Satlink ST-6986

SATLINK ST-6986 DVB-S/S2/T/T2/C Combo Meter User Manual

Model: ST-6986 | Brand: Satlink

1. Introduction

The SATLINK ST-6986 is a portable combo meter designed for the installation and verification of digital TV services across satellite (DVB-S/S2/S2X), terrestrial (DVB-T/T2), and cable (DVB-C) signals. It features a 7-inch high-definition TFT LCD screen (1024x600) and supports MPEG-2, H.264/AVC, and H.265/HEVC (10-bit) hardware decoding. This device integrates a constellation analyzer, spectrum analyzer, and various scanning functions to assist in precise signal alignment and troubleshooting. Its compact design, lightweight build, intuitive user interface, and long-lasting battery make it suitable for both residential and multi-dwelling unit installations.

2. Package Contents

Verify that all items are present in the package:

- 1 x SATLINK ST-6986 Satellite TV Receiver
- 1 x 12V Car Charger Cable
- 1 x 12V Power Charger
- 1 x Carrying Case
- 1 x Neck Strap
- 1 x AV Cable
- 1 x USB Update Cable
- 1 x Silicone Case
- 1 x User Manual (English)

Figure 2.1: Included carrying case for the ST-6986 meter.

3. Product Overview

The ST-6986 features a robust design with a clear display and intuitive controls for efficient signal analysis.

3.1 Front Panel and Display

Figure 3.1: Front view of the ST-6986 showing the main menu interface.

The front panel includes a 7-inch LCD screen displaying the main menu with options for Satellite, Terrestrial, Cable, Spectrum, Network, Other, Media Center, and Settings. To the right of the screen are numerical keys (0-9), function buttons (MUTE, INFO, MENU, EXIT), and navigation controls (directional arrows and OK button). Indicator lights for Power (PWR), H/V polarization, Lock (LOCK), and Charging (CHG) are located at the top right.

3.2 Rear Panel and Connections

Figure 3.2: Rear view of the ST-6986 showing various input/output ports.

The rear panel provides essential connectivity. From left to right, you will find the DC IN port for power, AV OUT and AV IN ports, an Ethernet port, HDMI OUT, a USB port for software updates, and ANT (terrestrial/cable) and LNB (satellite) input ports.

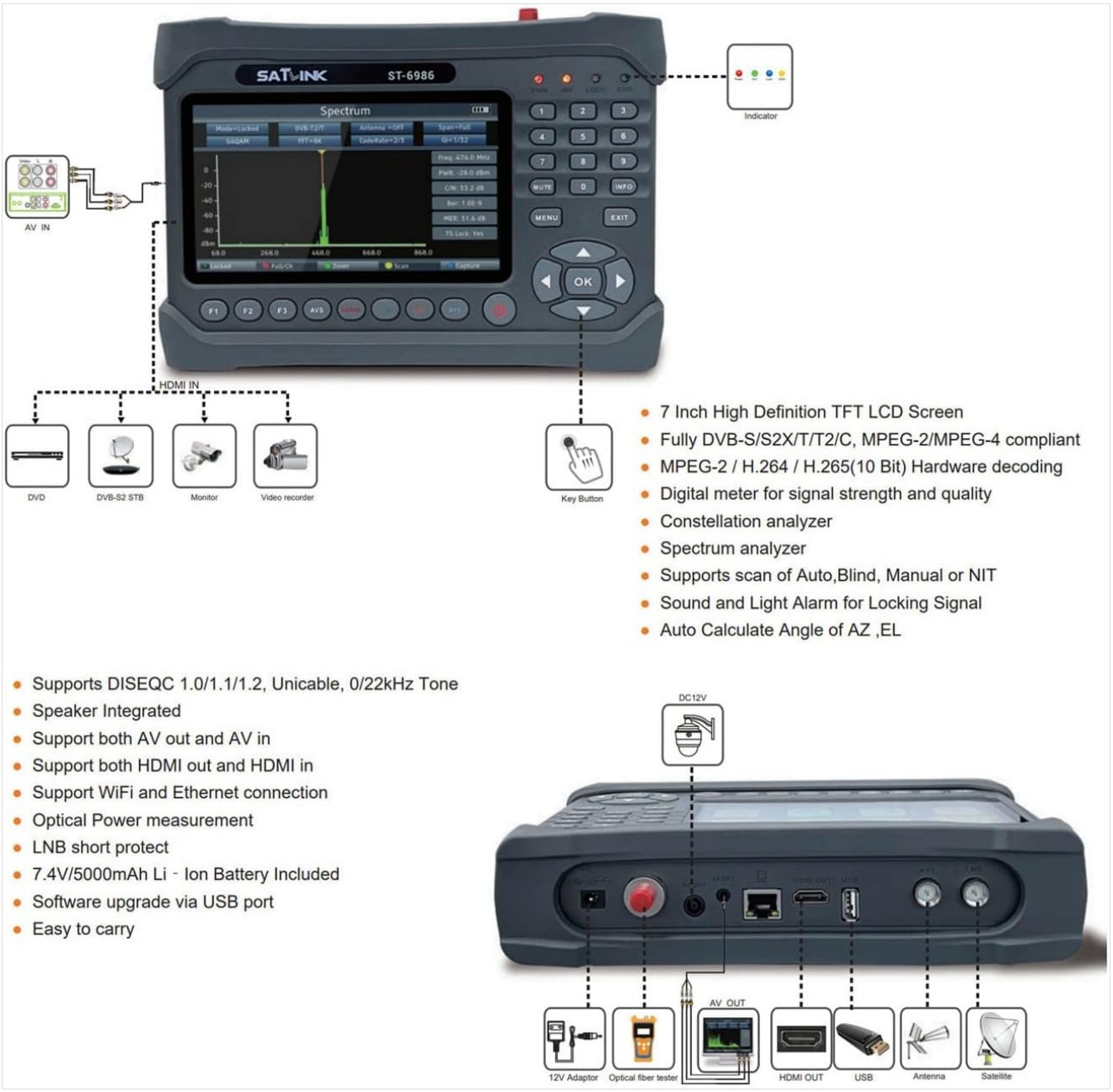

Figure 3.3: Detailed diagram of ST-6986 features and port connections.

This diagram illustrates the various inputs and outputs, including HDMI IN/OUT, AV IN/OUT, USB, and antenna/satellite connections. Key features highlighted include the 7-inch HD TFT LCD screen, DVB-S/S2/S2X, T/T2/C compatibility, MPEG-2/H.264/H.265 (10-bit) hardware decoding, digital meter for signal strength and quality, constellation and spectrum analyzer, and support for DISEQC 1.0/1.1/1.2, Unicable, and 0/22KHz tone.

4. Setup

4.1 Initial Charging

Before first use, fully charge the ST-6986. Connect the provided 12V power charger to the DC IN port on the device and plug it into a power outlet. The CHG indicator light will illuminate during charging. A full charge typically takes several hours. The device can also be charged using the 12V car charger cable.

4.2 Connecting to Signal Sources

- **Satellite (DVB-S/S2/S2X):** Connect the LNB cable from your satellite dish to the LNB input port on the ST-6986.

- **Terrestrial/Cable (DVB-T/T2/C):** Connect your terrestrial antenna or cable TV signal to the ANT input port on the ST-6986.

4.3 Powering On/Off

Press and hold the red power button located on the front panel to turn the device on or off. The PWR indicator light will show the power status.

5. Operating Instructions

5.1 Navigating the Menu

Use the directional arrow buttons (Up, Down, Left, Right) to navigate through menu options. Press the**OK** button to confirm a selection or enter a submenu. Press the **EXIT** button to return to the previous menu or the main screen.

5.2 Satellite Signal Measurement

1. From the main menu, select **Satellite**.
2. Use the arrow keys to select the desired satellite from the list.
3. Adjust LNB Frequency, Transponder, Frequency, Symbol Rate, and Polarity as needed.
4. Configure DISEQC settings (1.0/1.1/1.2), Unicable, and 0/22KHz tone if applicable.
5. Adjust the satellite dish for optimal signal strength and quality. The meter will display real-time signal readings. The LOCK indicator will light up when a signal is acquired.

Figure 5.1: Satellite settings screen for configuring LNB, transponder, and other parameters.

5.3 Terrestrial/Cable Signal Measurement

1. From the main menu, select **Terrestrial** or **Cable**.
2. Select the appropriate region/standard.
3. Perform an automatic or manual channel scan. The meter will display signal strength and quality for detected

channels.

5.4 Spectrum Analyzer

Select **Spectrum** from the main menu to view the signal spectrum. This feature helps identify interference and optimize signal reception by visualizing frequency distribution.

5.5 Constellation Analyzer

The constellation analyzer provides a visual representation of the signal modulation, aiding in diagnosing signal quality issues that may not be apparent from strength and quality readings alone.

5.6 Software Update

Software updates can be performed via the USB port. Download the latest firmware from the official Satlink website, save it to a USB drive, and follow the instructions provided in the device's 'Settings' menu for updating.

6. Maintenance

6.1 Cleaning

Wipe the device with a soft, dry cloth. Do not use liquid cleaners or solvents, as they may damage the screen or casing.

6.2 Battery Care

The ST-6986 is equipped with a 7.4V/5000mAh Li-ion battery. To prolong battery life, avoid fully discharging the battery frequently and store the device in a cool, dry place when not in use for extended periods. Recharge the battery periodically if stored for a long time.

6.3 Storage

Store the device in its carrying case to protect it from dust, moisture, and physical damage.

7. Troubleshooting

- **No Power:** Ensure the battery is charged or the device is connected to the power adapter. Check the power button for proper engagement.
- **No Signal Reading:**
  - Verify all cables are securely connected to the correct input ports (LNB for satellite, ANT for terrestrial/cable).
  - Check LNB power settings in the menu for satellite signals.
  - Ensure correct satellite, transponder, frequency, and symbol rate settings are entered.
  - Confirm the antenna/dish is correctly aimed.
- **Poor Signal Quality:**
  - Adjust the antenna/dish alignment incrementally.
  - Check for obstructions between the antenna/dish and the signal source.
  - Inspect cables and connectors for damage.
  - Use the spectrum and constellation analyzers to diagnose specific interference or modulation issues.
- **Screen Not Responding:** Try restarting the device. If the issue persists, contact support.

8. Specifications

Feature	Specification
Transmission Standards	DVB-S/S2/S2X, DVB-T/T2/C, MPEG-2/H.264/AVC, H.265/HEVC (10 Bit)
Display	7-inch TFT LCD (1024x600)
Satellite Input Frequency	950 to 2150 MHz
Satellite Input Signal Level	-65 to -25 dBm
LNB Supply	13V/18V, Imax 400mA
DVB-T/T2/C Input Frequency	48 to 862 MHz
DVB-T/T2/C Input Signal Level	-79.5 dBm (max)
Antenna Power	5V, 12V/24V Imax 100mA
Demodulation Types	QPSK, 8PSK, 16APSK (Satellite); OPSK, 16PAM, 64QAM, 256QAM (Terrestrial/Cable)
Battery	7.4V/5000mAh Li-ion
Connectivity	HDMI IN/OUT, AV IN/OUT, USB, Ethernet, Wi-Fi
Dimensions (W x D x H)	253 mm x 171 mm x 54 mm (approx. 5.4 x 17.1 x 5.4 cm)
Net Weight	1.3 kg (1300 Grams)
Video Output Resolution	1080p
Audio Output Mode	Stereo
Supported Audio Format	PCM

9. Warranty and Support

Specific warranty information is not provided in the product details. For warranty claims, technical support, or service inquiries, please refer to the documentation included with your purchase or contact your retailer. You may also visit the official Satlink website for further assistance.