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**Reference Notes:**

- Chapter 2 includes pinouts for P1, P2, P3, and P4. Refer to pinouts applicable to your system, as needed.
- In regard to calculating system power requirements, refer to *DBK Basics* located near the front of this manual.

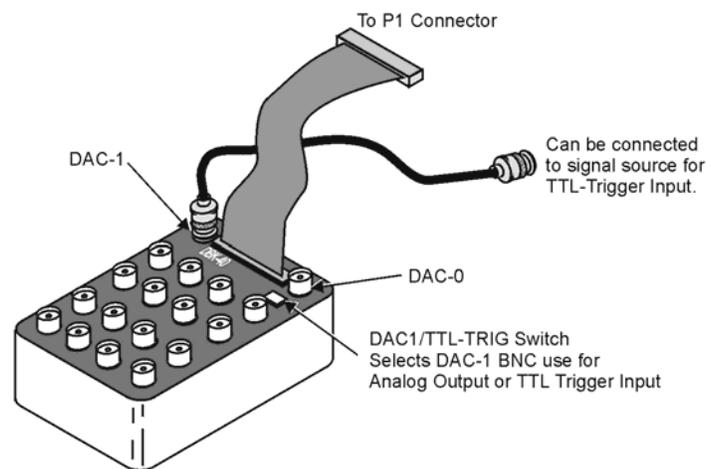
## Overview

The DBK40 is a termination panel consisting of 18 BNC connectors. The unit provides an easy means of attaching analog signals from BNC cables to a DB-37 connector, such as P1 on a LogBook, a Daq device, or a DBK module.

The panel includes:

- 16 analog input channels
- 2 analog output channels (DAC-0 and DAC-1)
- a slide switch (DAC1/TTL-TRIG Switch)
- a male DB37 connector

The DAC1/TTL-TRIG Switch is used to select the mode of the DAC-1 BNC connector. DAC-1 can be used as an analog output channel, or as a TTL Trigger Input.



**DBK40**

## Hardware Setup

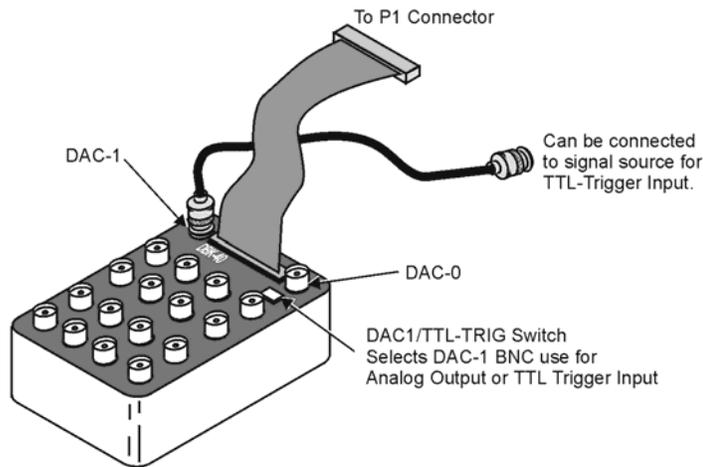
The DBK40 has a male DB37 connector that is pin-compatible with the P1 port. Typically a 6-foot ribbon cable is provided to attach the DBK40 to the P1 connector of the primary acquisition device, e.g., a LogBook or DaqBook.

### CAUTION



Connecting the DBK40 to a port other than P1 may result in damage to the system.

Connect one end of the ribbon cable to the DB37 connector of the DBK40 and the cable's other end to the Analog I/O Port (P1) of the primary data acquisition device.



## Using the DBK40

The DBK40 is equipped with BNC connectors for 16 single-ended or 8 differential inputs. Also provided are BNC terminals for DAC0 and DAC1 analog outputs.

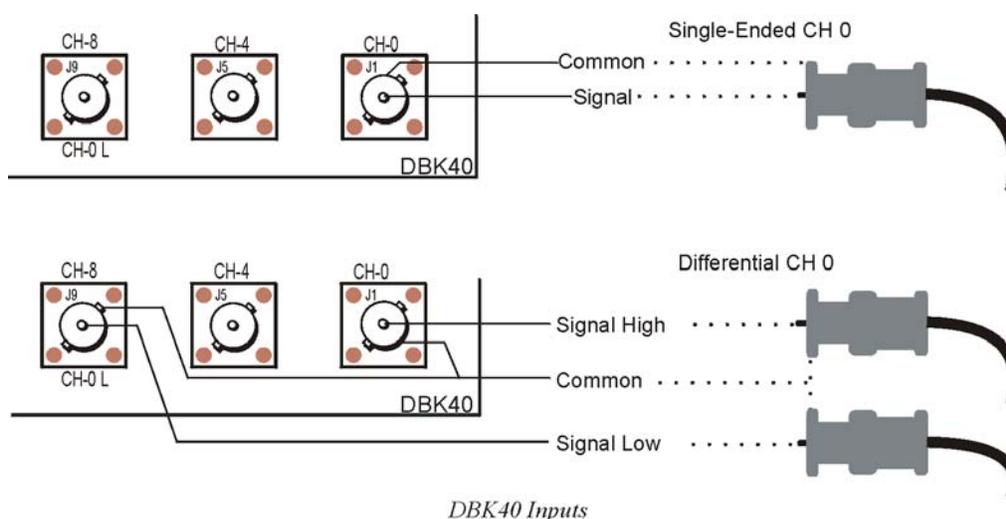
The DAC-1 connector may be used for access to the LogBook or Daq Device Analog I/O TTL trigger input. The position of the DBK40 slide switch determines the use of DAC-1, as indicated in the following table. Verify that this switch is in the correct position for your application.

Switch Setting	Description
TTL/TRIG	Allows the connector to be used for TTL trigger input.
DAC-1	Allows the connector to be used DAC-1 output.

The collars of all of the BNC connectors are common to each other and analog ground. When the TTL trigger input is selected (via the slide switch), the isolated ground plane of the TTL-TRG/DAC1 connector is referenced to digital or TTL ground. Most of the top area of the DBK40's PC board is ground plane that provides excellent low-impedance, low-noise signal interfacing.

Connect your analog signals to the unit as you would to any other BNC connector. The outer shell is ground; the center pin is the signal.

The figure below shows connections for single-ended and differential inputs. In the differential mode, channels 0 to 7 are high; 8 to 15 are low (0 & 8, 1 & 9, 2 & 10, etc).



## DBK40 - Specifications

**Name/Function:** BNC Analog Interface Module

**Connection:** Male DB37 mates with P1.

**Analog Input Connection:** One BNC connector for each of 16 analog input channels.

**Single-Ended Mode:** Center conductor carries signal, outer conductor carries signal ground.

**Differential Mode:** Center conductor of two adjacent BNC connectors carries high and low input signals; the outer conductors of both are attached to system ground.

**Analog Output Connection:** One BNC connector for each of 2 analog output channels; center conductor carries signal, outer conductor carries signal ground.

**TTL Trigger Input Connection:** One analog output BNC connector can be switched to provide a TTL trigger input connection; in TTL mode, the second analog output channel is unavailable on the BNC connector.

**Size:** 6.8" wide x 5.3" long x 2.3" high

**Weight:** 21 oz

**Length of Supplied Cable:** 6 ft



Notes