

App Guide

Relative Trunk Flex Feedback

SageMotion
Wearable Biofeedback System



Table of Contents

Components	<i>(page 1)</i>
Wirelessly Connect to Computer or Cellphone	<i>(page 2)</i>
Relative Trunk Flex Feedback	<i>(page 3)</i>

Components



Hub



Nodes (8x)



Battery



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



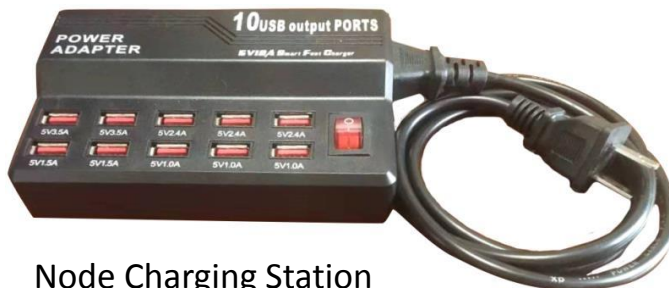
Cable A (10x)

-Connect Hub to Battery
-Charge Nodes & Battery



Cable B (*optional use*)

-Connect Hub to Computer



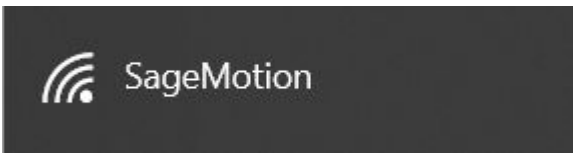
Node Charging Station

Wirelessly Connect to Computer or Cellphone

1) Connect Cable A to Battery and to Hub



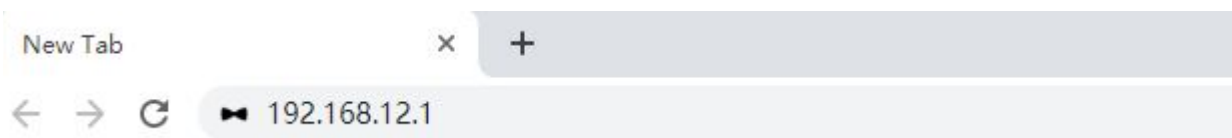
2) On Computer/Cellphone, Connect to Wi-Fi: "SageMotion"



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>**

Relative Trunk Flex Feedback

The purpose of the Relative Trunk Flex Feedback is to train trunk flex.

1) Turn on 3 Nodes



Slide switch toward middle to turn node on



Green light will blink after the node is on and running

Green LED (power and wireless connection)

- ON:** Power on, wirelessly *connected* to hub
- OFF:** Power off
- Blinking:** Power on, wirelessly *disconnected* to hub

Red LED (visual interface)

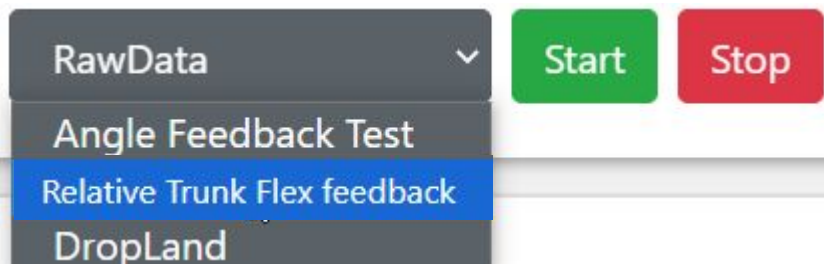
- ON:** Sync failure, switch node off then on again
- OFF:** Normal operation
- 3 Blinks:** Triggered from blink button in interface
- 1-4 Blinks on start:** Percentage of battery life. 1 blink is 0-25%, 2 blinks is 25%-50%, 3 blinks is 50%-75%, and 4 blinks is 75% -100%

Yellow LED (battery)

- ON:** Battery is charging
- OFF:** Battery is full (cable plugged in) or charging cable is unplugged
- Blinking:** Battery malfunctioning



2) Select “Relative Trunk Flex Feedback











3) Click the magnifying glass to search



Relative Trunk Flex Feedback (cont.)

4) Order the nodes as needed by dragging nodes to types and positions

Node List ?  



Type	Position	MAC		
sensor	l1_sensor	18:04:ED:EB:48:96		
sensor	s1_sensor	18:04:ED:E7:83:15		
feedback	feedback	18:04:ED:EB:20:64		

Number of Nodes Required = 3

Drag node MAC to swap node positions

Note: 12-digit node ID will match the number in the MAC column

5) Click the chain icon button to connect

Node List ?  

Connect Nodes

Type	Position	MAC
------	----------	-----

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



Relative Trunk Flex feedba 














 **Ready to collect data**

7) Click “Blink” or “Vibrate” to Test Connection.

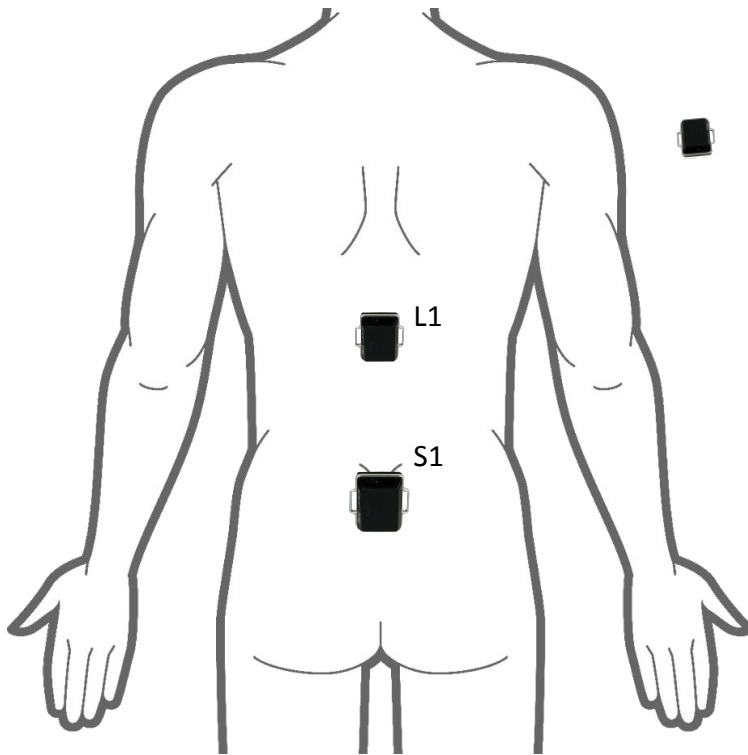
Node List ?  

Type	Position	MAC				
sensor	l1_sensor	18:04:ED:EB:48:96				
sensor	s1_sensor	18:04:ED:E7:83:15				
feedback	feedback	18:04:ED:EB:20:64				

Relative Trunk Flex Feedback (cont.)

8) Place the nodes on the subject

Subject is facing away from the viewer



Note: feedback node can be placed anywhere

Sensor nodes should be placed so that their switches are pointed superiorly (up towards the head).

9) Click “Start” to Start Running App



10) After training, click stop to stop the app



Relative Trunk Flex Feedback (*cont.*)

Description of Data in Downloaded File

time (sec): time since trial start

trunk_flex_angle (deg): Trunk flex angle

feedback_threshold (deg): Threshold for feedback

feedback_enabled: Whether feedback is enabled (1) or disabled (0)

feedback_state: Whether feedback is being provided (1) or not (0)

Note: all value types below will be repeated for each individual sensor

SensorIndex_1/2/3/4: index of raw sensor data

AccelX/Y/Z_1/2/3/4 (m/s²): raw acceleration data

GyroX/Y/Z_1/2/3/4 (deg/s): raw gyroscope data

MagX/Y/Z_1/2/3/4 (μT): raw magnetometer data

Quat1/2/3/4_1/2/3/4: quaternion data

Sampletime_1/2/3/4: timestamp of each sensor

Package_1/2/3/4: package number of each sensor