

Operation Manual

S30 Satellite Meter

Ver:1.2



WARRANTY

We provide with 12 months warranty against any defect in materials and workmanship from the date of shipment. This warranty is not transferable and not applicable to the used or demonstration products. The obligation of us arising from a warranty claim shall be limited to repairing, or as an option, replacing without charge, any assembly or component (except batteries and chargers).

We shall have no responsibility for any defect or damage caused by improper use, improper maintenance or for any product which has been repaired or altered by anyone other than us or an authorized representative.



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1.General Introduction

S30 Satellite Meter is an ideal testing instrument for satellite dish installation which has extremely fast response and high accuracy and stable display. It can display MER to judge if the signal is exist.

The instrument can calculate the Azimuth, Elevation and polarization angle automatically according to the operator's longitude and latitude.

The satellite channel plan can be edit by PC edit software.

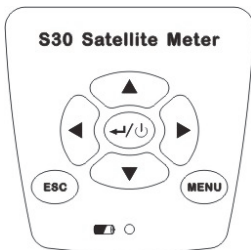
With Lithium battery, it can power the LNB and has over 4 hours working time.

2.Panel Introduction

2.1 Appearance




2.2 Keypad




、: Increase and decrease.

、: Left and right circularly selection.

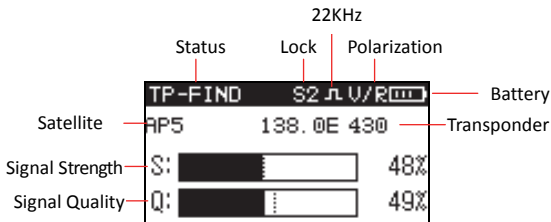
 : Power on/off(hold it over 3 seconds to power off) or Confirmation.

 : Main Menu.

 : Retrun to previous menu or cancel

 : Charger Indicator.

2.3 Display Description



- **22KHz:** **V** means 22KHz control function is available.
- **Lock:** **S** or **S2** means the signal value is above the threshold.
- **Polarization:** Switch between 13V(vertical/right) and 18V(horizontal/left).
- **Battery:** Capacity of battery.

3. Power Supply

3.1 Battery

With a built-in 7.4V /1.6AH Lithium battery, the meter can continuously work for above 2.5 hours. when the battery voltage drops below 6.0V, S30 will automatically power off and then users must charge it with the attached charger for about 3 hours.

NOTE:

- 1. Only use the charger provided with the meter.***
- 2. Power off the meter when charging.***
- 3. Lower temperature may cause the battery capacity reduction, but does not damage the battery.***
- 4. Replace a new battery when the battery working time reduce.***

3.2 Charging

Charge the meter before the first time use. Please charge the meter as follows:





1. Insert the charger output plug into S30 DC charge socket.
2. Connect the charger to AC 100V-240V Power and the charger indicator of meter is with red light.
3. When indicator switch to green, the instrument has been fully charged(It is suggested to charge extra one hour after indicator switched to green, which will be helpful to extend the battery life). Then you can disconnect the power and pull out the charger output plug.

NOTE: Only charge in the temperature 10 ℃~35 ℃.

4. Using the Instrument

4.1 Fast Searching

Turn on the instrument, come to fast searching interface first.

Press  or  to select the current testing satellite. Then press  or  to select the current testing transponder.

Align the dish, When S30 finds the signal, it will lock the signal and show **S** or **S2**. (The signal is s2). Align the dish to maximize the signal value and quality (The beep frequency shows the signal quality).

The maximum value has been recorded. Align the dish to reach maximum value. refer to Figure 1.

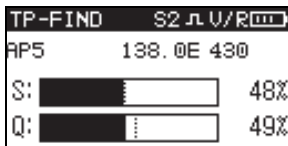


Figure 1

4.2 Spectrum Function



1. Press  to main menu as figure 1, then press  to select the spectrum icon.



Figure 2

2. Press  to set LO、POL、22KHz, refer to figure 3.

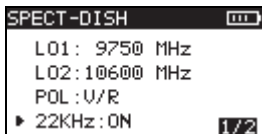






Figure 3



、: Move the marker or edit parameters.



: Enter into parameters edition or move marker.

: Confirmation.

3. Press  to figure 4 and align the dish and maximize the signal value and quality.

NOTE:

(1) Press  and  to move marker cursor.

(2) Press  and  to switch spectrum span circularly (80M, 160M, 320M, FULL).

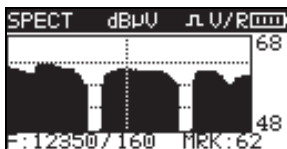



Figure 4

4. Press  again to figure 5. The instrument will analyse signal and set parameters automatically and display the current signal strength and signal quality. Then align the dish slightly to maximize the signal quality.

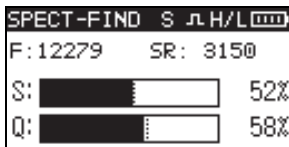



Figure 5

5. Press  to measure LEVEL, MER and CBER/VBER, refer to figure 6.

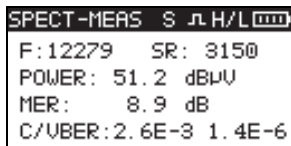


Figure 6

4.3 Angle Calculate

Press **MENU** to main menu, press **→** to select Angle icon as Figure 7, then **↔/⏻** enter into Figure 8. Input the current longitude and latitude, the meter will calculate the Azimuth(AZ)、Elevation (EL)、Polarization (POL), refer to figure 9



Figure 7

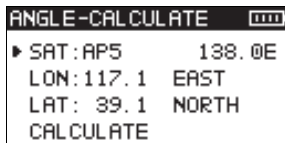


Figure 8

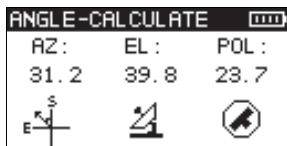


Figure 9

4.4 Setup



Press  to select "SETUP" in the main menu, refer to figure 10. Press  to setup interface as figure 11.



Figure 10



Figure 11

4.4.1 System information

The information of the instrument, Refer to Figure 12 It includes serial number, software version , hardware version and so on.

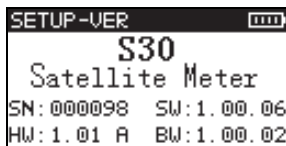




Figure 12

4.4.2 General

Press  to select “Configure” in the figure 11 interface, then press  to setup interface, as figure 13.

4.4.2.1 Backlight



Set the backlight ON and OFF by pressing  and , refer to Figure 13.



Figure 13

4.4.2.2 Shutdown Time



Set shutdown time for inactive keypad after 5 minutes, 15 minutes, 30minutes by pressing  and . Refer to figure 14



Figure 14

4.4.2.3 Beep





Press  and  to switch the “Beep” function ON or OFF. Refer to figure 15.



Figure 15

4.4.2.4 Level Units

Set level unit dBuV, dBmV or dBm by pressing  and  buttons. Refer to figure 16.

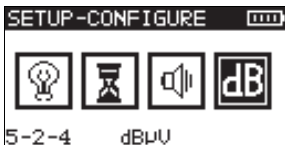


Figure 16

4.4.2.5 LCD CONTRAST





In figure 16 press  to select “CONTRAST”, refer to Figure 17. Press  to enter “CONTRAST” interface, as figure 18. Press  and  to adjust the contrast .



Figure 17

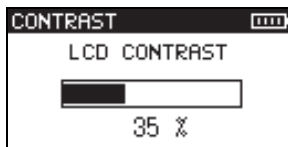


Figure 18

4.4.3 Satellite setting




In figure 11 press  to select "SAT SETTING", refer to Figure 19.



Figure 19

Press  to enter “SATELLITE LIST” interface, as figure 20. Press  to select satellite name.

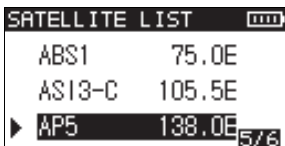


Figure 20







Then press  again to enter current setup interface, as figure 21.



Figure 21

4.4.3.1 Satellite setup

In Figure 21, press  to enter figure 22. Then Press  to select LO1、LO2 and LONGITUDE, press  to enter into parameters edition and press  or  to input parameters.

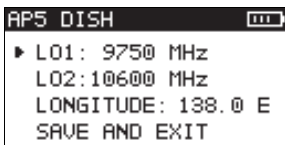


Figure 22

4.4.3.2 Transponder setup








In figure 22, press  to return figure 21. Select "TP SETUP" by press  to setup transponder, as figure 23.



Figure 23

Press  to enter figure 24 and figure 25. Then press  to TYPE、F、SR、POL、22KHz、ROLL, press  to enter into parameters edition and press  or  to input parameters.

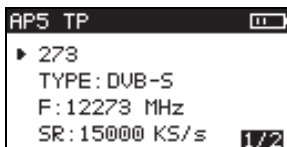


Figure 24

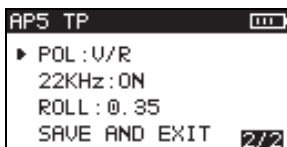


Figure 25

4.4.4 Battery State

The battery voltage is shown as a column graph as Figure 26. When the voltage is lower than 0%,the instrument will automatically power off.

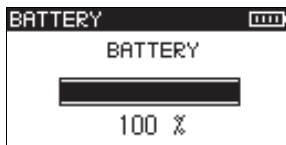


Figure 26

4.5 DISEqC





Press  to main menu, press  to select DISEqC icon as Figure 27, then press  enter into Figure 28. Then press  to DISEQC-TYPE、SWITCH INPUT and input parameters.



Figure 27

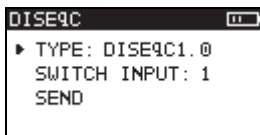




Figure 28

In figure28, press  to return figure 27. Select "SEND" by press  to diseqc-search, as figure 29.

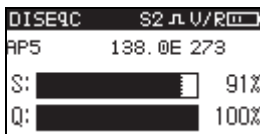







Figure 29

4.6 SaTCR

Press  to main menu, press  to select SaTCR icon as Figure 30, then press  enter into Figure 31. Then press  to select "ENABLE" as Figure 32, then press  will send SaTCR commands ,and the cursor automatic change to next option as Figure





33. You can change the other options by  to select, and then press  or  to input parameters, at last press  to send the commands.



Figure 30

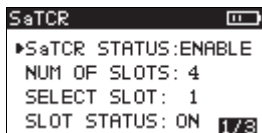


Figure31

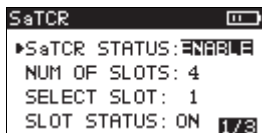


Figure 32

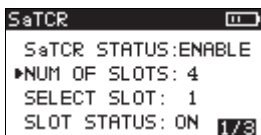


Figure 33

In figure 34, press **(ESC)** to return figure 30. Select "SAVE AND EXIT" by press **(←/⏻)** to SaTCR-search, as figure 35.

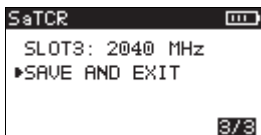


Figure 34

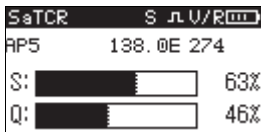


Figure 35

5. Create User Channel Plan

In order to enhance your work efficiency, please create user channel plan before test. S30 will detect all effective channels automatically and save in this channel plan.

5.1 Upload and Download Channel Plan

The instrument can be connected with PC by USB cable to upload and download channel plan.

6. Specification

Frequency Range:	950MHz-2150MHz
Input Level Range:	30dB μ V-110dB μ V
Unit:	dB μ V、dBmV、dBm
Accuracy:	± 3.0 dB(20 $^{\circ}$ C $\pm 5^{\circ}$ C)
Input impedance:	75 Ω
Symbol Rate(SR):	1Msps-45Msps
Connector:	F
Measurement:	Average Power, MER and BER
22K Control:	support
Audio output:	Built-in BUZZER
Display:	128x64 LCD
Memory:	16 satellite, 6 transponder/per sat
LNB voltage:	13V,18V and off
LNB current:	<400mA
Port:	USB
Adapter power:	100~240V AC
DC Input voltage:	DC12V/1.2A
Work Time:	About 2.5 hours
Charge Time:	About 3 hours

Working Temperature:	0°C-40°C
Storage Temperature:	-10°C-50°C
Dimension(L*H*W):	153mm*93mm*42mm
Weight:	358g

7. Accessories

Charger (PW09021915W)	1
F Connector (P.121058J8J)	2
USB data cord(P.900000421)	1
Vehicle Charger (P.340100S20)	1
Manual	1
CD(Satellite channel editor software)	1
Shoulder Strap (PKS30004603)	1
Package (PK1S3000000)	1

