

睡眠ウォッチマン®



Sleep Watch-Man for Android

The SLEEP and STEP counter
wristwatch!

Press the SLEEP button
each morning to see how
much you slept!



And download your sleep recording
to any Android Phone or Tablet!



Features

- An objective measure of sleep/wake behavior, based on body movement.
- Proven technology used in sleep clinics around the world.
- Store and share your sleep information on the cloud.
- See estimates of your performance based on your sleep history.
- See a real-time estimate of your current performance.
- Perform optional a simple reaction time test (PVT) to see the effects of good/bad sleep.
- Also count your steps!



Did you get your 8 hours of Sleep?

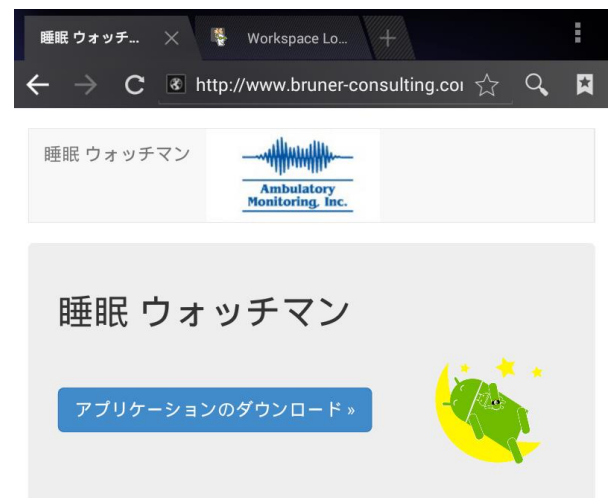
Getting Started: Loading the Sleep Watchman for Android App

1. Make sure the Android phone or Tablet Settings enable you to “Allow installations from unknown sources.”



2. From your Android browser download the latest Sleep Watchman for Android app from:

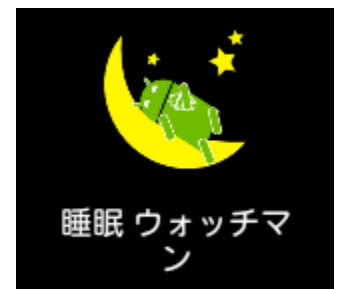
<http://www.bruner-consulting.com/sleepwatchman.html>



3. If the installation does not begin automatically, then install the Sleep Watch-Man app using your Android's Download app.



4. Start the Sleep Watch-Man for Android app.



Getting Started: Pairing the IR-Bluetooth Interface

Your Sleep Watch-Man communicates with your Android device through an ActiSys IR-Bluetooth Interface (Act-BT5711U). This device gets paired with your phone/tablet in much the same way as a Bluetooth headset would.

1. Install the 4 AAA batteries provided in the compartment at the bottom of the interface, taking care to orient the batteries as shown within the compartment.
2. Turn the interface on by pressing the “On” button (the interface turns off automatically after 10-minutes of non-use).

3. In your Android device “Settings” pair with the ACT-BT5711U. The pairing code is **0000**.



4. When asked by the Sleep Watch-Man app, select ACT-BT5711U.




Getting Started: Inserting the battery

1. Remove the 4 screws using the screwdriver provided.
2. Insert a fresh DL2430 size coin cell battery for over 30-days of operation.
PLUS SIDE UP!
3. Replace the battery cover with the 4 screws provided; making sure the rubber O-Ring is in its groove for a watertight seal. The screws should be finger-tight.
4. Synchronize using the Android App (see detailed instructions below)
5. Wear it!

Synchronize: Start your Sleep Watch-Man

If you've already recorded your activity, then synchronizing first gathers any data from your Sleep Watch-Man. Then the Sleep Watch-Man begins running again.

1. Turn the ACT-BT5711U interface on.
2. Press and hold the SLEEP button on the Sleep Watch-Man to start infrared (IR) communications. Release the button when the display begins to change. The device serial number and battery days will be displayed.
3. When the Sleep Watch-Man Display shows  place it in front of the interface.
4. Press the "Synchronize" button on the Sleep Watch-Man app. If prompted, select the ACT-BT5711U interface to continue.

Ready for Bed?

Sleep Watch-Man works well without any help from you. But if you want the best estimate of long it takes you to fall asleep (a.k.a. “Sleep Latency”) you should let Sleep Watch-Man know when you’re ready to go to bed and try and to sleep.

Don’t worry. If you forget this step the Sleep Watch-Man for Android app will estimate when you went to bed based on your activity level.

1. Press and hold down the left button.
The display will show `Go to bEd`, (going to bed) and briefly light up a green LED. Now Sleep Watch-Man knows that it should calculate “Sleep Latency,” how long it takes for you to get to sleep. Sleep Watch-Man lights up green so you can be certain you pressed the button even when you’re under the covers.
2. Have a good sleep...

Reading Your Sleep Scores Each Morning on the Sleep Watch-Man

1. If you can't wait to download your sleep to your Android, you can view some information about last night's sleep directly on the Sleep Watch-Man. After you wake up, simply press the SLEEP button, once.

Sleep Watch-Man will tell you when you first fell asleep and when you woke up. Specifically, Sleep Watch-Man presents the time when you first began an entry of sleep for at least 18 out of 20-minutes, *Go SLEEP* or longer up to the last sleep before you were awake, *End SLEEP*, for an hour or more (or you pressed the SLEEP button!).

IF you pressed and held the ACT (To Bed) button as described earlier when you went to bed (till you saw `Go to bEd` displayed), Sleep Watch-Man will give you an estimate of `SLEEP Lcy`, (Sleep Latency is how long it took for you to fall asleep). Next, Sleep Watch-Man displays the estimate of `t SLEEP` (total Sleep) time in hours and minutes. Finally, Sleep Watch-Man calculates the percentage of time you were asleep between the registered start and end times. That's your `SLEEP PC`, (Sleep Percent)!

During the Day

Count your walking steps! Sleep Watch-Man can also make an estimate of the number of steps you have walked (and vigorous hand/body movements equivalent to a step in energy content) since your last major sleep period (note that short naps do not reset the step counter). 10,000 steps should be the goal for an adult's active lifestyle!

During the day, press the **ACT** button just once to display the number of steps since you've been awake.



ACT 10000

At the end of each day, write your total ACT down in your sleep journal for a more complete picture of your total day.

Napping

If you're mainly interested in night time sleep, and not interested in counting your steps, you don't even need to wear Sleep Watch-Man during the day. But we recommend you put Sleep Watch-Man on about an hour before bedtime.

If you sleep during the day, or even doze in front of the TV, Zzz-Logger will mark sleep of less than two hours long as a `NAP` entry instead of a `SLEEP` entry.

Press the ACT button before bed to see how active you were during the day. And press the SLEEP button before bed to see if Sleep Watch-Man caught you dozing in front of the TV! If you don't press any button

before going to bed, then any dozing or even extreme inactivity may be included in your evening sleep entry by Sleep Watch-Man.

Note: If you tend to fall asleep in front of the TV or are extremely motionless during these time periods, let the Sleep Watch-Man know when you're really ready for bed by pressing and holding the ACT button till you see **Go to bEd** displayed (the green light will illuminate). This will make sure Sleep Watch-Man doesn't count TV time as SLEEP time!

Reviewing Your Sleep History

Up to the last 30 days of sleep information can be viewed in the Sleep Watchman for Android app. Tabular data of each block of sleep 20-minutes or longer can be scrolled through. Statistics include the estimates for “In Bed” time, the time to fall asleep (latency), the total sleep (Duration), the number of minutes spent awake after falling asleep (WASO), and the percentage of time spent in motion (% Restless). Sleep Watch-Man also estimates the amount of steps you took since the last time you slept.



2014年 02月 26日

就床時刻	00:00
分眠りに落ちる（レイテンシ）	00:08
睡眠終了時刻	07:48
起床時刻	07:54
睡眠時間	07:39
中途覚醒時間	1

Review Activity (Actigrams) and Performance Estimate Curves.

You may choose from choose to review Activity charts (Actigrams) or Performance Estimates from the chart selection menu. Activity charts present activity values recorded by Sleep Watch-Man each minute. Performance estimates are based on the Sleep Performance Model (SPM) validated by the US Army, which predicts cognitive performance based on a sleep reservoir approach.

グラフの設定

グラフの種類

生活リズムグラフ

生活リズムグラフ



パフォーマンス項目



キャンセル

時間軸のスケール

24 時間

1 時間



3 時間



12 時間



24 時間



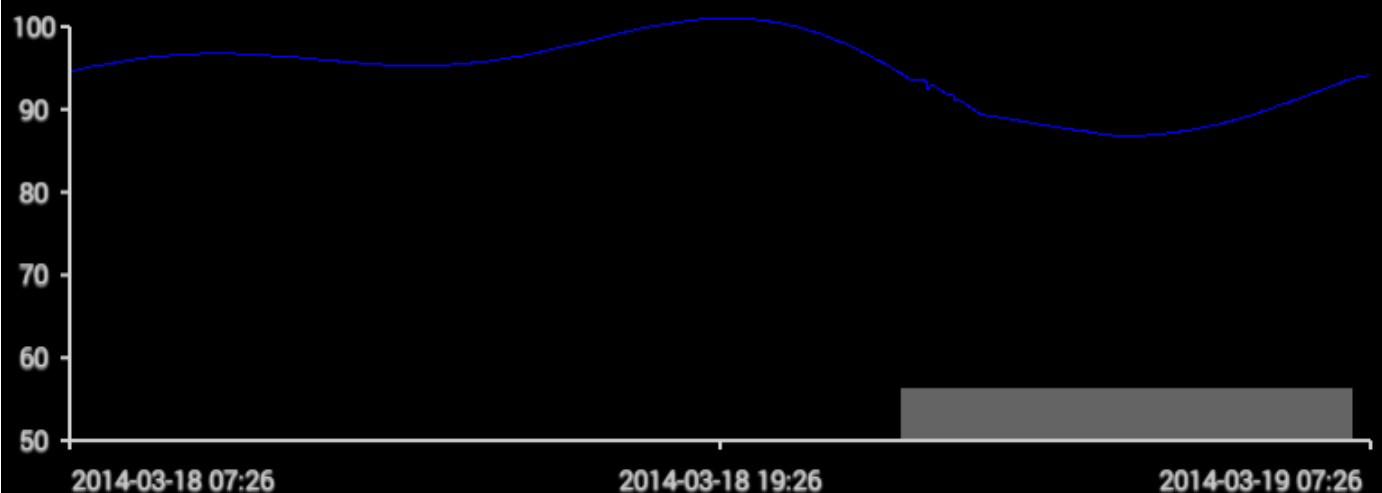
2 日



7 日



14 日

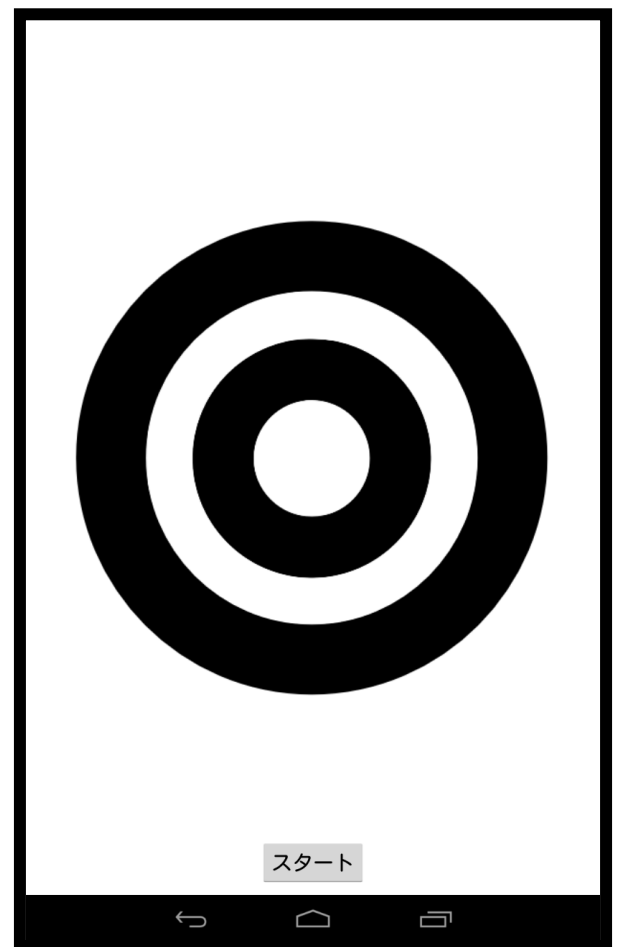


PVT Testing

PVT is short for “Psychomotor Vigilance Task.” This is a simple reaction time test requiring the user to tap the screen every time the target appears (but not before). Changes in the length of reaction time are sensitive to sleep deprivation and blood alcohol level. While useful data requires tests of anywhere from 3 to 10-minutes in length, the current Sleep Watch-Man for Android app has a 1-minute demonstration test that you can try. Results from these tests can be further analyzed and are included as attachments when you email results from your Android device from within the app. To start a test tap the “PVT” menu choice in the upper right corner of the app.



Press the “START” button at the bottom of the screen and the test will begin after a short count-down. The target (stimulus) is presented at random intervals. Tap anywhere on the screen as fast as you can when you see the target, but not before it appears (“Too early” is presented). Wait too long and a message “Too Late” is presented and you should look for a new target to present itself before tapping again.

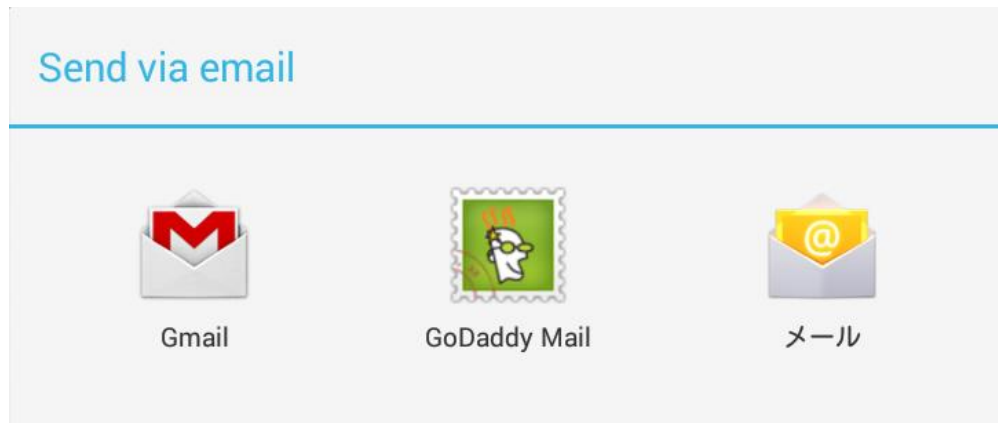


Emailing Results from Sleep Watch-Man

Data backup files, Tabular Sleep Results and PVT data files can be emailed directly from the Sleep Watch-Man app when an email program has been properly configured on the Android. To start, tap the email menu choice at the upper right corner of the screen.



This will bring up a selection of installed email apps to select from as shown below here:



Select an email app and Sleep Watch-Man will automatically attach the available data and create a suggested subject heading which includes the Sleep Watch-Man serial number. You can modify the subject line, add text to the body of the email, and also remove or add other attachments (like screenshots of your data).

FAQ

What if I don't wear the Sleep Watch-Man for a while? Sleep Watch-Man can sense when it is removed and will not count sleep when it's not worn. It won't count ACT (steps) either! When you're ready, just start wearing Sleep Watch-Man again and it'll record your next night's sleep and keep track of your daily steps.

How long will the battery last? The Sleep Watch-Man should run about 30-days on a fresh 2430 battery.

What if I wake up for several hours and then go back to bed? If Sleep Watch-Man senses that you are awake for more than an hour, it will mark each sleep or nap as separate entries.

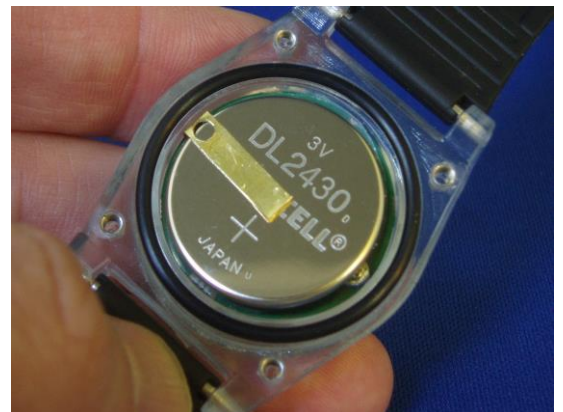
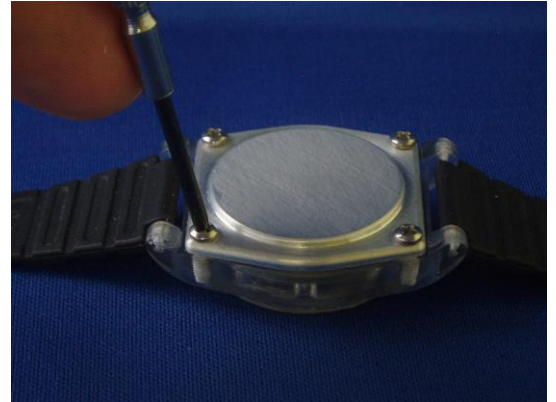
How do I know that Sleep Watch-Man is recording my activity? You will see two small display elements near the bottom right corner of the LCD toggle back and forth in response to motion.

Appendix

Changing the Sleep Watch-Man Battery

Press the cover down firmly with one's finger when loosening or tightening the cover. Use a Philips type screwdriver to loosen the four screws and remove the cover. Gently **slide** the battery until it is free of the contacts. The contacts are not meant to be bent during this process. Dispose of used battery properly according to local regulation.

Slide a fresh DL2430 battery between into the battery compartment under the positive contact, positive side up. And replace the cover and 4 screws.



When replacing the cover, be certain the O-ring seal is properly seated in the groove provided. When closing the battery compartment, the screws should be snug, but do not over-tighten. To assure even tightening adjust screw tightness in an alternating diagonal pattern while pressing firmly on the battery cover.

