

Technical Note

Pin Connections for Measurement Computing Interface Cards - Ballistic Measurement System

Most Recent Revision Date: 2 February 2004

The Ballistic Measurement System interfaces with the computer by two methods:

- 1) USB Interface custom developed by Fitness Technologies
- 2) Measurement Computing (formerly ComputerBoards) interface cards

This technical note describes the pin connections used for the Measurement Computing interface.

In summary, the BMS software expects the displacement signal on AD Channel 0. Force input depends on the number of force channels to be collected. For single force input (e.g. from Kistler Quattro Jump plate) the force signal is expected on AD channel 1. Early BMS systems used a 12 volt rechargeable battery supply to power the transducer. Current systems use the +5V supply on the card to power the linear cable extension transducer.

For four force channel inputs (e.g. Kistler and AMTI multiaxial force plates) the four force channels are expected on AD channel 1, 2,3, and 4. For control of the brake system, the BMS sets the voltage on DA channel 0. To provide a synch pulse for output to other data collection systems (e.g. EMG) the BMS takes DIO 1 high at the start of the sampling period and takes it low at the completion. For test purposes, jumpers are also placed between DIO 0 and AD channel 7. This is not necessary for normal function of the BMS but can be used to test the correct installation of the interface card and drivers. Sample pin connections for the most common interface card used the PC-Card DAS16/12AO is provided below.

PC-Card DAS16/12 AO

