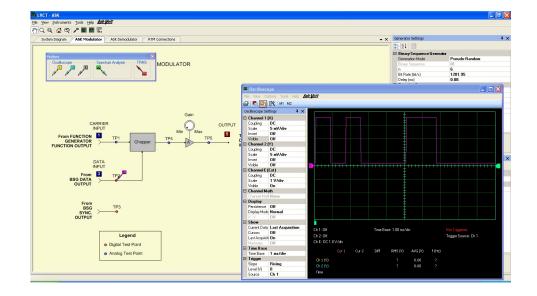
## LVCT Software 581621 (9432-00)



#### LabVolt Series

Datasheet



Festo Didactic en 11/2024

\* The product images shown in this document are for illustration purposes; actual products may vary. Please refer to the Specifications section of each product/item for all details. Festo Didactic reserves the right to change product images and specifications at any time without notice.

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### **General Description**

The Communications Technologies (LVCT) software provides a user interface for the system. Each different communications technology is presented as a separate application. On start-up, the user selects the desired application in the Application Selection dialog box. Then the LVCT software loads the signal processing routines used to implement that application in the RTM.

The main window of the software has a number of tabs each containing one diagram. Some diagrams show how the elements of the system are interconnected. The other diagrams show the functional blocks of the circuits that make up the application. Each circuit diagram includes a number of Test Points (TPs) and/or Test Busses (TBs) allowing the student to observe and measure the signals within the circuit using the virtual instruments included in the software. In some applications, Data Points (DPs) provide access to data in the form of editable or read-only tables.

The software includes the following virtual instruments (depending on the application):

- The Oscilloscope displays analog or digital signal waveforms.
- The Spectrum Analyzer displays the frequency spectrum of a signal.
- The True RMS Voltmeter measures the true RMS value of a signal.
- The Logic Analyzer records and displays the states of multiple digital signals.
- The ADSL application has two Constellation Viewers to display complex signal constellations.

The user interface includes tables of settings that allow changing various software parameters in order to control the system or to configure the virtual instruments and the generators (function generators and clock generators) provided in the applications. In addition, faults can be inserted into the circuits by the instructor for troubleshooting exercises. The Communications Technologies Training System User Guide is included with the LVCT Software.

Various application sets are available for the LVCT Software:

The following applications are enabled when the Data Acquisition Interface and the Analog/Digital Output Interface plug-ins are detected:

- PAM / PWM / PPM Applications
- PCM / DPCM / Delta Modulation Applications
- ASK / FSK / BPSK Applications
- QPSK / QAM / ADSL Applications

The following applications are enabled when the Data Acquisition Interface, Analog/Digital Output Interface and Vocoder plug-ins are detected:

- DSSS / FHSS / CDMA Applications

\* Please note that previous versions of the software used CD-ROMs to unlock the different applications. These CD-ROMs are not needed anymore as the applications are automatically enabled based on the detected RTM plug-ins.

### Manual

Description	Manual number
Communications Technologies Training System (User Guide)	584879 (39862-E0)

# Specifications

Parameter	Value	
Virtual Oscilloscope		
Display Channels	3 (including External Trigger channel)	
Channel Math	None, Ch 1 + Ch 2, Ch 1 – Ch 2	
Memories	2	
View modes	Single Refresh, Continuous Refresh	
Display Mode	Normal, Dots	
X-Y Mode	Yes	
Persistence	Off, 2 Traces, 3 Traces, 4 Traces	
Cursors	Off, Horizontal, Vertical, Both (Hor. Active), Both (Vert. Active)	
Trigger Source	Ch 1, Ch 2, Ext	
Scale Settings	5 mV/div to 5 V/div	
Auto Scale	Yes	
Time Base Settings	0.2 µs/div to 0.2 s/div	
Virtual Spectrum Analyzer		
Memories	2	
View modes	Single Refresh, Continuous Refresh	
Averaging	Off, 2, 4, 8, 16	
Cursors	Off, Horizontal, Vertical	
Scale Type	Linear, Logarithmic	
Maximum Input Settings	0.1 to 5 V Linear, -30 to 20 dBV Logarithmic	
Scale Settings (Logarithmic)	1 to 10 dBV/div	
Frequency Span Settings	2 to 20 kHz/div	
Virtual True RMS Voltmeter		
Mode	Volts, dBm	
View modes	Single Refresh, Continuous Refresh	
Range Settings	10 mV to 10 V	
Virtual Logic Analyzer		
Display Width	0.001 to 1000 ms	
Data Channels	8	
Symbol Channels	2	
Record Buffer Length	256 clock cycles	
Cursors	Off, On	
Virtual Constellation Viewer (ADSL)		
Grid	None, Position, Limit	
Axes	Off, On	
Persistence	None, 5, 10, 15	
Tone	0 to 31	
Computer Requirements	The LVCT software requires a currently available personal computer with USB 2.0 ports, including a 3D graphics card (dual-monitor support is recommended) and a fast Ethernet (100 Mb/s) network interface adapter, running under one of the following operating systems: Windows <sup>®</sup> 7 or Windows <sup>®</sup> 8.	

Reflecting the commitment of Festo Didactic to high quality standards in product, design, development, production, installation, and service, our manufacturing and distribution facility has received the ISO 9001 certification.

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### Festo Didactic SE

Rechbergstrasse 3 73770 Denkendorf Germany

P. +49(0)711/3467-0 F. +49(0)711/347-54-88500

### Festo Didactic Inc.

607 Industrial Way West Eatontown, NJ 07724 United States

P. +1-732-938-2000 F. +1-732-774-8573

### Festo Didactic Ltée/Ltd

675 rue du Carbone Québec QC G2N 2K7 Canada

P. +1-418-849-1000 F. +1-418-849-1666

#### www.labvolt.com

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