

DEVISER®



EM560/EM560B

Frequency & Code Selective EMF Analyzer

Key Benefits

- 9kHz to 6GHz/9GHz Spectrum Analyzer
- Supports various field strength antennas and applications such as;
 - Medium-high frequency wave,
 - TV broadcasting,
 - Wireless communication and environment monitoring, etc.
- 5G NR, 4G LTE, 3G UMTS code selective EMF measurements
- Integrated with live temperature and humidity compensation, WiFi module, Compass, GPS positioning and USB communication module
- Measurements conform to ICNIRP 2020 and other national standards
- **Attach Field Strength Calibrator EM20 as standard**
- Operating Time greater than 5 hours
- Weight less than 2.5kg



www.deviserinstruments.com

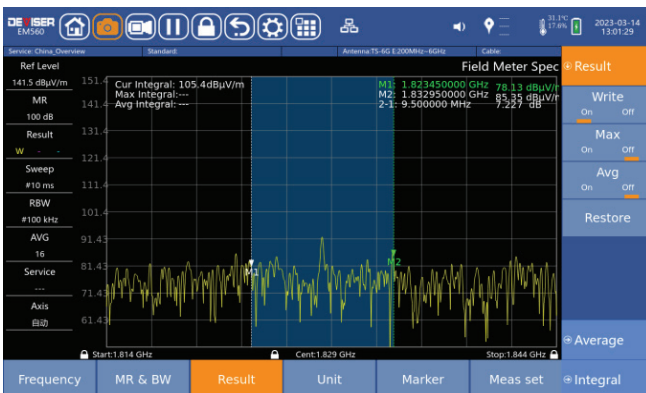
Overview

Brought to you by Deviser Instruments Inc, the new, ergonomically designed, user friendly, EM560/EM560B is part of a new generation, portable Frequency & Code Selective EMF Analyzer that is robust, offers long battery life for extended operation time. The EM560/EM560B's design is based the market leading, field proven measurement functions, high performance Frequency & Code Selective EMF Analyzer model EM860. It is the ideal instrument for outdoor EMF testing.

Main Features

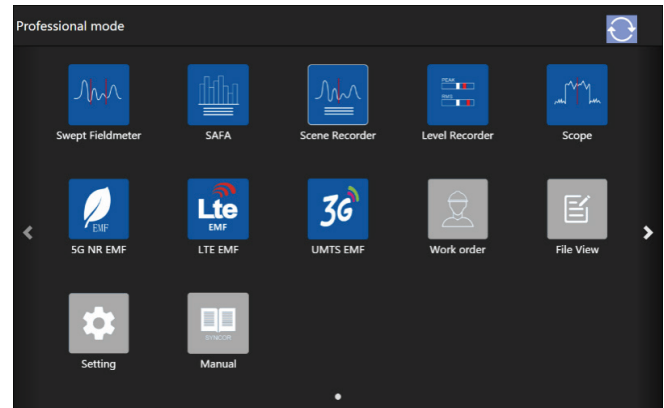
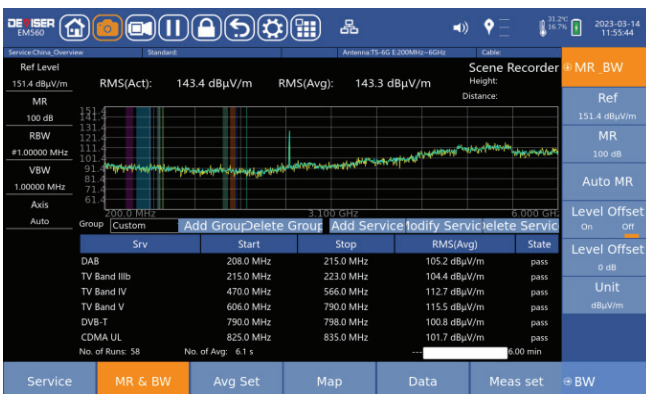
Swept Fieldmeter

The high performance spectrum analysis functions can display the spectrum, average power, signal strength in user selected sweep widths, time, resolution, amplitude reference, frequency range. In the Result function, there are four trace: Real time, Max hold, Average and Min hold. In addition, there are totally three markers can be shown.



Scene Recorder

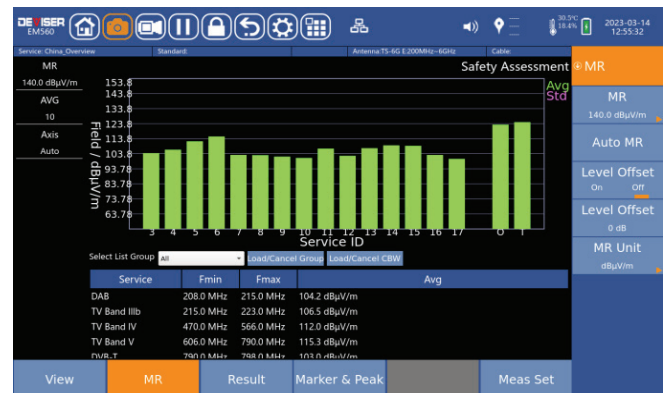
In the scene recorder mode, users can perform complete base station EMF testing easily and quickly, with editable and selectable service table, including provider names & channel tables (CBW), real time field strength display in GIS, save & export results for fast and easy reporting.



All apps

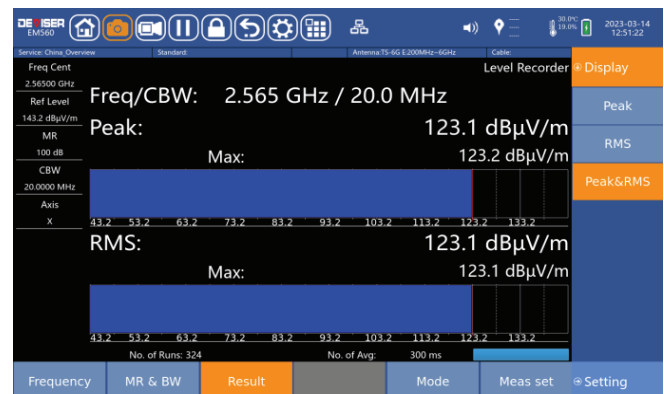
Safety Evaluation

The "Safety Evaluation" bar graph display provides the user with a summary of power level exposure values at selected frequency bands or services, showing field strength units or % of any given selected human safety standards. Users can edit the service tables information as needed.



Level Recorder

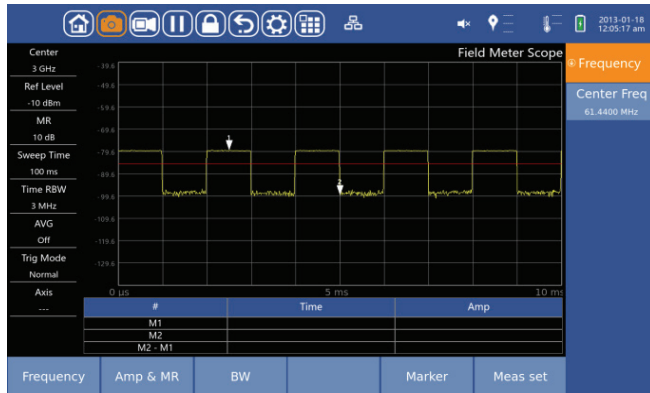
In Level Recorder mode, results display numerical data and bar graphs, user can select to use single-axis or three axis antenna mode.





Field Meter Scope

The time domain signal field strength is viewable in field meter scope mode. Users can set the trigger mode in normal, gate sweep and time controlled, etc. Only one of the X, Y, and Z axis antennas can be selected in the uniaxial antenna mode.



5G NR FR1 code selective EMF measurement

The 5G NR FR1 code selective EMF measurement

Mode shows the field strength values in 5G NR band, the different PCI and field strength values in each PCI respectively, so that users can analyze the contribution rate of each base station to the total field strength.

NSA Cent Freq	dBm	Total	1	2	3	4	5G NR EMF	BWP
2.524950 GHz	0 dB	---	180	61	60	155	---	---
Att	No SSS	---	1	4	2	0	---	---
BW	Act(SSS Max)	68.26 dBuV/m	68.26 dBuV/m	59.86 dBuV/m	56.95 dBuV/m	---	---	---
50 MHz	Max(SSS Max)	70.28 dBuV/m	70.28 dBuV/m	60.03 dBuV/m	56.95 dBuV/m	52.65 dBuV/m	---	---
SCS	Avg(SSS Sum)	69.05 dBuV/m	69.05 dBuV/m	59.23 dBuV/m	53.08 dBuV/m	52.36 dBuV/m	---	---
30 kHz	Act(SSS Sum)	69.63 dBuV/m	68.26 dBuV/m	62.87 dBuV/m	57.38 dBuV/m	---	---	---
RB Offset by 15kHz SCS	Max(SSS Sum)	70.49 dBuV/m	70.28 dBuV/m	63.26 dBuV/m	57.38 dBuV/m	55.29 dBuV/m	---	---
111 RB	Avg(SSS Sum)	69.60 dBuV/m	69.05 dBuV/m	62.06 dBuV/m	53.43 dBuV/m	53.29 dBuV/m	---	---
15kHz SCS	Act(SSS 0)	68.26 dBuV/m	68.26 dBuV/m	---	---	---	---	---
Cent Offset	Act(SSS 1)	56.95 dBuV/m	---	---	56.95 dBuV/m	---	---	---
0 Hz	Act(SSS 2)	---	---	---	---	---	---	---
SS Block	Act(SSS 3)	56.38 dBuV/m	---	56.38 dBuV/m	---	---	---	---
Pattern	Act(SSS 4)	59.86 dBuV/m	---	59.86 dBuV/m	---	---	---	---
Spec Pair	Act(SSS 5)	57.11 dBuV/m	---	57.11 dBuV/m	---	---	---	---
Unpair	10.74 dBuV/m	40.7 dBuV/m	---	---	23.6	---	---	---



LTE code selective EMF measurement

In LTE code selective EMF measurement mode, the results shows PCI, Act(PSS), Max(PSS), Avg(PSS), Act(SSS), Max(SSS), Avg(SSS), Act(SSS), Max(RS), and Avg(RS), etc.

Cent Freq	dBuV/m	Total	1	2	3	4	5	6	7	8	LTE EMF
2.56500 GHz	---	---	202	---	---	---	---	---	---	---	---
Duplex Mode	PCI	---	---	---	---	---	---	---	---	---	---
TDD	Sync	---	---	---	---	---	---	---	---	---	---
Amp	Act(PSS)	94.09	94.09	---	---	---	---	---	---	---	---
20 dB	Max(PSS)	94.13	94.13	---	---	---	---	---	---	---	---
10 dB	Avg(PSS)	94.07	94.07	---	---	---	---	---	---	---	---
20 MHz	Act(SSS)	94.06	94.06	---	---	---	---	---	---	---	---
Axis	Max(SSS)	94.14	94.14	---	---	---	---	---	---	---	---
X	Avg(SSS)	94.10	94.10	---	---	---	---	---	---	---	---
ULDL Allocate	Act(RS)	93.83	93.83	---	---	---	---	---	---	---	---
9 DSUUUDUUU	Max(RS)	93.86	93.86	---	---	---	---	---	---	---	---
	Avg(RS)	93.77	93.77	---	---	---	---	---	---	---	---
	Act(RS1)	---	---	---	---	---	---	---	---	---	---
	Max(RS1)	---	---	---	---	---	---	---	---	---	---
	Avg(RS1)	---	---	---	---	---	---	---	---	---	---
	Act(RS2)	---	---	---	---	---	---	---	---	---	---
	Max(RS2)	---	---	---	---	---	---	---	---	---	---
	Avg(RS2)	---	---	---	---	---	---	---	---	---	---
	40.93	---	140.93	---	---	---	---	---	---	---	---



3G UMTS code selective EMF measurement

In 3G UMTS code selective EMF measurement

Mode, the EM560/EM560B gets to work on UMTS scrambling and CPICH channel power, Act(CPICH), Max(CPICH), Min(CPICH), Avg (CPICH) and total values.

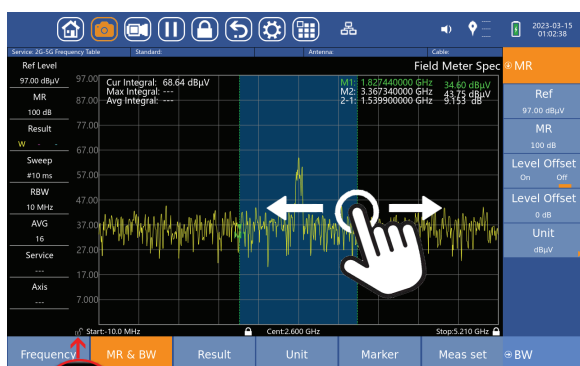
Cent Freq	dBuV/m	Total	1	2	3	4	5	6	UMTS EMF
2.56500 GHz	---	---	---	---	---	---	---	---	---
Amp	Scr	---	---	---	---	---	---	---	---
20 dB	Act	122.94	122.94	---	---	---	---	---	---
10 dB	Max	122.95	122.95	---	---	---	---	---	---
Axis	Avg	122.87	122.87	---	---	---	---	---	---
Auto	Min	122.75	122.75	---	---	---	---	---	---
	40.93	---	140.93	---	---	---	---	---	---



Multitouch

Multitouch operation with finger movement can adjust marker position and center frequency.

Before moving the center frequency, press the lock button at the lower left corner to unlock the screen as illustrated below.



Recording

1. Screen Capture

User can save the information on screen.

2. Screen Recording

User can save the recording video, the device also supports video playback

3. Status and Trace

User can select the Status to save the measurement screen or select Trace to record the spectrum trace. Power level vs. frequency can then be analyzed offline.

Remote Control & Data Transfer

Smart Device Operation

The instrument can be operated remotely on smart device or computer through the connection to Cloud service.

1. Wi-Fi

1). Insert USB Wi-Fi dongle and go to System Settings | Network to enable Wi-Fi hotspot and remote control.

2). Search for access point from Wi-Fi settings on computer or smart devices to join. Launch VNC Client, enter IP address and password to connect for remote desktop.

Computer or smart devices can also connect through Cloud server to the instrument for remote control to operate and display real-time measurement information.



2. LAN Connection

1). In order to connect to the instrument through its LAN port, use an Ethernet cable to connect the computer or smart devices to the instrument and configure its IP address to be the same subnet as the instrument.

2). Download VNC Client to install on computing device. Launch the VNC Client, enter the IP address of the instrument and password to connect.



3. Screen Projection

Connect the HDMI port of the instrument to project the instrument screen to HD TV or monitor. It's useful for education or technical training sessions.



Ordering information

Standard Configuration and Accessories (included with instrument)

Description	Part No.	Order No.
EM560 Frequency & Code Selective EMF Analyzer Base Unit	EM560	0120.0560.01
Battery Pack, Rechargeable, 10.8V, 9200mAh, 99.36WH	10.8V, 9200mAh, 99.36WH	6120.0100.08
AC-DC Power Adapter(15V/4A ,60W)	15V 4A	6120.0700.05
Power Cord	SA8300-700	6190.0500.40
Power Adaptor Plug Cord (Europe)	AE4000-733	6290.0500.03
Power Adaptor Plug Cord (Unite States)	AE4000-734	6290.0500.04
Power Adaptor Plug Cord (United Kingdom)	AE4000-735	6290.0500.05
Power Adaptor Plug Cord (Australia)	AE4000-736	6290.0500.06
Omnidirectional Antenna	E8000-005	6120.0900.05
RF Connector(N/SMA)	N/SMA-JK	6190.0500.37
USB WiFi Module	USB150M	6120.0600.15
Tripod	R2004	6110.0900.05
Tripod kit	EM860-200	2120.0860.14
Power Supply DC Vehicle Adapter(12V/5A)	12V/5A	6120.0700.04
Frequency & Code Selective EMF Analyzer EM860/EM560 Operation Quick Guide (English)	EM560-001	6120.0600.82
Transit Case with shoulder belt (for EM560 Base Unit and up to 2 antennas)	S5040	6120.0600.61
Calibration Certificate EM560 Base Unit	EM560-004	6120.0600.84
Field Strength Calibrator EM20	EM20	2110.0020.00
Scene Recorder	EM560-800	2120.0560.00
Swept Fieldmeter	EM560-801	2120.0560.01
SAFA(Safety assessment)	EM560-802	2120.0560.02

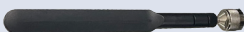

Optional Accessories

Description	Part No.	Order No.
Frequency Selective Antenna TS-6G (200MHz-6GHz, requires Antenna Kit EM860-201)	TS-6G	2120.0860.00
Frequency Selective Antenna HTS-250M (100K-250M, requires Antenna Kit EM860-201)	HTS-250M	6110.0900.04
Calibration Certificate EM560-TS-6G	EM560-005	6120.0600.85
Frequency Selective Probe TS-8G (200MHz-8GHz, requires Antenna Kit EM860-201)	TS-8G	2120.0860.19
Calibration Certificate EM560-TS-8G	EM560-014	6120.0600.70
Frequency Selective Probe TS3-8G (30MHz-8GHz, requires Antenna Kit EM860-201)	TS3-8G	2120.0860.25
Calibration Certificate EM560-TS3-8G	EM560-022	6120.0600.91
HDMI Cable(4K 60Hz, 3 meters)	HDMI	6120.0500.42
Antenna Kit for TS-6G and HTS-250M	EM860-201	2120.0860.15
Extension Cable(2 meters) with control cable	EM860-001	6110.0500.37
Extension Cable(2 meters) without control cable	EM860-009	6120.0500.45
Extension Cable(5 meters) with control cable	EM860-010	6120.0500.46
Extension Cable(5 meters) without control cable	EM860-008	6110.0500.50
Calibration Certificate EM560-HTS-250M	EM560-006	6120.0600.86
Antenna Adapter	EM860-016	2120.0860.21

Software

Description	Part No.	Order No.
Field Meter Scope	EM560-803	2120.0560.03
Level Recorder	EM560-804	2120.0560.04
Field Manage System Software(PC)	EM560-805	2120.0560.05
LTE EMF(TDD-LTE & FDD LTE code selective) measurement	EM560-806	2120.0560.06
UMTS EMF(UMTS code selective) measurement	EM560-807	2120.0560.07
5G NR EMF(5G NR code selective) measurement	EM560-808	2120.0560.08
5G NR Beam Statistic(only for EM560B)	EM860-813	2120.0860.16
5G NR Multipath(only for EM560B)	EM860-814	2120.0860.17
5G NR RE Statistic(only for EM560B)	EM860-815	2120.0860.18
5G NR RB Vs Time(only for EM560B)	EM860-816	2120.0860.22



Attachment	
Omnidirectional antenna ET101	
TS-6G/HTS-250M/TS-8G/TS3-8G	

Specifications

Specifications – Base Unit EM560/EM560B	
Frequency range	EM560 : 9kHz to 6GHz EM560B: 9kHz to 9GHz
IF bandwidth	EM560 : 20MHz EM560B : 100MHz
Frequency ref. accuracy	±1ppm
Amplitude accuracy	±1.5 dB
Sweep Rate	20GHz/s@25kHz
RBW	10Hz to 10 MHz
Input RF range	-140 dBm to +30 dBm
Max safely input level	+30 dBm
Attenuation range	0 to 50dB with 1 dB step
IP3	+14dBm
Positioning	GPS and Beidou
Interfaces	USB2.0 × 2, LAN, AUX, HDMI, Type-C, SD Card
Display	7 inches capacitive touchscreen
Operation time	5 hours
Weight	2.5kg
Dimensions (L x W x H)	255mm x 179mm x 71mm
Operating temperature	-10°C ~ +50°C
Storage temperature	-20°C ~ +60°C
Recommended calibration interval	12 months (include antenna)
Three axis electric field probe	
Model	TS-6G/HTS-250M/TS-8G/TS3-8G
Frequency range	200MHz ~ 6GHz/100kHz~250MHz/200MHz - 8 GHz/30MHz - 8 GHz
Antenna type	TS-6G/TS-8G/TS3-8G: E-field HTS-250M: H-field
RF connector	N Type/50Ω
Measurement uncertainty	≤±1.5dB (900 MHz ~ 3 GHz) ≤±2.5dB (<900 MHz, or >3 GHz)
Dynamic range	>60 dB
Linearity	≤±1.5dB
Recommended calibration interval	24 months



DEVISER®

© 2023 Deviser Instruments Incorporated

www.deviserinstruments.com

All rights reserved. Specifications subject to change without notice. All product and company names are trademarks of their respective corporations. Deviser Instruments manufacturing facilities are ISO 9001 certified. Do not reproduce, redistribute, or repost without written permission from Deviser Instruments.

Headquarter -Design and Manufacturing (23000m²)

