

# AccuSway<sup>PLUS</sup>

For Balance and Postural Sway Measurement



CE

## DESCRIPTION

AMTI's AccuSway<sup>PLUS</sup>\* system is a complete solution for quantifying and evaluating human balance.

AccuSway<sup>PLUS</sup> was developed and built to be economical, portable, and easy to use.

The AccuSway<sup>PLUS</sup> uses a Hall Effect based sensor design. This one piece sensor element provides extremely high overload protection on all axes.

The AccuSway<sup>PLUS</sup> **measures the three forces (Fx, Fy, Fz) and the three moments (Mx, My, Mz)** involved in balance, providing outputs that allow easy computation of the center-of-pressure coordinates.

A grid on the surface of the platform provides base-of-support coordinates which can be combined with the balance data, allowing the center-of-pressure (COP) to be plotted relative to the subject's foot position.

The AccuSway<sup>PLUS</sup>

- provides a large support surface
- can be used with a desktop or laptop computer
- contains complete built-in electronics
- has an external input that can be used to synchronize data
- lightweight
- low profile

## Digital Output

Allows system output to plug directly into an RS-232 serial port (interface box included). USB output available.

## Analog Output

Eight channels of analog outputs (+/- 10 V) are provided corresponding to Fz1, Fz2, Fz3, Fz4, Fx1, Fx2, Fy1, and Fy2, which may be summed in the software to provide Fx, Fy, Fz, Mx, My, and Mz.

## SOFTWARE

The AccuSway<sup>PLUS</sup> can be used with AMTI's Balance Clinic or Balance Trainer software. Balance Clinic is ideal for basic static balance applications, and Balance Trainer is intended for clinical balance research.

### Balance Clinic Features

- Subject database
- Test Protocol
- Real Time Acquisition and Display
- Simple Test Sequence
- Trial and Batch Analysis
- Export data in ASCII Format
- Easy recording of Base of Support
- User Options: units, trigger setup, user defined variables, filters

### Balance Trainer Features

Includes the same features as Balance clinic, as well as the following:

- Real Time Visual Balance Feedback
- Programmable Targets and Obstacles
- Customized Training Regimens
- Limits of Stability sway marking

## EXTERNAL SYNC SIGNAL

When this dedicated digital input line is brought to ground, the platform's internal processor will transmit a unique data set to the PC.

\*U.S. Patent #5,814,740.

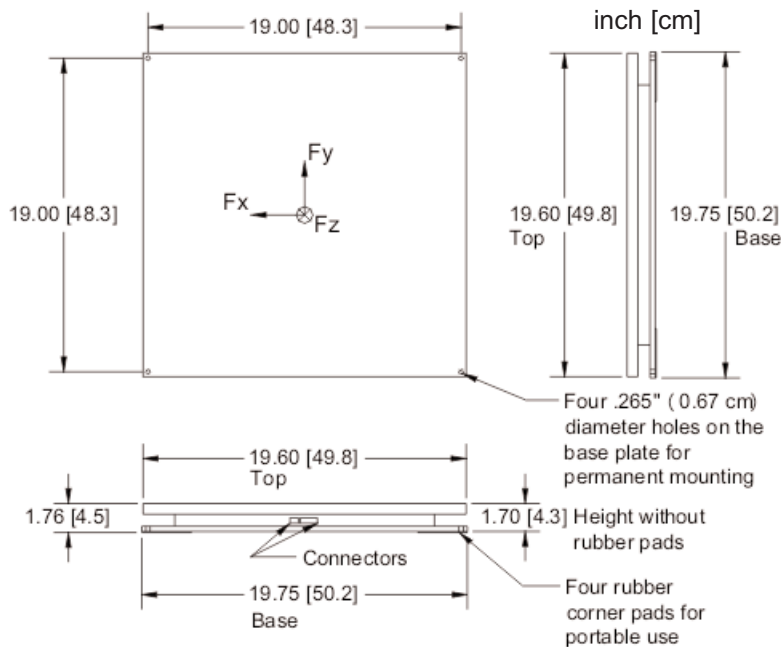
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**AMTI**

Fz Capacity, lb (N)	250 (1112)
Fx, Fy Capacity, lb (N)	40 (180)
Mz Capacity, in-lb (Nm)	300 (34)
Resultant Moment Capacity- $\sqrt{(Mx^2+My^2)}$ , in-lb (Nm)	1600 (181)
Fz Natural Frequency	120 Hz
Fx, Fy Natural Frequency	100 Hz
Dimensions, in (mm)	1.73 x 19.69 x 19.69 (44 x 500 x 500)
Weight, lb (kg)	25 (11.4)
Digital Data Rate	Software selectable 50, 60, 100, 120, 200, 240, 300, 400, 500, 600, 1000, or 1200 data sets per second. 12 bit resolution.
Interface	RS232 serial port, user selectable 57.6K or 115.2K Baud. Usable at up to 1200 data sets per second at 230K Baud with USB converter.
External Sync Signal	Active = low volts, switch to ground (0-.9V). Inactive = high volts, open circuit with internal pull up resistor. Protected to +/- 18V. 1K Ohm input resistance.
Digital Data Transmission	Proprietary binary format
Power Supply	7.5 VDC, 110V or 220V input power supply included
Minimum Computer Requirements	Windows 98 operating system, Pentium 450 MHz processor, 64 MB Ram, and an RS232 serial port. Also compatible with Windows 2000/Me/XP and a USB port.
Filters	Fixed 100 Hz 3rd order analog.



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