









# 2023 Tiffin Open Road



OPEN ROAD ALLEGH









<b>4</b>	Module Locations	<b>12</b>	M1 HC Half Bridge Card
<b>5</b>	Module Locations Cont.	<b>13</b>	M1 Breaker Card 1
<b>6</b>	G12 Pinout	<b>14</b>	M1 Breaker Card 2
<b>7</b>	G12 Pinout (Continued)	<b>15</b>	Lighting
<b>8</b>	M1 Overview	<b>16</b>	Slides
<b>9</b>	M1 Slide Card	<b>17</b>	MaxxFans
<b>10</b>	Tiffin Slide Adapter	<b>18</b>	Vent Fans (Non Maxxfan)
<b>11</b>	M1 Slide Alternate		

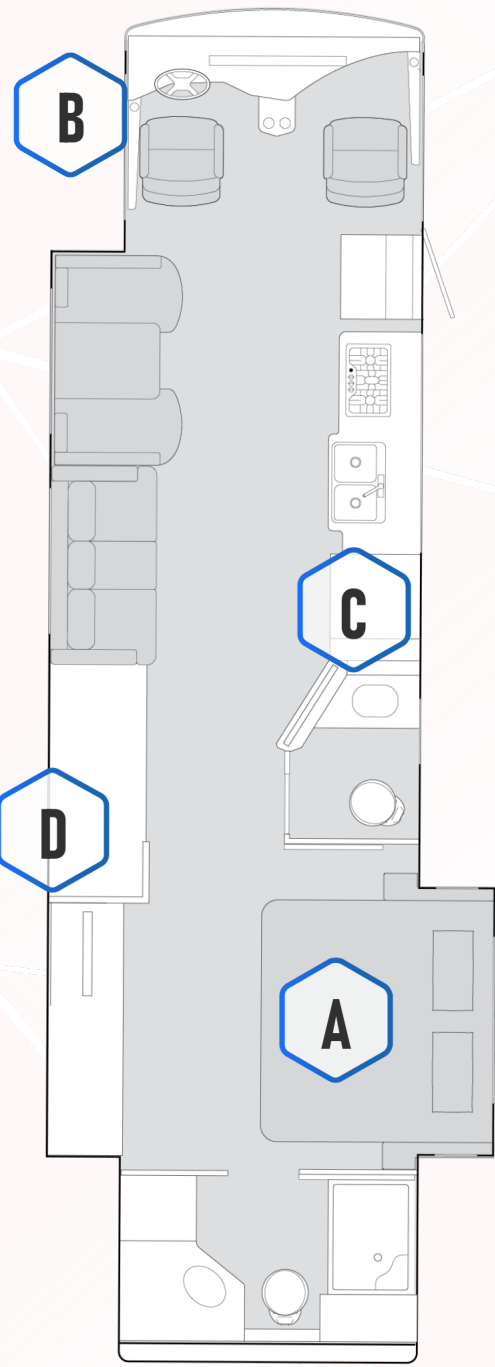
## Schematic Connections Legend

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

<b>19</b>	Tank Sensing	<b>25</b>	Merge System
<b>20</b>	LPG + Chassis Voltage	<b>26</b>	HCR-11 Pinout
<b>21</b>	HVAC	<b>27</b>	Network
<b>22</b>	Water Heat (Non-Truma)	<b>28</b>	Network (Continued)
<b>23</b>	Truma Water Heat	<b>29</b>	Power Diagram
<b>24</b>	AGS	<b>30</b>	Connectors

Schematic Connections Legend

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



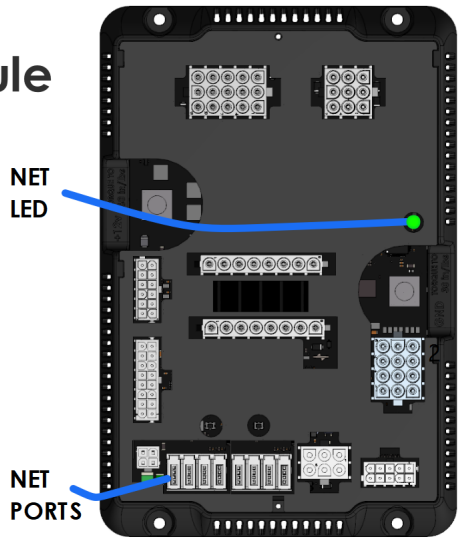
## A G12 Module



**Spyder Part #**  
BMODZU2VU

**Tiffin Part #**  
5126984

**Dimensions**  
9" X 6"



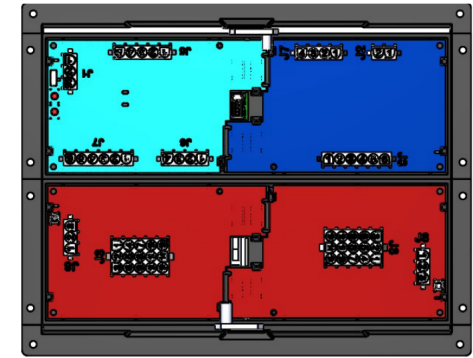
## B M1 Front Panel



**Spyder Part #**  
BENCZM2DS

**Tiffin Part #**  
5126983

**Dimensions**  
10" X 7.8"



## C 7" Lite LCD



**Spyder Part #**  
BSSPZZQEE

**Tiffin Part #**  
5127270

**Dimensions**  
7.6" X 5"



## D DCD Panel

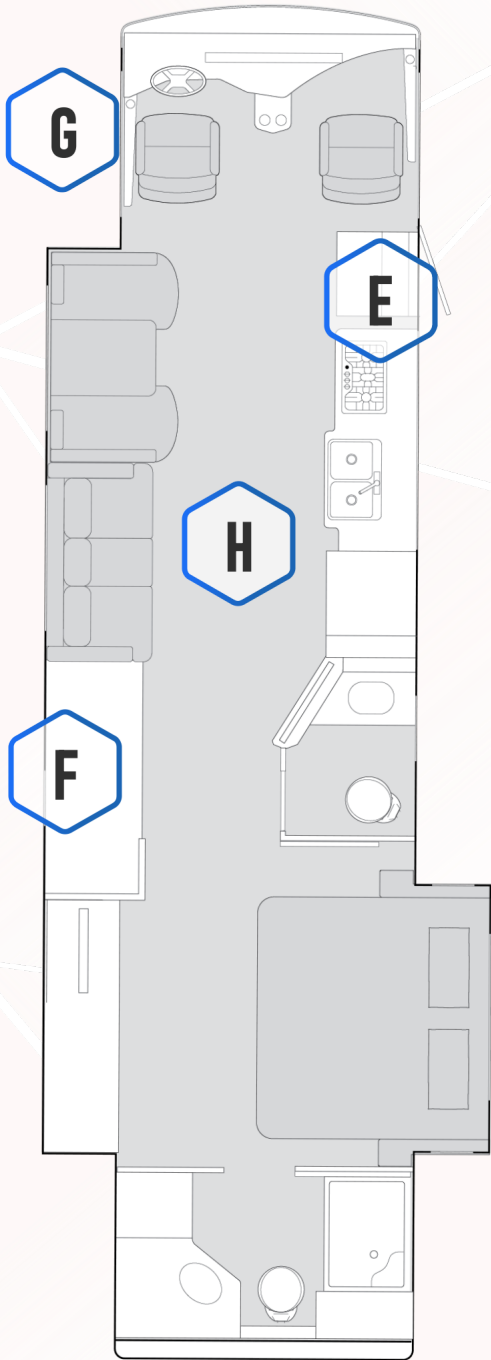


**Spyder Part #**  
BENCZ38DS

**Tiffin Part #**  
5127268

**Dimensions**  
10" X 4"





**E** 5" Color LCD



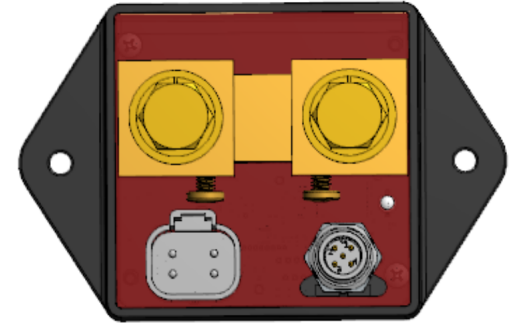
**Spyder Part #**  
BSSPZZREK  
**Tiffin Part #**  
5127269  
**Dimensions**  
5.7" X 3.6"



**F** TruState Module



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

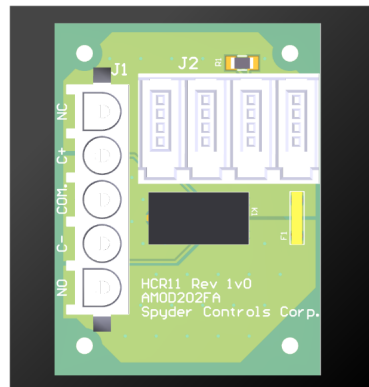


Inverter Bay

**G** HCR-11



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



Front D/S Compartment

**H** RF Hub

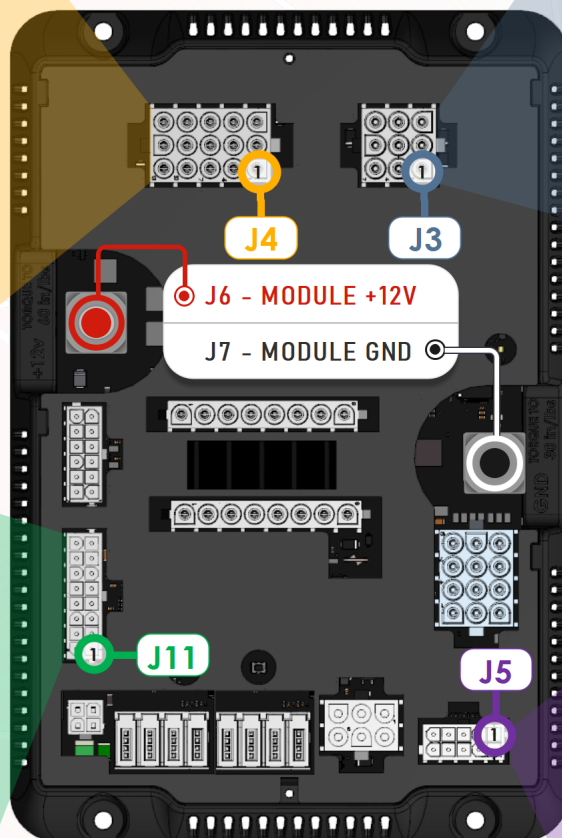


**Spyder Part #**  
BMODZRFT0  
**Tiffin Part #**  
5127293  
**Dimensions**  
5.1" DIA

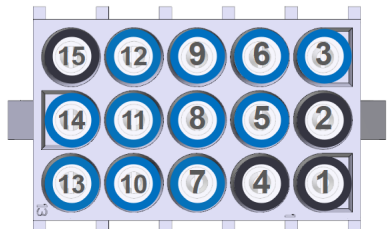


Ceiling

## G12 Module @ Under Bed

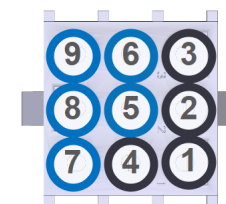


### J4



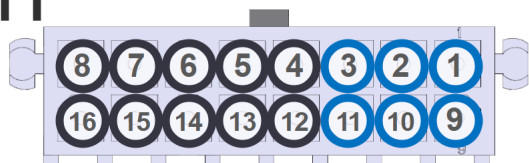
- |                             |                                |
|-----------------------------|--------------------------------|
| 1 Spare                     | 9 Rear Bath Lt (CH38)          |
| 2 Spare                     | 10 Mid Bath Ceiling Lts (CH39) |
| 3 Main OH/Liv Rm Lt (CH32)  | 11 Floor Lts (CH40)            |
| 4 Spare                     | 12 Dinette OH Lt (CH41)        |
| 5 Entry Lt (CH34)           | 13 Sconce Lt (CH42)            |
| 6 Task Lt (CH35)            | 14 TV Accent LT (CH43)         |
| 7 Hall LT (CH36)            | 15 Spare                       |
| 8 Bedroom Ceiling Lt (CH37) |                                |

### J3



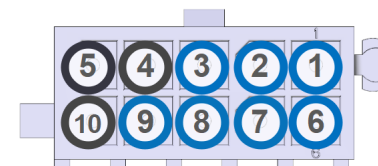
- |                         |                         |
|-------------------------|-------------------------|
| 1 Spare                 | 6 Ceiling Fan Lo (CH26) |
| 2 Spare                 | 7 Galley Fan (CH27)     |
| 3 Spare                 | 8 Mid Bath Fan (CH28)   |
| 4 Spare                 | 9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

### J11



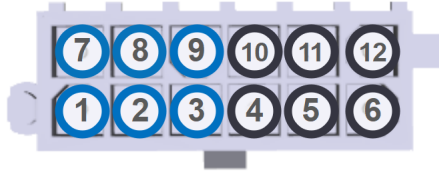
- |                           |                    |
|---------------------------|--------------------|
| 1 Fresh Tank Sensor Input | 9 Tank Sensor GND  |
| 2 Grey Tank Sensor Input  | 10 Tank Sensor GND |
| 3 Black Tank Sensor Input | 11 Tank Sensor GND |
| 4 N/A                     | 12 N/A       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

### J5



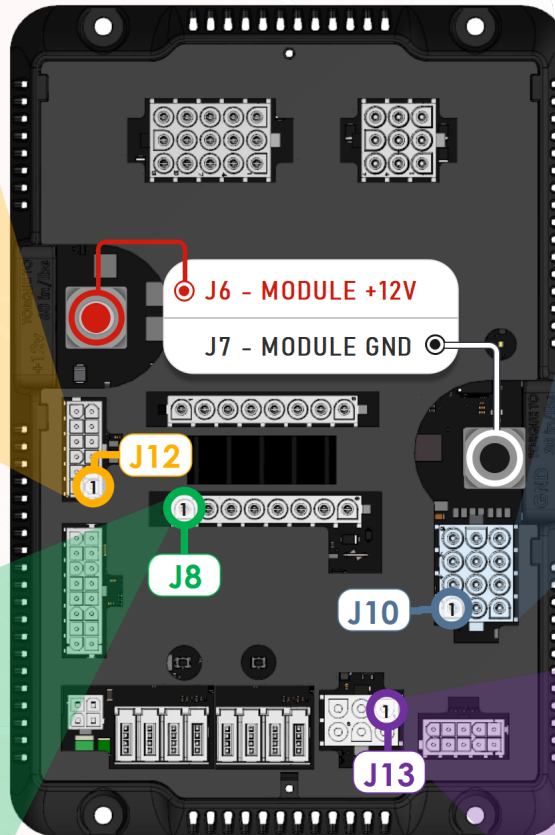
- |                           |                               |
|---------------------------|-------------------------------|
| 1 Park Brake (GND)        | 6 IGN Input (+12V)            |
| 2 WTR Pump SW (GND)       | 7 Spare (+12V)                |
| 3 Entry Door Pin SW (GND) | 8 Shorepower Detection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

## J12



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

## G12 Module @ Under Bed



## J10



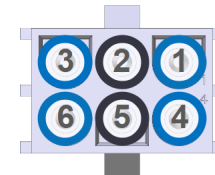
- |                  |                  |
|------------------|------------------|
| 1 FR A/C Comp    | 7 RR A/C Fan LOW |
| 2 FR A/C Fan HI  | 8 RR A/C Ht Pump |
| 3 FR A/C Fan LOW | 9 Water HT Elec  |
| 4 FR A/C Ht Pump | 10 Water HT Gas  |
| 5 RR A/C Comp    | 11 Spare         |
| 6 RR A/C Fan HI 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

## 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



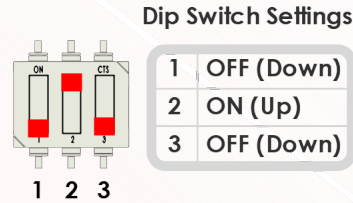
- |           |                  |
|-----------|------------------|
| 1 LPG Sig | 4 LPG GND        |
| 2 Spare   | 5 Spare          |
| 3 Spare   | 6 Gen Run Status |

## M1 Slide Card

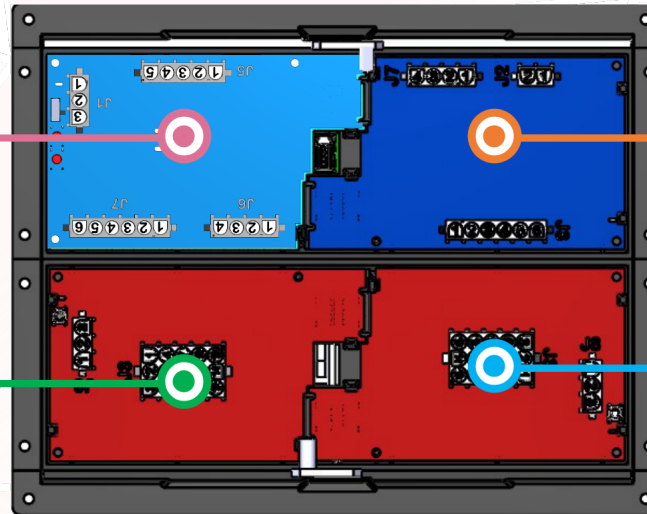
- Awning Constant
- Undercoach Constant
- Slide Breaker #1
- Slide Breaker #2
- Slide Breaker #3
- Ignition (12V)
- Park Brake (GND)
- P/S FR Slide EXT
- P/S FR Slide RET
- D/S FR Slide EXT
- D/S FR Slide RET
- P/S RR Slide EXT
- P/S RR Slide RET
- D/S RR Slide EXT
- D/S RR Slide RET
- Hydraulic Pump

## 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)
- HCR-11
- Entry Step SW
- Batt +12V HVAC
- IGN (+12V)



Front M1 Panel



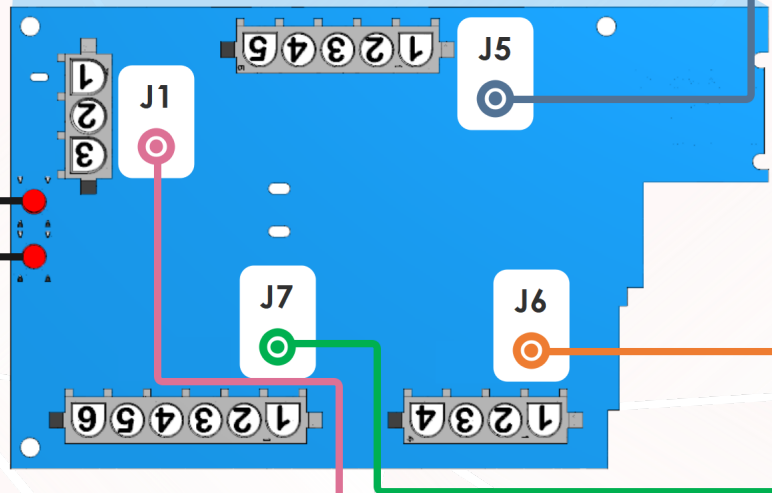
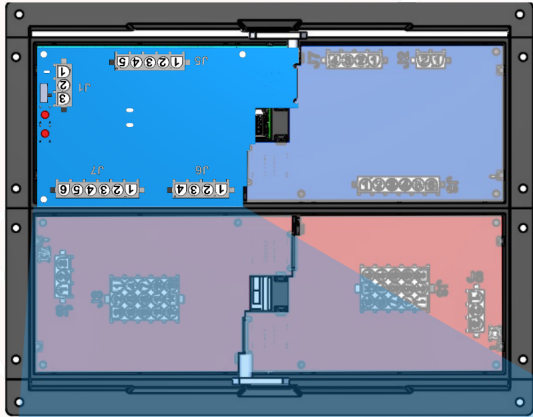
## M1 High Current

- Door/Assist Handle
- Water Pump
- Awning Light
- Road
- Porch
- Tank HT Power Trigger
- Door Awning EXT
- Door Awning RET
- 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



M1 Slide (Card 1)



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

**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**

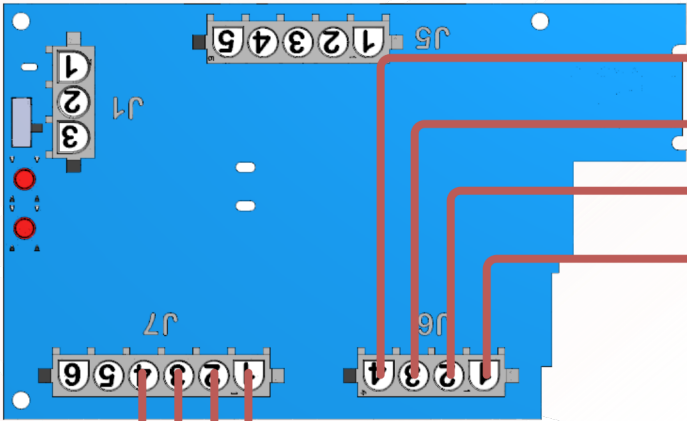
1 P/S RR Slide Ext	4 D/S RR Slide Ret
2 P/S RR Slide Ret	5 Hydraulic Pump
3 D/S RR Slide Ext	6 Spare

**J1**

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

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

## M1 Slide Card

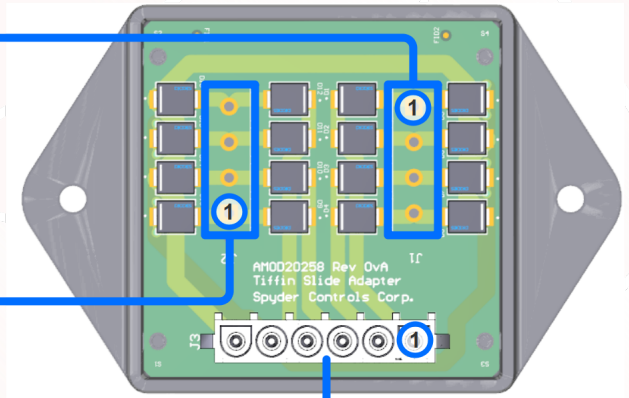


**Attached to J1**

1	Front D/S Slide RET
2	Front D/S Slide EXT
3	Front P/S Slide RET
4	Front P/S Slide EXT

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

## Tiffin Slide Adapter



**Attached to J2**

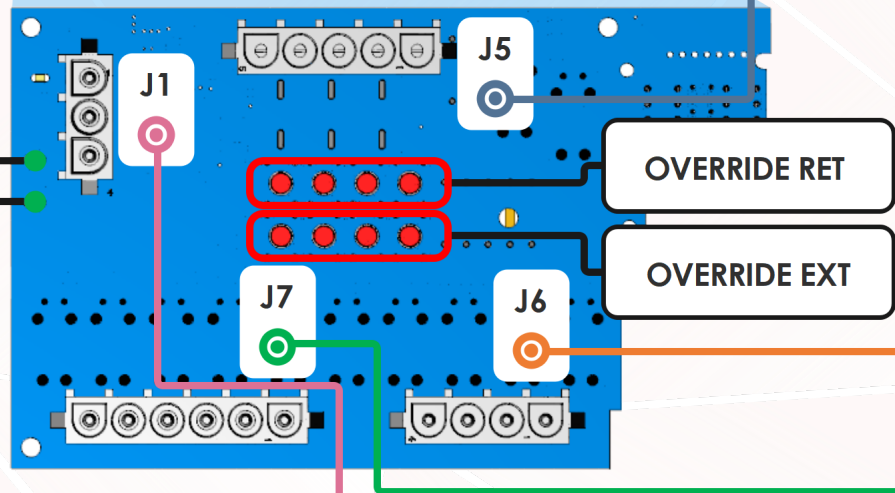
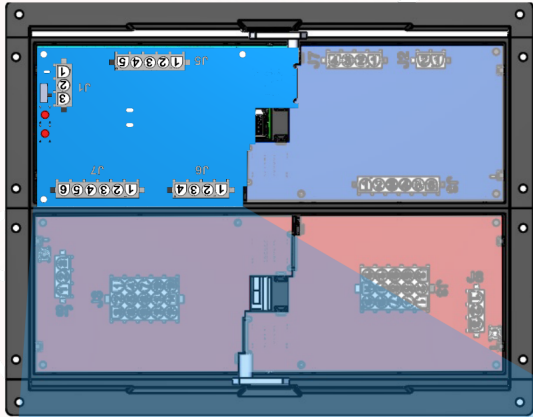
4	Rear P/S Slide EXT
3	Rear P/S Slide RET
2	Rear D/S Slide EXT
1	Rear D/S Slide RET

**Header J3**

1	Front D/S Slide
2	Front P/S Slide
3	Rear D/S Slide
4	Rear P/S Slide
5	Hydraulic Pump RET
6	Hydraulic Pump EXT

# M1 Slide (Card 1 Alternate Overrides)

Front M1 Panel



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

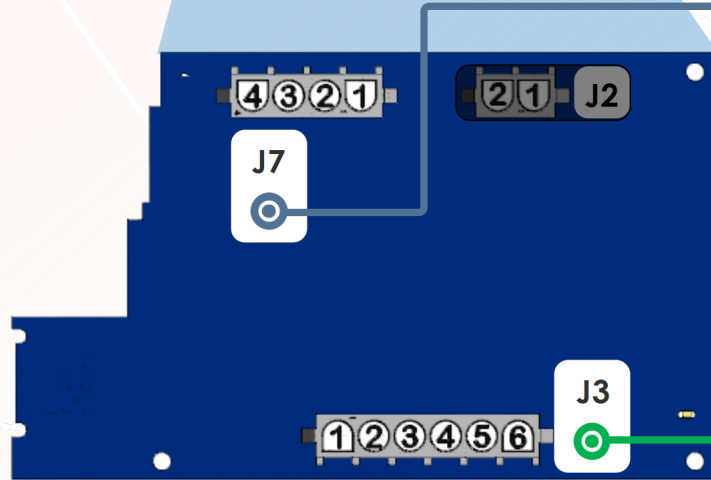
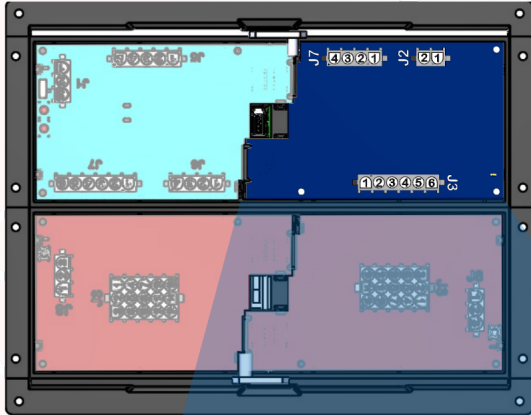
**J7**

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

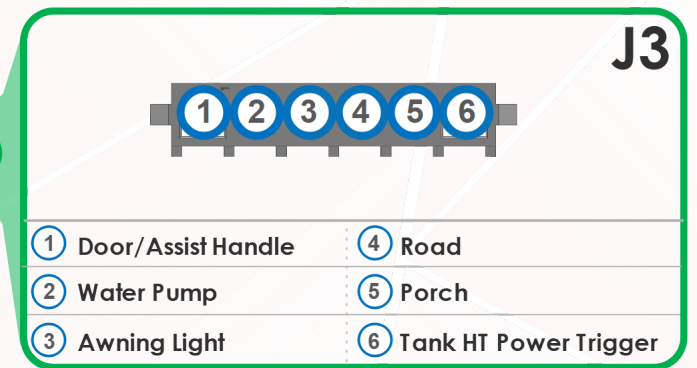
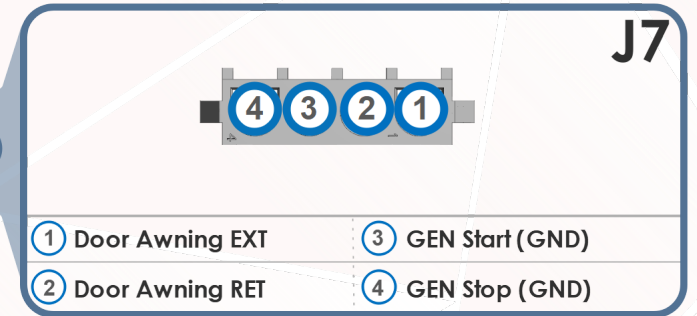
**J1**

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

Front M1 Panel

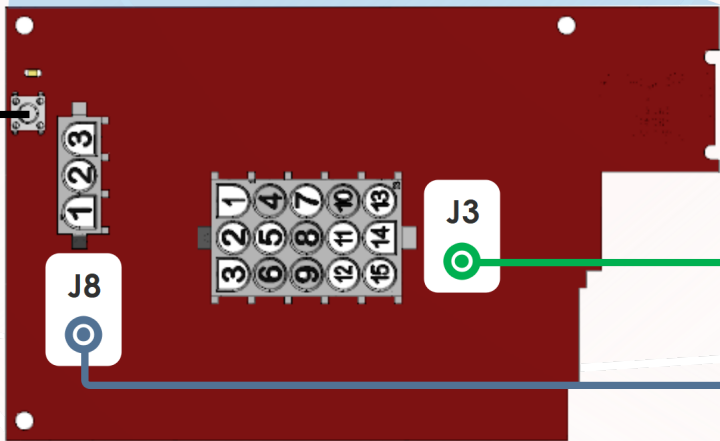
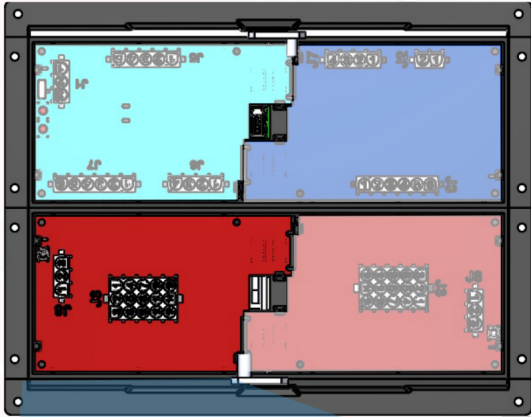


M1 High Current (Card 2)



# M1 Breaker (Card 3)

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	Spare
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		

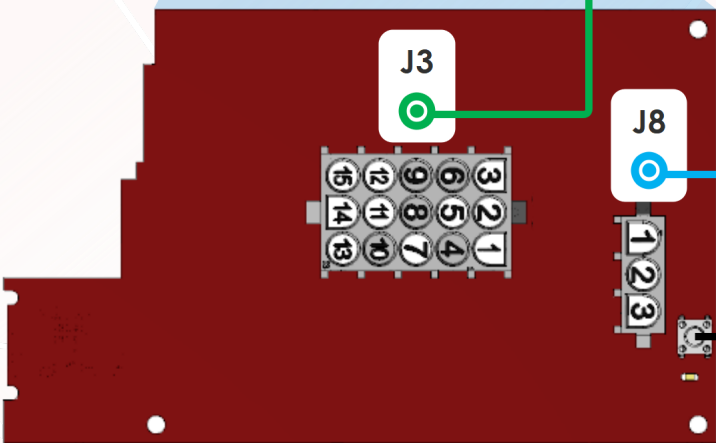
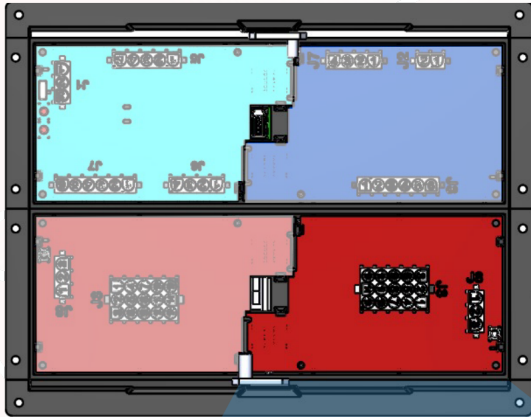
### J8

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

1	IGN (+12V)	3	N/A
2	N/A		

# M1 Breaker (Card 4)

Front M1 Panel



M1 Breaker (Card 4)

### J3

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

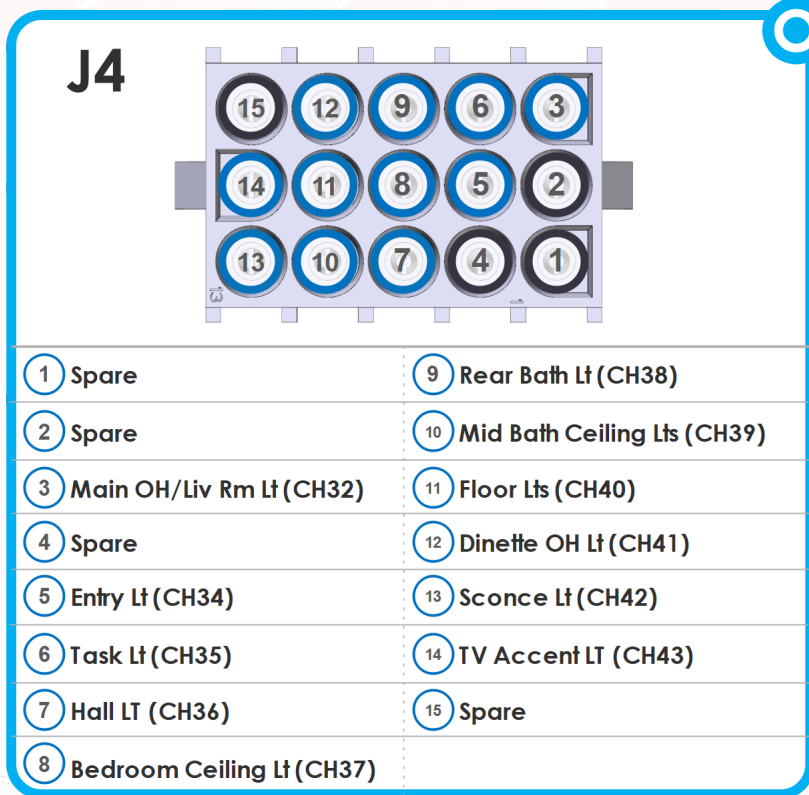
① SLD #1 PWR/Closet LT (HSE)	⑨ Power Window (IGN)
② 12V Outlet 2/USB PWR	⑩ Cargo Lts
③ AGS Power (HSE)	⑪ N/A
④ Truma (HSE)	⑫ D/S Mirror PWR (IGN)
⑤ N/A	⑬ Seat Power #2
⑥ Slide 3 Power	⑭ Seat Power #1
⑦ Map LT/Fans/Radio	⑮ P/S Mirror PWR IGN

### J8

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

① IGN (+12V)	③ N/A
② N/A	

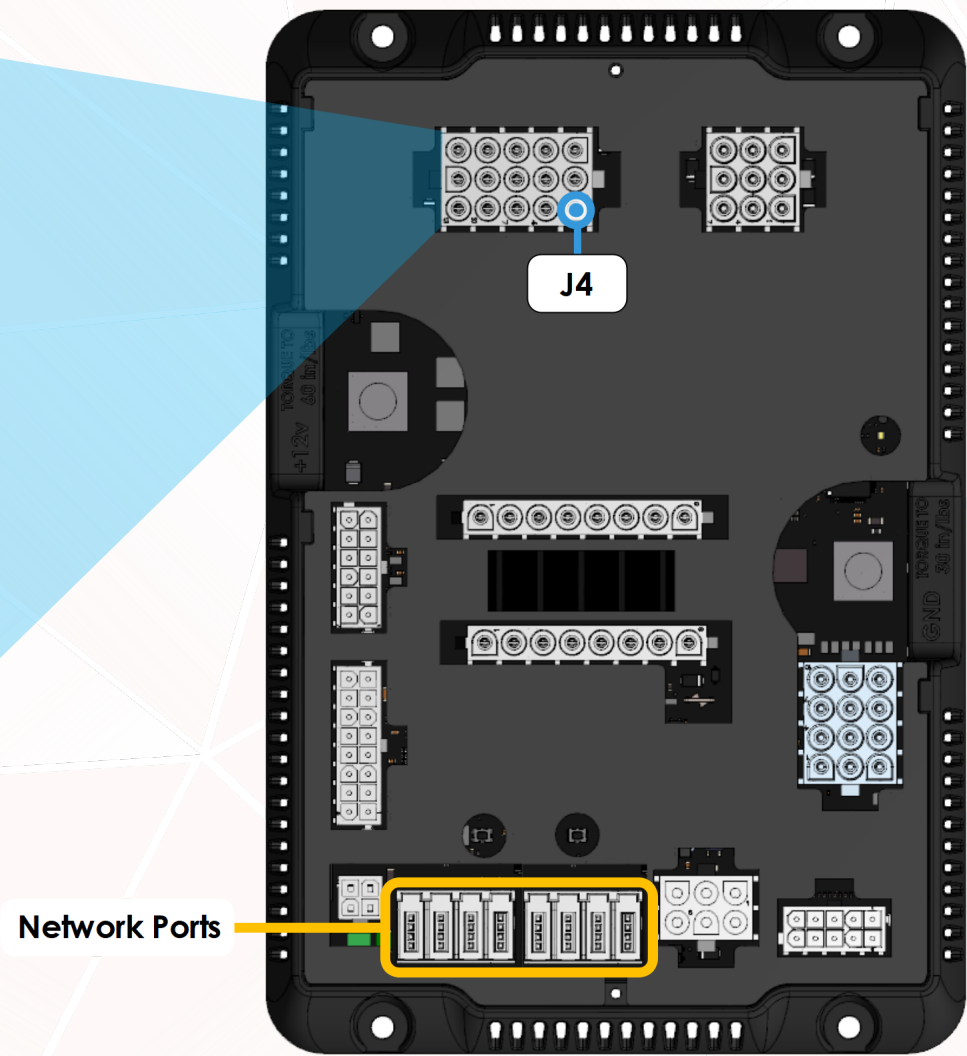
Breaker Reset



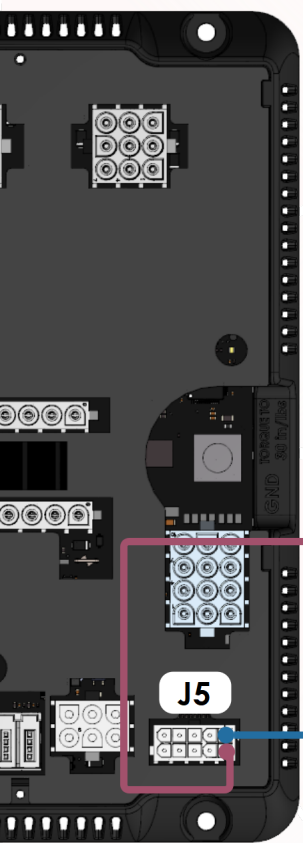
\* All Lights Listed Can Dim

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

## G12 Module @ Under Bed

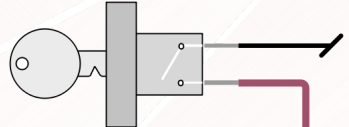


Network Ports

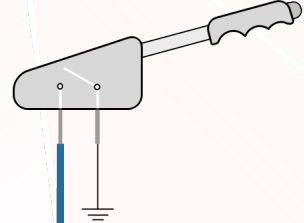


G12 Module  
@ Under Bed

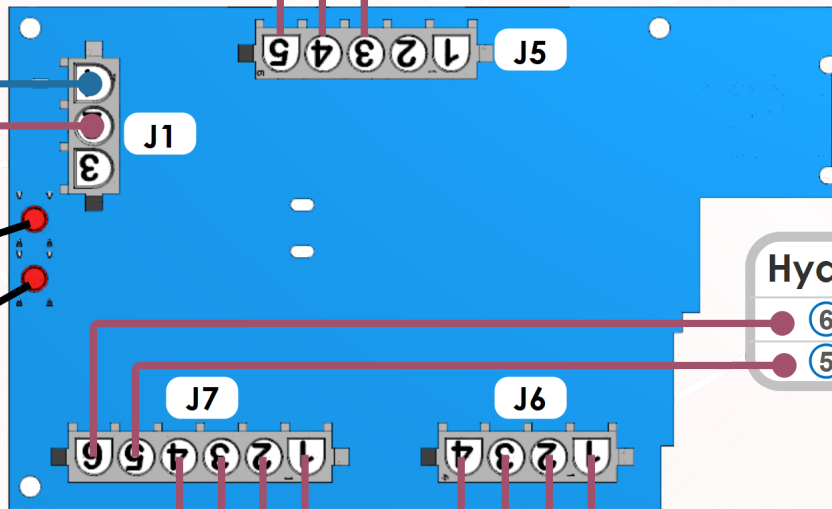
Ignition Switch



Park Brake Switch



M1 Slide Card



Slide Breakers

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

Hydraulic Pumps

- ⑥ Spare
- ⑤ Hydraulic Pump

OVERRIDE RET

OVERRIDE EXT

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

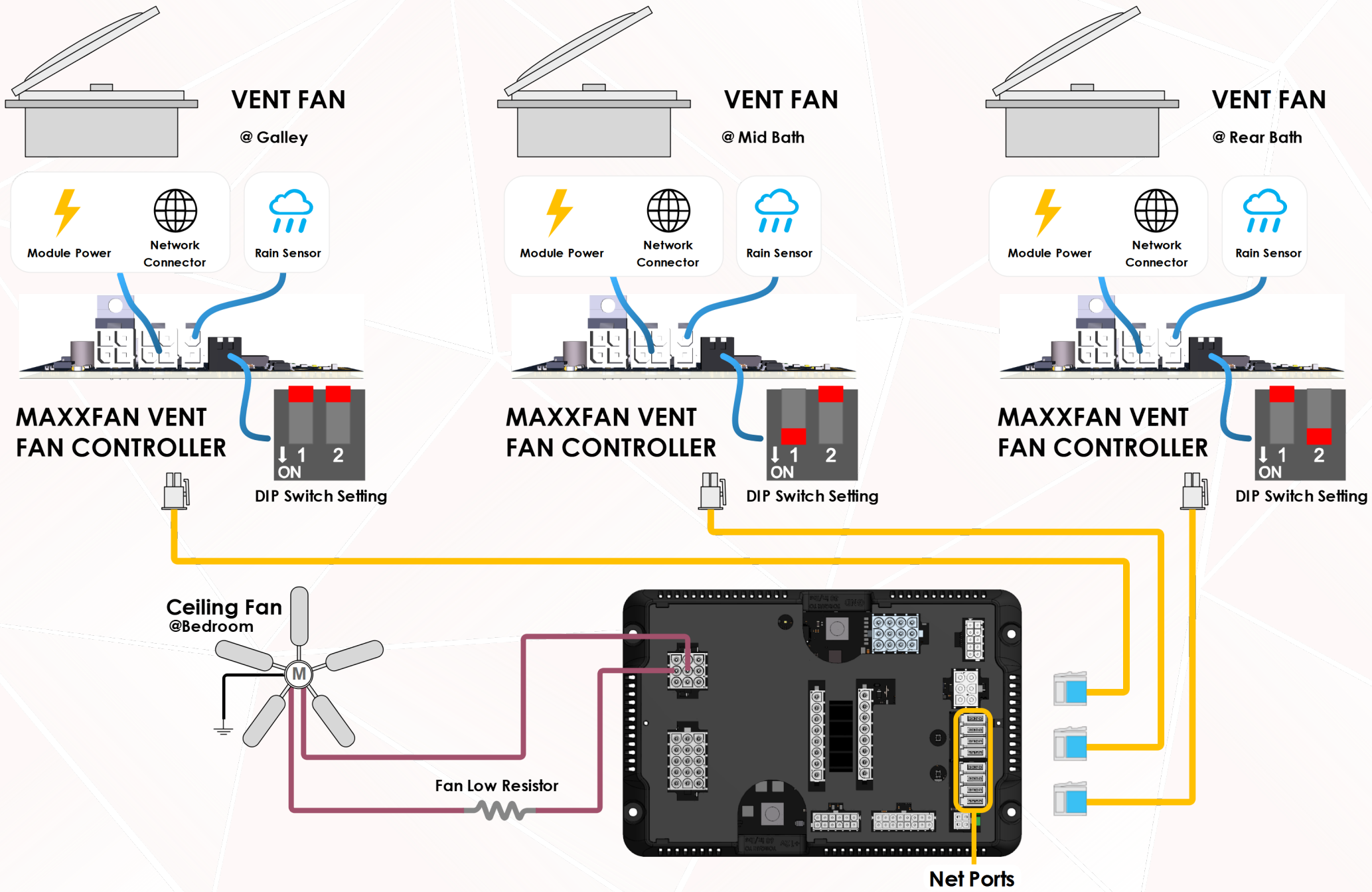
- ① P/S FR Slide EXT
- ② P/S FR Slide RET
- ③ D/S FR Slide EXT
- ④ D/S FR Slide RET

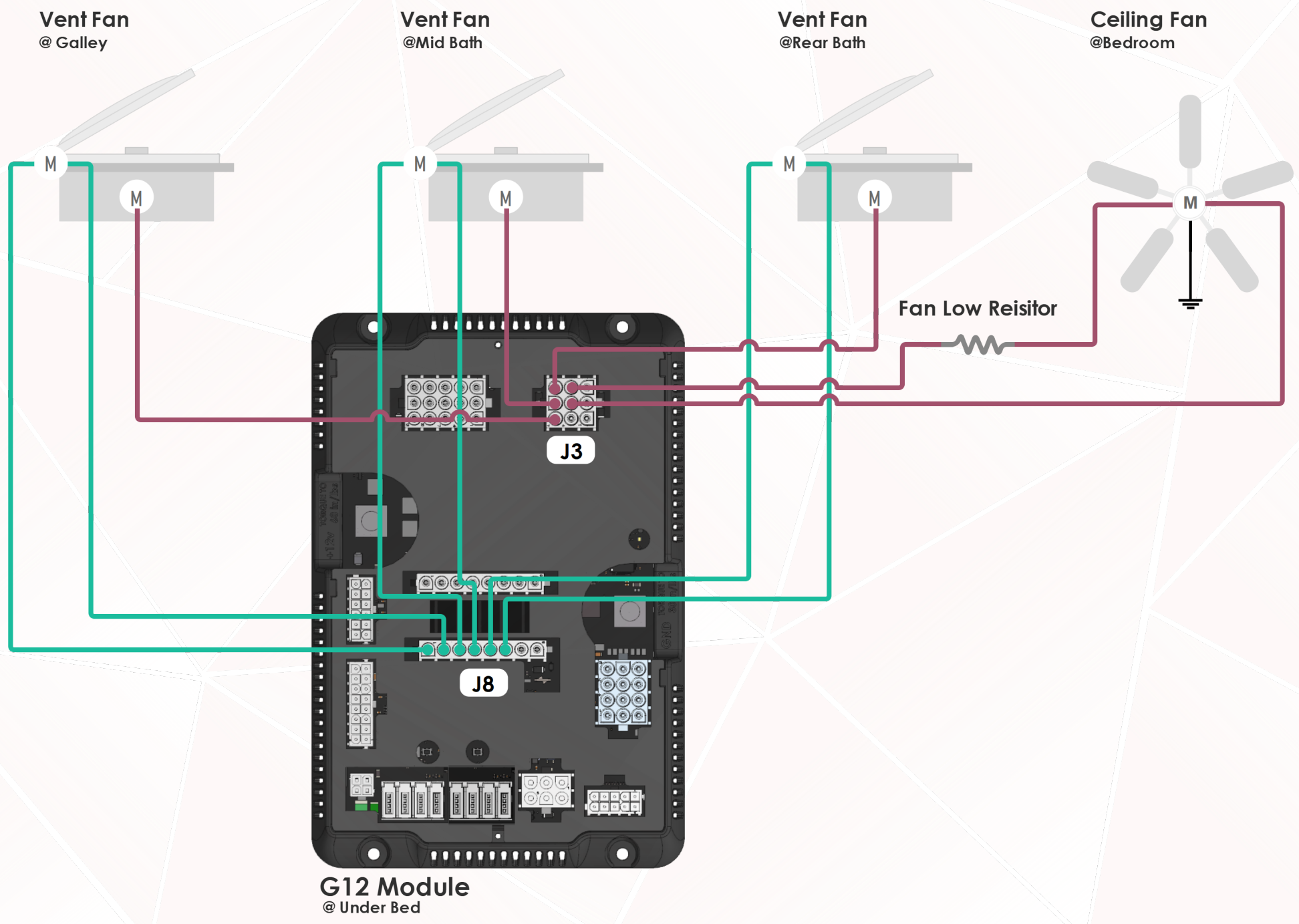


Emergency Override

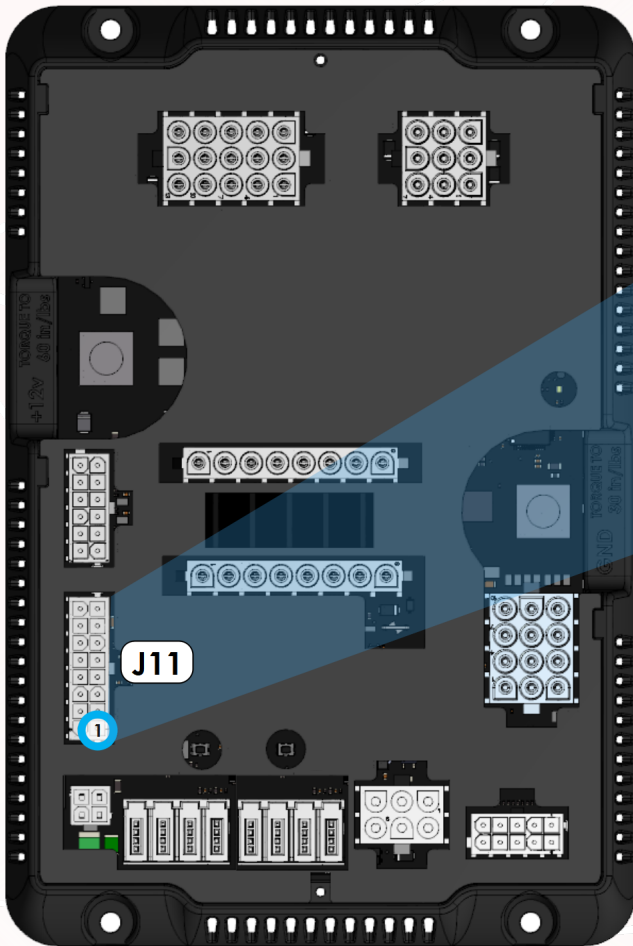
Park brake and ignition must be on for slides to operate.

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.

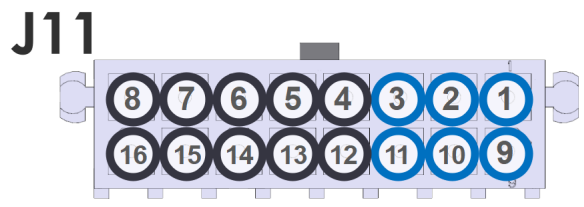
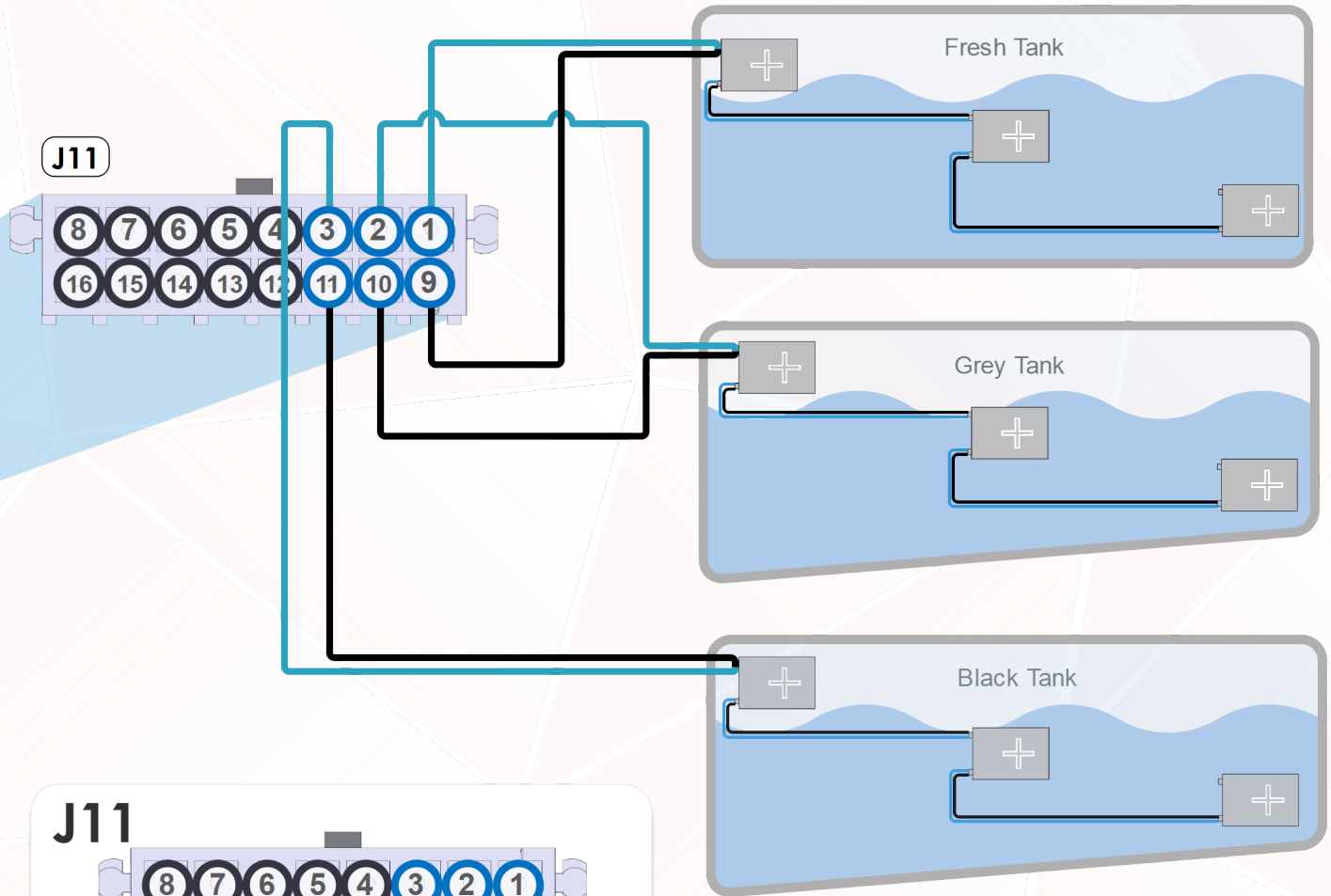




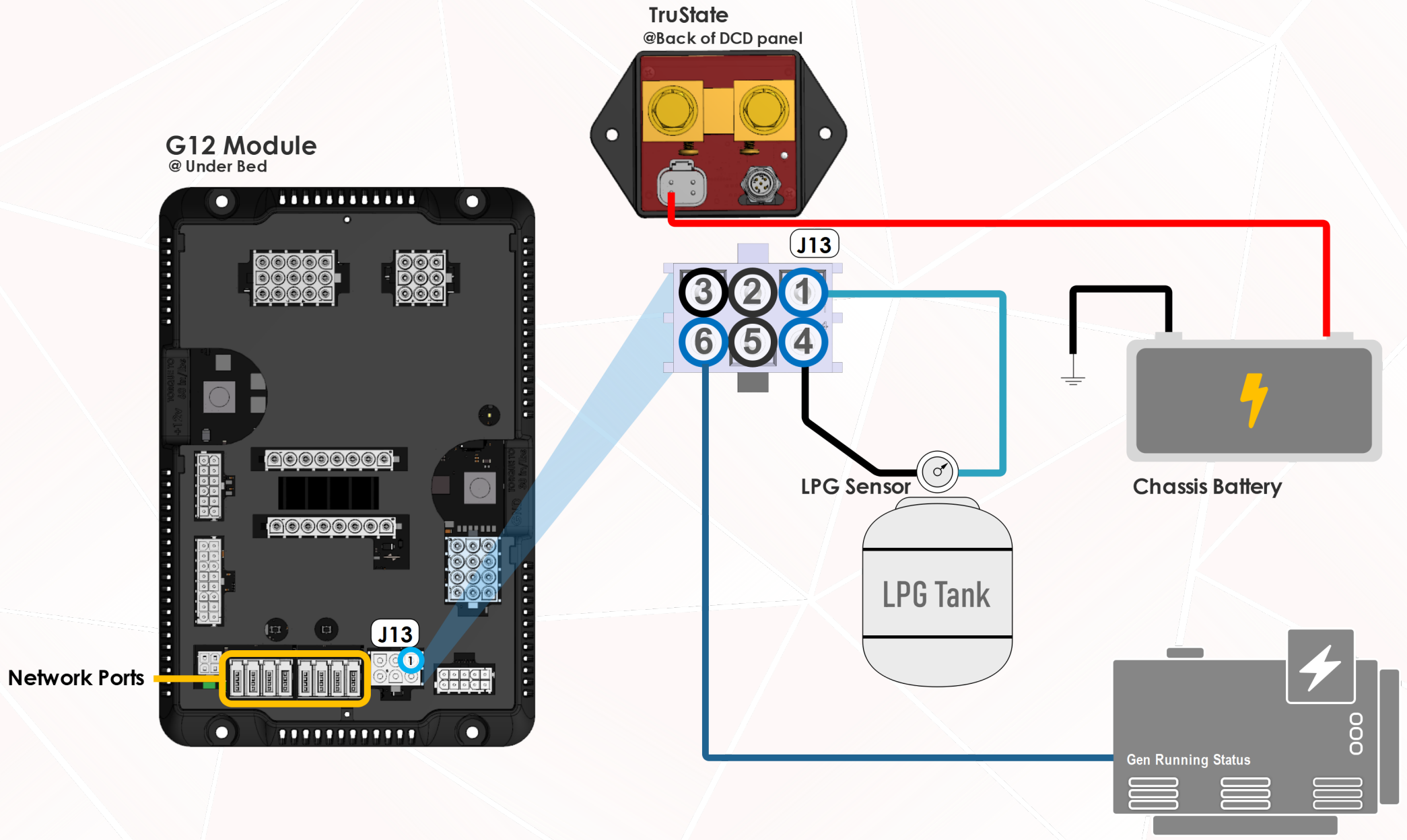
G12 Module

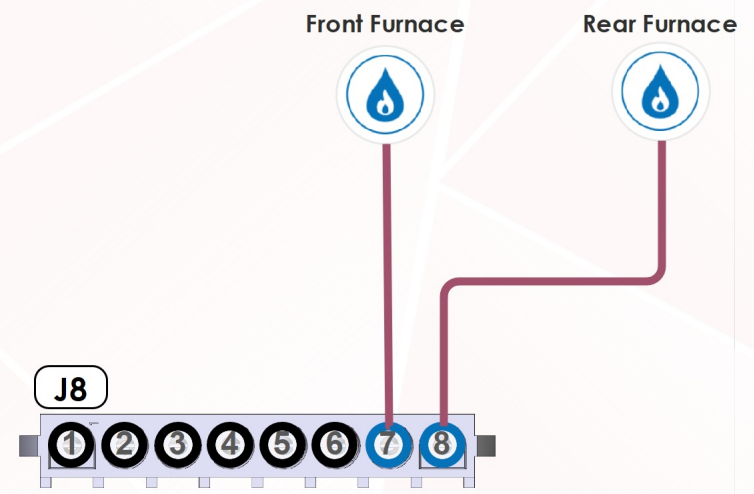
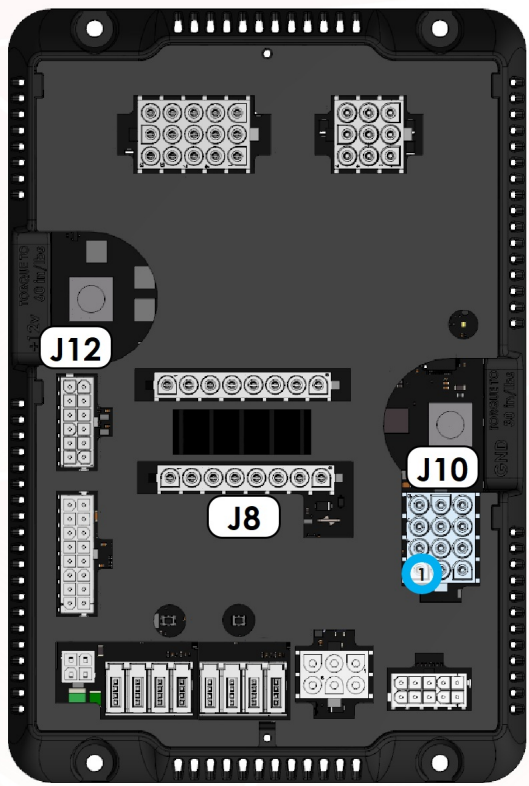
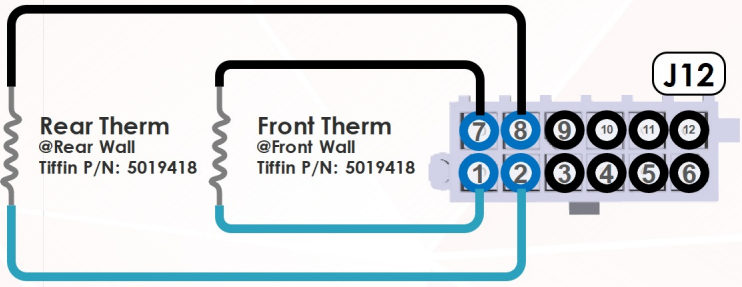
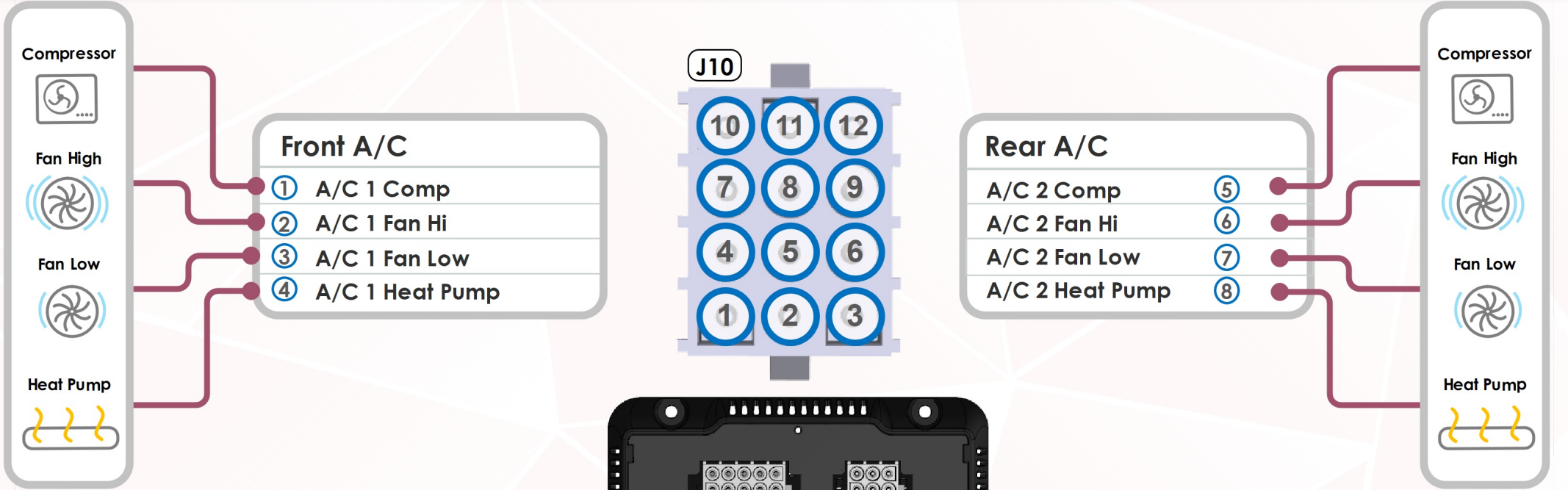


3 Level Tank Sensor System



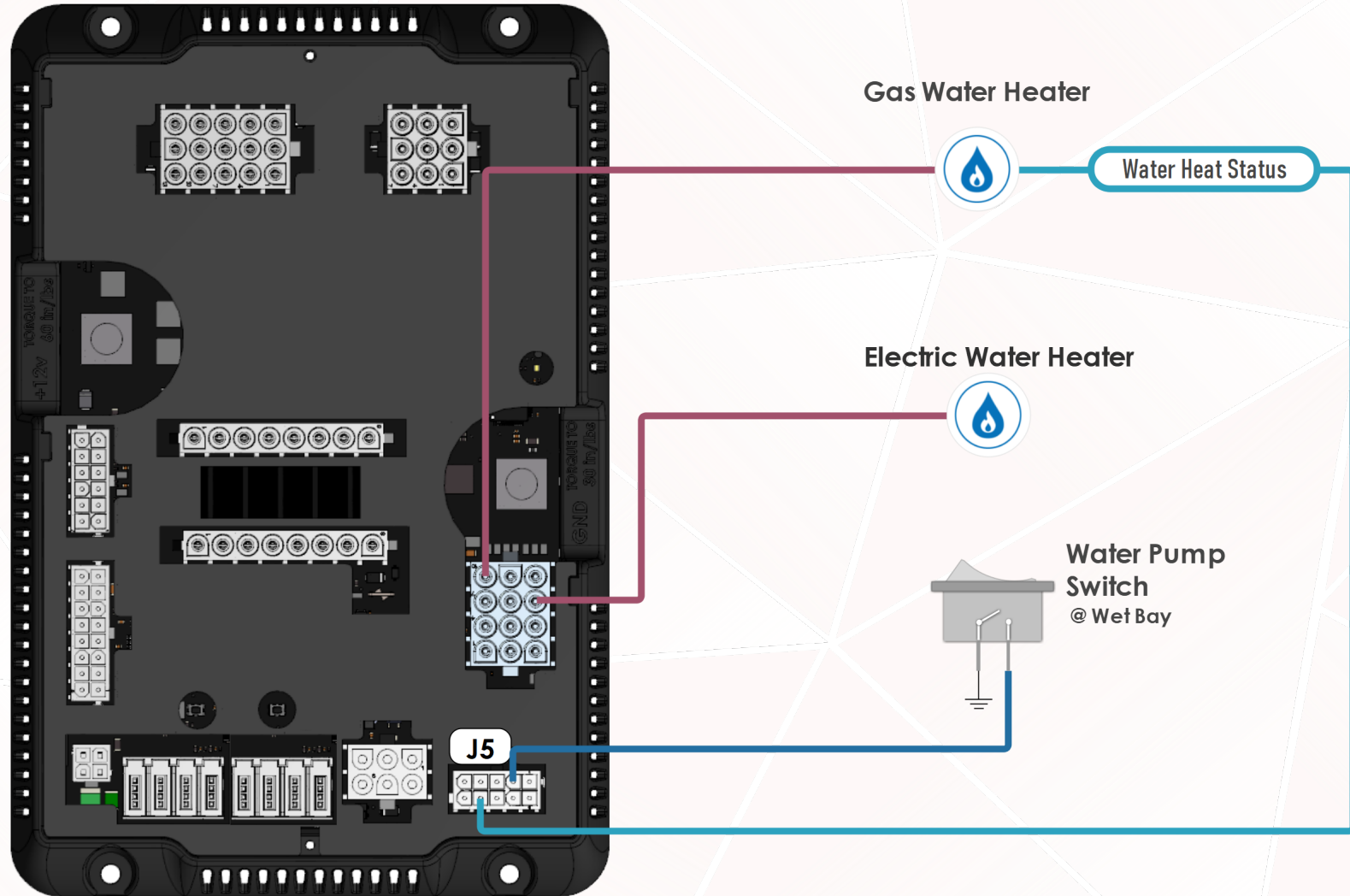
- |                           |                   |
|---------------------------|-------------------|
| ① Fresh Tank Sensor Input | ⑨ Tank Sensor GND |
| ② Grey Tank Sensor Input  | ⑩ Tank Sensor GND |
| ③ Black Tank Sensor Input | ⑪ Tank Sensor GND |



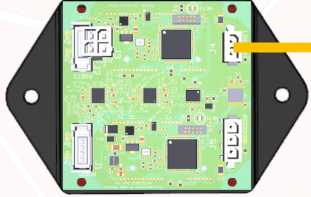


**G12 Module**  
@ Under Bed

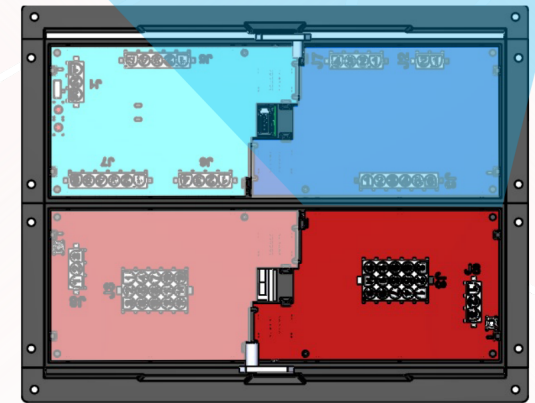
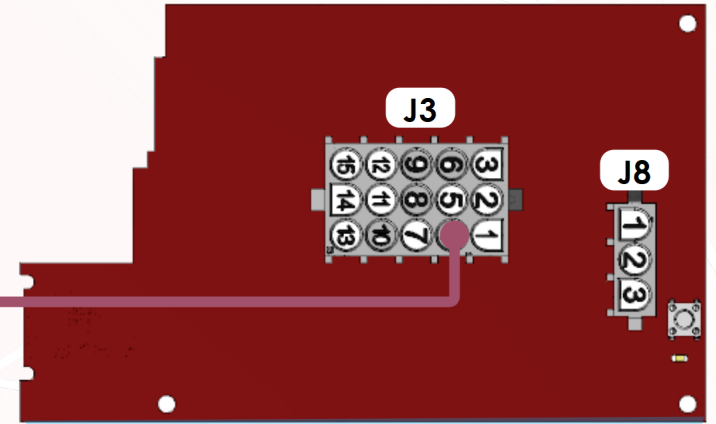
## G12 Module @ Under Bed



Bridge Module  
@Under Bed by G12

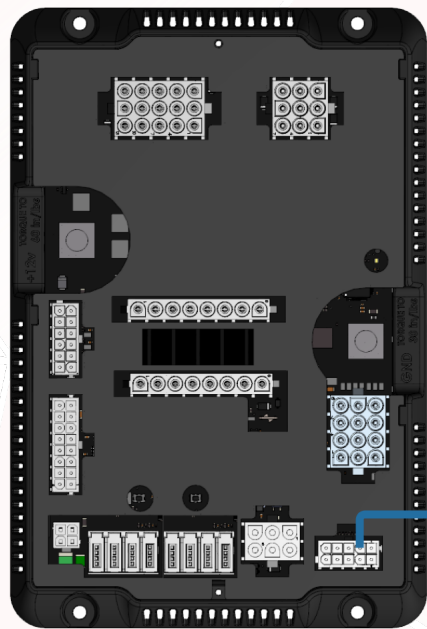
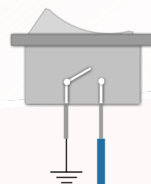


M1 Breaker Card



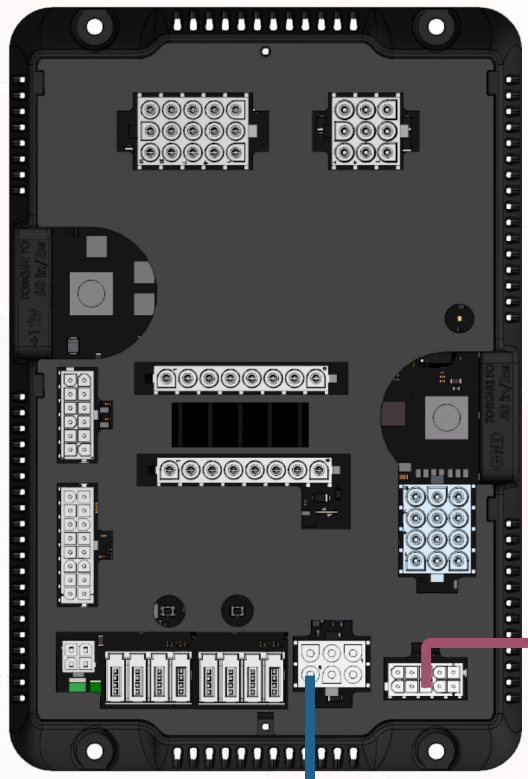
Front M1 Panel

Water Pump Switch  
@ Wet Bay



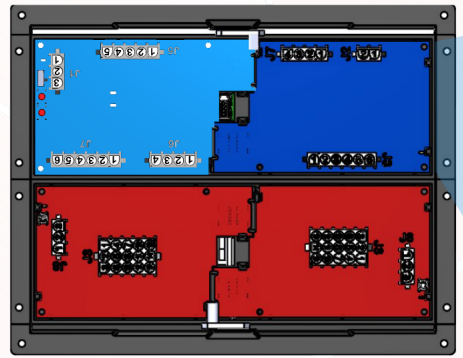
G12 Module  
@ Under Bed

**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.

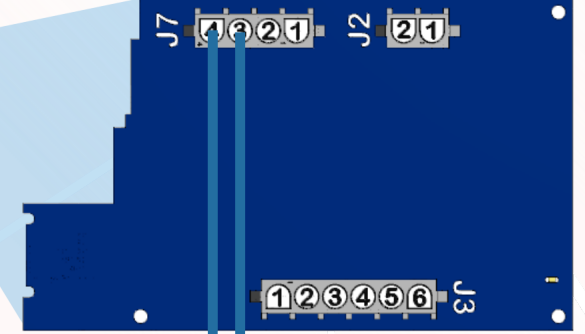


G12 Module  
© Under Bed

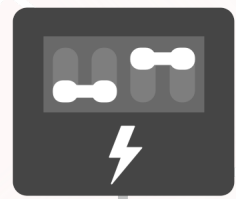
Front M1 Panel



M1 High Current Card

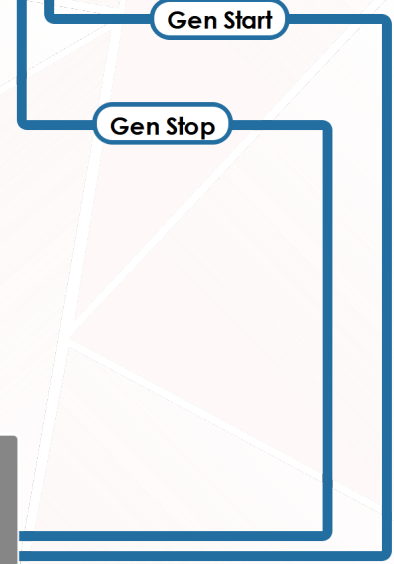
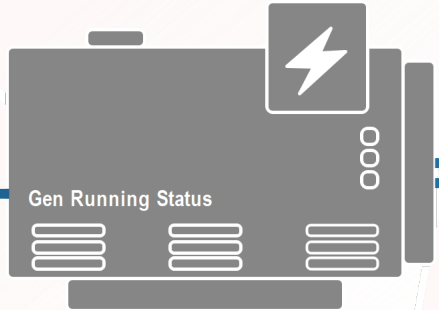


120V BREAKER PANEL



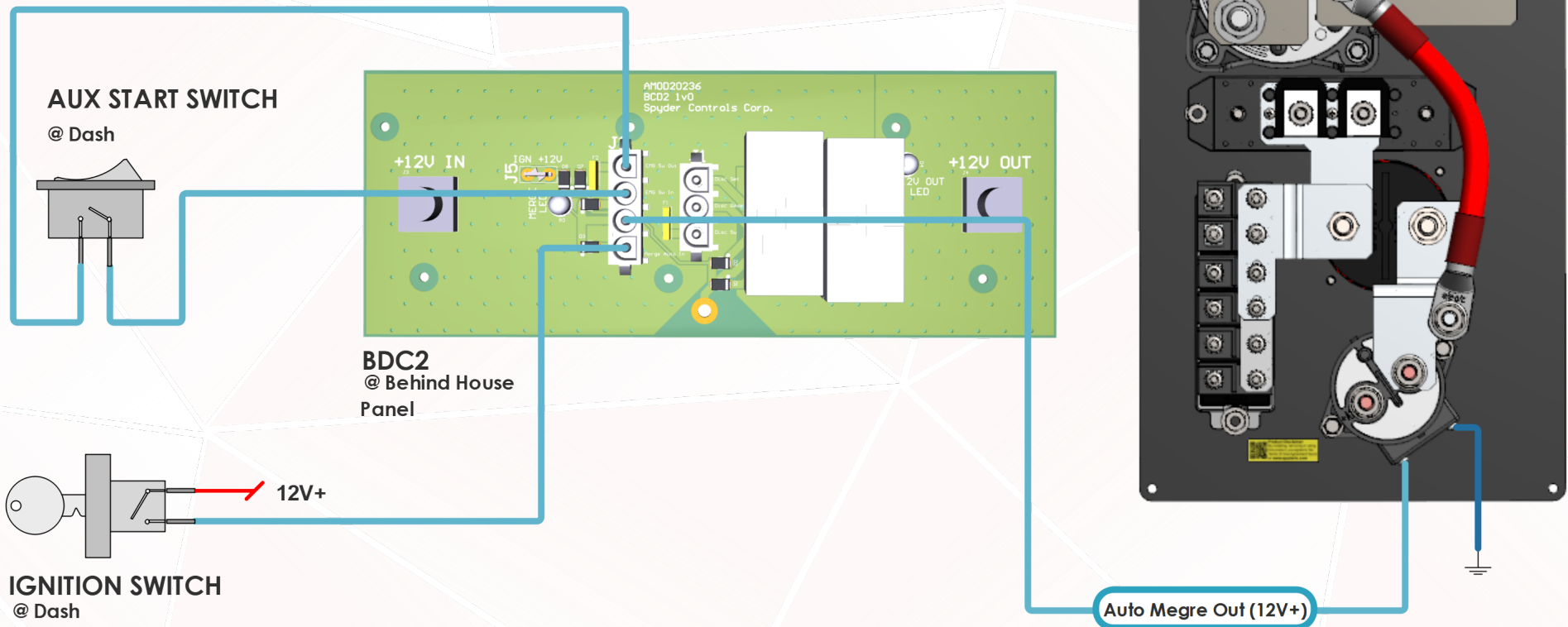
120V AC - 12V DC

**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.

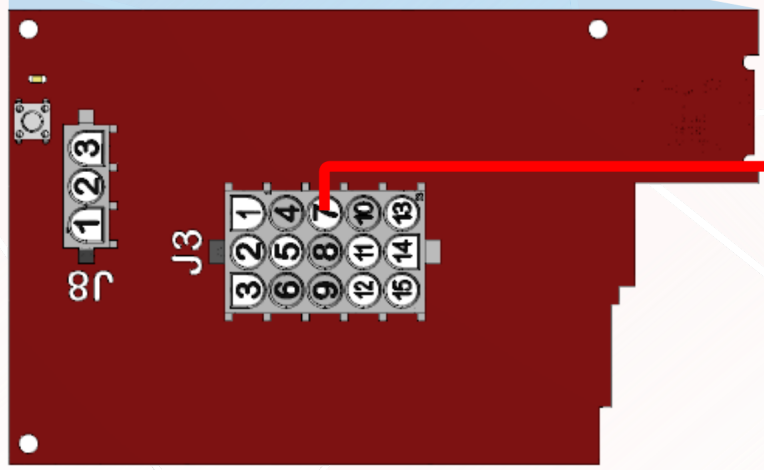
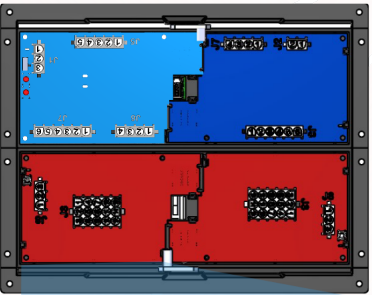


## Note

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.

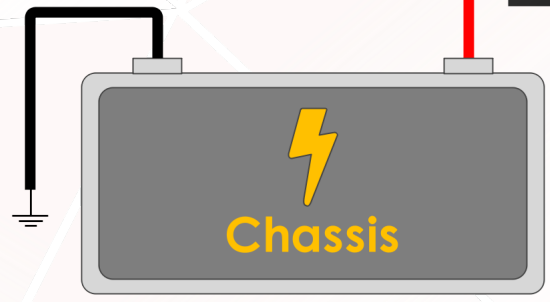
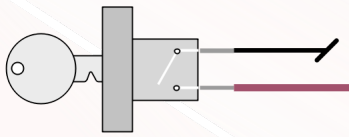


M1 Front Panel

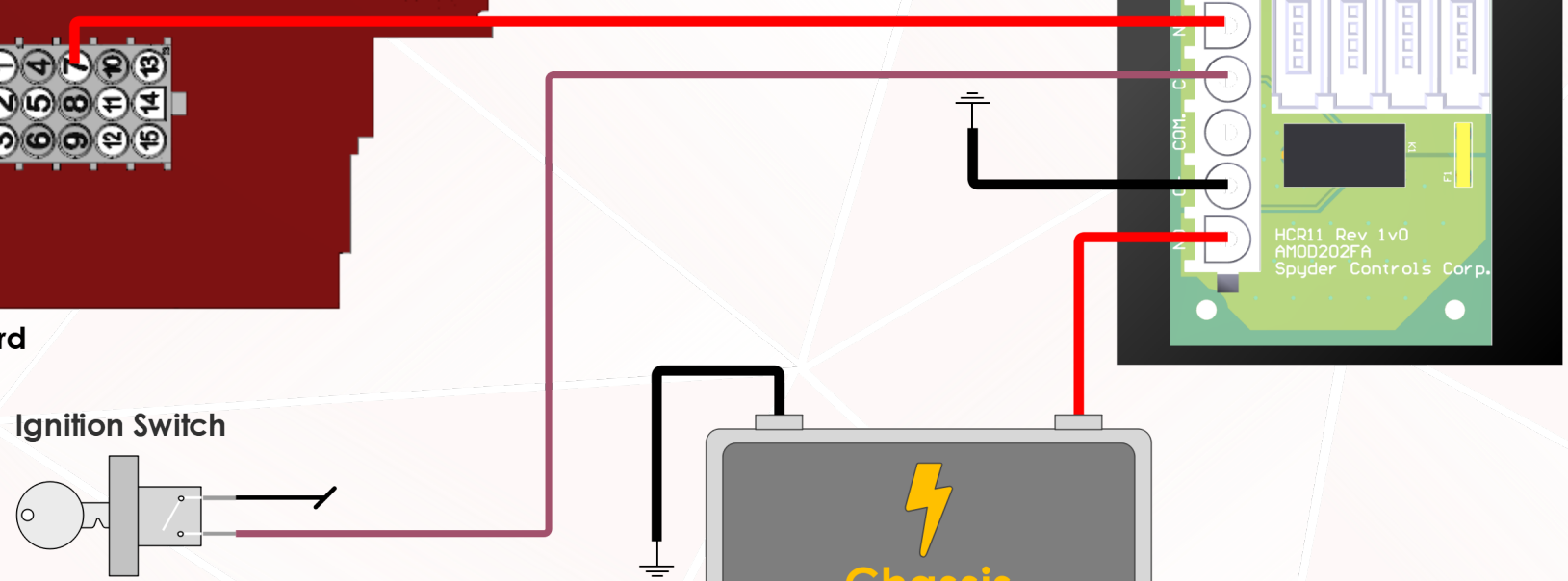
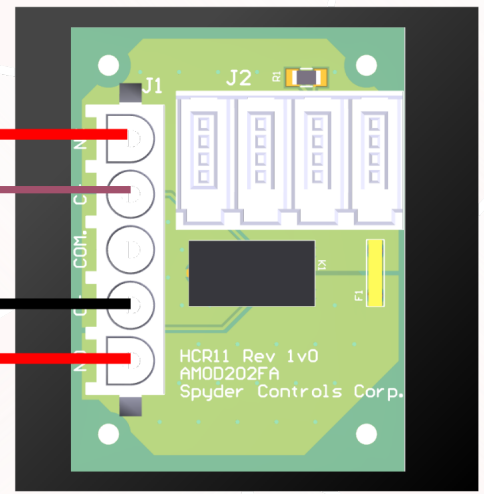


M1 Breaker Card

Ignition Switch



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

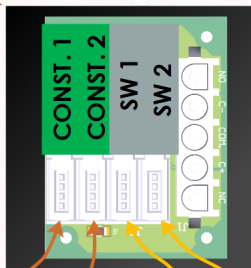




### THE ORDER OF THE NETWORK CABLES AT THIS TAP IS IMPORTANT !

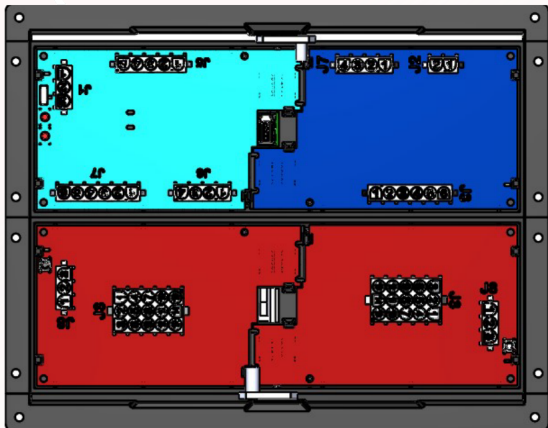
The RF Hub and M1 Panel MUST be plugged into the ports shown. The always on ports are powered when the house disconnect is off.

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



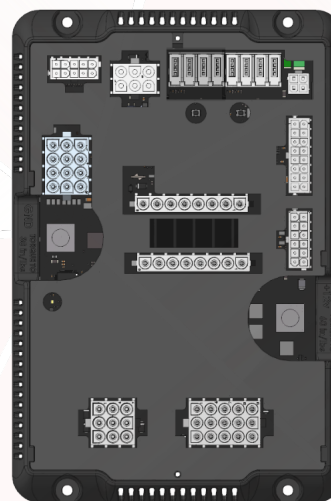
Always On Switched

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

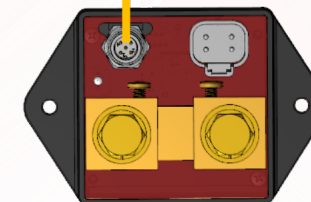


**RF Hub**  
@Ceiling

**Terminator**



**G12 MODULE**  
@ Under Bed  
Tiffin P/N: 5126984



**TruState**  
@ DCD Panel

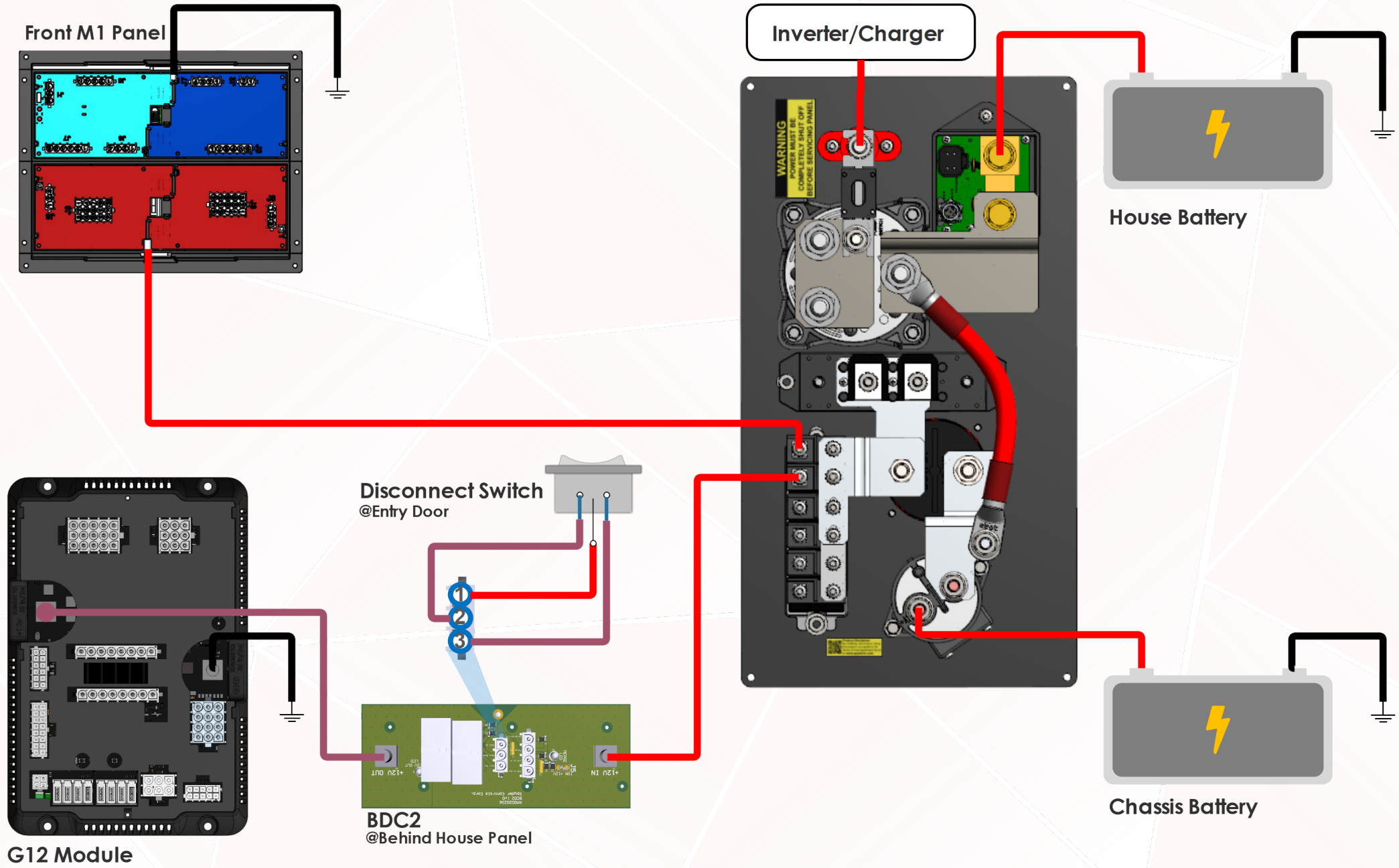
### Always On Network

This network to remain powered while house disconnect is off.

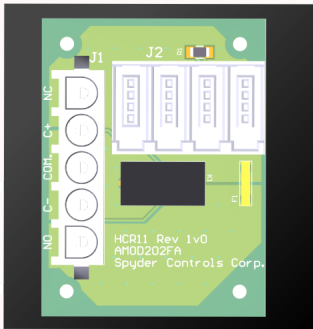
This network can be turned off using the battery disconnect on the DCD panel.

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

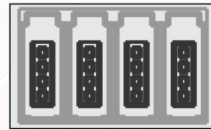




**TERMINATOR**  
**HCR-11**  
 Tiffin P/N: 5105426



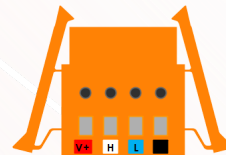
**G4 Common Drop Tap**  
 Tiffin P/N: 5016592



**G4 Terminator Drop Tap**  
 Tiffin P/N: 5051936



**4 Pos Wago Connector**  
 Tiffin P/N: 5015508



**Wago Hook Tool**  
 Wago P/N: 231-131



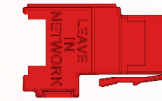
**Mini-Clamp Plug**  
 Tiffin P/N: 5066157  
 3M P/N: 37104-2165-000 FL 100



**Mini-Clamp Socket**  
 Tiffin P/N: 5066158  
 3M P/N: 37304-2165-000 FL 100

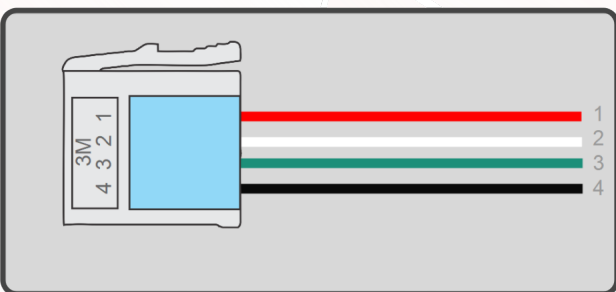
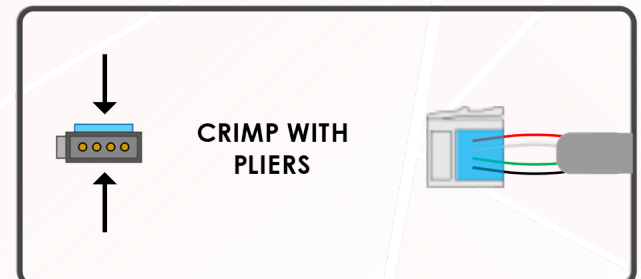
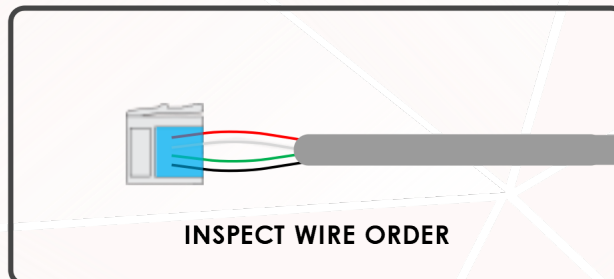
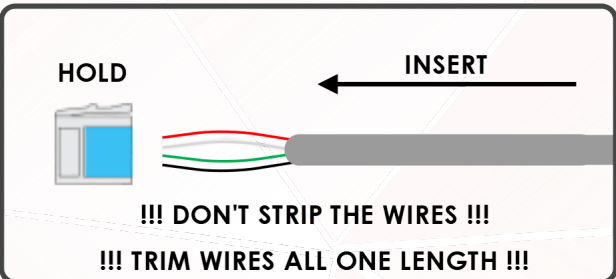
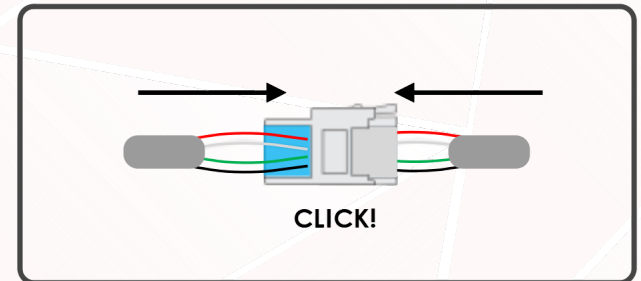
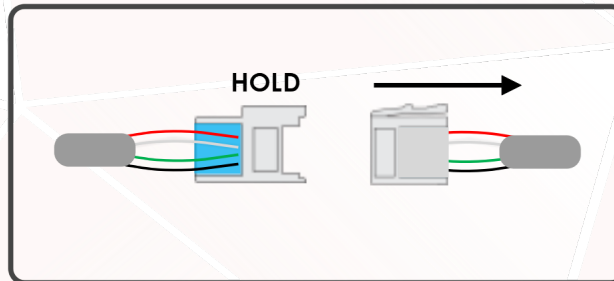
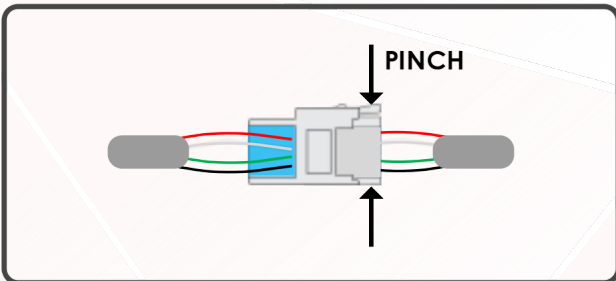


**In-Line Terminator**  
 Spyder P/N: BBCKZG700  
 Tiffin P/N: 5125008



**MiniFit Jr Connector**  
 Digi-Key P/N: 0039012040

**Minifit Jr Pins**  
 Digi-Key P/N: 0039000181



**Mate-N-Lok Pin Extractors**



**Mate-N-Lok Pin Extractor**  
 TE P/N: 305183



**Mini Mate-N-Lok Pin Extractor**  
 TE P/N: 189727-1