- CLASS ROCK - Classic rock
- SOFT R & B - Soft R&B
- ADULT HIT - Adult hits
- LANGUAGE - Language program
- SOFT ROCK - Soft rock
- REL MUSE - Religious music
- TOP 40 - Top 40
- REL TALK - Religious talk
- COUNTRY - Country music
- PERSONLTY - Personality
- OLDIES - Oldies
- PUBLIC - Public
- WEATHER - Weather forecast
- PTY 24 -- 2B - Not specified
- NO PTY - No program type

Programme type ID (PTY)

The program type of the selected station can be displayed.

For this purpose, press **OPT** in FM mode, then press multifunction button **PT**.



The selected station's program type is displayed for 10 seconds (e.g. SOFT ROCK = soft rock music).

For further information, see "4.1.4. RBDS functions" on page 8.

Programme type scan search (PTY)

The radio plays stations with a selectable PTY in order of ascending frequency for 8 seconds each.

To activate the program type scan search, press **OPT** in FM mode, then press multifunction

button **PT**.



You can pre-select one of the currently available PTY by turning the right rotary control/push button left or right. Pressing the right rotary control/push button will confirm the selection and the program type scan search begins.



The abbreviation **SC** signals the active scan search. Press the right rotary control/push button again if you wish to keep the received program. The previously heard program is selected if no station with the selected PTY is receivable.

Note

Some stations do not transmit a PTY ID. In this case, the display shows **NO PTY**, and no scan search is possible.

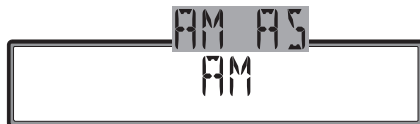
4.2. AM operation

4.2.1. Switching on AM modes

The following modes can be set:

- **FM** (AM wave bands)
- **FM FS** (AM autostore function)

Press **AM** repeatedly until the desired band or operation mode is selected.



When changing the waveband or the mode, the last selected station is set.

AM station search

The radio searches in descending/ascending order of frequency.

To activate station search, turn the right rotary control/push button to the left/right.

Scan search AM (SC)

An automatic station search can be started. The first run is performed on an insensitive plane, all further runs on a sensitive plane. Receivable stations can be heard for 8 seconds.

Press the right rotary control/push button, and the abbreviation **SC** is displayed.



Press the right rotary control/push button if you wish to keep the received station.

Note

Scan search begins at the currently set frequency. Once the scan begins, it will continue until either a station is retained or until another mode is selected.

Manual frequency tuning AM (MAN)

To activate manual tuning, press **MAN**.



Set the desired frequency by turning the right rotary control/push button.

On the left side of the display, MAN indicates that manual tuning is active.

10kHz tuning steps are performed.

To exit the manual tuning feature, press **MAN** again.

Requesting/storing AM stations

Saving: 10 transmitters can be stored under station buttons. Seek the desired station and press multifunction button **1** - **0**, until the station button number appears.



Request: Repeatedly press the multifunction button **1** - **0**. The stored station is called up.

4.2.2. AM autostore (AS)

The 9 current stations with the strongest signal will be stored on station buttons **1** - **9** in the order of their signal quality.

Press **AM** repeatedly until AM AS is displayed.



To perform an autostore scan, press multifunction button **AS** repeatedly until AS-SEEK is displayed.



The autostore memory level is identified on the display with **AS**.

To select the stored frequencies, press **1** - **9**.

Note

In general, there is no need to perform an autostore scan search (AS-SEEK). The stations saved from an autostore scan search will remain stored until another scan search is performed.

5. CD operation

Notes on compact discs (CD)

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

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

Note

The system may not be able to play copy-protected CDs or CDs with CD-ROM sections which do not correspond to the audio CD standard.

5.1. Selecting CD function

Press button **CD**, the display shows **CD S**.



If no CD is present, the display briefly shows **NO CD**, and the radio mode remains active.

5.2. Inserting/ Ejecting CDs

Insert the CD into the CD slot with the printed side up. The unit automatically pulls in the CD and briefly displays the number of tracks and total playback time for the CD. The unit then begins to play back the CD, beginning with the first track (the display shows **TRACK**).

After playing the last track, the unit automatically begins to play the first track of the CD again.



To eject a CD, briefly press **EJECT**. The CD is ejected and can be removed.

Please note

The CD is not ejected when the unit is switched off, it remains in the CD slot.

Skipping tracks forwards/backwards

Turn right rotary control/push button to right / left. If the right rotary control/push button is turned further, several tracks can be skipped in forward or reverse directions. The unit switches to the first track once the last track is reached. Analogously, it switches from the first track to the last track.



If a track has been playing for more than 8 seconds when the skip back function is triggered, the device returns to the beginning of the track. If the track has been played for less than 8 seconds, the device will skip to the next track.



Scan function (SC)

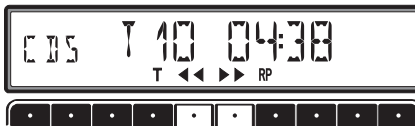
Using the scan function, all following CD tracks are played back for 8 seconds each. Push the right rotary control/push button, until the display shows **SC**.



Press the rotary control/push button again to terminate the scan search.


Fast forward/rewind

By pressing multifunction button  the Fast Forward function (audible) is activated. Conversely, if you press multifunction button  the fast rewind function (audible) is activated. The relative time is displayed during this function.



Fast forward / rewind terminates when the multifunction button is released. The relative time is displayed for a further 8 seconds.

Displaying relative time

By pressing multifunction button  the relative time of the currently playing track is displayed for approx. 8 seconds.



Random Play (RP)

Using the random generator function, the tracks of the current CD are played in random order.

By pressing multifunction button **RP** the random play function is activated. The abbreviation **RP** appears on the display.



By pressing the multifunction button **RP** again, the "Random play" function is deleted.

5.3. Temperature Protection Circuit

To protect the laser diode from excessive heat, a temperature protection circuit is integrated into the unit.

When this protection circuit is activated, [] TEMP appears for 8 seconds.



The unit switches back to the last selected signal source (FM or AM).

After a cool down period, the CD mode may be called up again. However, if the temperature is still too high, the unit again switches back to the previously selected signal source.

6. User menu

The following functions can be customized to your personal needs in the user menu.

- **USER** - User memory
- **M/S** - Mono/Stereo setting
- **DRIVER** - LHD / RHD setting
- **PHONE** - Telephone characteristics
- **LED** - LED setting

6.1. Calling up/exiting the user menu

Call up the user menu by pressing **OPT** for longer than 3 seconds. **USER** appears on the display.



Another user action must take place within 6 seconds, otherwise the user menu is exited automatically.

The current setting can also be quit and the selection saved by pressing **CD**, **AM**, **FM** or **TP**.

User memory (USER)

The specific user memory saves the sound settings and the last received station when the unit is switched off.

Call up the user menu.



One of three users can now be selected by turning the right rotary/push button: **USER 1**, **USER 2** and **USER 3**.

If the right rotary control/push button is pressed, "Setting Mono/Stereo" is called up.

Setting Mono/Stereo

In order to suppress reception-related interference, three different parameters can be set for reception optimization.

- **STO AUTO**: Setting for normal operation – i.e. the unit switches from stereo to mono reception and back, depending on the reception conditions (for nearly all reception areas, this is the optimal setting).
- **STEREO**: Setting for exceptional conditions – i.e. the unit is constantly set to stereo reception (e.g. for private broadcasters in urban areas).

- **MONO**: Setting for reception conditions with constant reflection – i.e. the unit is constantly set to mono.

Call up the user menu. Press the right rotary control/push button repeatedly until **STEREO**, **STO AUTO** or **MONO** is displayed, depending on the currently selected setting.



Now turn the right rotary control/push button to select **STEREO**, **STO AUTO** or **MONO**.

If the right rotary control/push button is pressed, "Setting DRIVER" is called up.

Note

This setting is saved in dependence to the set user.

Setting the DRIVER

If a telephone with hands-free operation is installed, the call is routed through the speaker system. The setting DRIVER is used to set the appropriate speaker side (left/right hand drive).

Call up the user menu. Press the right rotary control/push button repeatedly until DRIVER L or DRIVER R is displayed, depending on the currently selected setting.



Now turn the right rotary/push button to select DRIVER L (LHD) or DRIVER R (RHD).

If the right rotary control/push button is pressed, the menu item “Telephone mute characteristics” is called up.

Telephone mute characteristics

If a telephone with hands-free operation is installed, the call may be routed through the speaker system. This eliminates the need for an additional speaker. However, the signal lines (NF – telephone input and earth – telephone input) must be connected to the car radio.

The following settings are available:

- PH MUTE - Switching radio to mute
- AUDIO PH - Telephone call via the car radio

Call up the user menu. Press the right rotary control/push button repeatedly until AUDIO PH or PH MUTE is displayed, depending on the currently selected setting.



Now turn the right rotary control/push button to select AUDIO PH or PH MUTE.

If the right rotary control/push button is pressed, the menu item “User memory (USER)” is called up.

For both settings, PHONE is displayed in case of an incoming call.



The current audio source is muted. In this situation, you can only change the volume and the sound settings for the telephone call at the unit.