



## User Manual

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# Floodlight™ MS Cognitive Test

**Software version: 1.2 | Document version: 4.0**



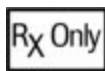
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For iOS - 9341897001  
For Android - 9341919001

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07-20-2021



Federal law restricts this device to sale by or on the order of a  
healthcare practitioner

Floodlight™ MS Cognitive Test is a medical device.

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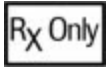

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To the maximum extent permitted by law, you shall not decompile and/or reverse engineer the software or any part thereof.

Any serious incident that has occurred in relation to the device should be reported to Roche Customer Support and the competent authority where you reside. See the Support section for more information on how to contact Roche Customer Support.

## Symbols used

The following table displays the symbols used in this User Manual.

	<b>Product manufacturer:</b> The name and address of the application's manufacturer.
	<b>Reference Number:</b> Indicates the Reference or Catalog number for this user manual
	<b>Prescription Use Only:</b> Federal law restricts this device to sale by or on the order of a healthcare practitioner
	<b>Warnings and Precautions:</b> Highlights information that is critical for optimal performance of the system. May also indicate that loss of data or invalid data could occur if the precautions or instructions are not observed.

# Contents

---

- 1 Overview ..... 6**
  - 1.1 Intended Use ..... 7
  - 1.2 Contraindications ..... 7
  - 1.3 Risks and Benefits ..... 7
  - 1.4 Warnings and Precautions ..... 7
  
- 2 Matching Activity ..... 8**
  - 2.1 Get Started ..... 9
    - 2.1.1 Review Instructions ..... 9
    - 2.1.2 Start the Activity ..... 11
    - 2.1.3 Read the Product Label ..... 11
    - 2.1.4 Cancel the Activity ..... 13
  - 2.2 Match the Symbols (Part 1 of 2) ..... 14
    - 2.2.1 What will I see on my screen? ..... 14
    - 2.2.2 How do I perform this activity? ..... 15
  - 2.3 Match the Numbers (Part 2 of 2) ..... 16
    - 2.3.1 What will I see on my screen? ..... 16
    - 2.3.2 How do I perform this activity? ..... 17
  
- 3 Troubleshoot ..... 19**
  - 3.1 Why do I see the Instructions screens when I tap START? ..... 20
  - 3.2 Why am I seeing a screen about this activity being skipped? ..... 20
  - 3.3 Can I cancel an activity after I start? ..... 20
  - 3.4 How do I cancel an activity? ..... 21
  - 3.5 What if I get a call while performing the activity? ..... 21
  - 3.6 What if I get interrupted or distracted by someone while performing this activity? ..... 21
  - 3.7 Can I retake the activity? ..... 22
  - 3.8 Do I need to use a specific hand or finger when completing this activity? ..... 22
  
- 4 Additional Information ..... 23**
  - 4.1 Internet Connection ..... 24

---

4.2 Adverse Events .....	24
4.3 Warranty .....	24
<b>5 Support .....</b>	<b>25</b>
<b>6 Appendix A .....</b>	<b>26</b>
6.1 Open Source Software .....	26
6.1.1 Open source license notifications and licenses (For iOS) .....	26
6.1.2 Open source license notifications and licenses (For Android) .....	27

# 1 Overview

The Floodlight™ MS Cognitive Test is made up of two activities:

- **Match the Symbols:** Match symbols with the numbers
- **Match the Numbers:** Match numbers to establish a baseline for the **Match the Symbols** activity

You can complete this activity to measure your cognitive function over time. This activity will help you collect data about the unique ways in which multiple sclerosis (MS) impacts you.

## In this Section:

---

1.1 Intended Use .....	7
1.2 Contraindications .....	7
1.3 Risks and Benefits .....	7
1.4 Warnings and Precautions .....	7

## 1.1 Intended Use

The Floodlight™ MS Cognitive Test is intended as a cognitive assessment aid to determine the level of cognitive functioning in patients 18 years of age and older with multiple sclerosis. The Floodlight™ MS Cognitive Test is used by patients in their home environment, and the results are reviewable by the patient and exported to a qualified healthcare professional (HCP) for review. The patient is not intended to take action on the device output without consultation of a qualified HCP.

The Floodlight™ MS Cognitive Test only provides objective measurements of cognitive function and does not provide an interpretation or a clinical implication of the measurements. The Floodlight™ MS Cognitive Test should only be used as an adjunctive tool for measuring cognitive function and is not intended to be used as a stand-alone diagnostic device nor to identify the presence or absence of clinical diagnoses.

## 1.2 Contraindications

None known.

## 1.3 Risks and Benefits

All known and foreseeable risks have been reduced as much as possible and no unacceptable risk has been identified. Potential benefits include tracking measurements in key domains outside of the clinical setting and supporting informed consultations between healthcare professionals and their patients. Overall, the potential benefit of the device far exceeds the probable known and foreseeable risks.

## 1.4 Warnings and Precautions



Do the test as often as recommended by your provider. Please note that self-testing at home does not replace your regular visits with your provider.



Do not try to interpret the data presented by the summary charts. Only your provider can interpret the data that you collect using the Floodlight™ MS Cognitive Test.



Follow the recommended instructions while performing each activity. If you do not follow the instructions, it may result in inaccurate data.



Place your phone on a flat surface. Not placing the phone on a flat surface will change the accuracy of your data.

## 2 Matching Activity

This activity measures how fast your brain processes information. This is achieved by:

- Asking you to correctly match symbols to a number
- Asking you to match numbers
- Measuring how many symbols and numbers you matched correctly in the given amount of time.

### In this Section:

---

2.1 Get Started .....	9
2.2 Match the Symbols (Part 1 of 2) .....	14
2.3 Match the Numbers (Part 2 of 2) .....	16

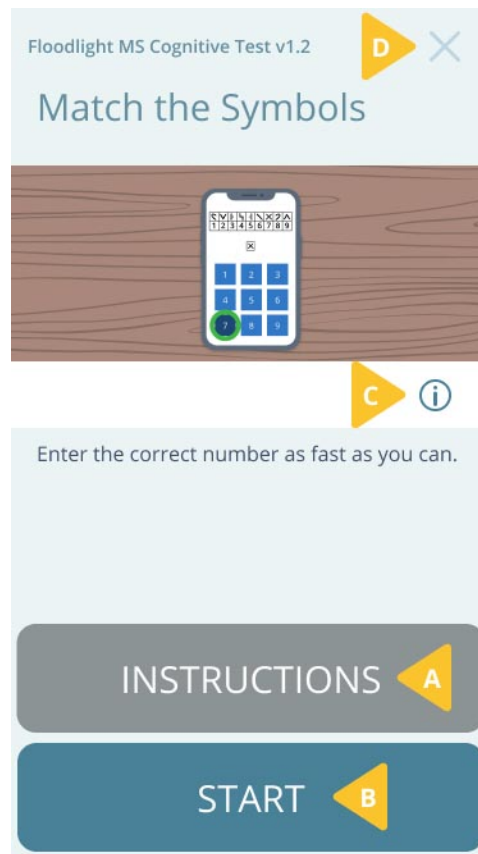


## 2.1 Get Started

From the **Match the Symbols** or **Match the Numbers** start screen, you can:

- A. **Review Instructions** (on page 9)
- B. **Start the Activity** (on page 11).
- C. **Read the Product Label** (on page 11)
- D. **Cancel the Activity** (on page 13)

**Note:** You cannot cancel the activity after you start.



### 2.1.1 Review Instructions

You must follow the instructions when performing each activity. This ensures that the data collected for the activity is accurate. You can quickly review instructions from the starting screen for each activity. In addition, you can review this user manual to review more detailed instructions for the activity.

The **first five times** you perform an activity, you will be prompted to review instructions when

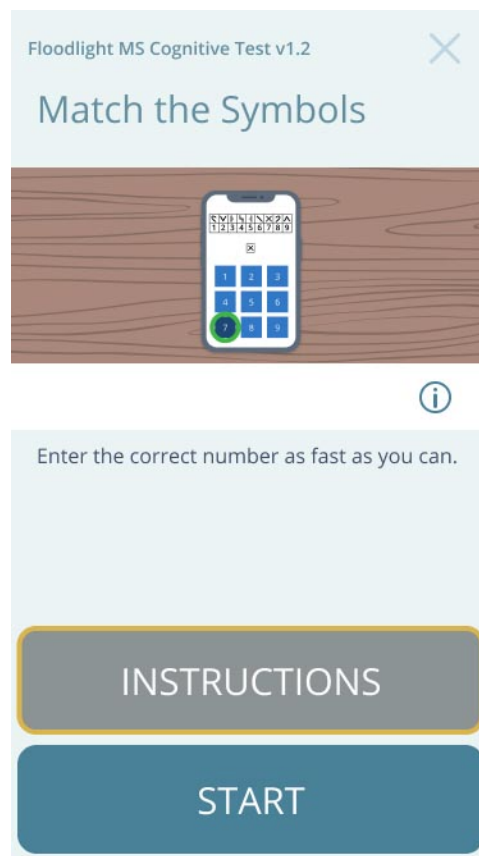
you tap **START**. After that, every time you press **START**, the activity will start without first displaying the instructions.

You can:

- Review the instructions on the screen
- Review this user manual

**To review instructions for this activity:**

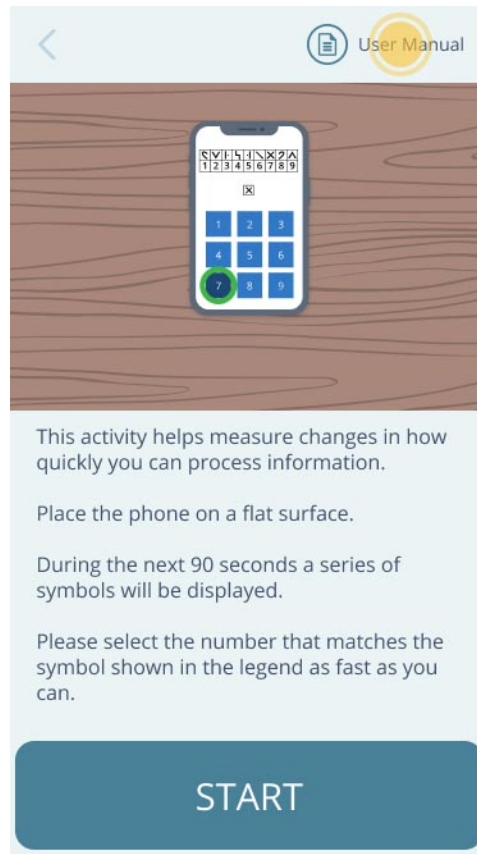
1. From the **Match the Symbols** or **Match the Numbers** start screen, tap **INSTRUCTIONS** to quickly review how to perform the activity.



**To review this user manual:**

1. From the **Match the Symbols** or **Match the Numbers** start screen, tap **INSTRUCTIONS**.

2. From the following screen, tap **User Manual** to see this user manual for the activity.



### 2.1.2 Start the Activity

#### Tip

It is best to complete your activities in an environment where you can focus and minimize interruptions.

When you are in a comfortable environment and ready to complete your activity:

1. Place your phone on a flat surface such as a table or a desk.
2. Tap **START** to begin the activity.
3. A **5 second** countdown screen will appear.

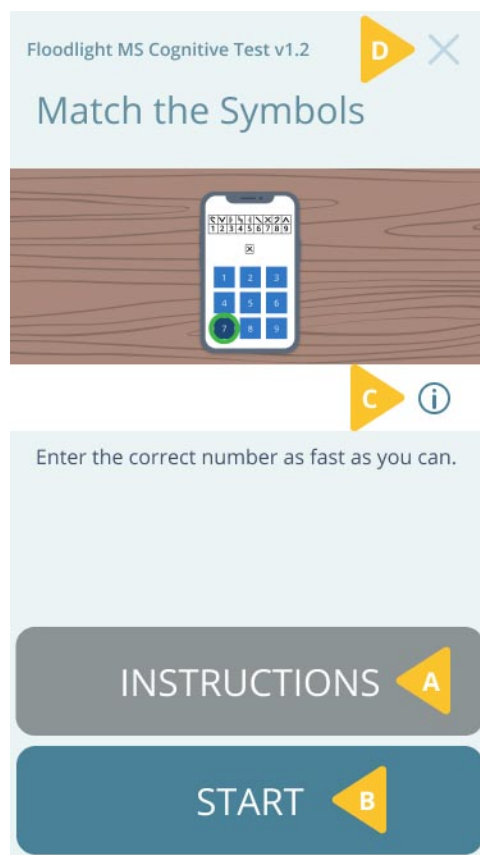
Relax and get ready to complete the activity once the countdown runs out.


### 2.1.3 Read the Product Label

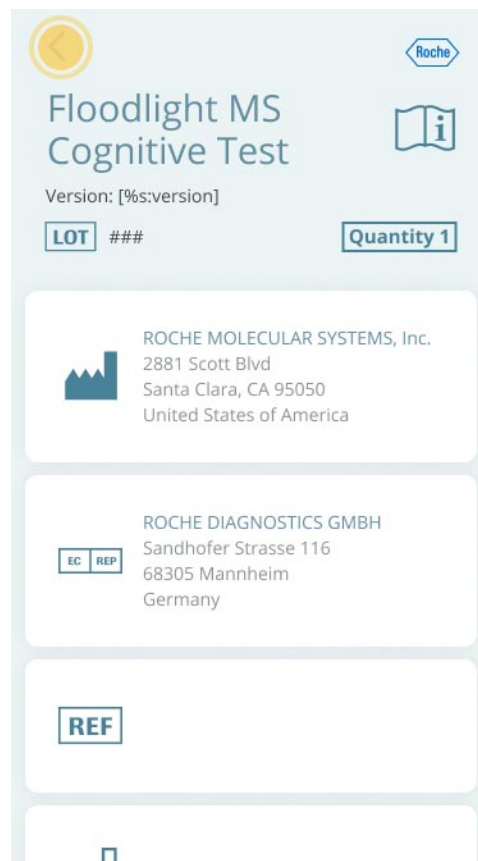
You can find out more information about the product in the product label.

**To display the product label:**

1. Tap the **Info** button **(i)** **(C)** on the **Match the Symbols** or **Match the Numbers** screen.



2. Tap the **Back** button  to go back to the **Match the Symbols** or **Match the Numbers** screen.



### 2.1.4 Cancel the Activity

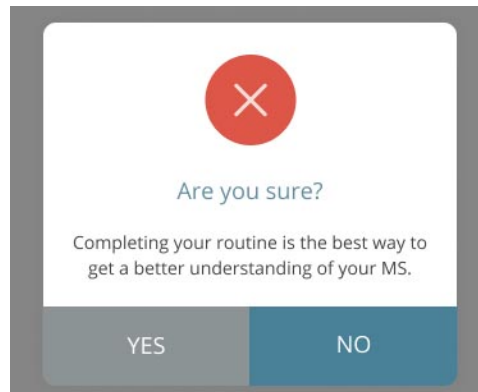
You can cancel this activity before you tap **START**. If you cancel the activity, you will have an opportunity to come back later in the day and resume your routine from where you stopped.

The data for all activities that you have completed up until this point will be saved.

#### To cancel the activity:

1. Tap the **Close** button  on the top-right corner.

2. Tap **YES** on the confirmation screen.



## 2.2 Match the Symbols (Part 1 of 2)

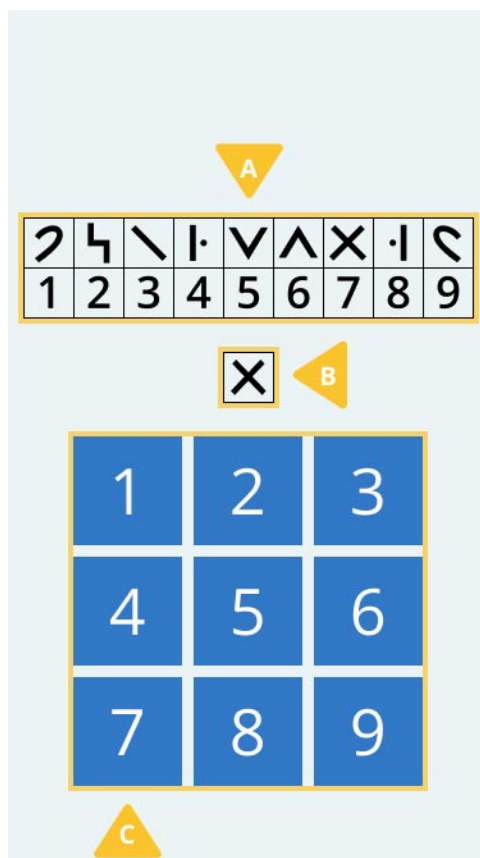
This is the first Matching Activity. In this activity, you match as many symbols as possible to their numbers within **90 seconds**.

### 2.2.1 What will I see on my screen?

When the activity starts, you will see:

- A. The *symbol grid* that you will use to find the number associated with each symbol.
- B. The *symbol* that you will have to match.

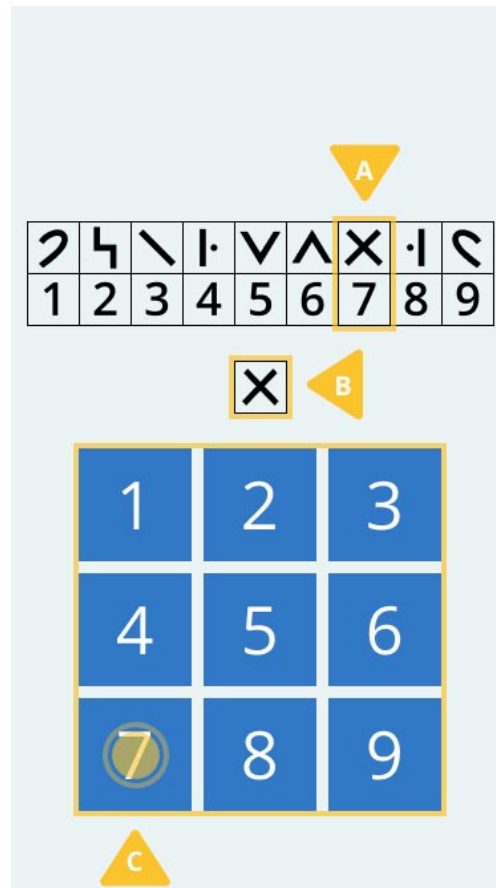
C. The *keypad* that you will use to tap the number matching the symbol.



### 2.2.2 How do I perform this activity?

Use the **symbol grid (A)** to identify the number associated with the **symbol (B)** and tap the correct number on the **keypad (C)** displayed on the screen.

For example, note that the number **7** matches the symbol **X** displayed below the symbol grid. Tap number **7** on the keypad.



To complete this activity, match as many symbols as possible to their numbers within **90 seconds**. The activity automatically stops, when the time is up.

## 2.3 Match the Numbers (Part 2 of 2)

This is the second Matching Activity. In this activity, you match as many numbers as possible within **30 seconds**.

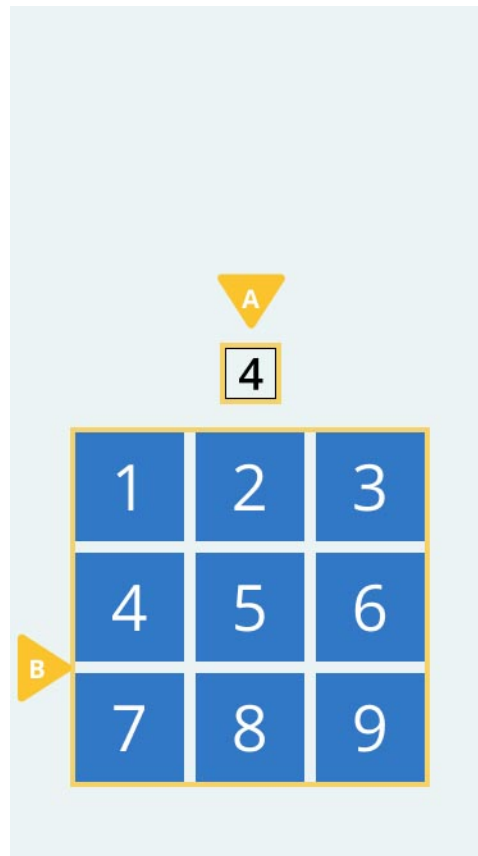
### 2.3.1 What will I see on my screen?

When the activity starts, you will see the following on your screen:

- A. The *number* that you will have to match.



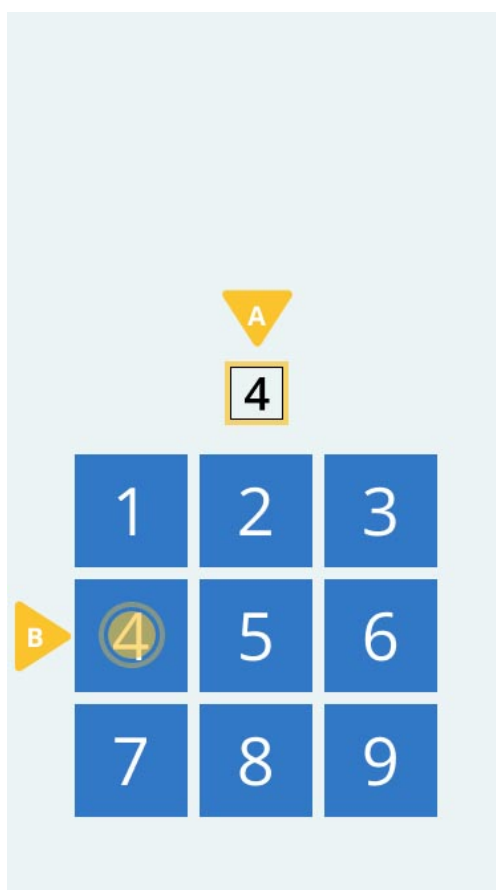
B. The *keypad* that you will use to tap the number.



### 2.3.2 How do I perform this activity?

When a **number (A)** is displayed on the screen, tap the same number on the **keypad (B)** displayed on the screen.

For example, note that the number **4** is displayed on the screen. Tap number **4** on the keypad.



To complete this activity, match as many numbers as possible within **30 seconds**. The activity automatically stops, when the time is up.

## 3 Troubleshoot

### In this Section:

---

3.1 Why do I see the Instructions screens when I tap START? .....	20
3.2 Why am I seeing a screen about this activity being skipped? .....	20
3.3 Can I cancel an activity after I start? .....	20
3.4 How do I cancel an activity? .....	21
3.5 What if I get a call while performing the activity? .....	21
3.6 What if I get interrupted or distracted by someone while performing this activity? .....	21
3.7 Can I retake the activity? .....	22
3.8 Do I need to use a specific hand or finger when completing this activity? .....	22

### 3.1 Why do I see the Instructions screens when I tap START?

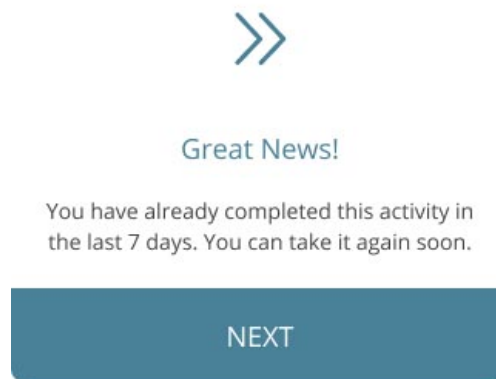
The **first five times** you perform an activity, you will be prompted to review instructions when you tap **START**.

After this, you will be directed to the countdown screen when tapping the **START** button. You can always review instructions by tapping on the **INSTRUCTIONS** button when needed.

### 3.2 Why am I seeing a screen about this activity being skipped?

Your ability to memorize the symbol grid may affect the accuracy of the data collected by this activity. This activity may be skipped if you have already completed it in the last seven days.


If that situation occurs, you will see the following message:

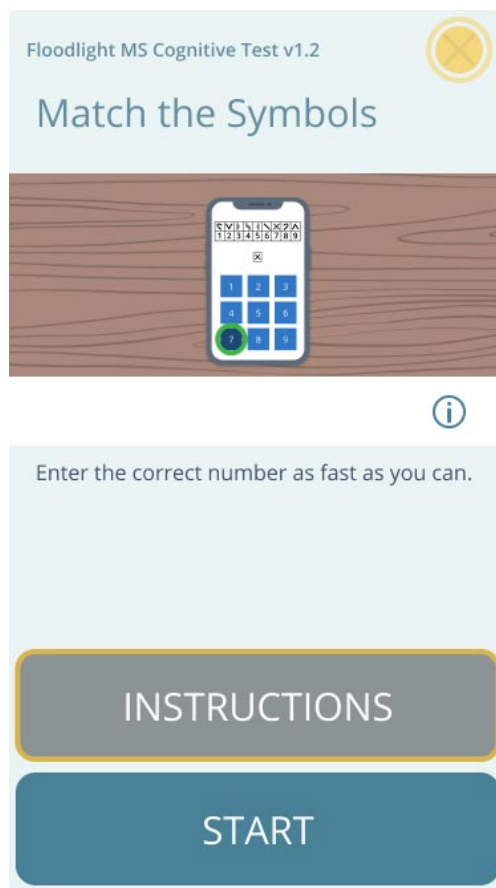


### 3.3 Can I cancel an activity after I start?

No, you **cannot** cancel an activity after you tap **START**.

### 3.4 How do I cancel an activity?

You can cancel an activity only before you start the activity. To cancel the activity, tap the **Cancel** button  on the top-right corner of the activity start screen, as shown below:



### 3.5 What if I get a call while performing the activity?

If you get a call while performing the activity, the activity is automatically stopped and no data is submitted. You can restart the activity at a later time.

### 3.6 What if I get interrupted or distracted by someone while performing this activity?

It is best to complete this activity in a location, or environment, where you can focus for better accuracy. However, it is not a problem if you get interrupted, or distracted, as you perform this activity. You will have more opportunities to complete this test in the future. The data collected over an extended period of time is more relevant than a single data point.

### **3.7 Can I retake the activity?**

You can retake the activity only if:

- You received a phone call during the activity.
- You canceled the activity earlier during the day.

### **3.8 Do I need to use a specific hand or finger when completing this activity?**

No, this activity does not require you to use a specific hand or finger. It is recommended to consistently place the phone on a flat surface, such as a table, to optimize the accuracy of the data collected.

## 4 Additional Information

### In this Section:

---

4.1 Internet Connection .....	24
4.2 Adverse Events .....	24
4.3 Warranty .....	24

## 4.1 Internet Connection

You can complete your activity in the Offline mode. However, you will need an internet connection (Wi-Fi or Cellular) to transfer your activity data to the server.

## 4.2 Adverse Events

An adverse event is defined as any untoward medical occurrence, unintended disease or injury, or untoward clinical signs (including abnormal test results), related to the Floodlight MS activity. While there are no known adverse events related to the activities, potential adverse events include depression and/or suicidal behavior triggered by misinterpretation of test results. To mitigate this risk note the warning not to try to interpret the data presented by the summary charts (**Warnings and Precautions** section). If you experience or think you may have experienced an adverse event, please report this information (see section **Support** for contact information).

## 4.3 Warranty

Please refer to the **No Warranties** section in the Floodlight™ MS Mobile Application Terms and Conditions.



## 5 Support

If you face any problem using the Floodlight™ MS Mobile Application, you can contact us at any time.

- **By Email:**

- **Australia** - [floodlightms\\_support.au@roche.com](mailto:floodlightms_support.au@roche.com)
- **Austria** - [floodlight\\_support.at@roche.com](mailto:floodlight_support.at@roche.com)
- **Finland** - [floodlight\\_support.fi@roche.com](mailto:floodlight_support.fi@roche.com)
- **Germany** - [grenzach.support\\_floodlight@roche.com](mailto:grenzach.support_floodlight@roche.com)
- **Italy** - [italy.floodlightms@roche.com](mailto:italy.floodlightms@roche.com)
- **Portugal** - [floodlightms\\_support.pt@roche.com](mailto:floodlightms_support.pt@roche.com)
- **Switzerland** - [floodlightms\\_support.ch@roche.com](mailto:floodlightms_support.ch@roche.com)
- **United Kingdom** - [uk.floodlightms\\_support@roche.com](mailto:uk.floodlightms_support@roche.com)
- **USA** - [FloodlightMS\\_support.us@gene.com](mailto:FloodlightMS_support.us@gene.com)

- **By Phone:**

- **Australia** - 1800 570 627
- **Austria** - 0800 012 327
- **Finland** - 800 02662
- **Germany** - 0800 4268426
- **Italy** - 800 098 389
- **Portugal** - 800 910 428
- **Switzerland** - 0800 35 66 35
- **United Kingdom** - 0800 066 5557
- **USA** - 888-455-8668 (888-ILLUMN8)

## 6 Appendix A

### 6.1 Open Source Software

#### 6.1.1 Open source license notifications and licenses (For iOS)

The following table lists the Open Source software used as part of the Floodlight™ MS Cognitive Test for the iOS devices.

- Library=commons-csv-1.7.jar
  - Version=1.7
  - License=Apache 2.0
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
- Library=simpleclient\_hotspot-0.9.0.jar
  - Version=0.9.0
  - License=Apache 2.0
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
- Library=simpleclient\_dropwizard-0.9.0.jar
  - Version=0.9.0
  - License=Apache 2.0
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
- Library=commons-lang3-3.11.jar
  - Version=3.11
  - License=Apache 2.0
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
- Library=simpleclient\_vertx-0.9.0.jar
  - Version=0.9.0
  - License=Apache 2.0
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
- Library=commons-math3-3.6.1.jar
  - Version=3.6.1
  - License=Apache 2.0, BSD 3

- Link=<https://www.apache.org/licenses/LICENSE-2.0>
- <https://opensource.org/licenses/BSD-3-Clause>
- Library=commons-math3-3.6.1.jar
  - Version=3.6.1
  - License=Apache 2.0, BSD 3
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
  - <https://opensource.org/licenses/BSD-3-Clause>
- Library=vertx-core-3.9.4.jar
  - Version=3.9.4
  - License=Apache 2.0, Eclipse 2.0
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
  - <https://www.eclipse.org/legal/epl-2.0/>
- Library=logback-classic-1.2.3.jar
  - Version=1.2.3
  - License=Eclipse 1.0, LGPL 2.1
  - Link=<https://opensource.org/licenses/EPL-1.0>
  - <https://www.gnu.org/licenses/old-licenses/lgpl-2.1.en.html>
- Library=json-20190722.jar
  - Version=20190722
  - License=MIT
  - Link=<https://opensource.org/licenses/MIT>
- Library=lombok-1.18.16.jar
  - Version=1.18.16
  - License=MIT
  - Link=<https://opensource.org/licenses/MIT>
- Library=jquery-3.5.1.min.js
  - Version=3.5.1
  - License=MIT
  - Link=<https://opensource.org/licenses/MIT>

### 6.1.2 Open source license notifications and licenses (For Android)

The following table lists the Open Source software used as part of the Floodlight™ MS Cognitive Test for the Android devices.

- Library=commons-csv-1.7.jar
  - Version=1.7
  - License=Apache 2.0
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
- Library=simpleclient\_hotspot-0.9.0.jar
  - Version=0.9.0
  - License=Apache 2.0
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
- Library=simpleclient\_dropwizard-0.9.0.jar
  - Version=0.9.0
  - License=Apache 2.0
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
- Library=commons-lang3-3.11.jar
  - Version=3.11
  - License=Apache 2.0
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
- Library=simpleclient\_vertx-0.9.0.jar
  - Version=0.9.0
  - License=Apache 2.0
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
- Library=commons-math3-3.6.1.jar
  - Version=3.6.1
  - License=Apache 2.0, BSD 3
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
  - <https://opensource.org/licenses/BSD-3-Clause>
- Library=commons-math3-3.6.1.jar
  - Version=3.6.1
  - License=Apache 2.0, BSD 3
  - Link=<https://www.apache.org/licenses/LICENSE-2.0>
  - <https://opensource.org/licenses/BSD-3-Clause>
- Library=vertx-core-3.9.4.jar
  - Version=3.9.4

- License=Apache 2.0, Eclipse 2.0
- Link=<https://www.apache.org/licenses/LICENSE-2.0>
- <https://www.eclipse.org/legal/epl-2.0/>
- Library=logback-classic-1.2.3.jar
  - Version=1.2.3
  - License=Eclipse 1.0, LGPL 2.1
  - Link=<https://opensource.org/licenses/EPL-1.0>
  - <https://www.gnu.org/licenses/old-licenses/lgpl-2.1.en.html>
- Library=json-20190722.jar
  - Version=20190722
  - License=MIT
  - Link=<https://opensource.org/licenses/MIT>
- Library=lombok-1.18.16.jar
  - Version=1.18.16
  - License=MIT
  - Link=<https://opensource.org/licenses/MIT>
- Library=jquery-3.5.1.min.js
  - Version=3.5.1
  - License=MIT
  - Link=<https://opensource.org/licenses/MIT>