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## Improve your RCBS Charegemaster scale

Posted by Jaco Brink - 2007/11/07 02:34

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A while ago the friend of mine phoned me regarding his RCBS Charegemaster combo scale. Up to then I have not taken much notice of my own scale, but he informed me that his scale was charging extremely slow. I timed mine and found that mine was running a lot faster than his. This set me on a journey to find out why there was a difference. The outcome however was that his scale was defective, but it gave us insightful information about the working of these scales.

After doing some research on the internet I was able to determine that these little green scales are fully re-programmable. I sent an e-mail to RCBS on which I received no reply, and eventually telephoned them. They were very helpful and gave me their instructions on how to change the programming on this scale.

This has made a tremendous difference in my reloading experience with this scale. The scale is fully adjustable and there are many settings and that you can change. To enter the program mode pres EDIT MEM and ENTER at the same time. After making an adjustment pres ENTER to go to the next option. After the last setting the scale will reset and countdown. If you passed a setting you have to start from the beginning, there is no back button.

This is the list of settings that you can make to your scale, for some of the functions I do not have detailed instructions as to what they do, and would recommend that you do not change them:

HSB\_A1 (15.68) Grains under target weight to go from full to high speed for low weight

HSB\_B1 (3.42) Grains under target weight to go from high to slow speed low weight

BSP\_C1 (1.08) Grains under target weight to go from slow to final trickle speed low weight

MSP\_A2 (39.20) Grains under target weight to go from full to high speed for medium weight

MSP\_B2 (8.55) Grains under target weight to go from high to slow speed medium weight

MSP\_C2 (2.25) Grains under target weight to go from slow to final trickle speed medium weight

SSP\_A3 (196.00) Grains under target weight to go from full to high speed for heavy weight

SSP\_B3 (42.75) Grains under target weight to go from high to slow speed heavy weight

SSP\_C3 (11.32) Grains under target weight to go from slow to final trickle speed heavy weight

SEL (065) ???

F\_A (050) Grains for a Heavy Charge

M\_A (035) Grains for a Medium charge

S\_A (006) Grains for a slow charge

W\_F (200) Rotation for Full speed

W\_M (100) Rotation for Medium speed

W\_S (036) Rotation for slowest speed

S\_F (012) Scale sensitivity timeout time in m/s fast speed

S\_M (024) Scale sensitivity timeout time in m/s medium speed

S\_S (128) Scale sensitivity timeout time in m/s slow speed.

FR1 (040) ?

FS1 (016) ?

FR2 (080) ?

SR1 (032) ?

SS1 (008) ?

SR2 (040) ?

DEC (000) ?

AT (000) ?

I have to advise you to only make changes to your scale if you are confident to do so, and remember that there is not a "return to default" setting in the scale. If all else fails return your scale to the default settings listed above in brackets. I am now able to throw 56 grains of S365 in less than 18 seconds (average of 15 charges), and with very few overthrows.

Another problem I experienced with the scale was that there were continued overthrows. The RCBS employee advised me to take a McDonnell's straw (because it is thicker than a normal straw), cut off about a half inch piece and put it into the tube where the powder exits. This caused the last part of an extruded powder to clutter less, and reduced the amount of overthrows dramatically.

I hope you have more joy with your scale now.

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If you have any other suggestions or recommendations on how to improve the functionality of this scale please reply on this topic [http://www.sahuntingrifle.co.za/components/com\\_fireboard/uploaded/images/RCBS\\_Charegemaster.jpg](http://www.sahuntingrifle.co.za/components/com_fireboard/uploaded/images/RCBS_Charegemaster.jpg)

Post edited by: Jaco Brink, at: 2007/11/07 15:27

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## Re:Improve your RCBS Charegemaster scale

Posted by THOMAST - 2007/11/12 11:30

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Jaco,  
Weet jy dalk of 'n mens dieselfde kan doen met die Lyman 1200DPS skaal?  
Hy is stadiger as die RCBS.

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## Re:Improve your RCBS Charegemaster scale

Posted by Jaco Brink - 2007/11/12 12:56

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THOMAST wrote:

Jaco,  
Weet jy dalk of 'n mens dieselfde kan doen met die Lyman 1200DPS skaal?  
Hy is stadiger as die RCBS.

Ek het so 'n paar jaar gelede my Lyman verkoop (toe ek die RCBS aangekoop het). Van wat ek kan onthou was die skaal redelik vinnig. Die stadig waarvan ons praat wat Martel ervaar het met sy RCBS was ongeveer 3 keer die tyd wat dit neem om 'n lading met my skaal te gooi. Ek vergeet nou die presiese tyd, hy kan my dalk reghelp maar dit was in die omgewing van 45 sekondes vir 'n 52 grein lading.

Hy (Martel) het toe 'n nuwe Lyman gekoop. Die nuwe skaal is blykbaar blitsvinnig maar nadat hy dit twee keer omgeruil het, het hy sy geld teruggevra en wag nou weer vir 'n RCBS. Ek wil nie kommentaar lewer oor wat sy probleme met die skaal was nie want ek ken nie die presiese detail nie.

As jou skaal regtig so stadig is moet daar 'n fout wees en moet dit met Lyman opgeneem word. Van wat ek verstaan is hulle diens baie goed. Ek glo die skaal sal ook geprogrammeer kan word (dit moet geprogrammeer word om te werk so dit moet verander kan word).

Neem ook in aanmerking dat die Lyman stadiger is as 'n RCBS en dat jy nie die tye wat jy kry moet vergelyk met wat ons met die RCBS kry nie. Ek het 'n vergelyking tussen die skale, hierby aan. Kyk of jy min of meer dieselfde tye as in die toetsverslag kry. As jy tyd drasties verskil moet daar foute gesoek word.

[http://www.sahuntingrifle.co.za/components/com\\_fireboard/uploaded/files/Vergelyking\\_van\\_skale.pdf](http://www.sahuntingrifle.co.za/components/com_fireboard/uploaded/files/Vergelyking_van_skale.pdf)

Post edited by: Jaco Brink, at: 2007/11/13 11:36

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## Re:Improve your RCBS Charegemaster scale

Posted by Hermann - 2007/11/21 12:18

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Thomast as die 1200 Lyman skaal testadig gooi, moet jy kyk of die dryfas nie vas is in die buste of daar is kruit tussen die dryfas en die plastiek kruithouer. As dit die geval is sny die hoeke weg van die plastiek kruithouer. Dit sal n groter gaaping maak tussen die dryfas en die plastiek kruithouer. My skaal n Lyman 1200 gooi S365 56gr @20sek.

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## Re:Improve your RCBS Charegemaster scale

Posted by THOMAST - 2007/11/22 08:27

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Dankie Hermann,  
Waar presies sny jy die plastiek weg?

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## Re:Improve your RCBS Charegemaster scale

Posted by Francois - 2007/11/23 08:47

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Ek gebruik ook 'n Lyman 1200 en ja hy gooi poeier stadig. My plan wat ek gebruik om die gooiproses te bespoedig, is om 'n "powder dipper" van Lee of enige ander maathouer van so  $\pm 35$  grein te gebruik om 'n redelike hoeveelheid poeier eers in die pannetjie te gooi. Die res word dan deur die skaal gelewer. Ek gooi 46.2 grein S365 in onder 8 sekondes op die manier.

Vir die 375H&H gooi ek 2 van die  $\pm 35$  grein mates in die pannetjie en die res van die 74 grein word deur die skaal gelewer in ook ongeveer 6 - 7 sekondes.

Ek het gevind dat die akkuraatheid van die ladings op die manier nog steeds baie goed is, baie dikwels presies en soms so  $\pm 0.1$  grein wat 2 of 3 korretjies 365 is en wat maklik bygevoeg kan word as 'n mens wil hare kloof oor 0.1 grein op 74 grein poeier.

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## Re:Improve your RCBS Charegemaster scale

Posted by Hermann - 2007/11/23 09:55

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Ek gebruik n Lee powdemeasure om spoed te bevorder. Dit het n stukkie rubber wat die kruit vee dus, die growe kruit soos S335, S355, S365 en tot S385 word nie gesny nie. Die Lee is seepglat. Ander powdermeasure sny die kruit.

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## Re:Improve your RCBS Charegemaster scale

Posted by Burdge - 2008/03/18 19:24

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Jaco,

I found your post very helpful. Thank you! I was able to re-program the "HSP\_" parameters on my unit and greatly reduce the time it takes to dispense a charge, without reducing the accuracy.

I have spoken with Don Legg at RCBS (who is the main technical contact person at RCBS for the Charegemaster product) and he was not aware of the function of the "HSP" parameters. This product is actually made by Excell Precision in China for RCBS, and Don has not been able to get a full definition of the programmable parameters from Excell.

He informed me, though, that the "W\_" parameters control the initial speed of the trickler. They are properly interpreted as having an implied decimal point. That is, the "200" means 20.0 grains and the "100" means 10.0 grains. Above 20.0 grains the charge will start at the highest speed, between 10.0 and 20.0 grains the charge will start at the medium speed.

I tried changing the "MSP\_" and "SSP\_" parameters, but did not obtain results that I could interpret. I'm not sure why the unit would ever want to downshift if it was 196.00 grains below the target weight!

Don said that the "S\_" parameters control the dwell time for measurements at the different speeds and that a setting of "64" corresponds to 2 seconds (each unit being 1/32 second). When I increased these parameters I did notice a longer lag time in detecting the scale reading and adjusting the trickler speed. I assume that this will allow the scale measurement a longer time to settle when running at the slower speeds.

A large setting for "S\_F" causes serious over-charging, as the unit doesn't seem to be able to properly detect the downshift point. I assume the time delay also involves some type of time averaging, so the unit has to run past the desired shift point quite a ways before the average reaches the required value.

I also noticed that the "HSP\_", "MSP\_" and "SSP\_" parameters are scaled versions of each other and appear as parallel linear lines if plotted on a log-linear scale. I'm not sure what this means, but I doubt that it is a coincidence.

Robert

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Paola, KS, USA

Post edited by: Burdge, at: 2008/03/18 21:57

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## Re:Improve your RCBS Charegemaster scale

Posted by Jaco Brink - 2008/03/19 21:54

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Robert

Wonderful stuff. Thank you. Now I will have to spend some time behind the scale to test some of these new settings.

Regards

Jaco

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## Re:Improve your RCBS Charegemaster scale

Posted by charliez - 2008/04/06 19:14

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I just noticed this discussion, what settings do you use now?

I'd like to try them out to see what the effects are.

I am trying to slow down the trickle speed (i.e. not the fast, slow, medium speeds but the last portion where it trickles to get to the final weight).

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## Re:Improve your RCBS Charegemaster scale

Posted by Burdge - 2008/04/08 06:17

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Charliez,

The settings I use are optimized for my load, which is 24.5 grains of Reloader-15. This is for the .223 Remington chambering. My goal was to reduce the amount of time that the Charegemaster spent on the lower speed settings. I haven't had any success trying to adjust the actual rotation speed of the trickler tube. I tried to maximize the time the unit spends at the fastest trickle speed without also causing over-charges.

The settings I chose, based upon trial and error, are as follows:

HSP\_A1 = 5.50  
HSP\_B1 = 2.25  
HSP\_C1 = 0.40

I also put a thin metal tube within the trickler tube to slightly reduce the diameter and to cover the threads on the trickler tube.

With these settings the Charegemaster drops the first 20.0 grains in about 5 seconds. It downs shifts quickly through the medium speed and then slow speed, and then finally downshifts to the "bump" trickle mode. Two or three "bumps" are all that is typically needed.

The entire charge is dispensed in about 10 to 15 seconds. Waiting for the scale to stabilize, show the count number, and then show the final weight extends the total time to 15 to 20 seconds. This is just about perfect timing, since the new charge is usually ready by the time I have seated the bullet on the previous load.

These parameters should be able to be optimized for any powder type and weight with a little experimentation.

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Robert

Post edited by: Burdge, at: 2008/04/08 06:19

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## Re:Improve your RCBS Charegemaster scale

Posted by charliez - 2008/04/08 21:31

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Thanks Robert! I'll try these settings.

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## Re:Improve your RCBS Charegemaster scale

Posted by Burdge - 2008/04/10 17:32

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Charliez,

You are welcome.

Since you mentioned that you are wanting to slow down the final trickle operation, I assume that you are having trouble with clumps of powder falling during the final trickle. I had the same problem, and I was able to fix it by "sleeving" the trickler tube.

I think having threads in the trickler tube is counter-productive in the Charegemaster. In a manual trickler, the trickler tube is level and the threads act as a screw-auger that moves the powder down the tube and forces it out the end. The Charegemaster tube is set at a slight incline and the tube rotation mainly serves to overcome the static friction between the powder and the trickler tube. Once in motion, the powder travels down the tube due to gravity and the "roll over" action of the powder.

When the powder reaches the end of the tube it encounters the threads, but the rate at which the threads can move the powder is actually slower than the speed at which the powder is moving down the tube. This causes a "log jamb" at the end of the trickler tube, and powder builds up, filling the tube. The excess amount of powder near the end of the tube causes powder to fall unpredictably during the final bump trickle.

If the trickler tube is sleeved with a thin-walled aluminum tube (a drinking straw can also be used) of the appropriate outside diameter, this covers the threads, and the powder moves more uniformly down the trickler tube and doesn't build up at the end. The inner diameter of the sleeve can be adjusted to balance between speed and accuracy. My sleeve reduces the inner diameter by about 50%, but the resulting tube diameter still works quickly with the relatively small charges that I dispense. During the final bump trickle my Charegemaster is capable of dropping one or two kernels at a time, so the final weight is very accurate. During high-speed trickle it is just as fast as the un-sleeved version.

Hope this helps.

Robert

Post edited by: Burdge, at: 2008/04/10 22:33

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## Re:Improve your RCBS Charegemaster scale

Posted by Andy - 2008/07/21 12:46

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Very Helpful - thanks.

I have an unrelated problem that perhaps someone can assist with.

I have had a recurring problem with mine that others have experienced. When I press:

- the "2" it reads "3";

- the "5" it reads "6";
- the "8" it reads "9"; and
- the "0" resets the display.

I was about to pack the unit up and send it back to RCBS for warranty replacement and it corrected itself after sitting idle and unplugged for two weeks, only the re-occur right after the warranty expired.

There does not appear to be a Master Reset.

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## Re:Improve your RCBS Charegemaster scale

Posted by Burdge - 2008/07/21 18:54

I had a similar problem. I did a couple of things. I'm not sure which one fixed it.

With the wall adapter unplugged, I opened the scale unit and unplugged the flex cable that connects the keypad from the circuit board. I left it unplugged from several minutes. I also wiped down the entire unit with an anti-static dryer sheet.

Since doing this I haven't had any more problems.

Post edited by: Burdge, at: 2008/07/21 18:54

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## Re:Improve your RCBS Charegemaster scale

Posted by Andy - 2008/07/22 16:41

The problem seems to be with the dispensing unit's keypad, not the scale unit's. Which unit's cable did you disconnect?

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## Re:Improve your RCBS Charegemaster scale

Posted by Burdge - 2008/07/22 16:54

Andy,

Sorry for the confusion. I meant to say the dispenser unit, not the scale unit.

Inside the dispenser unit there is a flat flex cable that connects the membrane keypad to the circuit board. I disconnected this flex cable from the circuit board.

While the cable was disconnected, I wiped down the unit with an anti-static sheet (the recommendation of using an anti-static sheet came from RCBS - although they only mentioned wiping down the exterior of the unit to reduce erratic readings).

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## Re:Improve your RCBS Charegemaster scale

Posted by Jakes - 2010/03/18 11:49

Ek wil nog steeds weet: Elektroniese Skaal watter EEN! RCBS C/M of Lyman DPS 3 nou ook nog Hornady L-N-L! Ek wil ook nou die vinnig laai ding doen! Power Measure, balkie skaal, dribbler, tregher ens. Ek skiet die goed 2-3X vinniger uit as wat ek dit kan laai!

Ek weet net nie watter een nie!

HELP, oortuig my!

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## Re:Improve your RCBS Charegemaster scale

Posted by Pieter le Roux - 2010/04/20 08:15

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Ek hou daarvan om die gewig van my ladings te sien voor ek dit van die skaal verwyder en moes altyd sit en kyk hoe die skaal na elke lading deur die hele rympie van poeier, koeÃ«l, nommer ens. ens. gaan voor hy weer die finale gewig wys. Dit is egter net 'n probleem wanneer jy die lading uit die skaal se geheue oproep. Deur die gewig in te tik en {disp} te druk wys hy dadelik die finale gewig en jy wen amper 10 sekondes per gooi.;

{RCBS Charegemaster}

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