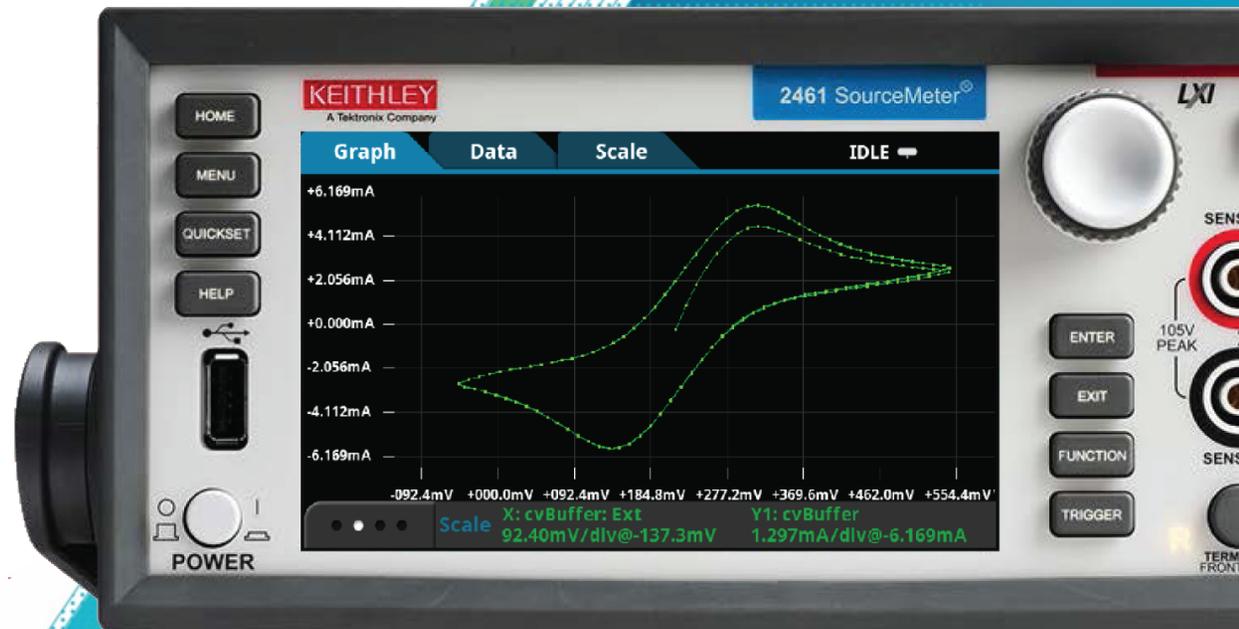# Self-Guided Demo Tour
Model 2450-EC / 2460-EC Potentiostats

Electrochemistry Lab Systems

Model 2450-EC/2460-EC Potentiostats
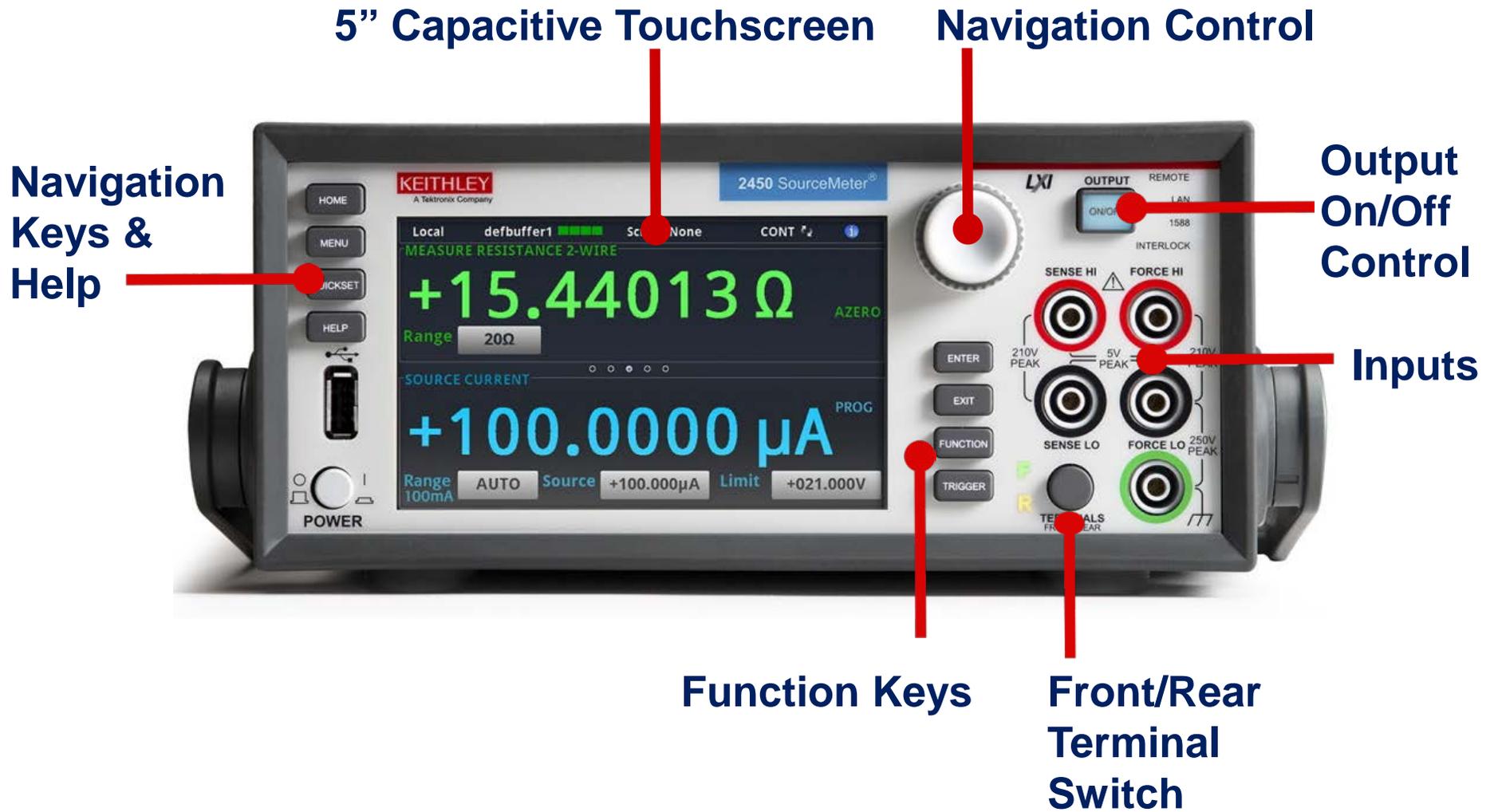## Self-Guided Tour

Use this guide to explore what you can do with the Models 2450-EC and 2460-EC Potentiostats. Applications range from Cyclic Voltammetry to Chronoamperometry and graphical viewing of the results.

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Models 2450-EC / 2460-EC Potentiostats

The front panel of the user interface

5" Capacitive Touchscreen   **Navigation Control**

Navigation Keys & Help

Output On/Off Control

Inputs

Function Keys   **Front/Rear Terminal Switch**

Model 2450-EC Potentiostats

The rear panel of the instrument

Triaxial Inputs

Safety Interlock

Ethernet

Digital I/O

USB

TSP-Link

GPIB

Model 2460-EC Potentiostats

The Rear Panel of The Instrument

Low-Leakage Screw-Terminal Connector

Safety Interlock

Ethernet

USB

Digital I/O

TSP-Link

GPIB

Models 2450-EC / 2460-EC Potentiostats

How it works

The Source-Measure Unit (SMU)

Stated in the simplest possible terms, a source-measure unit (SMU) instrument integrates the capabilities of a precision power supply (PPS) with those of a high-performance digital 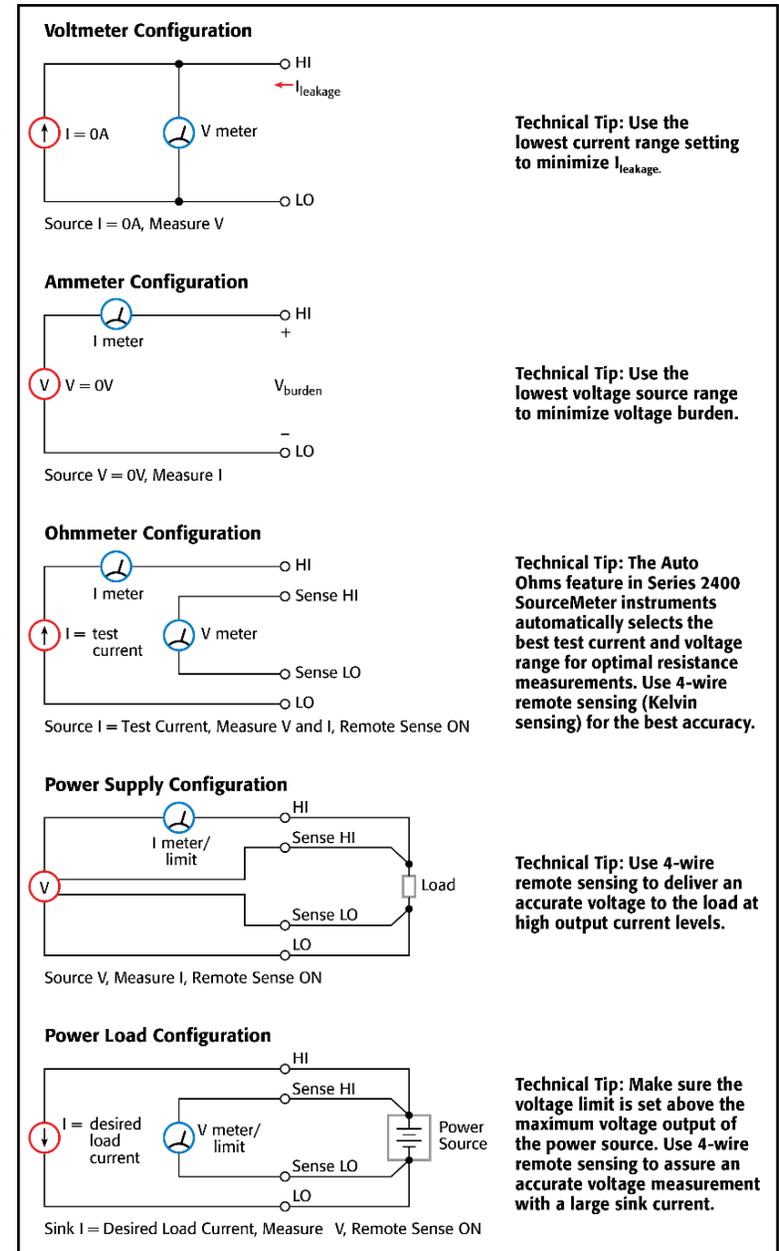multimeter (DMM) in a single instrument. For example, SMU instruments can simultaneously source or sink voltage while measuring current, and source or sink current while measuring voltage. They can be used as stand-alone constant voltage or constant current sources, voltmeters, ammeters, and ohmmeters, and as precision electronic loads. Their high-performance architecture also allows using them as pulse generators, waveform generators, and automated current-voltage (I-V) characterization systems.
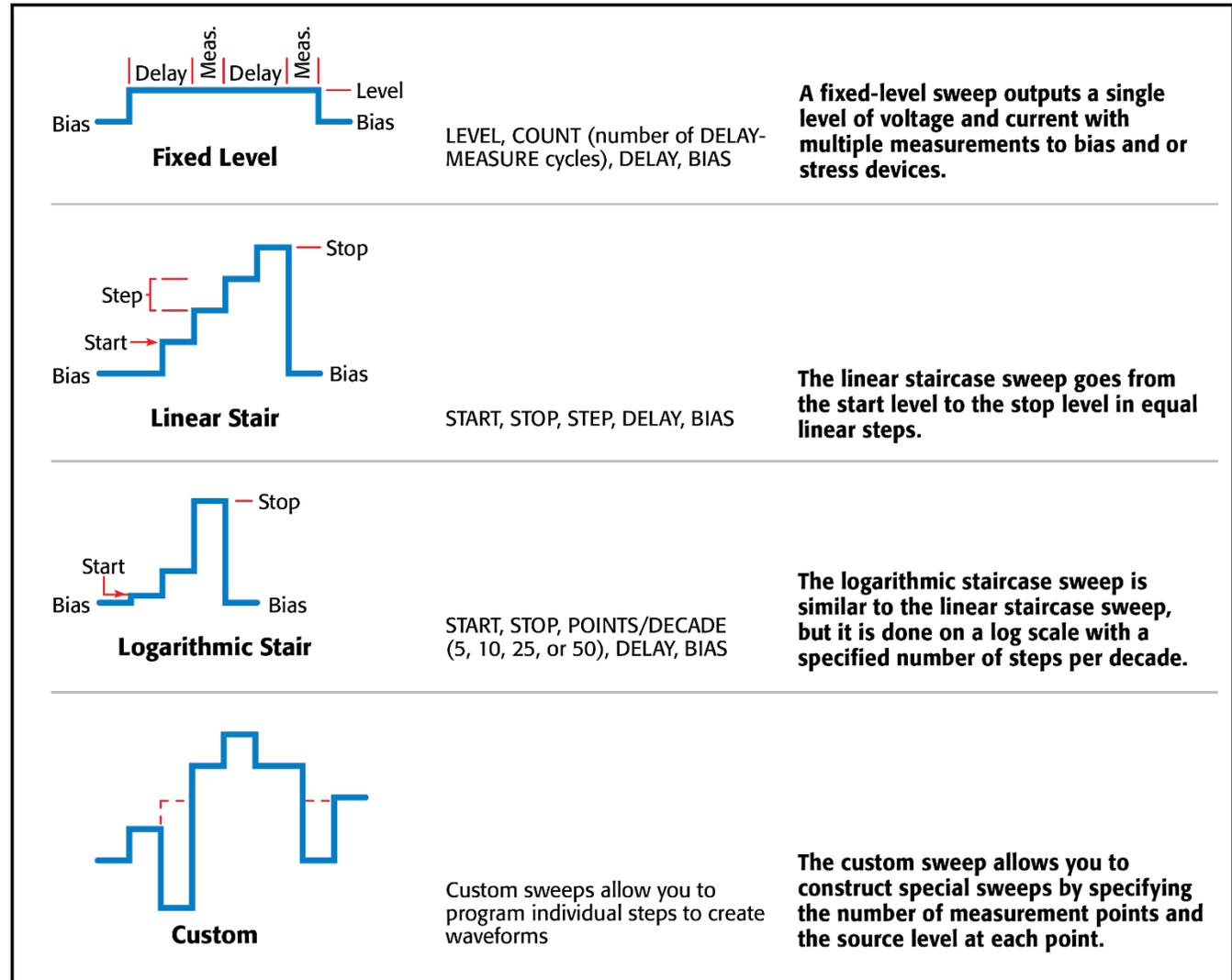

A Precision DMM + A Precision Power Supply + More = SMU

Voltmeter Configuration

Source I = 0A, Measure V

Technical Tip: Use the lowest current range setting to minimize $I_{leakage}$.

Ammeter Configuration

Source V = 0V, Measure I

Technical Tip: Use the lowest voltage source range to minimize voltage burden.

Ohmmeter Configuration

Source I = Test Current, Measure V and I, Remote Sense ON

Technical Tip: The Auto Ohms feature in Series 2400 SourceMeter instruments automatically selects the best test current and voltage range for optimal resistance measurements. Use 4-wire remote sensing (Kelvin sensing) for the best accuracy.

Power Supply Configuration

Source V, Measure I, Remote Sense ON

Technical Tip: Use 4-wire remote sensing to deliver an accurate voltage to the load at high output current levels.

Power Load Configuration

Sink I = Desired Load Current, Measure V, Remote Sense ON

Technical Tip: Make sure the voltage limit is set above the maximum voltage output of the power source. Use 4-wire remote sensing to assure an accurate voltage measurement with a large sink current.

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Models 2450-EC / 2460-EC Potentiostats
Operation

The Source-Measure Unit (SMU)

SMU instruments simplify capturing the data needed to characterize a wide range of devices with the SMU instruments' built-in DC sweeps, including linear staircase, logarithmic staircase, and custom sweeps.

Fixed Level

LEVEL, COUNT (number of DELAY-MEASURE cycles), DELAY, BIAS

A fixed-level sweep outputs a single level of voltage and current with multiple measurements to bias and or stress devices.

Linear Stair

START, STOP, STEP, DELAY, BIAS

The linear staircase sweep goes from the start level to the stop level in equal linear steps.

Logarithmic Stair

START, STOP, POINTS/DECADE (5, 10, 25, or 50), DELAY, BIAS

The logarithmic staircase sweep is similar to the linear staircase sweep, but it is done on a log scale with a specified number of steps per decade.

Custom

Custom sweeps allow you to program individual steps to create waveforms

The custom sweep allows you to construct special sweeps by specifying the number of measurement points and the source level at each point.

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Models 2450-EC / 2460-EC Potentiostats
Checklist for the tour

Before beginning the tour, please be sure you have the following items:

☐ Model 2450 or 2460 Instrument
☐ Power Cord

☐ Model 2450 or 2460 Quick Start Guide

☐ Model 2450-ECVCUBE Battery Demo Fixture

(Included with the Model 2450-DEMO-KIT)
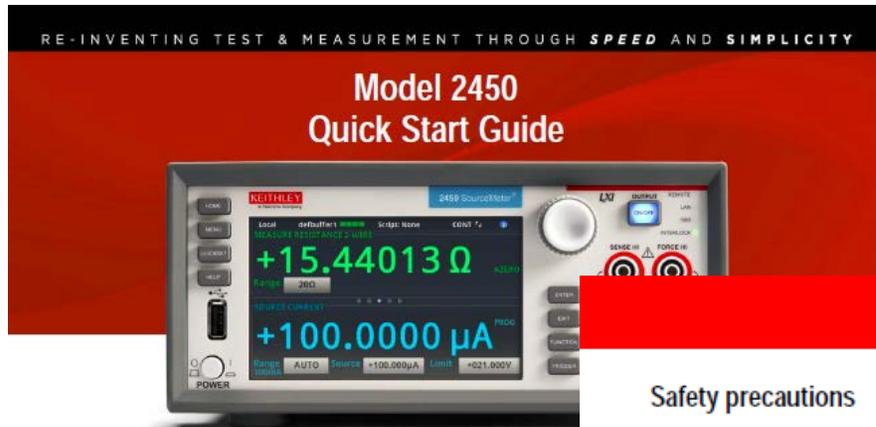
☐ Electrochemistry Flash Drive

☐ Electrochemistry Translator Cable

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Models 2450-EC / 2460-EC Potentiostats
Safety Precautions

Before beginning the tour, please be sure you have read the Model 2450 or 2460 Quick Start Guide sections on Safety Precautions before continuing this self-guided tour.

Models 2450-EC / 2460-EC Potentiostats

Basic User Interface Navigation

The Models 2450-EC and 2460-EC Potentiostats are all-in-one instruments with superior ease of use and measurement performance. The Models 2450-EC/2460-EC offer intuitive instrument operation that minimizes the learning curve and enables faster set up to test results.

Objective: See how simple it is to navigate the instrument

1 HOME Screen

- Power up the SMU. Allow SMU to boot up.
- Review the Measure and Source Windows.
- Touch the Measure and Source **Range** buttons to view options.
- Touch the **Source** button to view the numeric keypad. Try entering a value.
- Swipe the lower part of the screen to view the various windows. Explore the options.

- Press the **HOME** key to return to the main screen.

2 MENU Screen

- Explore the various menu icons and their functions. Familiarize yourself with the configuration settings available.
- If you open a window that has a blue bar on the right side of the screen, this means the entire window can be swiped up or down to provide more options. Example:

- Press the **HOME** key when finished.

3 Navigation Control

Pressing the navigation control opens menus and submenus and selects an entered value.

- Rotate the navigation control to select the MEASURE **Range** button. When a button or icon is highlighted in yellow, that button or icon is now in focus and is controllable by the navigation control.
- Press the navigation control to select the button. Rotate the knob to change the ranges.
- Press the navigation control to select the range.
- Try using the navigation control on other screens like the MENU screen.
- Press the **HOME** key when finished.

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Models 2450-EC / 2460-EC Potentiostats
Basic User Interface Navigation

The Models 2450-EC and 2460-EC Potentiostats are all-in-one instruments with superior ease of use and measurement performance. The Models 2450-EC/2460-EC offer intuitive instrument operation that minimizes the learning curve and enables faster set up to test results.
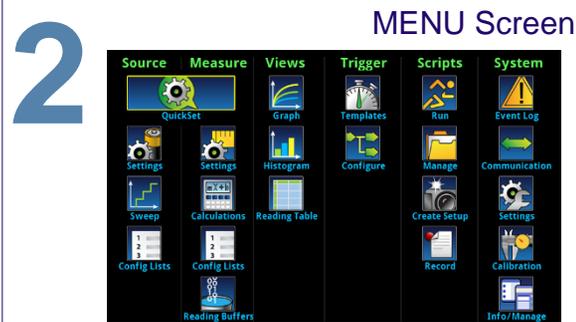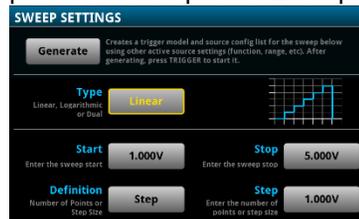
Objective: See how simple it is to navigate the instrument

4 VIEWS Screens

- Select the Data Graph and Sheet view to review your results quickly.
- To view data in the Graph view, press the **MENU** key, then select **Graph** Views. The graph will update if the SMU is continuously running or plot sweep data.
- In the Graph view, explore the Data and Scale tabs to understand how to control what is plotted, how to change axis values, and how to adjust the scaling of the graph.
- To view data in the Sheet view, press the **MENU** key, then select **Sheet** Views.
- Touching any of the data points will bring up more details about that particular measurement.
- Press the **HOME** key when finished.

5 EVENT LOG Screens

Icon	Description
▲	A white-outlined triangle means that the system event log has not logged any new events since the last time the event log was viewed.
ⓘ	A blue circle means that an informational event message has been logged. The message is for information only. This is used to indicate status changes or information that may be helpful to the user. It also includes commands if the Log Command option is on.
⚠	A yellow triangle means that a warning event message has been logged. This message indicates that a change occurred that could affect operation.
⚠	A red triangle means that an error event message has been logged. This may indicate that a command was sent incorrectly.

- Touch the indicator in the upper right corner of the front-panel display to view the most recent error, warning, or info message.
- Touch the upper right corner of the HOME page to see an event indicator as described above and as shown. Touch this indicator to display the most recent event.
- Select the ouch the **Event Log** button to view all messages in the event log.
- To view details about an event, touch any event in the list. This information helps you to resolve errors with the SMU.
- Another way to open the event log is through the main MENU screen. Press the **MENU** key, and under the System column, touch the **Event Log** icon.
- Press the **HOME** key when you have finished.

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Models 2450-EC / 2460-EC Potentiostats

Basic User Interface Navigation

The Models 2450-EC and 2460-EC Potentiostats are all-in-one instruments with superior ease of use and measurement performance. The Models 2450-EC/2460-EC offer intuitive instrument operation that minimizes the learning curve and enables faster set up to test results.

Objective: See how simple it is to navigate the instrument

6

HELP Screens

On the front panel, press the **HELP** key. The SMU has a context-sensitive help system to speed up your learning curve. When an icon or touchscreen button has focus (icon or button is highlighted with a yellow box), that feature or function has context-sensitive help. If there is no specific focus when you press the **HELP** key, overview information for the screen you are viewing displays.

- Rotate the navigation knob until one of the buttons or icons has focus. Press the **HELP** key to display the help.
- If the help display has a blue bar on the right side of the screen, swipe up or down to display more help information.
- Explore the various MENU selections and different screens to see more context-sensitive help.
- Press the **HOME** key when finished.

Summary

The user interface of the Models 2450-EC and 2460-EC allows you to set up most instrument functions and features and perform source and measure operations. You can use the touch-screen display to set up the instrument and tests. You can also use the navigation control knob to highlight an item, and then press the control knob to select it.

The major benefits:

- Large, bright, and easy to read front panel
- Context-sensitive front-panel help
- Swipe-screen capability for more measurement information
- User-friendly configurations from the menu view
- Built-in graphing capability to get to your results quickly
- Data sheet that allows you to view source and measure values quickly
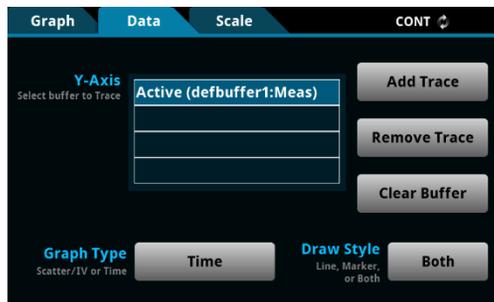- Error logging so you can quickly diagnose the configuration

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Models 2450-EC / 2460-EC Potentiostats
Cyclic Voltammetry

The Models 2450-EC and 2460-EC Potentiostat instruments come with a set of preloaded electrochemistry tests, including cyclic voltammetry, chronoamperometry, chronopotentiometry, and others. This reduces set up time when you want to use the Model 2450 or 2460 in one of these modes.

Objective: Discover how quickly you can configure the Model 2450-EC or 2460-EC for cyclic voltammetry.

1   Setting Up

Return the SMU to a default state and set up the graph function:
- Press the **MENU** key.
- Press the System **Info/Manage** icon.
- Press the **System Reset** button and select **OK**.
- Press the **MENU** key.
- Press the Views **Graph** icon.
- Press the **Data** tab.
- Press the **Graph Type** button and select **Scatter/IV**.
- Press the **HOME** key.

2   Setting Up

- Connect the Model 2450-ECVCUBE Demo DUT to the four banana jacks on the front panel. Make sure the cut-out corner of the DUT is closest to the navigation control. If your Demo DUT has two cutout corners, make sure both cutout corners are facing up.

3   Selecting Cyclic Voltammetry Preloaded Test Script

To execute the script saved in the internal memory of the instrument:
- Press the **HOME** key to return to the home screen.
- Touch the **No Script** indicator as shown in the image above. A list of available scripts is displayed.
- Select **CyclicVoltammetry** from the list.
- The script will begin immediately.

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Models 2450-EC / 2460-EC Potentiostats
Cyclic Voltammetry

The Models 2450-EC and 2460-EC Potentiostat instruments come with a set of preloaded electrochemistry tests, including cyclic voltammetry, chronoamperometry, chronopotentiometry, and others. This reduces set up time when you want to use the Model 2450 or 2460 in one of these modes.

Objective: Discover how quickly you can configure the Model 2450-EC or 2460-EC for cyclic voltammetry.

4 Selecting Cyclic Voltammetry Test Script on the Flash Drive

Your Model 2450-EC or 2460-EC demo system came with preloaded electrochemistry test scripts. The demo system also came with a flash drive that contains all of the test scripts and documentation for your reference.

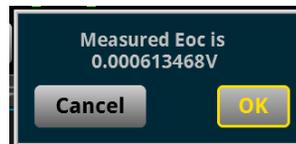To execute the script from the USB flash drive:
- Insert the USB flash drive into the front-panel USB port.
- At the top of the Home screen, touch the active script indicator. A list of available scripts is displayed.
- Select **usb1/CyclicVoltammetry.tsp**. The script begins to execute immediately.
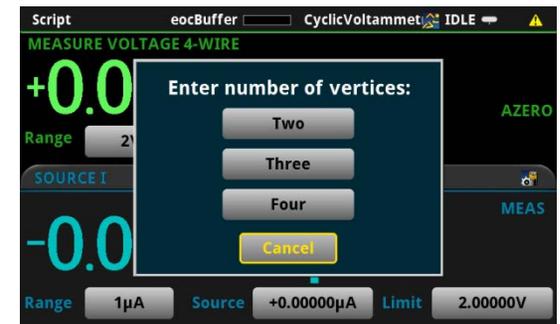
5 Acquire Eoc

- When the script has executed, it prompts you to indicate if you are ready to measure the open circuit potential (Eoc). If the experiment is set up and measurements are ready to be taken, select **Yes** to begin the test. Select **No** to quit the program.
- With the demo cube inserted, the Eoc will be measured and the result displayed.

- Select **OK**.

6 Define the Potential Sweep Parameters

After the open circuit voltage is measured, the parameters of the potential sweep must be defined: Number of vertices, voltage magnitude, and reference voltage.

- Select **Three** vertices.

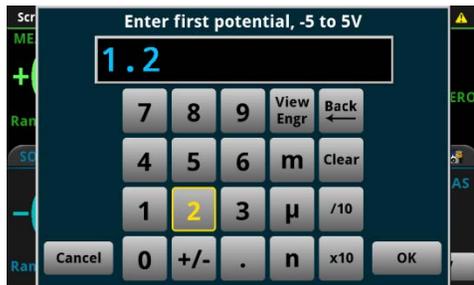**Tektronix**®

Models 2450-EC / 2460-EC Potentiostats

Cyclic Voltammetry

The Models 2450-EC and 2460-EC Potentiostat instruments come with a set of preloaded electrochemistry tests, including cyclic voltammetry, chronoamperometry, chronopotentiometry, and others. This reduces set up time when you want to use the Model 2450 or 2460 in one of these modes.

Objective: Discover how quickly you can configure the Model 2450-EC or 2460-EC for cyclic voltammetry.

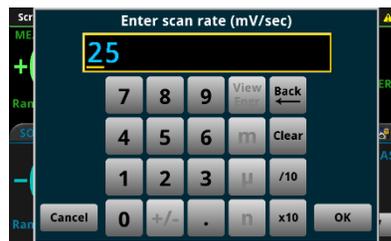**7** — Define the potential sweep parameters

- Define the voltage vertices using the following values for the three potentials:
  - Potential 1: **1.2**V
  - Potential 2: **1.8**V
  - Potential 3: **1.2**V
- After each selection, select the **vs. Eref** reference type.

8 — Define the Scan Rate & Number of Cycles

- After sweep parameters have been defined, you are prompted to enter the scan rate in units of millivolts per second. Select **OK** to use the default of 25.
- At the next **Enter number of cycles** prompt, enter **2** and select **OK** to accept.

9 — Define the Maximum Current Range & Sampling Interval Units

- At the next prompt, select **1mA** for the maximum current range.
- At the next prompt, select **pts/cycle** for the sampling interval units.

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Models 2450-EC / 2460-EC Potentiostats
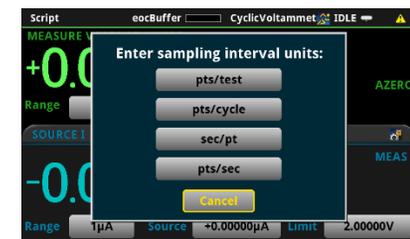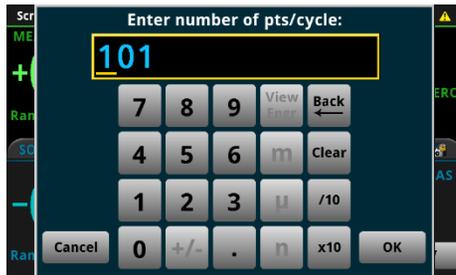## Cyclic Voltammetry

The Models 2450-EC and 2460-EC Potentiostat instruments come with a set of preloaded electrochemistry tests, including cyclic voltammetry, chronoamperometry, chronopotentiometry, and others. This reduces set up time when you want to use the Model 2450 or 2460 in one of these modes.

Objective: Discover how quickly you can configure the 2450-EC or 2460-EC for cyclic voltammetry.

10 Define the Number of pts/cycle

- At the next prompt, enter 101 and select **OK**.

11 Begin the Experiment

- You will now be prompted to select whether you want to save the data to a USB flash drive when the experiment is finished. For now, select **No**.

- The final prompt asks you if you are ready to begin the experiment. Select **Yes** to start the test.

12 Graphing the Results

- While the test is running, you will see the SMU plot the results in real time as the test progresses. After two cycles, the resulting voltammogram for the demo cube battery should look like the above image.
- When the test is complete, you will be prompted to either:
  - **Exit**
  - **Repeat**
  - Start a **New** test
- Choose what you what you would like to do.

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Models 2450-EC / 2460-EC Potentiostats
Cyclic Voltammetry

The Models 2450-EC and 2460-EC Potentiostat instruments come with a set of preloaded electrochemistry tests, including cyclic voltammetry, chronoamperometry, chronopotentiometry, and others. This reduces set up time when you want to use the Model 2450 or 2460 in one of these modes.
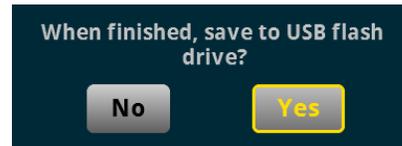
Objective: Discover how quickly you can configure the Model 2450-EC or 2460-EC for cyclic voltammetry.
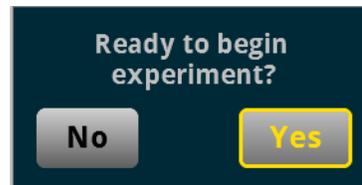
13

Exploring the Graph

- You can pinch and zoom the Models 2450-EC and 2460-EC touchscreens (just like your smart phone or tablet) on the Graph tab so you can analyze the data. Try zooming in on some of the data on the graph. You can also pinch the touchscreen to zoom out.
- You also can apply graphing cursors on the graph. Along the bottom of the graph screen, slide the bar until you reach the cursor bar.
- Select the button in the right side of the bar so that you can select **Vertical**, **Horizontal**, or **Both** cursors. Using the touchscreen. Adjust the position of the cursors and note how the X and Y values update.
- To return the graph to its original scaling quickly, touch the SmartScale icon in the upper right corner of the graph screen, as shown by the arrow in the image.

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Graphing the Data

- To view data in the Sheet view, press the **MENU** key.
- In the Views column, select **Reading Table**.
- Touch any of the data points to bring up more details about that specific measurement.
- Scroll through the table by sliding your finger along the mini graph in the table.
- Press the **HOME** key when finished.

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Models 2450-EC / 2460-EC Potentiostats
Battery Charge and Discharge

The Models 2450-EC and 2460-EC Potentiostat instruments come with a set of preloaded electrochemistry tests, including cyclic voltammetry, chronoamperometry, chronopotentiometry, and others. This reduces set up time when you want to use the Model 2450 or 2460 in one of these modes.

Objective: Discover how quickly you can configure the Model 2450-EC or 2460-EC for battery charge or discharge using chronopotentiometry.

1 Setting Up

Return the SMU to a default state and set up the graph function:
* Press the **MENU** key.
* Press the System **Info/Manage** icon.
* Press the **System Reset** button. Hit **OK**.
* Press the **MENU** key.
* Press the Views **Graph** icon.
* Press the **Scale** tab.
* Press the **X-Axis Method** button and select **All**.
* Press the **HOME** key.

2 Setting Up

* Connect the Model 2450-ECVCUBE Demo DUT to the four banana jacks on the front panel. Make sure the cut-out corner of the DUT is closest to the navigation control. If your Demo DUT has two cutout corners, make sure both cutout corners are facing up.

3 Selecting Chronopotentiometry Preloaded Test Script

To execute the script saved in the internal memory of the instrument:
* Press the **HOME** key to return to the home screen.
* Touch the **No Script** indicator as shown in the image above. A list of available scripts is displayed.
* Select **Chronopotentiometry** from the list.
* The script will begin immediately.

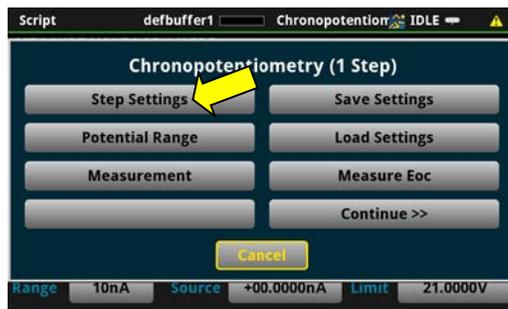**Tektronix**®

Models 2450-EC / 2460-EC Potentiostats

Battery Charge and Discharge

The Models 2450-EC and 2460-EC Potentiostat instruments come with a set of preloaded electrochemistry tests, including cyclic voltammetry, chronoamperometry, chronopotentiometry, and others. This reduces set up time when you want to use the Model 2450 or 2460 in one of these modes.

Objective: Discover how quickly you can configure the 2450-EC or 2460-EC for battery charge or discharge.

4 Configure Step 1 to Charge at 15µA

When the test script executes a number of settings will appear.

- Press **Step Settings**.
- Press Step: SET VALUE.
- Press Current:SET. Change the current to 15µA and then press OK.
- Press **Time:5s** and change the duration time to 60 seconds then press OK.
- Press the <<Back button.

5 Configure Step 2 to Discharge at 15 µA.

Add a second step to discharge the battery

- Add a second step to discharge the battery by pressing More Steps…
- Press Step2: SET VAL.
- Press Current:SET. Change the current to -15µA and press OK.
- Press Time:5s and change the duration time to 60 seconds then press **OK**.
- Press <<Back twice to return to main menu.

6 Set the Potential Range

Change the Potential Range to the 20V range by pressing the **20V** button.

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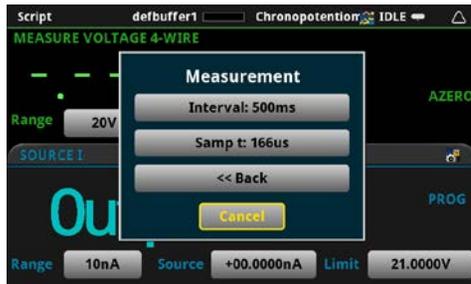**Tektronix**®

Models 2450-EC / 2460-EC Potentiostats

Battery Charge and Discharge

The Models 2450-EC and 2460-EC Potentiostat instruments come with a set of preloaded electrochemistry tests, including cyclic voltammetry, chronoamperometry, chronopotentiometry, and others. This reduces set up time when you want to use the Model 2450 or 2460 in one of these modes.

Objective: Discover how quickly you can configure the 2450-EC or 2460-EC for battery charge or discharge.

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7   Adjust Measurement Parameters

Change the measurement interval time to 500ms
- From the main screen, press Measurement
- Press Interval
- Change the time to 500ms/pt
- Press <<Back
- From main menu, press Continue

---

8   Begin the Experiment

- You will now be prompted to select whether you want to save the data to a USB Flash Drive when the experiment is finished. For now, hit **No**.

- The final prompt asks you if you are ready to begin the experiment. Hit **Yes** to start the test.

---

9   Graphing the Results

- While the test is running, you will see the 2450-EC or 2460-EC plot the results in real time as the test progresses. First you will see the battery charging up for 60 seconds, and then you will see the battery discharge for 60 seconds.
- When the test is complete, you will be prompted to either:
  - View Statistics
  - Repeat
  - Change Settings
  - Exist
- Choose to Exit. When asked to Exit program, select Yes.

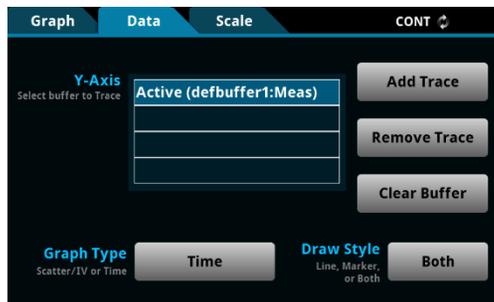**Tektronix**®

Models 2450-EC / 2460-EC Potentiostats
Cyclic Voltammetry

The Models 2450-EC and 2460-EC Potentiostat instruments com with a set of preloaded electrochemistry tests, including cyclic voltammetry, chronoamperometry, chronopotentiometry, and others. This reduces set up time when you want to use the Models 2450 or 2460 in one of these modes.

Objective: Run the cyclic voltammetry test script on a real electrochemical cell
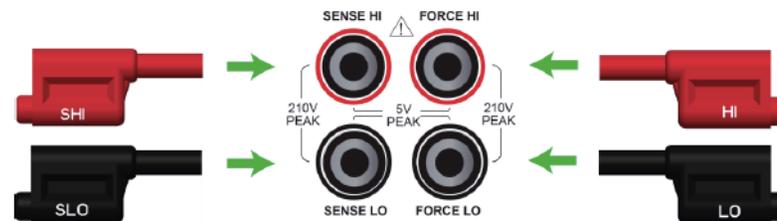
1 Setting Up

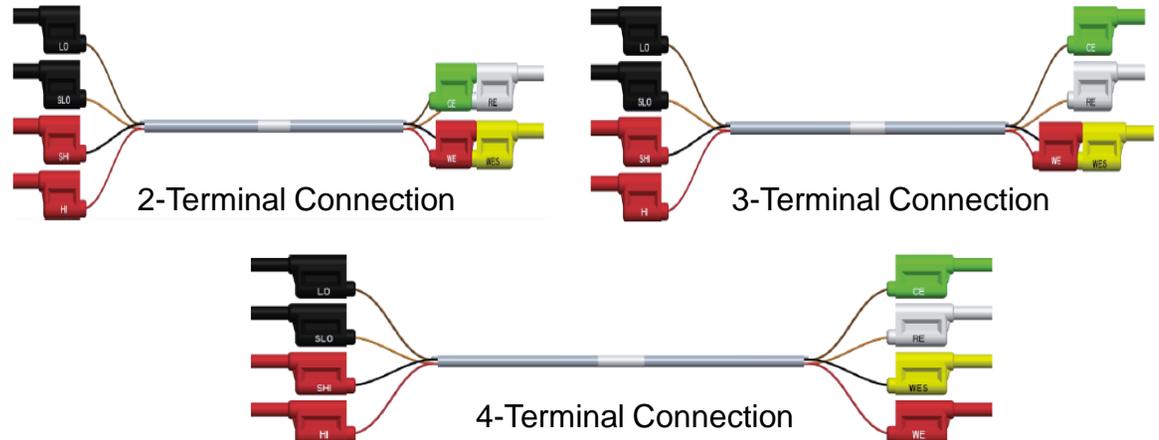Return the SMU to a default state and set up the graph function:
- Press the **MENU** key.
- Press the System **Info/Manage** icon.
- Press the **System Reset** button and select **OK**.
- Press the **MENU** key.
- Press the Views **Graph** icon.
- Press the **Data** tab.
- Press the **Graph Type** button and select **Scatter/IV**.
- Press the **HOME** key.

2 Setting Up

- Prepare your electrochemical cell.
- Connect the translation cable to the Model 2450-EC or 2460-EC as shown above. Note the cable connector markings to insert into the proper banana jacks.
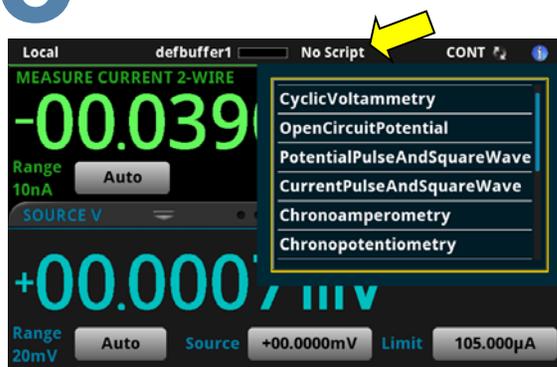- Connect the other end of the cable to your 2, 3, or 4 terminal cell as shown.

2-Terminal Connection

3-Terminal Connection

4-Terminal Connection

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Models 2450-EC / 2460-EC Potentiostats
Cyclic Voltammetry

The Models 2450-EC and 2460-EC Potentiostat instruments come with a set of preloaded electrochemistry tests, including cyclic voltammetry, chronoamperometry, chronopotentiometry, and others. This reduces set up time when you want to use the Model 2450 or 2460 in one of these modes.

Objective: Run the cyclic voltammetry test script on a real electrochemical cell

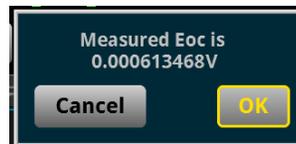**3** Selecting Cyclic Voltammetry Pre-Loaded Test Script

Execute the script saved in the internal memory of the instrument:
- Press the **HOME** key to return to the home screen.
- Touch the **No Script** indicator, as shown in the image above. A list of available scripts is displayed.
- Select **CyclicVoltammetry** from the list. The script will begin immediately.
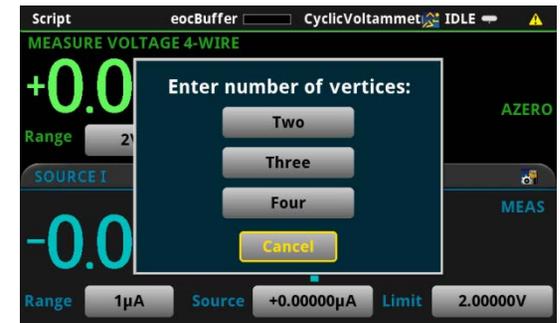
4 Acquire Eoc

- When the script has executed, it prompts you to indicate if you are ready to measure the open circuit potential (Eoc). If the experiment is set up and measurements are ready to be taken, select **Yes** to begin the test. Select **No** to quit the program.
- With your cell connected, the Eoc will be measured and the result displayed.

- Select **OK**.

5 Define the Potential Sweep Parameters

After the open circuit voltage is measured, the parameters of the potential sweep must be defined: Number of vertices, voltage magnitude, and reference voltage.

- Select Two, Three, or Four vertices for your test.

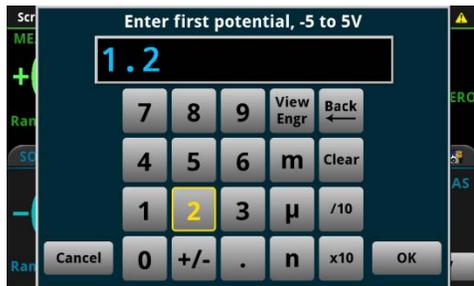**Tektronix**®

Models 2450-EC / 2460-EC Potentiostats

Cyclic Voltammetry

The Models 2450-EC and 2460-EC Potentiostat instruments come with a set of preloaded electrochemistry tests, including cyclic voltammetry, chronoamperometry, chronopotentiometry, and others. This reduces set up time when you want to use the Model 2450 or 2460 in one of these modes.

Objective: Run the cyclic voltammetry test script on a real electrochemical cell

6 — Define the Potential Sweep Parameters

Define 2, 3, or 4 voltage vertices:
- Use values for the potentials you want to use for your cell.
- After each selection, select the reference type that you want to use.

7 — Define the Scan Rate & Number Of Cycles

- After sweep parameters have been defined, you are prompted to enter the scan rate in units of millivolts per second. Enter a scan rate for your test.
- At the next **Enter number of cycles** prompt, enter a value and select **OK** to accept.
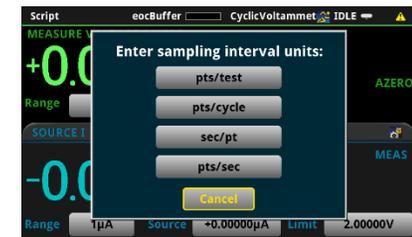

8 — Define the Maximum Current Range & Sampling Interval Units

- At the next prompt, select the maximum current range you want to use for your cell test.
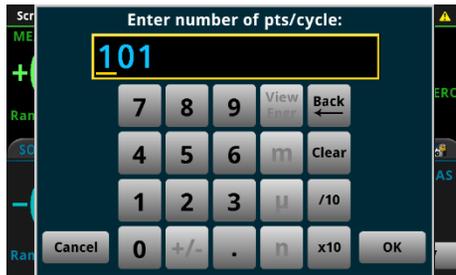- At the next prompt, select the sampling interval units.

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Models 2450-EC / 2460-EC Potentiostats
Cyclic Voltammetry

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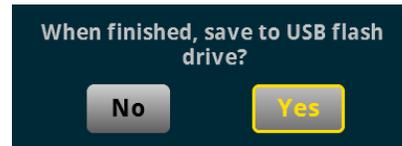
Objective: Run the cyclic voltammetry test script on a real electrochemical cell

9 — Enter a Value for Sampling Interval Units Chosen

- At the next prompt, enter a value for the sampling interval units you chose in Step 8.
- Select **OK**.
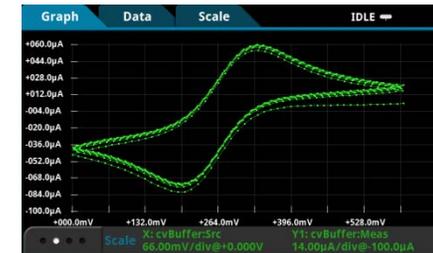
10 — Begin the Experiment

- You will now be prompted to select whether you want to save the data to a USB Flash Drive when the experiment is finished. For now, select **No**.

- The final prompt asks you if you are ready to begin the experiment. Select **Yes** to start the test.

11 — Graphing the Results

- While the test is running, you will see the SMU plot the results in real time as the test progresses. Depending on your cell chemistry, the voltammogram may look like the above image.
- When the test is complete, you will be prompted to either:
  - **Exit**
  - **Repeat**
  - Start a **New** test
- Choose what you what you would like to do.

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Models 2450-EC / 2460-EC Potentiostats

Cyclic Voltammetry

The Models 2450-EC and 2460-EC Potentiostat instruments come with a set of preloaded electrochemistry tests, including cyclic voltammetry, chronoamperometry, chronopotentiometry, and others. This reduces set up time when you want to use the Model 2450 or 2460 in one of these modes.

Objective: Run the cyclic voltammetry test script on a real electrochemical cell

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Exploring the Graph

- You can pinch and zoom the Models 2450-EC and 2460-EC touchscreens (just like your smart phone or tablet) on the Graph tab so you can analyze the data. Try zooming in on some of the data on the graph. You can also pinch the touchscreen to zoom out.
- You also can apply graphing cursors on the graph. Slide the bottom display bar at the bottom of the graph screen until you reach the Cursor bar, then select the button on the right side of the bar to select **Vertical**, **Horizontal**, or **Both** cursors.
- Using the touchscreen. Adjust the position of the cursors and note how the X and Y values update.
- To quickly return the graph to its original scaling, touch the SmartScale icon in the upper right corner of the graph screen.

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Graphing the Data

- To view data in the Sheet view, press the **MENU** key.
- In the Views column, select **Reading Table**.
- Touch any of the data points to bring up more details about that specific measurement.
- Scroll through the table by sliding your finger along the mini graph in the table.
- Press the **HOME** key when finished.

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Models 2450-EC / 2460-EC Potentiostats
Electrochemistry Tests Available

The Models 2450-EC and 2460-EC Potentiostat instruments come with a set of preloaded electrochemistry tests, including cyclic voltammetry, chronoamperometry, chronopotentiometry, and others. This reduces set up time when you want to use the Model 2450 or 2460 in one of these modes.

Exploring Further

In addition to the Cyclic Voltammetry test, the Models 2450-EC and 2460-EC come preloaded with the following tests that you can explore:

Linear Sweep Voltammetry:
Potential is swept at a user-programmable scan rate between two defined points while current is measured.

Open Circuit Potential:
Measures the cell potential difference between two electrodes with high input impedance as a function of time.

Potential Pulse and Square Wave with Current Measure:
The instrument sources potential at programmable peak and base levels while current is recorded at a user-defined position on the pulse peak level.

Current Pulse and Square Wave with Voltage Measure:
The instrument sources current at programmable peak and base levels while potential is recorded at a user-defined position on the pulse peak level.

Chronoamperometry:
The potential is stepped to a programmed value while the resulting current is measured as a function of time.

Chronopotentiometry:
The current is stepped to a programmed value while the resulting potential is measured as a function of time

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Models 2450-EC / 2460-EC Potentiostats

Summary

This concludes the Model 2450-EC / 2460-EC Potentiostat instruments demo tour. The Model 2450-EC / 2460-EC takes a giant step for test and measurement into today's world of state-of-the-art smart technology. Its innovative graphical user interface and advanced touchscreen technology allow intuitive use and minimize the learning curve so that you learn faster, work smarter, and invent more easily. All this combined with Keithley precision and accuracy will enable you to Touch, Test, Invent™ with the new favorite go-to instrument in the lab for years to come.

To learn more, visit: http://www.tek.com/keithley for detailed white papers, application notes, videos, and other materials. For further product demonstrations or to request a quote, please contact your local Keithley authorized distributor.

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