



## ASSEMBLY, OPERATION & MAINTENANCE MANUAL

*FAIR-COURT*®

*OFFICIAL BASKETBALL EQUIPMENT TESTING SYSTEM*

*No. ERTD2003NCAA*



SAVE THESE INSTRUCTIONS FOR FUTURE USE

## PRECAUTIONS

### On Safety

- + Make sure hook is securely fastened on the basketball rim, by pulling downward and snapping into place.
- + **IMPORTANT** – When dropping the weight during the test procedure, keep hands, fingers and cord clear of tube enclosure to avoid possible injuries or damage to the unit.

### On Power Sources

- + Use only an alkaline 9-volt battery.
- + When unit is not in use or is being stored for an extended period of time, the battery should be removed to avoid damage that can be caused by battery leakage or corrosion.
- + **LOW BATTERY** warning will begin when the unit detects the 9-volt battery is at approximately 7 volts. **DEAD BATTERY** display jeopardizes instrument accuracy, and a new battery should be installed immediately!

- + Battery life is 20-40 hours, depending on battery quality and use.
- + When in execute mode, Drop Weight uses the most electricity and will drain the battery prematurely.

### On Placement

- + Do not leave the testing device in a location near heat sources, or in a location subject to direct sunlight, excessive dust, or mechanical shock.
- + It is best to store the unit in the case provided, to protect it from dust and shock.

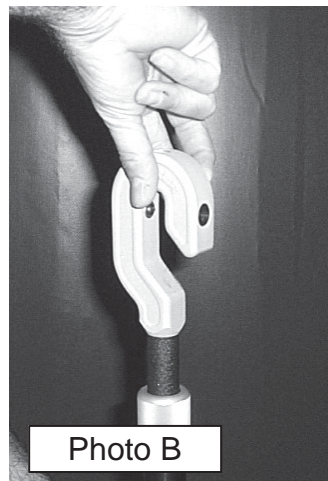
### Removal From Case

- + When removing the unit from the carrying case, make note of the packing material, so the unit may be properly repacked when testing is completed.

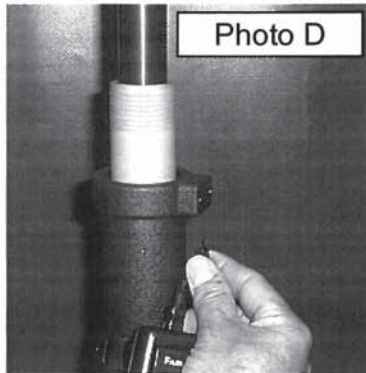
## SETTING UP

### Assembly

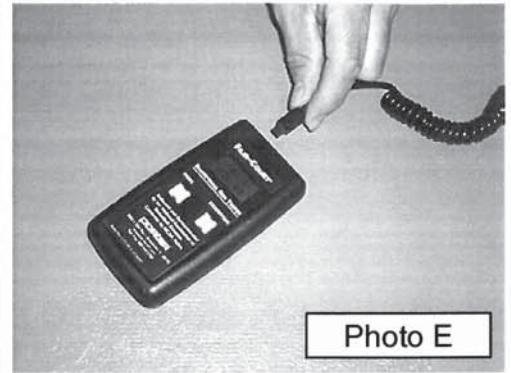
1. Unscrew hook (turn counterclockwise) (Photo A) and pull hook and shaft out of unit until it stops (Photo B).
2. Tighten (turn counterclockwise) extended hook securely, according to the label on the shaft (Photo C).



3. Insert the plug of the control cord upward into the receptacle on the lower housing (Photo D). Note that the arrow on the control cord must be facing outward.



4. Plug the other end of the control cord into the top of the hand-held readout box (Photo E). Note that the arrow on the control cord must be facing toward the front of the unit.



5. Assembly is now complete.

THIS WARNING IS GIVEN IN COMPLIANCE  
WITH CALIFORNIA'S PROPOSITION 65:

**WARNING**

This product contains chemicals known to the  
State of California to cause cancer, birth defects  
or other reproductive harm.

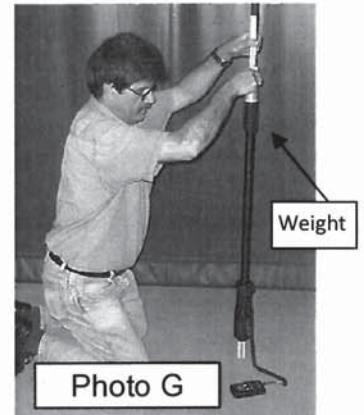
## OPERATION

1. Turn the unit on by moving the switch on top of the hand-held readout box to the ON position (The FAIR COURT logo will appear).
2. The unit must be calibrated every time it is turned on. If the unit is accidentally turned off during use, the unit must be re-calibrated.

### Calibration

1. Note: proper calibration is required for accurate measurement of baskets.
2. Find a solid floor surface (concrete, ceramic, granite, etc.) to use as a standard to calibrate the unit. DO NOT calibrate the unit on wood or synthetic floors.
3. Make certain the height measurement rod is hand-tightened within the base (Photo F).

4. Hold the tester in a vertical position, with the base resting on a solid floor surface (Photo G). Provide a slight downward pressure to prevent the base from chattering on the hard surface when the weight is dropped.



5. Press the **MODE** button until the message Calib Test appears on the readout (Photo H).



6. Calibration is most easily achieved by holding the tester with one hand, placing the readout box on the floor, and dropping the weight with the free hand.



7. Press the EXECUTION button and the message Calib Drop # 1 appears on the readout (Photo I).

8. Press the EXECUTION button once again and the message Raise Weight appears on the readout (Photo I).

9. As the weight is raised to the maximum height allowed (against the coupling), the message Drop Weight will appear.

10. Drop the weight (after the weight hits the spring in the housing, catch the weight with one hand as it returns upward so as to halt the bouncing action).

11. After catching the weight, return it to it's resting position within the housing.

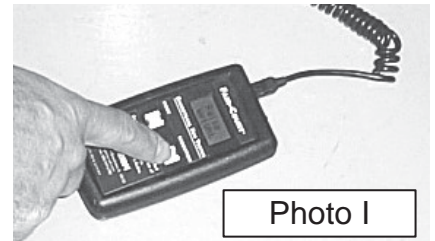
IMPORTANT – The weight must be allowed to come to rest on the spring in the housing between trials, to quiet the vibration of the spring. Neglecting to do so may produce erroneous measurements.

12. After steps 10 and 11 have been performed, a message on the readout will give the percentage of the energy absorption.

13. Continue pressing the EXECUTION button to repeat for Calib Drop # 2 and Calib Drop # 3. After Drop # 3, the average of the three drops will be shown on the readout.

14. Press the EXECUTION button once again, and either Calib Passes or Calib Fails will appear on the readout.

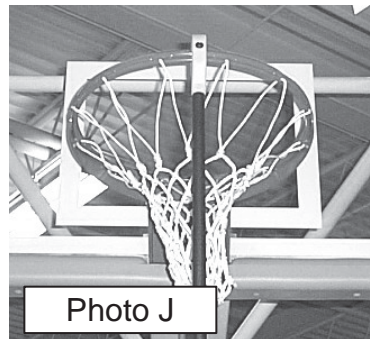
15. If Calib Fails appears, repeat the calibration steps on another (concrete) floor area.



## Basket Height Measurement

1. Place a piece of duct tape over the center of the rim at the furthest point from the backboard and hook the tester onto the rim over the tape (Photo J).

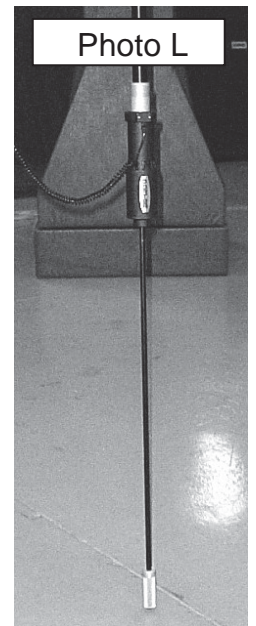
2. As you pull downward, the hook should click into place as the spring-loaded detents engage the rim.



3. Allow the unit to come to rest in a plumb (vertical) position.

4. Unscrew the bottom shaft with the knurled handle (Photo K). Lower this measuring shaft until it touches the floor (Photo L).

5. Look for the scored line on the black anodized shaft – this line is used to check if the goal is at the required 10'-0" height.



6. If you cannot see the scored line, then the goal is too low. Place your finger and thumb on the shaft, directly under the housing, and pull the tester at an angle toward you. The shaft will extend further, revealing the scored line. You can then estimate the height discrepancy.
7. If the scored line is visible below the housing, then the goal is too high.
8. The goal height should be adjusted to 10'-0". See instructions included with backboard support to make adjustments as required.
9. After all adjustments are complete, replace the measuring shaft into the housing, making sure the knurled handle is once again tightened.

## Testing of Basket Rebound

1. Test competition baskets for proper NCAA (or FIBA) rebound range – 35 to 50% on each basket. Later, you will check the difference between the two baskets – it must be no greater than 5%.
2. Basket testing is best achieved by holding the readout box in one hand, and dropping the weight with the other hand. **IMPORTANT** – When dropping the weight, keep hands, fingers and cord clear of tube enclosure to avoid possible injuries or damage to the unit.
3. Press the MODE button and the message Test Bskt 1 will appear on the readout (Photo M).
4. Press the EXECUTION button and the message Bskt 1 Drop # 1 will appear on the readout.
5. Press the EXECUTION button and the message Raise Weight will appear on the readout.
6. Hold the unit in a vertical position. Raise the weight to the stop collar, then drop the weight. The percentage of the impact energy absorption of the rim will be displayed. Note – Stop the weight from bouncing before performing second and third drops.
7. Repeat Steps 4 through 6 for Drops # 2 and # 3.
8. Press the EXECUTION button and the average of the three drops will appear on the readout (Photo N). Press the EXECUTION button again and the readout will indicate if the backstop passes or fails (Photo O). If basket 1 fails, the goal will need to be adjusted (per the manufacturer's instructions) or replaced.



**IMPORTANT** – The weight must be allowed to come to rest on the spring in the housing between trials, to quiet the vibration of the spring. Neglecting to do so may produce erroneous measurements.

9. Repeat Steps 3 through 8 (Test Bskt 2) for the second competitive rim and goal support equipment.

## Court Results

1. Press the MODE button and the message Court Results will appear on the readout (Photo P). This mode allows the user to recall the calibration average, baskets 1 and 2 average, and compute the percentage difference between the two baskets.
2. Press the EXECUTION button and the calibration average as measured will be displayed (Photo Q).
3. Press the EXECUTION button again and the message Calib PASS! will appear on the readout (Photo R).
4. Keep pressing the EXECUTION button to scroll through the information for baskets 1 and 2:
  - + Average will be shown, PASS message appears.
  - + The Diff = (%) message will appear.
  - + The Diff PASS or Diff FAIL message will appear. If Diff FAIL appears, then one of the two goals must be adjusted to within 5% of the reading of the other goal.
  - + The final message will indicate whether the court has met the criteria for Rebound Range and Rebound Differences.
  - + A Court PASS or Court FAIL message will appear.
5. This concludes the test.
6. The last page of this booklet is a log sheet. Make a copy of this sheet, and record the test results for your records.
7. Make certain the unit is turned off. Return it to the carrying case immediately.



## TEST RESULTS

Since NCAA (Div. I) specifies semi-annual testing (once before the season and once before the post-season), it is recommended that a dated log sheet be filed, to prove that proper testing and adjustments were performed. See the **TEST PROCEDURE LOG SHEET** on the back of this booklet – make additional copies for future testing.

The Fair-Court<sup>®</sup> test device should also be readily available during all conference/competition games, to test the equipment (rebound elasticity and rim height) should any complaint or protest arise in regard to equipment not meeting NCAA performance requirements.

## FOR YOUR INFORMATION

### Transport/Storage of Tester

- + Handle the tester carefully. Any nicks or scratches (or bending) on the weight slide rod tube will affect and distort correct test readouts.

### Maintenance

- + Cleaning of the testing device can be achieved by using a soft cloth, slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzene.
- + When unit is not in use or is being stored for an extended period of time, the battery should be removed to avoid damage that can be caused by battery leakage or corrosion.

### Troubleshooting Guide

**PROBLEM:** The unit does not power up.  
**SOLUTION:** Insert the battery with the correct polarity.  
**SOLUTION:** Replace the battery with a new one if it is weak.

**PROBLEM:** After a Low Battery message, the display disappears.  
**SOLUTION:** Replace the battery.


**PROBLEM:** The control cord disconnects from the readout box during a test.  
**SOLUTION:** Turn the unit off and start the test again (must begin with the Calibration step).

**PROBLEM:** Reading seem erroneous or unordinary.  
**SOLUTION:** If you are in a mode such as Calibration or Basket 1 or 2, you may cycle through and replace previous data.  
**SOLUTION:** If readings are still out of the ordinary, look for abnormalities in the goal (cracked welds, broken or possibly defective latching mechanism) or instability in the goal support system.

**PROBLEM:** I toggled past a testing number (e.g. Calib 1, Basket 2 Drop #1).  
**SOLUTION:** If you are in a mode such as Basket 1 or 2, you may cycle through and replace previous testing data in that mode (Basket 1 or 2).

## GUARANTEE

All components and workmanship of basic components are guaranteed to be free and clear of defects. Defective components will be repaired or replaced, at our option, subsequent to the return of the defective component, or complete information being received by us concerning the nature of the defect, for a period of one year from the date of shipment.

 **WARNING:** Cancer and Reproductive Harm –  
For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

**Porter**

Porter Athletic Equipment Company  
601 Mercury Drive, Champaign, IL U.S.A., 61822  
Toll Free: (888) 277-7778 • Phone: (217) 367-8438 • Fax: (217) 239-2255  
[www.porterathletic.com](http://www.porterathletic.com)

SAVE THESE INSTRUCTIONS FOR FUTURE USE

# NCAA (FIBA) BASKETBALL RIM REBOUND / ELASTICITY TEST PROCEDURE LOG SHEET

TEST DATE \_\_\_\_\_

## A) TEST SITE INFORMATION

1. School/Arena: \_\_\_\_\_  
Address: \_\_\_\_\_  
Tested By (Institution Rep.): \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_
2. Site Visit (if performed by outside equipment technician)  
Testing Rep: \_\_\_\_\_  
Company: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

## B) TESTING DATA

1. Calibration Average: \_\_\_\_\_ %
2. Backstop No. 1 (Court Location – N. S. E. W.)  
Goal Height: \_\_\_\_\_ After Adjustment: \_\_\_\_\_  
Goal Elasticity (%): \_\_\_\_\_ After Adjustment (%): \_\_\_\_\_  
Comment: \_\_\_\_\_
3. Backstop No. 2 (Court Location – N. S. E. W.)  
Goal Height: \_\_\_\_\_ After Adjustment: \_\_\_\_\_  
Goal Elasticity (%): \_\_\_\_\_ After Adjustment (%): \_\_\_\_\_  
Comment: \_\_\_\_\_

## C) COURT RESULTS (After All Adjustments)

1. Calibration Average: \_\_\_\_\_ %
2. Backstop No. 1: \_\_\_\_\_ % Passes Fails
3. Backstop No. 2: \_\_\_\_\_ % Passes Fails
4. Difference: \_\_\_\_\_ % Passes Fails
5. Court Passes: \_\_\_\_\_ Fails: \_\_\_\_\_

### NCAA CALIBRATION REQUIREMENT

The rebound/elasticity of any basket ring support system shall be within a 35 percent to 50 percent energy absorption range of total impact energy, and within a five percent differential between baskets on the same court.

For assistance, contact: Porter Athletic Equipment Company  
601 Mercury Drive  
Champaign, IL U.S.A. 61822  
Toll Free: (888) 277-7778  
E-Mail: [sales@porterathletic.com](mailto:sales@porterathletic.com)  
[www.porterathletic.com](http://www.porterathletic.com)

**porter**

### NOTES

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