



OSCIUM

**Manual
iMSO-204x**



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Section 1 – Getting Started

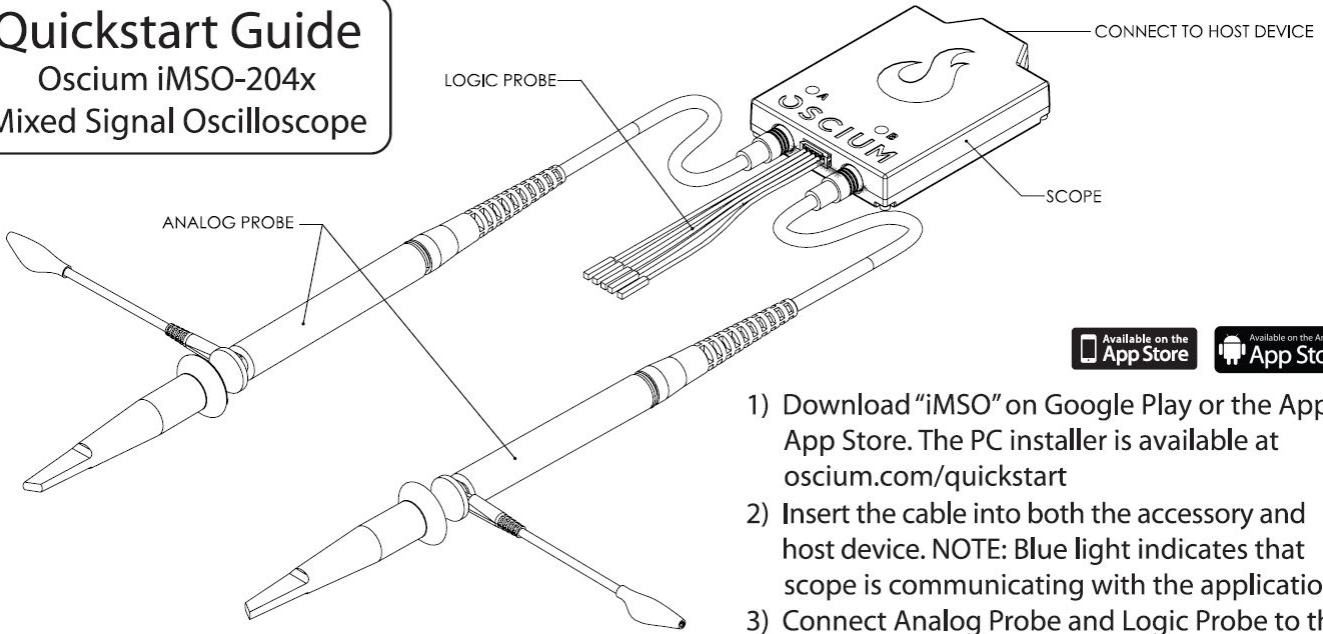
1.10 Quickstart Guide

iMSO-204x has universal platform support. It works with iOS, Android, PC, Mac.

The Quickstart Guide is available for reference below:

Quickstart Guide

Oscium iMSO-204x
Mixed Signal Oscilloscope



CONNECT TO HOST DEVICE

SCOPE

LOGIC PROBE

ANALOG PROBE

- 1) Download “iMSO” on Google Play or the Apple App Store. The PC installer is available at oscium.com/quickstart
- 2) Insert the cable into both the accessory and host device. NOTE: Blue light indicates that scope is communicating with the application.
- 3) Connect Analog Probe and Logic Probe to the appropriate ports on the scope.
- 4) For more information, please visit the Oscium website at www.oscium.com/quickstart

WARNING
DO NOT APPLY MORE THAN +/-40V IN 10X MODE & MORE THAN -8V TO +13V IN 1X MODE

WARNING
DO NOT APPLY MORE THAN -0.5/+7V TO THE DIGITAL CHANNELS

Made for

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1.20 SAFETY

The maximum voltage limit for the analog probe in 1x mode is -8v / +13v, and the maximum voltage limit in 10x mode is -40V / +40V. The maximum voltage limit for the digital channels is -.0.5v to +7v. Oscium is not held liable for usage outside of these limits.



1.30 Compatibility

1.31 Hardware

Oscium's iMSO-204x has universal platform support; it works with iOS, Android, PC and Mac.



For iOS to work, the host device must have a lightning connector.

For Android to work, the host device needs to have USB OTG (On-The-Go).

Also, here are the details for the physical connector to the host:

| | |
|----------------------------|--|
| Connector (to host) | Mini-B to Lightning, Mini-B to Micro-B |
| | Mini-B to USB A |

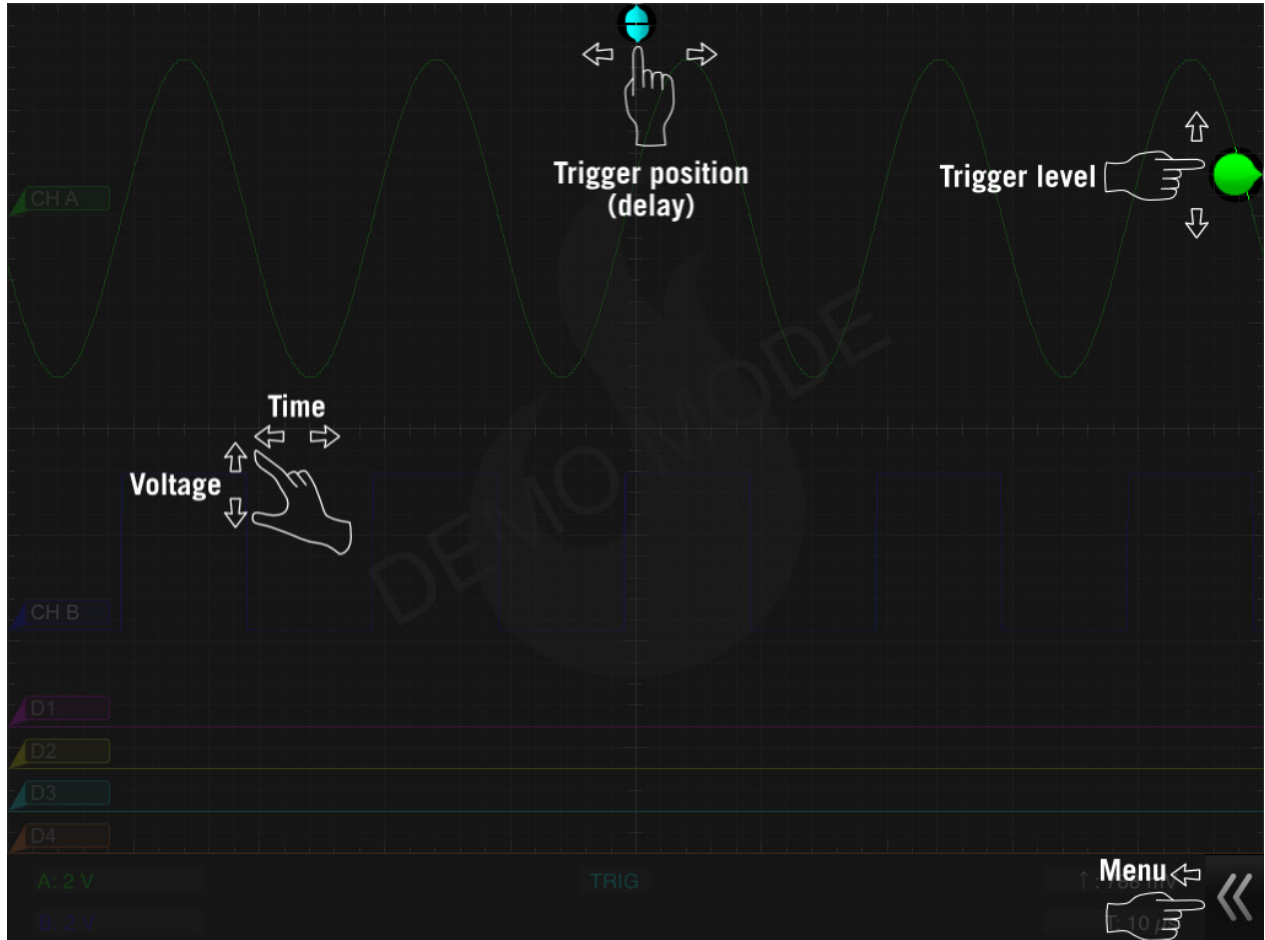
1.32 Software

| | |
|--|----------------------------------|
| System Requirements (Software) | iOS version 7.0 & higher |
| | Android version 4.0.3 & higher |
| | Windows 7 & higher |
| | Mac OS 10.10 (Yosemite) & higher |

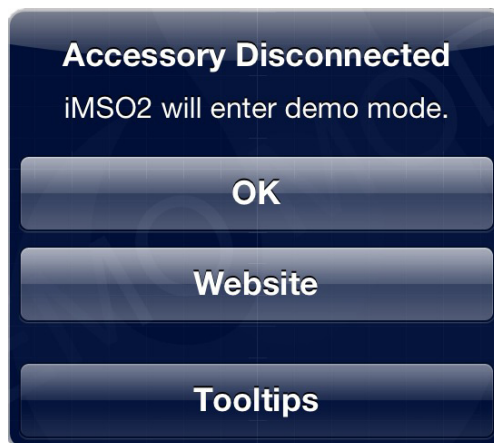


1.40 Tool Tips

Although having a manual is nice (and if you're reading this, you probably agree), it is even better when there's help built into the app itself. Here is a screenshot of some of the tool tips we've built into the app (this picture is found on iOS 7 software and newer):



This tool tip is only available (1) when the demo app is first launched or (2) after hardware has been connected and is now disconnected. In both situations the same alert box appears:



Section 2 – How It Works

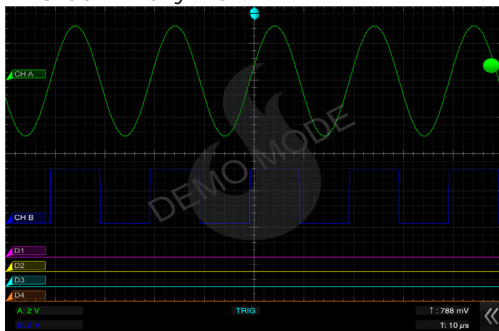
2.10 Menu

The manual describes how iMSO works on your host device.

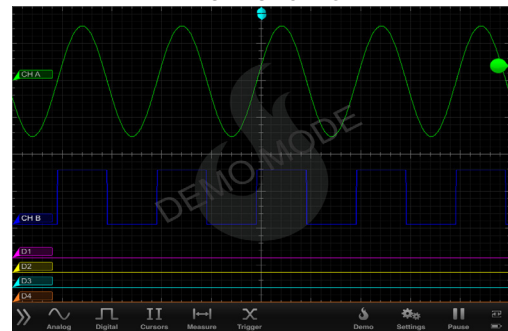
iOS, Android, PC or Mac Software


The menu bar can be hidden or revealed by sliding the arrows located in the bottom right corner of the app to the left. To uncover the summary bar simply slide the arrows (now located on the bottom left corner of the app) to the right.

The Summary Bar








The Menu Bar





The menu bar works this way as of the iOS 7 update. For users not on iOS 7, the menu bar can be hidden or revealed by sliding up (or down) on the word menu in the bottom middle of the screen. 

The menu bar has sub menus that can be selected by touching the appropriate word or icon. When hardware is not connected the following options exist in the menu bar:






When hardware is connected on an iPhone or iPod touch,  changes to . The demo mode icon disappears on the iPad when hardware is in use. In addition, Oscium has a single shot mode that is enabled by pressing and holding  or . Upon holding one of those icons, it will change to .

2.20 Analog Channels




The two analog channels are represented by green and blue signals. Simply touch either the green  or blue  rectangle on the left. Leave your finger on the box and then move the channel position either up or down.

2.21 Analog Channels On / Off

Touch  on the menu bar. Channels can be turned either on or off with a tap to  or .

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2.22 Analog Channel 1x / 10x Probe


The analog probe has a sliding red lever  that allows the user to move between 1x and 10x modes. Once a mode is selected on the analog probe, chose the matching state by selecting either  or . The selected state will be gray and the unselected state will be translucent.






To enable 10x mode, the user must slide the red lever located on the physical probe. The 10x option located in software only changes the voltage scales in software; it does not actually divide the voltage. Please remember to slide the red lever on the physical probe for all 10x measurements.

2.23 Analog Channel DC / AC Coupling






When current is flowing in the same direction, touch .

When current is changing directions, touch . The selected state will be gray and the unselected state will be translucent.


2.24 Channel Labeling

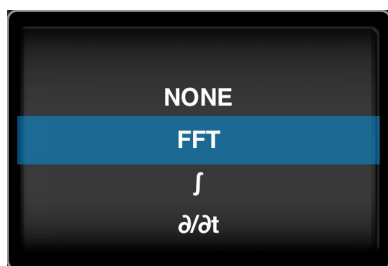
Touch  on the menu bar. Then, touch either  or  to the right of the word LABEL. A keyboard will appear. Enter the desired name using the keys on the keyboard. When finished touch away from the keyboard and the name will display next to the word LABEL in the analog menu. Your custom label will also appear next to that waveform.




2.25 Math On/Off

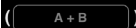
Touch  on the menu bar. At the bottom of the menu, MATH appears. To turn MATH on, touch  and it will change to . The function will appear on the screen in red. To turn MATH off, touch  and it will turn to  indicating MATH is deactivated.

2.26 Math Functions


Touch  on the menu bar. Then, touch the box directly below the word MATH. A pick wheel will appear with the following options:



Use the pick wheel to select the desired setting. To activate the setting tap away from the menu. The appropriate symbol should then appear in the selection box: ,  or .

After identifying the appropriate symbol, the source needs to be selected. Simply touch the selection box  to the right of the previous FFT box. A pick wheel will appear. Once the desired source settings are selected, touch away from the menu. The appropriate sources for both A and B are displayed directly below this selection box.

2.30 Digital Channels

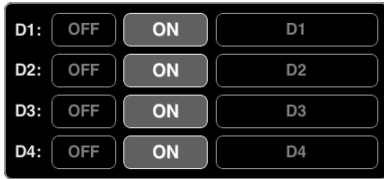
The purple, yellow, blue and orange signals represent the four digital channels. Simply touch the far left rectangle  of the desired digital signal. Leave your finger on the rectangle and



iOS, Android, PC or Mac Oscilloscope

move the channel position either up or down.

2.31 Digital Channels On / Off

Touch on  the menu bar. The following menu will appear:



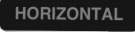

Each channel can be turned either on or off by touching either  or .

2.40 Cursors



2.41 Cursors On / Off

Touch  on the menu bar. Touch  to activate cursors.

2.42 Cursor Axis

Then, touch either the  cursor or the  cursor. Select which signal to view by touching the bubble on the far left of that signal. For example, if D1 is selected, which is the purple signal, the cursors will change to purple. Then, if D2 is selected, the cursors will change to yellow to match the color of D2, which is yellow. After selecting the appropriate signal, make sure the menu bar is pulled down so that the summary screen appears. Metrics relating to the cursors appear in the center of the summary screen and in the color of the signal that is being viewed.



2.43 Cursor Mode

There are two modes available on this device:  and . Upon activating cursors, two lines will appear. One is dotted and the other is solid. The solid line is active and can be moved by touching the line and while holding that line moving it either up or down. While in tracking mode both the solid and dotted lines will move together. In independent mode the solid line is the only line that can be moved. Additionally, dynamic metrics related to the solid line are available in the summary screen located at the bottom (and in the color of the selected channel). Tap on the dotted line and it will become a movable solid line, while the other line will change to dotted.

2.44 Horizontal Cursors

Touch the  icon from the menu bar. Touch  to activate cursors.




Touch  from the cursors menu and it will change from  to .







Touch  and  to turn the horizontal cursors on and off respectively.

On the main screen, touch and swipe the desired cursor in the vertical direction and place where desired. The selected cursor will be displayed as a solid line and the un-selected cursor, a dashed line. The position of the selected cursor is indicated next to @V in the summary bar. The distance between the two cursors is indicated next to ΔV in the summary bar.





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2.45 Vertical Cursors






Touch the  icon from the menu bar. Tap  to activate cursors. Touch  from the cursors menu. On the main screen, touch and swipe the desired cursor in the horizontal direction and place where desired. The selected cursor will be displayed as a solid line and the un-selected cursor, a dashed line. The position of the selected cursor is indicated next to @t in the summary bar. The distance between the two cursors is indicated next to Δt in the summary bar. The voltage level at the point where the selected cursor crosses the waveform is indicated in the summary bar next to @V and the vertical difference between the crossing points of the two vertical cursors is indicated in the summary bar next to ΔV. When using vertical cursors with the analog channel both @t, Δt and @V, ΔV will be visible in the summary bar.

Verify that  cursors are selected. To move cursors independently of one another, touch . To move cursors as a single unit with a fixed distance between them, touch . The following options are available:   .






1.If cursor data is to be displayed in Base, touch . The options next to the word UNIT set the unit of time.

Time settings available in the Base option include:  . The  option sets the unit of measure in seconds. The  option sets the unit of measure in hertz.


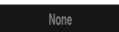
2. If cursor metrics are to be displayed in Phase, touch . The options next to the phrase 360° WITHIN sets the phase. The option of  sets 360° within 5 divisions. The  option sets 360° between the two cursors.

3. If cursor data is to be displayed as a ratio, touch . The options next to the phrase 100% WITHIN set the ratio. Ratio settings available next to 100% WITHIN include:  . The option of  sets 100% within 5 divisions. Since there are 10 divisions in the horizontal time scale, this option effectively cuts the screen in half. The  option sets 100% between the two cursors.

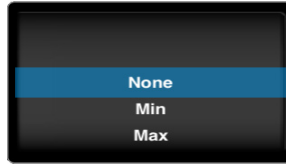
2.46 FFT Units

Touch the  icon from the menu bar. The options next to the phrase FFT Units will set the voltage units. Voltage options available in the FFT Units option include  and . By touching the  option the voltage units will display as volts in the summary bar. Touching the  option will change the voltage units to dBv.

2.50 Measurements

Touch  from the menu bar. Fifteen different measurements exist: Min, Max, Mean, Peak to Peak, RMS, Duty Cycle (+), Duty Cycle (-), Pulse Width (+), Pulse Width (-), Cycle Mean, Cycle RMS, Frequency, Period, Rise Time, and Fall Time. To scroll through the measurement options, touch . Then, scroll through the pick wheel to choose the desired measurements. To activate the settings touch away from the menu.

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Up to six measurements can be selected for either CH A or CH B or a combination of both. Once selected, measurements appear on the top right of the interface.

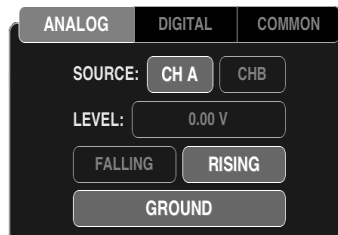


2.60 Trigger

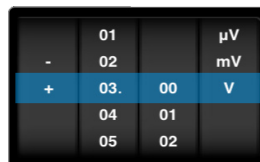
2.61 Analog Triggering

The trigger level is controlled with the  bubble located on the far right of the screen. If the bubble is  green the triggered signal is CH A. If the bubble is  blue, it is triggering on CH B. To change the trigger from CH A to CH B, touch . Then touch . Then simply select the SOURCE to be triggered.

To change the voltage level, simply touch and drag the bubble either up or down. Moving the level up will increase the voltage level and moving it down will decrease the voltage level. The exact voltage level will appear just to the left of the bubble along with either an up arrow or a down arrow. An up arrow indicates that the trigger is on a rising edge; a down arrow indicates that the trigger is on a falling edge. It is also possible to change the trigger level in the advanced triggering menu. Tap . Then tap  and, when active, it will change to .

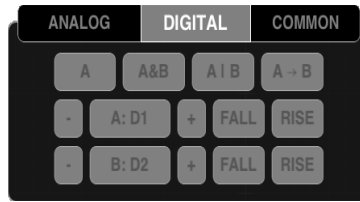



To navigate to an exact trigger level touch on  next to the word LEVEL. The analog trigger level pick wheel should then appear.

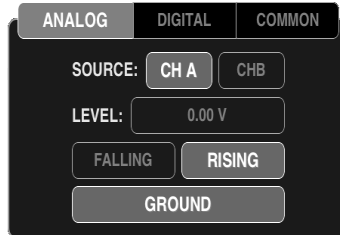


To select the desired trigger level touch and drag in each of the four columns until the specific value is reached. To activate the settings touch away from the menu. When analog triggering has been enabled, then all the advanced options for digital triggering will be grayed out.



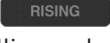
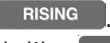


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To reactivate the analog trigger, touch . If the analog triggering is grayed out, it is disabled. Then touch any of the options on the picture below and it will no longer be grayed out.



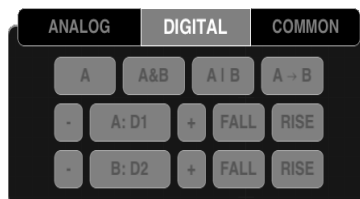
Analog triggering is always available in demo mode; it is not possible to deactivate until hardware is used.



To trigger off of a rising edge, touch . If rising is already activated it will look like , this means that falling is deactivated, because both falling and rising cannot be active at the same time. If it is deactivated it will look like , and falling is activated. Touch it once and it will activate to . To trigger off a falling edge the same procedure should be followed. Falling should look like  when activated and  when deactivated.

To recenter your trigger level, touch  and your signal will be brought in line with CH A.

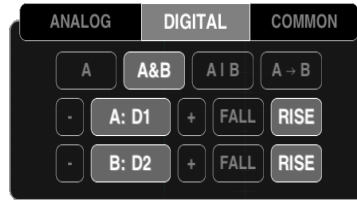
2.62 Digital Triggering

This feature is only available with hardware; it is not available in demo mode. When in demo mode all the digital triggering options are grayed out.



1. Touch  from the menu bar. Then touch  at the top of the menu to view more advanced digital triggering options. All the options may be grayed out (because analog and digital triggering can't both be active at the same time). If analog is grayed out, digital is active and vice versa. To activate the desired trigger, touch one of the advanced triggering options.

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Then, the option that is touched will activate. From the menu, select the desired triggering function from these options: single channel only **A**, simultaneous events on two channels **A&B**, a single event on one of two channels **A|B**, or concurrent events on two channels **A->B**.

2. Below the selected triggering functions touch **-** or **+** to select the digital channel from D1 to D4 to be used as channels A and B, respectively.



3. After locating the desired digital channel, touch **A: D4** and when activated, it will change to **A: D4**. In the previous example, channel A is now D4. Now, the bubble that appears on the far left of D4 will have an A inside **A**. The A indicates that D4 is now A. Repeat the same process for B, when applicable.

4. To choose whether triggering occurs on a rising or falling edge, either select **FALL** for a falling edge or select **RISE** for a rising edge.

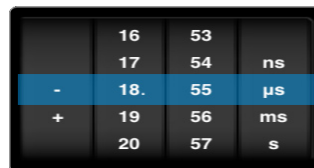
2.63 Auto vs Normal

Touch **X Trigger**. Then touch **COMMON**. Touch the desired mode, either AUTO or NORMAL. For example, if activating AUTO mode touch **AUTO** and it will change to **AUTO**. Repeat the process for NORMAL mode. The default setting is AUTO.

2.64 Delay

To set the trigger delay  from the main screen, touch the screen and swipe horizontally to move the trigger point. The bottom portion  will detach from the top to set the trigger position.

To set the trigger delay from the trigger menu, touch **X Trigger** then select **COMMON** and press **0.99 μ s** located next to DELAY. A pick wheel will appear that allows you to set the delay time to the value shown in the readout.



To select the desired trigger delay touch and drag in each of the four columns until the specific value is reached. To activate the settings tap away from the menu or tap **BACK**.




2.65 Holdoff

Touch **X Trigger** in the menu bar to enter the trigger menu.








Touch **COMMON**. Touch **0.99 μ s** next to HOLDOFF to set the holdoff time. Setting the Holdoff value should be done in the same manner as the delay.

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2.66 Analog vs Digital

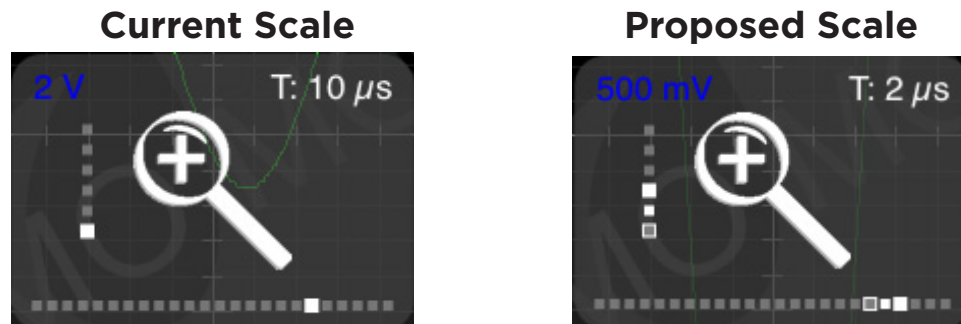
Touch . Then touch . Touch the desired mode, either ANALOG or DIGITAL. For example, if activating ANALOG mode touch ANALOG and it will change to . Repeat the process for DIGITAL mode. The default setting is ANALOG.

2.66 Single-Shot Waveform Capture

If the signal is active, the screen can be paused by touching . Pause is located in the menu bar, on the far right side. If the signal is paused, the screen will resume real time measurements by touching . In order to capture a single-shot wave form touch and hold  or  until it changes to . Then touch , it will then capture a single-shot waveform. Remember that in order to trigger off a specific event make sure that the  setting is normal. If it is set to auto you will just get the next frame, not the next event.

2.70 Pinch-to-Zoom




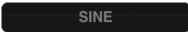
Zooming into a waveform is as easy as zooming into a picture on your smartphone. Both iMSO and iMSO2 provides instant feedback showing both the scale you're in & where you're headed.



The blue number in the top left corner shows your volts per division and the white number in the top right corner shows the timescale. Focus on the right image. The two solid dots show where you're headed and the white outlined dot shows your current scale.

2.80 Demo



2.81 Demo Functions

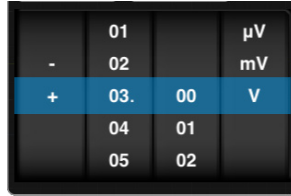
When no hardware is attached, iMSO or iMSO2 will operate in Demo Mode. Demo Mode is illustrated in the bottom right corner by . When hardware is attached, Demo Mode is not available; iMSO2 will now be in Active Mode. Active Mode is illustrated in the bottom right corner by . While in Demo Mode, touch  to change the function that is being viewed. Although four different wave forms can be viewed on each analog channel, only one waveform can be viewed on each channel at any given time. To change the wave form being viewed, touch  then pick the desired waveform in the pick wheel. To activate the setting touch away from the menu.





iOS, Android, PC or Mac Oscilloscope

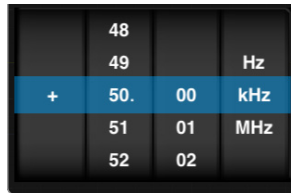
2.82 Demo Amplitude

Touch  from the menu bar on the right. To change the **AMPLITUDE:** of the signal touch  located to the right of **AMPLITUDE:**. Enter the desired voltage using the pick wheel. To activate the setting tap away from the menu.





2.83 Demo Frequency


Touch  from the menu bar on the right. To change the **FREQUENCY:** of the signal, touch  located to the right of **FREQUENCY:**. The pick wheel pops up and it is now possible to modify the frequency by selecting the desired frequency. Frequencies can be entered in Hz, kHz, or MHz. To activate the settings tap away from the menu.







2.84 Demo DC Offset



Touch  from the menu bar. To set the DC offset, touch  located to the right of **DC OFFSET:**. Then select the desired voltage offset from the pick wheel. To activate the settings tap away from the menu.

2.85 Duty Cycle

In order to change the Duty Cycle, the demo mode must be set to **SQUARE**. Once the demo mode is switched to square the Duty Cycle option will change from **DUTY CYCLE: 0.50** to **DUTY CYCLE: 0.00**. To change the **DUTY CYCLE:** of the signal, touch . Enter the desired voltage using the pick wheel. To activate the setting tap away from the menu or tap **BACK**.

2.90 Settings


iPhone/iPod touch- When hardware is connected,  disappears and is replaced by . Then all additional settings are unlocked. In order to change the settings while in demo mode, touch and hold  until it changes to .

iPad/iPad mini-  appears in the main menu bar. When hardware is connected  disappears. Then all additional settings are unlocked.




2.91 Grid Settings

iOS, Android, PC or Mac Oscilloscope




Lines vs. Dots

Touch . Then touch the desired selection, either **LINES** or **DOTS**. This setting affects the way that the signals are displayed; it will either be point by point (dots) or it will be represented with a line.




Graticule

Touch . Then touch  or  to scroll through the various background display options. They include: Crosshairs, Major Tics, Minor Tics, Major Grid, Minor Grid, and finally Graticule. Once a selection is tapped it becomes active and changes from **GRATICULE** to **GRATICULE**. Touching graticule is a shortcut for tapping all of the above.


2.92 Alerts

Touch . Three alerts are available. They are located on the third row from the top: ALERTS, ON STARTUP & ON DISCONNECT. Cycle through the options by tapping  or  next to the selection. Then tap the selection to activate it. To deactivate a specific alert and it will change from **ON STARTUP** to **ON STARTUP**. Touching **ALERTS** is a shortcut for tapping all of the above.

2.93 Persistence



Touch . Then touch and swipe the dot to the right of persist **PERSIST:**  **5**. For the advanced options relating to **DIG. PERSIST:**, touch . Digital persistence can either be turned off or on. To turn it on, tap **ON**. To turn digital persistence off, touch **OFF**.

2.94 Sounds

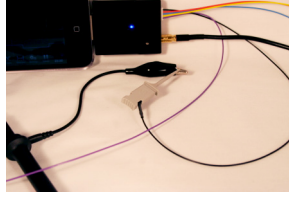
Sounds can be controlled either through hardware or software. The Apple device can control the sound (in the same way it always controls sound) by using the plus/minus volume controls on the side of the device. In the software, sounds are turned off by tapping . Then touch **SOUNDS** and it will either turn sounds on **SOUNDS** or off **SOUNDS**.

2.95 Compensation

The IM50-204x is shipped fully calibrated and fully compensated. If, for any reason, the analog input ever needs to be re-compensated, a built-in 3.3 V, 1 kHz reference signal exists. Regardless of whether the function generator we provide is used or if an external input is used, the electrically isolated flathead screwdriver will help trim the signal. Here's how to use the built-in reference wave:

Touch  from the menu bar. From the setting menu, tap **OUTPUT 1 kHz** to enable the 3.3 V calibration signal. When the signal is activated **OUTPUT 1 kHz** changes to **OUTPUT 1 kHz**. Next, select  on the menu bar and ensure **1x** is selected. Insure the **ATTENUATE** switch on the analog probe is switched to 1x. Connect the SMD grabber for GND (or the black wire) to the ground clip for the analog probe.



iOS, Android, PC or Mac Oscilloscope





Remove the connector attachment from the analog probe. Then connect the SMD grabber for D1 (or the purple wire) to the tip of the analog probe.



2.96 Screenshot







Two options exist. First, a screenshot can be captured by simultaneously pressing both the home button and the power button on your Apple device. The screen will flash white while the picture is captured. When a picture is captured this way, everything visible on the LCD will be captured and available in photos. The second option is to touch  and then touch . The text SCREENSHOT will fade to from black to gray and the display will briefly change to full screen mode. Although this is a very useful method, it may not always be the best way to take a screenshot. By simultaneously pressing the home and the power button, it is possible to take a picture of exactly what is on the screen. In some cases, this will be the best option.



2.97 Email

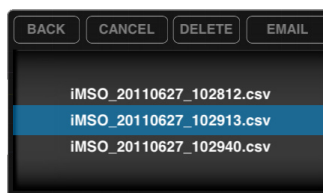
Touch . Then, touch . The email will consist of the image currently displayed on the screen. Although it is not possible to retrieve screenshots from this spot, the pictures are still available in photos where they can be emailed. The other option is to simultaneously press both the home button and the power button on your Apple device. The screen will flash white while the picture is captured. When a picture is captured this way, everything visible on the screen will be captured and available in photos where they can be emailed.

2.98 Manage Data Log

This feature is only available with hardware; it is not available in demo mode. When in demo mode the data logging options for DATA LOG: START and STOP are grayed out.

Touch  from the menu bar. Then touch  from the data log option, .  will then change to  in order to indicate data is being logged. To stop data logging tap .

Touch . Then touch . A pick wheel will appear with all of the data that has been previously logged. To select precious data log tap away from the menu.



iOS, Android, PC or Mac Oscilloscope

When viewing the .csv data file:

Each column (excluding the first) is the data point in time that is shown on the screen.

When the time scale is set to less than 100ms, each row is a single screen capture.






When the time scale is greater than or equal to 100ms, each row is a data point in time.

2.99 Configuration Settings

Reset Configurations

To reset the configuration, touch . Then touch .

Saving Configurations

Up to three configurations can be saved at a time. Touch . Then touch  next to CONFIG 1, 2 or 3.  will turn to  and then back to , indicating the configuration has been successfully saved.

To upload a saved configuration touch .  Will turn to  and then back to , indicating the configuration has successfully been loaded.

Section 3 – Product Warranty & Accessories

3.10 Product Warranty



iMSO-204x hardware both come with a full one year manufacturer's warranty. No warranty exists on probes and accessories.

3.20 Accessories

iMSO-204x come with the following accessories: 1x / 10x analog probe, logic harness, five SMD grabbers, and one screwdriver.

3.21 1x / 10x Analog Probes



The analog probe is capable of measuring signals up to 100 MHz (although our fastest scope is currently limited to 50 MSPS). This probe can operate in either 1x or 10x mode. It is removable with an SMB connector.

3.22 Logic Harness



The logic harness is has five colors: purple (D1), yellow (D2), blue (D3), orange (D4), and black (ground). The colors on the harness match up with the colors on the interface. If a user is color blind, the harness colors are labeled D1, D2, D3, D4, and GND on the back of the iMSO-204x hardware

3.23 SMD Grabbers



SMD grabbers have the Oscium flame custom built into the front.

3.24 Screwdrivers



The electrically-isolated flathead screwdriver is custom made for iMSO-204x and is used for compensating the device.

Section 4 - Performance Specifications

| iMSO-204x | |
|--------------------------------|--|
| System Requirements (software) | iOS Version 7.0 & higher Android Version 4.0.3 & higher Windows 7 & higher Mac OS 10.10 (Yosemite) & higher |
| System Requirements (hardware) | iOS Lightning Devices (iPad, iPhone, iPod) Android Devices with USB OTG Windows or Mac with USB 2.0 & higher |
| Analog | 2 Channel, 8 bit |
| Analog Probe | 1x & 10x selectable, removable with SMB |
| Digital | 4 |
| Digital Probe | 4 bits, 1 Gnd, 0.100" connectors with removable SMD Grabbers |
| Analog Bandwidth | 5MHz |
| Max Sample Rate | 50MSPS |
| Sample Depth | 1000pts |
| Horizontal Sensitivity | 200ns/div-10s/div |
| Trigger & Vertical Position | Adjustable |
| Vertical Sensitivity | 50mV/div to 2v/div (1x); 500mV/div to 20v/div (10x) |
| Connector (to host) | Mini-B to Lightning, Mini-B to Micro-B, Mini-B to USB A |
| Max Digital Input Voltage | -0.5v to +7v |
| Max Input Voltage | -8v to +13v (1x); -40v to +40v (10x) |
| Coupling | AC or DC |
| Trigger Modes | Auto/Normal/Single/Stop |
| Trigger Types | Analog, Digital (A, A&B, A B, A-B) |
| Live Measurements | 6 |
| Measurement Types | Frequency |
| | Period |
| | Min |
| | Max |
| | Mean |
| | Peak to Peak |
| | RMS |
| | Positive Duty Cycle |
| | Negative Duty Cycle |
| | Positive Pulse Width |
| | Negative Pulse Width |
| | Cycle Mean |
| | Cycle RMS |
| | Rise Time |
| | Fall Time |
| Features | Screen Capture & Email |
| | Demo mode (Analog) |
| | Horizontal/Vertical Cursor Measurements |
| | Reference Capture |
| | Delay (always on) / Holdoff -99.99s max |
| | FFT, Data Logging, Advanced Math |

4.11 Performance Optimization

Newer generations of Apple hardware will improve the Oscium customer experience. Animations will be faster and crisper. Multitasking can also affect performance. Turning off

applications will improve performance. Double click the home button on your Apple device. All the applications listed in this menu are currently running on the device. Press and hold any icon. They will begin to shake and a minus sign will appear on the top left corner of the app. Tapping the minus sign will shut down the app; it will not delete it from your device. This will free up additional processing power on your device to maximize the user experience.

Section 5 - How to Contact Us

Thank you for your interest in Oscium's newest product: iMSO-204x! Please feel free to contact us if you have any questions, comments or feedback. The best way to reach us is by emailing support@oscium.com or by visiting us at www.oscium.com. Send us a technical question or just say hi. Product updates and new product releases will be available first on our twitter and facebook pages. Thank you again for your interest in Oscium!