

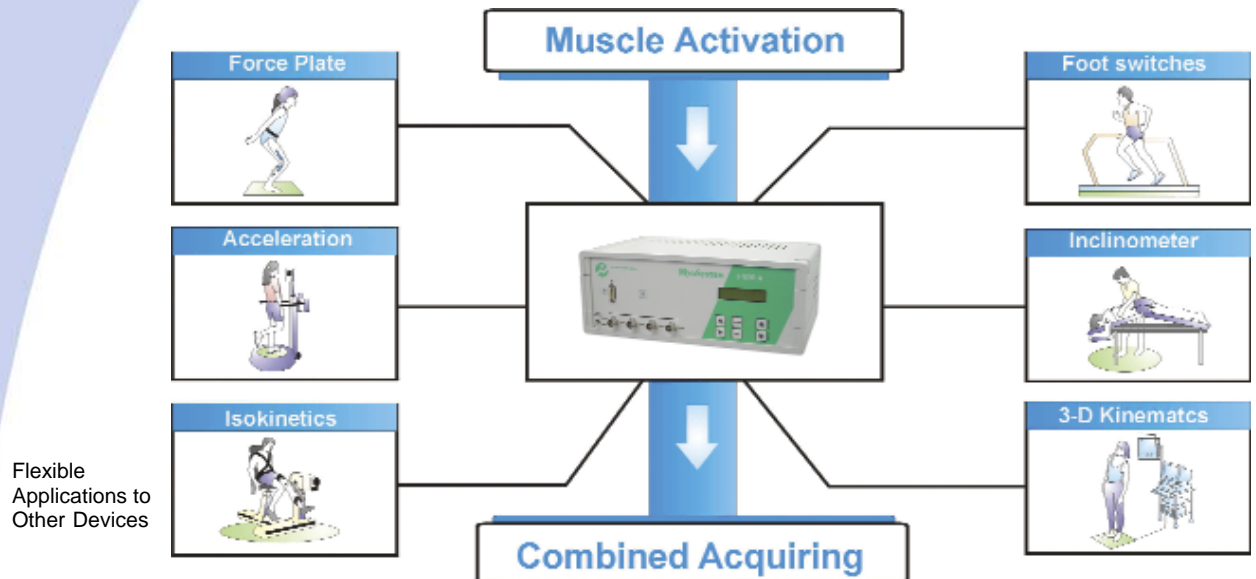


Product Overview

The MyoSystem™ 1400A surface and fine-wire electrode EMG unit is a highly versatile device ideal for the most demanding research studies, yet simple enough to use for clinical applications. The system is available as a 4, 8, 12 or 16-channel unit. This instrument features Noraxon's internationally patent-protected amplifier technology to provide clean, consistent, and reliable EMG signals during any type of isometric or dynamic exercise. The 1400A is fully compatible with Noraxon's line of biomechanical sensors. This allows any EMG lead to be freely exchanged with other sensor types, like force, angle, acceleration, inclination, and more. Each system is equipped with four isolated analog input channels that enable the instrument to measure a variety of analog signals from biomechanical devices in synchrony with EMG such as motion analysis, force plates, etc. The 1400A has a "built in" USB A/D which handles all data acquisition and greatly simplifies interfacing to a computer for data acquisition.

Benefits

- Provides scientifically reliable data
- Monitors up to 16 muscles simultaneously
- Provides compatibility with motion measurement systems and isokinetic devices
- Includes set bandwidth of 10-500 Hz for SEMG and 10-1,000 Hz for fine-wire
- Allows for flexible placement of electrode sites and spacing
- Provides virtually artifact-free signals



Features

- Noraxon's internationally patented amplifier technology
- Thin, lightweight, very flexible cables with 8 channels per cable
- Pre-amplified electrode leads, can be used with disposable or permanent electrodes
- Audio feedback capabilities
- Selectable bandwidths for use with either surface or fine-wire electrodes
- Four standard isolated analog inputs to accommodate other kinetic or kinematic signals
- Internal data acquisition system with USB connectivity for up to 20 channels
- Device operation configurable from instrument keypad or via computer commands
- Compliant with IEC60601-1 and IEC60601-2-40 electromyography standards (CE approved)

Specifications

Power Requirements

- 90-240VAC 50/60 Hz (.45-.9 amps)

Hardware Filters

- No notch (50/60 Hz) filters are used
- All SEMG leads have 1st order high-pass filters set to 10 Hz +/- 10% cutoff
- All SEMG channels have 8th order Butterworth low-pass filters set to either 500 Hz or 1,000 Hz +/- 2% cutoff
- All auxiliary channels have 4th order Butterworth low-pass filters set to 500 Hz +/- 5% cutoff EMG Channels
- Baseline noise < 1 uV RMS
- Input impedance > 100 MOhm
- CMR > 100 dB
- Range 0 to +/- 7 mV
- Isolation > 3,000 Volts

Auxiliary Channels

- BNC connector/channel
- Input impedance 1 MOhm
- Range 0 to +/- 10 Volts
- Isolation > 1,500 Volts

Sync Channel

- BNC connector
- TTL input level activation
- Isolation > 1,500 Volts

Analog Outputs

- 25 pin D-sub connector
- All EMG channels gain of 500 (fixed)
- All auxiliary channels gain of 0.5 (fixed)
- All outputs +/- 5 Volts max

USB Port

- Standard type B connector

Data Acquisition System

- 12-bit resolution
- Noise < 2 LSB
- 20 channels (16 SEMG + 4 auxiliary)
- All channels have individual gain settings
- SEMG channel hardware gains (500) x1, x2, x4, x5, x8, x10
- Sensor channel hardware gains x1, x2, x4, x5, x8, x10
- Auxiliary channel hardware gains (0.5) x1, x2, x4, x5, x8, x10
- Sample rates 1,000; 2,000; 3,000; 6,000 samples/ second/ channel
- Updates transferred to PC every millisecond

Physical

- 11" L x 7.75" W x 4" H; 4 lbs. (28 x 19.7 x 10.2 cm; 1.8 kg)

Options

- Expansion cards for 8, 12, or 16 channel EMG system, when used with 32 channel A/D Card, can be expanded to a synchronized 32 channel system
- Bandwidth can be increased to 2000Hz
- Full line of Noraxon direct plug-in sensors (e.g. foot switches, goniometers, inclinometers, accelerometers and force sensors)