

App Guide  
**Standing Balance 1**  
**(Trunk Side, Front Angle)**

SageMotion  
Wearable Biofeedback System





## **Table of Contents**

Components	<i>(page 1)</i>
Wirelessly Connect to Computer or Cellphone	<i>(page 2)</i>
Standing Balance 1 App (Trunk Side, Front Angle)	<i>(page 3)</i>

# Components



Hub



Nodes (8x)



Battery



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



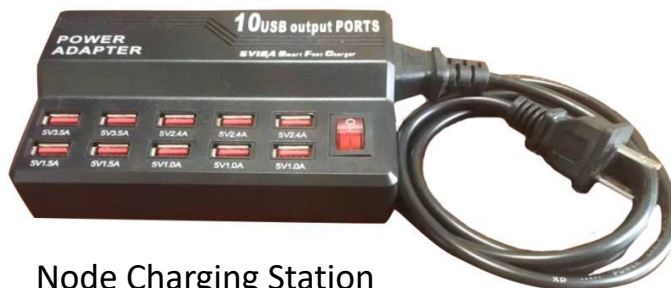
Cable A (10x)

-Connect Hub to Battery  
-Charge Nodes & Battery



Cable B (*optional use*)

-Connect Hub to Computer



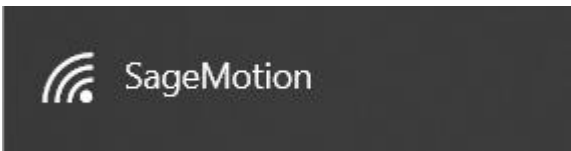
Node Charging Station

# Wirelessly Connect to Computer or Cellphone

## 1) Connect Cable A to Battery and to Hub



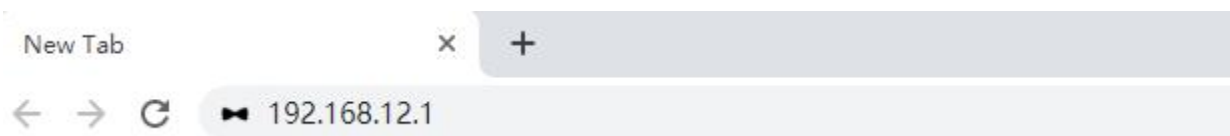
## 2) On Computer/Cellphone, Connect to Wi-Fi: "SageMotion"



*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 1 App

*The purpose of the Standing Balance 1 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

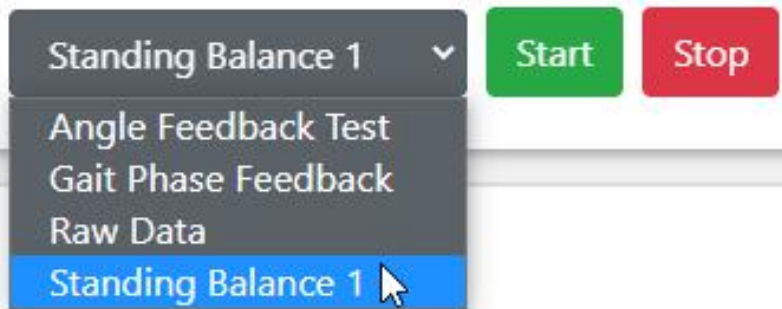


*Slide switch toward middle to turn node on*



*Green light will blink after the node is on and running*

## 2) Select “Standing Balance 1” App



## 3) Click “Search”

**Node List**








# Standing Balance 1 App (cont.)

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

Node List

Search

Connect

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

5) Click “Connect”

Node List

Search

Connect

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

Standing Balance 1 ▾

Start

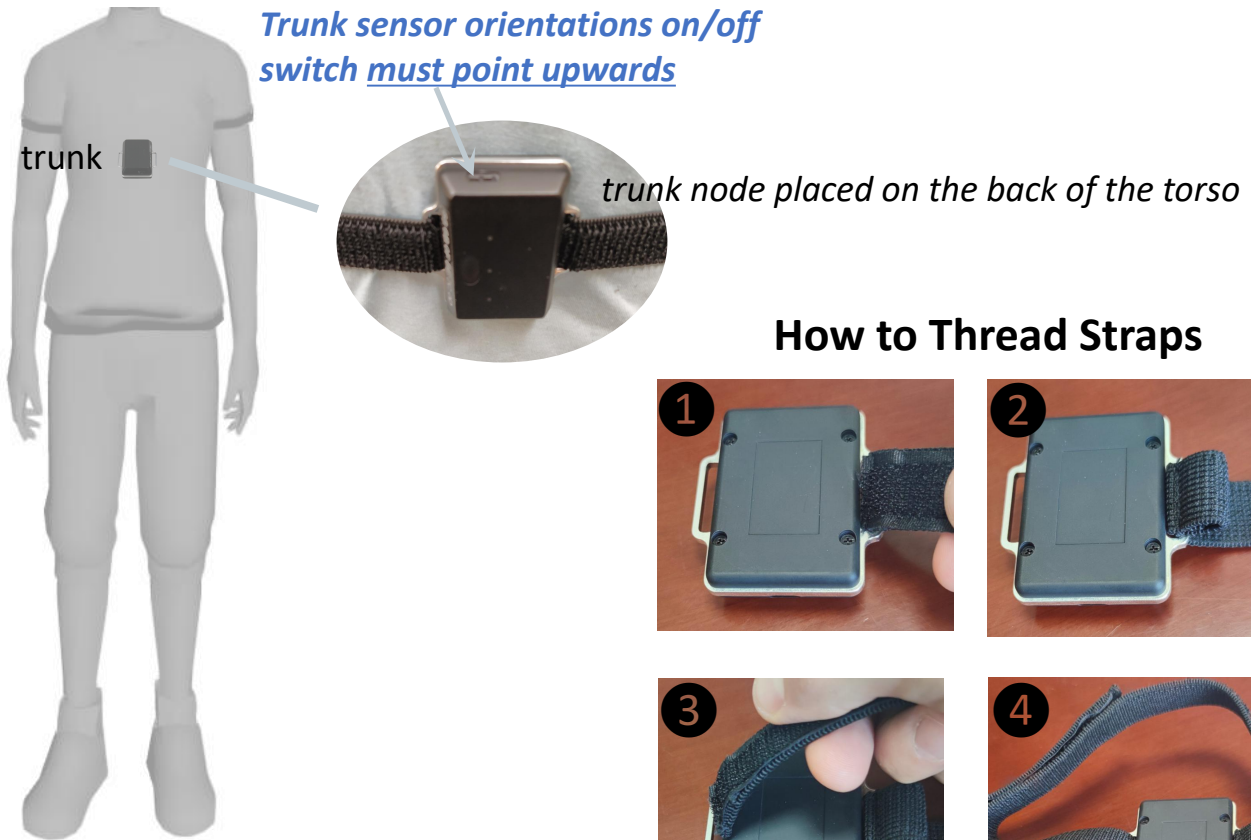
Stop

✓ Ready to collect data



# Standing Balance 1 App (cont.)

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



**[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			
feedback	feedback_right	88:6B:0F:E1:D8:9E			
feedback	feedback_left	88:6B:0F:E1:D8:A6			
feedback	feedback_front	88:6B:0F:E1:D8:9F			
feedback	feedback_back	88:6B:0F:E1:D8:96			



# Standing Balance 1 App (cont.)

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

## App Configuration

Trial Name trial\_1

### Feedback Settings

Feedback On true

Max Lean Right Angle 10

Max Lean Left Angle 10

Max Lean Front Angle 10

Max Lean Back Angle 10

### Save Options

Save Mode xlsx

# Standing Balance 1 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.

## Data Management

 Download Selected

 Delete Selected

<input type="checkbox"/>	Name	Date▲	Duration	App	Type	Size	Rename	Delete
<input checked="" type="checkbox"/>	<u>trial_1</u>	2021-09-18-19-48-55	0:00:11	Standing Balance 1	.xlsx	895.4 kB		

# Standing Balance 1 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<sup>2</sup>): 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