Display

The display consists of three fields and changes according to the operating mode and function.

Display field 1:
- **Radio mode**
- Memory banks and wavebands
- Brief indication of preset station (e.g. P1)
- **Cassette mode**
- CAS - cassette inserted
- **Audio**
- Numeric and graphic representation of the volume and audio settings.
- **DSC**
- Permanent display for DSC programming.
- Graphic representation of the adjusted volume level.

Display field 2:
- **Radio mode**
- Radio frequency or station name
- PTY programme type
- **Cassette mode**
- TAPE1/TAPE2 - side of tape being played.
- Displays active function.
- **DSC**
- Serves as display and entry field during DSC programming
- Clock display
- **Miscellaneous**
- Indicates new source (e.g. when changing from radio to cassette)

Display field 3:
- Displays active functions.
  - Stereo
  - Cassette inserted
  - Loudness
- **Radio mode**
  - AF - RDS alternative frequency
  - PTY - RDS programme type
  - TA - Priority for traffic information
  - TP - Traffic programme station
  - lo - Seek tuning sensitivity
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Quick reference

1. REL
   To release the detachable panel (theft protection).
   Press this knob and remove the release panel.

2. ON - Power up/down
   Press this button to turn the equipment on. It will play at the preset volume. If you press this button briefly during radio reception, the volume will turn down instantly (MUTE).
   This function is cancelled by pressing the ON button again. You can programme the mute volume (refer to "DSC programming").
   Press the button for about 2 seconds to turn the unit off.

Switching on/off via the ignition:
If the set has been connected correspondingly, it can also be turned on and off with the vehicle ignition.
Press the ON button to keep on operating the set when the ignition is switched off.
The set will switch on. To avoid that the battery goes flat, the system will be turned off automatically after one hour of playback.

3. Volume knob
   Turn the knob to set the volume.

4. Eject
   Press this button to eject the cassette.

5. Cassette slot
   Insert the tape into the slot with the open side showing to the right. The tape will be played in the direction previously selected.

6. Display
   Displays all settings, operating modes and functions.

7. < | > Fast winding
   To fast rewind the tape for direction “TAPE 1”.
   To fast forward the tape for direction “TAPE 2”.

8. D >> Fast winding
   To fast forward the tape for direction “TAPE 1”.
   To fast rewind the tape for direction “TAPE 2”.

9. Rocker switch

Radio mode
A / V Seek tuning
  A Up
  V Down
<< >> Up/down in short intervals (on FM only if “AF” is off)
For FM only:
<< >> Scrolling through the broadcasting networks, if AF is on. Example: NDR 1, 2, 4, N-Joy, FFN ...

Extra function of rocker switch:
For additional settings use
AUD
DSC-MODE
PTY
Requirement: The respective function is activated.

10. SRC/SC
    (SRC = audio source, SC = scan)
    Press button briefly to select the operating mode (tuner, cassette). The active mode appears in the display.
Press **SRC/SC** longer to select the SCAN function.

**Radio mode**
Press **SRC/SC** longer.
The radio will scan all receivable FM, MW and LW stations (*Dresden RCR 128 without MW, LW*). “SCAN” and the station name (if applicable) appear on the display one after another (only for FM).

**PTY Scan**
PTY Scan can be started if PTY is on (“PTY” will be displayed). The radio will scan all stations broadcasting the selected programme type.

“TP” will be displayed when a traffic programme is played.

**AF on/off:**
Press **AF·TA** longer: a beep will be emitted; “AF” appears.
Press **AF·TA** longer: a beep will be emitted; “AF” disappears.

**PTY (Programme Type)**
You can select among various programme types. Using the rocker switch << >> it is possible to recall all PTY programme types, if PTY is activated (“PTY” lights up in the display).

**BA/TS**
Switches between the wavebands/memory banks FM1, FM2, FMT (Travelstore), MW and LW (*Dresden RCR 128 without MW, LW*).

**Extra function: Travelstore**
To store the six most powerful radio stations in the Travelstore bank:
Press **BA/TS** until a beep sounds and “T-STORE” appears.

On MW and LW you can store six stations each (*except for Dresden RCR 128*).

**Store station** - hold down a preset button in radio mode until a beep is emitted.

**Recall station** - select a waveband and also the memory bank on FM; press the relevant preset button briefly. The selected preset button will briefly appear in display field 1 (e.g. P1).

**DIS - clock display**
Press this button briefly and the time will be displayed for a while.

**Cassette mode**
Press this button to switch the display between the cassette direction and clock indication.

**DSC Direct Software Control**
Adjusts programmable basic settings. Refer to “DSC programming”.

**AUD Default settings for treble and bass**
You can store different settings for the FM, MW, LW and cassette mode (*Dresden RCR 128 without MW, LW*).
Important notes

What you need to know
Before using your new car radio, please read through the following information carefully.

Traffic safety
As the driver of a motor vehicle, it is your responsibility to pay attention to the traffic situation at all times. Never use your car radio in a way that could distract you. Please keep in mind that you travel a distance of 14 m per second at a speed of only 50 km/h.

Should the traffic situation become particularly demanding, we advise you not to use the radio. Always make sure that you are still able to hear any warning signals coming from outside the vehicle, such as police or fire engine sirens, so that you can react accordingly. Consequently, you should always select a moderate volume for playing your car radio while you are driving.

Installation
If you would like to install your new car stereo yourself or add other audio components to existing ones, then please read the enclosed instructions on installation and connection carefully. In order to ensure that the set operates properly the positive power supply line must be connected via the ignition and the permanent +12 V lead. Do not ground the loudspeaker outputs!

Warning note
Danger of damaging the automatic power antenna in a car wash
Before you drive into a car wash
• switch the radio off by pressing the ON button.
The power antenna will retract, if it doesn’t, press ON again.
Do not drive into the car wash unless the power antenna has retracted!
Clock

This car radio is equipped with a built-in clock.

Display priority:
To switch the display priority, press the \( \bigcirc \) button until you hear a beep. Press as many times until the desired display mode is active (not during radio reception).

Radio mode
Press the \( \bigcirc \) button briefly to display the clock.

Cassette mode
Press this button to switch the display between the cassette direction and clock indication.

Setting the clock
- Press DSC briefly.
- Press \( \text{\texttt{A/V}} \) to selection the "CLOCK-SET" function.
- Press \( \text{\texttt{<<}} \) to set the hours or minutes. The adjustable option will flash in the display.
- Press \( \text{\texttt{A/V}} \) to adjust the flashing value.
- After you have set the clock, press DSC briefly to store the new setting.

Release panel

Theft protection
This unit is equipped with a detachable control panel. A car radio without control panel is worthless for thieves.

Protect your car radio and detach the control panel when you leave your car. It is very easy to attach and detach the release panel thanks to its specific design.

Note:
Do not pull the release panel straight out from the chassis, but detach it as illustrated below. Be sure not to drop the panel.
Do not expose the release panel to direct sunlight or other heat sources.
Do not leave it in a humid place.

Detaching the release panel
Press the REL button to release the control panel. Then pull it off gently as illustrated.

If the set was still in operation, it will turn off now. All current settings remain stored. If a cassette or CD is inserted, it will be kept in the set.
The radio will turn on automatically when you attach the release panel again.

Attaching the release panel
Slide the panel (B) from the left to the guide of the chassis (A). Gently push the left side of the panel against the front of the chassis until it snaps into place.
Fixing the release panel
If you wish to fix the release panel permanently to the chassis, screw down the enclosed bolt at the left hand side of the chassis into the hole (C), see Fig.

Selecting the audio mode
Use the SRC/SC (source) button to select between radio and cassette mode.

To select the operating mode:
• Press SRC/SC.

Radio operation with RDS (Radio Data System)
The Radio Data System will enhance your enjoyment when you listen to FM radio stations.
More and more radio stations broadcast RDS information along with their regular programming.
As soon as a programme has been identified, the station name including a regional identifier, if applicable, will appear in the display, for example, NDR1 NDS (regional programme in Lower Saxony, Germany).
When RDS is activated, the preset buttons become programme buttons. You now know exactly which programme you have tuned into, making it easy to find the desired station quickly.
But RDS offers you further advantages:

AF - Alternative frequency
The AF (Alternative Frequency) function makes sure that the radio always tunes into the strongest frequency of the currently selected programme automatically.
This function is activated when “AF” appears in the display.
In order to switch this function on or off,
• press the AF·TA button until a beep is emitted.
While searching for the strongest reception signal, the radio may switch to mute briefly.

If “SEARCH” appears in the display when the radio is switched on or one of the stored frequencies recalled, the unit is already automatically searching for an alternative frequency.
“SEARCH” will disappear from the display when the alternative frequency has been found or after the frequency band has run through completely.
If the reception quality of the selected programme deteriorates beyond a certain point:
• Tune into another station.

REG - regional programme
Certain radio programmes are split up at times into regional programmes offering local information. The 1st programme broadcast by NDR, for example, offers programmes with different contents in the northern German states of Schleswig-Holstein, Hamburg and Lower Saxony at certain times of the day.
If you are listening to a particular regional programme and wish to continue doing so, select “REG ON” in the DSC mode.
If you leave the service area of the regional programme you are tuned into, or if you would like to take advantage of full RDS service, switch to “REG OFF” in the DSC mode.
Selecting a waveband
With this car radio you can select between the following wavebands:
FM 87.5 - 108 MHz
MW 531 - 1602 kHz
LW 153 - 279 kHz (Dresden RCR 128 without MW, LW).
• Select the desired waveband by pressing the BA/TS button.

Station tuning
Automatic seek tuning ▲/▼
• Press ▲/▼; the car radio will automatically search for the next station.
If you hold ▲/▼ pressed up or down on the rocker switch, seek tuning will speed up in the upwards or downwards direction.

Automatic seek tuning
▲ Up
▼ Down
<< / >> Up/down in short intervals
(on FM only if “AF” is switched off)

Manual tuning with << >>
You can also tune into a station manually.
Requirement:
AF and PTY must be switched off (i.e. the symbols do not light up in the display).
If necessary, deactivate these functions:
• Press AF·TA or PTY.
Manual tuning:
• Press << >>; the frequency will change in short intervals in the downwards or upwards direction.
If you hold << >> pressed to the left or the right on the rocker switch, the frequency scan will speed up.

Scrolling through the broadcasting networks (FM only)
You can use the << >> buttons to tune into stations in your reception area.
If it is possible to receive several programmes in the same broadcasting network, you can scroll through them in the forwards direction by pressing >>, or backwards using the << button, e.g. NDR 1, 2, 3, 4, N-JOY, ...
For this to work properly you must have already tuned into the stations at least once and “AF” must be active (lights up in the display).

To do this, you can start the Travelstore seek operation:
• Press BA/TS for 2 seconds; the system will start to run through the frequency band.
If “AF” is not lit up,
• Hold AF·TA down. A beep sounds and “AF” appears.
This fulfills the requirements for selecting stations with << >>.

Switching between the memory banks (FM)
You can switch between the memory banks 1, 2 and T in order to store stations and recall them later.
The currently selected memory bank appears in the display.
• Press the BA/TS button as many times as necessary until the desired memory bank lights up in the display.

Storing stations
On FM, you can store six stations on the preset buttons 1, 2, 3, 4, 5, 6 for each of the memory banks (1, 2, T).
On MW/LW, you can also store six stations each (Dresden RCR 128 without MW, LW).
To select a scanned station and switch off the Scan function:
• Press SRC/SC.
If no station is selected, scan will start again.

Selecting the automatic tuning sensitivity
You can alter the automatic tuning sensitivity.
If “lo” is displayed, the radio will only pick up strong, local stations (low sensitivity).
If “lo” does not light up, the radio will also pick up weaker, more distant stations (high sensitivity).
If you would like to alter the sensitivity level please refer to the section on “DSC programming – SENS”.

PTY - Programme Type
PTY is an RDS service offered by an increasing number of broadcasting stations. This feature allows you to select FM stations according to their programme type.
After you have chosen the PTY of your preference, the corresponding stations can be selected either by seek tuning or using the scan function.
Programme types
Turn PTY on.
Use << >> to have the last selected programme type displayed and to choose a new one.
You can select any one of the stored types with the preset buttons 1-6.
The following list indicates some of the programme types which are available.
WEATHER
FINANCE
TRAVEL
HOBBIES
JAZZ
COUNTRY
NEWS
INFO
SPORT
CULTURE
SCIENCE
VARIED
POP MUSIC
ROCK MUSIC
CLASSICS

Switching PTY ON/OFF
- Press PTY.
When the function is active, the programme type selected last will briefly appear in the display. “PTY” will appear permanently.

Checking the programme type of the station
- Press PTY for approximately 2 seconds.
After the beep tone the display will show the programme type offered by the tuned in station. If “NONE” appears in the display, the current station has no PTY code.

Displaying the selected programme type
- Press << or >>.
The programme type selected last will be displayed briefly.

Selecting a programme type
a) Using the preset buttons
When PTY is switched on, you can use the preset buttons 1-6 to select the programme types stored at the factory.
- Press one of the presets 1-6.
The selected programme type will be displayed for 2 seconds.

If you would like to listen to a station with this PTY,
- press ∧/∨ to start the seek tuning function.
If the radio is unable to find a station offering the selected programme type, the display will show “NO PTY” and a beep tone will be emitted. The radio will select the station which was tuned into before seek tuning was activated.
You can assign different programme types to each preset position. Please refer to the next section on “Storing programme types”.

b) Using the << >> buttons on the rocker switch
When PTY is switched on, you can select a programme type using buttons << >>.
- Press << or >>; the programme type selected last will be displayed for 3 seconds.
- During this period press >> (forwards) or << (backwards) to select the desired type.
- Press << or >> as many times as required.
If you would like to listen to a station with the selected PTY,
Scanning stations with PTY SCAN
Requirement: “PTY” must appear in the display.
• Press the SRC/SC button until you hear a beep.
All of the stations in your current reception area offering the selected programme type will be scanned.
To switch off PTY-SCAN:
• Press SRC/SC or the seek-tuning rocker switch once again.

PTY priority
Situation:
PTY is switched on and lights up in the display. No station offering the selected programme type can be found currently in your reception range (with seek tuning or scan). The set will switch back to the station previously tuned into.
As soon as it is possible to receive a programme in the broadcasting network with the PTY selected, the radio will switch over to the corresponding station for the duration of the programme.

Example:
German broadcasting network NDR:
- Station playing: NDR3.
- “PTY” lights up in the display.
- Programme type “POP” selected.
- Seek tuning is started.
- No station with “PTY-POP” can be found.
- The display shows “NO PTY” and automatically switches back to NDR3.
- NDR2 airs a “PTY-POP” programme.
- The radio will switch to the linked station NDR2 for the duration of the “POP” programme.

During cassette operation, the set will also switch to the programme offering the selected PTY within the broadcasting network. After the PTY programme has ended the system will switch back to the previous mode (radio or cassette).

Note:
As already mentioned, these functions are only supported by a limited number of RDS stations at the present time.

Storing programme types
Each of the preset buttons 1-6 has been assigned one programme type at the factory.
If desired, you can also replace these with other available programme types.
To do so, make sure that “PTY” lights up in the display.
• If necessary, press the PTY button to switch on the function.
• Select a programme type using buttons << >> and hold down the desired preset button (1-6) until you hear a beep.
Now the selected programme type can be recalled by pressing this preset, if “PTY” lights up in the display.

• press ∕ to start the seek tuning function.
If the radio is unable to find a station offering the selected programme type, the display will show “NO PTY” and a beep tone will be emitted. The radio will select the station which was tuned into before seek tuning was activated.
Traffic programme station reception with RDS-EON

The abbreviation “EON” stands for Enhanced Other Networks, which means that information is exchanged within a radio network.

Many FM radio stations provide their service area with traffic messages at regular intervals.

Along with their programmes, all traffic programme stations transmit a special carrier signal, which is decoded by your car radio. If this signal is identified, “TP” will appear in the display (Traffic Programme).

In addition to these, there are also stations which do not actually transmit traffic information themselves, but by using RDS-EON it is possible for them to forward the traffic messages broadcast by another traffic programme station in the same radio network.

If you want to have the priority for traffic announcements activated while listening to one of these stations (e.g. NDR4), “TA” must appear on the display panel.

If a traffic announcement is broadcast, the radio will automatically switch to the linked traffic programme station (in this case, NDR2) for the duration of the message and return to the original programme (NDR4) afterwards.

Traffic announcement priority on/off

If the priority for traffic announcement programmes is activated, “TA” will light up in the display.

To switch the priority on or off:
• Press the AF-TA button. “TA” appears.
If you press AF-TA while a message is being broadcast, this message will be interrupted. The unit will then switch back to the previous mode. The priority for other traffic messages remains active.

Please note that several buttons have no function while a traffic announcement is broadcast.

Warning beep

If you leave the reception area of the traffic programme station currently tuned into, you will hear a warning beep after approximately 30 seconds. This alarm tone will also be emitted if you press a preset button for a station which does not send the traffic programme signal (TP).

Switching the warning beep off

a) Tune into another station offering traffic information:
• Press the rocker switch or
• press a preset button which has a traffic programme station allocated to it.

Alternatively:

b) Switch off the priority for traffic announcements:
• Press TA.
“TA” will disappear from the display.

Automatic seek tuning start
(Cassette operation)

If you leave the reception area for the traffic programme station you have tuned into while you are listening to a cassette, the system will automatically start searching for a new traffic programme. If no such station is found within approximately 30 seconds, a warning beep will sound every 30 seconds. To switch the warning beep off, proceed as described above.
Cassette deck operation

Cassette playback
Insert the tape into the slot with the open side showing to the right. Press SRC/SC to select the tape deck mode. “TAPE 1” or “TAPE 2” will appear. The tape will be played in the direction previously selected.

Cassette eject
Press  to eject the cassette.

Fast winding
For tape direction “TAPE 1”, press < button to fast rewind. To fast forward, press > button. For tape direction “TAPE 2”, press > button to fast rewind. To fast forward, press < button. When the end of the tape is reached with fast forward, the tape direction will change and the other side of the tape will be played. With “Radio Monitor ON” during fast winding you can listen to the radio programme previously selected. It is possible to change the Radio Monitor setting in the DSC mode. (Refer to “DSC programming - RM”).

Reversing the tape
To change the tape direction during cassette playback:
• Press < / > simultaneously. The display shows “TAPE 1” or “TAPE 2” for the selected tape side.

Traffic information during cassette playback
The Traffic Announcement function (priority for traffic programmes) makes it possible to receive traffic information during cassette playback. If a traffic message is broadcast, cassette playback will stop and the message reproduced. This function is active, if “TA” lights up in the display.
• Press the AF-TA button briefly to activate TA.

Adjusting the volume for traffic announcements and the warning beep
Although this volume was preset at the factory, you can use the DSC function to alter the setting (see “DSC programming - TA VOL”).

Adjusting the volume for traffic announcements and the warning beep
Although this volume was preset at the factory, you can use the DSC function to alter the setting (see “DSC programming - TA VOL”).
DSC programming

The car radio has been equipped with DSC (Direct Software Control) to allow you to customise certain programmable, basic settings to suit your personal needs and preferences and then store them.

The basic settings for this audio equipment were made at the factory.

In the following you can find an overview of these settings, so that you can always reset to them if desired.

If you wish to alter any of the programming,
• press DSC.

MENU \المع\ will light up in the display.

Use the \المع\ buttons of the rocker switch to select the function you wish to change. The display will show you the setting you have selected. Press the << >> buttons of the rocker switch to change the values. Confirm the setting you have selected by pressing the DSC button.

LOUDNESS

- Loudness boosts the bass frequencies at low volume.
- LOUD 1 - Low boost
- LOUD 6 - Max. boost

TA VOL

- The traffic announcement and warning beep volume can be set between 0 to 63.
- The message will then come through at this volume, if the standard volume is lower.
- If the standard volume is set higher than the TA VOL level, then the traffic report will be played at the standard volume.

REG

- Regional function on/off.

SENS DX1

- To adjust the seek tuning sensitivity.
- “LO” stands for local reception.
- “DX” stands for distant reception.
- Select “LO 3” if you want to receive strong stations in the local area, select “DX 1” if you want to tune into weaker stations which are further away.

MUTE

- To change the mute volume.

BEEP X

- To change the volume of the acknowledgement tone (beep) between 0 and 9.
- (0 = off)

RM OFF

- Radio Monitor
- If the Radio Monitor function is active during fast winding of the tape, the set will switch to the radio and play the station previously received.

DISPLAY

- ON/OFF
- Display indications on or off with the car radio turned off.
Overview of the DSC factory settings

<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOUDNESS</td>
<td>3</td>
</tr>
<tr>
<td>TA VOL</td>
<td>40</td>
</tr>
<tr>
<td>REG</td>
<td>OFF</td>
</tr>
<tr>
<td>SENS</td>
<td>DX1</td>
</tr>
<tr>
<td>CLOCKTYPE</td>
<td>CLOCK 24</td>
</tr>
<tr>
<td>CLOCKSET</td>
<td></td>
</tr>
<tr>
<td>ON VOL</td>
<td>20</td>
</tr>
<tr>
<td>MUTE</td>
<td>10</td>
</tr>
<tr>
<td>BEEP</td>
<td>3</td>
</tr>
<tr>
<td>RM</td>
<td>OFF</td>
</tr>
<tr>
<td>DIS</td>
<td>OFF</td>
</tr>
</tbody>
</table>

Subject to modifications!

Appendix

Specifications

**Amplifier**

Output power: 4 x 19 W RMS power acc. to DIN 45324 at 14.4 V
4 x 30 W max. power

**Tuner**

Wavebands:

- **FM**: 87.5 – 108 MHz
- **MW**: 531 – 1602 kHz
- **LW**: 153 – 279 kHz
  *(Dresden RCR 128 without MW, LW)*.

FM frequency response: 35 - 16 000 Hz

**Cassette**

Frequency response: 35 - 16 000 Hz

Subject to modifications!