C4

GRAPHICAL USER INTERFACE MANUAL

VERSION 2.1

SMARTRISE

Document History

Date	Version	Summary of Changes
March 14, 2024	2.1	Updated document presentation. Updated the *Connect to GUI* subsection. Added the *Software Download Pre-requisites* section. Added the *SECURITY* section. Added the *USERS* section. Added a List of Abbreviations.
November 28, 2022	2	Complete overhaul of the document. Updated all the sections. Added the *Dynamic Security* section. Updated the *Update Files* section. Added the *System Update* section.
November 4, 2020	1.4	Added information from the *C4 GUI Startup Guide*. Added *Backup Param* section. Updated *System* section with new figures and procedures. Updated *Parking* section with new figures and procedures. Added Success and Warning popup messages.
February 20, 2020	1.3	Updated *Parking* section to show Calendar and Rules for specific dates and times. Added *About* section. Deleted *Security* section. Deleted *Backup Param* section. Replaced all screenshots to include the ABOUT in the Navbar.
November 27, 2019	1.2	Updated cover image. Updated format. Replaced all screenshots and added descriptions for fields and buttons.
January 16, 2019	1.1	Updated MONITORING, NAVBAR, PARAMETER (S-Curve, PI Label) and SYSTEM (Real Time Clock).
January 11, 2019	1.0	Initial Release

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1 Introduction

The C4 Controller uses a Data Acquisition Device (DAD) to communicate with the Graphical User Interface (GUI). Users can set the C4 parameters and settings through GUI.

1.1 Wire the DAD Unit to GUI

Some C4 controllers do not have the DAD connector wired.

If the controller does not already have the cable wired, wire the connector as shown in the figure below:

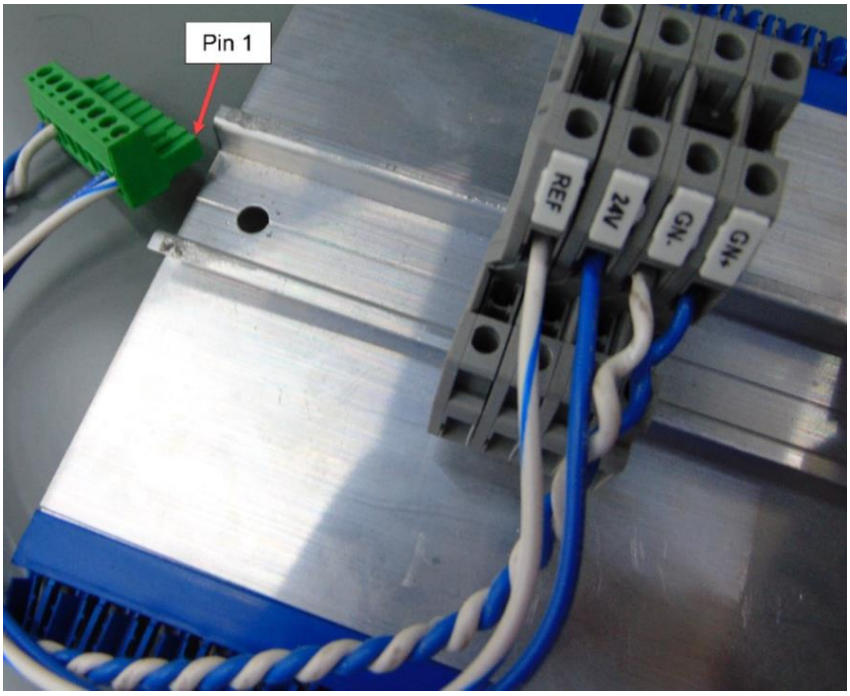

Figure 1: DAD Connector Cable

The table below 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
3	Twisted Pair – White	GN-
8	Twisted Pair – Blue	GN+

1.2 Connect to GUI

When connecting the DAD unit to GUI, only one DAD Unit per group can be powered up.

Perform the following steps to connect to GUI:

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1. Power up the controller.

   NOTE: the DAD Fault and Heartbeat (HB) LEDs start flashing, and the HB turns green when ready.

2. Connect to GUI using a Wi-Fi laptop or tablet.

   NOTE: if you are using Windows 10, go to the NETWORK & INTERNET SETTINGS **(** **)** menu option on the bottom right of the main desktop window.

3. Select the Wi-Fi Connection:

   i. **For Traction configuration:** select the 'C4 [Job_Site_Name]' Wi-Fi connection.

   ii. **For Hydraulic configuration:** select the **'**Evolved [Job_Site_Name]' Wi-Fi connection.

4. Enter the password: SmartriseMRM.
5. Click on CONNECT.
6. Click on OK.

   NOTE: the connection shows: No internet, secured.

7. Open a web browser (preferably Google Chrome or Firefox).
8. Type '192.168.4.1' in the address bar.

   NOTE: the user will automatically be redirected to the GUI login page.

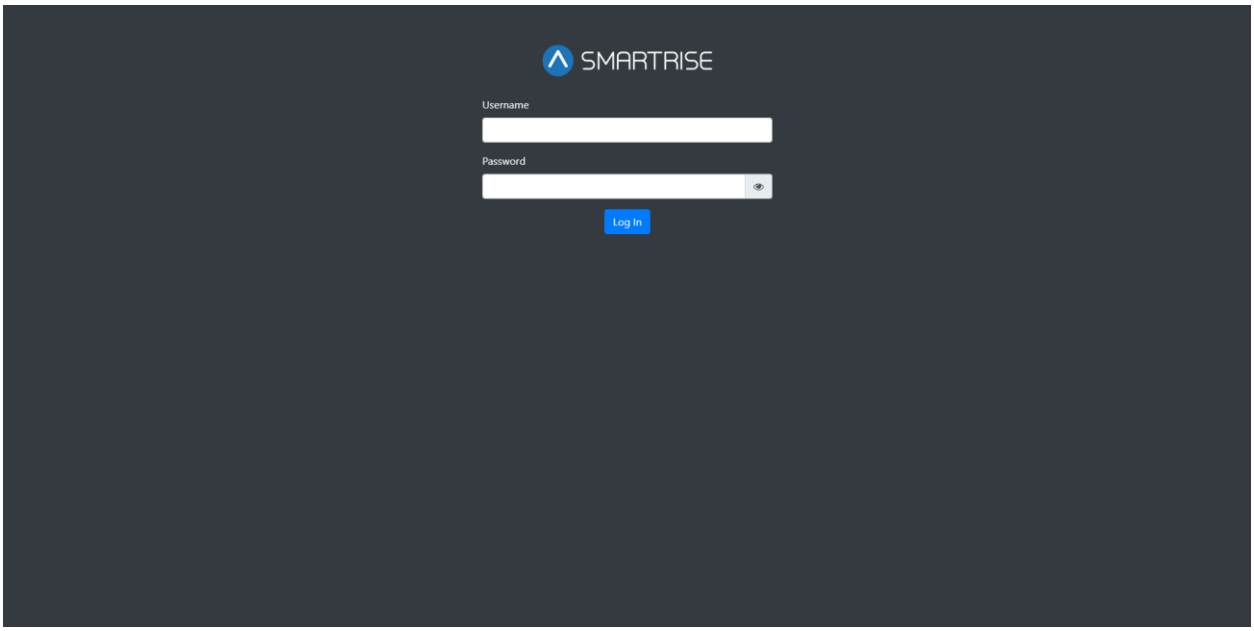

Figure 2: GUI Login Page

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2 NAVBAR

The NAVBAR is a set of menu options the user can choose from to navigate between menu panels. The NAVBAR is displayed on the left side of every panel.

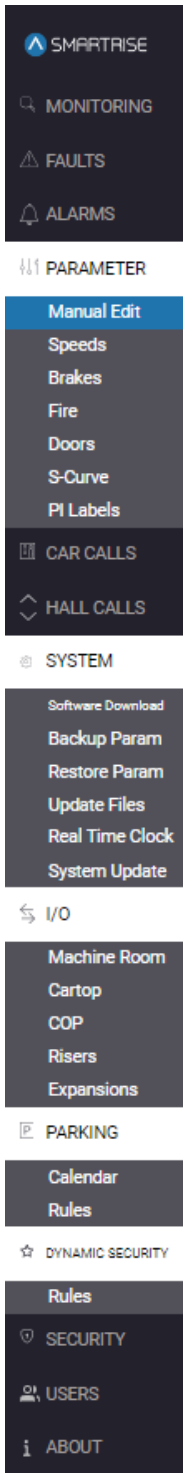

Figure 3: NAVBAR Traction

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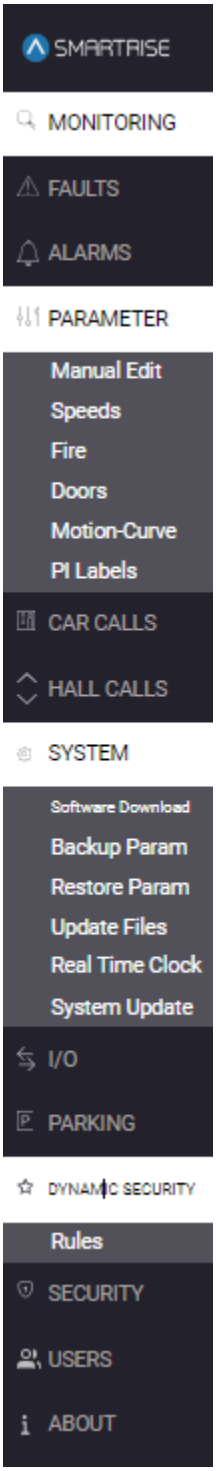

Figure 4: NAVBAR Hydro

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3 MONITORING

The MONITORING panel displays real time data from cars within the same group. Each car displays the following information:

- Car Label
- Current Floor
- Destination
- Mode Operation

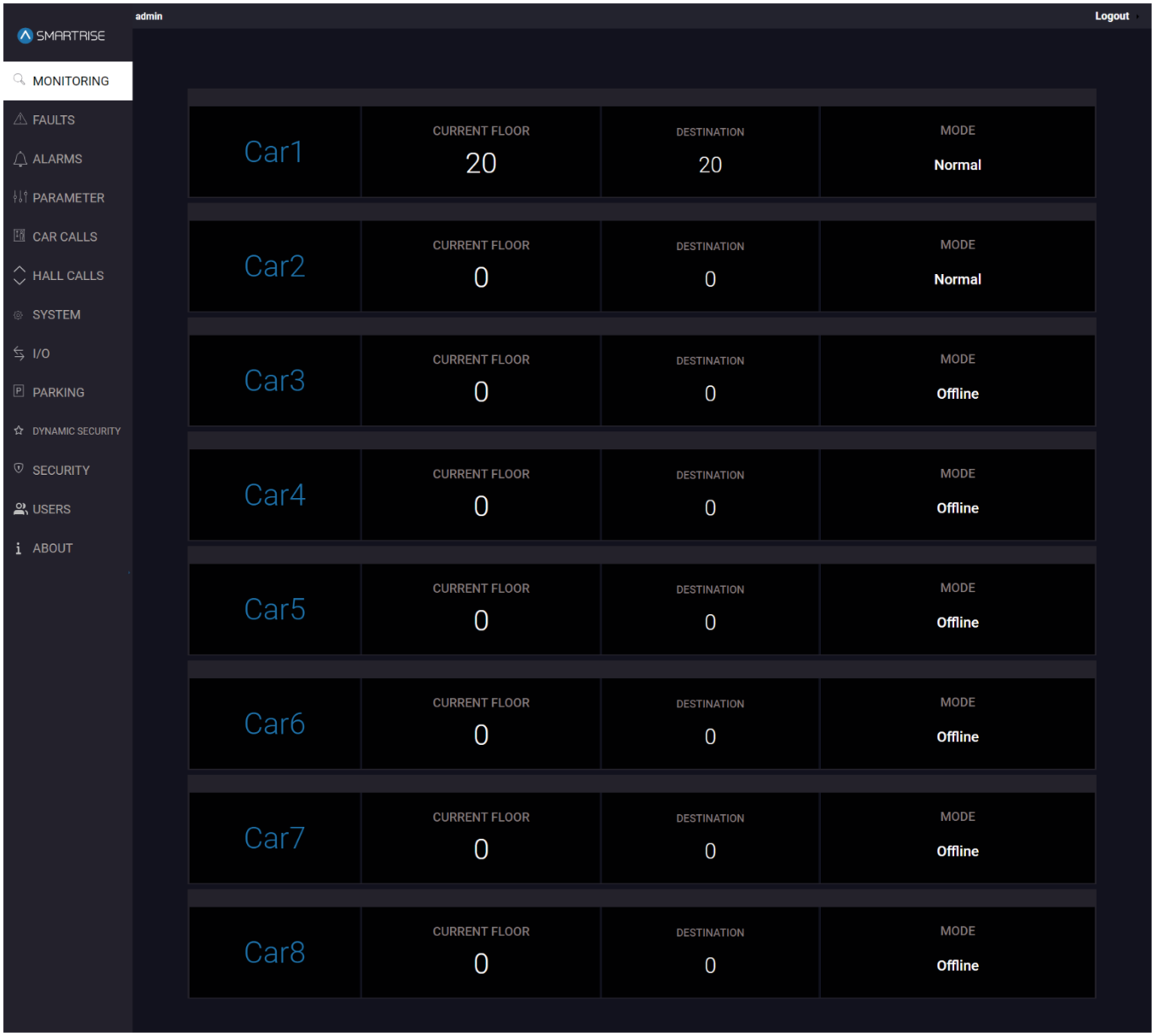

Figure 5: MONITORING Panel

If a car is faulted, the car DIV is highlighted in red as seen in the image below.

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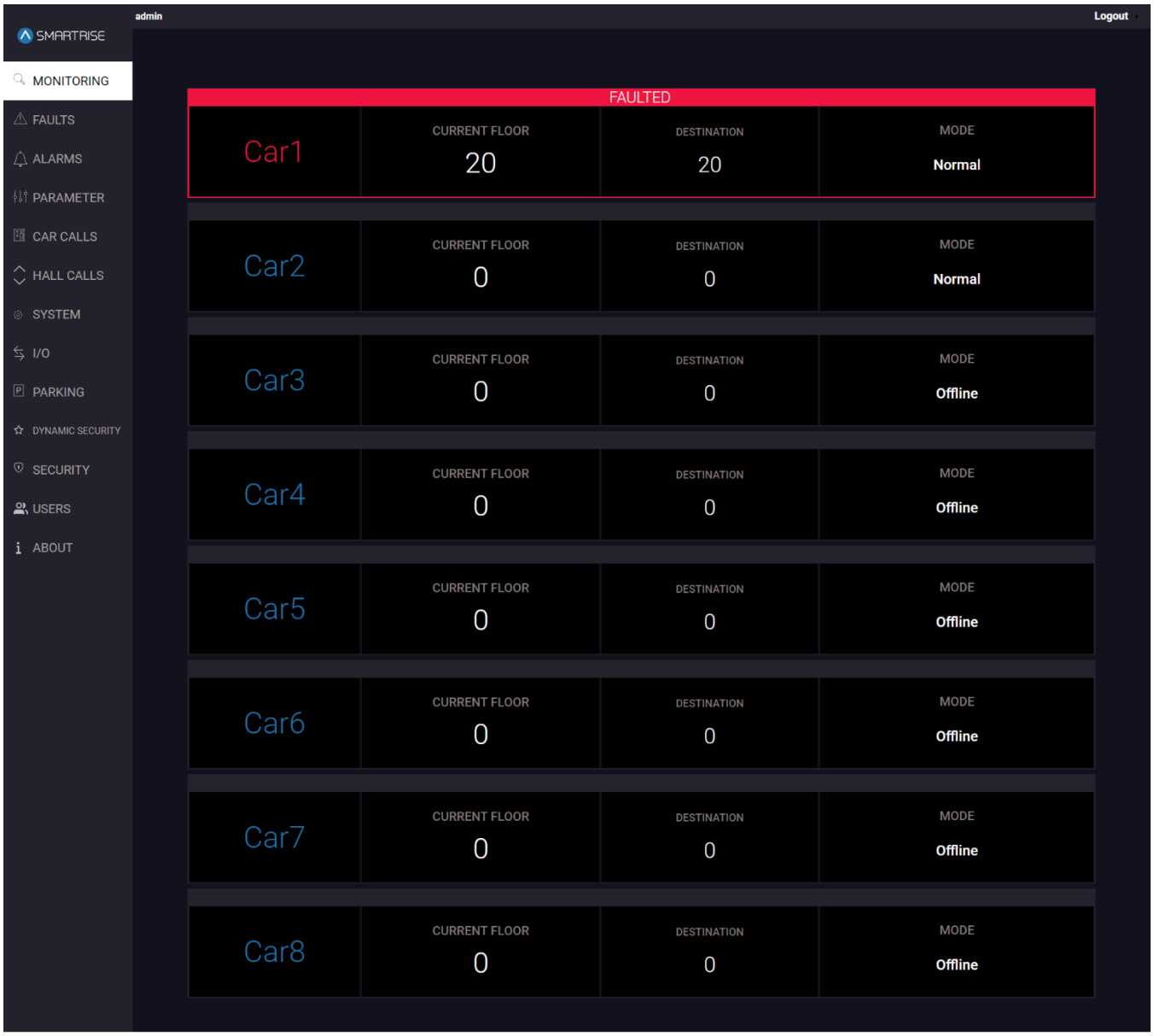

Figure 6: MONITORING Panel: FAULTED CAR

The table below lists the description of the MONITORING Panel.

Table 2: MONITORING Panel

Field	Description
CAR LABEL	Displays the car label
CURRENT FLOOR	Displays the car's current location
DESTINATION	If applicable, displays the next destination landing
MODE	Displays the mode of operation
FAULTED	If faulted, displays the fault number and name

When the user clicks anywhere inside a specific car record, the MONITORING Panel displays the status of that particular car.

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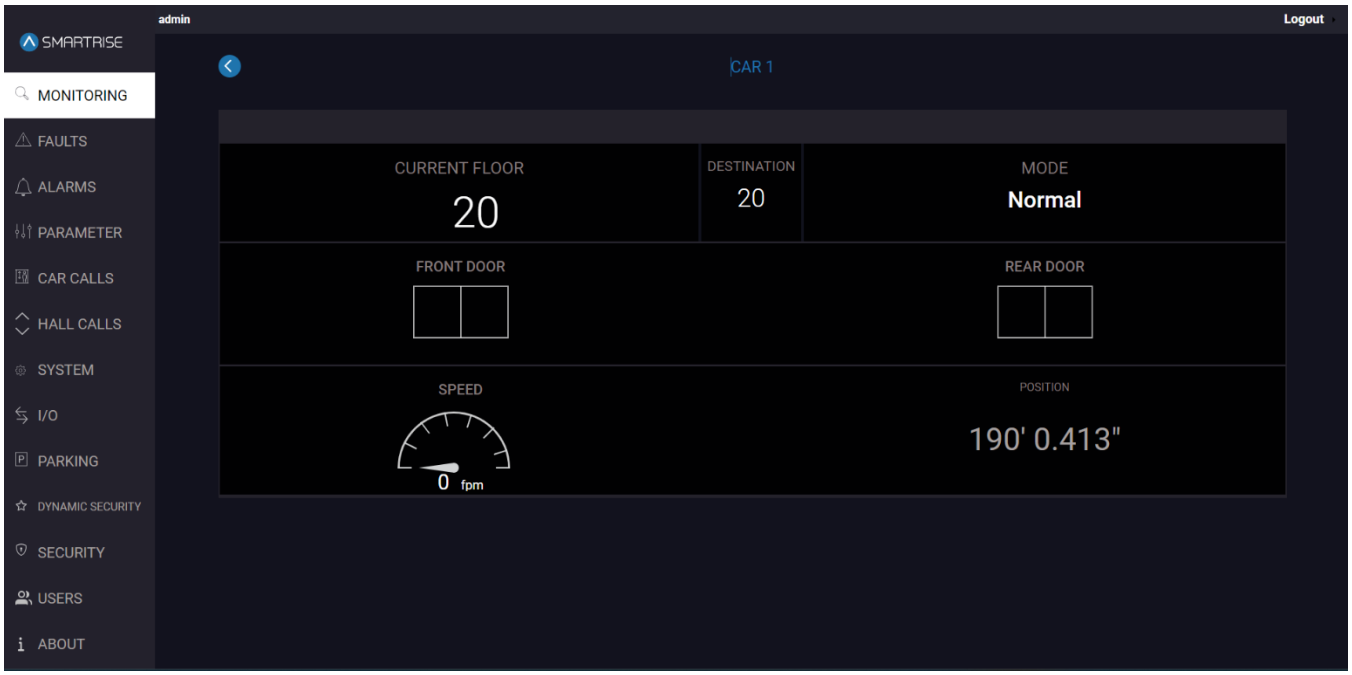

Figure 7: MONITORING Panel - Car Status

Table 3: MONITORING Panel - Car Status

Field	Description
CURRENT FLOOR	Displays the car's current location
DESTINATION	Displays the next destination landing (if any)
MODE	Displays the mode of operation
FRONT DOOR	Displays the front door status (open, opening, close, closing, nudge...)
REAR DOOR	Displays the rear door status (open, opening, close, closing, nudge...)
SPEED	Displays the speed of the car
POSITION	Displays the position of the car
Buttons	
	Allows the user to return to the MONITORING Panel

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4 FAULTS

The FAULTS Panel displays a log of the faults triggered by any car within a group.

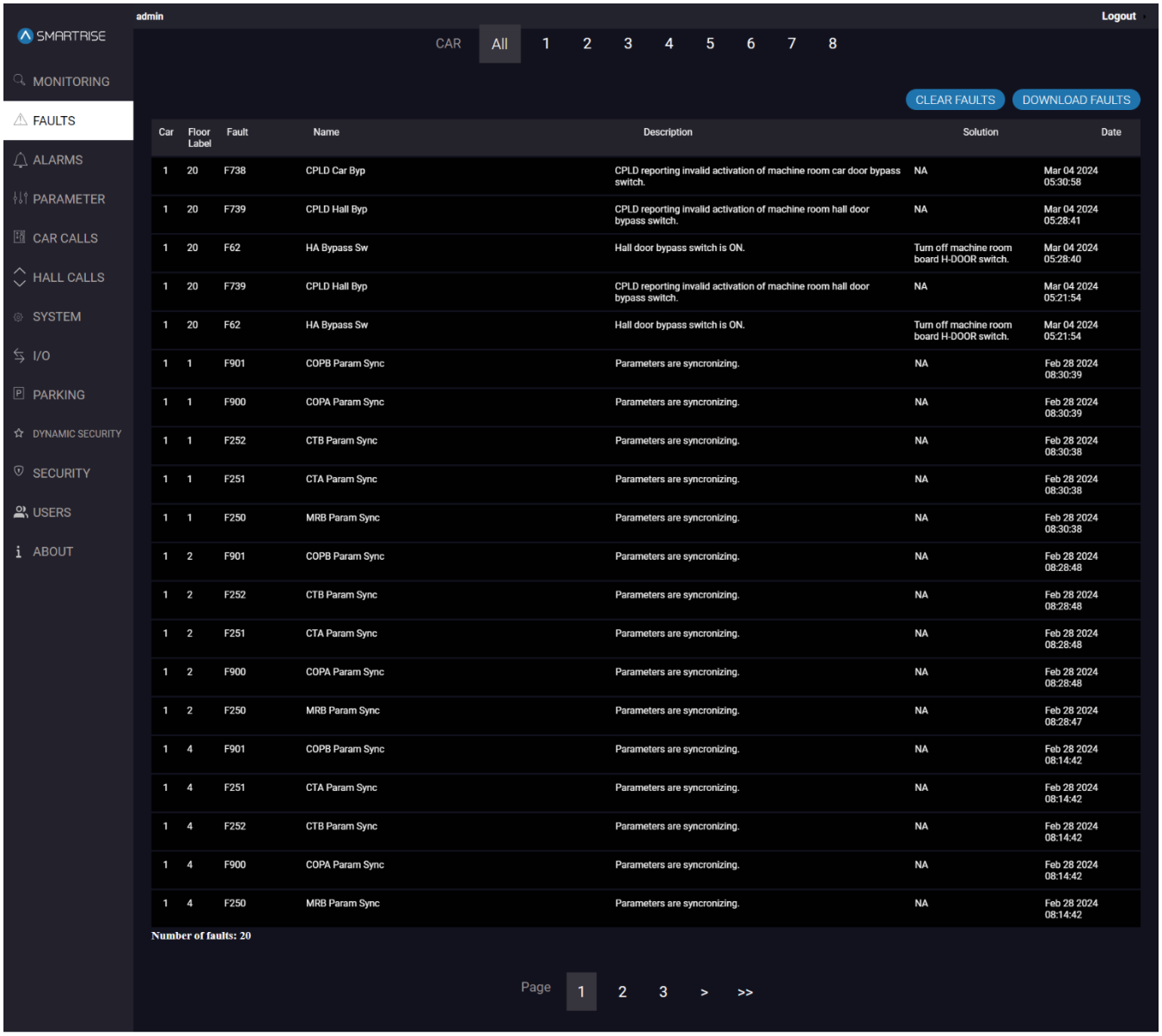

Figure 8: FAULTS Panel

The table below lists the description of the FAULTS Panel.

Table 4: FAULTS Panel

Field	Description
CAR All 1 2	Allows the user to select the faults for all cars or a specific car
CAR	Displays the car label of the car with the fault
FAULT	Displays the fault's number
NAME	Displays the fault's name

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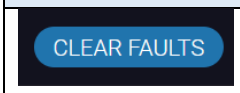
DESCRIPTION	Displays the fault's description
SOLUTION	Displays the fault's potential solutions
DATE	Displays the fault's date & time
Buttons	
	Allows the user to clear all faults
	Allows the user to download the faults list

Perform the following steps to clear the faults list:

1. Go to the FAULTS Panel.
2. Click on CLEAR FAULTS.

   NOTE: all faults will be cleared from the list.

Perform the following steps to download the faults list:

1. Go to the FAULTS Panel.
2. Click on DOWNLOAD FAULTS.

   NOTE: the "faults.csv" file will be downloaded into the Downloads folder on the user's device by default. The user can also select the location of the download.

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5 ALARMS

The ALARMS Panel displays a log of the alarms triggered by any car within a group.

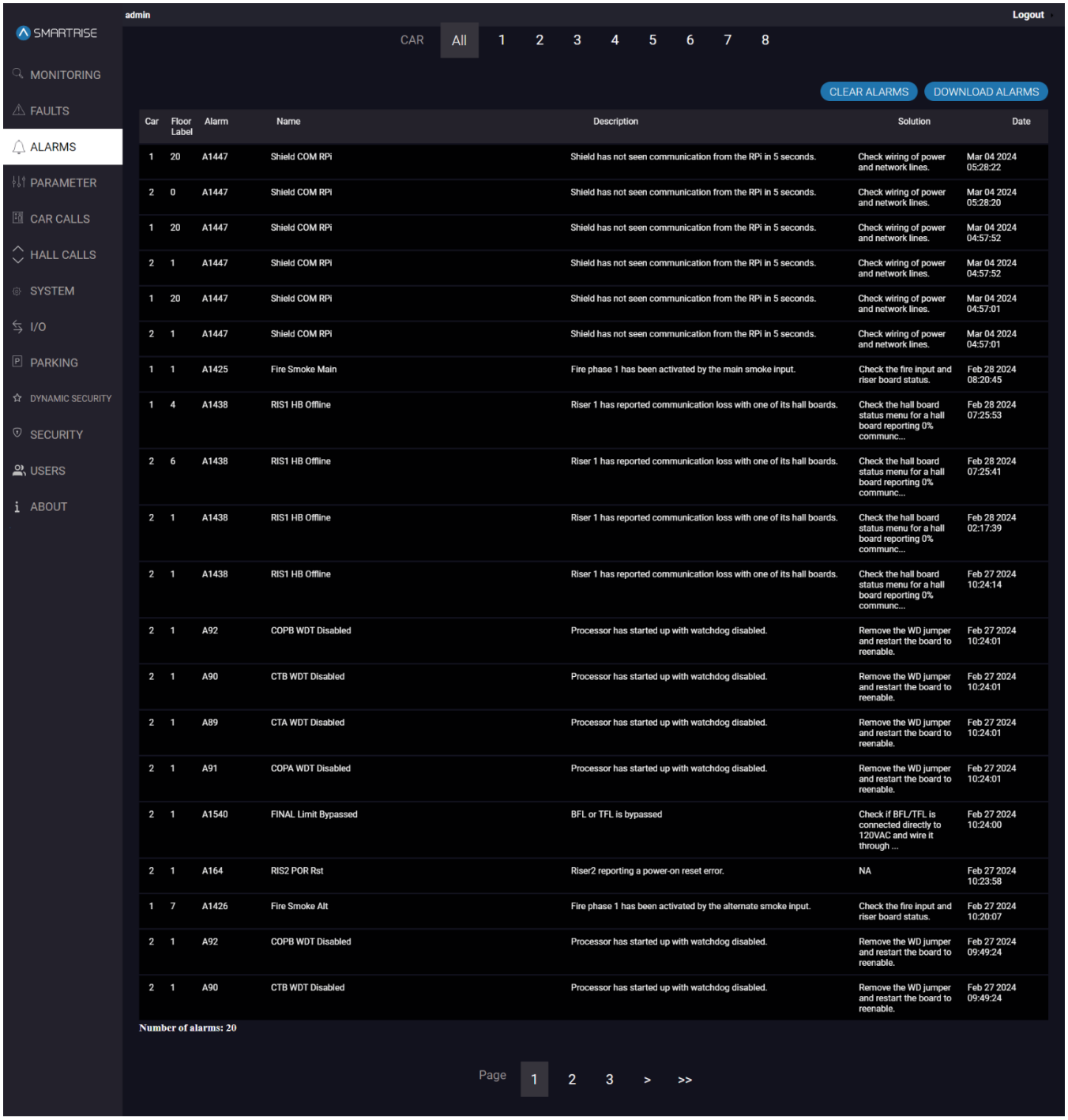

Figure 9: ALARMS Panel

The table below lists the description of the ALARMS Panel.

Table 5: ALARMS Panel

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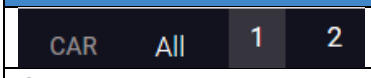
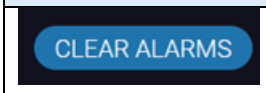
Field	Description
	Allows the user to select the alarms for all cars or a specific car
CAR	Displays the car label of the car with the alarm
ALARM	Displays the alarm's number
NAME	Displays the alarm's name
DESCRIPTION	Displays the alarm's description
SOLUTION	Displays the alarm's potential solutions
DATE	Displays the alarm's date & time
Buttons	
	Allows the user to clear all alarms
	Allows the user to download the alarms list

Perform the following steps to clear the alarms list:

1. Go to the ALARMS Panel.
2. Click on CLEAR ALARMS.

   NOTE: all alarms will be cleared from the list.

Perform the following steps to download the alarms list:

1. Go to the ALARMS Panel
2. Click on DOWNLOAD ALARMS

   NOTE: the "alarms.csv" file is downloaded into the Downloads folder on the user's device, and the user can also select the location of the download.

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6 PARAMETER

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

6.1 Manual Edit

The Manual Edit subpanel allows the user to adjust a specific parameter to a specific car.

There are 5 types of parameters: 1-bit, 8-bit, 16-bit, 24-bit, and 32-bit.

Each type has its own set of parameters specified by an index.

Example: 01-0000 stands for Fire Main Use Rear Door and 01-0131 stands for Bypass Fire Service.

NOTE: the indexes are 0000 and 0131 and the type is 01.

The parameter can be adjusted based on the value entered for a selected car within the same group. When the user hits SEARCH, the parameter's name (along with its current value), category, and option to adjust are displayed based on the user-entered value.

The user can enter a decimal number to adjust the corresponding parameter on the controller.

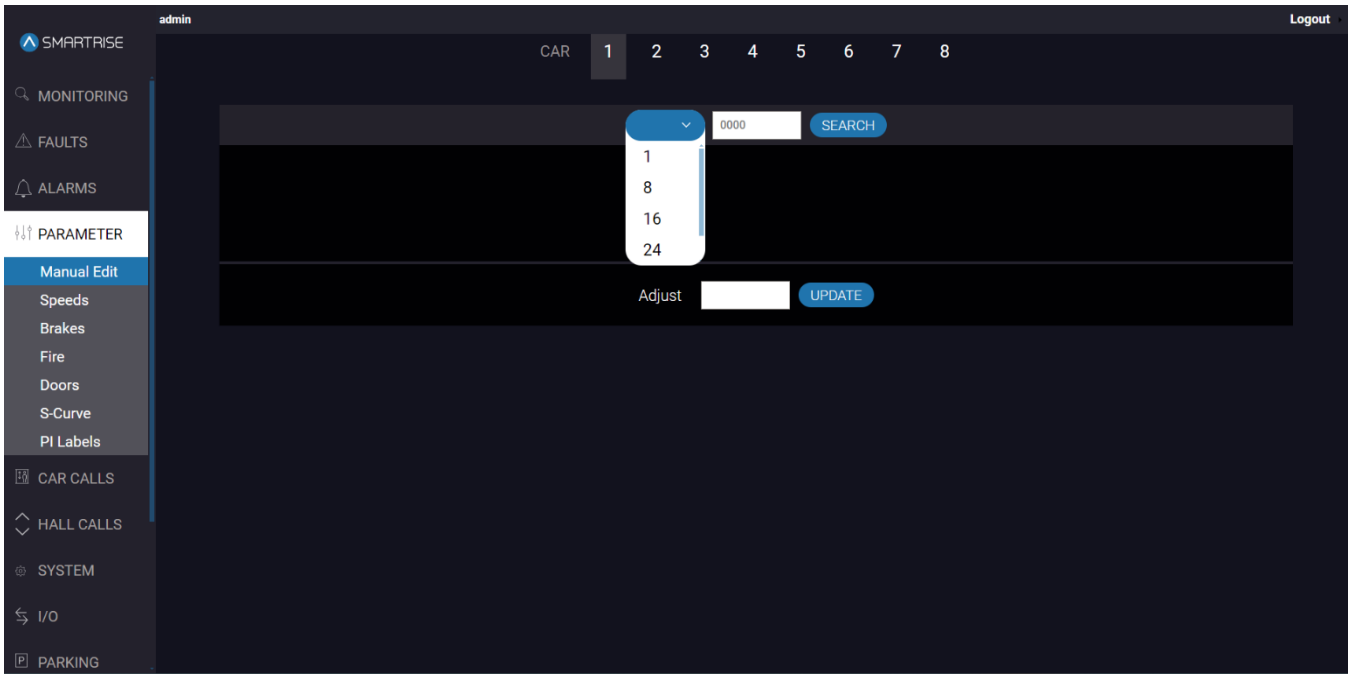

Figure 10: PARAMETER Panel - Manual Edit

The table below lists the description of the PARAMETER Panel - Manual Edit.

Table 6: PARAMETER Panel - Manual Edit

Field	Description

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CAR 1 2	Allows the user to select the car label
Parameter Type	Allows the user to select the parameter type from the dropdown list
Parameter Index	Allows the user to enter the index of a specific parameter under the parameter type
The parameter type and index are pre-defined values. For the same parameter type and index, the value of a certain parameter may differ from one car to another.	
Adjust	Allows the user to enter or select the adjusted parameter based on the parameter type
Buttons	
SEARCH	Allows the user to search for the parameter value according to the parameter type and index
UPDATE	Allows the user to update the adjusted value for the parameter based on the user-entered value

Perform the following steps to manually edit the parameters for a particular car:

1. Turn on DIP A4 on the MR board.
2. From the PARAMETER Panel - Manual Edit, select the car label.
3. Select the Parameter Type from the dropdown list.
4. Enter the Parameter Index.
5. Click SEARCH.
6. Enter the adjusted value and click UPDATE.
   - If a valid adjustment has been made, a green UPDATE tag with a checkmark will be displayed.
7. **Optional:** turn off DIP A4.
   - DIP A4 will affect the functionality of PARAMETER Panel, SYSTEM Panel (Restore Param subpanel), and I/O Panel.
   - In case no modifications on the PARAMETERS are due.

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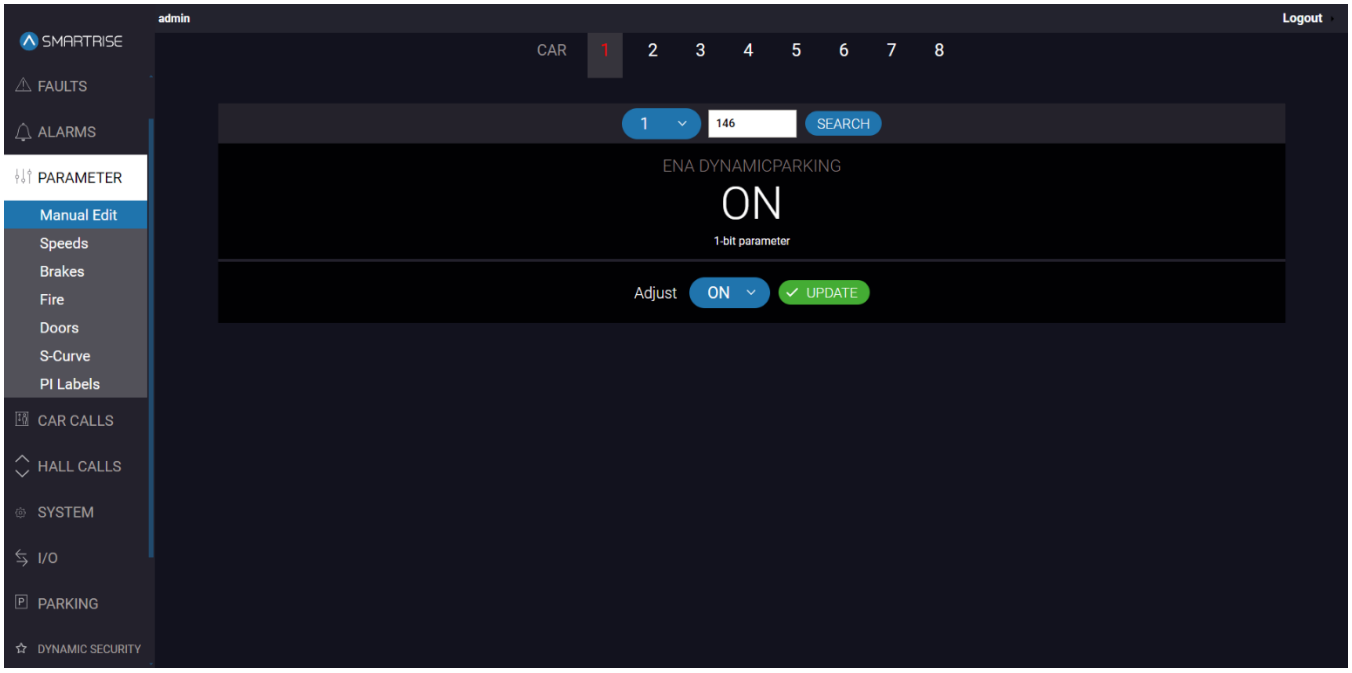

Figure 11: PARAMETER Panel - Manual Edit UPDATE

6.2 Speeds

The speeds sub-panel allows the user to enter different speed parameters determined by the controller module.

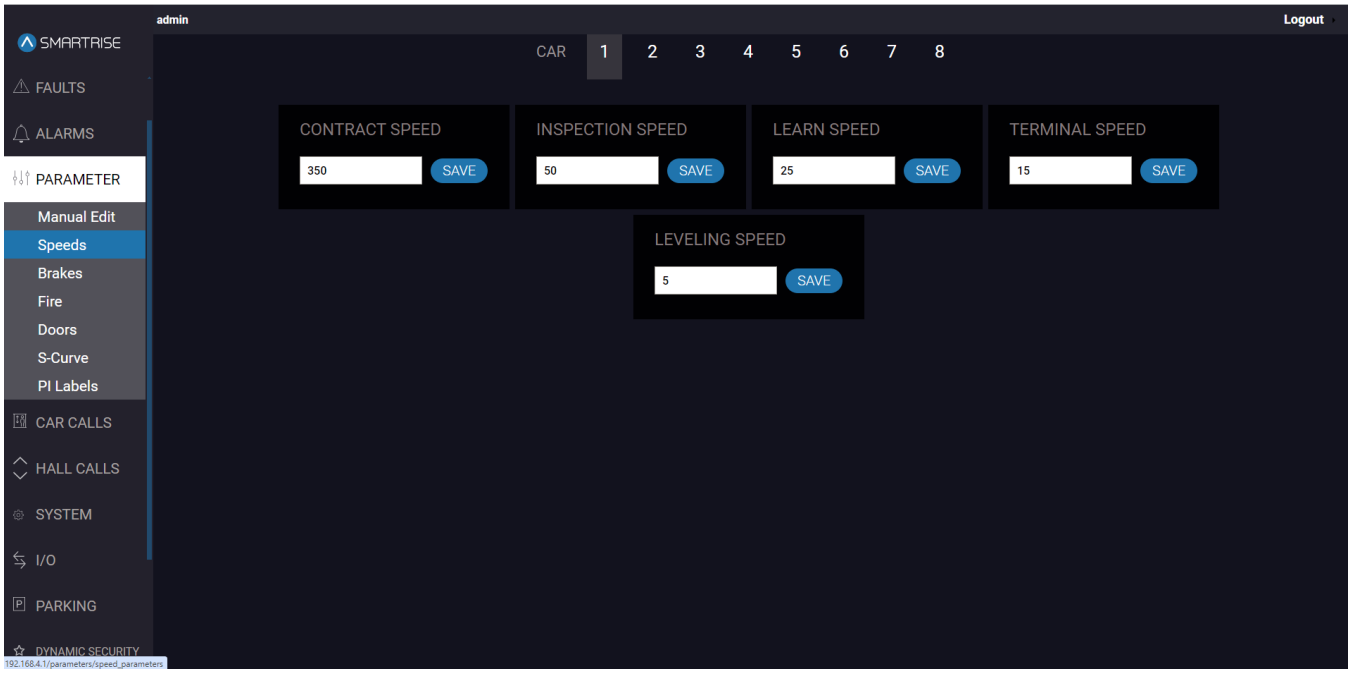

Figure 12: PARAMETER Panel - Speeds (Traction Configuration)

The table below lists the description of the PARAMETER Panel - Speeds.

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Table 7: PARAMETER Panel - Speeds

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

NOTE: for the Hydro Jobs, only CONTRACT SPEED and INSPECTION SPEED are displayed.

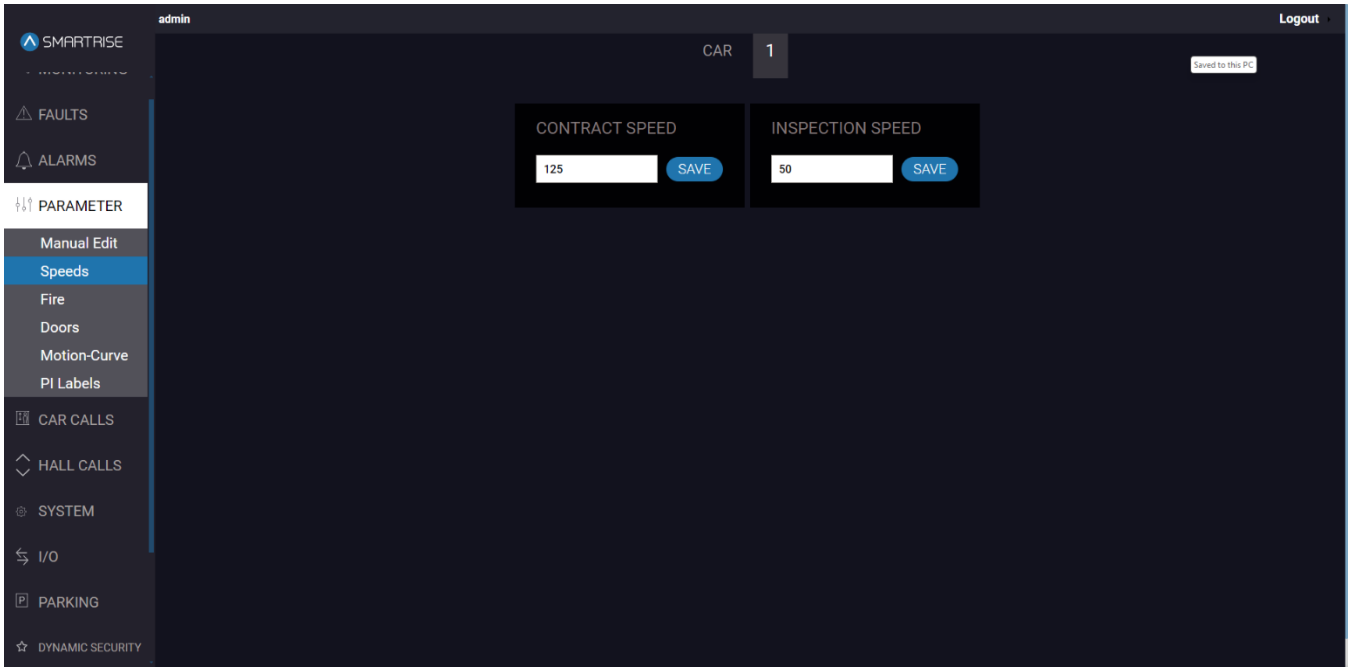

Figure 13: PARAMETER Panel - Speeds (Hydro Configuration)

Perform the following steps to update the speeds parameters for a particular car:

1. Turn on DIP A4.
2. From the PARAMETER Panel - Speeds, select the car label.
3. Enter the new parameter value(s) and click SAVE.
   - A green SAVE tag with a checkmark is displayed.

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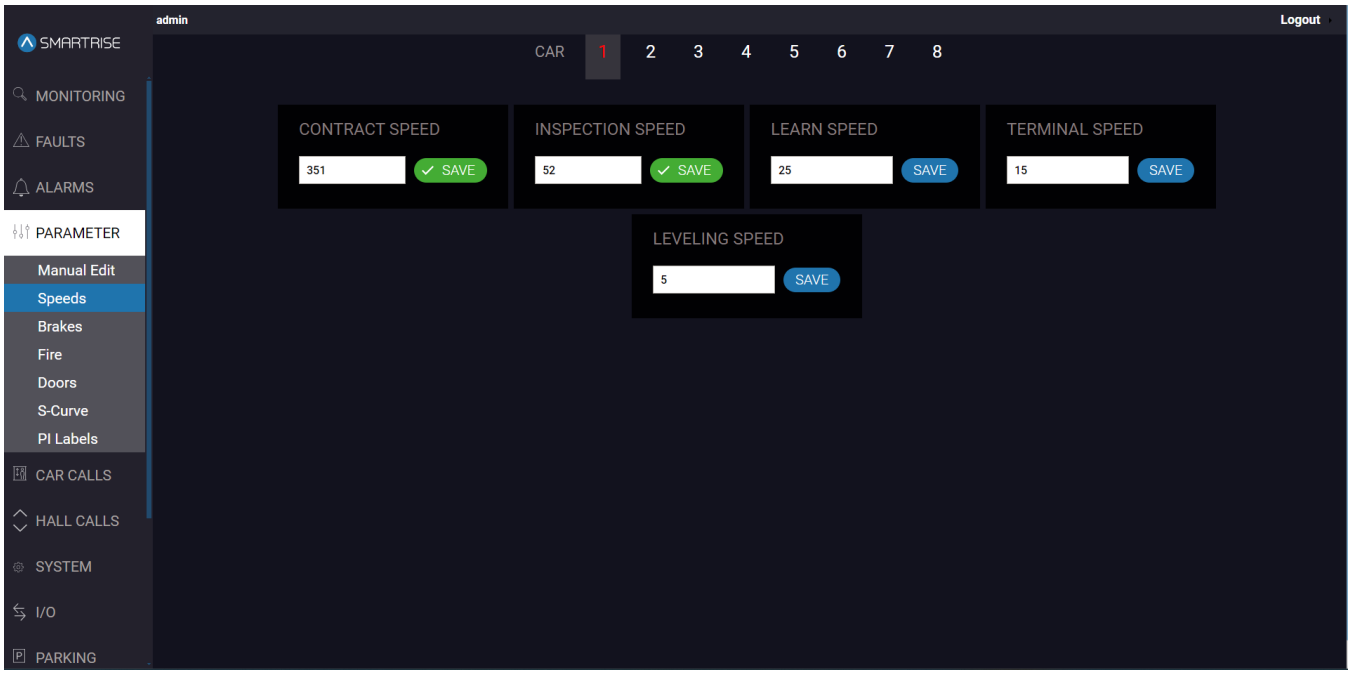

Figure 14: PARAMETER Panel - Speeds SAVE

6.3 Brakes

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

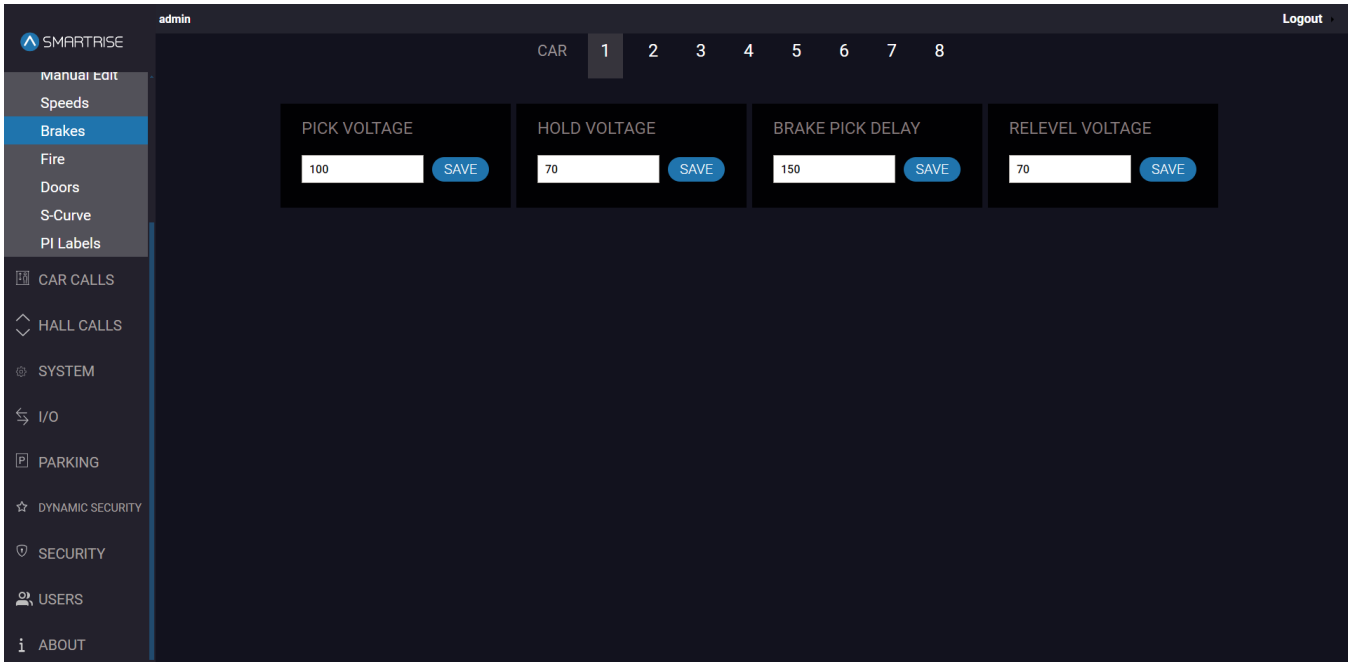

Figure 15: PARAMETER Panel - Brakes

The table below lists the description of the PARAMETER Panel - Brakes.

Table 8: PARAMETER Panel - Brakes

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Field	Description
CAR 1 2	Allows the user to select the car label
PICK VOLTAGE	Allows the user to set the pick voltage for opening the brakes
HOLD VOLTAGE	Allows the user to set a consistent voltage supplied to the brakes to keep them open
BRAKE PICK DELAY	Allows the user to set the time at which the brake is held at zero speed
RELEVEL VOTAGE	Allows the user to set the voltage at which the brake hardly lifts during releveling, allowing the sheave to rotate beneath the brake
Buttons	
SAVE	Allows the user to save the set brake parameters

Perform the following steps to update the brake voltage parameters for a particular car:

1. Turn on DIP A4.
2. From the PARAMETER Panel - Brakes, select the car label.
3. Enter the new brake voltage value(s) and click SAVE.
   - A green SAVE tag with a checkmark is displayed.

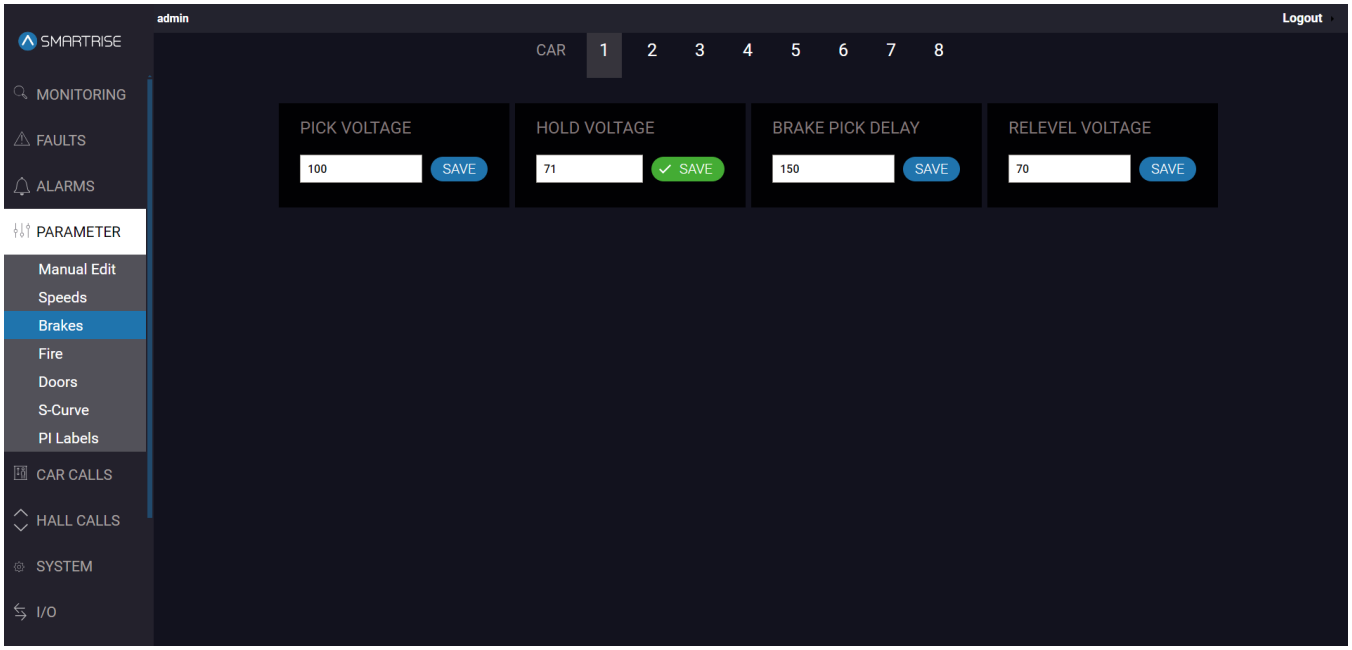

Figure 16: PARAMETER Panel - Brakes SAVE

6.4 Fire

The Fire subpanel allows the user to set parameters for the main and alternate fire recall floors.

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The Fire subpanel contains 3 sections:

MAIN SMOKE: allows the user to choose the designated landing of the car in case smoke is detected in the main lobby.

MAIN RECALL: allows the user to choose the designated landing of a car in case of a fire.

ALTERNATE RECALL: allows the user to choose the designated alternate landing of a car in case there is a sign of a fire at the designated main recall floor.

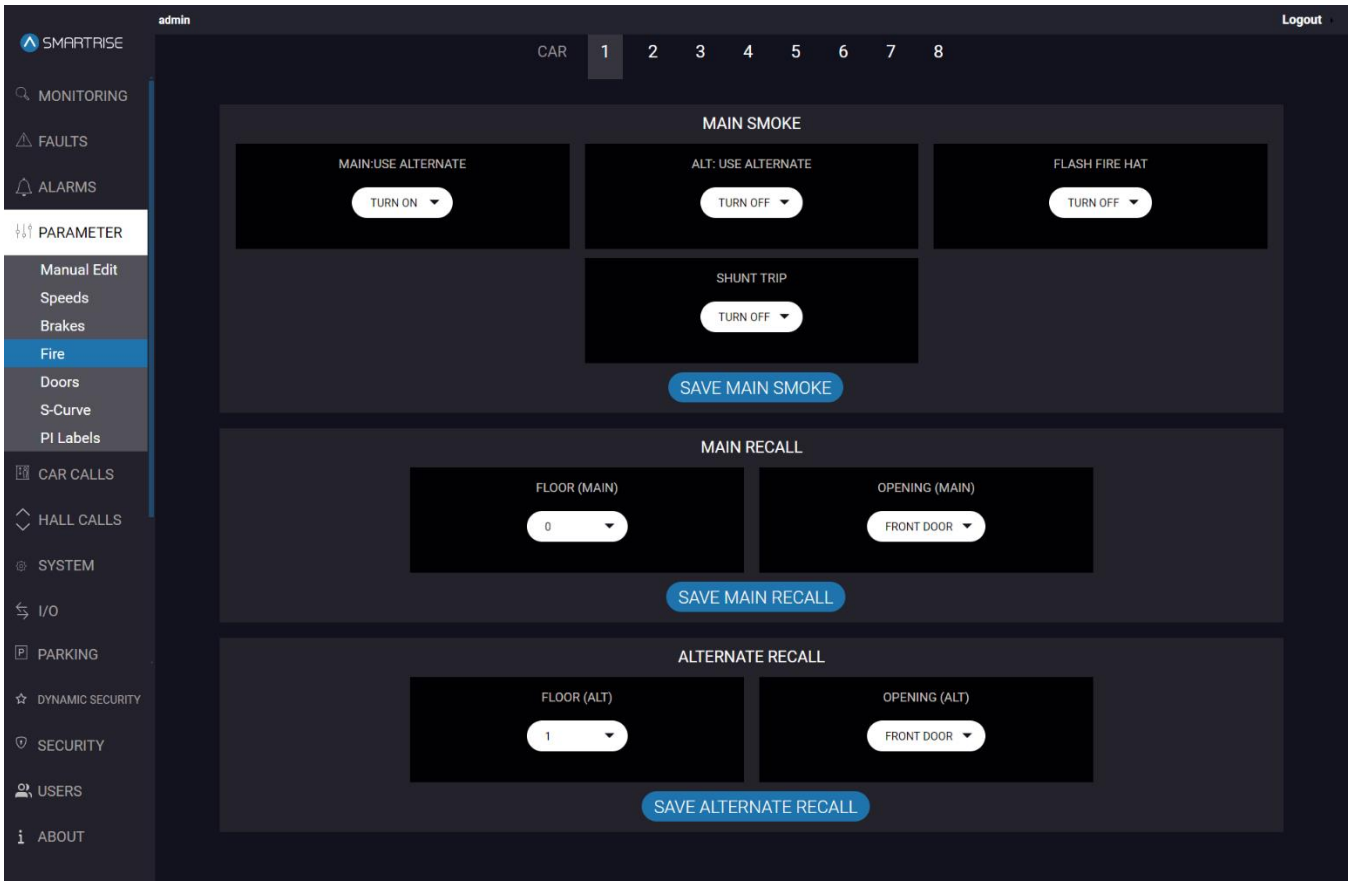

Figure 17: PARAMETER Panel - Fire

The table below lists the description of the PARAMETER Panel - Fire.

Table 9. PARAMETER Panel - Fire

Field	Description
CAR 1 2	Allows the user to select the car label
MAIN SMOKE	
MAIN: USE ALTERNATE	Allows the user to select if the car travels to the main landing when smoke is detected
ALT: USE ALTERNATE	Allows the user to select if the car travels to the alternate landing when smoke is detected in the main lobby
FLASH FIRE HAT	Allows the user to select if the Flash Fire Hat symbol on the panel will flash when smoke is detected

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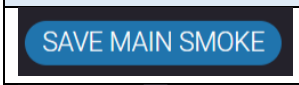
SHUNT TRIP	Allows the user to select if the shunt output trips a breaker, cutting off the controller's main power in case of a fire in the main lobby
MAIN RECALL	
FLOOR (MAIN)	Allows the user to select the designated main landing when recalled
OPENING (MAIN)	Allows the user to select which door opens 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 recalled to the alternate designated landing
Buttons	
	Allows the user to save the set main smoke parameters
	Allows the user to save the set main recall parameters
	Allows the user to save the set alternate recall parameters

Perform the following steps to update the smoke and recall parameters for a particular car:

1. Turn on DIP A4.
2. From the PARAMETER Panel - Fire, select the car label.
3. Select the new smoke and recall parameters from the dropdown list and click SAVE.
   - A green SAVE tag with a checkmark is displayed.

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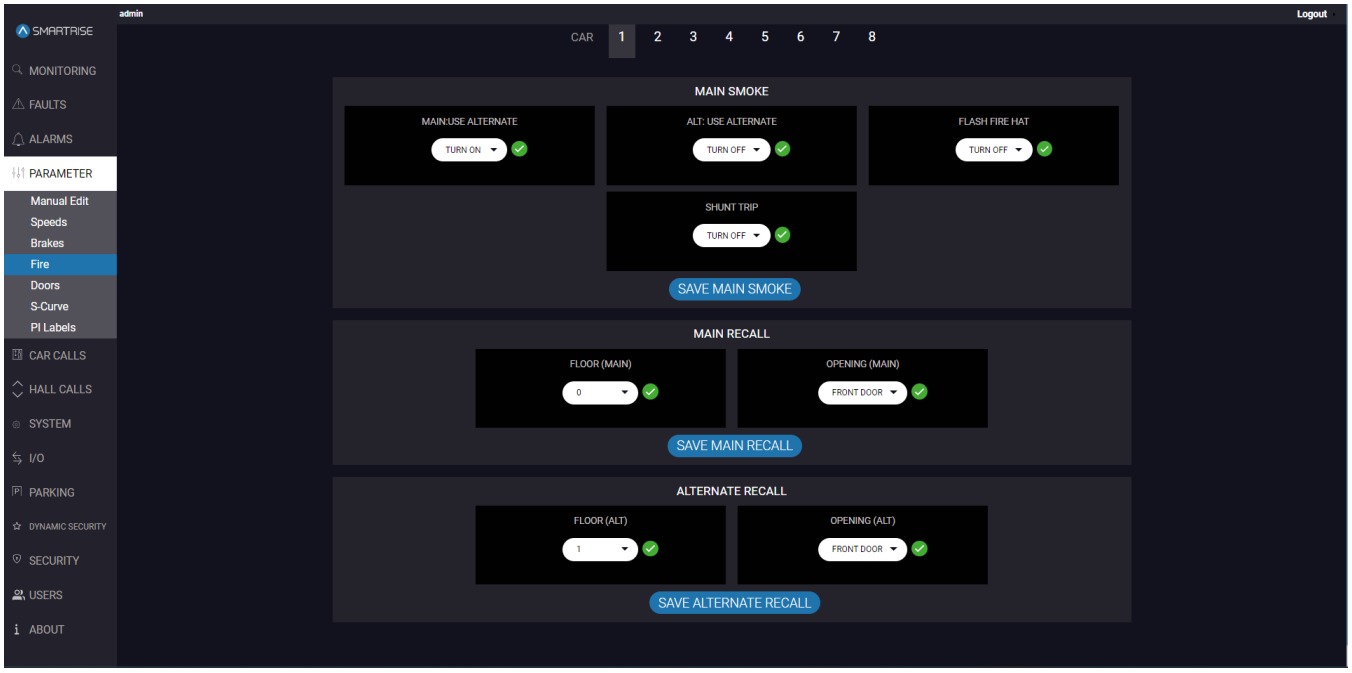

Figure 18: PARAMETER Panel - Fire SAVE

6.5 Doors

The Doors subpanel allows the user to configure the parameters for car door timings.

The timing of the doors to open, remain opened, close, or remain closed depends on the time of day and the purpose of the elevator.

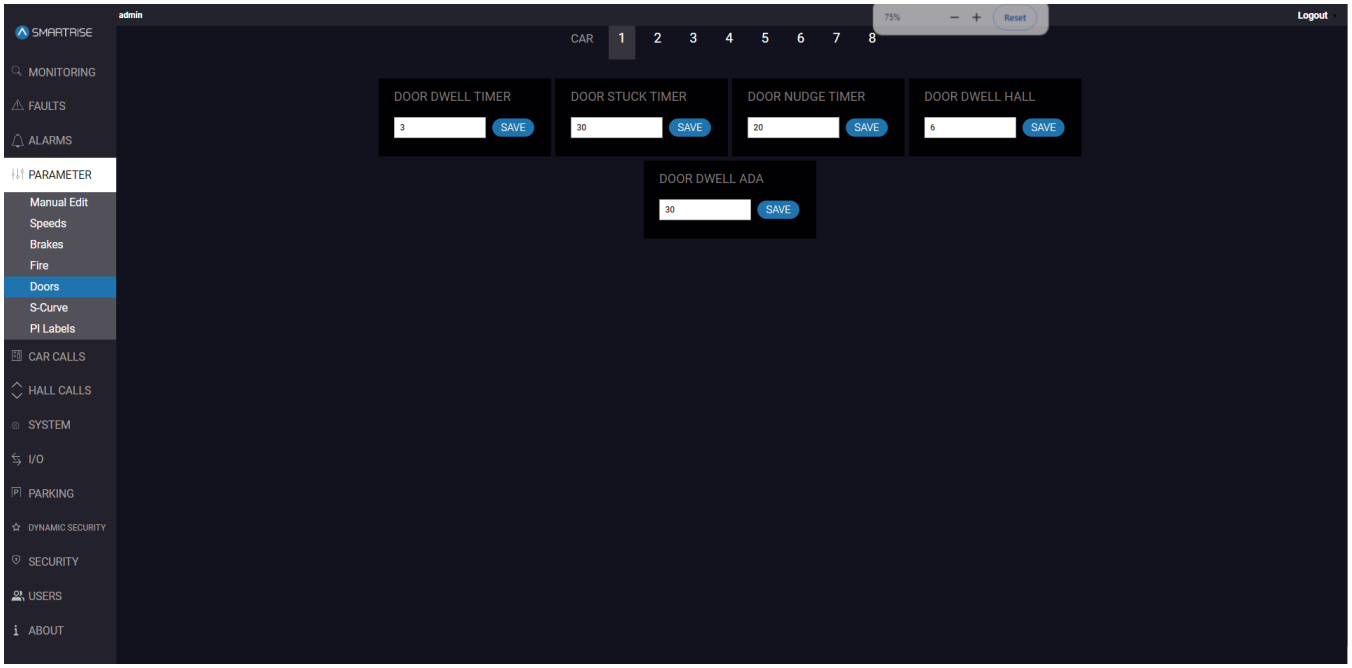

Figure 19: PARAMETER Panel - Doors

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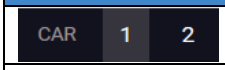
The table below lists the description of the PARAMETER Panel - Doors.

Table 10: PARAMETER Panel - Doors

Field	Description
	Allows the user to select the car label
DOOR DWELL TIME	Allows the user to set the time for the doors to remain open while answering car calls
DOOR STUCK TIME	Allows the user to set the time limit for a door to completely open or close before faulting
DOOR NUDGE TIME	Allows the user to set the time for the doors trying to close after being held open for a certain amount of time. If set to zero, nudging is disabled.
DOOR DWELL HALL	Allows the user to set the time for the doors to remain open while answering hall calls
DOOR DWELL ADA	Allows the user to set the time for the doors to remain open while answering ADA calls
Buttons	
	Allows the user to save the set doors parameters

Perform the following steps to update the doors parameters for a particular car:

1. Turn on DIP A4.
2. From the PARAMETER Panel - Doors, select the car label.
3. Enter the new parameter value(s) and click SAVE.
   - A green SAVE tag with a checkmark is displayed.

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Figure 20: PARAMETER Panel - Doors SAVE

6.6 S-Curve

The S-Curve subpanel allows the user to regulate the acceleration and speed to create a smooth transition without any abrupt jerking motion. It is reserved for traction jobs. For more information about the S-Curve and adjusting the parameters for all profiles, consult the *C4 User Manual*.

NOTE: for hydro jobs, a Motion-Curve is displayed (see Figure 21).

The following profiles are used under the S-Curve:

- NORMAL
- INSPECTION
- SHORT
- EMERGENCY

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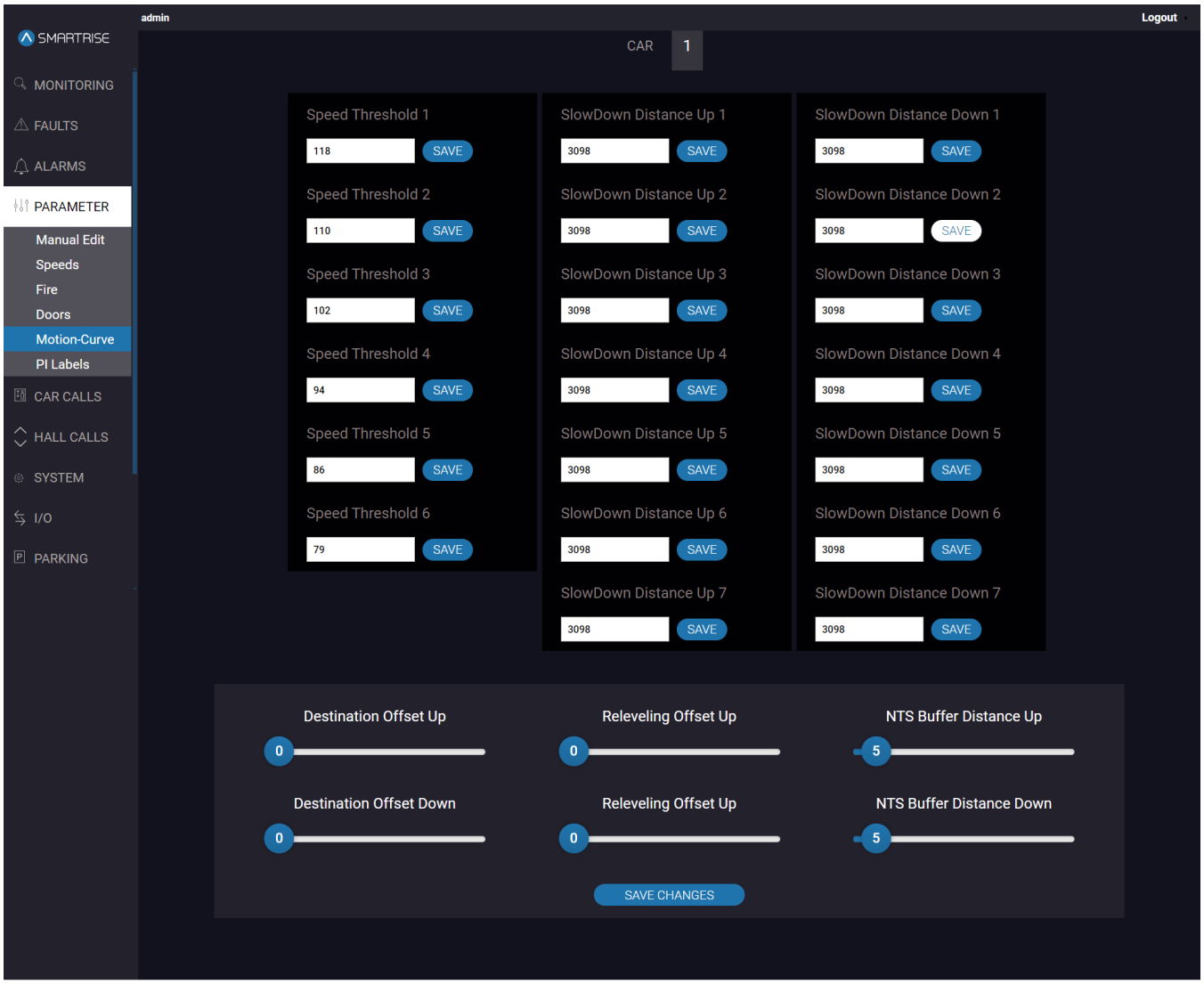

Figure 21: PARAMETER Panel - Motion-Curve (Hydro Configuration)

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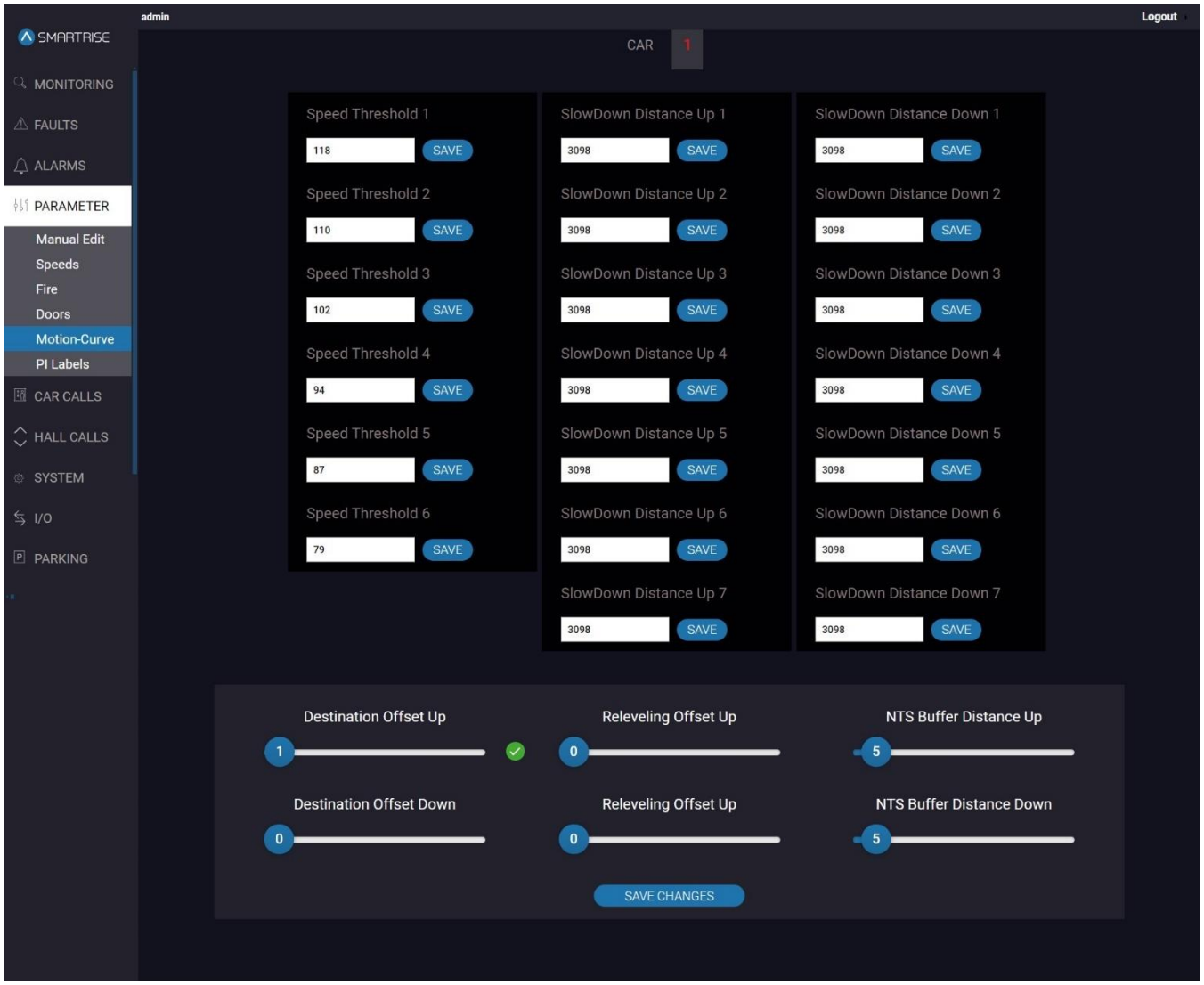

Figure 22: PARAMETER Panel - Motion-Curve SAVE I (Hydro Configuration)

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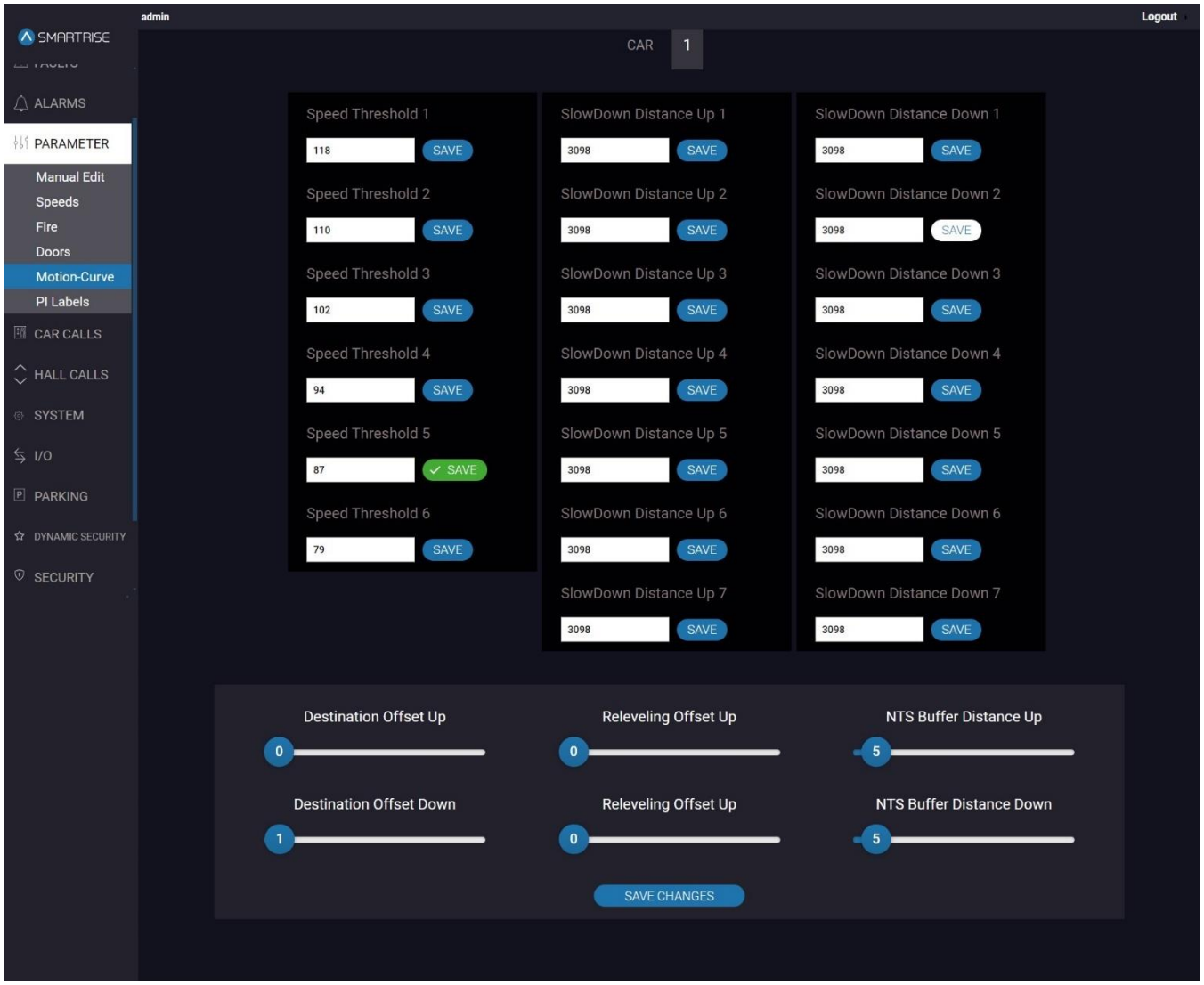

Figure 23: PARAMETER Panel - Motion-Curve SAVE II (Hydro Configuration)

6.6.1 NORMAL PROFILE

The NORMAL PROFILE allows the user to adjust the parameters for all automatic operation runs that are longer than the minimum short profile distance, except for emergency power.

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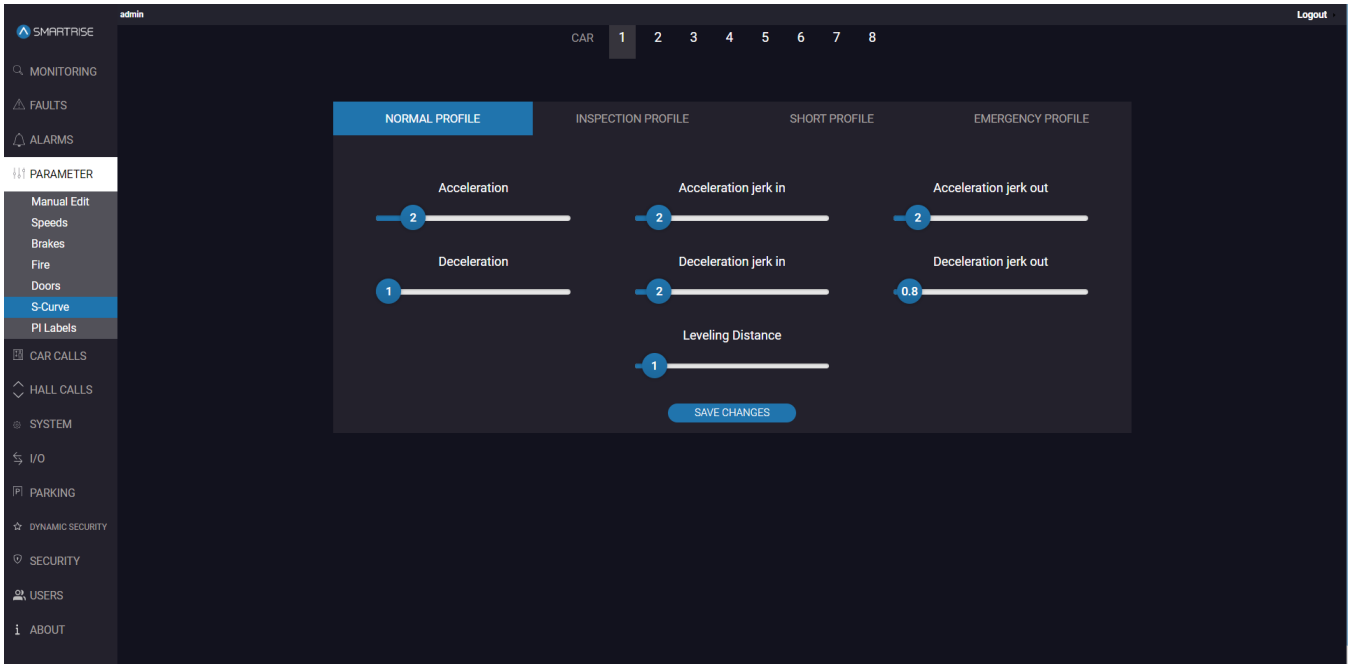

Figure 24: PARAMETER Panel - S-Curve NORMAL PROFILE

The table below lists the description of the PARAMETER Panel - S-Curve NORMAL PROFILE.

Table 11: PARAMETER Panel - S-Curve NORMAL PROFILE

Field	Description
CAR 1 2	Allows the user to select the car label
Acceleration	Allows the user to set the pace 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 the speed at which the profile transitions from maximum to zero acceleration (constant velocity) on normal profile runs
Deceleration	Allows the user to set the pace 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 reaching the destination floor on normal profile runs
Buttons	
SAVE CHANGES	Allows the user to save the set normal profile parameters

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Perform the following steps to update the normal profile parameters for a particular car:

1. Turn on DIP A4.
2. From the PARAMETER Panel - S-Curve NORMAL PROFILE, select the car label.
3. Slide the bar to the new parameter value(s) and click SAVE CHANGES.
   - A green checkmark is displayed.

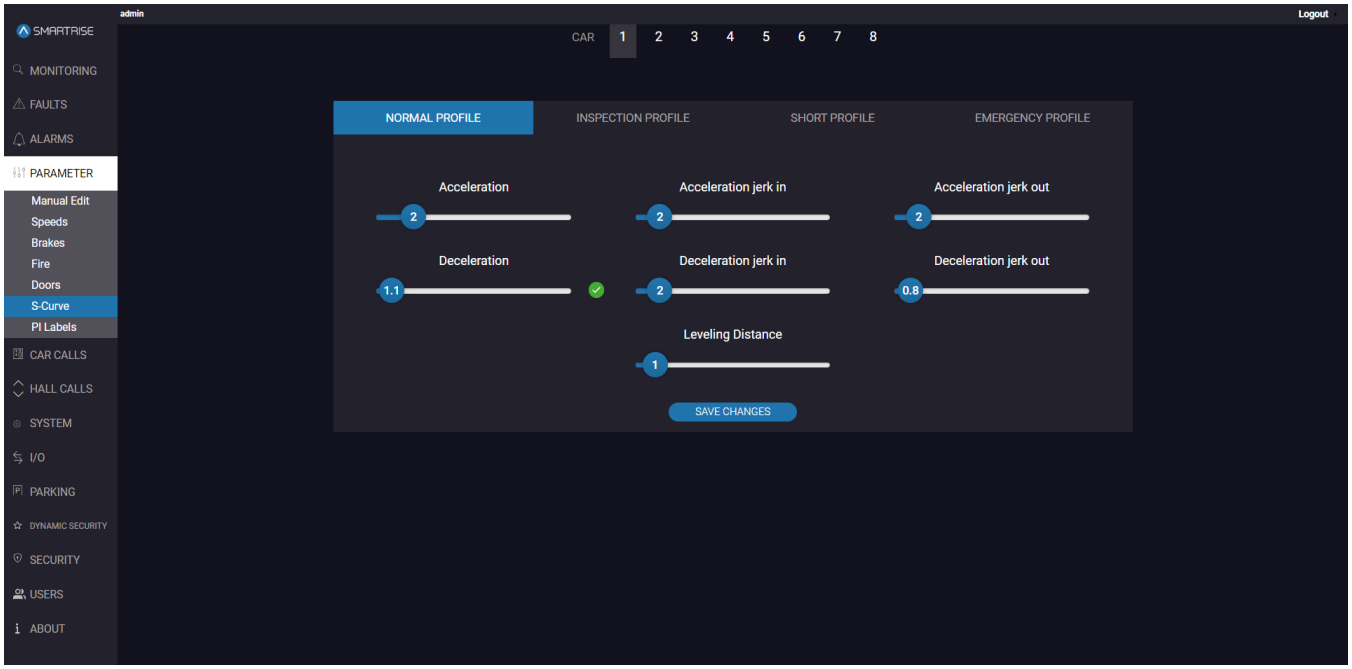

Figure 25: PARAMETER Panel - S-Curve NORMAL PROFILE SAVE

6.6.2 INSPECTION PROFILE

The INSPECTION PROFILE allows the user to adjust the parameters for when the car is operating in Inspection mode.

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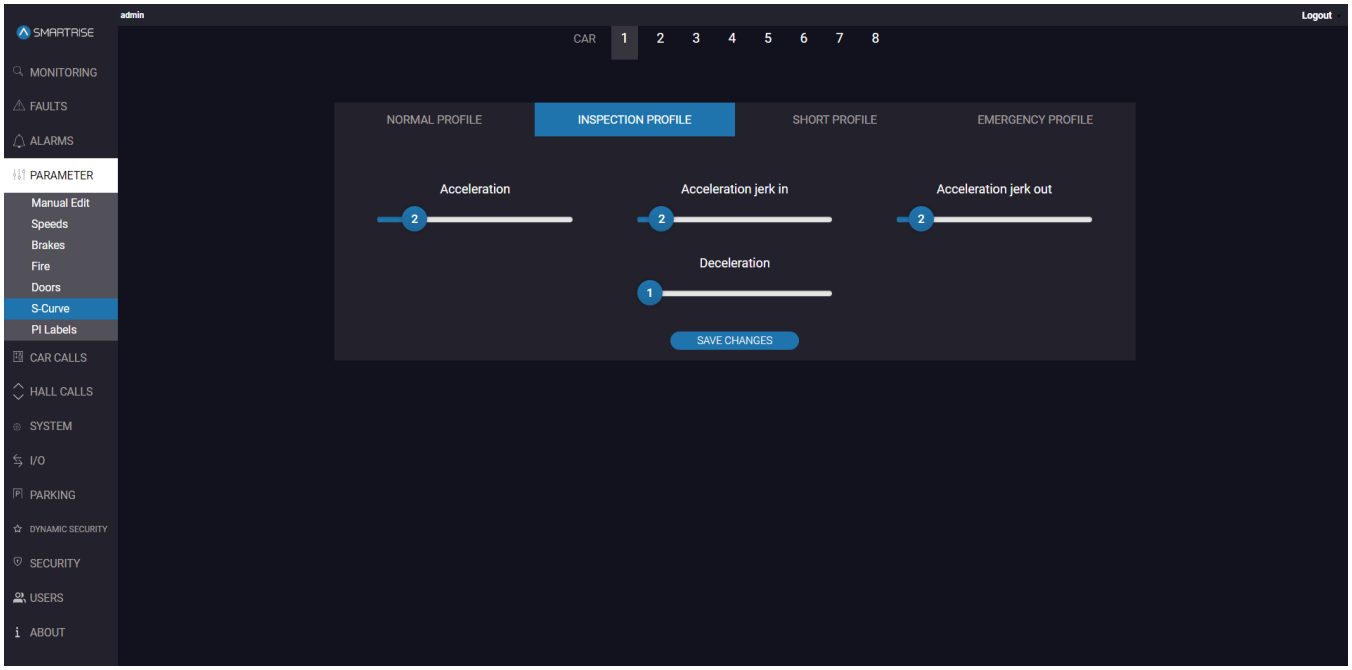

Figure 26: PARAMETER Panel - S-Curve INSPECTION PROFILE

The table below lists the description of the PARAMETER Panel - S-Curve INSPECTION PROFILE.

Table 12: PARAMETER Panel - S-Curve INSPECTION PROFILE

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

Perform the following steps to update the inspection profile parameters for a particular car:

1. Turn on DIP A4.
2. From the PARAMETER Panel - S-Curve INSPECTION PROFILE, select the car label.
3. Slide the bar to the new parameter value(s) and click SAVE CHANGES.
   - A green checkmark is displayed.

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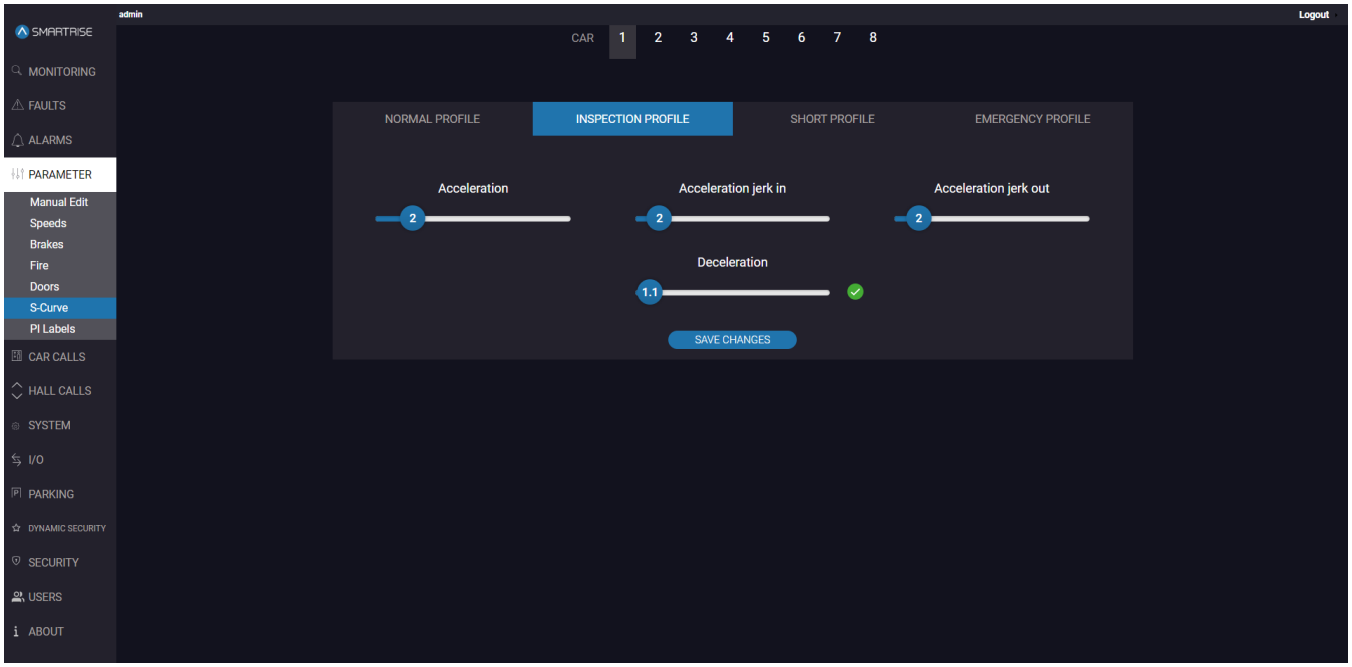

Figure 27: PARAMETER Panel - S-Curve INSPECTION PROFILE SAVE

6.6.3 SHORT PROFILE

The SHORT PROFILE allows the user to adjust the parameters for when the car is operating for the set minimum profile.

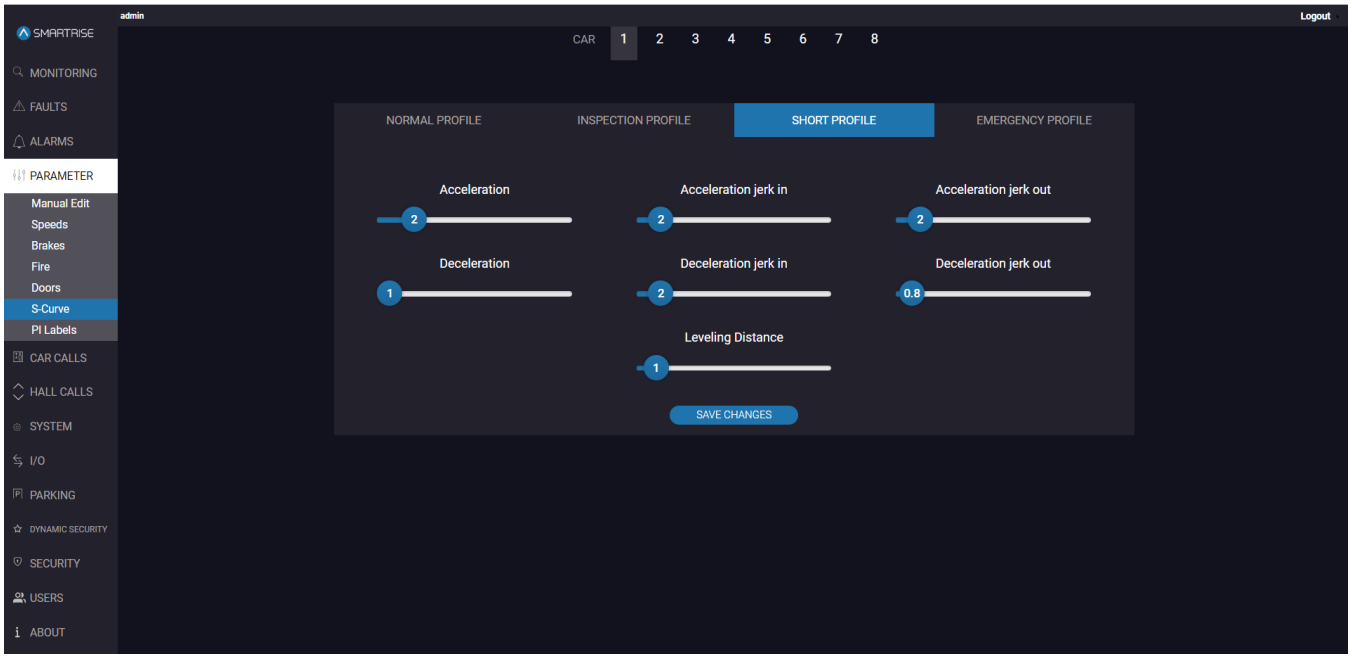

Figure 28: PARAMETER Panel - S-Curve SHORT PROFILE

The table below lists the description of the PARAMETER Panel - S-Curve SHORT PROFILE.

Table 13: PARAMETER Panel - S-Curve SHORT PROFILE

Field	Description

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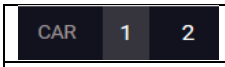
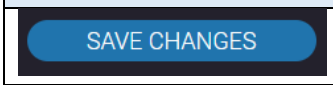
	Allows the user to select the car label
Acceleration	Allows the user to set the pace at which the car reaches constant speed on short profile runs
Acceleration jerk in	Allows the user to set the transition from zero speed to full acceleration on short profile runs
Acceleration jerk out	Allows the user to set the speed at which the profile transitions from maximum to zero acceleration (constant velocity) on short profile runs
Deceleration	Allows the user to set the pace 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 reaching the destination floor on short profile runs
Buttons	
	Allows the user to save the set short profile parameters

Perform the following steps to update the short profile parameters for a particular car:

1. Turn on DIP A4
2. From the PARAMETER Panel - S-Curve SHORT PROFILE, select the car label.
3. Slide the bar to the new parameter value(s) and click SAVE CHANGES.
   - A green checkmark is displayed.

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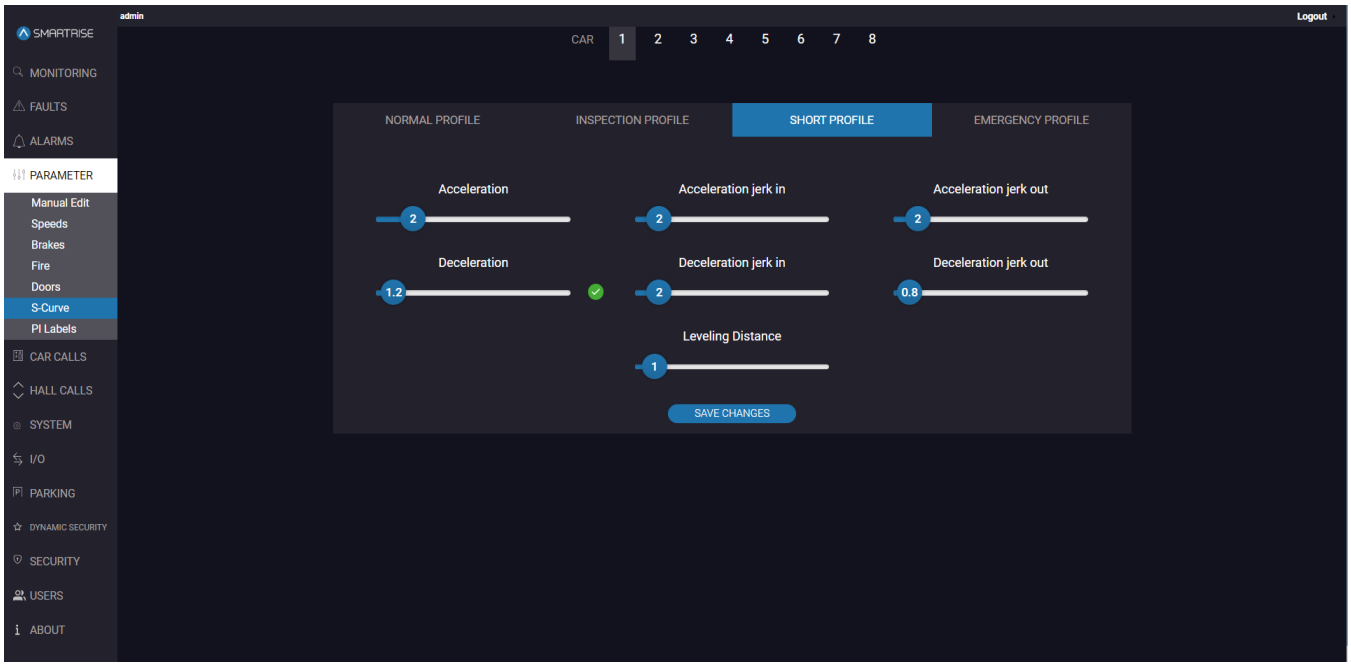

Figure 29: PARAMETER Panel - S-Curve SHORT PROFILE: SAVE

6.6.4 EMERGENCY PROFILE

The EMERGENCY PROFLE allows the user to adjust the parameters for when the car is operating in Emergency mode.

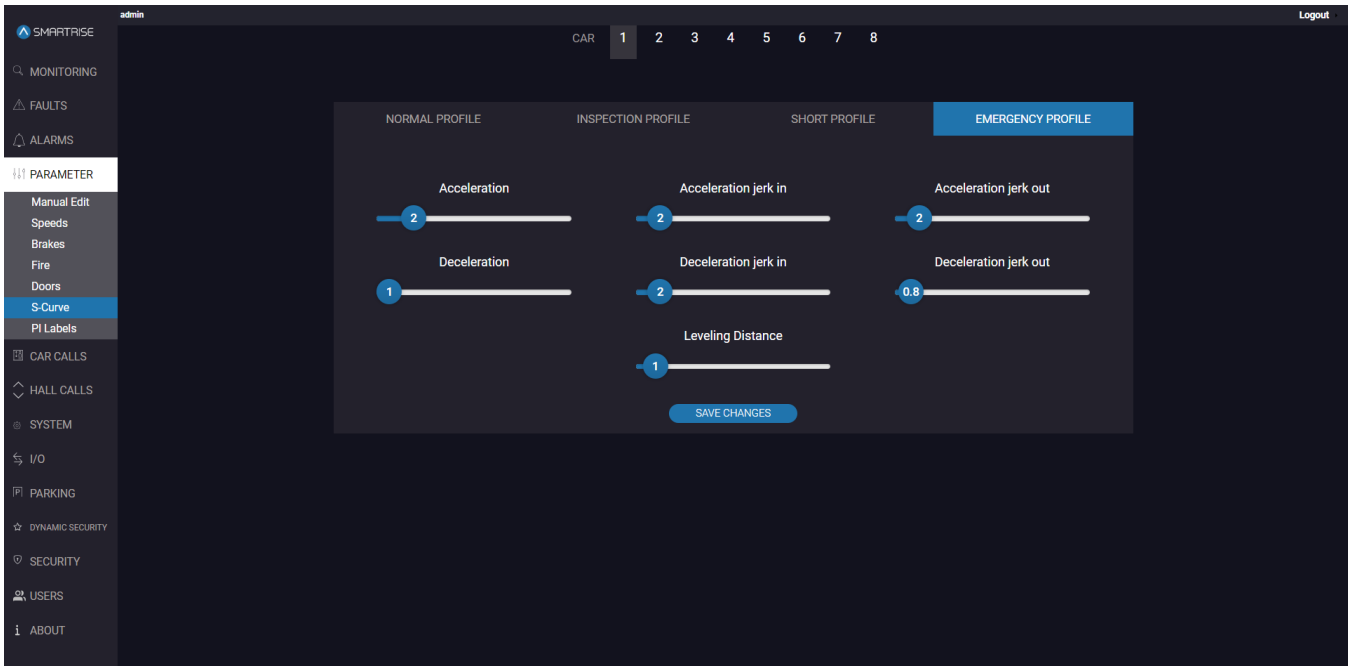

Figure 30: PARAMETER Panel - S-Curve EMERGENCY PROFILE

The table below lists the description of the PARAMETER Panel - S-Curve EMERGENCY PROFILE.

Table 14: PARAMETER Panel - S-Curve EMERGENCY PROFILE

Field	Description

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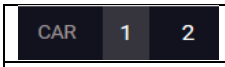
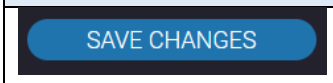
	Allows the user to select the car label
Acceleration	Allows the user to set the pace at which the car reaches constant speed on emergency profile runs
Acceleration jerk in	Allows the user to set the transition from zero speed to full acceleration on emergency profile runs
Acceleration jerk out	Allows the user to set the speed at which the profile transitions from maximum to zero acceleration (constant velocity) on emergency profile runs
Deceleration	Allows the user to set the pace 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 reaching the destination floor on emergency profile runs
Buttons	
	Allows the user to save the set emergency profile parameters

Perform the following steps to update the emergency profile parameters for a particular car:

1. Turn on DIP A4.
2. From the PARAMETER Panel - S-Curve EMERGENCY PROFILE, select the car label.
3. Slide the bar to the new parameter value(s) and click SAVE CHANGES.
   - A green checkmark is displayed.

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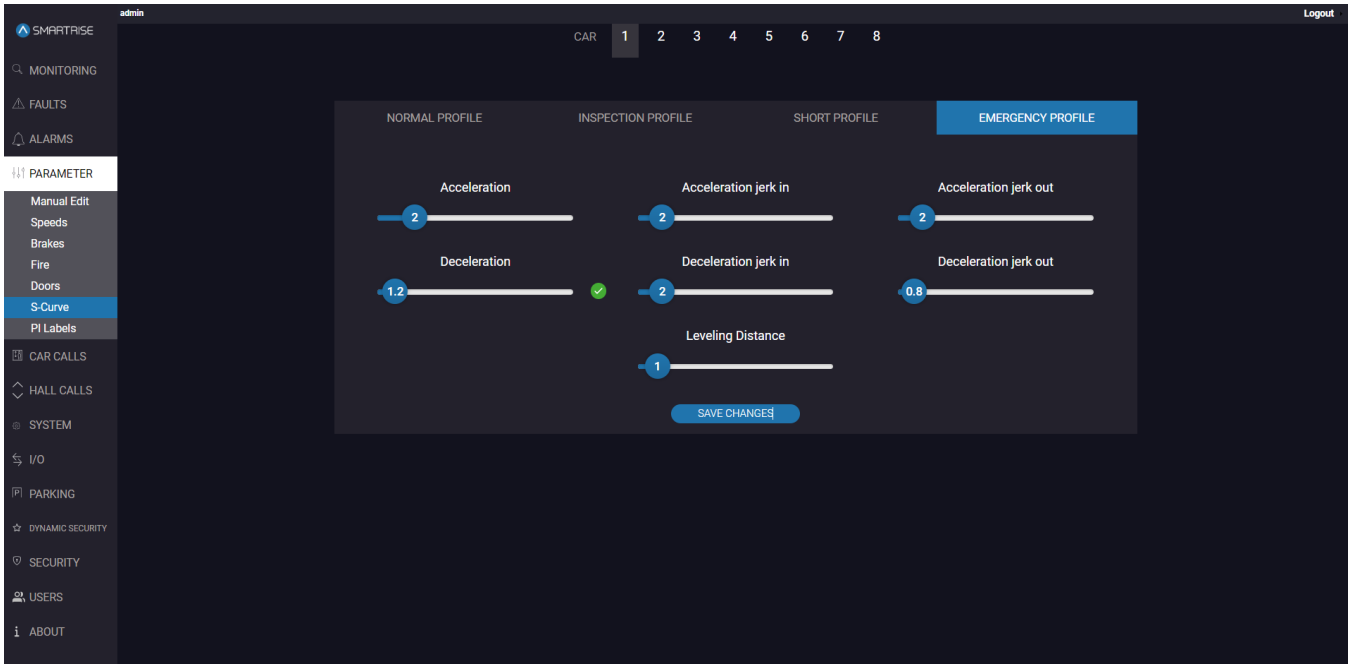

Figure 31: PARAMETER Panel - S-Curve EMERGENCY PROFILE SAVE

6.7 PI Labels

The Position Indicator (PI) subpanel displays the assigned floor label for each floor.

The number of adjustable PIs available depends on the number of floors and openings of a job. The C4 System can support up to 96 floors.

NOTE: "PI" represents the floor label.

The user can adjust the label by entering numeric, alphanumeric, and special characters into the field. By default, the C4 system supports two characters per floor. Three-character PIs are possible by turning on a parameter (See the *C4 Parameter List)*.

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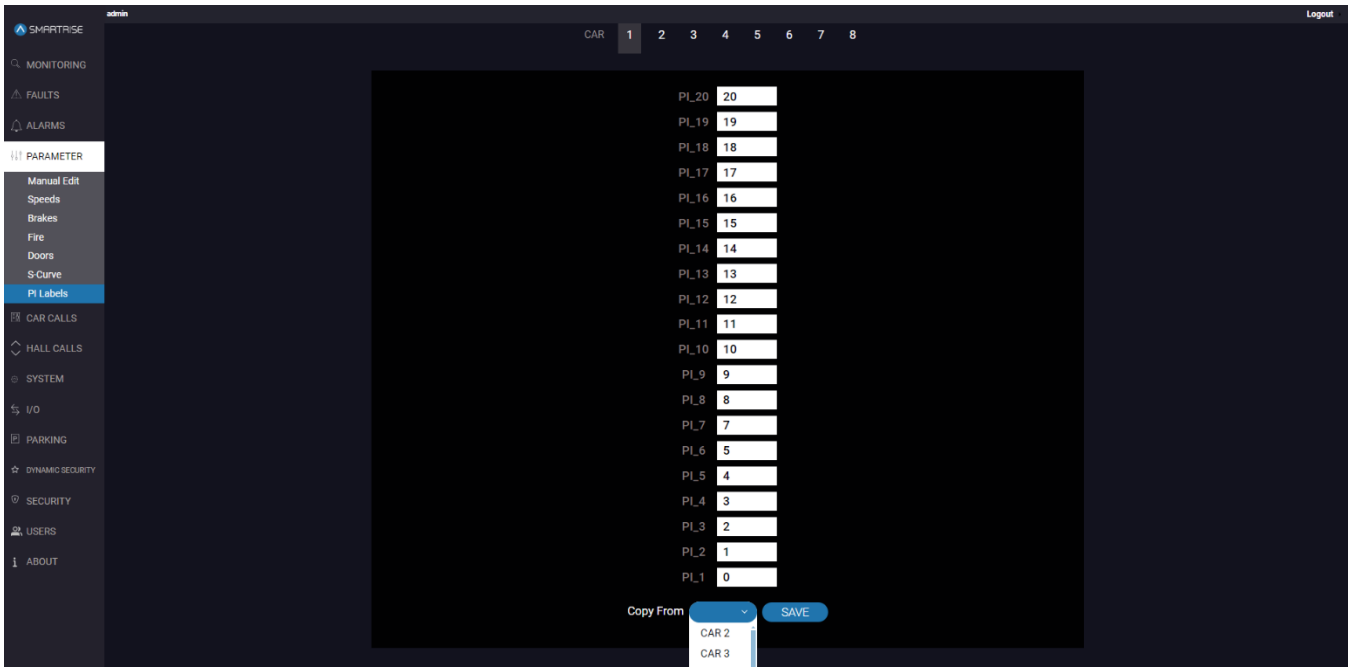

Figure 32: PARAMETER Panel - PI Labels

The table below lists the description of the PARAMETER Panel - PI Labels.

Table 15.:PARAMETER Panel - PI Labels

Field	Description
CAR 1 2	Allows the user to select the car label
PI_1 through PI_96	Allows the user to label any landing to a 3-digit alphanumeric or numeric configuration
COPY FROM	Allows the user to select a car number to copy PI Labels from
Buttons	
SAVE	Allows the user to save the set PI Label parameters made on the page

Perform the following steps to update the PI Label parameters for a particular car:

1. Turn on DIP A4.
2. From the PARAMETER Panel – PI Labels, select the car label.
3. If the car's position:
   i. is manually adjusted, go to Step 4
   ii. is copied from another car, go to Step 5
4. Enter the new PI value (or values) for the individual car, then click on SAVE.
   - A green checkmark is displayed.
5. Click COPY FROM and select the car whose PI parameters are being copied, then click on SAVE.

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- A green checkmark is displayed.

Figure 33: PARAMETER Panel - PI Labels SAVE

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7 CAR CALLS

The CAR CALLS panel allows the user to initiate a Car Call from the system.

Each button on the screen represents to a floor. When the user presses a button, the controller registers a car call. If the system already has existing car calls, the corresponding button lights up.

NOTE: “R” indicates rear doors.

Figure 34: CAR CALLS Panel

The table below lists the description of the CAR CALLS Panel.

Table 16: CAR CALLS Panel

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

Perform the following steps to initiate a car call for a particular car:

1. From the CAR CALLS Panel, select the car label.
2. Click on the floor number.
   - The color of the active car call button turns blue.

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Figure 35: CAR CALLS Panel ACTIVE CAR CALL

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8 HALL CALLS

The HALL CALLS panel allows the user to initiate a Hall Call from the system. Each button on the screen represents a direction and floor. When the user presses a button, the controller registers a hall call in the chosen direction. If the system already has existing hall calls, the corresponding button direction lights up.

NOTE: "R" indicates rear doors.

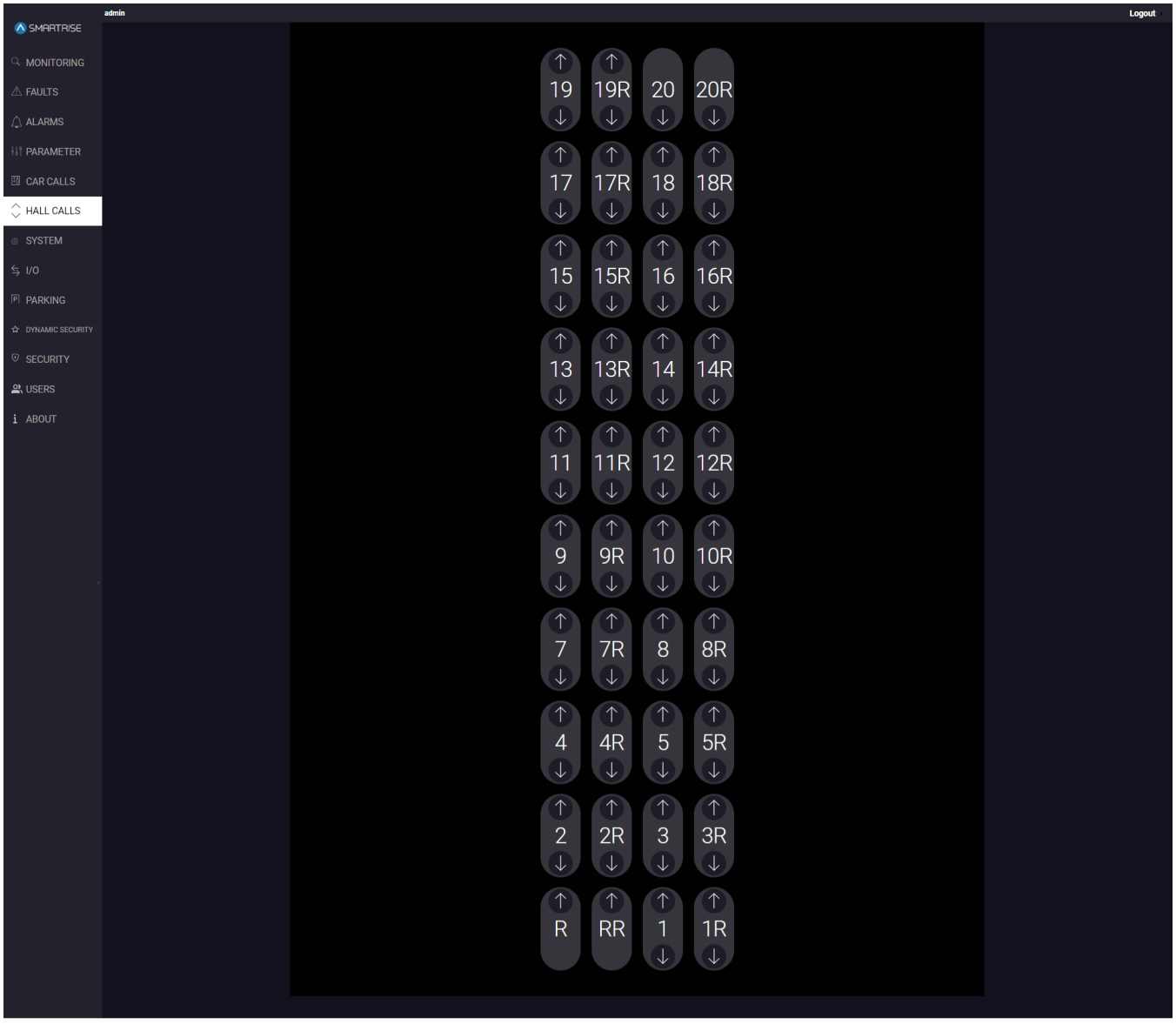

Figure 36: HALL CALLS Panel

The table below lists the description of the HALL CALLS Panel.

Table 17: HALL CALLS Panel

Field	Description
Floor Number	Allows the user to select a floor

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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 initiate a hall call:

1. From the HALL CALLS Panel, click on a Floor by selecting the move UP and/or DOWN arrows.
   - The color of the active hall call UP and/or DOWN arrow buttons turn blue.

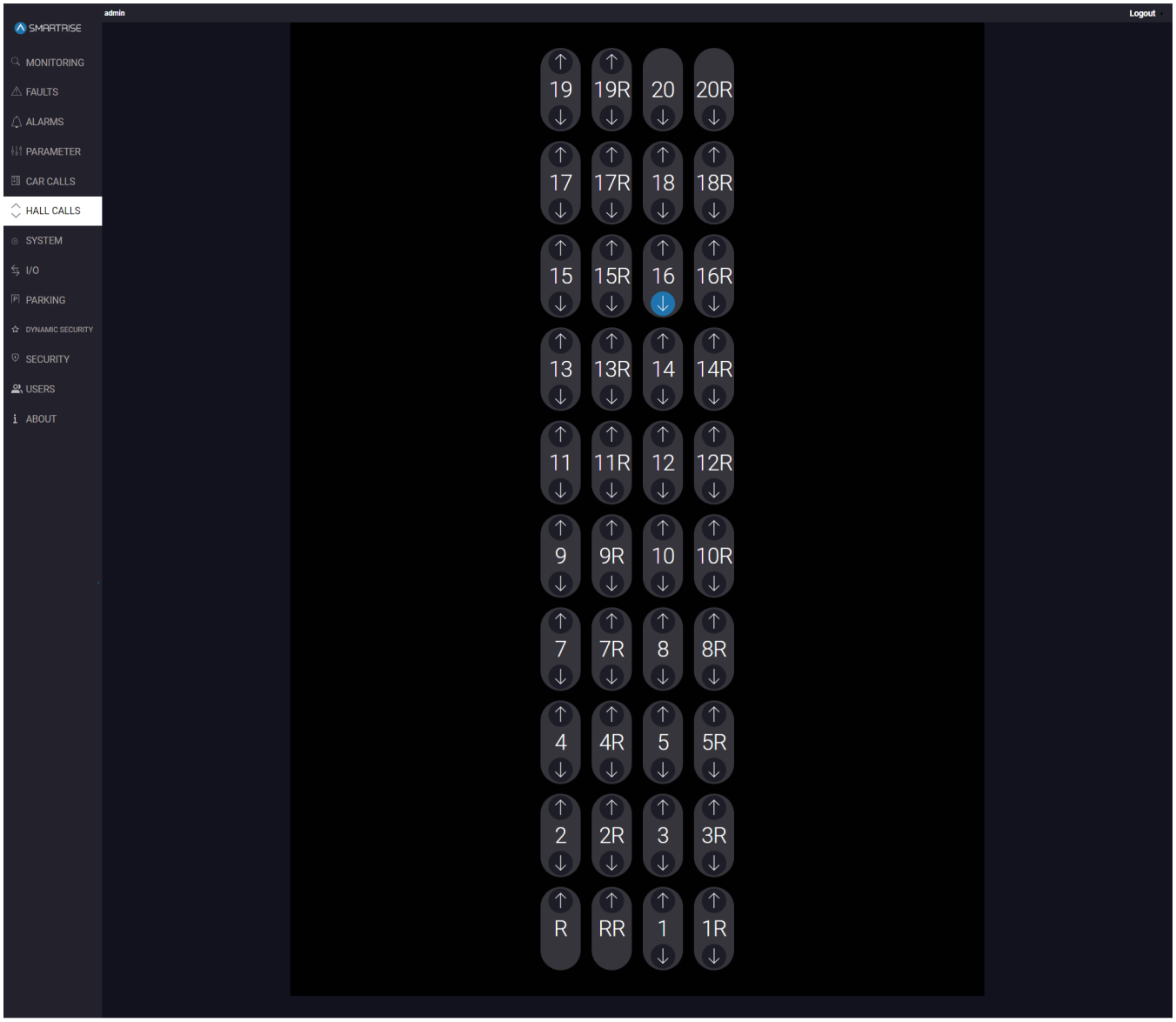

Figure 37: HALL CALLS Panel ACTIVE HALL CALL

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9 SYSTEM

The SYSTEM Panel allows the user to choose a system function. Each function provides step-by-step instructions on how to perform backups and updates.

9.1 Software Download

The Software Download subpanel displays detailed instructions to update the system software for Machine Room (MR), Car Top (CT), and Car Operational Panel (COP) boards and for Riser boards.

9.1.1 Software Download Pre-requisites

Minimum Software Requirements for Controller 64i0:

- **Board Version:** SR3032 M3 and higher
- **Shield:** SR2030C
- **Minimum DAD Shield Version:** v1.24 (Note: v1.23 is compatible but operates slower)

Recommended Software Versions for DAD:

- DAD with Local Monitor (LM):
  - **For Raspberry Pi:** lm_rpi_4.1.14_mw_v1.12.15_gui_v1.19.52
  - **For Rock Pi:** lm_rock_4.1.14_mw_v1.12.15_gui_v1.19.52
- DAD with GUI Only:
  - **For Raspberry Pi:** rpi_gui_1.19.52_mw_1.21.15
  - **For Rock Pi:** rock_gui_1.19.52_mw_1.21.15

NOTE: if the above pre-requisites are not met, the software download code cannot be downloaded through the Software Download subpanel. It will need to be downloaded using the Link 2 Programmer.

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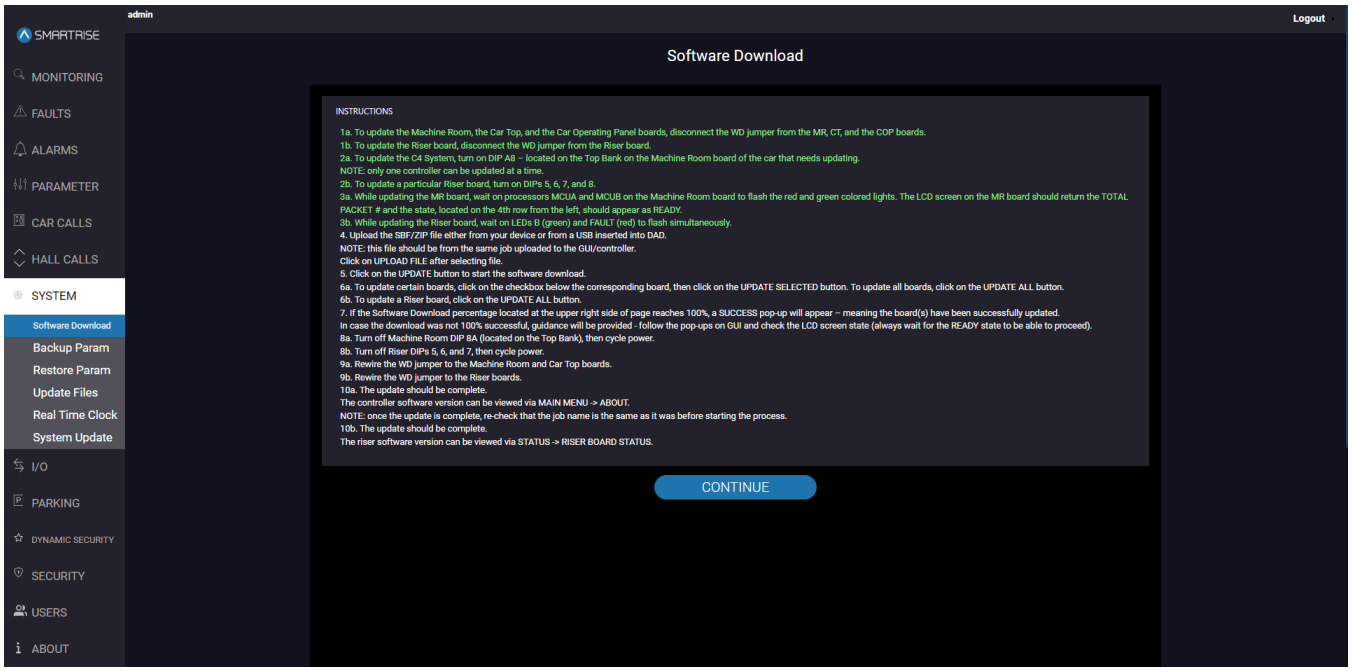

Figure 38: SYSTEM PANEL - Software Download

The table below lists the description of the SYSTEM Panel - Software Download.

Table 18: SYSTEM Panel - Software Download

Field	Description
INSTRUCTIONS	Displays the instructions on how to start software download
Show details	Displays the download's current status
Buttons	
CONTINUE	Allows the system to signal when it is ready for software download
Choose File	Allows the user to choose the car specific file provided by Smartrise (.sbf or .zip)
Upload	Allows the user to upload the selected file
Update	Allows the user to start the software download process
UPDATE ALL	Allows the user to select all boards to be updated
UPDATE SELECTED	Allows the user to select specific boards to be updated
DONE	Allows the user to finalize the software download process

Perform the following steps to update the software:

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1. Remove the WD jumper:
   - From the MR and CT boards (when updating the MR, CT, and/or COP boards)
     - On the MR board: the jumper is found on the upper left corner with the initials WD.
     - On the CT/COP board: the jumper is found on the right side of the direction buttons with the initials WD.
   - From the Riser board (when updating the Riser board)
2. 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 selected Riser boards.
3. Watch for a pattern of flashing red and green LEDs on the MCUA and MCUB
   - Check the MR board screen for retry and errors (bottom left of the screen during download)

     NOTE: the download process must start over if a field in the table below is displayed with 'ABORT'.

Figure 39: MR Board – ERROR

The table below lists the description of the displayed fields during software download.

Table 19: MR board - SOFTWARE DOWNLOAD PROGRESS

Field	Description
Total Packet Counter	Total count packets received by MR-B
Overall Load Progress	Overall load progress – all modules
Module (Board ID)	ID string for the module being loaded (MR-A, MR-B, CT-A, CT-B, RISE, COPA, COPB, DDMA, DDMB, SHLD)
Load Progress %	Load progress – current module
Total S-Records Successfully Loaded	Total number of S-records that were successfully transferred and programmed across all modules
Retry/ Error Causes	**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 contains too many records.

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	Sequence – Retry: Load package contains missing or 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 Software Download detected a download stall condition. Retry count = 00FF **READY:** indicates that MR-B has entered or returned to a state in which it informs the DAD that it is ready to begin a download.

4. From the SYSTEM Panel - Software Download, click CONTINUE.
   - The system starts checking software download nodes. If no system is detected, the following error is shown.
5. Click on CHOOSE FILE and select the car specific. sbf or .zip file provided by Smartrise and choose whether to import the file 'from your device' or 'from a USB plugged into the DAD'.

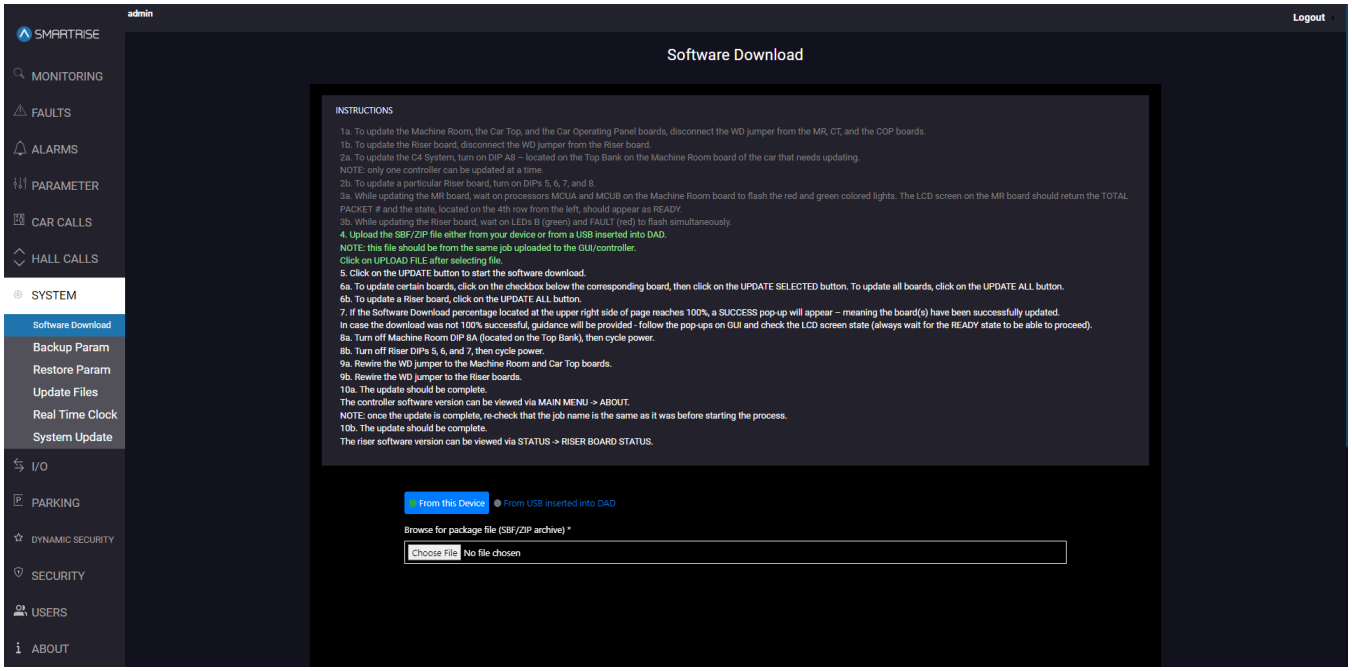

Figure 40: SYSTEM Panel - Software Download CHOOSE FILE

6. After selecting the file, click on 'Upload'.

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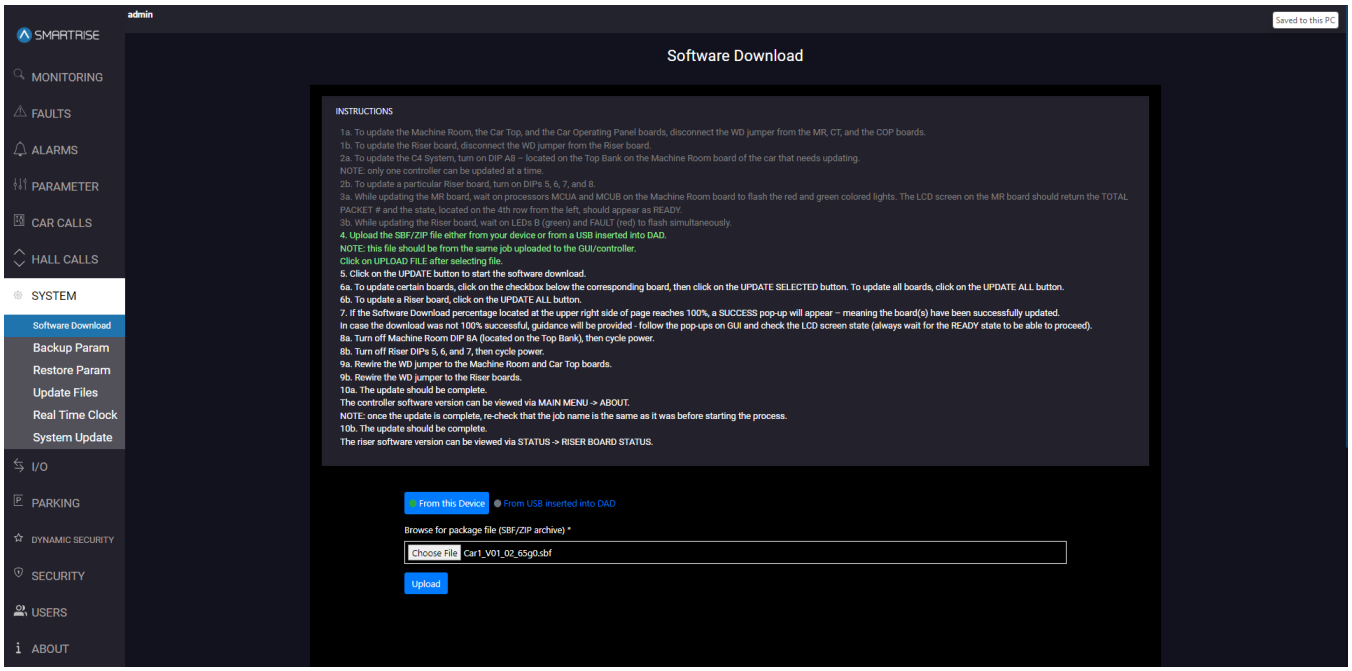

Figure 41: SYSTEM Panel - Software Download UPLOAD

NOTE: if the file is incompatible with the car, a 'Warning!' popup will be displayed.

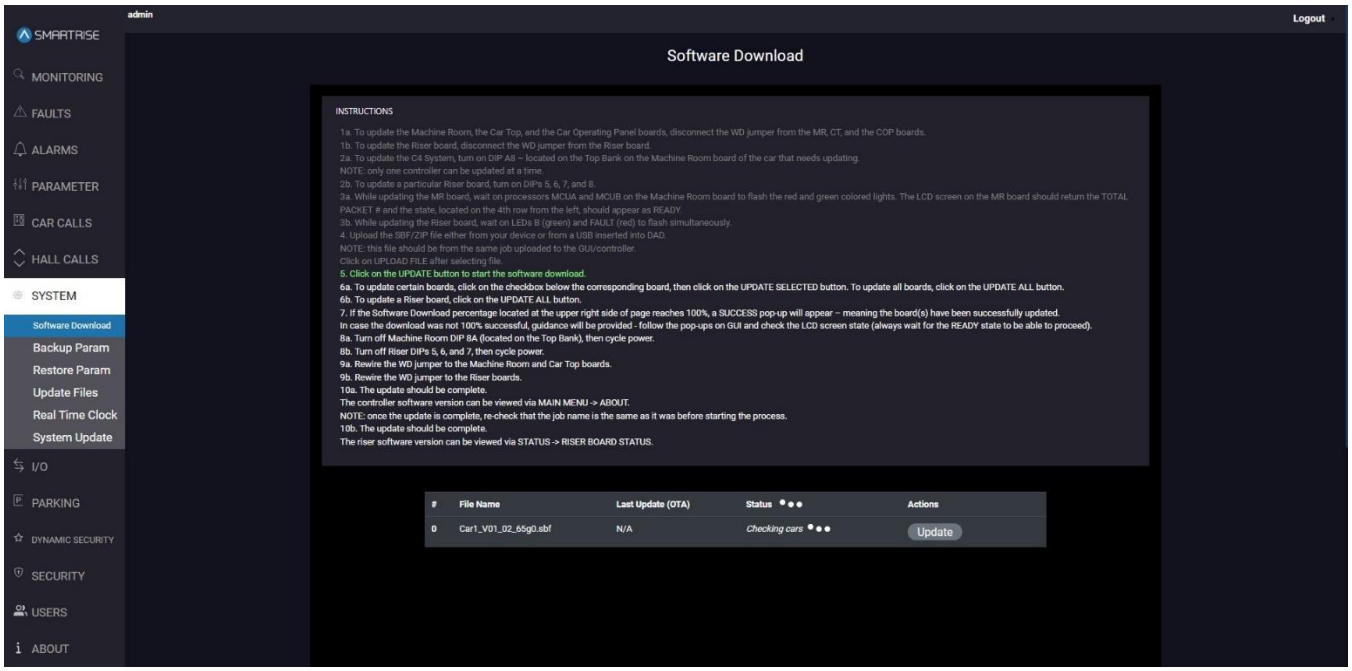

Figure 42: SYSTEM Panel - Software Download CHECKING STATUS

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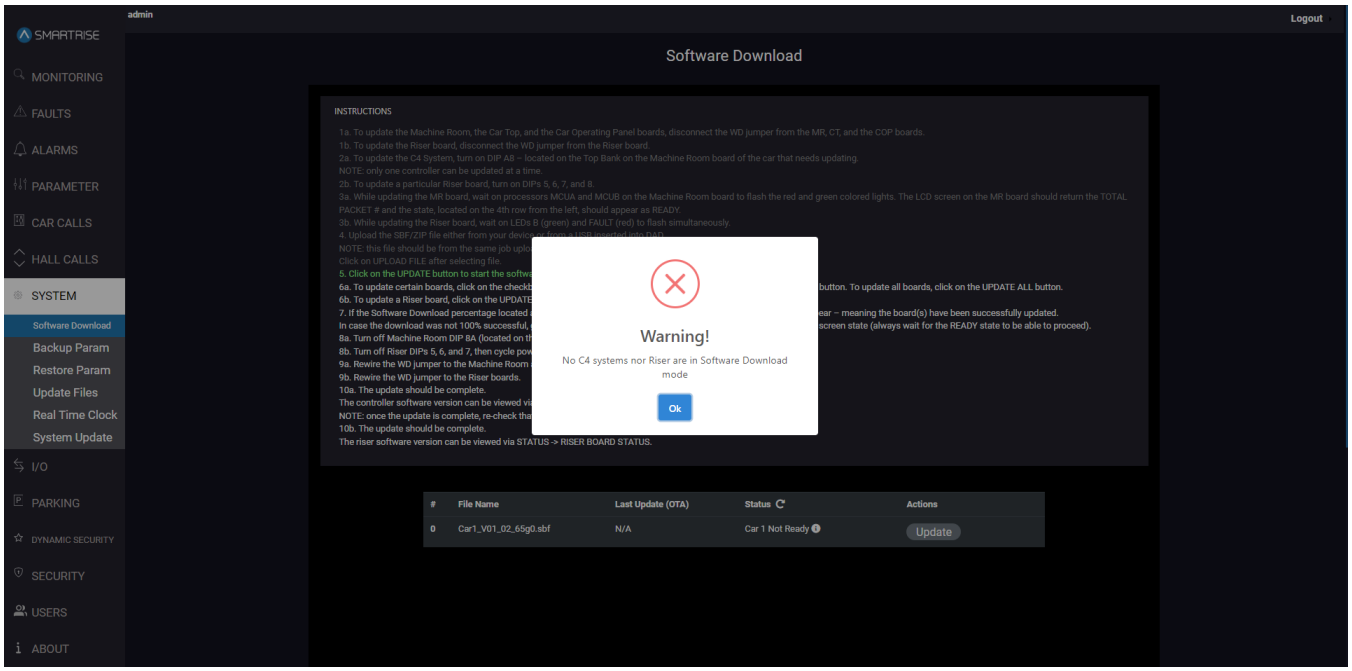

Figure 43: SYSTEM Panel - Software Download WARNING

7. Click on the 'Update' button to begin the software download.

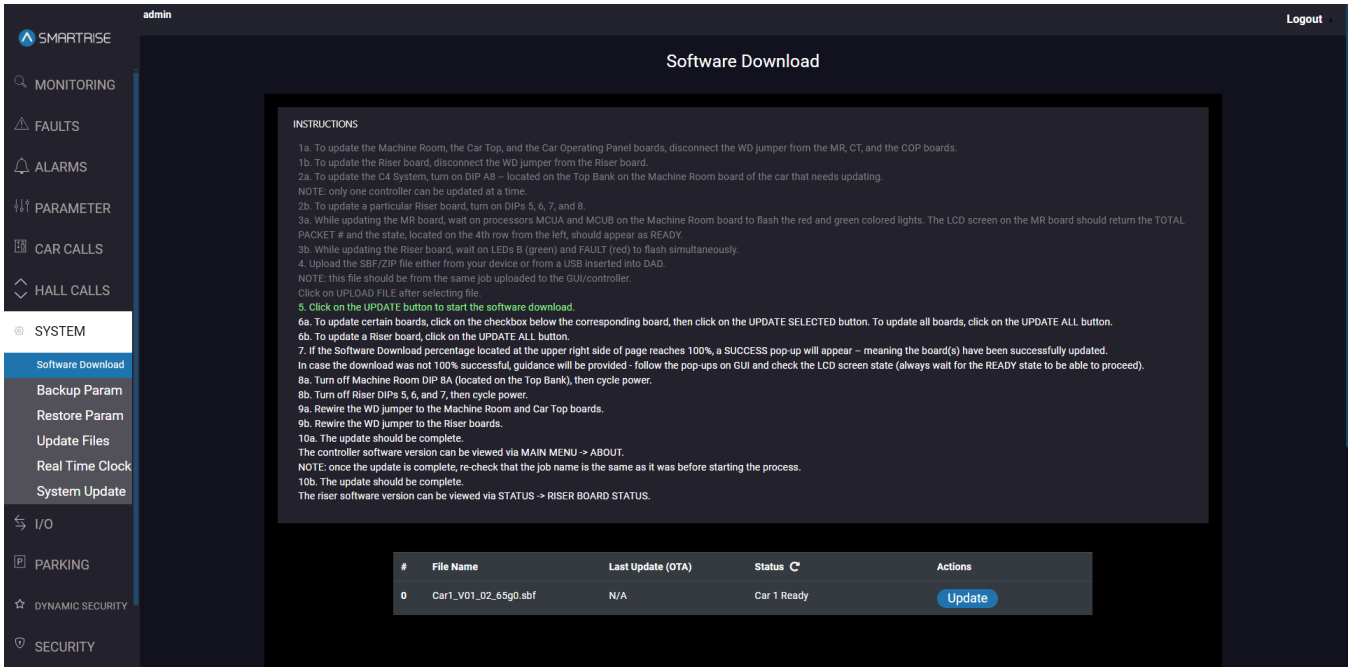

Figure 44: SYSTEM Panel - Software Download UPDATE (.sbf)

NOTE: if the file is uploaded in .zip format, multiple records of .sbf files might be displayed.

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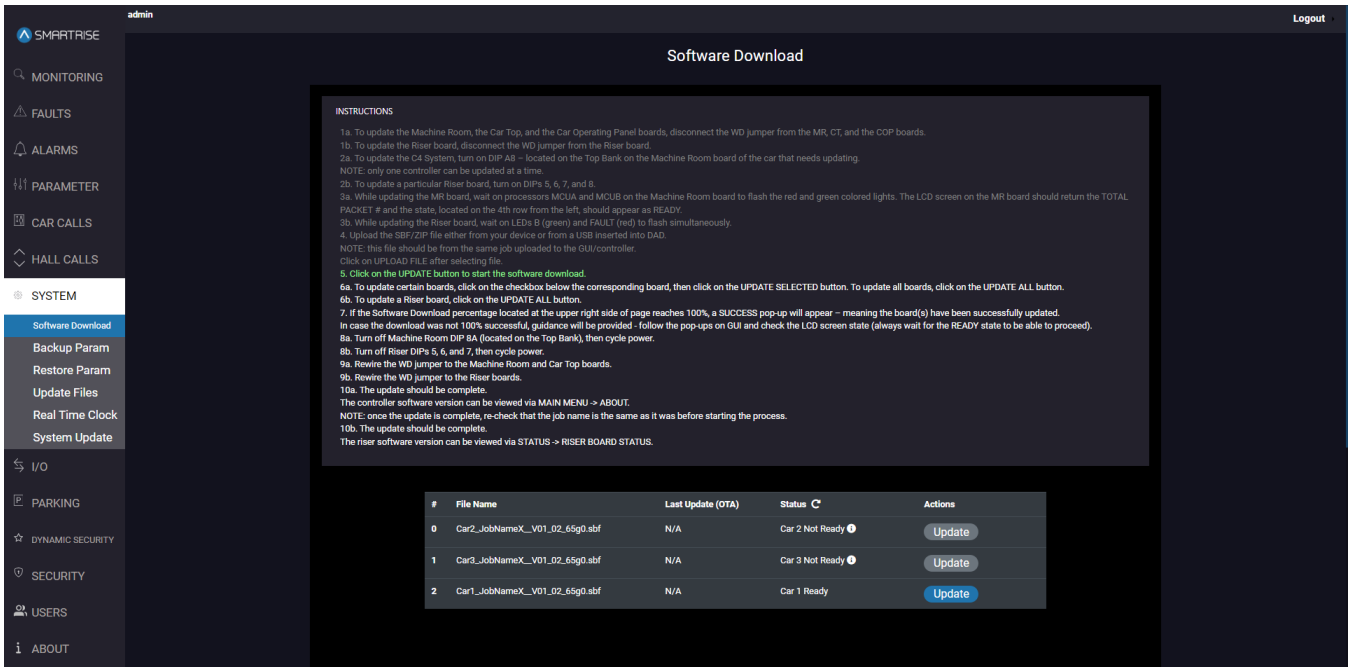

Figure 45: SYSTEM Panel - Software Download UPDATE (.zip)

8. To update the MR, CT, and/or COP boards:
   - Select the boards you want to update and click UPDATE SELECTED.
   - To update all boards, click UPDATE ALL.

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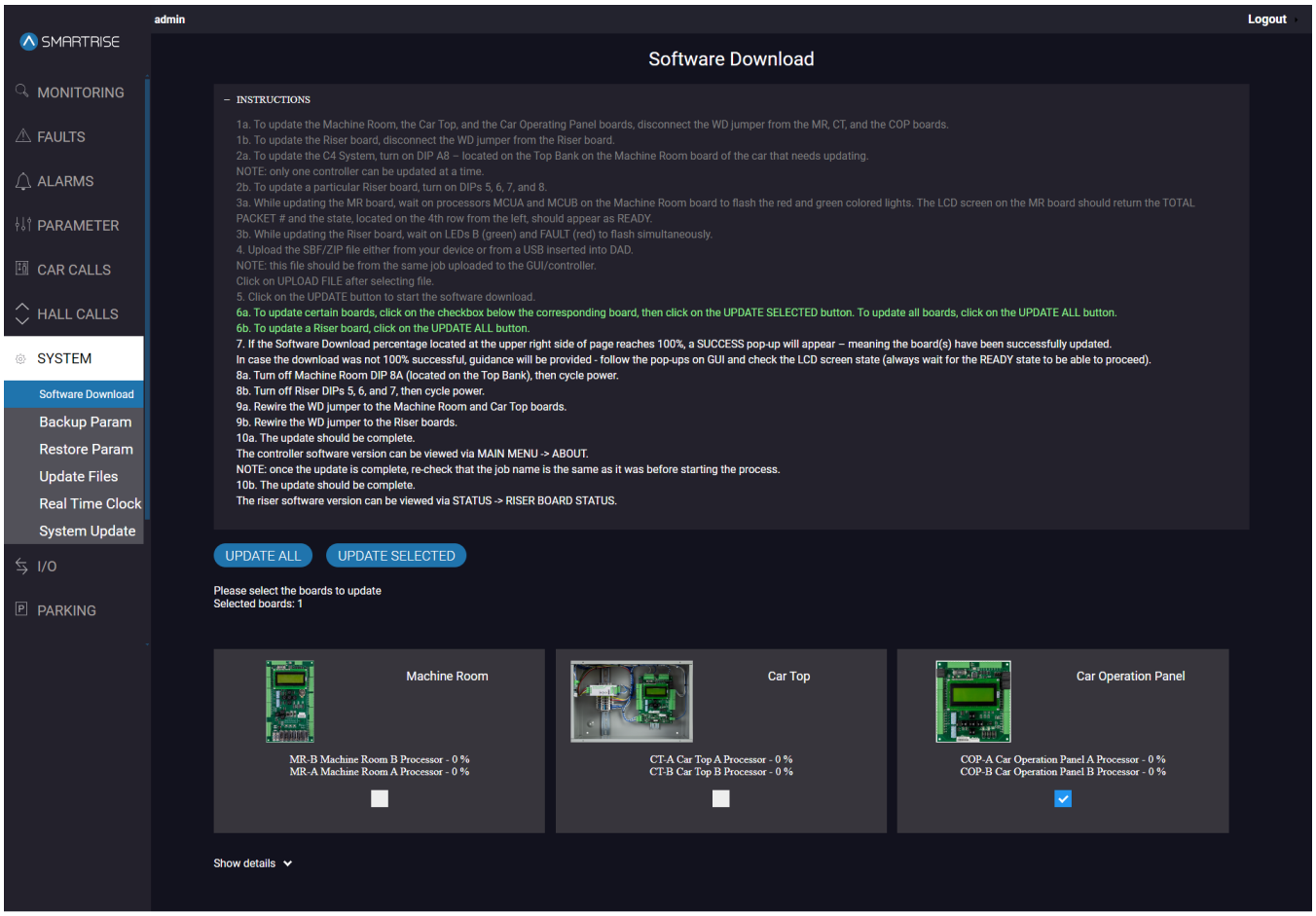

Figure 46: SYSTEM Panel - Software Download UPDATE (MR, CT, COP)

NOTE: the 'Show Details' displays the current status of the download.

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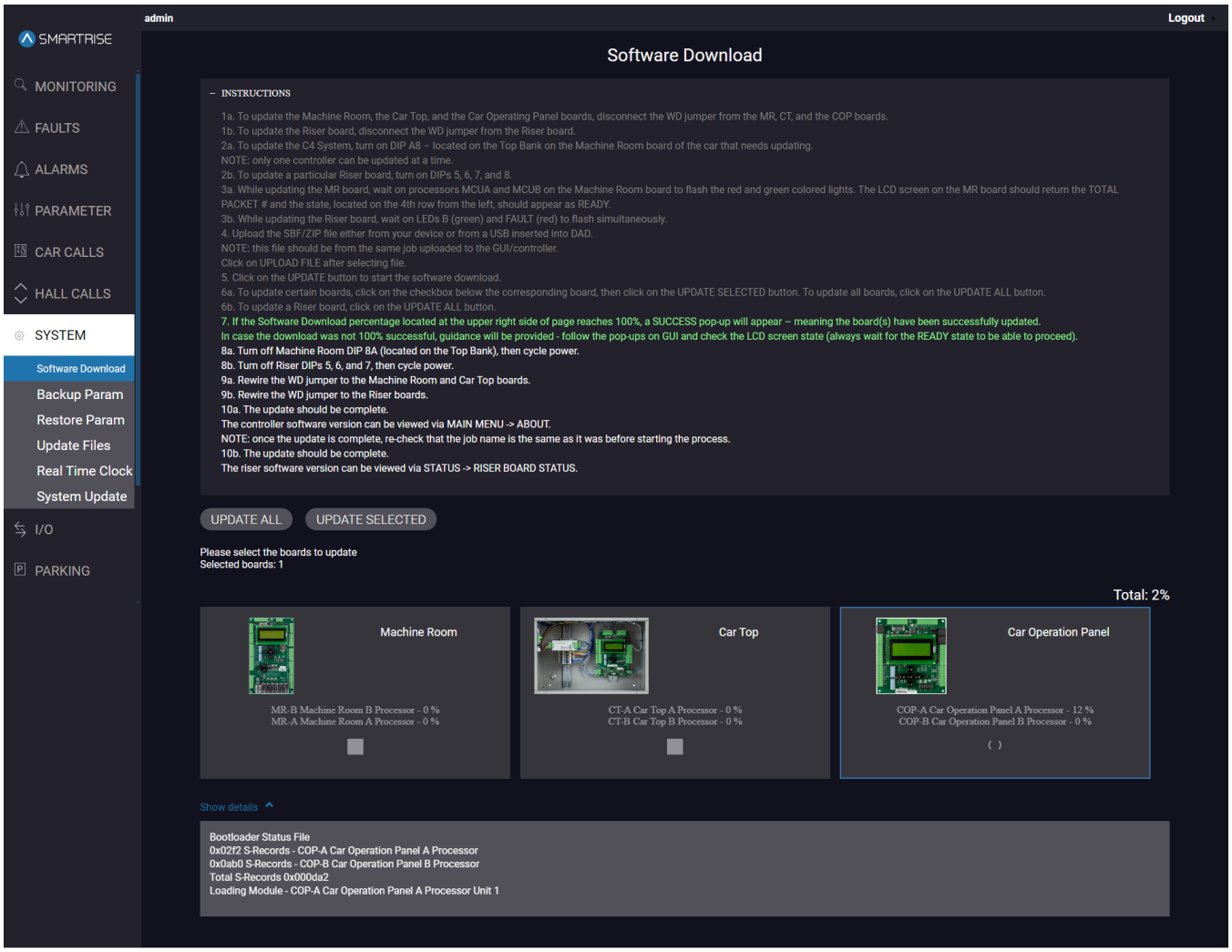

Figure 47: SYSTEM Panel - Software Download SHOW DETAILS (MR, CT, COP)

The MR board display simultaneously shows the individual and module process of the software download.

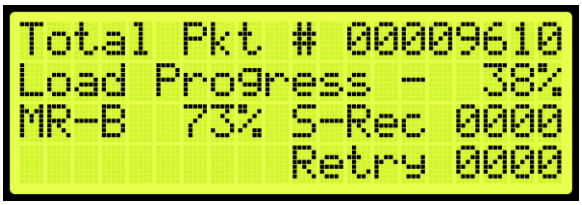

Figure 48: MR board - SOFTWARE DOWNLOAD PROGRESS

9. For the Riser board, click on the ‘Update’ button to begin the software download.

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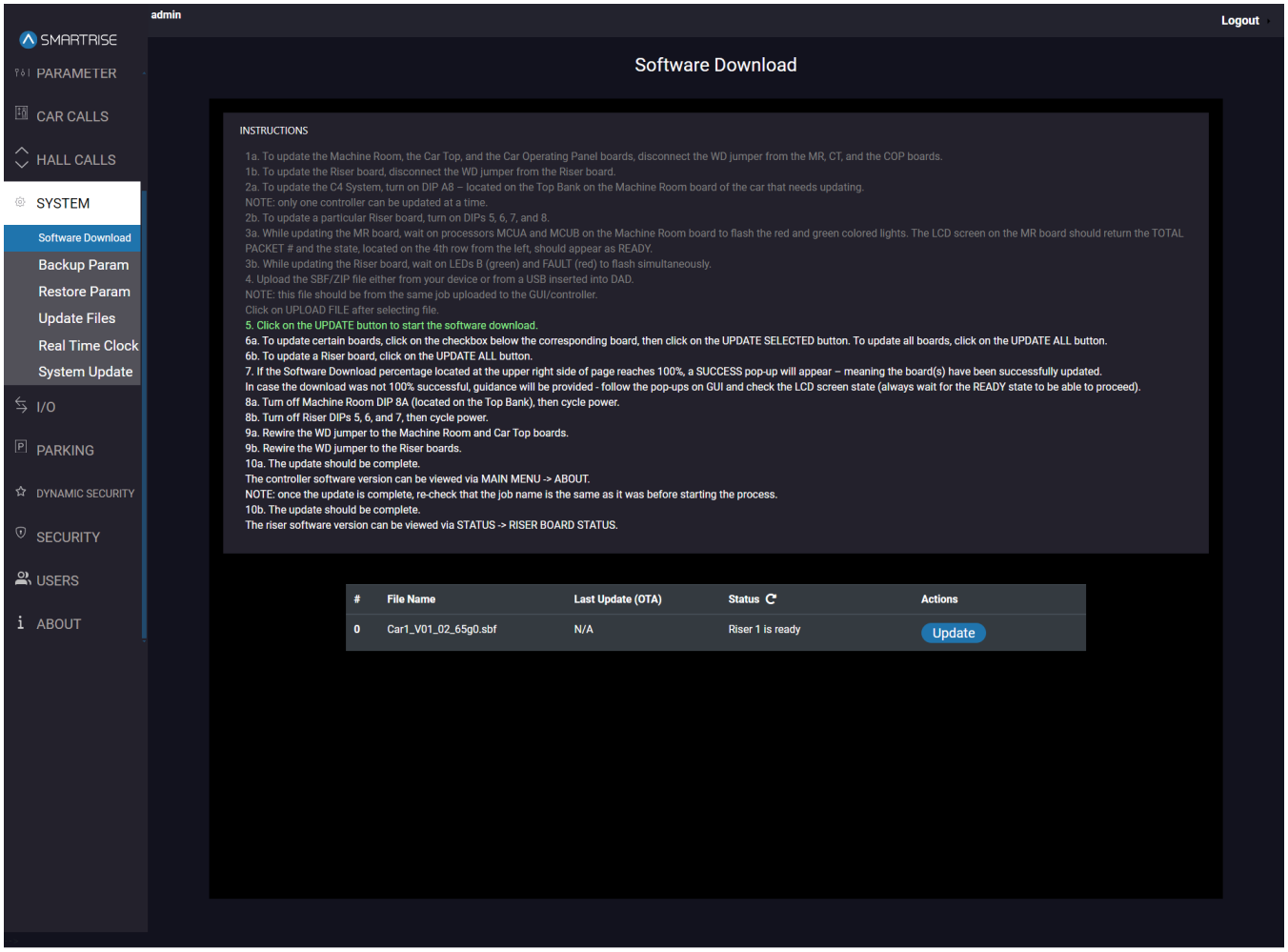

Figure 49: SYSTEM Panel - Software Download RISER UPDATE (.sbf)

10. To update the Riser board, click UPDATE ALL.

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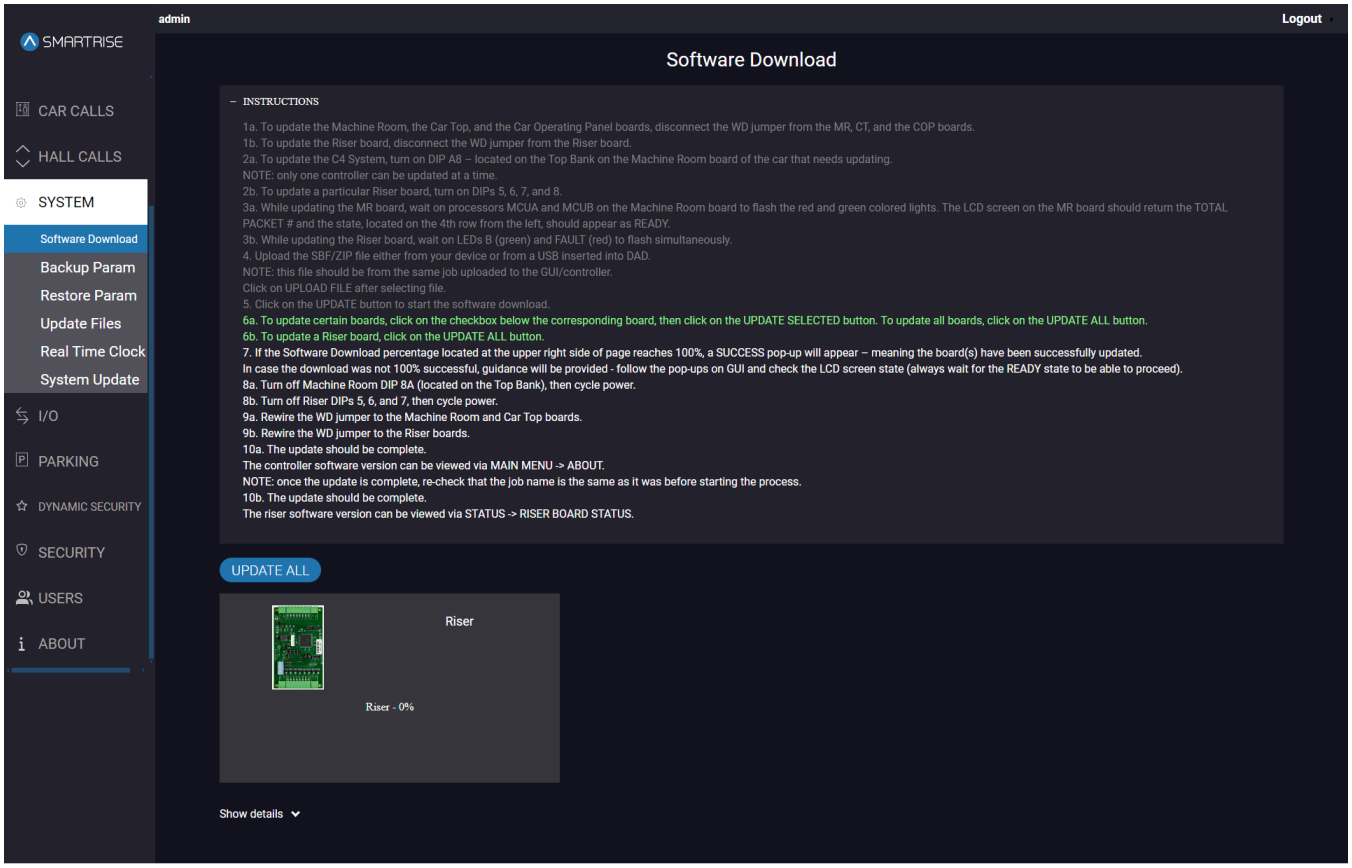

Figure 50: SYSTEM Panel - Software Download RISER UPDATE ALL

NOTE: the ‘Show Details’ displays the current status of the download.

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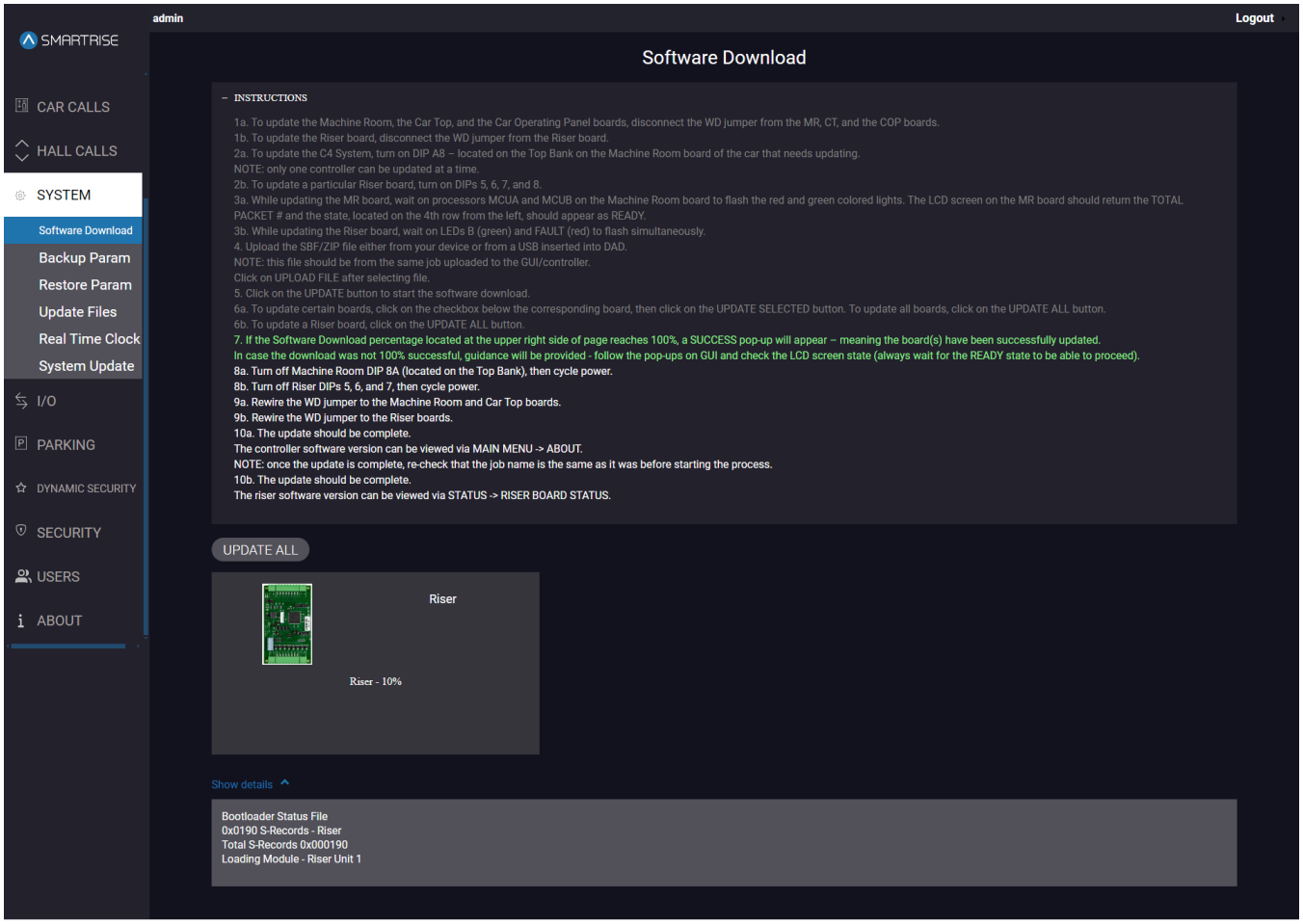

Figure 51: SYSTEM Panel - Software Download RISER SHOW DETAILS

11. When the Software Download percentage located in the top-right corner of the panel reaches 100%, a ‘Success’ pop up will be displayed.
12. Click on OK.
13. Click on DONE.

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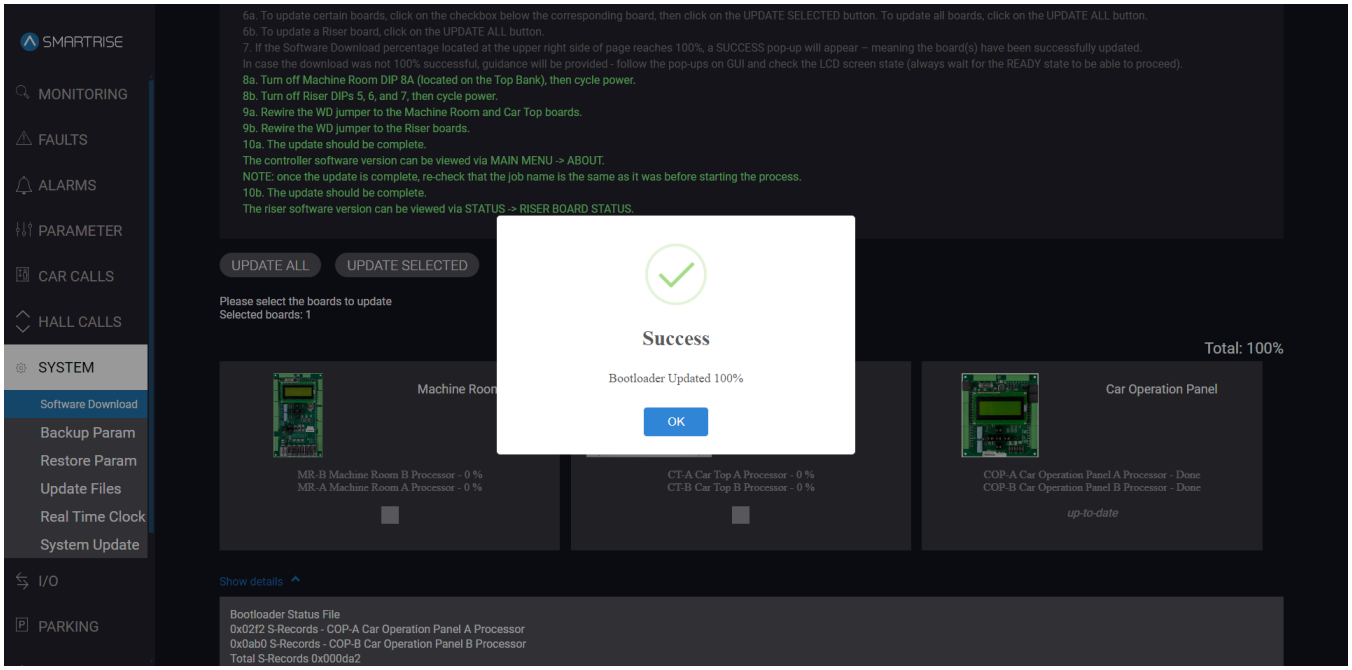

Figure 52: SYSTEM Panel - Software Download (MR, CT, COP) SUCCESS

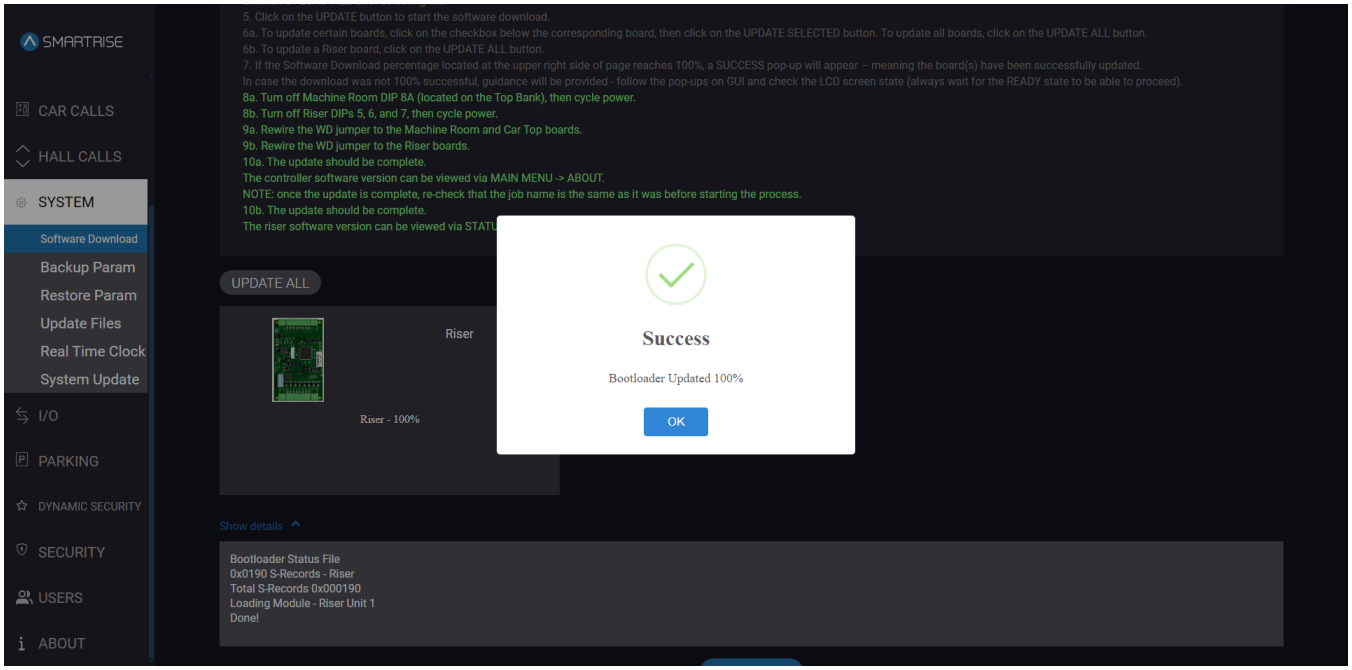

Figure 53: SYSTEM Panel - Software Download RISER SUCCESS

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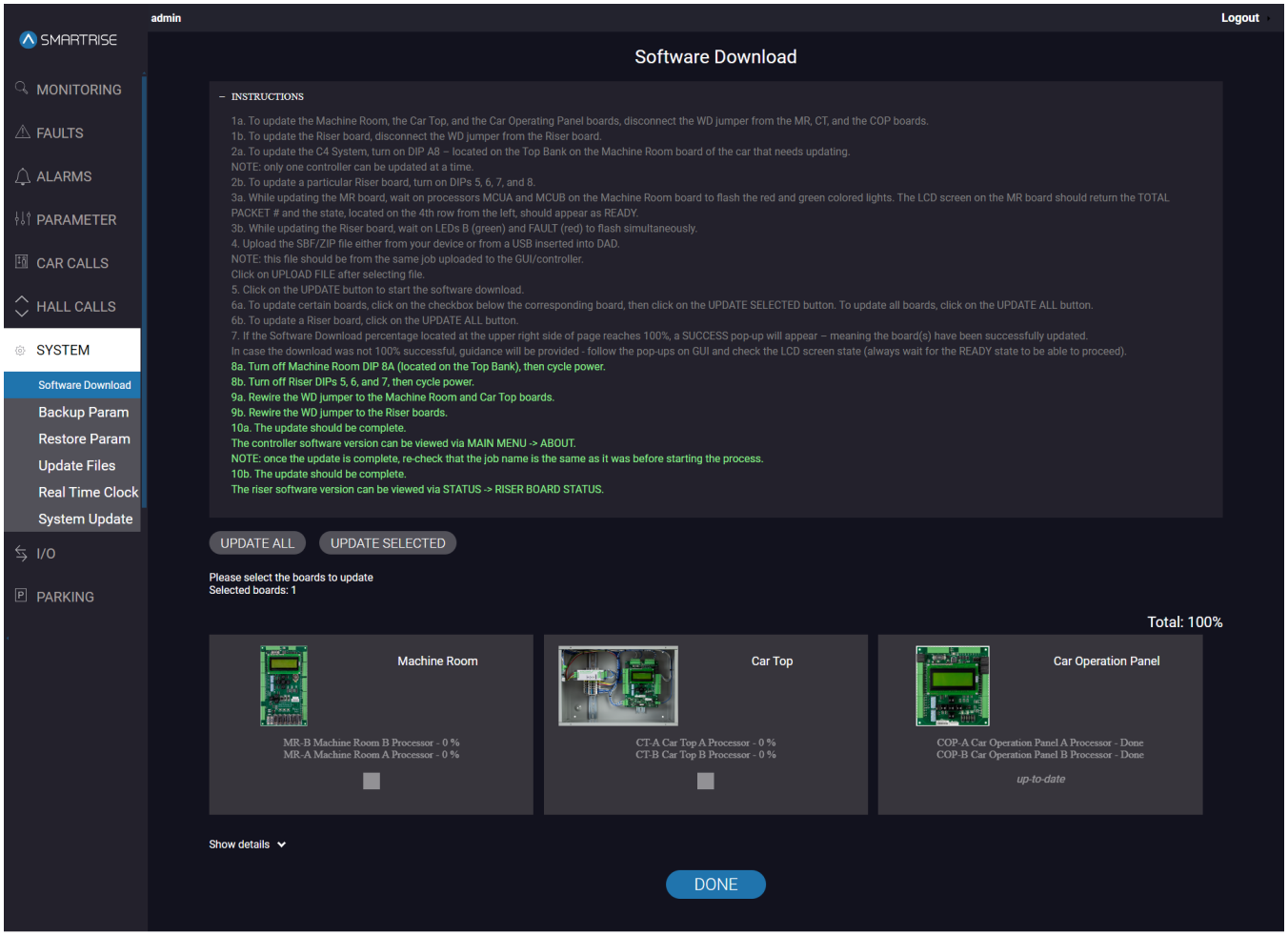

Figure 54: SYSTEM Panel - Software Download DONE

NOTE: when the update is completed, the user will be redirected to the table as shown in the image below, and a green check sign will appear next to 'Update'.

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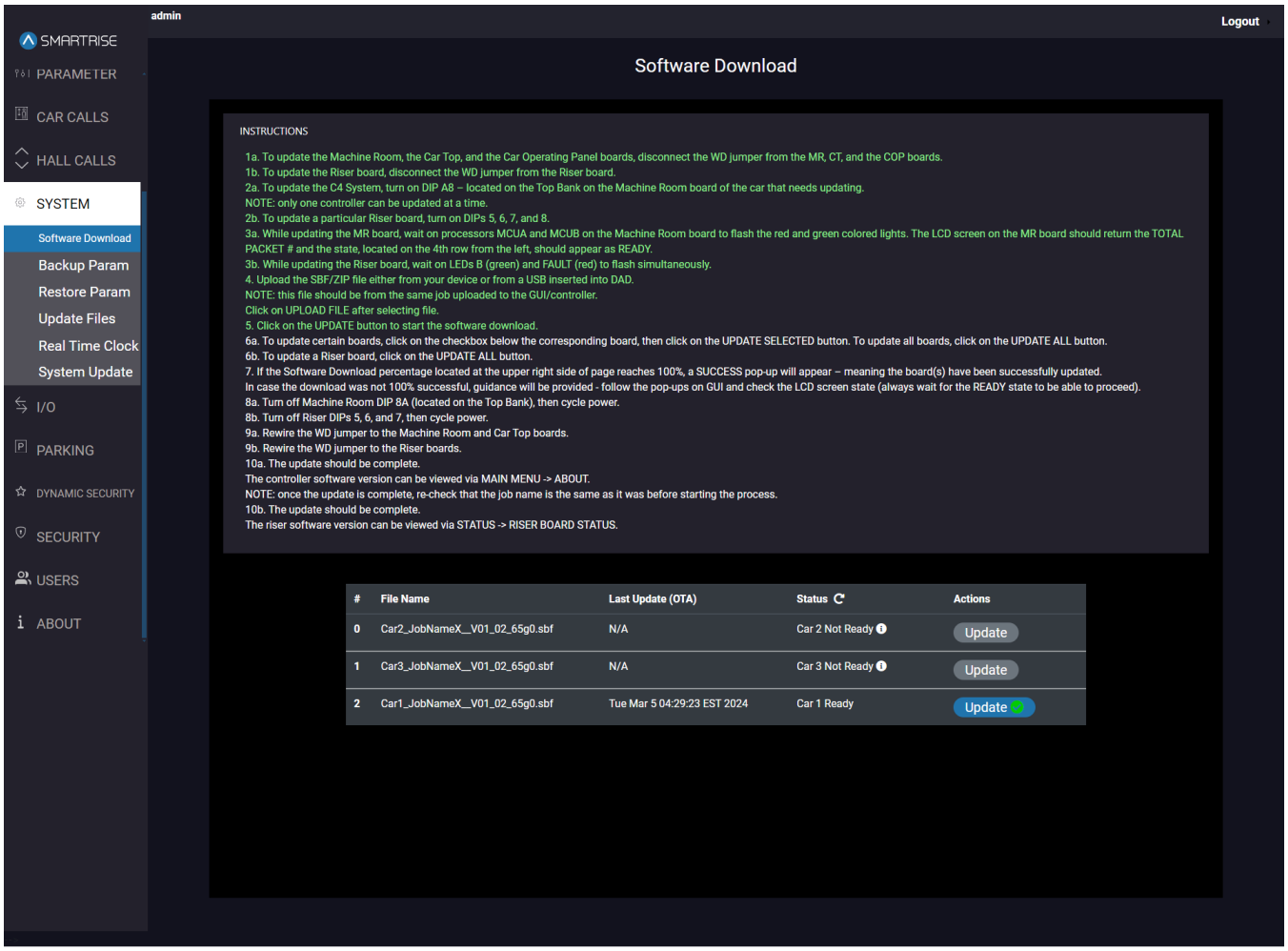

Figure 55: SYSTEM Panel - Software Download Update Completed

14. Turn off:
    - DIP 8A on the MR board.
    - DIPs 5, 6, and 7 on each Riser board.
15. Put the WD jumper back:
    - To the MR and CT boards.
    - To the Riser boards.
16. The update is now complete.

NOTE I: in case the GUI is unable to establish a connection with the DAD unit (due to a WebSocket issue for example), a Warning message is displayed giving you the option to either 'Restart Containers' *or* 'Reload Page'.

NOTE II: Before attempting another download, wait until the MR LCD displays 'READY'. If the download process starts too soon, it will fail again.

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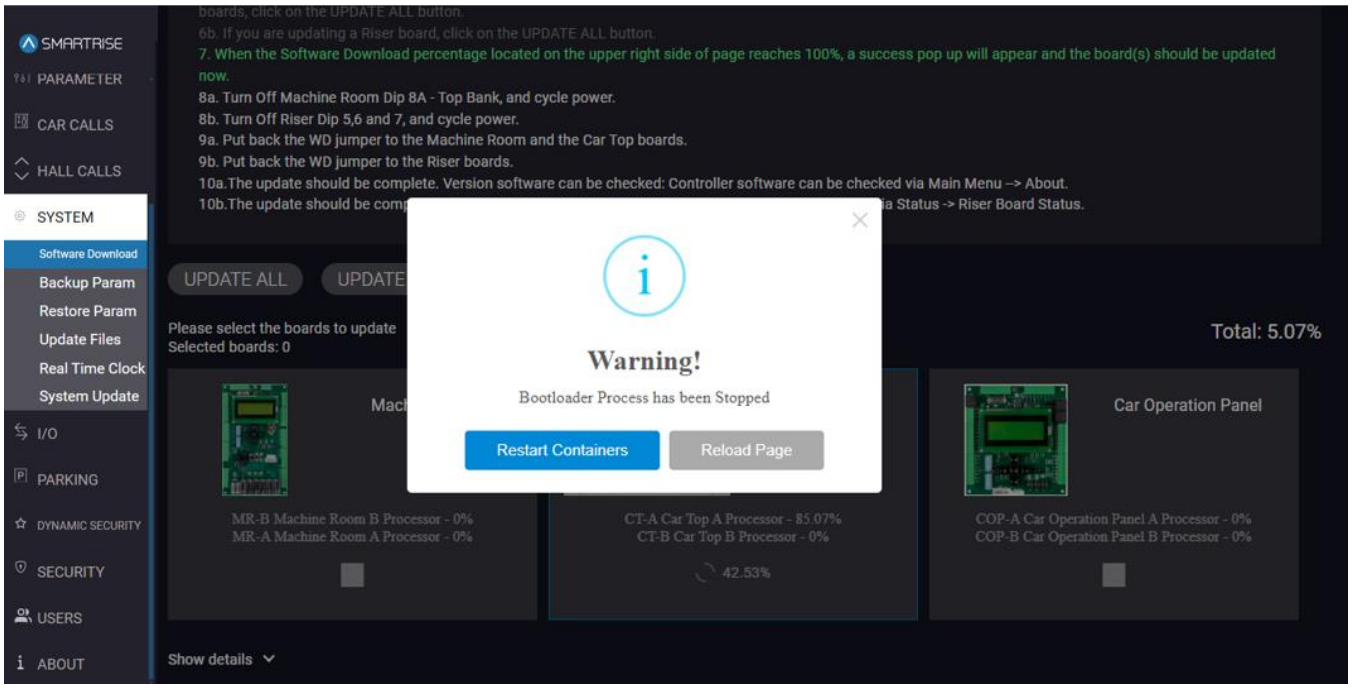

Figure 56: SYSTEM Panel – Software Download WARNING

9.2 Backup Param

The Backup Param subpanel allows the user to back up the parameters for a selected car. The downloaded file contains all the parameters and their respective values.

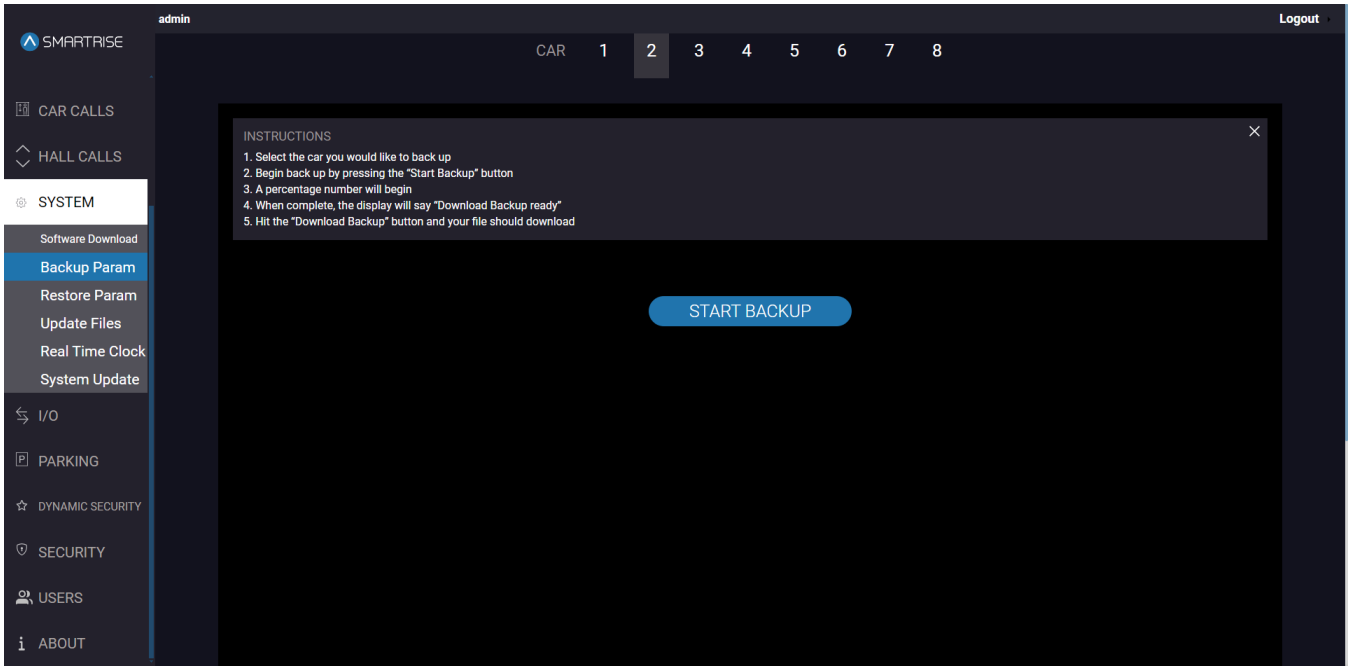

Figure 57: SYSTEM Panel - Backup Param

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NOTE: if the car is offline, the START BACKUP button won't be displayed.

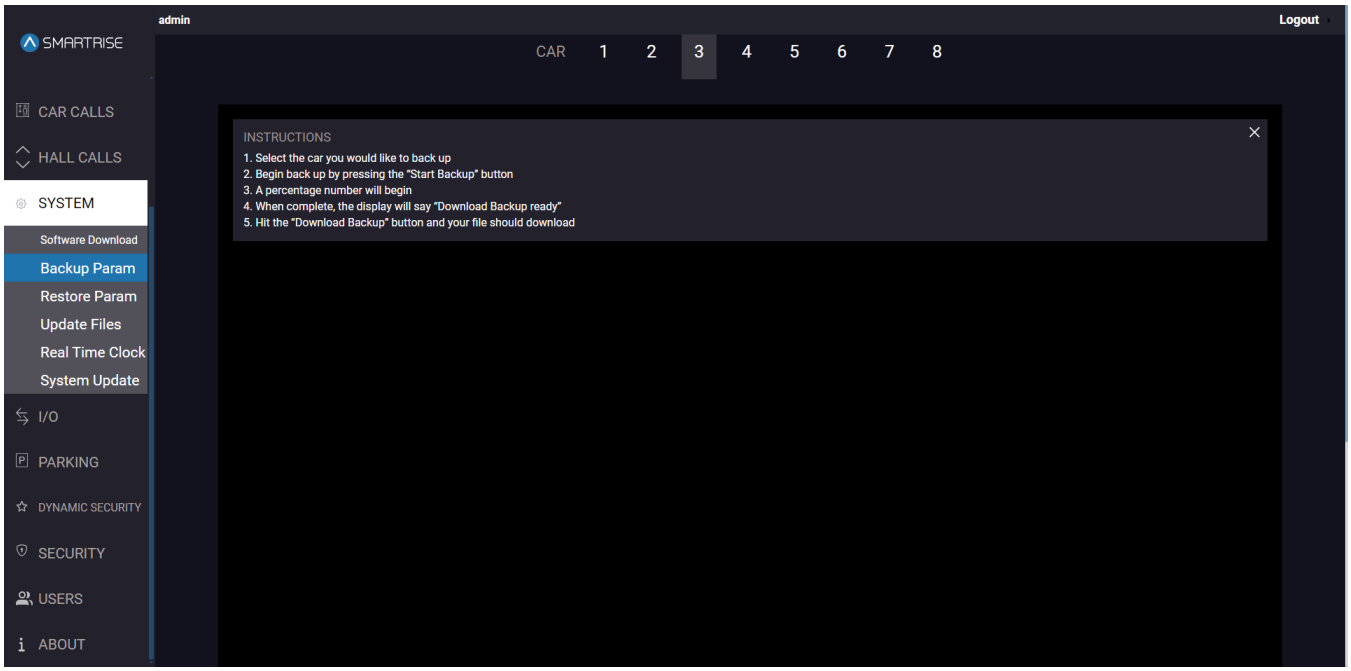

Figure 58: SYSTEM Panel - Backup Param CAR OFFLINE

The table below lists the description of the SYSTEM Panel - Backup Param.

Table 20: SYSTEM Panel - Backup Param

Field	Description
CAR 1 2	Allows the user to select the car label
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 specified location

Perform the following steps to backup parameters for a particular car:

1. From the SYSTEM Panel - Backup Param, select the car label of that car and click on START BACKUP.
2. The application starts copying the parameters of the selected car and shows a progress percentage on the screen.

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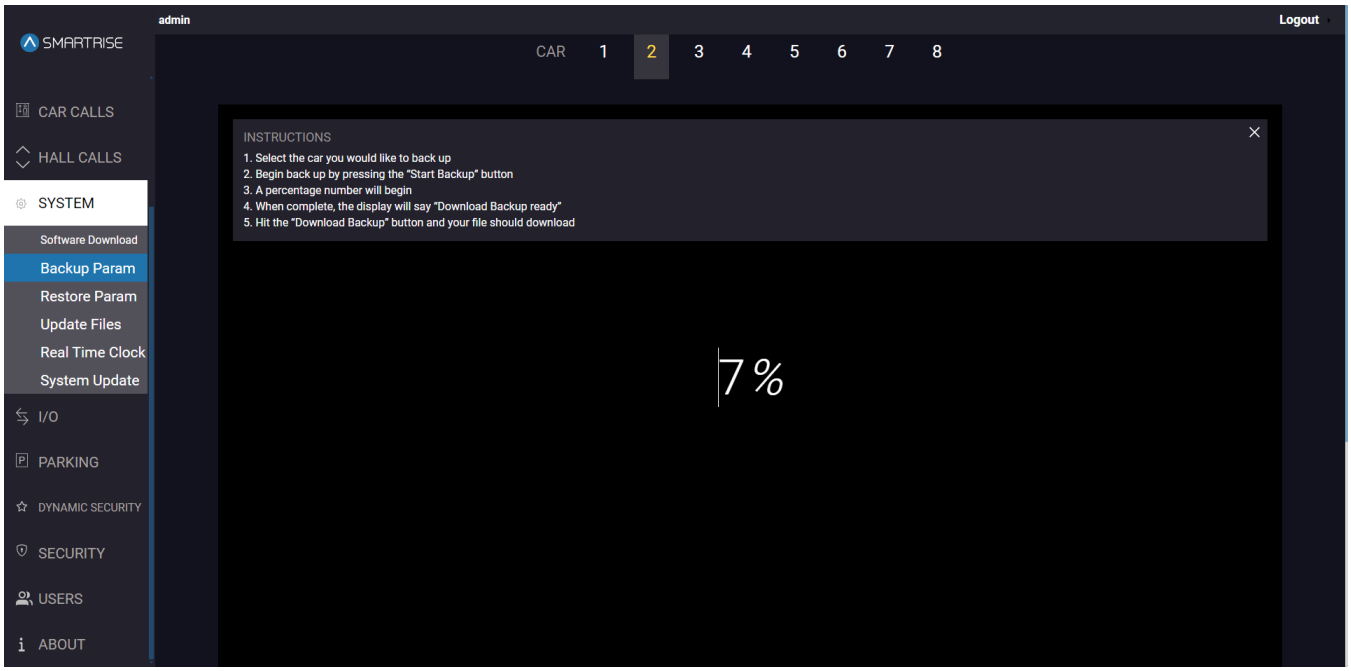

Figure 59: SYSTEM Panel - Backup Param START BACKUP

3. When complete, click DOWNLOAD BACKUP.

   NOTE: the "backup-car[label].spf" is downloaded into the Downloads folder by default. The user can also select the location of the download.

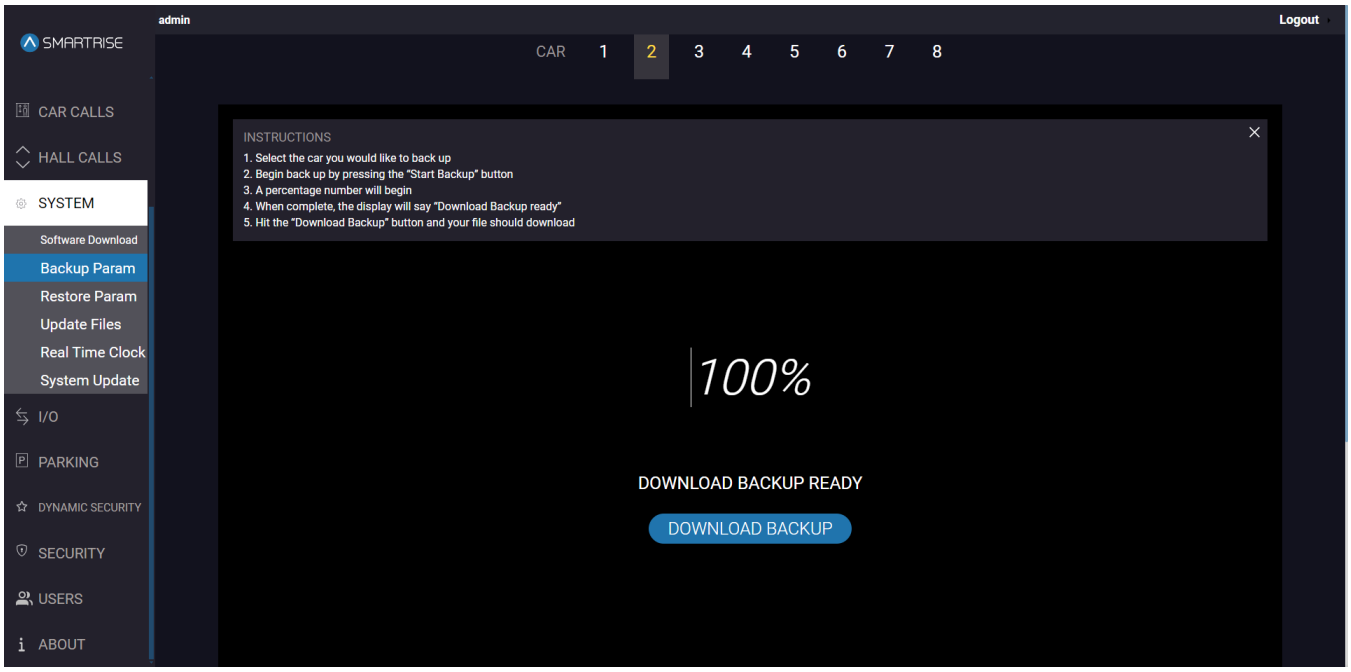

Figure 60: SYSTEM Panel - Backup Param DOWNLOAD BACKUP

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9.3 Restore Param

The Restore Param subpanel allows the user to overwrite the selected car's parameters using the selected file. The Restore Parameter is basically derived from the Backup Parameter.

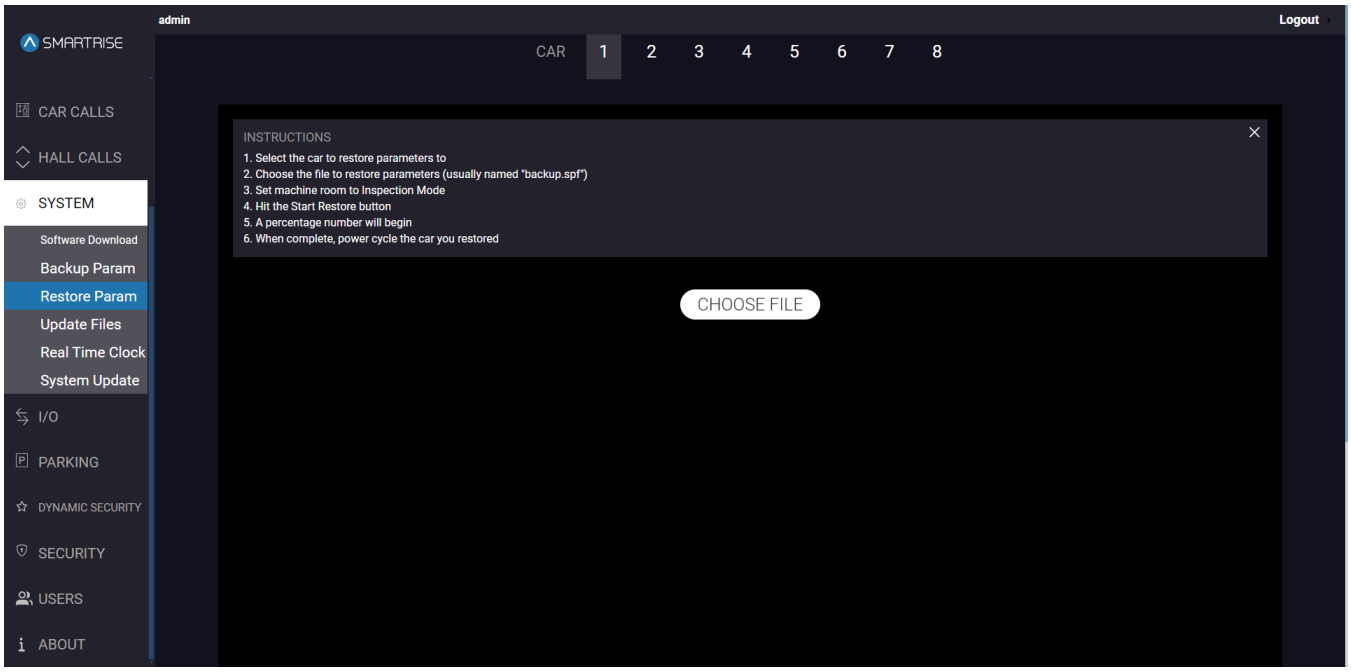

Figure 61: SYSTEM Panel - Restore Param

The table below lists the description of the SYSTEM Panel - Restore Param.

Table 21: SYSTEM Panel - Restore Param

Field	Description
CAR 1 2	Allows the user to select the car label
INSTRUCTIONS	Displays the instructions on how to restore the parameters
Buttons	
CHOOSE FILE	Allows the user to choose 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 steps to restore the parameters for a particular car:

1. Turn on DIP A4.
2. From the SYSTEM Panel - Restore Param, select the car label and click CHOOSE FILE.
3. From the Downloads folder, select the "backup_car[label].spf" file.

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4. Set the MR board to Inspection Mode.
5. Click on UPLOAD FILE.

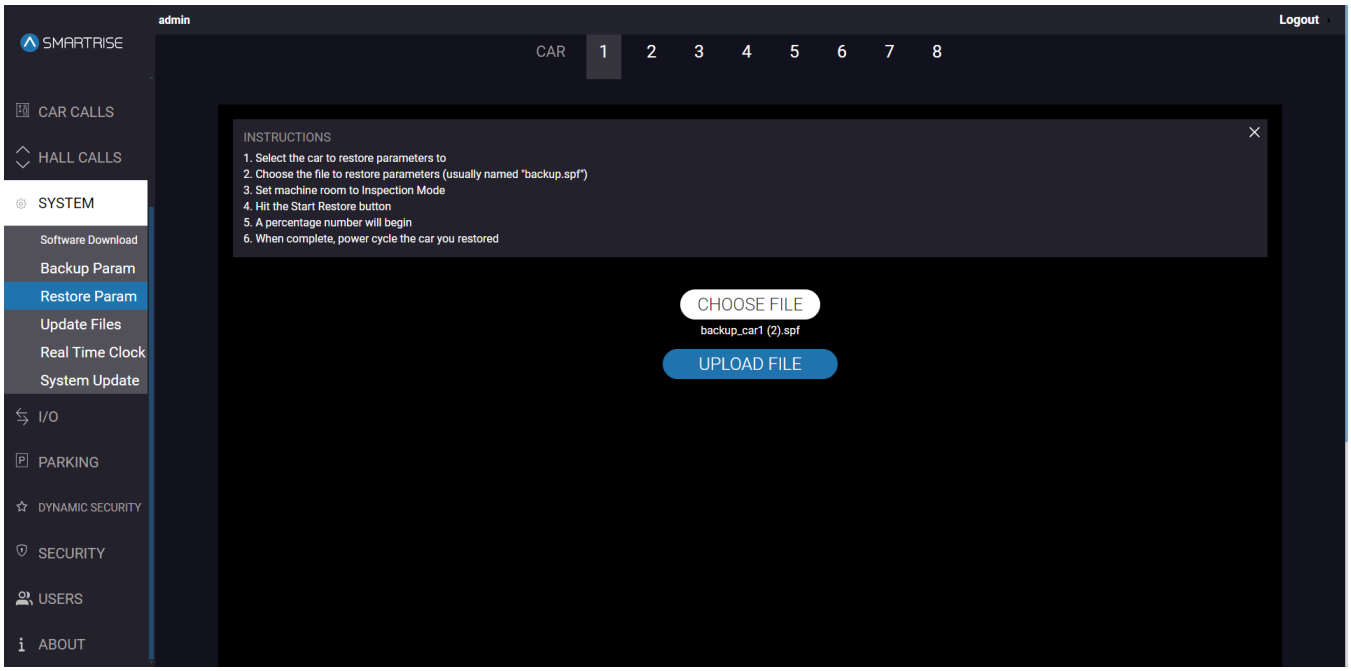

Figure 62: SYSTEM Panel - Restore Param UPLOAD FILE

6. Click on START RESTORE.

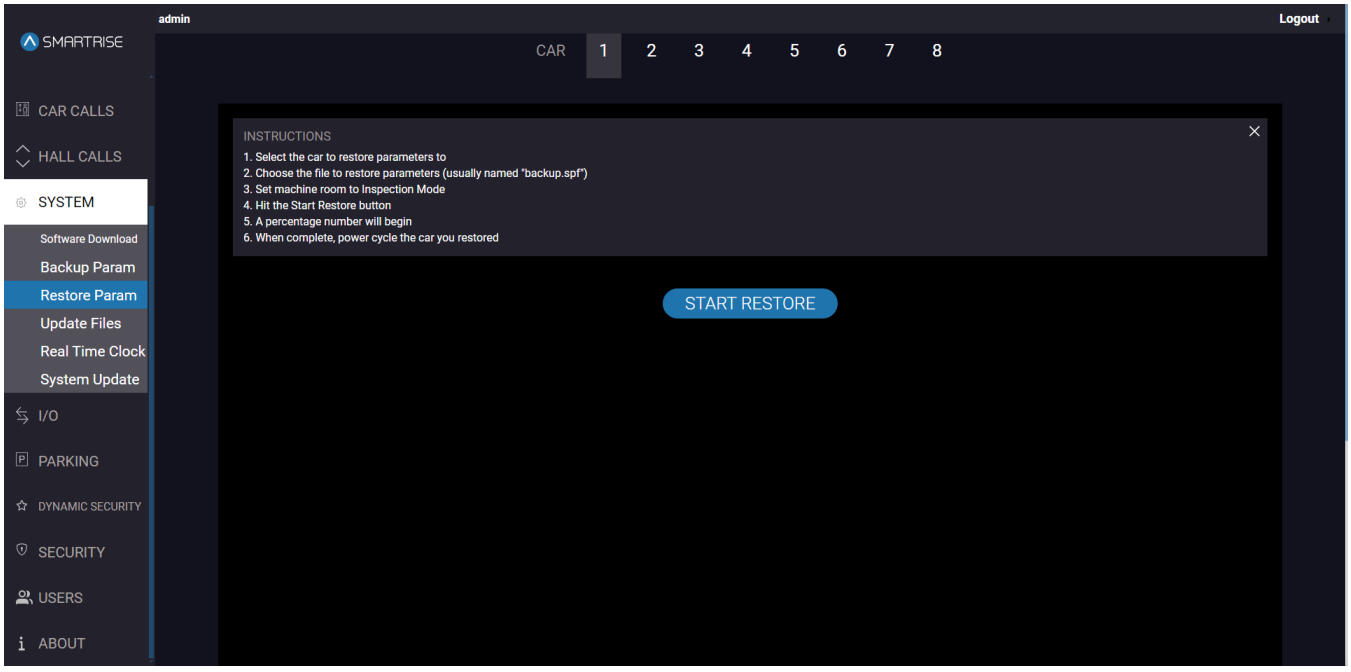

Figure 63: SYSTEM Panel - Restore Param START RESTORE

NOTE: if the MR board is not in Inspection Mode, a Machine Room Board Inspection Mode Warning is displayed and the process ends.

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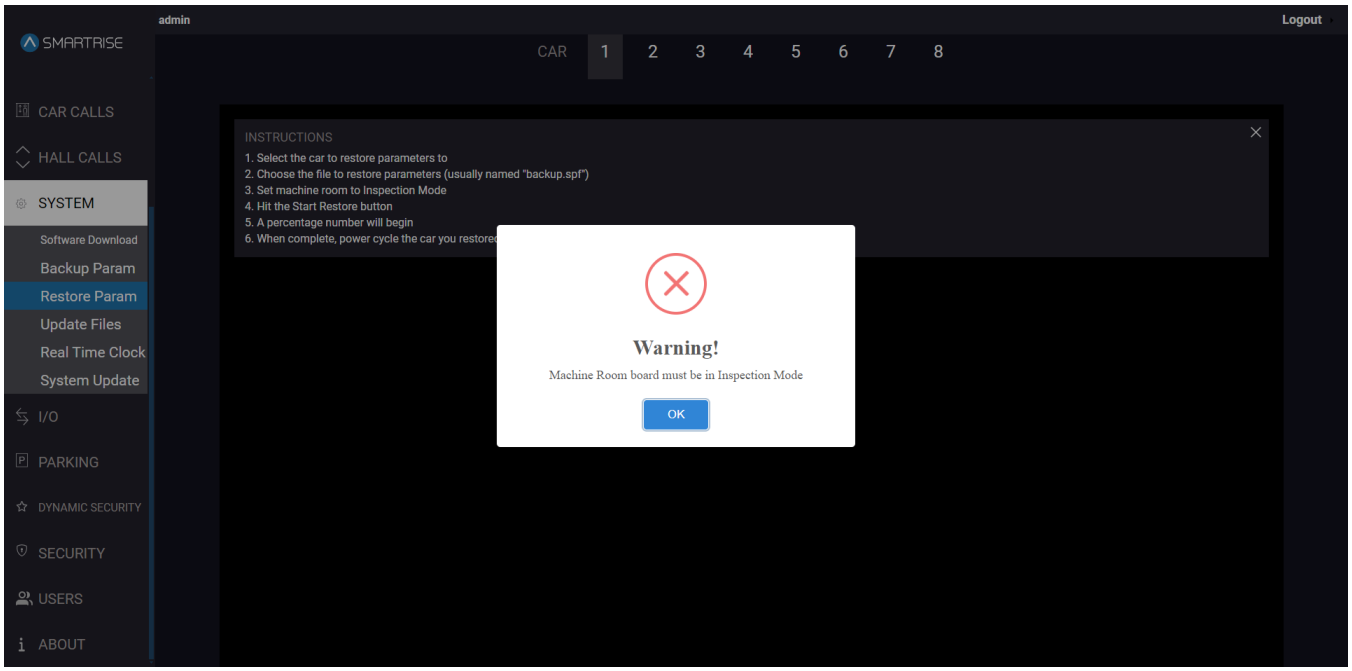

Figure 64: SYSTEM Panel - Restore Param WARNING

7. A percentage number is displayed. The parameters are restored when the screen displays 100%.

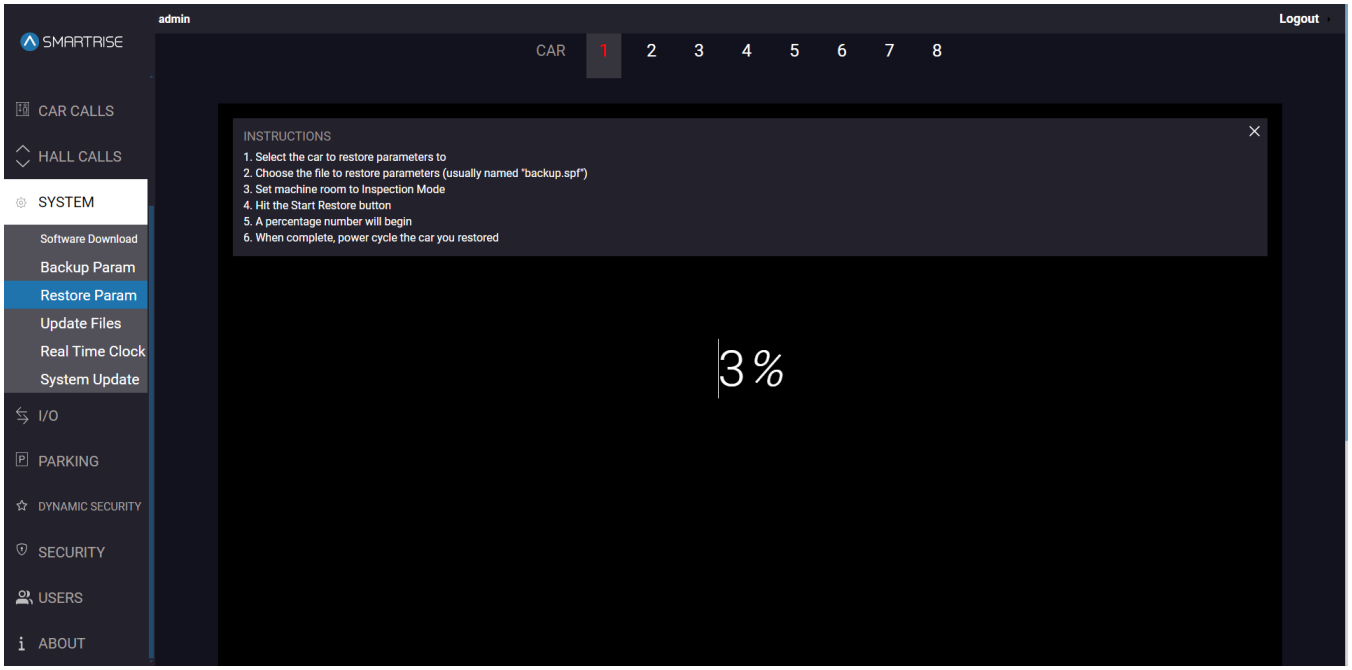

Figure 65: SYSTEM Panel - Restore Param RESTORE PROGESS

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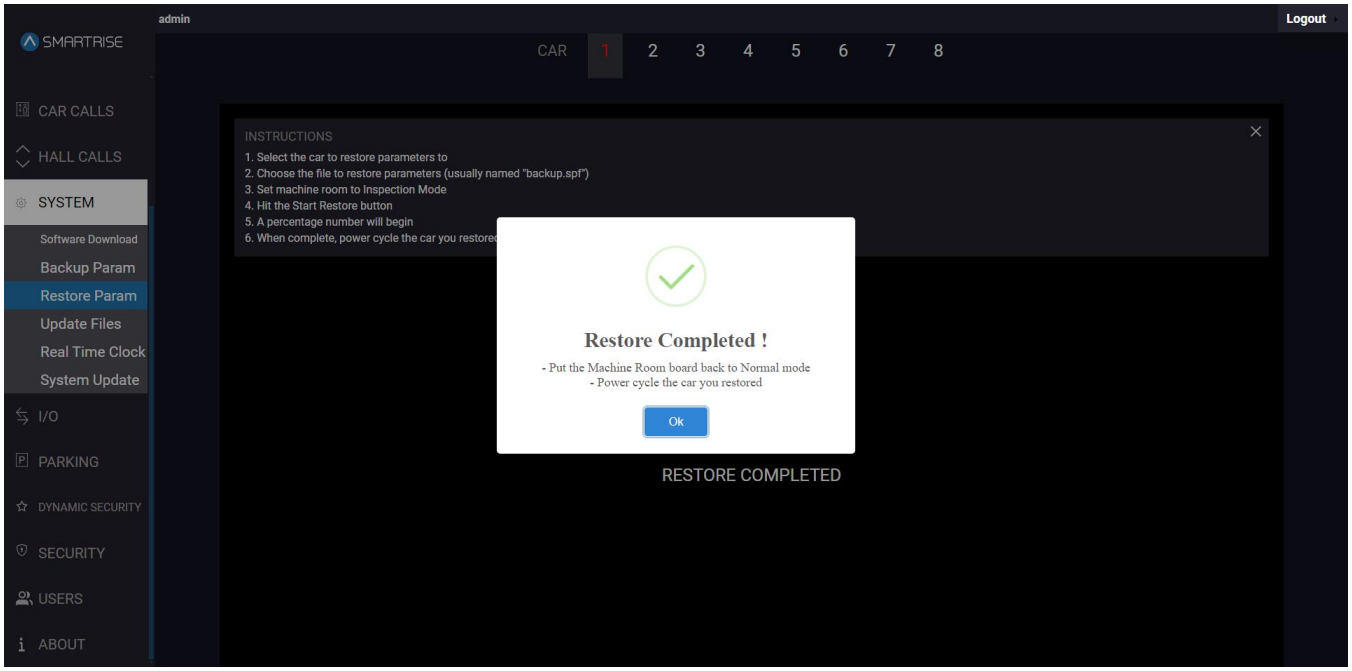

Figure 66: SYSTEM Panel - Restore Param RESTORE COMPLETED I

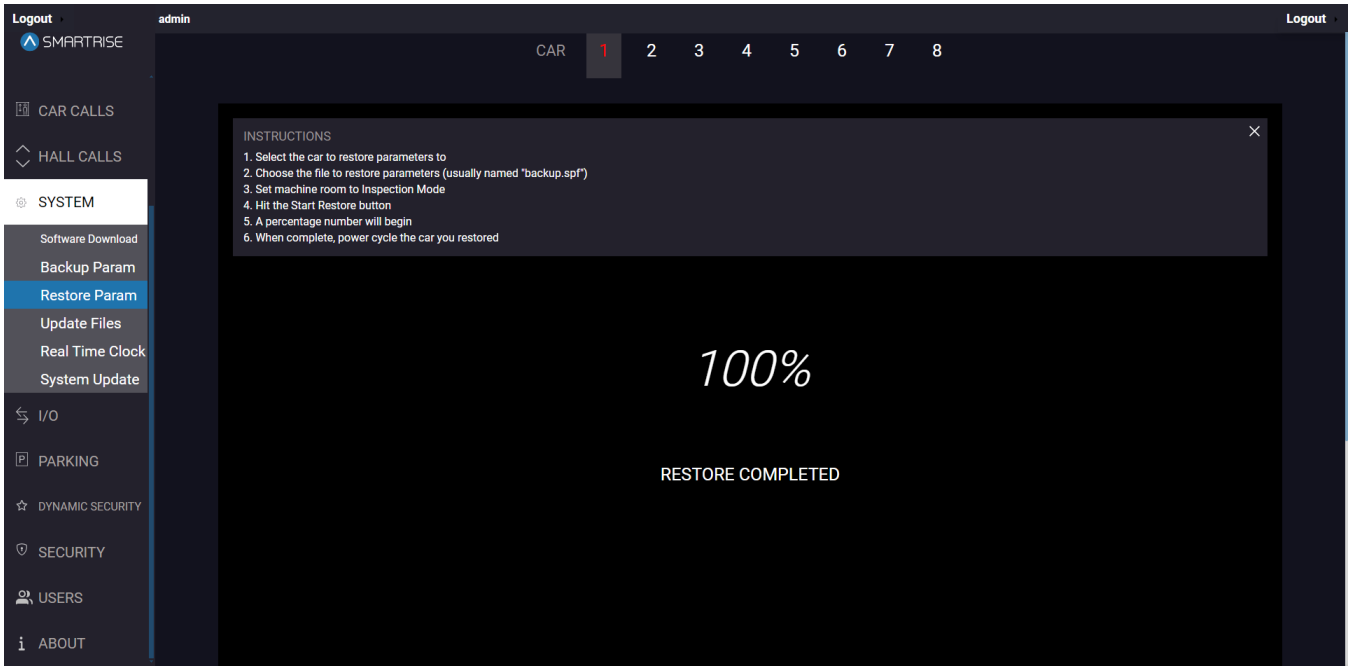

Figure 67: SYSTEM Panel - Restore Param RESTORE COMPLETED II

8. Power cycle the unit and set the MR to Normal mode.

9.4 Update Files

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

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9.4.1 UPDATE FILES

The UPDATE FILES subpanel allows the user to update the files list. This list includes any or a combination of the following:

1. **FAULTS List:** consists of FAULTS IDs and descriptions as displayed on the FAULTS Panel.
2. **ALARMS LIST:** consists of ALARM IDs and DESCRIPTIONS as displayed on the ALARMS Panel.
3. **PARAMETER LIST:** consists of PARAMETER TYPES, INDEX, and NAMES.
4. **I/O LIST:** consists of I/O NAMES.

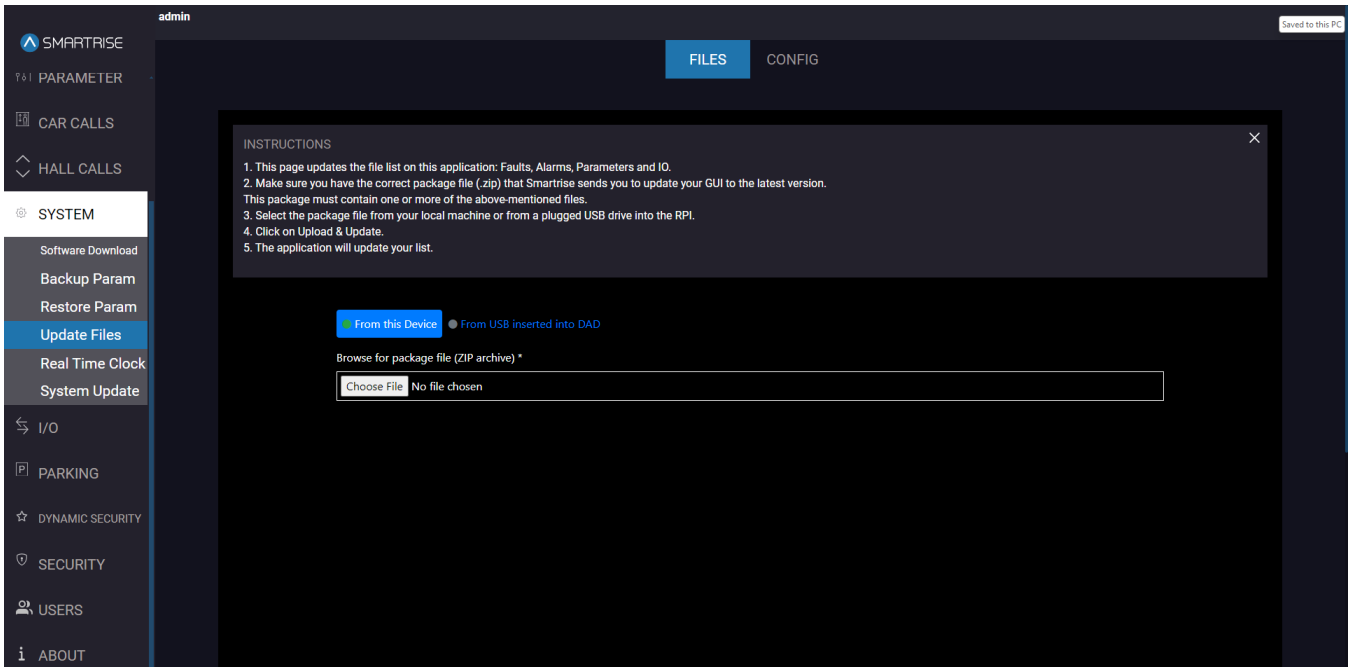

Figure 68: SYSTEM Panel - Update Files [FILES]

The table below lists the description of the SYSTEM Panel - Update Files [FILES].

Table 22: SYSTEM Panel - Update Files [FILES]

Field	Description
INSTRUCTIONS	Displays the instructions on how to restore the parameters
Buttons	
Choose File	Allows the user to select the package file from their local device or from a plugged USB drive into DAD
Upload & Update	Allows the user to upload and update the file list on the system

Perform the following steps to update the files list:

1. From the SYSTEM Panel - Update Files - FILES, select the .zip package file from your device or from a USB plugged into the DAD.

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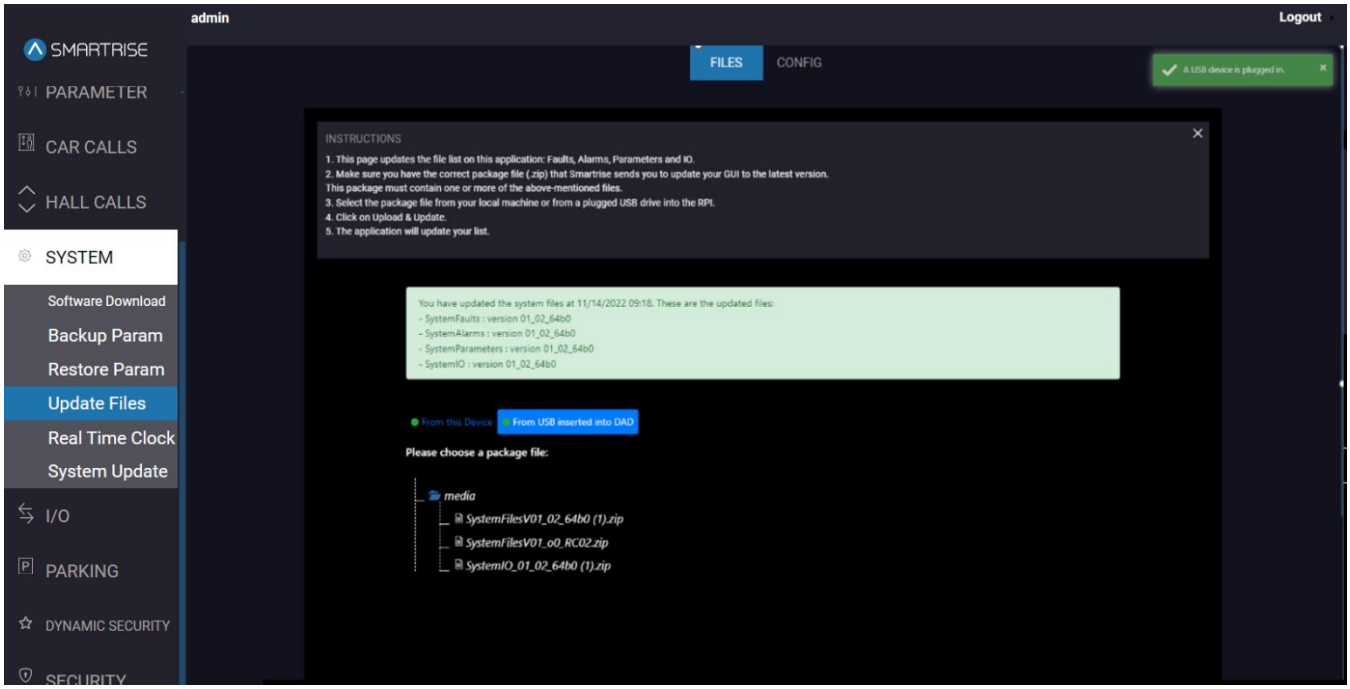

Figure 69: SYSTEM Panel - Update Files [FILES: CHOOSE FILE (From USB inserted into DAD)]

2. After selection the file, click on 'Upload & Update'.

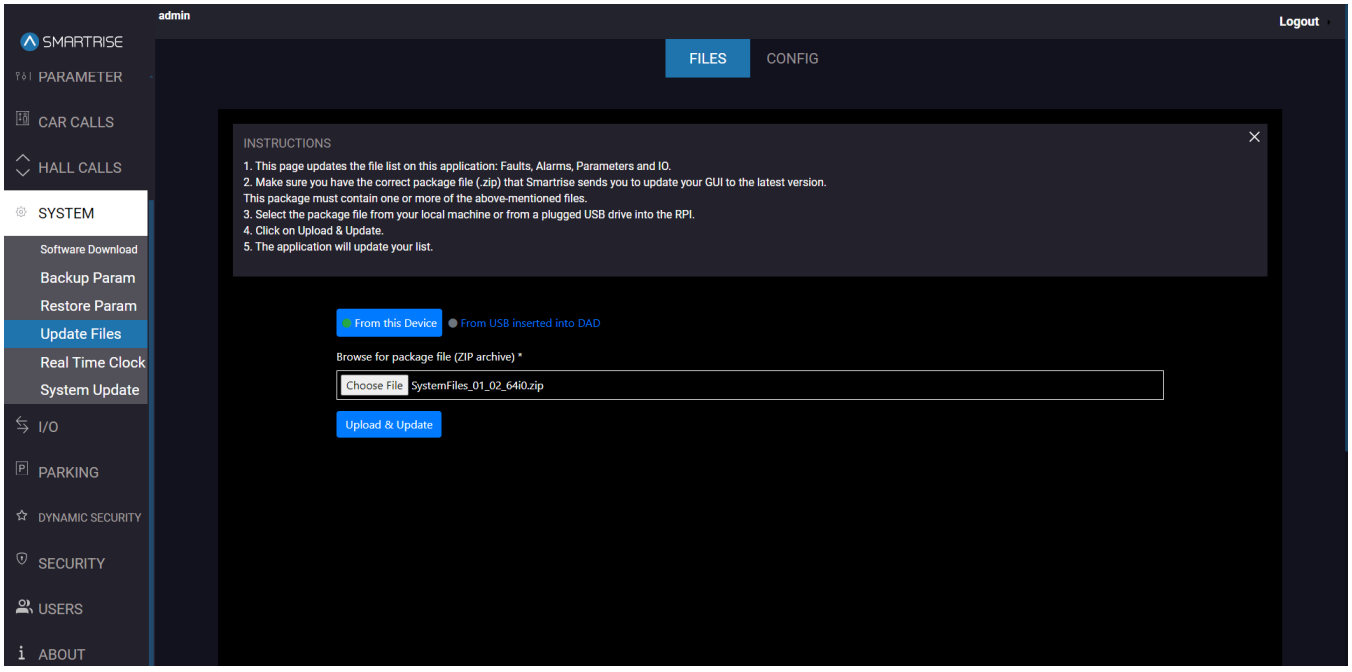

Figure 70: SYSTEM Panel - Update Files [FILES: UPLOAD & UPDATE (From your Device)]

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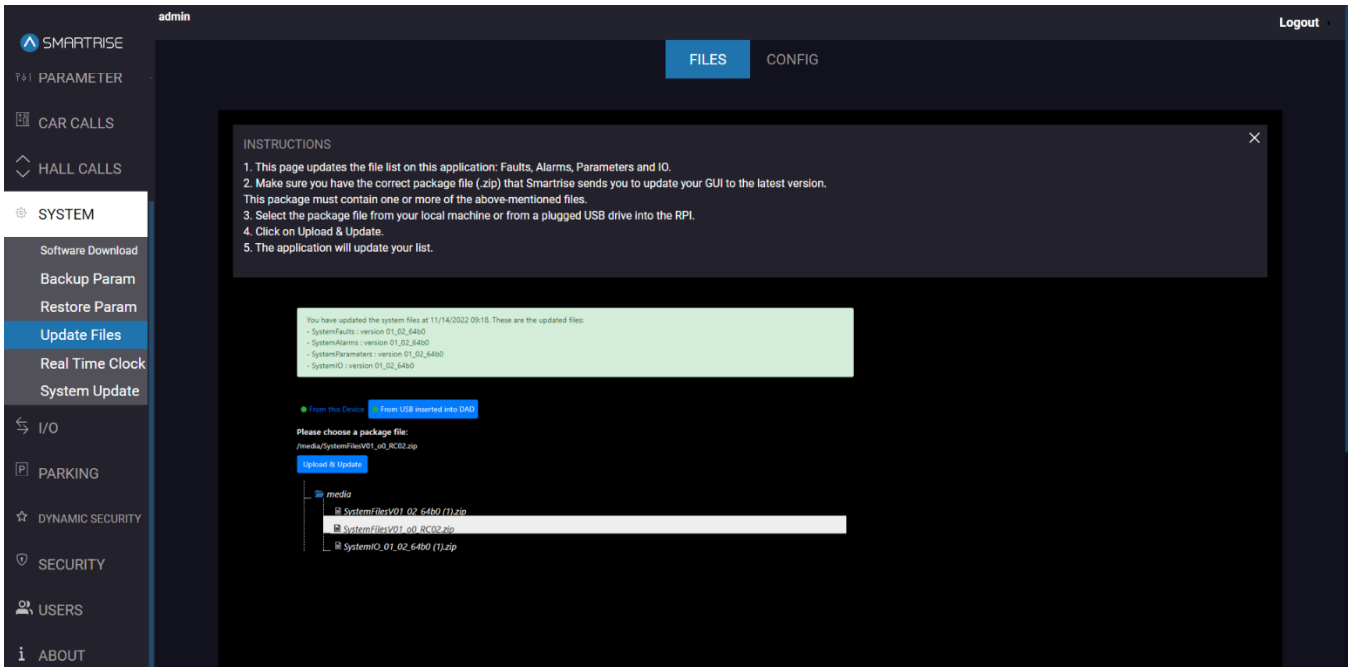

Figure 71: SYSTEM Panel - Update Files [FILES: UPLOAD & UPDATE (From USB inserted into DAD)]

3. The application will start the update process and a loading message is displayed.

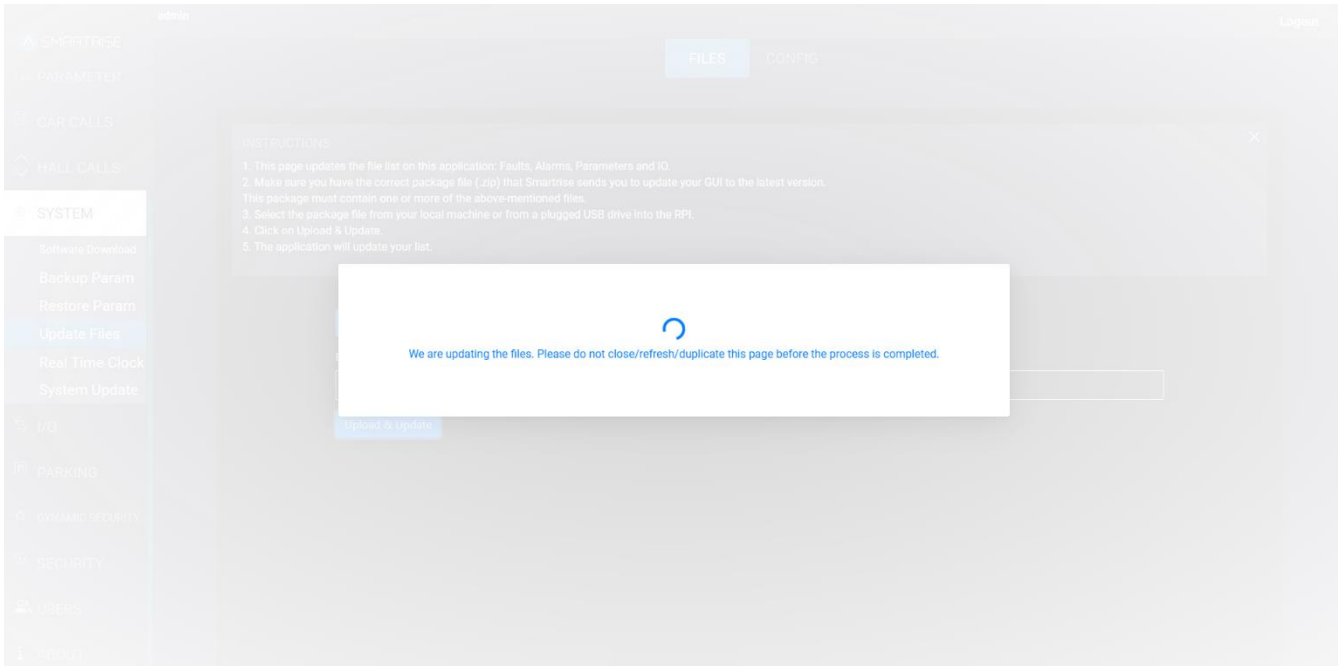

Figure 72: SYSTEM Panel - Update Files [FILES: LOADING]

4. When the update is complete, a success popup is be displayed. Click OK.

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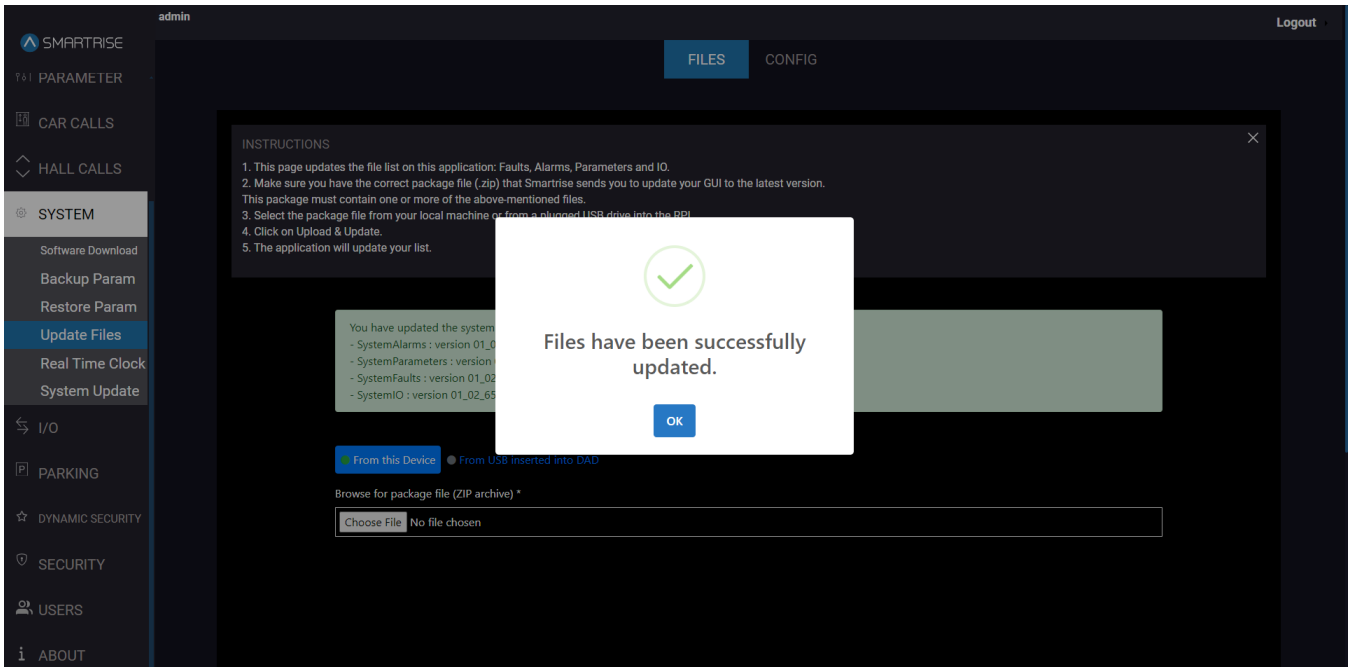

Figure 73: SYSTEM Panel - Update Files [FILES: SUCCESS]

5. The list of files uploaded to the system is displayed on the screen along with the date and time of the update.

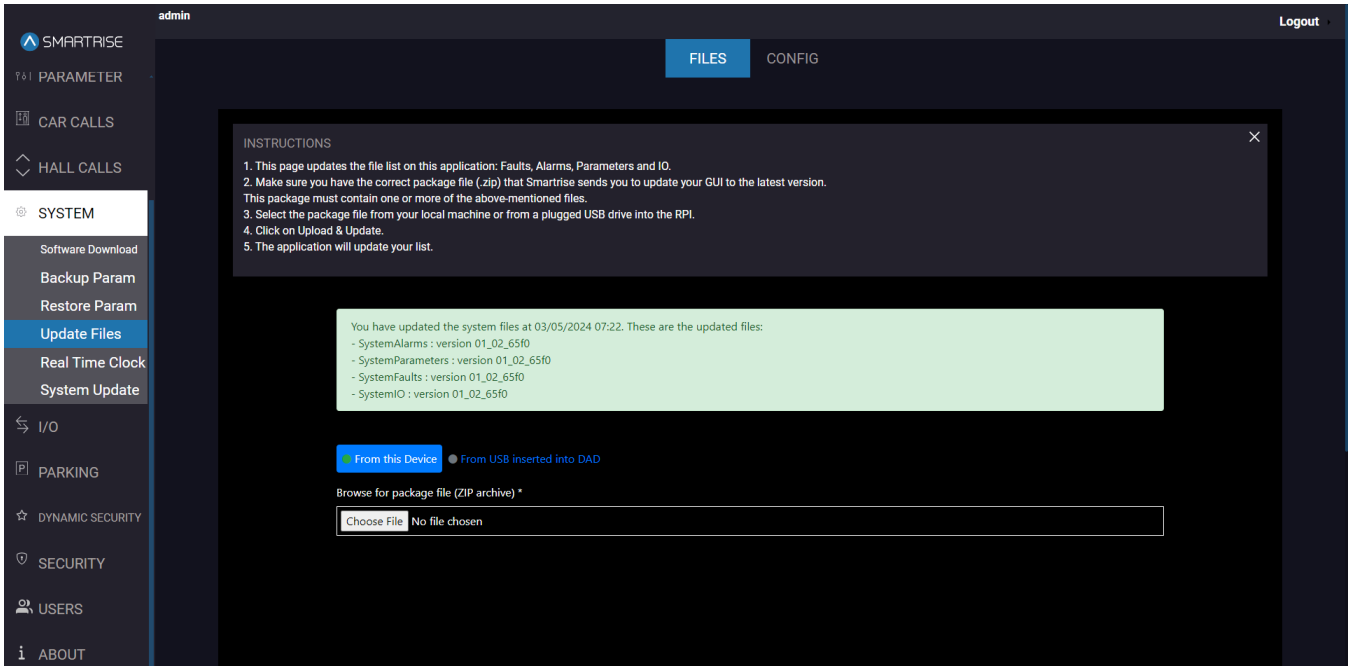

Figure 74: SYSTEM Panel - Update Files [FILES: UPLOADED LIST OF FILES]

NOTE: in case of an invalid file, an error message will be displayed.

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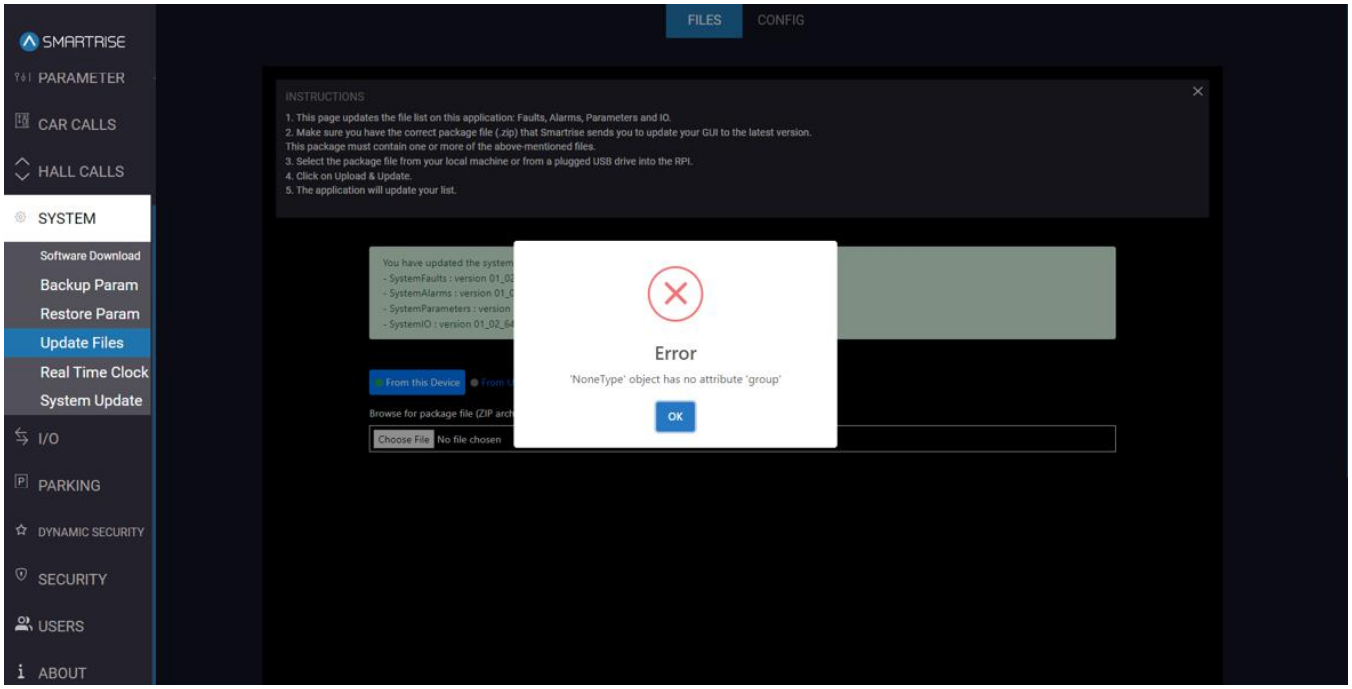

Figure 75: SYSTEM Panel - Update Files [FILES: INVALID FILE]

9.4.2 UPDATE CONFIG

The UPDATE CONFIG subpanel allows the user to choose a job specific configuration file to update the entire application to that job's specifications.

The purpose of CONFIG is to streamline the process of setting up a C4 DAD with job specific data.

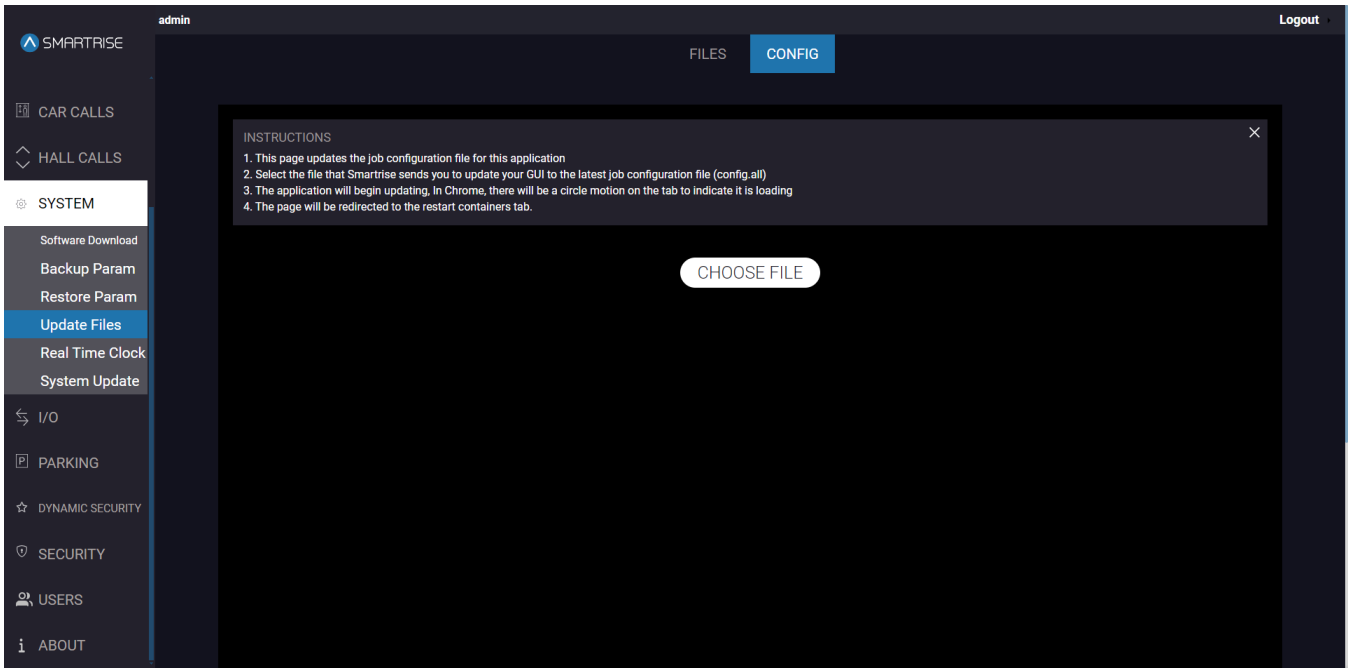

Figure 76: SYSTEM Panel - Update Files [CONFIG]

The table below lists the description of the SYSTEM Panel - Update Files [CONFIG].

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Table 23: SYSTEM Panel - Update Files [CONFIG]

Field	Description
INSTRUCTIONS	Displays the instructions on how to upload configuration files
Buttons	
CHOOSE FILE	Allows the user to select the configuration file to upload
UPDATE CONFIG	Allows the user to upload the configuration file to the DAD unit
SYNC NEW CONFIG	Allows the user to download the configuration file to the C4 application

Perform the following steps to update the config file:

1. From the SYSTEM Panel - Update Files - CONFIG, click CHOOSE FILE.
2. Select the SYNC CONFIG GILE (config*.h) to update a specific job.
3. Click UPDATE CONFIG.
   - The system begins to upload the new configuration file.

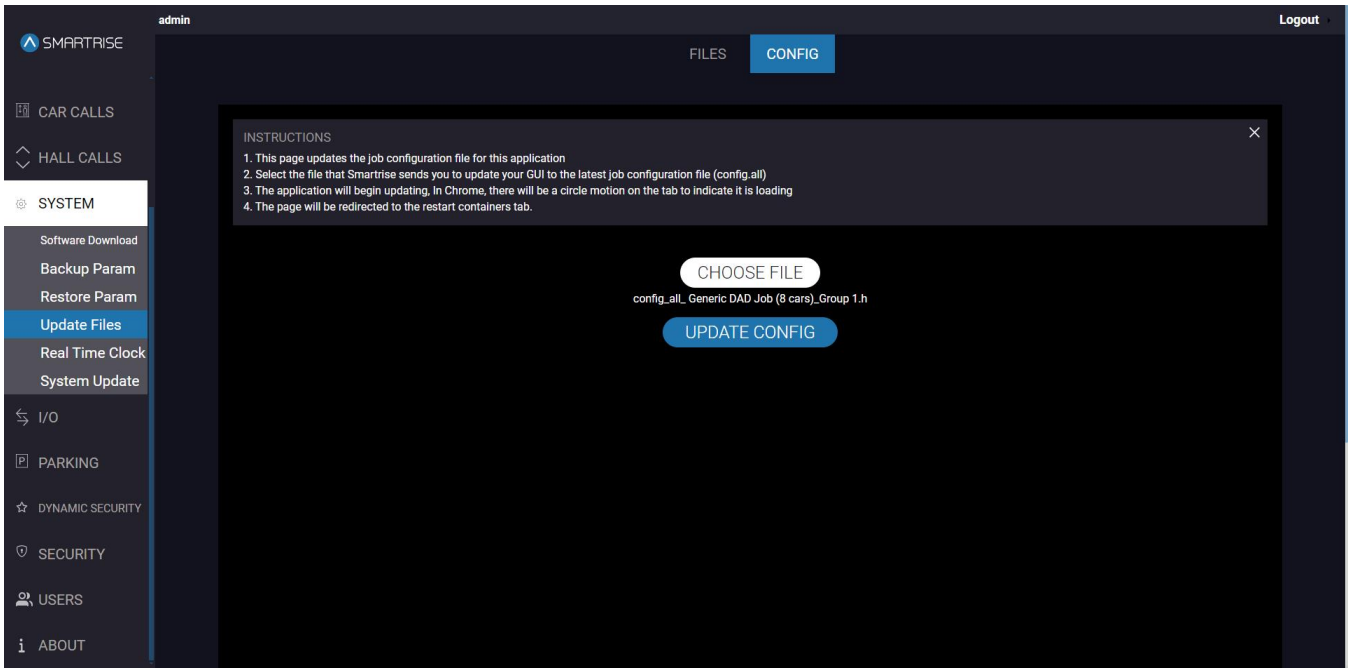

Figure 77: SYSTEM Panel - Update Files [CONFIG: UPDATE CONFIG]

4. Click SYNC NEW CONFIG to download the configuration file to the C4 application.

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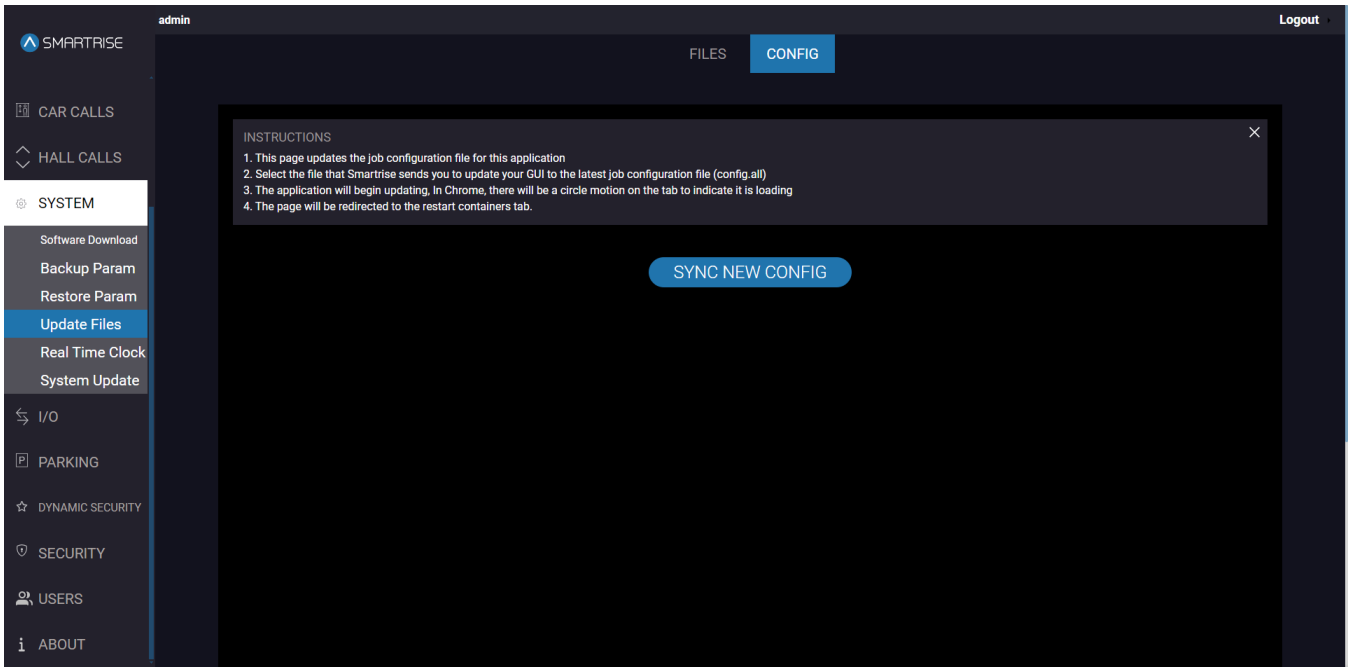

Figure 78: SYSTEM Panel - Update Files [CONFIG: SYNC NEW CONFIG]

5. A 'Success' popup is displayed.

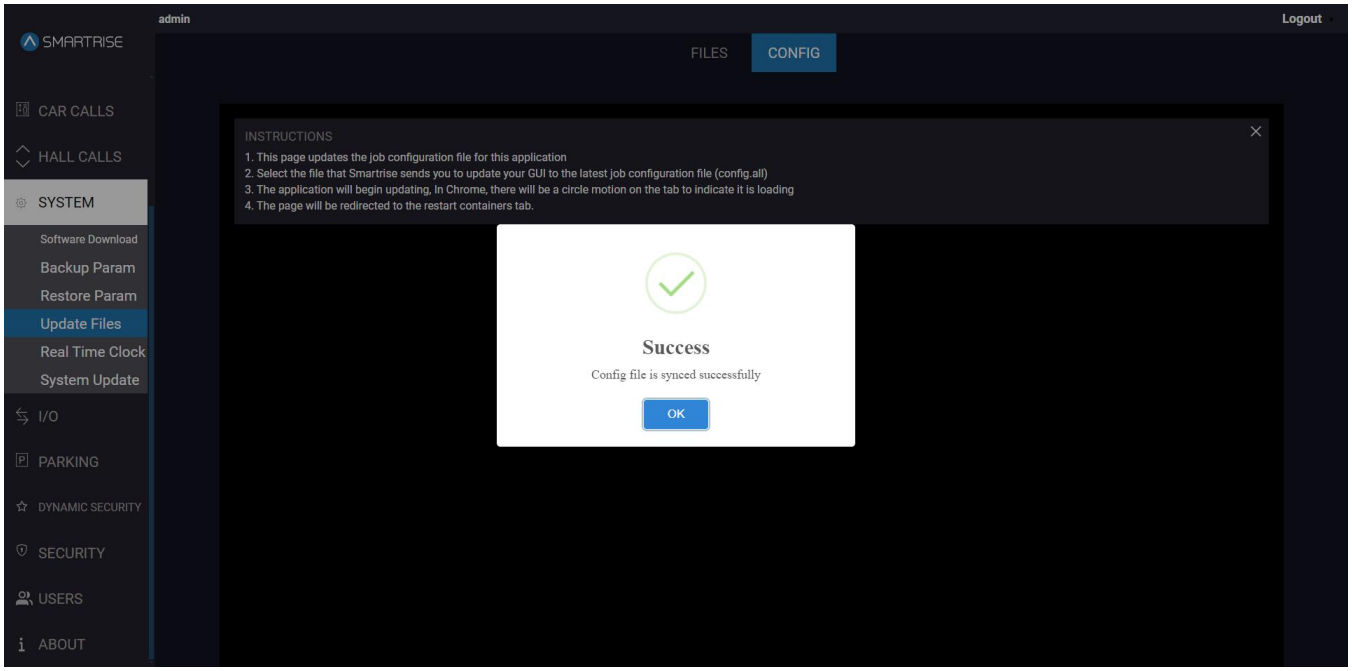

Figure 79: SYSTEM Panel - Update Files [CONFIG: SUCCESS]

NOTE: the user will be automatically redirected to the Restart Container page. Then once the 90 second count is completed, the user will then be redirected to the Monitoring page.

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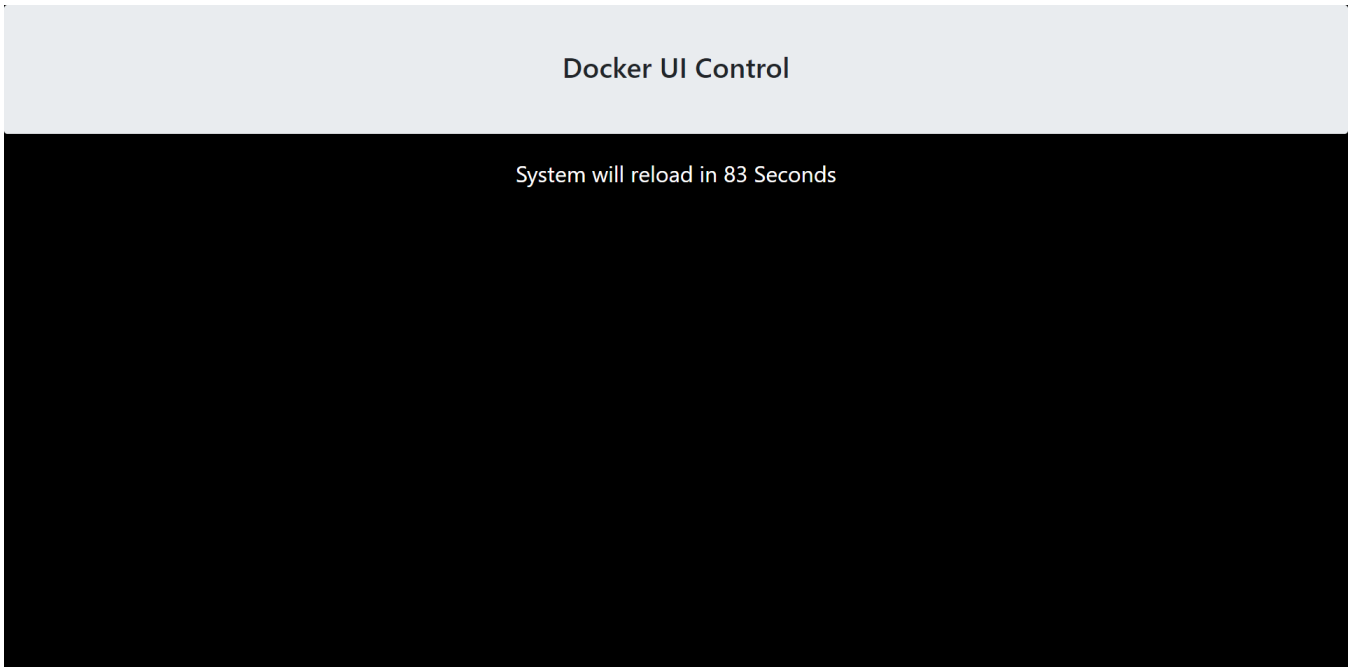

Figure 80: SYSTEM Panel – Update Config SYSTEM RELOAD

9.5 Real Time Clock

The Real Time Clock subpanel displays the real date and time obtained from the controller. After changing the date and/or time, the system performs a reload session and return to the MONIROTING Panel.

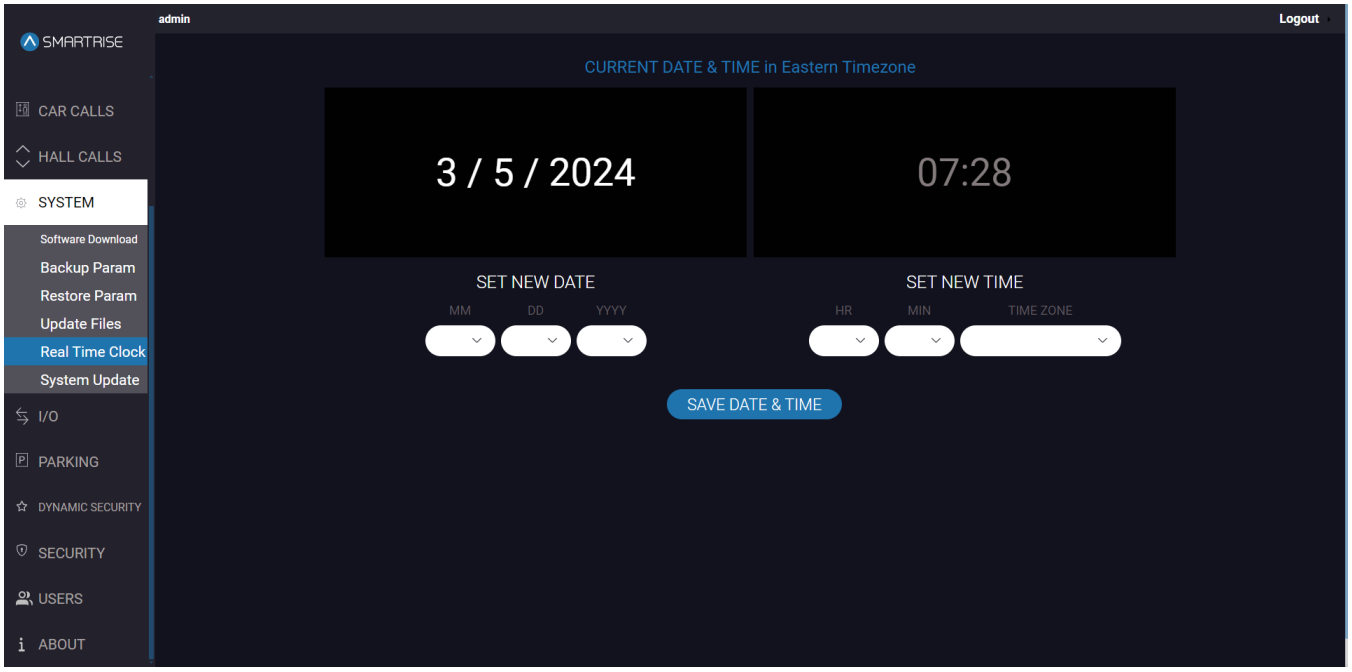

Figure 81: SYSTEM Panel - Real Time Clock

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The table below lists the description of the SYSTEM Panel - Real Time Clock.

Table 24: SYSTEM Panel - 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 – TIME ZONE	Allows the user to select the location's time zone
Buttons	
SAVE DATE & TIME	Allows the user to save the real DATE & TIME

Perform the following steps to update the real time clock:

1. From the SYSTEM Panel - Real Time Clock, select the current date and time from each dropdown list.

   NOTE: the time is entered in military time format.

2. Click SAVE DATE & TIME to save the real time.
   - The system reloads and then returns to the MONIROTING Panel.

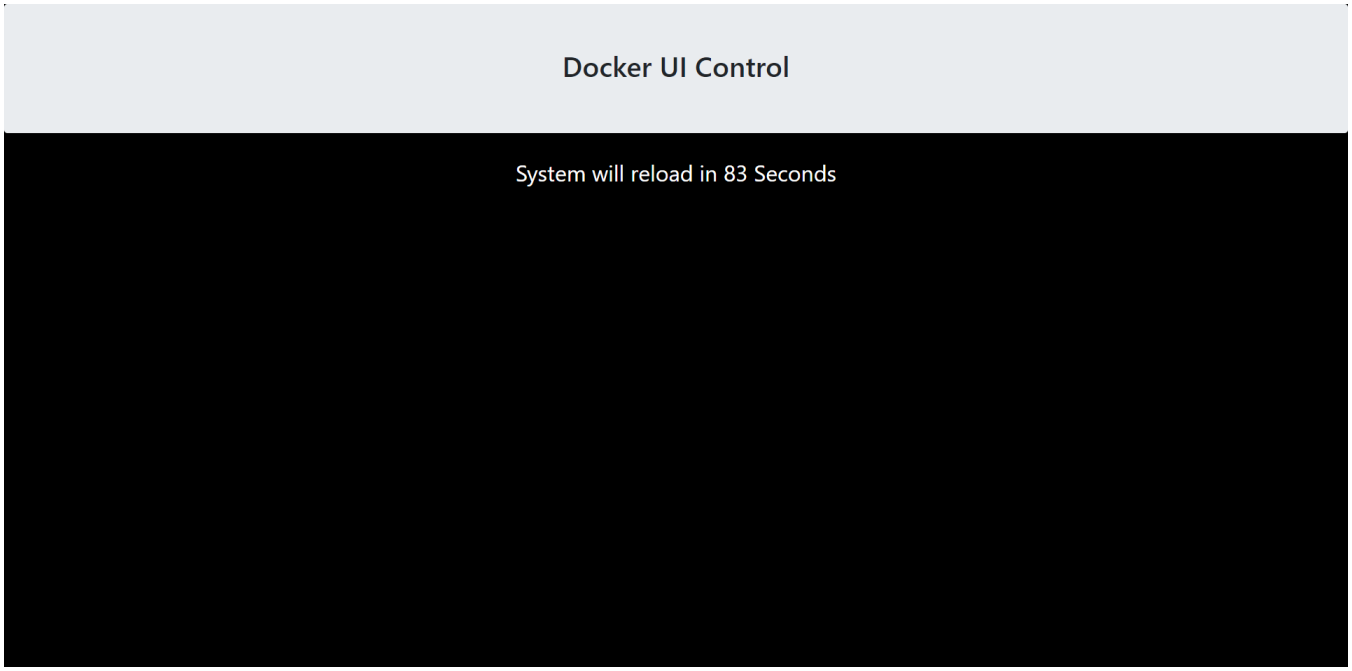

Figure 82: SYSTEM Panel - Real Time Clock SYSTEM RELOAD

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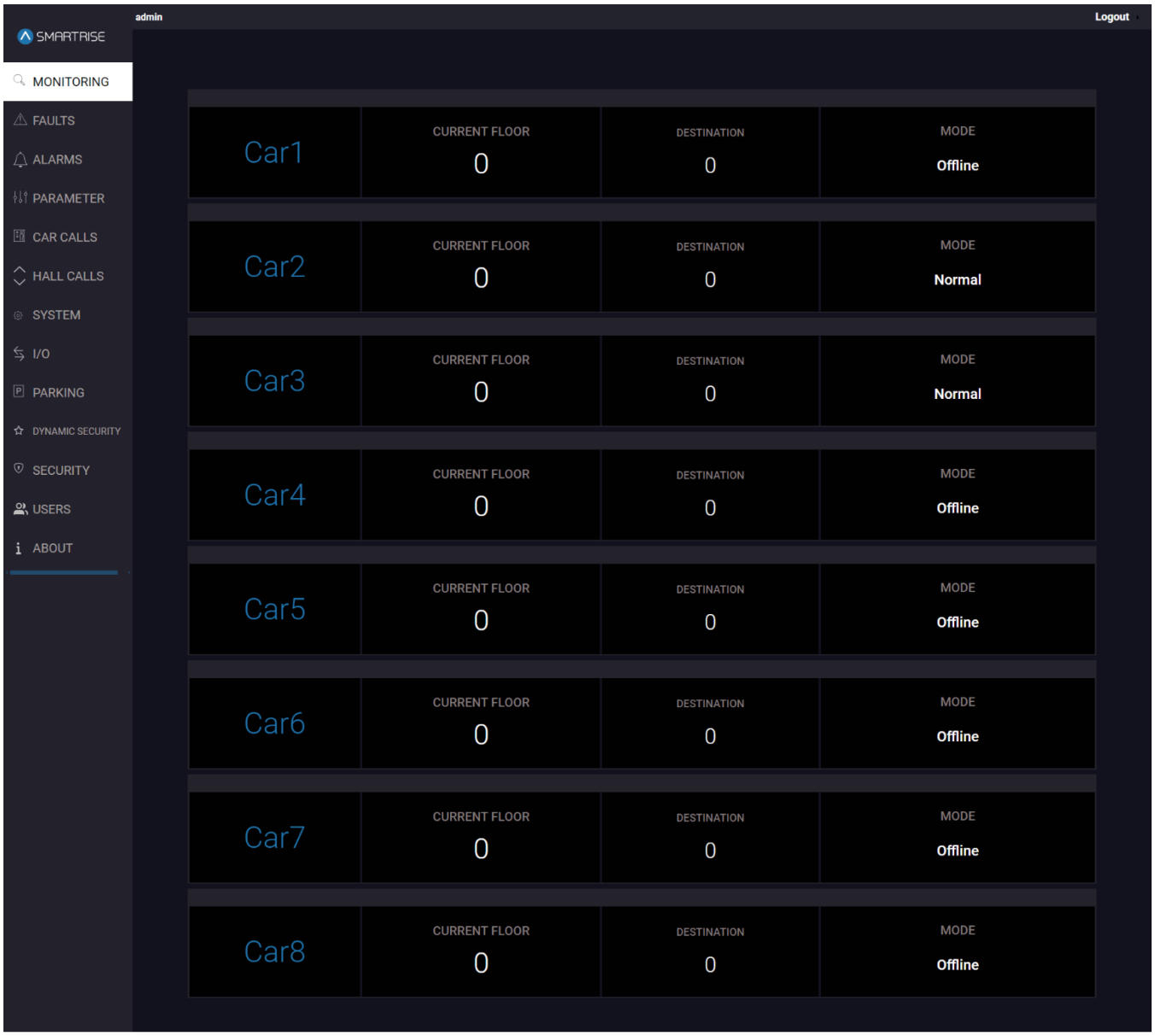

Figure 83: MONIROTING Panel Landing Page

9.6 System Update

The System Update subpanel allows the user to update the software version for the GUI application on the DAD Unit. This update is carried out by selecting a file and downloading it to the system.

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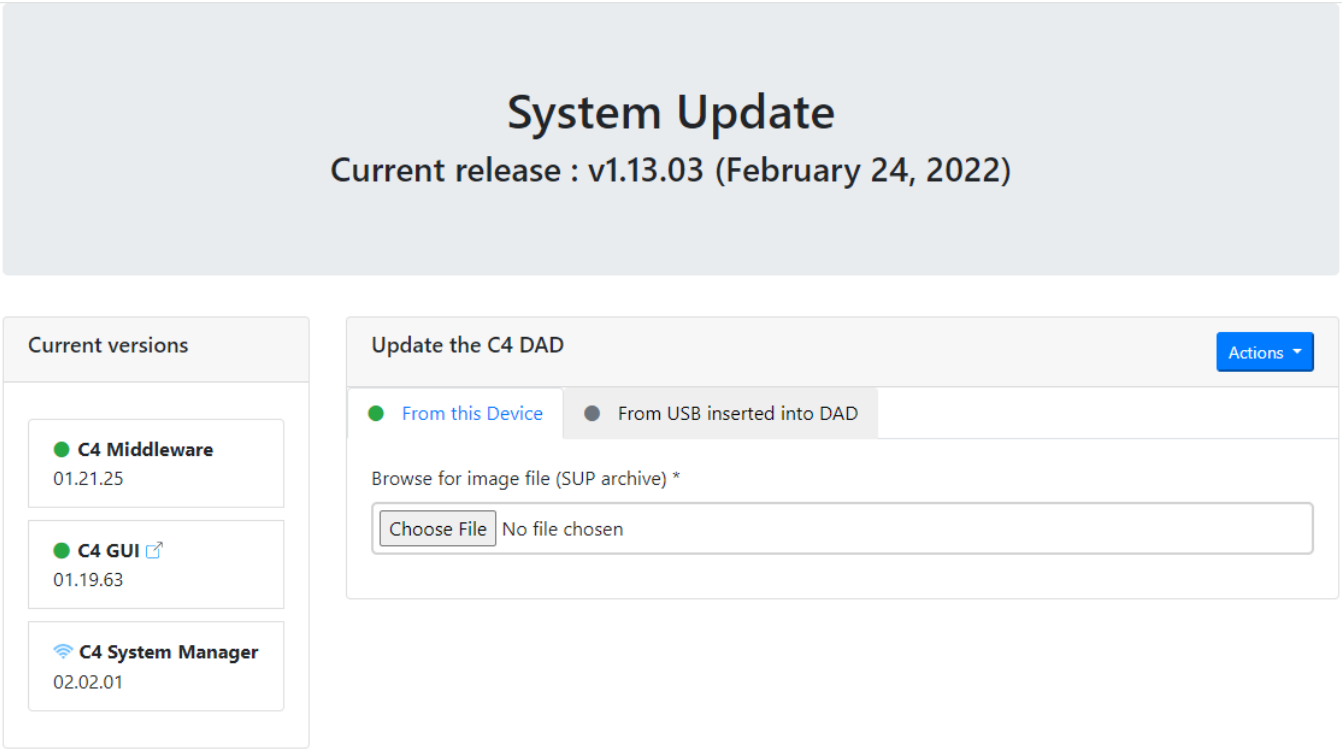
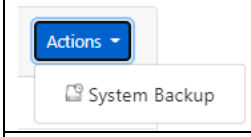
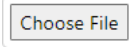


Figure 84: SYSTEM Panel - System Update

The table below lists the description of the SYSTEM Panel - System Update.

Table 25: SYSTEM Panel - System Update

Field	Description
CURRENT VERSIONS	Displays the current versions of C4 Middleware, C4 GUI, and C4 System Manager
Update the C4 DAD	Allows the user to update the system from the local device or from USB drive
Buttons	
	Allows the user to back up the current software version
	Allows the user to choose the system update file

Perform the following steps to update the system:

1. From the SYSTEM Panel - System Update, click CHOOSE FILE and select the system update file and choose whether to import the file ‘from your device’ or ‘from a USB plugged into the DAD’.
2. Proceed with the guided steps displayed on the subpanel.

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10 I/O

The I/O Panel allows the user to add, change, remove, or move UNFIXED inputs and outputs.

Fixed inputs and outputs cannot be changed due to safety concerns. If additional feature, or moving an input or output, is required, any UNUSED input or output can be assigned a feature.

Inputs are assigned to the 500s and outputs to the 600s.

10.1 Machine Room

On the MR board, each input and output is defined.

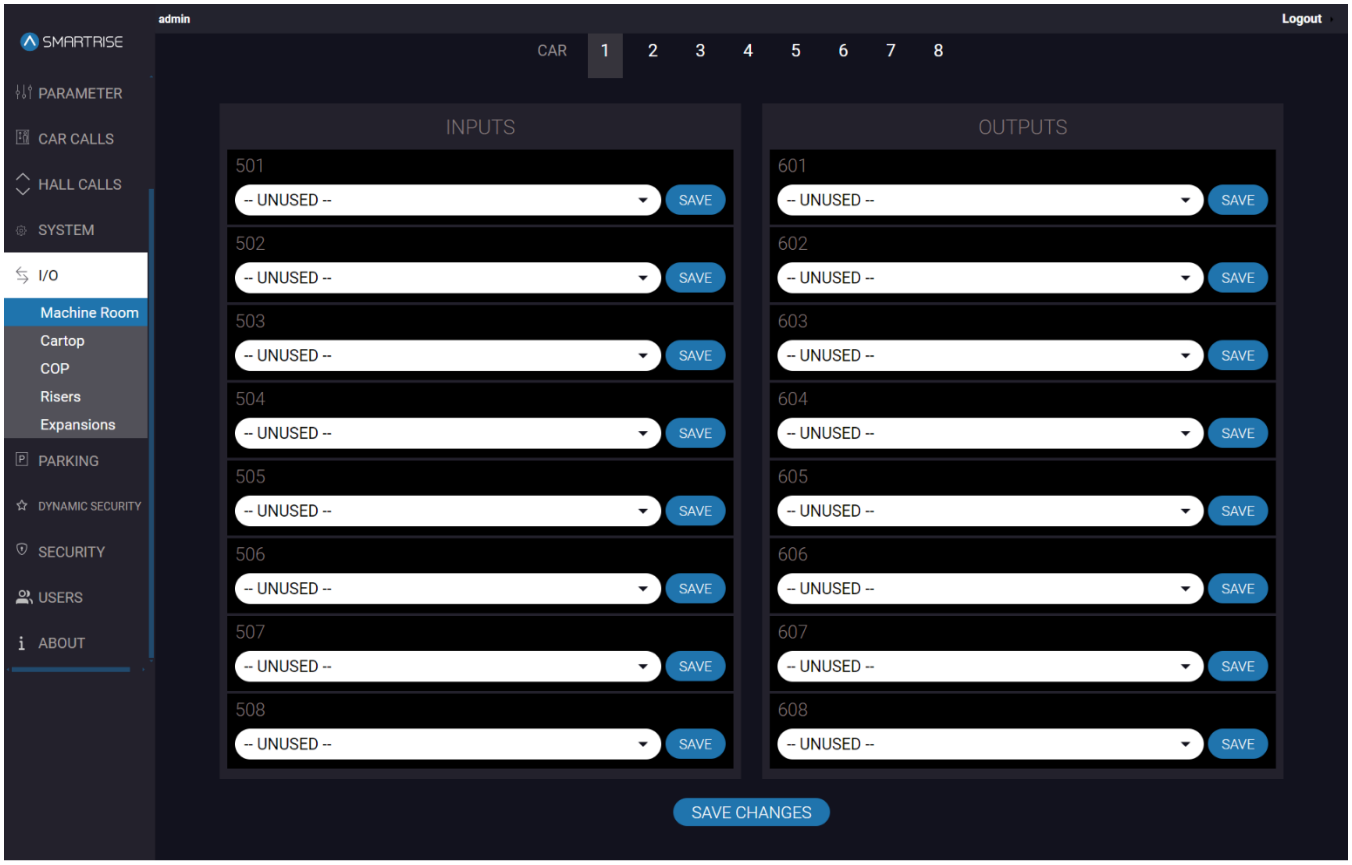

Figure 85: I/O Panel - Machine Room

The table below lists the description of the I/O Panel - Machine Room.

Table 26: I/O Panel - Machine Room

Field	Description
CAR 1 2	Allows the user to select the car label
INPUTS	
501-508	Allows the user to select the type of input to the MR board ports 501-508
OUTPUTS	

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601-608	Allows the user to select the type of output from the MR board ports 601-608
Buttons	
SAVE	Allows the user to save the selected type of input to MR board ports 501-508 or the selected type of output from the MR board ports 601-608
SAVE CHANGES	Allows the user to save all input and output changes to the MR board ports 501-508 and from the MR board ports 601-608

NOTE: inputs/outputs can be saved separately by clicking SAVE next to each type of input/output

Perform the following steps to update the Machine Room Input/Output for a particular car:

1. Turn on DIP A4.
2. From the I/O Panel - Machine Room, select the car label.
3. Click on each dropdown list and select the type of input and/or output.
4. Click SAVE or SAVE CHANGES.
   - A green save tag with a checkmark is displayed.

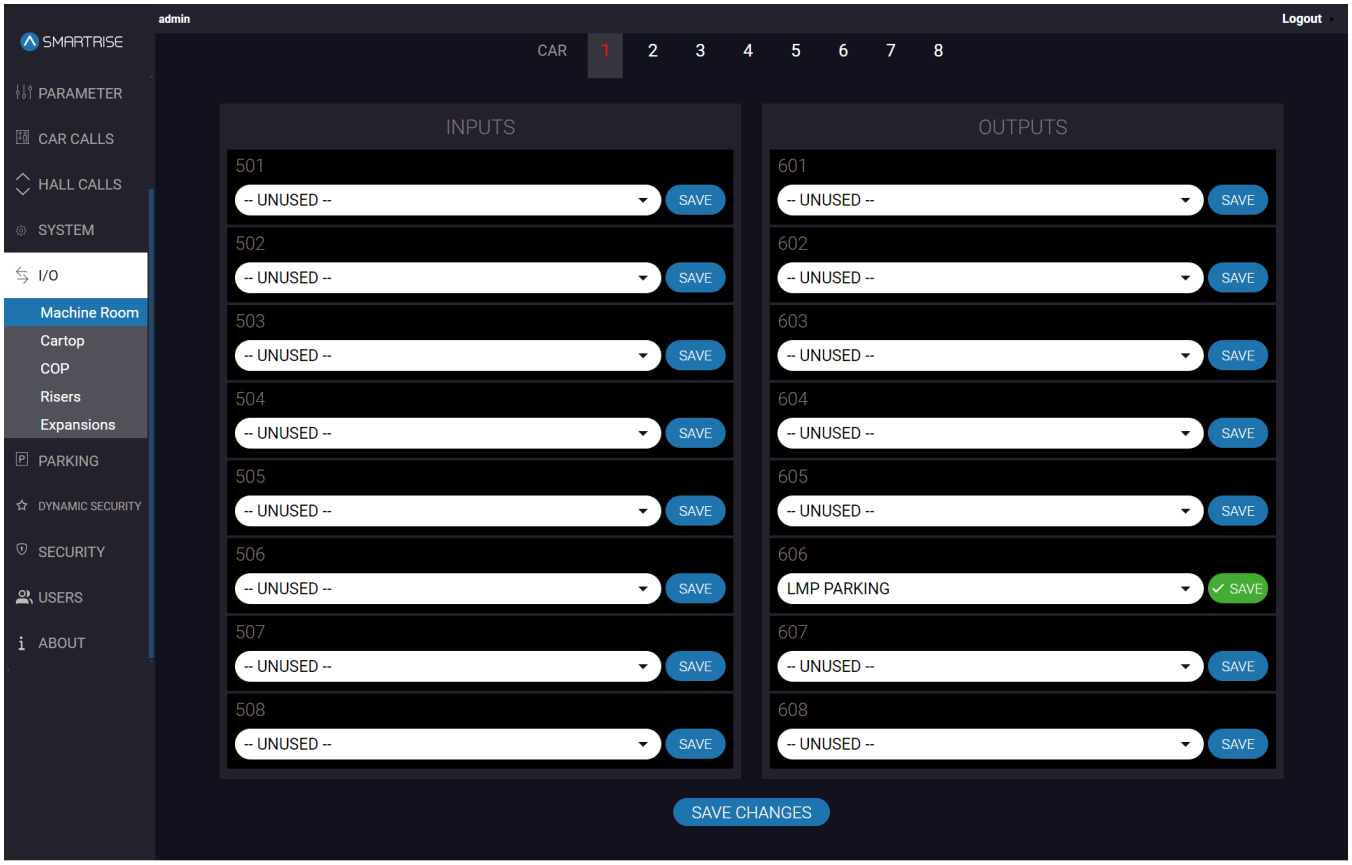

Figure 86: I/O Panel - Machine Room SAVE

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10.2 Cartop

On the Cartop board, each input and output is defined.

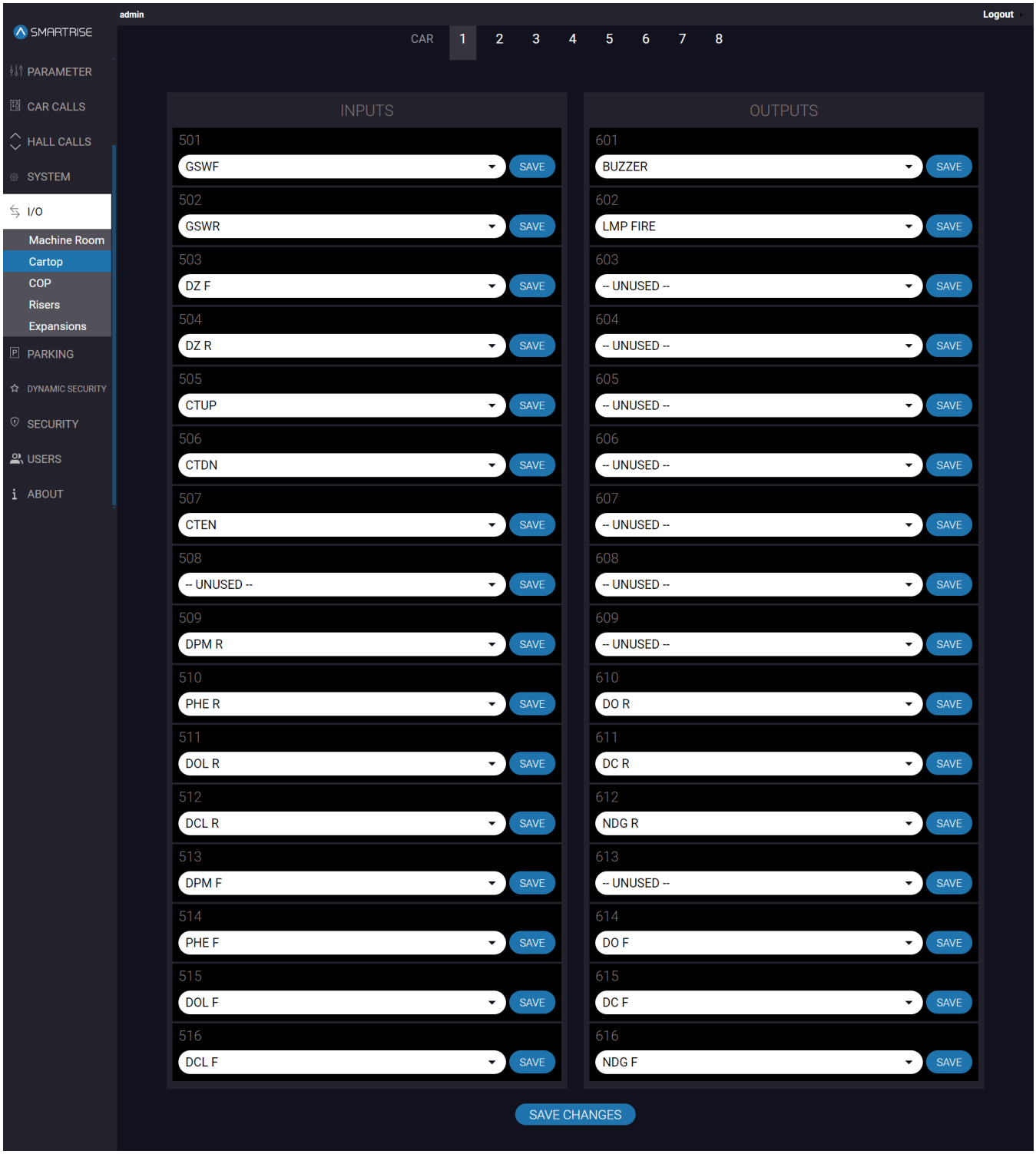

Figure 87: I/O Panel – Cartop

The table below lists the description of the I/O Panel - Cartop.

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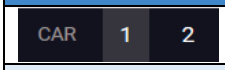
Table 27: I/O Panel - Cartop

Field	Description
	Allows the user to select the car label
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	
	Allows the user to save the selected type of input to Cartop board ports 501-516 or the selected type of output from the Cartop board ports 601-616
	Allows the user to save all input and output changes to the Cartop board ports 501-516 and from the Cartop board ports 601-616

Perform the following steps to update the Cartop Input/Output for a particular car:

1. Turn on DIP A4.
2. From the I/O Panel - Cartop, select the car label.
3. Click on each dropdown list and select the type of input and/or output.
4. Click SAVE or SAVE CHANGES.
   - A green save tag with a checkmark is displayed.

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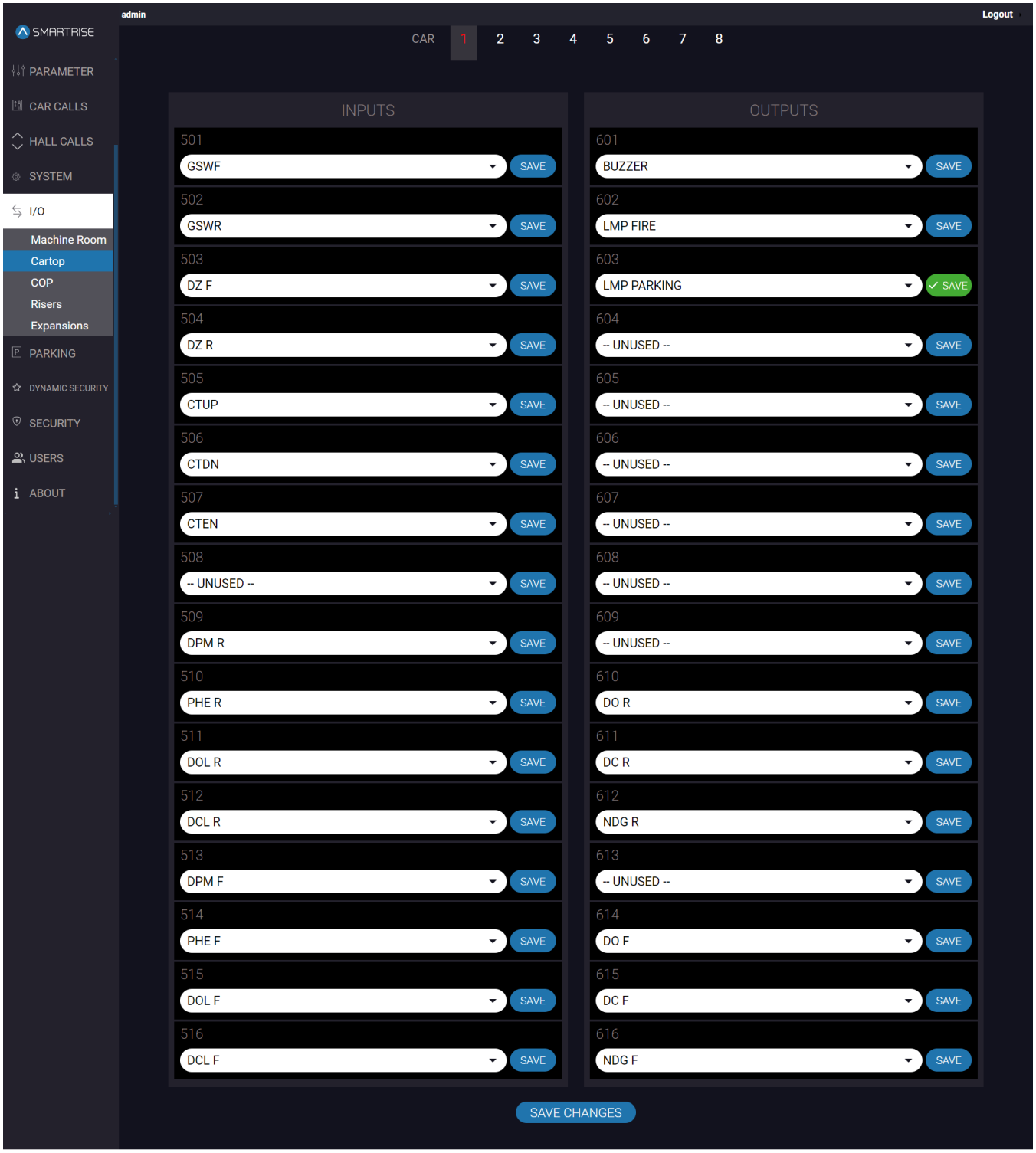

Figure 88: I/O Panel - Cartop SAVE

10.3 COP

On the COP board, each input and output is defined.

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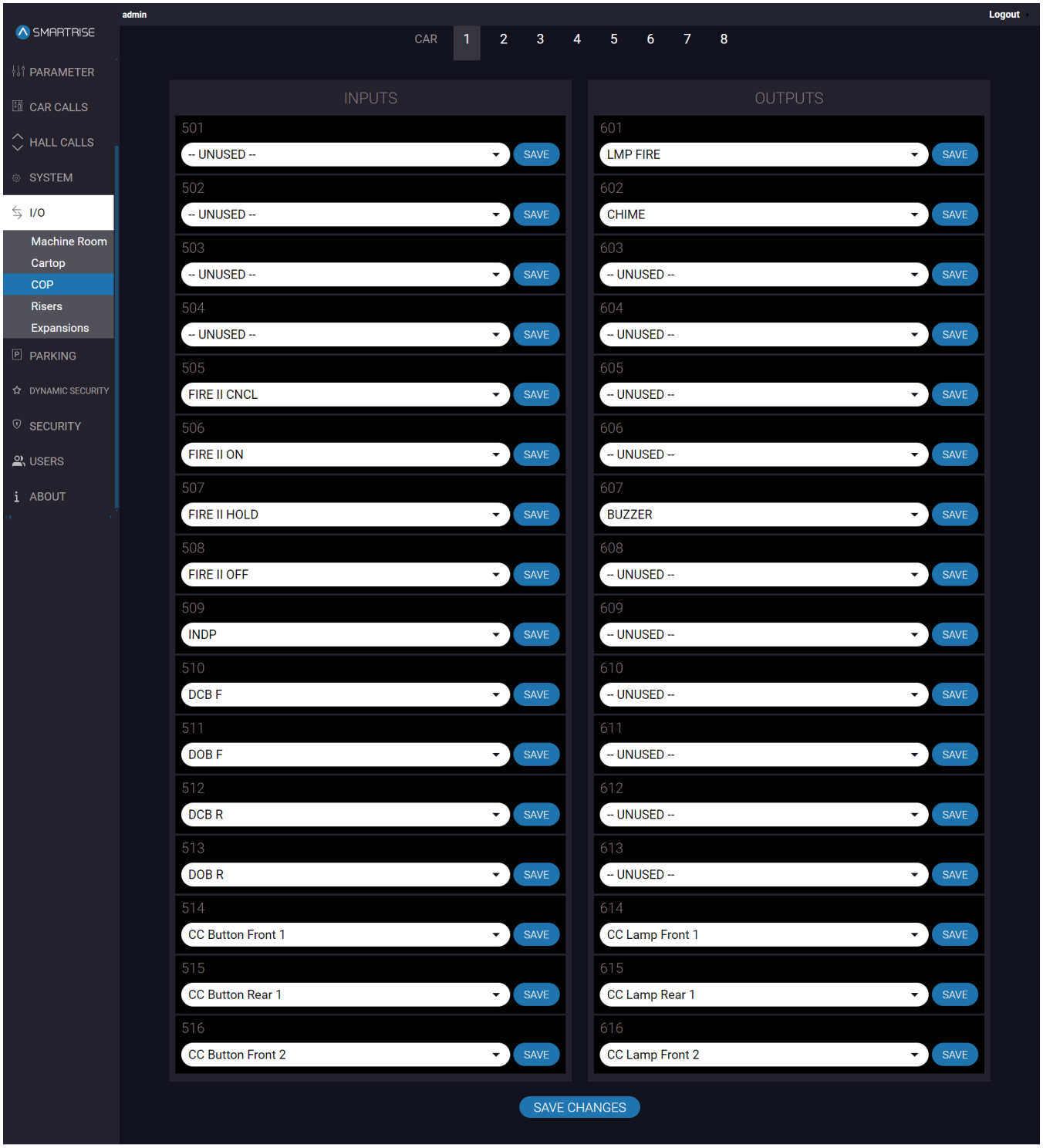

Figure 89: I/O Panel - COP

The table below lists the description of the I/O Panel - COP.

Table 28: I/O Panel - COP

Field	Description

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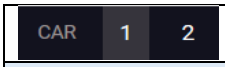	Allows the user to select the car label
INPUTS	
501-516	Allows the user to select the type of input to the COP board ports 501-516
OUTPUTS	
601-616	Allows the user to select the type of output from the COP board ports 601-616
Buttons	
	Allows the user to save the selected type of input to COP board ports 501-516 or the selected type of output from the COP board ports 601-616
	Allows the user to save all input and output changes to the COP board ports 501-516 and from the COP board ports 601-616

Perform the following steps to update the Machine Room Input/Output for a particular car:

1. Turn on DIP A4.
2. From the I/O Panel - COP, select the car label.
3. Click on each dropdown list and select the type of input and/or output.
4. Click SAVE or SAVE CHANGES.
   - A green save tag with a checkmark is displayed.

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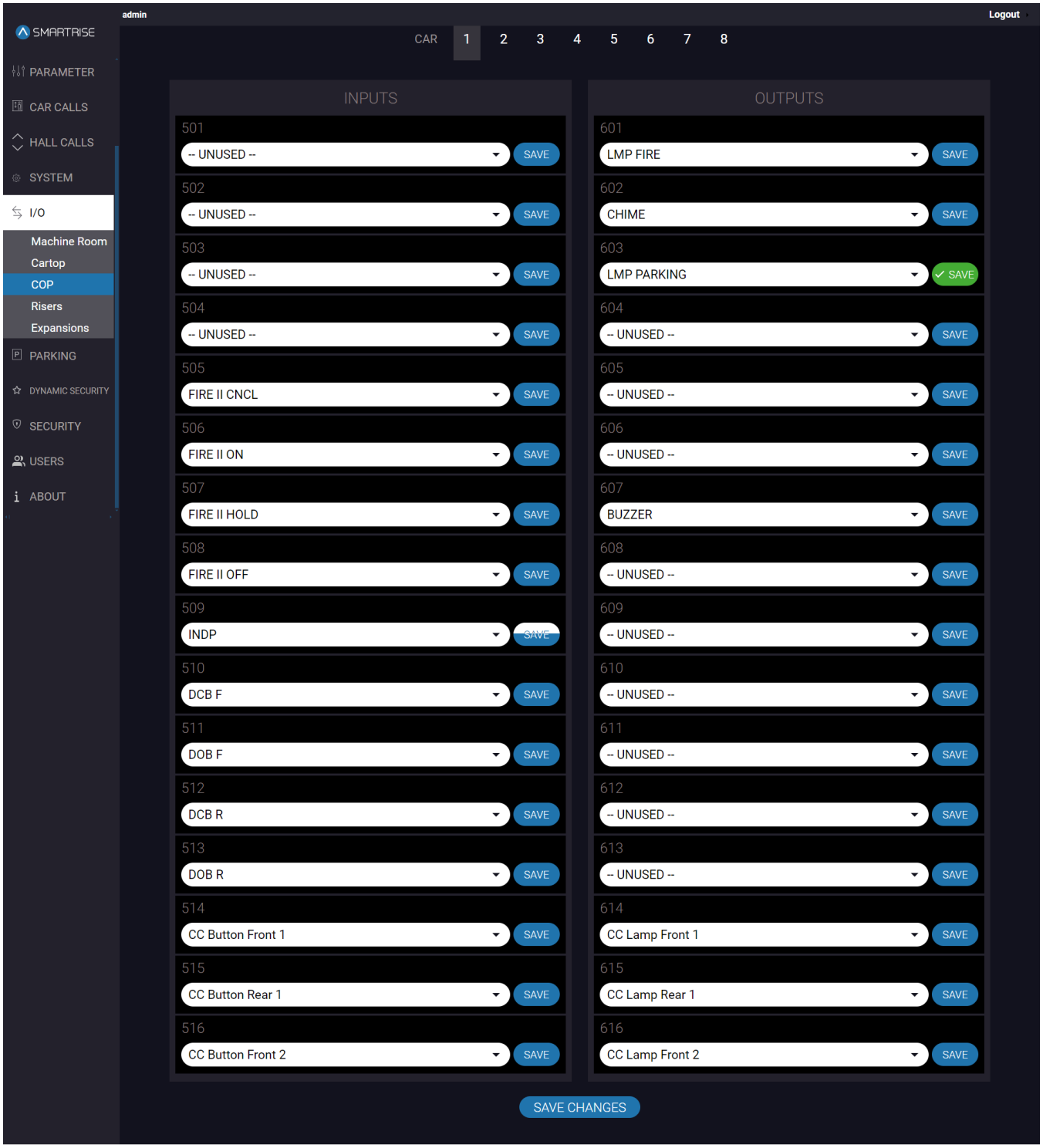

Figure 90: I/O Panel – COP SAVE

10.4 Risers

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

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

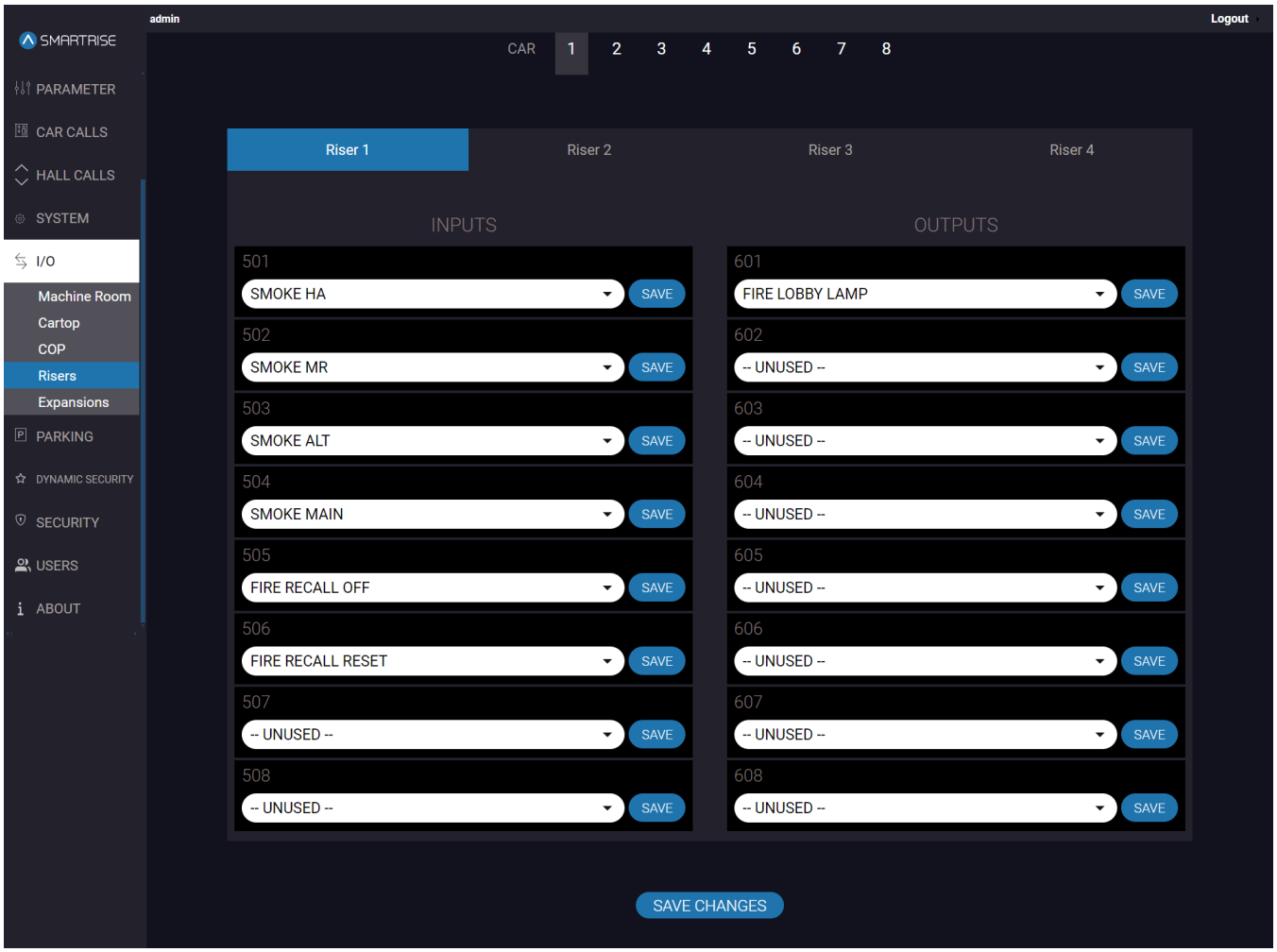

Figure 91: I/O Panel – Risers

The table below lists the description of the I/O Panel - Risers.

Table 29: I/O Panel - Risers

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

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SAVE	Allows the user to save the selected type of input to Riser board ports 501-508 or the selected type of output from the Riser board ports 601-608
SAVE CHANGES	Allows the user to save all input and output changes to the Riser board ports 501-508 and from the Riser board ports 601-608

Perform the following steps to update the Riser Input/Output for a particular car:

1. Turn on DIP A4.
2. From the I/O Panel - Riser, select the car label.
3. Click on each dropdown list and select the type of input and/or output.
4. Click SAVE or SAVE CHANGES.
   - A green save tag with a checkmark is displayed.

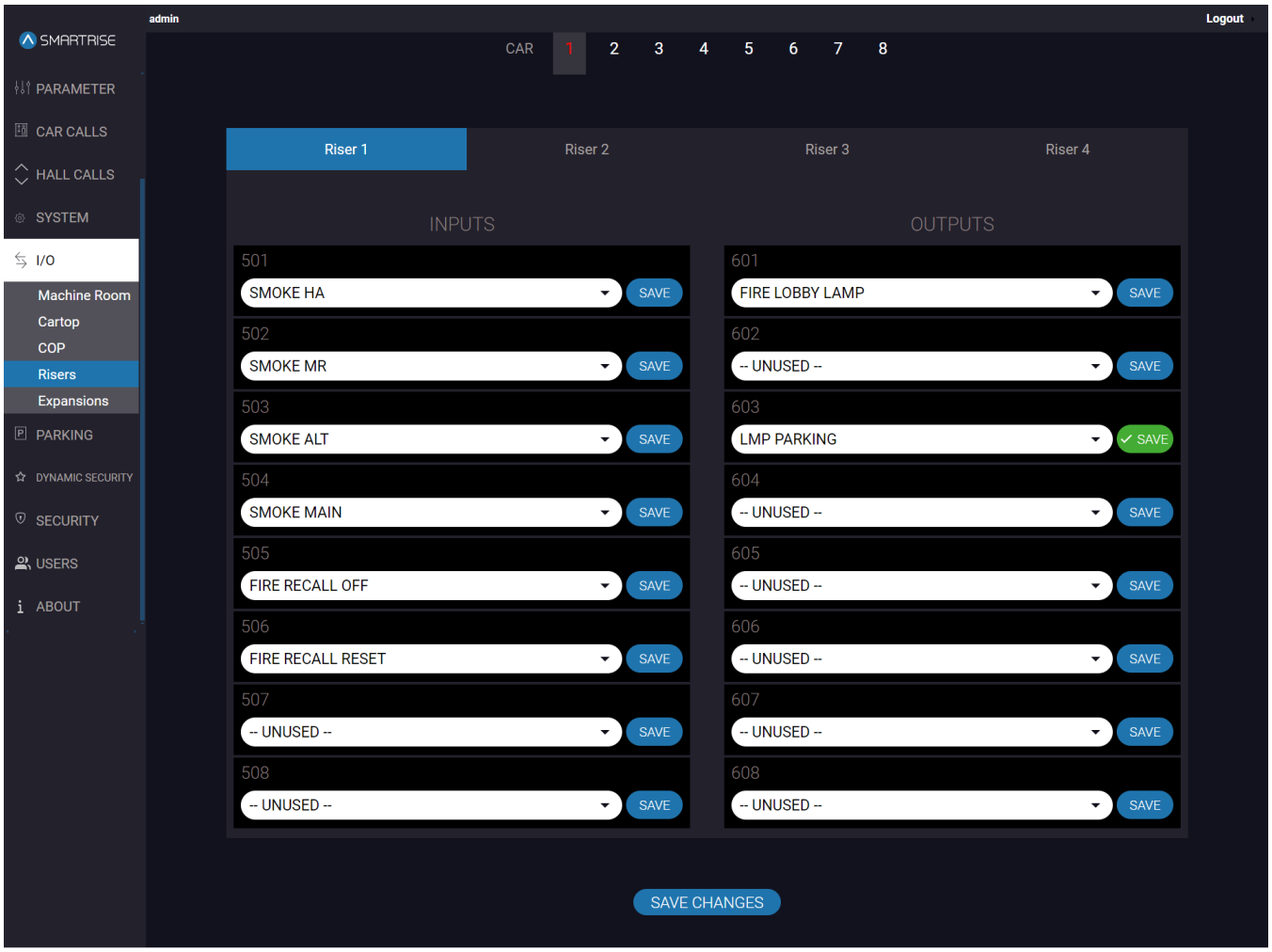

Figure 92: I/O Panel - Risers SAVE

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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.

Once the user selects the Expansion board from the dropdown; the screen below is displayed:

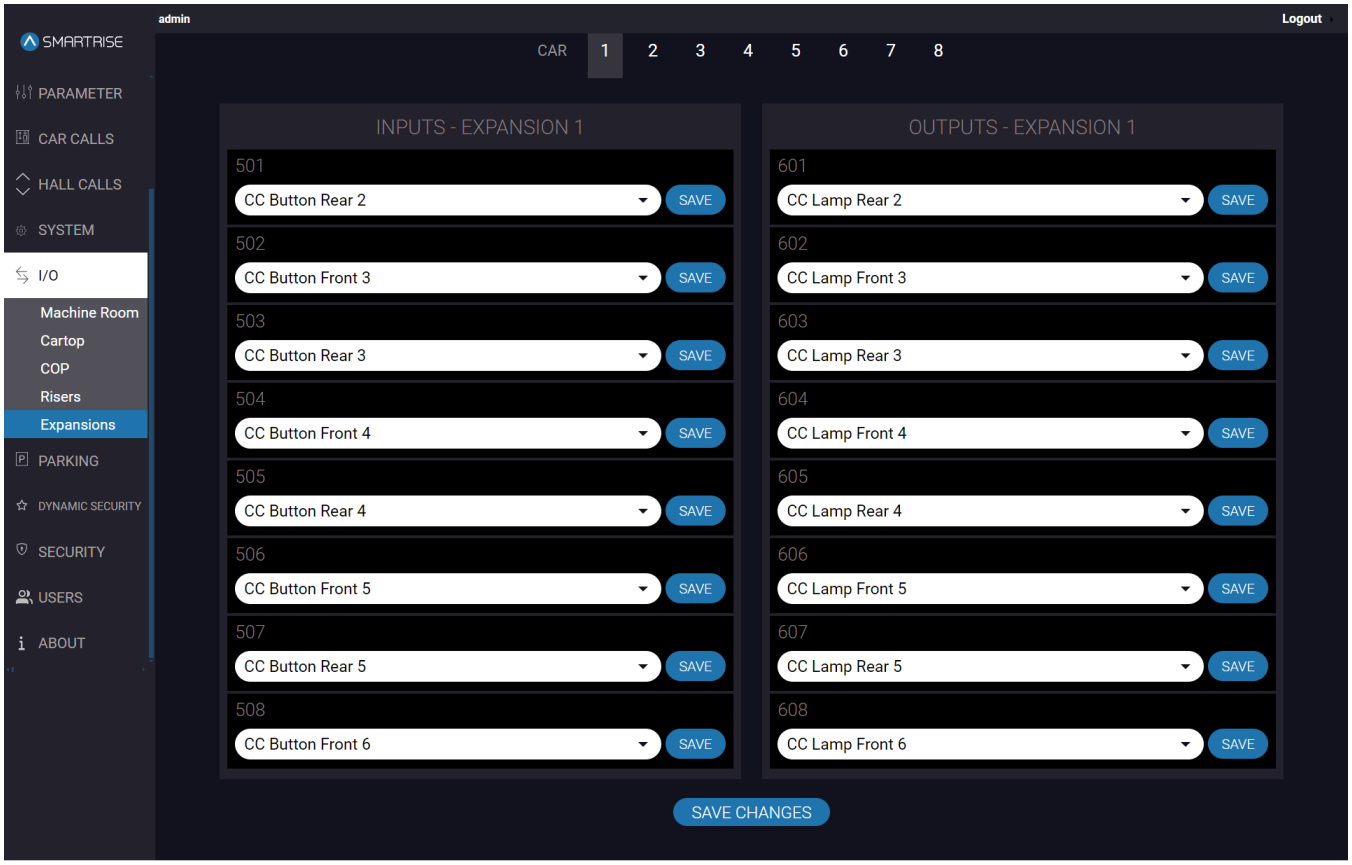

Figure 93: I/O Panel – Expansions

The table below lists the description of the I/O Panel - Expansions.

Table 30: I/O Panel - Expansions

Field	Description
Expansion 1	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	

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SAVE	Allows the user to save the selected type of input to Expansion board ports 501-508 or the selected type of output from the Expansion board ports 601-608
SAVE CHANGES	Allows the user to save all input and output changes to the Expansion board ports 501-508 and from the Expansion board ports 601-608

Perform the following steps to update the Expansion Input/Output for a particular car:

1. Turn on DIP A4.
2. From the I/O Panel - Expansion, click on the dropdown list and select the Expansion board to which inputs and outputs will be assigned.

Figure 94: I/O Panel - Expansions SELECT EXPANSION BOARD

1. Click on each dropdown list and select the type of input and/or output.
2. Click SAVE or SAVE CHANGES.
   - A green save tag with a checkmark is displayed.

NOTE: This process must be repeated for each expansion board.

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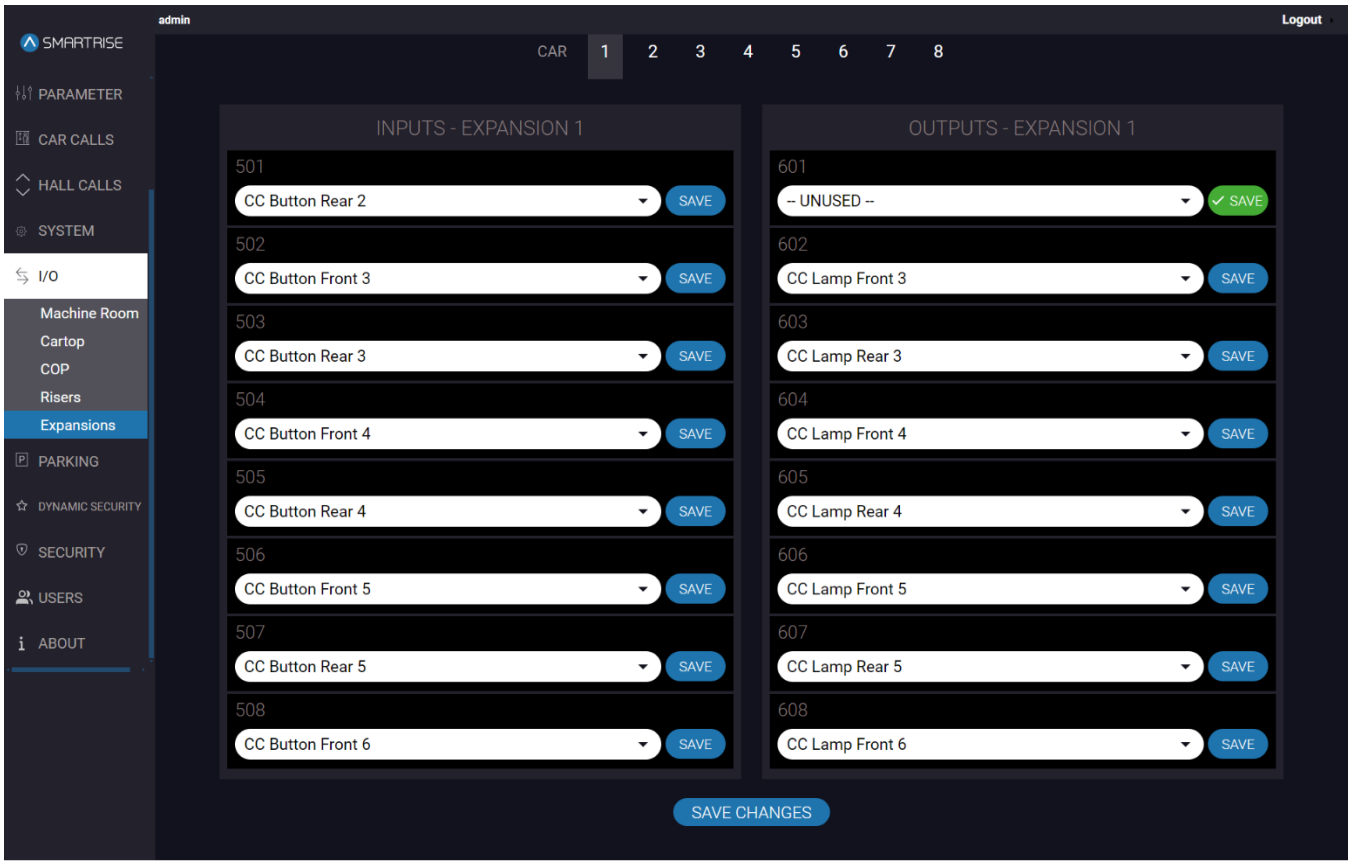

Figure 95: I/O Panel – Expansions SAVE

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11 PARKING

The PARKING panel allows the user to move an idle car/group of cars to a designated floor. The purpose of PARKING is to reduce the amount of time it takes to service busy floors.

For example: when a car has finished all its requests, it will return to the parking floor and remain there until another request is made.

11.1 Calendar

The Calendar subpanel displays where a car/ group of cars will park according to the rules for a specific time and day of the week. Rules also specify whether the doors will open or remain closed.

Figure 96: PARKING Panel - Calendar

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The table below lists the description of the PARKING Panel - Calendar.

Table 31: PARKING Panel - Calendar

Field	Description
Day & Time	Displays the parking rules for a car/ group of cars for a specific day and time
Buttons	
Car Specific Rule	Indicates a car-specific parking rule for specific days and times
Any Car Rule	Indicates a floor-specific parking rule for specific days and times
Historical Parking	Indicates historical data of parking rules for all cars for specific days and times
[ ] Park with door open	Indicates that the door state for the applied rule will be open (i.e., the car will park with open doors)
[|] Park with doors closed	Indicates that the door state for the applied rule will be closed (i.e., the car will park with closed doors)

11.2 Rules

The Rules subpanel allows the user to create parking rules.

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

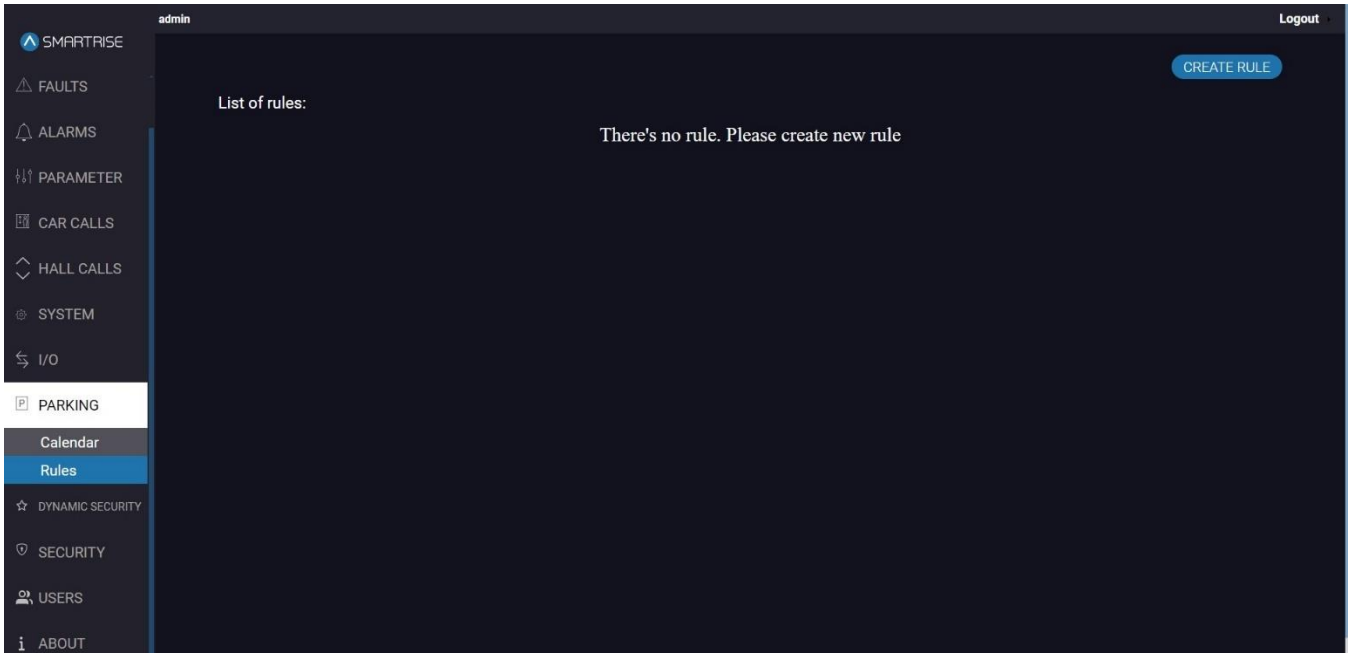

Figure 97: PARKING Panel

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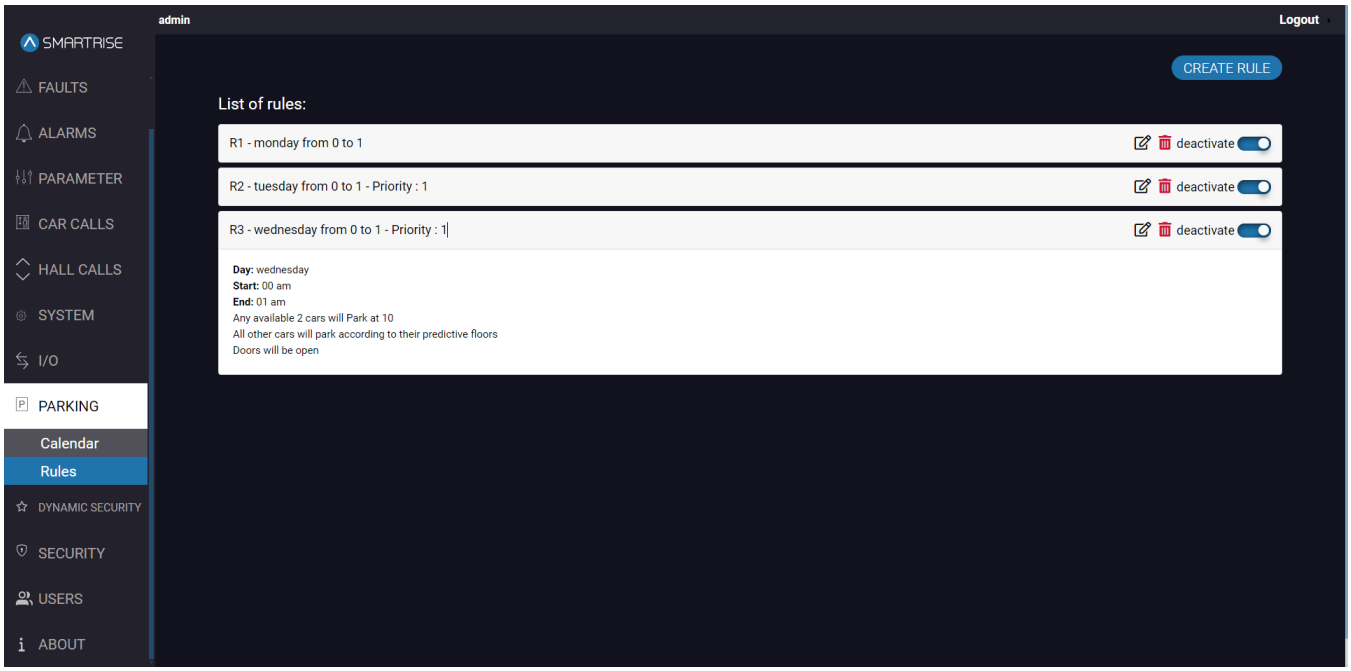

Figure 98: PARKING Panel - Rules

The table below lists the description of the PARKING Panel - Rules.

Table 32: PARKING Panel - Rules

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

Perform the following steps to create Parking Rules:

1. From the PARKING Panel - Rules, click on CREATE RULE.
2. Is the rule created for a specific car or floor:
   i. Car-specific: go to Step 3.

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ii. Floor-specific: go to Step 5.

3. The CREATE RULE – Car-specific pop-up is displayed.

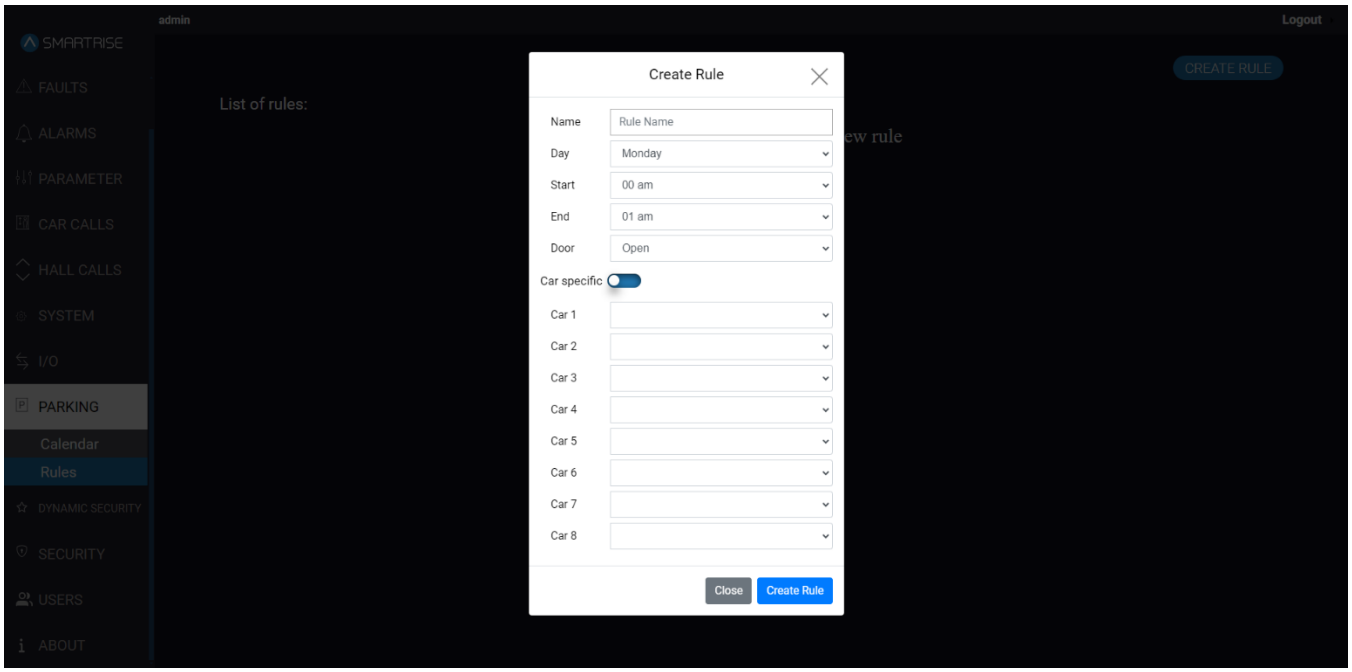

Figure 99: PARKING Panel – Rules CREATE RULE [Car-specific popup]

4. Fill the required fields and click 'Create Rule'.

   - The rule is displayed on PARKING Panel – Rules.

5. The CREATE RULE – Floor-specific pop-up will be displayed.

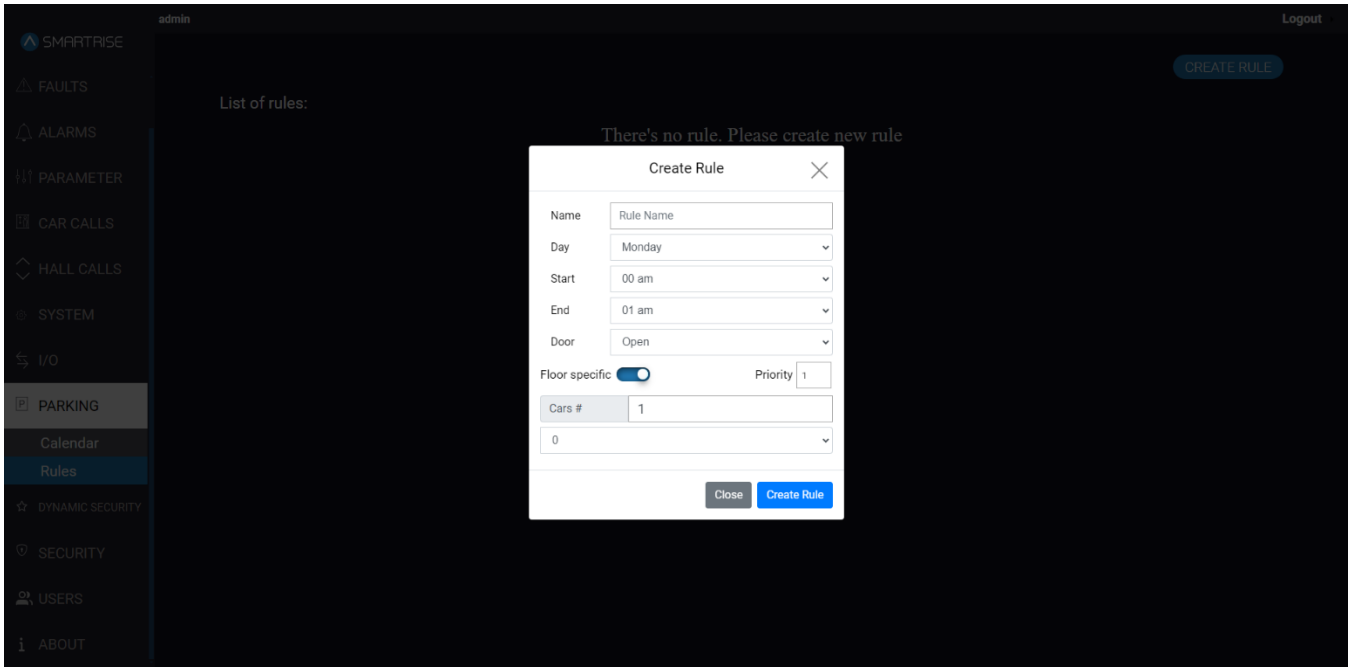

Figure 100: PARKING Panel - Rules: CREATE RULE [Floor-specific popup]

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6. Fill the required fields and click ‘Create Rule’.
   - The rule is displayed on PARKING Panel – Rules.

The table below lists the description of the CREATE RULE pop-up.

Table 33: PARKING Panel - Rules: CREATE RULE popup

Field	Description
Name	Allows the user to enter the rule’s name
Day	Allows the user to enter to rule’s effective day
Start	Allows the user to select the rule’s start time
End	Allows the user to select the rule’s end time
Door	Allows the user to select whether the car door is open or closed
Car specific	Allows the user to set a rule for a specific car to park on a specific floor
Floor specific	Allows the user to set a rule for any available car(s) to park on a specific floor
Priority	Allows the user to select the rule’s priority. *Priority only applied to floor-specific rules*
Car [X]	Allows the user to select the designated floor for each Car Label from the dropdown to which this rule is set for
Car #	Allows the user to select the number of cars to which this rule is set for
Buttons	
Create Rule	Allows the user to save the parking rule
Close	Allows the user to close the CREATE RULE popup without saving the parking rule

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12 DYNAMIC SECURITY

The DYNAMIC SECURITY panel allows the user to secure a door or an entry point. The purpose of DYNAMIC SECURITY is to help individuals access cars that are “open” to them. This helps preventing specific people from entering specific cars.

12.1 Rules

Security Rules are created to lock a car(s) for a specific time and day of the week.

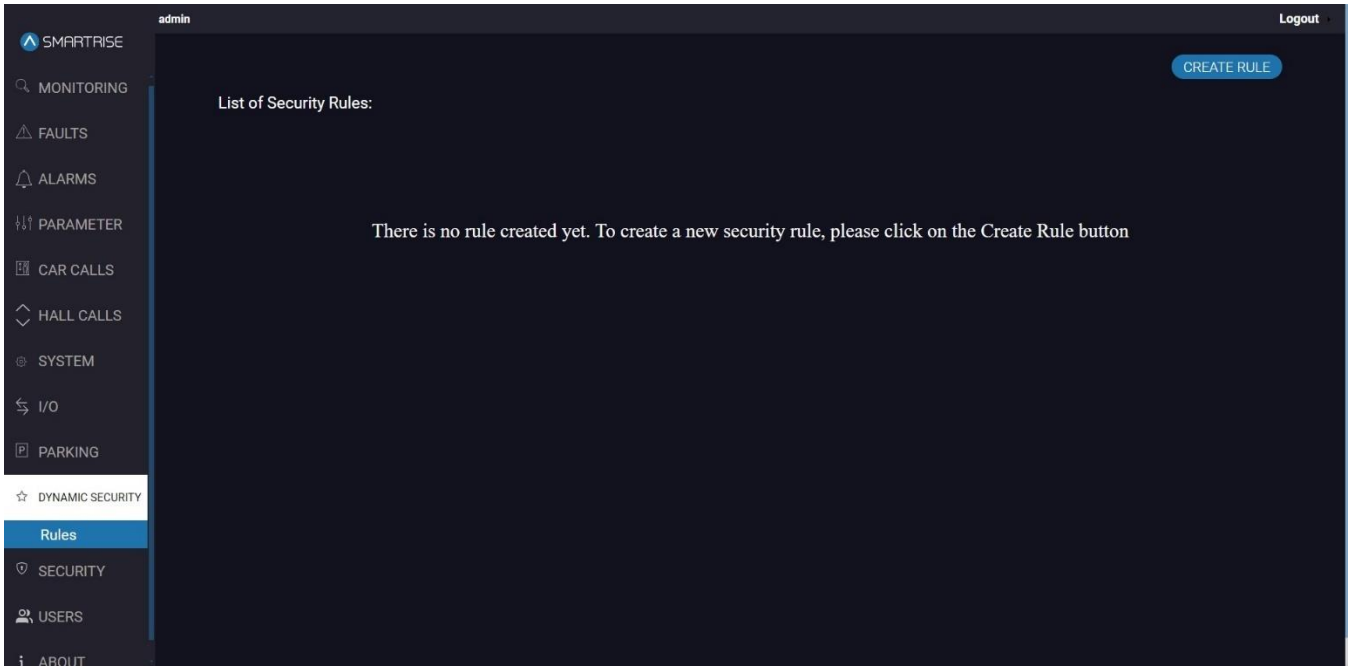

Figure 101: DYNAMIC SECURITY Panel

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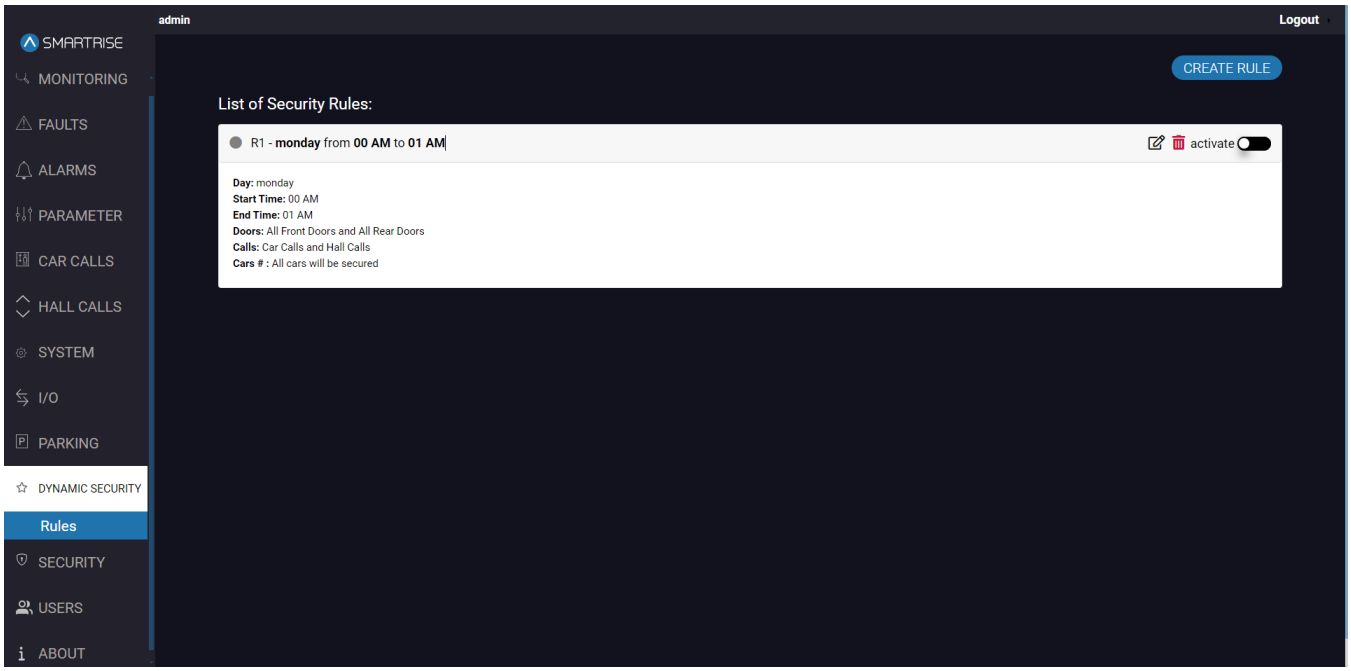
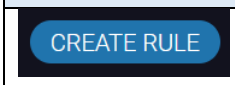
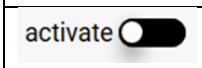
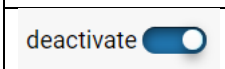


Figure 102: DYNAMIC SECURITY Panel – Rules

The table below lists the description of the DYNAMIC SECURITY Panel - Rules.

Table 34: DYNAMIC SECURITY Panel - Rules

Field	Description
List of Security Rules	Displays a list of all security rules
	Represents a non-current rule
	Represents a current rule
Buttons	
	Allows the user to create a security rule
	Allows the user to edit a security rule
	Allows the user to delete a security rule
	Allows the user to activate a security rule by sliding the button to the left
	Allows the user to deactivate a security rule by sliding the button to the right

Perform the following steps to create security rules:

1. From the DYNAMIC SECURITY Panel - Rules, click on CREATE RULE.
2. The CREATE RULE popup is displayed.

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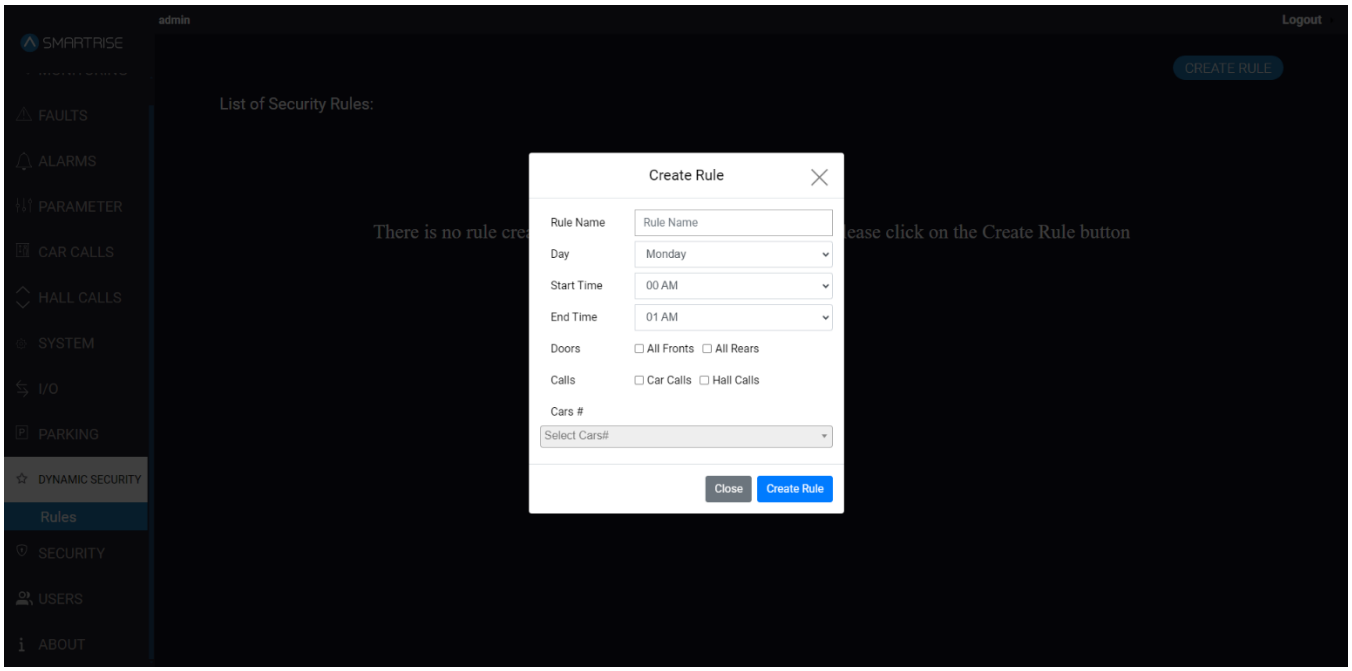

Figure 103: DYNAMIC SECURITY – Rules CREATE RULE popup

3. Fill the required fields and click **'Create Rule'.**
   - The rule is displayed on the DYNAMIC SECURTY Panel – Rules

NOTE: the Rule is created by default in a deactivated state.

The table below lists the description of the CREATE RULE popup.

Table 35: DYNAMIC SECURITY Panel - Rules CREATE RULE popup

Field	Description
Rule Name	Allows the user to enter the rule's name
Day	Allows the user to enter to rule's effective day
Start Time	Allows the user to select the rule's start time
End Time	Allows the user to select the rule's end time
Doors	Allows the user to select which door the rule is applied to
Calls	Allows the user to select which calls the rule is applied to
Cars#	Allows the user to select which cars the rules is applied to
Buttons	
Create Rule	Allows the user to save the security rule
Close	Allows the user to close the CREATE RULE popup without saving the security rule

NOTE: for DYNAMIC SECURITY, the following parameters should have the following values:

- 235 (Disable Virtual Input) OFF
- 1-257 (Enable Remote Security) ON

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- 1-173 (Disable DOB Secured FLR) ON
- 1-138 (Enable Hall Security) ON

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13 SECURITY

The SECURITY panel allows the user to secure a floor or an entry point. Unauthorized personnel cannot access these secured floors.

NOTE: “R” indicates rear doors.

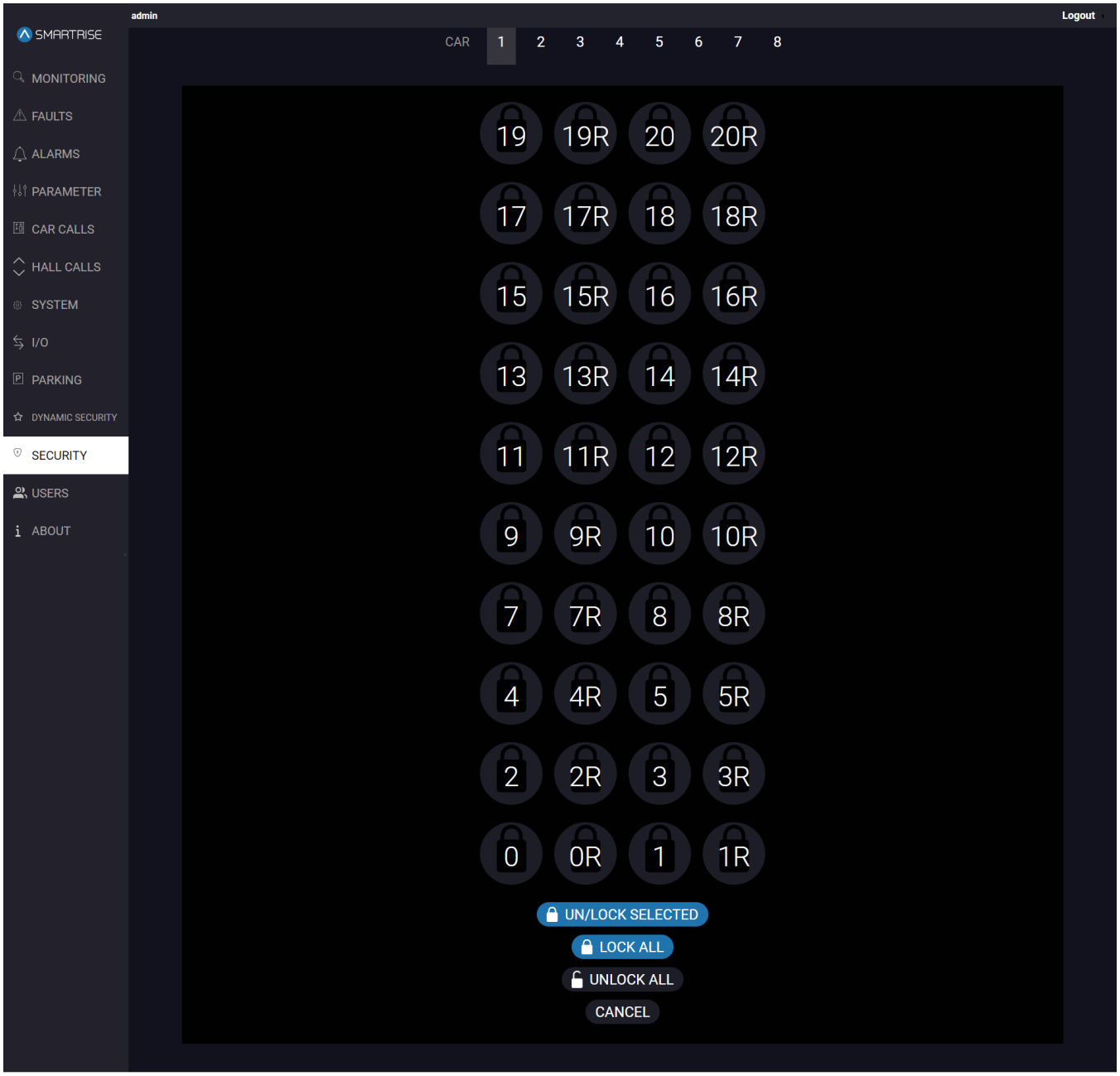

Figure 104: SECURITY Panel

Perform the following steps to secure a floor for a particular car:

1. From the SECURITY Panel, select the car label.

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2. Click on the floor number.
   - The color of the call button turns blue when the user locks the floor and turns to default dark grey when the user unlocks the floor.

     NOTE: the user can select specific floors to lock/unlock or the user can lock/unlock all floors.

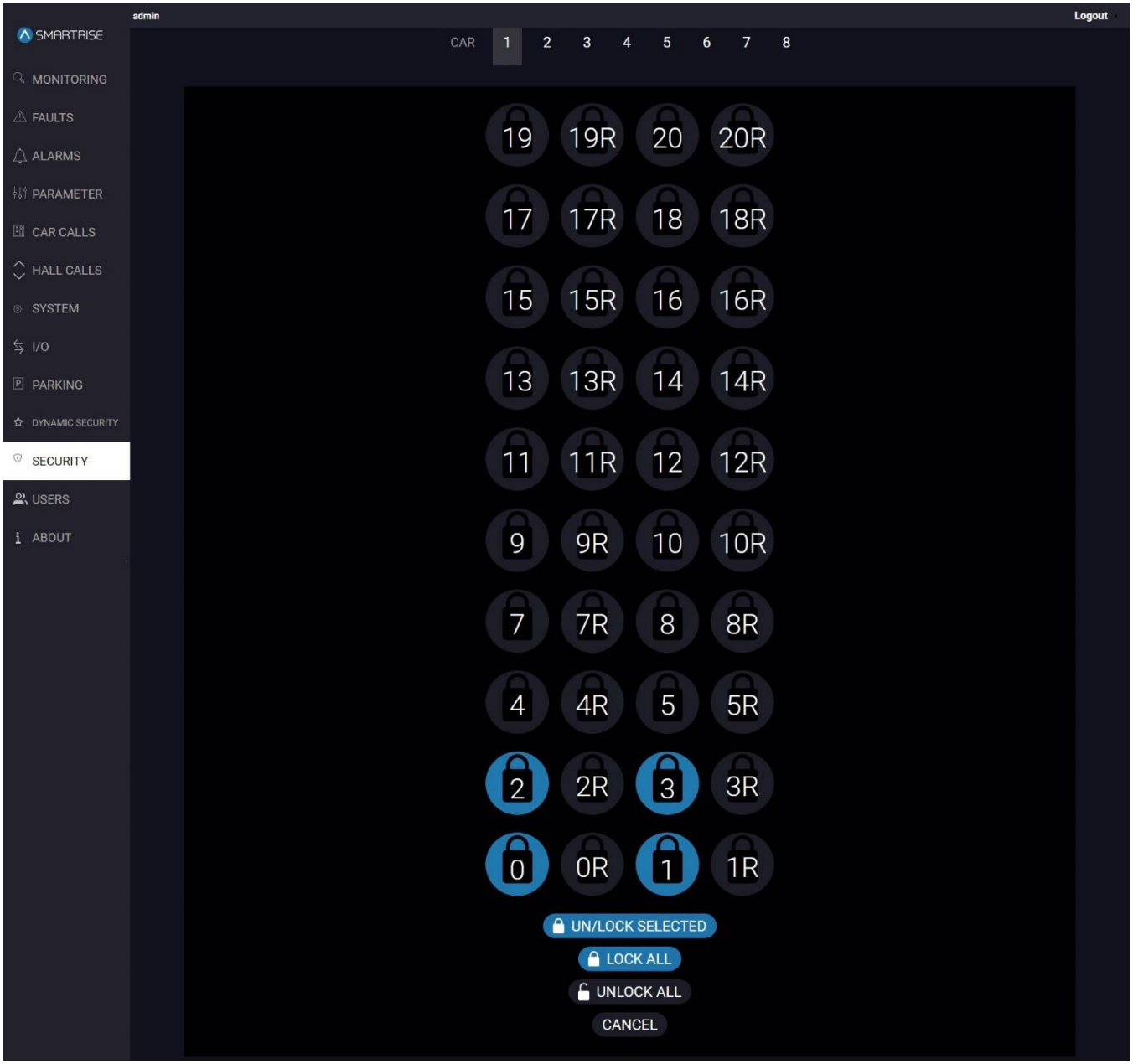

Figure 105: SECURITY Panel Active

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14 USERS

The USERS panel permits the creation of a new user, the ability to change the password of the current logged-in user, and to display the list of users available on the system.

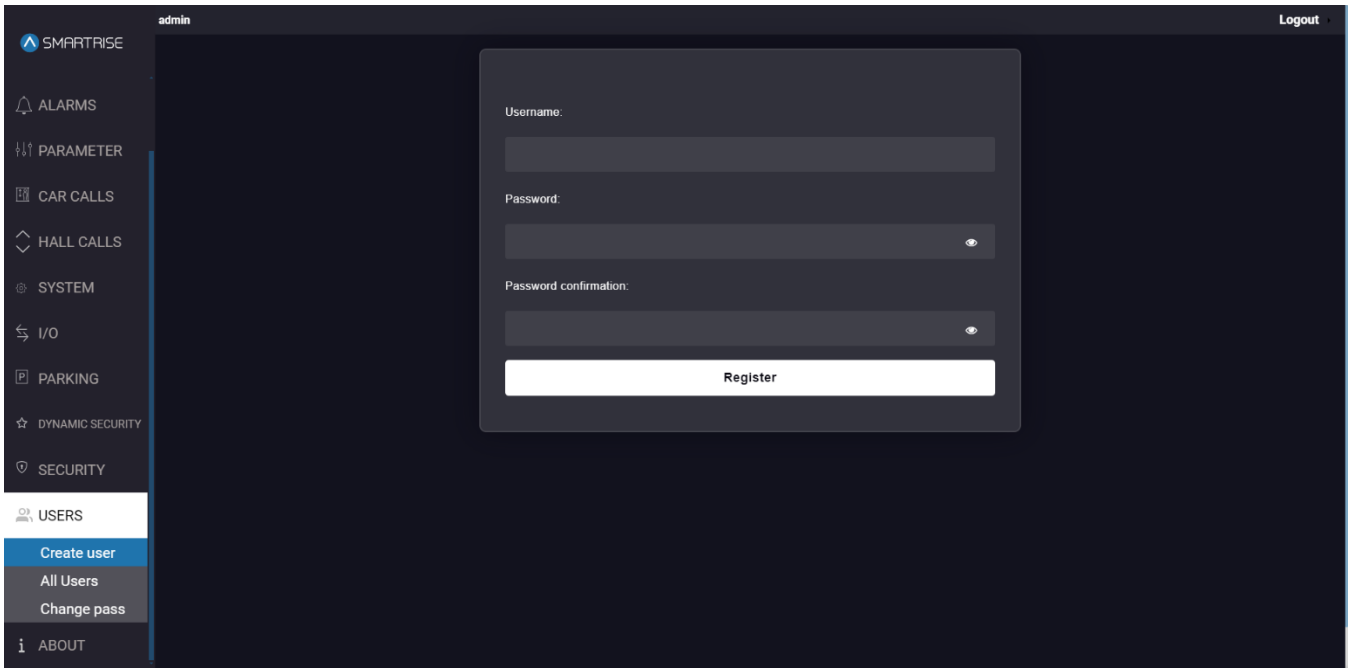

Figure 106: USERS Panel - Create User

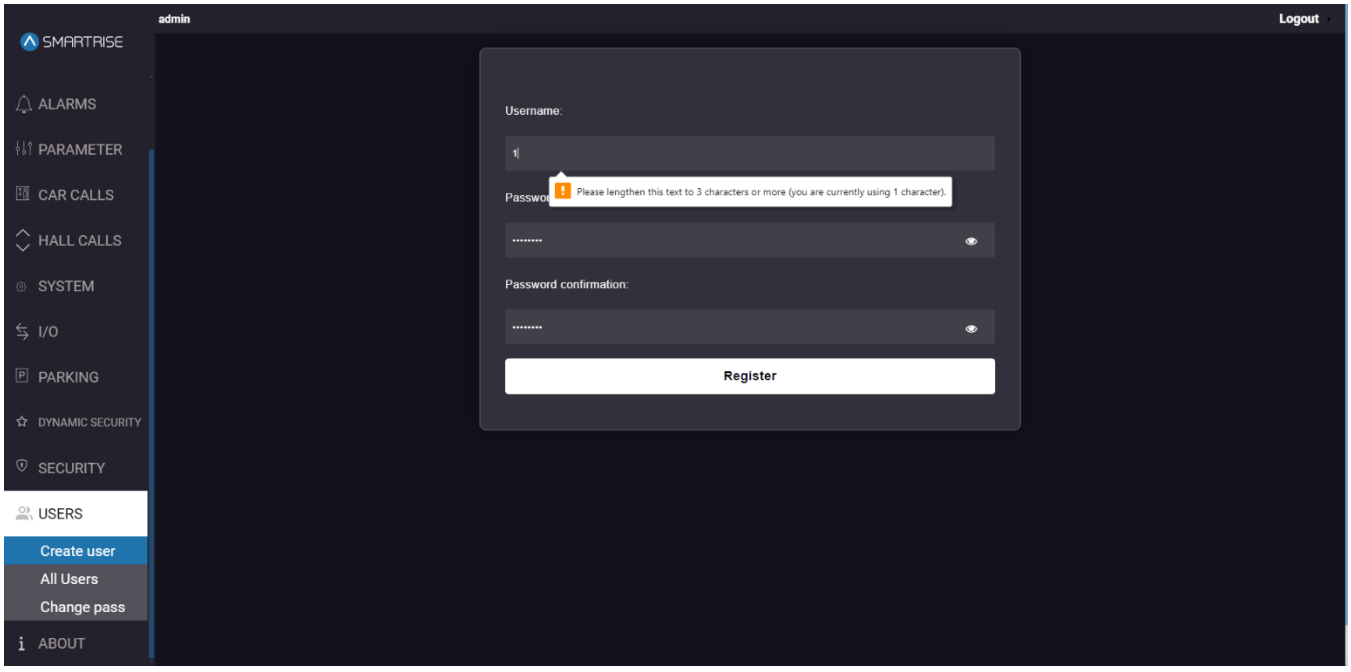

Figure 107: USERS Panel - Create User USERNAME VALIDATION

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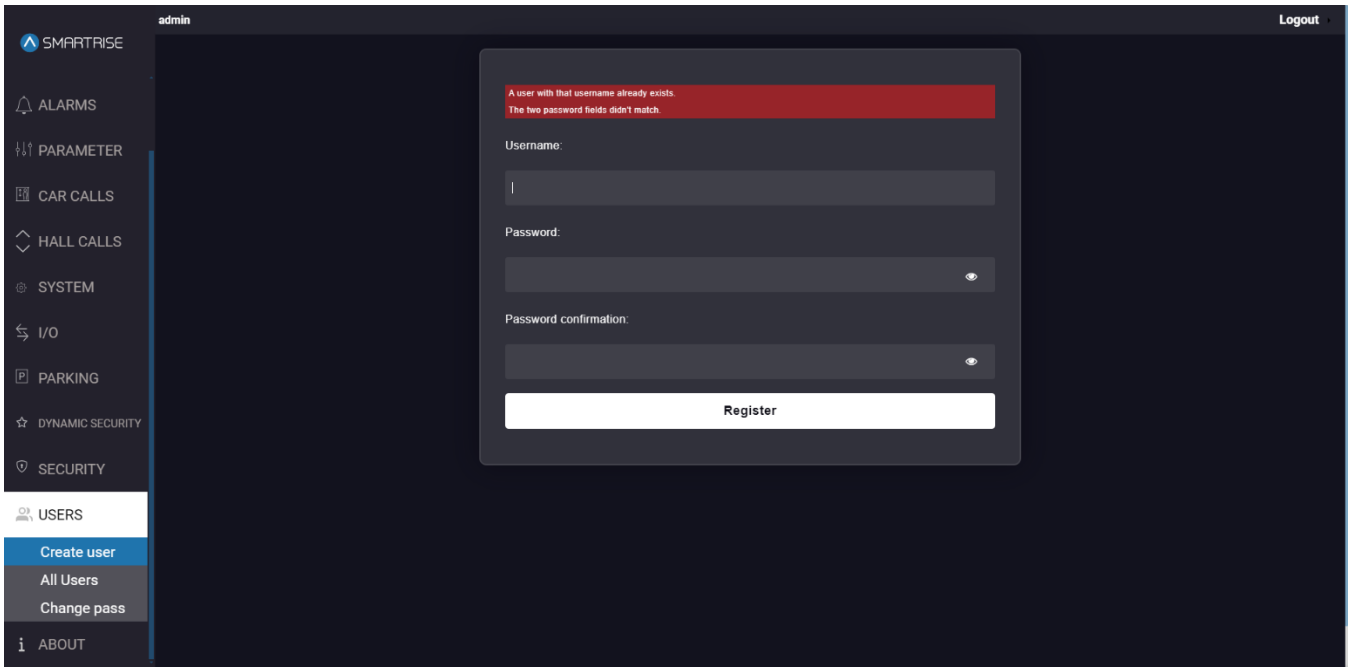

Figure 108: USERS Panel - Create User PASSWORD VALIDATION

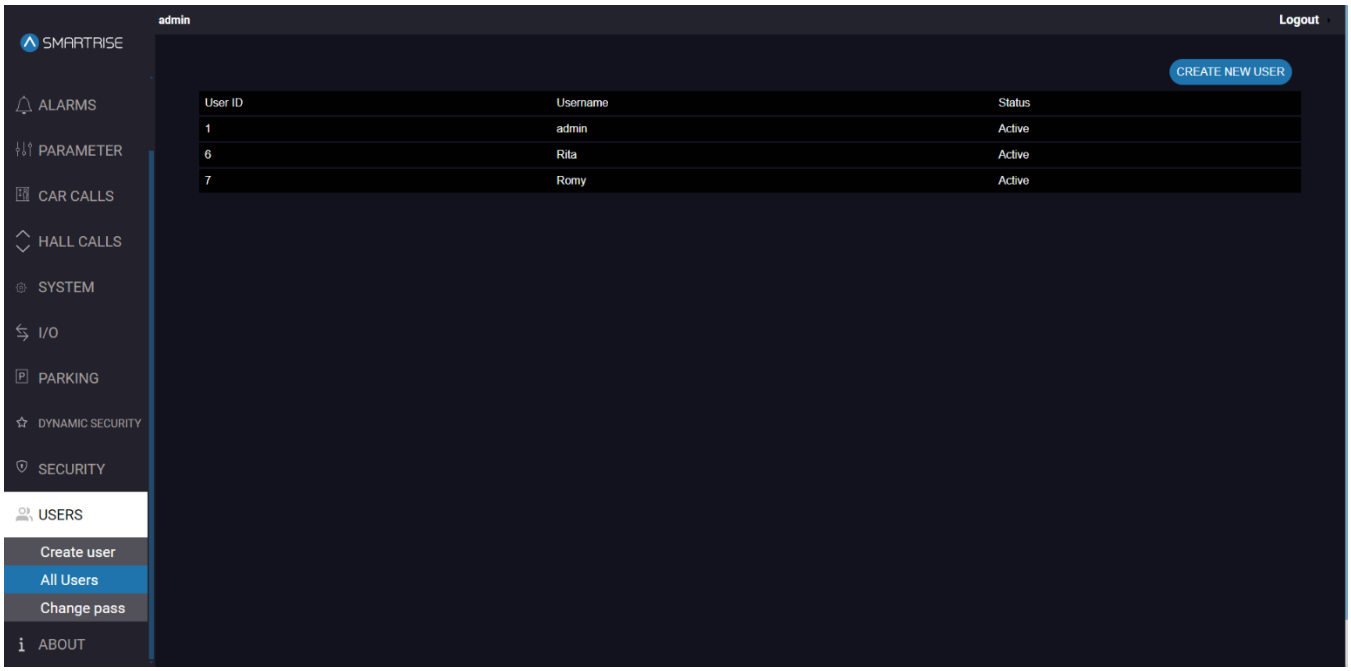

Figure 109: USERS Panel - All Users

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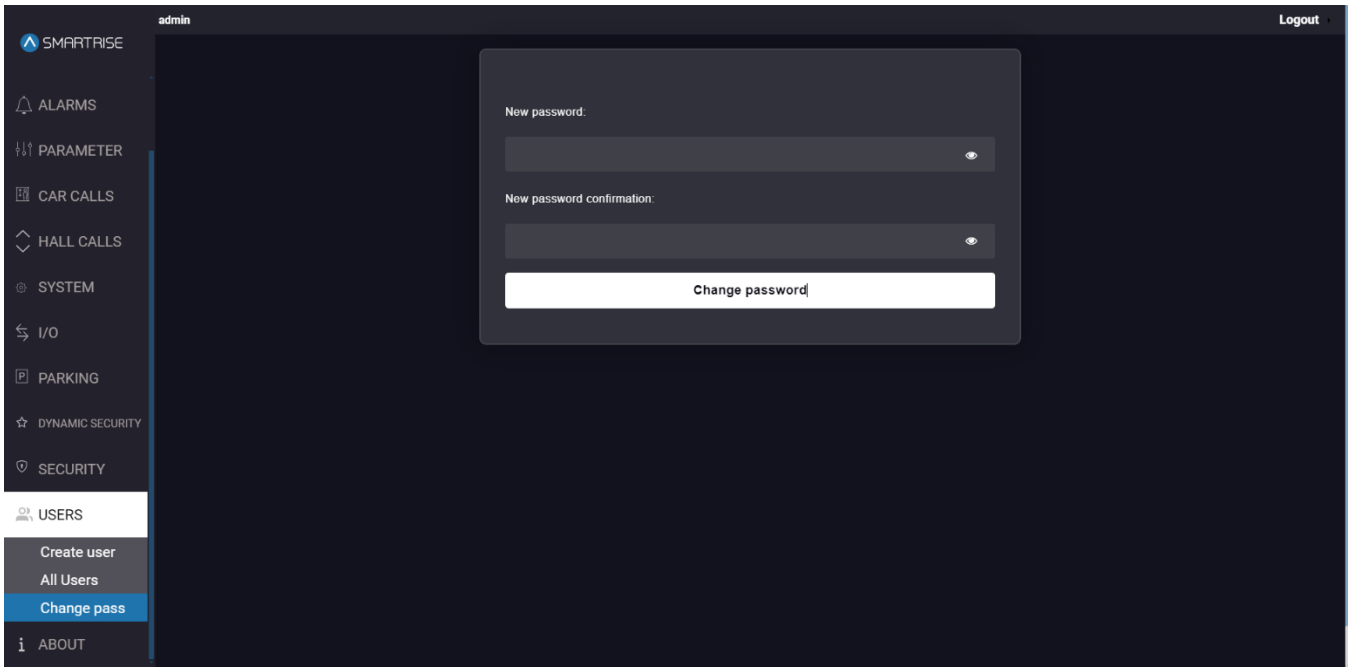

Figure 110: USERS Panel - Change Password

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15 ABOUT

The ABOUT Panel displays the current software and validity of system files and database tables.

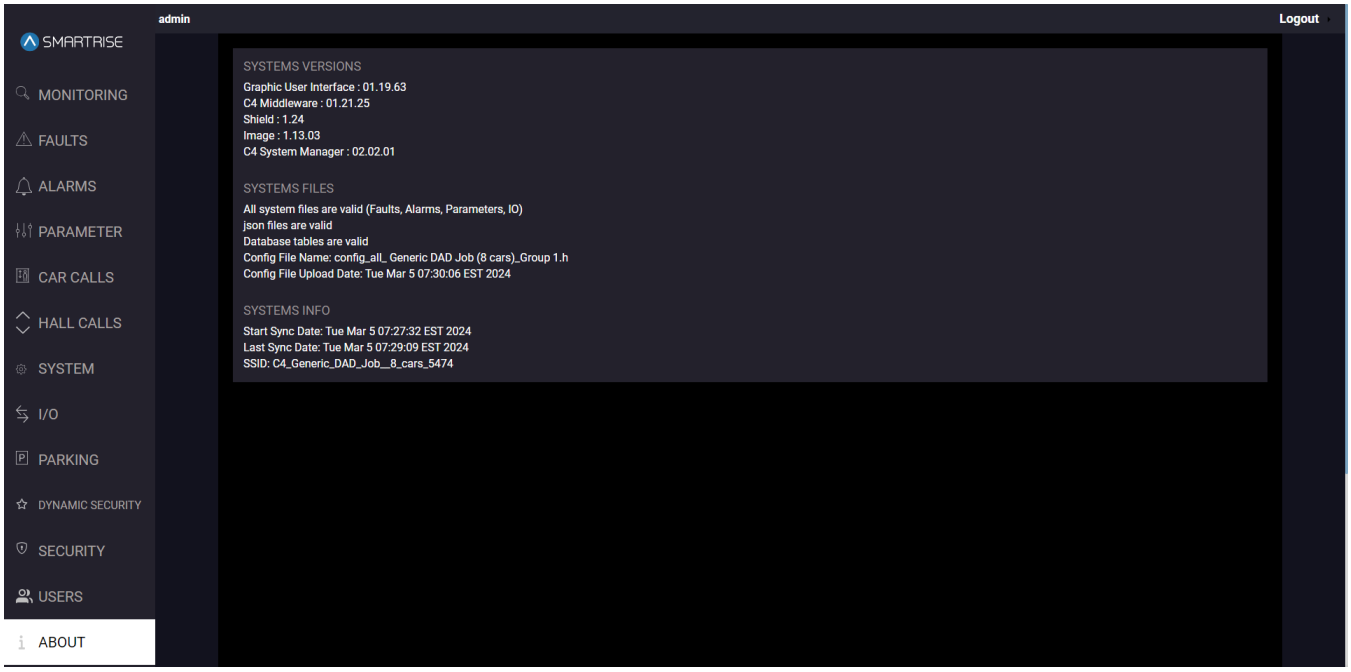

Figure 111: ABOUT Panel: TRACTION JOB

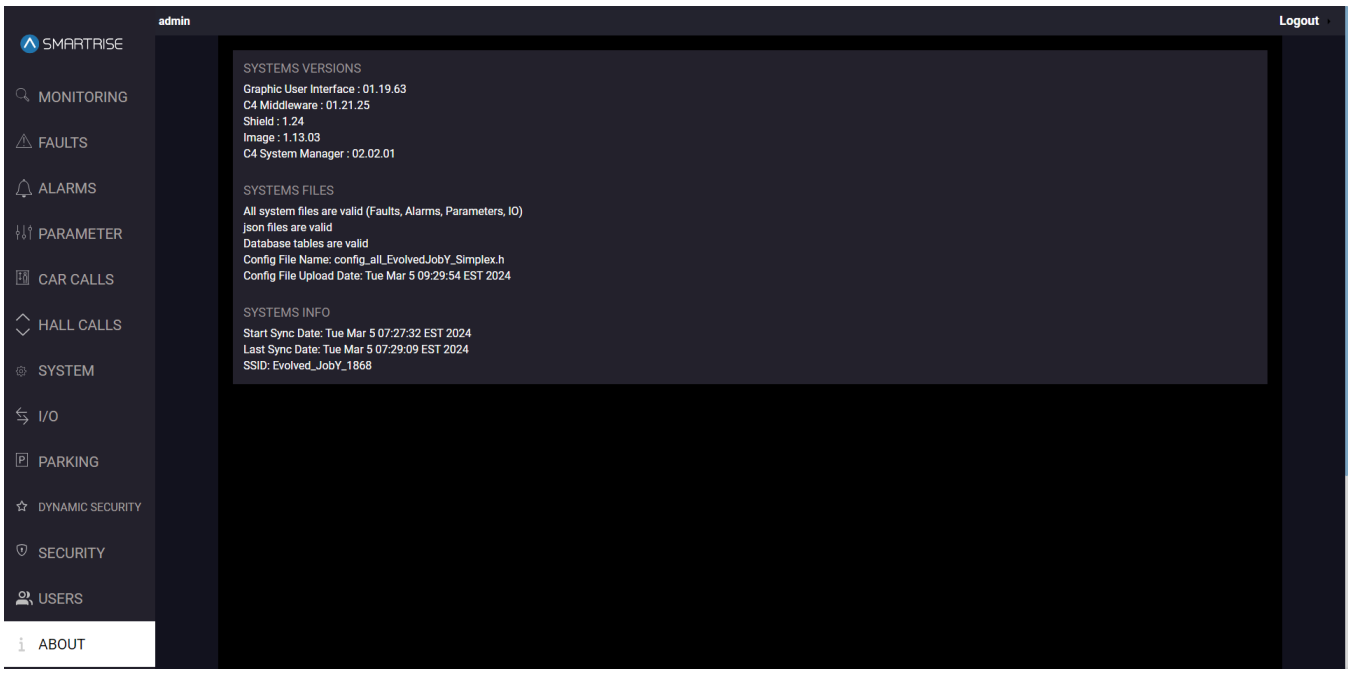

Figure 112: ABOUT Panel: HYDRO JOB

The table below lists the description of the ABOUT Panel.

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Table 36: ABOUT Panel

Field	Description
SYSTEM VERSIONS	Displays current System Version
SYSTEM FILES	Displays validity of files and databases
SYSTEM INFO	Displays the start and end of the sync process along with the Wi-Fi SSID

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List of Abbreviations

COP Car Operating Panel
CT Car Top
DAD Data Acquisition Device
GUI Graphical User Interface
HB Heartbeat
LM Local Monitor
MR Machine Room
PI Position Indicator

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