

# Generation 3 Controller Advanced Programming Guide

March 24, 2021

v1.0.5

## Technical Brief

## Special Features



# INNOTION

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

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## 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.

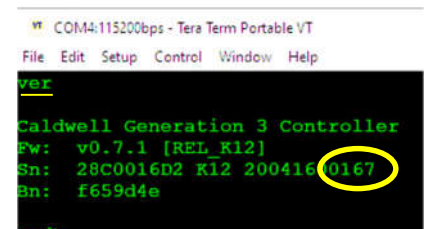
User:	“0”	// Did not change from v0.6.7
Installer:	“pwdXXXX”	// Replace the “XXXX” with the <b>last 4 digits</b> of the serial number
Developer:	“IMXXXX”	// Replace the “XXXX” with the <b>last 4 digits</b> of the serial number

*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 <b>pwd0167</b>	// Installers should use this one
Developer:	pwd <b>IM0167</b>	// 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)

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## Tech Brief – Special Features

Supported User Levels

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

Special features refers to one of four optional modes supported by the G3 Controller. When none of the special features are active the controller operates in Normal mode.

Special Feature modes, including Normal mode, are unique and cannot be combined such as Party Mode + Egress mode. It's one or the other and this includes Normal mode. If one Special Feature is active and another one enabled, it automatically cancels the previous mode and switches to the new one.

Special features alter the operation of a door and differ from “Normal” mode in the way door operations are commanded to open or close. Special features may enable functions that are not available in “Normal” mode. Some special features require optional accessories.

Special features include “Party Mode” (aka Entertainment Mode), “Egress Mode” (aka Close Behind Mode), “One Button Operation” (aka Convenience or ADA Mode) and “Move Assist Mode” (aka Motion Assist Mode).

- **Party Mode:** Automatically opens a door when the door is closed and motion has been detected. After a period of time, the door automatically closes. Party Mode requires at least 1 motion detector or IR beam sensor positioned near the panel 1's opening. For operation from either side of the opening, a motion detection device is required on both sides.
- **Egress Mode:** When an Open command is received from a wall switch or wall switch circuit, the door will open, wait for a period of time, then automatically close.
- **One Button Operation Mode:** When a Stop command is received from a wall switch or wall switch circuit the door will open. When the door is open, the Stop command/button will cause the door to close. If the door is moving, the Stop command/button will stop the door. Operation is similar to automatic garage door systems. A single button “ADA” wall switch can be wired in place of an INMOTION wall switch to provide door control from a single physical button.
- **Move Assist Mode:** Allows operation of a door by manually pushing the lead panel in the desired open or close direction. After a slight movement of approximately ¼”, the controller will engage the motor and move the door to programmed open or close position automatically.

## Special Feature Options for Operators at the Wall Switch

These are options that are available from any wired or wireless wall switch or remote. Wall switch enabling and disabling of Special Feature require the door be fully closed and in the jam. When the feature is enabled, all saved parameters for that feature are restored and the feature is enabled immediately. This differs when Special Feature activation is done from the CLI.

- Enable/Disable any special feature when the door is closed and, in the jam from a wall switch.
- Independent manual adjustment of the opening span for each feature including Normal mode.
- Special Features enabling is persistent and are re-enabled after a power cycle or reboot.
- Wall switch functions are fully operational while special features are enabled.
- Motion detections during close will stop the door for safety.
- “Soft Touch” is enabled for all operations.
- Defaults for Special Features:
  - Opening span: 40 inches
  - Magnetic Brake On Close: Disabled
  - Auto Close Timer: 10 seconds (when enabled)

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## Special Feature Installer Options

These are options can be set by the installer using a CLI terminal over a wired serial connection to the G3 controller, or via Bluetooth BLE if a G3 GPIO RS485 Adapter is attached to the controller. Multiple options are available for each special feature allowing the installer to customize each feature for each installation and customer.

- Magnetic “**brake at close**” can be enabled or delayed from 1s to 24 hours for all features except “**Move Assist**”. Move Assist does not support any automatic magnetic brake operations, however the wall switch “release/unlock” is supported from a wall switch or remote.
  - Magnetic “**brake at open**” can be enabled for all features except “**Move Assist**.”
- “**Auto Close**” can be enabled for all features and can be delayed from 1s to 24 hours.
- Independent feature spans can be set from 6.0” to the mechanical full span limit.
- Party Mode which uses a motion device to open a door will use the same device(s) to safely stop the door while closing and return to the programmed open position. All other features, including Normal mode will also use the motion detector to stop the door while closing for safety.
- Span adjust time can be extended or disabled from the 5s default up to “forever” (no time limit).
  - Normal, Party/Egress & One Button Op share a single span adjust parameter, “**fsat**”
  - Move Assist has an independent span adjust time parameter, “**fmat**” and only supports a fixed range of options from Disabled(0) or 1s to 98s. “Forever” (no time limit) is not supported.

*Note: Unlike the Special Feature wall switch options, CLI option changes are delayed. Although options can be changed at any time with the panel in any position, CLI changes are NOT set immediately. This includes when the panel is stopped and in the jam. Instead, CLI special feature options are only set, after the door is commanded to close and the door then enters the jam and stops. Manual door closures will not cause CLI to update, only a commanded close from a wall switch or the CLI will work.*

*For example, if the door is closing and the CLI command to enable Party Mode is sent, the door remains in its previous mode until the door closes and stops at the jam. At that point the controller enables Party Mode for the next door operation. If the door is already closed and a special feature or option is changed, those changes will not be active until the next “button close” operation completes. Enabling the changes only requires a wall switch close command or the CLI command “**button close**” or “**b a**” for short. This behavior can be checked with the “**info**” command, as it shows what features enabled and “active” right now. In the case above, info would show “Party Mode” as enabled but not active until the “button close” operation completes at the closed position in the jam.*

## Reprogramming the Door while a Special Feature is Enabled (Active)

If a special feature is enabled and the door needs to be reprogrammed, the G3 supports reprogramming requests from the wall switch or the CLI. When reprogramming is requested, the G3 simply enters the reprogramming mode, and when complete, re-activates the previous active Special Feature.

A request to reprogram from a wall switch is supported by all modes except “One Button Operation”. The reason is the wall switch request to reprogram uses a 10s “**Stop**” button press and that cannot be shared with the OBO’s use of the “**Stop**” button to initiate open, close and stop. If “One Button Operation” is active, it can be disabled to reprogram and then reenabled manually. Another option is to request reprogramming using the CLI command “**button autoseup**” or “**b a**”. All Special Features support reprogramming from the CLI.

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## Final Configurations

Since many of the options supported by the G3 are only available to the installer when using the CLI, those options should be set prior to completing the job. Customizing specific functions prior to a customer complaint saves unnecessary service calls and makes for happy customers.

The installer or dealer representative should familiarize themselves with the G3 Controller and its feature set. Knowing what the G3 can do is the first step in configuring the system for the customer's needs. Here are some things that a customer may want changed.

Does the customer need or want the magnetic brake enabled, disabled, or delayed? This applies to Normal mode and Special Features.

```
c mboc XXX // Normal Mode Brake On Close, Disable(0), Enable(1), Delay(2-86400s)
c fpmb XXX // Party Mode Brake On Close, Disable(0), Enable(1), Delay(2-86400s)
c fegb XXX // Egress Mode Brake On Close Disable(0), Enable(1), Delay(2-86400s)
c fobb XXX // One Button Op Brake On Close, Disable(0), Enable(1), Delay(2-86400s)
864,000 seconds = 24hours
```

Does the customer want manual Span Adjust enabled, Disabled or on all the time? Do they need more or less adjustment time?

```
c fsat XXX // Normal, Party Mode, Egress, One Button Operation
// Span Adj Time, Disable(0), Time Limit(2-98s), No Limit(99)
c fmat XXX // Move Assist Span Adj Time, Disable(0), Time Limit(2-98s)
```

Are there any special needs residents that may benefit from the One Button Operation feature? Do they need an ADA compatible wall switch button?

A compatible third-party ADA switch needs to be 24VDC compatible and provide a 0.5s – 1.0s pulse to the wall switch circuit. With “One Button Operation” mode enabled, the ADA switch is wired to the Stop signal. Contact the customer support for more information.



Does the door move too fast or too slow?

```
c osp XXX // Open Speed in inches per second Minimum(1), Maximum(10) Inches/Second
c csp XXX // Move Assist Span Adj Time, Minimum(1), Maximum(10) Inches/Second
```

Is the homeowner aware of the G3 Safety Features such as smart touch and motion detection devices?

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## Supported User Levels

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

## fpme (Feature Party Mode Enable)

Syntax: config fpme [VALUE]  
Abbreviation: c fpme  
Range/Units: 0 – 1  
Default: 0 (Disabled)

Activated  
On Close

## Command Description

CLI command to enable “Party Mode”. Enabling this mode disables any currently active mode including Normal mode. All functions of an attached wall switch, remote or home automation connection remain functional in this mode.

When the door is closed and a motion signal is received by the controller, the controller will open the door to the programmed span(default 40”), wait for a designated period(default 10s) and then close. On closure the door does not engage the magnetic brake by default but can be enabled with the modifier “**fmb**”.

If while closing motion is detected, the door will stop and return to its programmed span and restart the auto close timer if enabled.

Party Mode requires a “motion” trigger from a wired or wireless motion detector, IR Beam sensor or a motion signal from a 3<sup>rd</sup> party device wired into the motion circuit (requires a RS485 GPIO adaptor). When the system is wireless only, a wireless motion detector is the only supported signaling option. For wired & wireless systems, the “**button motion**” or “**b m**” command will simulate an actual motion signal.

## Command Options

Party modes supports the following options. Note the span adjust time (**fsat**) is shared between Normal & Party Mode, Egress, and One Button Operation.

Modifier	Description
fpmd	Span adjustable from 6” to full physical span. Default 40”.
fpmw	Auto close disable(0), immediate(1) or delayed(1s to 1day)
fmb	Brake On Close disable(0), immediate(1) or delayed(1s to 1day)
fsat	Span adjust time disable(0), time limit(1 – 98s), forever(99)
mbpop	Brake On Open disable(0), enabled(1)

## Terminal Output

```
cmd>c fpme 1
036.654: FEATURE: Party Mode ENABLED
cmd> c fpme 0
070.932: FEATURE: Party Mode DISABLED
cmd>c fpme // Check feature status; Status is Disabled
0
cmd>c fpme // Check feature status; Status is Enabled
1
```

## References

pwd Requires a minimum user level of “Installer”  
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation  
c fpmd Party Mode full open span (sub-span)  
c fpmw Party Mode auto close wait time  
c fmb Party Mode brake on close enable, disable or delay  
c mbpop Brake on Open

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

## Supported User Levels

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

## fpmd (Feature Party Mode Distance)

Syntax: config fpmd [VALUE]  
Abbreviation: c fpmd  
Range/Units: 6"– full span inches  
Default: 40 inches

Activated  
On Close

## Command Description

CLI command to set the open distance or sub-span for "Party Mode". This is the distance the door will open when this mode is active. If the user adjusted the sub-span manually, the new span will be stored in this parameter.

The sub-span can be set from a minimum of 6" to the physical full span of the door. If the sub-span is set to a value greater than the physical span of the door, the full span is set without error.

## Terminal Output

```
cmd>c fpmd // Check the modifiers current value
40.0000

cmd>c fpmd 75.5 // Set new sub-span to 75.5 inches
OK: 75.5000

cmd>c fpmd 99999 // Entered sub-span is too large so automatically set to full span
OK: 122.5061

cmd>c fpmd 6 // Sub-span set to 6" minimum
OK: 6.0000

cmd>c fpmd reset // Reset sub-span modifier to factory default
40.0000
```

## References

pwd Requires a minimum user level of "Installer"  
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation  
c fpme Party Mode enable  
c fpmw Party Mode auto close wait time  
c fpmb Party Mode brake on close enable, disable or delay  
c mbpop Brake on Open  
Appendix B Inch position to Encoder count conversion table.

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## Supported User Levels

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

## fpmw (Feature Party Mode Wait Time)

Syntax: config fpmw [VALUE]  
Abbreviation: c fpmw  
Range/Units: 0 – 86400 seconds  
Default: 10 seconds

Activated  
On Close

## Command Description

This modifier adjusts the wait before auto-closing while in Party Mode. The default is 10s, and it can be disabled(0), set to close immediately(1) or delay the closure (2s to 1day).

The time limit set here takes precedence over the span adjust time set by the “fsat” command. For more information refer to “Tech Brief – Info Report, Actual Adjustment Time”.

## Terminal Output

```
cmd>c fpmw // Check the modifier's current value
0

cmd>c fpmw 1 // Set auto close to immediately
OK: 1

cmd>c fpmw 60 // Set auto close delay to 60s
OK: 60

cmd>c fpmw 3600 // Set auto close delay to 1 hour
OK: 3600

cmd>c fpmw 86400 // Set auto close delay to 1 day
OK: 86400

cmd>c fpmw reset // Set auto close to factory default
10
```

## References

pwd Requires a minimum user level of “Installer”  
c fpme CLI enable for the special feature “Party Mode”  
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation  
c fpme Party Mode enable  
c fpmd Party Mode full open span (sub-span)  
c fpmb Party Mode brake on close enable, disable or delay  
c mbpop Brake on Open  
Tech Brief Info Report, Actual Adjustment time  
Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

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## Supported User Levels

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

## fpmb (Party Mode Brake on Close)

Activated  
On Close

Syntax: config fpmb [VALUE]  
Abbreviation: c fpmb  
Range/Units: 0 – 86400 seconds  
Default: 0 seconds (Disabled)

## Command Description

This modifier adjusts the wait before engaging the magnetic brake when in Party Mode and the door has just closed. The default is disabled(0), but it can be set to brake immediately(1) or to delay the brake from (2s to 1day).

A setting of 1 does not mean, delay by 1 second. When set to 1, the brake is enabled immediately to help lock the panel in place for installs that have a warped jam which can cause the panel to “bounce” out as the clutch disengages. Previous controllers had a separate “brake timer” that would control this functionality.

When set to 1, the G3 on close will engage the brake *before* releasing the clutch to lock the panel in place and prevent panel “bounce out”.

“fpmb” Value	Description
0	Brake on close is DISABLED
1	Brake is engaged IMMEDIATELY on close before releasing the clutch
2 – 86400	Brake is engaged after a delay of this many seconds. 2s – 1day

## Terminal Output

```
cmd>c fpmb // Check the modifier's current value
0

cmd>c fpmb 1 // Set brake on close to immediately
OK: 1

cmd>c fpmb 60 // Set brake on close delay to 60s
OK: 60

cmd>c fpmb 3600 // Set brake on close delay to 1 hour
OK: 3600

cmd>c fpmb 86400 // Set brake on close delay to 1 day
OK: 86400

cmd>c fpmb reset // Set brake on close to factory default
0
```

## References

pwd Requires a minimum user level of “Installer”  
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation  
c fpme Party Mode enable  
c fpmd Party Mode full open span (sub-span)  
c fpmw Party Mode auto close wait time  
c mbpop Brake on Open  
c mboc Normal mode brake on close  
Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

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## Supported User Levels

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

## fege (Feature Egress Enable)

Syntax: config fege [VALUE]  
Abbreviation: c fege  
Range/Units: 0 – 1  
Default: 0 (Disabled)

Activated  
On Close

## Command Description

CLI command to enable “Egress Mode”. Enabling this mode disables any currently active mode including Normal mode. All functions of an attached wall switch, remote or home automation connection remain functional in this mode.

When an “Open” command is received from a wired or wireless wall switch, the controller will open the door to the programmed span(default 40”), wait for a designated period(default 10s) and then close. On closure the door does not engage the magnetic brake by default but can be enabled with the modifier “fegb”.

## Command Options

Egress mode supports the following options. Note the span adjust time “fsat” is shared between Normal & Party Mode, Egress, and One Button Operation.

Table	Description
fegd	Span adjustable from 6” to full physical span. Default 40”.
fegw	Auto close disable(0), immediate(1) or delayed(1s to 1day)
fegb	Brake On Close disable(0), immediate(1) or delayed(1s to 1day)
fsat	Span adjust time disable(0), time limit(1 – 98s), forever(99)
mbpop	Brake On Open disable(0), enabled(1)

## Terminal Output

```
cmd>c fege 1
119.458: FEATURE: Egress ENABLED

cmd>c fege 0
142.274: FEATURE: Egress DISABLED

cmd>c fege // Check feature status; Status is Disabled
0

cmd>c fege // Check feature status; Status is Enabled
1
```

```
cmd>cmd OTHER_VERSIONS
output here
```

## References

pwd Requires a minimum user level of “Installer”  
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation  
c fegd Egress Mode full open span (sub-span)  
c fegw Egress Mode auto close wait time  
c fegb Egress Mode brake on close enable, disable or delay  
c mbpop Brake on Open

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## Supported User Levels

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

## fegd (Feature Egress Distance)

Syntax: config fegd [VALUE]  
Abbreviation: c fegd  
Range/Units: 6" – full span inches  
Default: 40 inches

Activated  
On Close

## Command Description

CLI command to set the open distance or sub-span for "Egress Mode". This is the distance the door will open when this mode is active. If the user adjusted the sub-span manually, the new span will be stored in this parameter.

The sub-span can be set from a minimum of 6" to the physical full span of the door. If the sub-span is set to a value greater than the physical span of the door, the full span is set without error.

## Terminal Output

```
cmd>c fegd // Check the modifiers current value
40.0000

cmd>c fegd 75.5 // Set new sub-span to 75.5 inches
OK: 75.5000

cmd>c fegd 99999 // Entered sub-span is too large so automatically set to full span
OK: 122.5061

cmd>c fegd 6 // Sub-span set to 6" minimum
OK: 6.0000

cmd>c fegd reset // Reset sub-span modifier to factory default
40.0000
```

## References

pwd Requires a minimum user level of "Installer"  
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation  
c fege Egress Mode enable  
c fegw Egress Mode auto close wait time  
c fegb Egress Mode brake on close enable, disable or delay  
c mbpop Brake on Open  
Appendix B Inch position to Encoder count conversion table.

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## Supported User Levels

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

## fegw (Feature Egress Wait Time)

Syntax: config fegw [VALUE]  
Abbreviation: c fegw  
Range/Units: 0 – 86400 seconds  
Default: 10 seconds

Activated  
On Close

## Command Description

This modifier adjusts the wait before auto-closing while in Egress Mode. The default is 10s, and it can be disabled(0), set to close immediately(1) or delay the closure (2s to 1day).

The time limit set here takes precedence over the span adjust time set by the “fsat” command. For more information refer to “Tech Brief – Info Report, Actual Adjustment Time”.

## Terminal Output

```
cmd>c fegw // Check the modifier's current value
0

cmd>c fegw 1 // Set auto close to immediately
OK: 1

cmd>c fegw 60 // Set auto close delay to 60s
OK: 60

cmd>c fegw 3600 // Set auto close delay to 1 hour
OK: 3600

cmd>c fegw 86400 // Set auto close delay to 1 day
OK: 86400

cmd>c fegw reset // Set auto close to factory default
10
```

## References

pwd Requires a minimum user level of “Installer”  
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation  
c fege Egress Mode enable  
c fegd Egress Mode full open span (sub-span)  
c fegb Egress Mode brake on close enable, disable or delay  
c mbpop Brake on Open  
Tech Brief Info Report, Actual Adjustment time  
Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

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## Supported User Levels

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

## fegb (Feature Egress Brake on Close)

Activated  
On Close

Syntax: config fegb [VALUE]  
Abbreviation: c fegb  
Range/Units: 0 – 86400 seconds  
Default: 0 seconds (Disabled)

## Command Description

This modifier adjusts the wait before engaging the magnetic brake when in Egress Mode and the door has just closed. The default is disabled(0), but it can be set to brake immediately(1) or to delay the brake from (2s to 1day).

A setting of 1 does not mean, delay by 1 second. When set to 1, the brake is enabled immediately to help lock the panel in place for installs that have a warped jam which can cause the panel to “bounce” out as the clutch disengages. Previous controllers had a separate “brake timer” that would control this functionality.

When set to 1, the G3 on close will engage the brake *before* releasing the clutch to lock the panel in place and prevent panel “bounce out”.

“fegb” Value	Description
0	Brake on close is DISABLED
1	Brake is engaged IMMEDIATELY on close before releasing the clutch
2 – 86400	Brake is engaged after a delay of this many seconds. 2s – 1day

## Terminal Output

```
cmd>c fegb // Check the modifier's current value
0

cmd>c fegb 1 // Set brake on close to immediately
OK: 1

cmd>c fegb 60 // Set brake on close delay to 60s
OK: 60

cmd>c fegb 3600 // Set brake on close delay to 1 hour
OK: 3600

cmd>c fegb 86400 // Set brake on close delay to 1 day
OK: 86400

cmd>c fegb reset // Set brake on close to factory default
0
```

## References

- pwd Requires a minimum user level of “Installer”
- c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation
- c fege Egress Mode enable
- c fegd Egress Mode full open span (sub-span)
- c fegw Egress Mode auto close wait time
- c mboc Normal mode brake on close parameter
- c mbpop Brake on Open
- Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

# G3 Advanced Programming Guide

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

## Supported User Levels

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

## fmae (Feature Move Assist Enable)

Syntax: config fmae [VALUE]  
Abbreviation: c fmae  
Range/Units: 0 – 1  
Default: 0 (Disabled)

Activated  
On Close

## Command Description

Use this CLI command to enable “Move/Motion Assist Mode”. Enabling this mode disables any currently active mode including Normal mode. All functions of an attached wall switch, remote or home automation connection remain functional in this mode including “**release**” to activate the magnetic brake.

Move assist automatically moves the door in the direction of a manual movement of the panel by the operator. The panel only needs to be moved a fraction of an inch to initiate an automatic motor assisted movement. By default, the panel does not auto close but that can be changed with the modifier “**fmaw**”. Brake on Close & Open are not supported with move assist however the magnetic brake can be enabled with the wall switch “release” button if desired.

The Span Adjust Time Limit for Move Assist can be disabled(0) or timed for 1s to 98s. Move assist span adjust cannot be set to “forever(99)”.

## Command Options

Move Assist supports the following options. Note the span adjust time (fmat) is an independent setting for move assist only, and does NOT support adjust forever(99).

Table	Description
fmad	Span adjustable from 6” to full physical span. Default 40”.
fmaw	Auto close disable(0), immediate(1) or delayed(1s to 1day)
fmab	Brake On Close disable(0), immediate(1) or delayed(1s to 1day)
fmat	Span adjust time disable(0), time limit(1 – 98s).
mbpop	Brake On Open is not supported & ignored with Move Assist enabled

## Terminal Output

```
cmd>c fmae 1
203.584: FEATURE: Move Assist ENABLED

cmd>c fmae 0
232.574: FEATURE: Move Assist DISABLED

cmd>c fmae // Check feature status; Status is Disabled
0

cmd>c fmae // Check feature status; Status is Enabled
1
```

## References

pwd Requires a minimum user level of “Installer”  
c fmat Span adjust time for Move Assist only  
c fmad Move Assist full open span (sub-span)  
c fmaw Move Assist auto close wait time  
c mbpop Brake On Open is IGNORED when this feature is enabled

# G3 Advanced Programming Guide

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

## Supported User Levels

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

## fmad (Feature Move Assist Distance)

Activated  
On Close

Syntax: config fmad [VALUE]  
Abbreviation: c fmad  
Range/Units: 6" – full span inches  
Default: 40 inches

## Command Description

This CLI command sets the open position or sub-span for "Move Assist". This is the distance the door will open when this mode is active. If the user adjusted the sub-span manually, the new span will be stored in this parameter.

The sub-span can be set from a minimum of 6" to the physical full span of the door. If the sub-span is set to a value greater than the physical span of the door, the full span is set without error.

## Terminal Output

```
cmd>c fmad // Check the modifiers current value
40.0000

cmd>c fmad 75.5 // Set new sub-span to 75.5 inches
OK: 75.5000

cmd>c fmad 99999 // Entered sub-span is too large so automatically set to full span
OK: 122.5061

cmd>c fmad 6 // Sub-span set to 6" minimum
OK: 6.0000

cmd>c fmad reset // Reset sub-span modifier to factory default
40.0000
```

## References

pwd Requires a minimum user level of "Installer"  
c fmae Move Assist enable  
c fmat Span adjust time for Move Assist only  
c fmad Move Assist full open span (sub-span)  
c fmaw Move Assist auto close wait time  
c mbpop Brake-On-Open is IGNORED when this feature is enabled  
Appendix B Inch position to Encoder count conversion table.

# G3 Advanced Programming Guide

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

## Supported User Levels

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

## fmax (Feature Move Assist Wait Time)

Syntax: config fmax [VALUE]  
Abbreviation: c fmax  
Range/Units: 0 – 86400 seconds  
Default: 0 seconds (Disabled)

Activated  
On Close

## Command Description

This modifier adjusts the wait before auto-closing while in Move Assist. The default is disabled(0), but it can be set to close immediately(1) or to delay closure from (2s to 1day).

The time limit set here takes precedence over the span adjust time set by the “fmat” command. For more information refer to “Tech Brief – Info Report, Actual Adjustment Time”.

## Terminal Output

```
cmd>c fmax // Check the modifier's current value
0

cmd>c fmax 1 // Set auto close to immediately
OK: 1

cmd>c fmax 60 // Set auto close delay to 60s
OK: 60

cmd>c fmax 3600 // Set auto close delay to 1 hour
OK: 3600

cmd>c fmax 86400 // Set auto close delay to 1 day
OK: 86400

cmd>c fmax reset // Set auto close to factory default
0
```

## References

pwd	Requires a minimum user level of “Installer”
c fmae	Move Assist enable
c fmat	Span adjust time for Move Assist only
c fmad	Move Assist full open span (sub-span)
c fmax	Move Assist auto close wait time
c mbpop	Brake On Open is IGNORED when this feature is enabled
Tech Brief	Info Report, Actual Adjustment time
Appendix A	Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

# G3 Advanced Programming Guide

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

## Supported User Levels

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

## fmat (Feature Move Assist Span Adjust Time)

Syntax: config fmat [VALUE]  
Abbreviation: c fmat  
Range/Units: 0 – 98 seconds  
Default: 5 seconds

Activated  
On Close

## Command Description

This parameter sets the span adjust time limit an operator has to adjust the sub-span of the door just after the door has reached its programmed open position. It is **Move Assist** is specific. Upon stopping, a timer is started, set to “**fmat**” seconds allowing the operator to manually move the panels to a new open position. If panel movement begins before the “**fmat**” timer runs out AND does not stop during the adjustment for longer than “**fmat**” seconds, the new span will be registered for this feature.

*For modes that support auto-close, the time limit for auto close can shorten or eliminate the span adjust time. Refer to the “Tech Brief – Info Report, Actual Adjustment Time” for more information.*

If additional changes to the span are required after an adjustment is attempted, pressing Open again, even while at full open, will give the operator an additional “**fmat**” timer run to retry the span adjustment for Move Assist.

Panel 1 Manually Moved To...	Description
Between 6” from closed TO 2” from full open	Sub-span is SET for the active feature
Between 2” & 4” from closed	Sub-span is SET to the minimum span of 6”
Less than 2” from closed	Sub-span is NOT set
Between 2” from full open & full open	Sub-span is set to the full open value

## Terminal Output

```
cmd>c fmat // Report the current span adjust time for Move Assist
5
cmd>c fmat 1 // Set span adjust time to 1 second which is too short to be useful.
OK: 1

cmd>c fmat 30 // Set span adjust time to 30 seconds
OK: 30

cmd>c fmat 98 // Set span adjust time to its maximum timed period of 98 seconds
OK: 98

cmd>c fmat reset // Reset span adjust time period to factory default of 5 seconds
5
```

## References

pwd	Requires a minimum user level of “Installer”
c fmae	Move Assist Enable
c fmat	Span adjust time for Move Assist only
c fmad	Move Assist full open span (sub-span)
c fmaw	Move Assist auto close wait time
c mbpop	Brake On Open is IGNORED when this feature is enabled
Tech Brief	Info Report, Actual Adjustment Time
Appendix A	Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

# G3 Advanced Programming Guide

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

## Supported User Levels

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

## fsat (Shared Feature Span Adjust Time)

Activated  
On Close

Syntax: config fsat [VALUE]  
Abbreviation: c fmat  
Range/Units: 0 – 98 seconds or 99(forever)  
Default: 5 seconds

### Command Description

This parameter sets the time limit for an operator to adjust the span of the door just after the door has reached its programmed open position and stopped while **Normal**, **Party Mode**, **Egress**, or **One Button Operation** are enabled. Upon stopping a timer is started, set to “fsat” seconds allowing the operator to manually move the panels to a new open position. If panel movement begins before the “fmat” timer runs out AND does not stop during the adjustment for longer than “fsat” seconds, the new span will be registered for this feature.

If additional changes to the span are required after an adjustment is attempted, pressing Open again, even while at full open, will give the operator an additional “fsat” timer run to retry the span adjustment for the currently active mode.

Span adjust for all these features can be disabled(0) or enabled with a timer value from 1 to 98s. Setting the parameter to 99 sets the span adjust time to unlimited or “forever”. *For modes that support auto-close, the time limit for auto close can shorten or eliminate the span adjust time. Refer to the “Tech Brief – Info Report, Actual Adjustment Time” for more information.*

Panel 1 Manually Moved To...	Description
Between 6” from closed TO 2” from full open	Sub-span is SET for the active feature
Between 2” & 4” from closed	Sub-span is SET to the minimum span of 6”
Less than 2” from closed	Sub-span is NOT set
Between 2” from full open & full open	Sub-span is set to the full open value

### Commands Sharing this Parameter

The shared parameter “fsat” controls the span adjust time for **Normal** as well as **Party Mode**, **Egress Mode** and **One Button Operation** as these are the only features that support an unlimited adjustment period(99).

### Terminal Output

```
cmd>c fsat          // Report the current span adjust time for Normal, Party Mode Egress & OBO
5
cmd>c fsat 1         // Set span adjust time to 1 second which is too short to be useful.
OK: 1
cmd>c fsat 98        // Set span adjust time to its maximum timed period of 98 seconds
OK: 98
cmd>c fsat 99        // Set span adjust time period to “forever” with (99)
OK: 99
cmd>c fsat reset     // Reset span adjust time period to factory default of 5 seconds
5
```

### References

pwd Requires a minimum user level of “Installer”  
c fpme Party Mode enable  
c fege Egress Mode enable  
c fobe One Button Operation enable  
Tech Brief Info Report “Actual Adjustment Time”  
Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

# G3 Advanced Programming Guide

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

## Supported User Levels

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

## fobe (Feature One Button Operation Enable)

Activated  
On Close

Syntax: config fobe [VALUE]  
Abbreviation: c fobe  
Range/Units: 0 – 1  
Default: 0 (Disabled)

## Command Description

CLI command to enable “One Button Operation/Simplicity Mode”. Enabling this mode disables any currently active mode including Normal mode. One Button Operation makes the door operate like an automated garage door opener.

One Button Operation uses a single wall switch button/command to open, close and stop the door. It operates in the same manner as a garage door opener. The “Stop” button/command is used to initiate all door movements. If the door is opening and “Stop” is pressed, the door stops. Pressing “Stop” again will close the door. Once the door reaches programmed open or close, pressing “Stop” will move the door to the opposite jam.

All functions of an attached wall switch or remote remain functional, except for the “Stop” function, where it will perform as previously described.

## Command Options

One Button Operation supports the following options. Note the span adjust time (fsat) is shared between Normal & Party Mode, Egress, and One Button Operation.

Table	Description
fobd	Span adjustable from 6” to full physical span. Default 40”.
fobw	Auto close disable(0), immediate(1) or delayed(1s to 1day)
fobb	Brake On Close disable(0), immediate(1) or delayed(1s to 1day)
fsat	Span adjust time disable(0), time limit(1 – 98s), forever(99)
mbpop	Brake On Open disable(0), enabled(1)

## Terminal Output

```
cmd>c fobe 1
277.772: FEATURE: One Button Operation ENABLED

cmd>c fobe 0
332.330: FEATURE: One Button Operation DISABLED

cmd>c fobe // Check feature status; Status is Disabled
0

cmd>c fobe // Check feature status; Status is Enabled
1
```

## References

pwd Requires a minimum user level of “Installer”  
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation  
c fobd One Button Operation full open span (sub-span)  
c fobw One Button Operation auto close wait time  
c fobb One Button Operation brake on close enable, disable or delay  
c mbpop Brake on Open

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# G3 Advanced Programming Guide

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

## Supported User Levels

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

## fobd (Feature One Button Op Distance)

Activated  
On Close

Syntax: config fobd [VALUE]  
Abbreviation: c fobd  
Range/Units: 6" – full span in inches  
Default: 40 inches

## Command Description

CLI command to set the open distance or sub-span for "One Button Operation". This is the distance the door will open when this mode is active. If the user adjusted the sub-span manually, the new span will be stored in this parameter.

The sub-span can be set from a minimum of 6" to the physical full span of the door. If the sub-span is set to a value greater than the physical span of the door, the full span is set without error.

## Terminal Output

```
cmd>c fobd // Check the modifiers current value
40.0000

cmd>c fobd 75.5 // Set new sub-span to 75.5 inches
OK: 75.5000

cmd>c fobd 99999 // Entered sub-span is too large so automatically set to full span
OK: 122.5061

cmd>c fobd 6 // Sub-span set to 6" minimum
OK: 6.0000

cmd>c fobd reset // Reset sub-span modifier to factory default
40.0000
```

## References

pwd Requires a minimum user level of "Installer"  
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation  
c fobe One Button Operation enable  
c fobw One Button Operation auto close wait time  
c fobb One Button Operation brake on close enable, disable or delay  
c mbpop Brake on Open  
Appendix B Inch position to Encoder count conversion table.

# G3 Advanced Programming Guide

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

## Supported User Levels

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

## fobw (Feature One Button Op Wait)

Syntax: config fobw [VALUE]  
Abbreviation: c fobw  
Range/Units: 0 – 86400 seconds  
Default: 0 seconds (Disabled)

Activated  
On Close

## Command Description

This modifier adjusts the wait before auto-closing while in One Button Operation mode. The default is disabled(0), but it can be set to close immediately(1) or to delay closure from (2s to 1day).

The time limit set here takes precedence over the span adjust time set by the “fsat” command. For more information refer to “Tech Brief – Info Report, Actual Adjustment Time”.

## Terminal Output

```
cmd>c fobw // Check the modifier's current value
0

cmd>c fobw 1 // Set auto close to immediately
OK: 1

cmd>c fobw 60 // Set auto close delay to 60s
OK: 60

cmd>c fobw 3600 // Set auto close delay to 1 hour
OK: 3600

cmd>c fobw 86400 // Set auto close delay to 1 day
OK: 86400

cmd>c fobw reset // Set auto close to factory default
0
```

## References

pwd Requires a minimum user level of “Installer”  
c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation  
c fobe One Button Operation enable  
c fobd One Button Operation full open span (sub-span)  
c fobb One Button Operation brake on close enable, disable or delay  
c mbpop Brake on Open  
Tech Brief Info Report, Actual Adjustment time  
Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

# G3 Advanced Programming Guide

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

## Supported User Levels

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

## fobb (Feature One Button Op Brake on Close)

Syntax: config fobb [optional]  
Abbreviation: c fobb  
Range/Units: 0 – 86400 seconds  
Default: 0 seconds (Disabled)

Activated  
On Close

## Command Description

This modifier adjusts the wait period before engaging the magnetic brake when in One Button Operation and the door has just closed. The default is disabled(0), but it can be set to brake immediately(1) or to delay the brake from (2s to 1day).

A setting of 1 does not mean, delay by 1 second. When set to 1, the brake is enabled immediately to help lock the panel in place for installs that have a warped jam which can cause the panel to “bounce” out as the clutch disengages. Previous controllers had a separate “brake timer” that would control this functionality.

When set to 1, the G3 on close will engage the brake *before* releasing the clutch to lock the panel in place and prevent panel “bounce out”.

“fobb” Value	Description
0	Brake on close is DISABLED
1	Brake is engaged IMMEDIATELY on close before releasing the clutch
2 – 86400	Brake is engaged after a delay of this many seconds. 2s – 1day

## Terminal Output

```
cmd>c fobb // Check the modifier's current value
0

cmd>c fobb 1 // Set brake on close to immediately
OK: 1

cmd>c fobb 60 // Set brake on close delay to 60s
OK: 60

cmd>c fobb 3600 // Set brake on close delay to 1 hour
OK: 3600

cmd>c fobb 86400 // Set brake on close delay to 1 day
OK: 86400

cmd>c fobb reset // Set brake on close to factory default
0
```

## References

- pwd Requires a minimum user level of “Installer”
- c fsat Span adjust time for Normal, Party Mode, Egress and One Button Operation
- c fobe One Button Operation enable
- c fobd One Button Operation full open span (sub-span)
- c fobw One Button Operation auto close wait time
- c mbpop Brake on Open
- Appendix A Minutes/Hours to seconds conversion for brake on close & auto close time parameters.

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# G3 Advanced Programming Guide

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

## Appendix A: Conversions

### Hours & Minutes to Seconds Conversion Table

The following table can be useful when configuring long delays for parameters that only accept parameters in seconds. For example, what is a 10-hour delay in seconds? **36000**

Supported User Levels

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

MINUTES	HOURS																								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
0	0	3600	7200	10800	14400	18000	21600	25200	28800	32400	36000	39600	43200	46800	50400	54000	57600	61200	64800	68400	72000	75600	79200	82800	0
1	60	3660	7260	10860	14460	18060	21660	25260	28860	32460	36060	39660	43260	46860	50460	54060	57660	61260	64860	68460	72060	75660	79260	82860	1
2	120	3720	7320	10920	14520	18120	21720	25320	28920	32520	36120	39720	43320	46920	50520	54120	57720	61320	64920	68520	72120	75720	79320	82920	2
3	180	3780	7380	10980	14580	18180	21780	25380	28980	32580	36180	39780	43380	46980	50580	54180	57780	61380	64980	68580	72180	75780	79380	82980	3
4	240	3840	7440	11040	14640	18240	21840	25440	29040	32640	36240	39840	43440	47040	50640	54240	57840	61440	65040	68640	72240	75840	79440	83040	4
5	300	3900	7500	11100	14700	18300	21900	25500	29100	32700	36300	39900	43500	47100	50700	54300	57900	61500	65100	68700	72300	75900	79500	83100	5
6	360	3960	7560	11160	14760	18360	21960	25560	29160	32760	36360	39960	43560	47160	50760	54360	57960	61560	65160	68760	72360	75960	79560	83160	6
7	420	4020	7620	11220	14820	18420	22020	25620	29220	32820	36420	40020	43620	47220	50820	54420	58020	61620	65220	68820	72420	76020	79620	83220	7
8	480	4080	7680	11280	14880	18480	22080	25680	29280	32880	36480	40080	43680	47280	50880	54480	58080	61680	65280	68880	72480	76080	79680	83280	8
9	540	4140	7740	11340	14940	18540	22140	25740	29340	32940	36540	40140	43740	47340	50940	54540	58140	61740	65340	68940	72540	76140	79740	83340	9
10	600	4200	7800	11400	15000	18600	22200	25800	29400	33000	36600	40200	43800	47400	51000	54600	58200	61800	65400	69000	72600	76200	79800	83400	10
11	660	4260	7860	11460	15060	18660	22260	25860	29460	33060	36660	40260	43860	47460	51060	54660	58260	61860	65460	69060	72660	76260	79860	83460	11
12	720	4320	7920	11520	15120	18720	22320	25920	29520	33120	36720	40320	43920	47520	51120	54720	58320	61920	65520	69120	72720	76320	79920	83520	12
13	780	4380	7980	11580	15180	18780	22380	25980	29580	33180	36780	40380	43980	47580	51180	54780	58380	61980	65580	69180	72780	76380	79980	83580	13
14	840	4440	8040	11640	15240	18840	22440	26040	29640	33240	36840	40440	44040	47640	51240	54840	58440	62040	65640	69240	72840	76440	80040	83640	14
15	900	4500	8100	11700	15300	18900	22500	26100	29700	33300	36900	40500	44100	47700	51300	54900	58500	62100	65700	69300	72900	76500	80100	83700	15
16	960	4560	8160	11760	15360	18960	22560	26160	29760	33360	36960	40560	44160	47760	51360	54960	58560	62160	65760	69360	72960	76560	80160	83760	16
17	1020	4620	8220	11820	15420	19020	22620	26220	29820	33420	37020	40620	44220	47820	51420	55020	58620	62220	65820	69420	73020	76620	80220	83820	17
18	1080	4680	8280	11880	15480	19080	22680	26280	29880	33480	37080	40680	44280	47880	51480	55080	58680	62280	65880	69480	73080	76680	80280	83880	18
19	1140	4740	8340	11940	15540	19140	22740	26340	29940	33540	37140	40740	44340	47940	51540	55140	58740	62340	65940	69540	73140	76740	80340	83940	19
20	1200	4800	8400	12000	15600	19200	22800	26400	30000	33600	37200	40800	44400	48000	51600	55200	58800	62400	66000	69600	73200	76800	80400	84000	20
21	1260	4860	8460	12060	15660	19260	22860	26460	30060	33660	37260	40860	44460	48060	51660	55260	58860	62460	66060	69660	73260	76860	80460	84060	21
22	1320	4920	8520	12120	15720	19320	22920	26520	30120	33720	37320	40920	44520	48120	51720	55320	58920	62520	66120	69720	73320	76920	80520	84120	22
23	1380	4980	8580	12180	15780	19380	22980	26580	30180	33780	37380	40980	44580	48180	51780	55380	58980	62580	66180	69780	73380	76980	80580	84180	23
24	1440	5040	8640	12240	15840	19440	23040	26640	30240	33840	37440	41040	44640	48240	51840	55440	59040	62640	66240	69840	73440	77040	80640	84240	24
25	1500	5100	8700	12300	15900	19500	23100	26700	30300	33900	37500	41100	44700	48300	51900	55500	59100	62700	66300	69900	73500	77100	80700	84300	25
26	1560	5160	8760	12360	15960	19560	23160	26760	30360	33960	37560	41160	44760	48360	51960	55560	59160	62760	66360	69960	73560	77160	80760	84360	26
27	1620	5220	8820	12420	16020	19620	23220	26820	30420	34020	37620	41220	44820	48420	52020	55620	59220	62820	66420	70020	73620	77220	80820	84420	27
28	1680	5280	8880	12480	16080	19680	23280	26880	30480	34080	37680	41280	44880	48480	52080	55680	59280	62880	66480	70080	73680	77280	80880	84480	28
29	1740	5340	8940	12540	16140	19740	23340	26940	30540	34140	37740	41340	44940	48540	52140	55740	59340	62940	66540	70140	73740	77340	80940	84540	29
30	1800	5400	9000	12600	16200	19800	23400	27000	30600	34200	37800	41400	45000	48600	52200	55800	59400	63000	66600	70200	73800	77400	81000	84600	30
31	1860	5460	9060	12660	16260	19860	23460	27060	30660	34260	37860	41460	45060	48660	52260	55860	59460	63060	66660	70260	73860	77460	81060	84660	31
32	1920	5520	9120	12720	16320	19920	23520	27120	30720	34320	37920	41520	45120	48720	52320	55920	59520	63120	66720	70320	73920	77520	81120	84720	32
33	1980	5580	9180	12780	16380	19980	23580	27180	30780	34380	37980	41580	45180	48780	52380	55980	59580	63180	66780	70380	73980	77580	81180	84780	33
34	2040	5640	9240	12840	16440	20040	23640	27240	30840	34440	38040	41640	45240	48840	52440	56040	59640	63240	66840	70440	74040	77640	81240	84840	34
35	2100	5700	9300	12900	16500	20100	23700	27300	30900	34500	38100	41700	45300	48900	52500	56100	59700	63300	66900	70500	74100	77700	81300	84900	35
36	2160	5760	9360	12960	16560	20160	23760	27360	30960	34560	38160	41760	45360	48960	52560	56160	59760	63360	66960	70560	74160	77760	81360	84960	36
37	2220	5820	9420	13020	16620	20220	23820	27420	31020	34620	38220	41820	45420	49020	52620	56220	59820	63420	67020	70620	74220	77820	81420	85020	37
38	2280	5880	9480	13080	16680	20280	23880	27480	31080	34680	38280	41880	45480	49080	52680	56280	59880	63480	67080	70680	74280	77880	81480	85080	38
39	2340	5940	9540	13140	16740	20340	23940	27540	31140	34740	38340	41940	45540	49140	52740	56340	59940	63540	67140	70740	74340	77940	81540	85140	39
40	2400	6000	9600	13200	16800	20400	24000	27600	31200	34800	38400	42000	45600	49200	52800	56400	60000	63600	67200	70800	74400	78000	81600	85200	40
41	2460	6060	9660	13260	16860	20460	24060	27660	31260	34860	38460	42060	45660	49260	52860	56460	60060	63660	67260	70860	74460	78060	81660	85260	41
42	2520	6120	9720	13320	16920	20520	24120	27720																	

# 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"><li>• "hfi" help command added for "TLE" issues</li><li>• Help commands "avi", "maxc" and "acdc" added</li><li>• Config command "spl" added</li><li>• "c all reset" updated to preserve "spl" and "hfi" settings</li><li>• "TLE" over-current/temps counts tracked in flash</li><li>• G3 LED color code updated</li><li>• Panel 1 mass increased to 50,000/100,00lbs (Oneway/Bipart)</li></ul>															
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"><li>• Entertainment, Close Behind, Simplicity &amp; Motion Assist modes</li><li>• UL325 closing force reduced by 35% over v0.6.7</li><li>• Improved security, delayed mag brake, manual span adjust, etc</li><li>• Integrated cycle testing</li><li>• Profile bin resolution increased by 300%.</li><li>• Cleaner CLI interface optimized for smart phone access</li></ul>															
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.															