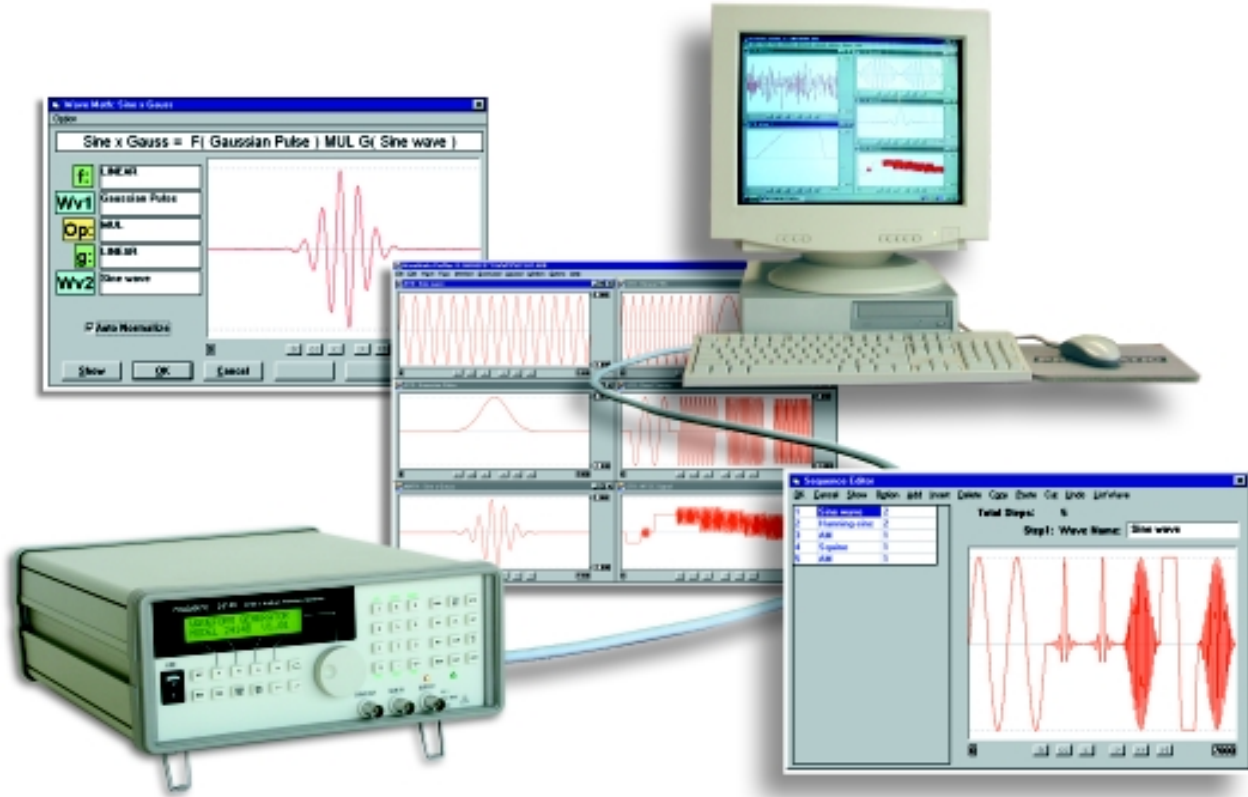


WaveWorks Pro⁺TM

Waveform Creation Software for Pragmatic ARBs

The simplest, most intuitive way to make your waveforms on your PC and Download them into a Pragmatic ARB, without programming!



New WaveWorks Pro⁺TM turns your computer screen into a waveform palette. WaveWorks Pro⁺TM, with its extensive waveform library and complete set of design and editing tools, provides unlimited waveforms and waveform sequences when coupled to Pragmatic Instruments' arbitrary waveform generators.

Now you can solve all your waveform needs like a pro, with WaveWorks Pro⁺TM!

This prolific software is a virtual waveform generator with real waveforms and control parameters. WaveWorks Pro⁺TM comes with a comprehensive array of math operations and transfer functions to design your most demanding waveshapes. Synthesis in both the time and frequency domain is provided by FFT and IFFT routines.

Import spreadsheet files, accomplish data analysis, facilitate documentation and report writing, with ease!

Features

• Functions

- 33 Standard Waveforms
- 20 Math Transfer Functions
- 13 Math Operations
- Sequence Programming
- Digital Pattern
- FFT and IFFT

• File Import / Export

- 7 Formats including Common ASCII Formats (.CSV, .PRN)

• Data Import from Popular DSOs

• GPIB and RS-232 Support

- Waveform Data Download / Upload
- Instrument Control Panel

PRAGMATIC[®]
INSTRUMENTS, INC.



Tel: (858) 271-6770 Web: <http://www.pragmatic.com>

Fax: (858) 271-9567 E-mail: awgsales@pragmatic.com

WaveWorks Pro[™]

STANDARD WAVEFORMS

All 33 standard waveforms with the required parameters are set up in the selected screen for instantaneous use.

Sine	Cosine	Square	Triangle	DC
Ramp	Squine	Gaussian	Pulse 1	Pulse 2
VHR Pulse	Exponential	SinX/X	Hanning (SinX/X)	
AM	FM	PWM	SCM	BFSK
BPSK	Lines	NTSC	PAL	Comb
FIR_LPF	LPF	Steps	Cardiac	
Continuous Sweep		Step Sweep	Burst Sweep	
Digital Noise		Analog Noise		

WAVEFORM GRAPHIC MATH

Math Transfer Function

All 20 transfer functions, including integration and differentiation, are available to modify the waveform in the specified manner.

Null	Linear	Section	Square
Absolute	Cubic	Square Root	Log
Exponential	Polynomial	Integration	Differentiation
DC Cut	Normalize	Rotate	Mirror
I-Phase	Q-Phase	I/Q Swap	Band Pass

Math Operator

Complex waveforms are readily created by use of the 13 math operators. Each of the waveforms in the set are included in developing the final result, which is downloaded to the ARB memory.

Addition	Subtraction	Multiplication	
Division	Cascade	Into	
Add_Into	Convolution	FIR Filter	
AM	PM	FM	QAM

SEQUENCE PROGRAMMING

Sequence offers virtual memory expansion and comprehensive real-world simulations. Any waveform stored in memory may be output in any order in a seamless manner and be repeated up to 1,000,000 times. Test profiles are easily defined by the use of a table to select each waveform in turn and designate the number of times each waveform is looped.

EDIT

Copy	Paste	Point
Vertex	Digital Pattern	Harmonics (FFT, IFFT)
Sequence		

AUXILIARY FEATURES

Fast Fourier transform offers frequency analysis and graphical presentation for frequency spectrum editing. Recreation of the time-domain waveform is offered using the inverse transform. A complete sample value tabulation of each waveform allows for point-by-point modification. A digital pattern describes the bit-by-bit synthesis of each waveform for editing in this arena.

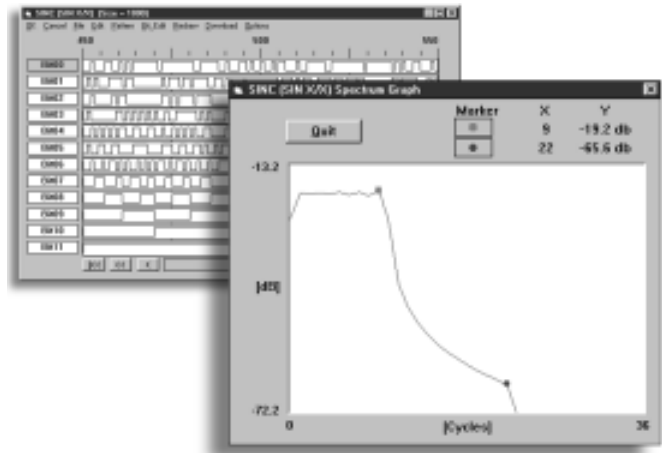
Waveform Analysis/Synthesis

Frequency Domain: FFT and IFFT

Harmonics:	up to 500th
Displays:	graphic and tabulation
Entry:	tabulation
Units:	Sin-Cos (Ampl), Sin (Ampl-Phase), Cos (Ampl-Phase), Sin (dB-Phase), Cos (dB-Phase)
Other Feature:	random phase entry

Time Domain: Digital Pattern

Display:	graphic
Edit:	mouse



COMPUTER REQUIREMENTS

Operating Systems: Windows[™] 95, 98, NT, 2000

PC Requirements: 486DX or better with 4MB free RAM

Interfaces:

Serial: COM port; RS-232C, up to 19.2 kBaud

GPIO: National Instruments' AT-GPIB[™] card

IEEE standard 488.2-1987

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WaveWorks Pro[™] is available for all of the following Pragmatic Instruments' waveform generators.

2201A	2411A	2414A	2711A	2416A
2205A	2411B	2414B	2714A	

For additional information and product availability, please visit us at: www.pragmatic.com.



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