App Guide
Hip Extension

SageMotion
Wearable Biofeedback System

sagemotion

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App Guide: Hip extension (version 1.1)
Information in this document is subject to change without notice.

Components

Hub

Nodes *(8x)*

Battery

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

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

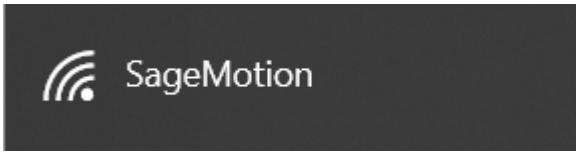
Cable B *(optional use)*
-Connect Hub to Computer

Node Charging Station

Wirelessly Connect to Computer or Cellphone

1) Connect Cable A to Battery and to Hub

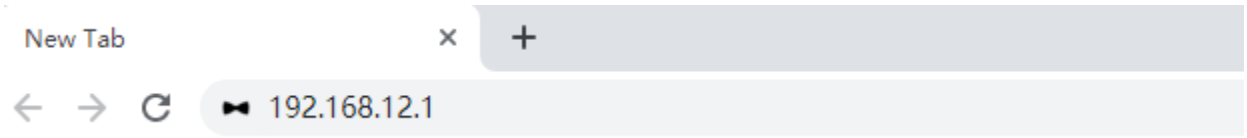
2) On Computer/Cellphone, Connect to Wi-Fi: “SageMotion”



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***

Hip Extension App

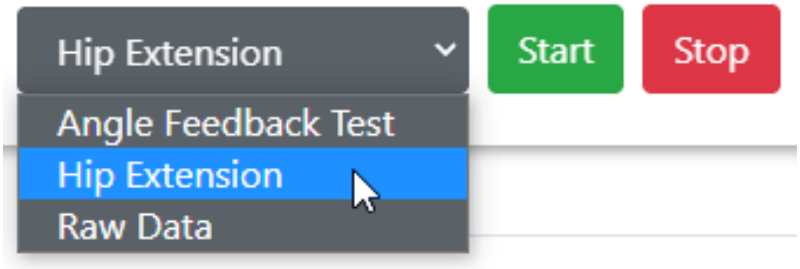
The purpose of the Hip extension App is to record, analyze, and provide feedback for Hip Extension angle while subjects perform walking or other daily activities.

1) Turn on 4 Nodes

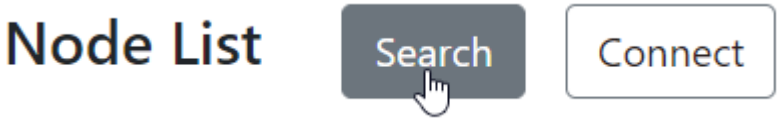
Slide switch toward middle to turn node on

Green light will blink after the node is on and running

2) Select “Hip extension” App

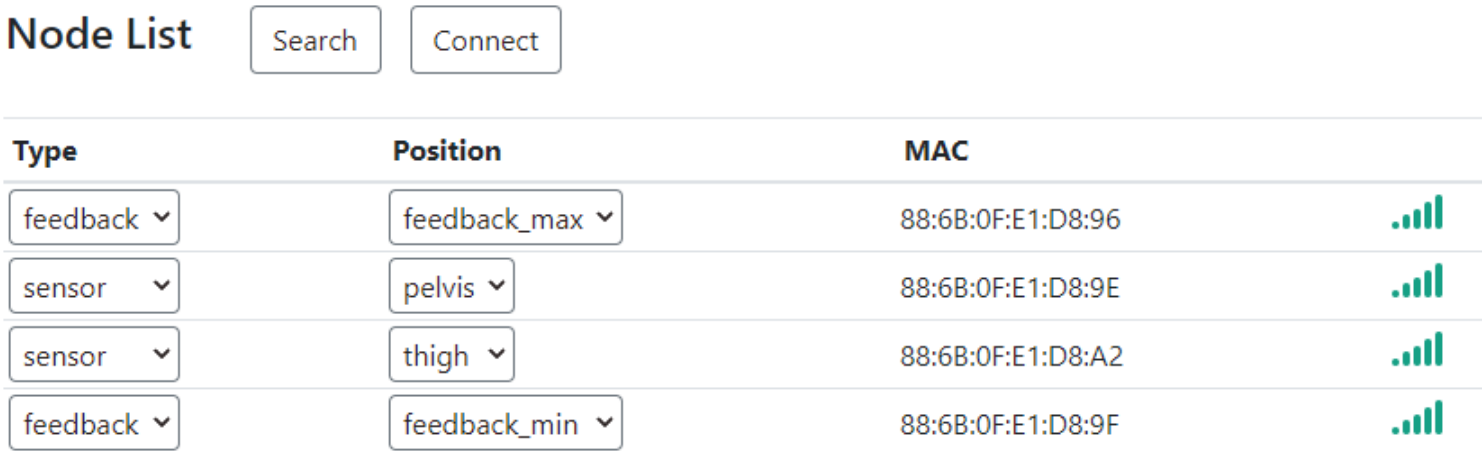


3) Click “Search”

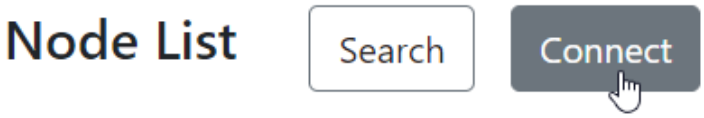


Hip Extension App *(cont.)*

4) Configure 2 Sensor Nodes and 2 Feedback Nodes as Shown Below:



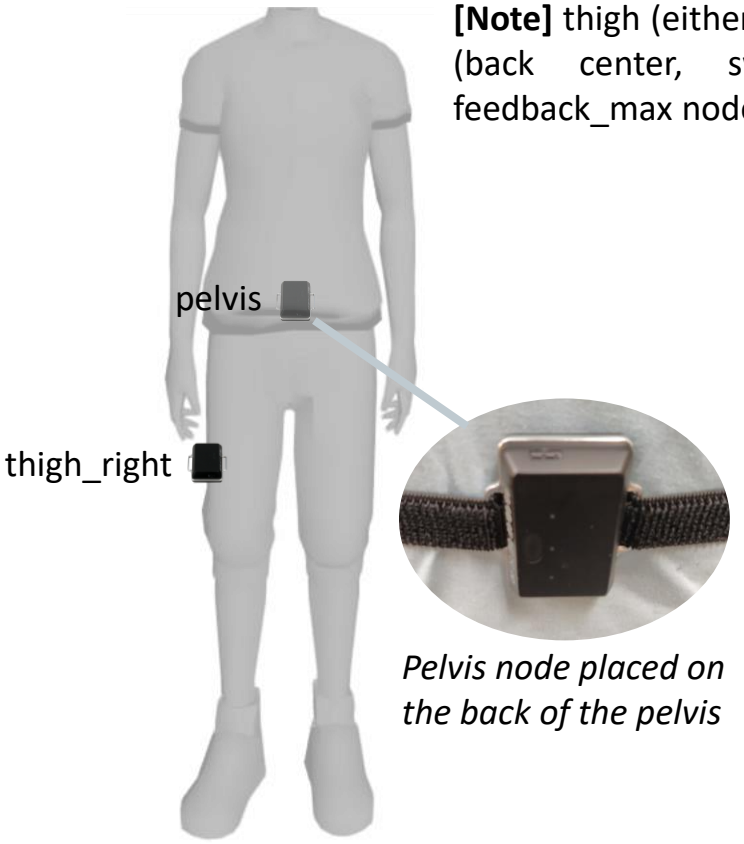
5) Click “Connect”



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

Hip Extension App *(cont.)*

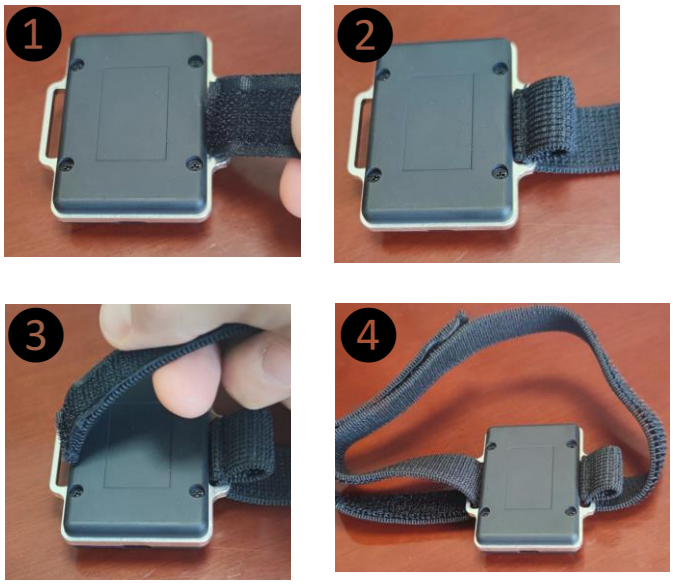
7) Thread Straps through Nodes and Attach at Locations Shown Below:



Pelvis node placed on the back of the pelvis

[Note] thigh (either left or right lateral, switch pointing up), pelvis (back center, switch pointing up). feedback_min and feedback_max nodes can be placed at any location

How to Thread Straps

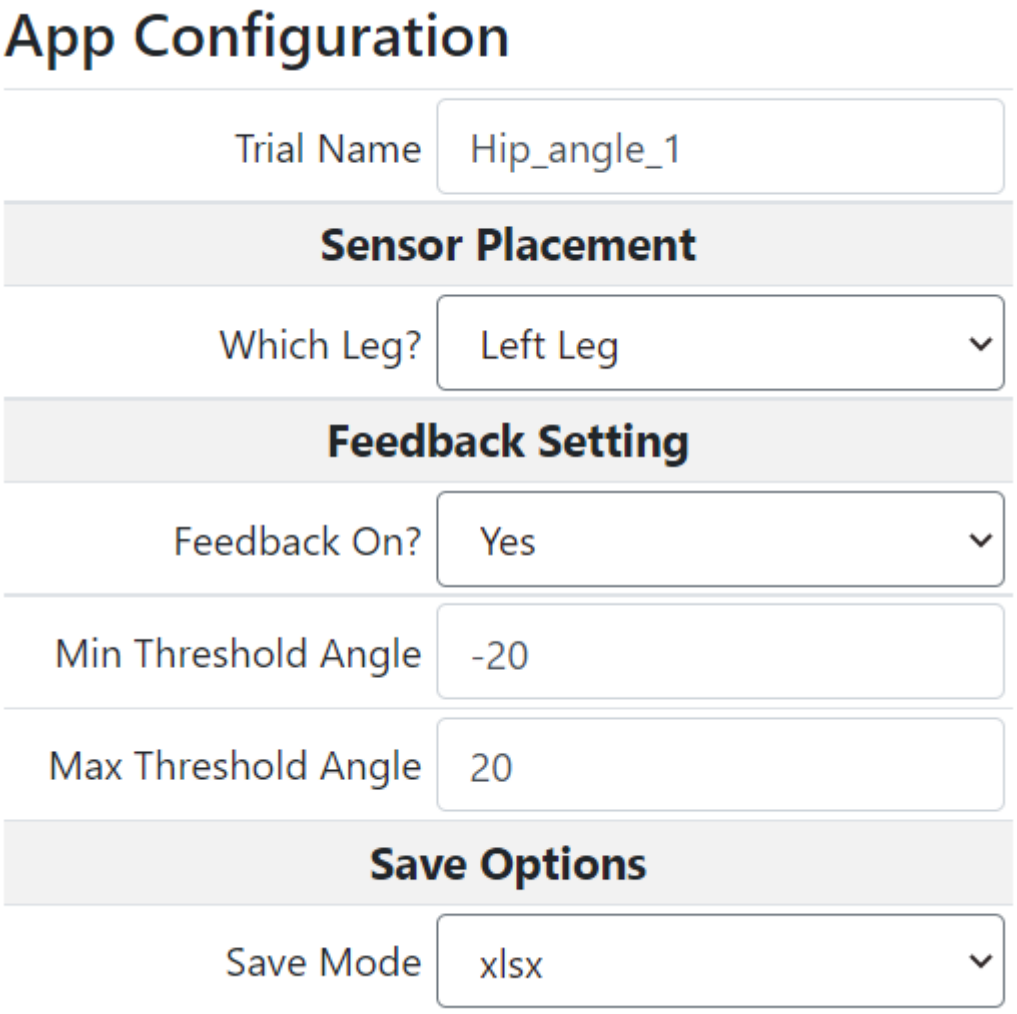


8) Click “Blink” for each Node to Confirm Correct Locations (red LED for given node blinks 3 times on click)

Type	Position	MAC		
sensor	thigh	88:6B:0F:E1:D8:A2		Blink
sensor	pelvis	88:6B:0F:E1:D8:9E		Blink
feedback	feedback_min	88:6B:0F:E1:D8:9F		Blink
feedback	feedback_max	88:6B:0F:E1:D8:96		Blink

Hip Extension App *(cont.)*

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

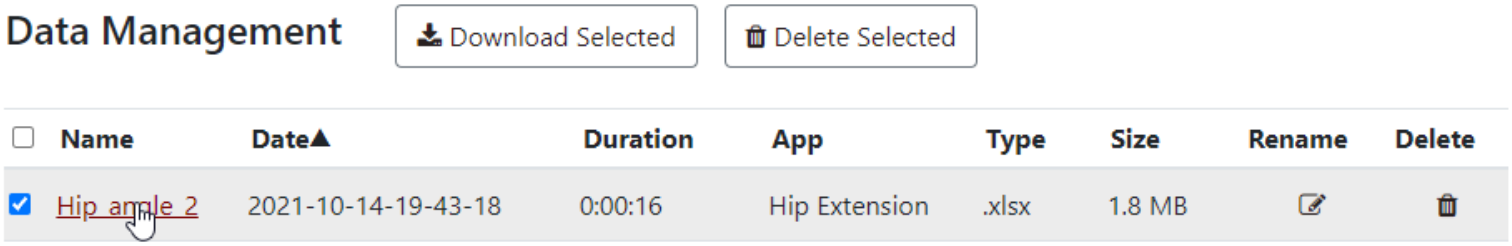


Hip Extension App *(cont.)*

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. Hip_angle_2) to Download it to the Computer or Phone.



Hip Extension App *(cont.)*

Description of Data in Downloaded File

time (sec): time since trial start

Hip_ext (deg): Hip Flexion/Extension angle for the leg

Feedback_min: Minimum threshold angle without feedback

Feedback_max: Maximum threshold angle without feedback

SensorIndex_1/2: index of raw sensor data

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

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

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

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

Sampletime_1/2: timestamp of each sensor

Package_1/2: package number of each sensor