



The **AE-966** and **AE-967** spectrum analysers cover a frequency band from **9 kHz** to **3 GHz** and allow a stable operation with span of **2 kHz/div** to **3 GHz/div**.

The **AE-966** is the basic model whereas the **AE-967** includes a **Tracking Generator**, which turns the **AE-967** into a highly useful tool for the response measurement of filters, amplifiers, attenuators and, generally speaking, any kind of radio frequency system.

The plentiful measurement functions like markers, traces, power measurement, limit line, dual display and trigger make measurement more easily and quickly. The exit direct VGA is ideal to realize presentations.

The **Tracking Generator** available in model **AE-967** offers the frequency response test with the same frequency band. The **RS232 interface** and **USB** allows the connection between the unit and PC. Users can develop their own applications software. **DC 12V power supply** (optional) allows user to carry this unit to drive around for frequency monitoring. With the carrying case, this unit is easy to carry and operate in the field service. 9k and 120k **EMI filter** and **quasi-peak detector** (optional) can perform the EMC test.

Characteristics:

- Low noise floor: -117dBm to 600MHz, 3k RBW.
- Fast sweep: 50ms ~ 25.6s.
- Tracking generator (only AE-967).
- Autoset.
- 5 markers with Delta Marker and Peak functions.
- 3 traces
- Power measurements: ACPR, OCBW, N-dB, Phase Jitter.
- Pass/Fail test with Limit Line editing.
- Split windows with separate settings.
- Sequence programming (user-defined macro).
- 6.4 " TFT color LCD, 640 x 480 resolution.
- Phone output (available in optional Demodulator).
- AC/DC/Battery multi-mode power operation.
- Compact size: 330(W) x 170(H) x 340(D) mm.
- Light weight: 5.8kg (without options).

Interface

- USB host for storage device connection and display image printout
- USB slave/RS232/GPIB(optional) for PC software connection and remote control.
- Direct VGA display image output.
- Reference signal input/output for synchronization
- External trigger signal input.

Options

- EMI filter with 9kHz/120kHz RBW and 6-dB bandwidth.
- Battery pack.
- AM/FM Demodulator.
- 300Hz/10kHz/100kHz RBW.
- GPIB interface.

GENERAL**FREQUENCY**

Range	From 9 kHz to 3.0 GHz
Accuracy	To see base of times.
Span Accuracy	To see base of times.
Span Range	2 kHz to 3.0 GHz in 1/2/5 sequence, full span, zero span.
Phase Noise	-80 dBc/Hz 1 GHz 20 KHz Offset typ.
Base of Times	±10 ppm, of 0 to 50 °C, 5 ppm/yr

BANDWIDTH

RBW Range	3 kHz, 30 kHz, 300 kHz, 4 MHz
RBW Accuracy	± 15%
VBW Range	100 Hz to 1 MHz in 1-3 steps.
Sweep Time Range	50 ms a 25,6 s

INPUT

RF Input	
Overload Protection	+30 dBm Continuous.
Impedance	50 Ω nominal
TG Output VSWR	<2:1, ref level. 0 dBm
Connector	Type N Female
Ext. Reference Clock	1 MHz, 1,544 MHz, 2,048 MHz, 5 MHz, 10 MHz, 10,24 MHz, 13 MHz, 15,36 MHz, 15,4 MHz, 19,2 MHz

Display	640 x 480 high-res color TFT LCD.
Markers	10 markers for peaks: 5 normal-delta marker pairs. Functions: Delta, Peak, Marker Track
Autoset Function	Auto tuning the measurement result for observation.
Sequence	Automated test by user defined macros without any remote control.

GPIO INTERFACE	Optional
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AMPLITUDE

Measurement Range	1 MHz to 15 MHz 15 MHz to 600 MHz 600 MHz to 2.3 GHz 2.3 GHz to 3.0 GHz
Reference Level Range	-30 dBm to + 20 dBm, overload protection.
Accuracy	±1 dB it 100 MHz
Frequency Flatness	±1 dB
Display Range Linearity	±1 dB over 70 dB
Overload Protection	+30 dBm, ±25 VDC
Average Noise Floor	-135 dBm/Hz: 1 MHz to 15 MHz -152 ± 1dBm/Hz: 15 MHz to 600 MHz -149 ± 1dBm/Hz: 600 MHz to 2.3 GHz -147 ± 1dBm/Hz: 2.3 GHz to 3.0 GHz
Harmonic Distortion	<-60dBc RF Input < -40dBm.
Non-Harmonic Spurious	<-110 dBm to 3kHz RBW
Third Intermodulation	<-70 dBc Input -40 dBm
Trace Detection	3 traces with Peak, Maximum hold, Freeze, Average, and Trace Math

OTHER FUNCTIONS

Internal Memory	10 Traces, 10 Setup Info, 10 Limit lines, 5 Corrections, 10 Sequences.
Power Measurements	ACPR, OCBW, Channel power, N dB BW y Phase Jitter.
Ref. Clock Output	10 MHz

CONNECTORS

RS-232	For the overturned one of the screen to a PC (free software).
External Trigger Input	BNC, TTL +5V signal.
USB Connector	Front Panel: Type A. Rear Panel: Type B mini.
DC Voltage Output	SMB Male, +9V/100mA max output.

TRACKING GENERATOR (only AE-967)

Frequency Range	9 kHz to 3,0 GHz
Amplitude Range	-50 dBm to 0 dBm
Amplitude Accuracy	±1 dB (0 dBm, 100 MHz)
Amplitude Flatness	±1 dB (0 dBm).
Harmonics	<-30 dBc typical.
Reverse Power	+30 dBm
Impedance	50 Ω nominal
TG Output VSWR	< 2:1

EMI FILTER (optional)

RBW Selections	9 kHz and 120 kHz, 3dB bandwidth
RBW Accuracy	15 %

AM/FM DEMODULATOR AND 10kHz & 100kHz RBW (optional)

Demodulator	AM, FM.
Output	Internal Speaker, 3.5mm stereo jack wired for mono.
RBW Selections	10 kHz and 100 kHz, 3dB bandwidth.
RBW Accuracy	15 %.

POWER SUPPLY

AC Input	100 to 240 V AC, 50-60 Hz.
Internal	
Battery (optional)	Li-Ion rechargeable battery pack using the DC/AC dual power supply
External	
Dual mode DC/AC	
power supply	DC 12 V
Consumption	60 W

OPERATION ENVIRONMENT CONDITIONS

Indoor use	
Altitude	Up to 2000 m
Optimum operating temp.	From 18 to 28 °C
Relative humidity	From 0 to 90

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STORAGE ENVIRONMENT CONDITIONS

Temperature range	From 0 to 40 °C
Relative Humidity	< 85%

MECHANICAL CHARACTERISTICS

Dimensions	W 330 x H 170 x D 340
Weight	6 kg without options.

INCLUDED ACCESSORIES

Power cord	CA-05
User's Manual	0 MI1486
CD – Software	0 DK0742
N-BNC adapter	2x AD059

OPTIONS

GPIB Interface	OP-966-A
Battery Pack	OP-966-CU
Resolution Filter 300Hz RBW	OP-966-E (*)
Resolution Filter 9KHz and 120KHz RBW	OP-966-D (*)
AM/FM demodulator and 10kHz & 100kHz RBW filter	OP-966-M (*)

(*) Only one of these options can be installed. Installation in factory on having done the order of the equipment. It is not possible to realize the installation later.