App Guide

Standing Balance
Trunk Front and Side Angle

SageMotion

Wearable Biofeedback System

sagemotion

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Components

Hub

Nodes *(8x)*

Battery

Node Straps: *Medium (8x), Short (4x), Long (2x)*

Cable A *(10x)*
-Connect Hub to Battery
-Charge Nodes & Battery

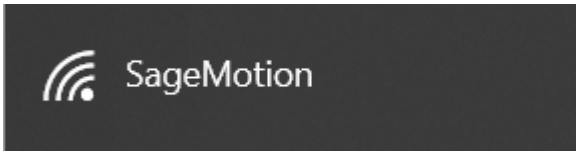
Cable B *(optional use)*
-Connect Hub to Computer

Node Charging Station

Wirelessly Connect to Computer or Cellphone

1) Connect Cable A to Battery and to Hub

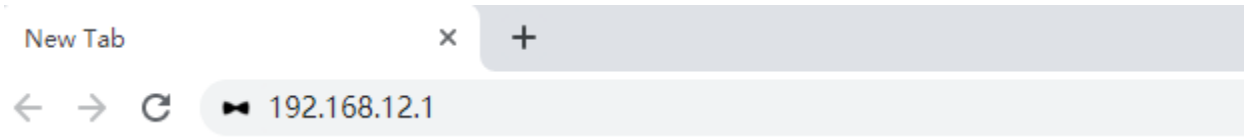
2) On Computer/Cellphone, Connect to Wi-Fi: “SageMotion”



Note 1: Need to wait for up to 1 minute for “SageMotion” to appear in Wi-Fi list. If it doesn’t appear, try turning the Wi-Fi off and then on again on the computer/cellphone.

Note 2: Hub is connected after clicking “Connect” even if in Windows it shows “Connecting” or “No internet, open”.

3) On Computer/Cellphone, in Chrome Address Bar, Go To http://192.168.12.1



[Note] If Computer Doesn’t Have Wi-Fi: *plug in Cable B to the Hub and to the ethernet port of your computer, then in chrome address bar, go to* ***http://192.168.137.1***

Standing Balance Trunk Front and Side Angle App

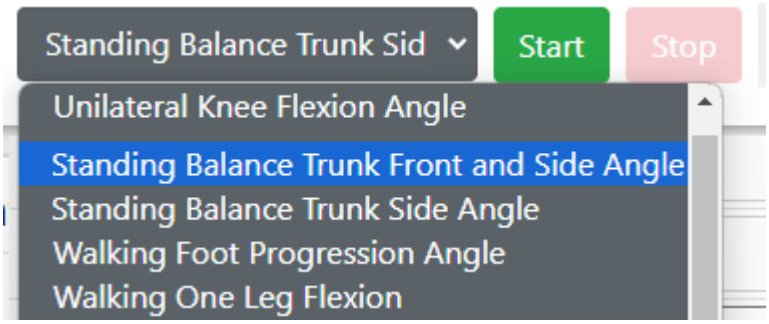
The purpose of the Standing Balance Trunk Front and Side Angle App is to record, analyze, and provide feedback for Trunk Side Angle, Trunk Front Angle while subjects perform Standing Balance activities.

1) Turn on 5 Nodes

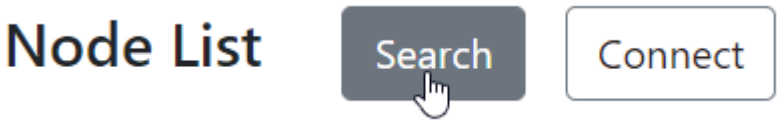
Slide switch toward middle to turn node on

Green light will blink after the node is on and running

2) Select "Standing Balance Trunk Front and Side Angle" App

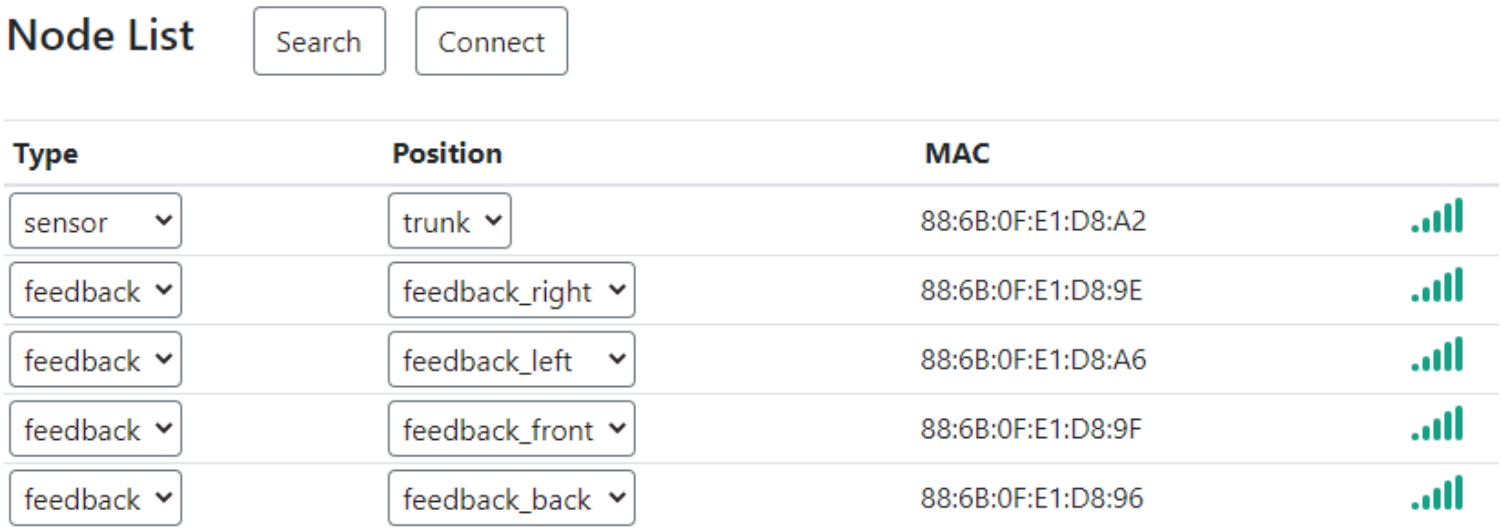


3) Click "Search"

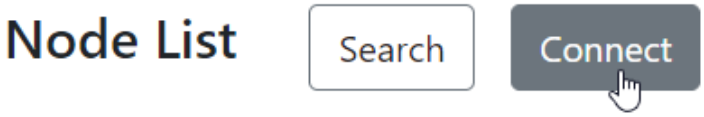


Standing Balance Trunk Front and Side Angle App *(cont.)*

4) Configure 1 Sensor Nodes and 4 Feedback Nodes as Shown Below:



5) Click “Connect”

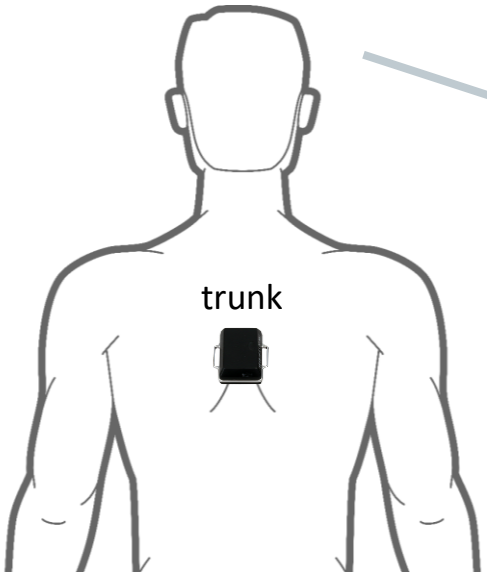


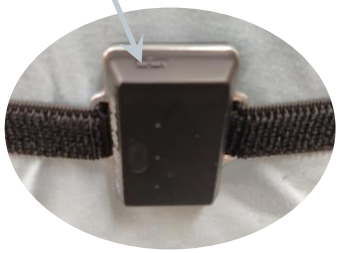
6) “Ready to collect data” Will Appear after Node Connection is Complete

Standing Balance Trunk Front and Side Angle App *(cont.)*

7) Thread Straps through Nodes and Attach at Locations Shown Below:

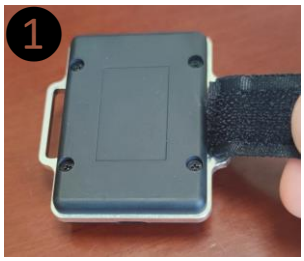
Trunk sensor orientations on/off switch must point upwards

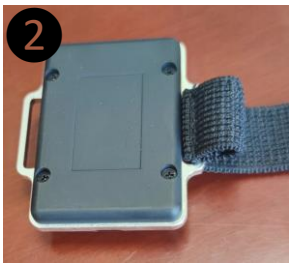




trunk node placed on the back of the torso

How to Thread Straps





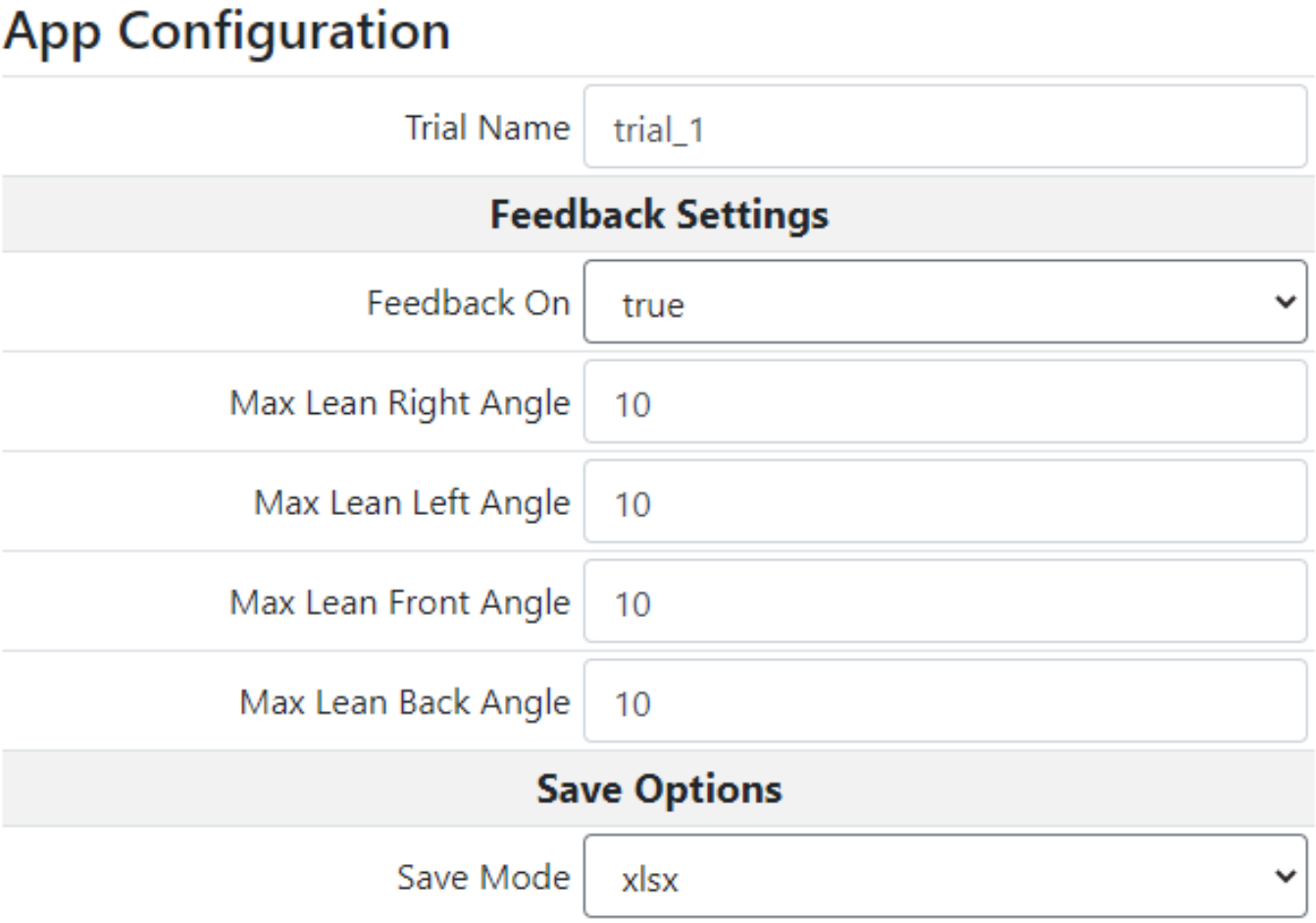
[Note] feedback_left, feedback_right, feedback_front, feedback_back nodes can be placed at any location

8) Click “Blink” for each Node to Confirm Correct Locations (red LED for given node blinks 3 times on click)

Type	Position	MAC			
sensor	trunk	88:6B:0F:E1:D8:A2			Blink
feedback	feedback_right	88:6B:0F:E1:D8:9E			Blink
feedback	feedback_left	88:6B:0F:E1:D8:A6			Blink
feedback	feedback_front	88:6B:0F:E1:D8:9F			Blink
feedback	feedback_back	88:6B:0F:E1:D8:96			Blink

Standing Balance Trunk Front and Side Angle App *(cont.)*

9) In App Configuration, Enter Settings (Example Below)

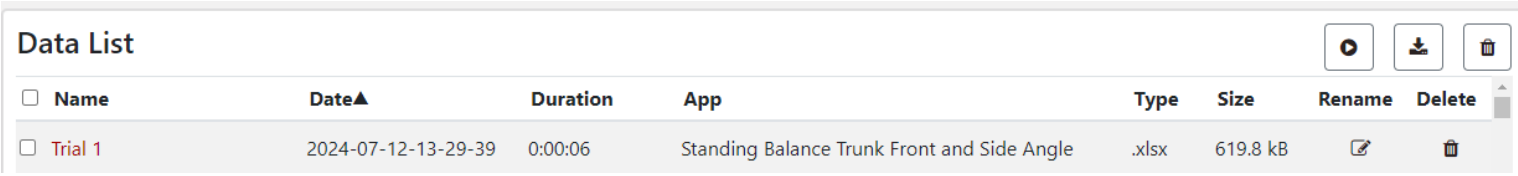


Standing Balance Trunk Front and Side Angle App *(cont.)*

10) Click “Start” to Start Running the App

11) After the Trial is Finished, Click “Stop”

12) After Clicking “Stop”, a File from that Trial will Appear under Download Data. Click the File (e.g. trial_1) to Download it to the Computer or Phone.



Standing Balance Trunk Front and Side Angle App *(cont.)*

Description of Data in Downloaded File

time (sec): time since trial start

TSA (deg): trunk side angle (medial-lateral), positive is to the right

TFA (deg): trunk forward angle (anterior-posterior), positive is forward

max_lean_right (deg): The feedback threshold of max right lean

max_lean_left (deg): The feedback threshold of max left lean

max_lean_front (deg): The feedback threshold of max front lean

max_lean_back (deg): The feedback threshold of max back lean

SensorIndex_1: index of raw sensor data

AccelX/Y/Z_1 (m/s^2): raw acceleration data

GyroX/Y/Z_1 (deg/s): raw gyroscope data

MagX/Y/Z_1 (μT): raw magnetometer data

Quat1/2/3/4_1: quaternion data

Sampletime_1: timestamp of the sensor

Package_1: package number of the sensor