

## Calibration restore for Series 5 J157-J257-J357 & J457 Refractometers

# Note: There are software fixes starting after version XXXXX which will

#### **Purpose:**

To restore the Refractometers calibrations back to factory defaults.

#### Symptoms:

There are <u>5 major symptoms</u> that will indicate a factory restore is needed:

- 1. The Sample Quality Indicator will not reach the "Good" level or above 80%
- 2. The Sample Quality Indicator is frozen whether a sample is loaded on the prism or not. The sample quality Indicator could be frozen anywhere from 0% to 100%
- 3. The Sample Quality Indicator is fluctuating erratically and will never stabilize.
- 4. The Live Reading or displayed measurements will not stabilize with or without a sample applied to the prism.
- 5. The Live Reading or displayed measurement will be frozen at a random value or always display the value for water.

#### **Important Notes:**

Depending on the model of refractometer and software revision level, there are different locations for restoring the factory calibrations. This document will show how to restore the calibrations for all software revision levels and models except the J47 and J57 models. See the chart below to determine which steps you need to follow depending on the model and software revision level:

## Software Revision level is located in MENU 123 / SYSTEM INFORMATION / SYSTEM STATUS

## All J157 – J257 – J357 models:

- 1. Software revision level 5.1.6.0 and higher starts on page 2.
- 2. Software version level before 5.1.6.0 starts on page 7.

## J457 models only:

- 1. Software revision level 4.1.6.0 and higher starts on page 2.
- 2. Software revision levels from 2.6.2.0 to 4.1.5.0 starts on page 7.
- 3. Software revision levels before 2.6.2.0, please contact RRA.

## Quick over view:

There are 3 steps outlined in more detail below for restoring the Refractometers factory calibrations.

- 1. Restore the Factory Two Point Calibration
- 2. Restore the Measurement Status Monitor
- 3. Perform a new Air Calibration



Detailed instructions: J457 after SW version 4.1.6.0: J157 – J257 – J357 after SW version 5.1.6.0:

1. Press MENU, the factory default password is 123.

≈F ≈F	RUDOLPH RESEARCH ANALYTICAL	_		Disk Prote	ction OFF	J	Friday, 457	10/21/2016 18:44:42 <b>?</b>
Sa	Smart Measu Timeout due f Measurement Qu Please load sam mple Quality :	U <b>Te™</b> to µality nple.					Þ	Start
Poo		Good	Method: Refr	act Index 20 Sm	art Disp	Refractive Inde	×	Zero
Liv Sa	ve Reading Imple Temp		 0°C	Stats. SD Response	Time	0.00000 2 Secs		Menu
Se St	et Temp ats. Avg	20.0 0.00	0°C 000	Refract Ind Brix		-, -,		Data
n 0	Average Std 0.00000 0.00	.Dev. % RSD	Max 0.00000	Min 0.00000	🗲 Accep	ot 💥 Clear	r 🞑	<b>\$</b>
S.No	Sample ID	Date	Time	Measurement	Scale	Temperature		
								Methods

2. Select CALIBRATION





3. Select FACTORY RESTORE



4. Select RESTORE FACTORY TWO POINT CALIBRATION



- 5. Press ZERO, the values should change to M=1 and B=0, see below. To save:
  - a. Option 1: After ZERO is performed, press CANCEL to exit this screen.
  - b. Option 2: After ZERO is performed, press SAVE to exit this screen.



Option 2

Restore m & b			Ê	?	Restore m & b				?
	m	1				m	0.9987757		
	b	0				b	0.001669498		
	Car	ncel <b>()</b> Zero	<b>,</b>				Cancel F Save	ß	



6. Select RESTORE FACTORY MEASUREMENT STATUS MONITOR



7. You will be asked if you really want to restore. Select YES.

Message	
Do you really want to restore?	
Yes No	



8. Last we will perform a new AIR Calibration. Select ZERO

RUDOLPH RESEARCH ANALYTICAL		Disk Protection OFF	J457	Friday, 10/21/2016 18:44:42
Sample Quality :	rem lity le.		•	► Start
	Good Method: Refr	act Index 20 Smart Disp	Refractive Index	O Zero
Live Reading Sample Temp	 20.00°C	Stats. SD Response Time	0.00000 2 Secs	🔗 Menu
Set Temp Stats. Avg	20.00°C 0.00000	Refract Ind Brix	-,	🥮 Data
n Average Std.D 0 0.00000 0.0000 S.No Sample ID	lev.  % RSD   Max 00 0.00 0.00000 Date   Time	Min 0.00000 C Acc Measurement Scale	ept Clear Temperature	
				Methods

9. Select AIR





10. Make sure the Refractometer Prism is very clean, dry and covered. Press CONTINUE



11. After Pressing continue, the calibration for air will take approximately 25 seconds.

Please Wait 24 secs

12. Press OK when completed. The factory calibrations will now be completely restored.





#### Detailed instructions: J457 with SW from 2.6.2.0 to 4.1.5.0: J157 – J257 – J357 with SW earlier than 5.1.6.0

**1.** Press MENU, the factory default password is 123.

RESEARCH ANALYTICAL		Disk Protection OFF	J457	Friday, 10/21/2016 18:44:42 7
Smart Measur Timeout due to Measurement Qua Please load samp Samplo Quality :	rem lity le.			▶ Start
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Live Reading           Sample Temp           Set Temp           Stats. Avg           n         Average           0         0.00000           S.No         Sample ID	20.00°C     20.00°C     0.00000  ev. % RSD Max 00 0.00 0.0000 Date Time	Stats. SD Response Time Refract Ind Brix Min 0 0.00000 C Accel	0.00000 2 Secs   pt X Clear Temperature	Menu Data



2. Select SERVICE SETTINGS, the default password is 519



3. Select BACKUP AND RESTORE.





4. Select CALIBRATION



5. Select RESTORE M & B



6. Press ZERO, the values should change to M=1 and B=0, see below. After M=1 and B=0, press CANCEL to exit this screen.





7. Select RESTORE MQC



8. You will be asked if you really want to restore. Select YES.

Message
Do you really want to restore?
Yes 🐼 No



9. Last we will perform a new AIR Calibration. Select ZERO

₩ RUDOLF	M TH TAL			Disk Prote	ction OFF	J4	Friday, 1 57	0/21/2016 18:44:42 <b>?</b>
Smart Me Timeout ( Measuremen Please load	asure <sup>1</sup> due to nt Quality sample.	м				•	►	Start
Poor		Good	ethod: Refr	act Index 20 Sm	nart Disp	Refractive Index	0	Zero
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Set Temp Stats. Avg		20.00° 20.00° 0.0000	C 0	Refract Ind Brix		-,		Data
n Average 0 0.00000	Std.Dev. 0.00000	% RSD 0.00	Max 0.00000	Min 0.00000	🗲 Acce	ept 🗙 Clear	à	5
S.No Sample II		Date	Time	Measurement	Scale	Temperature		4
								Methods

10. Select AIR





11. Make sure the Refractometer Prism is very clean, dry and covered. Press CONTINUE



12. After Pressing continue, the calibration for air will take approximately 25 seconds.



13. Press OK when completed. The factory calibrations will now be completely restored.

