

250MS/s Single-Channel Arbitrary Waveform / Function Generator

TABOR'S NEW
WW
WONDER WAVE
SERIES

MODEL WW2571A



- Single-channel 250 MS/s waveform generator
- Sine and Square waves generated to 100MHz
- 16 Bit amplitude resolution
- 1M waveform memory, 2M waveform memory, optional
- 16 Vpp into 50Ω, double into open circuit
- Multiple run modes including trigger, re-trigger and trigger delay
- AM, FM, Arbitrary FM, FSK, ASK, (n)PSK, Frequency Hop and sweep modulation

- Powerful sequence generator links and loops segments in user-defined fashion. Stores up to 10 different sequence tables
- 16 Bit LVDS parallel output
- High resolution 3.8" LCD, color display
- Ethernet 10/100, USB 2.0 and GPIB interfaces
- Multi-Instrument synchronization
- ArbConnection software for easy waveform creation&control

Model 2571, is a single-channel frequency agile waveform synthesizer combine industry leading performance, frequency agility and modulation capability in a stand-alone, bench-type product. Signal output in the range of 1Hz to 250MHz and 16-bit vertical DAC resolution provide the test stimuli required for the decades to come. It can be used as an arbitrary waveform generator, modulating generator, as well as function and pulse generator.

250MS/s Performance

Higher performance test equipment and systems are needed as products which use increasing signal bandwidths are developed. The sample rate generator can be programmed from frequencies as low as 1Hz to 250MS/s with superior waveform quality and purity. For example, phase noise is typically below 120dB/Hz at 10kHz offset for a 10MHz sine wave.

High Speed Function Generator

Interested in standard functions? There are 10 built-in functions that cover most routine requirements. These are sine, triangle, square, pulse, ramp, sinc, Gaussian, exponential, noise, as well as DC. Sine and square waves can be generated from frequencies as low as 100μHz to frequencies as high as 100MHz. All functions and their respective parameters are accessible via the front panel.

Waveform Memory

Longer waveform memory minimizes test duration by allowing multiple waveforms to be loaded simultaneously and retrieved as needed for the specific test. Both channels come with 1M points of memory as standard. Optional 2M memory is available for applications requiring longer memory.

Digital Outputs

16-bits are available as digital patterns from a rear-panel VHDC connector. Output level is LVDS which is efficient and sufficient for high speed digital data transmissions.

Digital patterns are built the same way as arbitrary waveforms; thus the immense power of the waveform generator with all its functions and features is harnessed behind this output turning the 2571 into the most powerful pattern generator in its class.

Frequency Agility

Decrypting radio transmission often employs frequency hopping. The 2571 provides breakthrough technology that allows simulation of 12-bit decrypted code as easy as writing a simple hop table. The frequency hop mode is fast, coherent and provides a great tool for simulating code transmission without losing speed and integrity.

250MS/s Single-Channel Arbitrary Waveform / Function Generator

Model WW2571A



Memory Segmentation and Sequencing

Solving almost every complex application, powerful segmentation and sequencing produce an endless variety of complex waveforms. The waveform memory can be divided into multiple waveform segments and sequenced in user-selectable fashion to create complex waveforms that have repeatable segments and thus saving precious memory space. Five different advance modes are available for the 2571A series to step through the sequence table, including stepped and mixed advance modes and thus increasing efficiency of the test system. To solve even the toughest application, the products allow generation of up to 100 different sequences, each capable of linking 16k waveform fragments and looping each waveform up to 1M times.

Accurate Output

As standard, the instrument is equipped with an internal frequency reference that has 1ppm accuracy and stability over a period of 1 year. An external frequency reference is provided on the rear panel for applications requiring greater accuracy or stability, supported by the instrument's 14 digits resolution.

Modulation Capability

Agility and modulation capabilities open the door to diverse applications. In addition to the capability of generating any shape and style of waveform with the arbitrary waveform generation power, the products can also do standard modulation schemes such as FM, AM, FSK, PSK, and frequency hops without sacrificing the power of the instrument control and output run modes.

Easy to use

Large and user-friendly 3.8" back-lit color LCD display facilitates browsing through menus, updating parameters and displaying detailed and critical information for your waveform output. Combined with numeric keypad, cursor position control and a dial, the front panel controls simplifies the often complex operation of an arbitrary waveform generator.

High Speed Access

Access speed is an increasingly important requirement for test systems. Included with the instrument is a variety of interfaces: Ethernet 10/100, USB 2.0 and GPIB so one may select the interface most compatible to individual requirements. Using any of the external interfaces, controlling instrument function and features as well as downloading waveforms and sequences are fast, time saving and easily tailored to every system regardless if it is just a laptop to instrument or full-featured ATE system. IVI drivers and factory support will speed up system integration thus minimizing time-to-market and reduce system development costs significantly.

Multi-Instrument Synchronization

Multiple 2571A can be synchronized using a Master-Slave arrangement allowing users to benefit from the same high quality performance in their multi-channels needs.

Automated External Self-Calibration

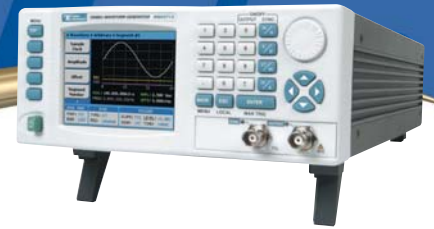
Normal calibration cycles in the industry range from one to three years where instruments are sent to a service center, opened to allow access to trimmers, calibrated and certified for repeated usage. Leading-edge technology was implemented to allow calibration from any interface, USB, GPIB or LAN. Calibration factors are stored in a flash memory thus eliminating the need to open instrument covers.

ArbConnection

ArbConnection is a graphical tool that provides an unlimited source of Arbitrary Waveforms. With the ArbConnection software you can control instruments functions, modes and features. You can also create a virtually infinite amount of test waveforms. Freehand sketch allows you to draw your own custom waveform for quick analysis of analog signals. You can use the built-in equation editor to create your own exotic functions. Add or subtract components of a Fourier series to characterize digital or analog filters or inject random noise into a signal to test immunity to auxiliary noise.

250MS/s Single-Channel Arbitrary Waveform / Function Generator

Model WW2571A



Service and Support

Beyond providing precision Test & Measurement instruments, Tabor Electronics provides unparalleled service and support, and is continuously finding new ways to bring added value to its customers.

Our after-sales services are comprehensive. They include all types of repair and calibration, and a single point of contact that you can turn to whenever you need assistance. As part of our extensive support, we offer individualized, personal attention Help Desk, both online and offline, via e-mail, phone or fax.

Tabor Electronics maintains a complete repair and calibration lab as well as a standards laboratory in Israel and USA. Service is also available at regional authorized repair/calibration facilities.

Contact Tabor Electronics for the address of service facilities nearest you.

Applications

For expert technical assistance with your specific needs and objectives, contact your local sales representative or our in-house applications engineers.

Manuals, Drivers, and Software Support

Every instrument comes equipped with a dedicated manual, developer libraries, I/O drivers, and software. However, if your specific manual is lost or outdated, Tabor Electronics makes it possible to log-on to its Download Center and get the latest data "in a click".

Product Demonstrations

If your application requires that you evaluate an instrument before you purchase it, a hands-on demonstration can be arranged by contacting your local Tabor Electronics representative or the Sales Department at our Corporate Headquarters.

Five-year Warranty

Every instrument from the Wonder Wave series comes with a five-year warranty. Each one has full test results, calibration certificate, and CD containing product's manual and complete software package. Our obligation under this warranty is to repair or replace any instrument or part thereof which, within five years after shipment, proves defective upon examination. To exercise this warranty, write or call your local Tabor representative, or contact Tabor Headquarters and you will be given prompt assistance and shipping instructions.

CORPORATE HEADQUARTERS

9 Hatasia St. P.O.Box404,
Tel Hanan, Israel 20302
☎ +972 (4) 8213393
FAX: +972 (4) 8213388
www.taborelec.com

EUROPE

Austria
UEI-Vienna
☎ +43 15451 588
FAX: +43 15451 464

Benelux (Belgium, The Netherlands and Luxembourg)
BFI Optilas B.V.
☎ +31 172 44 60 60
FAX: +31 172 44 34 14

Bulgaria
New-Tek Ltd.
☎ +359 296 25286
FAX: +359 268 7110

Cyprus
Sprel Ltd.
☎ +357 2237 7159
FAX: +357 2237 7284

Czech Republic & Slovakia
Testovaci Technika s.r.o.
☎ +420 2 7478 2237
FAX: +420 2 7478 1285

Denmark
Metric Industrial A/S
☎ +45 4371 6444
FAX: +45 4371 6433

Finland
Metric Industrial Oy
☎ +358 9 4761 600
FAX: +358 9 4761 6700

France
Racal Instruments SAS
☎ +33 1 3923 2205
FAX: +33 1 3923 2225

Germany
CompuMess Elektronika GmbH
☎ +49 89 321501-0
FAX: +49 89 321501-11

ADMess GmbH
☎ +49 6352 6091
FAX: +49 6352 1288

Greece
American Technical S.A.
☎ +30 210 5240 740
FAX: +30 210 5249 995

Hungary
ProMet Merestekhnika
☎ +36 24 521 240
FAX: +36 24 521 253

Italy
LP Instruments srl
☎ +39 2 4840 1713
FAX: +39 2 4840 1852

Norway
Metric Industrial AS
☎ +47 4000 4054
FAX: +47 4000 4053

Poland
NDN
☎ +48 22 641 1547
FAX: +48 22 644 4250

Romania
ARC Brasov srl
☎ +40 268 472 577
FAX: +40 268 419 749

Russia
Prist
☎ +7 495 777 5591
FAX: +7 495 236 4558

Spain & Portugal
Setup Electronica S.L.
☎ +34 93 414 0372
FAX: +34 93 414 0991

Sweden
Ferner Elektronik AB
☎ +46 8 760 8360
FAX: +46 8 760 8341

Switzerland
Elstar Elektronik AG
☎ +41 56 427 1888
FAX: +41 56 427 1976

United Kingdom & Ireland
SEMATRON UK Ltd.
☎ +44 1256 812222
FAX: +44 1256 812666

Yugoslavia (Bosnia, Croatia, Macedonia, Montenegro, Serbia, Slovenia)
MEM
☎ +43 1942 4254
FAX: +43 1943 4251

ASIA PACIFIC & JAPAN

Australia
Trio T&M Solutions
☎ +61 8 8234 0504
FAX: +61 8 8234 0130

India
AIMIL Ltd.
☎ +91 11 2695 0001
FAX: +91 11 2695 0011

Japan
TOYO Corporation
☎ +81 3 3279 0771
FAX: +81 3 3246 0645

South Korea
Zenixon Korea Co.
☎ +82 2 574 0084
FAX: +82 2 574 6447

Malaysia, Philippines & Thailand
Genetron Inc.

Malaysia
☎ +603 5513 3604
FAX: +603 5513 3608

Philippines
☎ +63 2672 0813
FAX: +63 2671 9490

Thailand
☎ +66 2948 7299
FAX: +66 2948 7322

New Zealand
Electrotest Ltd.
☎ +64 9 448 2600
FAX: +64 9 448 2611

Singapore & Vietnam
Gold Lite Engineering Pte Ltd.
☎ +65 6273 0487
FAX: +65 6273 5006

Taiwan
☎ +886 2 8226 1366
FAX: +886 2 8226 1368

China & Hong Kong
☎ +86 21 5878 4585
FAX: +86 21 5878 4595

AFRICA

South Africa
Inala Technologies (Pty) Ltd.
☎ +27 11 206 8368
FAX: +27 11 206 8361

MIDDLE EAST

Israel
Lahat Technologies Ltd.
☎ +972 3 547 2741
FAX: +972 3 547 2742

Turkey
Netes Ltd.
☎ +90 216 340 5050
FAX: +90 216 339 5556

UNITED STATES

SALES & SUPPORT OFFICE
☎ +1 909 797 0484
FAX: +1 760 751 1284

CANADA
Testforce Systems Inc.
☎ +1 514 856 0970
FAX: +1 514 856 6983

SOUTH AMERICAS
Tecnolink Electronics Co.
☎ +1 440 543 7710
FAX: +1 440 543 9681

Visit our website at www.taborelec.com


TABOR ELECTRONICS Inc.
Since 1971

Specification

250MS/s Single-Channel Arbitrary Waveform / Function Generator

Model WW2571A



STANDARD WAVEFORMS

Waveforms: Sine, Triangle, Square, Pulse, Ramp, Sinc (Sine(x)/x), Gaussian, Exponential, Repetitive Noise, DC, Half-Cycle.

Frequency Range: Waveform dependent

Source: Internal synthesizer

SINE

Frequency Range: 100µHz to 100MHz

Start Phase Range: 0-359.95°

Start Phase Resolution: 0.05°

Harmonics Distortion:

| | < 3Vpp | < 5Vpp | < 10Vpp |
|--------------|--------|--------|---------|
| DC to 1MHz | -55dBc | -48dBc | -37dBc |
| 1 to 10MHz | -50dBc | -43dBc | -35dBc |
| 10 to 50MHz | -35dBc | -30dBc | -28dBc |
| 50 to 100MHz | -28dBc | -25dBc | -23dBc |

Non-Harmonic Distortion:

| | |
|--------------|--------|
| DC to 50MHz | -65dBc |
| 50 to 100MHz | -60dBc |

Total Harmonic Distortion:

| | |
|-------------|------|
| DC to 20MHz | 0.1% |
|-------------|------|

Flatness (1kHz):

| | |
|-----------------|-----|
| DC to 1MHz | 1% |
| 1MHz to 10MHz | 3% |
| 10MHz to 25MHz | 5% |
| 25MHz to 80MHz | 10% |
| 80MHz to 100MHz | 15% |

Phase Noise - Internal SCLK

| | |
|---------------|------------|
| 100Hz Offset | -70dBc/Hz |
| 1kHz Offset | -85dBc/Hz |
| 10kHz Offset | -92dBc/Hz |
| 100kHz Offset | -112dBc/Hz |
| 1MHz Offset | -140dBc/Hz |

TRIANGLE

Frequency Range: 100µHz to 32MHz

Start Phase Range: 0-359.9°

Start Phase Resolution: 0.05°

SQUARE

Frequency Range: 100µHz to 100MHz

Duty Cycle Range: 0% to 99.9%

Rise/Fall Time:

| | |
|----------------|------|
| DC to 10Vpp | <4ns |
| 10Vpp to 16Vpp | <5ns |

Aberration:

| | |
|----------------|----------|
| DC to 10Vpp | <5%+10mV |
| 10Vpp to 16Vpp | <7% |

PULSE

Frequency Range: 100µHz to 32MHz

Delay, Rise/Fall Time, High Time Ranges: 0%-99.9% of period (each independently)

Rise/Fall Time:

| | |
|----------------|------|
| DC to 10Vpp | <4ns |
| 10Vpp to 16Vpp | <5ns |

Aberration:

| | |
|----------------|----------|
| DC to 10Vpp | <5%+10mV |
| 10Vpp to 16Vpp | <7% |

RAMP

Frequency Range: 100µHz to 32MHz

Delay, Rise/Fall Time Ranges: 0%-99.9% of period (each independently)

SINC (Sine(x)/x)

Frequency Range: 100µHz to 32MHz

"0 Crossings": 4-100

GAUSSIAN

Frequency Range: 100µHz to 32MHz

Time Constant: 10-200

EXPONENTIAL PULSE

Frequency Range: 100µHz to 32MHz

Time Constant: -100 to 100

REPETITIVE NOISE

Bandwidth: 50MHz

DC

Range: -16V to 16V

HALF-CYCLE WAVEFORMS

Function Shape: Sine, Triangle, Square

Frequency Range: 100Hz to 2MHz

Phase Start Range (Sine/triangle only): 0 to 359.9°

Start Phase Resolution: 0.05°

Run Modes: Continuous, Triggered

Delay Between Half Cycles (Continuous only): 500ns to 21s

Delay Resolution: 20ns

ARBITRARY WAVEFORMS

Sample Rate:

| | |
|-----------------|---------------------------------------|
| Continuous Mode | 1.5S/s to 250MS/s (typically 300MS/s) |
| All Other Modes | 1.5S/s to 225MS/s (typically 250MS/s) |

Vertical Resolution: 16 bits

Waveform Memory: 1M points (2M optional)

MEMORY SEGMENTATION

No. of Segments: 1 to 16k

Min. Segment Size: 16 points

Resolution: 4 points size increments from 16 to 1M points (2M optional)

SEQUENCED WAVEFORMS

Operation: Segments may be linked and repeated in a user-selectable order to generate extremely long waveforms. Segments are advanced using either a command or a trigger

ADVANCE MODES

Automatic Sequence Advance:

No trigger required to step from one segment to the next. Sequence is repeated continuously per a pre-programmed sequence table.

Stepped Sequence Advance:

Current segment is sampled continuously until a trigger advances the sequence to the next programmed segment and sample clock rate.

Single Sequence Advance:

Current segment is sampled the specified number of repetitions and then idles at the end of the segment. Next trigger samples the next segment the specified repeat count, and so on.

Mixed Sequence Advance:

Each step of a sequence can be programmed to advance either a) automatically (Automatic Sequence Advance), or b) with a trigger (Stepped Sequence Advance).

Sequencer Steps: 1 to 4096

Segment Loops: 1 to 1Meg

Minimum Segment Duration: 500ns

Multi Sequence: Selectable sequence from 1 to 10

DIGITAL PULSE GENERATOR

Channel Dependency: Both channels share pulse parameters except level, polarity, delay and state

Pulse State: On/Off

Pulse Mode: Single or double, programmable

Polarity: Normal, inverted or complemented

Period: 80 ns minimum, programmed with 4 ns increments

Specification 250MS/s Single-Channel Arbitrary Waveform / Function Generator

Model WW2571A



| | |
|----------------------------|-------------------|
| Pulse Width: | 4 ns minimum |
| Rise/Fall Time: | |
| DC to 10Vpp | <4ns |
| 10Vpp to 16Vpp | <5ns |
| High Time: | 0 ns minimum |
| Delay: | 0 ns minimum |
| Double Pulse Delay: | 0 ns minimum |
| Amplitude Window: | 16mVp-p to 16Vp-p |
| Low Level | -8V to +7.992V |
| High Level | -7.992V to +8V |

NOTES:

- All pulse parameters, except rise and fall times, may be freely programmed within the selected pulse period provided that the ratio between the period and the smallest incremental unit does not exceed the ratio of 1,000,000 to 1. With the 2M option, the ratio is extended to 2,000,000 to 1, hence the specifications below do not show maximum limit as each must be computed from the above relationship.
- Rise and fall times, may be freely programmed provided that the ratio between the rise/fall time and the smallest incremental unit does not exceed the ratio of 100,000 to 1.
- The sum of all pulse parameters must not exceed the pulse period setting

DIGITAL PATTERN OUTPUT

| | |
|--------------------------|-----------------------------------|
| Pattern Size: | 16-bits, LVDS levels differential |
| Update Frequency: | 100µpps to 250Mpps |

COMMON CHARACTERISTICS

FREQUENCY

| | |
|----------------------------------|-----------------------------|
| Resolution: | 14 digits (limited by 1µHz) |
| Accuracy & Stability: | Same as reference |

10MHz REFERENCE CLOCK

| | |
|----------|---|
| Internal | 0.0001% (1 ppm TCXO) initial tolerance over a 19°C to 29°C temperature range; 1ppm/°C below 19°C and above 29°C; 1ppm/year aging rate |
| External | 10MHz TTL, 50% ±2% duty cycle |

AMPLITUDE

| | |
|-------------------------|--|
| Range: | 16mV to 16Vp-p into 50Ω; Double into open circuit |
| Resolution: | 4 digits |
| Accuracy (1kHz): | |
| 16mV to 159.9mVp-p | ±(1% + 5mV) |
| 160mV to 1.599Vp-p | ±(1% + 10mV) |
| 1.6V to 11.99Vp-p | ±(1% + 70mV) |
| 12V to 16Vp-p | ±2% |

OFFSET

| | |
|--------------------|----------------------------|
| Range: | 0 to ±7.992V, into 50Ω |
| Resolution: | 1mV |
| Accuracy: | ±(1%+1% of Amplitude +5mV) |

FILTERS

| | |
|--------------|---|
| Type: | 25MHz Bessel 50MHz Bessel 60MHz Elliptic 120MHz Elliptic |
|--------------|---|

OUTPUTS

MAIN OUTPUT

| | |
|--------------------|---|
| Connector: | Front panel BNC, each channel |
| Impedance: | 50Ω ±1% |
| Protection: | Short Circuit to Case Ground, 10s max |
| Standby: | Output On or Off (Output Disconnected) |

SYNC OUTPUT

| | |
|-------------------|--|
| Connector: | Front panel BNC |
| Level: | TTL |
| Sync Type: | Pulse with Arbitrary and Standard Waves; LCOM in Sequence and Burst Modes (including Burst Modulation); Marker with Modulation Mode only, programmable position |

DIGITAL WORD OUTPUTS

| | |
|--------------------|--|
| Connector: | Rear panel SCSI-2, 68-pin VHDC |
| Word Width: | 16 bit differential outputs, channel 1 only |
| Level: | LVDS |

SAMPLE CLOCK OUTPUT

| | |
|-------------------|----------------|
| Connector: | Rear panel SMB |
| Level: | 400mVp-p |
| Impedance: | 50Ω |

COUPLE OUTPUT

| | |
|-------------------|--------------------------|
| Connector: | Rear panel SMB |
| Level: | LVPECL |
| Impedance: | 50Ω, terminated to +1.3V |

INPUTS

TRIGGER INPUT

| | |
|----------------------------|-----------------------------------|
| Connector: | Rear panel BNC |
| Impedance: | 10kΩ |
| Slope: | Positive or Negative (selectable) |
| Programmable Level: | ±5V |
| Sensitivity: | 100mV |
| Damage Level: | ±12V |
| Pulse Width: | ≥10ns minimum |

EXTERNAL REFERENCE INPUT

| | |
|-----------------------------|------------------------|
| Connector: | Rear panel SMB |
| Frequency: | 10MHz |
| Impedance&Level: | |
| Default | 10kΩ ±5%, TTL, 50% ±2% |
| Option | 50Ω ±5%, 0dBm Sinewave |

SAMPLE CLOCK INPUT

| | |
|--------------------------|-------------------|
| Connector: | Rear panel SMB |
| Input Level: | 300mVp-p to 1Vp-p |
| Impedance: | 50kΩ |
| Min. Pulse Width: | 4 ns |

COUPLE INPUT

| | |
|-----------------------------|--------------------------|
| Connector: | Rear panel SMB |
| Input Level: | LVPECL |
| Impedance: | 50Ω, terminated to +1.3V |
| Minimum Pulse Width: | 4 ns |

MODULATION

| | |
|---------------------------|---|
| Carrier Waveform: | Sinewave |
| Modulation Source: | Internal |
| Run Modes: | Off (Outputs CW), Continuous, Triggered, Delayed Trigger, Burst, Re-trigger and Gated |
| Advance Source: | Front panel button, Software commands, Rear panel TRIG IN |

FM

| | |
|------------------------------|---|
| Carrier Waveform: | Sine wave |
| Carrier Frequency: | 10mHz to 100MHz |
| Modulating Waveforms: | Sine, square, triangle, ramp |
| Modulating Frequency: | 10mHz to 100kHz |
| Peak Deviation: | Up to 50MHz |
| Marker Position: | Programmable at a selected frequency |

ARBITRARY FM

| | |
|------------------------------|---|
| Carrier Waveform: | Sine wave |
| Carrier Frequency: | 10mHz to 100MHz |
| Modulating Waveform: | Arbitrary waveform |
| Modulating Waveform | |
| Sample Clock: | 1S/s to 2.5MS/s |
| Frequency Array Size: | 4 to 20000 frequencies |
| Marker Output: | Programmable at a selected frequency |

AM

| | |
|---------------------------|--|
| Carrier Waveform: | Sine wave |
| Carrier Frequency: | 10mHz to 100MHz |
| Envelop Waveform: | Sine, square, triangle, ramp and Arbitrary™ |
| Envelop Frequency: | 10mHz to 100kHz |
| Modulation Depth: | 0% to 100% |

Specification 250MS/s Single-Channel Arbitrary Waveform / Function Generator

Model WW2571A



FSK

Carrier Waveform: Sine wave
Carrier Frequency: 100µHz to 100MHz
Baud Rate Range: 1bits/sec to 10Mbits/sec
FSK Data Bits Length: 1 to 4096
Marker Output: Programmable marker at a selected frequency

PSK

Carrier Waveform: Sine wave
Carrier Frequency: 100µHz to 100MHz
Carrier phase: 0 to 359.99°
Baud Rate Range: 1bits/sec to 10Mbits/sec
FSK Data Bits Length: 1 to 4096
Marker Output: Programmable marker at a selected phase

FREQUENCY HOPPING

Carrier Waveform: Sine wave
Carrier Frequency: 100µHz to 100MHz
Hop Table Size: 1 to 4096
Dwell Time Mode: Fixed or Programmable for each step
Dwell Time: 200 ns to 21 s
Dwell Time Resolution: 20 ns
Hop Frequency: 100µHz to 100MHz
Marker Position: Programmable on a selected frequency step

SWEEP

Carrier Waveform: Sine wave
Sweep Step: Linear, log or Arb
Sweep Direction: Up or Down
Sweep Range: 10mHz to 100MHz
Sweep Time: 1.4s to 40s
Marker Output: Programmable marker at a selected frequency.

TRIGGER CHARACTERISTICS

EXTERNAL

Source: Rear panel BNC
Trigger Level: ±5V
Resolution: 1mV
Input Frequency: DC to 5MHz
Min. Pulse Width: >10ns
Slope: Positive/Negative transitions, selectable
Trigger Jitter: ±1 sample clock period

DELAYS (Trigger input to waveform output)

System Delay: 6 sample clock cycles+150ns
Trigger Delay: [(0; 200ns to 20s) + system delay]
Trigger Resolution: 20ns
Trigger Delay Error: 6 sample clock cycles+150ns +5% of setting

INTERNAL

Retrigger Delay: 200ns to 20s, Waveform end to waveform restart
Retrigger Delay Error: 3 sample clock cycles+20ns +5% of setting

Retrigger Delay Resolution: 20ns

MANUAL

Source: Soft trigger command through the front panel or external interface

GATED MODE External signal enables generator. First output cyclesynchronous with the active slope of the triggering signal. Last cycle of output waveform always complete

BURST

Waveforms: Sine, Triangle, Square, Pulse, Ramp, Sinc (Sine(x)/x), Gaussian Pulse, Exponential Fall, Rising Pulse, Noise, DC.
Counted Burst Cycles: 1 to 1Meg, programmable
Source: Manual, Internal or External

FREQUENCY COUNTER / TIMER

Measurements: Frequency, Period, Avaraged Period, Pulse Width and Totalize Trigger Input
Source: 10Hz to 100MHz (typically 120MHz)
Range: 500mVpp
Sensitivity: 1ppm
Accuracy: 1ppm
Slope: Positive/Negative transitions
Gate Time: 100µSec to 1 Sec
Input Range: ±5V
Trigger Modes: Continuous, Hold and Gated
Period Avaraged

Range 10ns to 0.1 Sec
 Resolution 7 digits / Sec

Period and Pulse Width
 Range 200ns to 400 Sec
 Resolution 100ns

Totalize
 Range 10¹²-1
 Overflow Led indication

MULTI-INSTRUMENT SYNCHRONIZATION

Description: Multiple instruments can be daisy-chained together and synchronized to provide multi-channel synchronization.

Initial Skew: <15 ns + 1 sample clock cycle, depending on cable length and quality, typically with 1m cables

Waveform Types: Standard, Arbitrary and Sequenced using the automatic sequence advance mode only

Run Modes: Continuous, Triggered, Gated and Counted Burst

LEADING EDGE OFFSET

Description: Leading edge offset is programmable for master and slave units.

Run Mode: Continuous run mode only

Offset Range: 200 ns to 20 s

Resolution&Accuracy: 20 ns

GENERAL

Power Supply: 85 to 265Vac, 48-63 Hz

Power Consumption: 60W

Front Panel Display: Color LCD, 3.8" reflective, 320 x 240 pixels, back-lit

Operating temperature: 0°C - 50°C

Humidity (non-condensing): 11°C - 30°C 85%
 31°C - 40°C 75%
 41°C - 50°C 45%

Storage temperature: -40°C to + 70°C.

Interface: Ethernet 10/100, USB 2.0 and GPIB standard
Language: IEEE-488.2 - SCPI - 1993.0
Dimensions: 212 x 88 x 415 mm (WxHxD)

Weight: Approximately 7 lb

Safety: EN61010-1, 2nd revision
EMC: CE marked. Designed to meet VDE 0411/03.81 and UL 1244

Reliability: MTBF per MIL-HDBK-217E, 25°C, Ground Benign

Workmanship Std: Conform to IPC-A-610D

Supplied Accessories: Power Cord, USB cable, CD containing Operating Manual, ArbConnection software and developer libraries.

Warranty: 5 years standard

ORDERING INFORMATION

MODEL WW2571A
 250MS/s Single-Channel ArbitraryWaveform Generator

OPTIONS

2Meg: 2 Meg Memory

ACCESSORIES

S-Rack mount: 19" Single Rack Mounting Kit

D-Rack mount: 19" Dual Rack Mounting Kit

Case Kit: Professional Carrying Bag

Note: Options and Accessories must be specified at the time of your purchase.