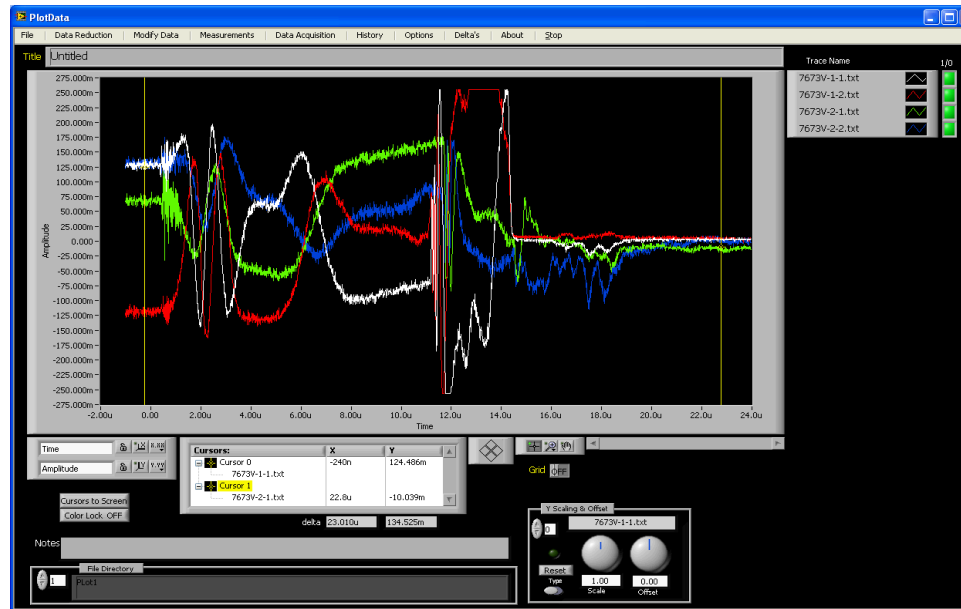


PlotData software

Data Acquisition and Waveform Manipulation System

SAND2014-2285C



David Wackerbarth (505) 844-6198 dewacke@Sandia.gov

Weapon Controls Department

Sandia National Labs

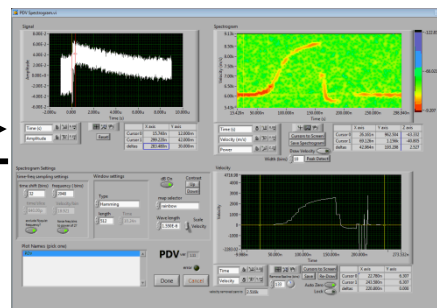
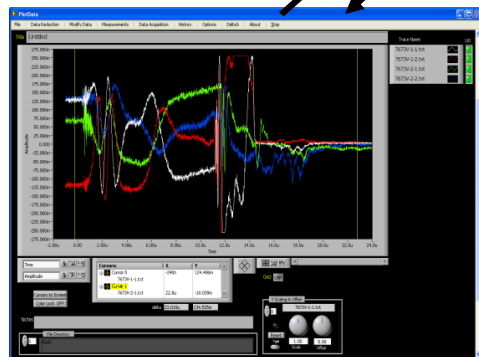
P.O. Box 5800

Albuquerque New Mexico 87185-0348

PlotData Overview

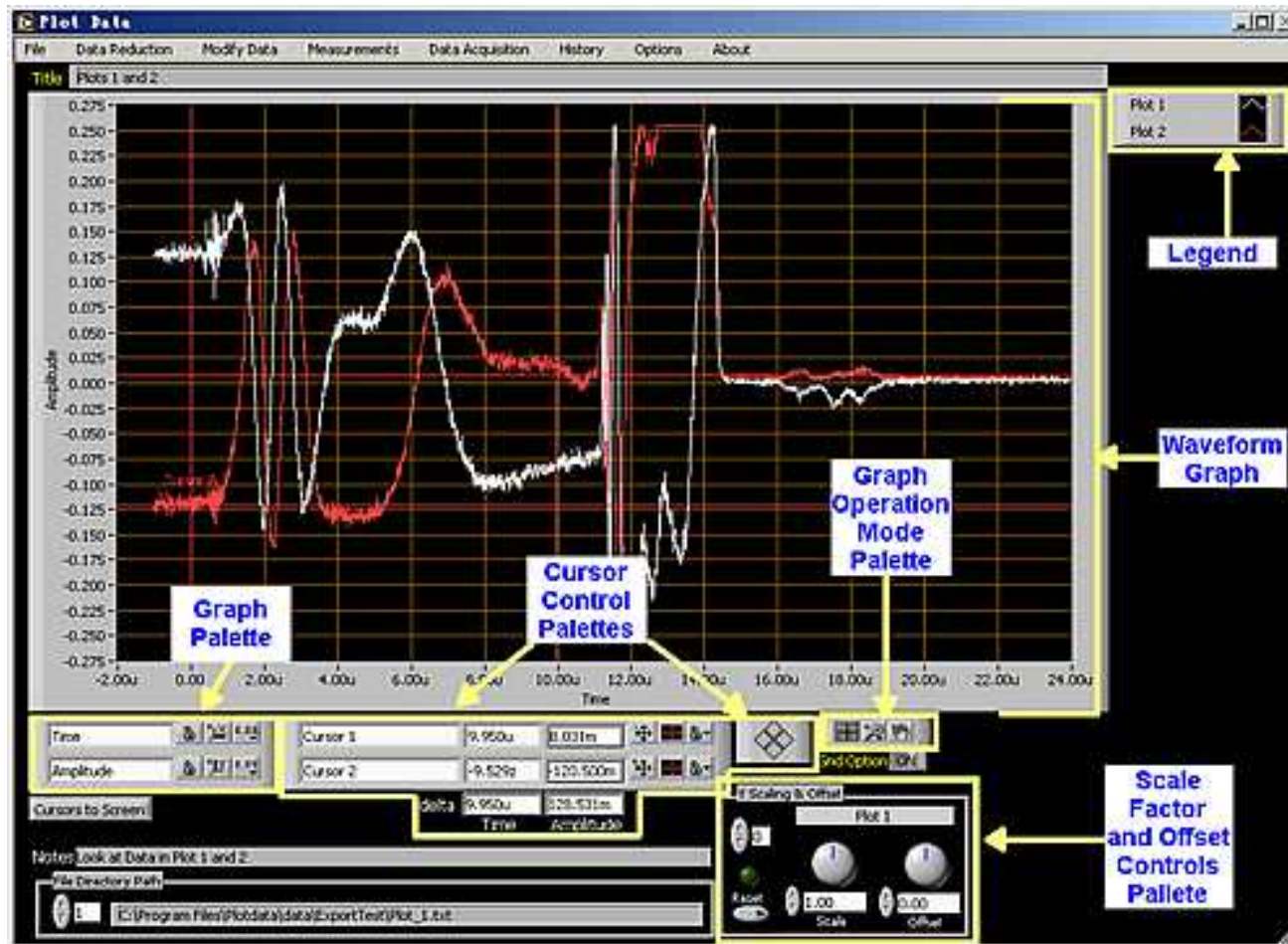


GPIB
USB
Ethernet



PlotData is designed for post-acquisition waveform data analysis. PlotData is both a post-acquisition and an advanced interactive data analysis environment. PlotData operates on a National Instruments' LabVIEW™ software platform. Using PlotData, the user can capture waveform data over a GPIB, USB and Ethernet interface. PlotData can both import and export several types of binary waveform files including, but not limited to, Tektronix .wfm, LeCroy .trc and xy pair ASCII files. Waveform manipulation includes numerous math functions, integration, differentiation, smoothing, truncation, and other specialized data reduction routines such as VISAR, PDV, PVDF (Bauer) piezoelectric gauges, and piezoresistive gauges such as carbon manganin pressure gauges.

PlotData Main Screen





File Types

- **Import File Types**

Auto Detect

PlotData (.plt)

ASCII (.csv)

Tektronix (.wfm, .csv, .isf and .wfa)

LeCroy (.trc)

Sound (.wav)

- **Export File Types**

PlotData (.plt)

PlotData (.spn) Snap Shot

ASCII XY Pair (.csv)


ASCII multi XY Pair (.csv)















































































Sound (.wav)

Data Acquisition

Data Acquisition Dialog Box

Test Title: _____

Strip Chart Recorder: 

Channel Name	I/O	Dig Type	Interface Type	Address/Equation	Dig Channel	[Cursors]	Status
Volts		Unknown	GPIB	1	CH1		
Current		Unknown	GPIB	1	CH2		
			GPIB		CH1		
			GPIB		CH1		
			GPIB		CH1		
			GPIB		CH1		
			GPIB		CH1		
			GPIB		CH1		
			GPIB		CH1		
			GPIB		CH1		
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			GPIB		CH1		
			GPIB		CH1		
			GPIB		CH1		
			GPIB		CH1		
			GPIB		CH1		
			GPIB		CH1		

Error - display error list

Delete Last Modified	Delete All	Print
Save Settings	Recall Settings	
Arm Scopes (single)	Force Trigger	
Lock Scopes	UnLock Scopes	

Done

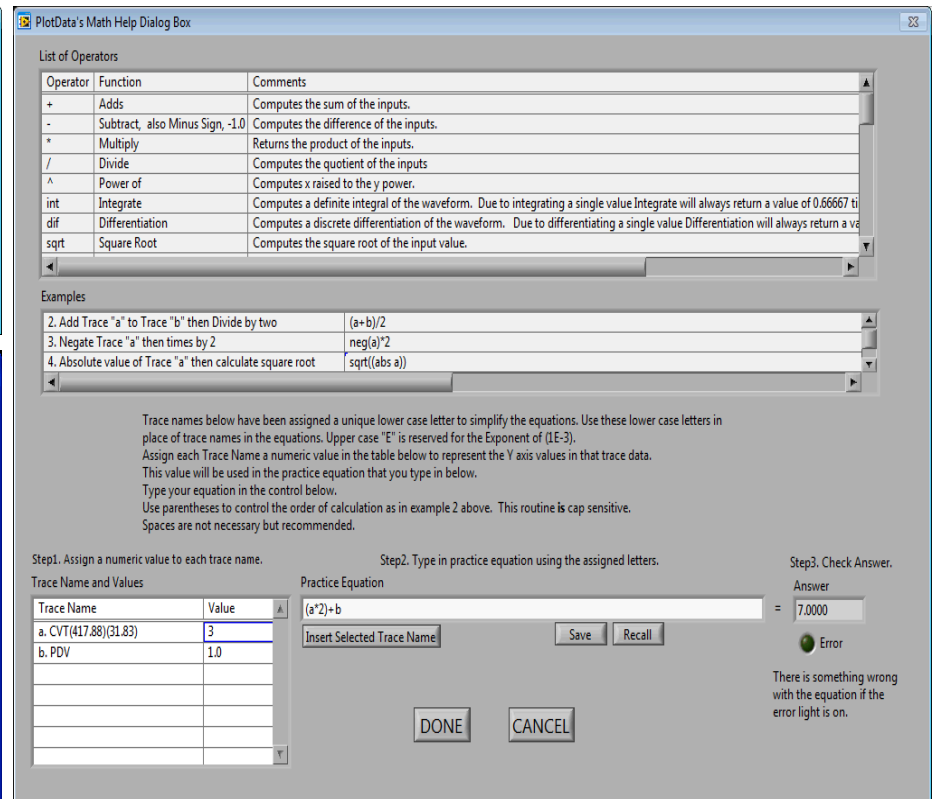
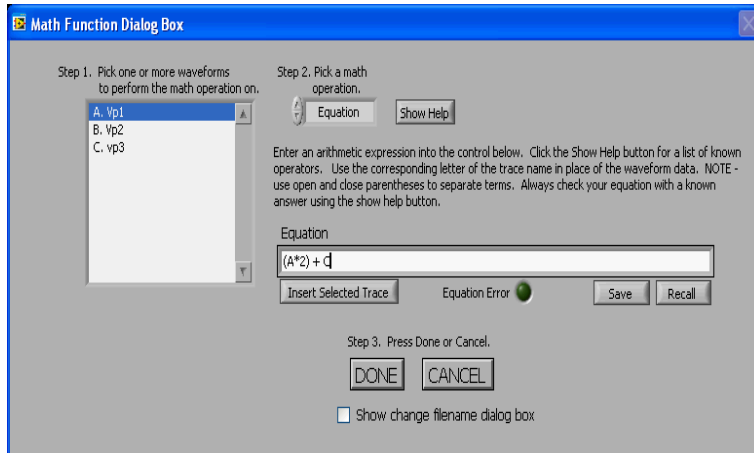
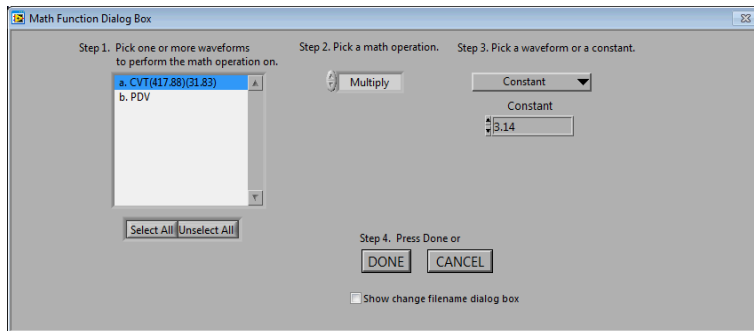
Data Acquisition Options

- ☐ Display Data After Collection.
- ☒ Preview Data After Collection.
- ☒ Auto Save Data (.plt) After Collection.
- ☐ Load Digitizer Settings
- ☐ Arm/Trigger/Lock/Monitor All Scopes
- ☐ Scope Arm Monitor
 - ☐ Computer Audio
 - ☐ Scope Audio

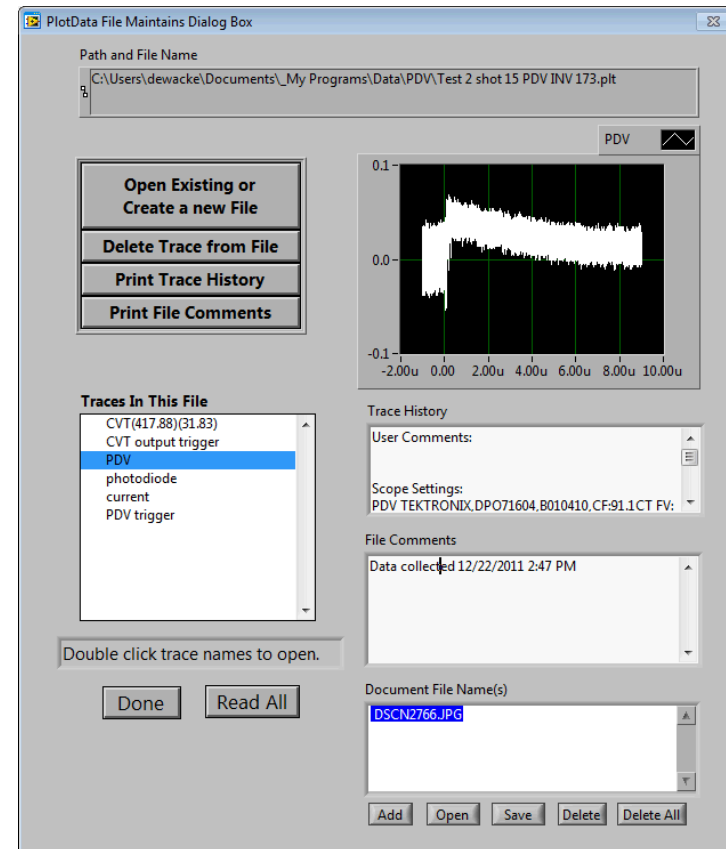
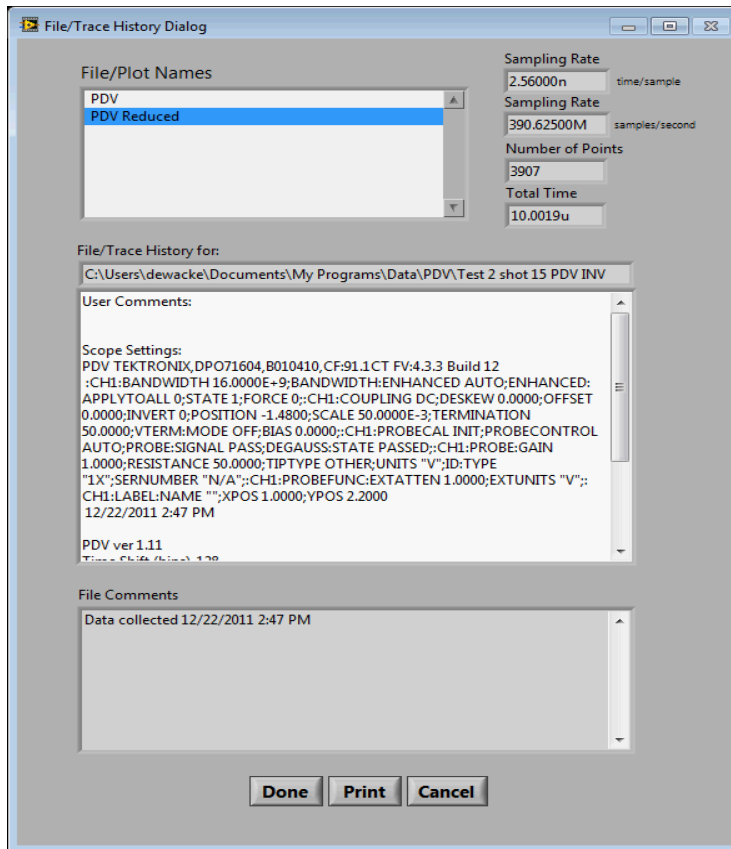
Find Available Scopes

Show Math Help Delete Backup Files

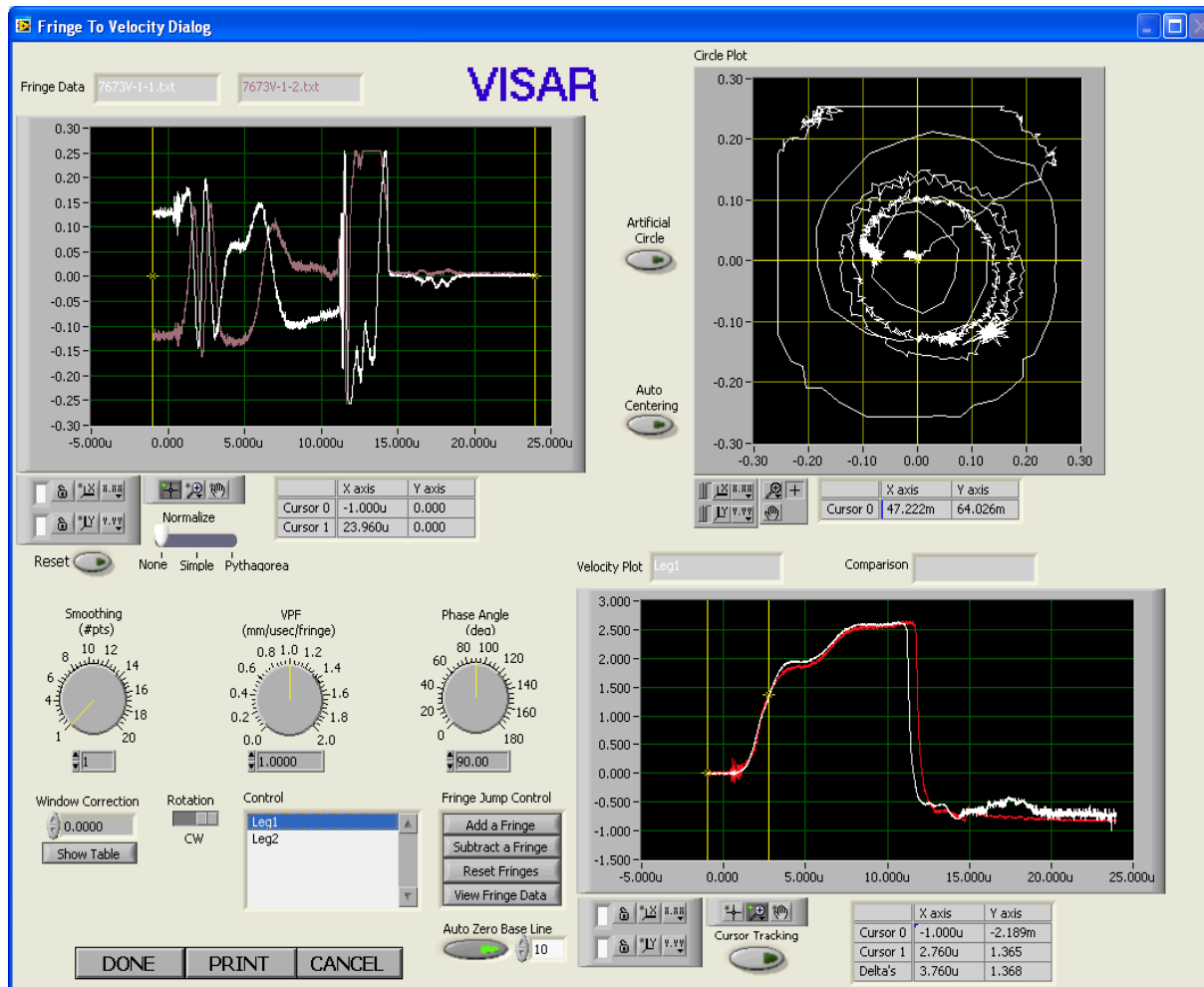
PlotData's Math Function Dialog Box



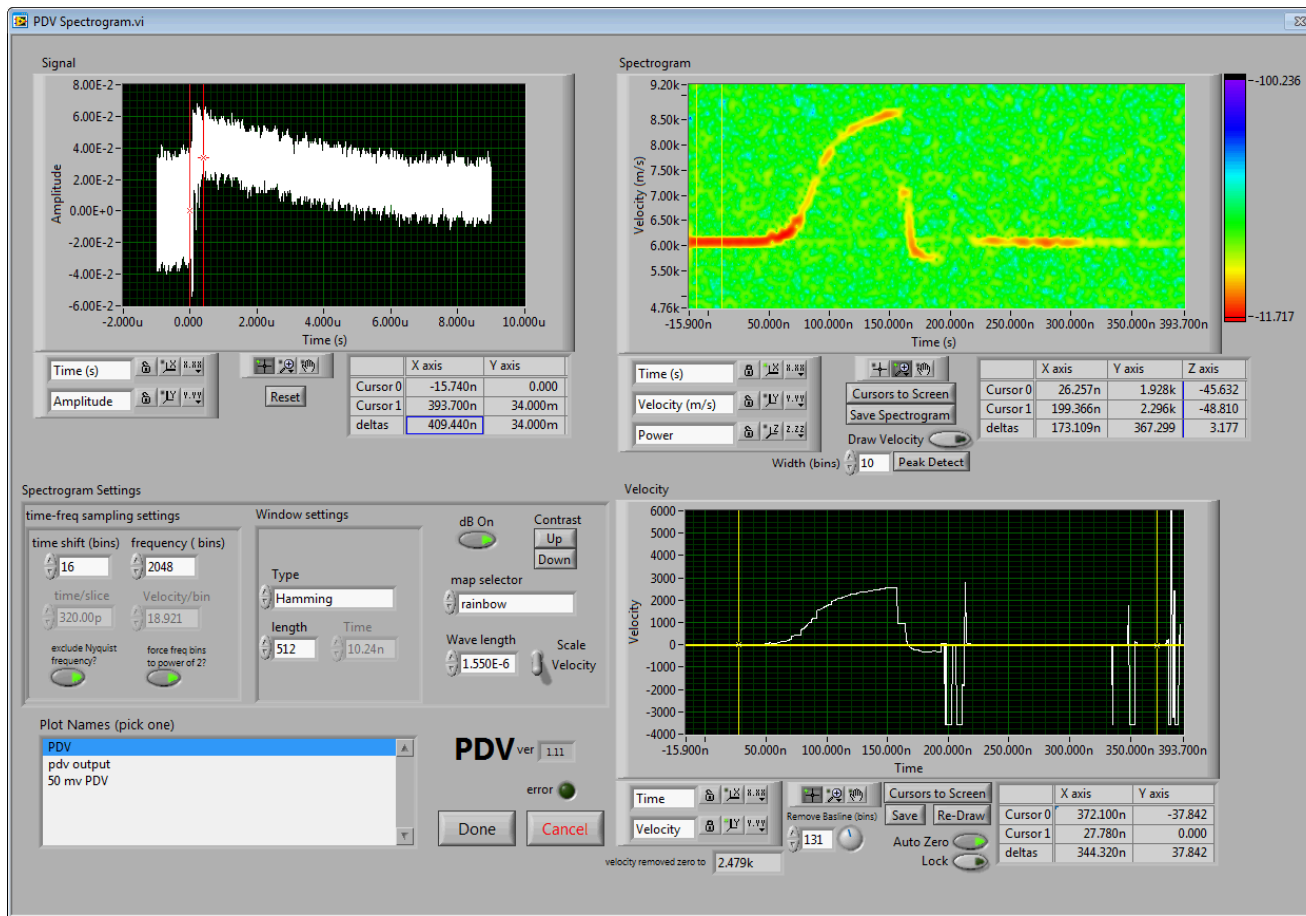
PlotData's History and File Dialog Box



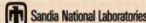
VISAR Data Reduction



PDV Data Reduction



Help Video files and Manual

 Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

PlotData Graph Plot Software

[Introduction](#) [Down Load](#) [Manual](#) [Help Videos](#) [Questions & Answers](#) [Trouble Shooting](#)

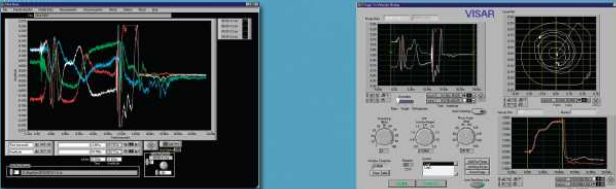
Help Videos

Name	Date modified	Type
Chapter 1-1-0 Main Dialog Box.mpg	11/10/2009 8:34 PM	Video Clip
Chapter 1-1-1 Legend Palette.mpg	11/10/2009 9:34 PM	Video Clip
Chapter 1-1-2 Graph Palette.mpg	11/11/2009 7:37 PM	Video Clip
Chapter 1-1-3 Cursor Control Palette.mpg	11/11/2009 9:59 PM	Video Clip
Chapter 1-1-4 Graph Operation Mode Palette.mpg	11/17/2009 9:06 PM	Video Clip
Chapter 1-1-5 Scale & Offset Control Palette.mpg	11/18/2009 7:46 PM	Video Clip
Chapter 1-1-7 Notes & File Path Palette.mpg	11/29/2009 3:28 PM	Video Clip
Chapter 1-1-7-1 Dual Y Axis Switch.mpg	11/18/2009 8:47 PM	Video Clip
Chapter 1-1-9 PlotData's Main Toolbar.mpg	11/29/2009 4:51 PM	Video Clip
Chapter 1-2 File.mpg	11/30/2009 4:21 PM	Video Clip
Chapter 1-3 History.mpg	12/1/2009 7:41 PM	Video Clip
Chapter 1-4 Delta's.mpg	12/1/2009 8:19 PM	Video Clip
Chapter 2-1 Options.mpg	12/5/2009 10:57 AM	Video Clip
Chapter 2-3-1 Importing Ascii File.mpg	12/6/2009 11:38 AM	Video Clip
Chapter 2-3-1 Importing PlotData File.mpg	12/6/2009 12:47 AM	Video Clip
Chapter 2-3-2 Importing Other Files.mpg	12/6/2009 1:18 PM	Video Clip
Chapter 2-4 Exporting Data.mpg	12/9/2009 4:25 PM	Video Clip
Chapter 2-5-1 Data Acquisition Part 1.mpg	12/9/2009 9:23 AM	Video Clip
Chapter 2-5-1 Data Acquisition Part 2.mpg	11/5/2009 2:51 PM	Video Clip
Chapter 2-5-1 Data Acquisition Part 3.mpg	11/5/2009 4:20 PM	Video Clip
Chapter 2-5-1 Data Acquisition Part 4.mpg	1/1/2010 7:06 PM	Video Clip

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Unlimited Release
Printed May 2007

PlotData Graph Plot Software User Manual: Version 2.5

David E. Wackerbarth



Prepared by
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Albuquerque, New Mexico 87185 and Livermore, California 94550


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Approved for public release further dissemination unlimited.

PlotData Software Real-Time Reduction and Manipulation of Waveform Data

Unique features include:

- Simple operations
- Real-time data manipulations
- Data changes are displayed instantly
- Control knob appears when smoothing operation is involved
- Smoothing operation is applied to the waveform continuously
- Operators can perform multiple operation on multiple waveforms
- Results displayed in real-time
- Data acquisition and processing routines are easily added

 Sandia National Laboratories