

RCBS®

POWDER PRO™ DIGITAL SCALE



98980

P R O D U C T I N S T R U C T I O N S

IMPORTANT

Before using the RCBS PowderPro™ Digital Scale, read this instruction manual 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. If you have read these instructions and still do not understand some operation, call us at 1-800-533-5000 and a technician will assist you.

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.

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

- Use only laboratory tested reloading data. We highly recommend the SPEER Reloading Manual.
- OBSERVE ALL WARNINGS ABOUT THE USE OF MAXIMUM LISTED LOADS.

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 primer 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 anyone 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.
- DO NOT smoke while reloading.

⚠ WARNING

This digital scale is for use with smokeless powders only. Do not use with black powder - the type used in muzzleloading firearms. If black powder should come in contact with an electrical spark, an explosion might occur causing serious personal injury.

Check calibration prior to each use of the scale and recheck frequently during use with the calibration weights provided. A spot check can easily be made during operation with an RCBS Scale Check Weight Set. If accuracy is found to be out of tolerance, the scale must be recalibrated as explained in the CALIBRATION section of this instruction manual. A scale with improper calibration will cause an incorrect charge weight which may exceed the maximum recommended load.

Digital scales are reliable devices but it is possible for the following failures to occur that may affect calibration accuracy:

- Changes in temperatures. Scales should be allowed to stabilize for 20 to 30 minutes prior to use when taken from one location to another where the temperature is different.
- Changes in scale location or level condition will affect calibration accuracy.
- Jarring of the scale during operation.

This instrument should be serviced only by a trained, qualified technician familiar with this model scale. The address and phone number for repair and service is shown on the back cover.

PRECAUTIONS

- Use only the two calibration weights supplied with the scale when running the calibration procedure. Use of other kinds of weights will result in inaccurate readings.
- Accuracy of the weights is critical to the accuracy of the scale. Weights should be kept clean and stored in a dry place. If weights are dropped or damaged in any way, they should be inspected against known standards to verify their accuracy. This is best performed by a qualified technician.
- Unplug the AC adapter when not in use.
- If static build-up on the scale is noticed, wipe the scale with an anti-static towel-ette (dryer sheet) or any readily available anti-static spray. First, spray a small quantity on a clean, soft cloth and then wipe the scale. Do not allow the spray to get into the mechanism.
- If powder should somehow get inside the unit, cease operating the unit immediately and do not use the scale until it is serviced. Contact RCBS Customer Service for information.

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.**

This 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 the equipment manufacturer for additional assistance.

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, no responsibility- either express or implied- is assumed for the use of ammunition reloaded with this product.

GENERAL INFORMATION

Most handloaders know quality reloads begin with RCBS products, and for speed and convenience, one of the most important pieces of equipment is an RCBS PowderPro™ Digital Scale. With features like a 1,500 grain capacity, large LCD readout and easy re-zero with the touch of a button, the RCBS PowderPro™ is the perfect choice for serious shooters who demand precision.

Carefully unpack the scale. Look for and identify the following items:

- Scale
- AC Power Adaptor
- Two (2) calibration weights
- 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 PowderPro™ is physically very fragile and the load cell can be damaged by:

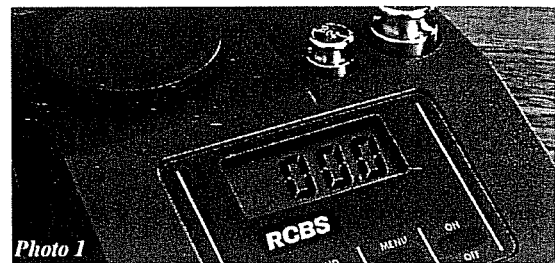
- Dropping the scale.
- Pulling up on the platen in such a way that it binds in the load cell.
- Introducing a violent physical shock to the scale.
- A lightning strike on the power line that feeds the scale.

Take care of the scale and it will provide years of trouble-free operation.

DISPLAY PANEL DESCRIPTION

Refer to photo #1 for button location and a detailed look at the display panel.

The **GMS/GRAINS** button will switch the scale from grains to grams and back again. When the scale is in the grains mode, the display reads “00.0”.



In the grams mode it will read “0.00”. Note that the left decimal will blink to alert you to the fact that you are in grams mode.

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.

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

The procedure only takes a minute or two and should be performed frequently 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: Proper and timely calibration is absolutely essential to good scale operation.

SET-UP

Your scale is powered by a 12-volt AC wall transformer. Attach the plug on the transformer cord into the receptacle located on the side of the scale. See photo #2. Observe the Infra-red data port for transferring information to the optional PowderMaster™ Electronic Powder Dispenser (See PowderMaster™ and Powder Trickler information on the back of this instruction booklet).



Photo 2

Next, plug the transformer into a convenient AC wall outlet. The scale will briefly display "TEST". The scale will then tare (zero) itself and the display will read "00.0" (if the **GMS/GRAINS** button is set to read in grains). The scale is now reading in grains. Let the scale stabilize for 20 to 30 minutes.

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 for the first time, remember to choose an area with a stable temperature that is free from drafts. To avoid inaccurate readings due to drafts, do not set the scale near open windows, or air conditioning or heating vents. Make sure the area is free from vibrations and that the work surface is level. Power line fluctuations can also cause the scale to be unstable. If the scale constantly fluctuates up and down by a few tenths and you are sure that it is not being affected by drafts, try plugging the scale into another outlet.

In normal use, your scale reading will "drift" a little. This is caused by changes in temperature or wind drafts and is perfectly OK. When the scale drifts more than 0.5 grains, it will warn you by flashing "TARE" and the weight. This tells you to gently press the **ZERO** button to re-zero the scale.

IMPORTANT: Like any scale, you control the accuracy of the PowderPro™. It is up to you to TARE and CALIBRATE the scale properly, and to continually verify the accuracy of the scale with the check weights.

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

TO USE THE SCALE

Note: You must calibrate first. See CALIBRATION on page 6.

WEIGHING: If the display panel is blank, press the **ON/OFF** button. This will turn the display panel on. The scale will TARE (zero) and the display will read "00.0". Place the material to be weighed on the platen and the weight will be displayed on the panel. The PowderPro™ reads in 1/10 of a grain increments up to 999.9 grains. It then goes to one grain increments from 1,000 to 1,500 grains.

RE-ZEROING: When weighing something that must be held in a container, like gun 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 once the weight of the container has been subtracted through re-zeroing.

TO RE-ZERO: Gently press **ZERO** to obtain a zero reading. Make sure there is no weight on the platen. 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.



The AUTOTARE function in the scale will try to eliminate the first 0.5 grains, causing the scale to read incorrectly. You must have at least 0.5 grains displayed on the scale before trickling in order to disable the AUTOTARE.

The powder trickler shown is not included with the PowderPro™, but is available as an accessory from your local dealer. See photo #3.

NOTE: Do not trickle powder into the pan from zero weight.

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, empty the powder and return the empty pan to the scale.

CALIBRATION

The scale has been calibrated before shipment. However, it should be checked before use and recalibrated if necessary. The purpose of calibration is to let the computer in the scale learn which signal from the load cell is associated with what specific weight.



Photo 4

1. To calibrate your scale, first remove all weight off the platen (*including your powder pan*). Be sure that you have a stable zero. That means your scale display is reading "00.0" with the decimal point solid, not blinking. See photo #4.



Photo 5

2. Press the **CAL** button. Display will flash "CAL y-N". Press the **YES** button. The scale will read "-0-". The scale is asking you to give it "ZERO" weight. Push **CAL** again. See photo #5.



Photo 6

3. 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 #6.



Photo 7

4. Press **CAL** and the scale will read "HOLD" again and then display "-50-". Remove the 20 gram weight. Replace it with the 50 gram weight. (Unless using low range calibration as described below). See photo #7.

5. Press **CAL**. After displaying "HOLD", the scale will display "-70-". Add the 20 gram weight to the 50 gram weight already on the platen. See photo #8.

6. Press **CAL**. After displaying "HOLD", the scale will read "--0-" again. Remove both check weights and press **CAL** for the last time. The scale will then read "00.0".



Photo 8

LOW RANGE CALIBRATION:

Since most handloaders are weighing powder charges of less than 20 grams (308.6 grains), we have provided a calibration technique suitable for low-range weighing.

Follow Calibration steps 1-4. When the scale asks for "-50-", remove the 20 gram weight and push **GMS/GRAINS**. The scale will return to operation without setting the 50 and 70 gram points. If later you try to weigh something more than 20 grams, the scale will warn you by flashing "CAL". When this happens, go through the full calibration procedure as described above. For most reloading uses, this is the preferred method of calibrating the scale.

Remember, the calibration weights are in grams, not grains.

SCALE ACCURACY AND READINGS

The PowderPro™ scale is accurate to +/- 0.1 grain. If you are weighing materials up to 999.9 grains, the display will read to 0.1 grains. If the object weighed is between 1,000 and 1,500 grains, the display changes to read to +/- 1.0 grain. This slight loss of resolution is more than made up for in the scale's ability to weigh to this level.

ERROR MESSAGES

The computer in your RCBS PowderPro™ scale can detect three different conditions:

Err 1 : This may be caused by:

- Calibrating the scale with the calibration weights in the wrong sequence.
- Calibrating the scale with powder pan on the platen.
- The scale "drifting" in transit. This causes the correct weight to be flagged an "**Err 1**" (*Should this occur, follow the Factory Calibration Procedures below*).

Err 2 : This error message indicates that you have exceeded the total capacity of the scale. The capacity is 1,500 grains or 100 grams.

Fail : This message 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 comes on and stays on, it is indicating that the load cell has probably failed. If this happens, contact RCBS for repair information.

FACTORY CALIBRATION

When "**Err 1**" comes up on the display, a factory calibration is required. You must follow the calibration sequencing precisely as listed below. To do otherwise can result in incorrectly programming the scale which can cause damage to the scale and/or incorrect weights.

1. Remove the scale pan from the platen.
2. The scale must be turned off. If the **On/Off** button does not work, unplug the scale and depress each of the four buttons five times. Plug the scale back in 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, you must simultaneously press and hold for 5 seconds the **GMS/GRAINS**, the **Zero** and the **On/Off** buttons. **Do not** press the **CAL** button. The display will now read "--0--". If the display reads "**00.0**", either you were not fast enough, or the buttons did not go down simultaneously. Turn the scale off and try again beginning with #3 above.

5. When you get the "--0--" press the **CAL** button, the display will read "**hold**" and then "--20--". Place the 20 gram weight on the platen. Wait approximately 5 seconds to allow the scale to stabilize and press **CAL**. The scale will ask for the "--70--" weight. Place the 20 gram weight on top of the 50 gram weight. Wait for about 5 seconds to allow the scale to stabilize. Press **CAL**, the scale will read "**hold**", then "--0--". Place the weights back in the storage wells and press **CAL**. The display will now read "**hold**" followed by "**00.0**". To be absolutely safe, the scale should now be calibrated following the calibration procedure found on page 6 of this instruction booklet.

PRODUCT SERVICE AND WARRANTY INFORMATION

Your RCBS PowderPro™ scale is manufactured for RCBS by PACT and is backed by a limited 2 year warranty. Understand that this scale is physically very fragile. Specifically the load cell, the component that does the load sensing, can be ruined by the following:

- Dropping the scale.
- Pulling up on the platen in such a way that it binds in the load cell.
- Introducing a violent physical shock to the unit.
- Shipping the scale with inadequate packaging.
- A lightning strike on the power line. (*Due to these possible situations, the load cell is not covered by warranty*).

In the unlikely event that your scale requires service, please contact RCBS for shipping instructions. Please do not ship the scale to RCBS. We recommend that you keep the original box and foam packaging.

Enjoy your new PowderPro™ Digital Scale and remember: Take care of the scale and it will provide years of trouble-free operation.

Try the Powdermaster™ Electronic Powder Dispenser with your new Powder Pro...

POWDERMASTER™ ELECTRONIC POWDER DISPENSER



- Works with the Powder Pro Digital Scale.
- Uses wireless infrared data transfer for precise communication.
- Can be used as a power trickler as well as a powder dispenser.
- Accurate to one tenth of a grain.
- Just enter the charge weight and push DISPENSE.
- Works with all types of smokeless powder.

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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