

## Direct Transmission Telemetry for EMG & Sensors

- Transmits data directly from the electrode site
- Operates EMG and other biomechanical sensors
- Free electrode type selection, fine wire included
- Portable belt receiver with retransmission option
- Retransmission range up to 100 meter
- Datalogger option via Flash Memory card
- 4 to 32 channel configuration
- Compatible to existing Noraxon hardware and software
- Simplifies measurements by eliminating connection cables



Belt Receiver/  
Retransmitter

## Product Overview

The TeleMyo™ 2400T Direct Transmission System (DTS) for EMG and other biomechanical sensors directly transmits data from the electrode or sensor site to a belt worn receiver. This direct transmission concept greatly simplifies the arrangement of EMG measurements by eliminating the need to arrange cable connections between the EMG electrodes and EMG amplifier. The small light weight probes are also beneficial for small subjects like children and small animals.

The Belt Receiver can operate in 3 modes:

- Direct connection to any PC via USB connection (transmission range 10m)
- Wireless retransmission of signals in real time to any Noraxon USB receiver (transmission range up to 100m)
- Data logging via Flash Memory card

This unique concept gives you flexibility to operate the DTS system without limitations. The compatibility to Noraxon's USB receiver systems, operated via WiFi based retransmission of data, allows you to integrate up to 8 additional stationary analog input signals (isokinetics, force plates, etc.) and optional analog output of all signals (to e.g. connect signals to 3D kinematic systems).



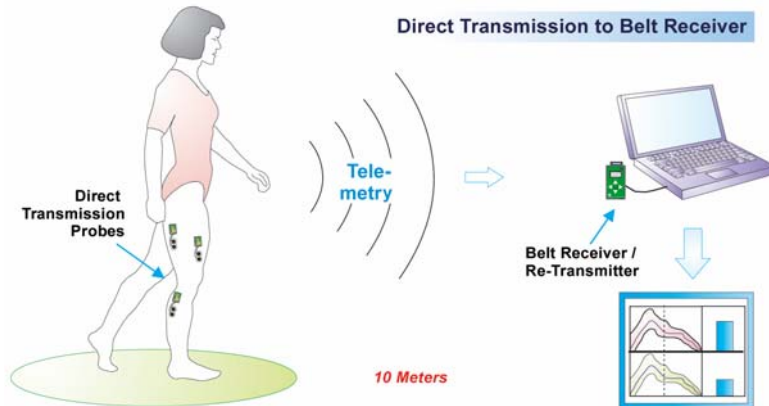
The DTS system can operate any configuration between 4 and 32 channels (2 Systems). The default system is equipped with EMG preamplifiers but can be upgraded with other biomechanical sensors like goniometers, Inclometers, foot switches, and accelerometers. A wireless synchronization system can be used to accurately synchronize the TeleMyo DTS System to other biomechanical devices.

## Operation Modes of Belt Receiver

Dependent on functionality aspects within your experiments you can configure and operate the TeleMyo DTS systems on 3 operation levels:

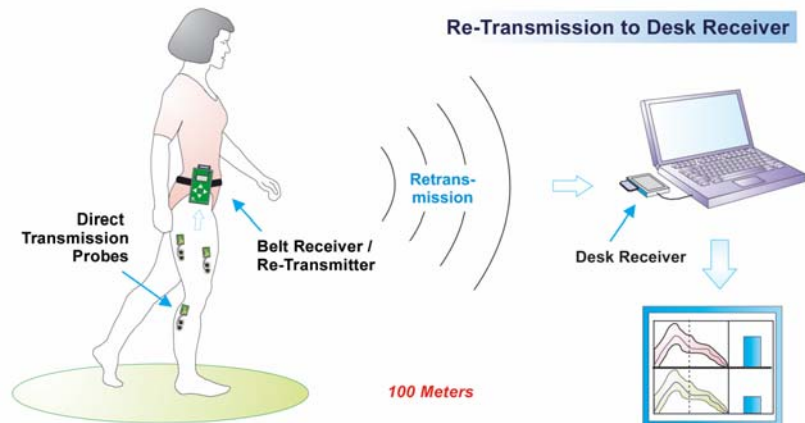
### 1. Direct USB based connection of Belt receiver to the PC

In this mode the DTS probes send the data to the Belt receiver which is located directly besides the PC. An USB connection arranges the real time access of all transmission data to the PC and data acquisition software. The transmission range is up to 10 meters.



### 2. Retransmission of data from Belt receiver to desk receivers

This mode operates a second (real time) transmission of data via WiFi to any of Noraxon's desk receivers (PC interface Receiver, Mini Receiver or Analog Output Receiver). This expands the transmission range up to 100 meter in line-of-sight. If the Mini Receiver is used, up to 8 additional analog input channels can be connected which allows you to integrate signals from stationary devices like Isokinetics or force plates.



### 3. Data Logging Mode via Flash Memory card

By exchanging the retransmission WiFi board with a Flash Memory Card the system can be used as a data logger at any time. Commercial Memory Cards up to 8 GB guarantee enormous data logging capacity. An easy and comfortable import routine transfers data to the Noraxon analysis software MyoResearch XP.

#### Available Desk Receivers:



##### PC INTERFACE RECEIVER

Standard Receiver with USB connection to PC



##### MINI RECEIVER

With 8 additional Input channels & Wireless Sync. - System



##### ANALOG OUTPUT RECEIVER

With 8 additional Input channels & analog Output for all channels

### 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 8 and 32 data channels
- (two individual DTS Belt Receiver can be combined up to a 32 Channels system)
- Unique receiver concept with analog input channels and up to 32 analog output channels
- Li-ion battery with 8 hours operation time
- Complete line of wireless biomechanical sensors
- Optional Fine Wire amplifiers with selectable band width
- Precise and flexible wireless synchronization trigger system
- Easy installation: no need to struggle with Windows network setting



## DTS Probe and Belt Receiver Specifications

### Power Requirements

- Replaceable Li-ion rechargeable battery, operation time more than 8 hours after fully charged

### 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
- DTS Probe transmission range: 10m
- Belt Receiver Re-Transmission range: up to 100 meters in line-of-sight recordings

### EMG Sensor Data Acquisition System

- 16-bit resolution
- Sample rates 1,500 (for 16-channels) or 3,000 samples/second/channel (for 8 Channels)
- Selectable low pass filter 500, 1000, 1500 Hz

### 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 +/- 3.5 mV
- Base gain 400
- Snap-style or Pinch-style terminal electrode connections

### Dimensions

- EMG Probes Dimensions: 1.34" L x 0.95" W x 0.55" H (3.4 cm x 2.4 cm x 3.5 cm)
- EMG Probes: Weight: Less than 14 g.
- DTS Belt Receiver Dimensions: 12.6 cm L x 6.75 cm W x 2.38 cm H
- DTS Belt Receiver Weight: Less than 185 g.

