

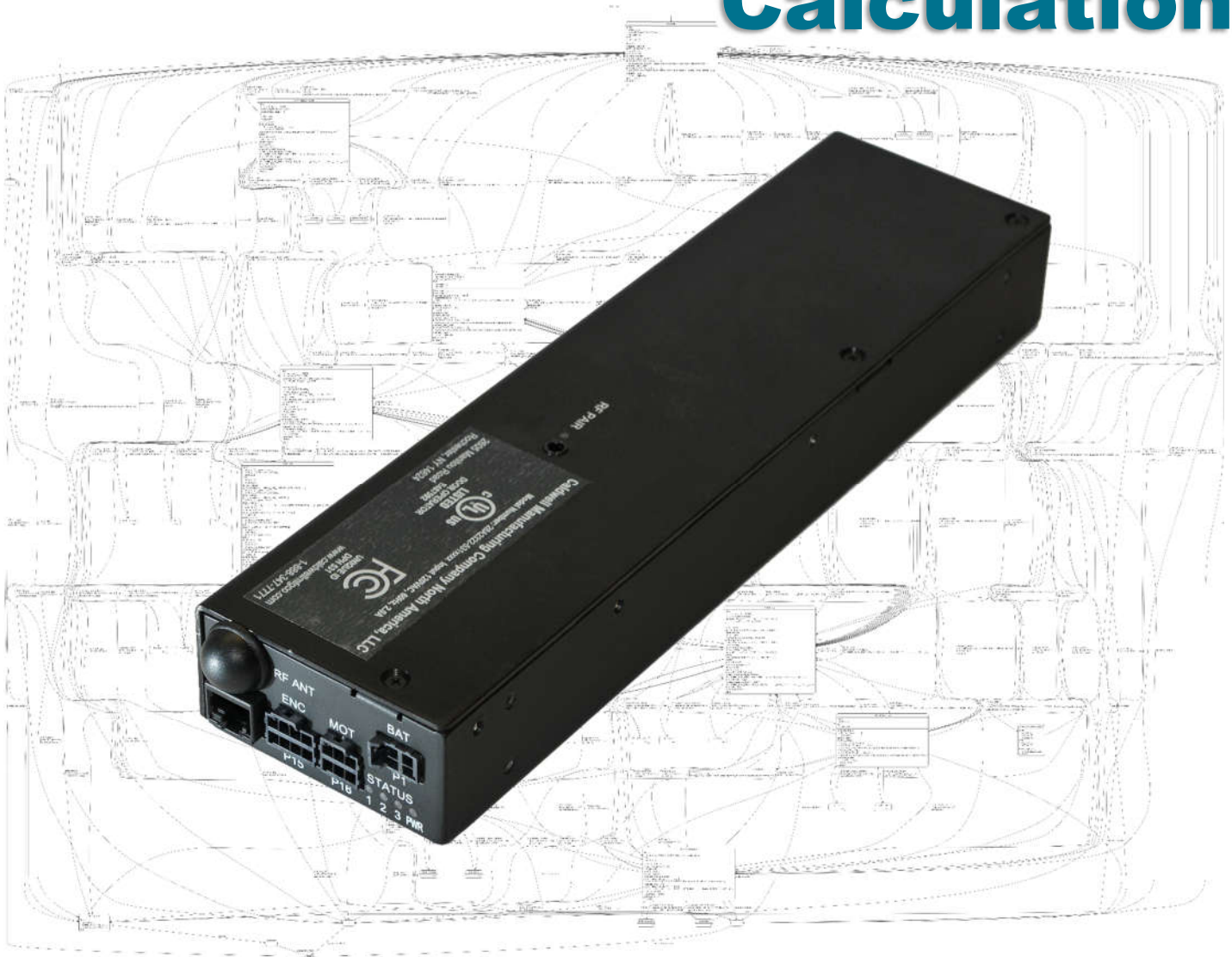
Generation 3 Controller Advanced Programming Guide

Technical Brief

March 24, 2021

v1.0.5

Pulley Diameter Calculation



INNOVATION

A Caldwell Company

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

If you READ nothing else, read this...

- Prior to installing an INMOTION G3 system verify the mechanical installation is 100% operational.
 - All panels move smoothly, without excessive force required at all points across the span
 - The frame is square & plumb, and the lead panel meets the jam evenly top to bottom.
 - All required weather stripping is installed properly and not binding during panel movement.
 - Panels are NOT warped, and panel pickups release and operate smoothly without issues.
 - Interlocks engage and disengage properly without dragging extra panels etc.
 - In a nutshell the door should be at its mechanical “best” before automation is installed
- NEVER leave a door running on a Cycle Test unattended...even for a minute, unless it is in a controlled environment completely void of people and pets.
- DO NOT experiment with commands you find in this guide unless you know what you are doing or have been directed to do so by a trained factory representative.
- Remember the G3 has been certified by UL to be safe, but that only applies if it has been installed safely by the installer.
- If you have any question or concerns, please consult the factory.
- Remember INMOTION offers free training, year-round, all you have to do is ask.

About this Guide...

This guide documents the more advanced options and features of the G3 Controller by INMOTION. It covers the G3 Controller with v0.7.0 or later firmware. This release added 4 “special feature” modes besides the “normal” mode present in the previous release. In addition, there is a cycle test option available to integrators and installers that can exercise the G3 while running any of the 5 supported modes for testing, option enabling or tuning.

When the G3 first boots, it is operating at the “user” level, and no password is required. In this mode, all commands to operate the door must come from wired or wireless accessories such as wall switches and remotes or from a home automation system wired into the wall switch circuit.

To access any of the advanced mode options, called modifiers, a password is required. The password entered will set the user level. The current user / password level can be checked at any time by entering the command “**pwd**” or “**p**” on the CLI. The current level will be displayed on the CLI.

In this guide each page will indicate what user level is required for the given command or function by the graphic shown. A checkmark next to the various levels indicate which user levels can call or modify the command or function documented.

Installers have access to the User, Installer and Developer levels by entering the appropriate password. The difference between the Installer and Developer levels is that some commands change such that the Installer level will not accidentally erase critical door programming information causing more work than necessary. If an installer needs to access one these protected commands, they only need to change to the Developer level to perform the task. For general and advanced programming, the Installer password will work for 99% of the tasks required.

Supported User Levels

<input checked="" type="checkbox"/>	User
<input checked="" type="checkbox"/>	Installer
<input checked="" type="checkbox"/>	Developer
<input checked="" type="checkbox"/>	Factory

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

CLI Password Access

Supported User Levels

- ☒ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

Starting with the “Special Features” v0.7.0 firmware release, the G3 controller requires unique passwords for each controller. This is due a California law, as of Jan 1, 2020, requiring minimum security for IoT devices. To address this change, the G3 utilizes its unique serial number as part of the password. Once programmed at the factory, this new password scheme is activated. The previous release supported 2 password levels for access to the CLI. Those being “Installer” and “Developer” and they were the same for all G3’s running v0.6.7 firmware. If you memorized those passwords, then the new password mechanism will not take too much effort.

The previous passwords for firmware v0.6.7 were:

User:	“0”	// Rarely used as it’s the default at boot
Installer:	“pwd1”	
Developer:	“IM1635”	

The new passwords use the same characters as before but with different numbers at the end.

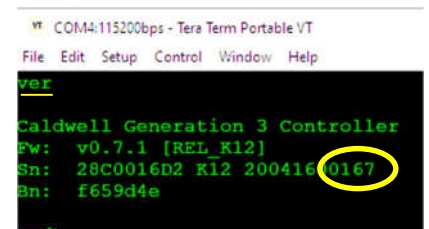
User:	“0”	// Did not change from v0.6.7
Installer:	“pwdXXXX”	// Replace the “XXXX” with the last 4 digits of the serial number
Developer:	“IMXXXX”	// Replace the “XXXX” with the last 4 digits of the serial number

Note: Entering an incorrect password, immediately puts the controller into “user” mode or minimum access.

As shown above adding the last 4 digits of the G3’s serial number will allow the installer to determine the password and access the G3’s CLI at the required user level. The serial number can be found on a sticker affixed to the back of the controller itself.



If for some reason the label is unreadable or missing, then the serial number must be obtained from the CLI using the “**ver**” or “**info**” commands. Both the password (**pwd**) and version (**ver**) commands are supported at boot (user level).



G3 VERSION COMMAND

After obtaining the serial number, the password can be entered in the CLI using the password command “**pwd**” or “**p**” for short.

Installer:	pwd pwd0167	// Installers should use this one
Developer:	pwd IM0167	// Only use if needed or when directed to do so by the factory

```
cmd>pwd pwd0167
Level = 1 (Installer)
cmd>
```

```
cmd>pwd IM0167
Level = 2 (Developer)
cmd>
```

* Passwords will auto-expire after 30 minutes regardless of CLI activity. This timeout can be extended by issuing the “**pwd**” or its abbreviation “**p**” (just the command, no password needs to follow)

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

- To make the measurement to an even “inch” mark, lay a tape measure out first, aligned with the correct edge of the tape, all the way back to the full open position. Then manually push Panel 1 until the rear edge lines up to an inch mark on the tape measure and record the distance.

5. DO NOT MOVE THE DOOR.

6. Get doors encoder position from the CLI using the command “ap” (Actual Position)

```
cmd>ap // Get position in encoder counts
5378 // Record the Encoder Count
```

7. Use the distance recorded earlier and the encoder count from above to calculate the pulley diameter:

$$pdia = \frac{Distance}{EncoderCounts} \times 76.3944$$

Example:
Distance: 172.25"
Encoder: 5378

$$pdia = \frac{172.25}{5378} \times 76.3944$$
$$pdia = 2.4468$$

8. Set your new pulley diameter with the “pdia” command

```
cmd>c pdia 2.4468 // Set the pulley diameter (use your value)
OK: 2.4468 // New pulley diameter has been set
```

9. Reprogram the door with the corrected pulley diameter. The CLI “pos” should now report panel 1’s distance from the jam to within ½” of the actual measured distance across the span.

```
cmd>pos // Reports the panel position in inches
OK: 75.46 // This should match the measured opening
* If this is a bipart, the opening is from center span.
```

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

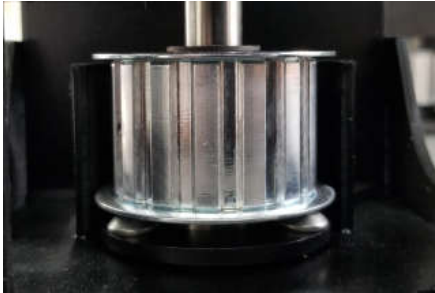
Tech Brief – Pulley Diameter Calculation

Alternate Pulley Diameters

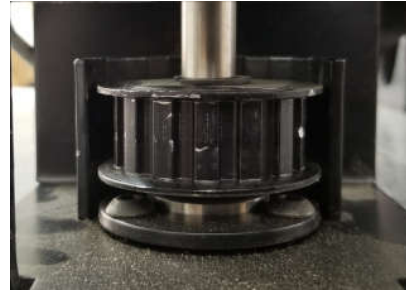
If a G3 System is purchased new from the factory there should be no reason to change the pulley diameter. If however, a G3 controller is matched up with an older INMOTION motor stack with the short “black” pulley, reported distances from several commands can be improved by using a corrected value of **1.7934** inches.

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory



Current Silver OEM Pulley (Default: 1.7988")



Previous Black OEM Pulley (Change to 1.7934")

Other Pulleys

Some dealers use our motors and change the OEM pulley to either gain speed or torque. If this is done, the “**pdia**” parameter for G3 must be updated to reflect the change for the embedded algorithms to function properly. We have found the G3 controller operates best if the pulley diameter is calculated instead of relying on the manufacturer’s mechanical specifications.

Pulley Diameter Calculation (ONLY NEEDED IF PULLEY IS NOT OEM)

Prerequisites: G3 Controller is programmed with at least the encoder polarity correct.

G3 belt must be properly tensioned.

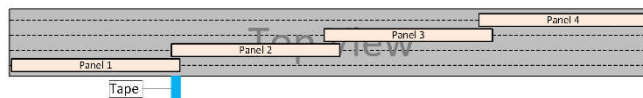
Tools: Tape measure, pencil and/or tape.

G3 debug cable or Bluetooth access to the CLI.

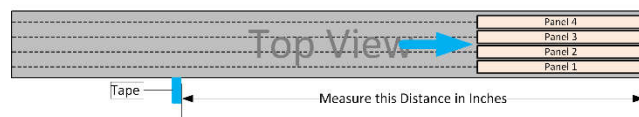
1. Make sure the door is in jam. Then power cycle or reset the controller with “rst 0”

```
cmd>rst 0 // Reboot the controller
cmd>p pwd1234 // After booting, enter the password
```

2. Using a piece of tape or a pencil, mark the rear edge of the lead panel on the frame or floor. The mark should line up with edge of the panel exactly.



3. Open the door manually or electrically to the widest position that will still allow you to measure from the tape to the rear edge of panel 1. If the door is pocketing, its ok to leave it out of the pocket.
4. With the door open, measure the distance from the tape to the rear edge of panel 1. *Record the number of inches Panel 1 moved including any fractions.*



G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Supported User Levels

- ☒ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

pdia (Pulley Diameter)

Syntax: config pdia [VALUE]
Abbreviation: c pdia
Range/Units: 0.5 – 4.5 inches
Default: 1.7998 inches (for current OEM tall silver pulley)



Command Description

This command allows the G3 controller to adapt to a different pulley size, in the rare circumstance where the pulley installed is not the original OEM pulley from INMOTION. The G3 controller uses the pulley diameter for several internal algorithms to calculate panel velocity and distances. UL 325 and “Soft Touch” depend on it and its very important that the value is correct.

Parameter Protection

Due to the critical nature of this parameter, it has some built in protection from accidental changes while performing other operations.

- config all reset: Will not change this parameter's value.
- rst 2: Will not change this parameter's value. (Wipe for Reprogram)

Terminal Output

```
cmd>c pdia
1.7988 // This is the diameter of the current OEM pulley

cmd>c pdia 4 // Set the pulley diameter to 4.0000"
OK: 4.0000

cmd>c pdia reset // Reset the pulley diameter to factory default
1.7988
```

References

pwd Requires a minimum user level of “Installer”
rst Reset command
Appendix B Inch position to Encoder count conversion table.
Tech Brief Pulley Diameter Calculation

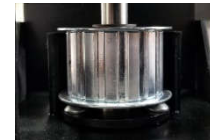
G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Appendix B: Span To Encoder Count


Silver Motor Pulley


Verify span, encoder count and belt tension. Compare, “pos” to encoder count, “ap” using the tables below. Requires the door type, “c drtp” to be set to “oneway” or “bipart”. For spans up to 33’.



Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

		PDIA	1.7988		SILVER		ONEWAY		F E E T										*Pulley diameter from G3 INMOTION Tall Silver pulley									
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16										
INCHES	0	0	510	1019	1529	2038	2548	3058	3567	4077	4587	5096	5606	6115	6625	7135	7644	8154	0									
	1	42	552	1062	1571	2081	2591	3100	3610	4119	4629	5139	5648	6158	6668	7177	7687	8196	1									
	2	85	595	1104	1614	2123	2633	3143	3652	4162	4672	5181	5691	6200	6710	7220	7729	8239	2									
	3	127	637	1147	1656	2166	2676	3185	3695	4204	4714	5224	5733	6243	6753	7262	7772	8281	3									
	4	170	679	1189	1699	2208	2718	3228	3737	4247	4756	5266	5776	6285	6795	7305	7814	8324	4									
	5	212	722	1232	1741	2251	2760	3270	3780	4289	4799	5309	5818	6328	6837	7347	7857	8366	5									
	6	255	764	1274	1784	2293	2803	3313	3822	4332	4841	5351	5861	6370	6880	7390	7899	8409	6									
	7	297	807	1317	1826	2336	2845	3355	3865	4374	4884	5394	5903	6413	6922	7432	7942	8451	7									
	8	340	849	1359	1869	2378	2888	3397	3907	4417	4926	5436	5946	6455	6965	7474	7984	8494	8									
	9	382	892	1401	1911	2421	2930	3440	3950	4459	4969	5478	5988	6498	7007	7517	8027	8536	9									
	10	425	934	1444	1954	2463	2973	3482	3992	4502	5011	5521	6031	6540	7050	7559	8069	8579	10									
11	467	977	1486	1996	2506	3015	3525	4035	4544	5054	5563	6073	6583	7092	7602	8112	8621	11										
		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33										
INCHES	0	8664	9173	9683	10192	10702	11212	11721	12231	12741	13250	13760	14269	14779	15289	15798	16308	16818	0									
	1	8706	9216	9725	10235	10745	11254	11764	12273	12783	13293	13802	14312	14822	15331	15841	16350	16860	1									
	2	8749	9258	9768	10277	10787	11297	11806	12316	12826	13335	13845	14354	14864	15374	15883	16393	16903	2									
	3	8791	9301	9810	10320	10830	11339	11849	12358	12868	13378	13887	14397	14906	15416	15926	16435	16945	3									
	4	8833	9343	9853	10362	10872	11382	11891	12401	12910	13420	13930	14439	14949	15459	15968	16478	16987	4									
	5	8876	9386	9895	10405	10914	11424	11934	12443	12953	13463	13972	14482	14991	15501	16011	16520	17030	5									
	6	8918	9428	9938	10447	10957	11467	11976	12486	12995	13505	14015	14524	15034	15544	16053	16563	17072	6									
	7	8961	9471	9980	10490	10999	11509	12019	12528	13038	13547	14057	14567	15076	15586	16096	16605	17115	7									
	8	9003	9513	10023	10532	11042	11551	12061	12571	13080	13590	14100	14609	15119	15628	16138	16648	17157	8									
	9	9046	9555	10065	10575	11084	11594	12104	12613	13123	13632	14142	14652	15161	15671	16181	16690	17200	9									
	10	9088	9598	10108	10617	11127	11636	12146	12656	13165	13675	14185	14694	15204	15713	16223	16733	17242	10									
11	9131	9640	10150	10660	11169	11679	12188	12698	13208	13717	14227	14737	15246	15756	16265	16775	17285	11										

		PDIA	1.7988	SILVER		BIPART		F E E T											*Pulley diameter from G3 INMOTION Tall Silver pulley				
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16					
INCHES	0	0	255	510	764	1019	1274	1529	1784	2038	2293	2548	2803	3058	3313	3567	3822	4077	0				
	1	21	276	531	786	1040	1295	1550	1805	2060	2315	2569	2824	3079	3334	3589	3843	4098	1				
	2	42	297	552	807	1062	1317	1571	1826	2081	2336	2591	2845	3100	3355	3610	3865	4119	2				
	3	64	319	573	828	1083	1338	1593	1847	2102	2357	2612	2867	3121	3376	3631	3886	4141	3				
	4	85	340	595	849	1104	1359	1614	1869	2123	2378	2633	2888	3143	3397	3652	3907	4162	4				
	5	106	361	616	871	1125	1380	1635	1890	2145	2399	2654	2909	3164	3419	3674	3928	4183	5				
INCHES	6	127	382	637	892	1147	1401	1656	1911	2166	2421	2676	2930	3185	3440	3695	3950	4204	6				
	7	149	403	658	913	1168	1423	1678	1932	2187	2442	2697	2952	3206	3461	3716	3971	4226	7				
	8	170	425	679	934	1189	1444	1699	1954	2208	2463	2718	2973	3228	3482	3737	3992	4247	8				
	9	191	446	701	956	1210	1465	1720	1975	2230	2484	2739	2994	3249	3504	3758	4013	4268	9				
	10	212	467	722	977	1232	1486	1741	1996	2251	2506	2760	3015	3270	3525	3780	4035	4289	10				
	11	234	488	743	998	1253	1508	1762	2017	2272	2527	2782	3037	3291	3546	3801	4056	4311	11				
INCHES		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33					
	0	4332	4587	4841	5096	5351	5606	5861	6115	6370	6625	6880	7135	7390	7644	7899	8154	8409	0				
	1	4353	4608	4863	5117	5372	5627	5882	6137	6392	6646	6901	7156	7411	7666	7920	8175	8430	1				
	2	4374	4629	4884	5139	5394	5648	5903	6158	6413	6668	6922	7177	7432	7687	7942	8196	8451	2				
	3	4396	4650	4905	5160	5415	5670	5924	6179	6434	6689	6944	7198	7453	7708	7963	8218	8472	3				
	4	4417	4672	4926	5181	5436	5691	5946	6200	6455	6710	6965	7220	7474	7729	7984	8239	8494	4				
	5	4438	4693	4948	5202	5457	5712	5967	6222	6476	6731	6986	7241	7496	7751	8005	8260	8515	5				
	6	4459	4714	4969	5224	5478	5733	5988	6243	6498	6753	7007	7262	7517	7772	8027	8281	8536	6				
	7	4480	4735	4990	5245	5500	5754	6009	6264	6519	6774	7029	7283	7538	7793	8048	8303	8557	7				
	8	4502	4756	5011	5266	5521	5776	6031	6285	6540	6795	7050	7305	7559	7814	8069	8324	8579	8				
	9	4523	4778	5033	5287	5542	5797	6052	6307	6561	6816	7071	7326	7581	7835	8090	8345	8600	9				
	10	4544	4799	5054	5309	5563	5818	6073	6328	6583	6837	7092	7347	7602	7857	8112	8366	8621	10				
11	4565	4820	5075	5330	5585	5839	6094	6349	6604	6859	7113	7368	7623	7878	8133	8388	8642	11					

800-426-7113

Technical Document Number: n/a

Rev. 1.0.5

2021-03-24


G3 Advanced Programming Guide


Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Black Motor Pulley

Verify span, encoder count and belt tension. Compare, “pos” to encoder count, “ap” using the tables below. Requires the door type, “c drtp” to be set to “oneway” or “bipart”. For spans up to 33’.



		PDIA	1.7934	BLACK	BIPART	F E E T													*Pulley diameter from G3 INMOTION Short Black pulley													
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16														
INCHES	0	0	256	511	767	1022	1278	1534	1789	2045	2300	2556	2811	3067	3323	3578	3834	4089	0													
	1	21	277	532	788	1044	1299	1555	1810	2066	2322	2577	2833	3088	3344	3600	3855	4111	1													
	2	43	298	554	809	1065	1321	1576	1832	2087	2343	2598	2854	3110	3365	3621	3876	4132	2													
	3	64	319	575	831	1086	1342	1597	1853	2109	2364	2620	2875	3131	3387	3642	3898	4153	3													
	4	85	341	596	852	1108	1363	1619	1874	2130	2385	2641	2897	3152	3408	3663	3919	4175	4													
	5	106	362	618	873	1129	1384	1640	1896	2151	2407	2662	2918	3174	3429	3685	3940	4196	5													
	6	128	383	639	895	1150	1406	1661	1917	2172	2428	2684	2939	3195	3450	3706	3962	4217	6													
	7	149	405	660	916	1171	1427	1683	1938	2194	2449	2705	2961	3216	3472	3727	3983	4239	7													
	8	170	426	682	937	1193	1448	1704	1960	2215	2471	2726	2982	3237	3493	3749	4004	4260	8													
	9	192	447	703	958	1214	1470	1725	1981	2236	2492	2748	3003	3259	3514	3770	4026	4281	9													
	10	213	469	724	980	1235	1491	1747	2002	2258	2513	2769	3024	3280	3536	3791	4047	4302	10													
11	234	490	745	1001	1257	1512	1768	2023	2279	2535	2790	3046	3301	3557	3813	4068	4324	11														
		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33														
INCHES	0	4345	4601	4856	5112	5367	5623	5879	6134	6390	6645	6901	7156	7412	7668	7923	8179	8434	0													
	1	4366	4622	4877	5133	5389	5644	5900	6155	6411	6667	6922	7178	7433	7689	7945	8200	8456	1													
	2	4388	4643	4899	5154	5410	5666	5921	6177	6432	6688	6943	7199	7455	7710	7966	8221	8477	2													
	3	4409	4664	4920	5176	5431	5687	5942	6198	6454	6709	6965	7220	7476	7732	7987	8243	8498	3													
	4	4430	4686	4941	5197	5453	5708	5964	6219	6475	6730	6986	7242	7497	7753	8008	8264	8520	4													
	5	4451	4707	4963	5218	5474	5729	5985	6241	6496	6752	7007	7263	7519	7774	8030	8285	8541	5													
	6	4473	4728	4984	5240	5495	5751	6006	6262	6517	6773	7029	7284	7540	7795	8051	8307	8562	6													
	7	4494	4750	5005	5261	5516	5772	6028	6283	6539	6794	7050	7306	7561	7817	8072	8328	8583	7													
	8	4515	4771	5027	5282	5538	5793	6049	6305	6560	6816	7071	7327	7582	7838	8094	8349	8605	8													
	9	4537	4792	5048	5303	5559	5815	6070	6326	6581	6837	7093	7348	7604	7859	8115	8371	8626	9													
	10	4558	4814	5069	5325	5580	5836	6092	6347	6603	6858	7114	7369	7625	7881	8136	8392	8647	10													
11	4579	4835	5090	5346	5602	5857	6113	6368	6624	6880	7135	7391	7646	7902	8158	8413	8669	11														

		PDIA	1.7934		BLACK		ONEWAY		F E E T		*Pulley diameter from G3 INMOTION Short Black pulley									
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
INCHES	0	0	511	1022	1534	2045	2556	3067	3578	4089	4601	5112	5623	6134	6645	7156	7668	8179	0	
	1	43	554	1065	1576	2087	2598	3110	3621	4132	4643	5154	5666	6177	6688	7199	7710	8221	1	
	2	85	596	1108	1619	2130	2641	3152	3663	4175	4686	5197	5708	6219	6730	7242	7753	8264	2	
	3	128	639	1150	1661	2172	2684	3195	3706	4217	4728	5240	5751	6262	6773	7284	7795	8307	3	
	4	170	682	1193	1704	2215	2726	3237	3749	4260	4771	5282	5793	6305	6816	7327	7838	8349	4	
	5	213	724	1235	1747	2258	2769	3280	3791	4302	4814	5325	5836	6347	6858	7369	7881	8392	5	
	6	256	767	1278	1789	2300	2811	3323	3834	4345	4856	5367	5879	6390	6901	7412	7923	8434	6	
	7	298	809	1321	1832	2343	2854	3365	3876	4388	4899	5410	5921	6432	6943	7455	7966	8477	7	
	8	341	852	1363	1874	2385	2897	3408	3919	4430	4941	5453	5964	6475	6986	7497	8008	8520	8	
	9	383	895	1406	1917	2428	2939	3450	3962	4473	4984	5495	6006	6517	7029	7540	8051	8562	9	
10	426	937	1448	1960	2471	2982	3493	4004	4515	5027	5538	6049	6560	7071	7582	8094	8605	10		
11	469	980	1491	2002	2513	3024	3536	4047	4558	5069	5580	6092	6603	7114	7625	8136	8647	11		
INCHES		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33		
	0	8690	9201	9712	10224	10735	11246	11757	12268	12779	13291	13802	14313	14824	15335	15846	16358	16869	0	
	1	8733	9244	9755	10266	10777	11288	11800	12311	12822	13333	13844	14356	14867	15378	15889	16400	16911	1	
	2	8775	9286	9798	10309	10820	11331	11842	12353	12865	13376	13887	14398	14909	15420	15932	16443	16954	2	
	3	8818	9329	9840	10351	10862	11374	11885	12396	12907	13418	13930	14441	14952	15463	15974	16485	16997	3	
	4	8860	9372	9883	10394	10905	11416	11927	12439	12950	13461	13972	14483	14994	15506	16017	16528	17039	4	
	5	8903	9414	9925	10437	10948	11459	11970	12481	12992	13504	14015	14526	15037	15548	16059	16571	17082	5	
	6	8946	9457	9968	10479	10990	11501	12013	12524	13035	13546	14057	14569	15080	15591	16102	16613	17124	6	
	7	8988	9499	10011	10522	11033	11544	12055	12566	13078	13589	14100	14611	15122	15633	16145	16656	17167	7	
	8	9031	9542	10053	10564	11075	11587	12098	12609	13120	13631	14143	14654	15165	15676	16187	16698	17210	8	
	9	9073	9585	10096	10607	11118	11629	12140	12652	13163	13674	14185	14696	15207	15719	16230	16741	17252	9	
	10	9116	9627	10138	10649	11161	11672	12183	12694	13205	13717	14228	14739	15250	15761	16272	16784	17295	10	
11	9159	9670	10181	10692	11203	11714	12226	12737	13248	13759	14270	14782	15293	15804	16315	16826	17337	11		

800-426-7113

Technical Document Number: n/a

Rev. 1.0.5

2021-03-24



G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

Document Revisions

Revision	Release Date	Description
1.0.0	Sep 22, 2020	Initial release
1.0.1	Oct 2, 2020	Fixed typos in "Soft Touch" Tuning
1.0.2	Nov 19, 2020	Added info on "hard current limit" vs "Soft Touch"
1.0.3	Mar 15, 2021	TLE update with firmware v0.7.2
1.0.4	Mar 22, 2021	Updated TLE Tech Brief
1.0.5	Mar 24, 2021	Fixed some typos & added a recommended command to the TLE docs

G3 Advanced Programming Guide

Part Number(s): 28C0030(G3), 28C0061(RCM), 29C0052(RS485)

G3 Firmware Revisions

Revision	Release Date	Description															
0.7.2 (latest)	Mar 11, 2021	Maintenance release to address "TLE" over-current/temp issue. <ul style="list-style-type: none">• "hfi" help command added for "TLE" issues• Help commands "avi", "maxc" and "acdc" added• Config command "spl" added• "c all reset" updated to preserve "spl" and "hfi" settings• "TLE" over-current/temps counts tracked in flash• G3 LED color code updated• Panel 1 mass increased to 50,000/100,00lbs (Oneway/Bipart)															
0.7.1	Aug 28, 2020	Functionally identical to the v0.7.0 release. Updated 4 parameters to use new defaults. <table><tr><th>Command</th><th>v0.7.1 New Defaults</th><th>v0.7.0 Defaults</th></tr><tr><td>osp</td><td>4.0000 IPS</td><td>4.5000 IPS</td></tr><tr><td>csp</td><td>4.0000 IPS</td><td>4.5000 IPS</td></tr><tr><td>fpce</td><td>470mA</td><td>430mA</td></tr><tr><td>fpthr</td><td>10 counts</td><td>5 counts</td></tr></table>	Command	v0.7.1 New Defaults	v0.7.0 Defaults	osp	4.0000 IPS	4.5000 IPS	csp	4.0000 IPS	4.5000 IPS	fpce	470mA	430mA	fpthr	10 counts	5 counts
Command	v0.7.1 New Defaults	v0.7.0 Defaults															
osp	4.0000 IPS	4.5000 IPS															
csp	4.0000 IPS	4.5000 IPS															
fpce	470mA	430mA															
fpthr	10 counts	5 counts															
0.7.0	Aug 21, 2020	"Special Features" release for G3 K12. G3 K02 is not supported. <ul style="list-style-type: none">• Entertainment, Close Behind, Simplicity & Motion Assist modes• UL325 closing force reduced by 35% over v0.6.7• Improved security, delayed mag brake, manual span adjust, etc• Integrated cycle testing• Profile bin resolution increased by 300%.• Cleaner CLI interface optimized for smart phone access															
0.6.7 (K12) 0.5.91(K02)	Dec 3, 2019	Initial production release for G3 supporting basic door functions only using wired & wireless accessories. Processors K02 & K12 supported.															