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AT007-A/B/C (6/9/20GHz)

Handheld Direction Finder

(Spectrum analyzer、Interference Finder、EMF measurement)

More portable, the weight is only 1.3kg
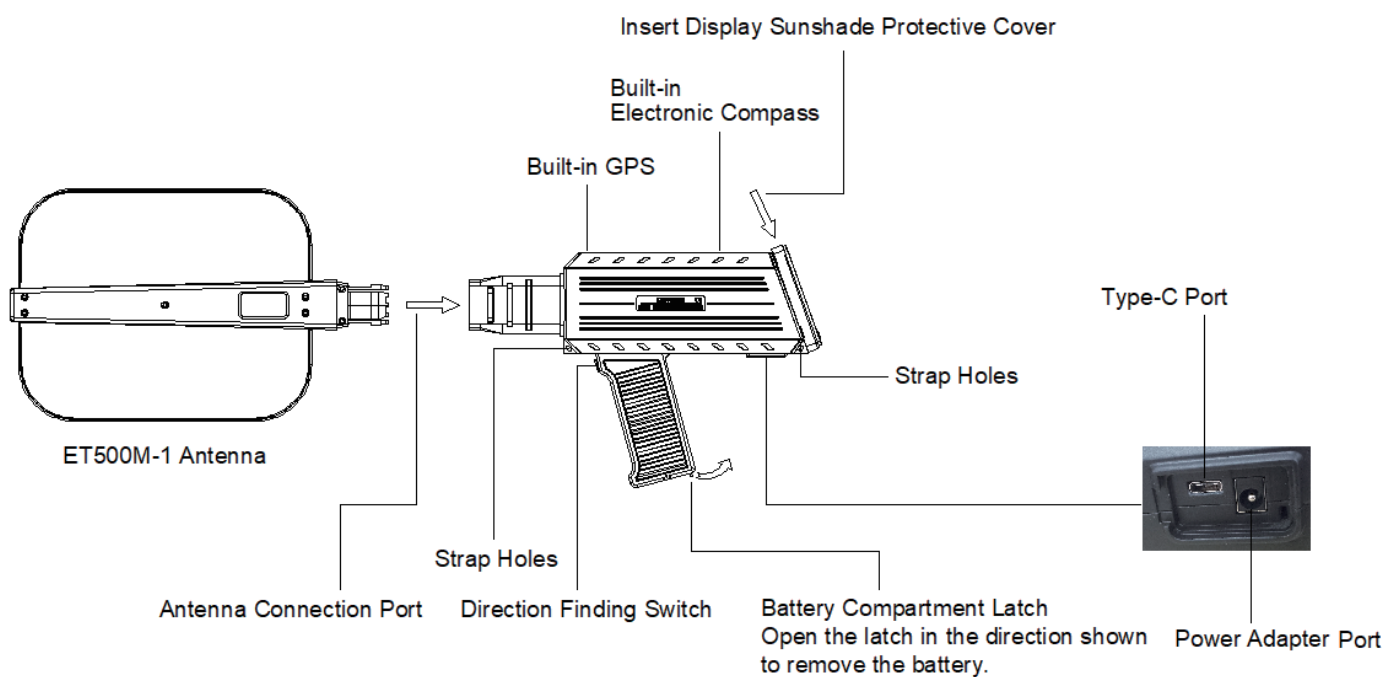
External monitor sunshade cover

Bomb-type battery case

This section describes some functions of each operation area

Insert Display Sunshade Protective Cover

Built-in
Electronic Compass

Built-in GPS

Type-C Port

ET500M-1 Antenna

Strap Holes

Strap Holes

Antenna Connection Port

Direction Finding Switch

Battery Compartment Latch
Open the latch in the direction shown
to remove the battery.

Power Adapter Port

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Cost-effective & Multi Functions

AT007 is a cost-effective "comprehensive wireless monitor", covering orientation instrument, spectrum analyzer, etc., because of its lightweight and very suitable for all kinds of wireless signal monitoring and interference detection in the field, widely suitable for government radio management, radio engineering construction, scientific research and teaching experiments, and military wireless interference exercises.

Spectrum	Field	Ori.	Tone
AoA	Coverage	GNSS	Spurious
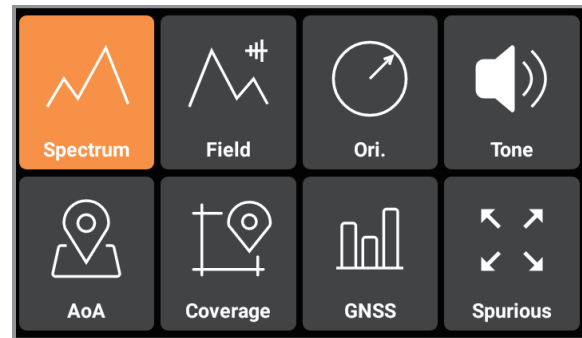
Main Features

- Lighter - weight 1.3 kg
- Faster - direction finding speed
- More accurate - direction finding accuracy
- Wider - frequency up to 20G
- More Functions – Orientation, Spectrum, EMF Meter
- Longer - 3 hours battery life
- Better - cost-effective use
- More convenient - user experience

8 APPs

- Spectrum Analyzer
- Field Strength Measurement
- Orientation
- Tone Approaching Search
- Angle-of-Arrival (AoA)
- Coverage Mapping
- GNSS Interference Hunting
- Spurious Emission Measurement

ET6G/9G/20GHz
(500MHz to 20GHz)

ET250M-1
(20MHz to 250MHz)

ET500M
(200MHz to 500MHz)

AT007

Dimensions of
Transit Case：
521*421*190mm
Weight: 5.86kg

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Cost-effective & Multi Functions

The fastest interference hunting speed!

Orientation measurement allows users to easily point in the direction of interference signal. The direction finding instrument should be held in horizontal state, and the internal electronic compass of the instrument should be calibrated after 1 circe of rotation, and then the direction finding work should be carried out. Turn on the direction finding switch, turn around for turns, about 2 seconds per turn, and turn off the direction finding switch at the end. The direction finding radar chart pops up on the interface, showing the yellow antenna direction Angle and the red interference recognition Angle respectively.

Azimuth: namely the real-time test antenna direction Angle (yellow line), refers to the direction Angle of the directional antenna at that time;

Confirm: the calculated interference direction angle of the incoming wave signal (red line);

Definition of direction Angle: the convention is that the compass refers zero degree to the north (N) position, and increase in a clockwise rotation to 359 degrees.

Direction finding rotation is about 2 seconds per turn

AT007 comes with an external shoulder strap for easy testingin high climbing environments

3

![DEVISER]
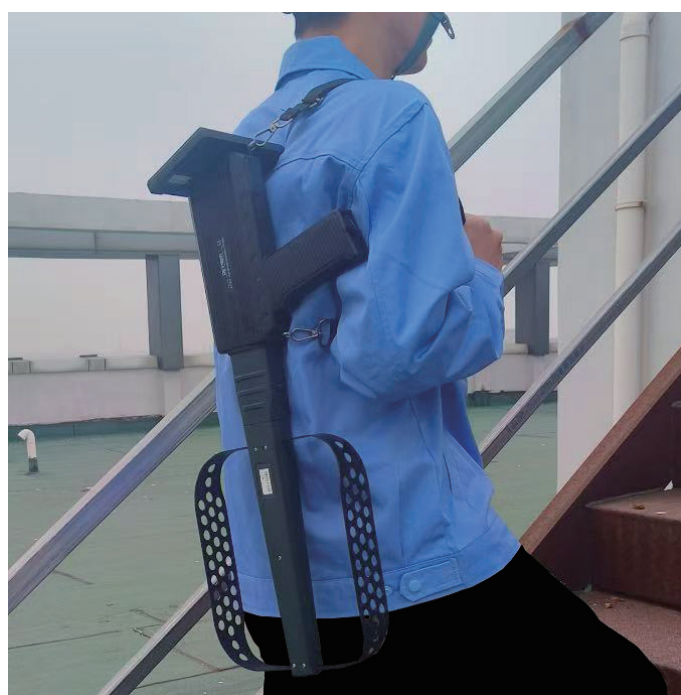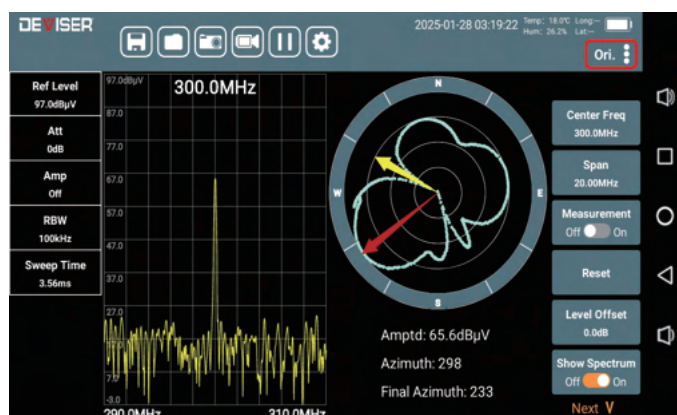
Wireless interference location

The first step: Monitor the interference signal based vehicle within a range of 10 kilometers.

Based a vehicle to do interference signal hunting within a range of 10km, the algorithm can analysis the direction angle of each point and show a suspected interference source in the surrounding area(1km range).

The second step: Monitor the interference signal by moving within the range of 1 kilometers.

Select N points, using AoA method to locate the interference source. As the picture show, we select 5 points and get 5 directional line, and also get a region of the interference source(100 m to 200m range) .

The last step: Using the tone approaching search.

Using the tone approaching search APP the approaching the source and finally find the source. Common interference sources are communication repeater, vehicle jammer, transmitter harmonics, Cell phone amplifiers, illegal radio stations, etc

ET107 Electric rotating platform (Optional)

One of the most economical vehicle mobile monitoring methods

Professional grade mobile vehicle monitoring stations are fully equipped and expensive. This platform is a mechanical electric rotation, based on amplitude ratio system, with lowest cost, and highest cost performance!

When the user is equipped with simple and practical ET107 on-board electric rotating platform, the user can automatically complete the interference screening work in the car, in any environmental conditions. Much higher efficiency at low cost.

Step:

Put the AT007 with ET107 on-board electric rotating platform on top of a car. The platform controller is in the car, connecting the ET107 using the control cable.

Turn on the start button of the platform controller, the ET107 can do 360 degree scanning , it can be set to 3/6 seconds per circle.

User can control the AT007 using a Laptop in the car, include start and stop.

User can observe the measurement results from AT007 in the car, the Laptop wifi can show the real-time direction angle of AT007 and the realtime signal strength. User can get one confirm direction angle after once measurement.

Controller
Vehicle-mounted
Fixed sucker

WIFI Module
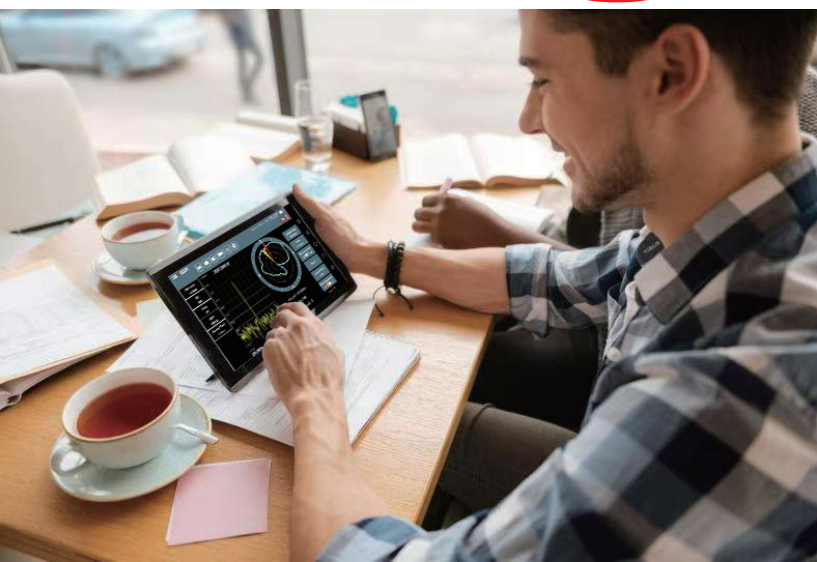
GNSS Interference Hunting

For aviation safety, it is serious if navigational GNSS channels are interference with illegal wireless signals. The survey shows that the rate of occurrence is increasing in all regions.

In order to monitor and identify aviation interference signals, AT007 uses the normalized integrated power histogram display algorithm, the value will be raised, and the color will be warmer when closer to the interference source. Using this principle, it is easier to find and determine the aviation interference channel, and using multiple step- by-step approach method to troubleshoot the interference source.
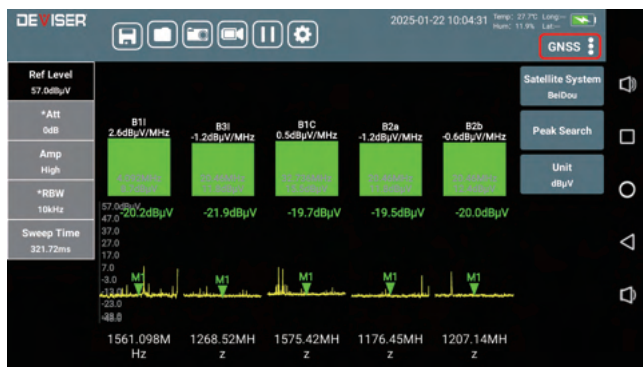
No GNSS Interference
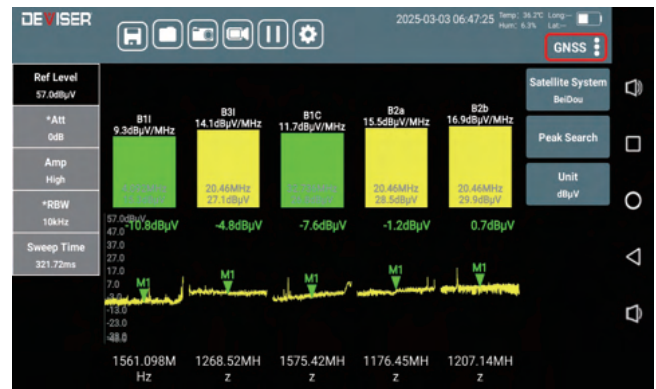

Lite GNSS Interference
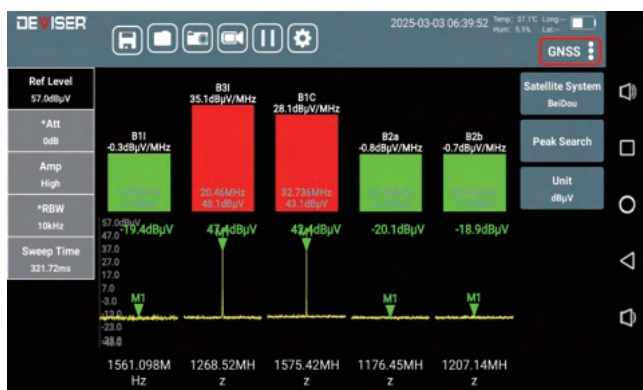
Severe GNSS Interference
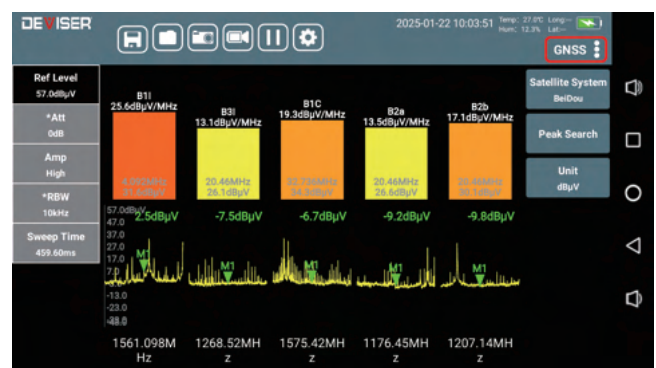
Medium GNSS Interference

Tone Approaching Search

Field Strength

Connect the directional antenna ET500M-1 and ET6G/9G/20G with instrument, select the "field strength" measurement function, and set the frequency of the test field strength. After the instrument automatically compensates the antenna factor AF, the spatial field strength of the frequency is displayed on the spectrum interface (dBμV/m).
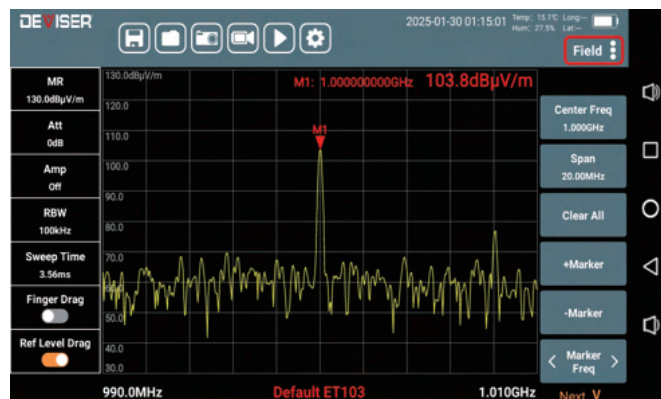

Tone Approaching Search

Using a directional antenna and built-in audible tone function, users can efficiently detect interference sources based on the audible tone increasing in frequency and level, thus identifying quickly the interfering signals received indoor and outdoor.
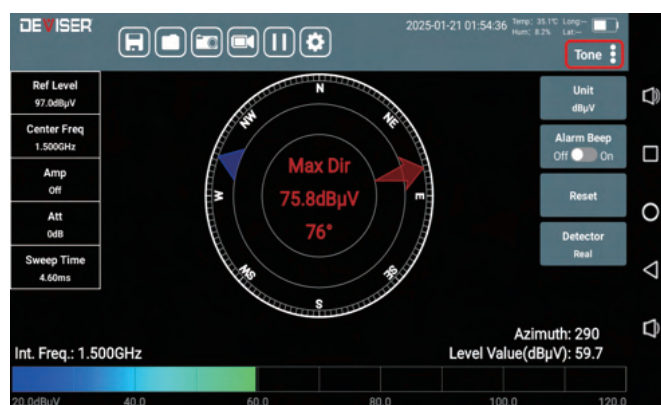
Coverage Mapping and Spectrum Clear

By using the internal GNSS module and electronic map, the E80 can perform outdoor coverage mapping measurement and the spectrum clear.
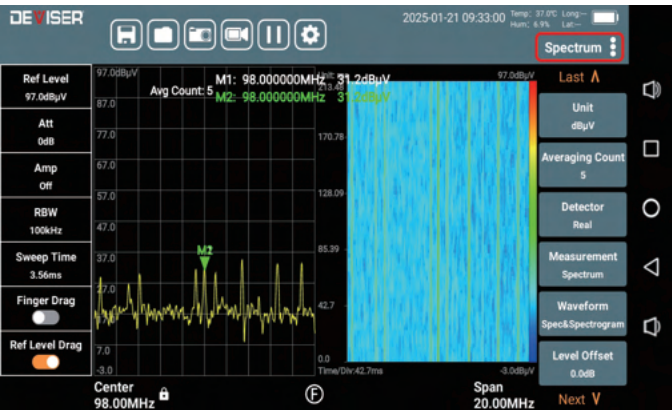
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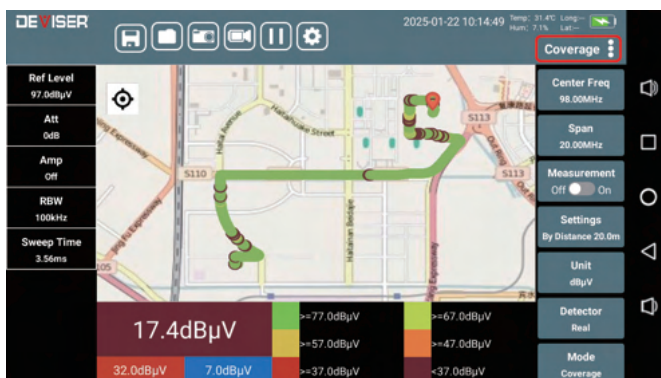
Spectrum Analyzer

The AT007 Direction Finder has the basic application functions of the E80 Spectrum analyzer.
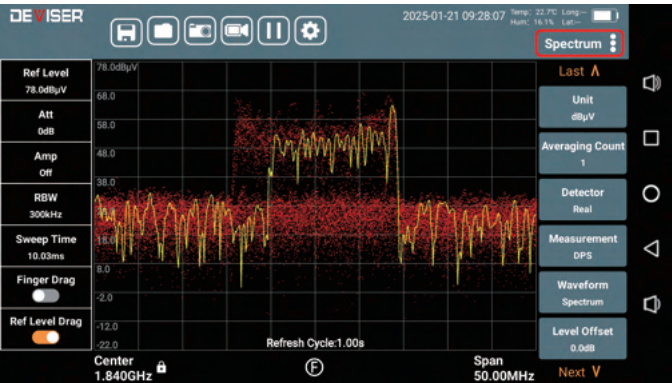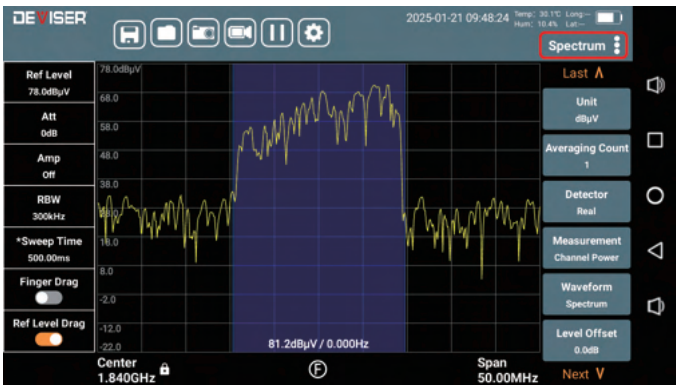

Waterfall diaplay & DPS

Waterfall diaplay and Persistence testing separates the desired signal transmission from underlying low-level inference signals with supreme clarity, and no service interruptions at any point.


Channel Power

Channel Power: measure the channel power of any userdefined spectral bandwidth.

Spurious Emission Measurement

Radio stations, telecommunication broadcasting equipment must follow the regulation to limit the transmission power, and most importantly, the spurious emission amplitude has to be managed under threshold value to comply with international standards.
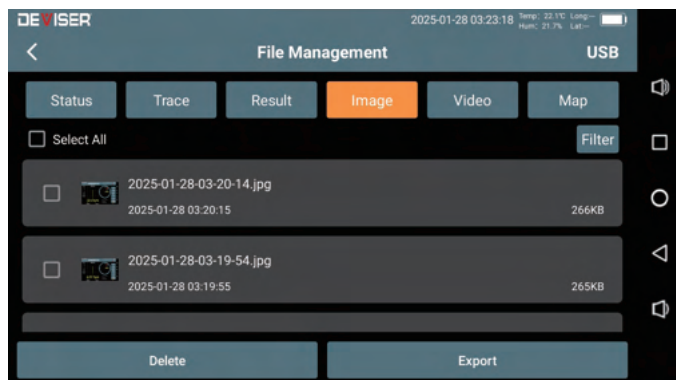
Several frequency bands can be configured for measuring spurious emission. Each band includes center frequency, span, RBW, threshold value … etc.
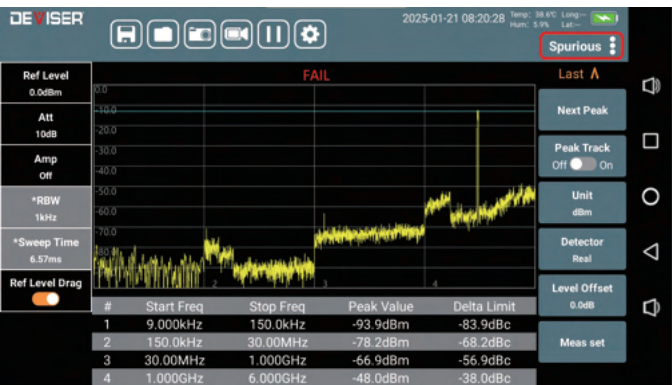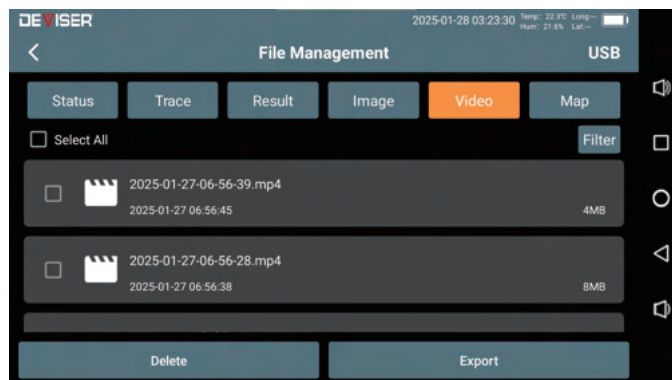
Recording and Playback

1.Screen Capture

Information shown on screen can be saved in image file.


2.Screen Recording and Playback

Information shown on screen can be recorded in video file and played back.

3.Status and Trace

Select Status to save the measurement information. Click "File management" to load the test results in the status file, select load playback to restore the original measurement status. Is a very convenient tool!

Set status or spectrum trace

Load status or spectrum trace
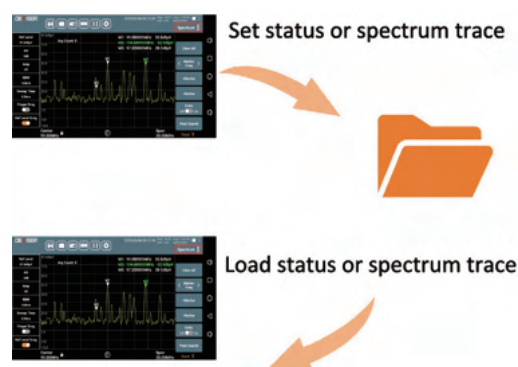
Remote control

1.LAN Connection

Use the USB-C to LAN cable to connect the instrument to a PC for remote control.

2.Wi-Fi Connection

Through the external USB WiFi module, it can realize the synchronous instrument operation and display with terminal products such as mobile phones and pads under wireless hot spot conditions.

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Technical Parameter	
Frequency range	9kHz-6GHz/9GHz/20GHz Resolution 1Hz Frequency accuracy: ±1ppm
IF bandwidth	20MHz speed 10GHz/s@25kHz
RBW	10Hz - 10MHz (1:3 step)
Attenuator range	0 - 50dB
Displayed average noise level (DANL)@1GHz	-160dBm/Hz (High sensitivity mode)
TOI	+14dBm (typical)
Phase noise	-100dBc/Hz@100kHz offset 1GHz
Amplitude accuracy	±1.5dB
Display	5.5 inch (720x1280)
Operating system	Android
Interface	USB(Type-C)
GPS、Compass	Built-in
Battery	7.2V/3.3AH/23.76WH
Operating time	About 3 hours (Dual batteries)
Size	603*265*153 mm
Weight	About 1kg

Technical Parameters			
Model #	ET250M-1	ET500M	ET6G/9G/20G
Picture			
Frequency range	20MHz to 250MHz	200MHz to 500MHz	500MHz to 6/9/20GHz
Front-to-Back Ratio	16dB		
VSWR	<2.5		
Polarization	Horizontal & Vertical Polarization		
Weight	About 290g	About 300g	About 230g