Precious Metal
VERIFIER PRO Mini

Quick Guide Manual
PMV PRO Mini
MODEL #3001

Sigma
Metalytics

PRO Mini Manual

Find enclosed:

- PMV PRO Mini model #3001
- Wand (optional)
- USB-C cable for charging and use with Windows Tablet or PC

This instrument is used to assist in the determination of validity of precious metals.

The use of this instrument and its results are for informational purposes only.

Determination of the validity of samples is strictly the responsibility of the operator, and should be combined as necessary by the user with other methods of measurement or inspection.
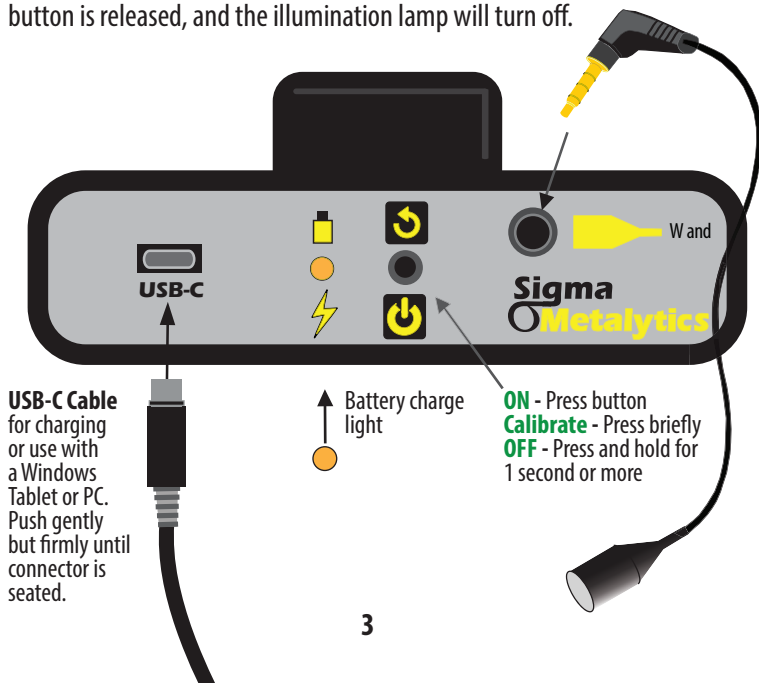
Contents

Getting Started

Charging the PRO Mini
• Plug in USB-C Cable Charging is much more rapid if the instrument is off. Charging light will remain dimly lit while the battery is being charged, even while instrument is off.

Powering ON/OFF
• Turn ON the PRO Mini Press the small black button on the endplate. The white sample illumination lamp under the Sensor Bar will light, indicating the instrument is powered on.
• Turn OFF the PRO Mini Press and hold the small black button on the endplate for more than 1 second. The instrument will power off when the button is released, and the illumination lamp will turn off.

USB-C Cable for charging or use with a Windows Tablet or PC. Push gently but firmly until connector is seated.

Battery charge light

ON - Press button
Calibrate - Press briefly
OFF - Press and hold for 1 second or more

USB-C

Sigma Metalytics

W and

Getting Started

Calibrating the PRO Mini

• Calibrating The PRO Mini will automatically calibrate when powering on. If calibration is needed during use, press the power button briefly and the yellow light will blink rapidly a few times, during which the instrument is calibrating.

NOTE: The instrument must be clear of samples and the sensor bar should be in the raised position during calibration. Otherwise, calibration will be incorrect, and calibration will have to be repeated with these conditions met.
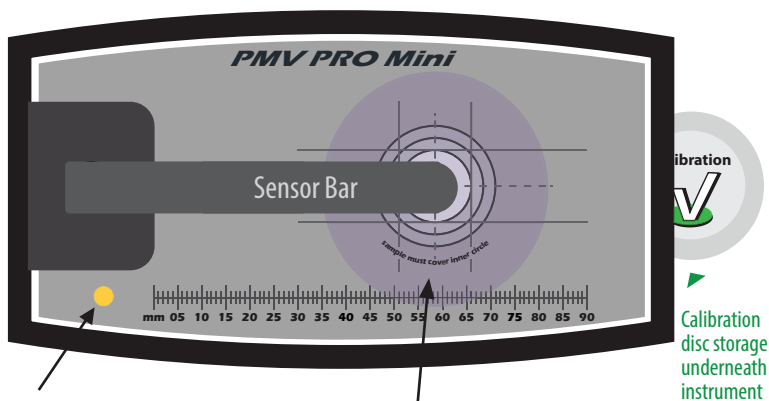
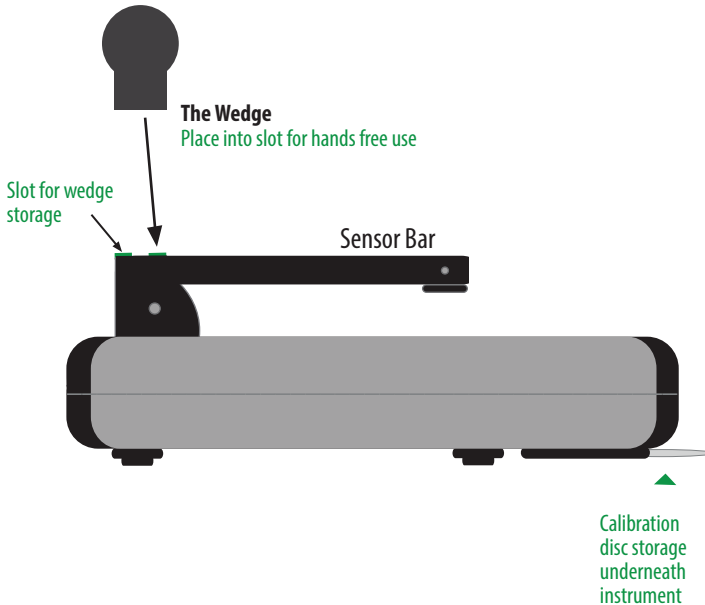**Blinking Light**
Instrument is calibrating

Sample Illumination Lamp
Instrument is powered on

Solid Light
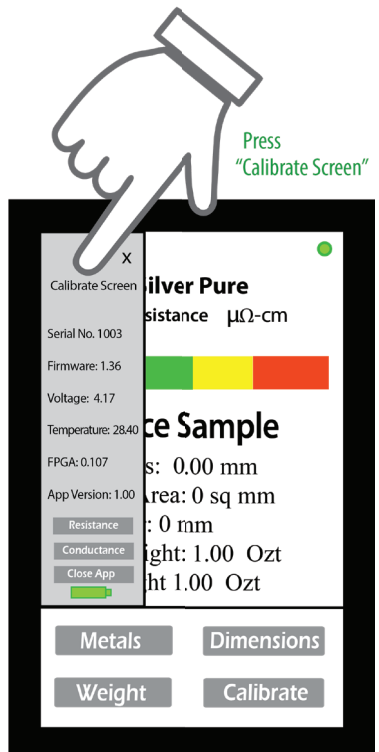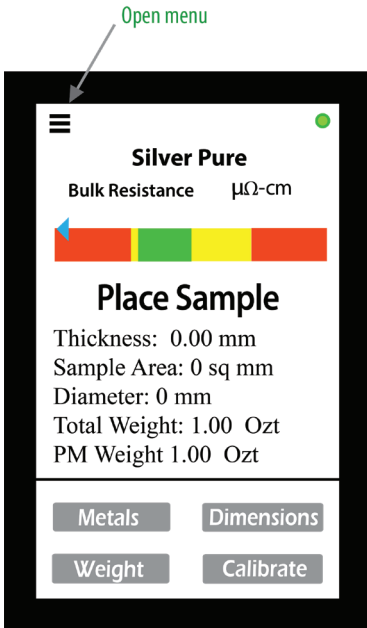Sample is in place

Hands Free Use

The Wedge

Hands Free Use The wedge, provided with the instrument, allows for hands free use of the PRO Mini. Place the wedge into the slot at the base of the sensor bar to hold the arm in place.

The Wedge
Place into slot for hands free use

Slot for wedge storage

Sensor Bar

Calibration disc storage underneath instrument

Screen Calibration

Calibration

1. Open the menu at the top left of the screen
2. Press "Calibrate Screen"

Open menu

Press "Calibrate Screen"

≡

Silver Pure

Bulk Resistance   μΩ-cm

Place Sample

Thickness: 0.00 mm
Sample Area: 0 sq mm
Diameter: 0 mm
Total Weight: 1.00 Ozt
PM Weight 1.00 Ozt

| Metals | Dimensions |
| Weight | Calibrate |

X
Calibrate Screen

Serial No. 1003

Firmware: 1.36

Voltage: 4.17

Temperature: 28.40

FPGA: 0.107

App Version: 1.00

Resistance
Conductance
Close App

ilver Pure
sistance   μΩ-cm

ce Sample

s: 0.00 mm
rea: 0 sq mm
: 0 mm
ght: 1.00 Ozt
ht 1.00 Ozt

| Metals | Dimensions |
| Weight | Calibrate |

Screen Calibration

3. A box will appear on the screen. Place the Calibration Disc on the screen so that the edge of the disc aligns with the top and left edges of the box, see below:

Top side must touch edge

Left side must touch edge

Calibration

Place disc here (as shown right)

Place calibration disc on screen to line up with top and left side of box (As shown above)

+

−

Accept

Cancel

Use **+ / −** buttons to adjust size of square until all edges line up with calibration disc
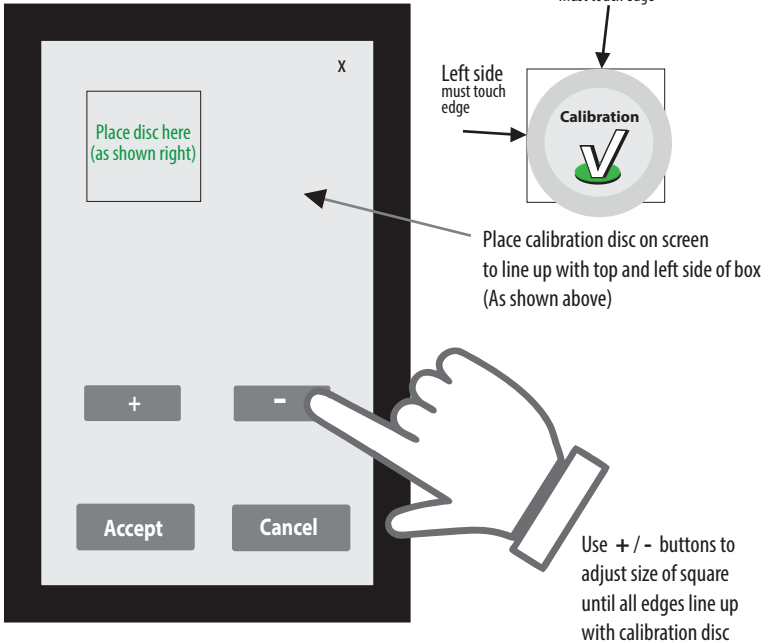
4. Adjust the width and height using the + / - buttons on the screen to adjust the square size until the bottom and right edge of the calibration disc are lined up. Accurate calibration is when all 4 edges of the box are aligned with the caibration disc.

5. Press "Save or Accept" button. The instrument will save the screen scale to accurately display expected sample size.
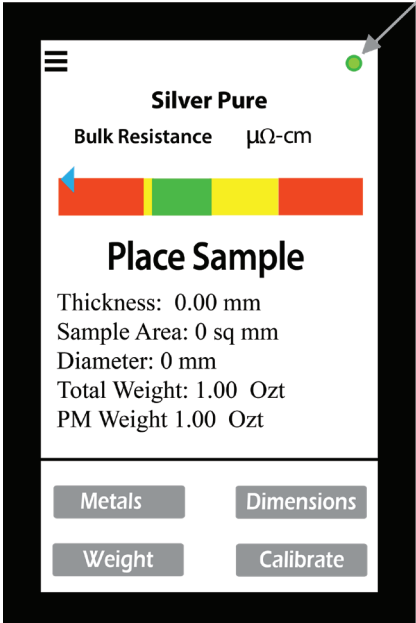
The Measurement Screen

The Measurement Screen

The PRO Mini Measurement Screen Once connected, the PRO Mini will display the measurement screen on the host device.

NOTE: A blinking green indicator will display in the upper right hand corner of the measurement screen to indicate the PRO Mini is connected.

Green light shows host is connected

Thickness = sample thickness

Sample Area = Expected area of the sample given weight and thickness

Diameter = Expected diameter if sample is round

Total Weight = User entered weight

PM Weight = User entered weight

Entering Information

Resistance and Conductance

1. Open the menu at the top left of the screen
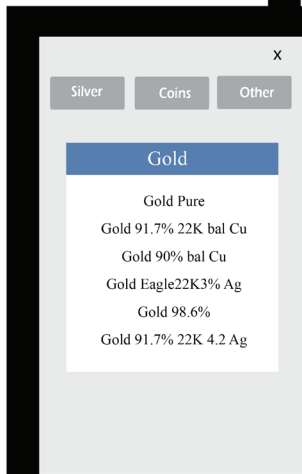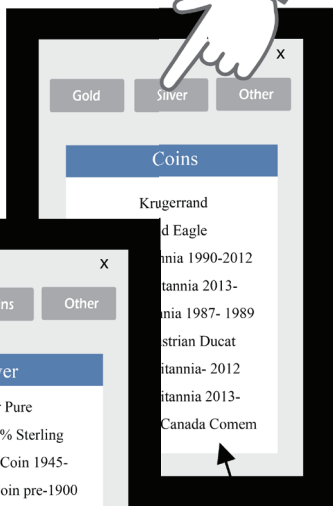2. Press "Resistance" or "Conductance"

Open menu

Silver Pure

Conductance   μ℧

Select
Resistance
or Conductance

≡   X

Calibrate Screen

Serial No. 1003

Firmware: 1.36

Voltage: 4.17

Temperature: 28.40

FPGA: 0.107

App Version: 1.00

Resistance

Conductance

Close App

ce Sample

: 0.00 mm

ea: 0 sq mm

0 mm

ght: 1.00 Ozt

t 1.00 Ozt

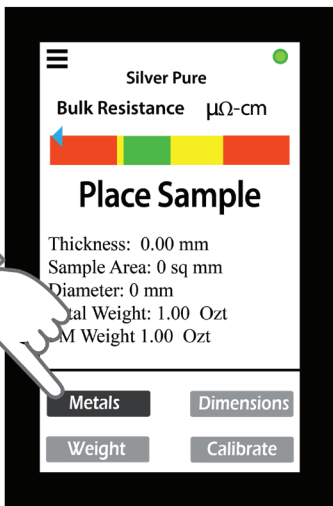| Metals | Dimensions |
| Weight | Calibrate |

Device will save setting for future use

Entering Information

Sample Alloy

1. Press the "Metals" button at the bottom of the Measurement Screen

2. Select the expected alloy of your sample

NOTE: Select the alloy type based on the main element of your sample, or select "Coins" if it is a specific coin type.
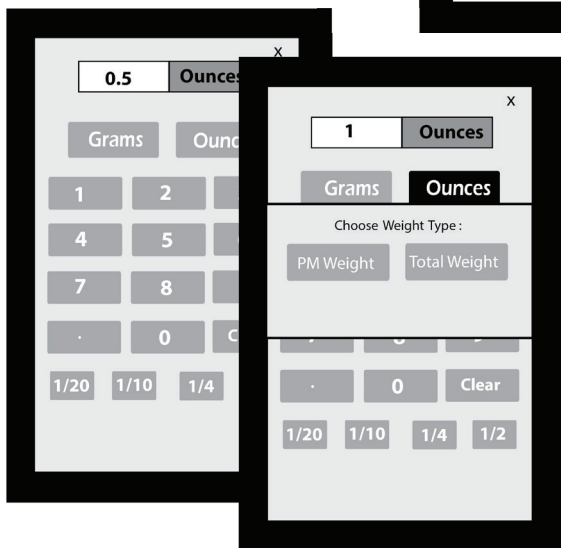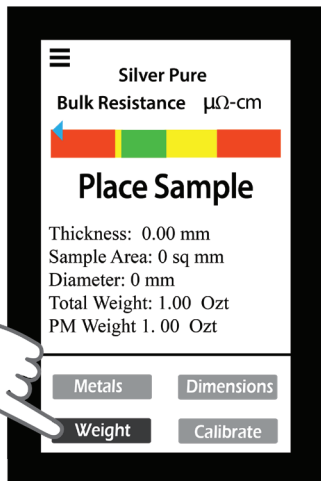
Silver Pure
Bulk Resistance   μΩ-cm

Place Sample

Thickness: 0.00 mm
Sample Area: 0 sq mm
Diameter: 0 mm
Total Weight: 1.00 Ozt
M Weight 1.00 Ozt

| Metals | Dimensions |
| Weight | Calibrate |

Gold   Silver   Other

Coins

Krugerrand
Gold Eagle
Britannia 1990-2012
Britannia 2013-
Britannia 1987- 1989
Austrian Ducat
Britannia- 2012
Britannia 2013-
Canada Comem

Gold   Coins   Other

Silver

Silver Pure
Silver 92.5% Sterling
Silver 90% Coin 1945-
Silver 90% Coin pre-1900
Silver 90% Coin 1900-1945
Silver 96% Britannia

Silver   Coins   Other

Gold

Gold Pure
Gold 91.7% 22K bal Cu
Gold 90% bal Cu
Gold Eagle22K3% Ag
Gold 98.6%
Gold 91.7% 22K 4.2 Ag

3. Select the alloy or coin type from the list

Entering Information

Sample Weight

1. Press the "Weight" button at the bottom of the Measurement Screen
2. Enter the weight in either grams or troy ounces, then select if weight entered is total sample weight or PM weight

☰
Silver Pure
Bulk Resistance   μΩ-cm

Place Sample

Thickness: 0.00 mm
Sample Area: 0 sq mm
Diameter: 0 mm
Total Weight: 1.00 Ozt
PM Weight 1. 00 Ozt

| Metals | Dimensions |
| Weight | Calibrate |

X

| 0.5 | Ounces |

| Grams | Ounc |

1	2
4	5
7	8
.	0	C

| 1/20 | 1/10 | 1/4 |

X

| 1 | Ounces |

| Grams | Ounces |

Choose Weight Type :

| PM Weight | Total Weight |

| . | 0 | Clear |

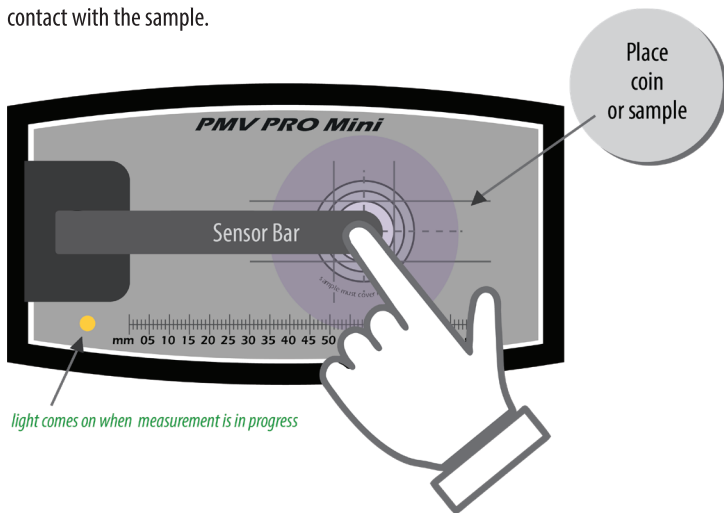| 1/20 | 1/10 | 1/4 | 1/2 |

Taking a Measurement

Place Sample

1. Place sample on target under bridge arm
NOTE: The sample must entirely cover the inner circle of the target to be accurately measured.

2. Press the sensor bar down to make contact with sample or sample holder
NOTE: Press the sensor bar gently but firmly so the sensor in the arm rotates to be in flat contact with the sample.


Place coin or sample

PMV PRO Mini

Sensor Bar

sample must cover

mm 05 10 15 20 25 30 35 40 45 50

light comes on when measurement is in progress

NOTE: Use the wedge for hands free measurement (see page 5)

Taking a Measurement

Basic Reading

1. Within 4 seconds the reading will stabilize. The thickness, diameter, and sample area will also be displayed

2. If the arrow is in the green area of the graph display, then the sample is reading is within expected range for the selected alloy type

3. The yellow area of the graph indicates caution. If the arrow is in the yellow, then the sample is within the edge of expected range, but check weight, size, and appearance carefully

4. If the arrow is in the red area of the graph, the sample is not within the expected range for a valid alloy
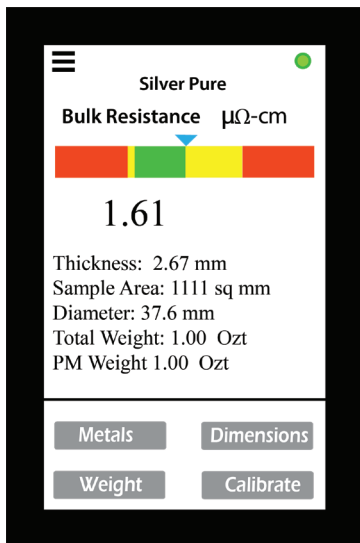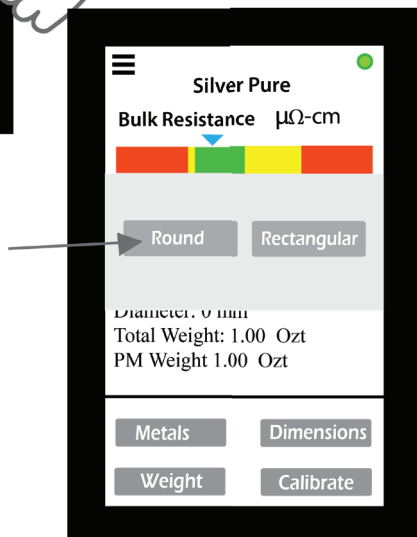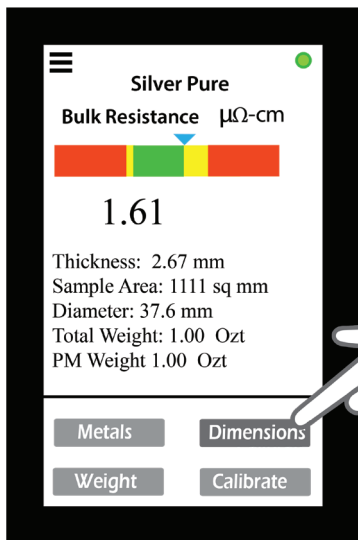

Sample reading of a pure silver coin
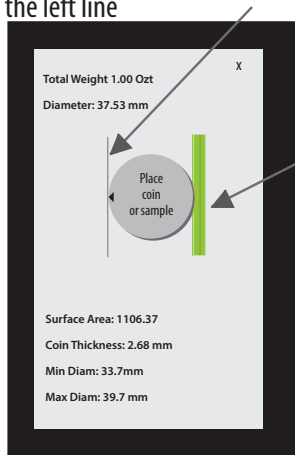
Taking a Measurement

Sample Dimensions

1. When the reading has stabilized, the instrument is ready to display the expected sample dimensions

Taking a Measurement

2. If the sample is round, 2 lines will appear on the screen. Place the sample on the screen so that the left edge of the sample is aligned with the left line

Total Weight 1.00 Ozt

Diameter: 37.53 mm

X

Place coin or sample

Surface Area: 1106.37

Coin Thickness: 2.68 mm

Min Diam: 33.7mm

Max Diam: 39.7 mm

The right edge of the sample sould be aligned with the right line, close enough so that the edge of the sample is in the green bar

X

Width −   Width +

S.A: 110.5 Thickness: 2.67mm   Total Weight 1.00 Ozt.
Width: 31.0 mm   Length: 35.8 mm
Max Length: 38.11 mm   Min Length: 32.2 mm

3. If the sample is rectangular, a rectangle will appear on the dimension screen. Place the sample on the screen so that the upper left corner of the sample is aligned with the upper left corner of the rectangle
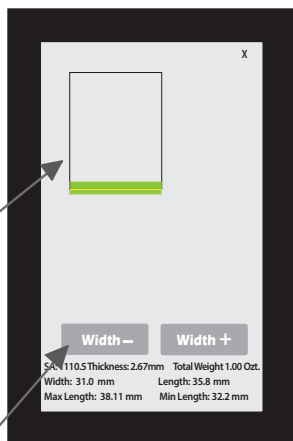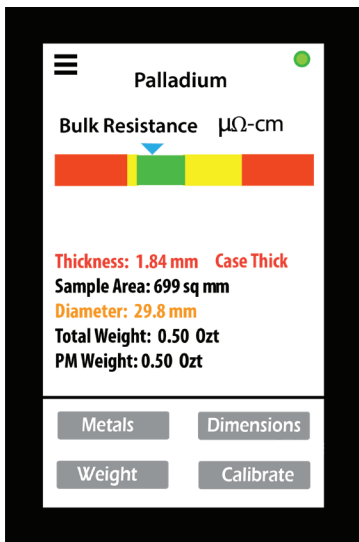
4. Adjust width with + / - buttons until the rectangle matches sample width
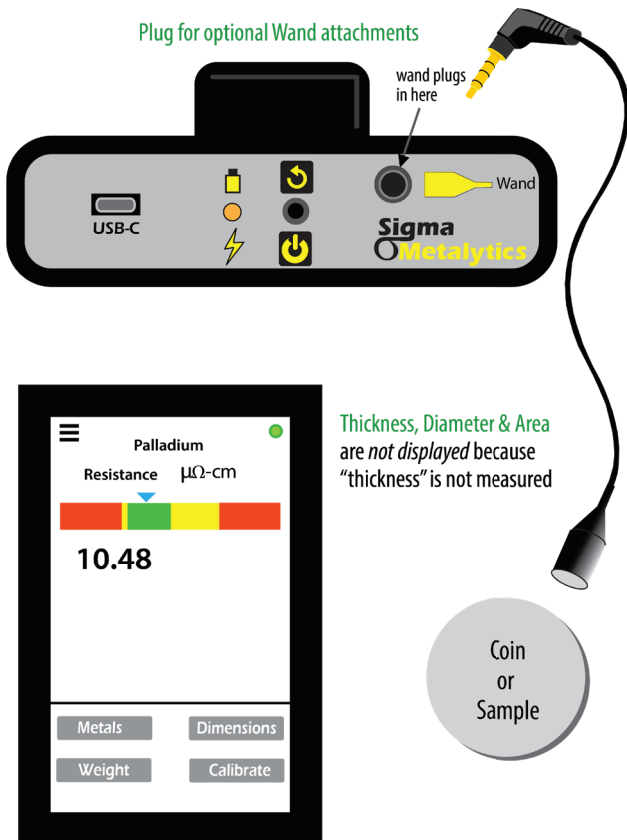
Errors

Example Error Messages

1. Sample case is too thick: Case Thick

2. Sample is too thin: sample reading will go from yellow to red

3. Sample diameter is too small: diameter reading goes from yellow to red

Wand Use

Plug for optional Wand attachments

wand plugs
in here

Wand

USB-C

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Thickness, Diameter & Area
are *not displayed* because
"thickness" is not measured

Palladium

Resistance μΩ-cm

10.48

Coin
or
Sample

Metals | Dimensions

Weight | Calibrate

Precious Metal VERIFIER PRO Mini

PMV PRO Mini
MODEL #3001

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www.sigmametalytics.com
info@sigmametalytics.com