

DVB-T2 Tuner

7 620 320 031



en Operating instructions



Controls

- Stand-by button Switch between normal mode and standby mode
- 2 Multi-function rocker switch
- ③ TV / radio button Open the menu used for switching between TV and radio mode
- (4) Keys 0 9 <u>Short press</u>: Access a stored station Long press: Store the current station
- 5 **VOL ±** button Change volume

- TX button Switch the display of subtitles on/off
- (7) MENU / OK Open the basic settings menu Confirm settings
- 8 AUX button Switch between TV viewing, playing up to 2 external A/V sources (AV1 and AV2), and playing connected HDMI (AV3) and USB devices (PLAYER)

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Important information

Before using the device, please read these instructions carefully and familiarize yourself with the device. Keep these instructions in your vehicle for later reference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Agreed product use

The device has been designed for operation in a commercial vehicle with a 12 V or 24 V electrical system.



Road safety

- Road safety has absolute priority. Only use the device when the vehicle is stationary. If it is necessary to use the device when traveling, find a safe stopping place, and stop the vehicle.
- You must always be able to hear police, fire service and ambulance sirens in good time from inside your vehicle.
 Therefore make sure that playback

is at a suitable volume.

Make sure that your ability to drive is not impaired and your vision is not blocked by the device, the antennas connected to it, or the wiring.

Installation notes

- The tuner must only be installed by experienced personnel.
- Before installation, disconnect the power supply by disconnecting the cable from the negative terminal of the battery.
- The tuner must be installed in such a way that the driver's actions are not impeded in any way.
- The installation location must be a rigid surface of sufficient stability. The vehicle manufacturer is responsible for compliance with the legal requirements.
- Check that the polarities of the connections are correct.
- Incorrect cabling can lead to problems in the vehicle as well as to damage, accidents and injury.
- Cables must be laid in such a way that they are not pinched and cannot be damaged by a sharp metal edge.
- Cables must be laid in such a way that the connections are not under tension.
- Only use very high quality antennas (e.g. Bosch DVB-T antennas) to ensure flawless and stable reception.

The use of 4 DVB-T antennas is obligatory.

Disposal of end-of-life appliances

Please do not dispose of your old appliance in the household refuse.

To dispose of the old appliance, please use the available waste return and recycling systems.

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Scope of delivery

- DVB-T2-Tuner
- Quick guide
- Remote control incl. battery (CR2032/2025, 3 V)
- IR receiver (for the remote control)

Accessories (optional)

 DVB-T antenna set (contains 4 active DVB-T antennas; part number 7 620 340 025)

Operation

Switching on/off

Switching on/off using the vehicle ignition

The device is switched on or off together with the vehicle ignition.

Stand-by mode

 Press the Stand-by button 1 to change between stand-by mode and normal operation.



Note:

In stand-by mode, the audio/video reproduction is switched off, but the device continues to receive, and the TV station list is continuously updated.

Adjusting the volume



The factory setting for volume is maximum.

Press the VOL+ or VOL- 5 button to raise or lower the volume.

Selecting a video source

Press the AUX (8) button to switch between TV viewing, playing up to 2 external A/V sources (AV1 and AV2), and playing connected HDMI (AV3) and USB devices (PLAYER).



Note:

It is not possible to play encrypted content via the HDMI port.

Displaying station information

Press the d or button 2.

Skiping to the next/previous station

► Press the or ► button (2).

Station information is displayed.

 Press the for (2) button again to change to the previous or next station.

Selecting a station from the station list

Notes:

You will find all the currently receivable TV stations in the station list.

- The station list also contains available pay-TV stations (indicated by a prefixed "\$").
- The device must be fitted with a suitable module/card in order to display pay-TV stations (see the "Receiving pay-TV" section).

To open the station list,

- ▶ press the \blacktriangle or \blacktriangledown button (2).
- To select a station,
- ▶ press the▲ or ▼ (2) button, more than once if necessary.

To play the station,

▶ press the **MENU/OK** (7) button.

Storing stations in the favourites list



Note:

There are up to 39 memory presets available for storing stations.

- Select the station you want from the station list (see the "Select a station from the station list" section).
- ▶ Give the station button (4) a long press.
 - Note:

If you want to store a station as a two-digit memory preset, briefly press the button of the first digit ("1", "2" or "3") and, within the next 2 (approx.) seconds, long press the button of the second digit.

Selecting a stored station

 Give the corresponding station button (4) a short press to call up the first 10 memory presets.



Note:

To select a two-digit memory preset, briefly press the buttons of the first and second digit within approx. 2 seconds of each other.

Displaying subtitles

▶ Press the **TX** button (6).



Note:

If a station provides subtitles, the "TX" symbol is shown in the station information. Subtitles are only displayed if they are actually available for the current programme.

Selecting a radio station

The device can also receive radio stations over DVB-T2.

To switch from TV to radio mode,

- ▶ press the **TV/Radio** ③ button.
- ▶ Press the ◀ or ▶ button (2).

Playing audio/video files via USB

Connecting a USB device

 Connect the USB storage device to the USB port.

Selecting USB playback

 Press the AUX (8) button repeatedly until "PLAYER" is displayed. The media player then starts. If it detects playable files on the USB device, playback will begin automatically.



Notes:

- Starting the media player and detecting playable files may take some time.
- If the media player is started and there is no suitable USB device connected, the system will display a corresponding message.
- If the USB device contains a variety of media formats (i.e. audio files, video files and/or image files), the media player will automatically start playing the audio content. You can then manually switch to image viewing or video playback (see the next section).

The media player provides an on-screen menu (OSM) for controlling playback.

Switching between audio, video and image playback

If the USB device contains a variety of media formats (i.e. audio files, video files and/or image files), you can switch between audio, video and image playback:

To switch to the next available media format,

- ▶ press the ◀ or ▶ button (2) repeatedly until the Content OSM button is highlighted.
- Press the **MENU/OK** 7 button.

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Note:

Switching between different media formats takes place in this order: audio – images – video.

Controlling playback

When an audio file is played, the file name and, if available, the artist, track name and cover of the corresponding track are displayed. When video playback or the image slideshow is started, the playback controls and the current file name are briefly displayed and then hidden automatically.



Note:

In video and image mode, to display the playback controls again, press the **MENU/OK** (7) button.

To control playback,

- ▶ press the ◀ or ▶ button ② repeatedly until one of the following buttons of the on-screen menu (OSM) is highlighted, and then
- ▶ press the **MENU/OK** (7) button.

OSM buttons for playback control:

- II/> Pause/resume playback or slideshow
- ► ► Skip to previous/next file
- X Only in audio mode: Switch random playback on/off
- Only in audio mode: Switch track repeat on/off
- INFO Only in audio mode: Display track information

Operation

To switch fast-reverse/-forward seek mode on/ off in audio and video mode,

- ▶ press the ▲ or ▼ button ② repeatedly until the desired speed is selected.
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Note:

You can also select a particular track from the track list (see section "Selecting an audio/image/video file from the track list"). Furthermore, for audio files, you can also select a particular track from the category list (see section "Selecting an audio file from the category list").

Selecting an audio/image/video file from the file list

In video and image mode, if necessary,

 first press the MENU/OK (7) button to display the controls.

To display the file list,

- ▶ press the ◀ or ▶ button ② repeatedly until the List OSM button is highlighted.
- ▶ Press the **MENU/OK** (7) button.

To select and play/view a particular file,

- in image mode, if necessary, press the ◀ or ▶ button (2) repeatedly until the file list is highlighted.
- Press the ▲ or ▼ button ② repeatedly until the desired file is highlighted.
- Only in audio/video mode: Press the
 button (2) repeatedly until the Select OSM button is highlighted.
- Press the **MENU/OK** (7) button.



Note:

To scroll up or down rapidly in the file list, press the ◀ or ▶ button ② repeatedly until the ▲ or ▼ OSM button is highlighted and then press the **MENU/OK** ⑦ button repeatedly until the desired section of the list is displayed.

Other functions provided by the OSM buttons:

- Back Return to current playback
- Meta Only in audio mode: Switch between track list and category list (see next section)

Selecting an audio file from the category list

Open the track list (see section "Selecting an audio/video file from the track list").

To display the category list,

- ▶ press the ◀ or ▶ button ② repeatedly until the Meta OSM button is highlighted.
- ▶ Press the **MENU/OK** (7) button.

To display the tracks of a particular category,

- ▶ press the ▲ or ▼ button ② repeatedly until the desired category is highlighted.
- Press the
 or
 button (2) repeatedly
 until the Select OSM button is high lighted.

▶ Press the **MENU/OK** (7) button.

The available tracks of the selected category are displayed.



Notes:

- If the selected category contains sub-categories, repeat the previous steps until the available tracks are displayed.
- If you want to skip back to the next higher category level, highlight and confirm the Undo OSM button.
- If you want to skip back to the top level of the category list, highlight and confirm the Home OSM button.
- To scroll up or down rapidly in the list, press the ◀ or ► button ② repeatedly until the ▲ or ▼ OSM button is highlighted and then press the MENU/OK (?) button repeatedly until the desired section of the list is displayed.

To select and play a particular track,

- ▶ press the ▲ or ▼ button ② repeatedly until the desired category is highlighted.
- Press the ◀ or ▶ button (2) repeatedly until the Select OSM button is highlighted.
- ► Press the **MENU/OK** (7) button. Playback of the selected track starts.

Settings

Opening/closing the settings menu and selecting menu items

To open or close the settings menu,

▶ press the **MENU/OK** (7) button.

To select a menu item and to open the submenu,

- ▶ press the▲ or ▼ (2) button, more than once if necessary.
- ▶ Press the ▶ button (2).

To close the submenu again,

▶ press the ◀ button ②.

To close the menu,

▶ press the ◀ button ② again.

Selecting the menu language

 Open the Languages menu from the Settings menu.

To select a language,

- ▶ press the▲ or ▼ (2) button, more than once if necessary.
- Press the MENU/OK (7) button to confirm the new setting.

Selecting the screen format

 Open the Screen format menu from the Settings menu.

To choose a format (4:3, 16:9),

- ▶ press the \blacktriangle or \blacktriangledown button (2).
- Press the MENU/OK 7 button to confirm the new setting.

Selecting the standard for video output

 Open the Video Out menu from the Settings menu.

To select the video standard (PAL, NTSC),

- ▶ press the \blacktriangle or \blacktriangledown button (2).
- Press the MENU/OK (7) button to confirm the new setting.

• Open the *Info time duration* menu from the Settings menu.

To set the display duration (1-5 seconds),

- Press the ▲ or ▼ (2) button, more than once if necessary.
- Press the MENU/OK (7) button to confirm the new setting.

Resetting to the factory settings

- Select the *Reset* menu item from the Settings menu.
- ▶ Press the ▶ button ②.
- Press the ▲ or ▼ ② button to highlight "Yes".
- ▶ Press the ◀ button (2).

The device switches off automatically and resets to its factory settings.

Checking the antenna reception power

Press the MENU/OK (7) - 1 - 2 - 3 (4) buttons in sequence.

Four bars indicating the current reception status of the installed antennas will be displayed on the connected monitor.

 Press the MENU/OK (7) button to hide the indicator again.

Receiving pay-TV

To play pay-TV stations with the device, you need a smartcard from your pay-TV supplier, as well as a suitable CAM (conditional access module). CAM socket:



To enable pay-TV reception,

- first switch the device off, if necessary.
- Remove the cover of the CAN socket (use a suitable tool if needed).
- Connect the CAM, with your pay-TV supplier's smartcard, to the CAM socket.
- Switch the device back on.

You can now play stations from your pay-TV supplier.

You will find information about compatible CAMs on the internet at: http://downloads.bosch-carmultimedia.net/

Software update

You will find software updates for this device on the internet at: http://downloads.bosch-carmultimedia.net/

You need a USB stick formatted to the FAT32 file system for a software update.

- Download the software update and decompress the file.
- Save the uncompressed files at the highest level (root directory) of a USB stick.
- First switch the device off, if necessary.
- Insert the USB stick into the USB port of the device.
- Switch the device back on.

The software update will be detected automatically, and the device looks for confirmation for performing the update.



Important note:

Do not switch the device of or remove the USB stick until the software update has been completed. Interrupting the update will cause data loss, and make the device unusable.

▶ Press the **MENU/OK** (7) button.



Note:

If you press a button other than the **MENU/OK** (7) button or wait for the timeout to elapse (approx. 30 seconds), the update will be cancelled and the device switches back to normal operation.

The update starts and its progress is indicated (first for the tuner update and then for the player update).

Once the update has completed,

- remove the USB stick.
- Press the MENU/OK 7 button.

The device starts up.

List of compatible USB sticks:

- SANDISK USB FLASH DRIVE 8 GB 3.0
- LEXAR Jumpdriver superspeed USB 3.0 S33 16 GB
- MICROVALUT CLICK super speed usb 8 GB
- TREKSTOR USB stick 8 GB



Note:

No guarantee can be offered for the function of other USB sticks.

.png, .jpg, .bmp

Supported storage

device capacity: 1 TB Supported image file formats:

Technical data			en 13
Technical d	ata	Video	
Power supply	12 V /24 V (9 - 36 V)	Transmission mode: Formats:	DVB-T, DVB-T2 352x240x30p
Current consumption			352x288x25p
In operation			1280x720x60p/50p
12 V: 24 V:	0.7 A 0.4 A	Codecs:	H.264/AVC H.264 L4.1
Max. current 12 V:	0.85 A		H.265 HEVC MPEG2
24 V: Standby current	0.46 A	File formats:	.mov (MPEG-4 Video/ MPEG-4 AAC)
12 V: 24 V:	0.55 A 0.3 A		.mp4 (H.264/ MPEG-4 AAC)
Antenna power supply			MPEG-1 Layer 2
per antenna:	max. 30 mA (5 V)	Develution	(MP2))
RF reception		NTSC:	720x480x60i
Wavebands	174 – 230 MHz	PAL:	720x576x50i
UHF:	470 – 862 MHz	Audio	
Bandwidth	7 MHz	Formats:	MPEG-1/2 layers 1 & 2,
UHF:	7 MHZ 8 MHz		16 – 48kHz, Layer 2: 32 – 384 kbps
Ports			MPEG-2/4 AAC-LC,
HDMI Version:	1.0		8 – 96 kHz, 8 – 576 kbps
USB Version: Supported file	2.0	Codecs:	Dolby Digital AC3 MPEG-1/2 layers 1 & 2, MPEG-2/4 /AAC-LC
systems:	NTFS, FAT32		Dolby Digital AC3

File formats:

.aac, .flac, .mp3, .wav

Operating temperature

0°C to +70°C

Storage temperature

-20 °C to +85 °C

Dimensions (W x H x D)

195 x 131 x 27 mm

- Weight approx. 800 g
- Certification CE, UN ECE R10
- Tested acc. to UN ECE R118

Subject to changes!



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