

The Adventure Starts Now. Explore. Find Out. Live. Free

2025

Tiffin Allegro Open Road

Integration Schematic



SPYDER
CONTROLS CORP



ALLEGRO OPEN ROAD



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Schematic Connections Legend



Constant Ground



Constant 12V+



Switched Ground



Switched 12V+



Reverse Polarity



Signal



120V AC Line

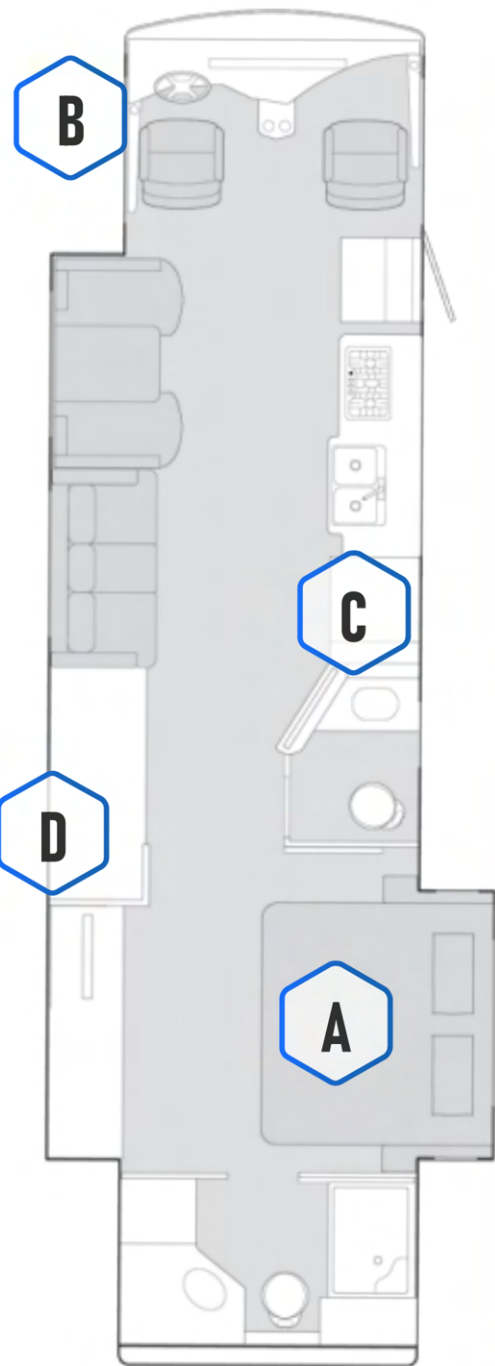


Network

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Schematic Connections Legend

	Constant Ground
	Constant 12V+
	Switched Ground
	Switched 12V+
	Reverse Polarity
	Signal
	120V AC Line
	Network



A **G12 Module**

i **Spyder Part #**
BMODZU2VU

Tiffin Part #
5126984

Dimensions
9" X 6"

NET LED

NET PORTS

A close-up photograph of the G12 Module. A blue line points from the 'NET LED' label to a small green LED on the right side. Another blue line points from the 'NET PORTS' label to a row of ports at the bottom.

B **M1 Front Panel**

i **Spyder Part #**
BENCZM2DS

Tiffin Part #
5126983

Dimensions
10" X 7.8"

A photograph of the M1 Front Panel, which is a rectangular panel with a red and blue color scheme and various electronic components.

C **7" Pro LCD**

i **Spyder Part #**
BSSPZZXXX

Tiffin Part #
TBD

Dimensions
7.6" X 5"

A photograph of a black 7-inch Pro LCD screen.

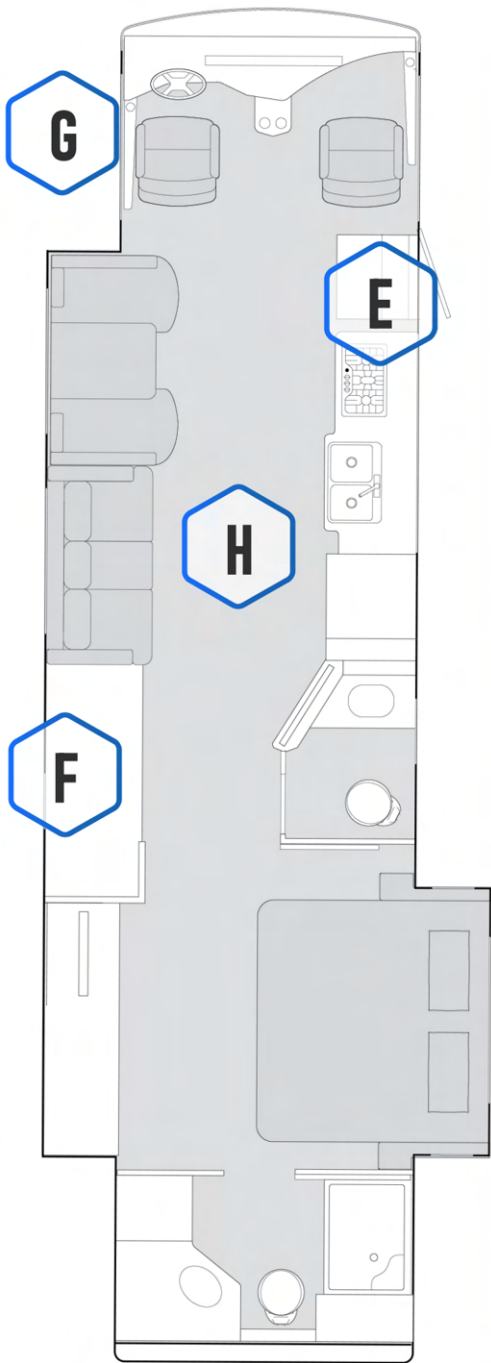
D **DCD Panel**

i **Spyder Part #**
BENCZ38DS

Tiffin Part #
5127268

Dimensions
10" X 4"

A photograph of the DCD Panel, a vertical control panel with a TIFFIN MOTORHOMES logo, an INVERTER MASTER SWITCH, and a HOUSE BATTERY MASTER SWITCH. It also features a BREAKER LEGEND with six numbered items.



E 5" Color LCD



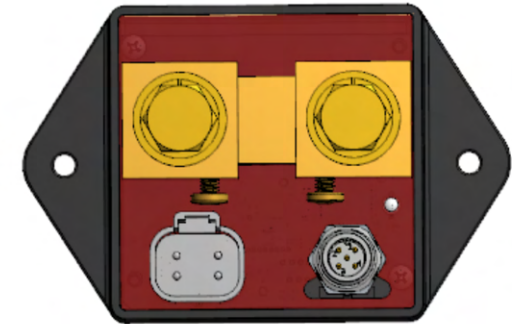
Spyder Part #
TBD
Tiffin Part #
TBD
Dimensions
5.7" X 3.6"



F TruState Module



Spyder Part #
BMODZC6VR
Tiffin Part #
5114016
Dimensions
2.7" X 2.7"

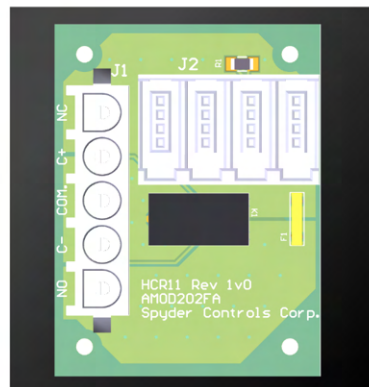


Inverter Bay

G HCR-11



Spyder Part #
BMODZGAN6-1
Tiffin Part #
5131310
Dimensions
2.5" X 2"



Front D/S Compartment

H RF Hub

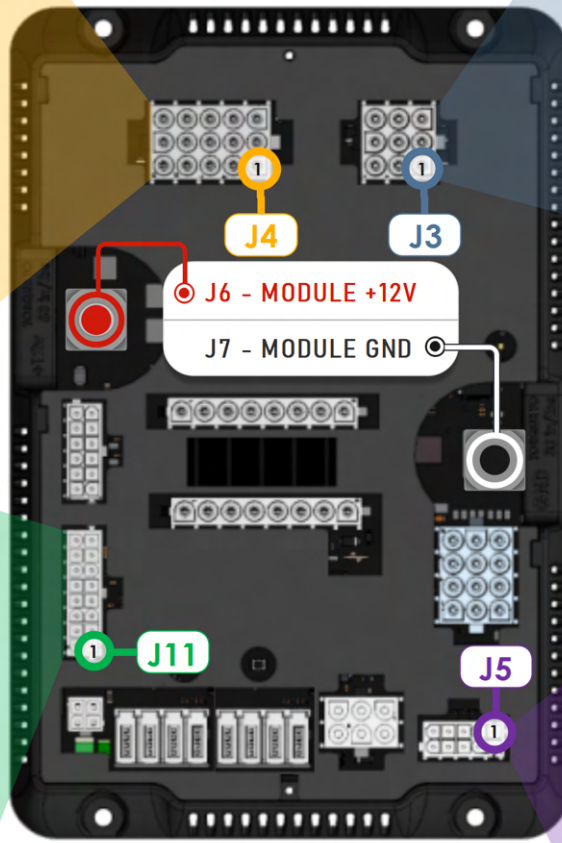


Spyder Part #
BMODZRFT0
Tiffin Part #
5127293
Dimensions
5.1" DIA

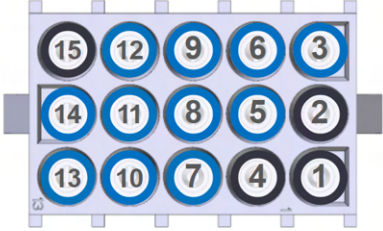


Ceiling

G12 Module @ Under Bed

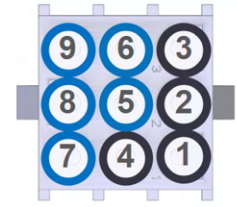


J4



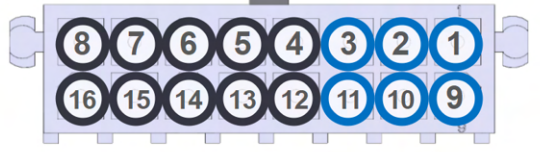
1 P/S Slide Lt	9 Rear Bath Lt (CH38)
2 D/S Slide Lt	10 Mid Bath Ceiling Lts (CH39)
3 Living Room Lt	11 Floor Lts (CH40)
4 TV Accent Lt	12 Dinette OH Lt (CH41)
5 Entry Lt (CH34)	13 Sconce Lt (CH42)
6 Task Lt (CH35)	14 FR Accent Lt
7 Hall Lt (CH36)	15 Galley Lt
8 Bedroom Ceiling Lt (CH37)	

J3



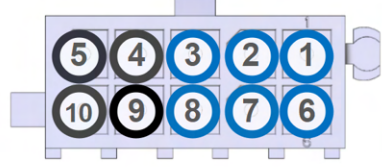
1 Spare	6 Ceiling Fan Lo (CH26)
2 Spare	7 Galley Fan (CH27)
3 Spare	8 Mid Bath Fan (CH28)
4 Spare	9 Rear Bath Fan (CH29)
5 Ceiling Fan Hi (CH25)	

J11



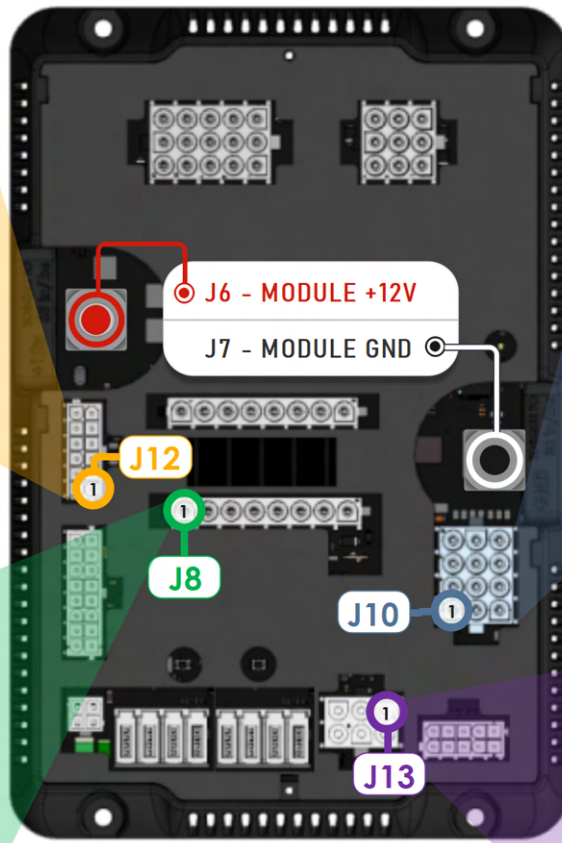
1 Fresh Tank Sensor Input	9 Tank Sensor GND
2 Grey Tank Sensor Input	10 Tank Sensor GND
3 Black Tank Sensor Input	11 Tank Sensor GND
4 N/A	12 N/A
5 N/A	13 N/A
6 Spare	14 Spare
7 Spare	15 Spare
8 Spare	16 Spare

J5

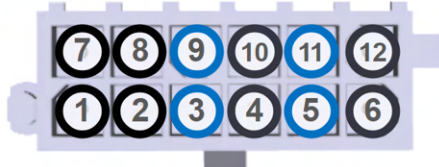


1 Park Brake (GND)	6 IGN Input (+12V)
2 WTR Pump SW (GND)	7 Merge Status (+12V)
3 Entry Door Pin SW (GND)	8 Shorepower Detection (+12V)
4 Spare (GND)	9 Spare (+12V)
5 Spare (GND)	10 Spare (+12V)

G12 Module @ Under Bed

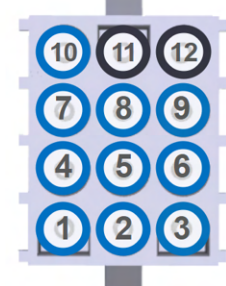


J12



① Spare	⑦ Spare
② Spare	⑧ Spare
③ Front A/C Therm	⑨ Front A/C GND
④ Spare	⑩ Spare
⑤ Rear A/C Therm	⑪ Rear A/C Therm GND
⑥ Spare	⑫ Spare

J10



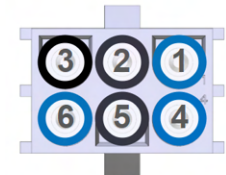
① FR A/C Comp	⑦ Spare
② FR A/C Fan HI	⑧ Spare
③ FR A/C Fan LOW	⑨ RR A/C Comp
④ FR A/C Ht Pump	⑩ RR A/C Fan HI
⑤ Spare	⑪ RR A/C Fan LOW
⑥ Spare	⑫ RR A/C Ht Pump

J8



① Galley Fan Lid Up	⑤ Rear Bath Fan Lid Up
② Galley Fan Lid Dn	⑥ Rear Bath Fan Lid Dn
③ Mid Bath Fan Lid Up	⑦ Front Furnace
④ Mid Bath Fan Lid Dn	⑧ Rear Furnace

J13



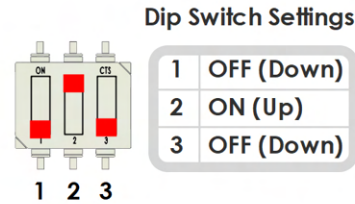
① LPG Sig	④ LPG GND
② Spare	⑤ Spare
③ Spare	⑥ Gen Run Status

M1 Slide Card

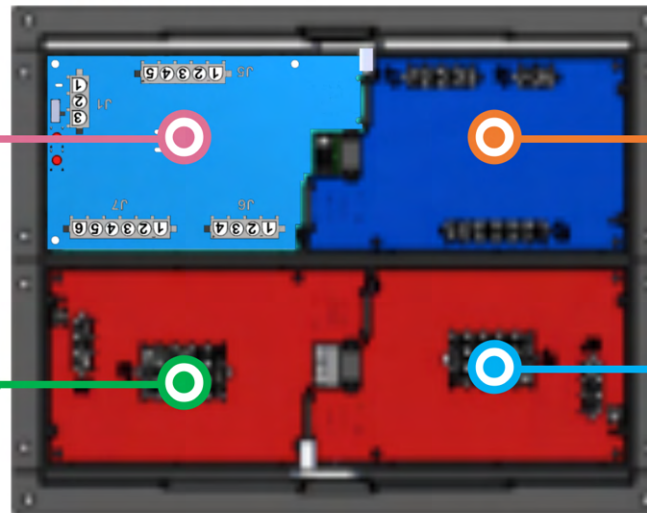
- Awning Constant
- Undercoach Constant
- Slide Breaker #1
- Slide Breaker #2
- Slide Breaker #3
- Ignition (12V)
- Park Brake (GND)
- P/S FR Slide EXT
- P/S FR Slide RET
- D/S FR Slide EXT
- D/S FR Slide RET
- P/S RR Slide EXT
- P/S RR Slide RET
- D/S RR Slide EXT
- D/S RR Slide RET
- Hydraulic Pump

M1 Breaker (Card 3)

- Camera/Radio (IGN)
- Jack Buzzer (IGN)
- Front Furnace (HSE)
- Rear Furnace (HSE)
- 12V Outlet 1/USB PWR/Batt +12V
- Batt HSE +12V/FR SHD
- Entry Step (IGN)
- TV Relay/Fridge/Dash SHD MOD (IGN)
- Euro Loff (IGN)
- HCR-11
- Entry Step SW
- Batt +12V HVAC
- IGN (+12V)



Front M1 Panel



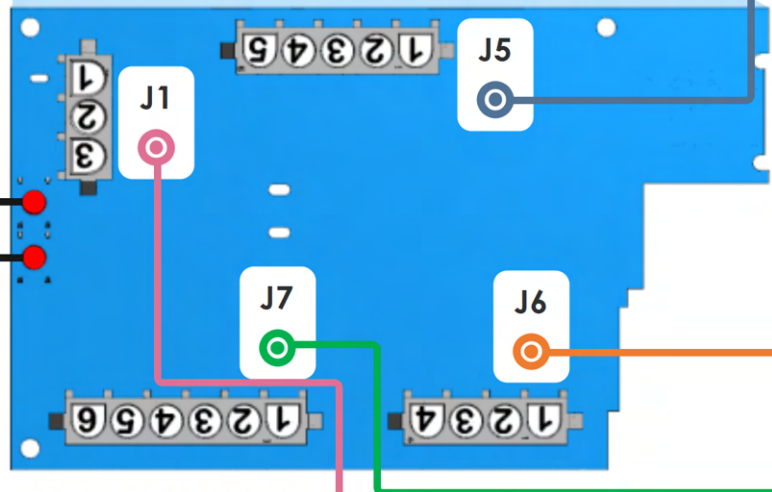
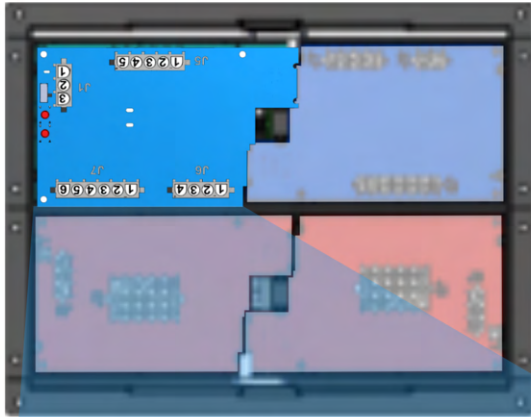
M1 High Current

- Door/Assist Handle
- Water Pump
- Awning Light
- Road
- Porch
- Tank HT Power Trigger
- Door Awning EXT
- Door Awning RET
- Entry Door Lock
- Entry Door Unlock
- Gen Start (GND)
- Gen Stop (GND)

M1 Breaker (Card 4)

- 12V Outlet 2/ USB PWR
- AGS Power (HSE)
- Slide 3 Power
- Power Window (IGN)
- D/S Mirror PWR (IGN)
- P/S Mirror PWR (IGN)
- Seat Power #1
- Seat Power #2
- Cargo Lights
- Map Lt/Fans/Radio
- Truma (HSE)
- SLD #1 PWR/Closet LT (HSE)
- IGN (+12V)

Front M1 Panel



i **Important Information**
 Alternate slide card information on next page. (Page 9)

i **Emergency Override**
 For more information on the slide overrides please see Page 14

J5

1 Awning Constant	4 Slide Breaker #2
2 Undercoach Constant	5 Slide Breaker #3
3 Slide Breaker #1	

J6

1 P/S FR Slide Ext	3 D/S FR Slide Ext
2 P/S FR Slide Ret	4 D/S FR Slide Ret

J7

1 P/S RR Slide Ext	4 D/S RR Slide Ret
2 P/S RR Slide Ret	5 Hydraulic Pump
3 D/S RR Slide Ext	6 Spare

J1

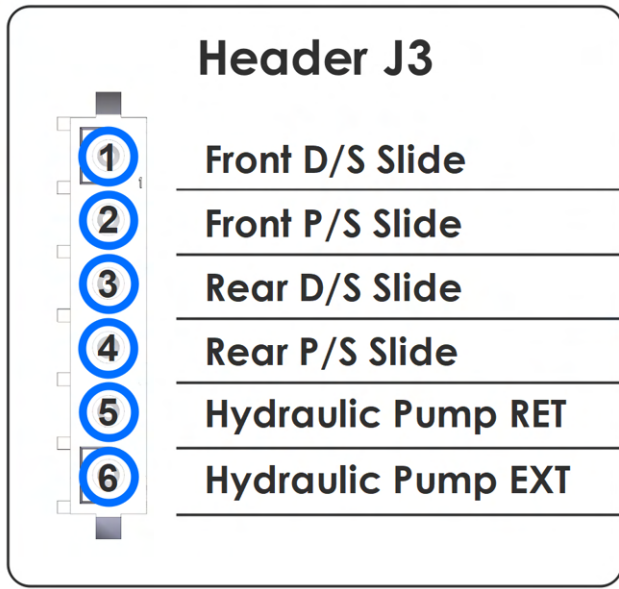
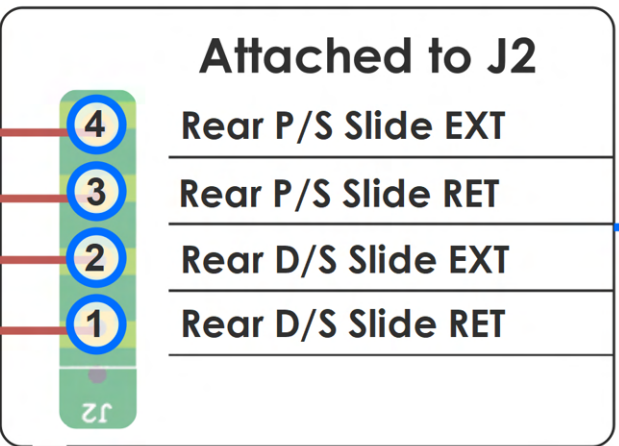
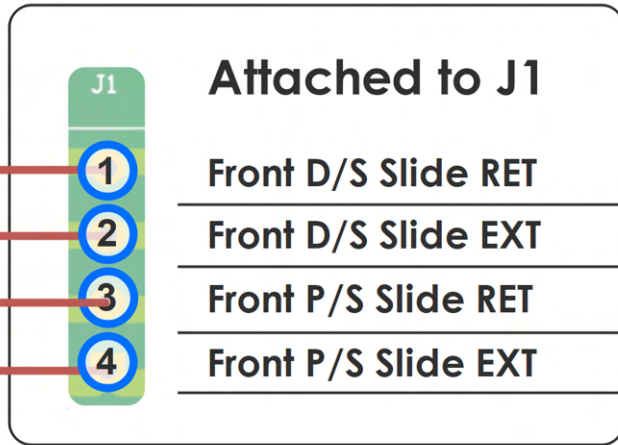
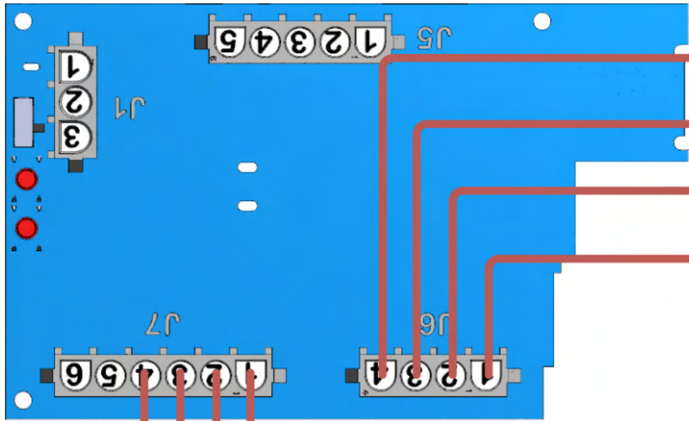
1 Ignition (+12V)	3 N/A
2 Park Brake (GND)	

M1 Slide (Card 1)

OVERRIDE EXT

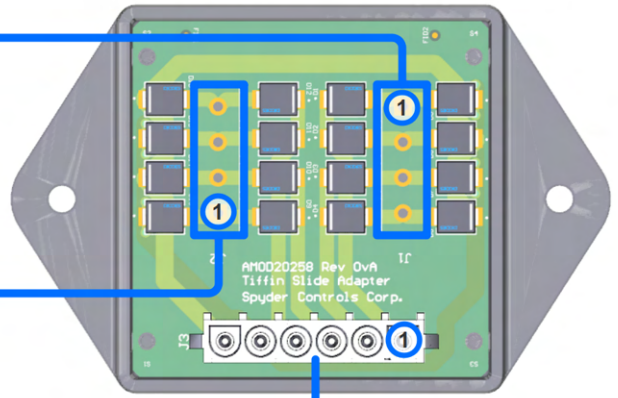
OVERRIDE RET

M1 Slide Card

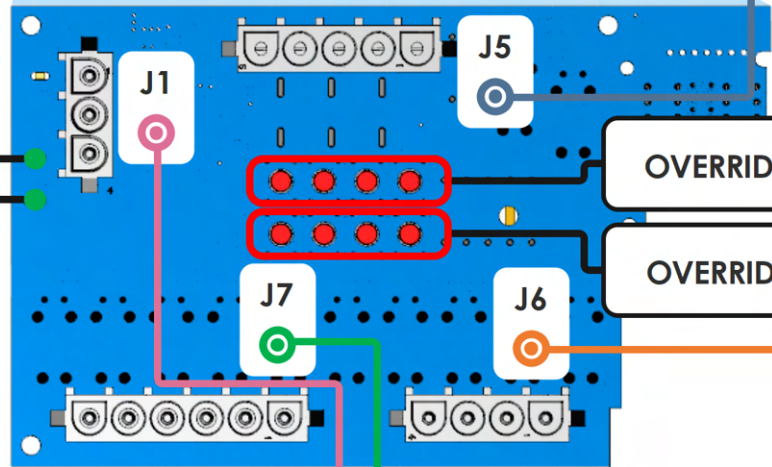
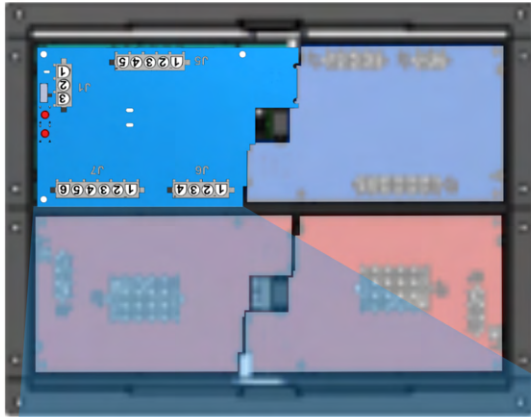


i Important Information
Tiffin Slide Adapter, is only used when Lippert slides are implemented into the coach.

Tiffin Slide Adapter



Front M1 Panel



OVERRIDE RET

OVERRIDE EXT

M1 Slide (Card 1)

Slides Ready LED

Awnings Ready LED

Emergency Override
For more information on the slides please see Page 14

J5

1 Awning Constant	4 Slide Breaker #2
2 Undercoach Constant	5 Slide Breaker #3
3 Slide Breaker #1	

J6

1 P/S FR Slide Ext	3 D/S FR Slide Ext
2 P/S FR Slide Ret	4 D/S FR Slide Ret

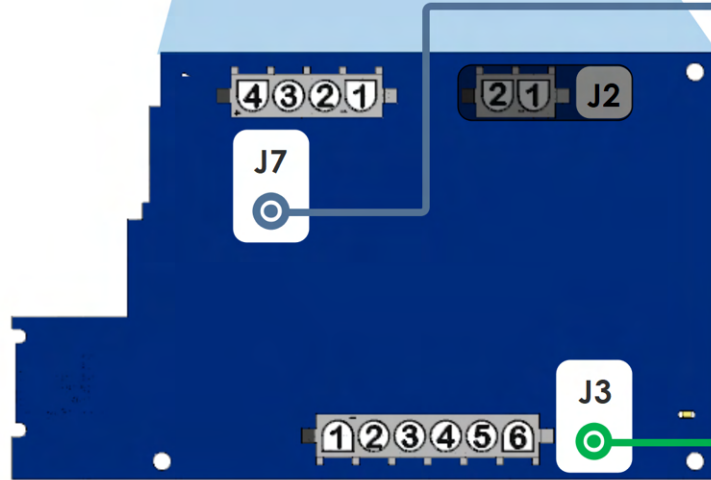
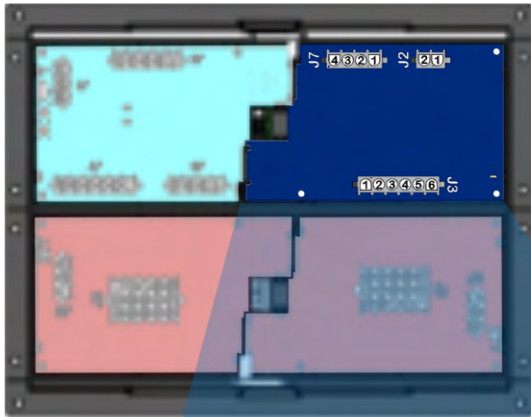
J7

1 P/S RR Slide Ext	4 D/S RR Slide Ret
2 P/S RR Slide Ret	5 Hydraulic Pump
3 D/S RR Slide Ext	6 Spare

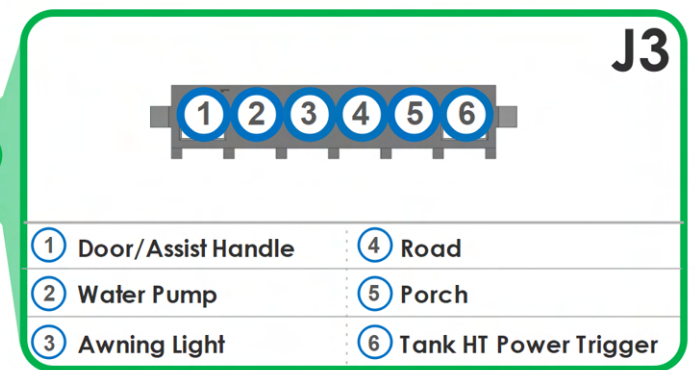
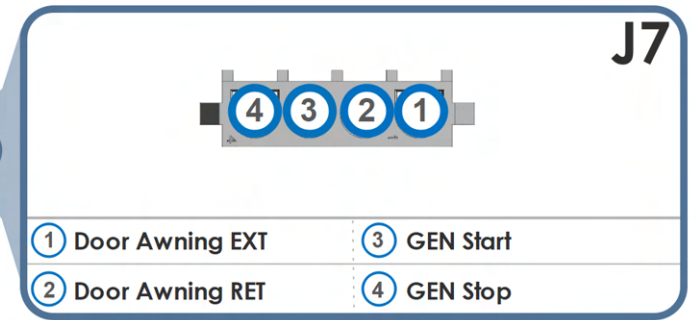
J1

1 Ignition (+12V)	3 N/A
2 Park Brake (GND)	

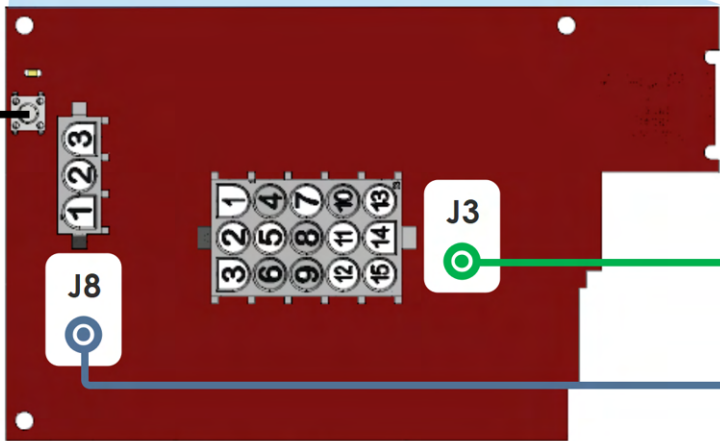
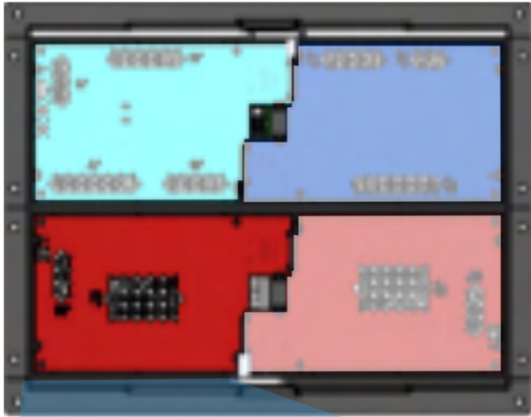
Front M1 Panel



M1 High Current (Card 2)



Front M1 Panel



M1 Breaker (Card 3)

Breaker Reset

J3

1	4	7	10	13
2	5	8	11	14
3	6	9	12	15

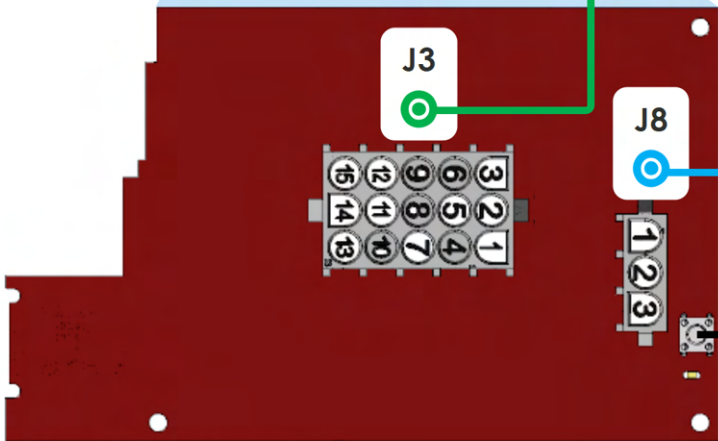
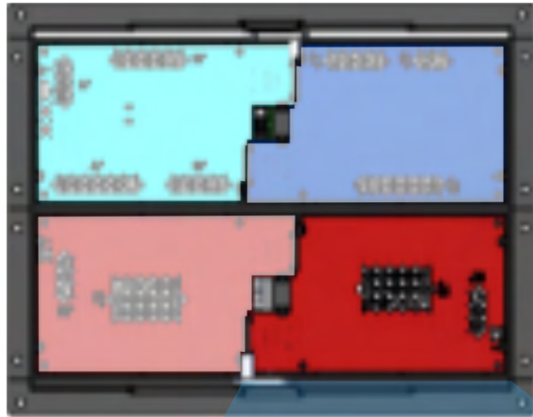
① Batt +12V HVAC	⑨ Rear Furnace (HSE)
② Camera/Radio (IGN)	⑩ Euro Loft Lt (IGN)
③ Jack Buzzer (IGN)	⑪ N/A
④ Entry Step SW	⑫ 12V Outlet 1/USB PWR/Batt +12V
⑤ N/A	⑬ TV Relay/Fridge/Dash SHD MOD (IGN)
⑥ Front Furnace (HSE)	⑭ Entry Step (IGN)
⑦ HCR11	⑮ Batt HSE +12V/FR SHD
⑧ N/A	

J8

1	2	3
---	---	---

① IGN (+12V)	③ N/A
② N/A	

Front M1 Panel



M1 Breaker (Card 4)

J3

15	12	9	6	3
14	11	8	5	2
13	10	7	4	1

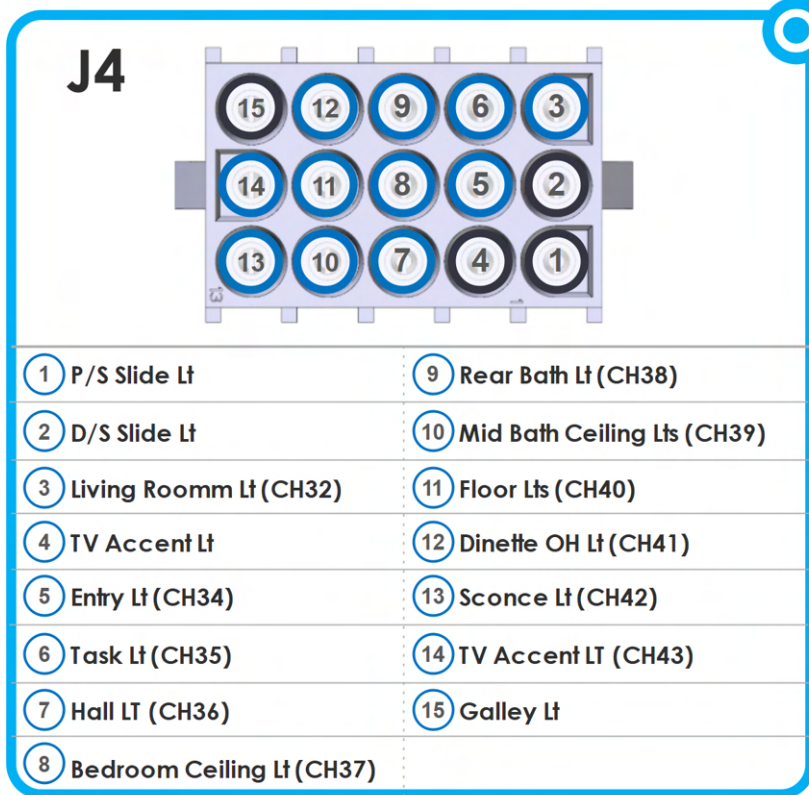
① SLD #1 PWR/Closet LT (HSE)	⑨ Power Window (IGN)
② 12V Outlet 2/USB PWR	⑩ Cargo Lts
③ AGS Power (HSE)	⑪ N/A
④ Truma (HSE)	⑫ D/S Mirror PWR (IGN)
⑤ N/A	⑬ Seat Power #2
⑥ Slide 3 Power	⑭ Seat Power #1
⑦ Map LT/Fans/Radio	⑮ P/S Mirror PWR IGN
⑧ N/A	

J8

1	2	3
---	---	---

① IGN (+12V)	③ N/A
② N/A	

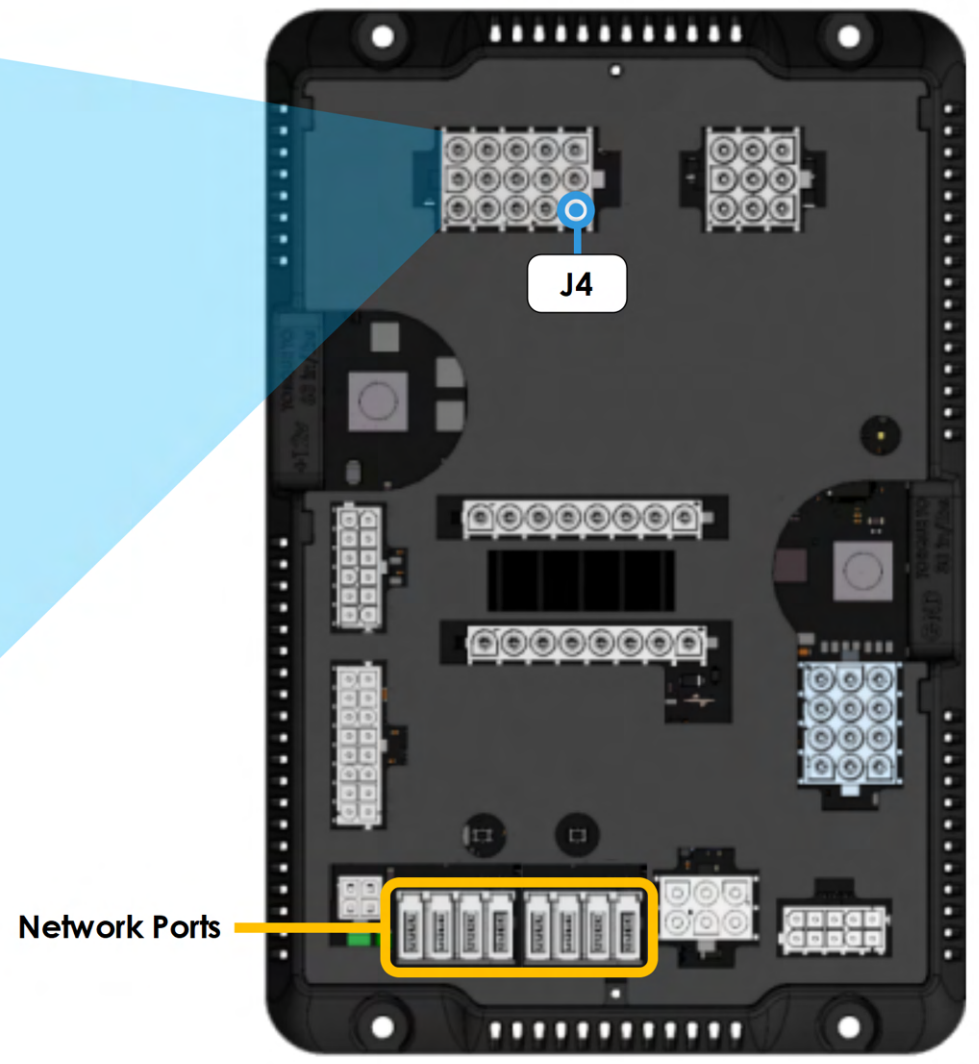
Breaker Reset

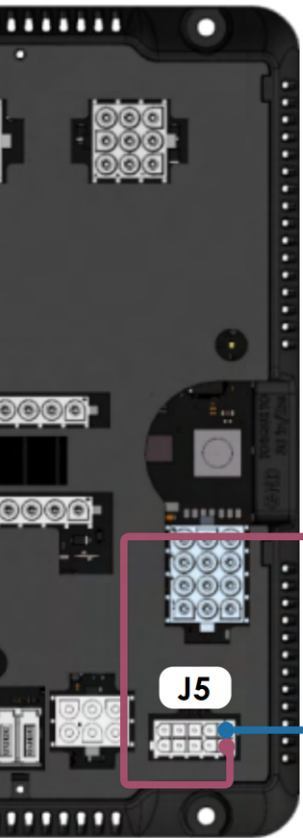


* All Lights Listed Can Dim

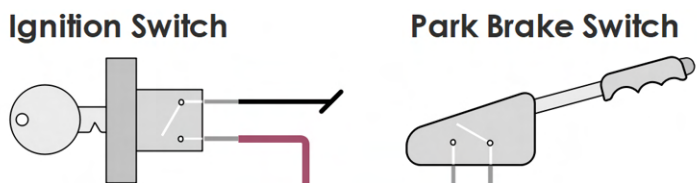
* All lights are grounded outside of the Spyder System. The G12 only provides 12V+

G12 Module @ Under Bed

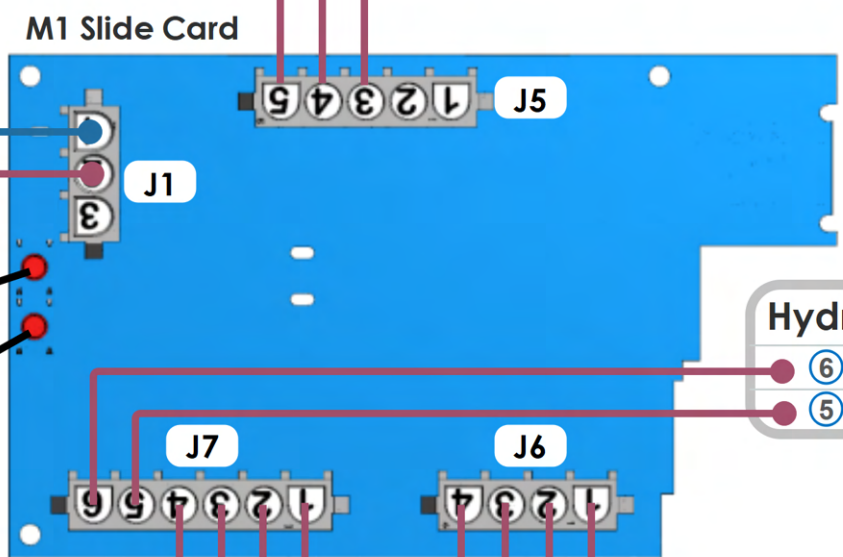




G12 Module
@ Under Bed



- ### Slide Breakers
- ⑤ Slide Breaker # 3
 - ④ Slide Breaker # 2
 - ③ Slide Breaker # 1



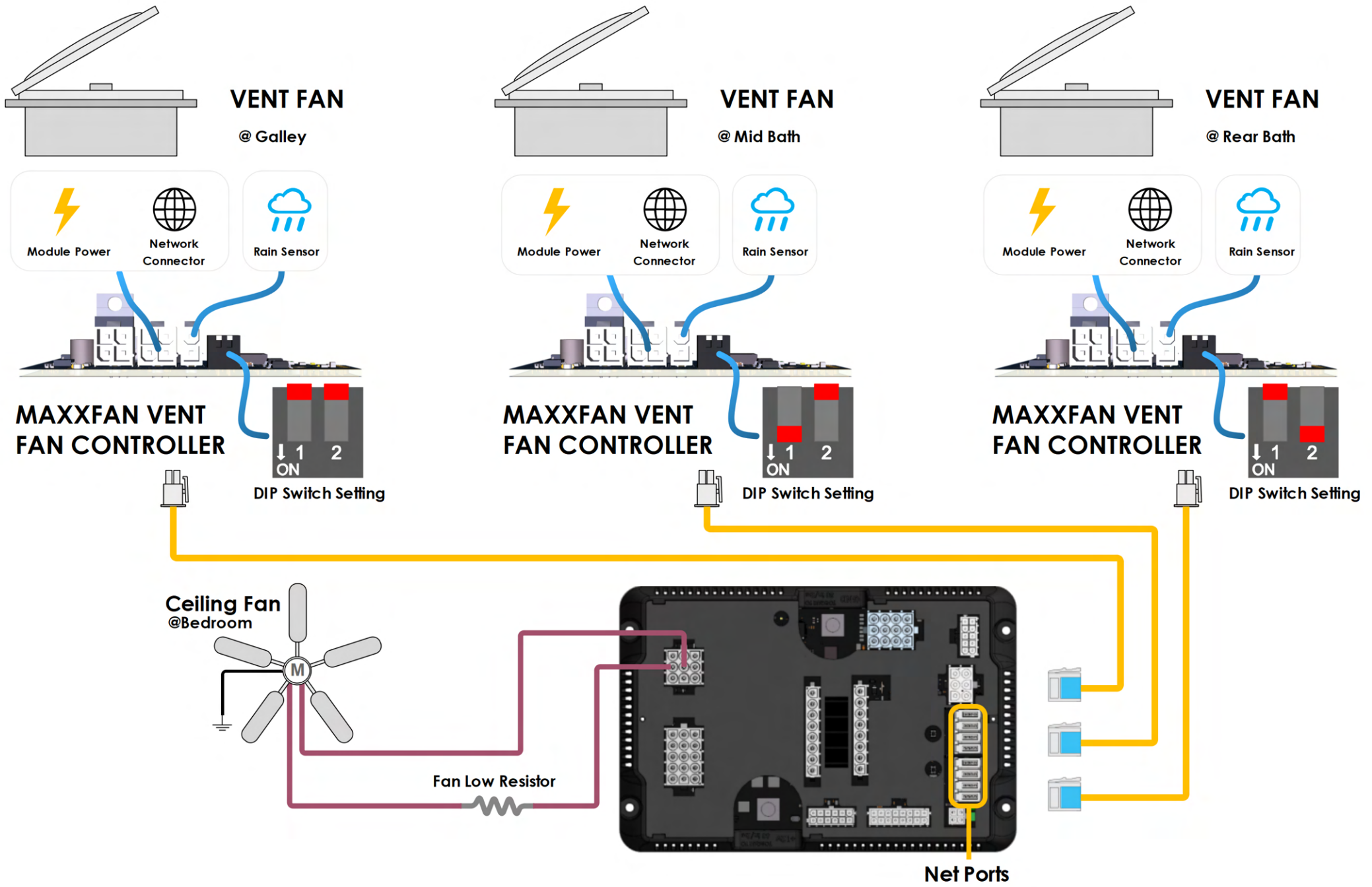
- OVERVERRIDE RET
- OVERVERRIDE EXT

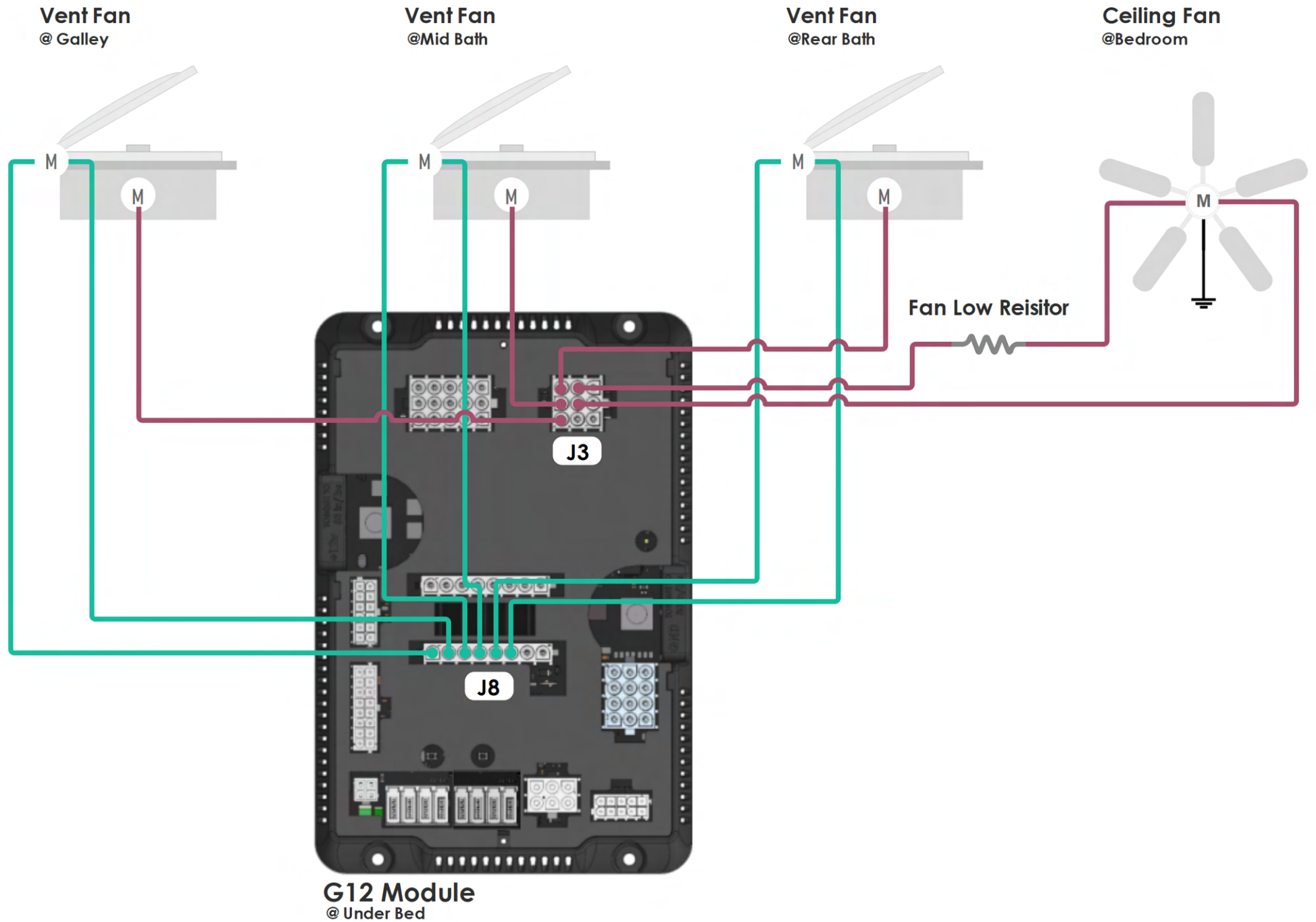
- ### Hydraulic Pumps
- ⑥ Spare
 - ⑤ Hydraulic Pump

- ### Rear Slide Outputs
- D/S RR Slide RET ④
 - D/S RR Slide EXT ③
 - P/S RR Slide RET ②
 - P/S RR Slide EXT ①

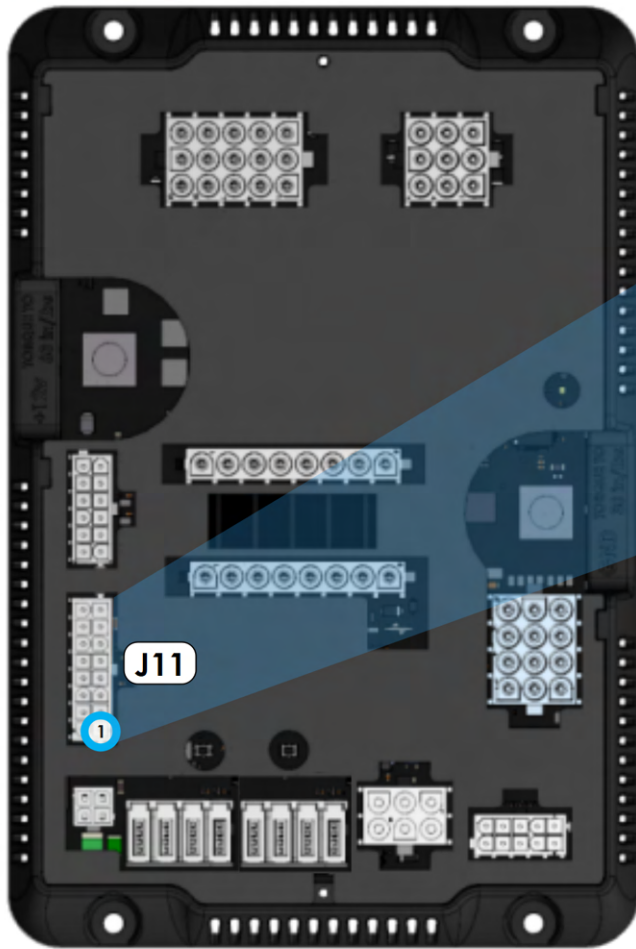
- ### Front Slide Outputs
- ① P/S FR Slide EXT
 - ② P/S FR Slide RET
 - ③ D/S FR Slide EXT
 - ④ D/S FR Slide RET

i **Emergency Override**
 Park brake and ignition must be on for slides to operate.
 In case of a system failure, use manual overrides on the slide card to operate slides. Engage overrides using a pen or other pointed object.

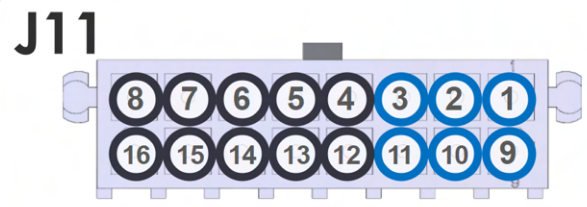
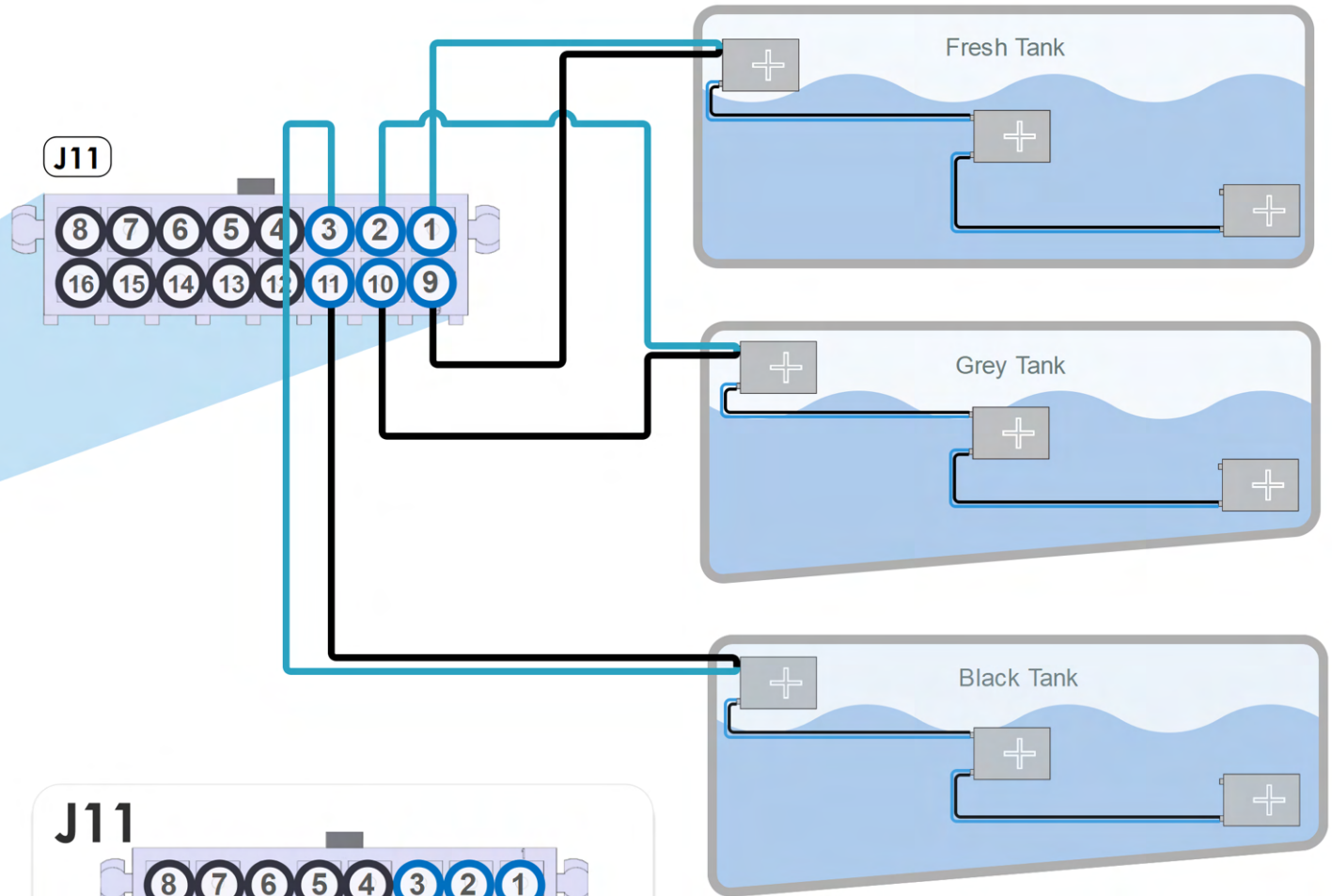




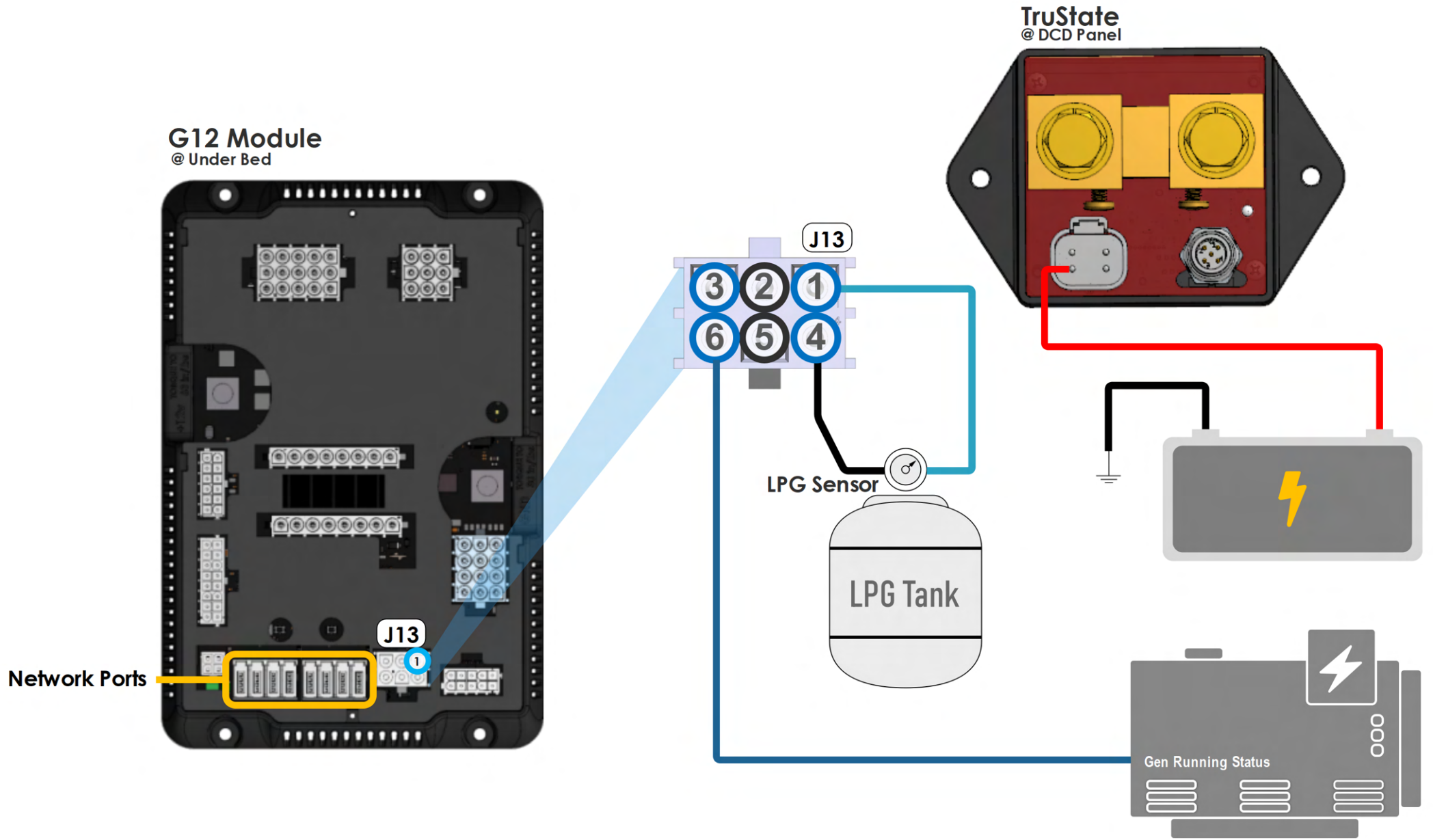
G12 Module

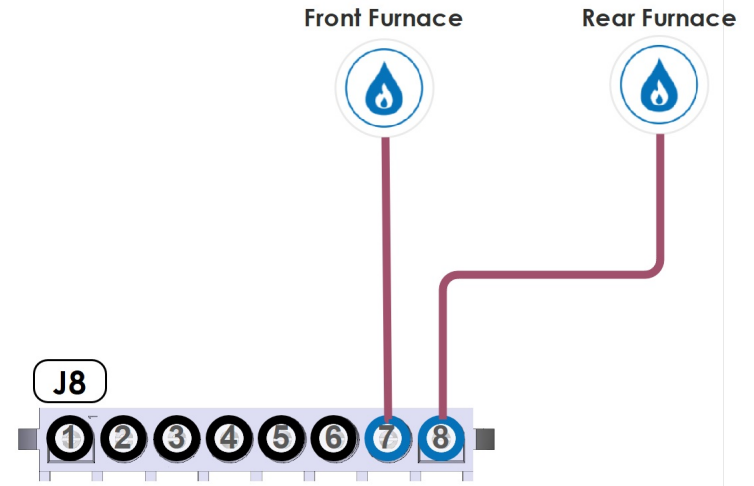
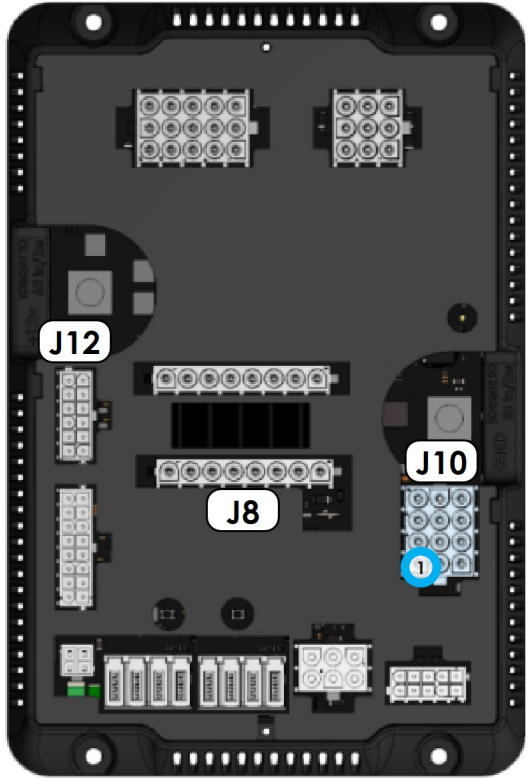
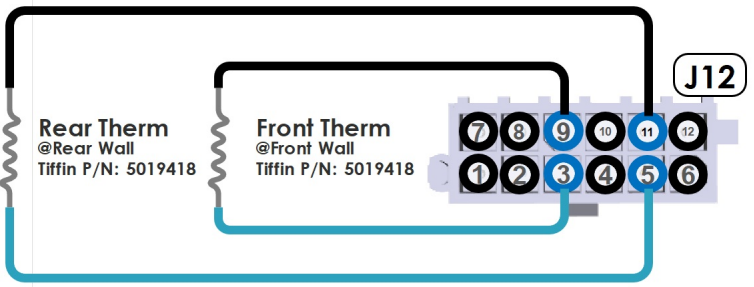
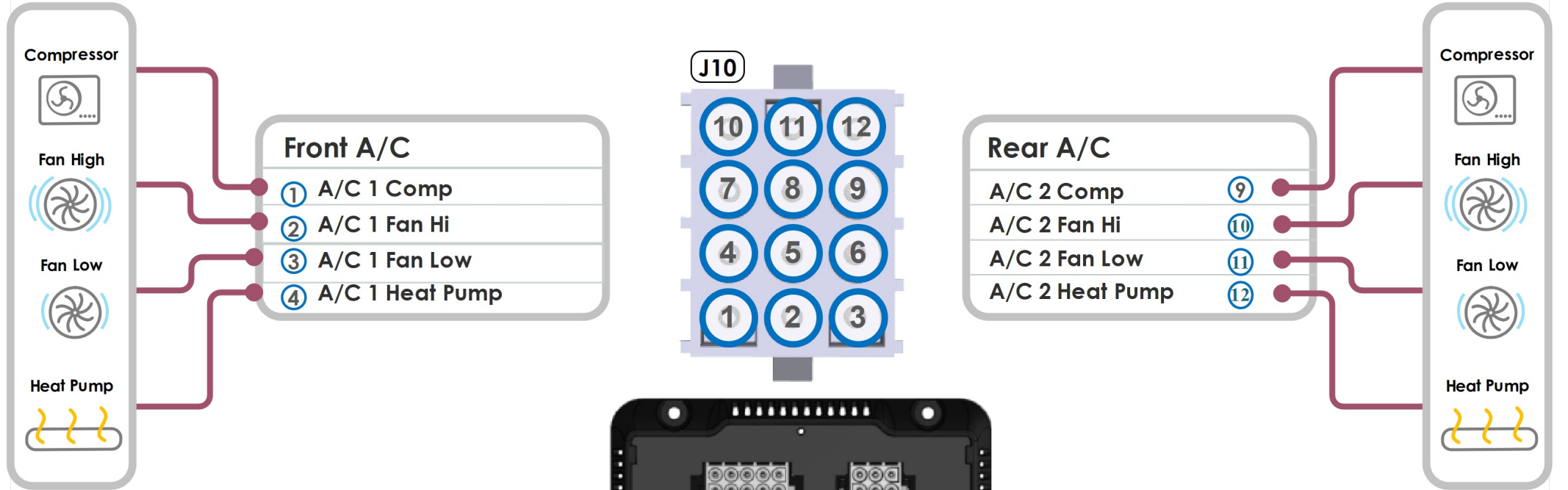


3 Level Tank Sensor System



① Fresh Tank Sensor Input	⑨ Tank Sensor GND
② Grey Tank Sensor Input	⑩ Tank Sensor GND
③ Black Tank Sensor Input	⑪ Tank Sensor GND

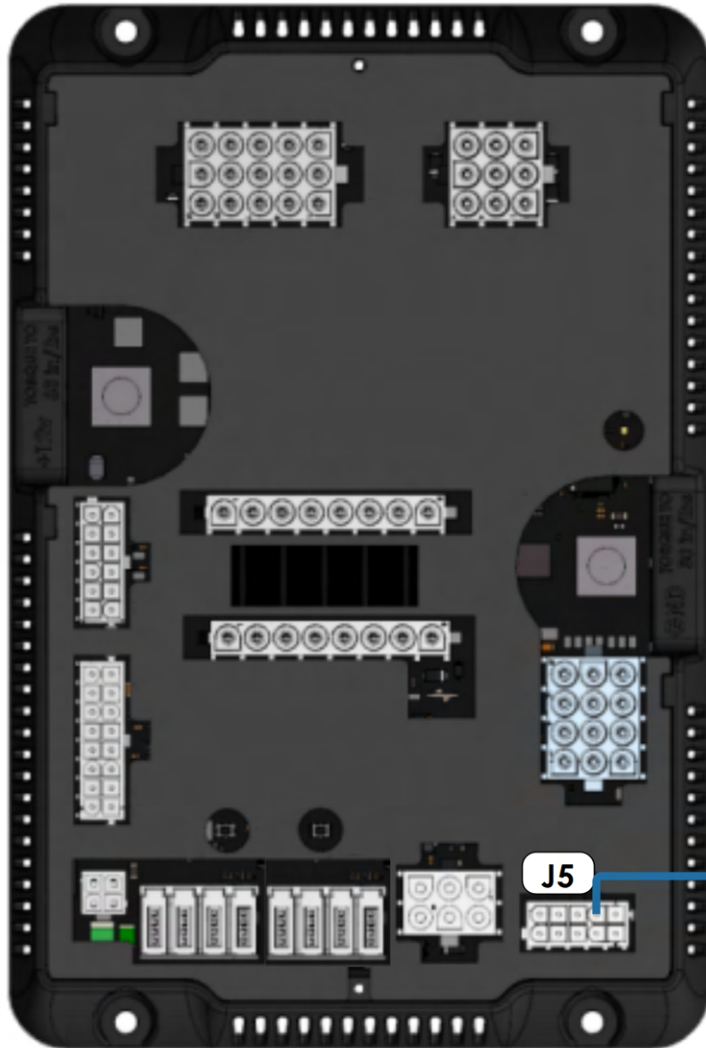




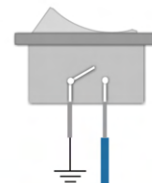
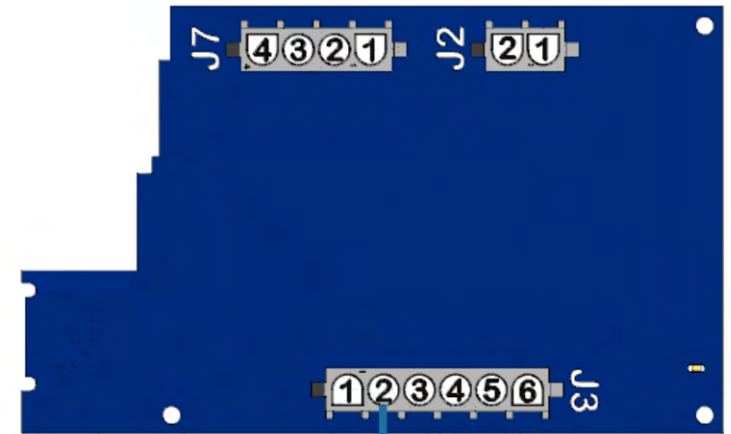
G12 Module
@ Under Bed

G12 Module

@ Under Bed



M1 High Current (Card 2)



Water Pump Switch
@ Wet Bay

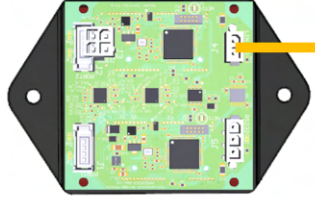


Water Pump

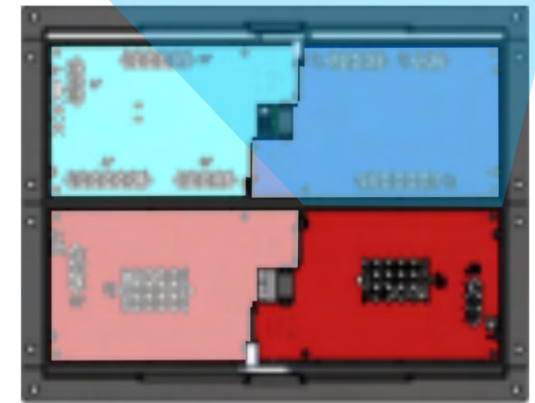
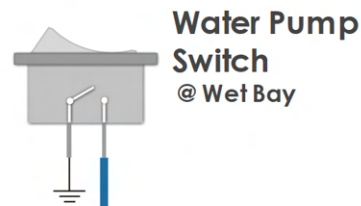
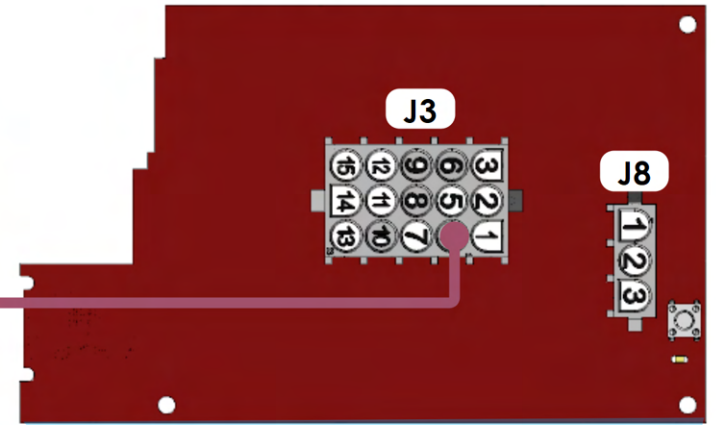
Input (GND)

J5

Bridge Module
@Under Bed by G12



M1 Breaker Card



Front M1 Panel

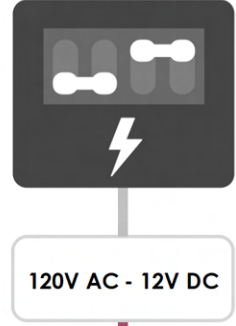
G12 Module
@ Under Bed

i **AGS**
 When AGS is on, the Generator will start when your batteries reach the percentage specified in the AGS settings page. The Generator will also start if there is an HVAC load present.



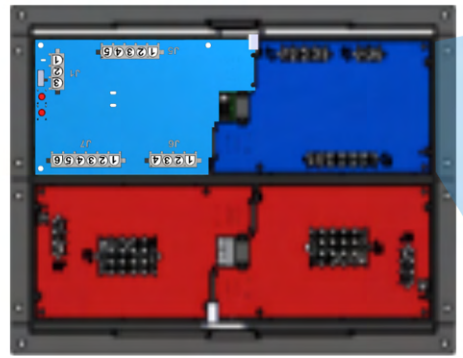
G12 Module
 @ Under Bed

120V BREAKER PANEL

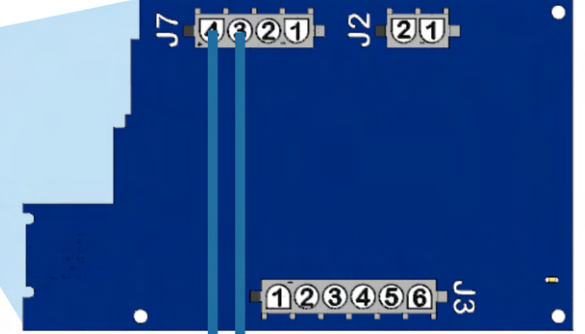


120V AC - 12V DC

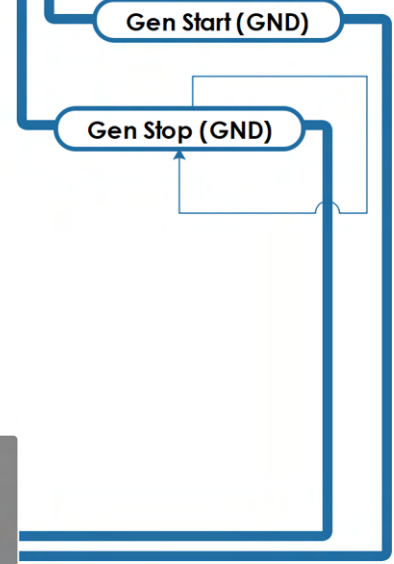
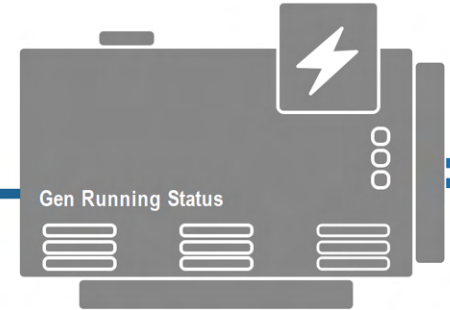
Front M1 Panel



M1 High Current Card

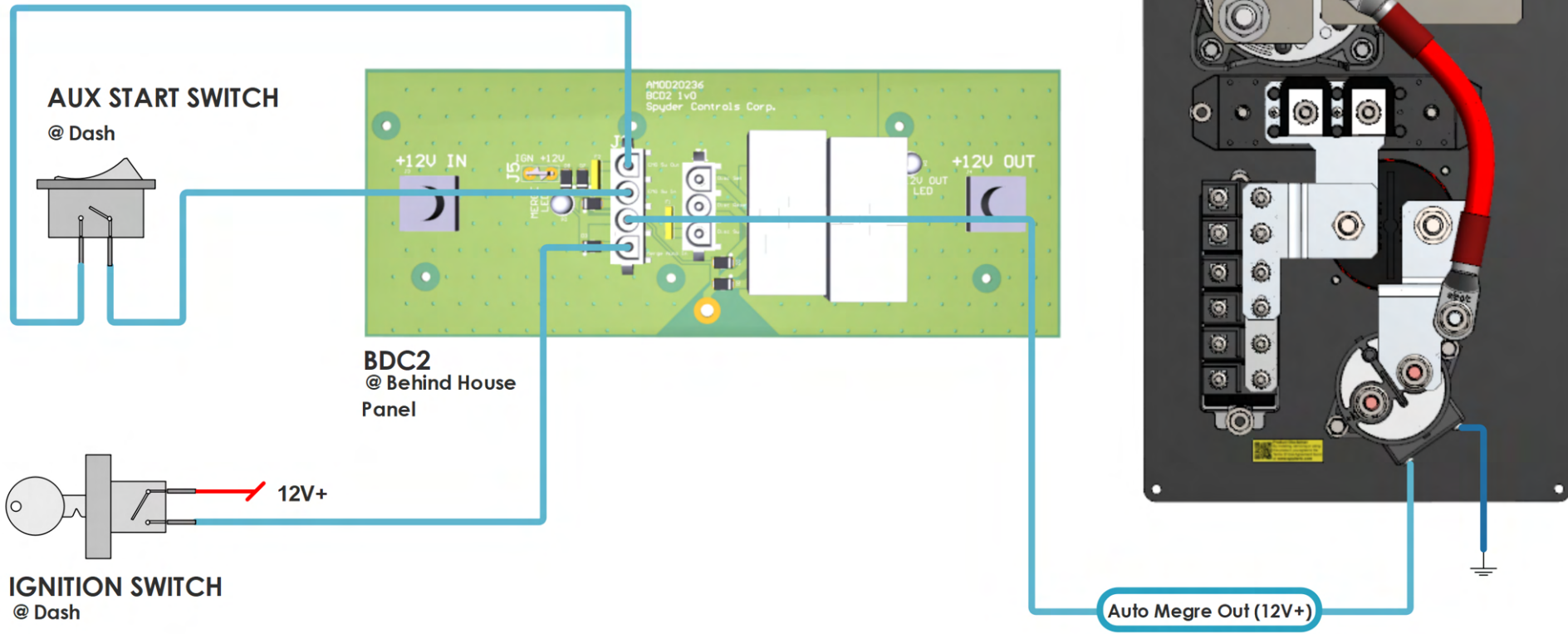


i **Shore Power Detection**
 When the G12 is receiving +12V on Connector J5 Pin 8, for the shore power detection, AGS will remain in the off state until shore power is disconnected.

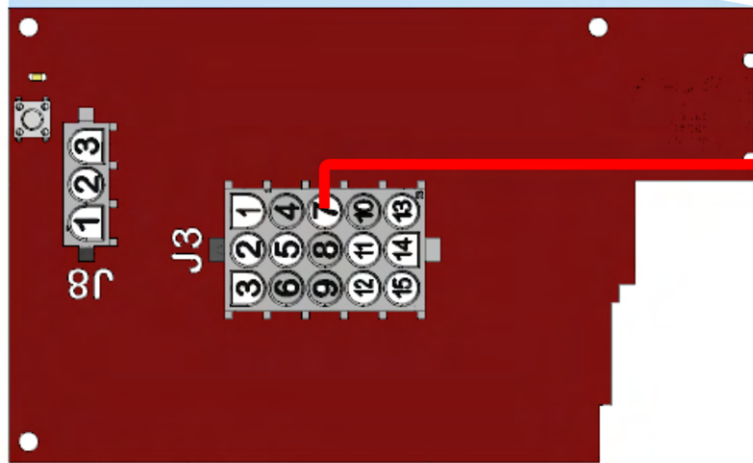
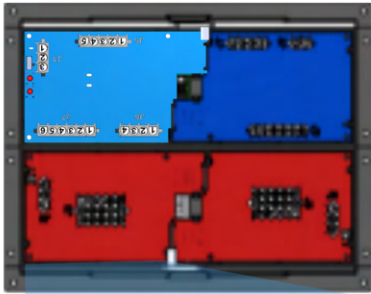


Note

Please note that the Spyder system in the 2023 Allegro Open Road in no way decides when the batteries should merge. Any auto merge functionality comes from a non-Spyder source in the coach. The BDC2 only receives inputs and in direct response outputs 12V+ to the Merge Solenoid.

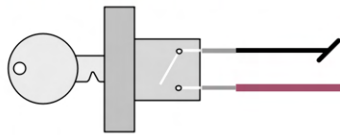


M1 Front Panel

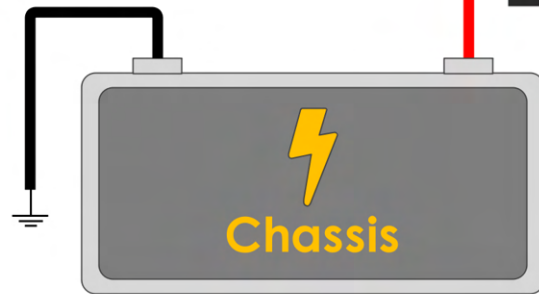
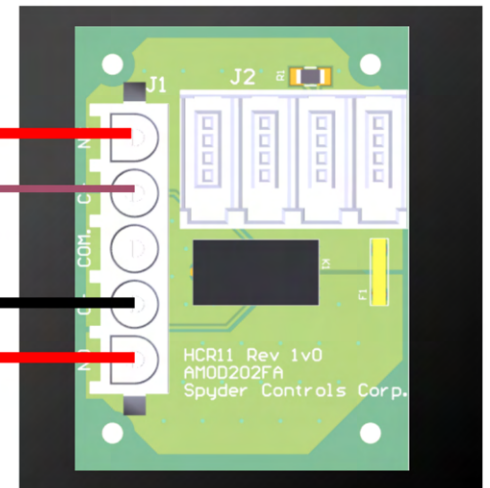


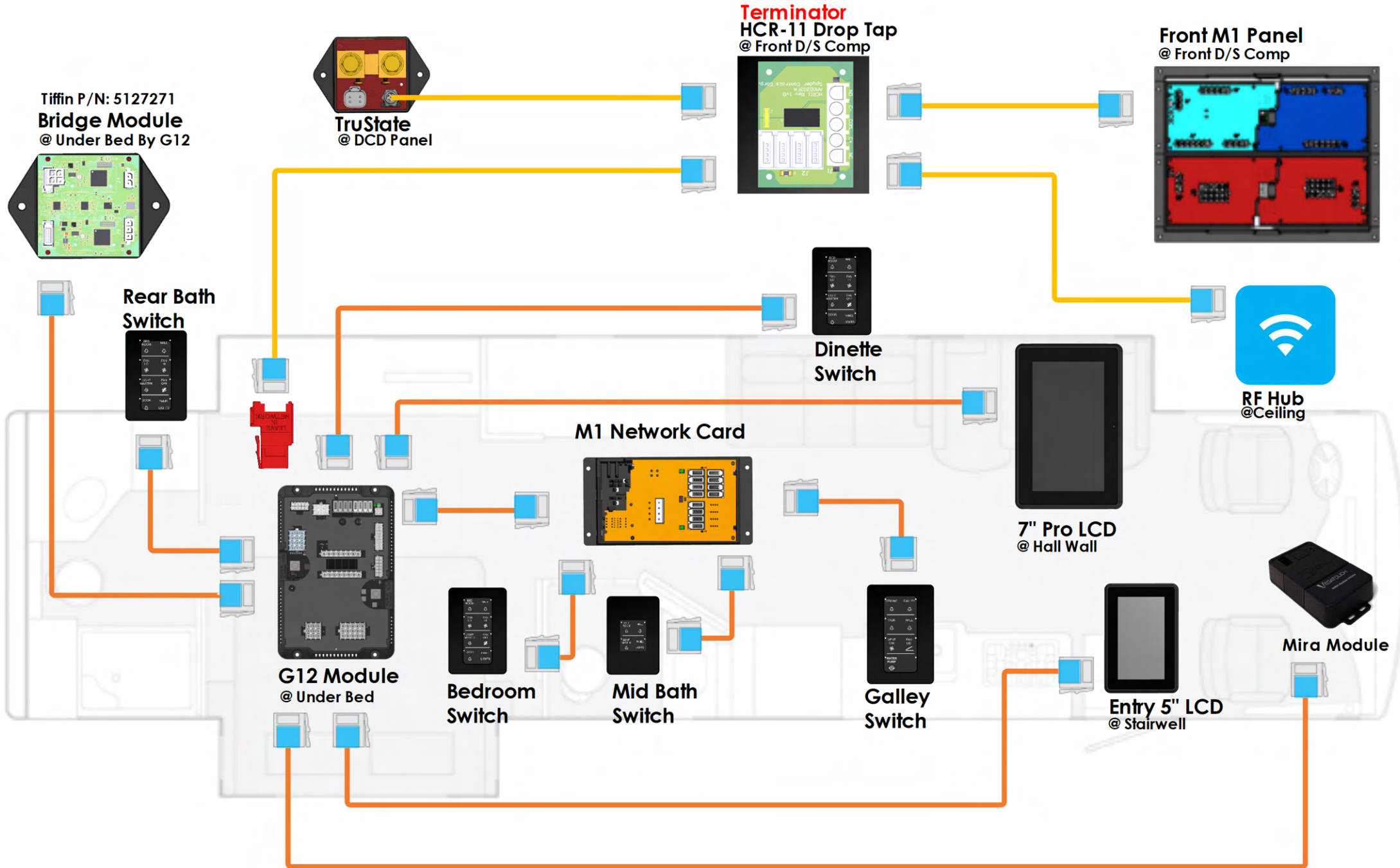
M1 Breaker Card

Ignition Switch



Terminator
HCR-11 Drop Tap
© Front D/S Comp

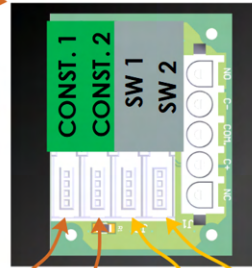




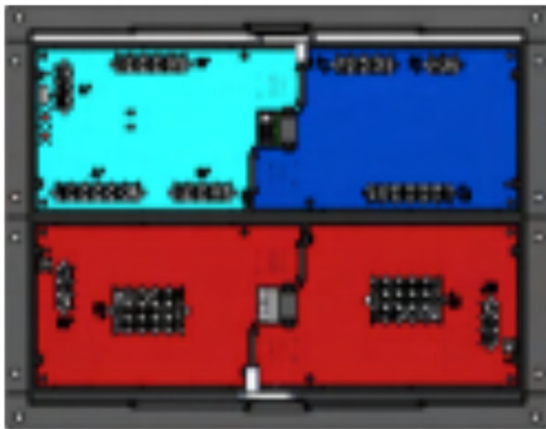
THE ORDER OF THE NETWORK CABLES AT THIS TAP IS IMPORTANT !

The RF Hub and M1 Panel MUST be plugged into the ports shown. The always on ports are powered when the house disconnect is off.

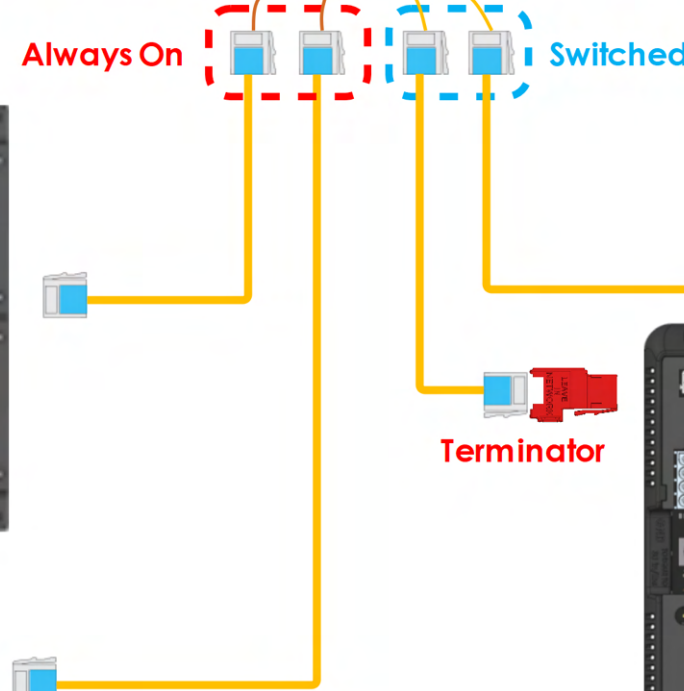
Tiffin P/N: 5105426
Terminator
HCR-11 Drop Tap
@ Front D/S Comp



Tiffin P/N: 5126983
Front M1 Panel
@ Front D/S Comp



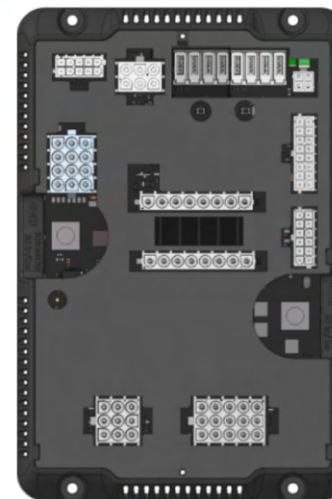
Always On Switched



Terminator



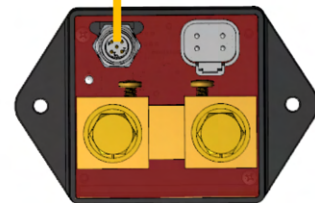
RF Hub
@Ceiling



G12 MODULE

@ Under Bed

Tiffin P/N: 5126984



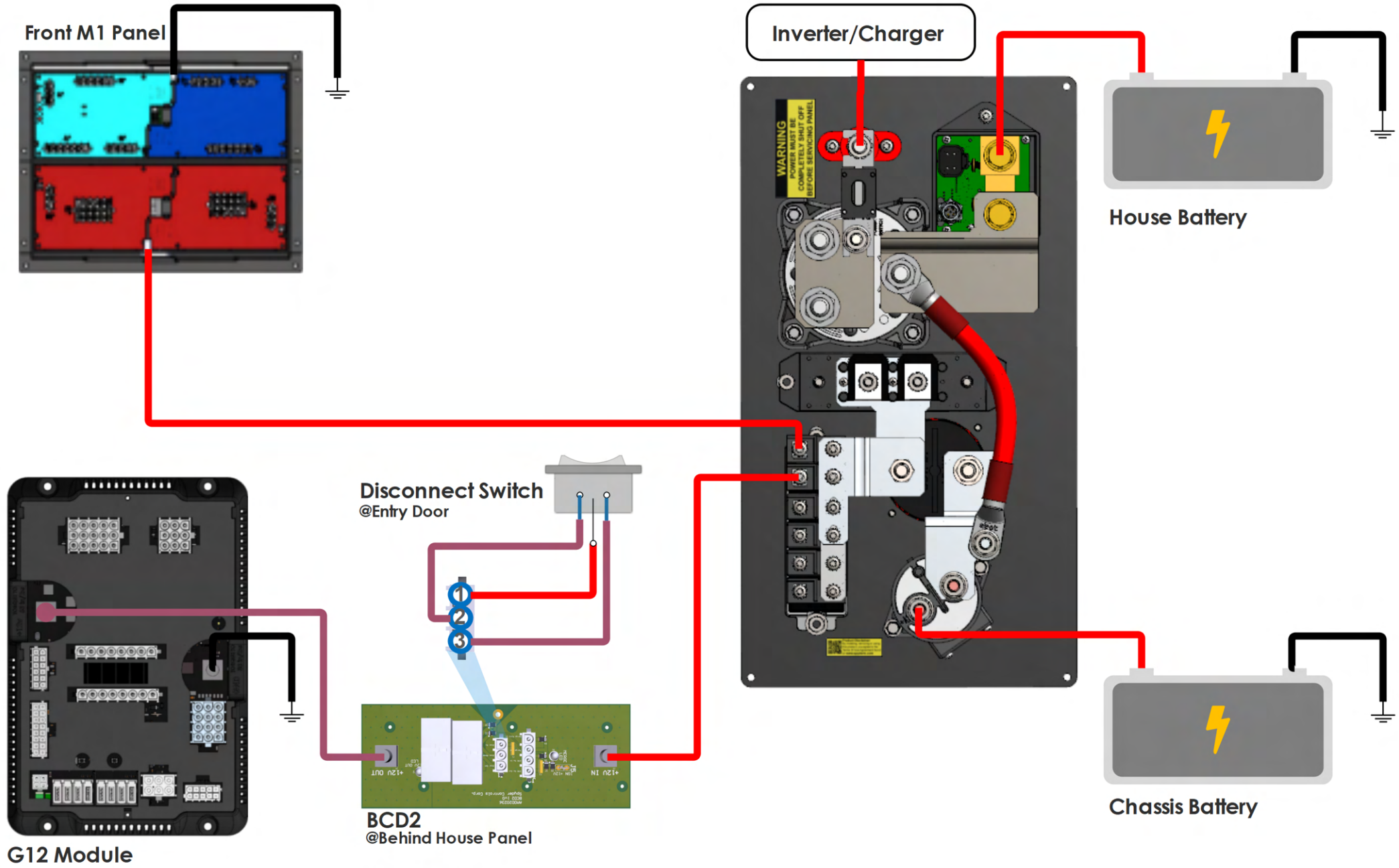
TruState
@ DCD Panel

i Always On Network

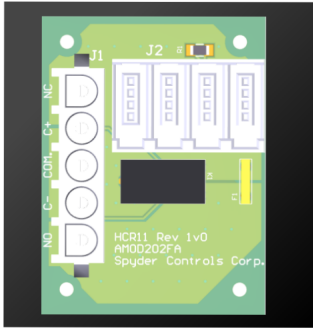
This network to remain powered while house disconnect is off.

This network can be turned off using the battery disconnect on the DCD panel.

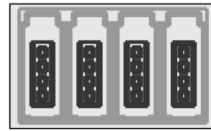
*(Ensure power does not transfer through the network cable to the G12, but does transfer to the RF Hub)



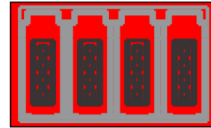
TERMINATOR
HCR-11
 Tiffin P/N: 5105426



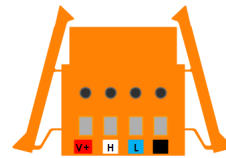
G4 Common Drop Tap
 Tiffin P/N: 5016592



G4 Terminator Drop Tap
 Tiffin P/N: 5051936



4 Pos Wago Connector
 Tiffin P/N: 5015508



Wago Hook Tool
 Wago P/N: 231-131



Mini-Clamp Plug

Tiffin P/N: 5066157
 3M P/N: 37104-2165-000 FL 100



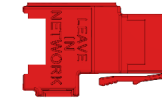
Mini-Clamp Socket

Tiffin P/N: 5066158
 3M P/N: 37304-2165-000 FL 100



In-Line Terminator

Spyder P/N: BBCKZG700
 Tiffin P/N: 5125008



MiniFit Jr Connector

Digi-Key P/N: 0039012040



Minifit Jr Pins
 Digi-Key P/N: 0039000181

