

C4

GRAPHICAL USER INTERFACE
MANUAL

VERSION 1.4



 SMARTRISE

Document History

Date	Version	Summary of Changes
January 11, 2019	1.0	Initial Submittal
January 16, 2019	1.1	Updated Monitoring, Navbar, Parameter, Pi Label, S-Curves, and Real Time Clock
November 27, 2019	1.2	Updated cover page Updated format Replaced all screen shots and added descriptions for fields and buttons
February 20, 2020	1.3	Modified Parking section to show a calendar and rules for specific times Added About section Deleted Security section Deleted Backup Param section Replaced all figures due to adding About to the Navbar
November 4, 2020	1.4	Inserted the information from the C4 GUI Startup Guide Reinserted Backup Param section Updated System section with new figures and procedures Updated Parking section with new figures and procedures Added Successful and Warning message pop-ups

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Table of Contents

1	Introduction	1
1.1	Wiring the DAD Unit to the GUI	1
1.2	Connect to the GUI.....	2
2	Navbar	3
3	Monitoring.....	4
4	Faults	6
5	Alarms.....	7
6	Parameters	8
6.1	Manual Edit.....	8
6.2	Speeds	10
6.3	Brakes	11
6.4	Fire	13
6.5	Doors	15
6.6	S-Curve	16
6.6.1	Normal Profile	17
6.6.2	Inspection Profile	18
6.6.3	Short Profile.....	19
6.6.4	Emergency Profile	21
6.7	PI Labels.....	22
7	Car Calls	24
8	Hall Calls	26
9	System	28
9.1	Software Download	28
9.1.1	Downloading	33
9.2	Backup Parameters	35
9.3	Restore Parameter	36
9.4	Update Files	39
9.4.1	Update Faults	39
9.4.2	Update Alarms.....	41
9.4.3	Update Parameters	43

- 9.4.4 Update Configuration 45
- 9.4.5 Real Time Clock 47
- 10 Inputs/Outputs48
 - 10.1 Machine Room49
 - 10.2 Cartop50
 - 10.3 COP52
 - 10.4 Risers54
 - 10.5 Expansions55
- 11 Parking.....57
 - 11.1 Calendar.....57
 - 11.2 Rules58
- 12 About.....62

List of Figures

Figure 1: DAD Connector Cable	1
Figure 2: Navbar	3
Figure 3: MONITORING Screen.....	4
Figure 4: MONITORING Screen – Status of Car.....	5
Figure 5: FAULTS Screen	6
Figure 6: ALARMS Screen.....	7
Figure 7: PARAMETER Screen – Manual Edit.....	8
Figure 8: PARAMETER Screen – Manual Edit - UPDATE.....	9
Figure 9: PARAMETER Screen – Speeds.....	10
Figure 10: PARAMETER Screen – Speeds – Save.....	11
Figure 11: PARAMETER Screen – Brakes.....	11
Figure 12: PARAMETER Screen – Brakes – Save	12
Figure 13: PARAMETER Screen – Fire	13
Figure 14: PARAMETER Screen – Fire – Save	14
Figure 15: PARAMETER Screen – Doors.....	15
Figure 16: PARAMETER Screen – Doors – Save	16
Figure 17: PARAMETER Screen – S-Curve – NORMAL PROFILE	17
Figure 18: PARAMETER Screen – S-Curve – NORMAL PROFILE – Save	18
Figure 19: PARAMETER Screen – S-Curve – INSPECTION PROFILE	18
Figure 20: PARAMETER Screen – S-Curve – SHORT PROFILE	19
Figure 21: PARAMETER Screen – S-Curve – EMERGENCY PROFILE	21
Figure 22: PARAMETER Screen – PI Labels	22
Figure 23: PARAMETER Screen – PI Labels – SAVE	23
Figure 24: CAR CALLS Screen Part 1 of 2.....	24
Figure 25: CAR CALLS Screen Part 2 of 2.....	24
Figure 26: Active Car Call	25
Figure 27: HALL CALLS Screen Part 1 of 2	26
Figure 28: HALL CALLS Screen Part 2 of 2	26
Figure 29: Active Hall Call	27
Figure 30: SYSTEM Screen – Software Download.....	28
Figure 31: Bootload Warning.....	29
Figure 32: SYSTEM Screen – Software Download – Choose File	29
Figure 33: SYSTEM Screen – Software Download – UPLOAD File.....	30
Figure 34: Upload File Warning	30
Figure 35: SYSTEM Screen – Software Download – START BOOTLOADER	31
Figure 36: SYSTEM Screen – Software Download – Selected Board.....	31
Figure 37: SYSTEM Screen – Software Download – Details.....	32
Figure 38: Progress on MR Board	32
Figure 39: Bootloader Success Message.....	32
Figure 40: Error.....	33
Figure 41: SYSTEM Screen – Software Download – No Response.....	34
Figure 42: SYSTEM Screen – Backup Param.....	35

Figure 43: SYSTEM Screen – Backup Param Percentage Complete36

Figure 44: SYSTEM Screen – Restore Param36

Figure 45: SYSTEM Screen – Restore Param – UPLOAD FILE37

Figure 46: SYSTEM Screen – Restore Param – START RESTORE38

Figure 47: Machine Room Board Inspection Mode Warning38

Figure 48: SYSTEM Screen – Restore Param – RESTORE COMPLETE39

Figure 49: SYSTEM Screen – Update Files – FAULTS39

Figure 50: SYSTEM Screen – Update Files – FAULTS – UPDATE FAULTS40

Figure 51: Faults Success Message40

Figure 52: SYSTEM Screen – Update Files – ALARMS41

Figure 53: SYSTEM Screen – Update Files – ALARMS - UPDATE ALARMS42

Figure 54: Alarms Success Message42

Figure 55: SYSTEM Screen – Update Files – PARAMS43

Figure 56: SYSTEM Screen – Update Files – PARAMS – UPDATE PARAMS44

Figure 57: Parameters Success Message44

Figure 58: SYSTEM Screen – Update Files – CONFIG45

Figure 59: SYSTEM Screen – Update Files – CONFIG – UPDATE CONFIG46

Figure 60: SYSTEM Screen – Update Files – CONFIG – SYNC NEW CONFIG46

Figure 61: Parameters Success Message47

Figure 62: SYSTEM Screen – Real Time Clock47

Figure 63: System Reload48

Figure 64: I/O Screen – Machine Room49

Figure 65: I/O Screen – Machine Room – Save50

Figure 66: I/O Screen – Cartop Part 1 of 250

Figure 67: I/O Screen – Cartop Part 2 of 251

Figure 68: I/O Screen – COP Part 1 of 252

Figure 69: I/O Screen – COP Part 2 of 252

Figure 70: I/O Screen – Risers54

Figure 71: I/O Screen – Expansion55

Figure 72: I/O Screen – Expansion – Input/Output55

Figure 73: PARKING Screen – Calendar57

Figure 74: PARKING Screen – Rules58

Figure 75: Create Rule – Car Specific Pop-up59

Figure 76: Create Rule – Floor Specific Pop-up60

Figure 77: ABOUT Screen62

List of Tables

Table 1: Wiring for the DAD Connector Cable	1
Table 2: MONITORING Screen	4
Table 3: MONITORING Screen – Status of Car	5
Table 4: FAULTS Screen	6
Table 5: ALARMS Screen	7
Table 6: PARAMETER Screen – Manual Edit	8
Table 7: PARAMETER Screen – Speeds	10
Table 8: PARAMETER Screen – Brakes	11
Table 9: PARAMETER Screen – Fire	13
Table 10: PARAMETER Screen – Doors	15
Table 11: PARAMETER Screen – S-Curve – NORMAL PROFILE	17
Table 12: PARAMETER Screen – S-Curve – INSPECTION PROFILE	19
Table 13: PARAMETER Screen – S-Curve – SHORT PROFILE	20
Table 14: PARAMETER Screen – S-Curve – EMERGENCY PROFILE	21
Table 15: PARAMETER Screen – PI Labels	22
Table 16: CAR CALLS Screen	25
Table 17: HALL CALLS Screen	27
Table 18: SYSTEM Screen – Software Download	28
Table 19: Bootloader Progress	33
Table 20: SYSTEM Screen – Backup Param	35
Table 21: SYSTEM Screen – Restore Param	37
Table 22: SYSTEM Screen – Update Files – FAULTS	40
Table 23: SYSTEM Screen – Update Files – ALARMS	41
Table 24: SYSTEM Screen – Update Files – PARAMS	43
Table 25: SYSTEM Screen – Update Files – CONFIG	45
Table 26: SYSTEM Screen – Real Time Clock	48
Table 27: I/O Screen – Machine Room	49
Table 28: I/O Screen – Cartop	51
Table 29: I/O Screen – COP	53
Table 30: I/O Screen – Risers	54
Table 31: I/O Screen – Expansion	56
Table 32: PARKING Screen – Calendar	57
Table 33: PARKING Screen – Rules	58
Table 34: Create Rule Pop-up	61
Table 35: ABOUT Screen	62

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1 Introduction

The C4 controller uses a Data Acquisition Device (DAD) for means of Graphical User Interface (GUI) communication. The GUI allows users to set parameters and settings within the C4.

1.1 Wiring the DAD Unit to the GUI

Some of the C4 controllers do not have the DAD connector wired. If the controller does not have the cable wired, then wire the connector as shown in the figure below.

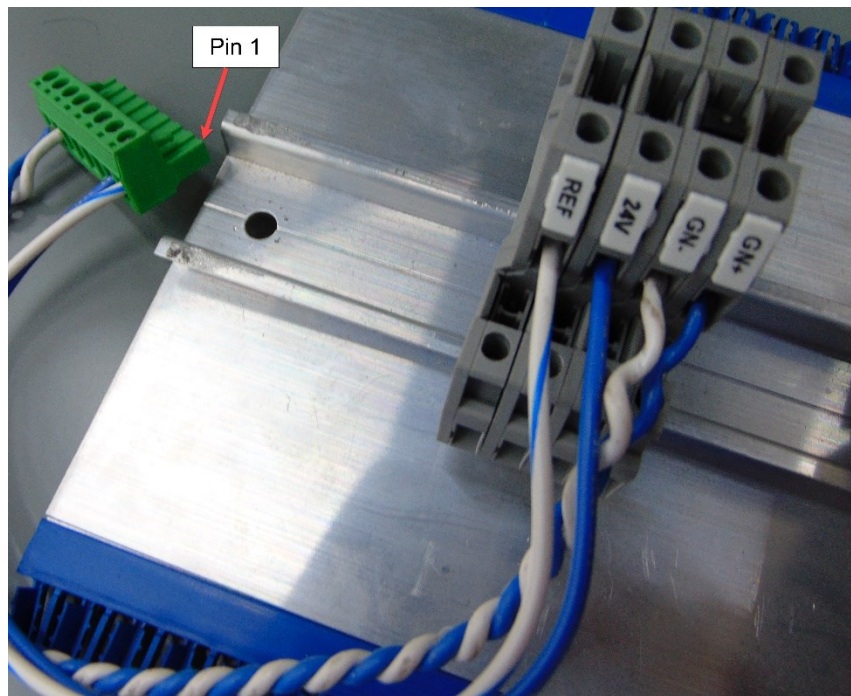


Figure 1: DAD Connector Cable

The following table lists the Wiring for the DAD Connector Cable.

Table 1: Wiring for the DAD Connector Cable


PIN	Wire Color	Signal
1	White/Blue	REF
2	Blue	24 VDC
7	Twisted Pair – White	GN-
8	Twisted Pair – Blue	GN+

1.2 Connect to the GUI

Only one DAD unit can be powered up when connecting the DAD to the GUI.

Perform the following to connect to the GUI.

1. Power up the controller.
2. The DAD fault and HB LEDs start flashing then the HB (Heartbeat) turns green when ready.
3. Using a Wi-Fi laptop or tablet, connect to the GUI.

NOTE: If using Windows 10, go to or click the Network & Internet Settings () menu option on the bottom right of the main desktop window.

4. Select the C4 [Job_Site_Name] Wi-Fi connection.
5. Enter the password: SmartriseMRM.
6. Click Connect.
7. Click Ok. The connection shows No internet, secured.
8. Open a web browser (preferably Google Chrome or Firefox).
9. Type 192.168.4.1 on the address bar.
10. The C4 Monitoring Graphical User Interface displays on the browser.

2 Navbar

The Navbar is a set of menu options the user can select from to navigate through different menu screens. The Navbar is shown on the left side of every screen.

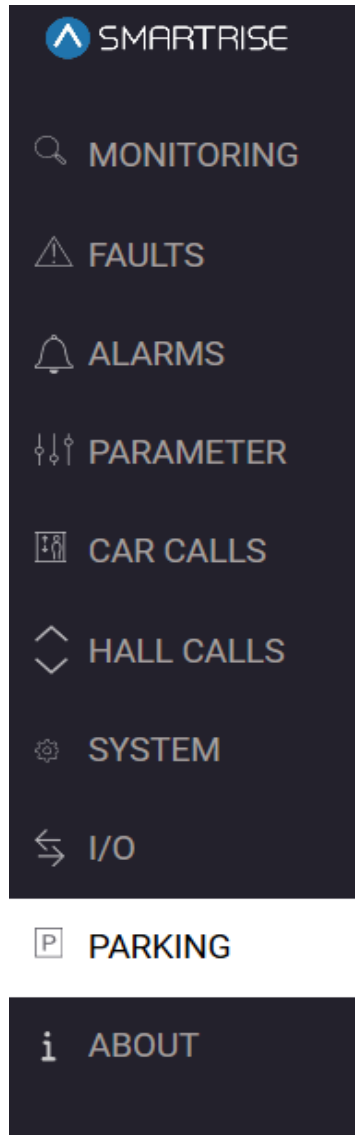


Figure 2: Navbar

3 Monitoring

The MONITORING screen is used to display live data from the cars in a group. Each car has the following displayed:

- Current Floor
- Destination
- Mode of Operation

If a car is faulted, the car displays a glowing FAULTED along with the fault number in red. The car borders are red as well.

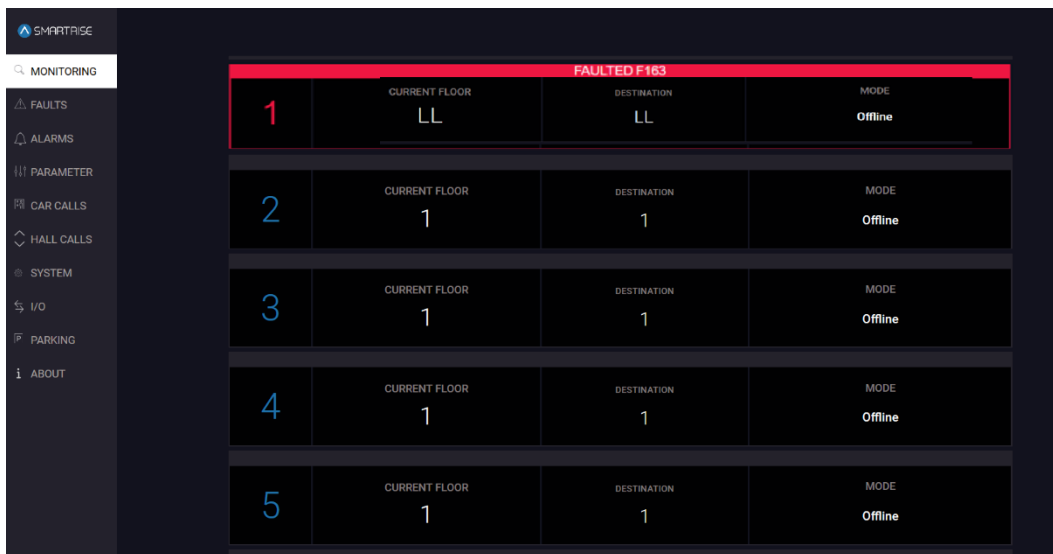


Figure 3: MONITORING Screen

The table below lists the description for the MONITORING screen.

Table 2: MONITORING Screen

Field	Description
Car Number	Displays the car number
CURRENT FLOOR	Displays the location of the car
DESTINATION	Displays the next destination landing (if any)
MODE	Displays the Mode of Operation
FAULTED	Displays the fault number if there is a fault with the car

When the user clicks on the car number, the MONITORING screen displays the status of that car.

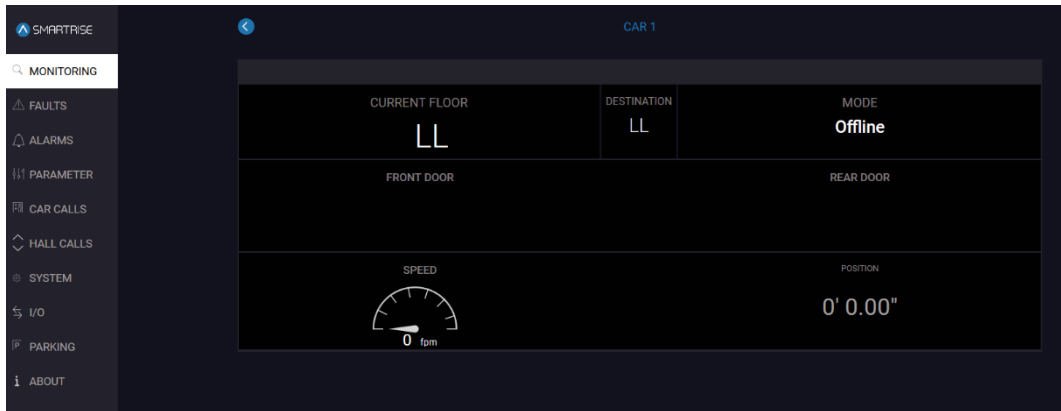


Figure 4: MONITORING Screen – Status of Car

The table below lists the description for the MONITORING screen – Status of Car.

Table 3: MONITORING Screen – Status of Car

Field	Description
CURRENT FLOOR	Displays the location of the car
DESTINATION	Displays the next destination landing (if any)
MODE	Displays the Mode of Operation
FRONT DOOR	Displays if the front door is open
REAR DOOR	Displays if the rear door is open
SPEED	Displays the speed of the car
POSITION	Displays the position of the car
Buttons	
	Allows the user to return to Monitoring screen

4 Faults

The FAULTS screen displays a recording of the faults triggered by any car in the group.

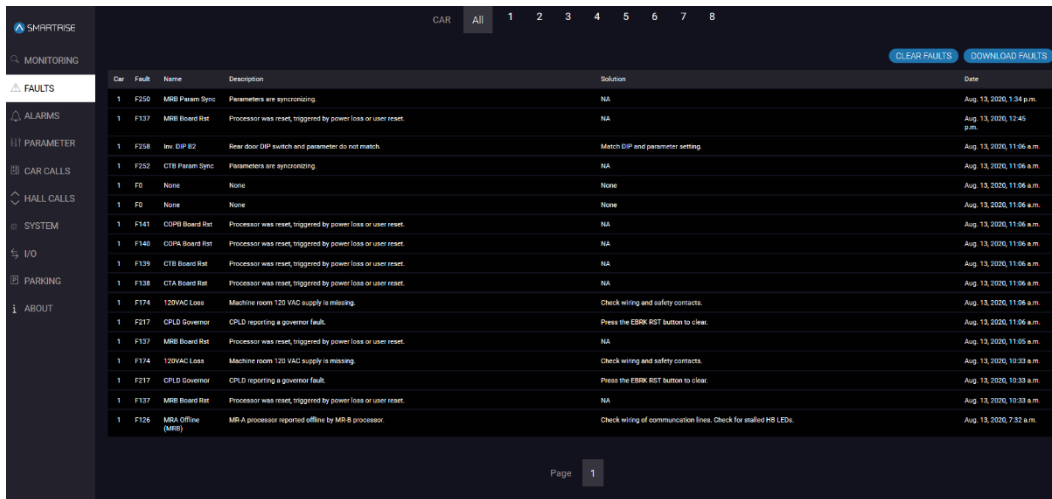


Figure 5: FAULTS Screen

The table below lists the description for the FAULTS screen.

Table 4: FAULTS Screen

Field	Description
CAR All 1 2	Allows the user to select the faults for a car or all cars
Car	Displays the car that has the fault
Fault	Displays the fault number
Name	Displays the name of the fault
Description	Displays the description of the fault
Solution	Displays possible solutions for the fault
Date	Displays the date and time the fault occurred
Buttons	
CLEAR FAULTS	Allows the user to clear all faults
DOWNLOAD FAULTS	Allows the user to download the faults list

Perform the following to download the faults list.

1. From the FAULTS screen, select the car that has a list of faults and click DOWNLOAD FAULTS.
2. The faults.csv file is downloaded into the Downloads folder.

To clear the faults list, select the car with the list of faults and click CLEAR FAULTS.

5 Alarms

The ALARMS screen displays a recording of the alarms triggered by any car in the group.

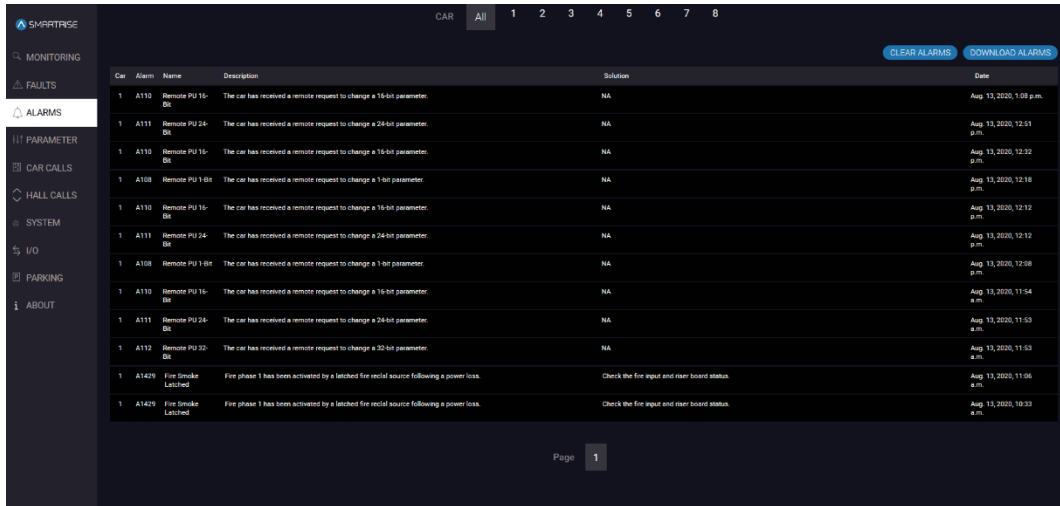


Figure 6: ALARMS Screen

The table below lists the description for the ALARMS screen.

Table 5: ALARMS Screen

Field	Description
CAR All 1 2	Allows the user to select the alarms for a car or all cars
Car	Displays the car that has the alarm
Alarm	Displays the alarm number
Name	Displays the name of the alarm
Description	Displays the description of the alarm
Solution	Displays possible solutions for the alarm
Date	Displays the date and time the alarm occurred
Buttons	
CLEAR ALARMS	Allows the user to clear all alarms
DOWNLOAD ALARMS	Allows the user to download the alarms list

Perform the following to download the alarms list.

1. From the ALARMS screen, select the car that has a list of alarms and click **DOWNLOAD ALARMS**.
2. The alarms.csv file is downloaded into the Downloads folder.

To clear the alarms list, select the car with the list of alarms and click **CLEAR ALARMS**.

6 Parameters

The PARAMETER screens allow the user to select parameters that are configured according to the job. For more information about setting the parameters, see the C4 User Manual and *C4 Parameter List*

6.1 Manual Edit

The Manual Edit screen allows the user to select a specific parameter to adjust for a specific car. There are 5 groups of parameters: 1-bit, 8-bit, 16-bit, 24-bit, and 32-bit. Each type has its own set of parameters specified by the index. For example, 01-0000 is Fire Main Use Rear Door, while 01-0131 is Bypass Fire Service. 01 is the type, 0000 and 0131 are the index.

Depending on the code entered for the group of cars, the parameter can be adjusted. When the user clicks SEARCH, the name of the parameters (with the current values), the category of the parameter, and option to adjust the parameter displays based on the selected value the user entered.

The user can enter a decimal number to change the respective parameter on the controller.

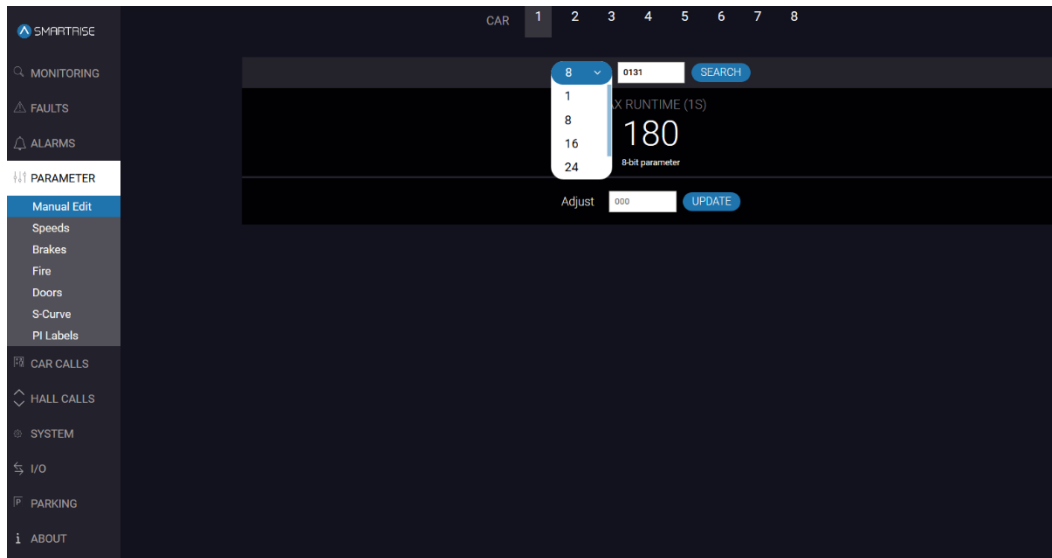



Figure 7: PARAMETER Screen – Manual Edit

The table below lists the description for the PARAMETER screen – Manual Edit.

Table 6: PARAMETER Screen – Manual Edit

Field	Description
CAR 1 2	Allows the user to select the car number
Group of Cars / Parameter Type Selection	Allows the user to select the parameter group from the drop-down list

Field	Description
Cars / Parameter Index	Allows the user to enter the index of a specific parameter under the parameter type
Adjust	Allows the user to enter the parameter adjustment
Buttons	
	Allows the user to select the number of cars in the group from the drop-down list
SEARCH	Allows the user to search for the value of the parameter per entered parameter type and index
UPDATE	Allows the user to update the adjustment for the parameter based on the selected value the user entered

Perform the following to manually edit the parameters.

1. On the MR board, turn on DIP 4A.
2. From the PARAMETER screen – Manual Edit, click on the car number to change the parameter for that car.
3. Select the parameter group from the drop-down list and enter the index.
4. Click SEARCH.
5. Enter the adjustment value and click UPDATE.
6. A green UPDATE with a checkmark displays when a valid adjustment has been entered.

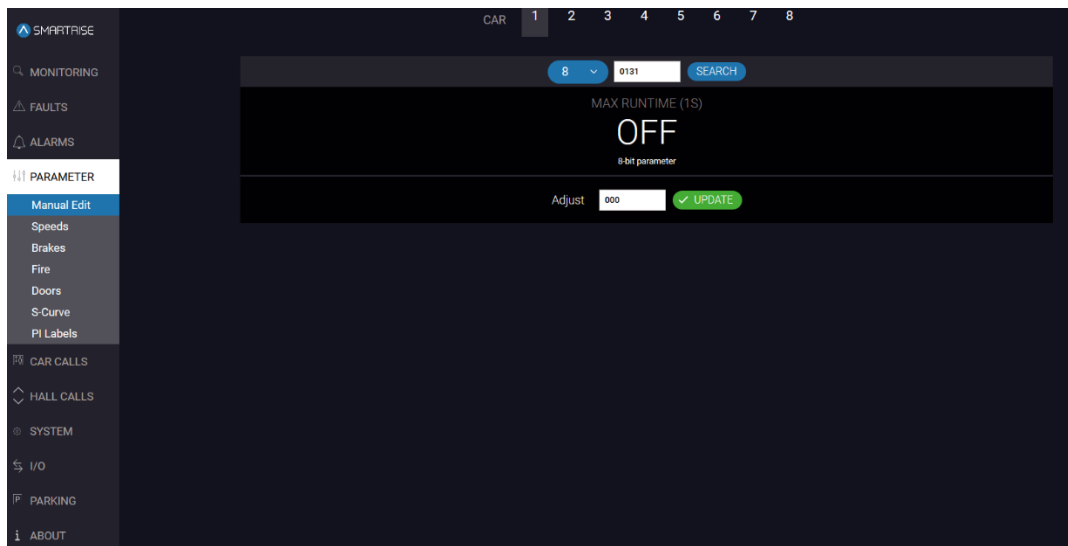


Figure 8: PARAMETER Screen – Manual Edit - UPDATE

7. Turn off DIP 4A.

6.2 Speeds

The Speeds screen allows the user to enter the parameters for the type of speed determined by the mode of the controller.

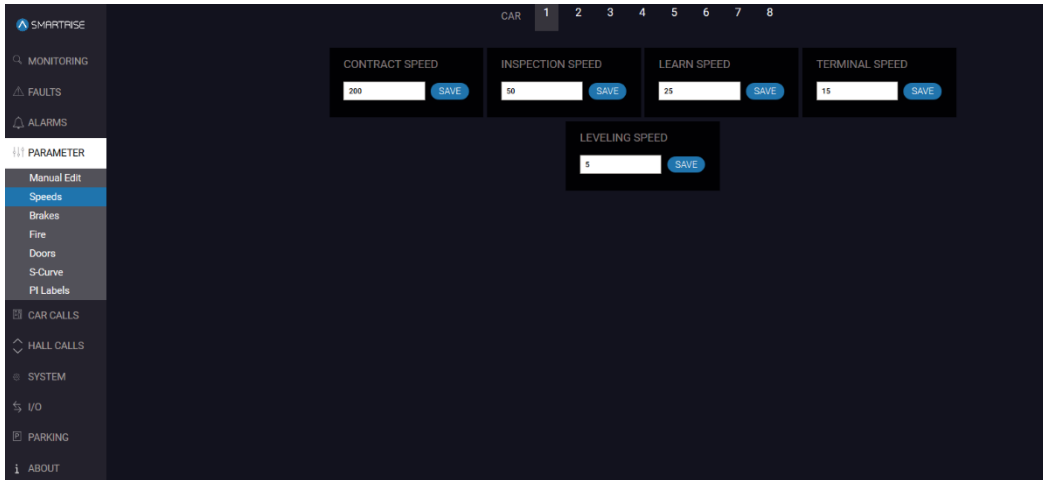


Figure 9: PARAMETER Screen – Speeds

The table below lists the description for the PARAMETER screen – Speeds.

Table 7: PARAMETER Screen – Speeds

Field	Description
CAR 1 2	Allows the user to select the car number
CONTRACT SPEED	Allows the user to enter the maximum speed of the elevator the job was configured for
INSPECTION SPEED	Allows the user to enter the speed the car runs for all inspection modes
LEARN SPEED	Allows the user to enter the speed used during hoistway learn operation
TERMINAL SPEED	Allows the user to enter the speed the car while in inspection and within the configured soft limit distance of a terminal floor
LEVELING SPEED	Allows the user to enter the speed used in automatic operation when leveling to a floor
Buttons	
SAVE	Allows the user to save the set speed parameters

Perform the following to update the speed parameters.

1. From the PARAMETER screen – Speeds, click on the car number to change the parameter for that car.
2. Enter the new parameter value(s) and click SAVE.

- A green SAVE button with a checkmark displays.

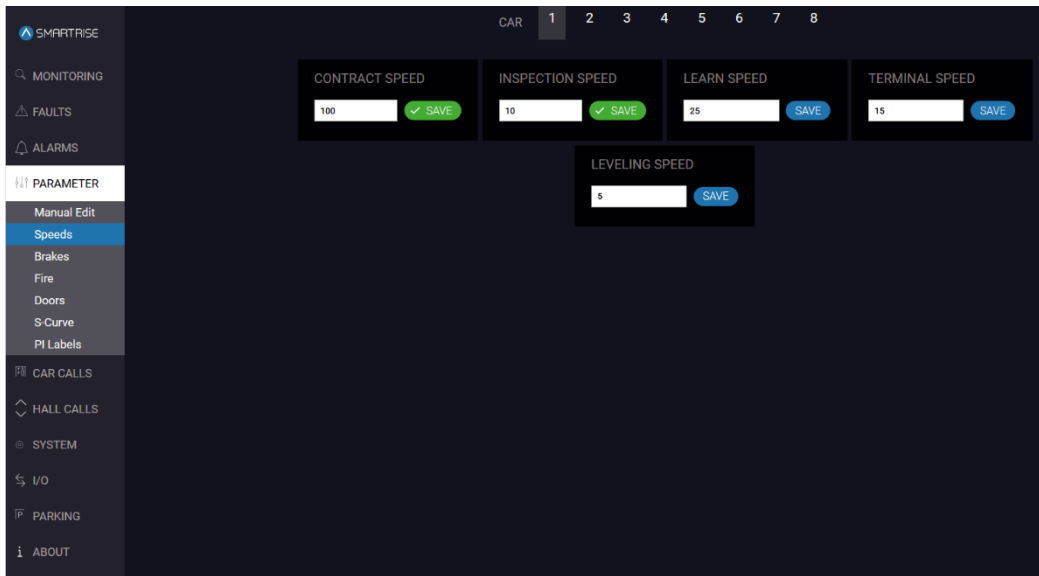


Figure 10: PARAMETER Screen – Speeds – Save

6.3 Brakes

The Brakes screen allows the user to adjust the brake voltage used to control rollback.

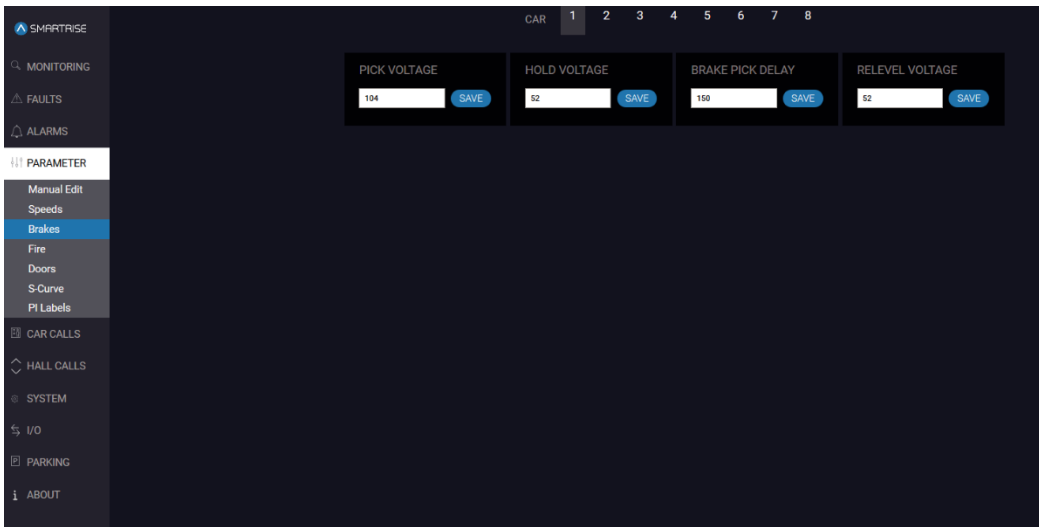


Figure 11: PARAMETER Screen – Brakes

The table below lists the description for the PARAMETER screen – Brakes.

Table 8: PARAMETER Screen – Brakes

Field	Description
CAR 1 2	Allows the user to select the car number

Field	Description
PICK VOLTAGE	Allows the user to enter the pick voltage to open the brakes (pick them)
HOLD VOLTAGE	Allows the user to enter a consistent voltage supplied to the brake to keep the brakes open
BRAKE PICK DELAY	Allows the user to enter the time the brake is held at zero speed
RELEVEL VOLTAGE	Allows the user to enter the voltage where the brake barely lifts during releveling to allow the sheave to turn under the brake
Buttons	
SAVE	Allows the user to save the set brake parameters

Perform the following to update the brake voltage parameters.

1. From the PARAMETER screen – Brakes, click on the car number to change the parameter for that car.
2. Enter the new brake voltage(s) and click SAVE.
3. A green SAVE button with a checkmark displays.

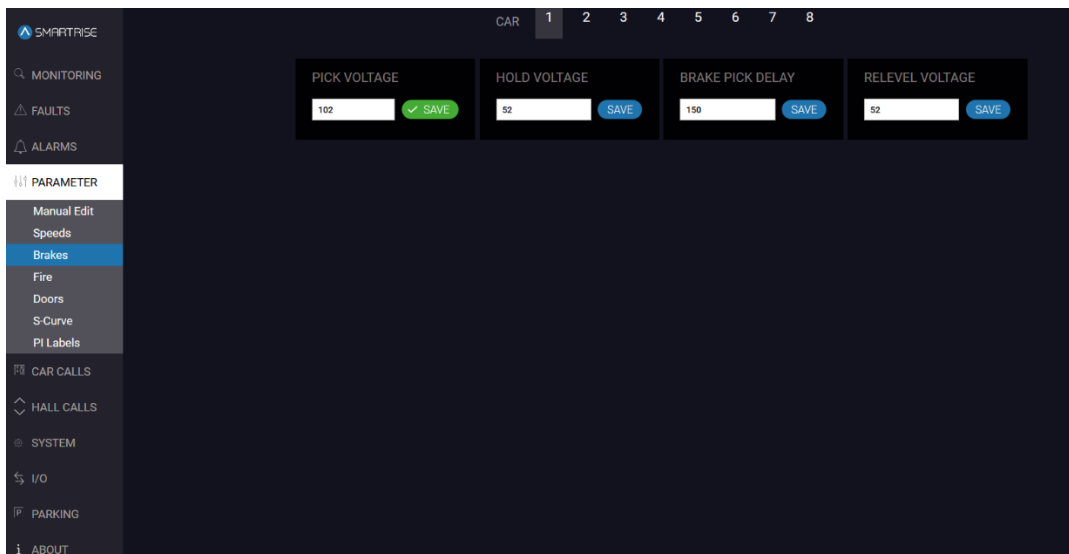


Figure 12: PARAMETER Screen – Brakes – Save

6.4 Fire

The Fire screen parameters are set for the main and alternate fire recall floor.

The Fire screen contains three sections:

- MAIN SMOKE – Allows the user to select where the car is recalled to a designated landing when smoke has been detected in the main lobby
- MAIN RECALL – Allows the user to select where the car is recalled to a designate landing during a fire
- ALTERNATE RECALL – Allows the user to select where the car is recalled to a designated alternate landing when there is an indication of a fire at the designated main recall floor

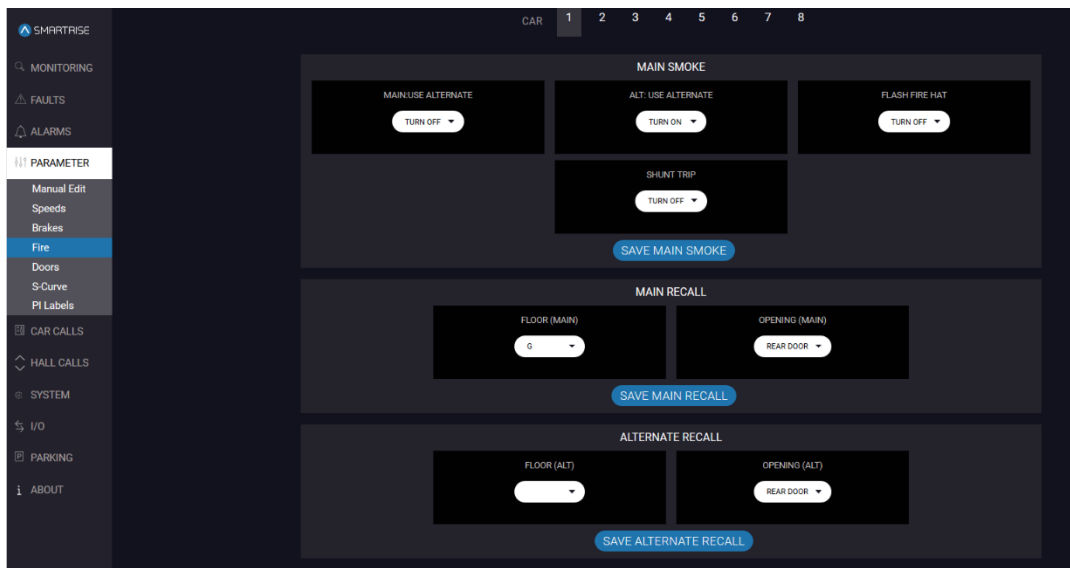


Figure 13: PARAMETER Screen – Fire

The table below lists the description for the PARAMETER screen – Fire.

Table 9: PARAMETER Screen – Fire

Field	Description
CAR 1 2	Allows the user to select the car number
MAIN SMOKE	
MAIN: USE ALTERNATE	Allows the user to select if the car travels to the main landing when smoke has been detected
ALT: USE ALTERNATE	Allows the user to select if the car travels to the alternate landing when smoke has been detected in the main lobby
FLASH FIRE HAT	Allows the user to select if the flash fire hat symbol on the panel flashes when smoke has been detected
SHUNT TRIP	Allows the user to select if the shunt output trips a breaker shutting off the main power to the controller in case of a fire in the main lobby

Field	Description
MAIN RECALL	
FLOOR (MAIN)	Allows the user to select the designated main landing when recalled
OPENING (MAIN)	Allows the user to select which door opens when recalled to the main designated landing
ALTERNATE RECALL	
FLOOR (ALT)	Allows the user to select the designated alternate landing when recalled
OPENING (ALT)	Allows the user to select which door opens when in case of being recalled to an alternate designated landing
Buttons	
SAVE MAIN SMOKE	Allows the user to save the selected main smoke parameters
SAVE MAIN RECALL	Allows the user to save the selected main recall parameters
SAVE ALTERNATE RECALL	Allows the user to save the selected alternate recall parameters

Perform the following to update the smoke and recall.

1. From the PARAMETER screen – Fire, click on the car number to change the parameter for that car.
2. Select the new parameters from the drop-down list for the smoke and/or recall parameters and click SAVE.
3. A green SAVE button with a checkmark displays.

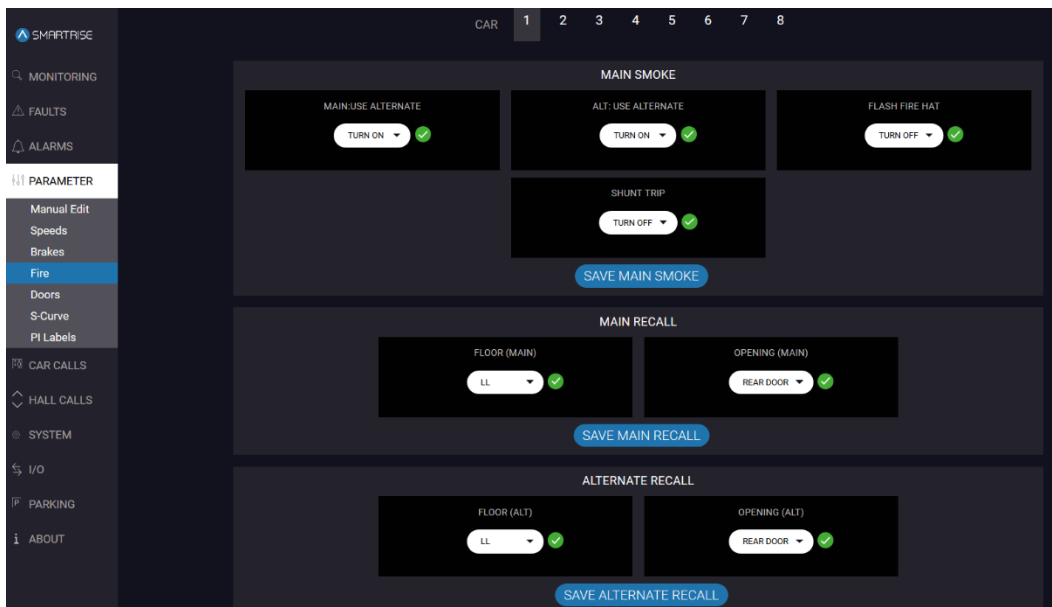


Figure 14: PARAMETER Screen – Fire – Save

6.5 Doors

The timing of the doors to open, remain open, close, or remain close is dependent upon the time of day and purpose of the elevator.

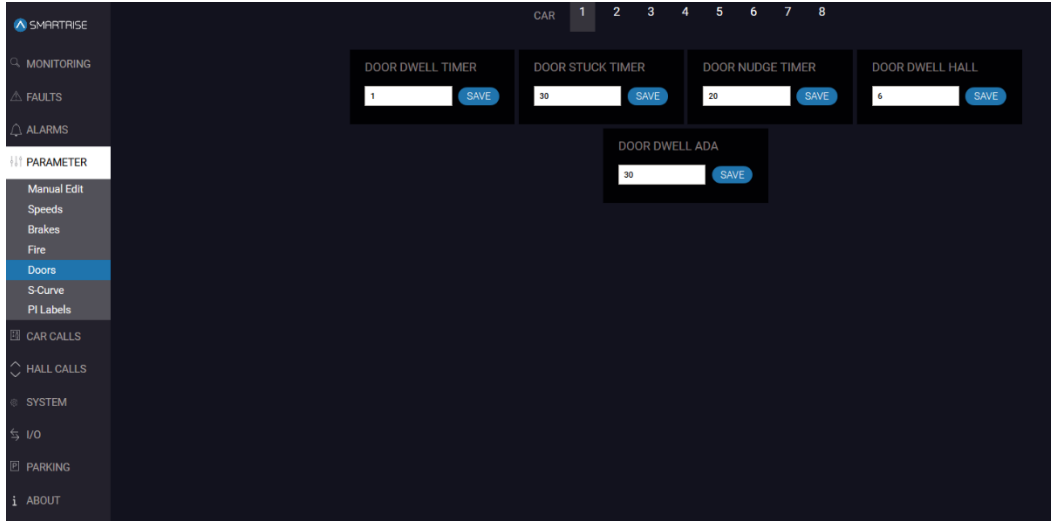


Figure 15: PARAMETER Screen – Doors

The table below lists the description for the PARAMETER screen – Doors.

Table 10: PARAMETER Screen – Doors

Field	Description
CAR 1 2	Allows the user to select the car number
DOOR DWELL TIME	Allows the user to enter the time the car doors remain open when answering car calls
DOOR STUCK TIME	Allows the user to enter the time limit for a door to completely open or close before faulting
DOOR NUDGE TIME	Allows the user to enter the time the doors try to close after the door has been held open past a certain period of time. If set to zero, nudging is disabled.
DOOR DWELL HALL	Allows the user to enter the time car doors remain open when responding to hall calls
DOOR DWELL ADA	Allows the user to enter the time car doors remain open when answering ADA calls
Buttons	
SAVE	Allows the user to save the set of door parameter

Perform the following to update the door parameters.

1. From the PARAMETER screen – Doors, click on the car number to change the parameter for that car.
2. Enter the new parameter value(s) and click SAVE.

3. A green SAVE button with a checkmark displays.

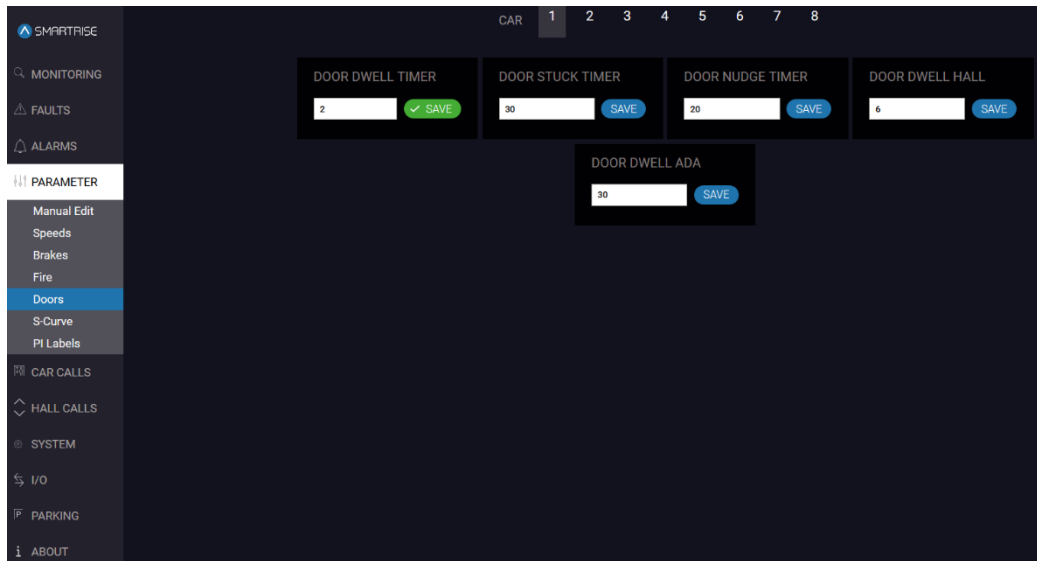


Figure 16: PARAMETER Screen – Doors – Save

6.6 S-Curve

The S-Curve provides a smooth transition by increasing or decreasing the acceleration and speed so there is no sudden jerking motion. For more information about the S-Curve and adjusting the parameters for all profiles, see the C4 User Manual.

The following profiles are used:

- Normal Profile
- Inspection Profile
- Short Profile
- Emergency Profile

6.6.1 Normal Profile

The Normal Profile is selected to set the parameters in all automatic operation runs that are longer than the minimum short profile distance except for emergency power.

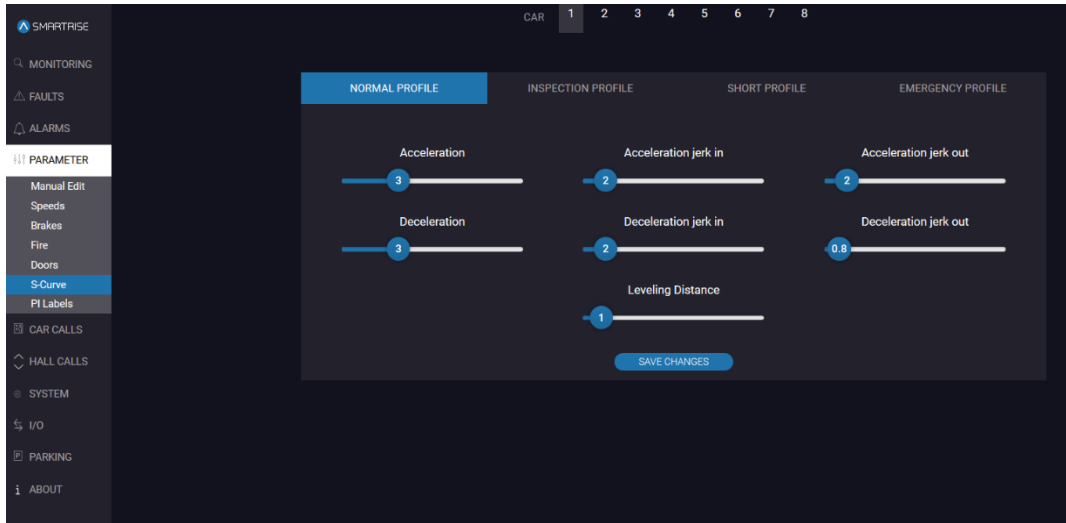


Figure 17: PARAMETER Screen – S-Curve – NORMAL PROFILE

The table below lists the description for the PARAMETER screen – S-Curve – NORMAL PROFILE.

Table 11: PARAMETER Screen – S-Curve – NORMAL PROFILE

Field	Description
CAR 1 2	Allows the user to select the car number
Acceleration	Allows the user to set the rate at which the car reaches constant speed on normal profile runs
Acceleration jerk in	Allows the user to set the transition from zero speed to full acceleration on normal profile runs
Acceleration jerk out	Allows the user to set how quickly the profile transitions from maximum to zero acceleration (constant velocity) on normal profile runs
Deceleration	Allows the user to set the rate at which the car reaches leveling speed on normal profile runs
Deceleration jerk in	Allows the user to set the softness of the transition from constant velocity to deceleration on normal profile runs
Deceleration jerk out	Allows the user to set the softness of the transition from deceleration to leveling speed on normal profile runs
Leveling Distance	Allows the user to set the stabilized distance the elevator will travel before arriving at the destination floor on normal profile runs
Buttons	
SAVE CHANGES	Allows the user to save the set parameters

Perform the following to update the normal profile parameters.

1. From the PARAMETER screen – S-Curve – NORMAL PROFILE, click on the car number to change the parameter for that car.
2. Slide the bar to the new parameter value(s) and click SAVE CHANGES.
3. A green checkmark displays.

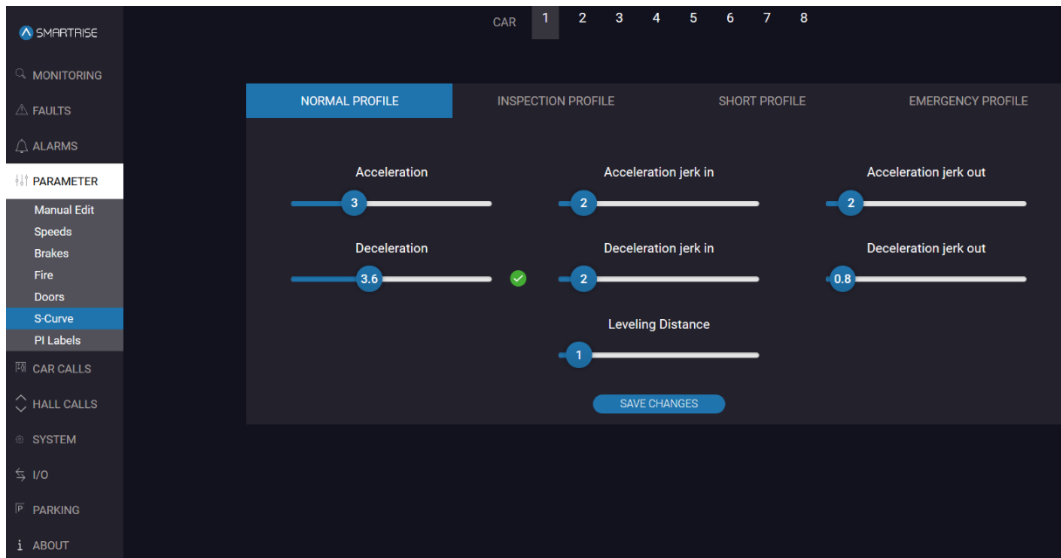


Figure 18: PARAMETER Screen – S-Curve – NORMAL PROFILE – Save

6.6.2 Inspection Profile

The Inspection Profile is selected to set the parameters when the car is operating in Inspection mode.



Figure 19: PARAMETER Screen – S-Curve – INSPECTION PROFILE

The table below lists the description for the PARAMETER screen – S-Curve – INSPECTION PROFILE.

Table 12: PARAMETER Screen – S-Curve – INSPECTION PROFILE

Field	Description
CAR 1 2	Allows the user to set the rate at which the car reaches constant speed on inspection profile runs
Acceleration	Allows the user to set the transition from zero speed to full acceleration on inspection profile runs
Acceleration jerk in	Allows the user to set how quickly the profile transitions from maximum to zero acceleration (constant velocity) on inspection profile runs
Acceleration jerk out	Allows the user to set the rate at which the car reaches leveling speed on inspection profile runs
Deceleration	Allows the user to set the rate at which the car reaches constant speed on inspection profile runs
Buttons	
SAVE CHANGES	Allows the user to save the set parameters

Perform the following to update the inspection profile parameters.

1. From the PARAMETER screen – S-Curve – INSPECTION PROFILE, click on the car number to change the parameter for that car.
2. Slide the bar to the new parameter value(s) and click SAVE CHANGES.
3. A green checkmark displays. See Figure 18.

6.6.3 Short Profile

The Short Profile is selected to set the parameters when the car is operating for the set minimum profile.

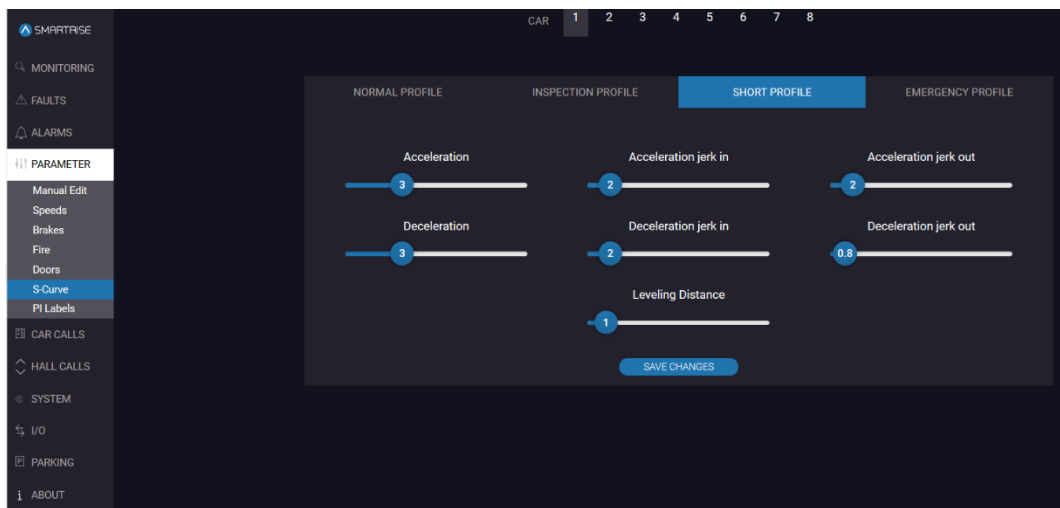


Figure 20: PARAMETER Screen – S-Curve – SHORT PROFILE

The table below lists the description for the PARAMETER screen – S-Curve – SHORT PROFILE.

Table 13: PARAMETER Screen – S-Curve – SHORT PROFILE

Field	Description
CAR 1 2	Allows the user to select the car number
Acceleration	Allows the user to set the rate at which the car reaches constant speed on short profile runs
Acceleration jerk in	Allows the user to set the transition from zero speed to full acceleration on short profile runs
Acceleration jerk out	Allows the user to set how quickly the profile transitions from maximum to zero acceleration (constant velocity) on short profile runs
Deceleration	Allows the user to set the rate at which the car reaches leveling speed on short profile runs
Deceleration jerk in	Allows the user to set the softness of the transition from constant velocity to deceleration on short profile runs
Deceleration jerk out	Allows the user to set the softness of the transition from deceleration to leveling speed on short profile runs
Leveling Distance	Allows the user to set the stabilized distance the elevator will travel before arriving at the destination floor on short profile runs
Buttons	
SAVE CHANGES	Allows the user to save the set parameters

Perform the following to update the short profile parameters.

1. From the PARAMETER screen – S-Curve – SHORT PROFILE, click on the car number to change the parameter for that car.
2. Slide the bar to the new parameter value(s) and click SAVE CHANGES.
3. A green checkmark displays. See Figure 18.

6.6.4 Emergency Profile

The Emergency Profile is selected to set the parameters when the controller is running on emergency operation.

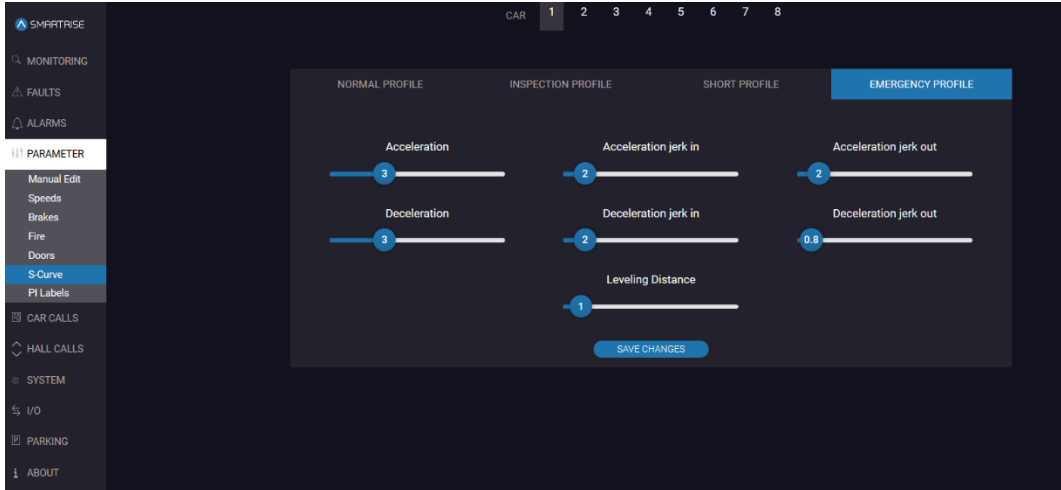


Figure 21: PARAMETER Screen – S-Curve – EMERGENCY PROFILE

The table below lists the description for the PARAMETER screen – S-Curve – EMERGENCY PROFILE.

Table 14: PARAMETER Screen – S-Curve – EMERGENCY PROFILE

Field	Description
CAR 1 2	Allows the user to select the car number
Acceleration	Allows the user to set the rate at which the car reaches constant speed on emergency profile runs
Acceleration jerk in	Allows the user to set the transition from zero speed to full acceleration on emergency profile runs
Acceleration jerk out	Allows the user to set how quickly the profile transitions from maximum to zero acceleration (constant velocity) on emergency profile runs
Deceleration	Allows the user to set the rate at which the car reaches leveling speed on emergency profile runs
Deceleration jerk in	Allows the user to set the softness of the transition from constant velocity to deceleration on emergency profile runs
Deceleration jerk out	Allows the user to set the softness of the transition from deceleration to leveling speed on emergency profile runs
Leveling Distance	Allows the user to set the stabilized distance the elevator will travel before arriving at the destination floor on emergency profile runs
Buttons	
SAVE CHANGES	Allows the user to save the set parameters

Perform the following to update the emergency profile parameters.

1. From the PARAMETER screen – S-Curve – EMERGENCY PROFILE, click on the car number to change the parameter for that car.
2. Slide the bar to the new parameter value(s) and click SAVE CHANGES.
3. A green checkmark displays. See Figure 18.

6.7 PI Labels

The Position Indicator (PI) Labels screen shows the floor label assigned to each floor.

The number of adjustable PIs is relative to how many floors and openings a job has. The C4 system supports up to 96 floors. “PI” is the floor label. The user can adjust the label by typing into the field numeric, alphanumeric, and special characters. By default, the C4 system supports two characters per floor. Three-character PIs are possible by turning on a parameter.

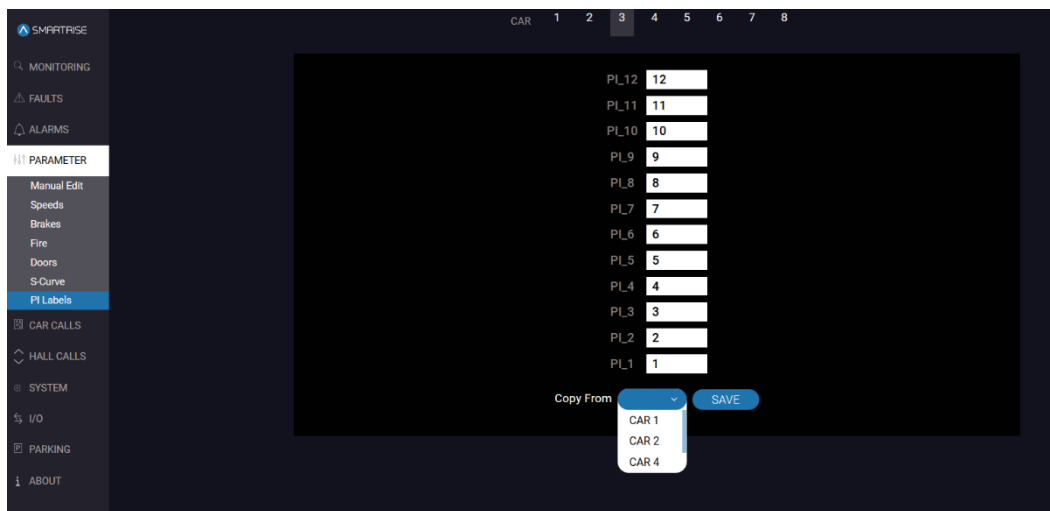


Figure 22: PARAMETER Screen – PI Labels

The table below lists the description for the PARAMETER screen – PI Labels.

Table 15: PARAMETER Screen – PI Labels

Field	Description
CAR 1 2	Allows the user to select the car number
PI_1 thru PI-96	Allows the user to label any landing to a 3-digit alpha-numeric or numeric configuration.
COPY FROM	Allows the users to select a car number to copy PI Labels from
Buttons	
SAVE	Allows the user to save all PI changes made on the page

Perform the following to update the PI Label parameters.

1. From the PARAMETER screen – PI Labels, click on the car number to change the parameter for that car.
2. Is the position of the car manually being changed or copied from another car?
 - a. If the position of the car is being manually changed go to step 3.
 - b. If the position of the car is being copied from another car go to step 4.
3. Enter the new position indicator parameter value(s) for the individual car and click SAVE. Go to step 5.
4. Click COPY From and select the car the position indicator parameters are being copied from and click SAVE.
5. A green checkmark displays.

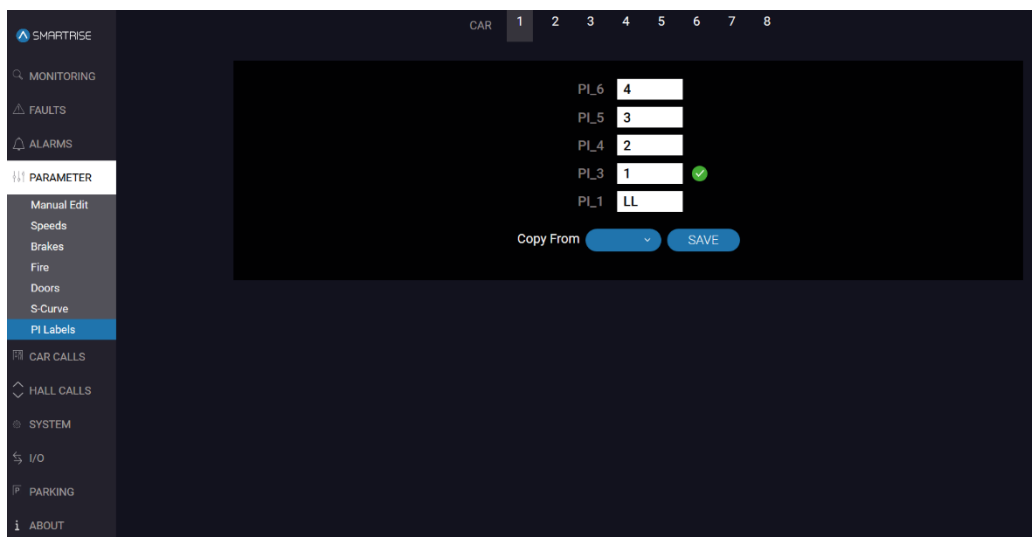


Figure 23: PARAMETER Screen – PI Labels – SAVE

7 Car Calls

The CAR CALLS screen allows the user to click on a button. Each button corresponds to a floor. When the button is pressed, the controller registers the car call. If there are car calls already in the system, the corresponding button lights up. The “R” represents there are rear doors.

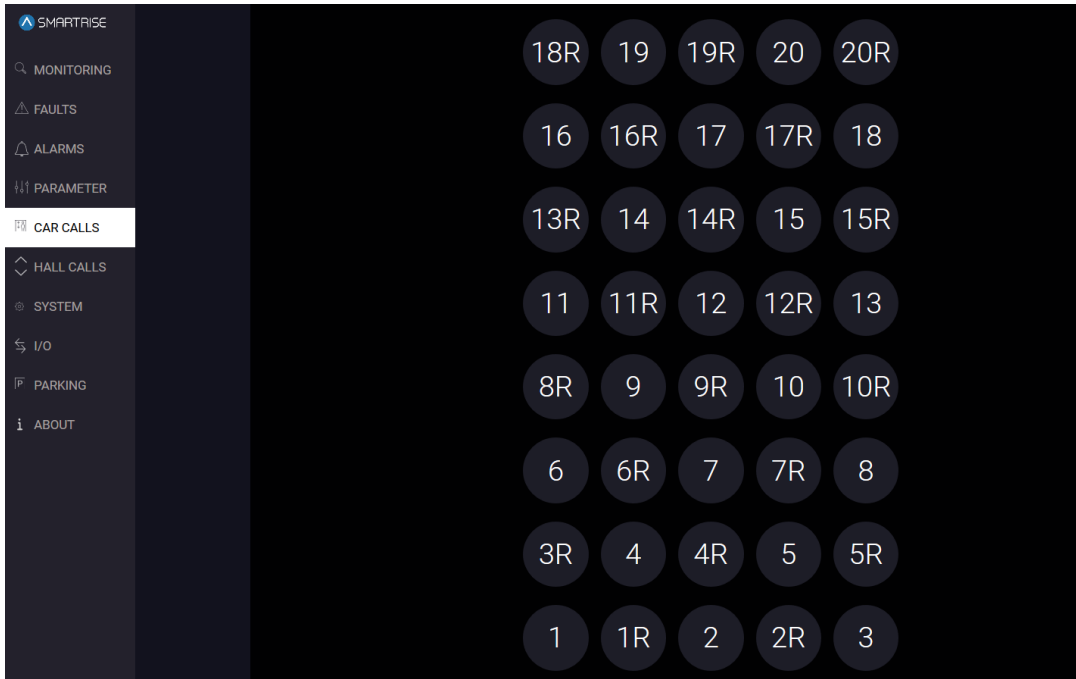


Figure 24: CAR CALLS Screen Part 1 of 2



Figure 25: CAR CALLS Screen Part 2 of 2

The table below lists the description for the CAR CALLS screen.

Table 16: CAR CALLS Screen

Field	Description
CAR 1 2	Allows the user to select the car number
Floor Number	Allows the user to select a floor

Perform the following to select a car call.

1. From the CAR CALLS screen, click on the car number for the car call then click the floor number.
2. The color of the active car call button turns blue.

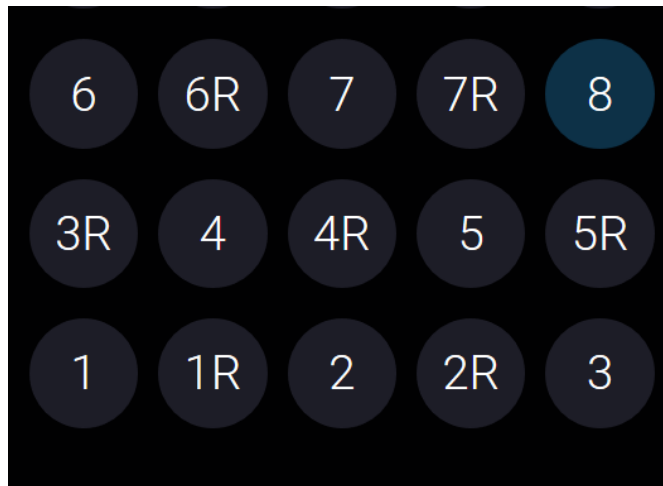


Figure 26: Active Car Call

8 Hall Calls

The HALL CALLS screen allows the user to click on a button. Each button corresponds to a direction and floor. When the button is pressed, the controller registers the hall call in the selected direction. If there are hall calls already in the system, the corresponding button direction lights up. The “R” represents there are rear doors.

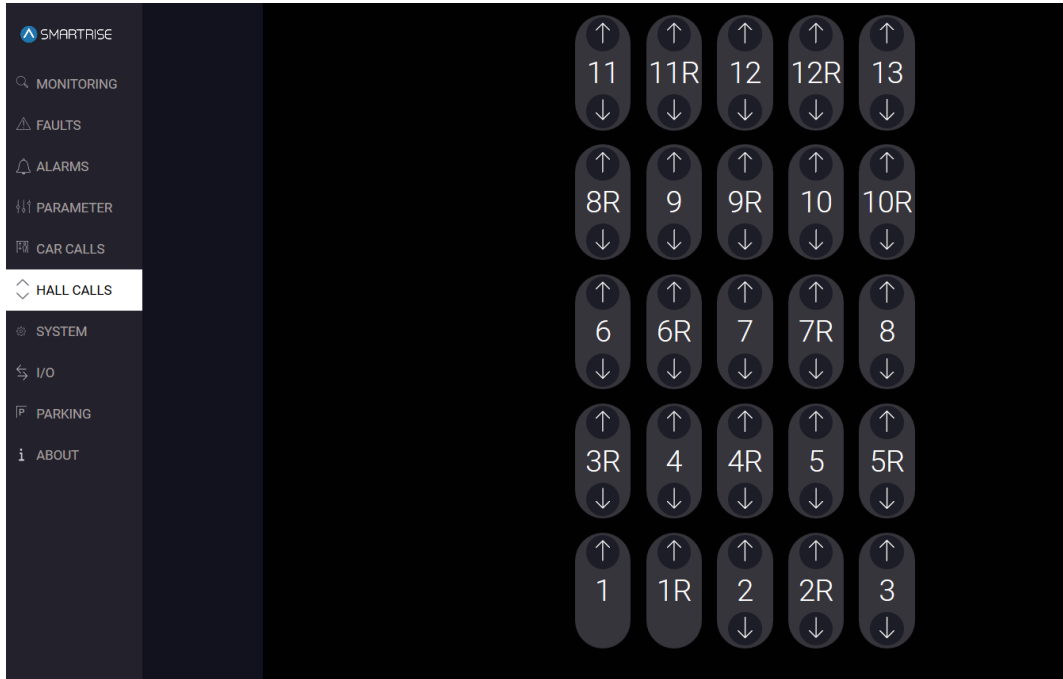


Figure 27: HALL CALLS Screen Part 1 of 2

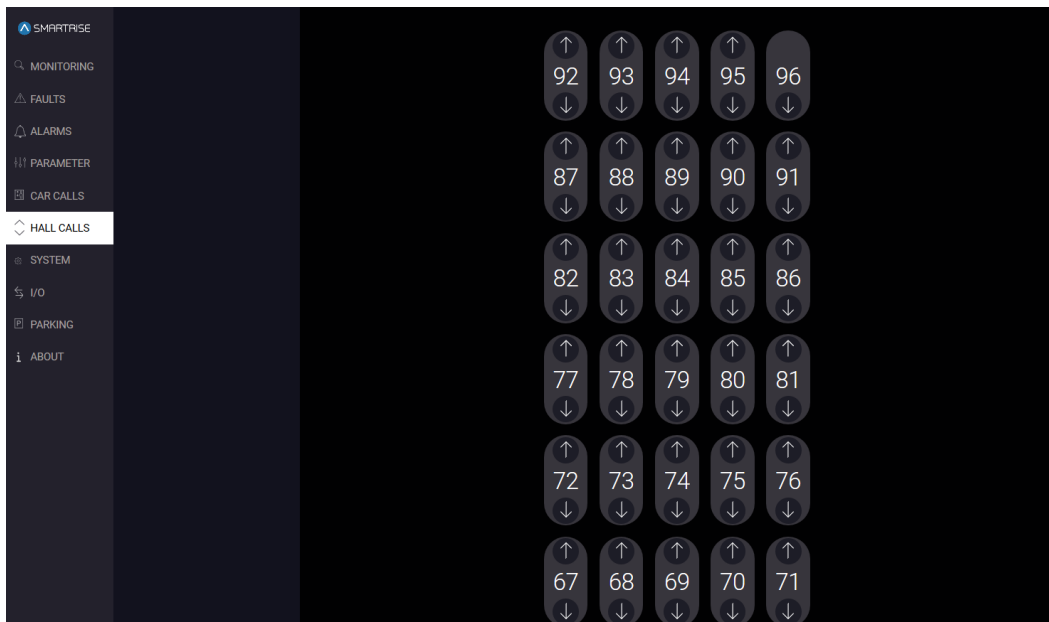




Figure 28: HALL CALLS Screen Part 2 of 2

The table below lists the description for the HALL CALLS screen.

Table 17: HALL CALLS Screen

Field	Description
Floor Number	Allows the user to select the hall call floor to stop at
Buttons	
	Allows the user to move the car in the up direction
	Allows the user to move the car in the down direction

Perform the following to select a hall call.

1. From the HALL CALLS screen, click on a floor by either the moving up or down arrows.
2. The color of the active hall call up and/or down arrows on the button turns blue.

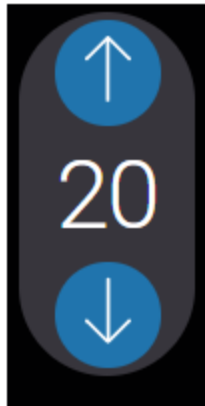


Figure 29: Active Hall Call

9 System

The SYSTEM screens allow the user to select a system function. Each function displays step by step instructions on how to perform updates and backups.

9.1 Software Download

The Software Download screen displays instructions on how to update system software.

The bootloader software version must be 1.10 or higher. If not, the bootloader code cannot be downloaded via the software download. The bootloader will require to be downloaded using the Link 2 Programmer.

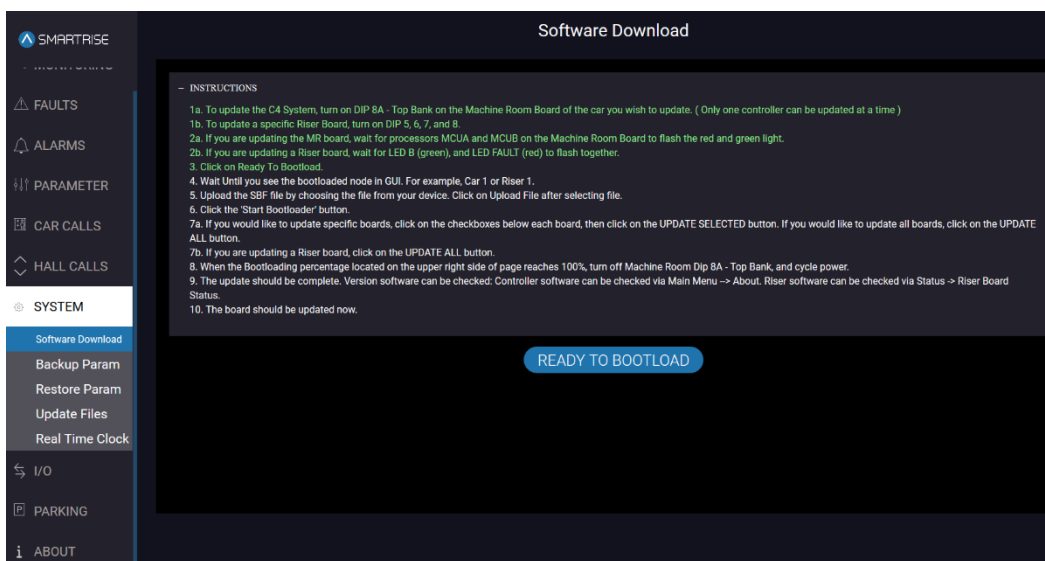


Figure 30: SYSTEM Screen – Software Download

The table below lists the description for the SYSTEM screen – Software Download.

Table 18: SYSTEM Screen – Software Download

Field	Description
INSTRUCTIONS	Displays the instructions on how to load the bootloader
Show Details	Displays the current status of the download
Buttons	
READY TO BOOTLOAD	Allows the system to detect if ready for bootloader
CHOOSE FILE	Allows the user to select the file to update the system software
UPLOAD FILE	Allows the user to upload the selected file
START BOOTLOADER	Allows the user to start the bootloader process
UPDATE ALL	Allows the user to select all boards to be updated
UPDATE SELECTED	Allows the user to select a specific board to be updated

Perform the following to upload the bootloader.

1. Turn on:
 - DIP 8A on the MR board to download one MR, CT, and/or COP board.
 - DIP 5, 6, 7, and 8 on each Riser board to download the designated Riser boards.

NOTE: For the purpose of this example, the MR board download is displayed.

2. Wait for the MCUA and MCUB to flash the red and green LEDs in a pattern.
3. From the SYSTEM screen – Software Download, click READY TO BOOTLOAD. The system starts checking bootloader nodes. If no system is detected, the following error is shown.

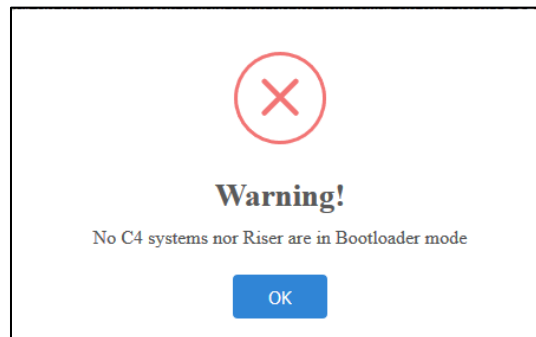


Figure 31: Bootload Warning

4. Click CHOOSE FILE to select the file to be updated.

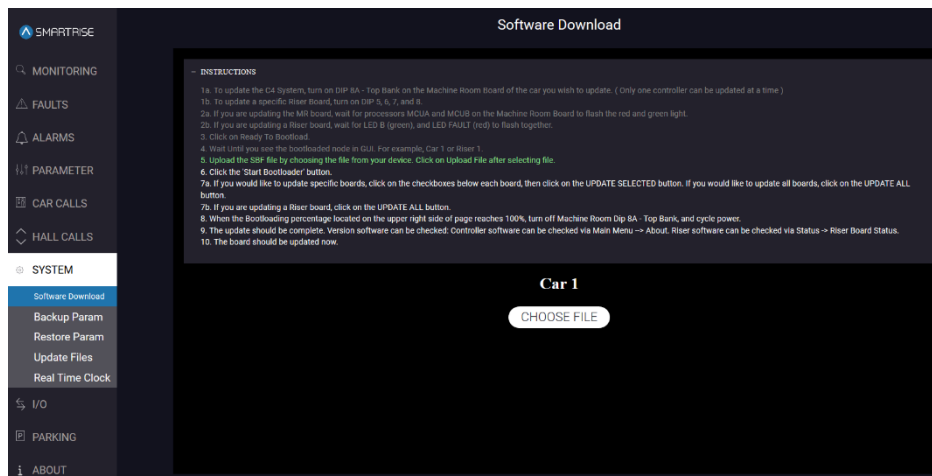


Figure 32: SYSTEM Screen – Software Download – Choose File

5. Select the car specific .sbf file supplied by Smartrise to update the system software.

- Click **UPLOAD FILE**. If the file does not correspond to the car, an Upload File Warning displays.

NOTE: The process continues after the warning.



Figure 33: SYSTEM Screen – Software Download – UPLOAD File

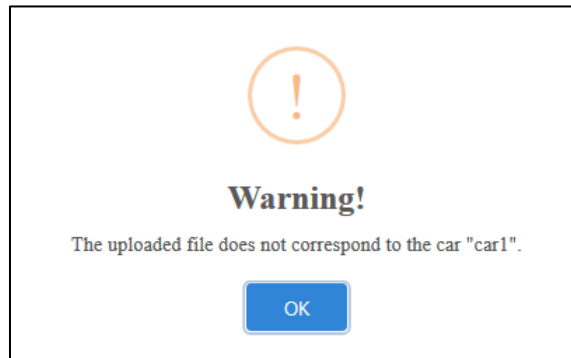


Figure 34: Upload File Warning

7. Click START BOOTLOADER.

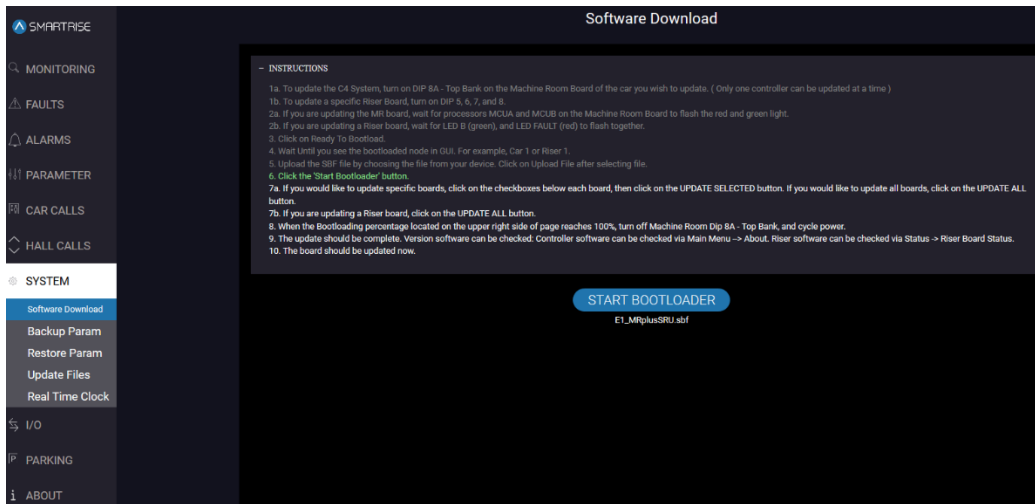


Figure 35: SYSTEM Screen – Software Download – START BOOTLOADER

8. Select the MR, CT, and/or COP board that is being updated.

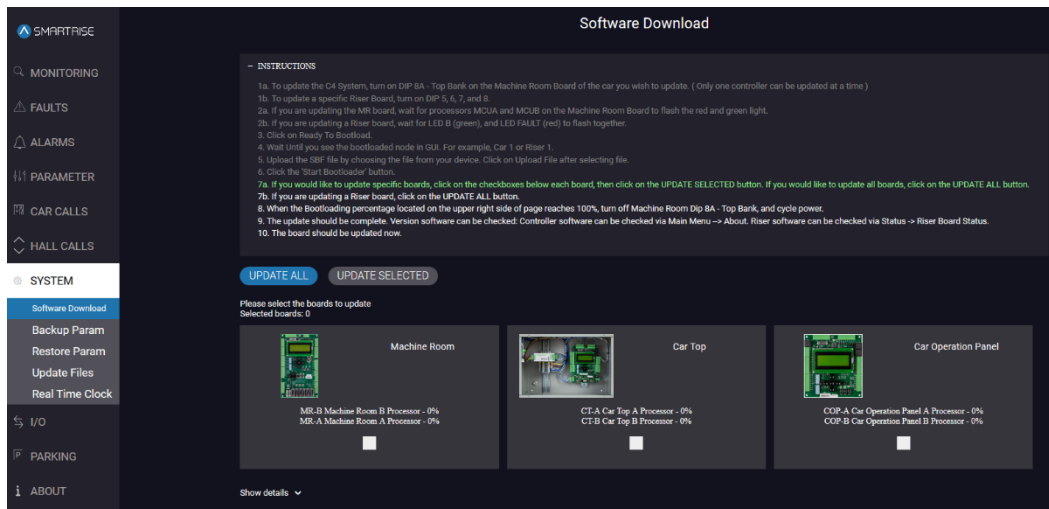


Figure 36: SYSTEM Screen – Software Download – Selected Board

- Click UPDATE ALL (for all boards) or UPDATE SELECTED (for specific boards) to begin update. The Show Details displays the current status of the download. At the same time, the MR board display shows the individual and module progress of the download.

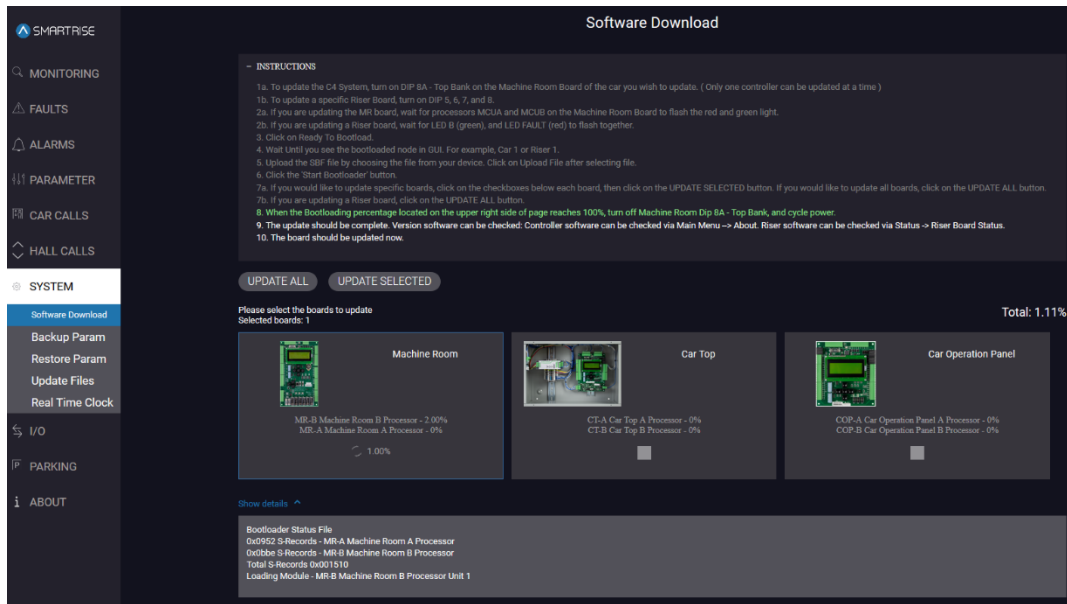


Figure 37: SYSTEM Screen – Software Download – Details

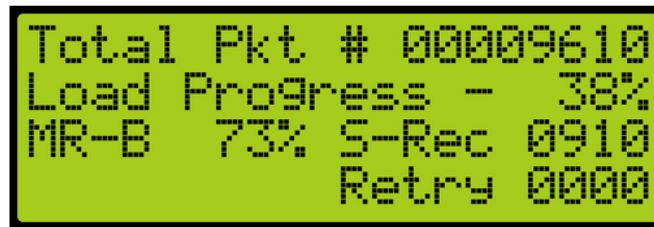


Figure 38: Progress on MR Board

- The MCUA and MCUB LEDs pattern will change to alternating between red, green, and yellow.
- When the screen displays 100%, the software updates are completed.

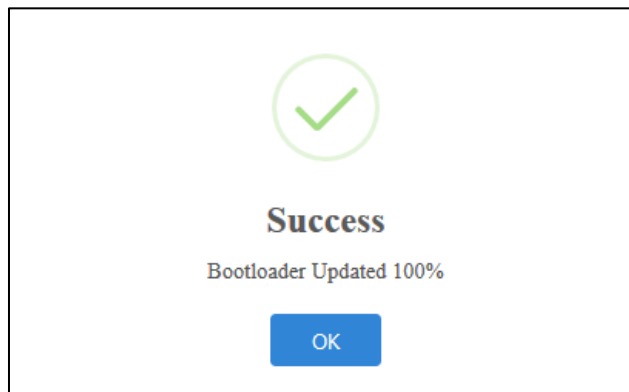


Figure 39: Bootloader Success Message

12. Power down the controller and turn off:
 - DIP 8A for the MR, CT and/or COP board
 - DIP 5, 6, and 7 for the Riser board
13. Turn the power to the controller back on.

9.1.1 Downloading

1. If turning on DIP 8A does not put the car in the Bootloading ready-state, check if the Watchdog jumpers are OFF. On the MR board, this jumper can be found on the upper left corner with the initial WD. On the CT/COP boards, the watchdog jumper is to the right of the direction buttons. Like the MR board, the jumper has the initials WD.
2. Retry and errors are shown during the download on the bottom left side of the display. The download procedure has to be repeated from the beginning if a Table 19 error highlighted with “Abort” is displayed.

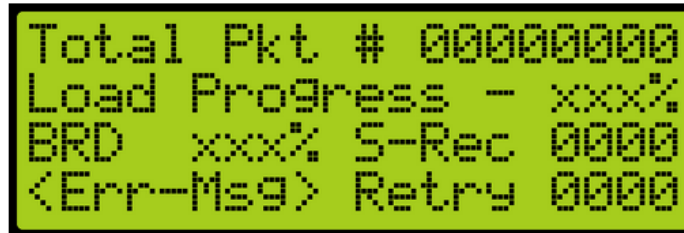


Figure 40: Error

The table below lists the display fields during Bootloader.

Table 19: Bootloader Progress

Field	Description
Total Packet Counter	Total count packets received by MR-B
Overall Load Progress	Overall download progress – All modules
Module (Board (ID)	ID String for module being loaded (MR-A, MR-B, CT-A, CT-B, RISE, COPA, COPB, DDMA, DDMB, SHLD)
Load Progress %	Load progress for the current module
Total S-Records Succesfull Loaded	Total number of S-Records successfully transferred and programmed for all modules

Field	Description
Reason for Retry/Error Reason Note: These appear both on the MR display and in the Web Page “Show Details” window.	Blank Field – No retries or errors Address – Retry – S-Record addressing error was detected Checksum – Retry – S-Record checksum error was detected No S3... – Retry – S-Record package did not start with “S3” sequence record Overflow – Retry – Load package contained too many records Sequence – Retry – Load package contains missing or records out-of-sequence records Flash Err – Abort – Flash write failed. Retry count =error code Bad Erase – Abort – Download initialization encountered a Flash Erase problem. Retry count=FFFF Stalled – Abort – MR-B Bootloader detected a download stall condition. Retry count = 00FF READY – Indicates that MR-B has entered or returned to a state where it is telling the DAD it is ready to start a download

- When all boards are selected to be updated and a board is not present, the system will continue to communicate then times out. A no response message is displayed in the Show Details display. See Figure 41.
- The process then returns for the user to select the board to be updated. See Figure 36. Wait until the MR LCD displays “READY” before attempting another download. If started too soon, the download process will fail again.

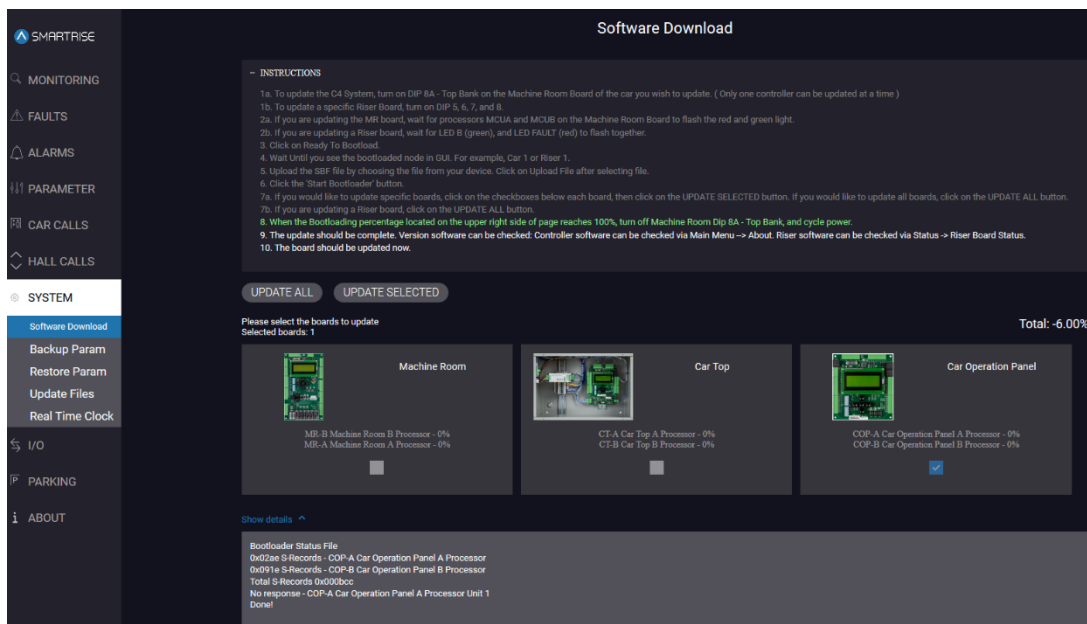


Figure 41: SYSTEM Screen – Software Download – No Response

9.2 Backup Parameters

The Backup Parameter screen allows the user to back up the selected car’s parameters. The downloaded file contains all the parameters and their values.

The user can cancel the backup clicking the Cancel button.

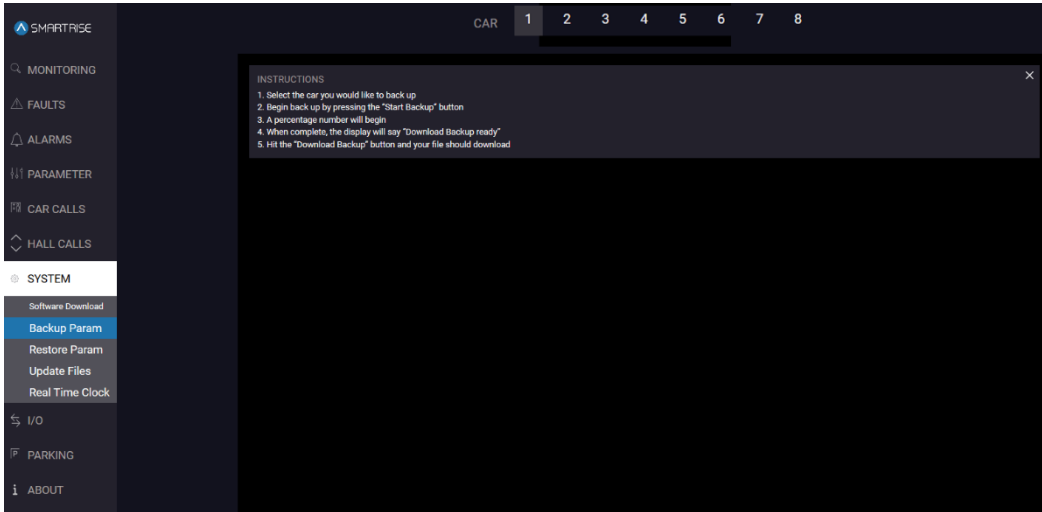


Figure 42: SYSTEM Screen – Backup Param

The table below lists the description for the SYSTEM screen – Backup Param.

Table 20: SYSTEM Screen – Backup Param

Field	Description
CAR 1 2	Allows the user to select the car number
Instructions	Displays the instructions on how to back up the parameters
Buttons	
START BACKUP	Allows the user to start the backup
DOWNLOAD BACKUP	Allows the user to save the parameter file to the selected location

Perform the following to backup parameters.

1. From the SYSTEM screen – Backup Param, select the car the parameters are being backed up for and click START BACKUP.

- The application begins copying the parameters of the selected car incrementing a number until it reaches 100%.

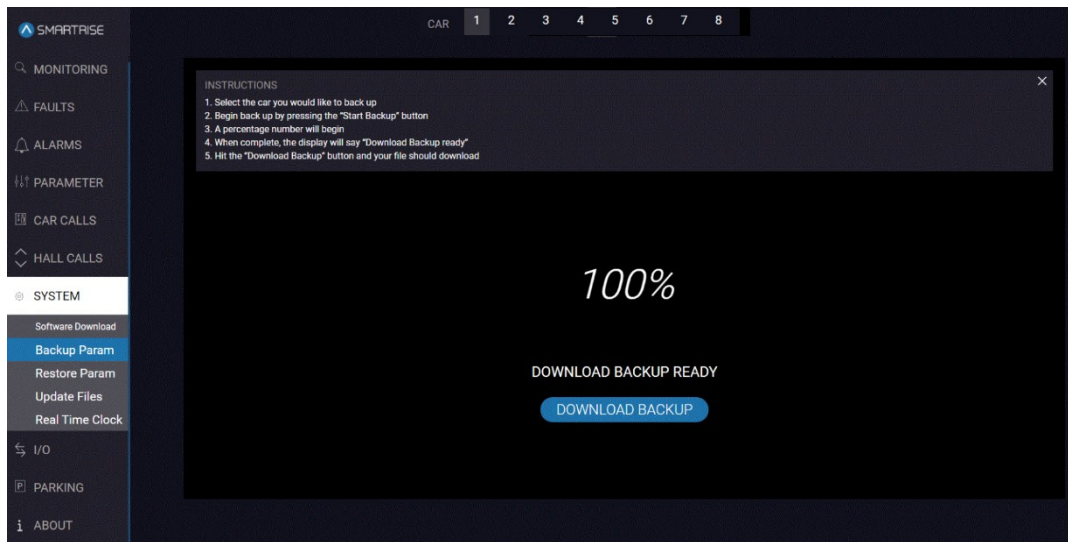


Figure 43: SYSTEM Screen – Backup Param Percentage Complete

- Click DOWNLOAD BACKUP. The backup car.spf file is downloaded into the download folder.

9.3 Restore Parameter

The Restore Parameter screen allows the user to overwrite the selected car's parameter using the selected file. The restore parameter is usually created from the backup parameter.

The user can cancel the restore by clicking the Cancel button.

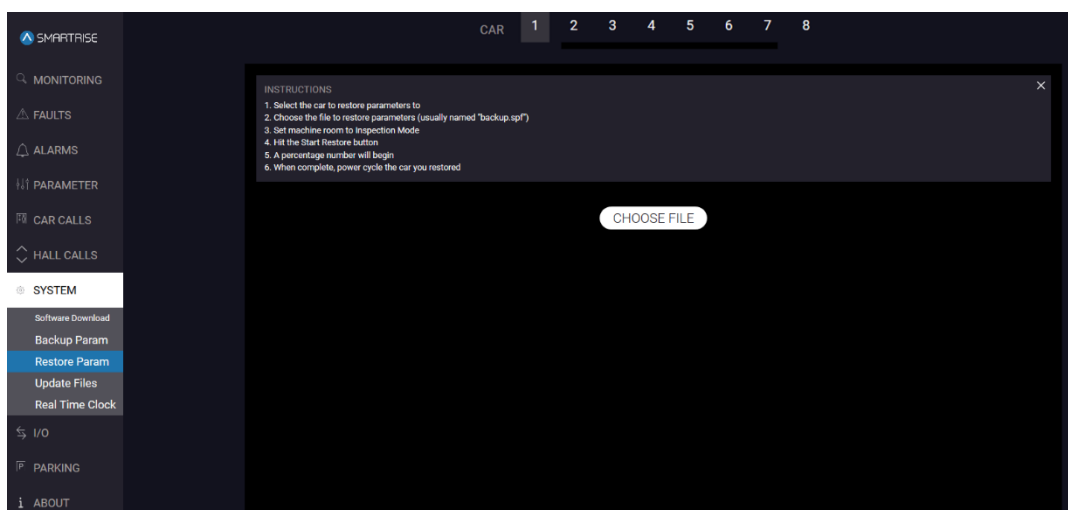


Figure 44: SYSTEM Screen – Restore Param

The table below lists the description for the SYSTEM screen – Restore Param.

Table 21: SYSTEM Screen – Restore Param

Field	Description
CAR 1 2	Allows the user to select the car number
Instructions	Displays the instructions on how to restore the parameters
Buttons	
CHOOSE FILE	Allows the user to select the parameter file
UPLOAD FILE	Allows the user to upload the parameter file
START RESTORE	Allows the user to start the restore parameter process

Perform the following to restore Parameters.

1. From the SYSTEM screen – Restore Param, select the car the parameters are being restored for and click CHOOSE FILE.
2. On the MR board, turn on DIP 4A.
3. From the Downloads folder, select backup car.spf file.
4. Click UPLOAD FILE.

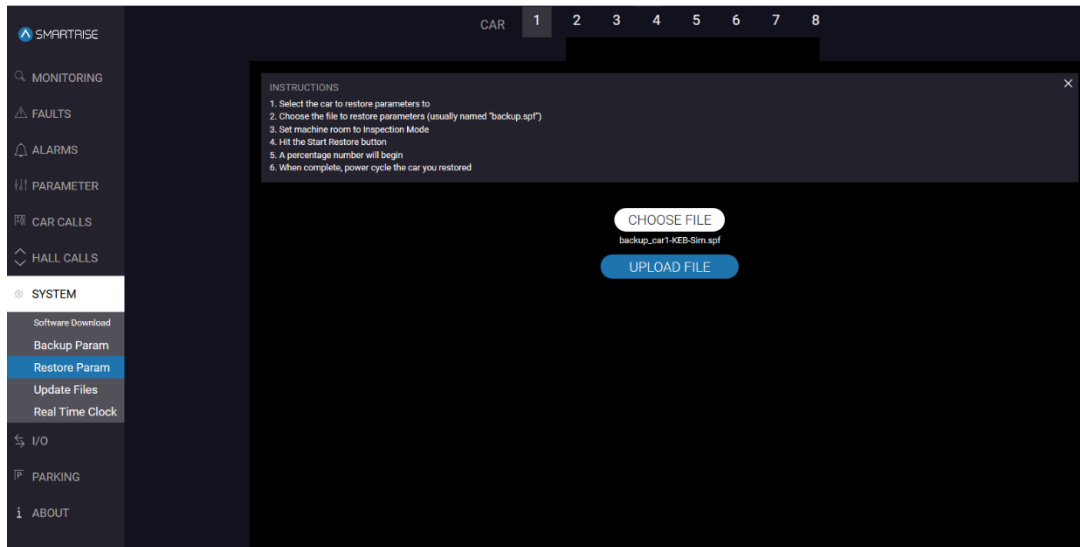


Figure 45: SYSTEM Screen – Restore Param – UPLOAD FILE

5. Click START RESTORE.

NOTE: If the MR board is not in Inspection Mode a Machine Room Board Inspection Mode Warning displays and the process ends.

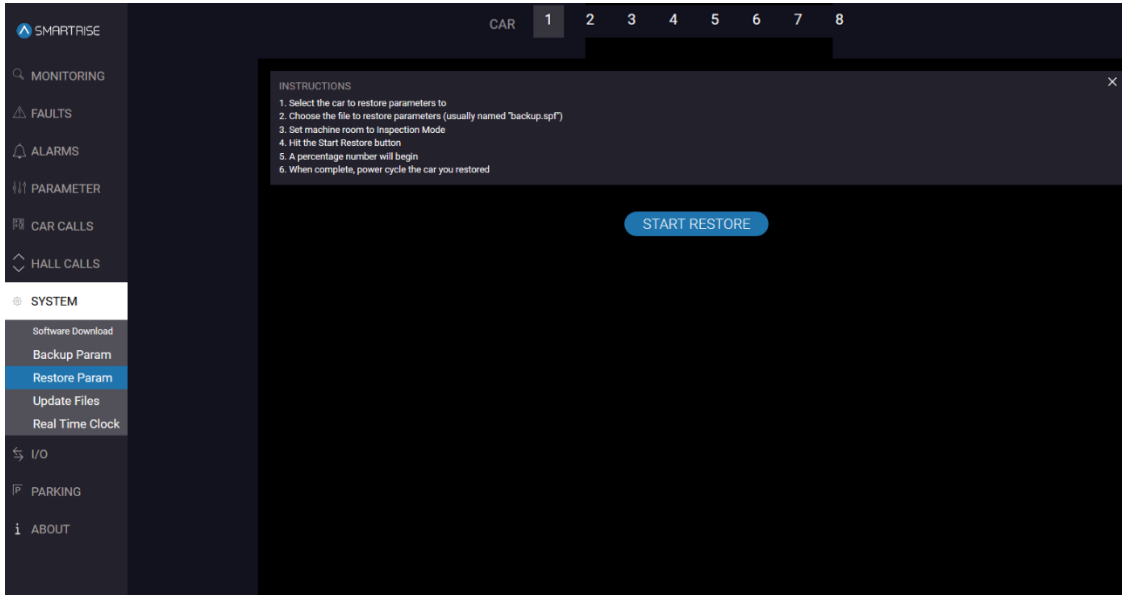


Figure 46: SYSTEM Screen – Restore Param – START RESTORE

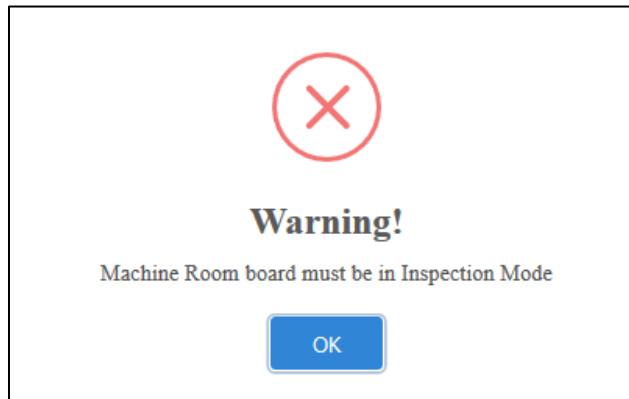


Figure 47: Machine Room Board Inspection Mode Warning

- When the screen reaches 100%, the parameters have been restored.

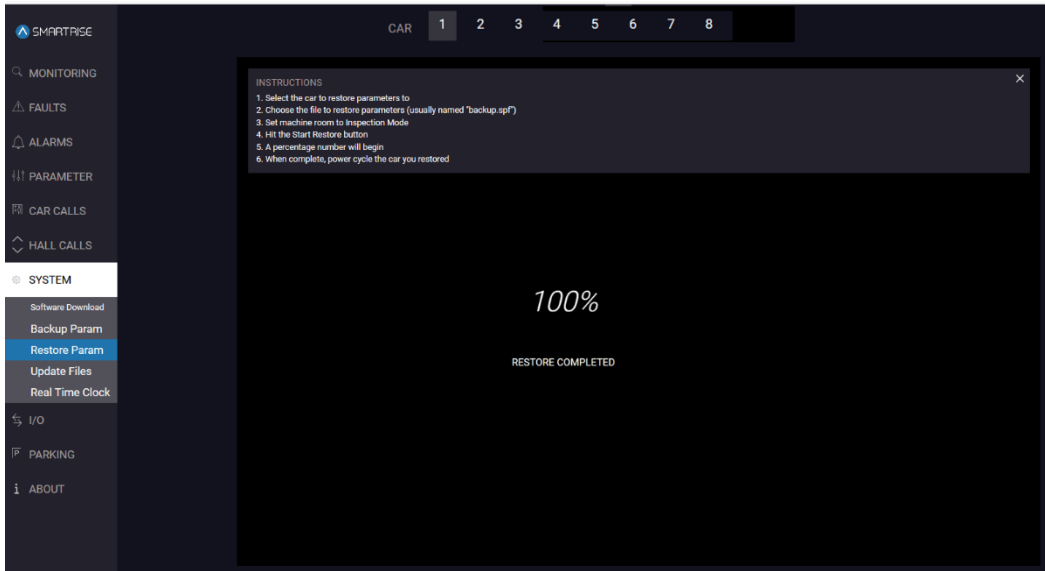


Figure 48: SYSTEM Screen – Restore Param – RESTORE COMPLETE

- Power cycle the unit

9.4 Update Files

System updates are performed by selecting a file and downloading it to the system.

9.4.1 Update Faults

When system updates are installed, the user must update the faults list. The Update Faults screen allows the user to update the faults list. The updated faults list includes Fault IDs and descriptions which are displayed on the FAULTS screen.

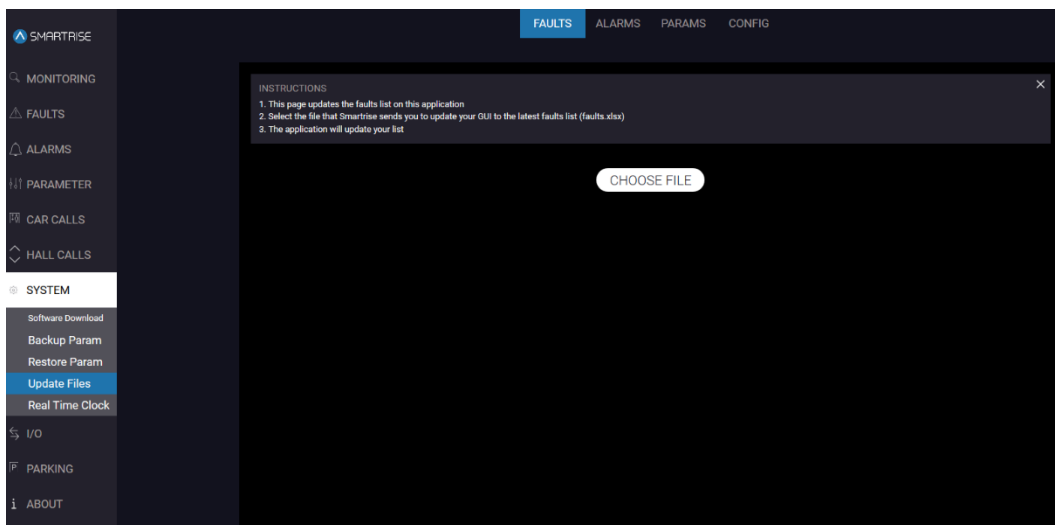


Figure 49: SYSTEM Screen – Update Files – FAULTS

The table below lists the description for the SYSTEM screen – Update Files – FAULTS.

Table 22: SYSTEM Screen – Update Files – FAULTS

Field	Description
Faults	Allows the user to perform fault updates
Instructions	Displays instructions on how to update the list of faults
Buttons	
CHOOSE FILE	Allows the user to select the file to update the list of faults
UPDATE FAULTS	Allows the user to update the list of faults

Perform the following to update the faults list.

1. From the SYSTEM screen -Update Files – FAULTS, click CHOOSE FILE.
2. Select the SystemFaults*.xlsx file from the known location.
3. Click UPDATE FAULTS.

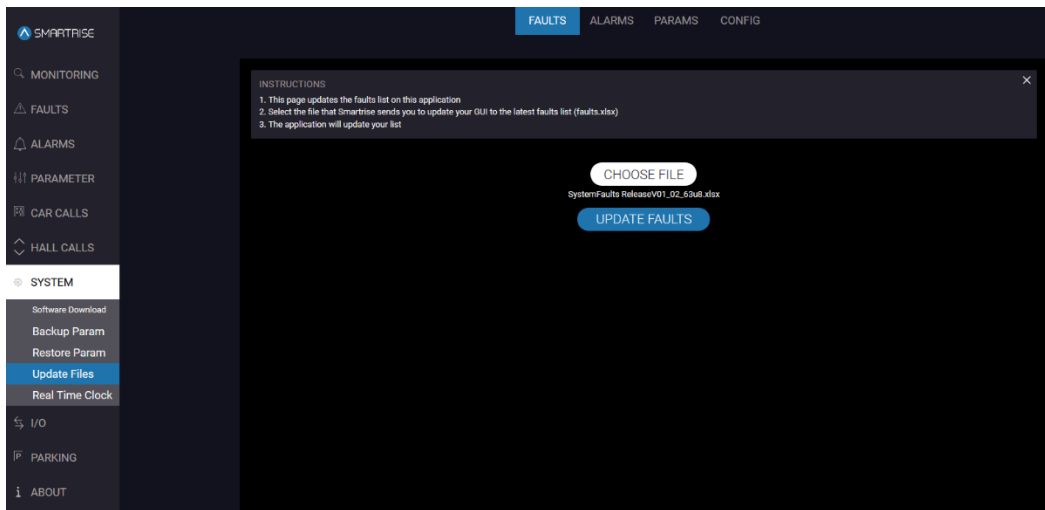


Figure 50: SYSTEM Screen – Update Files – FAULTS – UPDATE FAULTS

4. A successful message displays.

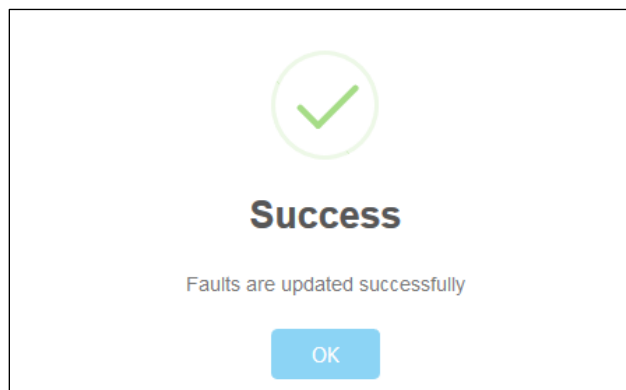


Figure 51: Faults Success Message

9.4.2 Update Alarms

When system updates are installed, the user must update the alarms list. The Update Alarms screen allows the user to update the alarms list. The updated alarms list includes Alarm IDs and descriptions which are displayed on the ALARMS screen.

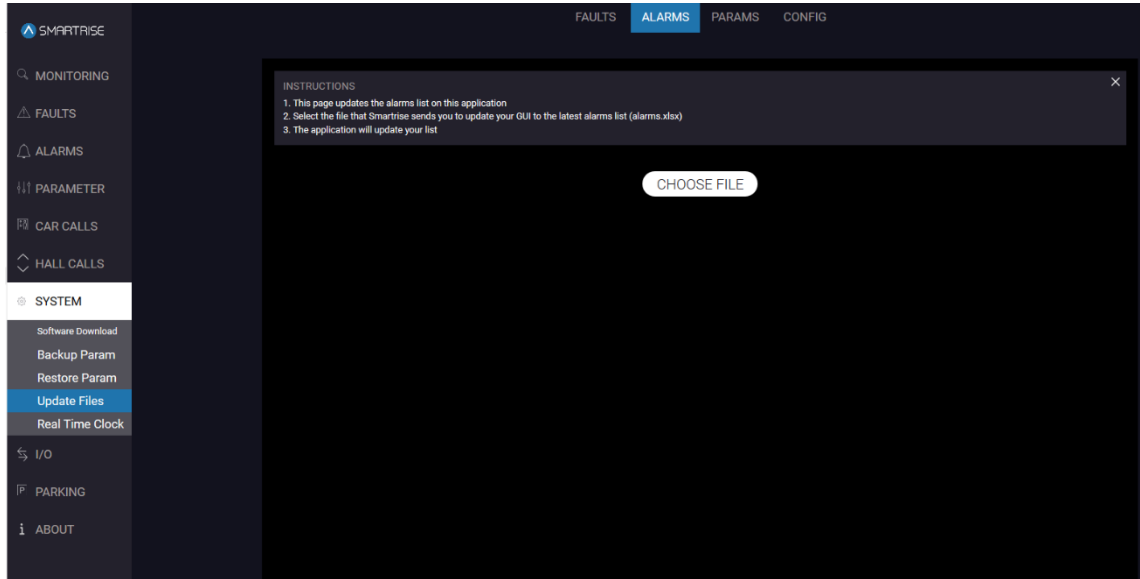


Figure 52: SYSTEM Screen – Update Files – ALARMS

The table below lists the description for the SYSTEM screen – Update Files – ALARMS.

Table 23: SYSTEM Screen – Update Files – ALARMS

Field	Description
Alarms	Allows the user to perform alarm updates
Instructions	Displays instructions on how to update the list of alarms
Buttons	
CHOOSE FILE	Allows the user to select the file to update the list of alarms
UPDATE ALARMS	Allows the user to update the list of alarms file

Perform the following to update the alarms list.

1. From the SYSTEM screen -Update Files – ALARMS, click CHOOSE FILE.
2. Select the SystemAlarms*.xlsx file from the known location.

3. Click UPDATE ALARMS.

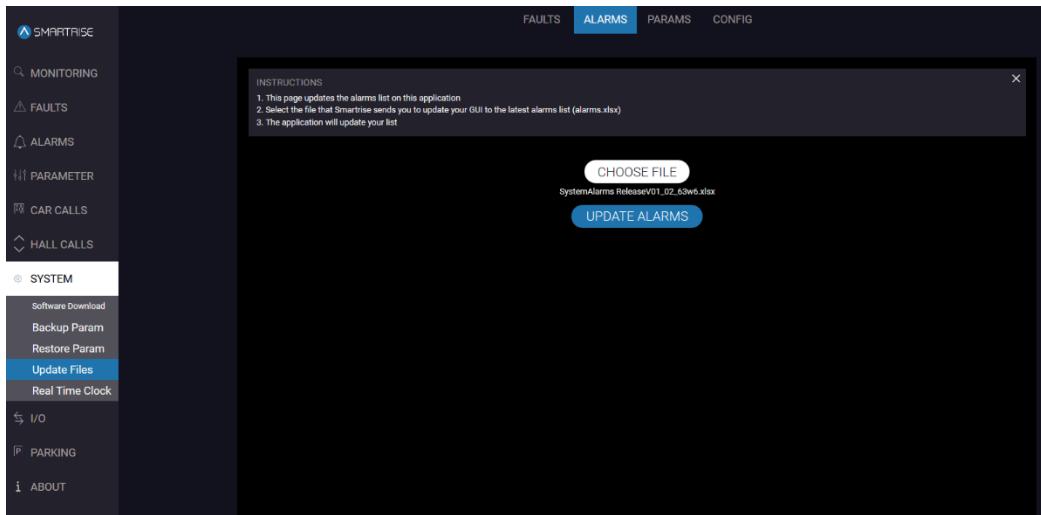


Figure 53: SYSTEM Screen – Update Files – ALARMS - UPDATE ALARMS

4. A successful message displays.

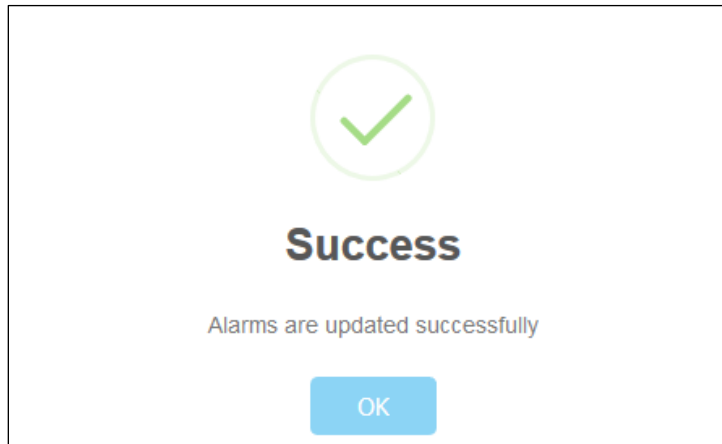


Figure 54: Alarms Success Message

9.4.3 Update Parameters

When system updates are installed, the user must update the parameter list. The Update Parameters screen allows the user to update the parameters list.

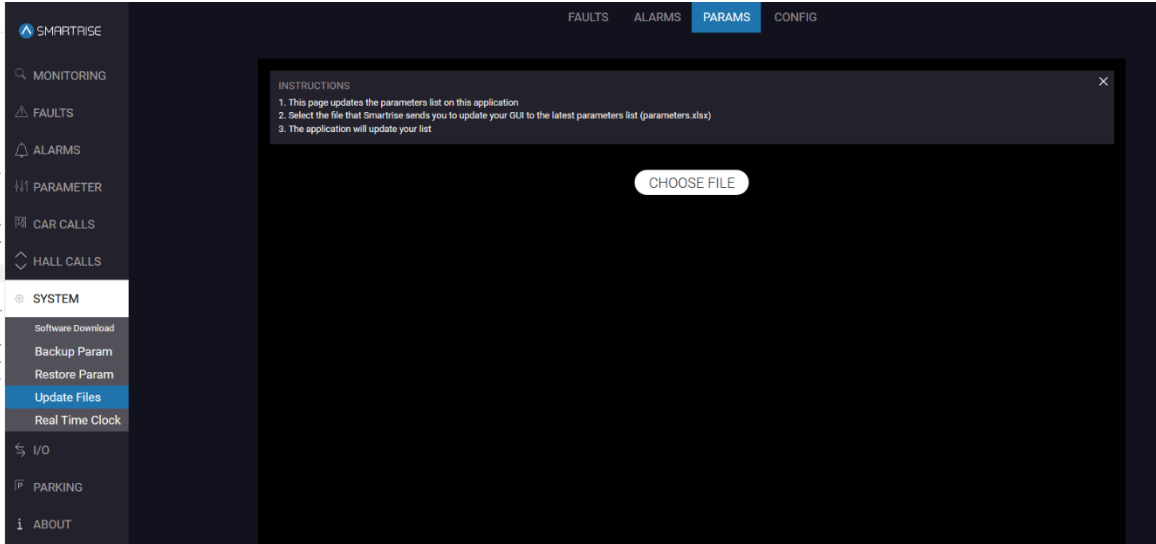


Figure 55: SYSTEM Screen – Update Files – PARAMS

The table below lists the description for the SYSTEM screen – Update Files – PARAMS.

Table 24: SYSTEM Screen – Update Files – PARAMS

Field	Description
PARAMS	Allows the user to perform parameter updates
Instructions	Displays instructions on how to update the list of parameters
Buttons	
CHOOSE FILE	Allows the user to select the file to update the system parameters
UPDATE PARAMS	Allows the user to update the list of parameters

Perform the following to update the parameter file.

1. From the SYSTEM screen – Update Files – PARAMS, click CHOOSE FILE.
2. Select the SystemParameters*.xlsx file from a known location.

3. Click UPATE PARAMS.

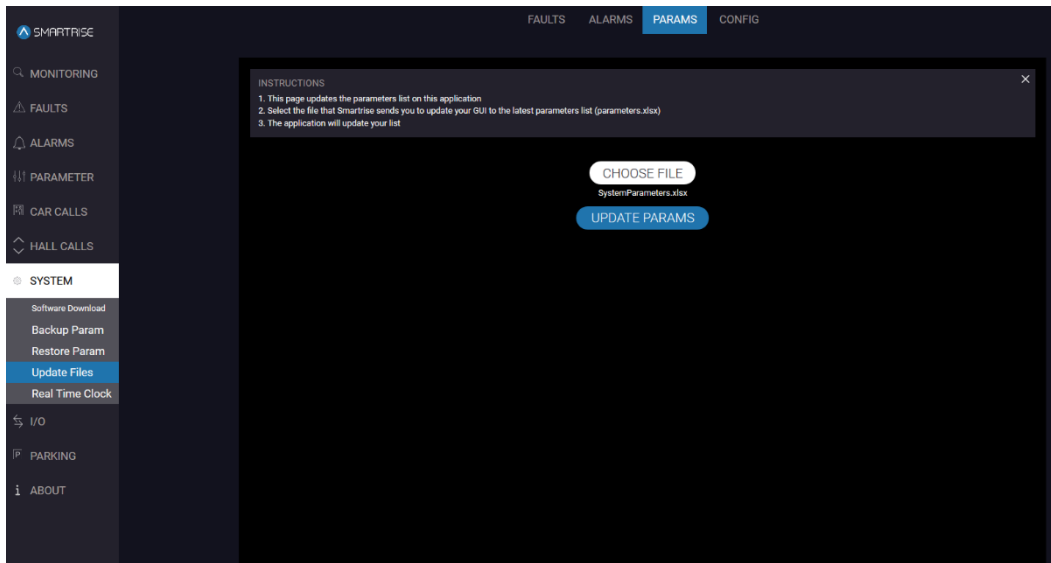


Figure 56: SYSTEM Screen – Update Files – PARAMS – UPDATE PARAMS

4. A successful message displays.

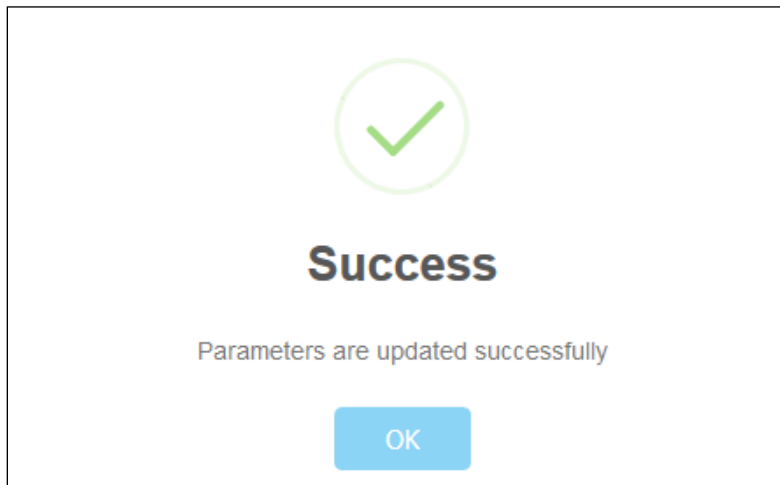


Figure 57: Parameters Success Message

9.4.4 Update Configuration

The Update Configuration screen allows the user to select a job specific config file to update the entire application to job’s specification.

This is primarily used for production purposes to streamline the process of setting up a C4 Data Acquisition Device with job specific data.

The user can cancel the update by clicking the Cancel button.

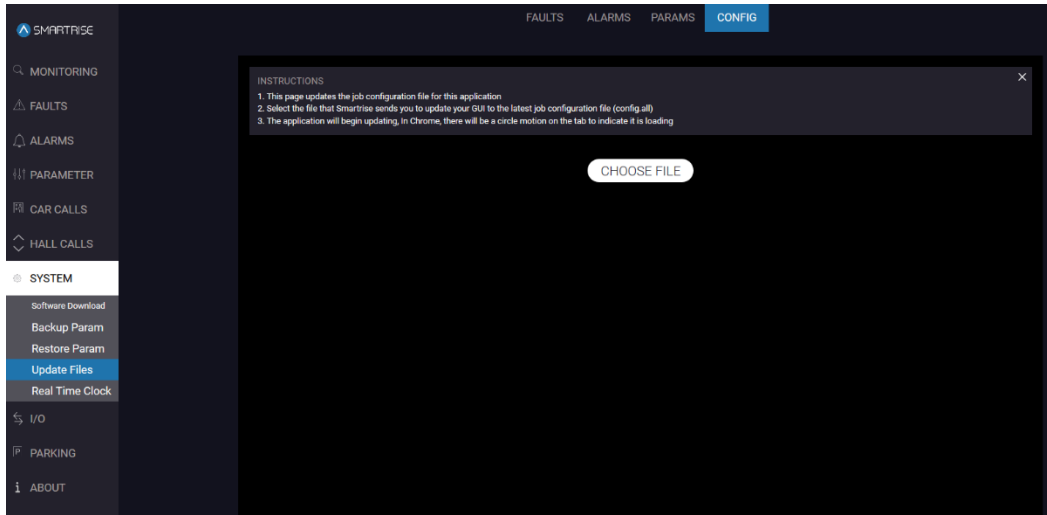


Figure 58: SYSTEM Screen – Update Files – CONFIG

The table below lists the description for the SYSTEM screen – Update Files – CONFIG.

Table 25: SYSTEM Screen – Update Files – CONFIG

Field	Description
Config	Allows the user to perform configuration updates
Instructions	Displays the instructions on how to upload the configuration files
Buttons	
CHOOSE FILE	Allows the user to select the file to update the configuration file
UPDATE CONFIG	Allows the user to upload the config file to the DAD unit
SYNC NEW CONFIG	Allows the user to download the config file to the C4

Perform the following to update the Config file.

1. From the SYSTEM screen – Update Files – CONFIG, click CHOOSE FILE.
2. Select the Sync Config file (config*.h) to update a specific job.

3. Click UPDATE CONFIG and the system begins to upload the new configuration file.

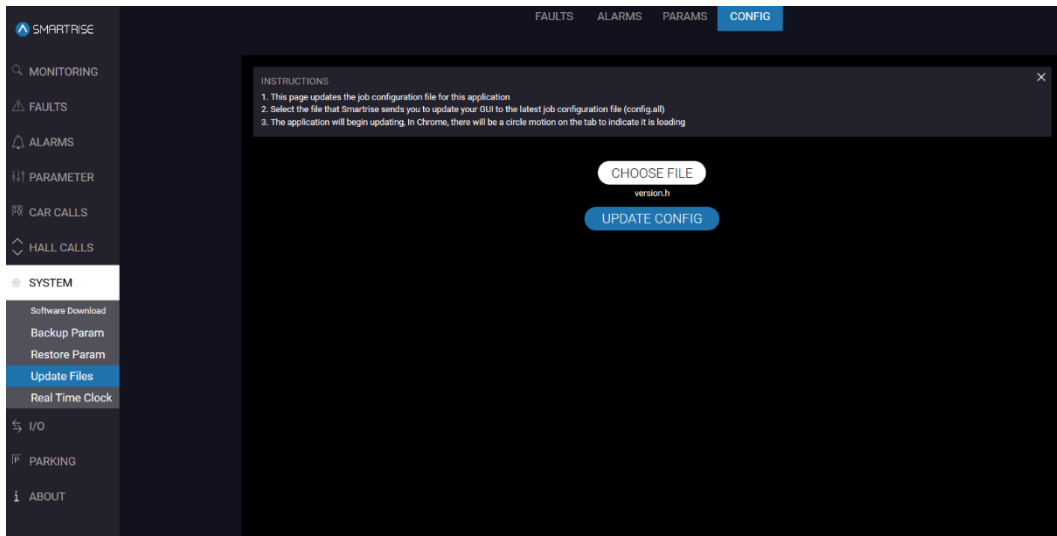


Figure 59: SYSTEM Screen – Update Files – CONFIG – UPDATE CONFIG

4. Click SYNC NEW CONFIG to download the config file.

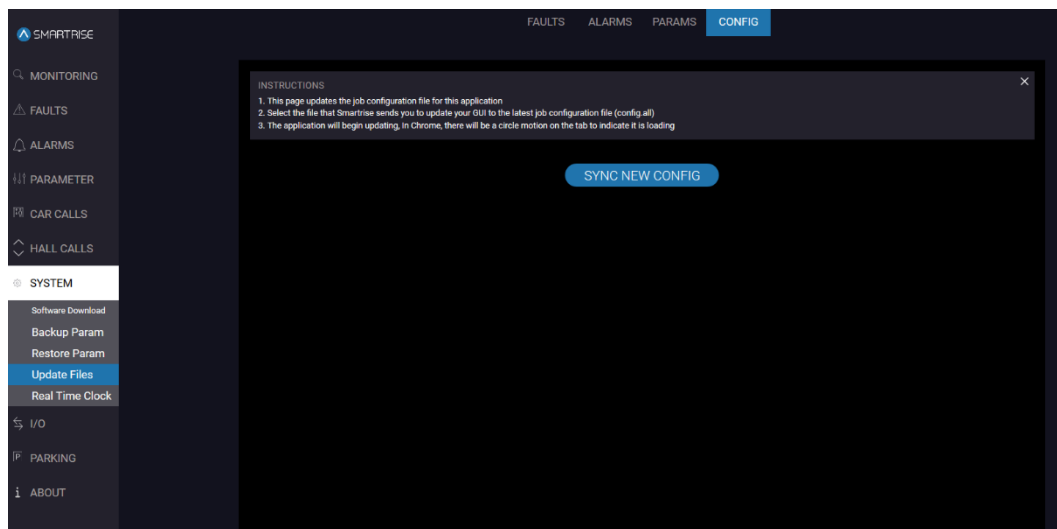


Figure 60: SYSTEM Screen – Update Files – CONFIG – SYNC NEW CONFIG

5. A successful message displays.

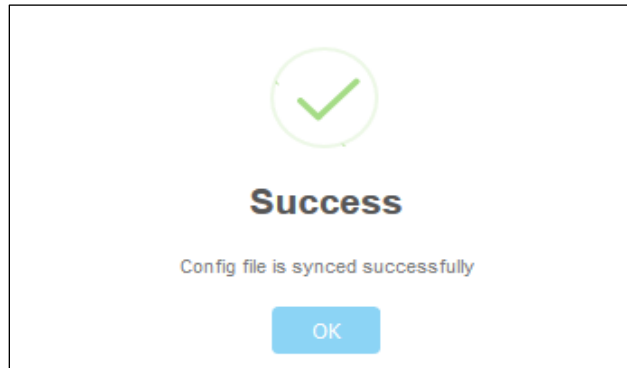


Figure 61: Parameters Success Message

6. Power cycle the unit.

9.4.5 Real Time Clock

The Real Time Clock screen displays the real date and time received from the controller. When the time and/or date is changed, the system goes through a reload session and returns to the MONITORING screen.

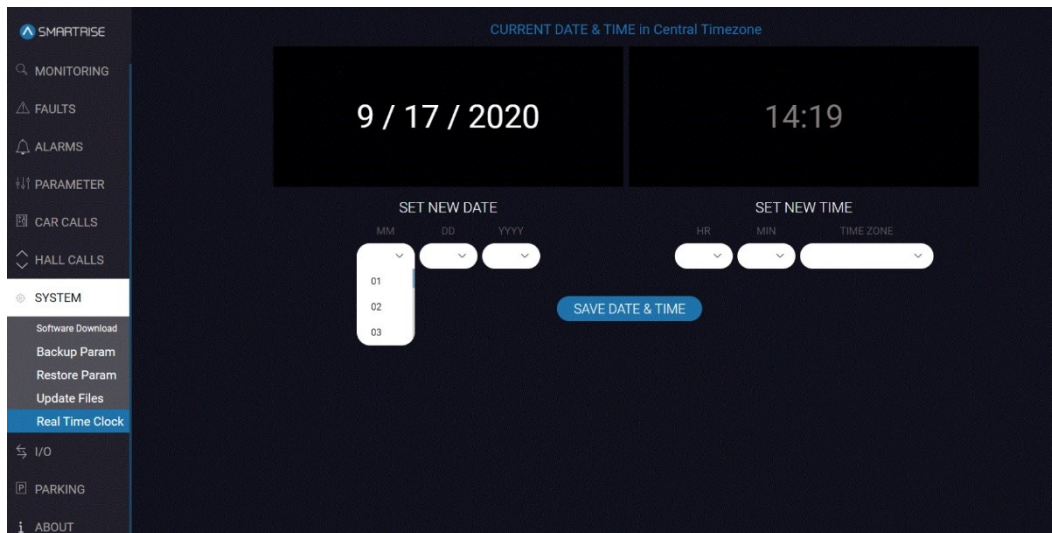


Figure 62: SYSTEM Screen – Real Time Clock

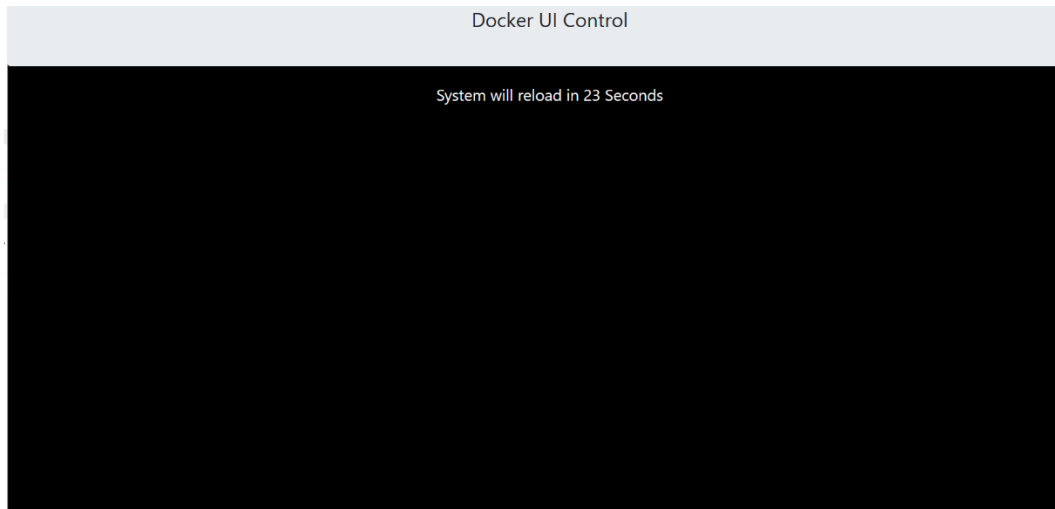


Figure 63: System Reload

The table below lists the description for the SYSTEM screen –Real Time Clock.

Table 26: SYSTEM Screen – Real Time Clock

Field	Description
SET NEW DATE - MM	Allows the user to select the real time month
SET NEW DATE - DD	Allows the user to select the real time day
SET NEW DATE - YYYY	Allows the user to select the real time year
SET NEW TIME - HR	Allows the user to select the real time hour
SET NEW TIME - MIN	Allows the user to select the real time minute
SET NEW TIME – AM/PM	Allows the user to select whether it is am or pm
SET NEW TIME – TIME ZONE	Allows the user to select the time zone for the location
Buttons	
SAVE DATE & TIME	Allows the user to save the real date and time

Perform the following to update the Real Time Clock.

1. From the SYSTEM screen – Real Time Clock screen, click on each drop-down list and select the current date and time.

NOTE: The time entered is in military time.

2. Click Save DATE & TIME to save the real time.

10 Inputs/Outputs

Inputs and outputs (I/O) can be changed, added, removed, or moved if they are not fixed (inputs/outputs that cannot be changed due to safety issues). Any UNUSED input or output can be assigned a feature if additional features, moving an input, or moving an output is required.

Inputs can only be assigned to the 500's and outputs to the 600's.

10.1 Machine Room

Each input and output on the Machine Room board is set.

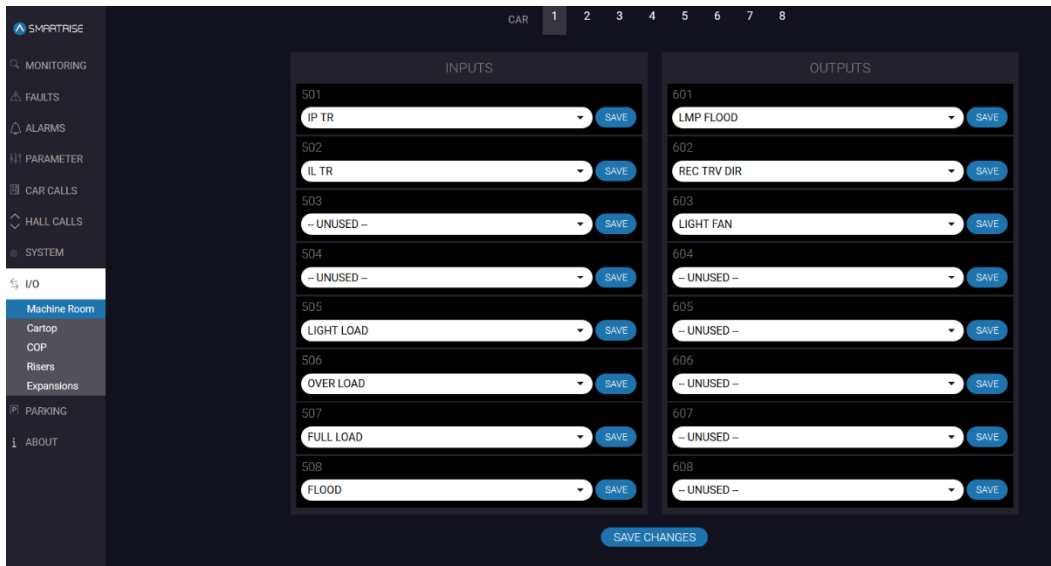


Figure 64: I/O Screen – Machine Room

The table below lists the description for the I/O screen – Machine Room.

Table 27: I/O Screen – Machine Room

Field	Description
CAR 1 2	Allows the user to select the car number
Inputs	
501-508	Allows the user to select the type of input to the MR board ports 501-508
Outputs	
601-608	Allows the user to select the type of output from MR board ports 601-608
Buttons	
SAVE	Allows the user to save the selected type of input or output to and from the MR board ports 501-508
SAVE CHANGES	Allows the user to save all input and output updates to the Machine Room board ports 501-508 and from the MR board ports 601-608

Perform the following to update the Machine Room Input/Output.

NOTE: Each of the Inputs and Outputs can be saved individually by clicking SAVE next to the type of input or output.

1. From the I/O screen – Machine Room, click on each drop-down list and select the type of input and/or output.
2. Click SAVE CHANGES.

3. A green checkmark displays.

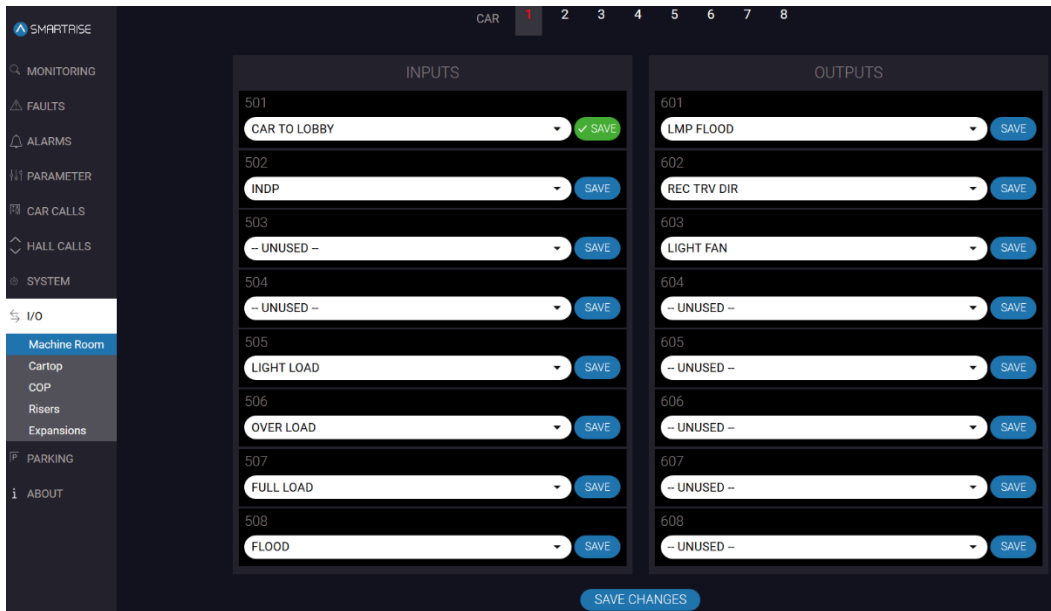


Figure 65: I/O Screen – Machine Room – Save

10.2 Cartop

Each input and output on the Cartop board is set.

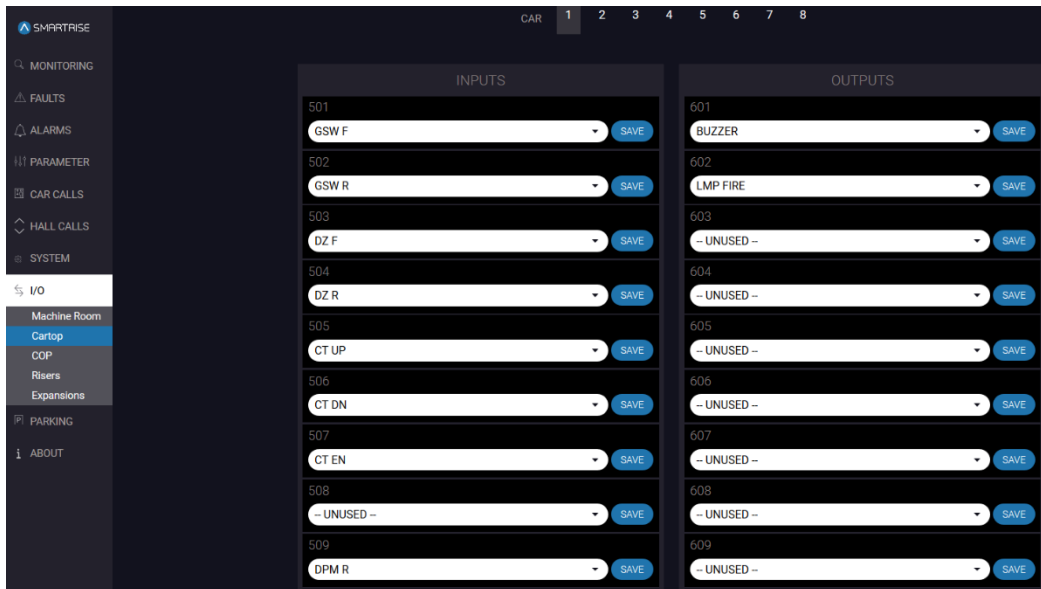


Figure 66: I/O Screen – Cartop Part 1 of 2

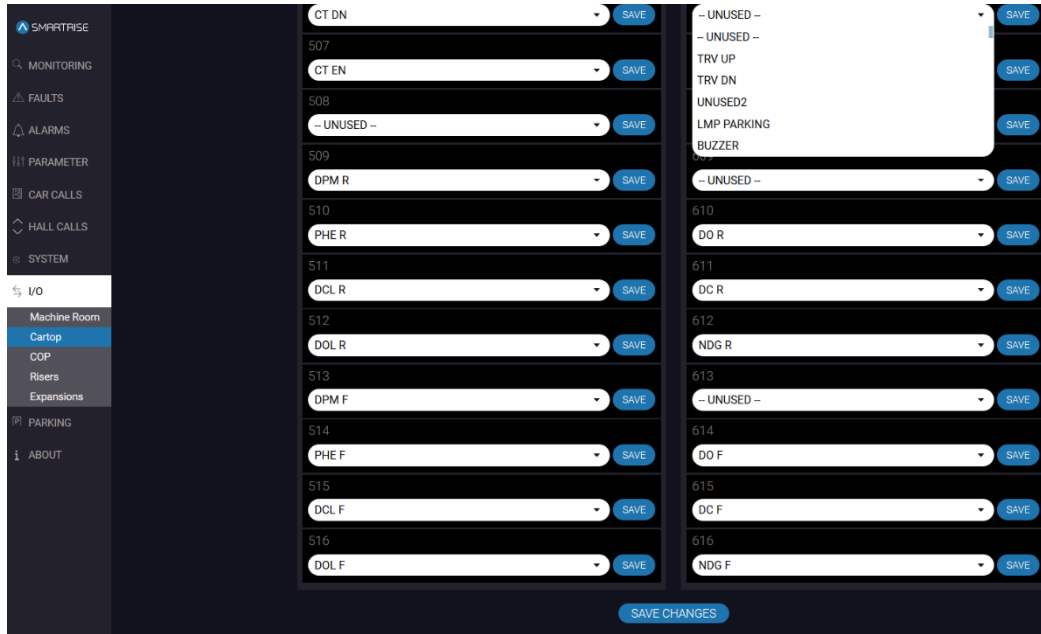


Figure 67: I/O Screen – Cartop Part 2 of 2

The table below lists the description for the I/O screen – Cartop.

Table 28: I/O Screen – Cartop

Field	Description
CAR 1 2	Allows the user to select the car number
Inputs	
501-516	Allows the user to select the type of input to the Cartop board ports 501-516
Outputs	
601-616	Allows the user to select the type of output from the Cartop board ports 601-616
Buttons	
SAVE	Allows the user to save the selected type of input to the Cartop board or output from the Cartop board port
SAVE CHANGES	Allows the user to save all input and output updates to the Cartop board ports 501-516 and from the Cartop board ports 601-616

Perform the following to update the Cartop Input/Output.

NOTE: Each of the Inputs and Outputs can be saved individually by clicking SAVE next to the type of input or output.

1. From the I/O screen – Cartop, click on each drop-down list and select the type of input and/or output.
2. Click SAVE CHANGES.
3. A green checkmark displays. See Figure 65.

10.3 COP

Each input and output on the COP board is set.

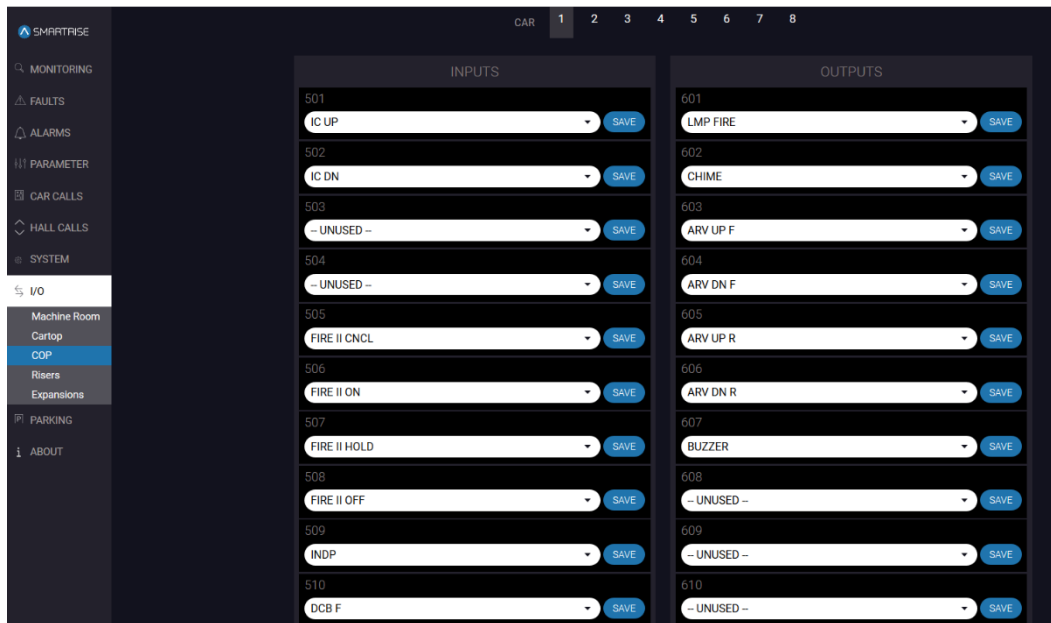


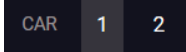
Figure 68: I/O Screen – COP Part 1 of 2



Figure 69: I/O Screen – COP Part 2 of 2

The table below lists the description for the I/O screen – COP.

Table 29: I/O Screen – COP

Field	Description
	Allows the user to select the car number
Inputs	
501-516	Allows the user to select the type of input to the COP board ports 501-516
Outputs	
601-616	Allows the user to select the type of output from the COP board ports 601-616
Buttons	
SAVE	Allows the user to save the selected type of input to the COP board or output from the COP board port
SAVE CHANGES	Allows the user to save all input and output updates to the COP board ports 501-516 and from the COP board ports 601-616

Perform the following to update the COP Input/Output.

NOTE: Each of the Inputs and Outputs can be saved individually by clicking SAVE next to the type of input or output.

1. From the I/O screen – COP, click on each drop-down list and select the type of input and/or output.
2. Click SAVE CHANGES.
3. A green checkmark displays. See Figure 65.

10.4 Risers

The Riser board can be configured for fire service or emergency power connections, and hall network connections.

Up to four Riser boards can be used within the system.

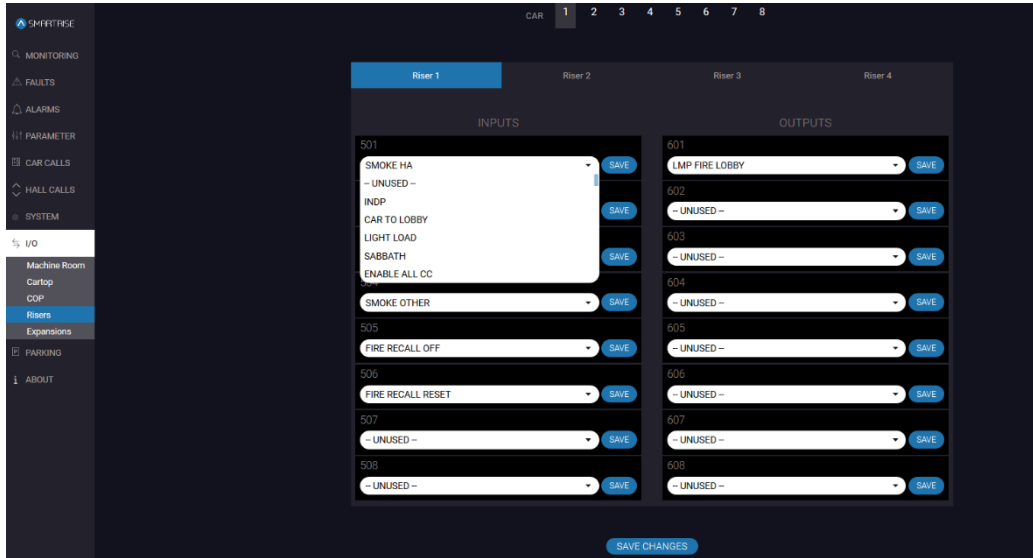


Figure 70: I/O Screen – Risers

The table below lists the description for the I/O screen – Risers.

Table 30: I/O Screen – Risers

Field	Description
CAR 1 2	Allows the user to select the car number
Inputs	
501-508	Allows the user to select the type of input to the Riser board ports 501-508
Outputs	
601-608	Allows the user to select the type of output from the Riser board ports 601-608
Buttons	
SAVE	Allows the user to save the selected type of input to the Riser board or output from the Riser board port
SAVE CHANGES	Allows the user to save all input and output updates to the Riser board ports 501-508 and from the Riser board ports 601-608

Perform the following to update the Riser Input/Output.

NOTE: Each of the Inputs and Outputs can be saved individually by clicking SAVE next to the type of input or output.

1. From the I/O screen – Risers, click on the drop-down list and select the type of input and/or output.
2. Click SAVE CHANGES.
3. A green checkmark displays. See Figure 65.

10.5 Expansions

Expansion boards are additional boards used to add Inputs and Outputs. Each Expansion Board has 8 adjustable inputs and 8 adjustable outputs. Up to 40 Expansion boards can be used within the system.

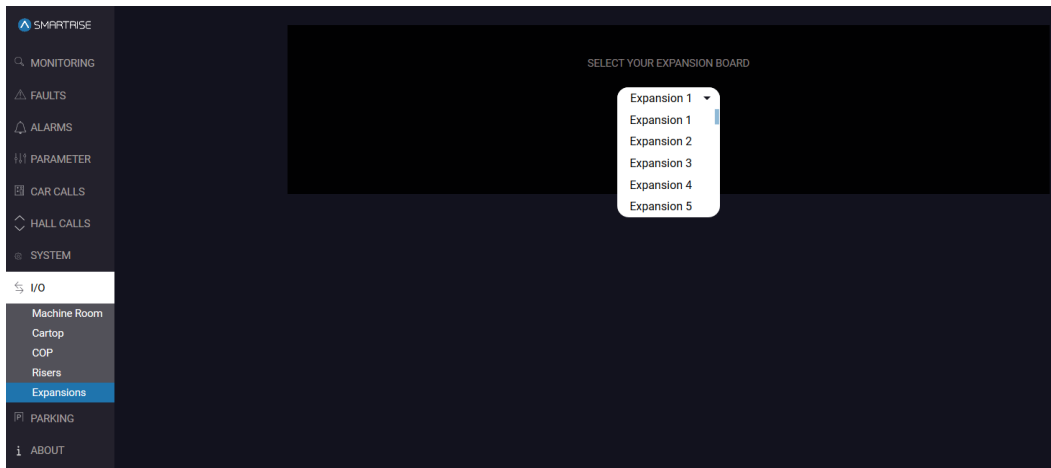


Figure 71: I/O Screen – Expansion

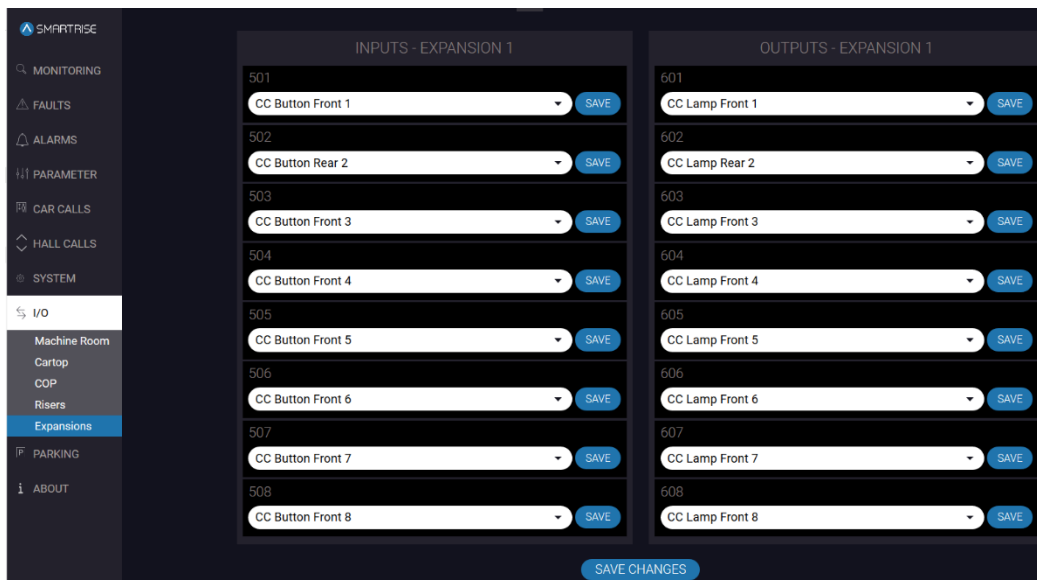


Figure 72: I/O Screen – Expansion – Input/Output

The table below lists the description for the I/O screen – Expansion.

Table 31: I/O Screen – Expansion

Field	Description
Expansion	Allows the user to select an Expansion board
Inputs	
501-508	Allows the user to select the type of input to the Expansion board ports 501-508
Outputs	
601-608	Allows the user to select the type of output from the Expansion board ports 601-608
Buttons	
SAVE	Allows the user to save the selected type of input to the Expansion board or output from the Expansion board port
SAVE CHANGES	Allows the user to save all input and output updates to the Expansion board ports 501-508 and from the Expansion board ports 601-608

Perform the following to update the Expansion Input/Output.

NOTE: Each of the Inputs and Outputs can be saved individually by clicking SAVE next to the type of input or output.

1. From the I/O screen – Expansion, click on the drop-down list and select the Expansion board that the inputs/outputs are assigned to.
2. Click SAVE CHANGES.
3. A green checkmark displays. See Figure 65.

This procedure needs to be repeated for all expansion boards.

11 Parking

Parking is used to move an idle car to a designated floor. The purpose of parking is to mitigate the time it takes to service traffic heavy floors. For example, if a car has completed all of its request, it will then return to the “parking” floor and stay there until another request is given to it.

11.1 Calendar

The Calendar screen displays how a car or group of cars are going to park according to the rules for a specific time and day of the week. The rules also include if the doors are going to open or remain closed.

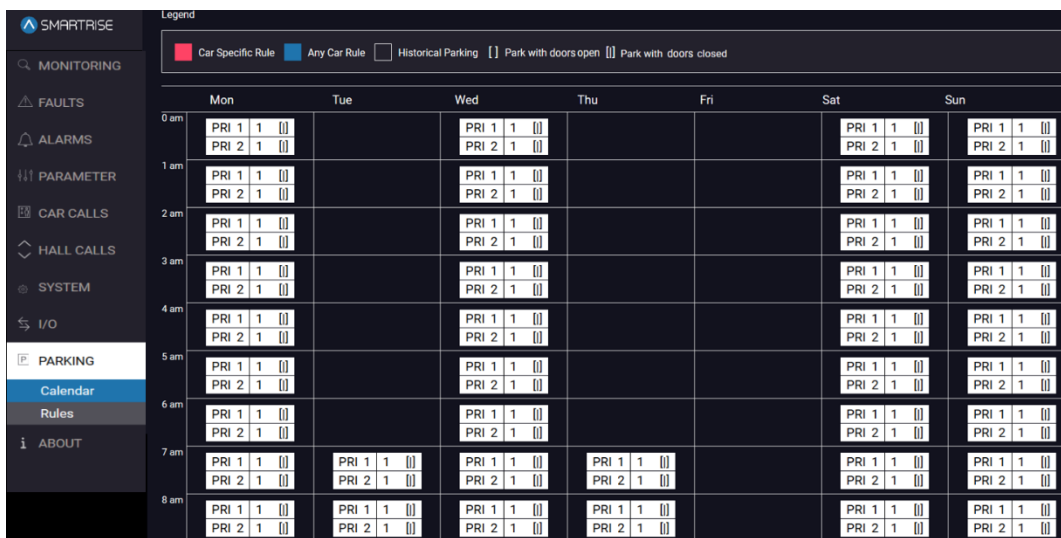


Figure 73: PARKING Screen – Calendar

The table below lists the description for the PARKING screen – Calendar.

Table 32: PARKING Screen – Calendar

Field	Description
Day and Time	Displays the parking rules for a car or group of cars for a specific day and time
Buttons	
Car Specific Rule	Allows the user to view the parking rules of a car for specific day(s) and time
Any Car Rule	Allows the user to view the parking rules of all cars for specific day(s) and time
Historical Parking	Allows the user to view the history of parking rules for all cars
Parking with door open	Allows the user to view all cars parked with doors opened
Parking with doors closed	Allows the user to view all cars parked with doors closed

11.2 Rules

Parking rules are created to instruct a car(s) to park at certain floors. For example, periods of high traffic. Doors can be set to open or remain closed upon parking.

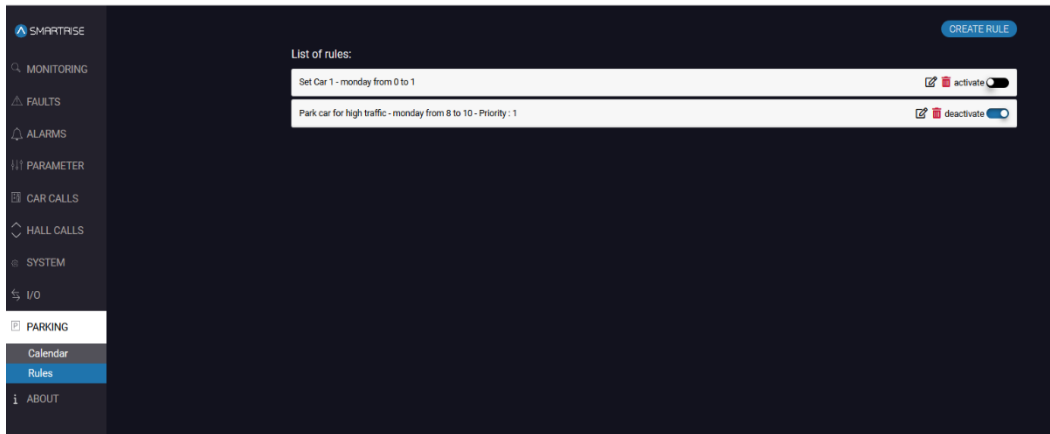






Figure 74: PARKING Screen – Rules

The table below lists the description for the PARKING screen – Rules.

Table 33: PARKING Screen – Rules

Field	Description
List of rules	Displays a list of all rules
Set Rule	Describes the created rule
Buttons	
CREATE RULE	Allows the user to create a rule
	Allows the user to edit rule
	Allows the user to delete the rule
activate 	Allows the user to activate the rule by sliding the button left
deactivate 	Allows the user to activate the rule by sliding the button right

Perform the following to create parking rules.

1. From the PARKING screen – Rules, click on CREATE RULE.
2. Is the rule being created for a specific car or floor?
 - a. If a rule is being created for a specific car, go to step 3.
 - b. If a rule is being created for a specific floor, go to step 5.

3. From the Create Rule – Car Specific pop-up (see Table 34 for field descriptions), select the following:

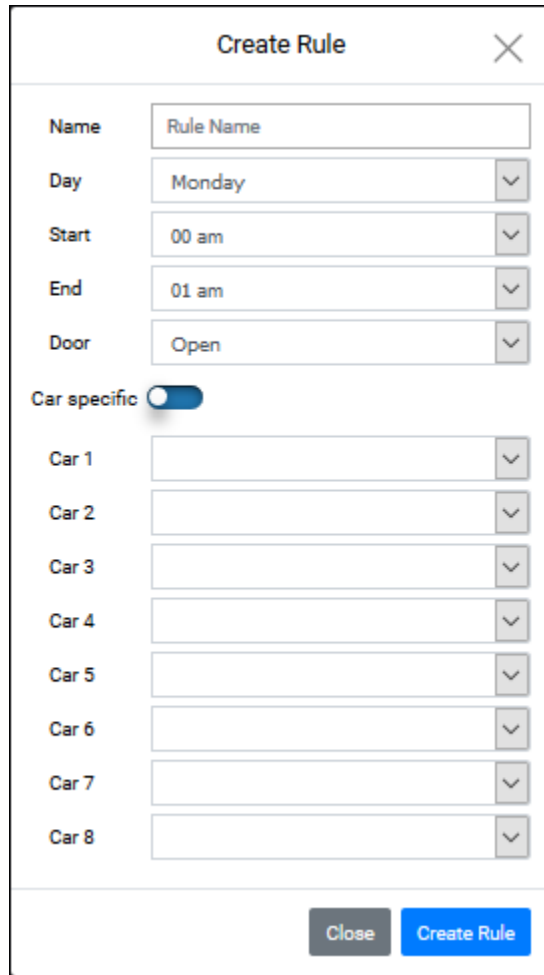
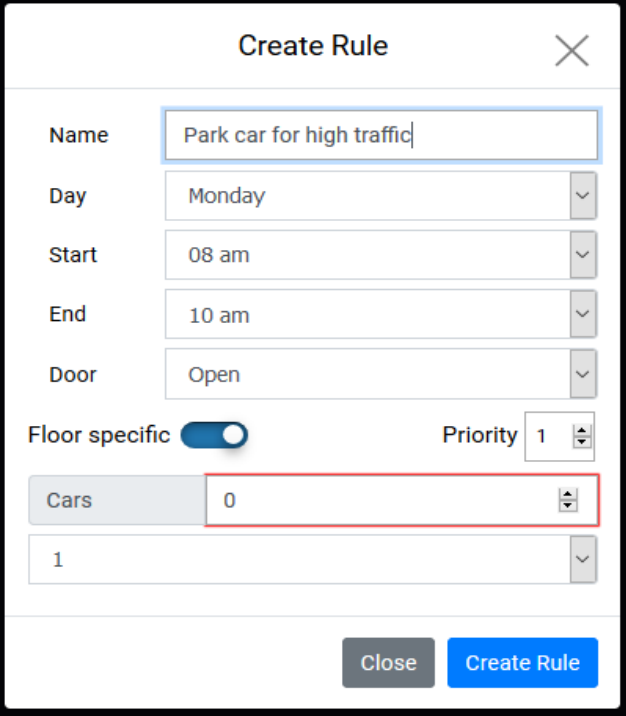


Figure 75: Create Rule – Car Specific Pop-up

- a. Name of the rule
- b. Day of the week the rule is set for
- c. Beginning time of day for the rule
- d. Ending time of day for the rule
- e. If the door is open or closed
- f. Car specific
- g. Created car or cars parking rule
- h. Which landing(s) a car(s) is parked

- Click Create Rule and the rule displays on the PARKING – Rules screen. The process ends.
- From the Create Rule – Floor Specific pop-up (see Table 34 for field descriptions), select the following:



The screenshot shows a 'Create Rule' pop-up window. The title bar contains 'Create Rule' and a close button (X). The form fields are as follows:

- Name: Park car for high traffic
- Day: Monday
- Start: 08 am
- End: 10 am
- Door: Open
- Floor specific:
- Priority: 1
- Cars: 0
- 1

At the bottom right, there are two buttons: 'Close' and 'Create Rule'.

Figure 76: Create Rule – Floor Specific Pop-up

- Name of the rule
 - Day of the week the rule is set for
 - Beginning time of day for the rule
 - Ending time of day for the rule
 - If the door is open or closed
 - Floor specific
 - Priority of the rule
 - Car
 - Landing a car is going to park
- Click Create Rule and the rule displays on the PARKING – Rules screen.

The table below lists the description for the Create Rule pop-up.

Table 34: Create Rule Pop-up

Field	Description
Name	Allows the user to enter the name of the rule
Day	Allows the user to select the day of the rule
Start	Allows the user to select the start time of the rule
End	Allows the user to select the end time of the rule
Door	Allows the user to select if car is open or closed
Car specific	Allows the user to select if the rule is for a specific car door
Floor specific	Allows the user to select if the rule is for a specific floor
Priority	Allows the user to select the priority NOTE: Priority only applies to floor specific
Car 0	Allows the user to select the first car the rule is for
Car 1	Allows the user to select the second car the rule is for
Buttons	
Close	Allows the user to close the Create Rule pop-up without saving the rule
Create Rule	Allows the user to save the rule

12 About

The About screen displays the current software and validity of system files and database tables.

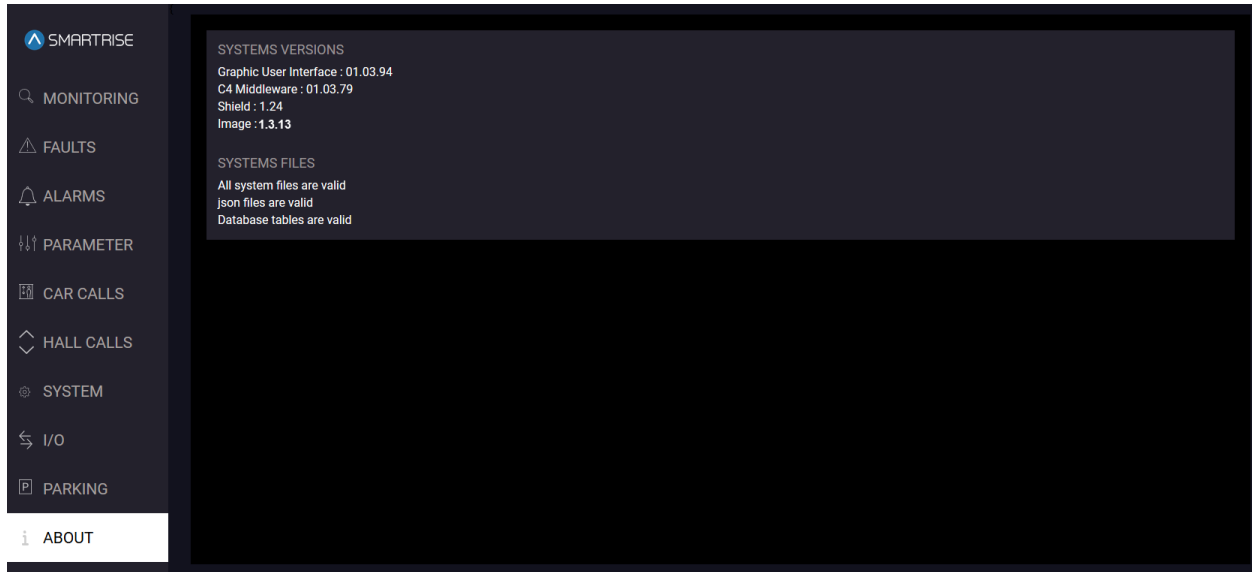


Figure 77: ABOUT Screen

The table below lists the description for the ABOUT screen.

Table 35: ABOUT Screen

Field	Description
SYSTEMS VERSIONS	Displays current system version
SYSTEMS FILES	Displays validity of files and databases