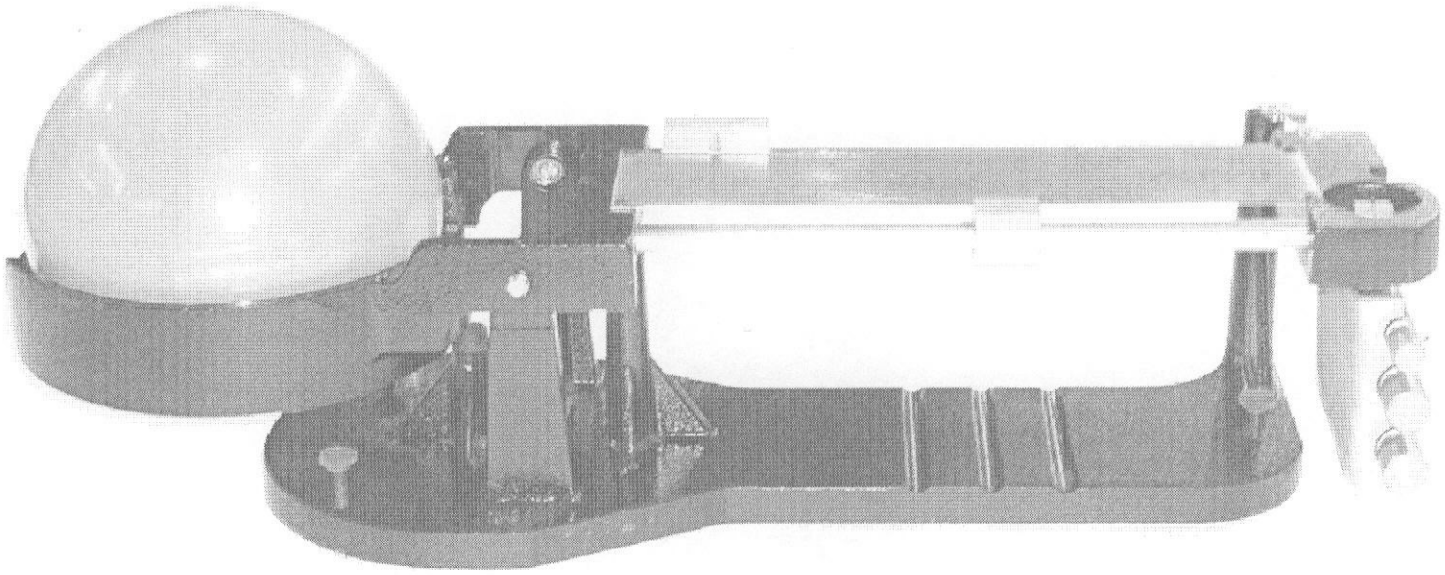
QUBICA AMF



Accu-Balance

Bowling Ball Scale

022 444 401

General instructions for balancing bowling balls to USBC gross weight and do-do weight specifications.

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Issue Date: Dec. 05

Technical Support (International) 804 730-4000 (Domestic) 1-866-460-7263

Accu-Balance Bowling Ball Scale

The United States Bowling Congress Regulation which pertains to weight, size, and balance states that: Bowling balls shall not have a circumference of more than 27 inches, nor shall they be more than 16 pounds in weight. The diameter of any ball must be constant. Bowling balls shall be so constructed and drilled that no less than six sides shall be in proper balance.

The following tolerances shall be permissible in the balance of a bowling ball:

A. **10 pounds or more –**
Not more than 3 ounces difference between top of ball (finger hole side) and the bottom (solid side opposite the finger holes).

B. **Less than 10 pounds –**
Not more than ¾ ounce difference between top of ball and bottom.

A. **10 pounds or more –**
Not more than 1 ounce difference between the sides to the right and left of the finger holes or between the sides in front and back of the finger holes.

B. **Less than 10 pounds –**
Not more than ¾ ounce difference between the sides to the right and left of the finger holes or between front and back of finger holes.

Tampering with a bowling ball such as drilling and loading to effect an off-center do-do condition causing it to become out of balance and weigh more on one side than the other is strictly prohibited. Any ball which does not conform with any of the above provisions may not be used in leagues or tournaments sanctioned by the United States Bowling Congress.

The six sides of a bowling ball are described as follows:

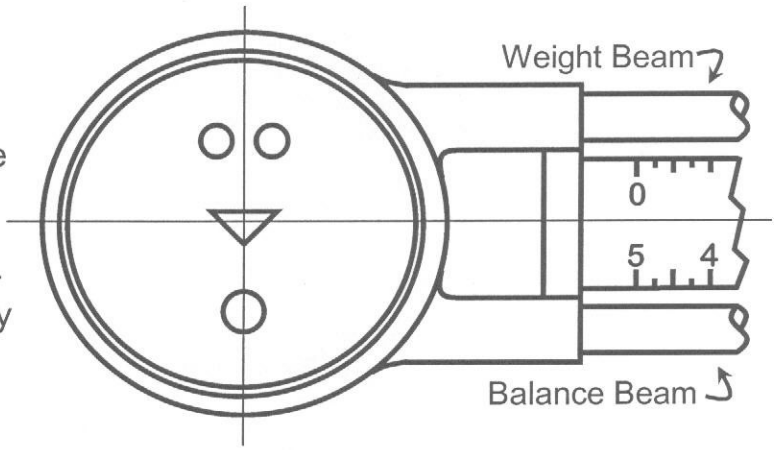
1. **Left Side:** Sid to left of finger holes, thumb hole toward the weigher.
2. **Right Side:** Side to right of the finger holes, the thumb hole toward the weigher.
3. **Top:** Finger hole side of the ball.
4. **Bottom:** Side opposite the finger holes.
5. **Front Side:** Side in front of thumb hole.
6. **Back Side:** Side in back of finger holes.

IMPORTANT:
Before any accurate weighing can be performed on this scale, it must be in perfect levelness. This is accomplished by turning the leveling screws until bubble level is centered and balance pointers are in direct alignment.

While this scale was manufactured primarily to detect do-do balls (balls out of balance), it has been proven that by placing the ball on any approved and recently tested gross weight beam scale, the gross weight may be accurately determined on this AMF Accu-Balance Scale.

NOTE: Recalibration of this scale requires special weights and precise procedures. Contact QubicaAMF Technical Support at 866-460-QAMF for assistance in returning scale to the manufacturer for recalibration.

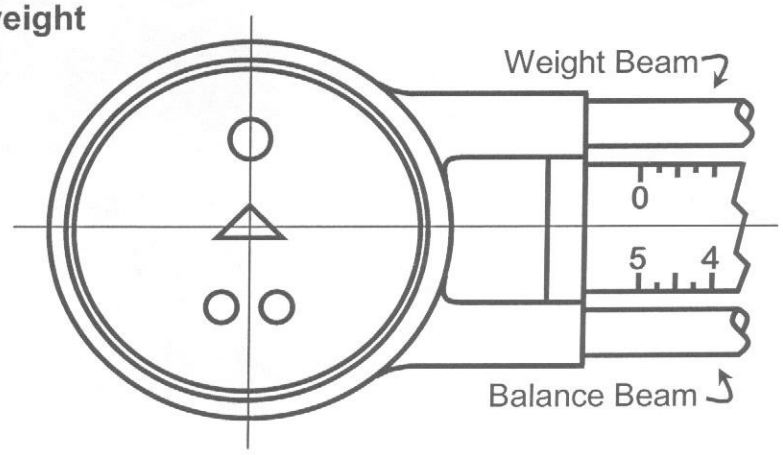
Position No. 1 — Determining the gross weight and Starting point for weighing left side



When the weigher has become familiar with the provisions of Rules and the six indicated bowling ball sides he is then ready to proceed providing the scale is in perfect levelness. Before determining the difference between any two sides of a bowling ball, a so-called gross weight or starting point must be considered in arriving at the proper balance. This is done by placing the ball in the scale (centered) as shown in Position 1 with the thumb hole toward weigher. Be certain the balance beam is set at zero while the poise on the weight beam is being adjusted to determine gross weight. This is the starting point in arriving at the difference between the right and left sides of the ball, the poise on the balance beam in every instance remaining at zero in making this first test, which we will refer to as Test 1.

Note: The rear weight beam will stay fixed and all remaining position readings (2 through 6) will now be made using the front balance beam only.

Position No. 2 — Weighing the right side of ball and proving gross weight



This position is obtained by rotating the ball one half turn and centered with the thumb hole furthest from weigher. If the beam is not in balance after turning the ball to position 2, the poise on the balance beam (in front) should be moved accordingly from zero untiol the beam is again in balance. Then a reading shall be taken to determine the difference in balance between the right and left sides of the ball.

Provide an accurate gross weight. Example: If the first test should show the ball to weigh 15 lbs., 15 ¾ oz. while test 2 indicates a reading of 16 lbs., ¼ oz., then the combined tests would indicate a gross weight of 16 lbs.

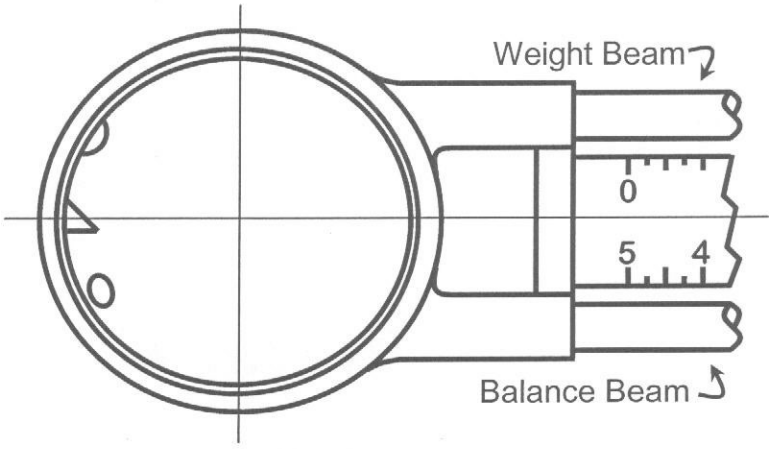
For rules and specification information:

United States Bowling Congress
Bowling Headquarters
5301 South 76th Street
Greendale, WI 53129
1-800-514– BOWL (2695)
Email: bowlinfo@bowl.com
Website: www.bowl.com

For product support information:

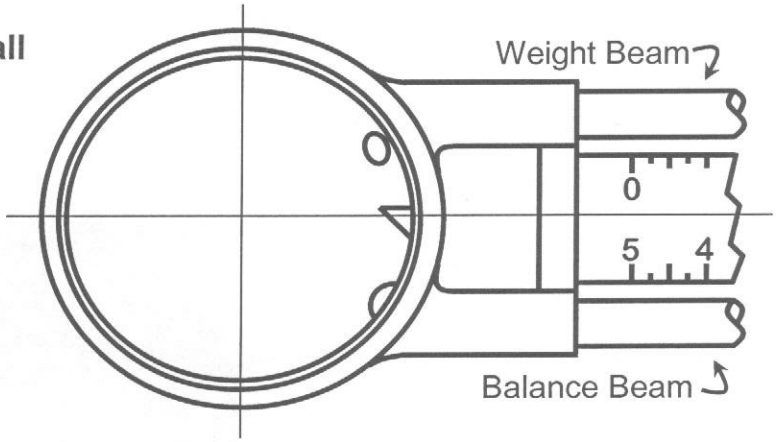
QubicaAMF Bowling Worldwide
Consumer and Support Products
8100 AMF Drive
Mechanicsville, VA 23111
1-866-460-QAMF (7263)
Email: info@qubicaamf.com
Website: www.qubicaamf.com

Position No. 3 — Weighing top of ball



With the ball still in the scale as shown in Position No. 2, give the ball one quarter turn (one-fourth) turn to left so that finger hole center line is parallel and aligned to the ege of the ball ring. This will place the ball into Position No. 3. As in Position No. 2, the poise on the weight beam must not be moved. Reading is then taken on the balance beam after the poise has been moved so that the beam is again in balance. In most cases it will be necessary to move poise on the balance beam to the right, which indicates the ball is plus (or heavy) on the top side of the ball.

Position No. 4 — Weighing bottom of ball

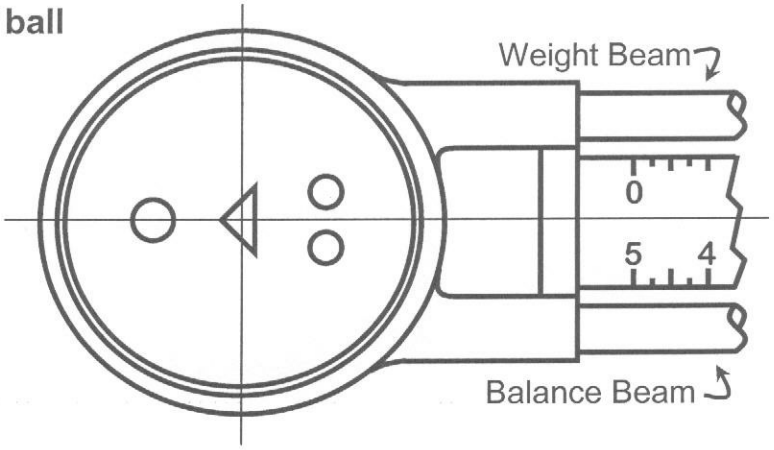


After reading the amount which the top side of ball is out of balance, the weigher should give the ball one-half turn to the right so that finger holes center line is parallel and aligned to the edge of the ball ring. This will place ball into Position No. 4. The poise on the weight beam remains undisturbed. Then proceed to balance the scale by moving the poise on the balance beam. In most cases the poise will be moved to the left causing the ball to be minus (or light) on the bottom side. To determine the total difference we then subtract the ball weight reading as indicated in Position No. 4 from the ball weight reading of Position No. 3. Example: If the bottom of the ball was found to weight 15 lbs., 12 ¾ oz. according to the test for Position No. 4, and the previous test, Position No. 3, shows the ball to weigh 15 lbs., 15 oz., then by subtracting the smaller weight from the larger weight we find a difference of 2 ¼ oz. This denotes that the ball is 2 ¼ oz. top heavy. This difference may vary up to 3 oz., the maximum allowed between the top and bottom.

- Weighs bowling balls from 5 to 17 pounds.
- Six precision ball bearings within the weighing ring for easy ball movement in all directions.* No need to pick up bowling ball during the weighing process.
- Has very clear-cut graduations that are easy to read.
- Has a back weight beam graduated in quarter ounces to a total of two pounds.
- Furnished with (2) four-pound and (1) two-pound barrel counterpoise weights, accurately calibrated.
- Counterpoise weights are locked on so they do not fall off in normal use, yet are very easy to remove and store.
- The complete counterpoise weight assembly can be quickly removed for checking "zero" balance.
- Has a trimming weight for perfect "zero" balance, conforms to weights and measures and USBC standards, and has a built-in level to ensure accurate leveling of the scale. Three leveling screws position the scale easily in all directions.
- Comes complete with precision ball bearing pivot bearing which can be easily replaced.
- Barrel weights and poises are polished brass to preserve the finish – with small parts chrome plated and the frame finished with a rich crackled black lacquer enamel.

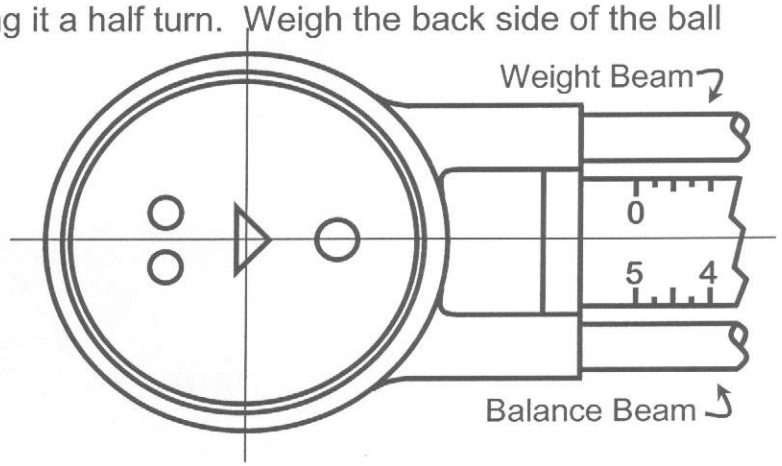
Position No. 5 — Weighing front side of ball

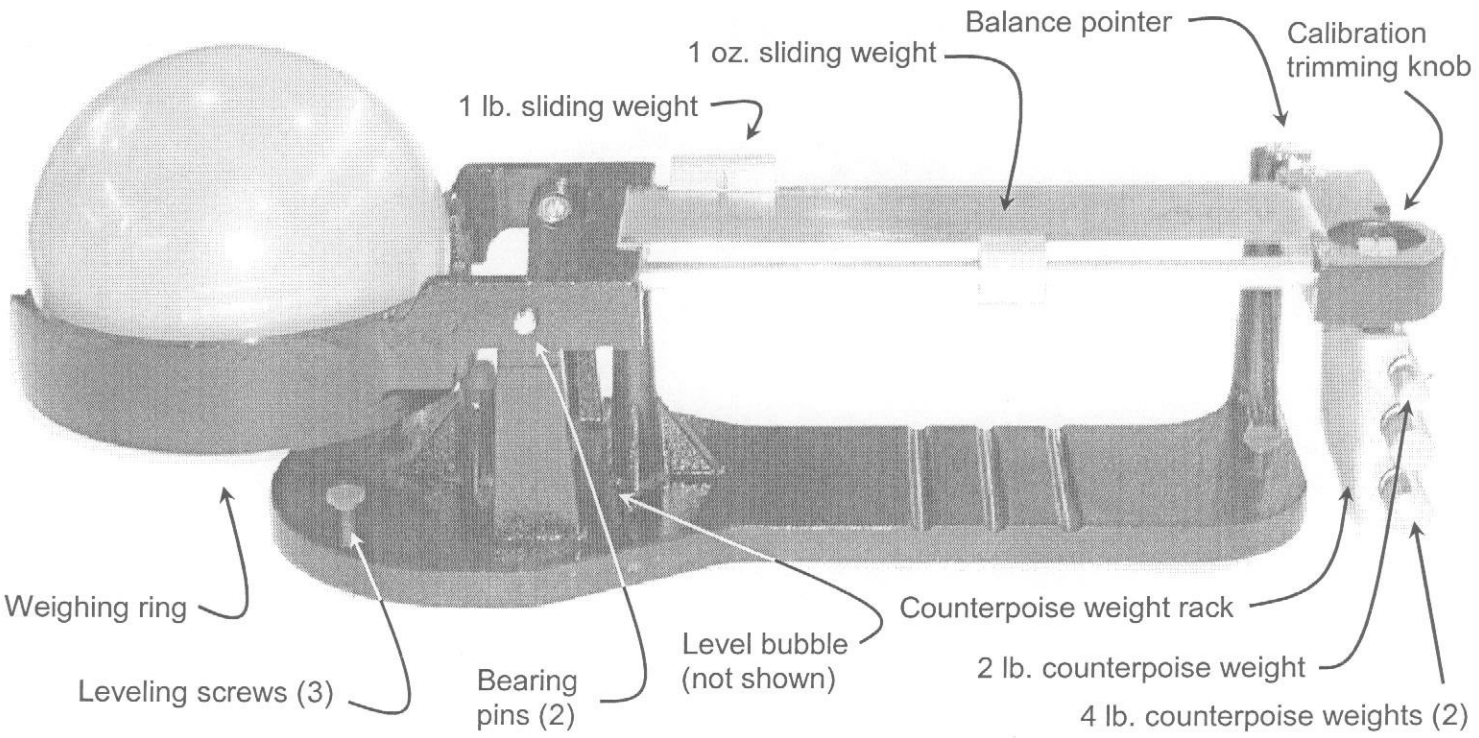
The position of the ball should now be changed in order to weigh the front sid of ball. This is done by placing the ball in scale as shown in Position No. 5, with the finger holes centered in a straight line through the length of ball scale with the thumb hole placed to the left. Then move poise on the balance beam until it is balance, taking a reading to determine weight of front side of ball.



Position No. 6—Weighing back side of ball

The position of the ball is reversed by giving it a half turn. Weigh the back side of the ball as shown in Position No. 6 with the finger holes again centered in a straight line and the thumb hole placed to the right. Adjust poise on the balance, taking a reading to determine the weight of the back side of the ball. The two readings of Position No. 6 and Position No. 5 should then be subtracted to determine the total difference between the front and back side of the ball. According to USBC rules, this difference may not exceed one ounce.





WARRANTY:

For any questions or concerns about the operation of your Accu-Balance Bowling Ball Scale, please contact QubicaAMF's Consumer & Support Products Division at 1-866-460-7263.

WARRANTY PERIOD: ONE (1) YEAR.

This warranty is subject to the following conditions and limitations:

1. QubicaAMF shall not be liable for loss of profits or other direct or indirect costs, expenses, losses or damages arising out of defects in the Equipment.
2. This warranty is extended to, and may be enforced only by the original Purchaser or the assignee named on the face of the invoice.
3. Purchaser shall maintain house temperature and humidity conditions as outlined in the Pinspotter Maintenance Manual during the Installation period and at all times thereafter.
4. Replacement parts or materials shall be delivered to Purchaser at the place of Installation or original delivery.
5. Notice of any defects must be sent to QubicaAMF by Purchaser and received by QubicaAMF no later than ten (10) days after expiration of each Warranty for such Warranty to apply.
6. The defect must not have been caused by carelessness, improper treatment (whether by inexperienced players or otherwise) or any willful or negligent act or omission (including any failure to comply with instructions given by QubicaAMF).
7. In no event will QubicaAMF be liable for any damages caused by the Customer's failure to perform the Customer's responsibilities in caring for QubicaAMF products.
8. QubicaAMF shall not assume any other liability in connection with the QubicaAMF Equipment.
9. THIS WARRANTY IS MADE IN LIEU OF ANY OTHER EXPRESSED OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND IN LIEU OF ANY OTHER OBLIGATION ON THE PART OF QUBICAAMF.
10. QubicaAMF shall have no liability whatsoever if repairs or replacements are made by anyone not approved in advance by QubicaAMF in writing.
11. QubicaAMF warranty is limited as stated herein.