

PCS102 CONTROL SOFTWARE WITH REMOTE CONTROL

Control your pcSQUID[™] system remotely via the Internet!

PCS102DA CONTROL SOFTWARE WITH DATA ACQUISITION AND REMOTE CONTROL

Compatible with National Instruments 16-bit E-Series DAQ boards and PCMCIA cards, featuring up to 333 kS/s sampling rates!

The new PCS102 Control Software for STAR Cryoelectronics' Programmable Feedback Loop Model PFL-102 and PC Interface Models PCI-100 and PCI-1000 includes several new features to enhance and simplify system set up and operation.

- Independently tune and lock the input SQUID or series SQUID array output stages.
- View the dc characteristics (current-voltage or voltage-flux) of the SQUID array in tune mode, or use the locked array to view the dc characteristics (current-voltage or current-flux) of the input SQUID.
- Use the MASTER mode to configure multiple SQUID Amplifier Channels simultaneously or to heat groups of several Channels at the same time.
- Heater Heat and Cool times are configurable with 0.1 second resolution to precisely control heater power.
- Multiple user initialization files simplify set up for different sensors and user applications.



The new PCS102DA Control Software with Data Acquisition is now compatible with all 16-bit E-Series DAQ devices from National Instruments. Use the Data Acquisition module like a virtual oscilloscope to record, save and print data for up to eight channels. Use the Spectrum Analysis module like a virtual spectrum analyzer to compute, view, save, and print a noise power spectrum of the SQUID amplifier output signal. The Spectrum Analysis module includes many of the same features found in expensive stand-alone spectrum analyzers.

STAR Cryoelectronics

pcSQUID™ Control Software PCS102 and PCS102DA

The powerful Data Acquisition and Spectrum Analysis tools enable automatic tuning and calibration of the output SQUID array and input SQUID stages of each SQUID amplifier channel for optimal performance, quickly and reliably, without the need for an external oscilloscope, multimeter, and spectrum analyzer.

The Remote Control module allows remote operation via a local network or the Internet using National Instruments DataSocket Transfer Protocol (DSTP). The PC running PCS102 that directly controls the hardware, including the PFL-102, PC Interfaces, DAQ device, and computer port connected to the PCI unit, acts as the Server for a remote Client PC also running PCS102. The Client essentially functions as a remote user interface for the Server, enabling complete control of the SQUID system. Recorded data may be transferred directly from the Server to the Client PC.





Measured Signal vs Time		Noise vs SQUID Bias	
	***	V	A
0.01 VAliv	etion complete	B: 1.236 N: Stop Sho	2.676 w 🗘 All
AUTOTUNING	CALIBRATION	NOISE OPTIM	IZATION
Data Points Rough Grid	Data Points	Data Points	Bias Int (%)
\$ 2000 \$ 50	1000	1024	10
Trought and		Frequency	10 Adjust A-flux
	Flux Step	1024	10
2000 € 50 Test Signal € 100gr0ms 50 Fine Grid € 20	 1000 Flux Step 128 	Frequency	10 Adjust A-flux Yes
		Frequency 1 kHz Raw Average	10 Adjust A-flue Yes Grid Size
2000 30 1 50 1 1 50 1 50 1 50 1 50 1 50 1 50 1	 ¹ 1000 Flux Step ¹ 128 Threshold (V) ¹ 0.500 Flux Jump (V) 	1024 Frequency 1 kHz Raw Average 100 Scan Average 4	10 Adjust A-flue Yes Grid Size 21 Poly Fit S-order
2000 30 1 50 1 50 1 50 1 50 1 50 1 50 1 50 1 50 1 50 1 50 1 50 1 50 1 50 1 50 1 50 1 50 1 50 1 1	 ¹1000 Flux Step ¹128 Threshold (V) ¹0.500 Flux Jump (V) 0.544 	1024 Frequency 1 kHz Raw Average 100 Scan Average 4	10 Adjust A-flux Yes Grid Size 21 Poly Fit

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Server	SERVER ON	
De	lay (ms) 🗘 200	
02		
DISCONNECT	Browse	
READ	DATA	
Active:Connected	لے Active:Connected	
Read Update	Data Update	
Auto	Auto	
looking manage	Time	
received message	09:15:45	
Message to send		
	Send	
	Server 0 URL De URL 02 DISCONNECT READ Active:Connected 0 Read Update	

UPGRADE YOUR pcSQUID™ SOFTWARE TODAY!

Standard version PCS102 Control Software with Remote Control: \$195.

Full version PCS102DA Control Software with Data Acquisition and Remote Control: \$595.

HARDWARE REQUIREMENTS

STAR Cryoelectronics' Model PFL-102 and PCI-1000 or PCI-100

Operating system requirements: Microsoft Windows™ XP, 2000, 9x, NT.