Precious Metal VERIFIER INVESTOR

MANUAL

MODEL #3012

Sigma Metalytics

Contents

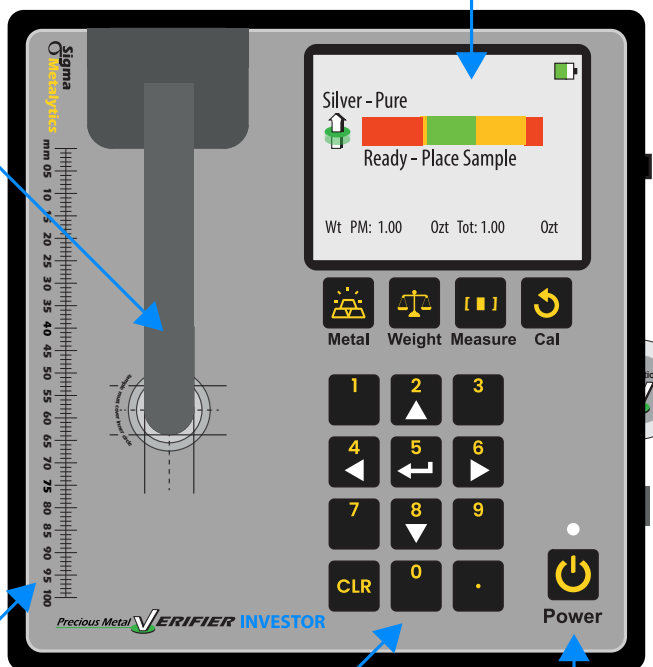
CAUTION

Read Before Use

The onboard sensor bridge is sensitive to stress. **DO NOT** force it left or right, place heavy objects on it, lift the device by the bridge. Stress can cause miscalibration and damage.

Sigma Metalytics and the Precious Metal Verifier INVESTOR make no claim, guarantee, or promise that measurements made by the Precious Metal Verifier INVESTOR 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 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



Display

Sensor Arm

Wand Connection Port

Cal. Disk Storage

USB C Cable Port
Connect a USB C cable for charging or to communicatge with a PC.

Sizing Scale
Accurate millimeter scale used to confirm size of sample during dimensions testing.

Keypad
The arrow keys are used for menu navigation and the number keys are used for weight entry.

Power Button

PMV INVESTOR Functions

The PMV INVESTOR 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 INVESTOR Wands measure 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:** The PMV INVESTOR onboard sensor uses a sensor in the arm and in the base of the device to measure 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 INVESTOR electronically measures the thickness of the sample using the average thickness of the face of the sample.

4. **Dimension Verification:** The PMV INVESTOR 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.

How to get the most out of your PMV INVESTOR

The PMV INVESTOR is used to test the resistivity and density of precious metal coins and bars. A genuine sample should pass both resistivity and density testing. It's important to use the right settings and sensors to make sure your PMV INVESTOR is providing the best results. Here's how to get the most out of your PMV INVESTOR:

1. **Power on the device and make sure it's able to calibrate properly:** Press the power button to turn the device on. PMV calibrates itself while turning on, so be sure there are no samples onboard. Read the Power On and Calibrate section (Pg. 7) for more.

2. **Select the correct alloy and enter the correct weight:** Select the expected alloy of the sample and and enter the weight. Follow the steps in the Metal Selection (Pg. 9) and Weight Entry (Pg. 10) to do so. If you don't know the expected alloy or weight, refer to the Testing Best Practices section (Pg. 20) for advice.

3. **Perform the testing and interpret the results:** Perform the resistivity testing by following the steps in the Resistivity Testing section (Pg. 12). If possible, test the sample's density as well following the Dimension Verification steps (Pg. 14). Use the Results Interpretation section (Pg. 13) to understand the results from the PMV.

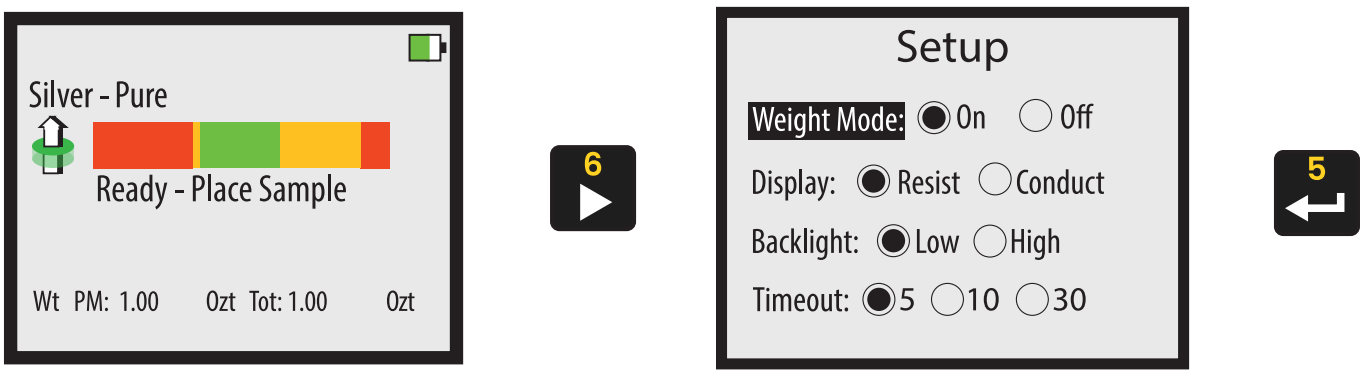
Power On and Calibrate

Power on your PMV INVESTOR by pressing the **POWER** button. The device will display the serial number, firmware version, FPGA version, and database version. The device self-calibrates during the power on stage. While the device is powering on, ensure there are no samples on the device and that the arm is in the upright and resting position. This calibration checks the internal components and prepares the device for use. When complete, the device will 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.

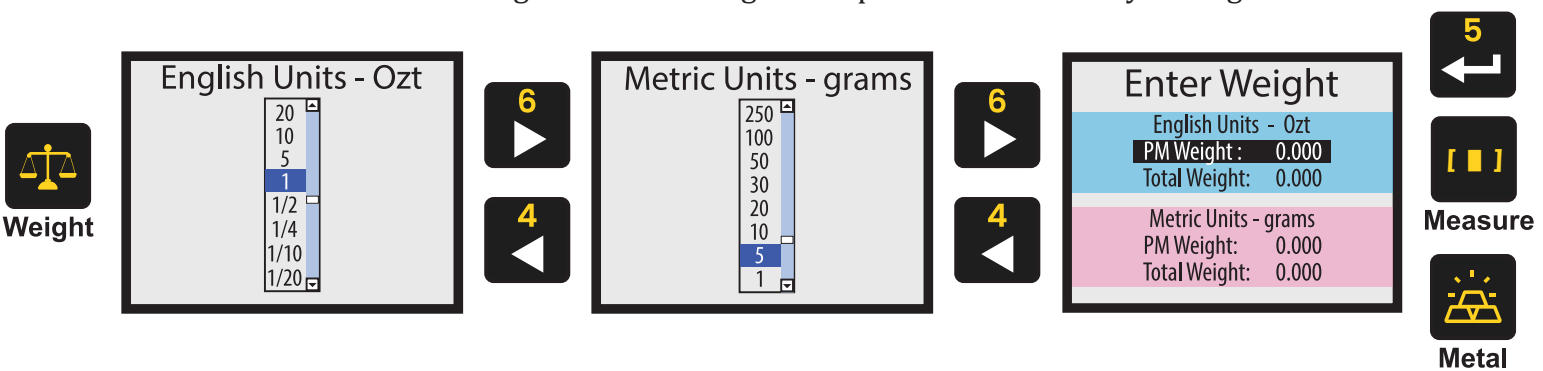


Metal Selection

Prior to taking a measurement, you must select the appropriate metal or alloy from the metal selection database. Choose the metal you expect the sample to be. Press the **METAL** button to 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.

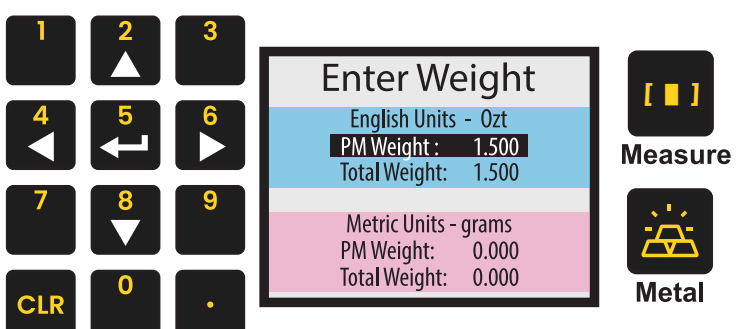
Weight Entry

Press the **WEIGHT** button to enter the weight of a sample. 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 the **ENTER**, **MEASURE**, or **METAL** button to confirm the selection. Entering the correct weight is important to accurately testing dimensions.



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.

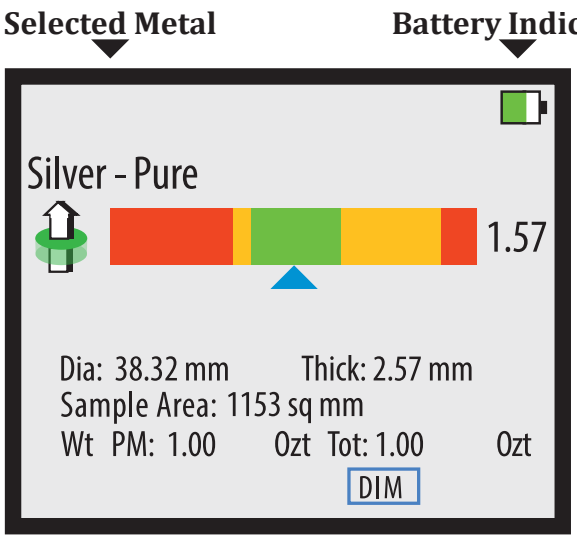
Measurement Screen

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.

Sample consistent with selected metal

Caution: confirm other aspects of sample, like size, weight, and markings.

Sample inconsistent with selected metal



Thru Verification Mode

Calculated Diameter

Calculated Sample Area

Precious Metal Weight

Measured Thickness

Total Weight

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.

Resistivity Testing

The INVESTOR's onboard sensor and Wands test the characteristic resistivity of precious metal coins and bars. Each precious metal alloy has an expected resistivity value; the PMV's sensors test the sample's resistivity and compare it to the known resistivity of the selected alloy. To properly test your sample, follow these steps:

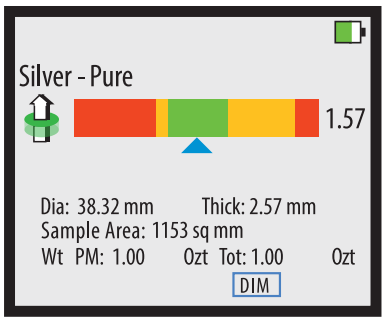
1. **Select the expected alloy:** Select the expected alloy of the sample. Follow the steps in the Metal Selection (Pg. 9) to do so. If you don't know the expected alloy, refer to the Testing Best Practices section (Pg. 20) for advice.

2. **Place the sample on the sensor:** Place the sample on the onboard sensor or touch the face of a Wand to the sample. Refer to the Wand Use section (Pg. 18) for how to use a wand.

   Note: the sample does not need to physically touch the sensor or wand. The PMV can read through plastic and cardboard and can read through most cases. You do not need to remove the sample from the case to test.

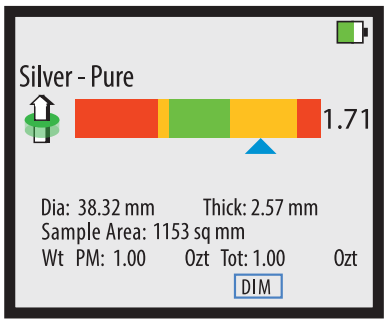
3. **Interpret the results:** Refer to the Resistivity Testing Interpretation section (Pg. 13) for details on determining the results of your sample's resistivity test. Generally, green is good, yellow is caution, and red is questionable.

Resistivity Testing Interpretation



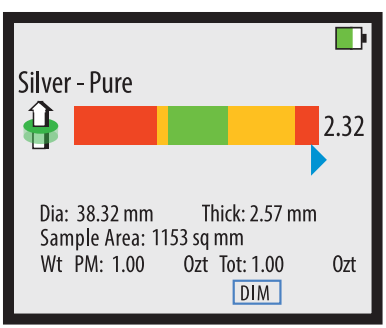
Reliable Reading, Good Sample

The device is getting a reliable reading and the reading is consistent with the selected metal.



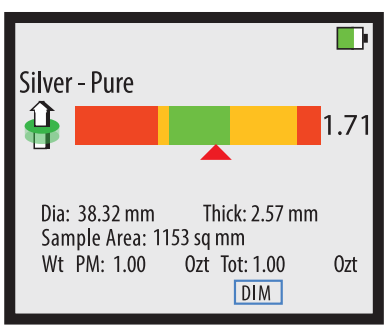
Reliable Reading, Confirm Density

The device is getting a reliable reading but the result is in the caution range. Confirm the density of your sample. If it passes this is a good sample.



Reliable Reading, Questionable Sample

The device is getting a reliable reading but the sample is testing outside of the expected range and is inconsistent with the selected alloy.



Unreliable Reading

The arrow turns red when the device is getting an unreliable reading. Confirm the testing conditions are correct before trusting the results.

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 with the onboard sensor.

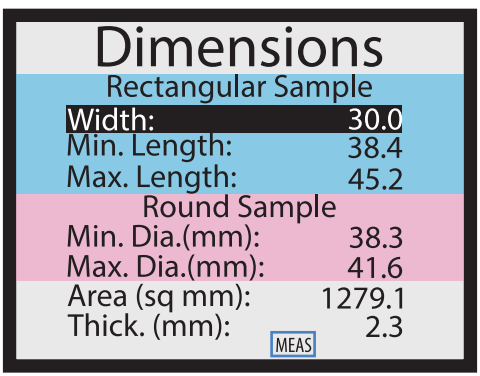
The INVESTOR has two dimension verification modes. The device will automatically select the mode that applies to the sample being tested. If the sample is small enough to fit on the display, the device will use the visual dimension verification mode. If the sample is too large to fit on the display, the device will use numerical dimension verification mode.

If the INVESTOR prompts you for the shape of the sample, it is using the visual dimension verification mode. You can find more info about the visual dimension verification mode on Page 16. Otherwise, the INVESTOR will immediately show the numerical dimension verification mode. The numerical dimension verification mode information is on page 15.

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

Numerical Dimension Verification

To verify the dimensions of a sample, the correct metal must be selected and the correct weight must be entered and the sample must be tested using the onboard sensor. To verify the dimensions of a sample, press the **MEASURE** button while the device's onboard sensor is reading the sample. Once the **DIMENSIONS** screen appears, you may move the sample away from the sensor. The following will be displayed:



You may use the scale printed on the face of the device to determine the dimensions of your sample and confirm that the sample's dimensions are within the dimensions calculated by the INVESTOR.

Rectangular Samples: Measure the width of your sample. Press the **ENTER** button and use the **NUMBER** buttons to enter the measured width. Press the **WEIGHT** button when finished. The INVESTOR will re-calculate the Min. and Max. Length of your sample. Measure the length to confirm that your sample is within the range. If it is not, then the sample is the wrong density.

Round Samples: Measure the diameter of your sample to confirm that your sample is within the Min. and Max. Diameters calculated by the INVESTOR. If it is not, then the sample is the wrong density.

Visual Dimension Verification

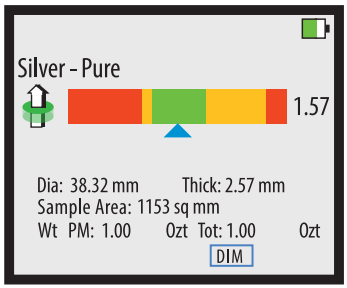
Select the shape of the sample using the **UP** and **DOWN** buttons. Once the DIMENSION screen appears, you may move the sample away from the sensor.

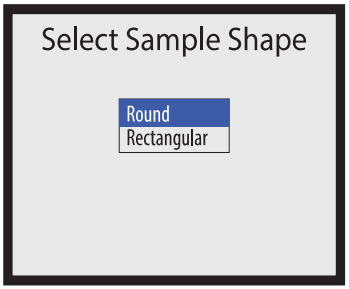
- **For round samples:** align the right edge of the sample to the vertical solid black line on the right-hand edge of the screen. The left edge of the sample is expected to fall within the green range indicated on the screen. If the edge falls within the range, then the sample's density is consistent 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 solid black line on the right-hand edge of the screen. Align the top of the sample to the horizontal solid black line on the top edge of the screen. 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, if the device determines that the sample is too long for the display, it will switch to numerical dimension verification mode. With the top edge, 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.

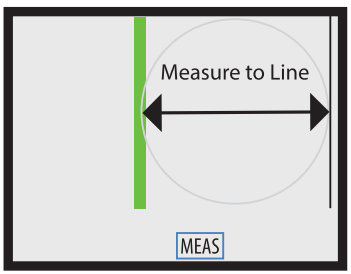
Note: If a sample fails the density test, double check to make sure the correct weight is entered and the correct alloy is selected. Then, test again before assessing the sample.

Visual Dimension Verification Diagram

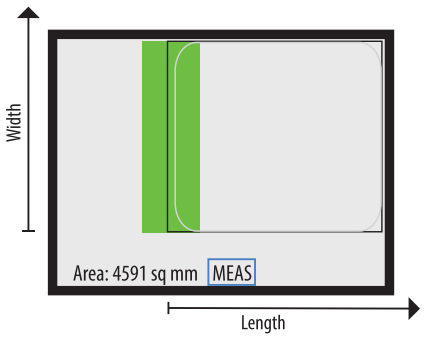




Round Sample



Rectangular Sample

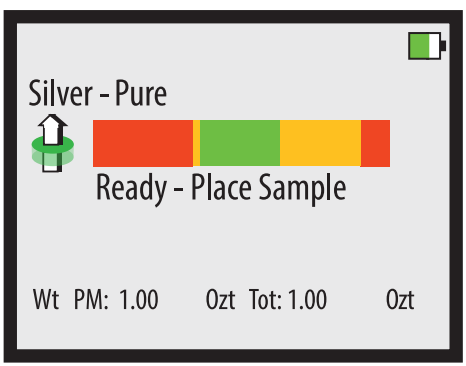


Green Bar = acceptable range

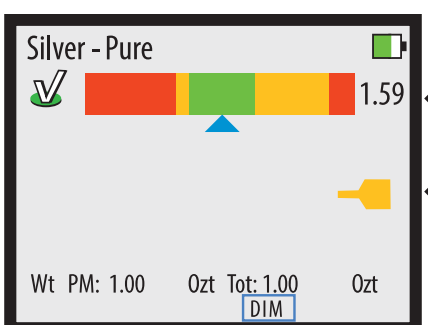
Wand Use

Wands are optional attachments for the PMV INVESTOR. 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 self calibrate. Ensure the head of the Wand is at least one inch away from any metal during this calibration process. 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. Wands are not able to perform density testing.



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.



Basic Verification Reading Result

Wand Icon

PC Interface

The PMV INVESTOR 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/investor-pc) and following the included download and installation instructions.

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

To install the INVESTOR PC interface:

1. Go to www.sigmametalytics.com/investor-pc and download the PMV INVESTOR Application Installation zip file.
2. Open the downloaded .zip file with File Explorer. Click into the PMV INVESTOR Folder and double click on the PMV INVESTOR 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 INVESTOR.”
6. Connect your INVESTOR to your computer using the included USB cable. Power on your device and run the PMV INVESTOR program to get started.
7. While using the INVESTOR with the PC interface, the readings will display on both the device’s display and the PC application.

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 Investor users. The PMV PRO 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)
Onboard	10.0	0.5	0.5	0.8	0.6
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

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+	Onboard
$25 American Gold Buffalo	0.500	15.550	2.24	27.00		Onboard
$10 American Gold Buffalo	0.250	7.776	1.83	22.00		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	Onboard
$25 American Gold Eagle	0.545	16.965	2.24	27.00		Onboard
$10 American Gold Eagle	0.273	8.483	1.83	22.00		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 > Pure"

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+	Onboard
$50 Australian Kangaroo	0.500	15.550	1.60	28.00		Onboard
$25 Australian Kangaroo	0.250	7.776	1.20	22.00		Onboard
$10 Australian Kangaroo	0.100	3.110	1.20	16.00		Onboard
€100 Austrian Philharmonic	1.000	31.103	2.00	37.00		Onboard
€50 Austrian Philharmonic	0.500	15.550	1.60	28.00		Onboard
€25 Austrian Philharmonic	0.250	7.776	1.20	22.00		Onboard
€10 Austrian Philharmonic	0.100	3.110	1.20	16.00		Onboard

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	Onboard
$25 Canadian Maple Leaf	0.500	15.550	2.23	25.00		Onboard
$10 Canadian Maple Leaf	0.250	7.776	1.70	20.00		Onboard
$5 Canadian Maple Leaf	0.100	3.110	1.22	16.00		Onboard
1 oz Chinese Panda	1.000	31.103	2.70	32.00	Gold > .999	Onboard
1/2 oz Chinese Panda	0.500	15.550	1.85	27.00		Onboard
1/4 oz Chinese Panda	0.250	7.776	1.53	21.95		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+	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	Onboard
1/2 oz Mexican Libertad	0.500	15.550	1.80	29.00		Onboard
1/4 oz Mexican Libertad	0.250	7.776	1.30	23.00		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+	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	Onboard
1/2 oz S. African Krugerrand	0.598	16.965	2.22	27.07		Onboard
1/4 oz S. African Krugerrand	.299	8.482	1.89	22.06		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	Onboard
1/2 oz U.K. Britannia	0.500	15.550	2.08	27.00		Onboard
1/4 oz U.K. Britannia	0.250	7.776	1.63	22.00		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+	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	Onboard
Australian Kangaroo	1.000	31.103	3.20	40.60	Silver > .9999+	Onboard
Austrian Philarhmonic	1.000	31.103	3.20	37.00		Onboard
Canadian Maple Leaf	1.000	31.103	3.29	38.00		Onboard
Chinese Panda	1.000	31.103	2.98	40.00	Silver > .999 or Coins > Silver Libertad	Onboard
Mexican Libertad	1.000	31.103	3.00	40.00		Onboard
S. African Krugerrand	1.000	31.103	2.84	38.70		Onboard
U.K. Britannia (1997 - 2012)	1.040	32.450	3.10	40.00	Silver > 96% Britannia	Onboard
U.K. Britannia (2013 - Pres.)	1.000	31.103	3.00	38.61	Silver > .999	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	Onboard
U.S. 1878 - 1904, 1921 Morgan Silver Dollar	0.859	26.730	2.40	38.10		Onboard
U.S. 90% Silver Dime	0.080	2.500	1.35	17.91		Onboard
U.S. 90% Silver Quarter	0.201	6.250	1.75	24.30		Onboard
U.S. 90% Silver Kennedy Half Dollar	0.402	12.500	2.15	30.60		Onboard
U.S. 90% Silver Liberty Half Dollar	0.402	12.500	1.80	30.63		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	Onboard
Austrian Philharmonic	1.000	31.103	1.00	37.00		Onboard
Canadian Maple Leaf	1.000	31.103	2.62	30.00		Onboard
U.K. Britannia	1.000	31.103	3.00	32.69		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+	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. Why does my silver read in the yellow?

Our "Pure Silver" range is calibrated to put .9999 silver in the green and .999 silver in the yellow on the right. We do this because we so frequently see .999 silver counterfeited that we want all users to be cautious of .999 silver samples and to check the other aspects (markings, weight, and size) of the sample prior to making any judgment. If you are using an onboard sensor, you can use the INVESTOR's sizing feature to confirm the size of the sample.

2. 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.

3. 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.

4. 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.

5. When do I need to re-calibrate?

The device will self-calibrate 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.

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

The PMV INVESTOR 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 INVESTOR's thickness measurement is usually slightly thinner than what's published by the mint or retailers.

7. How long does the battery last?

The PMV INVESTOR can go for about 4 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 or WhatsApp us at 530.562.4589 or send us an email at info@sigmametalytics.com.

Warranty

Sigma Metalytics Precious Metal Verifier INVESTOR devices come with a two-year limited warranty. Sigma Metalytics offers different methods for warranty service, including, but not limited to, parts, software dispatches, 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 INVESTOR and its accessories. If purchased through a retailer or distributor, you may be required to provide Sigma Metalytics with your original 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.
- Servicing not authorized by Sigma Metalytics.
- Usage that is not in accordance with the device's instructions.
- Failure to follow 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 INVESTOR MANUAL

MODEL #3012

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

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