

Operating Instructions

CAP Converter



Control Unit for Camping & Caravan Reception Systems

Contents

1	General Safety Instructions	2
2	About These Operating Instructions	6
2.1	Contents	6
3	Scope of Supply.....	6
4	CAP Converter Connections	6
5	Installing the CAP Converter	7
5.1	Connecting the CAP Converter to the WLAN	7
6	Connecting the CAP Converter to other CAP Systems.....	7
6.1	Change of Location	7
6.2	Operating the Turntable Using the External Pushbutton.....	8
6.2.1	Raising the Turntable from the Park Position.....	8
6.2.2	Lowering the Turntable to the Park Position	8
6.2.3	Resetting the Turntable	8
7	Connection Example CAP System.....	8
7.1	LED Status Display in Conjunction with CAP Systems	9
8	Operating HDS Systems Using the External Pushbutton.....	10
8.1.1	CAP Converter in Standby.....	10
8.1.2	Resetting the Turntable	10
8.1	Connection Example HDS System	10
8.2	LED Status Display in Conjunction with the HDZ 66/HDS 166.....	11
9	Updating the Channel List and Software	12
9.1	Updating the Channel List.....	12
9.2	Updating the Software.....	12
9.3	Automatic Channel List and Software Update (Astra 19.2°E).....	12
10	Streaming.....	13
10.1	Streaming via the CAPcontrol App	13
10.2	Streaming to PC/Laptop	13
11	Accessories (Not Included)	14
12	Possible Errors.....	15
13	Disposal	15

1 General Safety Instructions



Warning

Risk of death due to electric shock. Risk of fires resulting from electric current. Note the following points:

12 V connection (vehicle power supply)

- Make sure that the 12 V connection cable (power supply cable) is not reversed and not damaged during installation.

Power supply unit

- Make sure that the power supply unit (power supply cable) is not damaged or does not become damaged.
- A unit with a damaged power supply unit must be disconnected from the mains (pull the mains plug first!) and repaired by an electrical specialist before it can be used again.

Power supply voltage

- Operate the unit only at the specified mains voltage. The mains voltage is shown on the rear of the unit and on the power supply unit.
- Connect the unit to the antenna and to the TV set or the cable network and PC before connecting it to the mains and turning it on.

Accessibility of the mains socket

Position the unit close to an easily accessible mains socket so that you can disconnect it at any time if required.

Playing children

Make sure that children do not stick any objects into the ventilation slots.

Cleaning

- Unplug the connection cable/power supply unit before cleaning the unit.
- Never open the casing of the unit.
- Do not insert any objects into the ventilation slots.
- Use a dry cloth for cleaning.
- Restrict cleaning to the outer surface of the unit.

Ambient conditions

- The CAP Converter and the power supply unit are for indoor use only.
- Protect the unit from moisture, dripping and splash water.
 - Do not operate the unit in damp areas.
 - Only use the unit in a moderate climate, not in tropical conditions.
 - Do not place any liquid-filled objects (e.g. vases) on top of the unit.



Note

Risk of damage to the unit. Note the following points:

Incorrect wiring of the connections

Incorrect wiring of the connections can lead to malfunctions or defects in the unit.

Overheating

Observe the following points, so that the heat generated in the unit is adequately dissipated.

- Unless otherwise specified in the supplied instructions, maintain the following clearances around the unit: 10 cm above and 2 cm to each side.
- Do not cover or block the ventilation slots and the fan of the unit by, for example, other devices, magazines, table cloths, clothing or curtains.
- Do not place any objects on top of the unit.
- Do not place the unit near the heater. Do not place naked flames, such as lit candles, on the unit.
- Do not expose the unit to direct sunlight.

Risk of data loss and software damage if the receiver is disconnected from the mains during operation

Always wait until the control unit is in standby mode before disconnecting it from the vehicle power supply or mains. This ensures that any changed or new data will be saved by the control unit.

Long periods of absence or storms

In case of prolonged absence or thunderstorms, always switch off the unit (from stand-by mode) at the mains switch.

Further points:

Effects of waste heat from the unit

- Every electronic device generates heat. The temperature rise of the unit lies within the permissible range. Sensitive furniture surfaces and veneers may, however, discolour over time due to constant exposure to heat.
- The device feet can cause colour changes on treated furniture surfaces. To avoid possible discolouration, place the unit on a suitable firm and level surface.

How to use these instructions

- Read the instructions carefully before setting up and operating the unit.
- Keep the instructions safe for future reference, and pass them on to any new owner.

Return shipment/original packaging

Keep the original packaging in case you need to return the unit. Due to their design, receivers are sensitive to shocks and are only adequately protected by the original packaging. Improper shipping will void the warranty/guarantee claim for the receiver.

Updates

The information in this manual was correct at the time of going to press. However, we reserve the right to make changes at any time and without prior notice. If new software which affects the information in this manual (e.g. changes to functions) is released for your receiver, we will provide a new manual for download at www.kathrein-ds.com if we deem it necessary.

Repair

Ensure that any repairs to your unit are carried out by qualified personnel only.

- Improper work on the unit can impair its electrical safety.
- The manufacturer accepts no liability for accidents caused by the user opening the unit.
- Unauthorised opening and attempted repairs of the unit will result in the loss of all warranty claims.

Repair centre

CSS Caravan-Sat-Service GmbH

Werksreparaturstelle

Bahnhofstr. 110

83224 Grassau, Germany

Phone: +49 8641 69984-27

Website: <http://www.css-grassau.de>

2 About These Operating Instructions

2.1 Contents

These operating instructions describe how to quickly and easily connect the control unit to CAP or HDS systems and put it into operation. All further information can be found in the detailed operating instructions of the CAP or HDS systems at www.kathrein-ds.com.

- Go to www.kathrein-ds.com ► [Products](#) ► [Camping & Caravan](#).

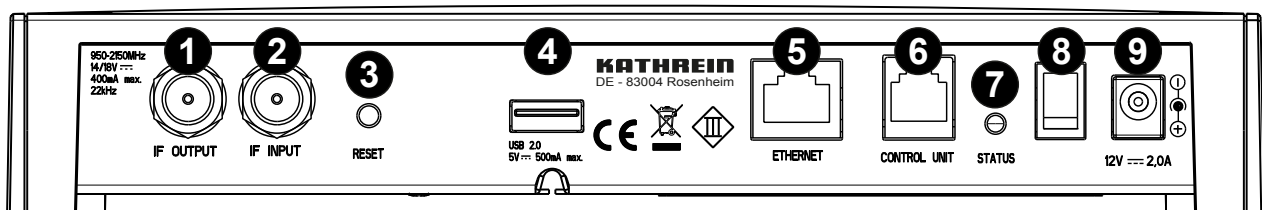
The operating instructions are available for download on the product page of your CAP or HDS system.

3 Scope of Supply

- CAP Converter control unit
- 12 V connection cable
- Pushbutton cable
- Operating instructions

4 CAP Converter Connections

- ① **IF Output:** Output satellite signal to TV/SAT receiver, F-type connector



- ② **IF Input:** Input satellite signal/control signal CAP or HDS system, F-type connector
- ③ **Reset:** Reset button
- ④ **USB port:** USB port type A
- ⑤ **Ethernet port:** RJ 45
- ⑥ **Control Unit:** RJ 12, connection for pushbutton cable or control panel
- ⑦ **Status LED:** Operating status display
- ⑧ **Mains switch:** On/off
- ⑨ **12 V connection:** Power supply

5 Installing the CAP Converter

✓ The master coaxial cable is connected to the **IF INPUT** ②.

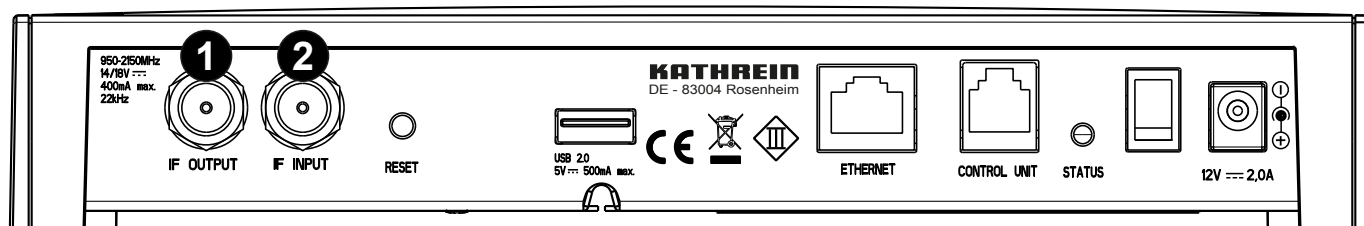
1. Connect the TV set to the **IF OUTPUT** ① using a coaxial cable (not included).



Risk of malfunction!

- Do not interchange the master coaxial cable and TV/receiver connection cable.
- Pay attention to the polarity of the 12 V connection cable (+ red /– black).

2. For installation of the 12 V connection cable (included) contact a specialist dealer.



5.1 Connecting the CAP Converter to the WLAN

✓ Kathrein UFZ 131¹⁾ (USB WLAN adapter) is plugged into the CAP Converter.

1. Download the CAPcontrol app onto your smartphone/tablet (Google: Play Store, Apple: App Store).
2. Start the CAP Converter.
3. Open the WLAN settings on your smartphone and select the WLAN network provided by your CAP Converter.
The WLAN access data and the network key can be found on the top side of your CAP Converter.

WLAN-Zugangsdaten

(nur in Verbindung mit Kathrein UFZ 131)

WLAN-Name (SSID): **KATHREIN_:D3:50**
Netzwerkschlüssel (PIN): **XVI3501025**

4. Open the CAPcontrol app on your smartphone/tablet.
5. The connection to the receiver is established automatically.

¹⁾ Available as accessory

6 Connecting the CAP Converter to other CAP Systems

6.1 Change of Location

To speed up the search after a change of location, enter the new location in the CAPcontrol app¹⁾ or use the external control panel to enter the new location.

¹⁾ Available as accessory

6.2 Operating the Turntable Using the External Pushbutton

6.2.1 Raising the Turntable from the Park Position

- ✓ The turntable is in the park position.
- ▶ Press the pushbutton.
 - ⇒ The turntable moves to the last satellite position.

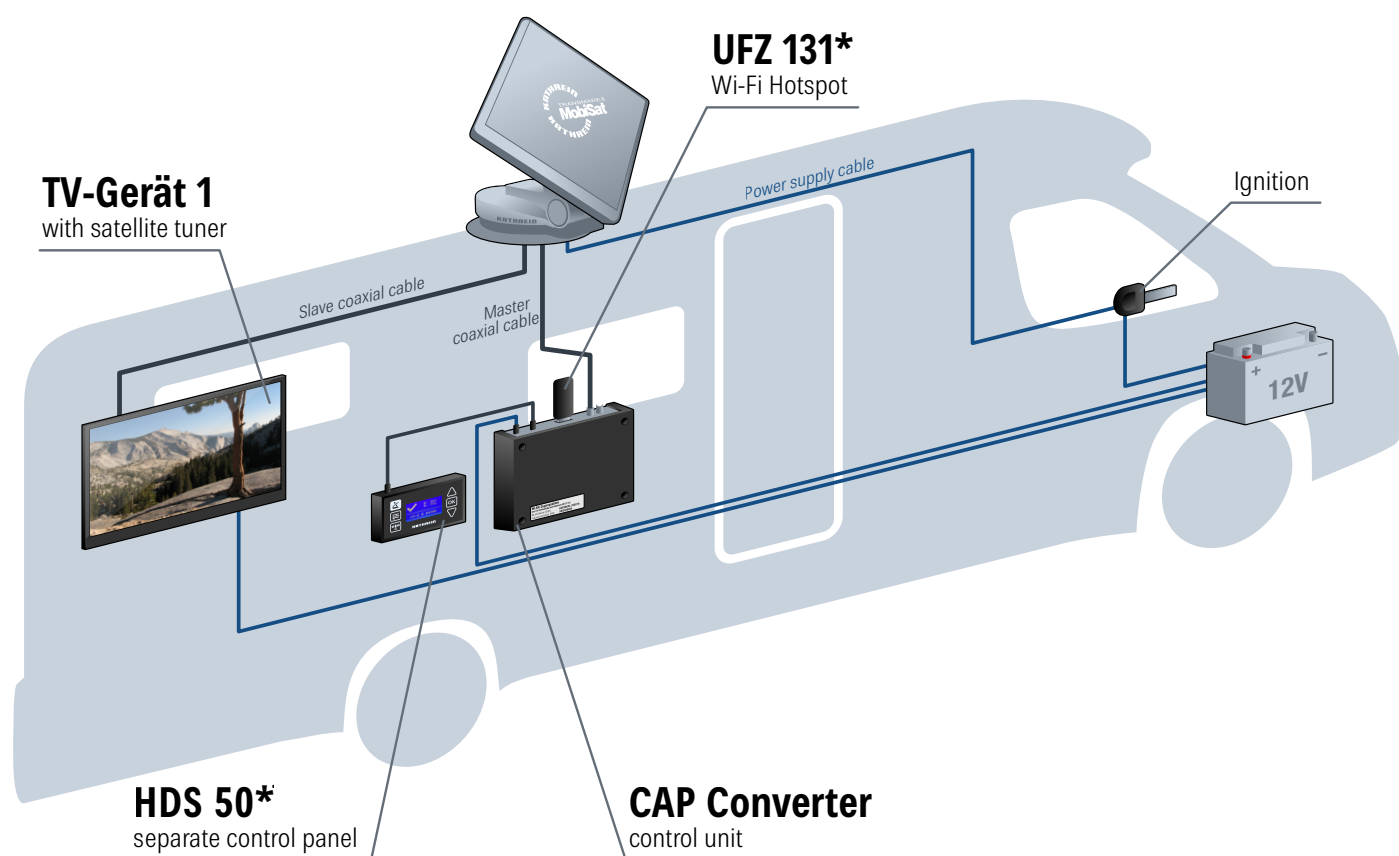
6.2.2 Lowering the Turntable to the Park Position

- ✓ The turntable is raised.
- ▶ Press the pushbutton.
 - ⇒ The turntable moves to the park position.

6.2.3 Resetting the Turntable

- ▶ Keep the pushbutton pressed for 5 seconds.
 - ⇒ The turntable is reset. The LED flashes 3 x green and 1 x red until the turntable is in the park position.

7 Connection Example CAP System



* Available as accessory

7.1 LED Status Display in Conjunction with CAP Systems

Function	LED Colour	Signal	Description
Problem	Red	LED flashes 1 x for 0.5 s, then pauses for 2 s	No connection to HDP
		LED flashes 2 x for 0.5 s, then pauses for 2 s	Satellite not found
		LED flashes 3 x for 0.5 s, then pauses for 2 s	Ignition is active
		LED flashes 4 x for 0.5 s, then pauses for 2 s	Turntable is blocked
		LED flashes 5 x for 0.5 s, then pauses for 2 s	Battery voltage too low
		LED flashes 6 x for 0.5 s, then pauses for 2 s	Temperature warning
		LED flashes 7 x for 0.5 s, then pauses for 2 s	Transponder does not exist



To return the CAP Converter to normal operation:

1. Check the cause of error.
2. Press the pushbutton once to acknowledge the error so that the CAP Converter can return to normal operation.

Normal operation	Green	LED flashes slowly	Turntable is in the park position
		LED flashes 3 x, followed by a short pause	Turntable is moving, e.g. to the park position
		LED flashes quickly	Turntable is searching for a satellite position
		LED is permanently on	Satellite found
	Red	LED is permanently on	Standby

USB update	Yellow ¹⁾	LED is permanently on	Downloading data from USB
	Green	LED lights up green for 1 s	Data download successful
	Red	LED lights up red for 1 s	Data download failed
	Yellow ¹⁾	LED lights up yellow for 1 s	Data download complete

Boot-loader	Yellow ¹⁾	LED is permanently on	Bootloader is active
	Red	LED flashes 1 x for 0.5 s, then pauses for 1.5 s	Data carrier not found
		LED flashes 2 x for 0.5 s, then pauses for 1.5 s	Folder structure/update file not found
		LED flashes 3 x for 0.5 s, then pauses for 1.5 s	Invalid update file
		LED flashes 4 x for 0.5 s, then pauses for 1.5 s	Saving update file failed

¹⁾ The red and the green LEDs on the external pushbutton are on at the same time

8 Operating HDS Systems Using the External Pushbutton

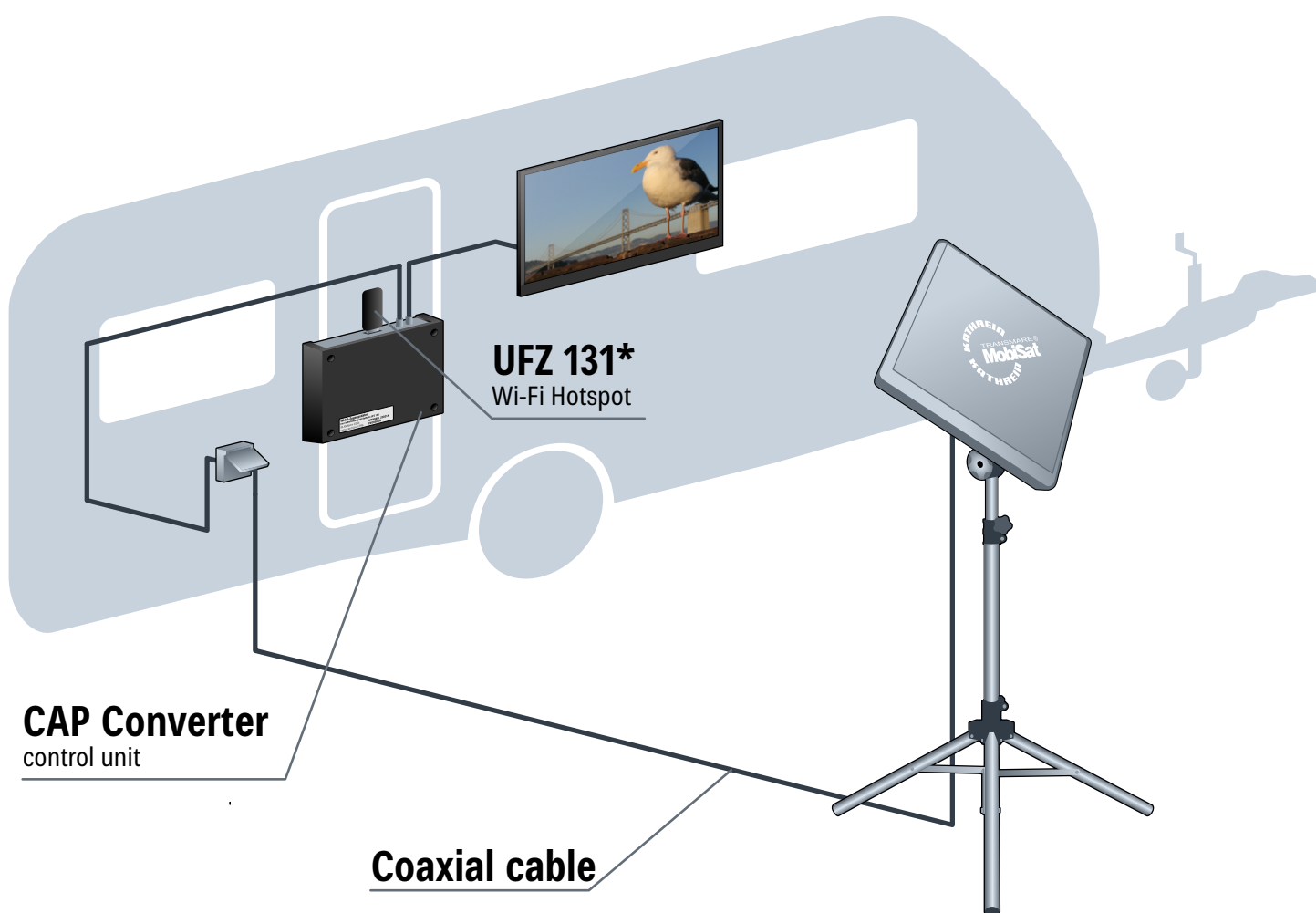
8.1.1 CAP Converter in Standby

- ✓ The antenna was successfully aligned with a satellite.
- ▶ Press the pushbutton.
 - ⇒ The CAP Converter switches from standby to normal operation.

8.1.2 Resetting the Turntable

- ▶ Keep the pushbutton pressed for 5 seconds.
 - ⇒ The turntable is reset. The LED flashes 3 x green and 1 x red until the turntable is in the park position.

8.1 Connection Example HDS System



* Available as accessory

8.2 LED Status Display in Conjunction with the HDZ 66/HDS 166

Function	LED Colour	Signal	Description
Problem	Red	LED flashes	No connection to antenna



To return the CAP Converter to normal operation:

1. Check the cause of error.
2. Press the pushbutton once to acknowledge the error so that the CAP Converter can return to normal operation.

Normal operation	Green	LED flashes slowly	Connection to antenna OK, no satellite found
		LED is permanently on	Satellite found
	Red	LED is permanently on	Standby

USB update	Yellow ¹⁾	LED is permanently on	Downloading data from USB
	Green	LED lights up green for 1 s	Data download successful
	Red	LED lights up red for 1 s	Data download failed
	Yellow ¹⁾	LED lights up yellow for 1 s	Data download complete

Boot-loader	Yellow ¹⁾	LED is permanently on	Bootloader is active
	Red	LED flashes 1 x for 0.5 s, then pauses for 1.5 s	Data carrier not found
		LED flashes 2 x for 0.5 s, then pauses for 1.5 s	Folder structure/update file not found
		LED flashes 3 x for 0.5 s, then pauses for 1.5 s	Invalid update file
		LED flashes 4 x for 0.5 s, then pauses for 1.5 s	Saving update file failed

¹⁾ The red and the green LEDs on the external pushbutton are on at the same time

9 Updating the Channel List and Software

9.1 Updating the Channel List

✓ An FAT32 formatted USB stick is available for this task.

1. Create a folder named **kathrein** and a subfolder named **capconverter** on the USB stick.
2. Download the *channel.xml* file with the current channel list from www.kathrein-ds.com ► [Service](#).
3. Save the *channel.xml* file on the USB stick in the *capconverter* subfolder.
4. Plug the USB stick in the CAP Converter.
5. Switch off the CAP Converter at the mains switch.
6. Switch the CAP Converter on again.
 - ⇒ The channel list is loaded automatically when the CAP Converter is switched on. The LED status indicates if the channel list has been loaded successfully or if a problem has occurred, see *LED Display in Conjunction with CAP Systems, page 9*.

9.2 Updating the Software

✓ An FAT32 formatted USB stick is available for this task.

1. Create a folder named *kathrein* and a subfolder named *capconverter* on the USB stick.
2. Download the *CAP650-Vq.xx_Bxx.bin* file with the current software from www.kathrein-ds.com ► [Service](#).
3. Save the *CAP650-Vq.xx_Bxx.bin* file on the USB stick in the *capconverter* subfolder.
4. Plug the USB stick in the CAP Converter.
5. Switch off the CAP Converter at the mains switch.
6. Press the pushbutton and simultaneously switch the CAP Converter on again at the mains switch.
 - ⇒ The software is loaded automatically when the CAP Converters is switched on. The LED status display indicates if the software has been loaded successfully or if a problem has occurred, see *LED Status Display in Conjunction with CAP Systems, page 9*.

! The update only works if the pushbutton on the rear side of the CAP Converter is pushed!

9.3 Automatic Channel List and Software Update (Astra 19.2°E)

✓ The antenna is aligned with Astra 19.2°E during the night.

The CAP Converter performs an automatic channel list and software update during the night.

! The automatic update only works if the CAP Converter is aligned with Astra 19.2°E during the night!

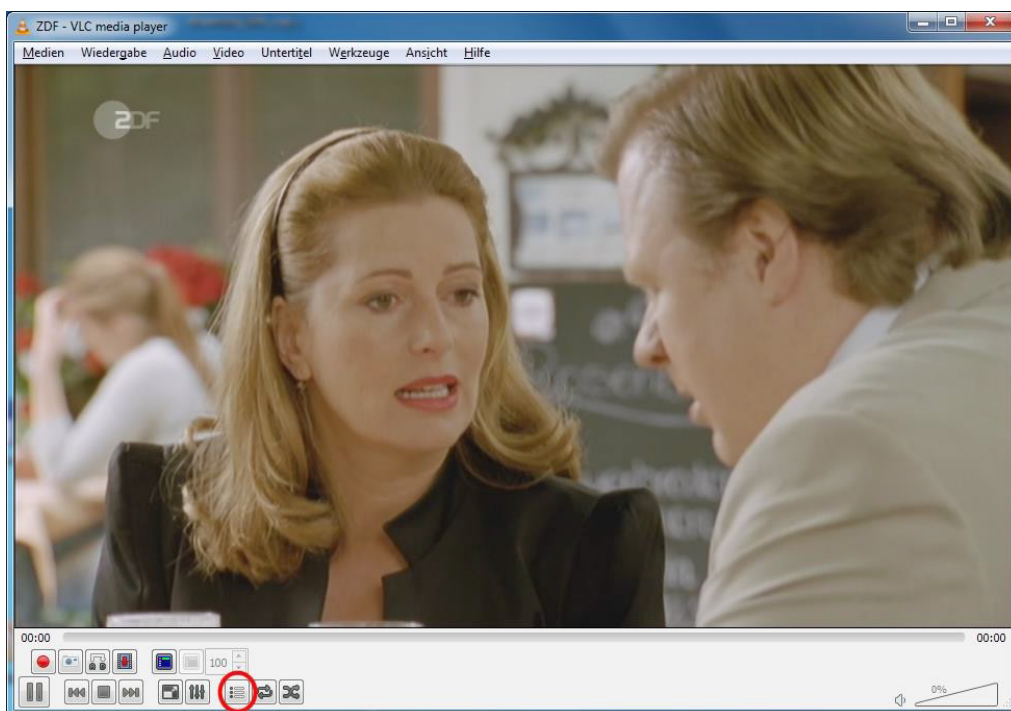
10 Streaming

10.1 Streaming via the CAPcontrol App

- ✓ The CAPcontrol app is installed on your smartphone/tablet.
- ✓ Smartphone/tablet and CAP Converter are connected via WLAN or a wired network.
- Open the CAPcontrol app
- Select a TV/radio station
- The selected station will be played on your smartphone/tablet

10.2 Streaming via PC/Laptop

- ✓ VLC Media Player is installed on your PC/laptop¹⁾.
- ✓ PC/laptop and CAP Converter are connected via WLAN or a wired network.
- Start the VLC Media Player
- Media -> Open file ... select
- Open m3u list²⁾
- Streaming starts automatically with "Das Erste"
- Use the N or P key to switch to the next or previous channel
- Click on the icon circled in red to show or hide the playlist. Double-click on the playlist to switch to the desired channel:



¹⁾ The VLC Media Player may be downloaded free of charge from the Internet.

²⁾ The m3u list may be downloaded at www.kathrein-ds.com (country-specific downloads: firmware, config files and channel list)

11 Accessories (Not Included)

The following accessories are available for the control unit:



HDS 50

Order number: 20410070

External control panel

- The external control panel HDS 50 allows easy and convenient operation of the CAP 650, 750 und 950 without having to switch on a receiver or TV set
- The HDS 50 offers a multitude of functions, e.g. selecting a satellite, lowering the antenna to the park position and others. The functions can be called up via an intuitively structured menu. An LC display provides the necessary overview

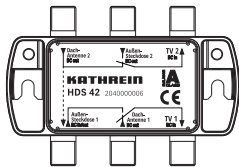


UFZ 131

Order number: 20410061

WLAN/USB adapter for wireless connection to the home network

- The UFZ 131 supports the wireless standards IEEE 802.11a/b/g/n with a data rate of up to 300 Mbps
- Easy installation via the receiver menu, no additional software required
- Supports 2.4 and 5 GHz ISM bands (dual-band)
- Supports 64-/128-bit WEP, WPA, WPA2 and WAPI encryption



HDS 42

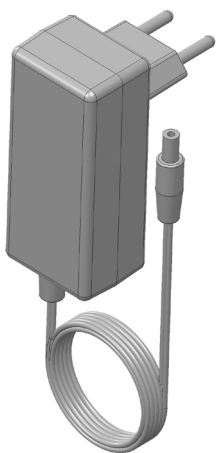
Order number: 2040000006

The HDS 42 is a master/slave switch and is connected between a receiver-independent CAP turntable and the HDS 166 antenna set. It automatically passes on the received satellite signal without having to reconnect the coax cable on the TV set.

12V Power Supply Unit

Order number: 1683660

For connection to 230 V outlets



The power supply unit can ordered from:

CSS Caravan-Sat-Service GmbH

Werksreparaturstelle

Bahnhofstr. 110

83224 Grassau, Germany

Phone: +49 8641 69984-27

<http://www.css-grassau.de>

12 Possible Errors



If a satellite cannot be found, make sure that the sequence of the satellite positions in your receiver corresponds to the sequence of the satellite positions in the CAP Converter.



If there is a connection problem between the CAP converter and the turntable or HDS system, check the cabling.

Tip

Device information required for a claim under warranty

If a claim under warranty is made, we require as much information as possible about your device, e.g. device name, order number, serial number. You can find this information on the sticker on the bottom of the device.

13 Disposal



Electronic equipment

Electronic equipment is not domestic waste – in accordance with Directive 2002/96/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of 27 January 2003 on waste electrical and electronic equipment, it must be disposed of properly. At the end of its service life, take this unit to a designated public collection point for disposal.

