

study coordinator guide

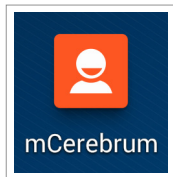
Rice University Lab Test

phone setup



download the config file

1. On the smartphone, open the mCerebrum app.



2. On the mCerebrum app home screen, tap the Options menu (shown below) in the upper-right corner of the screen.



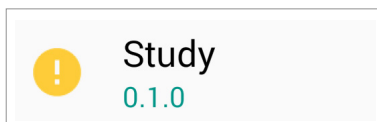
3. With the Options menu open, tap *Admin Settings*.

Note: If asked for a password to access the Admin Settings, enter the password: **1234**

4. Tap *System Setup*.
5. Tap *Applications*.
6. On the Install Applications screen, tap the *Check Updates* button at the bottom of the screen.


CHECK UPDATES

(A) If the Study app shows a yellow caution icon , tap the *Study* app in the list, then tap *Update*. Follow the on-screen instructions to update the app.



(B) If the Study app shows a green check mark  after checking for updates, your mCerebrum app is already up-to-date. In this case, please return to the *System Setup* screen and tap *Download New Configuration*.

7. You will be prompted to download the config file. Please enter the config file name: **R20160304**


Download Configuration File

Please enter the file name (example: default)

OK

8. Tap *OK* to download the config file.

phone setup (continued)



install/update apps

1. Once the config file is installed, please return to the mCerebrum app.
2. On the app home screen, tap the Options menu (shown below) in the upper-right corner of the screen.



3. With the Options menu open, tap *Admin Settings*.
4. Tap *System Setup*.
5. Tap *Applications*.
6. On the Install Applications screen, tap the *Check Updates* button at the bottom of the screen.

CHECK UPDATES

7. If any apps listed show a red X icon (✖), tap the app in the list then tap *Install*.
 If any apps listed show a yellow caution icon (⚠), tap the app in the list then tap *Update*.
 When every app shows a green check mark (✔), this means all apps are installed and up-to-date. Tap *Close*.

configuring the phone sensor

1. Once all applications are installed and up-to-date, return to the System Settings screen and tap *Settings*.
2. Tap *PhoneSensor*.
3. Tap to place a check mark in the box next to Default Settings.

Default Settings



4. Tap *Save*. The phone sensor is now configured.

IMPORTANT: To ensure high-quality data collection, the GPS feature of the smartphone must be set to *High Accuracy Mode*.

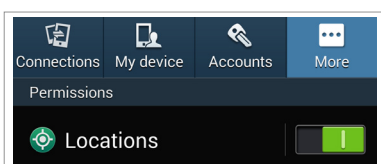
1. Open the Settings app on the smartphone.



3. On the Locations page, tap *Mode*.

Mode

2. Under the *More* tab in the Settings app, tap *Locations*.



4. On the next page, tap *High accuracy* to set the GPS to High Accuracy Mode.

High accuracy
 Uses GPS, Wi-Fi, and mobile networks to estimate your location.

chest sensor setup



configuring the chest sensor

ID number



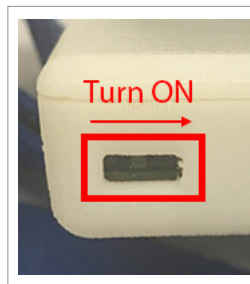
The ID number is found on a white label on the bottom of the chest sensor.

charging port



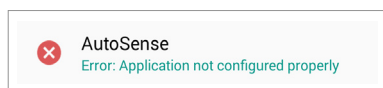
The charging port is found on the side of the chest sensor.

power switch

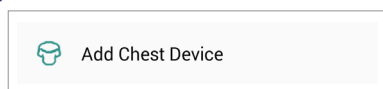


The power switch is found on the side of the chest sensor. To turn power ON, use a pen to slide the switch to the right as shown.

1. If necessary, go to the System Settings screen in the mCerebrum app. Tap *Settings*.
2. Tap *AutoSense* to access the AutoSense Settings screen.



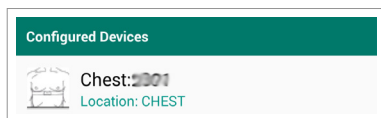
3. Tap *Add Chest Device*.



4. On the Chest Settings screen, under the Available Devices heading, tap the ID number of your device.

Note: Make sure you are selecting the ID number from the chest sensor that corresponds with this phone. If you do not see the device in the list, please ensure the sensor battery is charged and powered on.

5. With the device ID number selected, tap *Save*.
You should now see the appropriate chest sensor listed under the Configured Devices heading on the AutoSense Settings screen.



6. Tap *Save* again to complete chest sensor setup.

wrist sensor setup



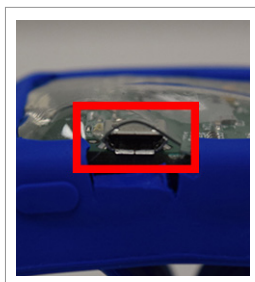
configuring the wrist sensor

ID number



The ID number is found on the top of the wrist sensor.

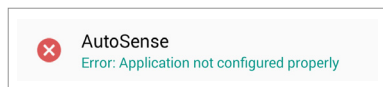
charging port



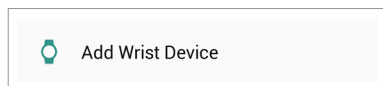
The charging port is found on the side of the wrist sensor.

Note: The LED light will blink when the sensor is on. If the LED does not blink, please charge the sensor using the included device charger.

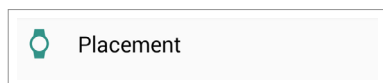
1. If necessary, go to the System Settings screen in the mCerebrum app. Tap *Settings*.
2. Tap *AutoSense* to access the AutoSense Settings screen.



3. Tap *Add Wrist Device*.



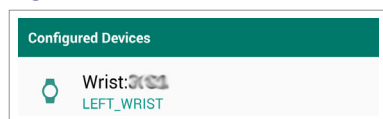
4. On the AutoSenseWrist Settings screen, tap *Placement* and select *Left Wrist* or *Right Wrist*.



5. Under the Available Devices heading, you should see the ID number of your device. Please tap the ID number.

Note: Make sure you are selecting the ID number from the wrist sensor that corresponds with this phone. If you do not see the device in the list, please ensure the sensor battery is charged and powered on.

6. With the device ID number selected, tap *Save*.
You should now see the appropriate wrist sensor listed under the Configured Devices heading on the AutoSense Settings screen.



7. Tap *Save* again to complete wrist sensor setup.
Repeat these steps to configure a second wrist sensor for the opposite hand.

study setup



setting the user ID

1. Go to the Admin Settings screen. Tap *Study Setup*.

✖ Study Setup
Error: UserID not defined

2. On the next screen, tap *User ID*.

✖ User ID
Error: UserID not defined

3. Type the desired ID of the participant then tap *OK*.

setting wake and sleep times

1. Go to the Study Setup screen and tap *Wakeup Time*.

✖ Wakeup Time

2. Select the time you expect data collection to begin each morning and tap *Set*.

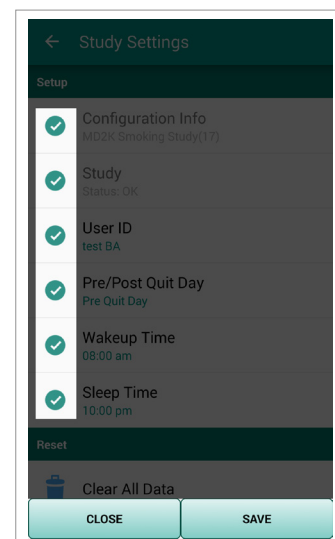
Set

To set the expected sleep time, repeat the same steps, but instead tap *Sleep Time* in step 1.

✖ Sleep Time

saving user settings

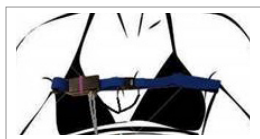
1. When you have finished setting the user ID, pre/post quit day, wakeup time, and sleep time, please tap *Save* on the Study Setup screen.
2. If all items under the Setup heading have a green check mark ✓ beside them, study setup is complete. You may tap *Close* and return to the app.



wearing the chest sensor



1. Make sure the chest sensor is charged and powered ON.
2. Wear the chest band under the armpits as shown.



3. Plug the RIP connectors into the **outside socket** of the chest sensor. Plug the two other ends into the chest band (near the buckle).

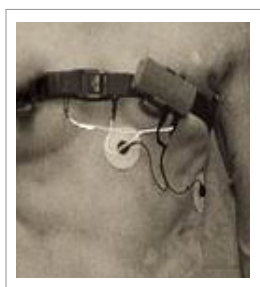


4. Plug the ECG connectors into the **inside socket** of the chest sensor.



5. Place two electrodes on the body as shown, then attach the other ends of the ECG connectors to the electrodes.

Note: Proper placement of electrodes on the body is important.



male



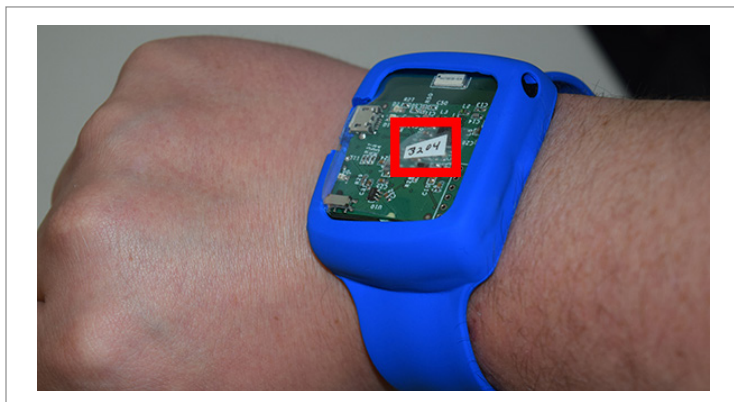
female

To confirm the sensor is working, see the *verifying data collection* instructions on the next page.

wearing the wrist sensors



1. Make sure the wrist sensor is charged.
2. Wear the wrist sensor so that the ID number is facing right-side-up from the point of view of the user, as shown below.



Note: It is important to always wear each sensor on the same wrist (left or right) as the placement chosen during the wrist sensor setup.

verifying data collection



To verify data collection, use the icons under the Sensor Data Quality heading near the top of the Study app home screen.

✓ **green check mark** — Good data is being collected

⚠ **yellow caution** — Data is being collected, but there is an issue with data quality (i.e. sensor is not worn properly)

✗ **red X** — No data is being collected (i.e. sensor needs charging, sensor is powered off, sensor is not paired properly)

Sensor Data Quality			
Respiration	ECG	Wrist(L)	Wrist(R)
⚠	⚠	✓	✗

using the app



start day

During each day of the study, participants should tap the *Start Day* button when data collection is ready to begin. This allows the software to trigger EMAs during appropriate times.

1. Make sure all sensors are properly worn.
2. In the mCerebrum app, tap the *Start Day* button to begin the day. Tap *Yes* to confirm.

Day	
Day Started: N/A	Start Day
Day Ended: N/A	

privacy

Privacy Control allows users to turn off certain features for a limited period of time. For example, they may wish to momentarily disable EMAs while they are busy or disable the GPS feature while they visit a particular location.

1. In the mCerebrum app, tap the *Turn On* button under the Privacy heading.

Privacy	
Not Active	Turn On

2. On the Privacy Control Settings screen, tap *Duration*.
Select the amount of time for which you wish to disable the feature(s).

Duration

3. Under the Privacy Type heading, tap each of the features you would like to temporarily disable. You will see a check mark appear to confirm the feature is selected.
4. Tap *Start* to begin the privacy timer.

Privacy Type	
Location GPS	<input checked="" type="checkbox"/>
Activity GPS, Accelerometer, Gyroscope	<input type="checkbox"/>
Chest Sensor	<input type="checkbox"/>
Wrist Sensors	<input checked="" type="checkbox"/>
EMA & Intervention	<input type="checkbox"/>
<div>START</div> <div>CLOSE</div>	

5. You will see a countdown timer under the Privacy Status heading to confirm the privacy settings are enabled. When you are finished, tap *Close*.

Privacy Status
Status ON (00:04:56)

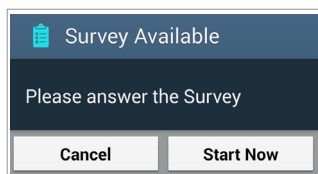
using the app (continued)



EMAs

EMAs will be automatically triggered by the software during a study.

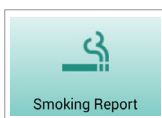
The participant will receive alerts on their phone that will prompt them to complete an EMA exercise. The phone will vibrate and sound an alarm for 30 seconds when it is time to complete an EMA exercise.



For additional testing purposes, EMAs can be accessed through the *Admin Settings* menu.

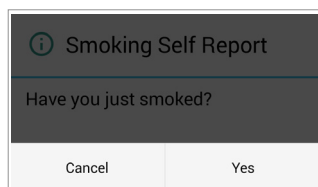
1. From the mCerebrum app home screen, tap the Options menu in the upper-right corner, then tap *Admin Settings*. Enter the password: **1234**
2. Tap *Test*, then tap *EMA Test*. Select which EMA exercise you would like to test.

smoking report

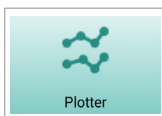


Smoking Report allows users to report the moment when they have smoked a cigarette.

1. In the mCerebrum app, tap the *Smoking Report* button (shown above).
2. When the question below appears, tap *Yes* to verify smoking has occurred or *Cancel* to cancel the smoking report.



plotter



Plotter allows users to view the data plotters for each available sensor.

1. In the mCerebrum app, tap the *Plotter* button (shown above), then select the Data Source you wish to view.
2. When finished, use the smartphone's Back button to manually return to the mCerebrum app.

Note: For more information on reading data, please see the *verifying data collection* section of this manual.

charging the devices



All devices should be charged every night. Use the device charger and cables to charge the smartphone and sensors, and let them charge overnight.

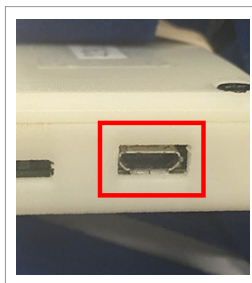
The battery life of the smartphone and Autosense sensors should last for the duration of each day.

smartphone



The charging port is found on the bottom of the smartphone.

AutoSense chest sensor



The charging port is found on the side of the chest sensor.

AutoSense wrist sensor



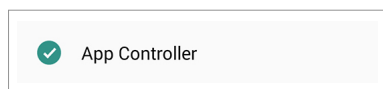
The charging port is found on the side of the wrist sensor.

saving data to a computer

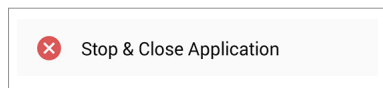


If necessary, perform the following steps to save the data to a computer:

1. Go to the Admin Settings screen and tap *App Controller*.



2. On the Application Settings screen, tap *Stop & Close Application*.



3. Connect the smartphone to a PC using the charging cable.
4. Using the computer, navigate to the phone's *org.md2k.datakit* folder. (*Phone > Android > data > org.md2k.datakit*)
5. Copy the *org.md2k.datakit* folder and paste it to your computer's hard drive.
6. Rename the folder on your computer. Use the participant's user ID as the new folder name.

reporting issues on github

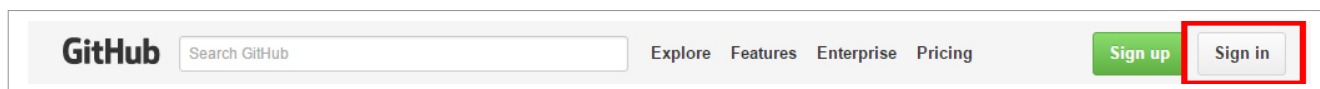


We request that software bugs and issues be reported **ASAP** on a case-by-case basis.

Please help by keeping our software development team informed of each issue as soon as possible.

To report an issue:

1. Go to <https://github.com/MD2Korg>
2. If necessary, click the *Sign In* button in the top-right corner and log in to your account.



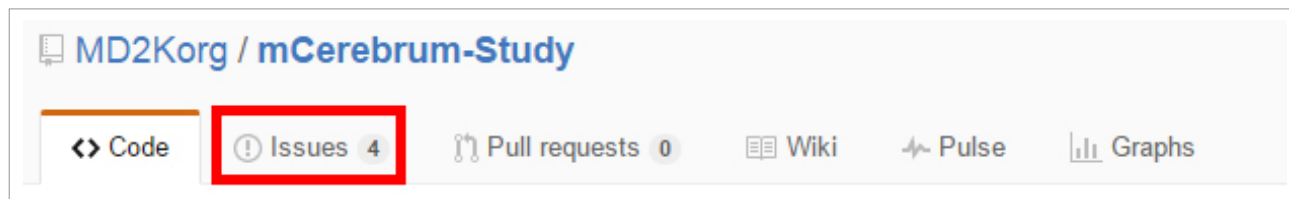
If you need to create an account, click *Sign Up* and enter your information.

3. Once you are logged in, click the name of the app for which you are reporting an issue.
For example: if you are reporting an error in the mCerebrum app, click *mCerebrum-Study*,
if you are reporting an error in Mood Surfing, click *mCerebrum-MoodSurfing*, etc.

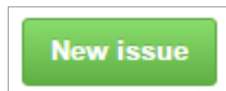


Note: If you are unsure which application to select, please make your best guess and we can easily move it later.

4. On the application page, click the *Issues* tab near the top of the screen.



5. On the Issues page, click the *New Issue* button.



6. On the next page, type a title and a brief description of the issue you are experiencing.
When you are finished, click the *Submit new issue* button.

