



# SCHWAIGER

## DVB-S2 SATELLITE



# SAT Finder **HD**

SAT

DIGITAL SATELLITE



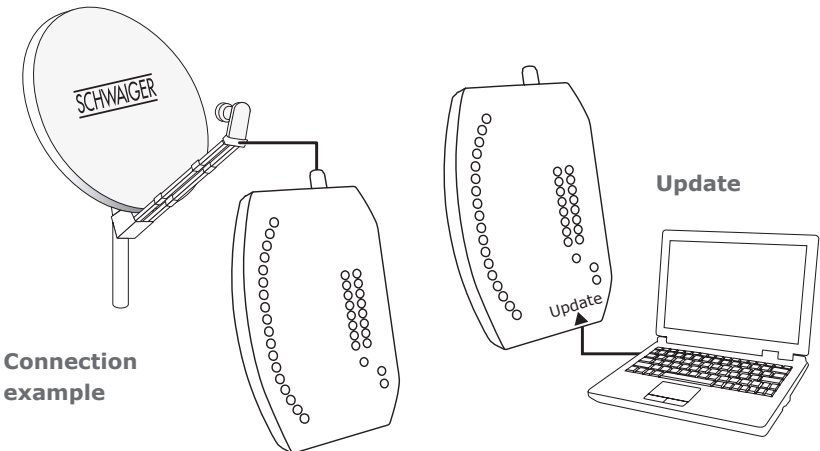
EQUIPMENT CONTROL

## OPERATING INSTRUCTIONS SF9002

SAT finder HD for 18 satellite positions

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## **1. GETTING STARTED**

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### **1.1 Package content**

- » SAT-Finder HD
- » Connection cable 1 m
- » Power Supply 12V DC / 2A
- » Car charging cable 12V DC
- » BNC Adaptor
- » Mini USB cable 1 m
- » Carrying strap
- » Quick reference guide (14 languages)
- » Operating instructions

## 1.2 Safety instructions

Before you use the unit the first time, read and follow the safety instructions carefully! Be sure to think of your own safety when setting up your system (slippery roof, risk of falling). Do not use the SAT-Finder HD if there is visible damage to the unit or the connecting cables. Be careful that the cables do not pose a risk of tripping.

Make sure that you don't trap or crush the connecting cables.

The used antenna must be earthed. The SAT-Finder HD is only designed for the short-term set up of a satellite system. Continuous use can damage the unit. The unit must not be used in the immediate vicinity of inflammable materials.

Only have repairs carried out by our qualified service personal. Attempts to open or repair the unit yourself will void the warranty.

### WARNING

Li-Po batteries must be handled with the utmost of care. Li-PO batteries can generate a large amount of heat when not used properly and can damage the unit and its surroundings. The enclosed battery instructions must be read in full. Treat the unit with care! Do not throw it or drop it! The unit must not be operated when it has been damaged.

The rechargeable battery pack's nominal voltage or nominal current values must not be exceeded. The unit may only be used with the designated charging equipment „Car Charger Adapter“ and the „230V Charge Adapter“. The rechargeable battery pack must not be shorted when it is connected to the SAT-Finder HD. This would damage the SAT-Finder HD. Damaged cables are to be immediately replaced by new intact cables. Do not place the unit in water! The unit must not be operated when water has entered the unit's interior.

When the unit is not going to be used for a long time, pull the connecting cable out of the charging socket. As the battery is a modern Li-ion rechargeable battery, the self-discharge rate is approx. 5% per month. The operating instructions are a part of the product and must always be passed onto future owners in case the product is sold!

### 1.3 Connecting the SAT-Finder HD

Please connect the „LNB“ marked socket of the Sat-Finder HD through the supplied coaxial cable and BNC adapter directly to the LNB.

Suitable LNB types:

- Single-LNB
- Twin-LNB
- Quad-LNB
- Quattro-LNB
- Monoblock LNBs
- Unicable-LNB (legacy-port)

If the SAT-Finder HD is to be connected directly to a Quattro-LNB, use the following table to connect it to one of the four LNB outputs so that the desired satellite can be identified. For other satellite positions you will see the current setting on [www.schwaiger.de](http://www.schwaiger.de)

### 1.4 Start-up process

Please charge before the first using the Sat-Finder HD completely. After the complete charging, the red LED will disable. Now you can use the Sat-Finder. Please put the „On“ Button for booting.

The Red LED flashes when the battery capacity is too low. In this level the battery still has a capacity of approximately 35% of their total capacity.

Please recharge the Sat-Finder HD.

After approx. 3-5 seconds the unit's firmware has been loaded into its RAM memory and component initialisation will begin. Subsequently, all LEDs will light up briefly and the SAT-Finder HD is ready for use.

The entire start-up process takes around 7 seconds.

## 2. SEARCHING AND FINDING

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### 2.1 Automatic satellite search

When the red Power-LED is on, the SAT-Finder is ready for use and you can align the satellite dish. It should be turned or adjusted in small steps otherwise you might easily miss a satellite, just like with analogue SAT-finders.

Vertical prepositioning of the dish makes searching easier.

Turn the satellite dish vertically until the LEVEL LEDs light up.

When a sufficiently strong signal is received (when 3 LEDs are „on“), the SAT-Finder HD will analyse the transponder found – this is shown by the MODE-LED flashing.

If the gauge of the signal is very low (up to 3 LEDs „on“), continue to turn the satellite dish further until sufficient signal level, approx. 4-6 LEDs, is shown. As soon as the SAT-Finder HD has recognised the satellite, this will be indicated by a green LED on the satellite summary and the quality of the signal will be shown by the QUALITY-LEDs lighting up.

If due to discrepancies in the data the satellite cannot be precisely identified, the LED for the satellite assumed to be the correct one based on the data received so far will continue to flash.

The SAT-Finder HD will then switch to wait mode, and if it is the satellite you were searching for you can start with the fine tuning of the satellite dish.

If a satellite has been identified, but it is not the one you were looking for, then you now know which orbit position/direction the satellite dish is pointing in, making it possible to target the desired satellite. To do this, turn the satellite dish in the corresponding direction until the SAT-Finder HD switches back to automatic search mode and starts to search for a satellite signal again.

Repeat this procedure until you have found the desired satellite.

## 2.2 Manual search / satellite preselection

Manual search allows a preselection of satellites that are located close to each other.

By pressing the left "A" button once the currently active LED will move on one step, thus selecting the next satellite. The satellites you can select are: 8°W, 7°W, 5°W and 4°W.

Turn the satellite dish vertically until the LEVEL LEDs light up.

When a sufficiently strong signal is received (when 3 LEDs are „on“), the SAT-Finder HD will analyse the transponder found – that is shown by the MODE-LED flashing.

If the quality of the signal is very low (up to 3 LEDs "on"), continue to turn the satellite dish further until sufficient signal quality, approx. 4-6 LEDs, is shown. As soon as the SAT-Finder HD has recognised the satellite, this will be indicated by a green LED on the satellite summary and the quality of the signal will be shown by the QUALITY-LEDs lighting up.

If due to discrepancies in the data the satellite cannot be precisely identified, the LED for the satellite assumed to be the correct one based on the data received so far will continue to flash.

The SAT-Finder HD will then switch to wait mode, and if it is the satellite you were searching for you can start with the fine tuning of the Satellite dish.

If you press the "B" button the SF9002 will switch back to automatic search.

## 2.3 Select the DiSEqC position

The manual search has been supplemented by the transmission of the DiSEqC switching sequences A, B, C, or D for the control of the monoblock LNBS.

Pressing the left button „A“ once puts the SF9002 into the manual search mode in which the closely positioned 8°W, 7°W, 5°W and 4°W satellites can be selected. This is followed by again pressing the button as needed to send the DiSEqC signals for positions A, B, C, or D and the satellite search starts as is described under „Automatic search“.

## 2.4 Switchable Signal Attenuation

With strong satellite signal all LED's are switched on for the level and quality function of the Satfinder display. Please use the attenuator function. You can reduce the signal by -5dB or -10dB to improve the fine tuning by using the level and quality display of the Satfinder HD. Pressing the B button for 2 seconds you can reduce the attenuation of the signal by -5dB and when you press the button for 4 seconds, you can reduce the attenuation of the signal by -10dB.

## 2.5 Reset

If you press both buttons together and hold them down for approx. 5 seconds, this will reset the SAT-Finder HD.

# 3. INDICATOR LED'S

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## 3.1 Level (signal strength)

Signal strength is displayed to the user via 8 LEDs. Each LED can either be "off", "flashing slowly", "flashing quickly" or "on".

## 3.2 Quality (signal quality)

Signal quality is displayed to the user via 8 LEDs.

## 3.3 Mode (mode of operation)

This LED shows the conditions of the attenuation of the signal. In -5dB, the LED lights green at -10dB, the LED lights up red



## 3.4 Satellite position display

Satellite display works similarly to the display of operating/search mode, using the status "off", "flashing" and "on", with meanings as shown in the following table:

MODE-LED	LED for the respective satellite	Meaning
„off“	„off“	The SAT-Finder HD hasn't locked on to a transponder.
„flashing“	„off“	The SAT-Finder HD has locked onto a transponder, but no satellite has been identified yet or not enough data/information has been received.
„flashing“	„flashing“	The SAT-Finder HD has locked onto a transponder and is analysing its data. Based on the data analysed so far the SAT-Finder HD assumes that the satellite dish is aligned with the satellite shown by the LED.
„on“	„on“	The SAT-Finder HD has locked onto a transponder, all necessary data has been received and processed. Based on the information received the satellite will be shown by its corresponding LED.
„on“	„flashing“	Special case: The SAT-Finder HD has locked onto a transponder and analysed all the data received. However, either not all the necessary data could be received or there were discrepancies in the received information. The SAT-Finder HD will show by LED what it assumes to be the correct satellite based on the data received.
„on“	„off“	Special case: The SAT-Finder HD has, as in the previous case, completed analysed of the data. Based on the data, either no satellite could be identified or the satellite is one that is not included on the SAT-Finder HD display. In this case the unit will try to tune to other transponders in order to start a new attempt at identifying the satellite.

## 4. APPENDIX

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### 4.1 Updating the SAT-Finder HD

The SAT-Finder HD identifies satellites using a range of data, which includes satellite tables. Because satellite operators and media organisations may make changes, the SAT-Finder HD is updateable. The SAT-Finder HD updater is a piece of software for Windows that carries out this task, enabling you to keep both the firmware and the satellite tables up to date at all times (or go to [www.schwaiger.de](http://www.schwaiger.de)).

### 4.2 Guarantee conditions

There is a statutory guarantee of 2 years. During this period, any damage caused by manufacturing or material faults will be repaired free of charge. Our guarantee does not apply to natural wear and tear, expendable parts, shipping damage and, furthermore, any damage caused by not following the operating instructions or by unqualified installation.

The protective elements that are destroyed when triggered by a power surge and damage caused by connecting unsuitable devices to the unit are also excluded from the guarantee. When claiming under guarantee, the date of purchase must be confirmed by enclosing the invoice, delivery receipt or similar documentation.



#### CE- mark

The unit is labelled with the C mark and complies with the European Directive requirements 2004/108/EC for EMC and 2006/95/EC for LVD. UN regulation requirements have been likewise fulfilled.



## Disposal

Never dismantle SF9002. The dismantling of Li-Po batteries can cause internal short-circuiting. This can result in the generation of gas, fire, and explosions or other problems that can be harmful to health. Rechargeable batteries do not belong in the household rubbish. As a consumer, you are obligated by law to return used rechargeable batteries. You are by no means allowed to dispose of rechargeable batteries in an open fire, in a rubbish container, in a recycling container not suitable for batteries, or in any other way that could be damaging to the environment. Outer and inner packaging is recyclable and should always be recycled. Packaging, such as plastic bags, do not belong in children's hands. Consumer information regarding the disposal of electric and electronic devices in private households. This symbol, found on products and/or accompanying documents, means that electric and electronic products must be disposed of separately to household rubbish when they have reached the end of their service life. Please take these products to the municipal collection points or recycling stations for treatment, retrieval of raw materials and recycling. These devices will be accepted there free of charge. The orderly disposal of this product serves to protect the environment. It prevents possible damage to humans and the environment which can occur when units are handled improperly at the end of their service life. More explicit information regarding from your nearest collection point or recycling station are available

## 4.3 Service-Information

At SCHWAIGER, customer satisfaction has the highest priority.

Should you have any questions, suggestions or problems regarding your SCHWAIGER product, please use the contact address below.

**Service-Hotline: +49 (0)9101 702-299**

**Service-Fax: +49 (0)9101 702-121**

**info@schwaiger.de**

**www.schwaiger.de**

## 4.4 ELEVATION TABLE FOR EUROPE

