

AccuGait

Portable Gait & Balance Platform



DESCRIPTION

AMTI's AccuGait* System is a complete portable solution for quantifying and analyzing human gait and balance. The AccuGait is accurate, economical, and easy to use with AMTI's powerful NetForce/BioAnalysis software package. The AccuGait System features:

Multi-component Measurement

Forces: F_x , F_y , F_z
Moments: M_x , M_y , M_z

Digital Output

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

Analog Outputs

Eight channels of analog outputs ($\pm 10V$) are provided corresponding to F_{z1} , F_{z2} , F_{z3} , F_{z4} , F_{x1} , F_{x2} , F_{y1} , and F_{y2} , which may be summed in the software to provide F_x , F_y , F_z , M_x , M_y , and M_z .

Hall Effect Sensor Based Design

One piece sensor element provides extremely high overload protection on all axes.

No Mounting Necessary

Just place the platform on a flat surface.

Minimal Components

Only the platform, cable, power supply, interface box, and a computer are needed to collect data. One or two platforms can be connected to a single serial port.

Portable Walkway Available

AMTI's portable walkway is a convenient flooring solution for the AccuGait.

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.

SOFTWARE

AMTI's NetForce/BioAnalysis software acquires, analyzes, and plots data from the AccuGait platform at a rate of 50, 60, 100, 120 or 200 data sets per second with an RS-232 output and additional rates of 240, 300, 400, 500, 600, 1000, or 1200 with a USB converter. NetForce provides a simple user interface and extensive database function for easy trial set-up and data acquisition. BioAnalysis performs a comprehensive analysis of the gait data and presents many summarizing parameters that can be averaged across numerous selectable trials.

BioAnalysis offers various data plots, including:

- Forces/Moments vs. Time
- Batch processing of plots
- Overlays of various trials for comparison
- Custom plot design

BioAnalysis calculates statistical parameters using data from a single data file or from multiple sets of data files.

BioAnalysis' ability to calculate the minimum, maximum, average, and standard deviation across a set of data files allows the easy compilation of a baseline for any study.

BioAnalysis allows the user to export the raw channel data and statistical parameters to ASCII files to be imported into spreadsheet programs like Excel, LOTUS, etc., for further analysis.

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

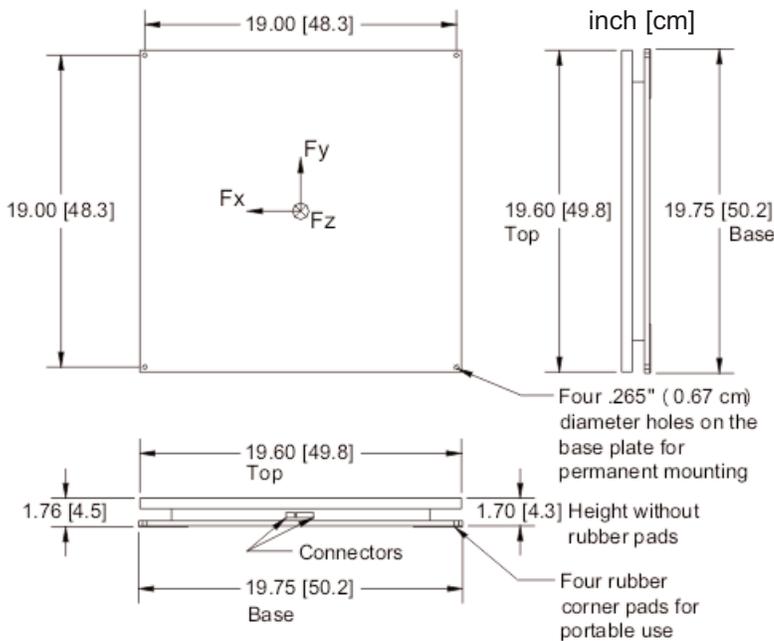
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Bulletin ACG-0107

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Fz Capacity, lb (N)	300 (1334)
Fx, Fy Capacity, lb (N)	100 (450)
Mz Capacity, in-lb (Nm)	750 (85)
Resultant Moment Capacity- $\sqrt{(M_x^2+M_y^2)}$, in-lb (Nm)	2000 (226)
Fz Natural Frequency	150 Hz
Fx, Fy Natural Frequency	140 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 a 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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