TELESTAR® SATPLUS Light

D

Manual

Digital DVB-S/S2/T/T2/C measuring receiver

V1_29_04_24

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1. FOREWORD

Dear customer,
thank you for choosing this product.
Our product complies with legal requirements and has been manufactured under constant quality control. The technical data correspond to the current status at the time of printing.
The warranty period for the appliance corresponds to the statutory provisions at the time of purchase. We also offer you our HOTLINE telephone service with professional assistance. In our service area, professional experts are available to answer your questions. Here you can ask any questions you may have about the products and receive tips on localising the cause of a possible fault.
Monday - Friday 8 a.m. - 4:45 pm on the following telephone number:
Technical hotline:02676 / 95 20 101
or by e-mail at: service@telestar.de
If you cannot be helped on the service hotline, please send the device to the following address, preferably in its original packaging, but packed securely for transport:

TELESTAR - DIGITAL GmbH
Service Centre
Am Weiher 14 (industrial area)
56766 Ulmen

Please read these instructions carefully and keep them for future reference. If you sell or pass on the device, please be sure to also hand over these operating instructions.

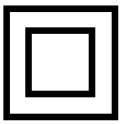
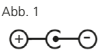
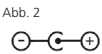
TRADEMARK INFORMATION
The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.

LEGAL NOTICE

Status: 01/2024

2. SAFETY INSTRUCTIONS

2.1 Explanation of Symbos

SYMBOL	MEANING
⚠ DANGER	This signal word indicates a hazard with a high degree of risk, which, if ignored, results in death or serious injury.
⚠ WARNING!	This signal word indicates a hazard with a medium degree of risk, which, if ignored, may result in death or serious injury.
⚠ CAUTION!	This signal word indicates a hazard with a low degree of risk, which, if ignored, may result in minor or moderate injury.
⚠ NOTE!	This signal word warns of possible property damage.
	This sign warns of danger.
	Protection class II Electrical devices with protection class II have a reinforced or double insulation equal to the rated insulation voltage between active and touchable parts (VDE 0100 part 410, 412.1). They usually have no connection to the protective conductor. Even if they have electrically conductive surfaces, they are protected by a reinforced or double insulation from contact with other live parts
CE	The products marked with this symbol meet the requirements of the directives of the European Community.
Abb. 1  Abb. 2 	For devices with hollow plugs, these symbols indicate the polarity of the plug. A distinction is made between 2 variants Fig. 1: Outside plus / inside minus Fig. 2: Inside plus / outside minus
	Appliances with this symbol may only be operated indoors in a dry environment

2. SAFETY INSTRUCTIONS

2.2 Intended use

The device serves as a measuring receiver for audio/video signals transmitted via satellite, DVB-T/2 and DVB-C. Any other operation or use of the device is considered improper and may result in personal injury or damage to property. Do not use the device for any other purpose. Operate the device indoors only; the device is intended for private use only and not for commercial use. We assume that the operator of the device has general knowledge of handling consumer electronics devices.
Liability expires in the event of improper use.

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> Only use replacement parts and accessories supplied or authorised by us.
> Do not modify the device and do not use any additional devices or spare parts that have not been explicitly authorised or supplied by us.
> Do not use the appliance in potentially explosive atmospheres.
> This includes, for example, fuel storage areas, petrol stations or areas where solvents are stored or processed.
> Do not operate the appliance in areas with particle-laden air (e.g. flour or wood dust)
> Do not expose the appliance to extreme conditions, e.g. direct sunlight, high humidity, moisture, extremely high or low temperatures, naked flames.

2.3 Safety Instructions

Check the appliance before use.
In the event of damage or a defect, the appliance must not be used. Risk of injury!
Risk of injury to children and persons with reduced physical, sensory or mental capabilities (e.g. partially disabled persons, elderly persons with reduced physical and mental capabilities) or lack of experience and knowledge.

> Please store the appliance only in places inaccessible to children.
> This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
> Never allow children to use the appliance unsupervised.
> Please keep the packaging materials used (bags, polystyrene pieces, etc.) out of the reach of children. Children must not play with the packaging. There is a risk of suffocation, especially with packaging film.

2. SAFETY INSTRUCTIONS

2.4 Operational Safety

DANGER

Risk of injury!
Risk of injury due to electric shock from live parts. There is a risk of electric shock or fire due to unintentional short circuits.

> Please check the appliance for damage before each use. If you notice any visible damage or the appliance is visibly damaged, please do not use it.
> If you notice a technical or mechanical problem, please contact TELESTAR Service.
> Only use the power supply unit included in the scope of delivery!
> Never open the housing of the device. , Disconnect the device from the power source immediately in the event of malfunctions
> If you move the appliance from a cold to a warm environment, moisture may condense inside the appliance.
In this case, wait about an hour before operating the appliance.
> Unplug the appliance from the socket if you are going to be away for a long time or during a thunderstorm.
> If foreign bodies or liquid get into the appliance, unplug the mains adapter from the socket immediately. Have the appliance checked by qualified specialists before putting it back into operation. Otherwise there is a risk of electric shock.

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2.5 Connecting the appliance

> Only connect the appliance to a properly installed, earthed and electrically fused socket.
> Please ensure that the power source (socket outlet) is easily accessible.
> Do not kink or crimp any cable connections.
> Before using the appliance, check that the voltage specification on the appliance corresponds to the local mains voltage.

2.6 Protecting the device from defects

NOTE!

Unfavourable ambient conditions such as humidity, excessive heat or lack of ventilation can damage the device. Only use the appliance in dry rooms. Avoid direct proximity to: Heat sources, such as radiators, open flames, such as candles, devices with strong magnetic fields, such as loudspeakers. Ensure a sufficient distance from other objects so that the device is not covered, so that adequate ventilation is always guaranteed. Avoid direct sunlight and locations with an unusually high level of dust. Ensure that contact with moisture, water or splashing water is avoided and that no objects filled with liquid - e.g. vases - are placed on or near the appliance.
Do not place any heavy objects on the appliance. Ensure that the appliance is not exposed to dripping or splashing water and that there are no open sources of fire (e.g. burning candles) near the appliance.

2.7 Handling batteries

The device contains a rechargeable battery. Only use this type of battery. Only use the battery type of the battery included in the scope of delivery.

⚠ DANGER!

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There is a risk of internal injury if batteries are swallowed.
The battery acid in the batteries can cause injuries if it comes into contact with the skin. Seek medical help immediately if there are signs of skin burns. Always keep new and used batteries away from children. Remove leaking batteries from the appliance immediately and clean the contacts before inserting new batteries.

⚠ WARNING!

There is a risk of explosion if batteries are used incorrectly.
Only use new batteries of the same type. Never use new and old batteries together in the same device. Ensure correct polarisation when inserting the batteries. Batteries should only be stored in cool and dry places. Never dispose of batteries in a fire.
If the device is not to be used for a longer period of time, please remove the batteries from the device. Never expose batteries to excessive heat or direct sunlight.

2.8 Cleaning the device

Disconnect the appliance from the power supply before cleaning. Use a dry, soft cloth to clean the appliance. Please do not use any liquids to clean the appliance. Do not use any solvents or cleaning agents, as these can damage the surface and/or labelling of the appliance.

2.9 Behaviour in the event of malfunctions

If the device malfunctions, disconnect it from the power supply and wait a few seconds. Reconnect the device to the power supply. It may be necessary to reset the device to the factory settings. If this is not successful, please contact your dealer or contact TELESTAR Digital GmbH directly. Further information can also be found on page 4. Please remove all parts from the packaging and completely remove all packaging materials. If one or more of the specified parts are missing, please contact:

3. SCOPE OF DELIVERY

TELESTAR Service Centre
Am Weiher 14,
56766 Ulmen
e-mail: service@telestar.de

NUMBER	DESCRIPTION
1	TELESTAR® SATPLUS Light
1	User Manual
1	External power supply
1	AV adapter cable
1	Rubber cover
1	12 Volt DC connection cable
1	BNC-Cinch adapter

4. DEVICE OVERVIEW

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4.1 Control panel and connections

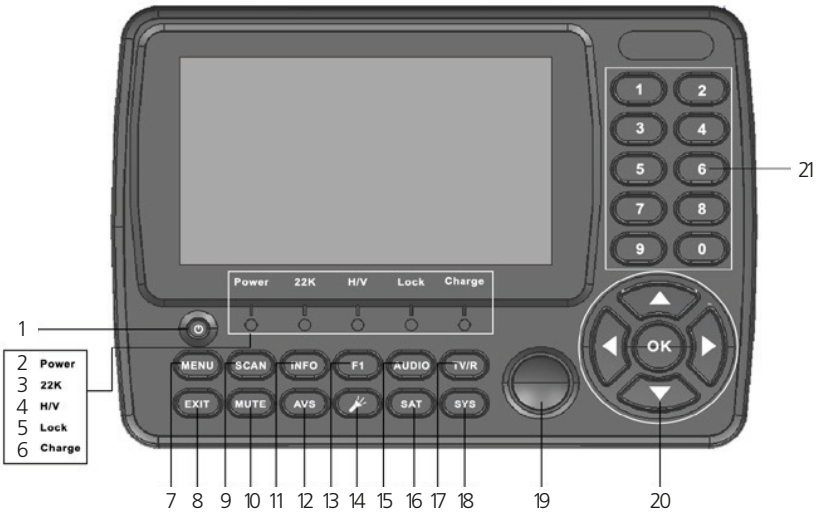

Abbildung 1

NR.	NAME	FUNCTION
1	On/Off	Switches the device on or off
2	Operating status LED	Lights up red during operation
3	22K	22 KHz Status
4	H/V	Polarisation status Red-horizontal (18V) / Green-vertical (13V)
5	LOCK	Signal is present. Data stream is being received
6	Charge	Battery control status Red: Battery is charging Blue: Battery fully charged
7	MENU	Calls up the main menu Pressing again switches back one menu item
8	EXIT	Exiting the called menu
9	SCAN	Calls up the DVB-S2 menu
10	MUTE	Mutes the sound

4. DEVICE OVERVIEW

4.1 Control panel and connections

NR.	BEZEICHNUNG	FUNKTION
11	INFO	Calls up the reception parameters of a set programme
12	AVS	Switches to external input source
13	F1	Calls up different functions depending on the operating mode
14	LED	Activates light for illumination in difficult lighting situations
15	Function red AUDIO	Calls up various functions in the menu. Calls up audio parameters.
16	Function orange SAT	Calls up various functions in the menu. Calls up the satellite installation menu.
17	Function grün TV/R	Calls up various functions in the menu. Switches between TV and radio mode.
18	Function blue SYS	Calls up various functions in the menu.
19	Compass	
20	Navigation cross	For navigation in the menu. **OK** button confirms a selection
21	Keyboard	To enter a value directly

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4. DEVICE OVERVIEW

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4.1 Control panel and connections

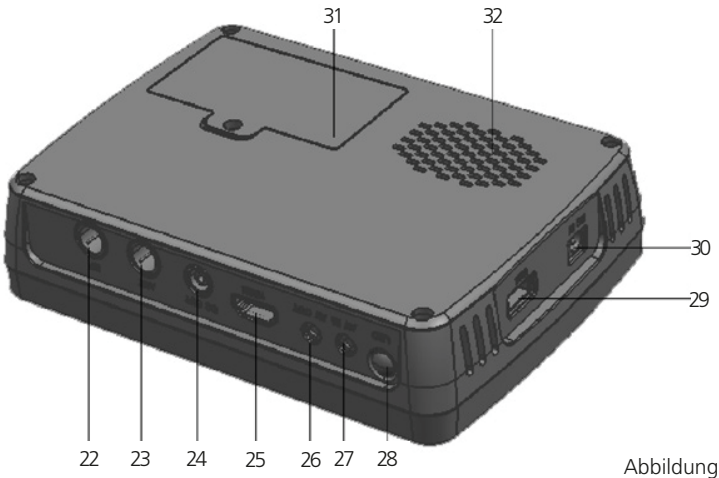

Abbildung 2

NR.	NAME	FUNCTION
22	LNB (satellite RF input)	Antenna connection Satellite reception system
23	RF (DVB-T/T2 / DVB-C RF input)	RF connection for measuring DVB-T/T2 or DVB-C signals.
24	DC Out	12 V voltage output for operating external devices with 12 V power supply. (e.g. surveillance camera)
25	HDMI Out	HDMI output for outputting the screen content to an external monitor
26	AV Out	AV output for outputting the screen content to an external monitor with an analogue AV connection. (adapter cable included in the scope delivery)
27	AV IN	For connecting an external audio/video playback device, e.g. surveillance camera with analogue output
28	LED	LED light for illumination in difficult lighting situations
29	USB-Port	USB connection for FW update and for saving a channel list
30	DC IN	Connection of the external power supply unit or car power supply unit (included in the scope of delivery)
31	Battery housing	Access to battery pack
32	Speaker	

5. INITIAL COMMISSIONING

5.1. Initial Commissioning

With the TELESTAR SATPLUS light, you are able to set up and align a satellite system optimally and easily. You can also use the device to measure DVB-C and DVB-T/DVB-T2 signals. Before using the device for the first time, the battery should be charged.
The first charging process should take at least 4 hours.
> Connect the 230 V mains adapter to the mains adapter connection on the side of the device and plug the mains adapter into a mains socket. The device is now charging. The CHG LED lights up.
> Switch on the device using the power button. After the start logo, the device is ready for operation.

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5.2. Menu

> Press the **MENU** button.

You can use the navigation cross to select all menu items in the menu. The selected menu item is highlighted in colour. You can call up the selected menu item by pressing the **OK** button. To exit the menu, press the **EXIT** button. To go back one step in the menu, press the **MENU** button.

5.2.1 System settings

If you are using the device for the first time, you may need to change the basic settings of the receiver. You can make these basic settings in the Settings area.
> Use the navigation cross to select the System settings menu item and confirm with **OK**.

5.2.1 System settings

OSD language:
> Select the menu language here.
Country:
> Select the country you are in here.
Aspect ratio:
> The various display formats can be set here.
TV setting
> Select between the PAL and NTSC TV systems here.
Video resolution
> Select the resolution of the device monitor and the resolution transmitted via HDMI here. Choose between the standard resolutions 576p, 720p, 1080i and 1080p.
HDMI Audio
> Select the audio signal of the HDMI output here.
Time zone
> Set the time zone prevailing at your location here.For Germany, this difference is GMT+1 hour.
System lock
> You can lock the system menu to prevent unauthorised access to certain menu items. Activate the lock in this menu and enter a 4-digit PIN access code. The factory-set PIN is 0000.
PWR unit
> Specify here whether the signal measurement should be displayed in dBuv or dBmV. The difference between dBmV and dBuV is that dBmV is measured in decibels relative to a millivolt, while dBuV is measured in decibels relative to a microvolt.
Keyboard illumination
> This setting activates the keyboard backlighting.
Key tone
> An acknowledgement tone can be activated here when the buttons on the device are pressed.
Loudspeaker
> Activate or deactivate the built-in loudspeaker under this menu item.
12V
> Switch the 12 volt output voltage for external devices on or off here.
Update
> Via the USB interface, you have the option of updating the operating software of the device, which can be downloaded from www.telestar.de if required. The software provided on the website must be unpacked. The unpacked file is then copied to a suitable storage medium and connected to the measuring receiver via USB.
Factory settings
> You can reset all settings that you have made on the device to their original state using the factory settings. This is useful if you have made changes that subsequently lead to the device not functioning optimally.
Version
> To check the current software version of the receiver, the information can be called up via this menu item.

5.2.1 System settings

Saving a channel list

To save programme and transponder lists, please read chapter 8.2.

Load channel list

To load programme and transponder lists, please read chapter 8.3.

6.1 DVB-S/S2 default setting

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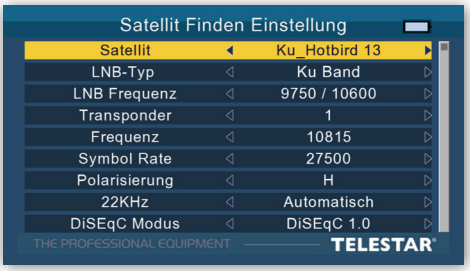
The device can be used to optimally align the satellite antenna. In addition, the following setting can be used to perform a search in order to save programmes for the satellite to be received.

> Connect the antenna cable to the measuring receiver at the Sat RF input (22) (Fig. 2)

> Select the Satellite menu item in the main menu and confirm with **OK**.



Satellite

> In the Satellite line, select the satellite position to which the satellite system is to be aligned or on which a measurement is to be carried out. Use the buttons ◀ ▶ to access the overview of satellite positions. Use the buttons ▲ ▼ to select a position and confirm your selection with **OK**.

LNB type

> In the LNB type line, you can use the navigation buttons ◀ ▶ to select the LNB with which the satellite position is to be received.
The default setting is Ku band (9750/10600). The device automatically switches between Ku-LOW and Ku-HIGH during RF input. The threshold for switching to the high band is 11.7 GHz. After entering the transponder frequency, the device then issues the corresponding DiSEqC or 22kHz switching commands.

LNB frequency

> Change the LOF frequencies in this line according to the LNB used.

Transponder

> Select the transponder on which the receiver is to receive a signal from the selected satellite.

Frequency

> You can change the frequency of the selected transponder if required. Enter the frequency in this line using the numeric keypad.

6. SAT-MEASURING RANGE

6.1. DVB-S/S2 default setting

Symbol rate

> To adjust the symbol rate if necessary, switch to the Symbol rate line and enter the value using the numeric keypad.

Polarisation

> Switch between Horizontal (H/V LED red) or Vertical (H/V LED green) here if required.

22K

> The measuring receiver controls a connected LNB or a multi-switch via the conventional 14/18 V - 22 kHz control (max. 4 SAT IF levels) or with DiSEqC control. The supply delivers a maximum of 500 mA. With the LNB setting Universal (9750 - 10600), the 22 kHz setting cannot be changed.

DiSEqC 1.0 / 1.1

> In these fields, use the navigation cross to set the satellite position that is controlled via DiSEqC. This setting depends on the satellite reception system and the associated modules.

Tone Burst

> Switch the tone burst here according to the connected satellite system. This setting depends on the satellite reception system and the associated modules.

LNB power

> The LNB power supply (14/18V) can be switched on or off via this menu item.

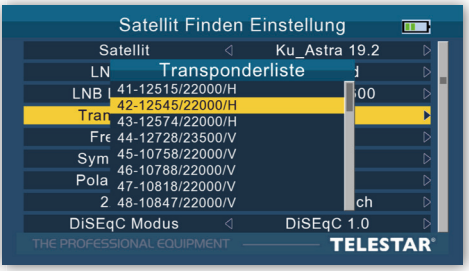
6.1.1. DVB-S/S2 default setting Unicable or dCSS

> When selecting the LNB type Unicable or dCSS, select the Unicable channel in the *IF Index* line and enter the frequency in the *IF Frequency* line using the keypad if necessary.

6.2. DVB-S/S2 measurement

> Select the DVB-S menu item in the main menu and confirm with **OK**.

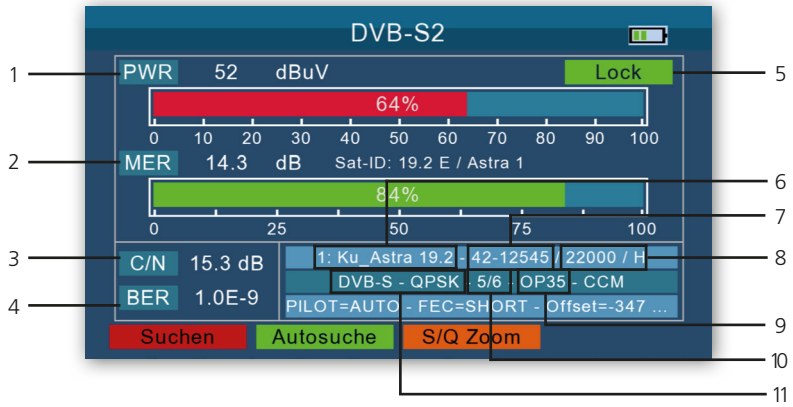
> Use the navigation cross ◀ ▶ to select a transponder on which a measurement is to be carried out and confirm with **OK**.



> Press the **OK** button.

6.2. DVB-S/S2 measurement

The measured values of the selected programme are displayed.



1. PWR

As soon as the measuring receiver is tuned, the level measurement starts.
The measured level is displayed in dBµV.

2. MER

MER measurement (modulation error rate). The MER is calculated from the constellation points.
It is the counterpart to the S/N measurement for analogue transmission methods.
The measurement range extends up to 20 dB.

3. C/N

Carrier-to-noise, carrier-to-noise ratio
The distance between the carrier and the noise is measured.
A good C/N is a prerequisite for all other qualities BER, MER.

4. BER

The measurement of the bit error rate is used to assess the quality of a DVB signal. The error correction mechanisms in the digital receiver are used to determine the bit error rate. The data stream before and after correction is compared and the number of corrected bits is determined. This number is set in relation to the total number of bits passed through and the BER is calculated from this.

5 Lock/No Lock

The Lock display indicates that the device is receiving a valid and analysable data stream. The No Lock display indicates that either the quality of the incoming signal is insufficient, the reception parameters set on the device do not match those of the transmitter or no DVB-S/S2 signal can be received at this frequency.

6. satellite position

Satellite position on which the measurement is performed.

7. transponder parameters

Transponder number and transponder frequency on which the measurement is being carried out.

8. transponder parameters

Symbol rate and polarisation on which the measurement is performed.

6. SAT-MEASURING RANGE

6.2. DVB-S/S2 measurement

9. RollOff

The roll-off factor generally describes the edge steepness when filtering a signal. In satellite transmission, the roll-off factors are used to define the edge steepness of the DVB-S2 signal. The lower the number, the lower the required frequency bandwidth. However, this also reduces the signal-to-noise ratio and therefore the transmission reliability. For DVB-S, a roll-off factor of 0.35 is generally used.

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10. error correction FEC

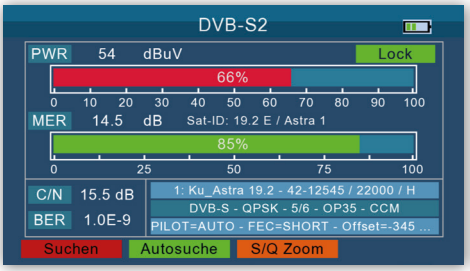
Forward error correction takes place during channel coding. Redundancy is added to the digital and initially source-coded signal in a channel encoder on the transmitter side to enable the channel decoder in the receiver to correct errors that have occurred on the transmission channel. The value of the FEC expresses the ratio of useful bits to transmitted bits. In this image, 5 of the 6 transmitted bits are useful bits.

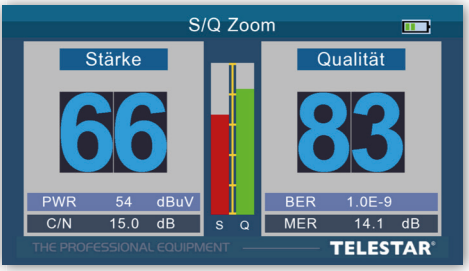
11 Transmission standard and modulation method

Displays the modulation method used on this transponder.

6.2.1. enlarged display

> Press the orange SAT button during the satellite measurement to display the most important parameters.





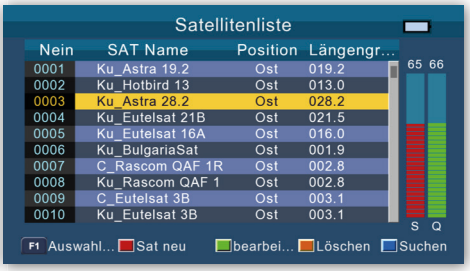
6. SAT-MEASURING RANGE

6.3. Updating the satellite programme list

The device comes from the factory with a preset programme list for the satellite position Astra 19.2 degrees East. You can update this programme list with other satellite positions.

> Select *„Other"* in the main menu and confirm with **OK**.

> Select *„Satellite list"* and confirm with **OK**.



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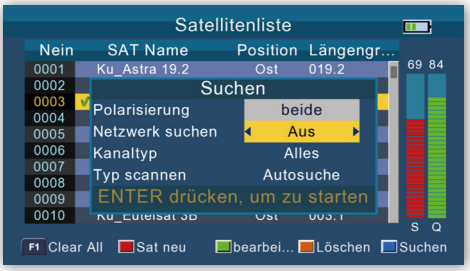
> Select the satellite position from the list on which a programme search is to be carried out.

> Press the **OK** button. A tick appears in front of the satellite name.

> Press the **blue SYS** (Search) button. Select „Search" and confirm with **OK**.

> If necessary, change the search parameters to suit your requirements.



> Press **OK** to start the search.

7. DVB-T/T2 - DVB-C MEASUREMENT RANGE

7.1. DVBT/T2 DVB-C measurement

> To carry out a measurement in the DVB-T/T2 or DVB-C range, please select the DVB-T menu or DVB-C menu item in the main menu and confirm with **OK**.

Please note in the DVB-T/T2 range:
If you have an active antenna that you operate on the device, you can activate an antenna supply voltage via the coax input of the device here.

Please also check the technical specifications of your antenna.
> To do this, select the *Active antenna* line and use the navigation buttons ◀▶ to switch the supply voltage on or off.

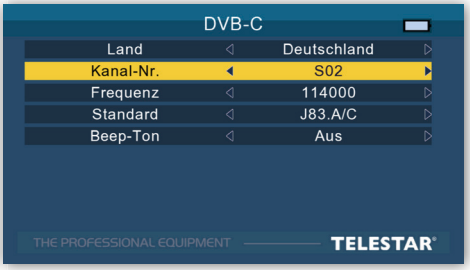
⚠ NOTE

The supply voltage can be set between 5 V, 12 V and 24 V.
Please also refer to the technical specifications of your antenna if necessary.
> Select the *LNB current line* and use the navigation buttons ◀▶ to select the corresponding supply voltage.7.1. DVBT/T2 DVB-C measurement

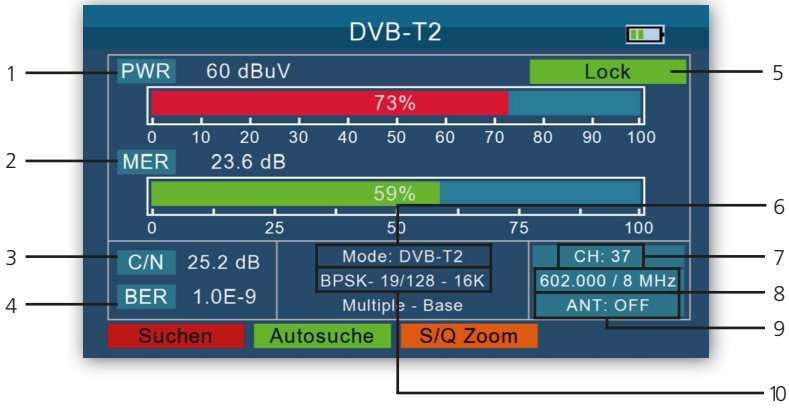
7. DVB-T/T2 - DVB-C MEASUREMENT RANGE

7.1. DVBT/T2 DVB-C measurement

> In the *Channel no.* line, select the frequency on which a measurement is to be carried out.
> Use the navigation buttons ◀ ▶ to call up the channel list.



> Press the **OK** button to start the measurement.



1. PWR

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2. MER

MER measurement (modulation error rate). The MER is calculated from the constellation points.
I t is the counterpart to the S/N measurement for analogue transmission methods.
The measurement range extends up to 20 dB.

3. C/N

Carrier-to-noise , carrier-to-noise ratio
The distance between the carrier and the noise is measured.
A good C/N is a prerequisite for all other qualities BER, MER.

7. DVB-T/T2 - DVB-C MEASUREMENT RANGE

7.1. DVBT/T2 DVB-C measurement

4 BER

The measurement of the bit error rate is used to assess the quality of a DVB signal.
The error correction mechanisms in the digital receiver are used to determine the bit error rate.
The data stream before and after correction is compared and the number of corrected bits is determined. This number is set in relation to the total number of bits passed through and the BER is calculated from this.

EN

5 Lock/No Lock

The *Lock* display indicates that the device is receiving a valid and analysable data stream. The *No Lock* display indicates that either the quality of the incoming signal is insufficient, the set reception parameters of the device do not match those of the transmitter or no DVB signal can be received at this frequency.

6. mode

Displays the transmission standard currently being received.

7. channel

Displays the currently set channel.

8. frequency

Displays the currently set frequency and the channel grid on which the measurement is being carried out.

9. ANT

Indicates whether the antenna feed voltage is activated or deactivated. (DVB-T/T2 only)

10. modulation method

Displays the currently received modulation method.

8. PROGRAMME LIST

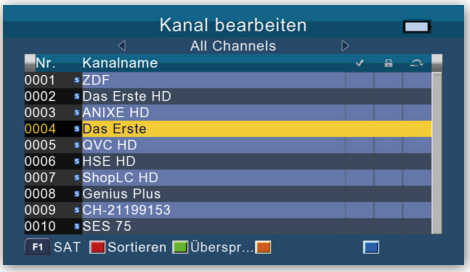
8.1. Editing the programme list

You can edit the saved channels according to various criteria.
> Select the Other menu item in the main menu using the navigation cross and confirm with **OK**.
> Select the Channel manager menu item and press **OK** to confirm.

EN

Changing the programme order
To change the order of the channels, programmes can simply be moved.
> Use the navigation buttons ▲ ▼ to select a programme that you want to move to a different position.
> Press the **OK** button. A symbol appears next to the programme name.

> Use the navigation buttons ▲ ▼ to select the position where you want to save the programme using the yellow cursor.
> Press the **orange SAT button** (move)



The programme is now moved to the desired position.

8. PROGRAMME LIST

8.1. Editing programmes

Deleting programmes from the list

You can delete one or more preset programmes or existing programmes in the receiver.

NOTE!

This setting deletes all selected programmes! To save programmes in the device again, please carry out a new search or reset the device to the factory settings.

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> Select the *Other* menu item in the main menu using the navigation cross and confirm with **OK**.

> Select the *Channel manage*r menu item and press **OK** to confirm.

> Use the navigation buttons to select one or more channels that you want to delete

> Press the OK button in each case. A symbol appears next to the programme name.

8. PROGRAMMLISTE

8.1. Editing programmes

> Press the **green TV/R** button (Delete).
If a password prompt appears, enter the 4-digit PIN.
The factory-set PIN is 0000.
> Confirm the prompt with Yes if you want to delete the programme(s) and press **OK**.

The programme(s) is/are now deleted from the programme list.

8.2 Backing up the programme list to a USB data carrier

If you have changed the order of programmes according to your wishes or deleted or added channels from the list, you can save these changes to a USB data carrier so that you can restore this data to the measuring receiver during a factory reset.
> Connect a USB data carrier to the device.
> Select the *System settings* menu item in the main menu using the navigation buttons ◀ ▶ ▲ ▼ and confirm with **OK**.
> Select the *Update* menu item and confirm with **OK**.
> Press the **blue SYS** (Save) button to save the programme list.
The programme data is written to the USB data carrier.

After a message appears on the display, the programmes and channel information are saved.
After successful transfer to the USB stick, a message appears which must be acknowledged by pressing the OK button.

EN

8. PROGRAMME LIST

8.3. Importing the programme list via USB

A programme list saved on USB can be imported into the device.

> Connect a USB data carrier to the device on which you have saved a programme list as described in chapter 8.2.

> Select the *System settings* menu item in the main menu using the arrow button and confirm with **OK**.

> Select the *Update* menu item and confirm with **OK**.

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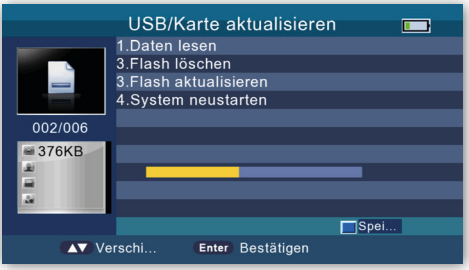
> Select the userdb.bin folder and confirm with **OK**..



> After successfully transferring the programme list, the device restarts.

ATTENTION!

Please do not disconnect the USB storage medium from the device under any circumstances during the loading process!

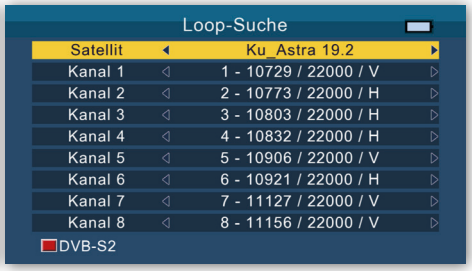
9. SPECIAL FUNCTIONS

9.1. Transponder/channel test - loop search

The device can analyse several transponders of a satellite position or several channels in the DVB-T/T2/C range. This gives you an overview and a check of the available transponders of a satellite position or channels in the DVB-T/T2/C range at the same time. 8 transponders/channels can be shown on the display at the same time.

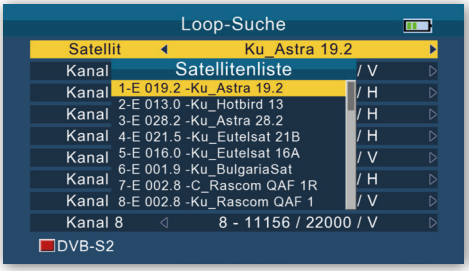
> Select *„Loop search"* in the main menu.

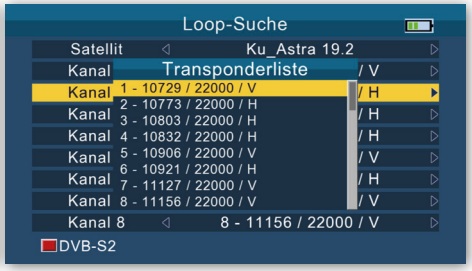
> If necessary, press the **red AUDIO button** repeatedly until the desired reception path is selected.
The following description for the satellite reception path.



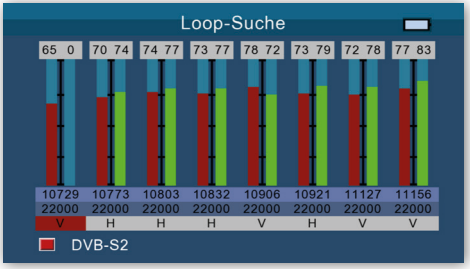
> If you want to perform a transponder test on satellite, select the top line and press the button ▶ to obtain an overview of all satellite positions.

> Select the desired satellite position and confirm with **OK**.





> Then select the transponders/channels to be displayed. Confirm with **OK**. The device checks all selected transponders/channels and displays the corresponding reception parameters.



EN

9. SPECIAL FUNCTIONS

9.2. Factory settings

You can reset the device to the factory settings.

NOTE!

Please note that all settings and programme list changes will be lost with this procedure.
Select the *System settings* menu item in the main menu using the navigation buttons ◀ ▶ ▲ ▼ and confirm with **OK**.

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> Select the *Factory settings* menu item and confirm with **OK**.
> Confirm the prompt with Yes if you want to perform a factory setting.

9.3. Video monitor function

You can use the device as a video monitor.
For example, you can use the device to align a surveillance camera or check an analogue video signal.
To do this, connect the AV cable included in the scope of delivery to the AV input of the device (Fig. 2 pos. 27) and connect the cable to an audio/video source using the cinch/BNC adapter included in the scope of delivery.

> Press the AVS button to activate the AV input of the device.
  If you want to set up a surveillance camera or other video output device with 12 V operating voltage, you can use the DC power cable included in the scope of delivery. The video device can be supplied with operating voltage via the SATPLUS 4 as follows
> Press the AVS button again to exit AV mode.

9. SPECIAL FUNCTIONS

9.4. Multimedia

The device is equipped with a USB 2.0 interface that can be used to connect USB mass storage devices such as a USB stick or an external hard drive (device requirements: File format FAT 32, speed for external hard drives: 5400 rpm).Films, pictures and music files can be displayed or played via the *Multimedia* menu.

> Press the menu button.

> Change to the *Multimedia* menu item and confirm with **OK**.

> Select the file type you want to play in the top line. (Film, Photo, Music)

> Select the folder in which the file you want to play is located.

> Confirm with **OK**.

EN

10. TECHNICAL DATA

EN

HF PART	
Frequency range DVB-C/-T/-T2, DAB+, TV, FM	48-862 MHz
Frequency range DVB-S/-S2	950–2150 MHz
TV standards	B/G, I, D/K, M, N
SAT RECEIVER	
Input level range	-65 to -25 dBm
Control signal	22 Khz, DiSEqCTM 1.2, SCR single-cable system
LNB power supply	13V/18V, I max. 400mA
Demodulation type	QPSK, 8PSK, 16APSK, 32APSK
Symbol rate (MS/s)	2<Rs<45Mband (SCPC/MCPC)
DVB-T/T2 RECEIVER	
Modulation method DVB-T	QPSK, 16/64 QAM
Modulation method DVB-T2	QPSK, 16/64/256 QAM
Input level range	-79.5dBm (max)
Antenna power supply	5V, 12V, 24V Imax 100mA
DVB-C RECEIVER	
Channel bandwidth MHz	6, 7, 8
Modulation method DVB-C	16/32/64/128/256 QAM
Input symbol rate MS/s	2–6999
LCD DISPLAY	
LCD type	TFT
Pixel	480x272 (RGB)
Visible picture size	95,04 x 53,86 mm
TV SYSTEM	
Colour standards	PAL, SECAM, NTSC
Audio	FM, NICAM and AM sound, AAC/HEAAC, Dolby AC3

10. TECHNICAL DATA

AUDIO/VIDEO PROCESSING	
Video decompression	MPEG-2 MP@Hl, MPEG-1 Decodirq. MPEG4 ASP@L5 HD Resolution, H.264, MP&HP@L4, HW JPEG decoding, H.265(8 Bit}/HEVC
Refresh rate	PAL-25 Frame@720*576 NTSC-30 Frame@720*480
Video Format	4:3, 16:9,By Pan & Scan and Letter Box Conversion
Audio Decompression	MPEG-1 Layer 1/11, M.PEG-2 Laye, 1/11
Audio Output	Stereo, Mono, R/L
POWER SUPPLY	
Lithium/ion	2600mAh, 7,4V
DC external	12V/ 1,0A
CONNECTIONS	
HF input Sat	75 Ω
RF input DVB-T/T2 / DVB-C	75 Ω
AV IN	3.5 mm jack audio stereo/video
AV OUT	3.5 mm jack audio stereo/video
TV output	HDMI 1.4
USB connection	USB 2.0
DC supply	12 V hollow plug socket
DIMENSIONS AND WEIGHT	
Dimensions (W × H × D) mm	175*140*45 mm
Weight kg	0,62 kg

10. TECHNICAL DATA

EN

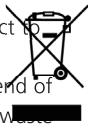
TECHNICAL DATA SPARE PART	
Manufacturer	Shenzhen Yunsheng High Tech Electronics Co., Ltd
Model number	YS03A-120150E
Input voltage	100-240V AC
Input frequency	50-60Hz
Output voltage	12V DC
Output current	1,5A
Output power	18W
Average efficiency during operation	84,0%
Efficiency at low load (10%)	80,0%
Power consumption at no load	≤0.1W

11. DISPOSAL INSTRUCTIONS

11.1. Disposal of the packaging

The packaging of your appliance consists exclusively of recyclable materials.
Please sort it accordingly and return it to the „Dual System".

11.2. Disposal of the device



The symbol of a crossed-out wheeled bin shown on the right indicates that this appliance is subject to Directive 2012 / 19 / EU.
This directive states that you may not dispose of this device with normal household waste at the end of its service life, but must dispose of it at specially designated collection points, recycling centres or waste disposal companies. This disposal is free of charge for you. Protect the environment and dispose of it properly. You can obtain further information from your local waste disposal company or the city or municipal administration.

11.3. Disposal of the batteries

Batteries and rechargeable batteries must not be disposed of with household waste. The symbol shown on the right means that you as a consumer are obliged to dispose of all batteries and rechargeable batteries separately. Appropriate collection containers are available in specialised shops and numerous public facilities. Information on the disposal of old batteries and rechargeable batteries can also be obtained from specialised waste disposal companies and municipal and local authorities. This disposal is free of charge for you. Protect the environment and dispose of them properly.

EN

12. CE-MARKING

CE

EN

Your device bears the CE mark and fulfils all necessary EU standards, and TELESTAR DIGITAL GmbH hereby confirms that the TELESTAR SATPLUS light device complies with the essential protection requirements of the Radio Equipment Devices Directive 2014/53/EU (RED), the RoHS Directive (2011/65/EU), the REACH Regulation 1907/2006 and the ErP Directive (2009/125/EU). The declaration of conformity for this product can be found at
www.telestar.de/de_DE/Konformitaetserklaerung/352-529/?productID=24868