# 250MS/s Dual-Channel Arbitrary Waveform / Function Generator





- Dual-channel 250 MS/s waveform generator
- Sine and Square waves generated to 100MHz
- 16 Bit amplitude resolution
- 1M waveform memory, 2M/4M 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, (n)QAM, 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 2572A, is a dual-channel frequency agile waveform synthesizer that combines industry leading performance, frequency agility and modulation capability in a stand-alone, benchtype product. Signal source 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 for sine and square waves 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  $700\mu Hz$  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 or 4M 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 2572A into the most powerful pattern generator in its class.

#### Frequency Agility

Decrypting radio transmission often employs frequency hopping. The 2572A 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 loosing speed and integrity.

#### **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.





**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 2572A 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.

#### **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, (n)PSK, (n)QAM and frequency hops without sacrificing the power of the instrument control and output run modes.

#### **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.

#### Easy to use

Large and user-friendly 3.8" back-lit color LCD display facilitates browsing though 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 functions and features as well as downloading waveforms and sequences is 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.

#### **Multiple Environments to Write Your Code**

Model 2572A comes with a complete set of drivers, allowing you to write your application in various environments such as: Labview, CVI, C++, VB, MATLAB. You may also link the supplied dll to other Windows based API's or, use low level SCPI commands (Standard Commands for Programmable Instruments) to program the instrument, regardless if your application is written for Windows, Linux or Macintosh operating systems.

#### **Precise Inter-Channel Phase Control**

In the 2572A, both channels share a common sample clock, and both channels are triggered from the same source assuring tightly synchronized channel-to-channel timing. Precise control over channel-to-channel phase offset is achieved by allowing control over channel start phase with a resolution down to as small as 1 waveform point. This enables extremely accurate timing or phase dependencies to be studied, such as those found in high speed digital communication systems.

#### **MODULAR**

Tabor's MODULAR software package supplies wireless design and manufacturing engineers with virtually all their test stimulus needs at baseband or IF/RF levels, whether required signals are analog or digital. With none of the limitations of traditional generators, Tabor's Wonder Wave Series allow any signal, simple or composed, clean or noisy, ideal or impaired, to be downloaded and played back.

#### **ArbConnection**

The ArbConnection software provides you with full control of instrument functions, modes and features. ArbConnection is a powerful editorial tool that allows you to easily design any type of waveform. Whether it is the built in wave, pulse or Serial data composers, or the built in equation editor with which you can create your own exotic functions, with ArbConnection virtually any application is possible.

#### **Multi-Instrument Synchronization**

Multiple 2572As can be synchronized using a Master-Slave arrangement allowing users to benefit from the same high quality performance in their multi-channels needs.



## 250MS/s Dual-Channel Arbitrary Waveform / Function Generator

## **Model WW2572A**



#### **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, IVI 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.

## **Model WW2572A**



#### CONFIGURATION

Output Channels 2, semi-independent

#### INTER-CHANNEL DEPENDENCY

Separate controls: Output on/off, amplitude,

offset, standard waveforms, user waveforms, user waveform

size, sequence table

Common Controls: Sample clock (Arb), frequency

(Std), period (Pulse) reference source, trigger modes, trigger advance source, SYNC output

#### **LEADING EDGE OFFSET**

**Description:** Channel 1 edge start trails

channel 2 edge by a programmable

number of points.

0 to 1M points, 2M/4M optional Range:

Resolution

and Accuracy: 1 point Initial Skew: < 1ns

#### STANDARD WAVEFORMS

Sine, Triangle, Square, Pulse, Waveforms:

Ramp, Sinc (Sine(x)/x), Gaussian, Exponential, Repetitive Noise. DC. Half-Cvcle.

Frequency Range: Waveform dependent Source: Internal synthesizer

Frequency Range: 700µHz to 100MHz

Start Phase Range: 0-360°

**Start Phase** 

0.01° Resolution:

#### **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

#### Flatness (1kHz):

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

#### Phase Noise - Internal SCLK

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

#### **TRIANGLE**

Frequency Range: 700µHz to 32MHz

Start Phase Range: 0-360° Start Phase

Resolution: 0.01°

#### **SQUARE**

Frequency Range: 700µHz 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: 700µHz 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: 700µHz to 32MHz

Delay, Rise/Fall

Time Ranges: 0%-99.9% of period (each

independently)

#### SINC (Sine(x)/x)

Frequency Range: 700µHz to 32MHz

"0 Crossings":

**GAUSSIAN** 

Frequency Range: 700µHz to 32MHz

**Time Constant:** 10-200

**EXPONENTIAL PULSE** 

Frequency Range: 700µHz to 32MHz Time Constant: -100 to 100

REPETITIVE NOISE

Bandwidth: 50MHz

#### DC

-8V to 8V Range:

#### HALF-CYCLE WAVEFORMS

Function Shape: Sine, Triangle, Square Frequency Range: 0.01Hz to 1MHz

Phase Resolution: 0.01° Duty Cycle Range: 0% to 99.9%

Run Modes: Continuous, Triggered

**Delay Between Half Cycles** (Continuous only): 200ns to 20s 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 or 4M optional)

#### **MEMORY SEGMENTATION**

No. of Seaments: 1 to 10k Min. Segment Size: 16 points

Resolution: 4 points size increments from

16 to 1M points (2M/4M 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 preprogrammed 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.



## **Model WW2572A**



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).

**Segment Loops:** 1 to 4096 **Segment Loops:** 1 to 1M

Minimum Segment

**Duration:** 600ns

Multi Sequence: 1 to 10, Selectable

#### **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

**Pulse Width:** 4 ns minimum, 1e3 Sec max.

Rise/Fall Time:

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

High Time:

Delay:

O ns minimum, 1e3 Sec max.

O ns minimum, 1e3 Sec max.

Double Pulse Delay:

O ns minimum, 1e3 Sec max.

Amplitude Window:

16mVp-p to 16Vp-p

Low Level -8V to +7.990V
High Level -7.990V 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/4M option, the ratio is extended to 2,000,000 (4,000,000) to 1, hence the specifications below do not show maximum limit as each must be computed from the above relationship.
- 2. 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.
- **3.** The sum of all pulse parameters must not exceed the pulse period setting

#### **DIGITAL PATTERN OUTPUT**

Pattern Width: 16-bits, differential

Output Level: LVDS

Pattern Length:

Dedicated Memory 1 to 128k

Arbitrary Memory 16 to 1M (2M or 4M optional) **Update Frequency:** 100µpps to 250Mpps

#### **COMMON CHARACTERISTICS**

#### **FREQUENCY**

Resolution:

Front Panel 11 digits (limited by 1µHz) Remote 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 10MHz TTL, 50% ±2% duty cycle or 50Ω ±5% 0dBm

#### **AMPLITUDE**

External

**Range:** 16mV to 16Vp-p into  $50\Omega$ ;

Double into open circuit **Impedance Display:** Programmable from  $50\Omega$  to  $1M\Omega$ 

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)

OFFSET

12V to 16Vp-p

**Range:** 0 to  $\pm 7.992$ V, into  $50\Omega$ 

+2%

Resolution: 1mV

**Accuracy:**  $\pm (1\%+1\% \text{ of Amplitude } +5\text{mV})$ 

**FILTERS** 

Type: 25MHz Bessel 50MHz Bessel

60MHz Elliptic 120MHz Elliptic

#### **OUTPUTS**

#### MAIN OUTPUT

**Connector:** Front panel BNC **Impedance:**  $50\Omega \pm 1\%$ 

**Protection:** Short Circuit to Case Ground,

10s max

**Standby:** Output On or Off (Output

Disconnected)

#### SYNC OUTPUT

**Connector:** Front panel BNC

Level: □□

**Sync Type:** Pulse with Arbitrary and

Standard Waves; LCOM in Sequence and Burst Modes (including Burst Modulation); Marker with Modulation Mode only, programmable position 0 to 1M (2M or 4M optional)

**Position:** 0 to 1M **Resolution:** 4 points

#### **DIGITAL PATTERN OUTPUTS**

**Connector:** Rear panel SCSI-2, 68-pin VHDC **Pattern Width:** 16 bit differential outputs

Source: Channel 1 only

Level: LVDS

#### **SAMPLE CLOCK OUTPUT**

COUPLE OUTPUT

**Connector:** Rear panel SMB

Level: LVPECL

**Impedance:**  $50\Omega$ , terminated to +1.3V

**INPUTS** 

#### TRIGGER INPUT

Connector: Rear panel BNC

Impedance:  $10k\Omega$ 

**Slope:** Positive or Negative (selectable)

Programmable Level:  $\pm 5V$ Sensitivity: 100mV Damage Level:  $\pm 12V$ 

**Pulse Width:** >10ns minimum

#### **EXTERNAL REFERENCE INPUT**

**Connector:** Rear panel SMB **Frequency:** 10MHz

Impedance&Level:

Default 10k $\Omega$  ±5%, TTL, 50% ±2% Option 50 $\Omega$  ±5%, 0dBm Sinewave

#### SAMPLE CLOCK INPUT

**Connector:** Rear panel SMB 100mVp-p to 1Vp-p

 $\begin{array}{ll} \text{Impedance:} & 50 \text{k}\Omega \\ \text{Min. Pulse Width:} & 4 \text{ ns} \end{array}$ 



## **Model WW2572A**



#### **COUPLE INPUT**

**Connector:** Rear panel SMB LVPECL

**Impedance:**  $50\Omega$ , terminated to +1.3V

Min. Pulse Width: 4 ns

**MODULATION** 

Carrier Waveform: Sinewave Modulation Source: Internal

Run Modes: Off (Outputs CW), Continuous,

Triggered, Delayed Trigger, Burst,

Re-trgger and Gated

Advance Source: Front panel button, Software

commands, Rear panel TRIG IN

Carrier Idle Mode: On or Off, programmable TTL, Programmable at selectable frequency

FM

Carrier Waveform: Sine wave Carrier Frequency: 10Hz to 100MHz Modulating Waveforms: Sine, square, triangle, ramp Modulating Frequency: 10mHz to 100kHz

**Peak Deviation:** Up to 50MHz

ARBITRARY FM

Carrier Waveform: Sine wave Carrier Frequency: 10Hz to 100MHz Modulating Waveform: Arbitrary waveform

**Modulating Waveform** 

Sample Clock: 1S/s to 2.5MS/s
Frequency Array Size: 4 to 10,000 frequencies

ΔМ

Carrier Waveform: Sine wave Carrier Frequency: 10Hz to 100MHz

**Envelop Waveform:** Sine, square, triangle, ramp **Envelop Frequency:** 10mHz to 100kHz

Modulation Depth: 0% to 100%

**FSK** 

Carrier Waveform: Sine wave Carrier Frequency: 10Hz to 100MHz Baud Rate Range: 1bits/sec to 10Mbits/sec

FSK Data Bits Length: 2 to 4,000

PSK

Carrier Waveform: Sine wave Carrier Frequency: 10Hz to 100MHz Carrier phase: 0 to 360°

Baud Rate Range: 1bits/sec to 10Mbits/sec

FSK Data Bits Length: 2 to 4,000

#### FREQUENCY HOPPING

Carrier Waveform: Sine wave Carrier Frequency: 10Hz to 100MHz Hop Table Size: 2 to 1.000

**Dwell Time Mode:** Fixed or Programmable for

**Dwell Time:** each step 200 ns to 20 s

Dwell Time Resolution: 20 ns

ASK

Carrier Waveform: Sine wave

Carrier Frequency: 10Hz to 100MHz

Start/Shift Amplitude: 16mVpp to 16Vpp into 50Ω Resolution: Maximum amplitude/4096 Baud Rate Range: 1Bits/s to 10MBits/s

ASK Data Bits Length: 2 to 4,000

#### **AMPLITUDE HOPPING**

Carrier Waveform: Sine wave

Carrier Frequency: 10Hz to 100MHz

**Range:** 16mVpp to 16Vpp into  $50\Omega$ , **Dwell Time Mode:** Fixed or Programmable for

each step

**Dwell Time:** 200 ns to 21 s

**Dwell Time Resolution:** 20 ns

**Resolution:** Maximum amplitude/4096

**ARBITRARY 3D** 

Carrier Waveform: Sine wave
Carrier Frequency: 10Hz to 100MHz
Modulating Waveform: Arbitrary waveform

Modulating Type: Amplitude CH1, Amplitude CH2, Frequency and Phase

Modulating Waveform

Sample Clock: 1S/s to 2.5MS/s Memory Size: 4 to 30,000

#### (n)PSK and (n)QAM

Carrier Waveform: Sine wave Carrier Frequency: 1Hz to 75MHz

Carrier Control: On/Off

Modulation Type: PSK, BPSK, QPSK, OQPSK,

PI/4 DQPSK, 8PSK, 16PSK, 16QAM, 64QAM, 256QAM and User Defined

Symbol Rate Range: 1S/s to 1MS/s

Carrier Control: On/Off

Symbol Period Accuracy: ±(500ns + Carrier Period)

Table Size: 2 to 4096

**SWEEP** 

Carrier Waveform: Sine wave
Sweep Step: Linear or log
Sweep Direction: Up or Down
Sweep Range: 10Hz to 100MHz
Sweep Time: 1.4s to 40s

#### **WIRELESS SIGNAL GENERATION**

#### **EVM (Error Vector Magnitude)**

	0.1 MS/s	1 MS/s	5 MS/s
10 MHz	0.15% (1)	0.30% (1)	1.40% (1)
80 MHz	$0.25\%^{(2)}$	0.50% (2)	1.20% (2)

Test conditions:

Sample Clock Frequency = as specified

Sample Clock = External Modulation = QPSK

Baseband Filter = Raised Cosine

Alfa = 0.35

#### **ACLR (Adjacent Channel Leakage Power Ratio)**

	0.1 MS/s	1 MS/s	5 MS/s
10 MHz	73 dB <sup>(1)</sup>	73 dB <sup>(1)</sup>	65 dB <sup>(1)</sup>
80 MHz	64 dB <sup>(2)</sup>	64 dB <sup>(2)</sup>	60 dB <sup>(2)</sup>

Test conditions:

Sample Clock Frequency = as specified

Sample Clock = External BW = Symbol Rate; Offset = 1.35 x Symbol Rate

#### TRIGGER CHARACTERISTICS

#### **RUN MODES**

Continuous: Free-run output of a waveform.
Upon trigger, outputs one waveform cycle. Last cycle

always completed. **Gated:** External signal transition enables

or disables generator output.
Last cycle always completed
Upon trigger, outputs a Dual
or multiple pre-programmed

number of waveform cycles

from 1 through 1M.

First output cycle is initiated by a software trigger. Consequent

output requires external triggers through the rear panel TRIG IN

#### TRIGGER SOURCE

#### EXTERNAL

**Burst:** 

Mixed:

Source: Rear panel BNC

Trigger Level:  $\pm 5V$ Resolution:  $\pm mV$ 

**Input Frequency:** DC to 2.5MHz

Min. Pulse Width: >10ns

**Slope:** Positive/Negative transitions,

selectable

**Trigger Jitter:** ±1 sample clock period



<sup>(1)</sup> Sample Clock Frequency = 100 MS/s (2) Sample Clock Frequency = 200 MS/s

## **Model WW2572A**



**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

**INTERNAL / RETRIGGER (BUS)** 

**Range:** 200ns to 20s **Resolution:** 20ns

Error: 3 sample clock cycles+20ns

**MANUAL** 

Source: Soft trigger command through

the front panel or external

interface

FREQUENCY COUNTER / TIMER

**Measurements:** Frequency, Period, Avaraged Period, Pulse Width and Totalize

Source: Trigger Input

Range: 10Hz to 100MHz (typically 120MHz)

**Sensitivity:** 500mVpp **Accurcay:** 1ppm

**Slope:** Positive/Negative transitions

Gate Time: 100µSec to 1 Sec

Input Range: ±5V

Trigger Modes: Continious, Hold and Gated

Period Avaraged

Initial Skew:

Range 10ns to 50ms Resolution 7 digits / Sec

Period and Pulse Width

Range 500ns to 50ms Resolution 100ns

**Totalize**Range 10<sup>12</sup>-1

Overflow Led indication

**MULTI-INSTRUMENT SYNCHRONIZATION** 

**Description:** Multiple instruments can be daisy-chained together and

synchronized to provide multichannel synchronization. <25 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.

Continuous run mode only

**Run Mode:** Continuous run m **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%

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
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 WW2572A

250MS/s Dual-Channel ArbitraryWaveform Generator

OPTIONS

Option 1: 2 M Memory
Option 2: 4 M Memory

**ACCESSORIES** 

S-Rack mount:
D-Rack mount:

19" Single Rack Mounting Kit
19" Dual Rack Mounting Kit
Professional Carrying Bag

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