

Version: 1.0

**Title- Radwin Function sets -square root** 

Made By: AB 22/09/15 (

(Issue 2)

## Radwin Function sets – how to apply a square root function

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A Customer was having difficulty creating a "seemingly" trivial function set – i.e. simply trying to square root some data.

As shown below: the customer had added the location and particular channel desired, and then added a second line for power raised to one half in order to obtain the square root.

The second screenshot shows the result of running the function set...the square root of 4.225 is definitely not 0.604!

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ction Sets		🔘 Setup	-
G 1031 : CT#1 Shaft Caps [13, G 1032 : CT#2 Shaft Caps-1 [3	19, 21] A. 4A, 6A, 7A, 8A, 9A, 11A]	Search	5
1033 : CT#2 Shaft Caps-2 [1	2A, 13A, 14A, 17A]	Tonics LiGogich Results	_
S 1034 : Function Set Con	figuration 8803 : Radwin All		- 22
2001 : Configure:	- Flements - Fi mytion sets may be used	n combine data, evoluti data, and create graphs, Locations	
2203 : Saic	are included by selecting the 'Location'	button and selecting a location. Likewise, existing function	
3001 : Radwin All			_
02 : 🔀 Data Genera	tor Elements   Function Output   Auto Generate E	ata   View Data   Memo   Statistics   tion	1
04 :	Identity: 0000 Name: 0	B Flow (Squareroot Function) Expand Fn Elements configuration package of	
038 :	Add Object	Edit Object Vindows It provides the	
168 :	Location Function C	nstant Edt Delete	
096 ;	Operator Item Cha	nel Lookup Graph Name Started	
B8 :	1 + 🔂 _03308 🏠	🔛 Dat 🛛 Tunnel No.3, Sh	
1118 :	2 pwr 🐓 0.500000	path MUST be specified for fore data. This may be on the	
28 I	and the second	more commonly on a shared	
8 I		commended that the database	
3158 :		ind sub folders are regularly	
3 3TFL :		o prevent loss of data in case of indware failure.	
4002 :	-		
03 :		Save Cancel Configuration	
5 : New Clove Pump Statis	on Total Flow		
6 : Douglaston Pump Stat	on Total Pumped Low Plow(Q7)	Menu - Options/ System Configuration	
007 : Douglaston Pump Stati 208 : New Clove Pump Stati	on Total Pumped Intermediate Flow(Q8)	The system configuration provides the	
4009 : New Clove Pump State	on High Flow(R09)	Complete configuration for Radlog for	
010 : Hillview Total Flow min	us Richmond Flow(Max/Min)		
		This may also be newed on a per Radwin annihilation hasis (ac available within each	
g abus : ab How (Squareroot P	Contract Contract		
BB Flow (Squareroot Function)	UK Callel	Logger Time: 02/26/2013 18:54:20 NUM	





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HWM Confirms 0.5 will perform a square root correctly. However, using numeric operations in function sets must be done with caution. The data is created as base unit data, in this case gallons/sec, and the maths operations will be performed in these gallons/sec base units. Unit conversions to units other than base units are applied to the data <u>after</u> the square root has been applied.

i.e. to change the values from the base unit gallons/sec to million gallons/day a factor of 86400/1000000 will be applied to both the original gallons/sec data and the square root gallons/sec data to produce the million gallons/day graphs. Therefore the gallons/sec square root data will display as the square root of the original data, but when both are converted to million gallons/day the function set data will no longer have a direct square root relationship to the original data.

## **Document History:**

Edition	Date of Issue	Modification	Notes
1st	27/02/13	Release	
2nd	22/09/15	Format update	