DaqBoard/3000USB Series
USB 1-MHz, 16-Bit Data Acquisition Boards

Requires one of the following
Operating Systems:

Windows 2000
Windows XP
Windows Vista

Covers 4 Connection Scenarios:

- o CA-248 Cables with DB37 Termination
- o TB-100 SCSI Screw Terminal Board
- o TB-101 Daughter Board
- o DBK215 BNC Module

DaqBoard/3001USB
DaqBoard/3005USB
DaqBoard/3031USB
DaqBoard/3035USB

DaqBoard/3000USB Series

1136-0941 rev 2.1

324401C-01

929792

DaqBoard/3000USB Series Installation Guide

Contents

Reference Note: After you have completed the installation you should refer to the electronic documents that were automatically installed onto your hard drive as a part of product support. The default location is in the **Programs** group, which can be accessed from the Windows Desktop.

You should keep your DaqBoard/3000USB serial number and board type, e.g., 3001USB, 3005USB, etc., with this document. Space is provided below for recording up to 4 board numbers.

	Board Type	Serial Number		Board Type	Serial Number
Board 1			**Board 3**		
Board 2			**Board 4**		

CAUTION

Take ESD precautions (packaging, proper handling, grounded wrist strap, etc.)

Use care to avoid touching board surfaces and onboard components. Only handle boards by their edges (or ORBs, if applicable). Ensure boards do not come into contact with foreign elements such as oils, water, and industrial particulate.

Reference Note: Adobe PDF versions of user manuals automatically install onto your hard drive as a part of product support.** The default location is in the **Programs** group, which can be accessed from the *Windows Desktop*. Refer to the PDF documentation for details regarding both hardware and software.

** Manuals can also be read directly from the Data Acquisition CD via the *View PDFs* option on the splash screen, or from our web site.

Minimum System Requirements

Monitor: SVGA, 1024 x 768 screen resolution
On PC: USB Port (USB2.0 recommended)

Windows XP users:
   Intel™ Pentium, 1 GHz or equivalent;
   10 GB disk space;128 MB memory

Windows Vista users:
   PC must be *Windows Vista Premium Ready*

Power Consumption (per board):

Model	Power Consumption (Typical)*	TR-2 (or TR-2U) Power Adapter*
/3001USB	3000 mW	Required
/3005USB	2000 mW	Optional
/3031USB	3400 mW	Required
/3035USB	2400 mW	Recommended

*A power adapter (TR-2, or TR-2U) will be required if the USB port cannot supply adequate power. USB2 ports are, by USB2 standards, required to supply 2500 mW (nominal at 5V, 500 mA).

(1) Install Software

IMPORTANT: **Software must be installed before installing hardware.**

(a) Place the Data Acquisition CD into the CD-ROM drive. *Wait for PC to auto-run the CD. This may take a few moments, depending on your PC.* If the CD does not auto-run, use the Desktop's Start/Run/Browse feature and run the **Setup.exe** file.

(b) After the intro-screen appears, follow the screen prompts.

(c) After successful installation turn off the computer and proceed with the following section, *Connect Signal Lines and Hardware*.

(2) Connect Signal Lines and Hardware

This section presents three examples of hardware setup. Other scenarios are possible, for example, using a TB-100 and also using one CA-248 cable. Also note that a TR-2 [or TR-2U] power supply will be needed when there is insufficient power from the USB port. However, you can use a TR-2 [or TR-2U] in any scenario.

Aside from using a TR-2 [or TR-2U] if needed, another important part of the setup is to avoid making redundant signal connections and to use approved ESD precautions. Pinouts have been included in this installation guide.

CAUTION
The discharge of static electricity can damage some electronic components. Semiconductor devices are especially susceptible to ESD damage. You should always handle components carefully, and you should never touch connector pins or circuit components unless you are following ESD guidelines in an appropriate ESD controlled area. Such guidelines include the use of properly grounded mats and wrist straps, ESD bags and cartons, and related procedures.

 The "Power" LED **(Bottom LED)** blinks during device detection and initialization; then remains on solid as long as the module has power. If there is insufficient power the LED will go off and a TR-2 [or TR-2U] power adapter will be needed.

Note that when the board is first powered there will likely be a momentary delay before the Power LED begins to blink, or come on solid.

If using a TR-2 [or TR-2U] be sure to supply power from it to the DaqBoard/3000USB Series board before connecting the USB cable to the computer. This allows the USB board to inform the host computer (upon connection of the USB cable) that the unit requires minimal power from the computer's USB port.
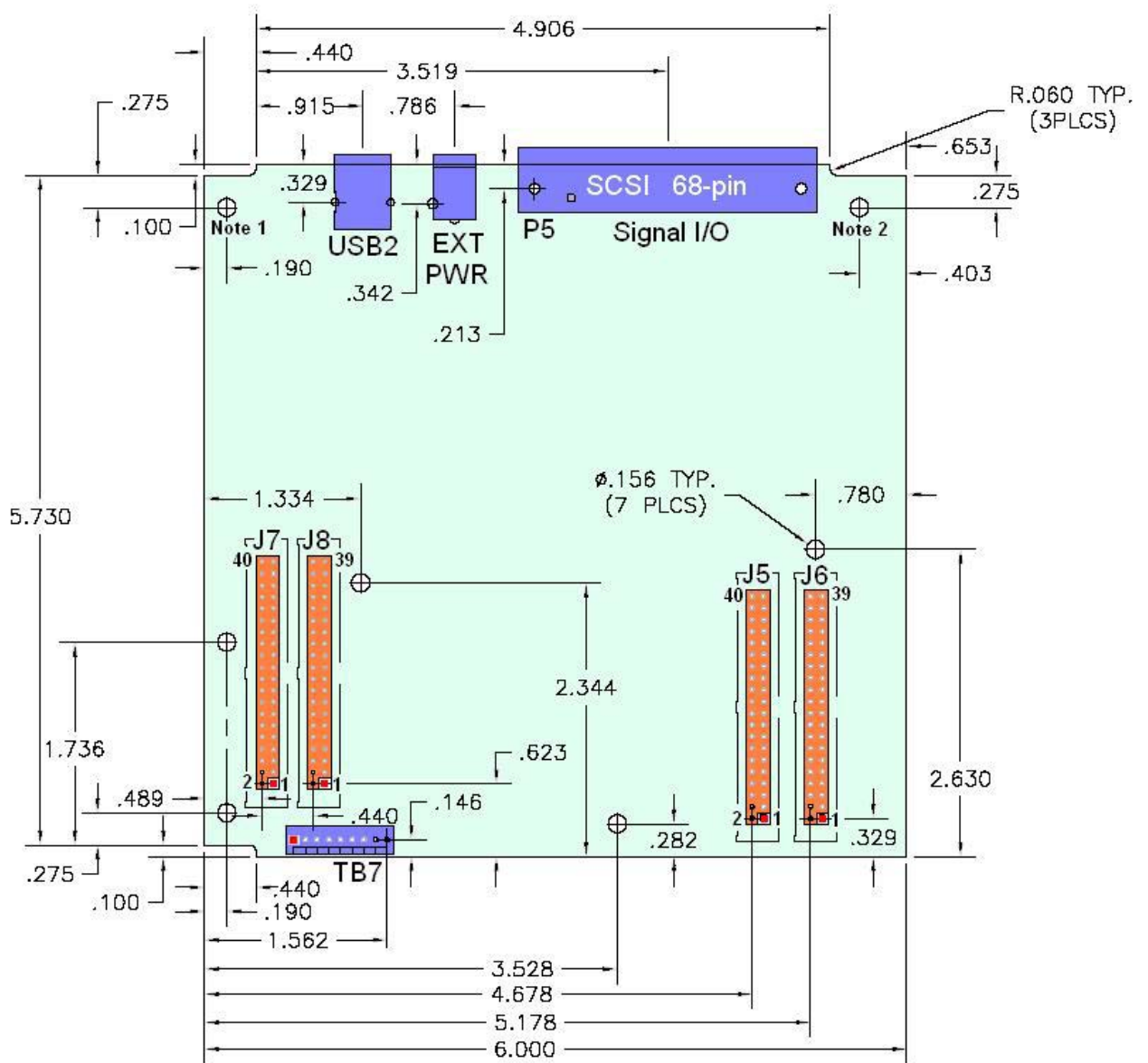
DaqBoard/3000USB Series – Board Dimensions

In general, all standoffs should be used to mount the board to a metal frame.

Note 1: The standoff at this location connects to the USB chassis for shunting electrostatic discharge.

Note 2: The standoff at this location connects to the DaqBoard/3000USB board's internal chassis plane for shunting electrostatic discharge.

WARNING !
Avoid redundant connections. Ensure there is no signal conflict between SCSI pins and the associated header pin (J5. J6. J7. and J8). Also ensure there is no conflict between TB7 (thermocouple connections) and the SCSI and/or the 40-pin headers. Failure to do so could possibly cause equipment damage and/or personal injury.

WARNING !

Turn off power to all devices connected to the system before making connections. Electrical shock or damage to equipment can result even under low-voltage conditions.

Scenario 1: Using CA-248 Cables to obtain DB37 Connectors
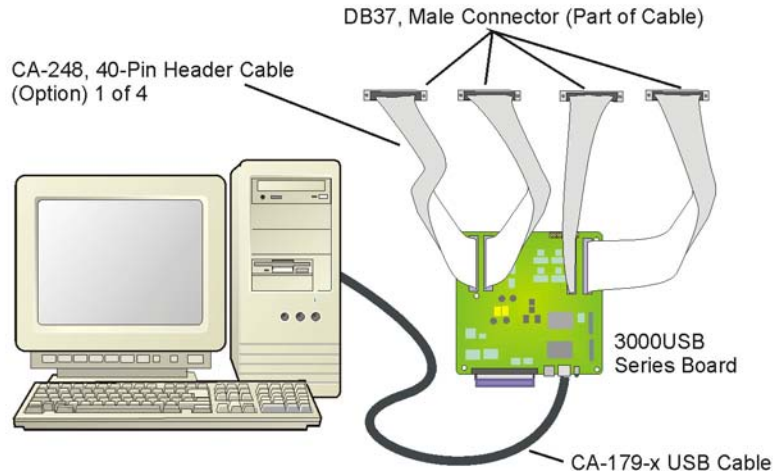
In this setup a CA-248 cable is connected to each of the 40-pin headers (J5, J6, J7, and J8). The result is four male DB37 connectors which, as can be seen from the pinouts, offer the same signal connectivity as the SCSI connector. Note that the J6 header is dedicated entirely to analog expansion and therefore is not applicable to /3001USB or /3005USB. As in all scenarios, **a CA-179-x USB cable is used to connect the /3000USB Series board to a USB port on the host PC**. USB2.0 is recommended.

If you need to find the name of your device, for example, if you are writing a custom program for multiple devices, navigate from the Windows Desktop to the Device Manager. The navigation path is:

Start➪Settings➪Control Panel➪System➪Hardware(Tab) ➪Device Manager➪Daqx PnP Devices

You will see the device listed in the format of DaqBoard/3000USB (see first figure, below).

You can change the name of the device by doing a *right-click* on the device name to open its properties dialog box, then clicking on the Properties tab (see second figure). You can then change the "FriendlyName" of the device.
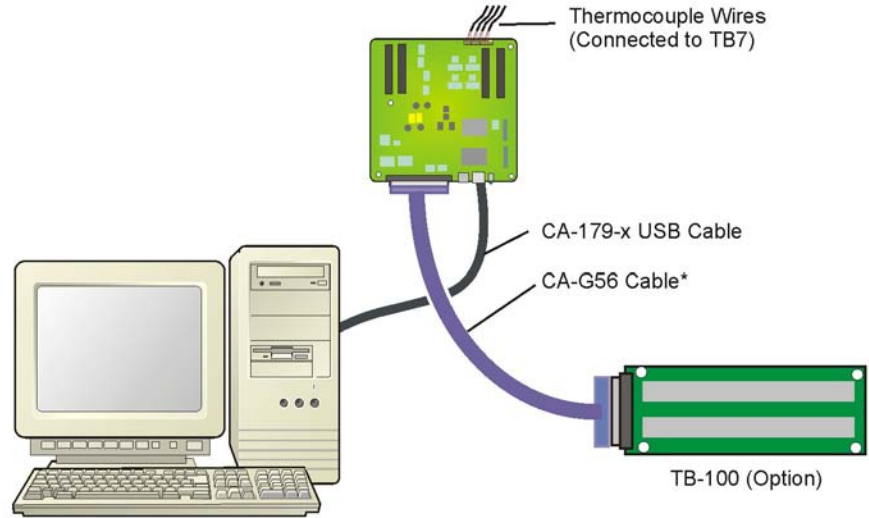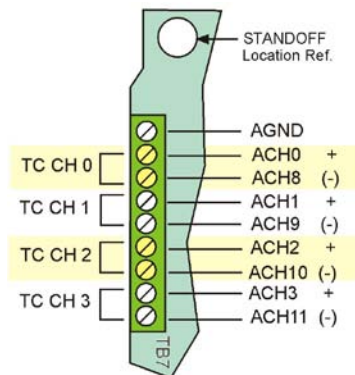

Locating DaqXPnP Devices   *Properties Dialog Box*

Scenario 2: Using a TB-100

Thermocouple Wires (Connected to TB7)

CA-179-x USB Cable

CA-G56 Cable*

TB-100 (Option)

In this setup a TB-100 screw-terminal board option is connected to the 68-pin SCSI connector via a CA-G56 shielded cable. However, the use of other cables is possible as noted below. In this example we can also see that 4 thermocouples are connected at TB7 (on the /3000USB board). This means that 8 analog channels [to obtain 4 differential TC channels] are required (see following figure). Redundant connections must be avoided. **A CA-179-x USB cable is used to connect the /3000USB Series board to a USB port on the host PC**. USB2.0 is recommended.

STANDOFF Location Ref.

AGND
TC CH 0 — ACH0 (+) / ACH8 (-)
TC CH 1 — ACH1 (+) / ACH9 (-)
TC CH 2 — ACH2 (+) / ACH10 (-)
TC CH 3 — ACH3 (+) / ACH11 (-)
TB7

WARNING !
Before connecting TC wires, ensure that the associated analog channels are not in use. Failure to do so could possibly cause equipment damage and/or personal injury.

The TB7 terminal block can be used to connect up to 4 thermocouples. The first TC channel makes use of Analog Channel 0 for its positive (+) lead and Analog Channel 8 for its negative (-) lead. The second TC channel uses analog Channels 1 and 9, and so on, as indicated in the pinout to the left.

In DaqBoard/3000USB Series applications, thermocouples should only be connected in differential mode. Connecting thermocouples in single-ended mode can cause noise and false readings. Appendix B of the user's manual includes additional information.

As in all scenarios, a CA-179-x USB cable is used to connect the /3000USB Series board to a USB2.0 port on the host PC.

* Any of the following 68-conductor expansion cables can be used to connect the TB-100 option the SCSI connector:

CA-G55	3 feet, ribbon cable.
CA-G56	3 feet, shielded expansion cable.
CA-G56-6	6 feet, shielded expansion cable.

Scenario 3: Using a TB-101 Terminal Board Option
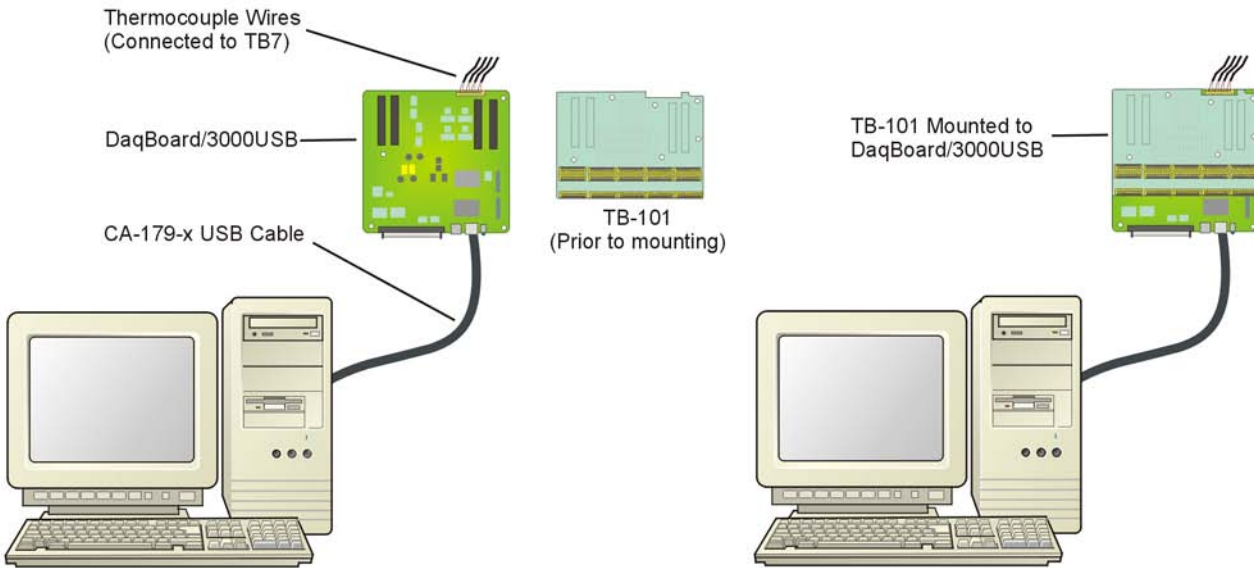
In this setup a TB-101 terminal board is plugged directly into the 40-pin headers (J5, J6, J7, and J8) of the main board. No cables are used in making this connection. "Stand-offs" are used to keep the boards from touching (instructions are provided on the following page).

In this example 4 thermocouples are connected at TB7 (on the /3000USB board). This means that 8 analog channels [to obtain 4 differential TC channels] are required (see following figure). Redundant connections must be avoided.
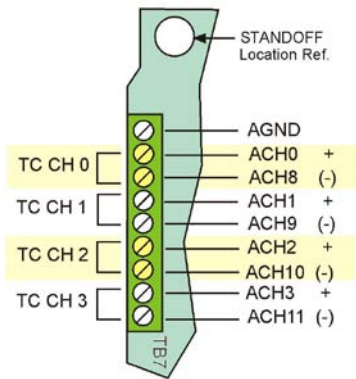
WARNING !

Before connecting TC wires, ensure that the associated analog channels are not in use. Failure to do so could possibly cause equipment damage and/or personal injury.

The TB7 terminal block [on the DaqBoard/3000USB] can be used to connect up to 4 thermocouples. The first TC channel makes use of Analog Channel 0 for its positive (+) lead and Analog Channel 8 for its negative (-) lead. The second TC channel uses analog Channels 1 and 9, and so on, as indicated in the pinout to the left.

In DaqBoard/3000USB Series applications, thermocouples should only be connected in differential mode. Connecting thermocouples in single-ended mode can cause noise and false readings. Appendix B of the user's manual includes additional information.

A CA-179-x USB cable is used to connect the /3000USB Series board to a USB port on the host PC. **USB2.0 is recommended.**

<table>
<tr><td colspan="2" align="center">**CAUTION**</td></tr>
<tr>
<td>**ATTENTION**
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE DEVICES</td>
<td>The discharge of static electricity can damage some electronic components. Semiconductor devices are especially susceptible to ESD damage. You should always handle components carefully, and you should never touch connector pins or circuit components unless you are following ESD guidelines in an appropriate ESD controlled area. Such guidelines include the use of properly grounded mats and wrist straps, ESD bags and cartons, and related procedures.</td>
</tr>
</table>

**Standoff Locations,
5 in Total**
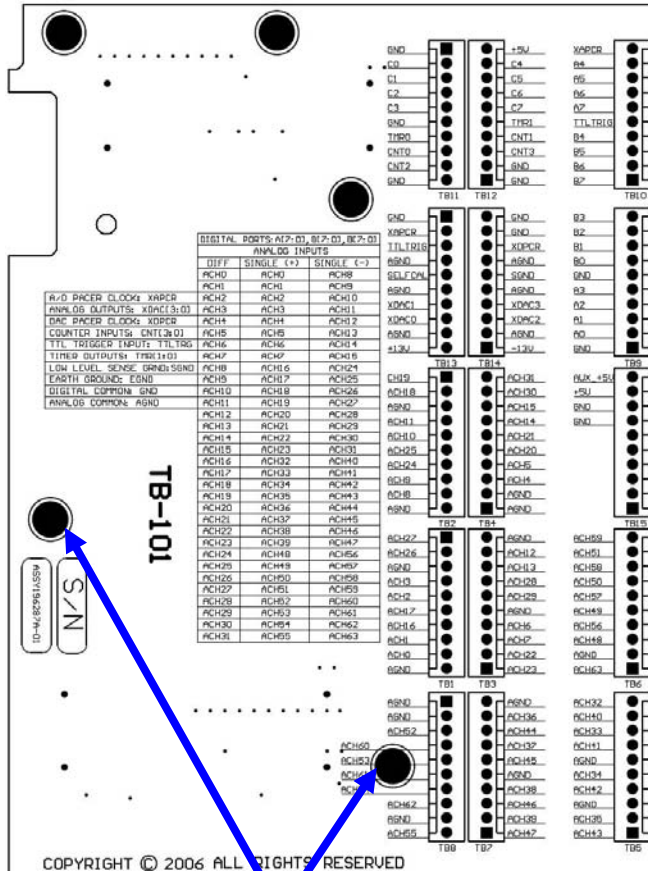
How to Mount the TB-101

Steps A through D relate to the following illustration.

A – After taking ESD precautions, remove the Hex Nuts from the 5 existing standoffs.
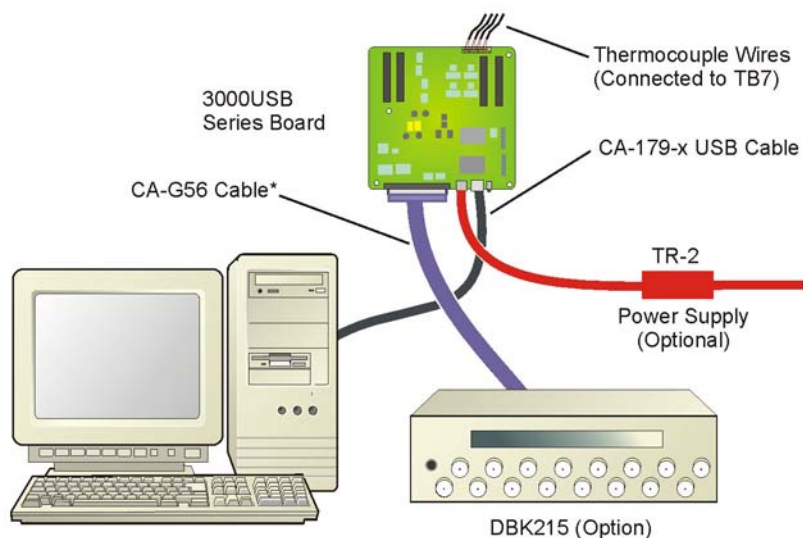
B – Thread the new ST-6-7 standoffs onto the existing standoffs. Tighten snug by hand.

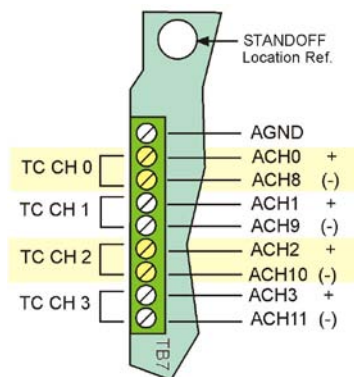C – Align the TB-101 with the new standoffs and position the board in place.

D – Using the Hex Nuts (removed in Step A), secure the TB-101 to the new standoffs. Tighten snug. Over-tightening will damage the board.
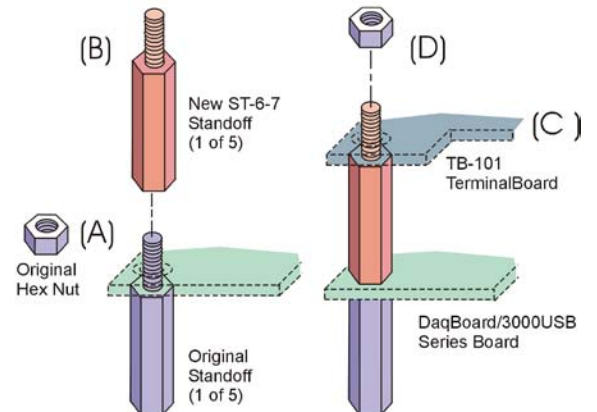
Scenario 4: Using a DBK215

In this setup a DBK215 BNC Module is connected to the 68-pin SCSI connector via a CA-G56 shielded cable. However, the use of other cables is possible as noted below. In this example we can also see that 4 thermocouples are connected at TB7 (on the /3000USB board). This means that 8 analog channels [to obtain 4 differential TC channels] are required (see following figure). Redundant connections must be avoided. A TR-2 power supply is being used, and is connected to the board's external power connector. **A CA-179-x USB cable is used to connect the /3000USB Series board to a USB port on the host PC.** USB2.0 is recommended.

<table>
<tr><td colspan="2" align="center">WARNING !</td></tr>
<tr><td></td><td>Before connecting TC wires, ensure that the associated analog channels are not in use. Failure to do so could possibly cause equipment damage and/or personal injury.</td></tr>
</table>

The TB7 terminal block can be used to connect up to 4 thermocouples. The first TC channel makes use of Analog Channel 0 for its positive (+) lead and Analog Channel 8 for its negative (-) lead. The second TC channel uses analog Channels 1 and 9, and so on, as indicated in the pinout to the left.

In DaqBoard/3000USB Series applications, thermocouples should only be connected in differential mode. Connecting thermocouples in single-ended mode can cause noise and false readings. Appendix B of the user's manual includes additional information.

As in all scenarios, a CA-179-x USB cable is used to connect the /3000USB Series board to a USB2.0 port on the host PC.

* Any of the following 68-conductor expansion cables can be used to connect the DBK215 module option the SCSI connector:

CA-G55	3 feet, ribbon cable.
CA-G56	3 feet, shielded expansion cable.
CA-G56-6	6 feet, shielded expansion cable.

<table>
<tr><td colspan="2" style="background:red;color:white;text-align:center">WARNING !</td></tr>
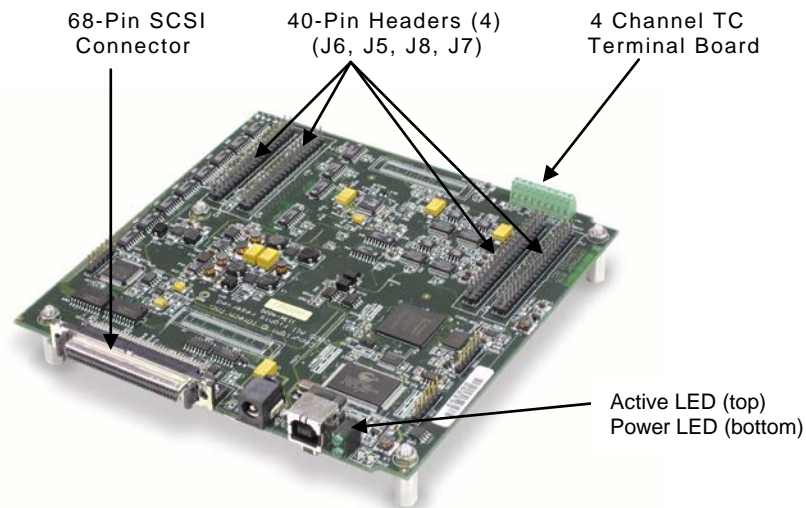<tr><td>⚡</td><td>Turn off power to all devices connected to the system before making connections. Electrical shock or damage to equipment can result even under low-voltage conditions.</td></tr>
</table>

<table>
<tr><td colspan="2" style="background:yellow;text-align:center">CAUTION</td></tr>
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</table>

DaqBoard/3031USB and DaqBoard/3035USB make use of J5 and J6 (two of the four 40-pin headers) for analog expansion. Pinouts for these and the remaining two headers (J7 and J8) are included in this section. A pinout for a 4-channel terminal board (TB7) is also included.

68-Pin SCSI Connector   40-Pin Headers (4) (J6, J5, J8, J7)   4 Channel TC Terminal Board

Active LED (top)
Power LED (bottom)

Locations of Signal Connectors and LEDs

LEDs: DaqBoard/3000USB Series boards have 2 LEDs located just right of the USB2 connector (see figure). The LEDs function as follows:

Active LED (Top LED)
This LED is on whenever active USB communication is taking place between the DaqBoard and the host PC. Note that the Active LED will be on solid during a data acquisition.

Power LED (Bottom LED)
The "Power" LED blinks during device detection and initialization; then remains on solid as long as the module has power. If there is insufficient power the LED will go off and a TR-2 [or TR-2U] power adapter will be needed.

Note that when the board is first powered there will likely be a momentary delay before the Power LED begins to blink, or come on solid.

68-Pin SCSI Connecter
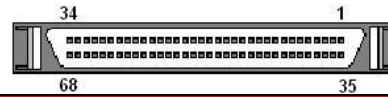
```
   34                              1
  [=================================]
  [=================================]
   68                             35
```

<table>
<tr><td colspan="2" style="background:red;color:white;text-align:center">WARNING !</td></tr>
<tr><td>⚡</td><td>Avoid redundant connections. Ensure there is no signal conflict between SCSI pins and the associated header pin (J5. J6. J7. and J8). Also ensure there is no conflict between TB7 (thermocouple connections) and the SCSI and/or the 40-pin headers. Failure to do so could possibly cause equipment damage and/or personal injury.</td></tr>
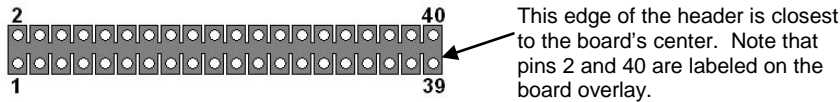</table>

Pin numbers refer to the 68-pin SCSI female connector, located on the DaqBoard.

Function		Pin		Pin	Function	
Analog input Channel 8		34		68	Analog input Channel 0	
Analog input Channel 1		33		67	Analog Common	
Analog Common		32		66	Analog input Channel 9	
Analog input Channel 10		31		65	Analog input Channel 2	
Analog input Channel 3		30		64	Analog Common	
Analog Common		29		63	Analog input Channel 11	
Analog input Channel 4		28		62	Low Level Sense Common	
Analog Common		27		61	Analog input Channel 12	
Analog input Channel 13		26		60	Analog input Channel 5	
Analog input Channel 6		25		59	Analog Common	
Analog Common		24		58	Analog input Channel 14	
Analog input Channel 15		23		57	Analog input Channel 7	
Analog Output 0 (**DAC0**) Note 1		22		56	Analog Output 3 (**DAC3**) Note 1	
Analog Output 1 (**DAC1**) Note 1		21		55	Analog Output 2 (**DAC2**) Note 1	
SELFCAL		20		54	Digital Common	
Vcc (+5 VDC)		19		53	Digital Common	
Digital I/O line A0	PORT A	18		52	Digital I/O line A1	PORT A
Digital I/O line A2		17		51	Digital I/O line A3	
Digital I/O line A4		16		50	Digital I/O line A5	
Digital I/O line A6		15		49	Digital I/O line A7	
Digital I/O line B0	PORT B	14		48	Digital I/O line B1	PORT B
Digital I/O line B2		13		47	Digital I/O line B3	
Digital I/O line B4		12		46	Digital I/O line B5	
Digital I/O line B6		11		45	Digital I/O line B7	
Digital I/O line C0	PORT C	10		44	Digital I/O line C1	PORT C
Digital I/O line C2		9		43	Digital I/O line C3	
Digital I/O line C4		8		42	Digital I/O line C5	
Digital I/O line C6		7		41	Digital I/O line C7	
TTL Trigger Input		6		40	Digital Common	
Counter Input CTR0		5		39	Counter Input CTR1	
Counter Input CTR2		4		38	Counter Input CTR3	
Timer Output 0		3		37	Timer Output 1	
A/D Pacer Clock Input/Output		2		36	Digital Common	
DAC Pacer Clock I/O		1		35	Digital Common	

Note 1: DaqBoard/3001USB and /3031USB each include DAC0, DAC1, DAC2, and DAC3.
DaqBoard/3005USB and /3035USB have no DACs.

J5 and J6, 40-Pin Headers for Analog Channels

Note: All channels are available for DaqBoard/3031USB and /3035USB. Channels 16 through 63 are not available for DaqBoard/3001USB and /3005USB.


This edge of the header is closest to the board's center. Note that pins 2 and 40 are labeled on the board overlay.

Each 40-pin header can be terminated out to a DB37 male connector via the CA-248 cable.

Analog CH.	Pin	J5		Pin	Analog CH.
CH 27	1			2	CH 19
CH 26	3			4	CH 18
Analog Com.	5			6	Analog Com.
CH 3 ⚡	7			8	CH 11 ⚡
CH 2 ⚡	9			10	CH 10 ⚡
CH 17	11			12	CH 25
CH 16	13			14	CH 24
CH 1 ⚡	15			16	CH 9 ⚡
CH 0 ⚡	17			18	CH 8 ⚡
Analog Com.	19			20	Analog Com.
CH 23	21			22	CH 31
CH 22	23			24	CH 30
CH 7	25			26	CH 15
CH 6	27			28	CH 14
Analog Com.	29			30	CH 21
CH 29	31			32	CH 20
CH 28	33			34	CH 5
CH 13	35			36	CH 4
CH 12	37			38	Analog Com.
Analog Com.	39			40	Analog Com.

Analog CH.	Pin	J6		Pin	Analog CH.
CH 43	1			2	CH 59
CH 35	3			4	CH 51
Analog Com.	5			6	CH 58
CH 42	7			8	CH 50
CH 34	9			10	CH 57
Analog Com.	11			12	CH 49
CH 41	13			14	CH 56
CH 33	15			16	CH 48
CH 40	17			18	Analog Com.
CH 32	19			20	CH 63
CH 47	21			22	CH 55
CH 39	23			24	Analog Com.
CH 46	25			26	CH 62
CH 38	27			28	CH 54
Analog Com.	29			30	CH 61
CH 45	31			32	CH 53
CH 37	33			34	CH 60
CH 44	35			36	CH 52
CH 36	37			38	Analog Com.
Analog Com.	39			40	Analog Com.

⚠ **For Analog Channels 0, 1, 2, 3, 8, 9, 10, and 11: Read the following WARNING which applies to their use as thermocouple channels.**

TB7, 4-Channel Thermocouple Terminal Block
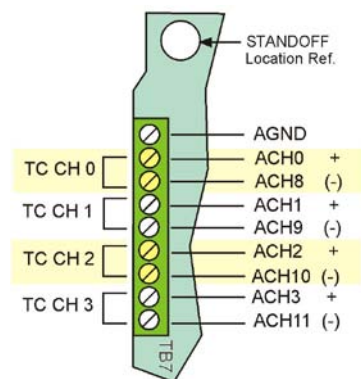
WARNING !
⚠ **Before connecting TC wires, ensure that the associated analog channels are not in use. Failure to do so could possibly cause equipment damage and/or personal injury.**

The TB7 terminal block can be used to connect up to 4 thermocouples. The first TC channel makes use of Analog Channel 0 for its positive (+) lead and Analog Channel 8 for its negative (-) lead. The second TC channel uses analog Channels 1 and 9, and so on, as indicated in the pinout to the left.

J7 and J8, 40-Pin Headers for
Digital Ports, Counters, Timers, DACS, Triggers, Pacer Clocks and Other Signals

Note: The 4 DAC channels are available for DaqBoard/3001USB and /3031USB.
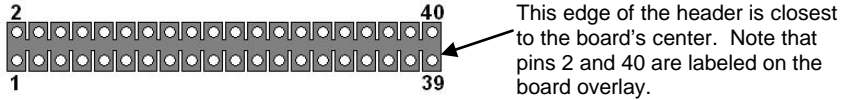The DACs do not apply to DaqBoard/3005USB and /3035USB.

2 ... 40

1 ... 39

This edge of the header is closest to the board's center. Note that pins 2 and 40 are labeled on the board overlay.

CA-248

DB-37

40-pin header

Each 40-pin header can be terminated out to a DB37 male connector via the CA-248 cable.

J7

Digital CH.		Pin			Pin	Digital CH.	
Digital GND		1			2	XAPCR *	
P O R T A	CH A0	3			4	CH A4	**P O R T A**
	CH A1	5			6	CH A5	
	CH A2	7			8	CH A6	
	CH A3	9			10	CH A7	
Digital GND		11			12	XTTLTRG	
P O R T B	CH B0	13			14	CH B4	**P O R T B**
	CH B1	15			16	CH B5	
	CH B2	17			18	CH B6	
	CH B3	19			20	CH B7	
Digital GND		21			22	Exp +5 Volts	
P O R T C	CH C0	23			24	CH C4	**P O R T C**
	CH C1	25			26	CH C5	
	CH C2	27			28	CH C6	
	CH C3	29			30	CH C7	
Digital GND		31			32	Timer 1	
Timer 0		33			34	Counter 1	
Counter 0		35			36	Counter 3	
Counter 2		37			38	Digital GND	
Digital GND		39			40	Digital GND	

* XAPCR = A/D Pacer Clock I/O

J8

Signal	Pin			Pin	Signal
+13VA	1			2	-13VA
--X--	3			4	--X--
Analog Com.	5			6	Analog Com.
XDAC0	7			8	XDAC2
XDAC1	9			10	XDAC3
Analog Com.	11			12	Analog Com.
SelfCal	13			14	SGND **
Analog Com.	15			16	Analog Com.
XTTLTRG	17			18	XDPCR ***
XAPCR*	19			20	Digital GND
Digital GND	21			22	Digital GND
--X--	23			24	--X--
Exp. +5 Volts	25			26	Aux Pwr
--X--	27			28	--X--
--X--	29			30	--X--
--X--	31			32	--X--
--X--	33			34	--X--
--X--	35			36	--X--
--X--	37			38	--X--
--X--	39			40	--X--

-- X-- = Not Connected

** SGND = Signal Ground (Low Level Sense Common)
*** XDPCR = DAC Pacer Clock I/O

Reference Note:
The DaqBoard/3000USB Series Users Manual (p/n 1136-0902) includes a pinout for the TB-100 screw-terminal board connector option. It also includes an appendix pertaining to the DBK215 16-BNC Connector Module. A PDF version of the manual is included on the data acquisition CD and is also installed on your PC in the DaqView program group which can be accessed from your Windows' Desktop Start Menu.*

*Default location.

CA-248, 40-Position Header to DB-37 Male, Ribbon Cable
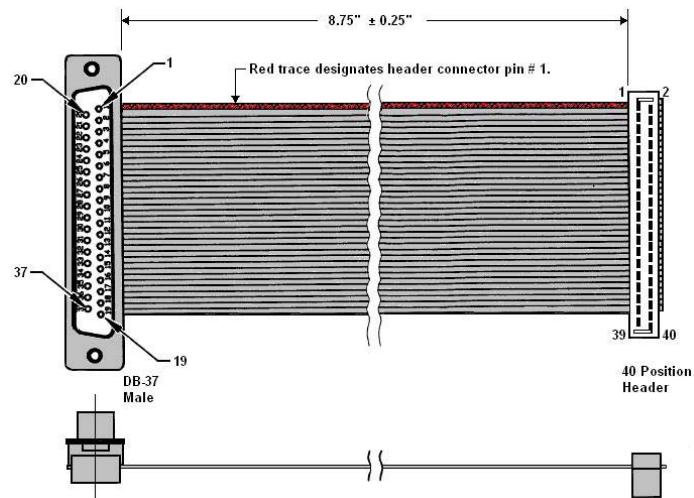
CA-248 Pinout, DB-37 Pins listed Sequentially

DB37 Pin No.	40 Position Header Pin No.	DB37 Pin No.	40 Position Header Pin No.	DB37 Pin No.	40 Position Header Pin No.	DB37 Pin No.	40 Position Header Pin No.
1	1	11	21	21	4	31	24
2	3	12	23	22	6	32	26
3	5	13	25	23	8	33	28
4	7	14	27	24	10	34	30
5	9	15	29	25	12	35	32
6	11	16	31	26	14	36	34
7	13	17	33	27	16	37	36
8	15	18	35	28	18	---	---
9	17	19	37	29	20	---	---
10	19	20	2	30	22	---	---

CA-248 Pinout, 40 Position Header Pins listed Sequentially

DB37 Pin No.	40 Position Header Pin No.	DB37 Pin No.	40 Position Header Pin No.	DB37 Pin No.	40 Position Header Pin No.	DB37 Pin No.	40 Position Header Pin No.
1	1	6	11	11	21	16	31
20	2	25	12	30	22	35	32
2	3	7	13	12	23	17	33
21	4	26	14	31	24	36	34
3	5	8	15	13	25	18	35
22	6	27	16	32	26	37	36
4	7	9	17	14	27	19	37
23	8	28	18	33	28	---	38
5	9	10	19	15	29	---	39
24	10	29	20	34	30	---	40

Connecting Thermocouple Wires

No(te!   **In DaqBoard/3000USB applications, thermocouples must be connected *differentially*. Failure to do so will result in false readings.**

Differential connection is made as follows:

      (a)   the red wire connects to the channel's Low (L) connector.
      (b)   the second [color-coded] wire connects to the channel's High (H) connector.
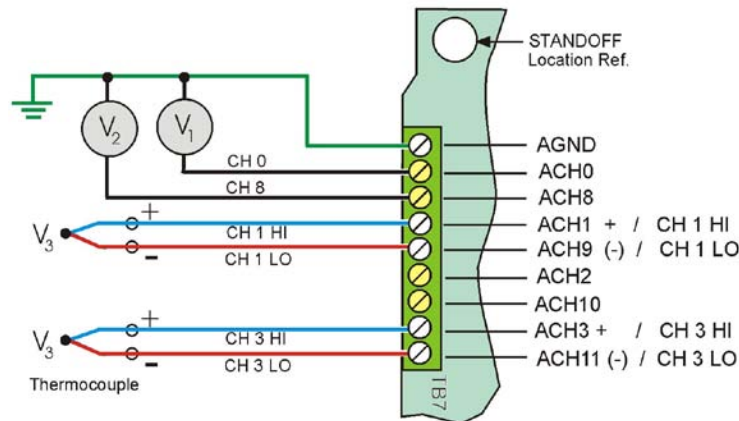
Single-Ended and Differential Connections to TB7

The figure shows voltage Single-ended connections for V1 (Channel 0) and V2 (Channel 8); it also shows V3 and V4, each resulting from a different thermocouple. In the case of V3 and V4, *Differential* mode is being used. The HI (+) line from the thermocouple is shown connected to Channel 1 HI; and the LO (negative) side is connected to Channel 1 LO. Notice that Channel 1 LO is the same screw terminal connection that would be used for CH 9 Single-Ended. V4 is connected in a similar manner (see figure).

No(te!   **In DaqBoard/3000USB applications, thermocouples should only be connected in differential mode. Connecting thermocouples in single-ended mode can cause noise and false readings. Appendix B of the user's manual includes additional information.**
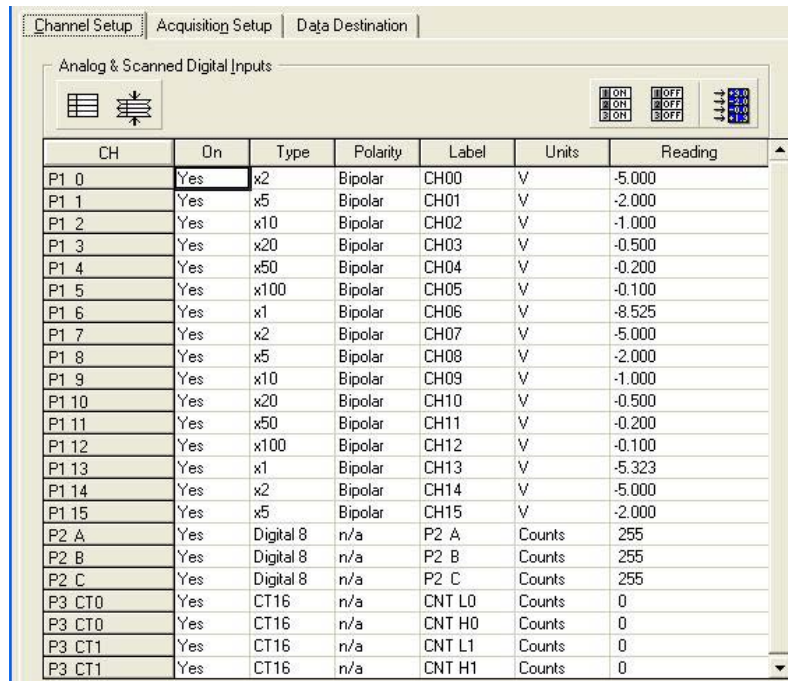
(3) Start DaqView

From Windows, open DaqView by double clicking on its icon, or use the Windows Desktop Start menu to access the program. You will find *DaqView* listed in the **Program** group (Use the desktop Start Menu / Programs to access the group).

Once the program is executed, software automatically identifies your device and brings up DaqView's *Main Window*. This window is discussed briefly in the following text, and in more detail in the *DaqView Manual* PDF included on the installation CD.

(4) Configure the System

The Channel Setup window (first tab on lower portion of main window) displays the analog and scanned digital input channels and allows you to configure them.
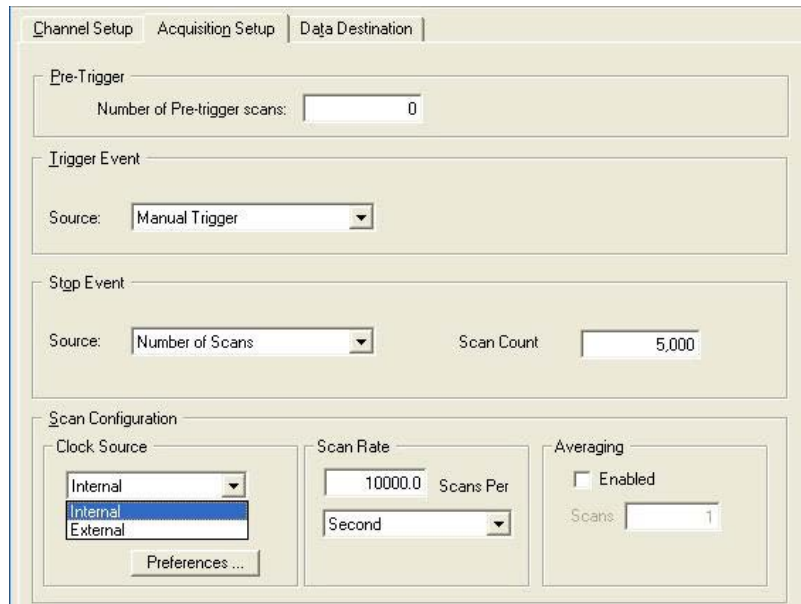

Channel Setup Tab Selected

Selecting the second tab of the main window displays the Acquisition Setup window, used to set triggering and configure the scan. These settings will be used when an acquisition to disk is started.

Acquisition Tab Selected

Note: The *Data Destination window* (not shown) lets you designate the directory for acquired data and the desired file formats.

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(5) *Collect Data*

Click the Enable Readings Column button (17), or the Start All Indicators button (5); the data acquisition begins and the *readings* column becomes active.   Click the Acquire button (12) to send the data to disk.
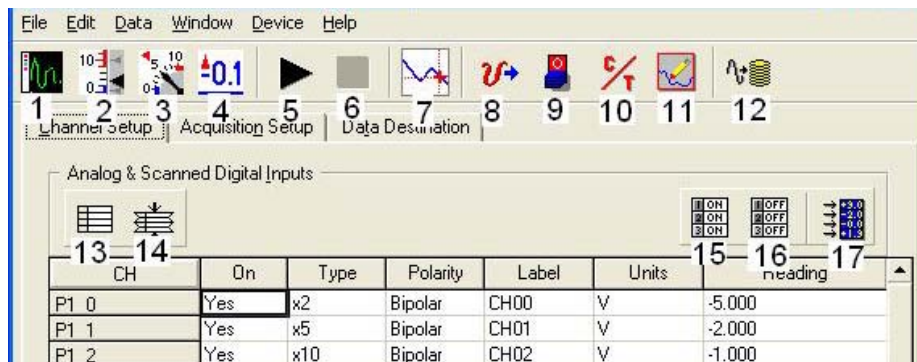
DaqView Main Window **Channel Setup Tab Selected**

Main Window, a Brief Description of Button Control Functions		
#	Item	Description
1	Scope	Brings up a window from which Scope and/or Chart displays can be configured and used for analyzing data in relation to x and y axes.
2	Bar Graph Meters	Displays a bar graph meter.
3	Analog Meters	Displays an analog dial meter.
4	Digital Meters	Displays a digital meter.
5	Start All Indicators	Starts displaying data in the Reading column and any open Chart or Meters window.
6	Stop All Indicators	Stops displaying data in the Reading column and any open Chart or Meters window.
7	View File Data	Launches an independent post-data acquisition program, such as PostView, if installed. The data acquisition CD includes a PDF version of the post data acquisition document.
8	Analog Output	Displays the Analog Output window of the available DAC channels.
9	Digital I/O	Displays the Digital I/O window.
10	Counter/Timer	Displays the Counter/Timer window.
11	Waveform & Pattern Output	Displays the Arbitrary Waveform and Streamed Output windows.
12	Acquire	Activates an acquisition of data to a file.
13	Show ALL Channels	Expands Analog & Scanned Digital Inputs spreadsheet to show all channels, whether active or not.
14	Hide INACTIVE Channels	Condenses the Analog & Scanned Digital Inputs spreadsheet, to hide channels that are inactive.
15	Turn All Visible Channels ON	Turns all visible channels ON. Hidden channels will remain off.
16	Turn All Channels OFF	Turns all the channels OFF.
17	Channel Reading	A toggle button that enables [or disables] the Channel Reading column of the Analog and Scanned Digital Input spreadsheet. Some windows require the Channel Reading column to be disabled when changing channels or other parameters. This command is also available from the Data pull-down menu.

Click one of the toolbar's display icon buttons to see your data in the form of a scope or meter display. Button (1) brings up the scope window, which allows you to set up a scope and chart displays; buttons 2, 3, and 4 are for: bar graph meters, analog meters, and digital meters, respectively.

Customer Assistance

To report problems and receive support, call your service representative. Before calling for assistance, please refer to the portions of the *DaqBoard/3000USB User's Manual* that are relevant to your situation.

Reference Notes:
- o Refer to the *DaqView* PDF for information regarding that application.
- o Refer to the *DaqBoard/3000USB Series Users Manual* PDF for hardware related information, including pinouts and block diagrams.
- o The default location for PDF documentation is in the Programs group, which can be accessed from the Windows Desktop.
- o The PDFs can also be accessed directly from the Data Acquisition CD via the <View PDFs> button on the opening splash screen.
- o The PDFs can also be accessed from our web site.

When you call, please have the following information available:
- Hardware model numbers
- Serial Numbers
- Software version numbers for DaqView
- Windows Operating System
- Type of computer and features

When returning equipment use original shipping containers or equivalent to prevent shipping damage. In addition to the above information, please be sure to include:
- The return authorization number (we provide you with this number after you contact us)
- The name and phone number of an individual who can discuss the problems encountered
- Any special instructions regarding return shipping
- A copy of troubleshooting notes and comments on tests performed and all problem-related conditions.

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