

**BIONOMADIX DUAL-CHANNEL ELECTROMYOGRAM (EMG) TRANSMITTER FOR SMART CENTER (EMG2-T)**

The dual-channel BioNomadix EMG Transmitter (BN-EMG2-T) is specifically designed to pair with Smart Center to wirelessly measure muscle activity signals across a wide range of conditions.

AcqKnowledge software is used to configure the BioNomadix EMG transmitter options and record/display the data.

**Required Materials:**

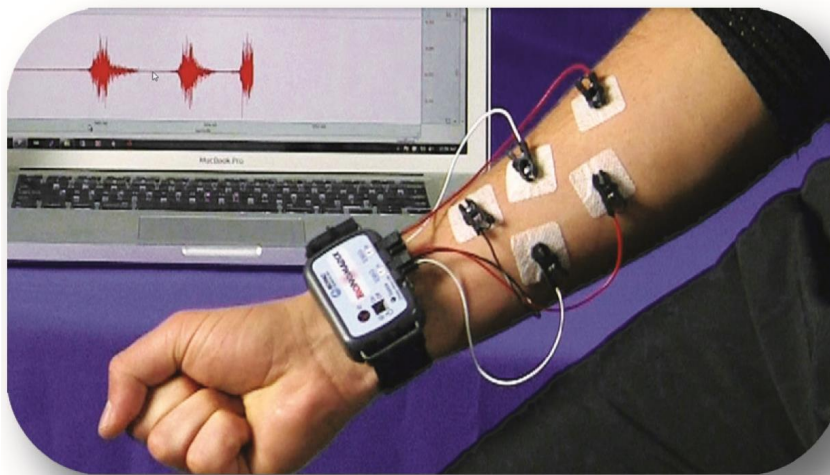
- BIOPAC Smart Center Module
- BioNomadix Electromyogram Transmitter (BN-EMG2-T)
- BioNomadix Electrode Leads (2-lead or 3-lead, 15, 30, or 45 cm)
- BIOPAC Electrodes (EL503)
- BIOPAC Electrode Gel (GEL1)
- BIOPAC abrasive pad for abrading skin (ELPAD)
- BIOPAC Skin Preparation Solution (ELPREP)
- OPTIONAL: BIOPAC Electrode Checker for checking electrode impedance levels (EL-CHECK)
- AcqKnowledge 5.0.2 (or higher) Software installed on computer

## Preparation and Placement of EMG Electrodes

To record using the BioNomadix EMG Transmitter, adhesive EL503 electrodes are placed on the area of interest, generally the arms, legs, or head (for facial EMG).

**IMPORTANT:** Before placing electrodes on Subject, the skin must be properly prepared to assure optimal conductivity and signal quality.

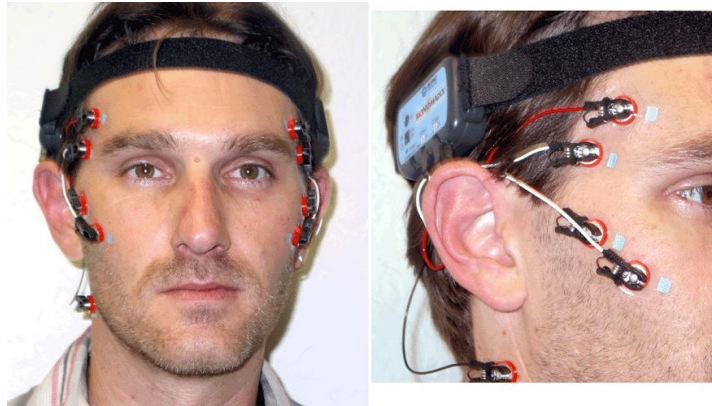
1. Use alcohol or BIOPAC ELPREP Skin Prep Solution to clean the areas where electrodes will be placed.
2. Gently abrade the areas with the ELPAD abrasive pad.
3. Apply the electrodes as follows, depending on the EMG area of interest. If recording only one channel, use the 3-lead BioNomadix electrode lead connected to CH A or CH B of transmitter. If recording dual-channel, connect the 3-lead electrode lead to CH A and the 2-lead electrode lead to CH B.



EMG Electrode Placement for Arms (Dual-channel)



EMG Electrode Placement for Legs



Electrode Placement for Facial EMG

**OPTIONAL:** After connecting the leads to the electrodes, we recommend testing for correct skin contact using BIOPAC's Electrode Impedance Checker (EL-CHECK). If you are not checking electrode impedance, continue to Step 5.

To test the impedance between any two electrodes:

- Insert the lead connectors into the appropriate inputs on the front panel of the EL-CHECK.
- Switch the selector knob to the corresponding VIN position, and then press and hold the **Test+** button.

Green, Yellow, Orange and/or Red LEDs will illuminate to indicate the measured electrode impedance.

The EL-CHECK is only active when the **Test+** button is pressed.

For best biopotential measurement results, the impedance between any two electrode leads should be less than 5 kΩ. Dried-out surface electrodes can sometimes be rejuvenated by applying a small amount of BIOPAC's electrode gel to the contact pad of the electrode.



- [Click here to see the EL-CHECK Product Page](#)
- [Click here to watch an EL-CHECK Tutorial Video](#)

- Slide the 3-lead electrode lead connector into the Channel **A** or **B** input of the BioNomadix EMG Transmitter as shown. If recording dual channel, connect the 3-lead electrode lead connector to CH A and the 2-lead electrode lead connector to CH B.

