

**MAGUIRE PRODUCTS, INC.**

**MAGUIRE G2™ ACCURACY  
VALIDATION MANUAL**

**April 25, 2002**

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The following steps describe set-up and three tests, which verify that our G2 Software correctly collects and displays the data in the controllers. Test 1 covers a single controller cycle. Test 2 includes a longer run, and Test 3 includes a change of recipe.

The controllers used for this test were Version 00420A (4-component) and Version 90505T (12-component). The software used was G2 Version 1.2.3. The steps presented apply equally well to any software version.

**The following tests involve Clearing Totals in the controller. Clearing totals in the controller resets the accumulated totals value. The G2 Server uses this value in the controller to track material usage. Clearing totals should only be used in a testing situation and not as standard practice during normal operation if you are using the G2 Server to track material usage. When clearing totals, be aware that G2 will not know that totals have been cleared and may report an erroneous totals value in material usage reports. If totals are cleared in the controller, erroneous total values may need to be purged from the G2 material usage database. Erroneous records may be removed by using the Purge/Archive option in the G2 Client interface. To select individual records to purge, use the Advanced Purge option. For more information on purging totals, see the Gravimetric Gateway® Manual.**

## Set-up

1. Set the switches on the exterior of the controller to suspend cycling.

right side	- ON, up (rather than OFF, middle or TIMED, down)
front	- ON, up (rather than OFF, down)
left side, lower	- CONTINUE, up (rather than IMMEDIATE PAUSE, down)
left side, upper	- STOP, END OF CYCLE, down (rather than CONTINUE, up)

2. Clear all of the database usage totals. The simplest way is deleting the files and letting them be re-initialized.

Shut down the G2 Server  
Find folder c:\g2\g2data\  
Delete database files: Blender\*, MaterialUsage\*, Report\*, Retrieval\*

3. Set the weight unit of the controller to be GRAMS.

- a. press EXIT\*\* blender shows PASSWORD
- b. press 22222 blender shows P 99.99V (P indicates program mode, 99.99 = any number)
- c. press \* blender shows INSTR\_\_
- d. press 89 blender shows WEIGHT\_UNIT
- e. toggle \* until WEIGHT\_UNIT becomes GRAMS
- f. press \* blender shows P 99.99V (P indicates program mode, 99.99 = any number)

4. Clear the usage totals of the controller. (from program mode)

**WARNING on Clearing Totals: Clearing totals in the controller resets the accumulated totals value. The G2 Server uses this value in the controller to track material usage. Clearing totals should only be used in a testing situation and not as standard practice during normal operation if you are using the G2 Server to track material usage. When clearing totals, be aware that G2 will not know that totals have been cleared and may report an erroneous totals value in material usage reports. If totals are cleared in the controller, erroneous total values may need to be purged from the G2 material usage database. Erroneous records may be removed by using the Purge/Archive option in the G2 Client interface. To select individual records to purge, use the Advanced Purge option. For more information on purging totals, see the Gravimetric Gateway® Manual.**

- a. press \* blender shows INSTR\_\_
- b. press 00 blender shows CLEARING a few seconds then  
blender shows P 99.99V (P indicates program mode, 99.99 = any number)

5. Observe totals displayed on controller

(from program mode)  
toggle VIEW until you see

(for a 4-component controller)

CY = 0 (cycles have been run)  
R = 0 (grams of regrind have been used)  
N = 0 (grams of natural)  
C = 0 (grams of color)  
A = 0 (grams of additive)  
T = 0 (grams total)

(or for a 12-component controller)

CY = 0 (cycles have been run)  
1 = 0 (grams of component 1 have been used)  
2 = 0 (grams of component 2)  
3 = 0 (grams of component 3)  
4 = 0 (grams of component 4)  
5 = 0 (grams of component 5)  
6 = 0 (grams of component 6)  
7 = 0 (grams of component 7)  
8 = 0 (grams of component 8)  
9 = 0 (grams of component 9)  
A = 0 (grams of component 0)  
B = 0 (grams of component 1)  
C = 0 (grams of component 2)  
T = 0 (grams total)

6. Start G2Server

7. Start Client

8. Use Download Recipe to Blender to give controller a recipe (The settings of recipes used are shown in step 13.)

## Begin Test 1

9. Use Edit Retrieval Times to add a retrieval time about 5 minutes into the future (enough time to allow the controller at least one cycle).

10. Put the upper switch on the left side of the controller in the UP position for several seconds, then back in the DOWN position. The blender will complete one cycle and suspend cycling.

11. Observe totals displayed on controller (as in step 4. above).

In our tests id=1 was a 4-component controller which displayed:

CY = 1 (cycles have been run)  
R = 900 (grams of regrind have been used)  
N = 1000 (grams of natural)  
C = 60 (grams of color)  
A = 40 (grams of additive)  
T = 2000 (grams total)

In our tests id=3 was a 12-component controller which displayed:

CY = 1 (cycles have been run)  
 1 = 900 (grams of component 1 have been used)  
 2 = 90 (grams of component 2)  
 3 = 909 (grams of component 3)  
 4 = 59 (grams of component 4)  
 5 = 39 (grams of component 5)  
 T = 1999 (grams total)

12. Allow the new retrieval time to pass.

13. Select the View Blender option and observe the usage displays.

In our tests selecting id=1 showed the following usages:

<b>(upper table)</b>	<b>Name</b>	<b>Usage</b>
Recipe	BRecipe_1	2,000.00 grs

<b>(lower table)</b>	<b>Type</b>	<b>Setting</b>	<b>Usage</b>
REG_1	Regrind	45.0	900.00 grs
NAT_1	Natural	0.0	1,000.00 grs
COL_1	Color	6.0	60.00 grs
ADD_1	Additive	4.0	40.00 grs

In our tests selecting id=3 showed the following usages:

<b>(upper table)</b>	<b>Name</b>	<b>Usage</b>
Recipe	BRecipe_3	1,999.70 grs

<b>(lower table)</b>	<b>Type</b>	<b>Setting</b>	<b>Usage</b>
REG_1	Regrind	45.0	900.00 grs
NAT_1	Natural	20	90.90 grs
NAT_2	Natural	200	909.00 grs
ADD_1	Additive	6.0	59.90 grs
ADD_2	Additive	4.0	39.90 grs

14. Use Reports/Material Usage option, limiting by Blender/Nothing/Nothing and Retrieval Time/Nothing/Nothing and print the two reports.

The reports arrange materials in alphabetical order.  
Blender/Nothing/Nothing showed:

<b>Blender</b>	<b>Material Code</b>	<b>Usage (Grams)</b>
-----		
1	ADD_1	40.00
	COL_1	60.00
	NAT_1	1,000.00
	REG_1	900.00
	Sub Total	2,000.00
-----		
3	ADD_1	59.90
	ADD_2	39.90
	NAT_1	90.90
	NAT_2	909.00
	REG_1	900.00
	Sub Total	1,999.70

-----  
 Grand Total: 3,999.70

The report by Retrieval Time/Nothing/Nothing groups materials by time intervals rather than blender:

Time	Material Code	Usage (Grams)
0:00-9:40	ADD_1	99.90
	ADD_2	39.90
	COL_1	60.00
	NAT_1	1,090.90
	NAT_2	909.00
	REG_1	1,800.00
	Sub Total	3,999.70
-----		
	Grand Total:	3,999.70

Both reports show usage values matching ViewBlender and the controller(s).

## Begin Test 2

- Use Edit RetrievalTimes to add a retrieval time far enough into the future to allow the controller(s) a number of cycles.
- Put the upper switch on the left side of the controller in the UP position (allow the blender to resume cycling). Leave the switch up until shortly before the next retrieval time and then flip it down to suspend cycling after a number of cycles.
- Observe totals displayed on controller (as in step 4. above).

In our tests id=1 was a 4-component controller which displayed:

CY = 28 (cycles have been run)  
 R = 25200 (grams of regrind have been used)  
 N = 28000 (grams of natural)  
 C = 1680 (grams of color)  
 A = 1120 (grams of additive)  
 T = 56000 (grams total)

In our tests id=3 was a 12-component controller which displayed:

CY = 31 (cycles have been run)  
 1 = 27900 (grams of component 1 have been used)  
 2 = 2817 (grams of component 2)  
 3 = 28179 (grams of component 3)  
 4 = 1856 (grams of component 4)  
 5 = 1236 (grams of component 5)  
 T = 61990 (grams total)

- Allow the new retrieval time to pass.
- Select the View Blender option and observe the usage displays.

In our tests selecting id=1 showed the following usages:

(upper table)	Name	Usage
Recipe	BRecipe_1	56,000.00 grs

(lower table)	Type	Setting	Usage
REG_1	Regrind	45.0	25,200.00 grs
NAT_1	Natural	0	28,000.00 grs
COL_1	Color	6.0	1,680.00 grs
ADD_1	Additive	4.0	1,120.00 grs

In our tests selecting id=3 showed the following usages:

(upper table)	Name	Usage
Recipe	BRecipe_3	61,990.70 grs

(lower table)	Type	Setting	Usage
REG_1	Regrind	45.0	27,900.00 grs
NAT_1	Natural	20	2,817.90 grs
NAT_2	Natural	200	28,179.00 grs
ADD_1	Additive	6.0	1,856.90 grs
ADD_2	Additive	4.0	1,236.90 grs

20. Use Reports/Material Usage option, limiting by Blender/Nothing/Nothing and Retrieval Time/Nothing/Nothing and print the two reports.

The report by Blender/Nothing/Nothing showed the usage of each material combining time intervals and separating blenders:

Blender	Material Code	Usage (Grams)
1	ADD_1	1,120.00
	COL_1	1,680.00
	NAT_1	28,000.00
	REG_1	25,200.00
	Sub Total	56,000.00
3	ADD_1	1,856.90
	ADD_2	1,236.90
	NAT_1	2,817.90
	NAT_2	28,179.00
	REG_1	27,900.00
	Sub Total	61,990.70
Grand Total:		117,990.70

The report by Retrieval Time/Nothing/Nothing showed the usage of each material combining blenders and separating time intervals:

Time	Material Code	Usage (Grams)
0:00-9:40	ADD_1	99.90
	ADD_2	39.90
	COL_1	60.00
	NAT_1	1,090.90
	NAT_2	909.00
	REG_1	1,800.00
	Sub Total	3,999.70
9:40-14:40	ADD_1	2,877.00
	ADD_2	1,197.00
	COL_1	1,620.00

NAT_1	29,727.00
NAT_2	27,270.00
REG_1	51,300.00
Sub Total	113,991.00

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Grand Total: 117,990.70

Again the reports show usage values, which verify that the software data correctly matches the data of the controller.

### Begin Test 3

- With the controller(s) still suspended, use Download Recipe to Blender to give controller(s) a different recipe.
- Use Edit Retrieval Times to add a retrieval time far enough into the future to allow the controller(s) a number of cycles.
- Put the upper switch on the left side of the controller in the UP position (allow the blender to resume cycling). Leave the switch up until shortly before the next retrieval time and then flip it down to suspend cycling after a number of cycles.
- Observe totals displayed on controller (as in step 4. above).

In our tests id=1 was a 4-component controller which displayed:

CY	= 38	(cycles have been run)
R	= 34800	(grams of regrind have been used)
N	= 38000	(grams of natural)
C	= 2080	(grams of color)
A	= 1120	(grams of additive)
T	= 76000	(grams total)

In our tests id=3 was a 12-component controller which displayed:

CY	= 43	(cycles have been run)
1	= 33660	(grams of component 1 have been used)
2	= 8577	(grams of component 2)
3	= 40179	(grams of component 3)
4	= 2336	(grams of component 4)
5	= 1236	(grams of component 5)
T	= 85988	(grams total)

Note: if controller values reach more than 6 digits, the digits left of 6 places do not appear.

- Allow the new retrieval time to pass.
- Select the View Blender option and observe the usage displays.

In our tests selecting id=1 showed the following usages:

(upper table)	Name	Usage
RecipeB	Recipe_A	20,000.00 grs

(lower table)	Type	Setting	Usage
REG_2	Regrind	48.0	9,600.00 grs
NAT_3	Natural	0	10,000.00 grs
COL_2	Color	4.0	400.00 grs

In our tests selecting id=3 showed the following usages:

<b>(upper table)</b>	<b>Name</b>	<b>Usage</b>
Recipe	BRecipe_C	24,000.00 grs

<b>(lower table)</b>	<b>Type</b>	<b>Setting</b>	<b>Usage</b>
REG_3	Regrind	24.0	5,760.00 grs
REG_4	Regrind	24.0	5,760.00 grs
NAT_3	Natural	100	12,000.00 grs
ADD_3	Additive	4.0	480.00 grs

The controller usage values are the total of the usage values for both recipes. For example, for component 1 of blender id=3, 27,900 controller usage after BRecipe\_3 only 5,760 usage in BRecipe\_C from View Blender above 33,660 controller usage after BRecipe\_3 and BRecipe\_C

27. Use Reports/Material Usage option, limiting by Blender/Nothing/Nothing and Retrieval Time/Nothing/Nothing and print the two reports.

The report by Blender/Nothing/Nothing showed the usage of each material combining time intervals and separating blenders:

<b>Blender</b>	<b>Material Code</b>	<b>Usage (Grams)</b>
-----		
1	ADD_1	1,120.00
	COL_1	1,680.00
	COL_2	400.00
	NAT_1	28,000.00
	NAT_3	10,000.00
	REG_1	25,200.00
	REG_2	9,600.00
	Sub Total	76,000.00
-----		
3	ADD_1	1,856.90
	ADD_2	1,236.90
	ADD_3	480.00
	NAT_1	2,817.90
	NAT_2	28,179.00
	NAT_3	12,000.00
	REG_1	27,900.00
	REG_3	5,760.00
	REG_4	5,760.00
	Sub Total	85,990.70
-----		
	Grand Total:	161,990.70

The report by Retrieval Time/Nothing/Nothing showed the usage of each material combining blenders and separating time intervals:

<b>Time</b>	<b>Material Code</b>	<b>Usage (Grams)</b>
-----		
0:00-9:40	ADD_1	99.90
	ADD_2	39.90
	COL_1	60.00
	NAT_1	1,090.90
	NAT_2	909.00
	REG_1	1,800.00
	Sub Total	3,999.70



9:40-14:40	ADD_1	2,877.00
	ADD_2	1,197.00
	COL_1	1,620.00
	NAT_1	29,727.00
	NAT_2	27,270.00
	REG_1	51,300.00
	Sub Total	113,991.00
14:40-15:40	ADD_3	480.00
	COL_2	400.00
	NAT_3	22,000.00
	REG_2	9,600.00
	REG_3	5,760.00
	REG_4	5,760.00
	Sub Total	44,000.00
	Grand Total:	161,990.70

Again the reports show usage values which verify that the software data correctly matches the data of the controller.

## **Send Technical Support Request To:**

**Your local distributor**

**OR**

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