

RCBS[®]

MICRO PRO ELECTRONIC SCALE



PRODUCT INSTRUCTIONS

IMPORTANT

Like any scale, you control the accuracy of your RCBS Micro Pro Electronic Scale. Before using the Micro Pro, read these instructions carefully to fully learn how to safely operate the scale. *Failure to properly operate the scale can result in severe personal injury and/or equipment damage.* This instruction manual contains specific safety and operating information. It should be considered a permanent part of your reloading equipment and remain with the equipment at all times for easy reference. If you have any questions after reading these instructions, please call **RCBS Customer Service at:**

1-800-533-5000

Monday - Friday

6:30 am - 4:00 pm Pacific Time

SAFETY

Reloading is an enjoyable and rewarding hobby that can be conducted safely. But, as with any hobby, carelessness or negligence can make reloading hazardous. This product has been designed from the beginning with the user's safety in mind. When reloading, safety rules must be followed. By observing these rules, the chance of a hazardous occurrence causing personal injury or property damage is minimized.

GENERAL

- Use all equipment as the manufacturer recommends. Study the instructions carefully and become thoroughly familiar with the operation of the product. If you do not have written instructions, request a copy from the equipment manufacturer.
- Don't take short cuts. Attempting to bypass established procedures is an invitation to an accident.

- Observe "good housekeeping" in the reloading area. Keep tools and components neat, clean and orderly. Promptly and completely clean up primer and powder spills.
- Reload only when you can give your undivided attention. Do not reload when fatigued or ill, or under the influence of medications or alcohol. Develop a reloading routine to avoid mistakes which may prove hazardous. Don't rush - load at a leisurely pace.
- Always wear adequate eye protection to protect your eyes from flying particles. You assume unnecessary risk when reloading without wearing safety glasses.

LOADING DATA

- DO NOT SMOKE WHILE RELOADING
- OBSERVE ALL WARNINGS ABOUT THE USE OF MAXIMUM LOADS LISTED
- Use only laboratory tested reloading data. We highly recommend the current SPEER Reloading Manual.

PRIMERS AND POWDER

- Store primers and powder beyond the reach of children and away from heat, dampness, open flames and electrical equipment. Avoid areas where static electricity is evident.
- DO NOT use primers of unknown identity. Scrap unknown primers in accordance with applicable regulations.
- Keep primers in the original factory container until ready to use. Return unused primers to the same factory packaging for safety and to preserve their identity. Primer packaging is designed to provide safe storage.
- DO NOT store primers in bulk. The blast of just a few hundred primers is sufficient to cause serious injury to any one nearby.
- DO NOT force primers. Use care in handling primers.
- DO NOT have more than one can of powder on the bench at one time. Powder cans should be stored away from the bench to avoid picking up the wrong one.
- DO NOT use any powder unless its identity is positively known. The only positive identification is the manufacturer's label on the original canister. Discard all mixed powders and those of uncertain identity.
- If you use a powder measure, replace the lids on both the powder hopper and powder can after the powder hopper has been filled.
- When using a powder measure, settle the powder in the powder hopper before charging any cases. Throw and check the weight of at least ten charges. This will assure you that the correct powder charge is being thrown.
- When you finish a reloading session, pour any remaining powder back into its

original factory container. This will preserve the identity and shelf life of the powder.

RECORD KEEPING

- Keep complete records of reloads. Apply a descriptive label to each box showing the date produced, and the primer, powder and bullet used. Labels for this purpose are packed with SPEER bullets.

Never attempt to guess at the identity of your ammunition.

CARE AND MAINTENANCE

Use a soft damp cloth to keep the scale housing, platen, and powder pan clean and free from foreign material. Storage "wells" for storing the check weights are provided in the scale housing. If you notice powder sticking to the powder pan, wipe the pan with a clothes dryer sheet, such as *Bounce* or *Downey*.

PRODUCT SERVICE & WARRANTY INFORMATION

Your RCBS Micro Pro™ Electronic Scale is manufactured for RCBS by PACT and is backed by a limited lifetime warranty. This scale is physically very fragile; Specifically the load cell, which provides load sensing. It can be damaged by dropping the scale, pulling up on the platen and causing it to bind in the load cell, sudden violent physical shock to the unit, or shipping the scale without adequate packaging. Because of this, the load cell is not covered by warranty.

In the unlikely event that your scale requires service, please call RCBS for shipping instructions. PLEASE DO NOT SHIP THE SCALE TO RCBS. We recommend that you keep the original box and foam packaging.

Because RCBS has no control over the choice of components, the manner in which they are assembled, the use of this product, or the guns in which the resulting ammunition may be used, we assume no responsibility, expressed or implied, for the use of ammunition reloaded with this product.

INTRODUCTION

Your Micro Pro™ Electronic Powder Scale is intended for use by persons familiar with proper handloading practices and their own loading equipment. If you are uncertain as to the operation of any of your equipment, contact RCBS for additional assistance. This scale provides a display that is both stable, yet flexible enough to respond to subtle weight changes. We think you'll be extremely satisfied with the results.

GENERAL INFORMATION

The scale should be stored and used at normal room temperature. It should never be stored in cold or freezing temperatures, which can damage the load cell. If the scale has been sitting at a cool temperature, remove it from the carton and allow it to sit at room temperature for about 20 to 30 minutes before using. Carefully unpack the scale. Look for and identify the following items:

- Scale
- Two (2) calibration weights
- Platen
- Powder pan

The scale was shipped in protective packaging which should be saved and used for transporting the scale. This packaging is also recommended for long-term storage of the unit.

IMPORTANT:

Treat the scale like the delicate instrument that it is. The Micro Pro™ Powder Scale is physically very fragile and the load cell can be damaged by the following:

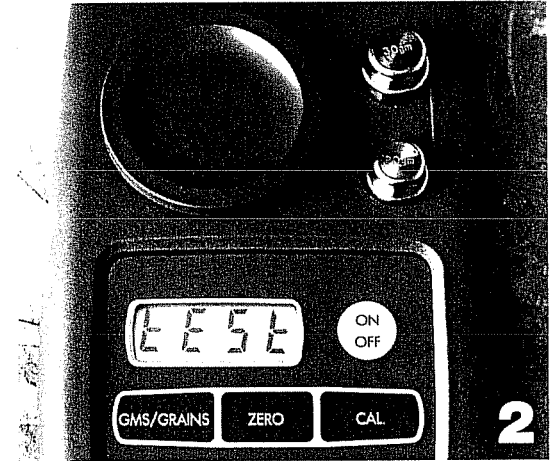
- **Pushing down or dropping the scale.**
- **Pulling up on the platen in such a way that it binds in the load cell.**
- **A sudden, violent physical shock to the scale.**

DISPLAY PANEL DESCRIPTION

The "GMS/GRAINS" button will switch the scale interchangeably from grains to grams. When the scale is in the grains mode the display reads 00.0. In the grams mode it will read $GM.00$.

Note that the "GM" will continually blink to alert you to the fact that you are in the grams mode. *See Photos 1 and 2.* Refer to Photo 1 for button location and a detailed view of the display panel.

The "ZERO" button is used to re-zero the scale. For example, to weigh powder in a powder pan, first place an empty pan on



the scale platform and gently push the "ZERO" button to re-zero the scale. This will automatically subtract the weight of the pan from the next weighing.

The "CAL" button is used to calibrate the scale. Proper and timely calibration is absolutely essential to good scale operation. This procedure only takes a few minutes and should be performed prior to each reloading session (at a minimum) to ensure accurate weighing. This procedure is fully described in detail in the CALIBRATION section. The "ON/OFF" button is used for turning the display panel on and off.

NOTE: It is your responsibility to make certain that the scale display is properly set to the weight unit (either grains or grams) that you are using.

SET-UP

Install the platen on the scale by gently turning it left and right until it is seated. **DO NOT PUSH DOWN ON THE PLATEN** with the thumb or finger, as this will damage the load cell.

The Micro Pro is powered by a 120 volt, AC Plug-in transformer with an output of 9 volts DC. Attach the plug on the transformer cord into the receptacle located on the left side of the scale. Plug the transformer into a convenient wall outlet. This wall outlet must be on a circuit that is free of heavy power-drawing machinery or equipment, such as a refrigerator, air conditioner, microwave oven, dishwasher or air compressor. The scale must have a steady supply of power. Any fluctuations will cause erroneous readings.

In an emergency or for use away from a power source, a 9-volt battery (not included) can be installed in the battery compartment in the bottom of the scale. Always install a fresh battery. The battery must put out 7.9 volts or better for proper operation. A fresh battery will run about 9 volts and provide approximate 12 to 15 hours of use. When the battery output drops below 7.9 volts, the scale will display "err1" when you attempt to calibrate it. While the battery will still have more than sufficient power to operate the computer and power the display, it lacks the voltage required to drive the load cell circuit. Always disconnect and remove the battery before storing the scale. When removing the battery, DO NOT bang the scale against your hand to "pop" the battery out. This may damage the load cell.

When you turn the scale, on it will briefly display "tEST". The scale will then zero and the display will read 00.0 or gm.00.

NOTE: Whenever the readings are stable the decimal point will be solid. When the readings are changing the decimal point will blink. When you set up your scale, remember to choose an area with a stable temperature, free from drafts. To avoid inaccurate readings, do not set the scale near open windows, air conditioning or heater vents. Make sure the area is free from vibrations and that the work surface is level.

Remember, a scale with an improper calibration will cause inaccurate charge weights which may exceed the maximum recommended listed load.

NOTE: The RF emissions from portable telephones may interfere with your scale. In nominal use your scale reading will drift slightly. This is due to temperature fluctuations or wind drafts and is normal.

NOTE: Whenever the scale stabilizes within .5 grains of your zero weight it will "auto zero" itself. This function is deactivated when the scale is more than +/- .5 Grains from your last zero weight. When the scale drifts more than +/- .5 grains from zero, it will warn you by flashing alternately between "FnrE" and the weight. This tells you to move the material you are weighing, replace the empty pan if necessary and gently press the ZERO button to re-zero the scale.

IMPORTANT: As with any scale, you control the accuracy of your RCBS Scale. It is your responsibility to zero and calibrate the scale properly. You need to continually verify the accuracy of the scale with the check weights.

WEIGHING

If the display panel is blank, press the ON/OFF button. This will turn the display panel on. Program the scale in Grams or Grains mode, whichever is appropriate. Place the material to be weighed on the platen and the weight will be displayed on the panel.

NOTE: The Micro Pro™ Electronic Powder Scale is very sensitive to off-center loading. You must make sure to center the material to be weighed on the platen. We recommend you only use our special powder pan. Make sure you always center the calibration weights on the platen.

RE-ZEROING

When weighing something that must be held in a container, such as powder, zeroing enables the scale to automatically subtract the weight of the container. Only the net weight of the powder in the container will be displayed .

TO RE-ZERO

Gently press "ZERO" to obtain a zero reading. Make sure there is no weight on the platform. Place an empty powder pan on the platen. Press "ZERO" again. The display will read "00.0" and the weight of the powder pan will be stored in the scale memory. It will automatically be subtracted from the next weighing. Add the powder to the pan. As powder is added, its net weight will be displayed.

When the scale pan and its contents are removed from the platen, the weight of the scale pan will be displayed as a negative number. The scale pan weight will remain in memory and the scale will again read zero when the empty pan is replaced. This value is retained until the ZERO button is pressed again or the scale is turned off.

We recommend that you leave the empty scale pan on the scale. When you want to weigh a charge, put the powder in the pan, read the weight, dump the powder and return the empty pan to the scale. This will allow the scale to Re-Zero itself for each weighing.

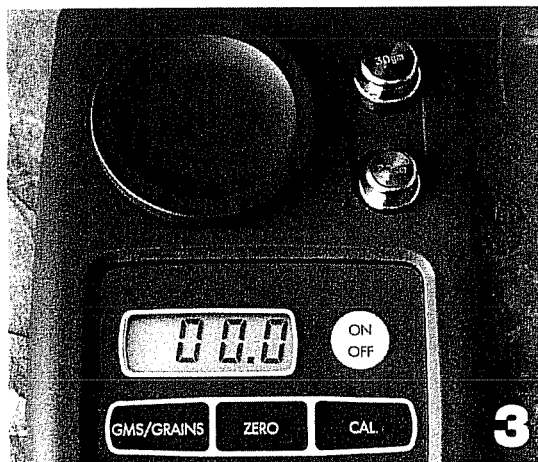
NOTE: When the battery runs low (below 7.8 volts) the scale becomes very inaccurate at higher weights, requiring frequent re-calibration. Time for a new battery.

CALIBRATION

The scale has been calibrated before shipment. However, it should be checked before use and re-calibrated if necessary. The purpose of calibration is to let the computer in the scale learn what signal from the load cell is associated with what specific weight. Before calibration, make sure that the work surface is level, stable, vibration free and away from fans or vents.

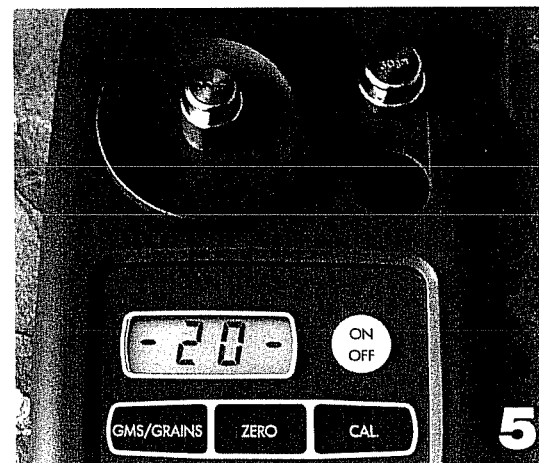
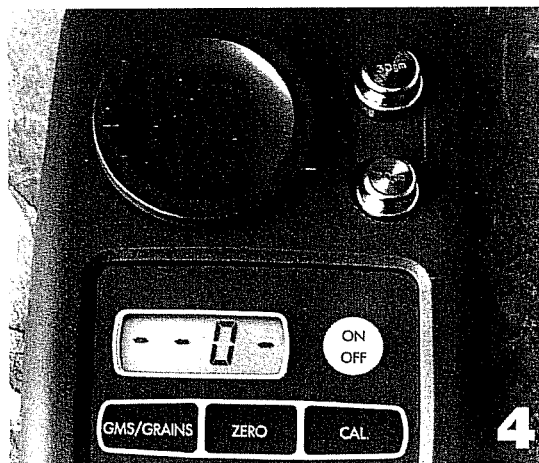
This is not a speed test! You should work slowly and methodically allowing at least 5 seconds each time a weight is added to the platen to allow the scale to stabilize and put that weight into its memory.

To calibrate your scale first ensure that you have a stable zero. Your scale display should read "00.0" with the decimal point solid, not blinking. Make sure that you do not have the scale pan on the platen. See *Photo 3*.

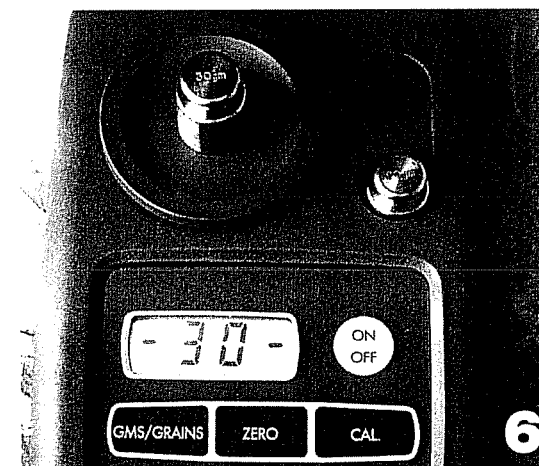


Press the CAL button. The scale will read --0-. See *Photo 4*. The scale is requesting "zero" weight. Push CAL again.

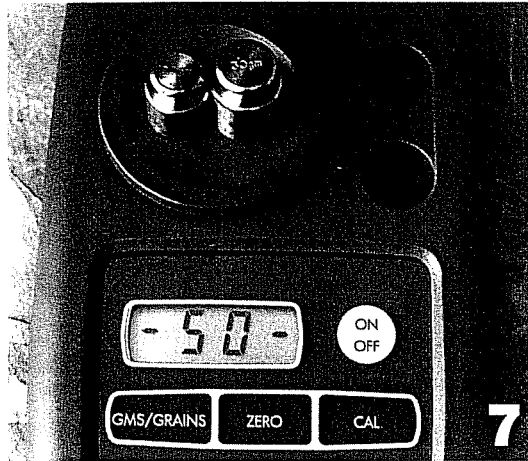
Now the scale will read "HOLD" for a few seconds and then display -20-. Place the 20 gram check weight in the center of the platen. See *Photo 5*.



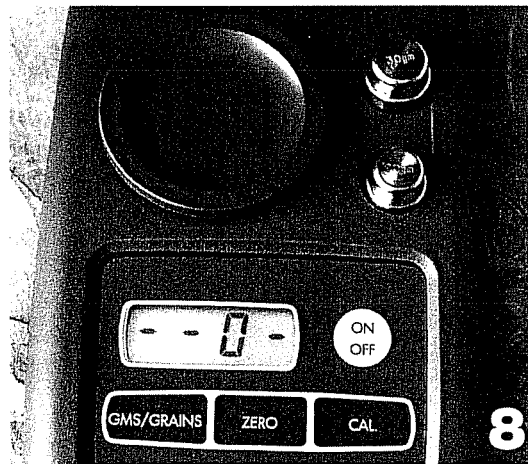
Press CAL and the scale will read "HOLD" again and then display -30-. Remove the 20 gram weight and replace it with the 30 gram weight. See *Photo 6*.



Press CAL. After displaying "HOLD" the scale will ask you for 50 grams. Add the 20 gram weight to the top of 30 gram weight already on the platform. NOTE: At this point BOTH weights must be on the platen. See Photo 7.



Press CAL. After displaying "HOLD", the scale will request --0- again. See Photo 8.



Remove both check weights and press CAL for the last time. The scale will read zero.

NOTE: If your 20 Gram check weight reads 19.99 or 20.01, re-calibration is not necessary for a +/- .1 grain range.

NOTE: Do not try to trickle powder in from zero weight. The Auto Zero will try to eliminate the first .5 grain causing the scale to read incorrectly. You must have at least .5 grains displayed on the scale before trickling to disable the Auto Zero.

REMEMBER:

Remove powder pan from platen before calibrating. Also, calibration weights are in GRAMS, NOT GRAINS.

SCALE ACCURACY AND READINGS

The Partner Electronic Scale is accurate to +/- .1 grain up to 300 grains and +/- .2 grains to 750 grains (provided the scale has warmed up and achieved a stable temperature and accurate calibration).

ERROR MESSAGES

The computer in your Partner Electronic Scale can detect three different conditions:

- **Err 1:** This will appear during calibration if you get the check weights reversed, calibrate the scale with the powder pan on the scale platen, or use weights other than the two standards provided. Err 1 will also appear when the battery voltage drops below 7.8 volts. To clear the Err 1 condition, see the Factory calibration shown on the back cover.
- **Err 2:** This indicates that you have exceeded the total capacity of the scale. The capacity is 750 grains or 50 grams. Err 2 also indicates permanent damage to the cell or scale.
- **FAIL:** This appears when the computer senses a zero or negative output from the load cell. It may appear momentarily if the scale is bumped hard (try to avoid). If the "Fail" message is continuous, this indicates that the load cell is damaged. Please contact RCBS for repair information.

Enjoy your new Micro Pro™ Electronic Powder Scale and remember: Take care of the scale and it will provide years of trouble-free operation.

Please see back page for FACTORY CALIBRATION.

**Questions? Call RCBS
Customer Service**

1-800-533-5000

Monday - Friday

6:30am - 4pm Pacific Time

FACTORY CALIBRATION

When "err1" is displayed, a Factory calibration is required. You must precisely follow this calibration sequencing as listed below. To do otherwise can result in incorrectly programming the scale which can cause incorrect weights and/or damage to the scale:

1. Remove the scale pan from the platen.
2. The scale must be turned off. If the "ON/OFF" button does not work, disconnect the transformer or battery and depress each of the four control buttons five times. Reconnect the transformer or battery and proceed.
3. Press the "ON/OFF" button to turn the scale on. The display will read "tEst" for about 1 or 2 seconds.
4. While the word "tEst" is showing on the display, **simultaneously** press and hold for at least 5 seconds the "GMS/GRAINS", the "ZERO", and the "ON/OFF" buttons. Do not press the "CAL" button.

The display should now read "--0-".* If the display reads "00.0", either the word "tEst" went out or the buttons did not go down simultaneously. Turn the scale off and try again beginning with step 3 above.

5. With the "--0-" on the display, press the "CAL" button, the display will read "Hold" and then "--20-". Place the 20-gm weight on the platen. Wait at least 5 seconds to allow the scale to stabilize; then press "CAL". "Hold" will appear and then "--30-". Replace the 20 gm weight with the 30 gm weight. Wait for at least 5 seconds to allow the scale to stabilize and press "CAL". After the "Hold", the scale will ask for the "--50-" weight. Place the small weight on top of the large one. Wait for at least 5 seconds to again allow the scale to stabilize. press "CAL", the scale will read "Hold", and then "--0-". Place both weights back in the storage wells and press "CAL". The display will now read "Hold" followed by "00.0". For safety purposes, the scale must now be calibrated using the regular calibration shown on page 5 .

**The display may build "8s and 0s" after you release the 3 buttons in step 4. Press "CAL" at any time to stop this program. An arbitrary number will then be displayed. ignore this by pressing "CAL" again and "--0-" will be displayed. continue with the Factory Calibration at step 5.*

RCBS

PRECISIONEERED® RELOADING EQUIPMENT

*We think that we make the very best reloading equipment in the world.
If you agree, please tell your friends. If you disagree, tell us - we want to do something about it!*

Customer Service

1-800-533-5000 (US or Canada) or 530-533-5191

Hours: Monday - Friday, 6:30am - 4:00pm Pacific Time

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