General Warranty

OWON warrants that the product will be free from defects in materials and workmanship for a period of 3 years from the date of purchase of the product by the original purchaser from the OWON Company. The warranty period for accessories is 12 months. This warranty only applies to the original purchaser and is not transferable to a third party.

If the product proves defective during the warranty period, OWON will either repair the defective product without charge for parts and labour, or will provide a replacement in exchange for the defective product. Parts, modules and replacement products used by OWON for warranty work may be new or reconditioned like new. All replaced parts, modules and products become the property of OWON.

To obtain service under this warranty, the customer must notify OWON of the defect before the expiration of the warranty period. Customer shall be responsible for packaging and shipping the defective product to OWON's designated service centre, a copy of the customer's proof of purchase is also required.

This warranty shall not apply to any defect, failure or damage caused by improper use or improper or inadequate maintenance and care. OWON shall not be obligated to furnish service under this warranty a) to repair damage resulting from attempts by personnel other than OWON representatives to install, repair or service the product; b) to repair damage resulting from improper use or connection to incompatible equipment; c) to repair any damage or malfunction caused by the use of non-OWON supplies; or d) to service a product that has been modified or integrated with other products when the effect of such modification or integration increases the time or difficulty of servicing the product.

Please contact the nearest OWON's Sales and Service Offices for services.

For better after-sales service, please visit www.owon.com.cn and register the purchased product online.

Excepting the after-sales services provided in this summary or the applicable warranty statements, OWON will not offer any guarantee for maintenance definitely declared or hinted, including but not limited to the implied guarantee for marketability and special-purpose acceptability. OWON should not take any responsibilities for any indirect, special or consequent damages.

Table of Contents

1. General Safety Requirements

Before use, please read the following safety precautions to avoid any possible bodily injury and to prevent this product or any other connected products from damage. To avoid any contingent danger, ensure this product is only used within the ranges specified.

- **Use Proper Power Cord.** Use only the power cord supplied with the product and certified to use in your country.

- **Power Grounded.** The main plug should be inserted in a power socket outlet only if provided with a protective earth contact.

- **Check all Terminal Ratings.** To avoid fire or shock hazard, check all ratings and markings on this product. Refer to the user manual for more information about ratings before connecting to the instrument.

- **Use Proper Overvoltage Protection.** Make sure that no overvoltage (such as that caused by a thunderstorm) can reach the product, or else the operator might expose to danger of electrical shock.

- **Do not operate without covers**. Do not operate the instrument with covers or panels removed.

- **Avoid exposed circuit**. Be careful when working on exposed circuitry to avoid risk of electric shock or other injury.

- **Do not operate if any damage.** If you suspect damage to the instrument, have it inspected by qualified service personnel before further use. Any maintenance, adjustment or replacement especially to circuits or accessories must be performed by qualified service personnel.

- **Use your instrument in a well-ventilated area.** Make sure the instrument installed with proper ventilation.

- **Do not operate in damp conditions.** In order to avoid short circuiting to the interior of the device or electric shock, please do not operate in a humid environment.

- **Do not operate in an explosive atmosphere.** In order to avoid damages to the device or personal injuries, it is

important to operate the device away from an explosive atmosphere.

■ **Keep product surfaces clean and dry.** To avoid the influence of dust or moisture in air, please keep the surface of device clean and dry.

■ **Electrostatic Prevention.** Operate the instrument in an electrostatic discharge protective environment to avoid damage induced by static discharges. Always ground both the internal and external conductors of cables to release static before making connections.

■ **Protect the Input Terminals of Instrument.** Do not bend or hit the input terminals and the connected devices, (such as filter, attenuator, etc.) as such stress may cause damages to devices and the instrument. Do not mix the use of 50Ω and 75Ω connectors and/or cables.

■ **Do Not Overload the Input.** To avoid damaging the instrument, the signals at input terminal must be less than 50V DC voltage components and 30 dBm (1 W) AC (RF) components.

■ **Appropriate Use of Power Meter.** If you are not sure of the characteristics of signal under measure, follow these recommendations to ensure safe operations: if a RF power meter is available, use it to measure the power level of this signal first; or add a rated external attenuator between signal cable and input terminal of the instrument. Maximum attenuation, reference level and maximum span frequency should be selected, to make the signals displayed within the screen.

■ **Know About the Specification Conditions of the Instrument.** For maximum performance of the instrument, use the analyzer under specified conditions.

■ **Handling Safety.** Please handle with care during transportation to avoid damages to buttons, knob, interfaces and other parts on the panels.

2. Safety Terms and Symbols

Safety Terms

Terms in this manual (The following terms may appear in this manual):

> ⚠ **WARNING**
> Warning indicates conditions or practices that could result in injury or loss of life.

> ⚠ **CAUTION**
> Caution indicates the conditions or practices that could result in damage to this product or other property.

Terms on the product (The following terms may appear on this product):

DANGER   Indicates an immediate hazard or injury possibility.
WARNING   Indicates a possible hazard or injury.
CAUTION   Indicates potential damage to the instrument or other property.

Safety Symbols

Symbols on the product (The following symbols may appear on the product):

⚠   Refer to Manual

CE   Conforms to European Union directives

♻   This product complies with the WEEE Directive (2002/96/EC) marking equipment. The affixed product label indicates that you must not discard this electrical/electronic product in domestic household waste.

3. User Notice

This chapter states the matters need to attention before first power on, and how to power on at first time, introduces spectrum analyzer's front/top panel and user interface, explains how to use the instrument with a measurement example demonstration.

3.1 General Inspection

When you receive your new instrument, it is recommended that you check the instrument following these steps:

1.Check for transportation damage.
If it is found that the packaging carton or the foamed plastic protection cushion has suffered serious damage, do not throw it away until the complete device and its accessories have been electrically and mechanically checked.

2.Check the Accessories
The supplied accessories are described in the "*Appendix A: Enclosure*" of this Manual. Please ensure that all the listed accessories are present and undamaged, if any problems are found please contact your distributor or OWON's local office.

3.Check the Complete Instrument
If there is any physical damage, operational fault, or performance issue please contact your distributor or OWON's local office. If there is any damage to the instrument please ensure you keep the original packaging. Ideally you should always keep the original packaging if the instrument must be returned for repair.

3.2 Safety Precaution before Operation

3.2.1 Power Supply Requirements

The analyzer allows the use of either an internal lithium battery pack, or AC-DC adapter shipped with the analyzer for its power supply.

The lithium battery is 7.4V, 9100 mAh.

The table below lists the requirement of the AC-DC adapter.

Table 3-1 AC-DC adapter requirement

AC-DC adapter parameter	Compatible range
Input Voltage	100 V - 240 VAC, 50/60 Hz
Output Voltage	12 - 15 VDC
Max. Power	45 W

3.2.2 Electro-static Discharge (ESD) Protection

ESD is an issue often ignored by users. Damage from ESD on the instrument is unlikely to occur immediately but will significantly reduce the reliability of it. Therefore, ESD precautions should be implemented in the work environment, and applied daily.

Generally, there are two steps to manage ESD protection:

1) Conductive table mat to connect hands via wrist bands

2) Conductive ground mat to connect feet via ankle straps

Implement both protection methods will provide a good level of anti-static protection. If used alone, the protection will not be as reliable. To ensure user's safety, anti-static components should offer at least 1MΩ isolation resistance.

⚠ **WARNING**
The above ESD protections measures cannot be used when working with over 500V!

Make good use of anti-static technology to protect components from damage:

1) Quickly ground the internal and external conductor of the coaxial cable before it is connected to the spectrum analyzer.

2) Staff must wear anti-static gloves before touching the connector cord or doing any assemble work.

3) Assure all the instruments are grounded properly to avoid static storage.

3.3 First Time to Power on

Note: Keep the air vents always clear of obstructions for proper ventilation and cooling of the instrument.

> ⚠ **CAUTION**
> Use only the original AC-DC adapter or originally supplied battery for the power source.
> The maximum RF input level of an average continuous power is 30 dBm (or 50 VDC signal input). Avoid connecting a signal into the analyzer that exceeds the maximum level.

1) Press the power switch ⏻ on the front panel.

2) Self-initialization takes about 30 seconds, after the boot screen the spectrum analyzer will default to the scanning curve.

3) After power on, let the spectrum analyzer warm up for 30 minutes for stabilization to obtain the most accurate results.

3.4 Front Panel Overview
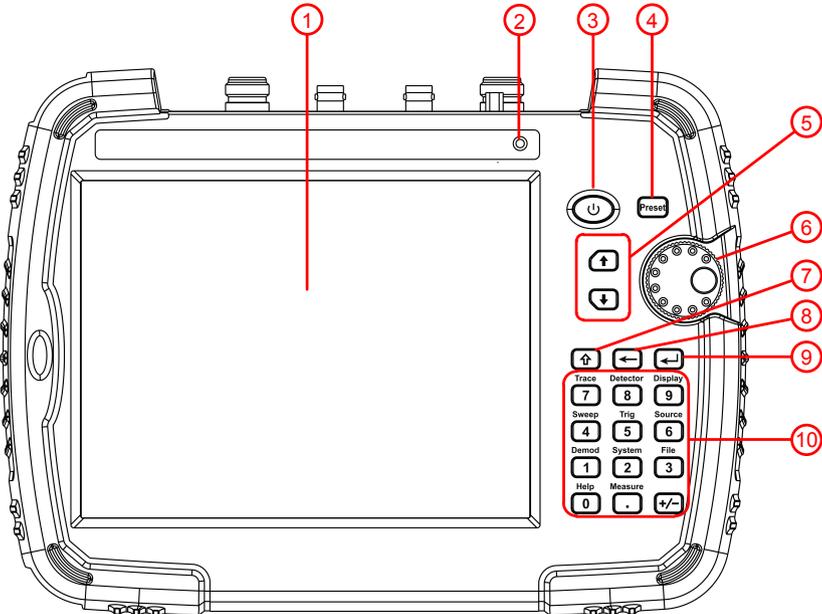
Figure 3-1 Front panel

NO.	Description
①	LCD touchscreen. The touchscreen can be specified in 【System】→[Setting▶]→[Control▶]→ [TouchControl▶].
②	**Light Sensor**: Adjusts the screen backlight according to the environmental light. This state can be specified in 【Display】 → [ScreenSetting▶] → [Brightness <u>Auto</u>].
③	**Power key**: Long push to turn on the analyzer, push to turn on/off the LCD display, long push to turn off the analyzer.
④	**Preset key**: Resets the analyzer to a known state. This state can be specified in 【System】 → [PowerOn/Preset▶] → [Preset▶].
⑤	**Arrow keys**
⑥	**Rotary knob**
⑦	**Shift key**: Press the Shift key to active it, the light is on. When the Shift key is active, pressing a number key will execute the upper function. Long press the Shift key to active it persistently. To switch to the brief active status, short press the Shift key.
⑧	**Backspace key**: Deletes the last character from input.
⑨	**Enter key**: Confirms a parameter selection or configuration.
⑩	**Function / numeric keypad**

3.5 Top Panel Overview
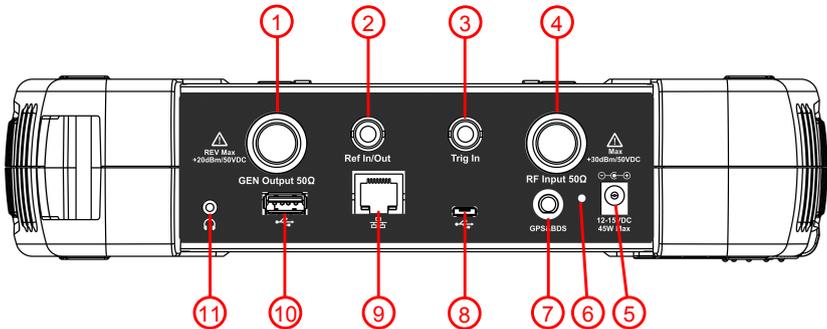
Figure 3-2 Top Panel Overview

NO.	Name	Description
①	GEN Output connector (50 Ω)	N type female connector. The output for the built-in tracking generator.
②	10MHz IN/OUT	BNC, female connector. The BNC input or output of the 10 MHz reference clock.
③	EXT Trig In connector	BNC, female connector. Connects to an external TTL signal. The TTL signal is used to trigger the analyzer's internal sweep.
④	RF Input connector (50 Ω)	N type female connector. Connector for RF input. ⚠ **CAUTION** Input voltage at RF input port must not be higher than 50 V DC to avoid damage to the attenuator and input mixer tracking generator. When input attenuator is higher than 10 dB, the RF port input signal must be less than +30 dBm.
⑤	External power connector	Provides input for the DC power source via an AC-DC adapter.
⑥	LED indicator	Green light when external DC power is connected. Red light when the battery is charging. Blinking light when charge suspend or battery absent.
⑦	GPS/BDS antenna connector	SMA-female type. Connects an GPS/BDS Antenna to offer the GPS location for the field testing. Active antenna supported.
⑧	USB Device interface	MICRO-USB type. Connects to a PC. This USB interface supports PictBridge printer and remote-control connection.
⑨	LAN interface	Through this interface, the analyzer can be connected to your local network for remote control.
⑩	USB Host interface	Type A. Connects to a USB memory stick.
⑪	Headphone jack	Connects to a headphone.

3.6 Rear Panel Overview
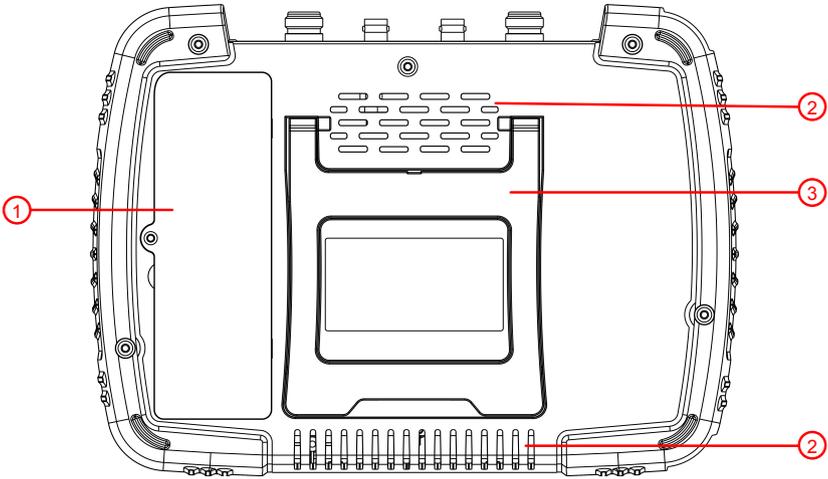
Figure 3-3 Rear Panel

NO.	Name
①	Battery compartment
②	Air vents
③	Tilt stand

3.7 User Interface Overview

Figure below illustrates the user interface, with touch screen menu keys, top bar, and measurement settings and results around the graph area.
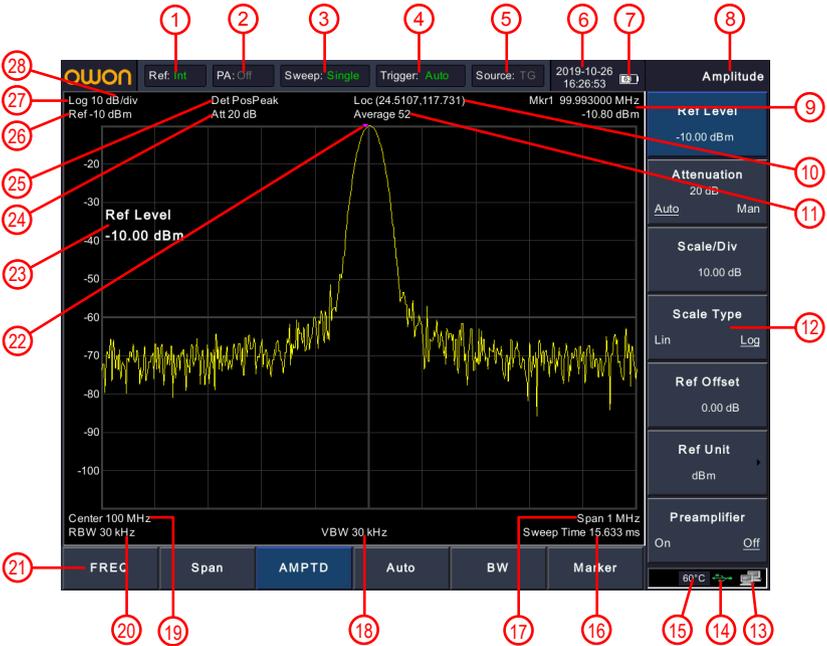
Figure 3-4 User interface overview

NO.	Name	Description	Related Key
①	Reference frequency	Set the reference frequency as **Int** (internal) or **Ext** (external) input	**FREQ** → [Freq Ref]
②	Preamplifier	Turn on/off the preamplifier	**AMPTD**→ [Preamplifier]
③	Sweep status	Set the sweep status to **Single** or **Cont** (continuous)	【Sweep】→ [Sweep Single] or [Sweep Cont]
④	Trigger type	Set the trigger type to **Auto**, **Video**, **Pos** (external positive edge), **Neg** (external negative edge)	【Trig】
⑤	Source	Show the source type as CW (Continuous Wave) or TG (Tracking Generator), press to turn on/off the source output	【Source】→ [Output] and [Source GEN]

10

⑥	Date/time	Display system date and time	【System】 → [Setting] → [Date/Time]
⑦	Battery charge indicator	Show the battery level	
⑧	Menu title	Function of current menu belongs to	
⑨	Marker information	Display frequency and amplitude of current marker	**Marker**
⑩	GPS/BDS location	Shows the GPS/BDS location (Latitude, Longitude) when the GPS/BDS antenna is inserted and is tracking satellites.	
⑪	Trace average number	Continuously get average of the trace to smooth it.	**BW**→ [Average]
⑫	Submenu softkeys	Menu items of current function, can be hidden	【Display】 → [UI Setting►] →[Menu Hiding]
⑬	LAN access sign	LAN access sign	
⑭	USB storage device status	The USB icon changes to green when USB storage device is inserted.	
⑮	Temperature or ANT	Display device internal temperature. If overcurrent occurs to the GPS/BDS antenna, red ANT will be shown.	
⑯	Sweep Time	System sweep time	【Sweep】 → [Sweep Time]
⑰	Frequency span or stop frequency	Display span width or stop frequency	**Span**→[Span] or **FREQ**→[Stop Freq]
⑱	Video bandwidth	Display video bandwidth	**BW**→ [VBW]

⑲	Center frequency or start frequency	Display center frequency or start frequency	**FREQ**→ [Center Freq] or [Start Freq]
⑳	Resolution bandwidth	Display resolution bandwidth	**BW**→[RBW]
㉑	Function softkeys	Press to active the submenu on the right	
㉒	Marker	Display current activated marker	**Marker**
㉓	Active parameter setting	Use the number keypad, knob, and arrow keys to set the value.	
㉔	Attenuation	Display input attenuation setting	**AMPTD** → [Attenuation]
㉕	Detector type	Display detector type	【Detector】
㉖	Reference level	Reference level	**AMPTD** → [Ref Level]
㉗	Amplitude Scale Type	**Log** (logarithmic) or **Line** (linear)	**AMPTD** → [Scale Type]
㉘	Amplitude Scale	Display amplitude scale	**AMPTD** → [Scale/Div]

3.8 Function Keys

There are 5 function softkeys on the interface screen and 11 function hardkeys on the front panel.

3.8.1 Function Softkeys

There are 5 function softkeys horizontally arranged along the bottom of the interface screen. Press one of the function softkeys to show the submenu along the right side of the display.

FREQ	Span	AMPTD	Auto	BW	Marker

Figure 3-5 Function Softkeys

Softkeys	Description
FREQ	Activates the center-frequency function, and accesses the frequency function menu.

Span	Activates the frequency sweep span function, and set Full Span\Zero Span\Last Span.	
AMPTD	Activates the reference level function, and accesses the amplitude softkeys, with which you set functions that affect data on the vertical axis.	
Auto	Searches the signal automatically within the full frequency range.	
BW	Activates the RBW (resolution bandwidth) function, and accesses the softkeys that control the bandwidth functions and averaging.	
Marker	[Marker]	Accesses the marker control keys that select the type and number of markers and turns them on and off.
	[MarkerFctn]	Accesses the menu of special functions, such as N dB bandwidth measure, marker noise, and frequency counting.
	[Marker→]	Accesses the marker function softkeys that allow you to set other system parameters based on the current marker value.
	[Peak]	Places a marker on the highest peak, and accesses the Peak functions menu.

3.8.2 Function Hardkeys

Pressing the [⇧] **Shift** key followed by a number key executes the function that is indicated in blue above the number key.

Shift key:
- Press the Shift key to active it, the light is on.
- When the Shift key is active, pressing a number key will execute the upper function.
- Long press the Shift key to active it persistently.
- To switch to the brief active status, short press the Shift key.

Figure 3-6 Shift key and function hardkeys

Hardkeys	Description
【Trace】	Accesses the softkeys that allow you to store and manipulate trace information.
【Detector】	Accesses the softkeys that allow you to configure detector functions.
【Display】	Accesses the softkeys that allow you to control what is displayed on the analyzer, including the display line, graticule and label.
【Sweep】	Accesses the softkeys that allow you to set the sweep time, select the sweep mode of the analyzer.
【Trig】	Accesses the softkeys that allow you to select the trigger mode of the analyzer.
【Source】	Accesses the softkeys that allow you to set the tracking generator.
【Demod】	Accesses the softkeys that allow you to set the demodulation.
【System】	Sets the system parameters. Accesses the calibration menu. Set the print parameters. Save and recall screen pixmap, trace data, or user state.
【File】	Accesses the softkeys that allow you to configure the file system of the analyzer.

【Help】	Press the Help key to activate the help system. Press the Help key again to exit.
【Measure】	Accesses the softkeys that let you make transmitter power measurements such as ACPR (adjacent channel power), channel power, and OBW (occupied bandwidth), etc. Sets the parameters for the selected measurement function in [Meas Setup▸].

3.9 Parameter Input

The active parameter value can be entered using the numeric keypad, knob, and arrow keys.

3.9.1 Numeric keypad

Enters a specific value, the submenu typically shows the selectable units. Press the desired unit or press ⏎ Enter key to complete the entry.

Figure 3-7 Numeric keypad

1. Number keys
    Numbers 0-9 are available to be used.

2. ⎡.⎤ Decimal point
    A decimal point "." will be inserted at the cursor position when this key is pressed.

3. ⎡+/-⎤ Sign key
    Sign key "+/-" is to toggle the sign of a parameter. When pressed the first time, a "-" will be inserted and changed into "+" following the second press.

4. ⎡←⎤ Backspace key

(1) During the process of parameter editing, this key will delete the characters on the left side of the cursor.
(2) While in the process of file name editing, pressing this key will delete characters that have been entered.

5. ⏎ Enter key
When pressed, the system will complete the input process and insert a default measurement unit for the parameter automatically.

3.9.2 Rotary knob
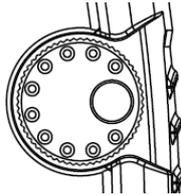
Figure 3-8 The rotary knob

The knob function:
During parameter editing, turn the knob clockwise to increase, or counterclockwise to decrease the parameter values at specified steps.

3.9.3 Arrow keys

Figure 3-9 Arrow keys

The arrow keys have following functions:
1) Increase or decrease the parameter value at specific steps while editing a parameter.
   Note: Press **FREQ**→[**CF Step**] to set the center frequency step.
2) Move the cursor though the directory tree in the【File】function.

3.10 Build-in Help

The built-in help provides information that refers to every function key and menu key on the front panel. Users can view this help information if required.
1.How to acquire built-in help

Press the ⇧ **Shift** key, then the【**Help**】key; a prompt about how to obtain help information will be shown

2.Page up and down
If there is more than one page of information, you can read the complete information by using the directional keys.

3.Close the current help information
Press the ⇧ **Shift** key, then the【**Help**】key again to close help.

4.Acquire the softkey help
A message about how to obtain help information will be shown, press the softkeys to get the corresponding help.

5.Acquire the help information of any function hardkey
A message about how to obtain help information will be shown, press the ⇧ **Shift** key, then any function hardkey to get the corresponding help.

3.11 Touchscreen Controls

The LCD is touchable, you can control the analyzer by different gestures.

The touchscreen can be specified in【System】→ [Setting▶] → [Control▶] → [TouchControl▶]. You can turn on/off the touch control in this submenu.

The instruction of touchscreen controls is as below. You can also use the buttons / knobs enclosed in brackets to do the same thing.

● Click the label to toggle between options on the top bar. See User Interface Overview for details on page 9.

● **Select a menu softkey**: Touch the menu softkeys in the bottom, or in the right.

● **Switch menu items**: If there are options that can be switched in the menu, you can repeatedly touch the area of the menu item to switch.

Press repeatedly to switch the options
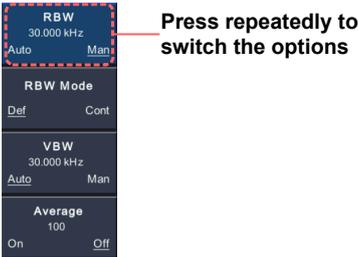
● **Scroll the list**: If there is a scroll bar in the file system window, you can swipe up and down to scroll the list.

● **Capture the screen** (【System】 → [Save/Recall▶] → [Screen Pixmap▶]): Double-tap in the display area to quickly capture a PNG image of the current screen display. If a USB device is inserted, the image will be saved to USB device, otherwise the local memory. A file name is automatically created using the current date and time stamp.

● **Move the active marker to the desired frequency** (**Marker** → [Marker▶] → turn the knob): When a marker is active, single-tap in the display area (at any level) to quickly move the marker to the desired frequency.

●**Set the reference level** (**AMPTD** → [Ref Level]): Swipe up or down in the display area.

●**Set the center or start frequency** (**FREQ**→ [Center Freq] or [Start Freq]): Swipe left or right in the display area.
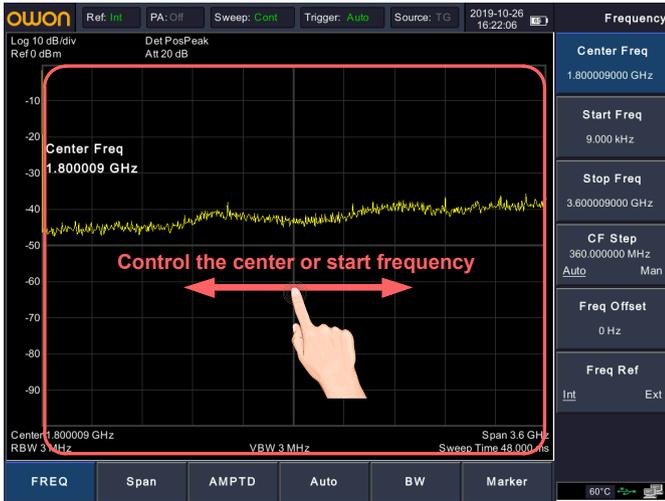
●**Set the Span** (**Span**→[Span]): In the display area, pinch and spread horizontally to change the span.
Set the RBW (**BW**→[RBW]): When **BW**→[RBW] softkey is selected, pinch and spread horizontally to change the RBW.
Set the VBW (**BW**→[VBW]): When **BW**→[VBW] softkey is selected, pinch and spread horizontally to change the VBW.

●**Set the Scale/Div** (**AMPTD** → [Scale/Div]): In the display area, pinch and spread vertically to change the Scale/Div.

3.12 Basic Measurement

Basic measurements include, input signal frequency and amplitude display, marked by a frequency marker.

Follow these four simple steps below to implement input signal measurement.
a) Setting center frequency;
b) Setting span and resolution bandwidth;
c) Activate marker;
d) Setting amplitude.

For example, to measure a 100 MHz, -10 dBm signal, you must turn on the spectrum analyzer and ensure it is warmed up for 30 minutes to ensure measurement accuracy.

1. Equipment connection

Connect the output terminal of signal generator to the **RF Input 50Ω** connector on the top of the spectrum analyzer. Set the parameters as follows:

Frequency	100 MHz
Amplitude	-10 dBm

2. Setting parameters

1) Press 【Preset】 on the front panel to restore the analyzer to its factory-defined state. The Spectrum analyzer will display the

spectrum from 9kHz to the maximum span width. The signal generated will display as a vertical line at 100MHz. Refer to Figure 3-10。
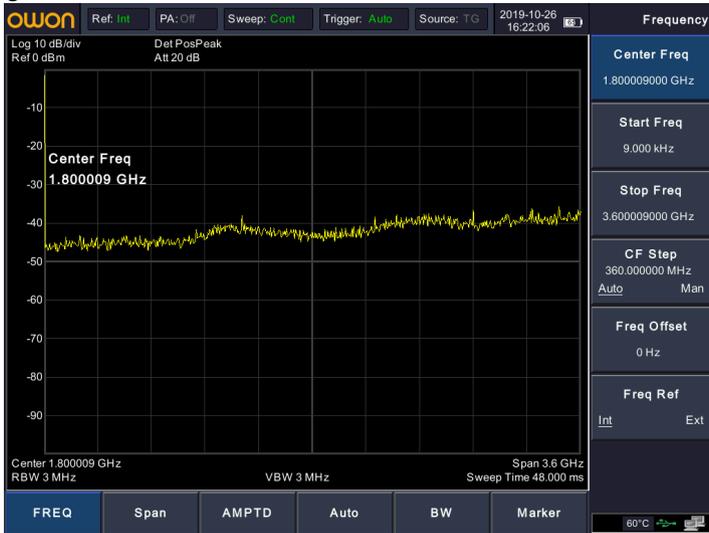
Figure 3-10 Full Span

To clearly observe the signal, reduce the frequency span to 1 MHz and set the center frequency to 100MHz.

2) Setting center frequency

Press **FREQ** softkey on the bottom, select [**Center Freq**] on the right submenu. Input "**100**" and select the unit as **MHz** on the right softkeys. The number keys can be used to set the exact value, the knob and arrow keys can also be used to set the center frequency.

3) Setting frequency span

Press **Span** softkey, input "**1**" and press **MHz** as its unit.

Press **BW** softkey, set [**RBW**] to **Man**, and input "**30**" and press **kHz** as its unit.

Press ⬆ **Shift** key followed by the 【**Detector**】 key, set the detection type to **Pos Peak**.

Figure 3-11 shows the signal at a higher resolution.

Please note that resolution bandwidth, video bandwidth and frequency span are self-adapted. They adjust to certain values according to frequency span. Sweep time can be self-adapted too.
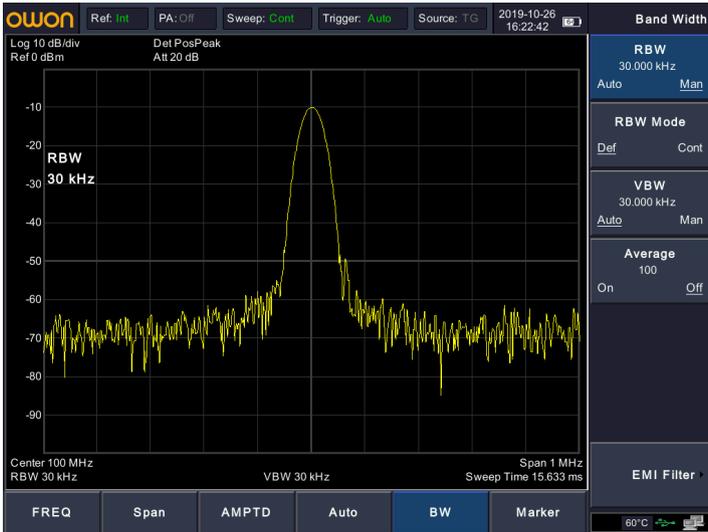
Figure 3-11 Set frequency span

4) Activate marker

Press **Marker** softkey on the bottom, select [**Marker ▶**] on the right submenu. Press the softkey to select [Marker 1 2 3 4 5], select Marker 1, the marker is located at horizontal center by default, that is the signal peak point or its neighbor.

Press **Marker** softkey on the bottom, select [**Peak ▶**] on the right submenu. Select [**Max Search**]. Frequency and amplitude values are read by the marker and shown on the top right of the display area.

5) Setting amplitude

The reference level will be shown at the top of the display grid. To get a better dynamic range, the real signal peak point should be located at or near the top of display grid (reference level). The reference level is also the maximum value on Y axis. Here we reduce to 20dB reference level to increase the dynamic range.

Press **AMPTD** softkey on the bottom, and the [**Ref Level**] softkey on the right will be activated. The reference level can be input at the top left of the display grid. Input "**-10**" using the numeric keypad and set the unit to **dBm**.

The reference level is set at -10 dBm, which is the signal peak value near the top of the grid. The balance between the signal peak value and noise is dynamic range.
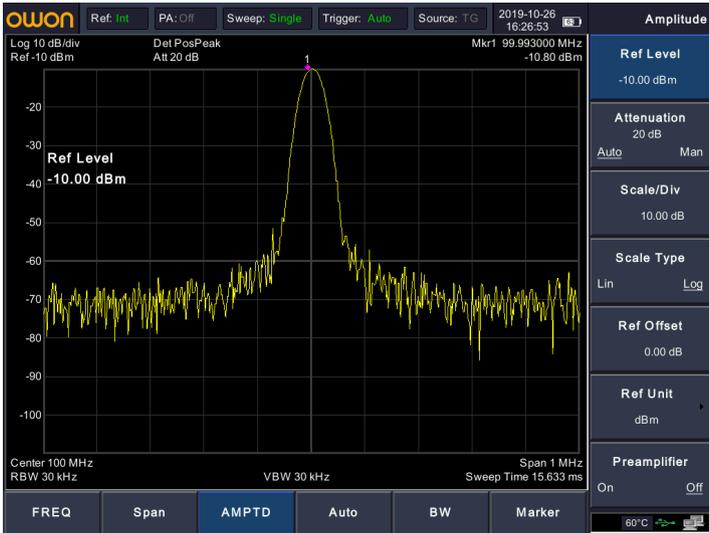
Figure 3-12 Set reference level

4. Troubleshooting

Typical issues that may occur when using your spectrum analyzer:
- Power on malfunction
- No signal display
- Wrong measurement results or poor frequency or amplitude precision.

1. Power on malfunction
   Power on malfunction can include a situation where the screen is still dark (no display) after switch on.
   If the screen is still dark after power on, please check:
   1) If the power supply has been connected correctly and it the power supply voltage range is within the specification.
   2) If the power switch has been turned on.

2. No signal display
   If there is no signal display at any wave band. Please try the following: set a signal generator at 30 MHz frequency and -10 dBm power and connect it to the spectrum analyzer RF input connector. If there is still no signal display, there may be a problem with the spectrum analyzer hardware circuit. Please contact OWON for service.

3. Wrong measurement results or poor signal frequency precision

If the display contents shake a lot or the frequency readout exceeds the error range during measurements, check if the signal source is stable. If so, check if spectrum analyzer reference is precise. Select internal or external frequency reference according to measurement conditions: press **FREQ** softkey → [**Freq Ref Int Ext**]. If the frequency is still not precise, then the spectrum analyzer LO has lost its phase lock, please contact OWON for service.

4. Wrong measurement results or poor readout amplitude precision

If signal amplitude readout is not precise, perform a calibration. If amplitude readout is still not precise, then it may be a problem with internal circuit, please contact OWON for service.

5. Appendix

Appendix A: Enclosure

(The accessories subject to final delivery.)

Standard Accessories

Power Cord   **CD Rom**   **Quick Guide**   **USB Cable**   **AC-DC Adapter**

GPS Antenna

Options

N-N Cable   **N-SMA Cable**   **SMA-SMA Cable**   **SMA Adaptor**   **N-SMA Adaptor**

**Near Field Probe includes: Four near-field probes,
N-SMA adapter, SMA-SMA cable
(Frequency range: 30 MHz – 3 GHz)**

Appendix B: General Care and Cleaning

General Care

Do not store or leave the instrument where the liquid crystal display could be exposed to direct sunlight for long periods of time.

Caution: To avoid any damage to the instrument or probes, do not exposed it to any sprays, liquids, or solvents.

Cleaning

Inspect the instrument and probes as often as operating conditions require.

To clean the instrument exterior, perform the following steps:

Wipe the dust from the instrument surface with a soft cloth. Take care not to scratch the transparent LCD protection screen when cleaning.

⚠ **WARNING**

Before reapplying power, ensure that the instrument is completely dry, avoiding any electric shock or electrical short circuit resulting from moisture.

Appendix C: USB Disk Requirements

USB disk requirements:
Max capacity 4G, NTFS file system is not supported.

If the USB disk doesn't work properly, format your USB disk and then try again.

Appendix D: PC Software Requirements

The PC software does not support Windows XP.

2019.12   V1.0.0