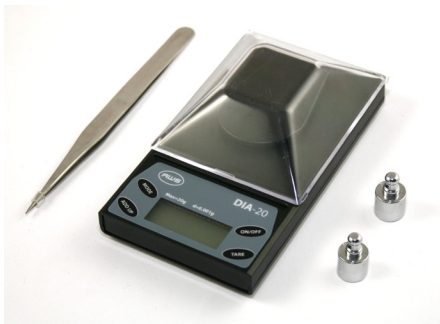




American Weigh Scales

DIA-20

User Manual



DIA-20 (20g x 0.001g)



DIA-20

Thank you for purchasing the American Weigh DIA-20 portable diamond scale. Please read all operating instructions carefully before use. Scales are precision measuring devices and should always be handled with proper care. To ensure years of reliable service, keep these simple tips in mind:

- Do not exceed the scale's maximum capacity. Overloading your scale can permanently damage it!
- Avoid exposure to extreme heat or cold. Scales perform best at normal room temperature. If temperatures have changed dramatically, calibration and adjustment may be necessary.
- Allow your scale to warm up for 30-60 seconds before performing calibration and adjustment(if available).
- Store your scale in a clean, dry location. Dust, dirt, and moisture can accumulate on the weighing sensors and electronics causing inaccuracy or malfunction.
- Avoid using your scale in close proximity to strong radio wave emitting devices such as computers, cash registers, and cordless phones.
- Always weigh on a flat and level surface, free from vibrations and drafts. The corner of a room is usually the most stable.
- Gently apply all items to be weighed. Do not drop items onto the weighing platform.
- Avoid dropping your scale. The warranty does not cover damage due to rough treatment or overload.
- Check the batteries first if you are having any trouble with your scale. This simple step can remedy most scale issues.
- Do not disassemble your scale. This product contains no user serviceable parts.

I. Part List

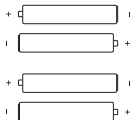
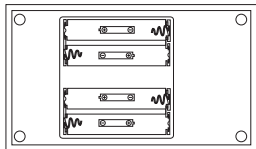
1. Scale
2. Case
3. 10g Calibration Weights (x2)
4. Tweezers
5. AAA Batteries (x4)

II. Key Description



III. Battery Installation

1. Before using the scale for the first time, check the battery compartment and remove any plastic insulation strips or packaging that may be in place to prevent battery drainage during shipping/storage.
2. If you are replacing the batteries, make sure the positive and negative contacts are properly aligned.



IV. Operation

1. Place the scale on a flat, level surface and press the **ON/OFF** key to turn the scale on.
2. Once the start-up process completes and the scale goes to zero you are ready to weigh.
3. Place the quantity to be weighed onto the weighing platform.
4. Wait a couple seconds for the display to stabilize before taking a weight reading.

V. Changing the Unit of Measure

1. Press the **MODE** key to change the scale's displayed unit of measure.
2. If the scale is turned off then back on, it will default to the last unit used.
 - **DIA-20 Units:** g (gram), ct (carat), gn (grain), dwt (pennyweight)

VI. Using the Tare Feature

You can use this scale's tare feature to subtract the weight of an empty container or vessel for net weight determination.

NOTE: The weight of the container will subtract from the available capacity.

1. Place the empty container or vessel on the weighing platform.
2. Press the **TARE** key once. The display will then reset to zero. If the container is removed, it's weight will be displayed as a negative number.
3. You may now fill the container with the quantity to be weighed. The display will show the net weight of the contents.
4. To return to normal weight display (gross weight),

remove any items from the weighing platform and press the **TARE** key again to re-zero the scale.

VII. Add-Up Feature

1. In normal weighing mode, place an object on the platform.
2. Once the weight is displayed, press the “ADD UP” key and replace the item with another and press “ADD UP” again.
3. The scale will display the sum of the two weights.
4. You may repeat until the scale reaches max capacity (display will show 0 when capacity is exceeded)

VIII. Calibration

Calibration and adjustment are performed at the factory. However, the weighing range can shift slightly during shipping. Also, due to changes in local acceleration of gravity around the world, adjustment is recommended when moving the scale from one location to another. To check calibration:

1. Place the required calibration weight on the scale and note the displayed value.
2. If the displayed value is not within acceptable tolerance (see chart below), adjustment is required.

Model	Acceptable Tolerance (\pm)	Calibration Weight
DIA-20	0.003g	10g, 20g

IX. Adjustment

1. Turn the scale on by pressing the ON/OFF key.
2. Wait for the display to show “0.000g” then press and hold the T UÖÖ key until the display shows “CAL”

then release.

3. Press the T UÖÖ key. The display will flash CAL followed by "10.000g".
4. Now place a 10g calibration weight on the platform and wait 3 seconds, the display will flash "20.000g".
5. At this point, place another 10g on the platform to make a total of 20g on the scale and wait a few seconds.
6. The display will read "PASS" and then return to normal weighing mode, calibration is finished! You can turn off the scale.

X. Troubleshooting

- **Problem:** Scale will not turn on
- **Solution:** Check the batteries
- **Problem:** Displayed weight fluctuates randomly
- **Solution:** Make sure your workspace is stable and free of any air currents or vibration
- **Problem:** Displayed weight is inaccurate
- **Solution:** Perform a calibration adjustment

XI. Error Codes

1. **OUTZ** - Zero range has shifted. Perform calibration adjustment. If the problem persists, the load cell may be permanently damaged due to overloading.
2. **88888** - Maximum capacity exceeded. Remove the

extra weight to avoid damaging the load cell.

3. L - Batteries are low. Replace the batteries.

XII. Specifications

	DIA-20
Max. Capacity	20g
Readability	0.001g
Power	Four (4) AAA Batteries
Dimensions	3.0 x 5.0 x 0.8 in.
Platform Dimensions	2.5 x 3.0 in.
Warranty	10 Year Limited Warranty

XIII. Capacity/Readability Charts

DIA-20
20g x 0.001g
100ct x 0.005ct
308.8gn x 0.02gn
12.86dwt x 0.001dwt