

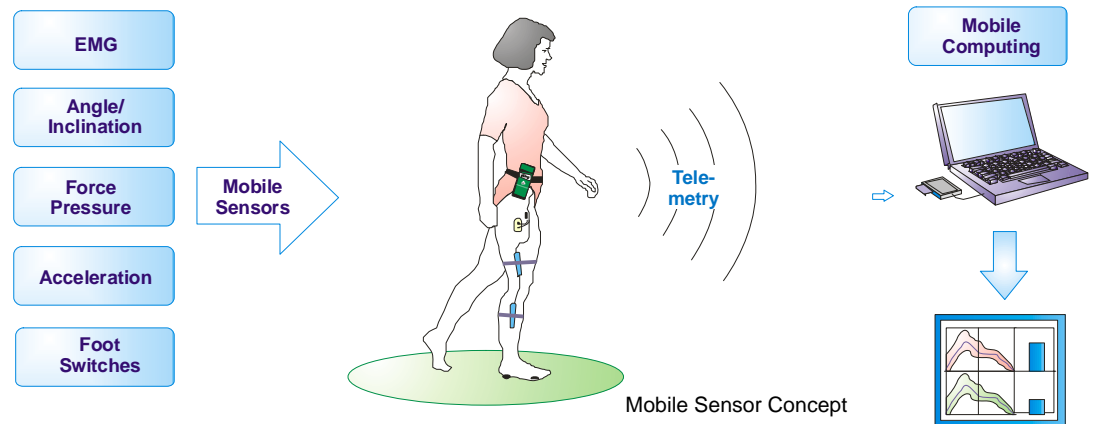
Wireless EMG and Sensor System

- 4 to 32 channel telemetry system
- Operates EMG and other biomechanical sensors
- Datalogger option via Flash Memory card
- Artifact-free and reliable WiFi data transmission
- Several receiver concepts with additional input/output channels available



Product Overview

The TeleMyo™ 2400T G2 Transmitter is the latest generation of surface and fine-wire telemetric EMG systems that sends real-time EMG and other analog signals up to 300 feet (100 meters) by wireless transmission to a desktop computer or notebook. It combines high-quality, scientifically reliable data with mobility, flexibility and ease-of-use for clinicians, researchers, sports medicine professionals, ergonomists and athletic trainers. The default system includes a 4, 8, 12 or 16 channel transmitter unit, a USB based PC-interface receiver box, active pre-amplified leads, battery charger, and a belt clip and pouch for easy use. The default system comes fully equipped with four, eight, twelve, or sixteen active EMG leads.



The option of purchasing an additional transmitter expands the system up to 32 channels for any combination of EMG and other analog signals. Virtually any analog sensor that is battery operated and works within +/- 5 volts can be connected directly to the system, such as foot switches and goniometers. In addition to the on-site pre-amplifiers, the "active leads" use Noraxon's patented signal amplifier technology, which provides clean, consistent and reliable data. The system can also be used as a datalogger when the WiFi board is exchanged with a flash memory board (up to 4GB).

Receiver and Wireless Sync-Trigger Concept

Noraxon's second generation of telemetry systems (TeleMyo 2400T "G2") offers a unique concept to receive and combine telemetric data with other biomechanical devices. Three models are introduced below, which can be upgraded at any time:

1. PC-Interface Receiver

The default receiver is the **PC-Interface Receiver**. It can receive WiFi based telemetry data up to 32 channels and forward the data via USB to the PC. Due to USB functionality, it installs easily, bypasses the need for any Window network configuration and runs on any Desktop PC, notebook or Windows release (Win 2000, XP, Vista).



PC-Interface Receiver

2. Mini-Receiver

The mid-level receiver model is the **Mini-Receiver**. It includes 8 additional analog input channels, which are needed for stationary devices like Isokinetics, force and contact plates and light gates. It allows the combination of mobile telemetric data collection with stationary systems without losing the wireless functionality. All data are forwarded to the PC via USB connection. The Mini-Receiver is preconfigured for Wireless synchronization functionality which can be ordered as an extra option (**Wireless Sync-Trigger Kit**).



Mini-Receiver with 8 analog input channels

3. Analog Input/Output 2400R Receiver

The top level receiver option is the **Analog Input/Output 2400R Receiver**. It has the capacity to convert all telemetric data to analog output data, which again can be connected directly to third party devices like 3D motion capture systems. The Analog Input/Output 2400R Receiver includes 8 analog inputs and the standard 16 analog outputs can be upgraded to 32 channels. The Analog Input/Output 2400R Receiver System includes the **Wireless Sync-Trigger Kit**.



Analog Input/Output 2400R Receiver with 16 (or 32 if upgraded) analog output channels and 8 additional input channels

The Analog Input/Output 2400R Receiver is the most flexible investment for biomechanical labs because it can simultaneously manage telemetric data, stationary analog input data, analog conversion/connection of telemetry data and any need related to trigger-based synchronization of involved measurement devices.

4. Stand-Alone Wireless Sync-Trigger System

The stand-alone **Wireless Sync-Trigger System** upgrades the PC-Interface Receiver and older TeleMyo Systems with a telemetric trigger system. This permits a time-synchronized start of data collection with the TeleMyo 2400T and any third party device in your lab.



Compact Wireless Sync-Trigger System – compatible with the PC-Interface Receiver.

Unique Items

- Noraxon's superior signal quality
- Fully compatible to ISEK and SENIAM standards for surface and fine wire EMG
- Expandable for any channel combination between 4 and 32 data channels
- Exchangeable battery with 8 hours operation time
- Unlimited time when used with a second battery.
- Complete line of Plug-In sensors
- Power to operate third-party sensors at each input port
- General signal input range +/- 5 Volts
- Two available digital channels for e.g. foot switch systems
- Optional Fine Wire amplifiers with selectable band width
- Two individual systems can be combined up to a 32 channel system
- Unique receiver concept with analog input channels and up to 32 analog output channels
- Easy installation: no need to struggle with Windows network setting
- Precise and flexible wireless synchronization trigger system
- Standard digital sync channel for coordinating other devices (e.g. wireless sync trigger, evoked potential stimuli)



Telemyo G2 transmitter with connected Biometrics 2D Goniometer

Plug-In Inline Sensor series

A set of ready-to-go pre-calibrated biomechanical sensors is available for the TeleMyo G2 System. All sensors are completely interchangeable with the EMG leads and can be used on any analog input port.

- Linear Force Transducer
- Handgrip Force
- Foot Switch/Soles
- Inclinometer
- Accelerometer
- Local Pressure
- Goniometer



Please check our **Sensor Catalogue** for a detailed description of sensors and applications.

Transmitter Specifications

Power Requirements

- 3.7V Lithium Ion rechargeable battery
- Includes a battery charger for 110-240 VAC 50/60 Hz

Battery

- Detachable battery cassette allows for virtually unlimited run time
- Unit does not need to be taken "out of service" to recharge batteries
- Smart battery technology for improved fuel gauging and monitoring the battery condition
- Single battery pack runs for up to 8 hours

Output & Transmission Frequency

(Depending on country)

- Up to 100 mW (depending on antenna and country allowance)
- DSSS 2412-2464 MHz on (up to) 11 selectable radio channels
- Up to 300 feet (100 meters) in line-of-sight recordings

Transmitter Data Acquisition System

- 16-bit resolution on all analog inputs
- Eight times over-sampling at 1500 Hz, four times at 3000 Hz
- Final sample rates 1,500 or 3,000 samples/ second/ channel

Telemetric Data Channels

- 4 to 16 analog input ports per transmitter
- All analog input ports accept a +/- 5 Volt input signal range and provide a supply of +/- 5 Volt power
- Selectable low pass filter 500, 1000, 1500 Hz
- 2 additional digital input ports (e.g. Foot Switches, TTL Marker, Data Logger Control)
- Additional sync port (e.g. Wireless Sync System)
- Alternative Data logger option operated via Flash memory card

EMG Preamp Leads

- No notch (50/60 Hz) filters are used
- 1st order high-pass filters set to 10 Hz +/- 10% cutoff
- Baseline noise < 1 uV RMS
- Input impedance > 100 MOhm
- CMR > 100 dB
- Input range +/- 10 mV
- Base gain 500
- Cable length 4 ft/122cm
- Snap-style or Pinch-style terminal electrode connections

Dimensions

- 5.14" L x 2.75" W x 1.38" H/ 13 cm x 7 cm x 3.5 cm
- Weight: 14 oz./ 397 g

For more detailed technical specifications on the **Mini-Receiver** and the **Analog Input/Output 2400R Receiver**, please refer to our Receiver data sheets



Slide-In Battery Charger with battery condition and capacity monitor



Depending on the need, the Multi-Mode FootSwitch System may be connected to the Telemyo G2 Transmitter "Digital In" or EMG ports.



EMG preamp cables with snap style connectors shown.



Optional Datalogger Control with Start&Stop and Marker Function