Modus Health LLC

## StepWatch with CRO Apps Reference Guide for Users



# **Table of Contents**

Installing and Setting Up the CRO Site App	3
Installing CRO Companion App	12
Preparing for a Participant Visit	20
The Info Panel	21
Setting Up a StepWatch	23
iPhone Connection	33
Android Connection	37
Participant's Use of CRO Companion App	41
iPhone	41
Android	44
Using Previous Settings for Returning Participant	46
Retrieve Data from a StepWatch	48
Preview a StepWatch	51
Managing a StepWatch at Home	52
Frequently Asked Questions	55
Troubleshooting	55

### 1. Installing and Setting Up the CRO Site App

#### For Installing the App

Go to the App store and search for Modus SW4 CR Site. Note that some studies will have Modus Health configure the CRO App on the study's behalf. In this case, you may skip this step.

Next, tap the download icon on the right side of the page.



Today	Ga	ames	Apps	Arcade (	0	Search
l iouay	2000		> yhhe	Aicade	~	Search

#### Launch Setup

Once the app finishes installing, launch it by tapping its icon from the home screen.



The first time you launch the app, you will be required to enter your Client ID and Project ID before being able to access the app. If you do not know your Client and Project ID, contact the Helpdesk or your Modus Health contact.

■ TestFlight 2:47 PM Mon Sep 30	stepuetch	, 91% ■
	Client ID	
	Project ID	
	Login	

#### **Site Settings**

After entering a valid Client and Project ID, the app will take you to the settings screen. The settings are meant to be entered once before the start of the study. These settings define how the app will function for your study.

22 PM Mon Sep 30	<b>२</b> 90% <b>■</b>
Settings	Done
Restore Defaults	
PROJECT	
Client ID	modus-crodev-dev
Project ID	8301100
SITE	
Site ID	>
Site Time Zone	America/Los_Angeles
Use Metric Units	$\bigcirc$
Cadence Thresholds Low to Med	15
0	
Cadence Thresholds Med to High	40
	0
Battery Level Warning Threshold	0

To configure settings for your site, select a name or code to represent your Site ID. After entering the Site ID, tap Settings in the top left-hand corner. Your entry will be saved.

3:34 PM Mon Sep 30	중 90% 💻	
1000000		
190929		

Note: You do not need to configure Settings if you are reinstalling the app as part of an ongoing study. Instead, simply enter your Site ID and tap Done. The app will detect that you are attempting to reconnect to an existing Site and configure your Settings to match. If you do not know your Site ID, please contact the Helpdesk or your Modus Health contact.

#### **Site Characteristics**

Once you have entered a Site ID, you choose how you want the app to function for your study.

#### Site Time Zone

App automatically picks the time zone connected to the iPad. If you want the app to use a different time zone, Modus Health or a team member with administrative privileges can change the time zone of your site in the cloud.

#### Use Metric Units

When on, the participant height will be entered in centimeters rather than feet and inches.

#### Cadence Threshold Low to Med

This is the strides per minute threshold, or steps on the leg with the StepWatch, for classifying if walking is a low intensity activity (default  $\leq$  14 strides/minute) or a medium intensity activity (default > 15 strides/minute).

#### Cadence Threshold Med to High

This is the strides per minute threshold, or steps on the leg with the StepWatch, for classifying if walking is a medium intensity activity (default > 15 strides/minute and ,  $\leq$  40 strides/minute) or a high intensity activity (default > 40 strides/minute).

#### Enable Stride Length Assessment

When on, the app will show the stride length assessment screen when setting up a participant. This allows you to choose whether you wish to calculate stride length based on a timed walk test, distance walk test, or manually enter stride length. When off, the app will skip the stride length assessment screen when setting up a participant.

#### Enable Pin Lock

When on, the app will require that a pin is entered after 15 minutes of inactivity or if you leave the app. You will be required to choose a pin once you save your settings.

:35 PM Mon Sep 30		<b>२</b> 89% 🔳
	Settings	Done
Site Time Zone		America/Denver
Use Metric Units		
Cadence Thresholds Low to Med		15
Cadence Thresholds Med to High	0	40
Battery Level Warning Threshold		80
Enable Stride Length Assessment		
Enable PIN Lock		
Population Controls		>
Companion App		On >
Reset App		

Helpdesk Phone: 1-202-830-1100 Ext. 2

#### **Population Controls**

This allows you to limit the StepWatch setup choices to only the choices you will need to use at your site. For example, if none of your participants require the jogging/running setting, you can use population controls to lock it in the "no" position. This prevents an incorrect choice from being selected during the study.

3:35 PM Mon Sep 30		<b>奈</b> 89% ■
Settings	Population Controls	
	ke when setting up a StepWatch for participants. They are eamline the setup process for projects with homogenous	
Runners Only		$\bigcirc$
Select this option only if all participants in the project do not have in	npaired gait, and frequently run or jog.	
No Runners		
Select this option only if no participants are expected to frequently	run or jog.	
No Severely Impaired Participants		
Select this option if no participants show severely impaired gait (rec	uire assistance walking).	
Impaired Participants Only		$\bigcirc$
Select this option if all participants show some level of impaired gain	L	

#### **Companion App**

Turn companion app to "on" if your participants will be using smartphones with the companion app for remote uploads.

- StepWatch Link Duration the number of days that the companion app will stay connected to a StepWatch.
- Notification Duration how many days you want to receive notifications regarding upload status, data compliance, and StepWatch battery warnings while the StepWatch is linked to the smartphone. Usually, StepWatch Link Duration and Notification Duration will be for the same number of days.
- Digital Lead receives email notifications regarding upload status, compliance warnings, and battery
  warnings. Generally, the Digital Lead is responsible for all sites, and will get these notifications for all
  participants.
- Site Coordinator receives email notifications regarding upload status, compliance warnings, and battery
  warnings. Generally, the Site Coordinator is responsible for one site, and will only get notifications for the
  participants at their site.
- Compliance Officer receives email notifications regarding summary status (includes daily steps, minutes active, and Y or N on the compliance threshold). This role can also be used to share information with a gamification or compliance vendor for triggering automated positive feedback, based on compliance, to participants through the vendor's study apps.

🗢 89% 🔳
Companion App
14 Days
14 Days
support@modushealth.com >
site@modushealth.com >
compliance@modushealth.com >

After completing the setup process in settings, tap "done" if new site or "update" if existing site. If updating a site, all iPads with the same Site ID will be updated to the new settings.

	Settings	Done
Site Time Zone		America/Denver
Use Metric Units		
Cadence Thresholds Low to Med		15
Cadence Thresholds Med to High	0	40
Battery Level Warning Threshold	(	80
Enable Stride Length Assessment		
Enable PIN Lock		
Population Controls		>
Companion App		On >

Reset App

### 2. Installing CRO Companion App

If using the CRO Companion App for remote uploads and do not have the app installed on a smartphone, search the App store for SW4 CRO Companion and download the app.

#### iPhones

For iPhones, when opening the app for the first time, select "OK" for using the camera, tap "OK" to the push notifications, and select "Allow" to "SW4 CRO' Would Like to Send You Notifications".



#### Androids

To download the CRO Companion app for Android smartphones, go to the app store.



Search for Modus Health StepWatch CRO, tap on the CRO Companion app and install it.



When you open the app, it will ask for access to this device's location. Select "Allow."





Under Battery optimization, use the pull-down menu to select "All apps". Search for the CRO Companion app.



Select "Don't optimize" and tap "Done". Then, tap the square in the bottom right corner to be given the option to close the Battery optimization settings.



Tap the "X" in the top right corner to close the Battery optimization settings and return to the CRO Companion app. The CRO Companion app is now ready to connect to a StepWatch that has been setup.



2. Take a strap and thread it through the StepWatch with the Velcro side facing up during threading. (Fig 3.3 - 3.4)

The StepWatch can be worn over a sock, but it needs to be on the outside of the leg and facing upright (as shown in Fig 3.5). It can be worn on either leg. See Section 10, Managing a

StepWatch at Home for additional instructions on wearing the StepWatch.

3.3

3.1



### 3. Preparing for a Participant Visit

#### Practice Preparing a StepWatch for Wearing

1. Attach the soft cover to the StepWatch. (Fig 3.1 - 3.2)







3.5

3.4

### 4. The Info Panel

You can access the Info Panel at any time from the Main Screen of the CRO App, by tapping the Info icon. This is where you access the app version number and useful features for device administration and troubleshooting.



From the Info Panel, you can Upload App Diagnostics (the Helpdesk may request that you do this when troubleshooting problems in the app) or reset the Security PIN. The app will require that you enter the current PIN before enabling you to create a new one.

When tapping the gear in the top right corner, you are taken to the site settings screen for setting up the Site ID and the characteristics of the study for the site. In some studies, Modus Health will setup the site settings prior to the delivery of the iPads.

10:54 AM Wed Oct 2	StepWatch 4	<ul><li>≈ 41% ■</li><li>₩</li></ul>
	SW4 CRO	
	Version 2.0.3 (268)	
	© Copyright 2018 Modus Health, LLC	
<b>(i)</b>	Upload App Diagnostics	Reset PIN

Important Security PIN Information

- You will have to re-enter the PIN after 15 minutes of inactivity.
- After 10 failed attempts, you will be locked out for 15 minutes.
- The app will require that you change your PIN every 120 days.
- If you cannot remember your PIN, contact the Helpdesk or re-install the app.

### 5. Setting Up a StepWatch

When using the StepWatch 4 CRO app, ensure that your mobile device is connected to a strong WiFi signal, or has at least 3 bars of cellular service. Internet connection is required for the app to register participants and upload data.

Launch the app and tap the "Setup a StepWatch" button, then either place the StepWatch on the outline for proximity connection or tap "Choose StepWatch" and tap of the StepWatch Bluetooth ID displayed on the StepWatch label, located on the back of the StepWatch.



1:57 PM Wed Oct 2	হ 41	%
Cancel	Connect to StepWatch	

Place StepWatch face-down inside the dotted outline. Do not remove until connected (this may take up to 30 seconds).



Tap "New Participant" if it is the first time this participant will be enrolled in the study, or "Returning Participant" if the participant was previously enrolled at this site. When using "Returning Participant," you will be asked if you would like to use the previous settings if data was uploaded for that participant. You would only use previous settings if the participant is not in the clinic to participate in the setup procedure. See the "Using Previous Settings for Returning Participant" for more details.



### On the Enrollment Screen, enter the participant's Subject ID, then tap Next.

4:30 PM V	Ned Oct 2	奈 41% ∎
Exit	StepWatch 4	Enrollment
	* stepwetch*	ENTER SUBJECT INFO Participant ID Re-enter Participant ID
Date	Oct 2, 2019	
Study r	Number 8301100 190929	
StepWa		
Battery		
		Next

On the Programming Screen, enter the participant's height, and characterize their walking behavior (this helps the app to pre-calibrate the StepWatch's step detection settings), then tap Next.

Exit Ste	pWatch 4	Program StepWatch
		Please enter the participant's height. 150cm
stepuetch		Does the participant frequently run or jog?
Date	Oct 2, 2019	Does the participant show an impaired gait? Severely impaired Slightly impaired No
Study Number	8301100	
Site ID	190929	
StepWatch ID	SW4-8389	
Battery Level	100%	
Subject ID	10031005	

Before proceeding, attach a StepWatch to participant's leg by following the directions included in the Site Coordinator Guide Sheet (or, see Section 10, Managing a StepWatch at Home).

- 1. First, be sure to place the soft cover securely on the back of the StepWatch. It should fit snugly without forcing.
- 2. Insert the gray or black Velcro strap through the back of the StepWatch, with the Velcro side down as the StepWatch is face down.
- 3. Place the StepWatch on the participant and pull the strap through the plastic ring and secure using the Velcro tip.







- 4. The StepWatch is placed about 0.5 1 inch above the anklebone, facing up (the "StepWatch" name should be readable and the walking figure should be right-side-up).
- Tighten strap until fit is comfortable but snug enough that it does not slip down.
- It can be placed over a sock, and on either leg.

#### **Step Verification & Fine Tuning**

Follow the directions on-screen to begin the Step Verification process.



Note: It's okay if the StepWatch detects more or less than 5 steps. The StepWatch will self-adjust if it over or under counted. What is important is that you tap stop in the app after you see the participant take five steps on the leg with the StepWatch. This is usually 10 total steps between the right and left legs.

#### **Stride Length Screen**

On the Stride Length screen, you may obtain a stride length by performing a distance walk test, timed walk test (will need to enter distance), or manually enter stride length. Choose the process appropriate for your study by tapping "By Distance", "By Time", or "Enter Stride Length Manually".



If you choose "By Distance", you will select the distance in meters. You will press start when the participant begins the test, and stop when the participant's foot crosses the finish line. The StepWatch will count steps during this interval and calculate the stride length.

If you choose "By Time", you will select the timed walk test such as "6 minutes" for the six-minute walk test. The StepWatch will count steps during the selected time interval. At the end, you will be required to enter the distance walked during the test. The StepWatch will then calculate stride length.

If you choose "Enter Stride Length Manually", you type in the participant's stride length.

Note: If you do not see a Stride Length Screen, Stride Length was an option not selected when setting up the Site iPad (see Site Settings in Section 1, Installing and Setting Up the CRO Site App).

#### **Final Registration**

Verify all the information is correct, and tap the "Register" button to submit the participant's details to the cloud and register them to the study. If this is a returning participant, the registration screen will say "Update" instead of "Register".

4:16 PM Wed Oct 2			
Exit StepWatch 4		Kstride Length Assessment	By Distance
	Cancel	Registration	
×.		e review the Participant i ast time before registerin	
stepwatch	Participa	nt ID	10031005
	StepWate	ch ID	SW4-8389
	Height		150cm
	Oct Cadence		66
Study Number	8 Sensitivit	ty	12
Site ID			
	SW		
Battery Level			
Subject ID	10	Register	
			Done

If you are using the QR Code on the iPad to connect the StepWatch to the iPhone, select "Yes" to "Using QR Connect" on the iPad. If you select "No", you will use "Choose StepWatch" on the smartphone to select the StepWatch you are connecting to.



#### **iPhone Connection**

4:17 PM Wed Oct 2		
Exit St	tepWatch 4	Transfer StepWatch Info
		To begin transferring the connected StepWatch to a study iPhone, tap Connect in the iPhone app.
久		When the camera view appears, simply scan the QR code below.
Date	Oct 2, 2019	
Study Number		
Site ID	190929	国際設置開始
StepWatch ID	SW4-8389	
Battery Level	100%	
Subject ID	10031005	
		Done





...I LTE 🔳

#### **QR** Connect Pathway





#### No QR Code Setup

5:52 PM Wed Oct 2		중 32% ∎_
Exit StepWatc	h 4	Key Back         Stride Length Assessment
Date	Oct 2, 2019	Choose one of the options below to calculate the participant's stride length. Tap "Enter Stride Length Manually" if you already know the participant's stride length, or tap "Skip" to proceed to registration. Use QR Connect? If the Companion App device is present, select "No" to complete registration.
Study Number	8301100	StepWatch to the Companion App later.
Site ID	190929	Yes No By Time
StepWatch ID	SW4-8389	
Battery Level	100%	Enter Stride Length Manually
Subject ID	10031005	
		Skip



	all 🗟 🗊
Choose Device	
	StepWatch 4
	StepWatch 4
	Choose Device
#### **Android Connection**

To connect the CR app to a StepWatch following setup, select "No" to the question about using the QR code. The CR app for Android does not support the QR Scanner.



Tap the "Connect" button on the CRO Companion app and choose the Bluetooth ID of the StepWatch you are connecting to. The Bluetooth ID is on the StepWatch label.





If the Participant ID and StepWatch Bluetooth ID are correct, tap "Yes," and the smartphone and StepWatch will be connected for the duration specified in Site settings. If they do not match, tap "No" and the connection will not go through.

The Connect button will turn teal in color when the connection expires between the smartphone and StepWatch. When the Connect button is active (teal), it can connect to the StepWatch for another visit / recording session.



#### Participant's Use of CRO Companion App

After initial setup, participants should use the companion app at home for automatic uploads of their data into the study cloud. The smartphone will remain connected to the StepWatch for the link duration specified in the app site settings. Participants should be instructed to keep the smartphone plugged in at night and to keep the app open. If an upload is desired outside of the automatic upload time, instruct participants to tap the Info button. This will expose the "Manual Upload" button. If tapped, it will upload the latest walking data into the cloud at that time. The StepWatch will need to be in Bluetooth range of the smartphone to successfully upload walking data. Tap the "Info" button to go back to the Connect screen.

iPhone



The Connect button becomes active again after the link duration expires. It can connect to a StepWatch for another data collection session as long as the StepWatch was setup with the CRO Site app first. The participant may use the QR code to connect to their StepWatch or select "No QR Code" to choose the Bluetooth ID of their StepWatch.





Note: After the first time the StepWatch is connected to the CRO companion app, the CRO companion app will only let the same Participant ID connect to it. In case of initiating a connection away from the clinic, this feature prevents a participant from accidently connecting to another participant's StepWatch. The CRO companion app must be uninstalled and reinstalled to use it with a different Participant ID

#### Android

If an upload is desired outside of the automatic upload time, instruct participants to tap the Info button. This will expose the "Manual Upload" button. If tapped, it will upload the latest walking data into the cloud at that time. The StepWatch will need to be in Bluetooth range of the smartphone to successfully upload walking data. Tap the "Info" button to go back to the Connect screen.



The Connect button becomes active again after the link duration expires. It can connect to a StepWatch for another data collection session as long as the StepWatch was setup with the CRO Site app first.



Note: After the first time the StepWatch is connected to the CRO companion app, the CRO companion app will only let the same Participant ID connect to it. In case of initiating a connection away from the clinic, this feature prevents a participant from accidentally connecting to another participant's StepWatch. The CRO companion app must be uninstalled and reinstalled to use it with a different Participant ID.

# 7. Using Previous Settings for Returning Participant

If a participant has previously been monitored with a StepWatch, the settings have been saved and you have the option of reusing them rather than going back through the setup process.



Note: It is more accurate to go back through the setup procedure each time the StepWatch is setup. Previous settings were designed for cases when the StepWatch needed to be setup without the participant present, and there is low probability that height or walking ability changed from the last setup procedure.

The registration screen shows the date of the most recent StepWatch setup procedure for this participant. The StepWatch step detection algorithm will be based on this setup procedure. If this date was not what you expected, you may cancel. To do this, go back and select "No" to "Use Saved Settings," and the app will take you through the setup process for your returning participant. If it the date is acceptable, tap "Update".

7:03 PM Fri Oct 4		<del>२</del> 909
Exit StepWatch 4	Enrollment	
· ·	Cancel Registration	
	StepWatch was successfully programmed using the last saved settings for the following participant:	
stepwatch		
	Participant ID: TEST	
	These settings were last used to record data on:	
Date O	<sup>bct</sup> Last Setup: February 26, 2019	
Study Number	Tapping below will update the participant's registration in	
Site ID	the cloud and complete setup	
StepWatch ID S	SW	
Battery Level		
	Update	
	Next	
	Next	

# 8. Retrieve Data from a StepWatch

When a StepWatch is returned to the site because data collection has concluded for a study visit/session, tap the "Retrieve data from a StepWatch" button on the Main Screen.



Following a successful connection, the app will automatically place the StepWatch unit into Idle Mode to prevent logging extra steps accidentally. To complete an upload of the data stored on the StepWatch to the cloud, tap "Upload Step Data."



Following a successful upload, the app will place the StepWatch into Storage Mode to conserve power until its next use. You will need to place the StepWatch on the charger for at least 10 seconds to wake it up when ready to use the StepWatch again. Tap "Return to Main Menu" when the upload is complete.

7:05 PM Fri Oct 4 Exit StepV	Vatch 4	Down	হ 90% <b>—</b>
step	e watch	Upload successful! All data stored been retrieved. Your StepWatch is not fully charge charge it before placing it in storag	d. It is recommended that you
Date	Oct 4, 2019	Your estimated charge time is:	01 hrs 19 mins
Study ID	8301100		
Site ID	TERI		
StepWatch ID	SW4-195c		
Participant ID	TERIANDR		
Total Steps	3048		
Battery Level	56%		
		Return To M	Main Menu

# 9. Preview a StepWatch

"Preview a StepWatch" is helpful when you want to know the state of a StepWatch such as the Participant ID, if the StepWatch is recording (run mode) or not recording (idle mode), battery level, number of steps recorded with the StepWatch, the day it started recording, and the number of days the StepWatch recorded. If the StepWatch is in run mode, it will continue to record steps after completing Preview. The "Set to Storage" mode will stop the StepWatch from recording and will turn off the Bluetooth radio to conserve battery. To turn the Bluetooth radio back on in order to connect with the StepWatch, you must place the StepWatch on a charger for 10 seconds, and then remove it from the charger.

	StepWatch 4		
	Preview	Done	
Proje	ect ID	8301100	2
Setup a Site	D	TERI	X
Patie	ent ID	METRIC4003	
Step	Watch BTID	SW4-197b	
Step	Watch Mode	Run	
Retrieve data f	Watch Battery Level (%)	44%	
Tota	Current Step Count	2830 Steps	
Start	Date	Sep 24, 2019	
Tota	Runtime	10 Days	
Preview a			
	Set To Storage Mo	de	
		A DESCRIPTION OF THE OWNER OF THE	

Note: If you set a StepWatch to Storage Mode, you will have to repeat setup with the CRO Site app to get StepWatch to record again for a participant

# 10. Managing a StepWatch at Home

Wearing the StepWatch



First, pull the strap through the slots on the back of the monitor. Then, pull the strap through the plastic ring and secure using the Velcro tip.

The StepWatch should rest about 0.5 - 1 inch above the anklebone, on the outside of the leg. The StepWatch does not require skin contact, and can be worn over a sock

#### **INCORRECT WEARING**



Upside down.



Inside the leg.

# Cleaning the StepWatch

If needed, you can clean the StepWatch by rubbing gently with a wet cloth or disinfectant wipe. To clean the strap, hand-washing with soap and warm water is preferred. Air-dry, or set dryer heat to low.



WARNING! NEVER PLACE THE STEPWATCH IN ANY TYPE OF OVEN OR AUTOCLAVE as this could potentially cause the permanent lithium battery to rupture or explode.

# Charging the StepWatch



To charge StepWatch, place it facedown on the center of the charger.

A light will illuminate when your StepWatch begins charging.



Do not place StepWatch on edge of charger.



Do not place StepWatch upside-down on charger.

#### Frequently Asked Questions

What happens if I forget my PIN?

You will need to re-install the app. For help with this process, see Section 1, Setting Up the CRO Site App. You may also contact the helpdesk.

What PIN do I use when I first open the app?

If your app has been preconfigured before being delivered to your Study Site, use the PIN 0000.

What if the StepWatch slips down the participant's ankle?

You will need to reposition the StepWatch and tighten the Velcro strap to keep the StepWatch in place.

Can participants switch what leg they wear the StepWatch on?

Yes

Can the StepWatch get wet?

Yes, the StepWatch is waterproof (IP67). StepWatch can be used in the shower, bath, or in the rain. Swimming is not recommended. A dry Velcro strap is recommended if wet.

Can I reuse a StepWatch for a different participant?

Yes, the StepWatch is setup with the information it needs each time it is setup. Therefore, the same StepWatch does not have to be used with the same participant, although you may choose to do it this way.

Can I reuse a smartphone with the CRO Companion app for a different participant?

Yes, but you must delete and re-install the app first. This is one of the safeguards against participants connecting to incorrect StepWatches once the study begins.

# Troubleshooting

The StepWatch cannot connect to the iPad:

Make sure the StepWatch is not on a charger when trying to connect. Make sure the StepWatch has some battery life by charging it for at least 15 minutes. Try restarting app. If problems persist, contact the Helpdesk.

The participant's StepWatch is lost of broken:

Next time participant comes to clinic, you may use another StepWatch.

The app crashes or does something unexpected:

Go to the Main Screen by tapping "Exit" on any app screen. Access the Info Panel (see Section 4, The Info Panel) and tap "Upload App Diagnostics," then contact the Helpdesk.