

UNI-T®

Instruments.uni-trend.com



Quick Guide

UTS5000A Series Signal Analyzer

REV 0

2023.10.31

Foreword

Dear Users,

Hello! Thank you for choosing this brand new UNI-T instrument. In order to use this instrument safely and correctly, please read this manual thoroughly, especially the Safety Requirements part.

After reading this manual, it is recommended to keep the manual at an easily accessible place, preferably close to the device, for future reference.

Copyright Information

Copyright is owned by Uni-Trend Technology (China) Co., Ltd.

If the product is proved to be defective within the warranty period, UNI-T reserves the rights to either repair the defective product without charging of parts and labor, or exchange the defected product to a working equivalent product (determined by UNI-T). Replacement parts, modules and products may be brand new, or perform at the same specifications as brand new products. All original parts, modules, or products which were defective become the property of UNI-T.

The "customer" refers to the individual or entity that is declared in the guarantee. In order to obtain the warranty service, "customer" must inform the defects within the applicable warranty period to UNI-T, and perform appropriate arrangements for the warranty service.

The customer shall be responsible for packing and shipping the defective products to the individual or entity that is declared in the guarantee. In order to obtain the warranty service, customer must inform the defects within the applicable warranty period to UNI-T, and perform appropriate arrangements for the warranty service. The customer shall be responsible for packing and shipping the defective products to the designated maintenance center of UNI-T, pay the shipping cost, and provide a copy of the purchase receipt of the original purchaser. If the product is shipped domestically to the purchase receipt of the original purchaser. If the product is shipped to the location of the UNI-T service center, UNI-T shall pay the return shipping fee. If the product is sent to any other location, the customer shall be responsible for all shipping, duties, taxes, and any other expenses.

The warranty is inapplicable to any defects, failures or damages caused by accident, normal wear of components, use beyond specified scope or improper use of product, or improper or insufficient maintenance. UNI-T is not obliged to provide the services below as prescribed by the warranty:

- a) Repair damage caused by installation, repair or maintenance of personnel other than service representatives of UNI-T;
- b) Repair damage caused by improper use or connection to incompatible equipment;
- c) Repair any damages or failures caused by using power source not provided by UNI-T;
- d) Repair products that have been changed or integrated with other products (if such change or integration increases time or difficulty of repair).

The warranty is formulated by UNI-T for this product, replacing any other express or implied warranties. UNI-T and its distributors refuse to give any implied warranty for marketability or applicability for special purpose. For violation of the warranty, repair or replacement of defective products is the only and all remedial measure UNI-T provides for customers. No matter whether UNI-T and its distributors are informed of any possible indirect, special, occasional or inevitable damage in advance, they assume no responsibility for such damage.

Front Panel



Figure 1-1 Front Panel

1. **Display screen:** display area, touch screen
2. **Advanced function key:** used to active advanced measurement function of the signal analyzer, which including:
 - **Advanced measurement:** access the menu of functions to measure transmitter power, such as adjacent channel power, occupied bandwidth and harmonic distortion
 - **Mode:** select the measurement mode for the signal analyzer
 - **Auto-tune:** the signal is automatically searched and placed in the center of the screen
3. **Measurement:** used to active the main functions of the signal analyzer, which including:
 - **Frequency (FREQ):** press this key to enable the center frequency function and enter the frequency setup menu
 - **Amplitude (AMPT):** press this key to enable the reference level function and enter amplitude setup menu
 - **Bandwidth (BW):** press this key to enable the resolution bandwidth function and enter control bandwidth and visualize proportions menu
 - **Sweep:** select the sweep menu of the signal analyzer to enter the scanning time
 - **Trigger:** enter the menu of trigger setup, trigger type, trigger parameter
 - **Trace:** enter the menu of control trace, detection mode and trace operation
 - **Marker:** used to select marked number, type, attribute, tag function and list, and to control the display of these markers

- **Peak:** place a marker at the amplitude peak value of signal and control this marked point to perform its function
 - **Measurement setting:** average/hold time and average type, display line and limit value
 - **Single:** press this key to perform single sweep, press it again to turn to continuous sweep
 - **Reset (Default):** press this key to reset the setting of signal analyzer to the default parameter
4. **Utility (function key):** used to active the main functions of signal analyzer, which including:
- **System information (System):** enter the system menu and setup its parameter
 - **File System (File):** press this key to enter file manager, files can be viewed, created, modified, and deleted; corrections, limits, measurement results, screenshots, traces, status and other files can be saved to internal or external memory and it can be recalled
 - **File storage (Save/Recall):** press this key to enter save menu, the types of files includes state, trace line + state, measurement data, limit, correction and export
 - **Touch/Lock:** switch of touch screen, this key will illuminate with green when it pressed
5. **Data control key:** direction key, rotary knob and numerical key are used to adjust the numerical value of the activated function, such as center frequency, start frequency, resolution bandwidth and marker position

Note

Esc key: If the instrument is in remote control mode, press this key to return to local mode.

6. **Radio Frequency input terminal (RF input 50 Ω):** this port is used to connect the external input signal, the input impedance is 50 Ω (NMD2.92 male-head)

Warning

It is forbidden to load the input port with a signal that does not meet the rated value, and ensure that the probe or other connected accessories are effectively grounded to avoid equipment damage or abnormal function. RF IN port can only withstand an input signal power of no more than +27 dBm or a DC voltage input of 16 V.

Warning

It is forbidden to load input signals on the output port to avoid damage or abnormal function.

7. **Headphone jack:** 3.5 mm
8. **USB 3.0 port:** used to connect external USB, keyboard and mouse
9. **ON/OFF Switch:** short press to active the signal analyzer, in on-state, short press ON/OFF switch will change the state to standby mode, all function will also be off

User Interface

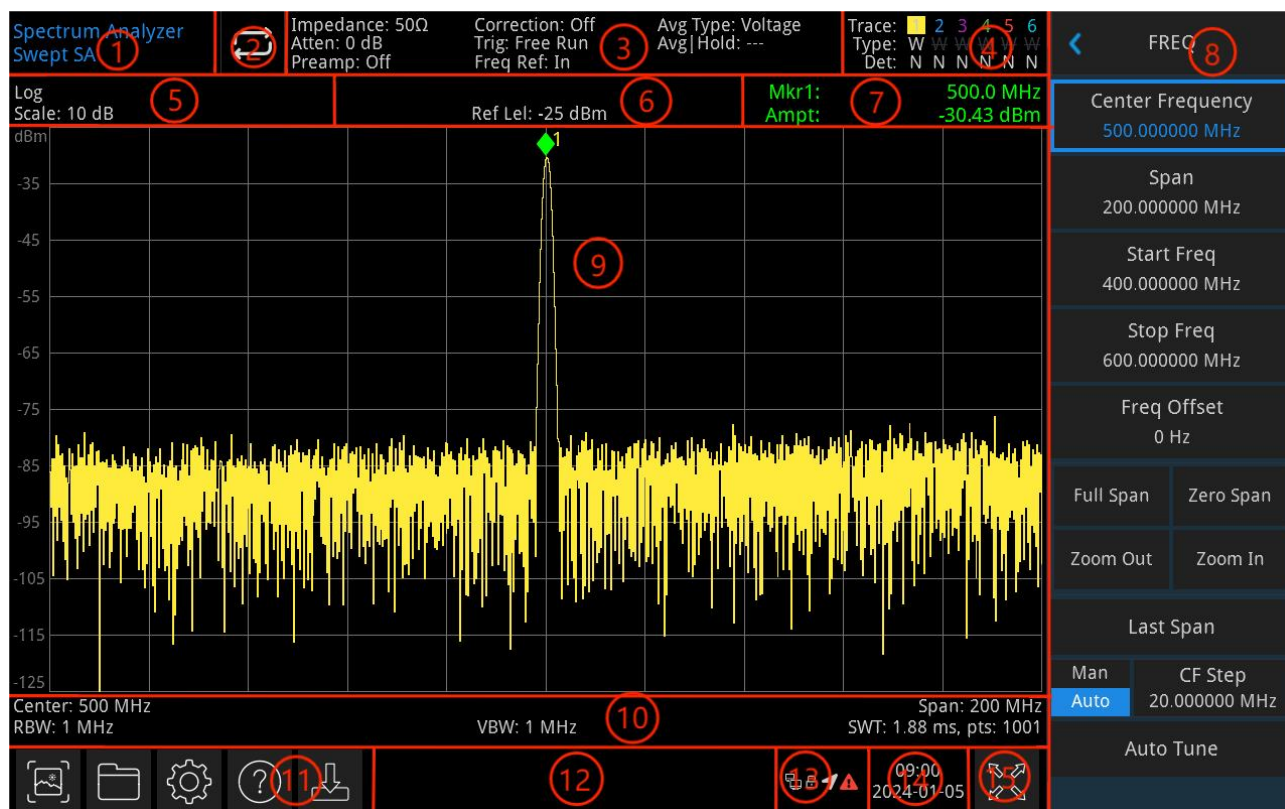


Figure 1-2 User Interface

- Working mode:** spectral analysis, EMI, analog demodulation, vector signal analysis and real-time spectral analysis
- Sweep/Measuring:** the current sweep mode includes single / continuous, tap the screen icon to quick switch the mode
- Measurement menu:** display the measurement information, which including input impedance, input attenuation, presetting, correction, trigger type, reference frequency, average type, and average/hold. Tap the screen icon to quick switch these functions.
- Trace indicator:** display the information of trace and detector, which including trace serial number, trace type and detector type






Note

The first line is display the number of trace line, color of number and trace should be the same. The second line is display the corresponding trace type which including W (refresh), A (average trace), M (the maximum hold), m (the minimum hold).

The third line is display the detector type which including S (sampling detection), P (peak value), p (negative value), N (normal detection), A (average), f (trace operation). All detection type are displayed in white letters.

Tap screen icon to quick switch different modes, different letter presents different mode.

- Letter in highlight white color, it presents the trace is being update
- Letter in grey color, it presents the trace is not update
- Letter in grey color with strikethrough, it presents the trace will not be update and display
- Letter in white color with strikethrough, it presents the trace is being update but no display; this case is useful for trace mathematical operation

5. **Display scale:** scale value, scale type (logarithm, linear). Scale value in linear mode cannot be changed
6. **Reference Level:** reference level value, reference level offset value
7. **Result of cursor measurement:** display the current result of cursor measurement, which is frequency, amplitude. Display time in zero span mode
8. **Panel Menu:** menu and function, which includes frequency, amplitude, bandwidth, trace and marker.
9. **Grid display area:** trace display, marker point, video triggering level, display line, threshold line, cursor table, peak list
10. **Data display:** center frequency value, sweep width, start frequency, cut-off frequency, frequency offset, RBW, VBW, sweep time and sweep count
11. **Function setting:** quick screenshot, file system, setup system, help system and file storage
 - Quick screenshot : screenshot will save to the default file; if there has an external storage, it is preferentially saved to external storage device
 - File system : user can use file system to save the correction, limit value, measurement result, screenshot, trace, status and other file into internal or external storage, and it can be recall to use
 - System information : view the basic and option information
 - Help system : help guides
 - File storage : import or export state, trace + state, measurement data, limit value and correction
12. **System log dialog box:** Click blank space on the right of file storage to enter system log to check the operation log, alarm and hint information
13. **Connection type:** display connecting state of mouse, USB and screen lock
14. **Date and time:** Display the date and time
15. **Full screen switch:** Open full screen display, the screen is stretched horizontally and the right button is automatically hidden

Rear Panel



Figure 1-3 Rear Panel

1. **USB 2.0 port:** used to connect USB and keyboard and mouse
2. **HDMI port:** HDMI video signal output port
3. **LAN port:** TCP/IP port for connecting remote control
4. **USB Device port:** signal analyzer can use this interface to connect a PC, which can be remote control by the software on the computer
5. **Ext 1:** when the signal analyzer uses the external trigger mode, the connector receives the rising or falling edge of an external trigger signal, which is fed into the signal analyzer through the BNC cable

Warning

It is forbidden to load the input port with a signal that does not meet the rated value, and ensure that the probe or other connected accessories are effectively grounded to avoid equipment damage or abnormal function.

6. **10 MHz reference input:** signal analyzer can use internal reference source or as an external reference source
 - If the instrument detects that the [10 MHz IN] connector is receiving a 10 MHz clock signal from an external source, the signal is automatically used as an external reference source, and the user interface displays "Frequency reference: external". When the external reference source is lost, overrun, or not connected, the instrument's reference source automatically switches to the internal reference, and the measurement menu displays "Frequency Reference: Internal".

Warning

It is forbidden to load the input port with a signal that does not meet the rated value, and ensure that the probe or other connected accessories are effectively grounded to avoid equipment damage or abnormal function.

7. **Ext 2:** when the signal analyzer uses the external trigger mode, the connector receives the rising or falling edge of an external trigger signal, which is fed into the signal analyzer through the BNC cable

Warning

It is forbidden to load the input port with a signal that does not meet the rated value, and ensure that the probe or other connected accessories are effectively grounded to avoid equipment damage or abnormal function.

8. **10 MHz reference output:** signal analyzer can use internal reference source or as an external reference source
 - If the instrument uses an internal reference source, [10 MHz OUT] connector can output 10 MHz clock signal generated by the instrument's internal reference source, which can be used to synchronize other devices.

Warning

It is forbidden to load the input signal on the output port to avoid equipment damage or abnormal function.

9. **Ground connector:** provides an electrical ground connection point for attaching an antistatic wrist strap to reduce electrostatic damage (ESD) when you are handling or connecting the DUT.
10. **Power port:** power supply terminal
11. **Power Switch:** used to turn on/off the AC power supply. When the switch is turned on, the signal analyzer enters the standby mode while the indicator on the front panel lights up.
12. **Burglar-proof Lock:** protect the instrument away from thief
13. **Dustproof cover:** take off dustproof cover and then to clean the dust
14. **Handle:** easy to move the signal analyzer

User Guide

Inspecting Product and Packing List

When you received the instrument, please inspect the packaging and packing list as follows.

- Inspect whether the packaging box is broken or scratched caused by external force, and further check whether the instrument appearance is damaged.
If you have any questions about the product or other problems, please contact with distributor or the local office.
- Take out the goods carefully and check with the packing list.

Safety Information

This chapter contains information and warnings that must be observed. To ensure that the instrument is operating under the safety conditions. In addition to the safety precautions indicated in this chapter, you must also follow accepted safety procedures.




Safety Precautions















Warning	Please follow the following guidelines to avoid possible electric shock and risk to personal safety.
	Users must follow the following conventional safety precautions in operation, service and maintenance of this device. UNI-T will not be liable for any personal safety and property loss caused by the user's failure to follow the following safety precautions. This device is designed for professional users and responsible organizations for measurement purposes.
	Do not use this device in any way not specified by the manufacturer. This device is only for indoor use unless otherwise specified in the product manual.

Safety Statements

Warning	"Warning" indicates the presence of a hazard. It reminds users to pay attention to a certain operation process, operation method or similar. Personal injury or death may occur if the rules in the "Warning" statement are not properly executed or observed. Do not proceed to the next step until you fully understand and meet the conditions stated in the "Warning" statement.
Caution	"Caution" indicates the presence of a hazard. It reminds users to pay attention to a certain operation process, operation method or similar. Product damage or loss of important data may occur if the rules in the "Caution" statement are not properly executed or observed. Do not proceed to the next step until you fully understand and meet the conditions stated in the "Caution" statement.
Note	"Note" indicates important information. It reminds users to pay attention to procedures, methods and conditions, etc. The contents of the "Note" should be highlighted if necessary.

Safety Signs

	Danger	It indicates possible danger of electric shock, which may cause personal injury or death.
	Warning	It indicates that you should be careful to avoid personal injury or product damage.
	Caution	It indicates possible danger, which may cause damage to this device or other equipment if you fail to follow a certain procedure or condition. If the

		"Caution" sign is present, all conditions must be met before you proceed to operation.
	Note	It indicates potential problems, which may cause failure of this device if you fail to follow a certain procedure or condition. If the "Note" sign is present, all conditions must be met before this device will function properly.
	AC	Alternating current of device. Please check the region's voltage range.
	DC	Direct current of device. Please check the region's voltage range.
	Grounding	Frame and chassis grounding terminal
	Grounding	Protective grounding terminal
	Grounding	Measuring grounding terminal
	OFF	Main power off
	ON	Main power on
	Power Supply	Standby power supply: when the power switch is turned off, this device is not completely disconnected from the AC power supply.
CAT I		Secondary electrical circuit connected to wall sockets through transformers or similar equipment, such as electronic instruments and electronic equipment; electronic equipment with protective measures, and any high-voltage and low-voltage circuits, such as the copier in the office.
CAT II		CATII: Primary electrical circuit of the electrical equipment connected to the indoor socket via the power cord, such as mobile tools, home appliances, etc. Household appliances, portable tools (e.g. electric drill), household sockets, sockets more than 10 meters away from CAT III circuit or sockets more than 20 meters away from CAT IV circuit.
CAT III		Primary circuit of large equipment directly connected to the distribution board and circuit between the distribution board and the socket (three-phase distributor circuit includes a single commercial lighting circuit). Fixed equipment, such as multi-phase motor and multi-phase fuse box; lighting equipment and lines inside large buildings; machine tools and power distribution boards at industrial sites (workshops).
CAT IV		Three-phase public power unit and outdoor power supply line equipment. Equipment designed to "initial connection", such as power distribution system of power station, power instrument, front-end overload protection, and any outdoor transmission line.
	Certification	CE indicates a registered trademark of EU
	Certification	UKCA indicates a registered trademark of United Kingdom.
	Certification	Conformance to UL STD 61010-1, 61010-2-030 and CSA STD C22.2 No.61010-1 and 61010-2-030.
	Waste	This product complies with the marking requirements of WEEE Directive (2002/96/EC). This additional label indicates that this electrical / electronic product must not be discarded in household waste.
	EEUP	This environment-friendly use period (EFUP) mark indicates that dangerous or toxic substances will not leak or cause damage within this indicated time period. The environment-friendly use period of this product is 40 years, during which it can be used safely. Upon expiration of this period, it should enter the recycling system.

Safety Requirements

Warning	
Preparation before use	Please connect this device to AC power supply with the power cable provided; The AC input voltage of the line reaches the rated value of this device. See the product manual for specific rated value. The line voltage switch of this device matches the line voltage; The line voltage of the line fuse of this device is correct. It not used for measuring the main circuit.
Check all terminal rated values	Please check all rated values and marking instructions on the product to avoid fire and impact of excessive current. Please consult the product manual for detailed rated values before connection.
Use the power cord properly	You can only use the special power cord for the instrument approved by the local and state standards. Please check whether the insulation layer of the cord is damaged or the cord is exposed, and test whether the cord is conductive. If the cord is damaged, please replace it before using the instrument.
Instrument grounding	To avoid electric shock, the grounding conductor must be connected to the ground. This product is grounded through the grounding conductor of the power supply. Please be sure to ground this product before it is powered on.
AC power supply	Please use the AC power supply specified for this device. Please use the power cord approved by your country and confirm that the insulation layer is not damaged.
Electrostatic prevention	This device may be damaged by static electricity, so it should be tested in the anti-static area if possible. Before the power cable is connected to this device, the internal and external conductors should be grounded briefly to release static electricity. The protection grade of this device is 4KV for contact discharge and 8KV for air discharge.
Measurement accessories	Measurement accessories are of lower class, which are definitely not applicable to main power supply measurement, CAT II, CAT III or CAT IV circuit measurement.
Use the input / output port of this device properly	Please use the input / output ports provided by this device in a properly manner. Do not load any input signal at the output port of this device. Do not load any signal that does not reach the rated value at the input port of this device. The probe or other connection accessories should be effectively grounded to avoid product damage or abnormal function. Please refer to the product manual for the rated value of the input / output port of this device.
Power fuse	Please use power fuse of specified specification. If the fuse needs to be replaced, it must be replaced with another one that meets the specified specifications.
Disassembly and cleaning	There are no components available to operators inside. Do not remove the protective cover. Maintenance must be carried out by qualified personnel.
Service environment	This device should be used indoors in a clean and dry environment with ambient temperature from 0 °C to +40 °C. Do not use this device in explosive, dusty or humid air.
Do not operate in humid environment	Do not use this device in a humid environment to avoid the risk of internal short circuit or electric shock.
Do not operate in flammable and explosive environment	Do not use this device in a flammable and explosive environment to avoid product damage or personal injury.
Caution	
Abnormity	If this device may be faulty, please contact the authorized maintenance personnel of

	UNI-T for testing. Any maintenance, adjustment or parts replacement must be done by the relevant personnel of UNI-T.
Cooling	Do not block the ventilation holes at the side and back of this device; Do not allow any external objects to enter this device via ventilation holes; Please ensure adequate ventilation, and leave a gap of at least 15 cm on both sides, front and back of this device.
Safe transportation	Please transport this device safely to prevent it from sliding, which may damage the buttons, knobs or interfaces on the instrument panel.
Proper ventilation	Poor ventilation will cause the device temperature to rise, thus causing damage to this device. Please keep proper ventilation during use, and regularly check the vents and fans.
Keep clean and dry	Please take actions to avoid dust or moisture in the air affecting the performance of this device. Please keep the product surface clean and dry.
Note	
Calibration	The recommended calibration period is one year. Calibration should only be carried out by qualified personnel.

Environmental Requirements

This instrument is suitable for the following environment:

- Indoor use
- Pollution level 2
- In operating: altitude lower to 3000 meters; in non-operating: altitude lower to 15000 meters
- Unless otherwise specified, operating temperature is 0 to +40°C; storage temperature is -20 to +70°C
- In operating: humidity temperature below to +35°C, ≤90% relative humidity
- In non-operating: humidity temperature +35°C to +40°C, ≤60% relative humidity
- There are ventilation opening on the rear panel and side panel of the instrument. So please keep the air flowing through the vents of the instrument housing. To prevent excessive dust from blocking the vents, please clean the instrument housing regularly. The housing is not waterproof, please disconnect the power supply first and then wipe the housing with a dry cloth or a slightly moistened soft cloth.

Connecting Power Supply

The specification of AC power supply that can input as the following table.

Voltage Range	Frequency
100-240 VAC (fluctuate ± 10%)	50/60 Hz
100-120 VAC (fluctuate ± 10%)	400 Hz

Please use the attached power lead to connect to the power port.

Connecting to service cable

This instrument is a Class I safety product. The supplied power lead has good performance in terms of case ground. This signal analyzer is equipped with a three-prong power cable that meets international safety standards. It provides good case grounding performance for the specification of your country or region.

Please install AC power cable as follows.

- Ensure the power cable is intact
- Leave enough space for connecting the power cord

- Plug the attached three-prong power cable into a well-grounded power socket.

Electrostatic Protection

Electrostatic discharge may cause damage to component. Components can be damaged invisibly by electrostatic discharge during transportation, storage and use.

The following measure can reduce the damage of electrostatic discharge.



- Testing in antistatic area as far as possible
- Before connecting the power cable to the instrument, inner and outer conductors of the instrument should be briefly grounded to discharge static electricity
- Ensure all the instruments are properly grounded to prevent the accumulation of static

Preparatory Work

1. Connecting the power cable and insert the power plug into protective grounding outlet; use the tilt adjustment bracket as needed for your viewing.



Figure 2-1 Tilt Adjustment

2. Press the switch  on the rear panel, the signal analyzer will enter standby mode.
3. Press the soft switch  on the front panel, indicator illuminates with green, which means the signal analyzer is powered on.

It takes about 30 seconds to initialize the boot, and then the signal analyzer enters the system default menu mode. In order to make this signal analyzer perform better, it is recommended that warm up the signal analyzer for 45 minutes after power on.

Usage Tip

Use External Reference Signal

If user want to use an external signal source 10 MHz as reference, please connect signal source to the 10 MHz In port on the rear panel. The measuring menu on the top of the screen will indicate **Reference Frequency: External**.

Activate the Option

If user want to activate the option, you need to input secret key of the option. Please contact UNI-T office to purchase it.

Refer to the following steps to activate the option you have purchased.

1. Save the secret key into USB and then insert it to signal analyzer
2. Press **[System] key > System Information > Add token**
3. Select purchased secret key and then press **[ENTER]** to confirm

Touch Operation

Signal analyzer has 15.6 inch multipoint touch screen for various gesture operating, which includes,

- Tap the top right on the screen to enter the main menu.
- Slide up/down, left/right in waveform area to change the center frequency of X axis or reference level of Y axis.
- Zoom two points in waveform area to change the sweep width of X axis.
- Tap parameter or menu on the screen to select and edit it.
- Turn on and move the cursor.
- Use auxiliary quick key to perform common operation.
- Use [Touch/Lock] to turn on/off touch screen function.


Remote Control

The UTS5000A series signal analyzers support communication with computers via USB and LAN interfaces. Through these interfaces, users can combine the corresponding programming language or NI-VISA, using the SCPI (Standard Commands for Programmable Instruments) command to remotely program and control the instrument, as well as interoperate with other programmable instruments that support the SCPI command set.

For more information about the installation, remote control and programming, please refer to **UTS5000A Series Programming Manual** on official site [http:// www.uni-trend.com](http://www.uni-trend.com).

Help Information

The signal analyzer's built-in help system provides help information for each function button and menu control key on the front panel.

- Touch the left of the screen "  ", help dialog box will pop out on the center of the screen. Tap support function to get more detailed help description.
- When help information displayed on the center of the screen, tap "x" or other key to close the dialog box.

Troubleshooting

This chapter lists the possible faults and troubleshooting methods of the signal analyzer.

Please follow the corresponding steps to handle it, if these methods is not work, please contact UNI-T and provide your machine device information (acquisition method: **[System]>System Information**).

1. After press the power soft switch, the signal analyzer still display a blank screen, and nothing is displayed.
 - a. Check whether the power connector is properly connected and the power switch is turned on.
 - b. Check whether the power supply meets the requirements.
 - c. Check whether the fuse of the machine is installed or blown.
2. Press the power switch, if the signal analyzer still display blank screen and nothing is displayed.
 - a. Check the fan. If the fan is rotating but the screen is off, the cable to the screen may be loose.
 - b. Check the fan. If the fan does not rotate and the screen is off, it represents the instrument is not enabled.
 - c. In case of the above faults, do not disassemble the instrument by yourself. Please contact UNI-T immediately.

3. Spectral line is not updated for a long time.

- a. Check whether the current trace is in update state or multiple averaging state.
- b. Check whether the current is meet the restriction conditions. Check the restriction settings and whether there are restriction signals.
- c. In case of the above faults, do not disassemble the instrument by yourself. Please contact UNI-T immediately.
- d. Check whether the current mode is in the single sweep state.
- e. Check whether the current sweep time is too long.
- f. Check whether the demodulation time of the demodulation listening function is too long.
- g. Check whether the EMI measurement mode is not sweeping.

4. The measurement results are incorrect or not accurate enough.

Users can obtain detailed descriptions of technical index from the back of this manual to calculate system errors and check measurement results and accuracy problems. To achieve the performance listed in this manual, you need:

- a. Check whether external device is properly connected and work.
- b. Have a certain understanding of the measured signal and set appropriate parameters for the instrument.
- c. Measurement should be performed under certain conditions, such as preheating for a period of time after starting up, specific working environment temperature, etc.
- d. Calibrate the instrument regularly to compensate for measurement errors caused by instrument aging.

If you need calibrate the instrument after the guarantee calibration period, please contact UNI-T company or obtain paid service from authorized measurement institutions.

Appendix

Maintenance and Cleaning

(1) General Maintenance

Keep the instrument away from the direct sunlight.

Caution

Keep sprays, liquids and solvents away from the instrument or probe to avoid damaging the instrument or probe.

(2) Cleaning

Check the instrument frequently according to the operating condition. Follow these steps to clean the external surface of the instrument.

Please use a soft cloth to wipe the dust outside the instrument.

When cleaning the LCD screen, please pay attention and protect the transparent LCD screen.

When cleaning the dust screen, use a screwdriver to remove the screws of the dust cover and then remove the dust screen. After cleaning, install the dust screen in sequence.

Please disconnect the power supply, then wipe the instrument with a damp but not dripping soft cloth.

Do not use any abrasive chemical cleaning agent on the instrument or probes.

Warning

Please confirm that the instrument is completely dry before use, to avoid electrical shorts or even personal injury caused by moisture.

Contact Us

If the use of this product has caused any inconvenience, if you in mainland China you can contact UNI-T company directly.

Service support: 8am to 5.30pm (UTC+8), Monday to Friday or via email. Our email address is infosh@uni-trend.com.cn

For product support outside mainland China, please contact your local UNI-T distributor or sales center.

Many UNI-T products have the option of extending the warranty and calibration period, please contact your local UNI-T dealer or sales center.

To obtain the address list of our service centers, please visit our website at URL:

<http://www.uni-trend.com>