

TRANSCAP Transient Data Capture

TRANSCAP is a powerful, easy to use PC based data acquisition and graphics system which can be used to acquire and analyze transient test data.

Data recording is to memory with optional single shot or multi-event modes where data is stored directly to your hard disk drive. This provides a large storage capacity for event data.

The software has been designed with the user in mind and is easy to use with even the most complex functions taking only minutes to master

TRANSCAP is an essential tool for any industrial, scientific or engineering measurement. No special computer knowledge is required and the system can be used as a cost effective replacement for transient recorders, memory scopes and paper recorders.

TRANSCAP is locally developed and supported and can be customized to suit user applications.

The screenshot displays the TRANSCAP software interface. At the top, the 'Acquisition Channel Settings' dialog box is open, showing a table of channels and their configurations.

Ch #	Description	Active	Conversion (MU/Volt)	Calibration (MU)	Units
1	33kV Incomer Red	<input checked="" type="checkbox"/>	1.000	0.000	kV
2	33kV Incomer White	<input type="checkbox"/>	1.000	0.000	kV
3	33kV Incomer Blue	<input type="checkbox"/>	1.000	0.000	kV
4	Frequency	<input type="checkbox"/>	1.000	0.000	Hz
5	Feeder Red CT	<input type="checkbox"/>	100.000	0.000	A

Below the table, 'Board Settings' shows 'Points per Channel: 1024' and 'Sampling Frequency (Hz) per Channel: 10000'. 'Trigger Options' are set to 'Channel: 1', 'Pre-Trigger: None', 'Trigger Mode: Level + (+ Slope)', 'Trigger Level (Eng. Units): 1.000', and 'Threshold: 0.000'. Buttons for 'OK', 'Cancel', 'Help', 'Run', 'Display', 'Card', 'All On', and 'All Off' are visible.

The main window, 'Ad12 Windows Data Acquisition', shows a plot of 'Scaling Data' with a purple sine wave and a red envelope. The y-axis ranges from -6.00 to 6.00, and the x-axis ranges from 0.000 to 0.102.

The 'Frequency Domain Analysis Options' dialog box is open, showing 'Fast Fourier Transform' selected. 'Channel Selection' is set to 'Channel X: ' and 'Channel Y: '. 'Window Options' show 'Window Size: 1024' and 'Overlap %: '.

The 'Fast Fourier Transform' plot shows a frequency spectrum with a peak at 9.77 Hz. The y-axis ranges from 0.00 to 124.00, and the x-axis ranges from 9.77 to 615.20. A cursor is positioned at 'Point # 1: f=9.8, y=100.36'.

Features Overview

User Interface

- ✓ MS Windows Graphical User Interface (GUI) with drop down Windows
- ✓ Short cut keys
- ✓ Context sensitive help
- ✓ Built in cueing (prompting)
- ✓ User manual on-line

Acquisition System

- ✓ Supports National Instruments data acquisition cards including PCMCIA (notebook)
- ✓ Up to 16 simultaneous input channels
- ✓ Data resolution up to 24 bits
- ✓ Input voltage range depends on card chosen but includes ± 5 and ± 10 volts
- ✓ Acquisition can be viewed or stored in a disk file. Data length for each event is set by the user and limited only by computer memory
- ✓ Any combination of channels can be enabled
- ✓ Real-time multichannel voltmeter read channel prior to acquisition
- ✓ Trigger options include level (\pm , + and -) with or without pretrigger and manual (keyboard)
- ✓ Test descriptions and comments can be entered for each test
- ✓ A comprehensive channel information sheet is provided to convert the input signal to the correct engineering units. Channel description, conversion factor, calibration factor and units can be specified for each channel

Data Display

- ✓ Data can be plotted from a previously saved data file
- ✓ The entire data set can be plotted on the screen. Zoom into the area of interest
- ✓ Three user defined plotting windows can be selected
- ✓ Select manual, user or auto axis scaling with linear or logarithmic x and y axes
- ✓ Screen grid and zero line can be selected
- ✓ Window titles can be specified

Analysis Options

- ✓ Peak detection
- ✓ Statistics
- ✓ Spectral analysis of data
- ✓ Digital filtering
- ✓ Vector summation

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