

SW-102-UV Digital VHF/UHF Power & SWR Meter & Frequency counter

V.S.W.R. meter Introduction

VSWR. Forward and reflected power direct digital readout, without any calibration.
Maximum measurable power range up to 120W.
low insertion loss (0.3 decibels or less) structure allows it to be permanently connected.
Build in Frequency counter .
All Function display (Frequency,Power , SWR,FW,RW,Battery Level)

Feature & Specification

Frequency range: 125 - 525MHz
Measurable power range: 0.5 - 120W(+/-0.5%)
Input read frequency counter (must be < 0.5 W)
Maximum power: 120W
Impedance: 50Ω
Size: W 76 X H 77 X D35 mm.
Weight: < 220 grams
Battery : 3.7V Li-ion Rechargeable Battery

* Not for the DMR digital radio.

Interface: SO239

MAX. Power in	120 W (Measurable power, Radio must be ANALOG)
V.S.W.R	1.00~19.9
Frequency Ranger	COVER : 125MHz~525MHz
Insertion Loss	< 0.15dB(VHF) , < 0.25dB(UHF)
Temperature	0°C~60°C
Frequency counter	Yes (TX input must be minimum 0.5W + - 0.5%)
Battery Display	Yes
Battery Build-in	3.7V Li-ion Battery
Auto Power Off	1-9 mins
Size	66*68*37 (mm)
Charger in	5V (micro usb)
Backlight	AUTO OFF
Interface (in and out)	SO239
Weight	220g (include battery)

- **Power ON/OFF:**

Press 2 second the [Red button] to power on or power off

MENU Display (Note: Version for up to V3.8)

No.	Mode	Adj	Default Setting	Content
1	Adjustment Forward	-99 to +99	0	Fine Tune Level %
2	Adjustment Reverse	-99 to +99	0	Fine Tune Level %
3	Adjustment Time Base	-99 to +99	0	Frequency Counter ,OSC Time Base
4	LCD DIM (Back Light Time)	0-9	1	"0" is always on, 1 min to 9 mins
5	POWER OFF	0-9	3	"0" is always on, 1 min to 9 mins

* Supplier, the product will add functionality without having to give notice

• Set & Save:

1. Press MENU [Blue button]
2. Press F1 [Red button](Select 1-5 Function)
3. Press [Blue button] (-), [Yellow button] (+)
4. Press the [Red button] for 2 seconds
5. Press the [Blue button] to SAVE and EXIT

• How to check the S.W.R. of your Antenna :

Connect to "TX" on Radio output and Antenna to "ANT". Proper adaptor/cable is required if your device has different type of connectors.

1. Measurement V.S.W.R. : (see Pic.1)
2. SW-102 TX connect Radio RF out
3. Radio TX , SW-102 with display S.W.R. measure data.

Do not affect the test in the following cases, there are objects nearby, placed horizontally.

• How to check the output Watt of your transceiver :

Connect to "TX" on Radio output and dummy Load to "ANT". Proper adaptor/cable is required if your device has different type of connectors.

1. Measurement Power: (see Pic.2)
2. SW-102 TX connect Radio RF out
3. SW-102 ANT connect 50 ohm Dummy Load
4. Push Radio TX , SW-102 display is Power measure data.

(SW-102 is not for DMR system)

• Package Contents

- 1x SURECOM SW-102-UV Power & SWR Meter (SO239 - connector)
- 1x Power PSU 100-240V
- 1x Charger Cable
- 1x English Users Manual

OLD VERSION : V3.8 ,V4.5,V4.9 ,V5.0,V5.1

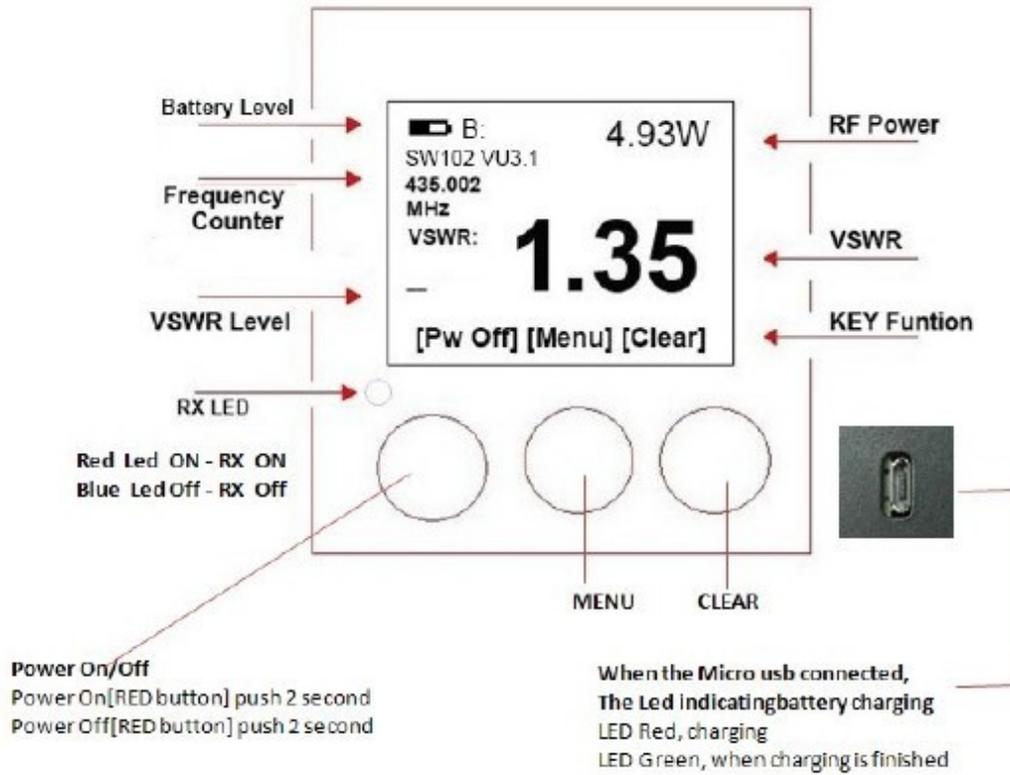
****All Specifications are subject to change without notice**

Model	Country (Market)	Language
SW-102	USA,UK,CANADA..	ENGLISH
Below Model for tailor made Multi-language		
SW-102-C	CHINA	简体
SW-102-F	France	français
SW-102-H	HONGKONG, TAIWAN	繁體
SW-102-I	India	हिन्दी
SW-102-J	JAPAN	日本語
SW-102-K	Korea	한국어
SW-102-M	Malaysia	Malay
SW-102-R	RUSSIAN FEDERATION	русский
SW-102-SP	Spain	
SW-102-T	Thailand	ไทย

Correct use of read standing S.W.R. read



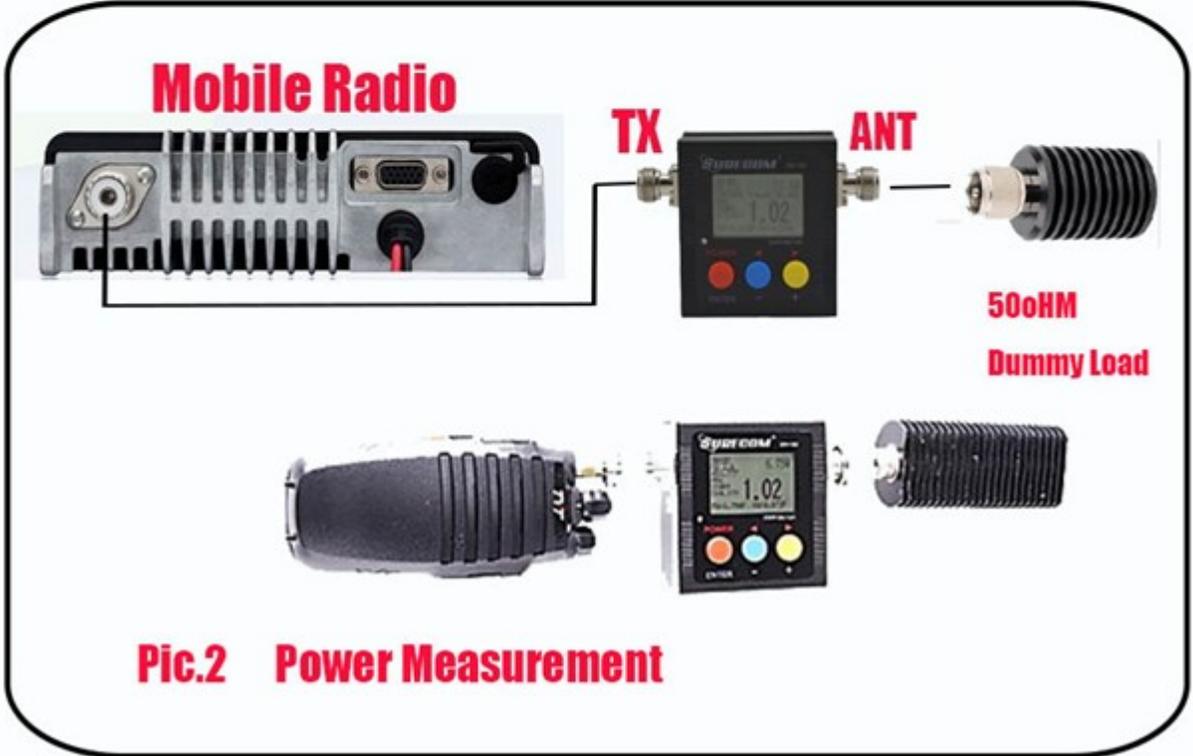
DISPLAY Features:



TX to RADIO



TO ANTENNA



Note: Damage your radio when Connect without Antenna and Dummy.

SURECOM SW-102 Q & A

- **No Operation?**

1. Please charge with USB cable +5V , or come with PSU .
2. Push and hold on the "RED" button .
3. Replacement battery when battery dead. (below Ver 5.1 use by 14500battery,V1.X use by li-ion polymer battery.
4. There are still problems with steps 1. and 2.and 3., please contact service center.

- **Watt /SWR read data is not hold on ?**

2. 1. Some Radio problem when end of TX
2. .Radio output TX is not stabilizing.

- **Read the watt data is not accurate ?**

3. 1. SW-102 is not for DMR system
2. Don't not use the antenna get the watt data.
3. Please use the correct power dummy load to measure (must be 50 OHM)
4. The data read error when not read the frequency from radio
5. The TX input is weak
6. Input Watt below 0.5W

- **Read the S.W.R. data is not accurate?**

4. 1. SW-102 is not for DMR system
2. Do not affect the test in the following cases, there are objects nearby
3. Do not affect the test in the following cases,placed horizontally.

- **Read the Frequency counter is not display or read frequency not accurate?
e.g. Radio is 145.000 , read 145.003**

5. 1. SW-102 is not for DMR system
2. Input below 0.5W
3. Please use menu mode and fine tune the frequency offset.

- **Display have problem ? e.g.BLack or Garbled or no Display**

6. 1. Restart the SW-102
2. Remove the inside battery.
3. There are still problems with steps 1. and 2., please contact service center.

- **How to RESET the mirco chip**

7. 1. Off mode ,
2. Hold the Red button when the display show "restore to default "
3. There are still problems with steps 1. and 2., please remove the battery.

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VSWR	Γ (s11)	Reflected Power (%)	Reflected Power (dB)
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1.0	0.000	0.00	-Infinity
1.5	0.200	4.0	-14.0
2.0	0.333	11.1	-9.55
2.5	0.429	18.4	-7.36
3.0	0.500	25.0	-6.00
3.5	0.556	30.9	-5.10
4.0	0.600	36.0	-4.44
5.0	0.667	44.0	-3.52
6.0	0.714	51.0	-2.92
7.0	0.750	56.3	-2.50
8.0	0.778	60.5	-2.18
9.0	0.800	64.0	-1.94
10.0	0.818	66.9	-1.74
15.0	0.875	76.6	-1.16
20.0	0.905	81.9	-0.87
50.0	0.961	92.3	-0.35

, Reflected Power, and Γ (s11)