

Arbitrary Waveform Generator



APLAB introduces new high precision Arbitrary Waveform Generator for 30MHz, 50MHz, 80MHz, and 120MHz with excellent price to performance ratio. The unique design provides unusual versatility, high resolution and wide frequency range at affordable prices.

These are ideal for generating waveforms used in testing diverse types of telecommunication, biomedical electronics, automotive, aviation, ultrasound, MRI, sonar / radar, audio, video and other applications. Beyond the eight standard waveform, Sine, Square, Pulse, Triangle, Saw tooth, TTL, and Sweep, AM, FK, and FSK capabilities makes easy to modulate waveforms with int/Ext modulating source.

Optional high stability TCXO (0.5ppm) for applications demanding even higher precision.

FEATURES

- 10 μ Hz to 30 / 50 / 80 / 120 MHz
- 12 bit Amplitude Resolutio, 40MS/s
- 16K Word Waveform memory
- 5 PPM Clock Accuracy and Stability (0.5ppm TCXO optional)
- DDS Technology delivers Extremely Low Phase Noise Signal
- Built in 8 standard waveforms
- Software for Easy waveform creation and Control, 6 Waveform storage
- RS232, GPIB and USB Interfaces (Optional)

Technical Specifications

	AWG30	AW50	AWG80	AWG120
Output Waveform	Sine, square, pulse, triangle, saw-tooth, cardioelectric, sample (sinX/X), Gaussian white noise and sweep signal.			
Modulation Signal Combination	Sine, square, pluse, triangle, saw-tooth, cadioelectric, sample (sinX/X), Gaussian white noise + internal AM (sine, square, pluse, triangle, positive and negative saw-tooth) / EXTERNAL AM. Sine, square + internal FSK (square) / external FSK : Sine, square, +external PSK : And other modulation or non-modulation waveforms.			
Output Frequency				
Sine wave	10μHz ~ 40MHz	10μHz ~ 60MHz	10μHz ~ 80MHz	10μHz ~ 120MHz
Square / Pulse	10μHz ~ 10MHz.			
Triangle / Saw tooth	10μHz ~ 100KHz.			
Outout Level	Open circuit 20Vp-p upto 10MHz. 6Vp-p upto 30MHz.	Open circuit 20Vp-p upto 10MHz. 6Vp-p upto 30MHz, 2Vp-p up to 50MHz and above.		
Best Resolution	10μHz.			
Freq. Stability / Temp. Coeffi.	<50ppm (room temperature), <5ppm/°C.			
OUTPUT	Main function output, synchronized signal output, audio signal output.			
Mode of Signal	Sweep, AM, FM, FSK.			
Output Impedance (Main Output)	50 Ohms.			
Frquency Response				
Sine wave	Better than ±0.5dB (<3MHz, 20Vp-p), ±2dB (20<MHz, 20Vpp), ±3.5dB (<120MHz, 6Vpp) / Distortion: ≤0.15% (<100 kHz ≥= 10Vpp).			
Square and pulse	Better than ±20% (<100kHz, 20Vp-p), better than ±30% (<3MHz, 20Vpp), better than ±40% (<20MHz, 20Vpp).			
Output Attenuator	Minimum output level is 2mVp-p.			
Max DC Bias	-9.99V ~ 9.99V (2.01V ~ 6.32V, ≤20MHz).			
Square and Pulse	Duty factor 20% ~ 80% adjustable, Pulse duty factor 1% ~ 999% adjustable.			
Square Rising / Falling Edge	≤15ns.			
Triangle Linear Offset	Better than 1% (≤50kHz), better than 2% (50kHz).			
Internal Sweep	Linear or Log; Sine or Square.			
Full Scale Sweep : Frequency	10μHz~20MHz, amplitude 2mVpp~20Vpp; sweep time 1ms~500s (value combined by 0, 1, 2, 5).			
Modulation Characteristic				
AM	Sine, square, triangle, positive and negative saw-tooth, internal, external modulation; modulation frequency 10MHz ~ 100kHz (sine) ~ 20kHz (other waveforms); amplitude 10mVp-p ~ 10Vp-p.			
FM	Square, triangle positive and negative saw-tooth, internal modulation.			
FSK / PSK	Square internal modulation, TTL level; frequency 10μHz ~ 20MHz.			
Modulation Frequency	10μHz ~ 100kHz Sine wave and 10MHz ~ 20KHz Other Waveforms / Internal 1KHz.			
AM Depth	0 ~ 200% automatically changing with AM amplitude.			
FM Deviation	0 ~ >10% adjustable (10KHz modulation frequency).			
FSK	Frequency Range 10μHz ~ 20MHz.	Phase Set Range 0 ~ 360°.		
BURST	Burst internal arbitrary pulse frequency 65535 output pulses.			
Internal Trigger	Keying single trigger.			
External Trigger	Single or continuous trigger; the external input frequency must be lower than that of the internal pulse frequency for more than 50 times (duty factor 50% ±10%).			
Frequency Reference				
Internal Frequency Standard	Internal frequency standard : TCXO 40.000MHz.			
Frequency Deviation	By temperature change : 5ppm.			
Microcomputer Function	Yes.			
Interface Function	RS232 Interface / IEEE 488 GPIB (option).			
Storage / Call Function	Register used for storage / call of front panel states.			
Power Consumption	230V ±10%, 50Hz ±10%, <30VA.			
Environmental Requirements				
Storage Temperature	-10°C ~ +60°C.			
Operating Temperature	0°C ~ +45°C.			
Dimensions & Weight	254 (W) x 95 (H) x 335 (D) mm approx., 4.5 Kg.			
Standard Accessories	Power Cord - 1 No., BNC-BNC Cable - 2 Nos., RS-232 Cable - 1 No., Software CD - 1 No., Instruction Manual.			
Optional Accessories	50 Ohms Termination			

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