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Data Sheet

August 13, 2026

ANRITSU

Anritsu 68177B Synthesized Sweep Generator, 0.01 to 50 GHz

Anritsu 68177B Synthesized Sweep Generator 10 MHz to 50 GHz The Anritsu 68177B is a microprocessor-based synthesized sweep generator covering 10 MHz to 50 GHz in the 681XXB family. It provides phase-locked CW plus analog and step sweeps with front-panel LCD and IEEE-488 GPIB control. The Anritsu 68177B is a microprocessor-based synthesized sweep generator covering 10 MHz to 50 GHz in the 681XXB family. It provides phase-locked CW plus analog and step sweeps with front-panel LCD and IEEE-488 GPIB control.



MODEL

Anritsu 68177B

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

68177B

LISTING

<https://aumictechlabs.com/products/68177b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Anritsu 68177B is a synthesized sweep generator delivering phase-locked signal generation across 0.01 to 50 GHz, with waveguide extensions supporting operation to 110 GHz. Built for precision testing in radar, telecommunications, and satellite systems, it combines ultra-low SSB phase noise of -100 dBc at 10 kHz offset from 10 GHz with flexible sweep architectures - analog, step, manual, and alternate modes - each maintaining phase lock across the swept range. Technical Specifications Frequency Range & Output 0.01 to 50 GHz (coaxial output); waveguide extensions to 110 GHz Maximum output power: +17 dBm Minimum output power: -125 dBm or -15 dBm Power resolution: 0.01 dB Output level switching time: < 15 ms + 1 ms/GHz step, <

40 ms typical maximum Phase Noise Performance SSB phase noise: -100 dBc at 10 kHz offset from 10 GHz Single-sideband noise floor: -96 dBc/Hz to -54 dBc/Hz Signal purity: -40 dBc harmonics and non-harmonics Sweep Modes Analog sweep: 1 kHz minimum width (0.1 Hz with Option 11) to full range, phase-locked throughout Step sweep: 1 to 10,000 steps with 1 kHz to full-range step size; dwell time 1 ms to 99 seconds per step Manual sweep: Phase-locked stepped adjustment between user-defined limits Alternate sweep: Dual-range operation with independent power level assignment Programmable frequency agility: Up to 1000 non-sequential GPIB-addressed frequencies Modulation Capabilities Internal AM, FM, phase, and pulse modulation Seven internal waveforms including Gaussian noise and arbitrary user-defined signals Complex modulation via user download Pulse modulation supports doublet, triplet, and quadruplet configurations for RADAR testing Synchronized simultaneous modulation for multi-parameter signal synthesis

Key Features Phase-locked operation across all sweep modes ensures frequency stability and repeatability Flexible step configuration from 1 to 10,000 steps with variable dwell timing Programmable frequency agility via GPIB for rapid, non-sequential frequency selection Pulse modulation optimized for radar blind spot characterization User-definable arbitrary waveforms for custom modulation scenarios

Typical Applications Radar and electronic warfare system testing Telecommunications and satellite communication equipment validation RF component characterization and analysis Automatic test equipment (ATE) signal sourcing Signal simulation for system-level evaluation

Compatibility & Integration GPIB control enables remote frequency sequencing and modulation parameter adjustment. Volatile memory storage supports rapid switching between stored frequency sequences without recompilation.

Features & description

From manufacturer datasheet

Features

- Frequency coverage 10 MHz to 50 GHz • Synthesized phase-lock with high resolution • Standard 1 kHz resolution; Option 11 for 0.1 Hz • Banded leveled output per family power tables • Optional Option 15 high power and Option 16 oven • IEEE-488 GPIB remote programming

Applications

- Microwave stimulus across 10 MHz to 50 GHz • ATE automated GPIB source applications • Component and receiver testing in band • LO substitution and swept measurements

68177B Characteristics / Specifications

PARAMETER	VALUE
Model	68177B
Manufacturer	Anritsu / Wiltron
Instrument Type	Synthesized Sweep Generator
Alias	68177B; Anritsu 68177B
Frequency range	10 MHz to 50 GHz
Family	681XXB Synthesized Sweep Generators
CW frequency resolution standard	1 kHz
CW frequency resolution Option	0.1 Hz
Leveled output 0.01 to less than 2 GHz	+12 dBm
Leveled output 2 to 20 GHz	+10 dBm
Leveled output greater than 20 to 40 GHz	+2.5 dBm
Leveled output greater than 40 to 50 GHz	+2.5 dBm
Leveled with step attenuator 0.01 to less than 2 GHz	+10 dBm
Leveled with step attenuator 2 to 20 GHz	+8.5 dBm
Leveled with step attenuator greater than 20 to 40 GHz	0 dBm
Leveled with step attenuator greater than 40 to 50 GHz	-1 dBm
Output power resolution	0.01 dB
Internal time base aging	less than 2×10^{-8} /day
Internal time base aging Option	less than 5×10^{-10} /day
Remote control	IEEE 488 GPIB
Display	Dot matrix LCD
Dimensions	about 5.25 inHx 16.875 inWx 23.5 inDWeight: about 50 lb
AC power	90 to 132 or 180 to 264 Vac
Power consumption	about 400 VA

PARAMETER	VALUE
Harmonics family typical	-50 to -60 dBc
Nonharmonic spurious typical	-60 dBc
SSB phase noise 68XXXB at 6 GHz 10 kHz class	about -86 to -88 dBc/Hz
Related CW model	68077B
Related signal generator	68277B
Related sweep signal	68377B Notes Power rows from Anritsu 68000B/69000A El Toro datasheet tables for 68177B (10 MHz to 50 GHz). Confirm Option 11/15/16, attenuator, and RF connector on the unit.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Output power resolution	0.01 dB
Internal time base aging	less than 2 x 10^-8/day
Internal time base aging Option 16	less than 5 x 10^-10/day
Remote control	IEEE 488 GPIB
Display	Dot matrix LCD
Dimensions	about 5.25 in H x 16.875 in W x 23.5 in D
Weight	about 50 lb
AC power	90 to 132 or 180 to 264 Vac
Power consumption	about 400 VA
Harmonics family typical	-50 to -60 dBc
Nonharmonic spurious typical	-60 dBc
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Levelled with step attenuator 2 to 20 GHz: +8.5 dBm	
Levelled with step attenuator greater than 20 to 40 GHz: 0 dBm	
Levelled with step attenuator greater than 40 to 50 GHz: -1 dBm	

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Related sweep signal	68377B

Notes

Power rows from Anritsu 68000B/69000A El Toro datasheet tables for 68177B (10 MHz to 50 GHz). Confirm Option 11/15/16, attenuator, and RF connector on the unit.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.