Precious Metal VERIFIER PRO

MANUAL

MODEL #2701

Sigma Metalytics

Contents

CAUTION

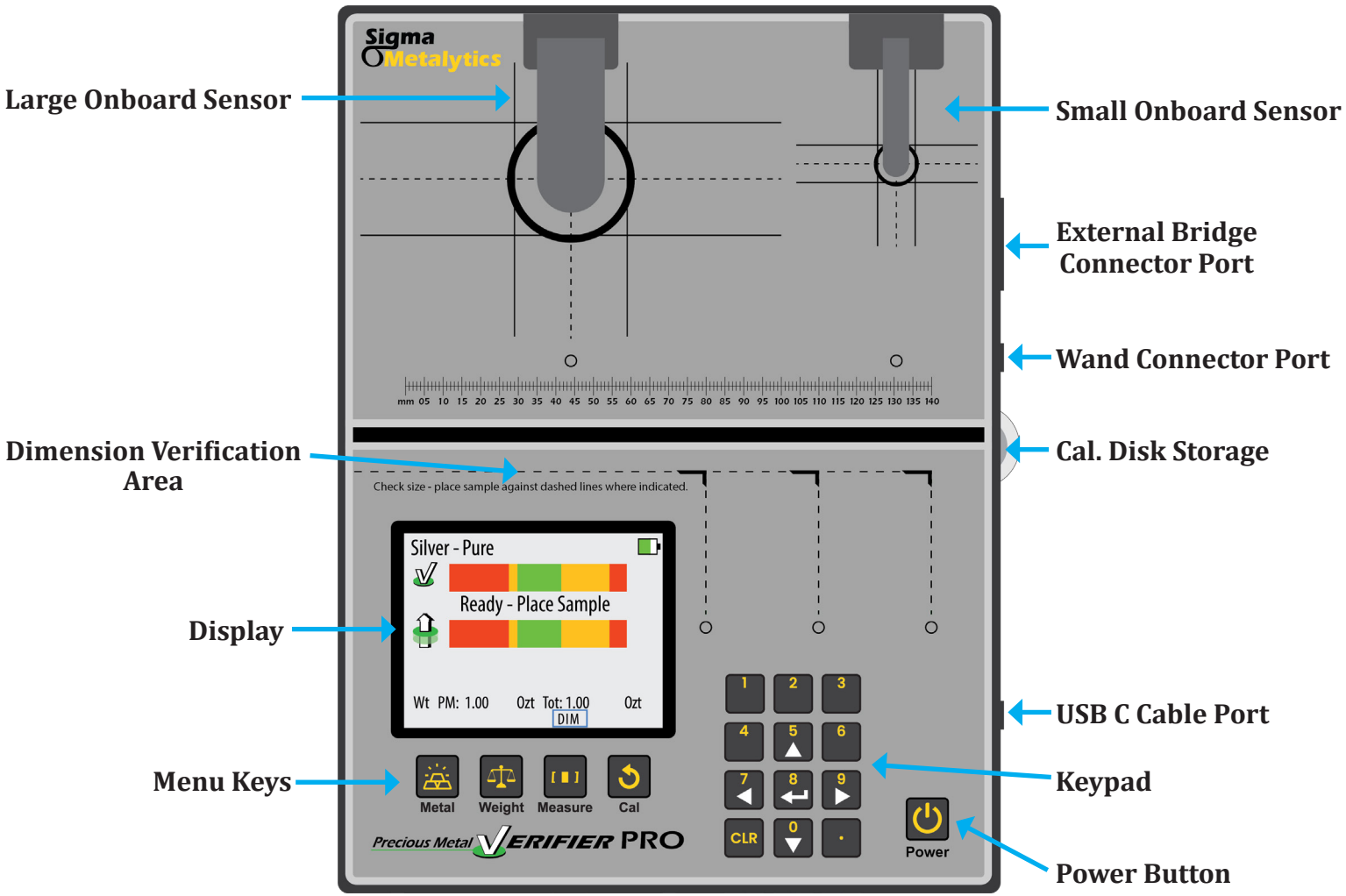
Read Before Use

- The onboard sensors and bridges are very sensitive to stress. **DO NOT** press on them, place objects on them, or lift the device by the bridges. Stress can cause miscalibration and damage.

- The plastic cover on the display protects the screen from damage. **DO NOT** remove the plastic cover from the display.

Sigma Metalytics, LLC makes no claim, warranty, guarantee, or promise, express or implied, that measurements made by the Precious Metal Verifier PRO indicate that any sample is or is not genuine. Measurement results, whether within or without the bounds consistent with the selected metal or alloy, are INFORMATIONAL PURPOSES ONLY and any judgment about or action taken with regard to any sample is entirely the responsibility of the user. To ensure accuracy, thoroughly read the included instructions and be aware of the special conditions which may affect the readings.

Device Diagram



PMV PRO Functions

The PMV PRO uses up to four different measurements to determine if a coin or bar is consistent with genuine precious metals.

The four measurements are:

1. **Basic Verification Mode:** The PMV PRO measures the sample's resistivity just under the surface of the metal. This ensures there are no contaminants or foreign metals in or near the surface.

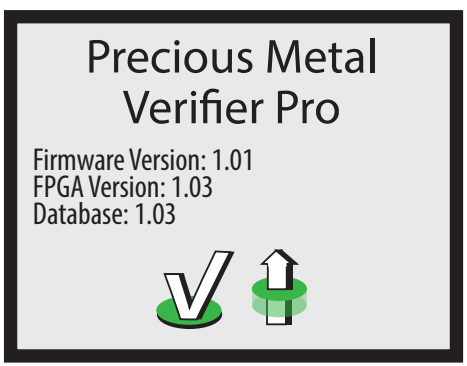
2. **Thru Mode:** Using the sensors above and below the sample, the PMV PRO measures the sample's bulk resistivity. This measurement checks the entirety of the sample and ensures there are no contaminants or foreign metals anywhere between the two sensors.

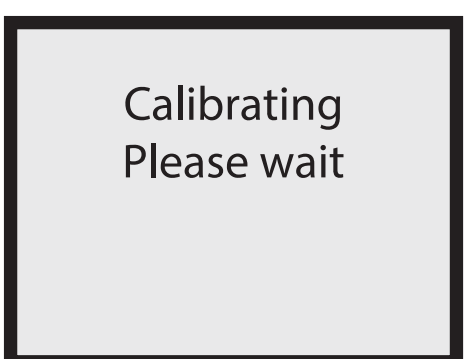
3. **Thickness Measurement:** The PMV PRO electronically measures the thickness of the sample using the average thickness of the face of the sample.

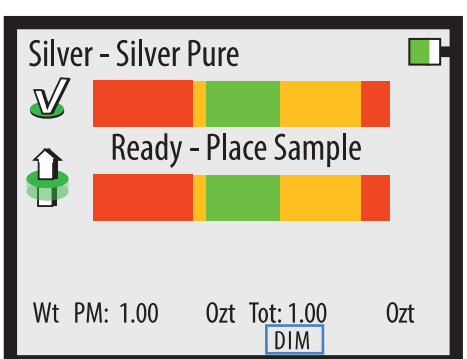
4. **Dimension Verification:** The PMV PRO can perform a specific gravity test to ensure the sample is the correct density. The user must enter the measured weight of the sample to perform this test.

Power On and Calibrate

Power on your PMV PRO by pressing the **POWER** button. The device will display the serial number, firmware version, FPGA version, and database version. The device needs to be calibrated each time it is turned on. This calibration checks the internal components and prepares the device for use. Press the **CAL** button to calibrate. The device will check each sensor then show the **READY** screen.



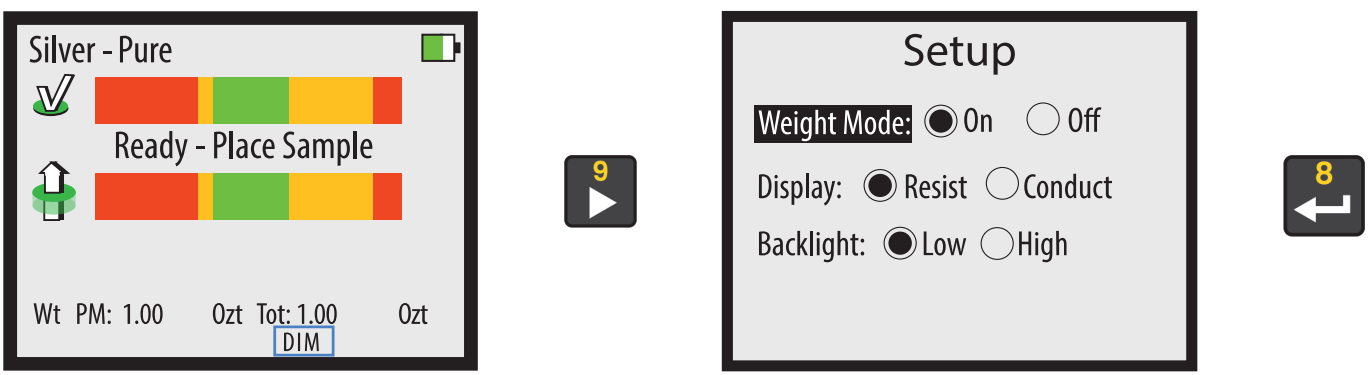




Setup

You may change some settings in the SETUP screen. To access the SETUP screen, press the **RIGHT** button on the READY screen. Use the **UP** and **DOWN** buttons to select the category, and use the **RIGHT** and **LEFT** buttons to change the selection within a category. Press the **ENTER** button when done to exit the SETUP screen.

Note: You do not need to setup the device each time you use it, the settings are saved between uses.

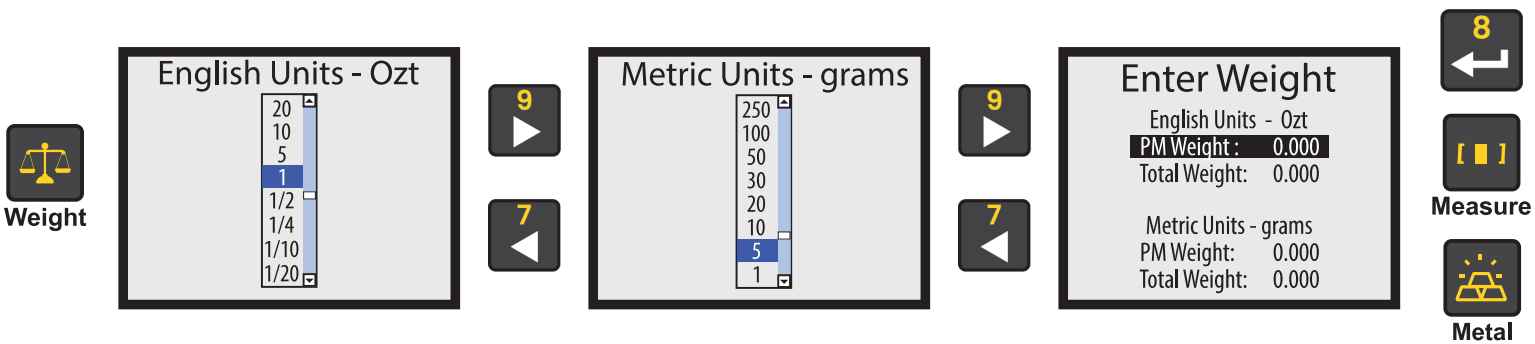


Metal Selection

Prior to taking a measurement, you must select the appropriate metal or alloy from the metal selection database. Press the **METAL** button open the selection menu. Use the **LEFT** and **RIGHT** buttons to navigate between metal categories, and use the **UP** and **DOWN** buttons to select a specific metal within a category. When ready, press the **ENTER**, **MEASURE**, or **WEIGHT** button to confirm the selection.

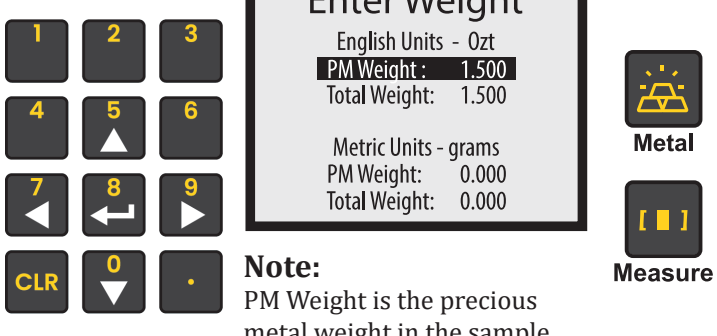
Weight Entry

To enter the weight of a sample, press the **WEIGHT** button. You can either select from the options listed in the English Units (Ozt) and Metric Units (grams) categories, or you can manually enter a weight on your own. Use the **LEFT** and **RIGHT** buttons to navigate between categories, and use the **UP** and **DOWN** buttons to select options within a category. When ready, press **ENTER**, **MEASURE**, or **METAL** to confirm the selection.



Manual Weight Entry

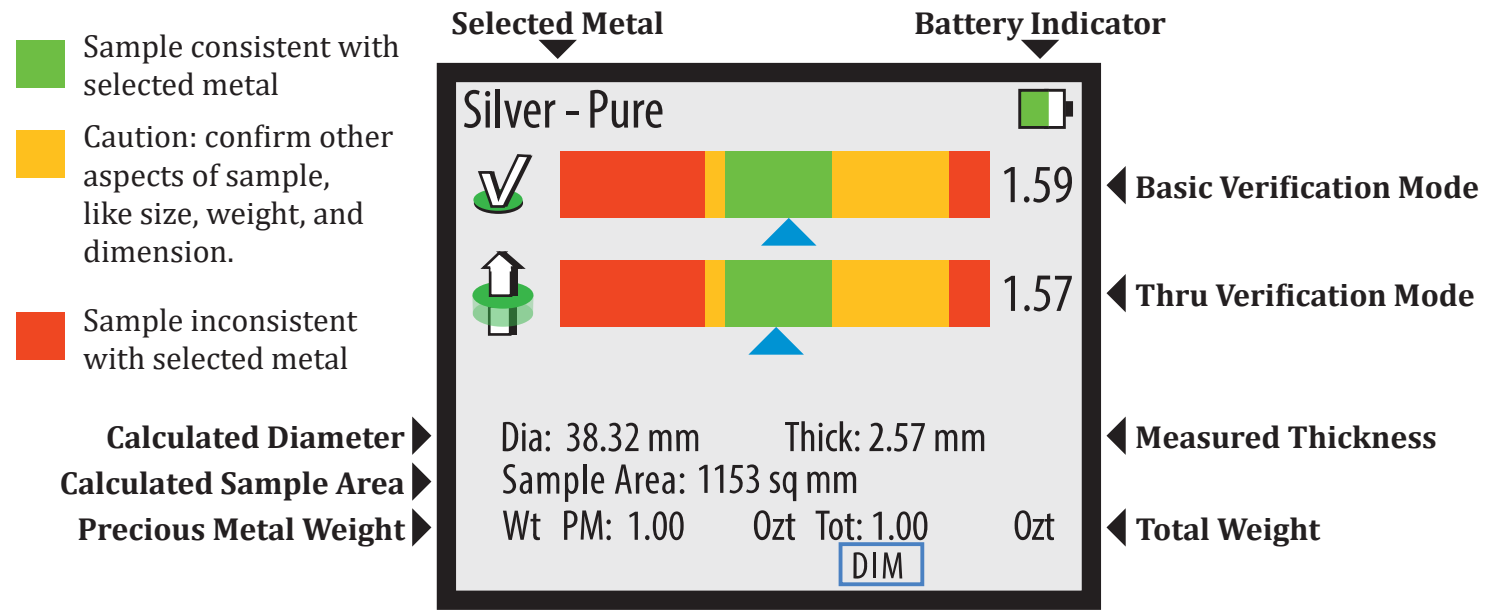
To manually enter weight, use the **UP** and **DOWN** buttons to select the type of weight you want to enter. Press the **ENTER** button to change the indicated weight. Use the **NUMBER** buttons to enter the desired weight. Press the **WEIGHT** button when finished to save the entry. When finished, press the **MEASURE** or **METAL** button to continue use.



Note:
PM Weight is the precious metal weight in the sample.

Measurement Screen

The MEASUREMENT screen will display when taking a reading. Below is a basic explanation of each part of the screen. The screen will not display the diameter, thickness, or weight if weight mode is turned off. When using a Wand attachment, only the Basic Verification Mode bar will display.

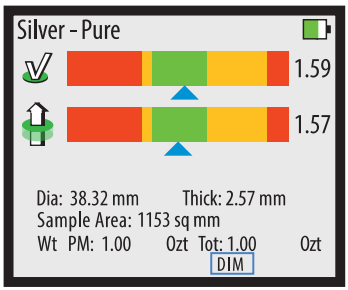


Blue Arrow
Indicates the device is getting a reliable reading.

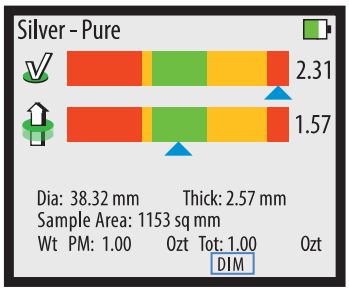
Red Arrow
Indicates the device is getting an unreliable reading, treat result with caution.

Sideways Arrow
Indicates the result is off the scale in specified direction.

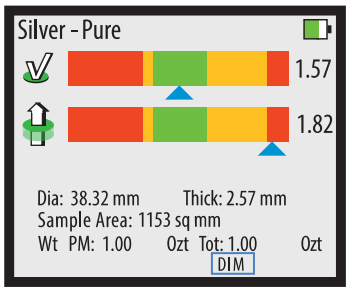
Measurement Interpretation



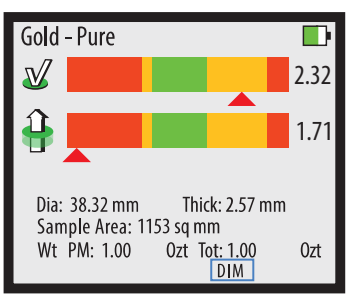
Reliable Reading, Good Sample
The device is getting a reliable reading and the reading is consistent with the selected metal.



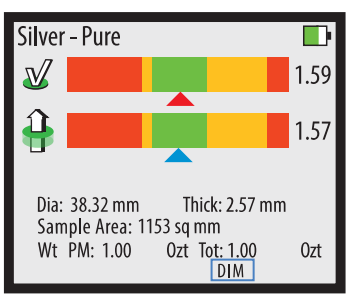
Reliable Reading, Bad Surface
The device is getting a reliable reading but the Basic Verification Mode indicates that the surface of the sample is inconsistent with the selected metal.



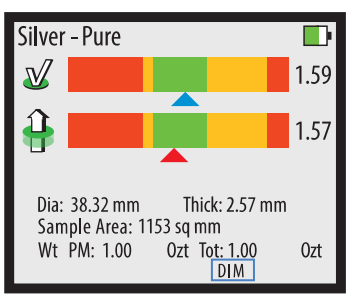
Reliable Reading, Bad Interior
The device is getting a reliable reading but the Thru Verification Mode indicates that the bulk of the sample is inconsistent with the selected metal.



Readings Differ Significantly
The red arrows indicate that the sample's results differ significantly, indicating a problem with the sample.



Unreliable Basic Reading
A red arrow on the top bar means the sample is too small. Try measuring with a smaller sensor.



Unreliable Thru Reading
A red arrow on the bottom bar means the sample is too thin. Try measuring with a smaller sensor.

Dimension Verification

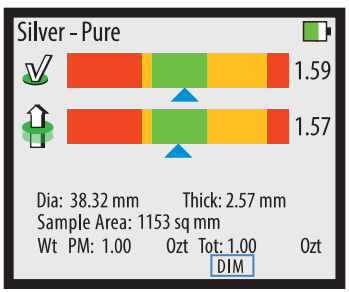
To verify the dimensions of a sample, the correct metal must be selected and the correct weight must be entered. To verify the dimensions of a sample, press the **MEASURE** button while the device is reading the sample. Select the shape of the sample using the **UP** and **DOWN** buttons. Once the DIMENSION screen appears, you may move the sample away from the sensor.

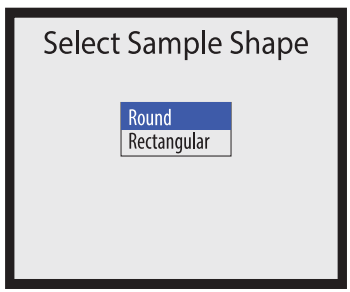
- **For round samples:** align the right edge of the sample to the vertical dotted line indicated by the illuminated LED. The left edge of the sample is expected to fall within the green range indicated on the screen. If the edge falls within the range, then the sample's density is consistent with the selected metal. If the left edge falls outside of the green range, then the sample's density is inconsistent with the selected metal.

- **For rectangular samples:** align the right edge of the sample to the vertical dotted line indicated by the illuminated LED. Use the **UP** and **DOWN** buttons to adjust the indicated width on the screen to match the width of the sample. While adjusting the width, the illuminated LED may change to indicate a different vertical dotted line. Re-align the right edge of the sample to the new line. With both the right edge and width aligned properly, the sample's left edge should fall somewhere within the green range. If the edge falls within the range, then the sample's density is consistent with the selected metal. If the left edge falls outside of the green range, then the sample's density is inconsistent with the selected metal.

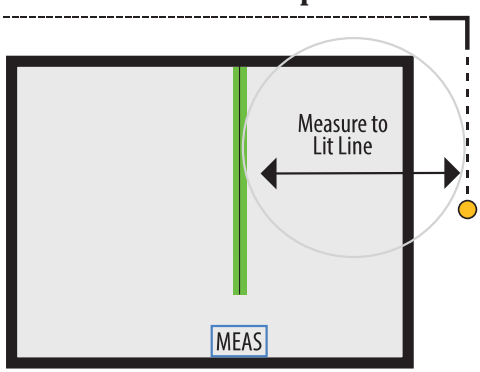
Note: The PRO must be actively reading a sample when **MEASURE** is pressed to perform dimension verification. The PRO is unable to provide dimension verification when using the Wand attachments.

Dimension Verification Diagram

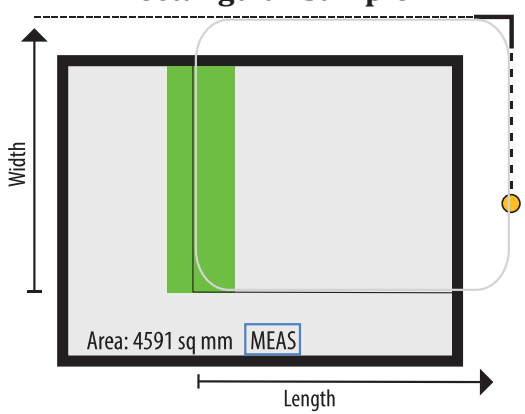




Round Sample



Rectangular Sample

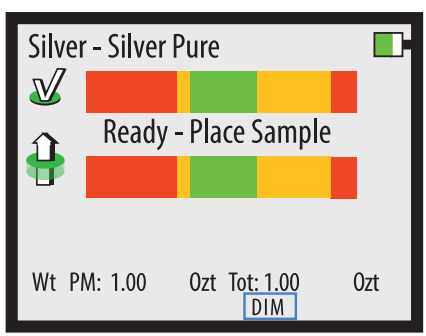


Green Bar = acceptable range

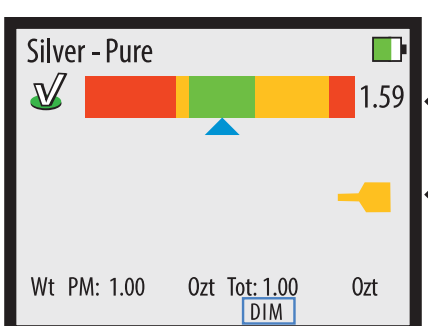
Wand Use

Wands are optional attachments for the PMV PRO. To use a Wand attachment, plug the Wand into the Wand Connector on the right-hand side of the device. When you plug in the Wand, the device will ask for calibration. Remove all samples from the device and ensure the Wand is at least one inch away from any metal, then press the **CAL** button. When the READY screen is displayed, you may touch the face of the Wand to a sample.

When measuring with the Wand, only the **Basic Verification Mode** reading will display. There will also be a yellow Wand indicator on the screen indicating the device is using the Wand's sensor.



Wand Reading Screen
When the Wand is touched to metal, the screen will change to show the results of the reading. There is only one bar and a yellow icon appears to indicate that the wand is in use.



Single Reading Result

Wand Icon

PC Interface

The PMV PRO is capable of using a Windows PC (Windows 7, 8, 10, and 11) as an interface for the device. You must first install the PC Interface program by downloading it from our website (www.sigmametalytics.com/pro-pc) and following the included download and installation instructions.

Once the program is successfully downloaded and installed, plug the PRO device into your PC using the included USB cable.

To install the PRO PC interface:

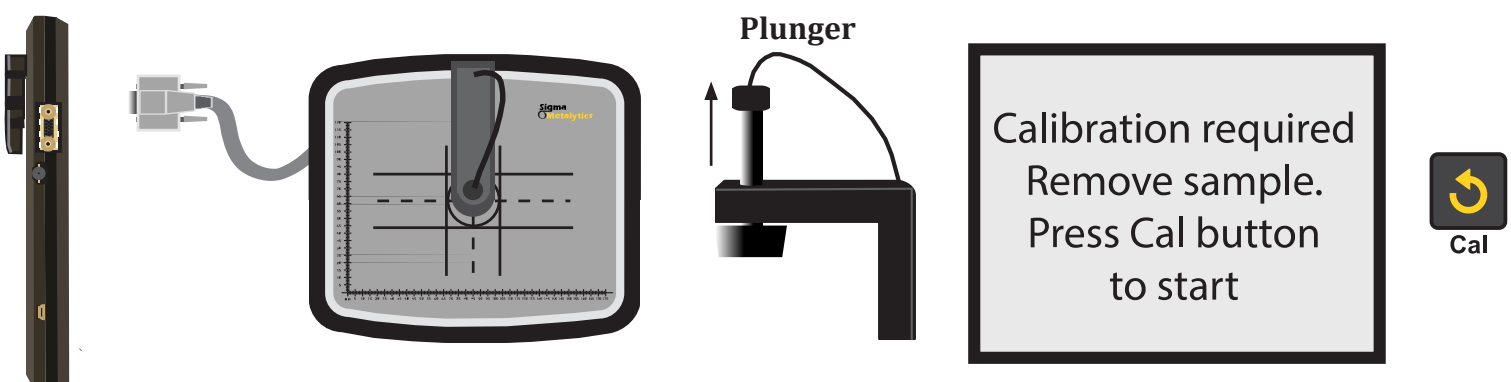
1. Go to www.sigmametalytics.com/pro-pc and download the PMV PRO Application Installation zip file.
2. Open the downloaded .zip file with File Explorer. Click into the PMV PRO Folder and double click on the PMV PRO installation program (.MSI file type).
3. Your computer might show a warning that the .MSI was stopped from running because it might be dangerous. Click “Learn More” and then “Run Anyway” to install the program.
4. The program will install to the C: drive by default, but you may select a custom folder.
5. You should now be able to find the on your desktop or by searching your installed applications for “PMV PRO.”
6. Connect your PRO to your computer using the included USB cable. Power on your device and run the PMV PRO program to get started.
7. While using the PRO with the PC interface, the readings will display on both the device’s display and the PC application.

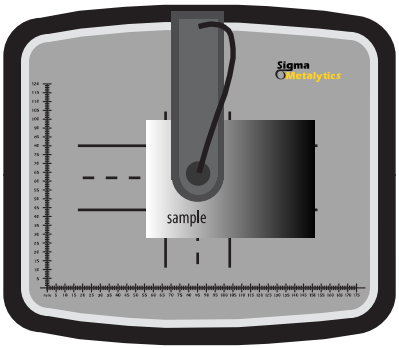
External Bridge

The External Bridge is an optional attachment for the PMV PRO. To use the External Bridge, plug the External Bridge into the External Bridge connector on the right-hand side of the device. When you plug in the External Bridge, the device will ask for calibration. Remove all samples from the device and External Bridge, and ensure the External Bridge's plunger is in the up position. Then press the **CAL** button. When the READY screen is displayed, you may place your sample under the External Bridge plunger. Press the plunger down firmly to ensure it is in full contact with the sample. When testing, you may move the sample around under the plunger to test various areas.

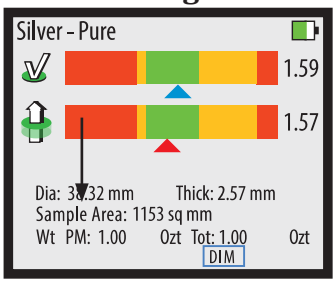
When measuring with the External Bridge, the **Basic** and **Thru Verification Modes** will display, just like using the onboard sensors.

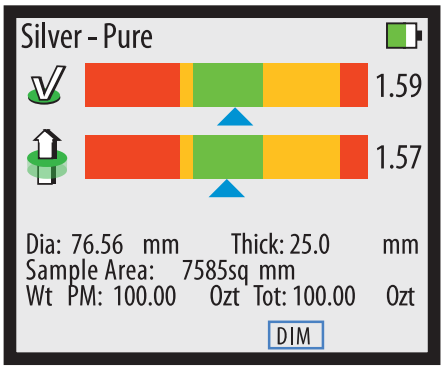
Note: The sample must be at least 12mm thick and at least 50mm wide to take an accurate measurement. The sample must be no more than 45mm thick. The sample must cover the entire black circle on the External Bridge platform throughout testing.





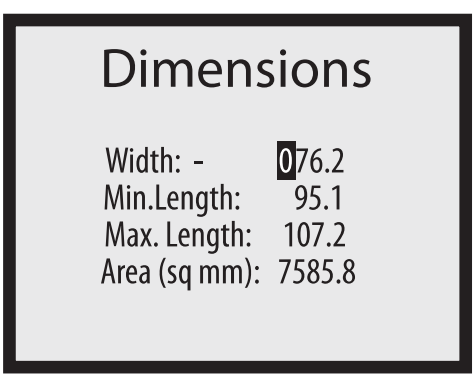
Plunger

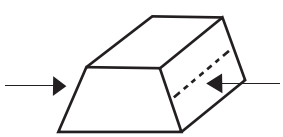




External Bridge Dimension Verification

The External Bridge can provide dimension verification, similar to the onboard sensors. Please refer to Page 12 for a basic overview. When verifying dimensions with the External Bridge, enter the measured weight, then, press the **MEASURE** button while the device is reading the sample. The device will display an initial DIMENSIONS screen. You must enter the measured width of the bar first for the device to calculate the expected minimum and maximum length of the sample. Use the onboard scale or calipers to measure the width. Once you have entered the width, press the **MEASURE** button again and the device will display the calculated minimum and maximum lengths for the sample. Confirm that your sample falls within that range.





Note:
For bars with angled sides, measure width from the middle of each side.

Note: Refer to Page 9 for data entry.

Thickness Calibration

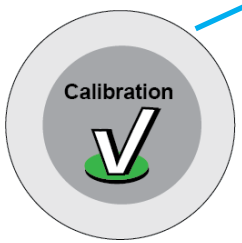
In the event that your PRO device's onboard sensors become miscalibrated, it may be important to re-calibrate the thickness measurement of your device. To do so, first power on the device and remove all samples. Once the device displays the READY screen, press and hold the **CAL** button for 3 seconds. The THICKNESS CALIBRATION screen will appear. Place the included calibration disk under the affected sensor, then press the **ENTER** button. Leave the calibration disk under the sensor until the screen returns to the MEASUREMENT screen.

With correct calibration, the calibration disk should be measured at about 1.57 - 1.62 mm thick. If your device reads the calibration disk as more than 0.1 mm thinner or thicker than expected, please contact us.

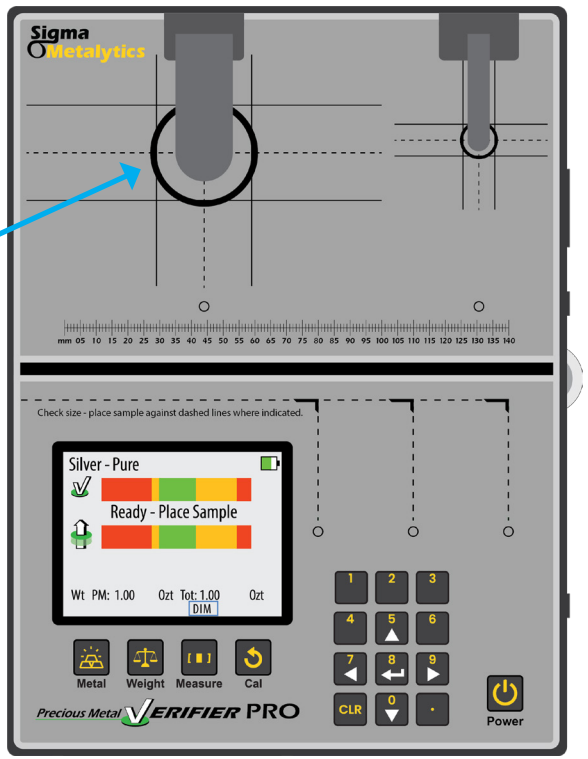
Note: This re-calibration is only rarely needed and should only be performed if the device is showing clear signs of a thickness mis-calibration. Because of the way the PRO electronically measures the thickness of coins based on the face of the coin, the PRO's indicated thicknesses for coins tends to be slightly thinner than the thickness specifications published by mints and retailers.

Thickness Calibration

Press and hold **CAL** for 3 Seconds



Place calibration disk under the sensor that needs to be calibrated.



Press **ENTER** to calibrate

Coin Reference and Testing Guide

This coin reference and testing guide section provides specifications for the most popular coins in the U.S. market. This section details the weights and sizes of the listed coins, as well as the correct setting to use on the Precious Metal Verifier (PMV) when testing these coins. Remember, counterfeiters will try anything to slip a fake through testing, including faking density or resistivity. By confirming the weight, size, and resistivity, the user can confirm that the sample has the correct density and resistivity, and is therefore consistent with the expected metal type. It is best practice to test both density and resistivity. A genuine sample should pass all tests it is subjected to.

Some notes on using this guide:

- The provided thicknesses and diameters are determined using calipers.
- There will be slight variance when measuring samples at home due to differences in caliper and scale calibration. Be as accurate as possible, but know that counterfeits tend to be at least 5-10% off in size or weight.
- This section is intended for PMV PRO users. The PMV Investor and PMV Original receive their own respective references and guides which are designed for use with those devices.
- Weights and sizes are listed to three decimal places. Not all scales and calipers are that precise; your scale or calipers may round to the nearest one or two decimal places. That is okay. Generally, a counterfeit will be off by more than one decimal place.
- Sigma Metalytics recommends to never damage a sample in any way, including opening the case, using acid, sanding, cutting, or drilling. Non-destructive testing is always the best way to assess a sample.
- *A genuine sample should pass all tests it is subjected to.*

Coin Reference Contents

NOTE:

This section covers the most popular and common samples found in the US Market. It does not contain an exhaustive coin list.

Testing Samples

It's important to properly test your precious metal coins and bars to ensure they are genuine. By testing certain key features of your coins and bars, you can quickly and effectively check for authenticity.

Weight

- Use an accurate scale to confirm that the sample weighs the correct amount.
- Counterfeit samples may weigh too little or too much; usually they weigh too little.
- There is some variation in genuine samples. These variations are very small and should not be more than 2% of the sample's expected weight.

Size

- Use the dimension verification function or a pair of calipers to confirm the dimensions of the sample.
- For rounds and coins, that's the thickness and diameter.
- For bars, that's the thickness, length, and width.
- Counterfeits that are the wrong size are often larger than genuine pieces.

Markings

- Ensure the sample has the correct markings, like design details, stamping, dates, words, and reeding.
- Coins and bars usually have detailed and unique designs. Compare your sample to images online or a reference book to confirm the markings match.
- Some services, like PCGS and NGC, provide high-resolution images of graded coins for comparison.

Resistivity

- Use your Sigma Metalytics device to confirm your sample has the correct resistivity.
- Select the sample's expected alloy type and test the sample. If it passes, then it's resistivity is consistent with the genuine alloy.
- Make sure your device is set to the correct alloy type for the sample. Testing samples on settings other than the expected alloy type does not provide valuable information.

PMV Best Practices

The Precious Metal Verifier is a technical device which can be tricky to use at first. Be sure to follow the instructions provided in the user guide for the basic use of the device. There are some easy ways to get the most out of your device.

Make sure the PMV is on the right setting

- If the PMV is on the wrong setting, the results won't be usable, no matter what they say. Always confirm it's on the correct alloy setting for the sample.
- The PMV cannot be used to "find" the alloy of a sample by testing it on different settings to determine which it passes. That is not a reliable way to determine the alloy of a sample.

Equalize Temperature

- Temperature plays an important role in resistivity testing. Always ensure your device and your sample are at or near the same temperature for accurate results.
- A temperature difference of more than about 10 - 15 degrees Fahrenheit can cause unreliable or inaccurate readings.

Use the Right Sensor for the Right Sample

- Each sensor is designed for samples of certain sizes. Using a sensor that's too large for the sample will cause bad readings. Ssing a sensor that's too small for the sample will not test as deep as it could.
- You can use the sensor selection section column in the reference charts to make sure you're using the right size sensor.

Test Both Sides

- The Wands for all PMVs have a limited penetration depth. To ensure you are testing as thoroughly as possible, test the sample on both sides. The readings should be identical or very similar.
- You may see slight variation between the two sides of a sample. Relief, design, stamping, and other surface differences may cause the sensor to read the two sides slightly differently.

Sensor Minimums

Each sensor on the Precious Metal Verifier has a minimum sample diameter and minimum sample thickness in order to provide an accurate result. Below is the chart for that information.

Sensor	Diameter (mm)	.999+ Silver Thickness (mm)	.999+ Gold and Silver Alloy Thickness (mm)	Gold Alloys, Platinum, and Palladium Thickness (mm)	Rhodium Thickness (mm)
Small Onboard	15.0 - Coins 10.0 - Bars	0.5	0.5	0.8	0.6
Large Onboard	32.0 - Coins 28.0 - Bars	1.5	1.5	2.5	2.0
Small Wand	8.0	0.8	0.8	1.7	1.1
Large Wand	18.0	0.8	0.8	1.7	1.1
Bullion Wand	24.0	4.0	4.5	7.0	6.3
External Bridge	50.0	12.5	12.5	12.5	12.5

Using the Calibration Disk to Test Thinner Samples

- You can use the included calibration disk (cal disk) to test thinner samples when using the Wands.
- If a sample is thinner than the minimum required thickness, try placing the cal disk behind the sample to act as a “backing” - that will enhance the signal from the Wand and allow for testing of thinner samples.

Tips for Testing Gold

- Always test both resistivity and density. If you only test one, counterfeits could slip by.
- Always confirm the device is on the correct setting. Some historic gold coins have been re-minted with different purities over time; make sure the device is on the right one.
- Gold pieces can be quite small, which means they can heat up quite quickly in our hands. Be sure your sample is near or at the same temperature as your device to ensure you are getting an accurate test.
- Measuring gold samples in assays can be tricky. Do your best to confirm the size and weight in addition to the resistivity. Counterfeit gold bars in assays are frequently the wrong thickness.
- ***If a deal is too good to be true, it probably is!***

GOLD

Name	Weight (ozt)	Weight (grams)	Thickness (mm)	Diameter (mm)	Alloy Setting	Sensor Selection
$50 American Gold Buffalo	1.000	31.103	2.95	32.70	Gold > .9999+	L. Onboard
$25 American Gold Buffalo	0.500	15.550	2.24	27.00		S. Onboard
$10 American Gold Buffalo	0.250	7.776	1.83	22.00		S. Onboard
$5 American Gold Buffalo	0.100	3.110	1.19	16.50		Small Wand
$50 American Gold Eagle	1.090	33.930	2.87	32.70	Gold > Gold Eagle or Coins > Gold Eagle	L. Onboard
$25 American Gold Eagle	0.545	16.965	2.24	27.00		S. Onboard
$10 American Gold Eagle	0.273	8.483	1.83	22.00		S. Onboard
$5 American Gold Eagle	0.109	3.930	1.19	16.50		Small Wand + Cal Disk

Alloy settings are formatted as "Category > Alloy" e.g. "Gold > .999"

GOLD

Name	Weight (ozt)	Weight (grams)	Thickness (mm)	Diameter (mm)	Alloy Setting	Sensor Selection
$100 Australian Kangaroo	1.000	31.103	2.00	37.00	Gold > .9999+	L. Onboard
$50 Australian Kangaroo	0.500	15.550	1.60	28.00		S. Onboard
$25 Australian Kangaroo	0.250	7.776	1.20	22.00		S. Onboard
$10 Australian Kangaroo	0.100	3.110	1.20	16.00		Small Wand
€100 Austrian Philharmonic	1.000	31.103	2.00	37.00		L. Onboard
€50 Austrian Philharmonic	0.500	15.550	1.60	28.00		S. Onboard
€25 Austrian Philharmonic	0.250	7.776	1.20	22.00		S. Onboard
€10 Austrian Philharmonic	0.100	3.110	1.20	16.00		Small Wand

GOLD

Name	Weight (ozt)	Weight (grams)	Thickness (mm)	Diameter (mm)	Alloy Setting	Sensor Selection
$50 Canadian Maple Leaf	1.000	31.103	2.80	30.00	Gold > .9999+ or Gold > Maple Leaf or Coins > Gold Maple Leaf	S. Onboard
$25 Canadian Maple Leaf	0.500	15.550	2.23	25.00		S. Onboard
$10 Canadian Maple Leaf	0.250	7.776	1.70	20.00		S. Onboard
$5 Canadian Maple Leaf	0.100	3.110	1.22	16.00		Small Wand
1 oz Chinese Panda	1.000	31.103	2.70	32.00	Gold > .999	L. Onboard
1/2 oz Chinese Panda	0.500	15.550	1.85	27.00		S. Onboard
1/4 oz Chinese Panda	0.250	7.776	1.53	21.95		S. Onboard
1/10 oz Chinese Panda	0.100	3.110	1.05	17.95		Small Wand

GOLD

Name	Weight (ozt)	Weight (grams)	Thickness (mm)	Diameter (mm)	Alloy Setting	Sensor Selection
1 oz Credit Suisse Bar	1.000	31.103	1.66	41.00 L 24.00 W	Gold > .9999+	S. Onboard
1 gram Credit Suisse Bar	0.032	1.000	0.41	15.00 L 8.50 W		Small Wand
5 gram Credit Suisse Bar	0.161	5.000	1.36	23.05 L 13.85 W		Small Wand
10 gram Credit Suisse Bar	0.322	10.000	1.36	25.30 L 15.20 W		Small Wand
1 oz Mexican Libertad	1.000	31.103	2.50	34.50	Gold > .999 or Coins > Pure Gold Libertad or Coins > 90% Gold Libertad (dependent on year)	L. Onboard
1/2 oz Mexican Libertad	0.500	15.550	1.80	29.00		S. Onboard
1/4 oz Mexican Libertad	0.250	7.776	1.30	23.00		S. Onboard
1/10 oz Mexican Libertad	0.100	3.110	1.30	16.00		Small Wand

GOLD

Name	Weight (ozt)	Weight (grams)	Thickness (mm)	Diameter (mm)	Alloy Setting	Sensor Selection
1 oz PAMP Suisse Bar	1.000	31.103	1.66	41.40 L 24.40 W	Gold > .9999+	S. Onboard
1 gram PAMP Suisse Bar	0.032	1.000	0.40	14.70 L 8.90 W		Small Wand
5 gram PAMP Suisse Bar	0.161	5.000	0.90	22.10 L 13.10 W		Small Wand
10 gram PAMP Suisse Bar	0.322	10.000	1.25	26.50 L 15.80 W		Small Wand
1 oz S. African Krugerrand	1.197	33.930	2.84	32.77	Coins > Gold Krugerrand or Gold > 91.67% 22k bal Cu	L. Onboard
1/2 oz S. African Krugerrand	0.598	16.965	2.22	27.07		S. Onboard
1/4 oz S. African Krugerrand	.299	8.482	1.89	22.06		S. Onboard
1/10 oz S. African Krugerrand	0.120	3.393	1.35	16.55		Small Wand + Cal Disk

GOLD

Name	Weight (ozt)	Weight (grams)	Thickness (mm)	Diameter (mm)	Alloy Setting	Sensor Selection
1 oz U.K. Britannia	1.000	31.103	1.80	32.69	Select from: Coins > Gold Britannia Select the correct coin era setting	L. Onboard
1/2 oz U.K. Britannia	0.500	15.550	2.08	27.00		S. Onboard
1/4 oz U.K. Britannia	0.250	7.776	1.63	22.00		S. Onboard
1/10 oz U.K. Britannia	0.100	3.110	1.20	16.50		Small Wand
1 oz Valcambi Suisse Bar	1.000	31.103	2.3	38.00 L 22.00 W	Gold > .9999+	S. Onboard
1 gram Valcambi Suisse Bar	0.032	1.000	0.55	15.00 L 8.50 W		Small Wand
5 gram Valcambi Suisse Bar	0.161	5.000	1.00	23.05 L 13.85 W		Small Wand
10 gram Valcambi Suisse Bar	0.322	10.000	1.36	25.30 L 15.20 W		Small Wand

Tips for Testing Silver

- Always test both resistivity and density. If you only test one, counterfeits could slip by.
- If your 90% U.S. silver tests out of the range on its intended era, try testing on the prior era. We believe the mint re-melted some old batches of silver to mint new coins, meaning they have the qualities of older coins. If it still tests out of the range on the prior era, it is a highly questionable sample.
- Most private mint silver is 99.9% (.999) purity. We have seen a number of private mint bars (especially 10 oz and 100 oz) from the 1980s read out of the range due to contaminants in the minting process.
- Modern sandwich quarters will read within the acceptable range on the 90% Silver setting. Modern coinage is designed to have the same resistivity to ensure they work in coin machines with older coinage. The best way to ensure your quarters are 90% silver is to check their weight.
- ***If a deal is too good to be true, it probably is!***

SILVER

Name	Weight (ozt)	Weight (grams)	Thickness (mm)	Diameter (mm)	Alloy Setting	Sensor Selection
American Silver Eagle	1.000	31.103	2.98	40.60	Coins > Silver Eagle	L. Onboard
Australian Kangaroo	1.000	31.103	3.20	40.60	Silver > .9999+	L. Onboard
Austrian Philarhmonic	1.000	31.103	3.20	37.00		L. Onboard
Canadian Maple Leaf	1.000	31.103	3.29	38.00		L. Onboard
Chinese Panda	1.000	31.103	2.98	40.00	Silver > .999	L. Onboard
Mexican Libertad	1.000	31.103	3.00	40.00	Coins > Silver Libertad	L. Onboard
S. African Krugerrand	1.000	31.103	2.84	38.70	Coins > Silver Krug.	L. Onboard
U.K. Britannia (1997 - 2012)	1.040	32.450	3.10	40.00	Silver > 96% Britannia	L. Onboard
U.K. Britannia (2013 - Pres.)	1.000	31.103	3.00	38.61	Silver > .999	L. Onboard

Alloy settings are formatted as "Category > Alloy" e.g. "Silver > Pure"

SILVER

Name	Weight (ozt)	Weight (grams)	Thickness (mm)	Diameter (mm)	Alloy Setting	Sensor Selection
U.S. 1921 - 1935 Peace Dollar	0.859	26.730	2.40	38.10	Silver > 90% Coin Select the correct coin era setting	L. Onboard
U.S. 1878 - 1904, 1921 Morgan Silver Dollar	0.859	26.730	2.40	38.10		L. Onboard
U.S. 90% Silver Dime	0.080	2.500	1.35	17.91		S. Onboard
U.S. 90% Silver Quarter	0.201	6.250	1.75	24.30		S. Onboard
U.S. 90% Silver Kennedy Half Dollar	0.402	12.500	2.15	30.60		S. Onboard
U.S. 90% Silver Liberty Half Dollar	0.402	12.500	1.80	30.63		S. Onboard

Tips for Testing Platinum

- Always test both resistivity and density. If you only test one, counterfeits could slip by.
- Platinum is dense, so platinum coins and bars are usually quite thin. If you're having trouble getting a good reading, try placing the calibration disk behind the sample or using a smaller sensor.
- The platinum setting on the PMV (under Other -> Platinum) is calibrated for pure platinum only (.999+). Samples of lower purity are rare and will not be testable with the PMV.
- Platinum and palladium have very similar resistivities. However, platinum is much more dense than palladium, so be sure to check the weight and size of your sample!
- ***If a deal is too good to be true, it probably is!***

PLATINUM

Name	Weight (ozt)	Weight (grams)	Thickness (mm)	Diameter (mm)	Alloy Setting	Sensor Selection
American Eagle	1.00	31.103	2.50	32.70	Other > Platinum	L. Onboard
Austrian Philharmonic	1.000	31.103	1.00	37.00		S. Onboard
Canadian Maple Leaf	1.000	31.103	2.62	30.00		S. Onboard
U.K. Britannia	1.000	31.103	3.00	32.69		L. Onboard

Alloy settings are formatted as "Category > Alloy" e.g. "Other > Platinum"

My Collection

You may have more sample types than we have listed in this booklet. The following pages give you space to record the specific data for any coins or bars that we don't have listed.

Name	Weight (ozt)	Weight (grams)	Thickness (mm)	Diameter (mm)	Alloy Setting	Sensor Selection
10 oz RCM Bar	10.0	310.03	7.60	90 x 52	Silver .9999+	L. Onboard

Record your sample's info and reference it later!

Tip: Be sure to use trustworthy sources, like verified coin books or trusted online databases, to ensure you have the correct info.

My Collection

Name	Weight (ozt)	Weight (grams)	Thickness (mm)	Diameter (mm)	Alloy Setting	Sensor Selection

My Collection

Name	Weight (ozt)	Weight (grams)	Thickness (mm)	Diameter (mm)	Alloy Setting	Sensor Selection

Common Questions

1. What does a reading to the left versus to the right mean?

The left side of the reading range indicates less resistivity and the right side indicates more resistivity. If a sample reads to the left, it means it is less resistive than expected; if a sample reads to the right, it means it is more resistive than expected. Generally, impurities and contaminants cause the readings to push to the right.

2. Why do my modern sandwich quarters read in the range on 90% silver?

Modern coinage is designed to have the same resistivity as older 90% silver coinage to ensure they all work in vending machines. The best way to ensure your quarters are 90% silver is to check their weight: modern quarters are about 0.5 grams lighter than older quarters.

3. Why doesn't the dimension screen come up?

The device needs to be actively measuring the sample when you press the MEASURE button to bring up the dimensions verification screen. If the device is not actively reading a sample, pressing MEASURE will not bring up the dimensions screen.

4. When do I need to re-calibrate?

The device will ask for calibration when powering on and when plugging in an attachment. In regular use, we recommend re-calibrating the device every 25 - 30 minutes; this ensures the device's properly measuring samples. Simply clear the device of all samples and press the CAL button to re-calibrate.

5. Why does the device provide a different thickness measurement on coins than the mint or a retailer?

The PMV PRO electronically measures thickness and takes the average thickness from the face of the coin while trying to account for relief, design, and lettering. Mints and retailers measure coin thickness using calipers at the rim, not the face. Because of this different method of measuring, the PRO's thickness measurement is usually slightly thinner than what's published by the mint or retailers.

6. How long does the battery last?

The PMV PRO can go for 6 - 8 hours of constant use before needing a charge. The device has a high-capacity battery, so you can leave it charging overnight or for long periods without damaging the system.

More questions? Give us a call at 530.562.4589 or shoot us an email at info@sigmametalytics.com

Warranty

Sigma Metalytics Precious Metal Verifier devices come with a two-year limited warranty. Sigma Metalytics offers different methods for warranty service, including, but not limited to, parts, software updates, and mail-in service. This limited warranty lasts for two years from the day of purchase and covers defects in materials and workmanship in your Precious Metal Verifier and its accessories. If purchased through a retailer or distributor, you may be required to provide Sigma Metalytics with your sales receipt from your purchase to qualify for our warranty service.

This limited warranty does not cover damage, problems, or malfunctions which result from:

- External causes, such as accident, abuse, misuse, or problems with electrical power.
- Usage that is not in accordance with the device's instructions.
- Use of accessories, parts, or components not supplied by Sigma Metalytics.
- Products for which Sigma Metalytics has not received payment.
- Normal wear and tear.

If, in our repair technician's sole discretion, the device's damage, problems, or malfunctions are the result of any of the causes listed above, the repair will be subject to a charge.

Please contact us for service, repair, and questions. We are happy to troubleshoot any problems over the phone or via email and set up a repair as needed.

Phone: (530) 562-4589
Email: info@sigmametalytics.com

Precious Metal VERIFIER PRO

MODEL #2701

WARNING: Lithium-ion batteries and products that contain lithium-ion batteries can expose you to chemicals including cobalt lithium nickel oxide, and nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Sigma Metalytics

www.sigmametalytics.com
info@sigmametalytics.com

Assembled in USA

US Patents No. 9,922,487; 10,417,855; 10,839,633