

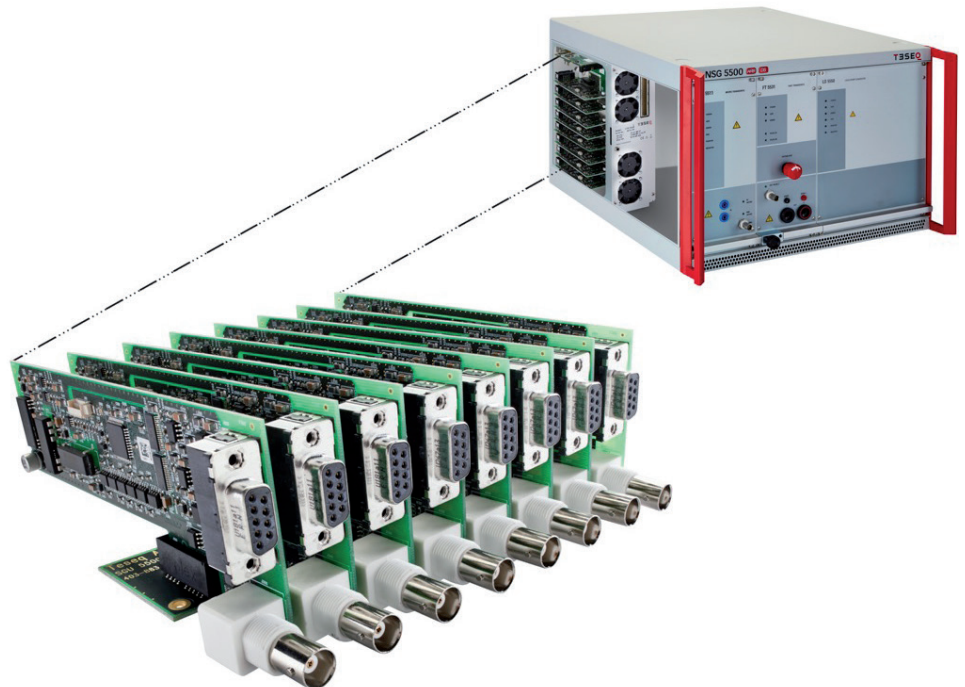


ARB 5500 ARBITRARY GENERATOR



The arbitrary generator ARB 5500 fits in the controller of the NSG 5500 and, together with AutoStar™ 7, provides the necessary control for battery and all battery simulation events, as well as advanced functions like power magnetics and continuous wave (ripple) simulations. This means that with the addition of some transient modules and a dropout switch, nearly all every-day requirements can fit in one 19" generator. The controller converts user input into algorithms for the ARB (arbitrary generator) which creates a model of the requirement in its own memory and then generates the analog signal for the selected battery simulator during the test run. All the requisite waveforms can be created from the built-in wave shapes or by loading a Clone™, e.g. a memory map of user-defined or pre-recorded wave shapes from an external application. The ARB also supports waveforms that may be difficult to describe or real-world events that need to be simulated. Therefore, AutoStar supports input any external application that can be output to .CSV format.

- Fits in a NSG 5500 for nearly all requirements in one 19" rack
- Up to 8 synched ARB channels, 64k segments
- Stepless operation
- 16 bit resolution, 10 MS/s, DC to 500 kHz
- New Autostar 7 adds advanced ramping, drag-n-drop, WYSIWYG features



ARB 5500 ARBITRARY GENERATOR

Technical specifications

Waveform Types	DC voltage and DC ramps, sine, square, triangle, exponential functions and Clone™
Segment parameters*	Amplitude, duration, frequency, DC offset, rectification, duty cycle, phase angle, trigger, noise
Delay between segments	None
Channel parameters	Repetition, modulation, end of test voltage, current limit
Output voltage	-10 to +10 V
Resolution	16 bit
Bit rate	10 MS/s per channel
Output accuracy	± (0.2% + 10mV) DC – 10 kHz ± 1% 10 – 100 kHz ± 2% 100 – 350 kHz ± 5% 350 – 500 kHz
Short circuit protection	Yes
Isolated output	Yes
Output Impedance	≈ 20 Ω
Drive Capability	≥ 1 k Ω
Number of segments per test	>64,000 depending on parameters
Frequency range	DC to 500 kHz
Frequency resolution	0.01 Hz
Amplitude and offset ramping	Static, linear, exponential, spot
Frequency ramping	Static, linear, exponential, spot, log(base 10)
Start/End Phase angle	0 to 359° in 1° steps
Rectification	None, positive, negative, bridge rectification voltage programmable and rampable
Segment duration	0.001 ms to 99,999 hrs
Channel (test) duration	1 to 99,999 count, continuous
Normal ramping values	Virtually unlimited**
Spot ramping values	2048
Clone™ memory for user defined wave shapes	1 GB
Synchronization	Up to 8 channels

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* The following parameters can be ramped during the test (up to 6 simultaneous): amplitude, frequency, duration, offset, rectification voltage and duty cycle

**Every segment's six rampable parameters each support a maximum of 2¹⁶ steps