

2023 ▶

# Allegro RED 360











RED 360 RED 360 R

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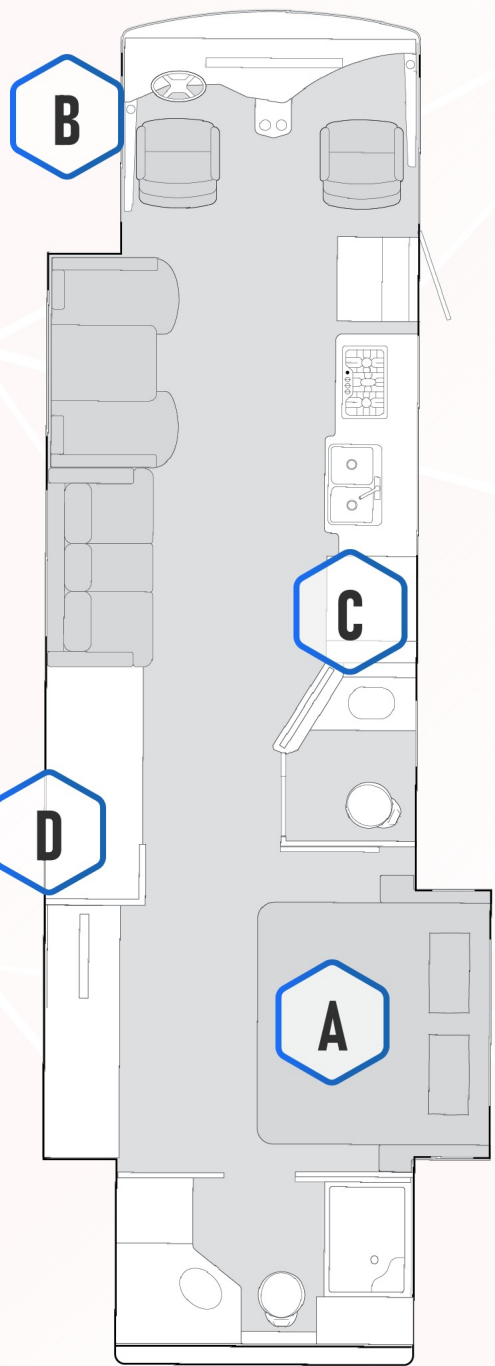
## Schematic Connections Legend

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

<b>19</b>	LPG + Chassis Voltage	<b>26</b>	Merge Logic
<b>20</b>	HVAC	<b>27</b>	Network
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<b>24</b>	AGS		
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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**

**Spyder Part #**  
BMODZU2VU

**Tiffin Part #**  
5126984

**Dimensions**  
9" X 6"

NET LED

NET PORTS

**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 #**  
BENCZ38DR

**Tiffin Part #**  
5127283

**Dimensions**  
10" X 4"

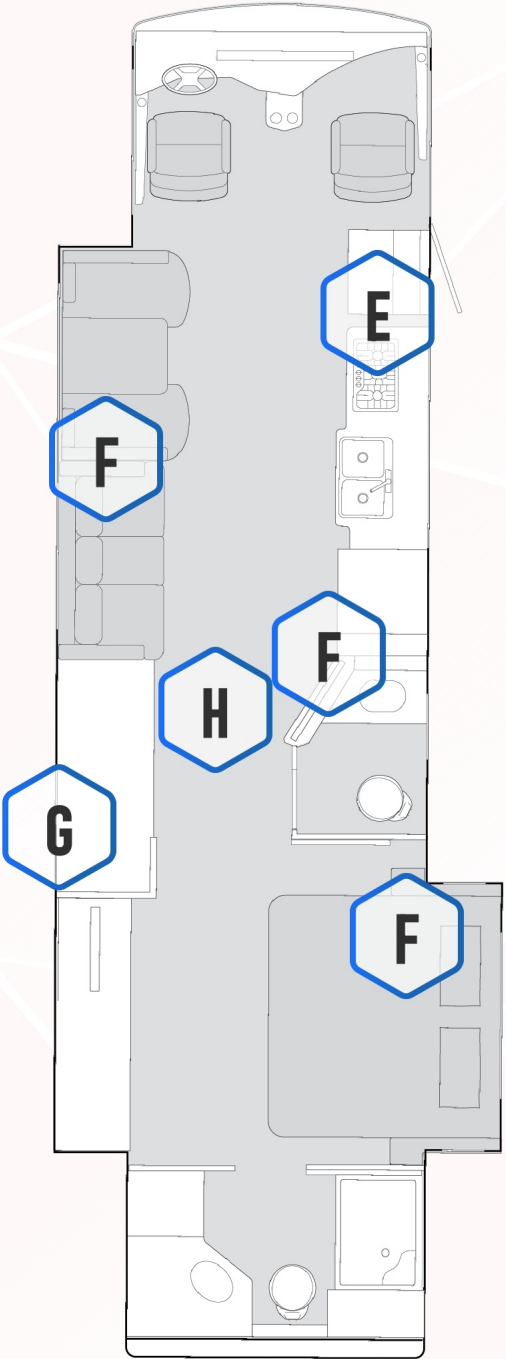
**BREAKER LEGEND**

- 1 HOUSE BATTERY
- 2 FRONT FURNACE
- 3 REAR FURNACE
- 4 WAGGONATOR TOILET
- 5 COIN OPERATED PUMP
- 6 PORCH ANNOD
- 7 COIN DETECTOR
- 8 SHOWER
- 9 OUTSIDE TV
- 10 COND REEL
- 11 AC/DC HOT
- 12 ENTRY STEP
- 13 BATT
- 14 M1 FRONT PANEL
- 15 HOUSE NON-DISCONNECT LOAD
- 16 SOLAR
- 17 CHASSIS A LOADS
- 18 MOTORHOMER
- 19 DASH EQUIPMENT
- 20 COOLER/HEAT FAN

INVERTER MASTER SWITCH

HOUSE BATTERY MASTER SWITCH

TIFFIN MOTORHOMES



## E 5" Color LCD



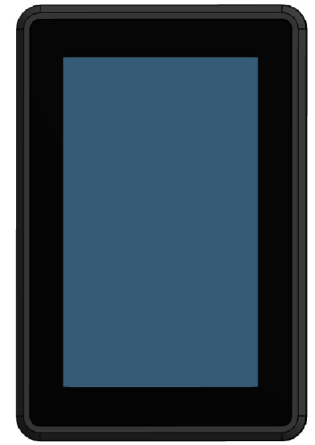
**Spyder Part #**  
BSSPZZREK  
**Tiffin Part #**  
5127269  
**Dimensions**  
5.7" X 3.6"



## F 3.5" Color LCD



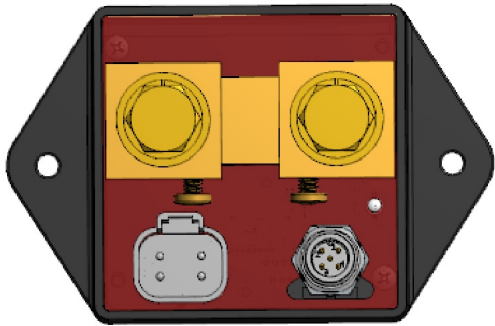
**Spyder Part #**  
BSSPZZTED  
**Tiffin Part #**  
5114009  
**Dimensions**  
4.5" X 2.9"



## G TruState Module



**Spyder Part #**  
BMODWC600  
**Tiffin Part #**  
5114016  
**Dimensions**  
2.7" X 2.7"



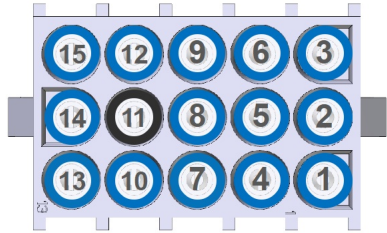
## H RF Hub



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

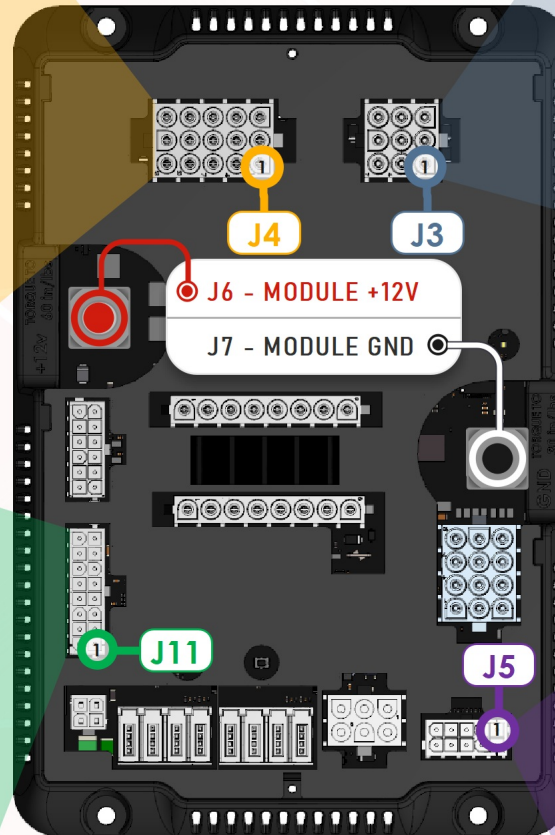


## J4

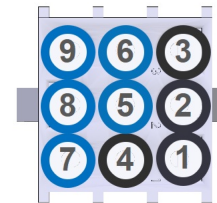


① PS Slide Lt (CH30)	⑨ RR Bath Ceiling Lt (CH38)
② DS Slide LT (CH31)	⑩ Mid Bath Ceiling Lt (CH39)
③ Ceiling Lt (CH32)	⑪ Spare
④ TV Accent (CH33)	⑫ Sofa Reading Lt (CH42)
⑤ Entry Lt (CH34)	⑬ Sconce Lt (CH42)
⑥ Task Lt (CH35)	⑭ Front Accent Lt (CH43)
⑦ Hall LT (CH36)	⑮ Galley (CH44)
⑧ Bed Ceiling Lt (CH37)	

## G12 Module @ Under Bed

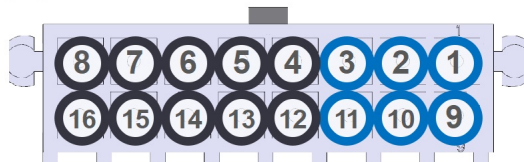


## J3



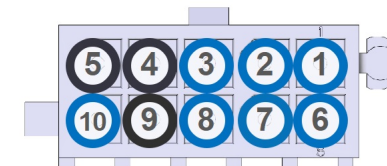
① Spare	⑥ Ceiling Fan Lo (CH26)
② Spare	⑦ Galley Fan (CH27)
③ Spare	⑧ Mid Bath Fan (CH28)
④ Spare	⑨ Rear Bath Fan (CH29)
⑤ Ceiling Fan Hi (CH25)	

## J11



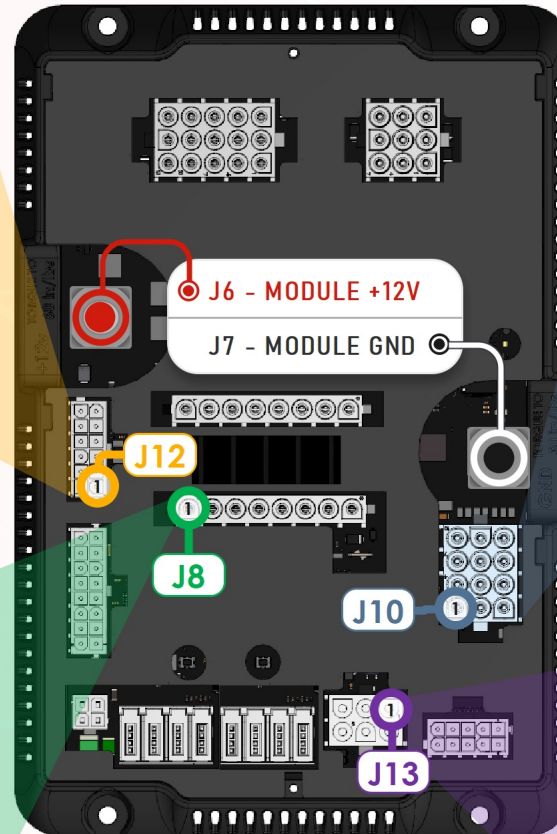
① Fresh Tank Sensor Input	⑨ Tank Sensor GND
② Grey Tank Sensor Input	⑩ Tank Sensor GND
③ Black Tank Sensor Input	⑪ Tank Sensor GND
④ Spare	⑫ Spare
⑤ Spare	⑬ Spare
⑥ Spare	⑭ Spare
⑦ Spare	⑮ Spare
⑧ Spare	⑯ Spare

## J5

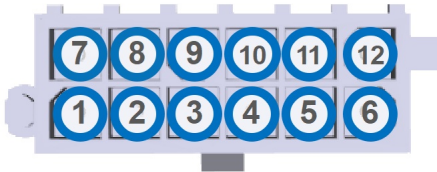


① Park Brake (GND)	⑥ IGN Input (+12V)
② WTR Pump SW (GND)	⑦ Spare (+12V)
③ Entry Door Pin Sw (GND)	⑧ Shore PWR Detect. (+12V)
④ Merge Status (GND)	⑨ Spare (+12V)
⑤ Spare (GND)	⑩ Spare (+12V)

## G12 Module @ Under Bed

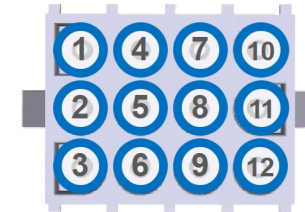


### J12



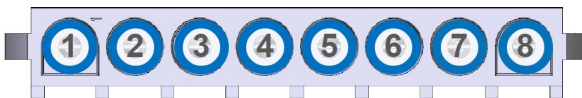
① FR Floor Therm	⑦ FR Floor Therm GND
② RR Floor Therm	⑧ RR Floor Therm GND
③ Front AC Therm	⑨ Front AC Therm GND
④ Mid AC Therm	⑩ Mid AC Therm GND
⑤ Rear AC Therm	⑪ Rear AC Therm GND
⑥ Bay Therm	⑫ Bay Therm GND

### J10



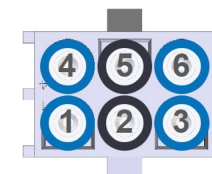
① FR A/C Comp	⑦ MID A/C Fan LO
② FR A/C Fan HI	⑧ MID A/C Ht Pump
③ FR A/C Fan LO	⑨ RR A/C Comp
④ FR A/C Ht Pump	⑩ RR A/C Fan HI
⑤ MID A/C Comp	⑪ RR A/C Fan LO
⑥ MID A/C Fan HI	⑫ RR A/C Ht Pump

### 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)

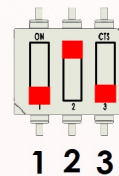
- Camera/Radio (IGN)
- Jack Buzzer (IGN)
- CB/Satellite
- Panel Lamp/Head LT (IGN)
- 12V Outlet 1/USB PWR
- Pantry (IGN)
- TV Relay/Fridge/Dash SHD MOD (IGN)
- HVAC Denso (IGN)
- Dock Light
- Entry Step SW
- IGN (+12V)

## M1 HC Half Bridge

- Door/Assist Handle
- Water Pump
- Porch
- Entry Door Lock
- Entry Door Unlock
- Door Awning EXT
- Door Awning RET
- Gen Start (GND)
- Gen Stop (GND)

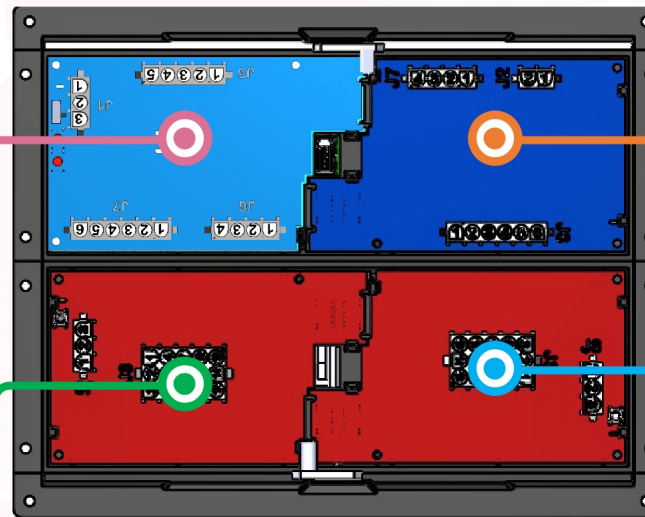
## M1 Breaker (Card 4)

- HVAC Denso
- 12V Outlet 2/ USB PWR
- Engine Preheat SW
- Electric Step Cover
- 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
- IGN (12V)



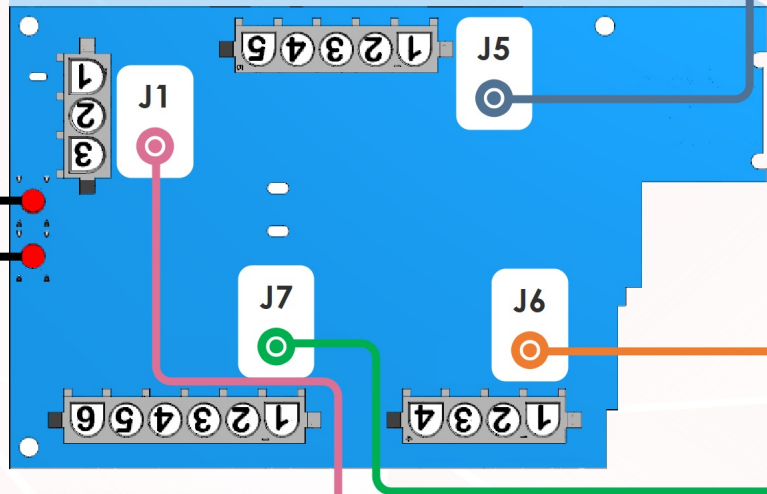
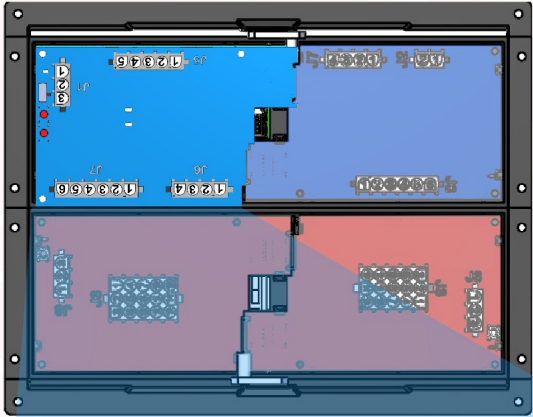
Dip Switch Settings

- 1 OFF (Down)
- 2 ON (Up)
- 3 OFF (Down)



M1 Front Panel

## M1 Front Panel



## M1 Slide (Card 1)

OVERRIDE EXT

OVERRIDE RET

**i** **Emergency Override**  
For more information on the slide overrides please see Page 13

### 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

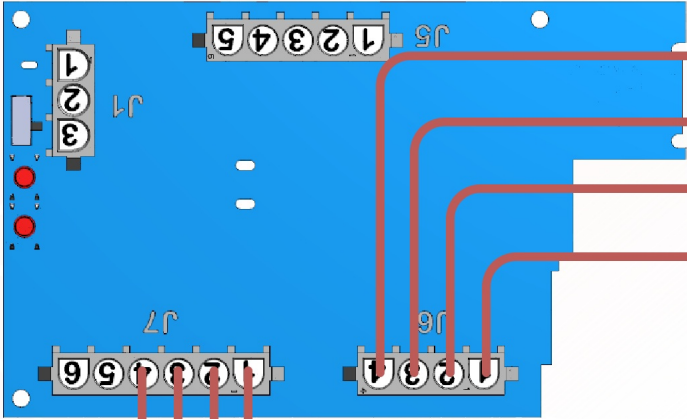
### J7

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 Spare
② Park Brake (GND)	

## M1 Slide Card

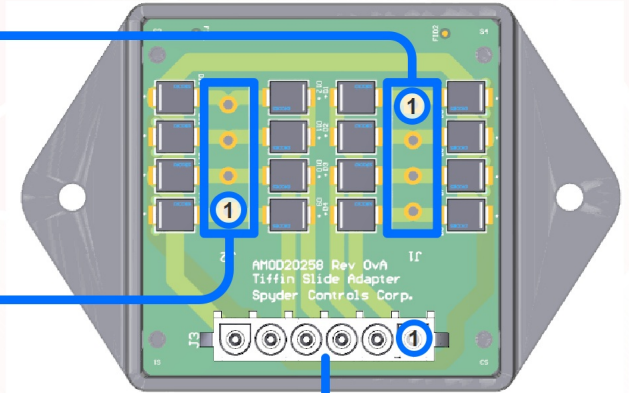


**Attached to J1**

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

**i 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

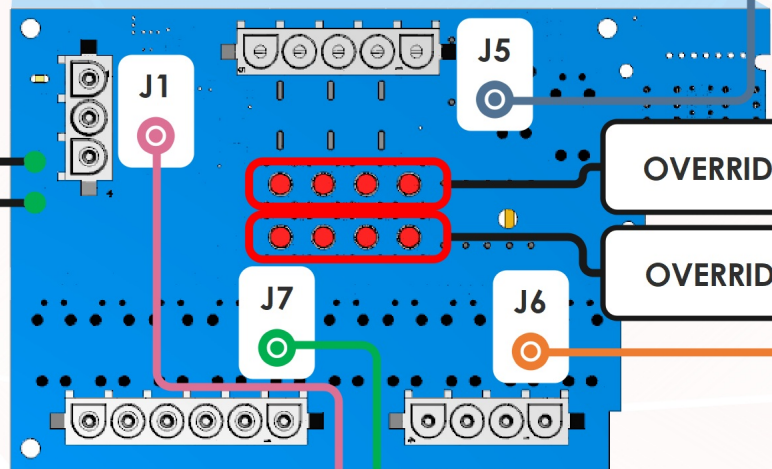
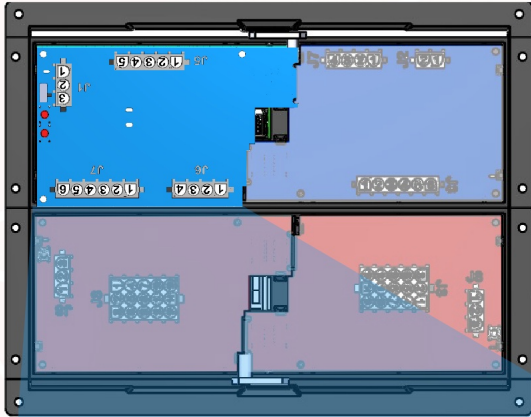
**Header J3**

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

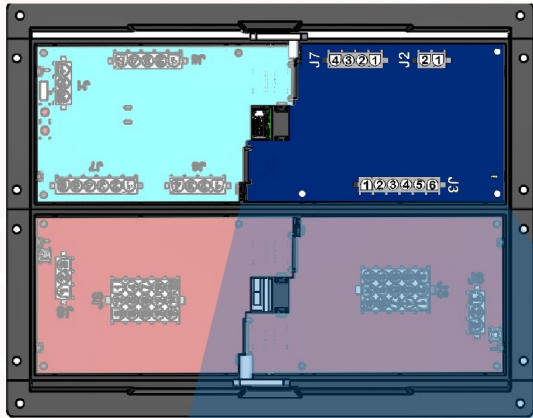
**J7**

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

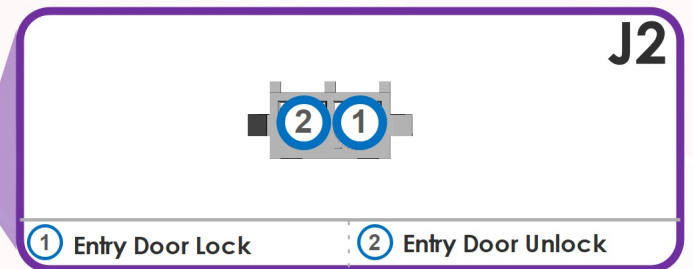
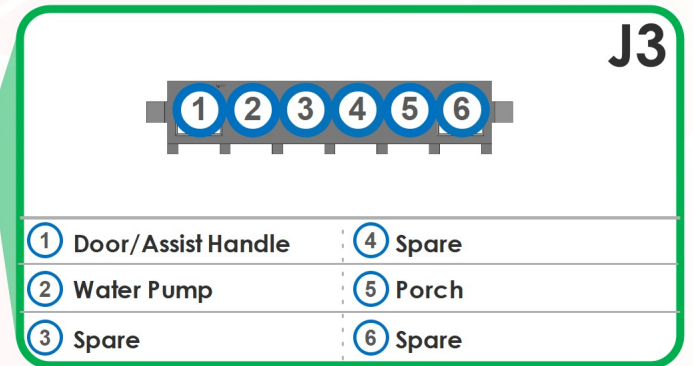
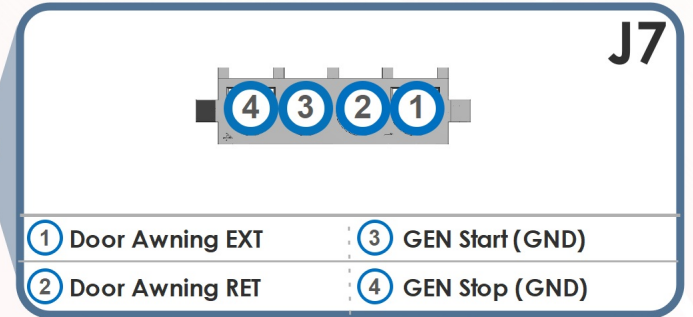
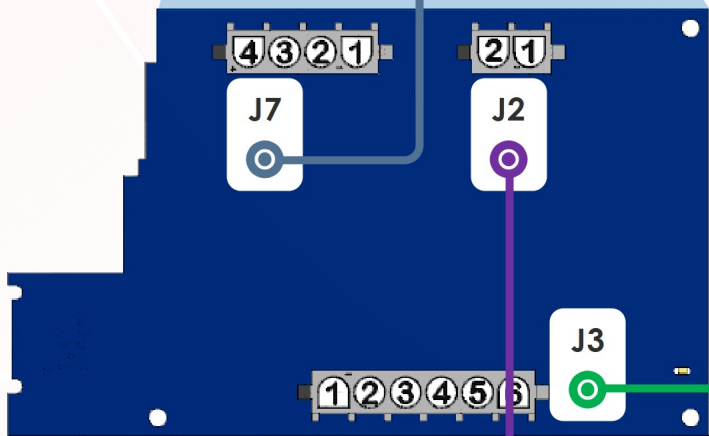
**J1**

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

M1 Front Panel

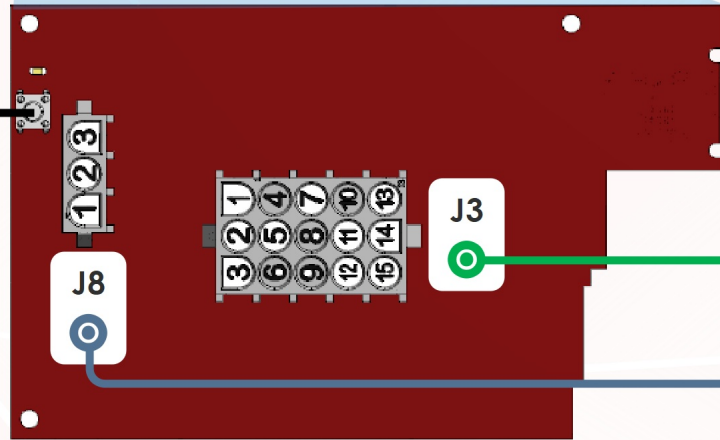
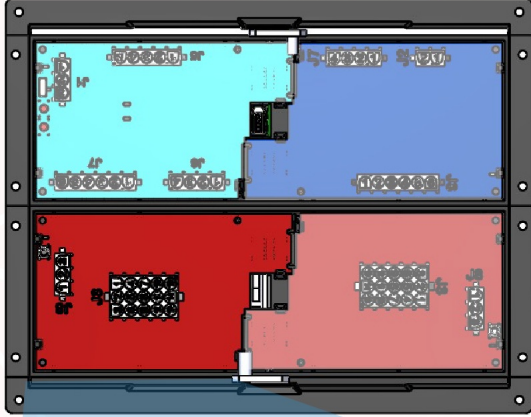


M1 HC Half Bridge (Card 2)



# M1 Breaker (Card 3)

M1 Front Panel



M1 Breaker (Card 3)

Breaker Reset

J3

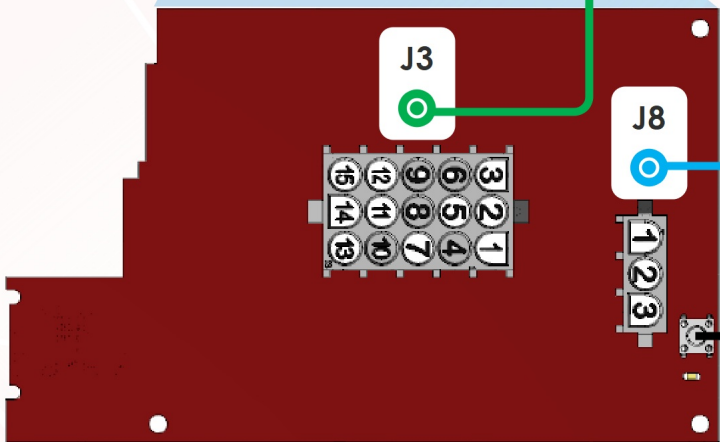
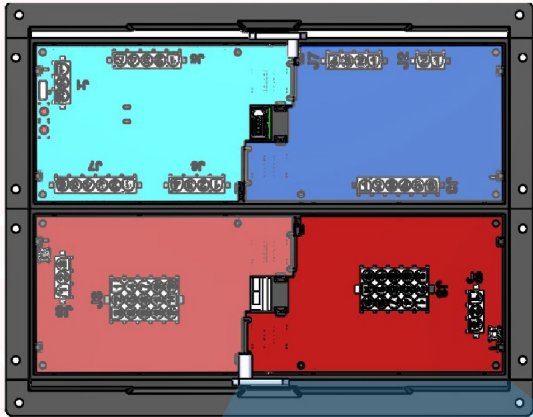
① Spare	⑨ Panel Lamp/Head Lt (IGN)
② Camera/Radio (IGN)	⑩ HVAC Denso (IGN)
③ Jack Buzzer IGN	⑪ N/A
④ Entry Step SW	⑫ 12V Outlet 1/USB PWR
⑤ N/A	⑬ TV Relay/Fridge/Dash SHD MOD (IGN)
⑥ CB/Satellite	⑭ Pantry (IGN)
⑦ Dock Light	⑮ Spare
⑧ N/A	

J8

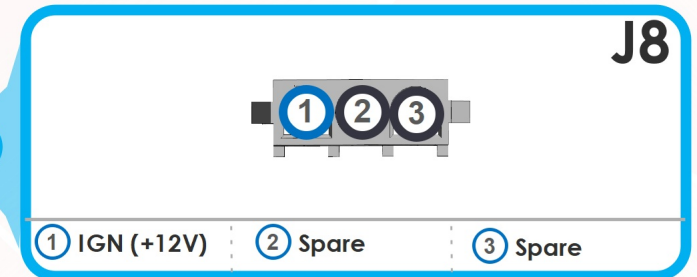
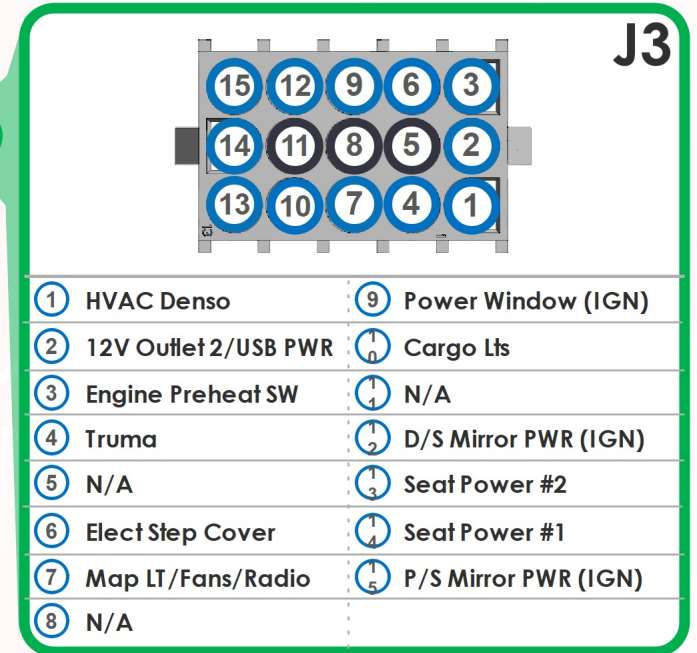
① IGN (+12V)	② Spare	③ Spare
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# M1 Breaker (Card 4)

M1 Front Panel



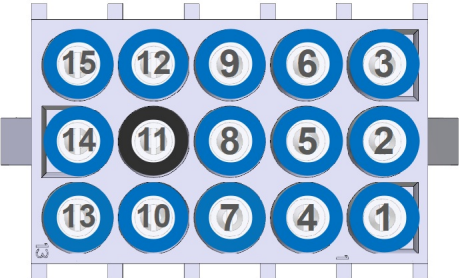
M1 Breaker (Card 4)



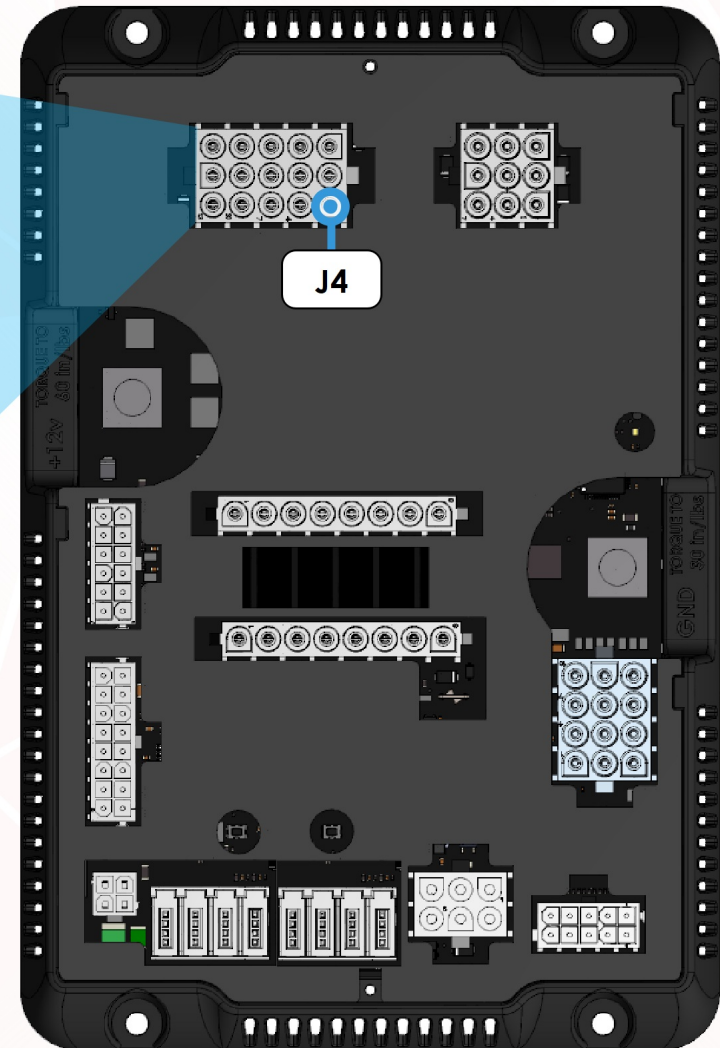
Breaker Reset

## G12 Module @ Under Bed

### J4

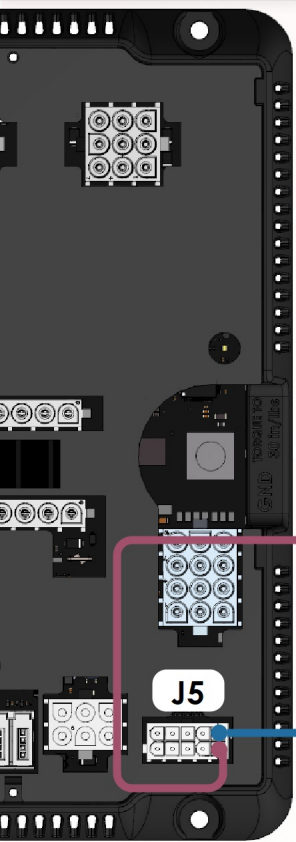


1 PS Slide Lights (CH30)	9 Rear Bath Lt (CH38)
2 DS Slide Lights (CH31)	10 Mid Bath Ceiling Lts (CH39)
3 Ceiling Lt (CH32)	11 Spare
4 TV Accent Lt (CH33)	12 Sofa Reading Lt (CH41)
5 Entry Lt (CH34)	13 Sconce Lt (CH42)
6 Task Lt (CH35)	14 Front Accent Lt (CH43)
7 Hall LT (CH36)	15 Galley (CH44)
8 Bedroom Ceiling Lt (CH37)	



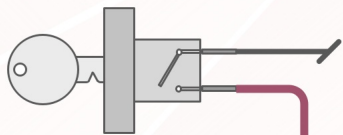
\* All Lights Listed Can Dim

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

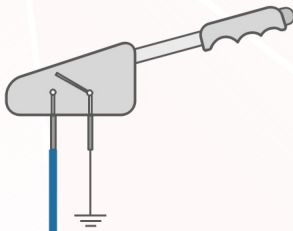


**G12 Module**  
@ Under Bed

Ignition Switch



Park Brake Switch



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

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

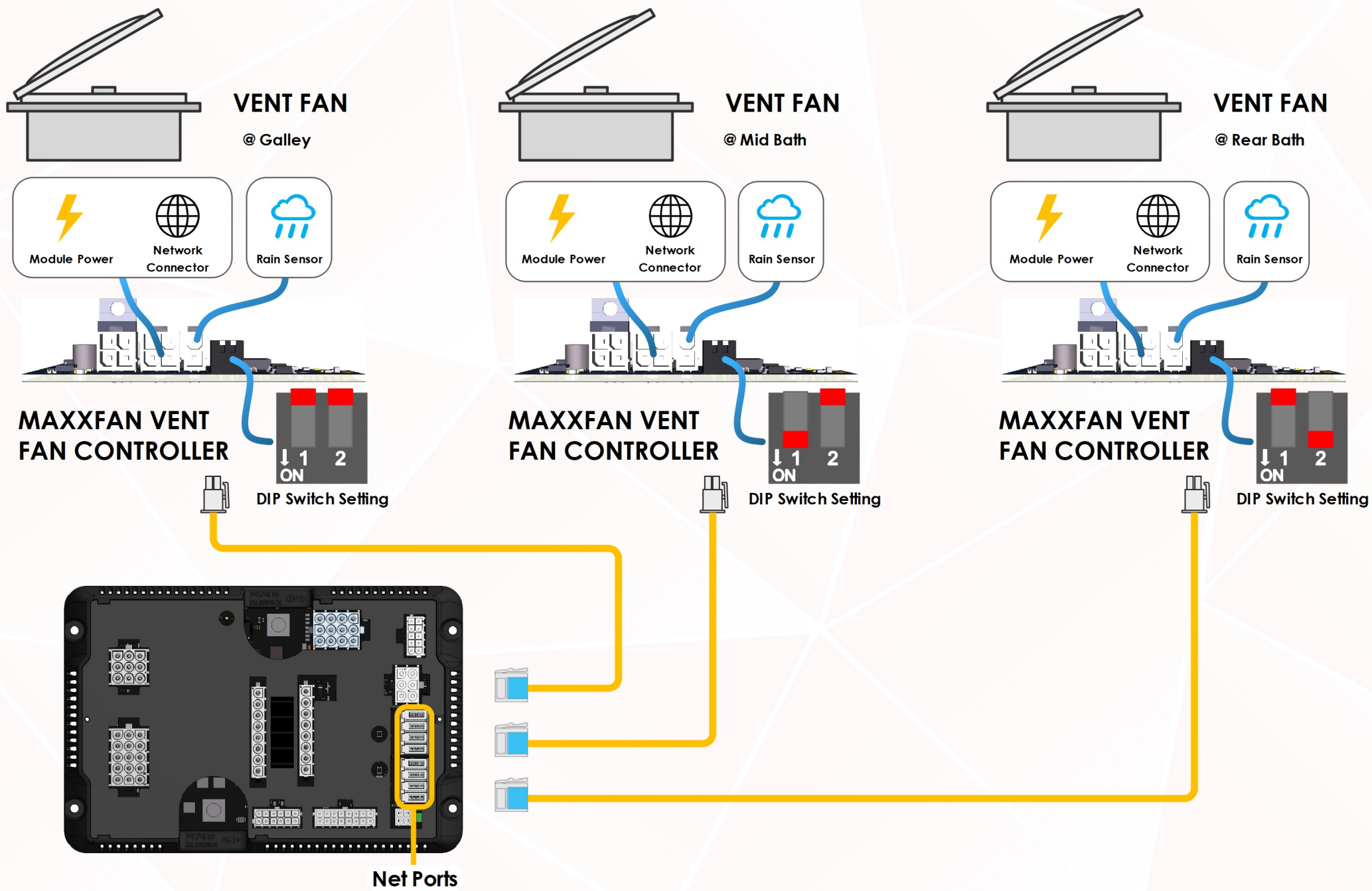
OVERRIDE RET

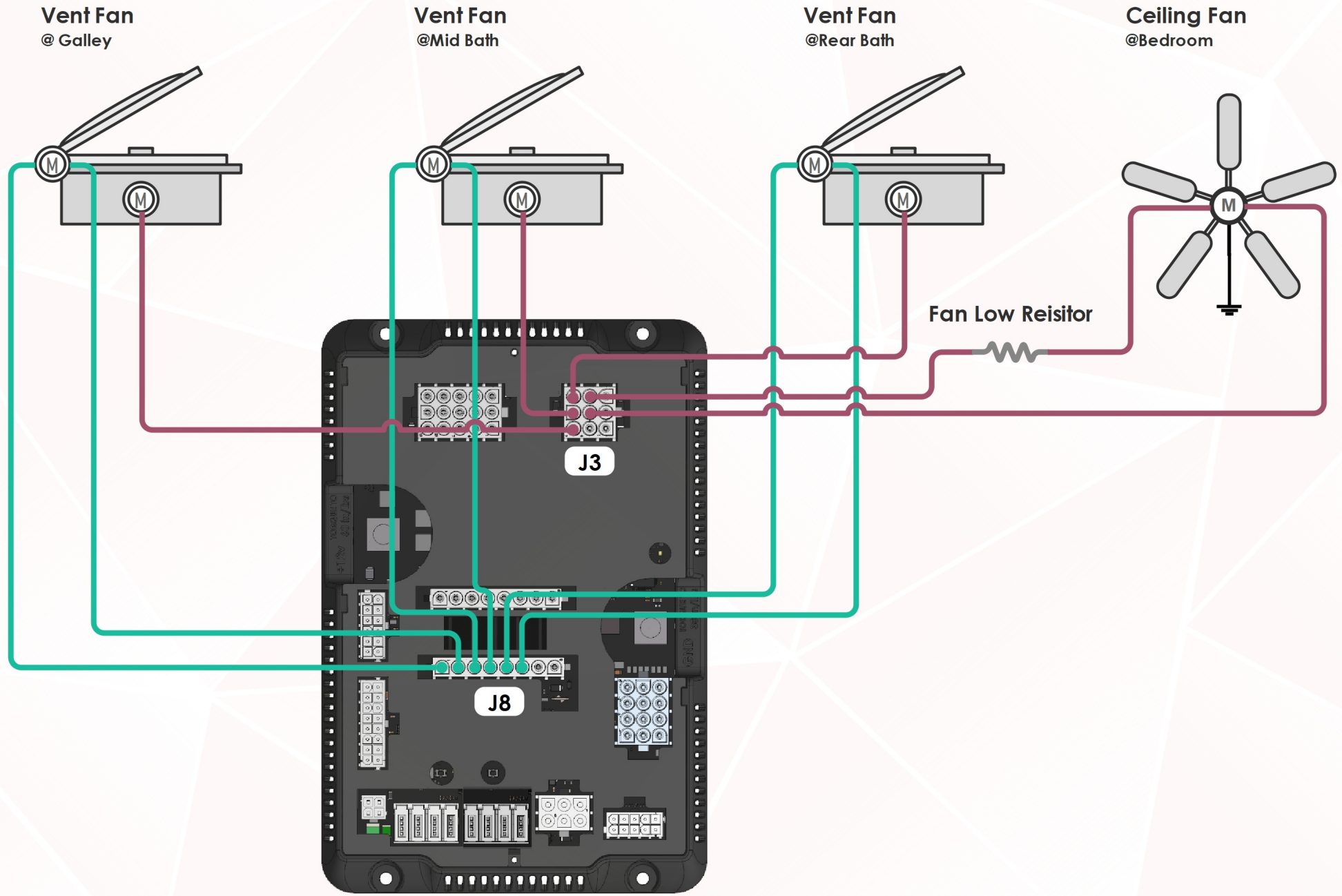
OVERRIDE EXT

- ### 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

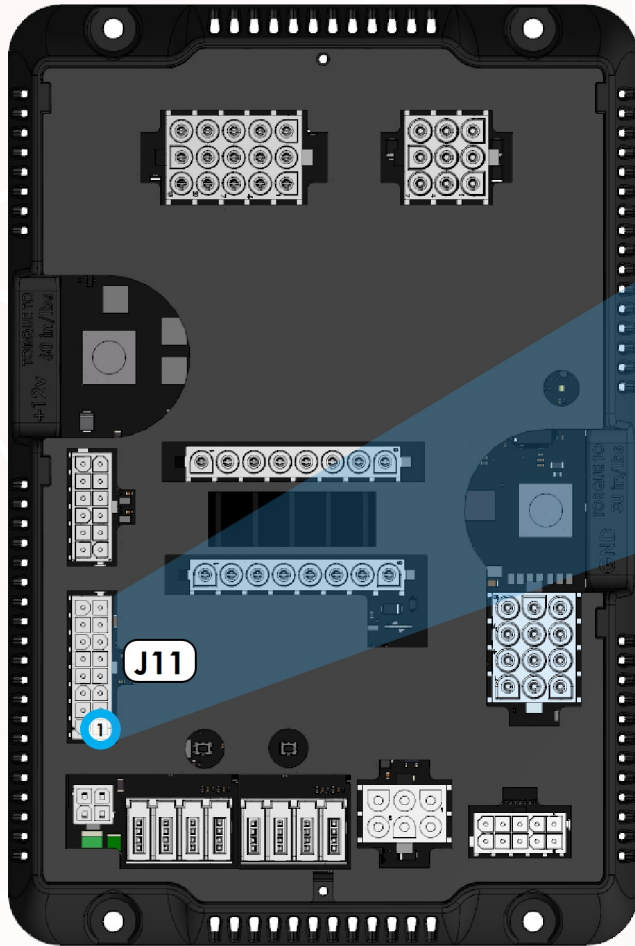
**i** **Emergency Override**  
Park brake and ignition must be on for slides to operate.  
In case of a system failure, use manual overrides on the slide card to operate slides. Engage overrides using a pen or other pointed object.





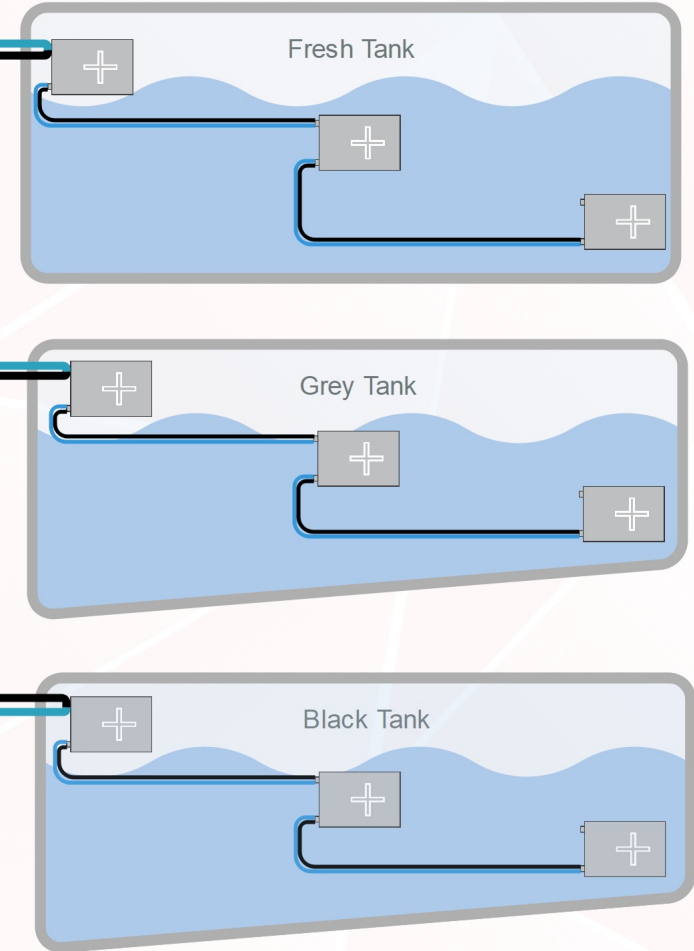
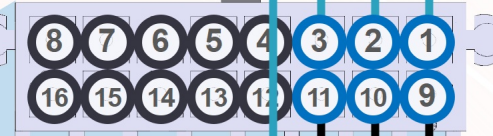
**G12 Module**  
@ Under Bed

### G12 Module



### 3 Level Tank Sensor System

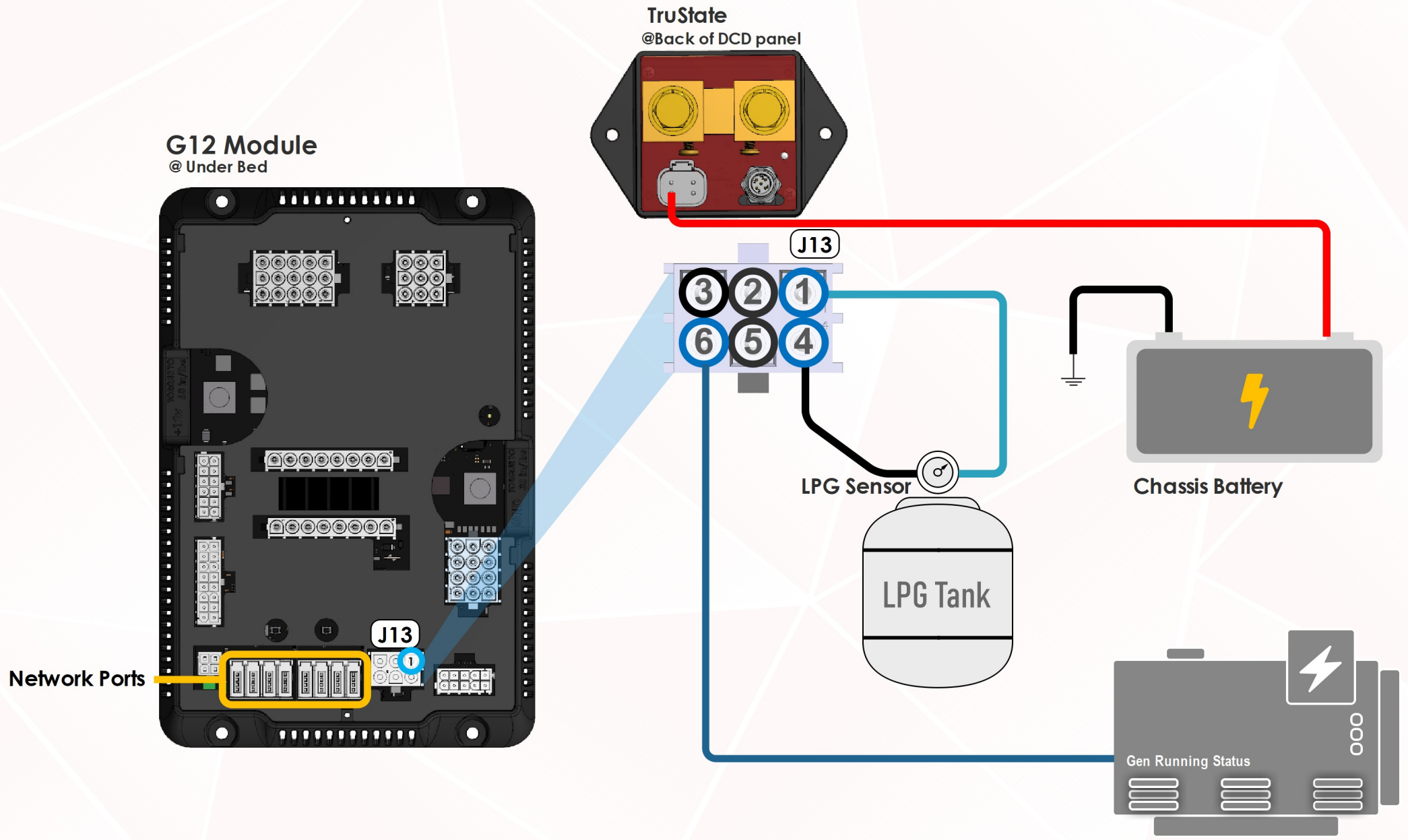
J11

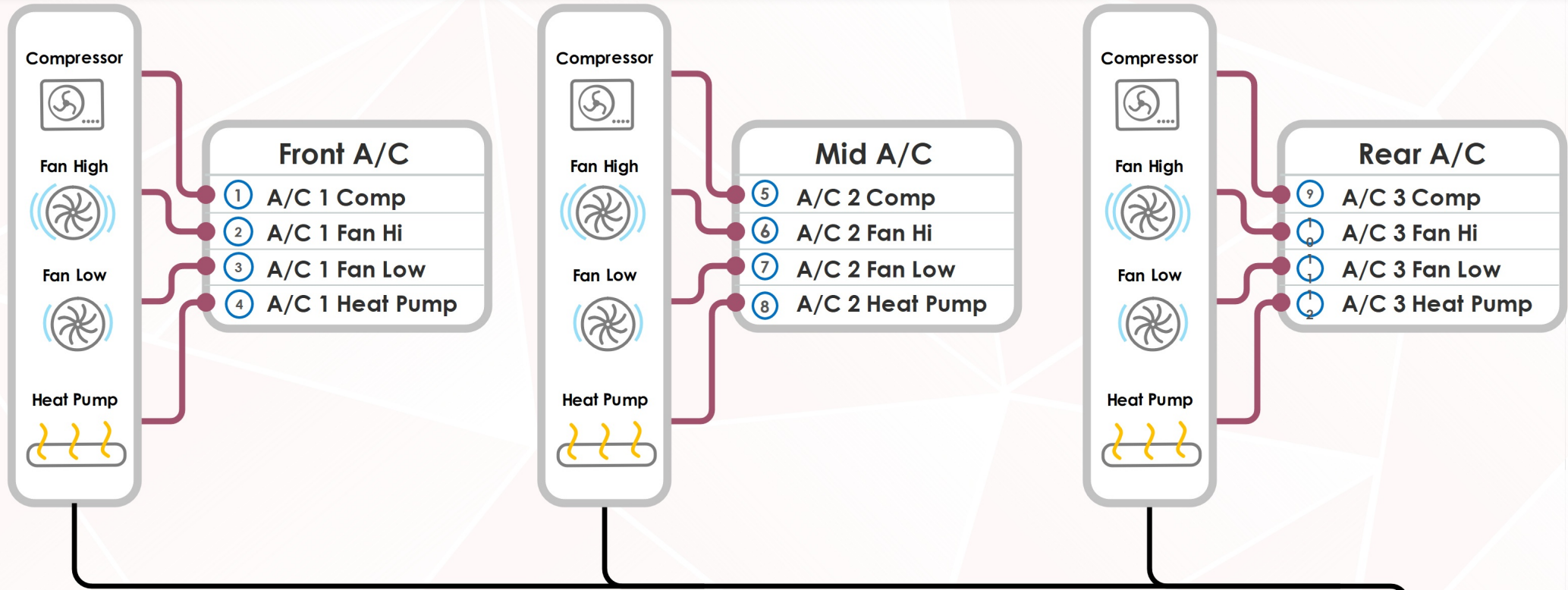


J11

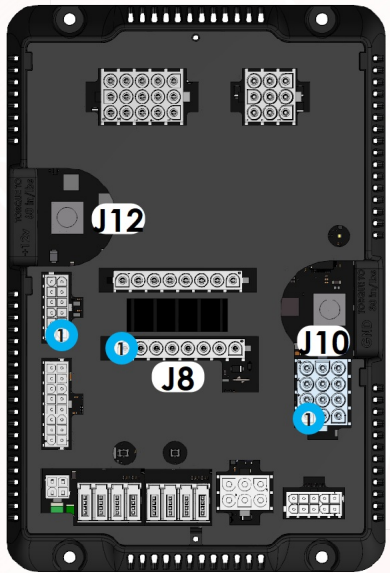
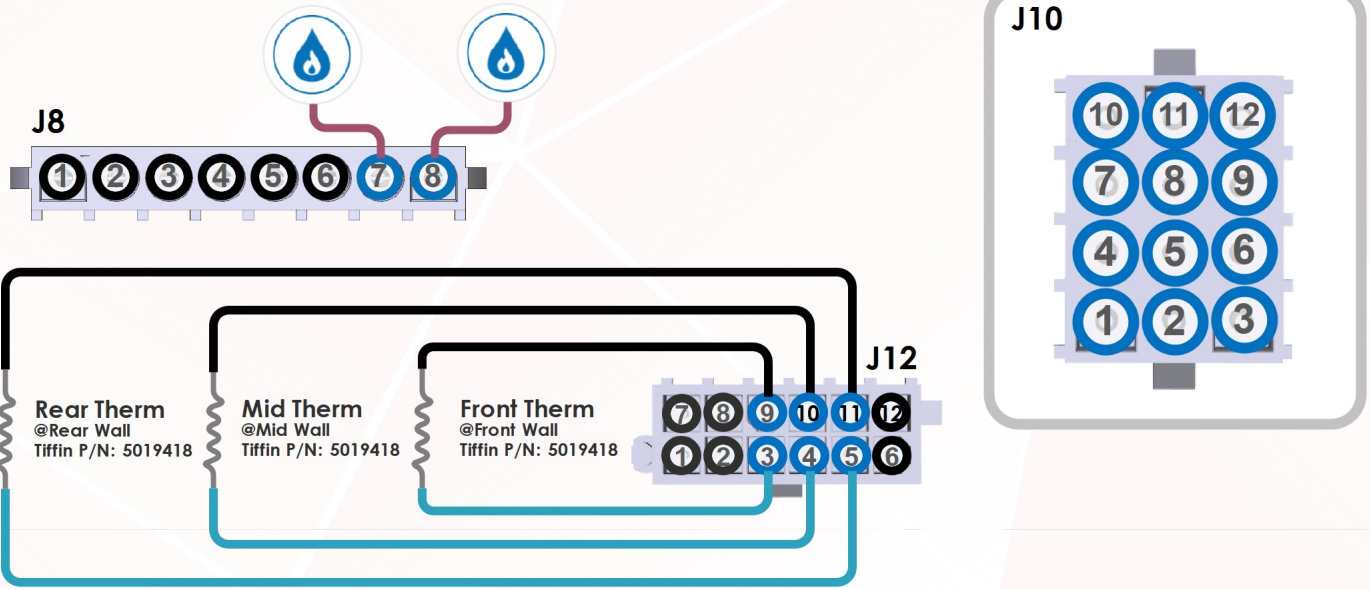


- |                           |                   |
|---------------------------|-------------------|
| ① Fresh Tank Sensor Input | ⑨ Tank Sensor GND |
| ② Grey Tank Sensor Input  | ⑩ Tank Sensor GND |
| ③ Black Tank Sensor Input | ⑪ Tank Sensor GND |





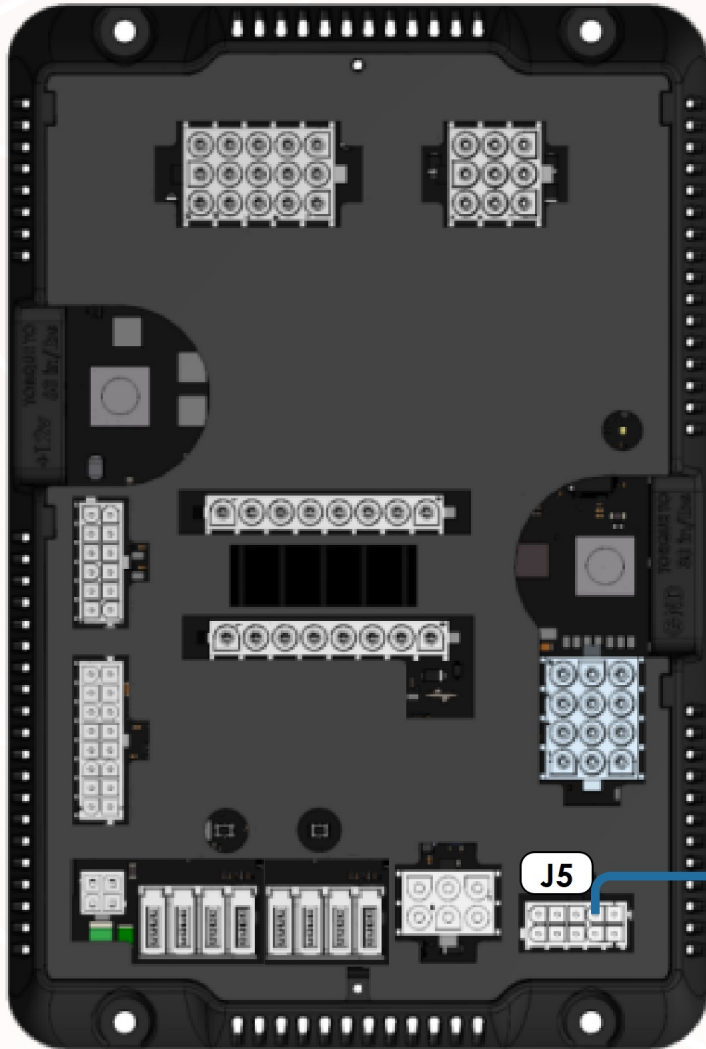
Front Furnace    Rear Furnace



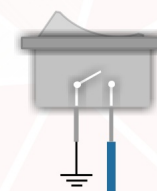
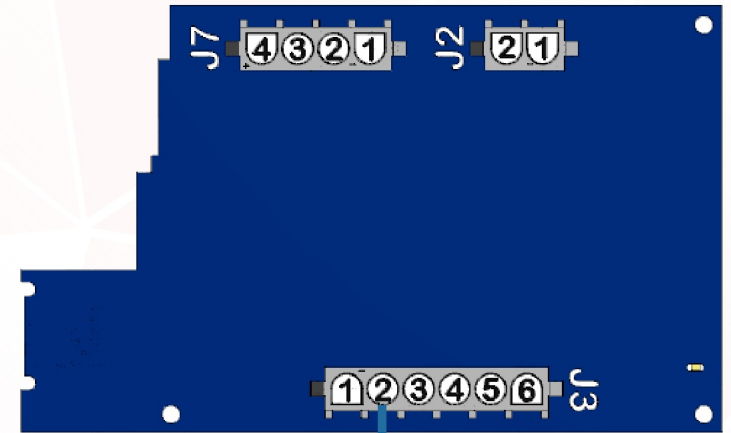
**G12 Module**  
@ Under Bed

## G12 Module

@ Under Bed



## M1 High Current (Card 2)



Water Pump Switch  
@ Wet Bay



Water Pump

Input (GND)

J5

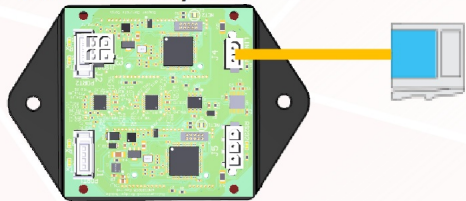
1 2 3 4 5 6

J1

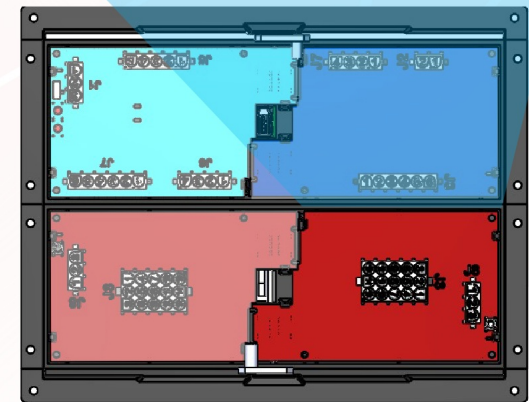
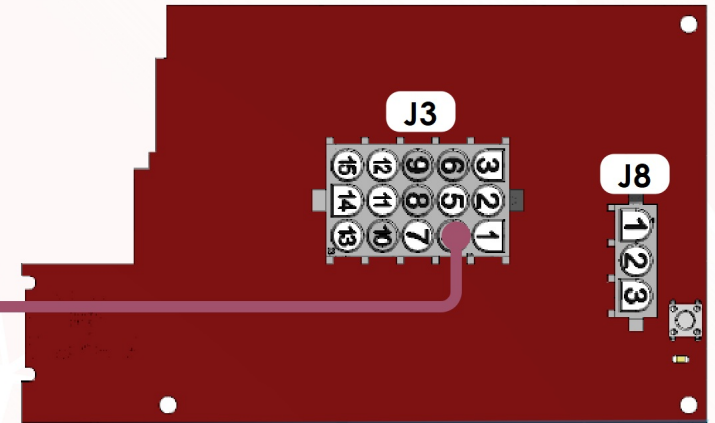
J2

J3

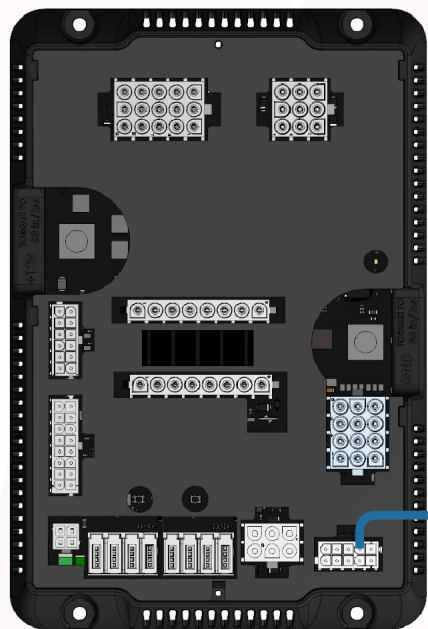
Bridge Module  
@Under Bed by G12



M1 Breaker Card

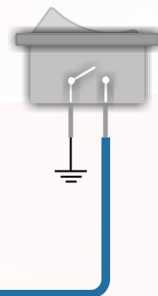


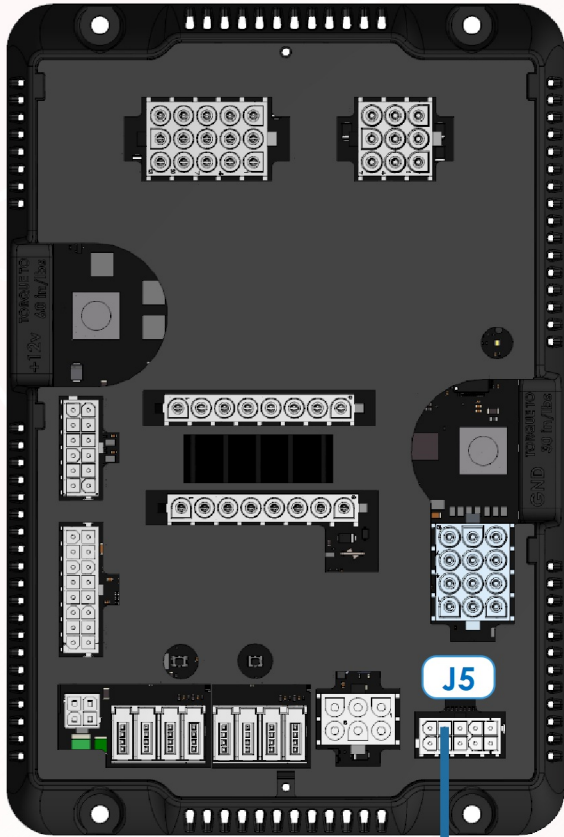
M1 Front Panel



G12 Module  
@ Under Bed

Water Pump Switch  
@ Wet Bay






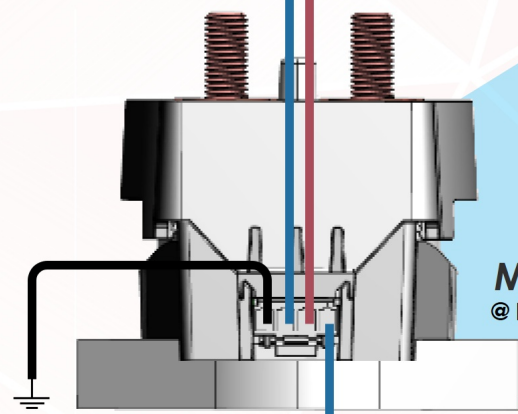
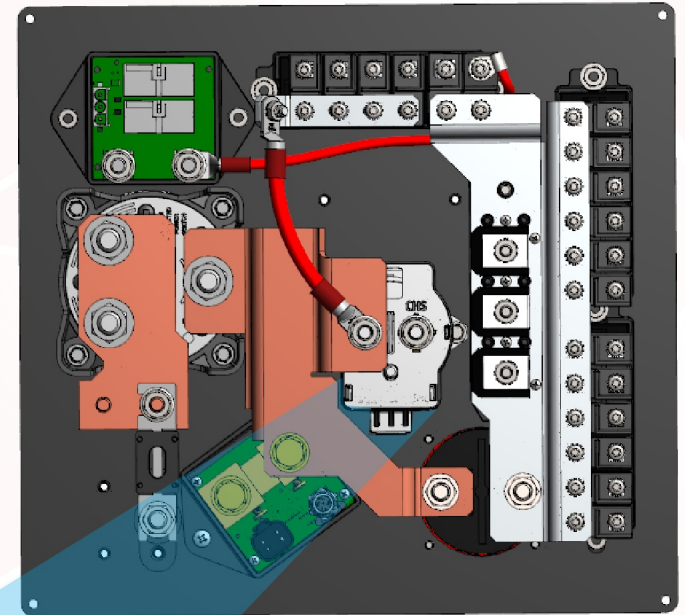
**G12 Module**  
@ Under Bed

### COACH RUNNING INPUT

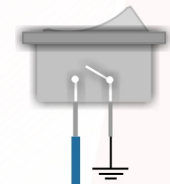
Depending on the chassis used in the coach the coach running input will either come from the engine (switched GND) or from the ignition (switched 12V+)

Two green circular icons: the left one shows an engine, and the right one shows a key.

**DCD PANEL**  
@ Inverter Bay



**MERGE SOLENOID**  
@ Back of DCD



**Manual Merge Override Switch**  
@ Dash

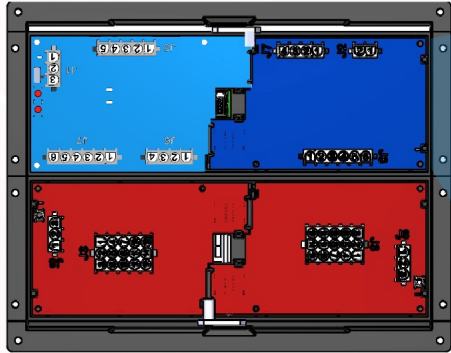
Auto / Manual Merge Input (GND)



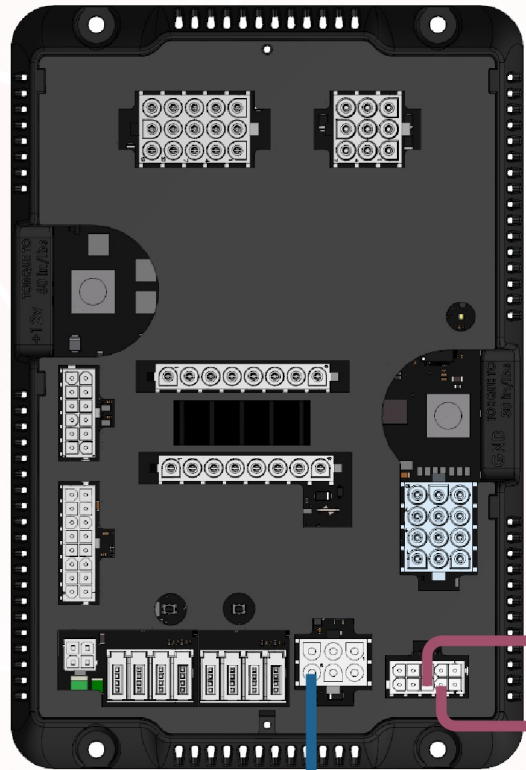
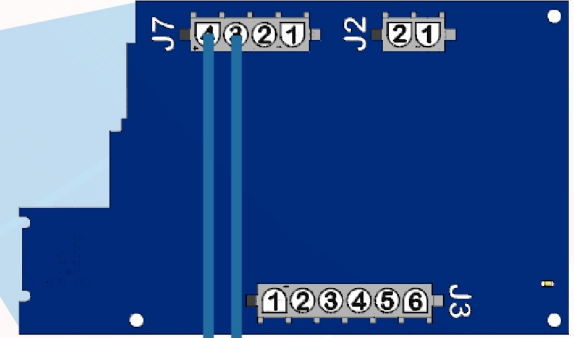
J5

**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.

Front M1 Panel



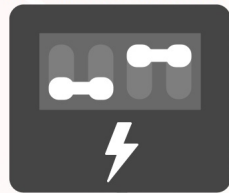
M1 High Current Card



G12 Module

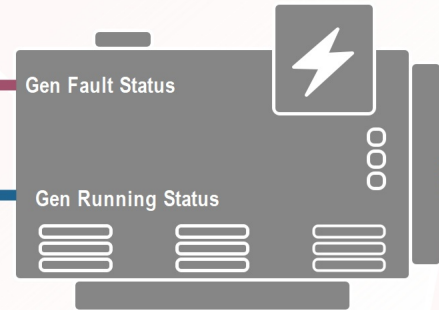
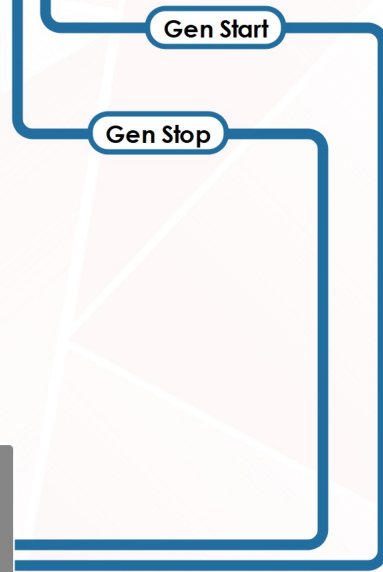
@ Under Bed

120V BREAKER PANEL

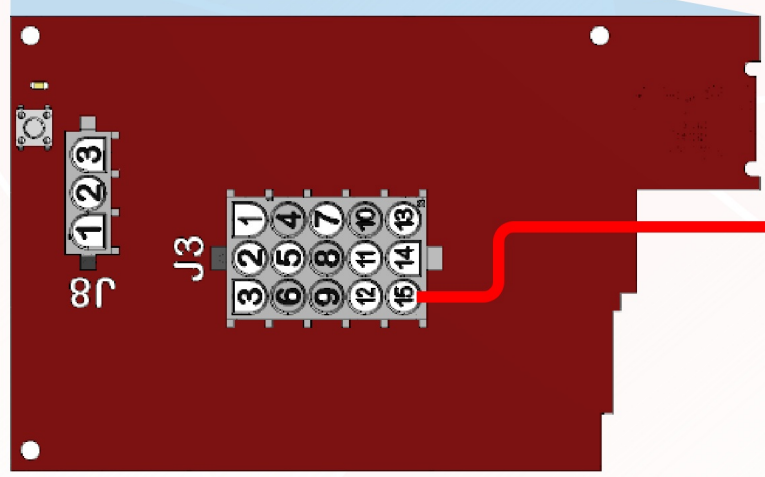
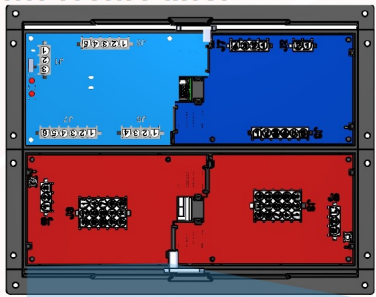


120V AC - 12V DC

**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.

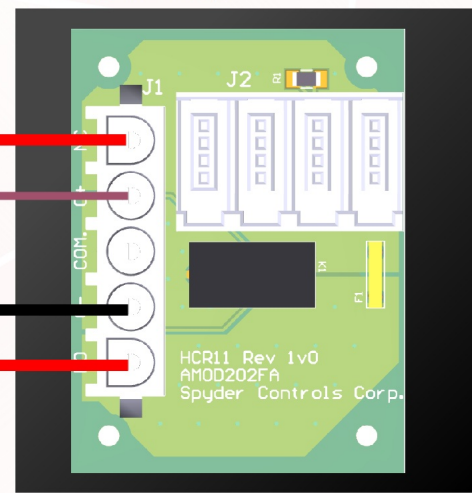


M1 Front Panel

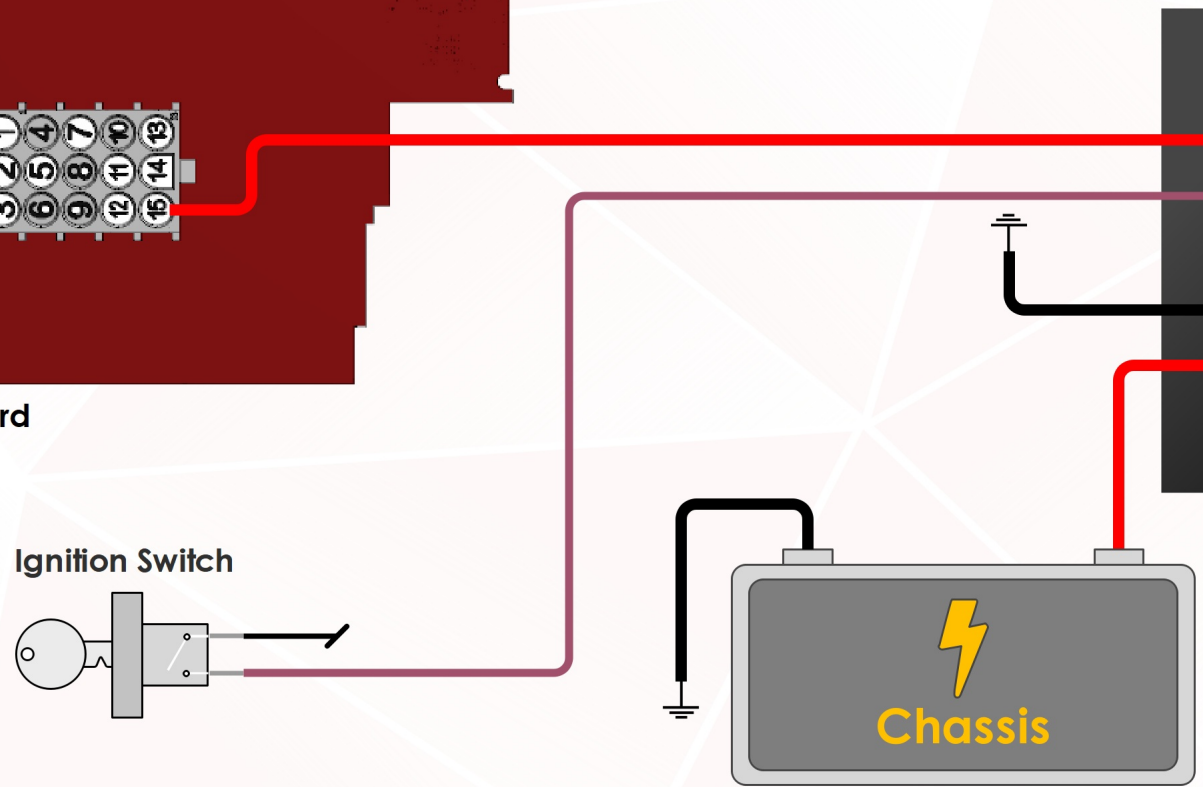
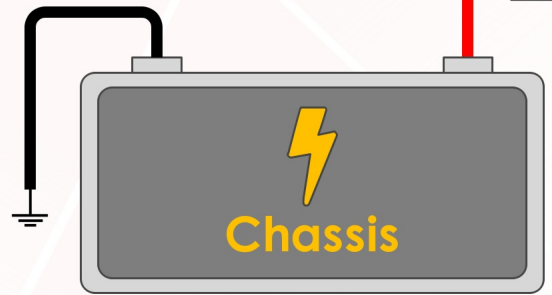
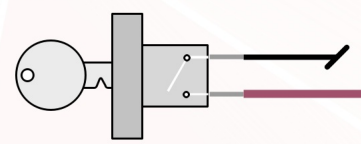


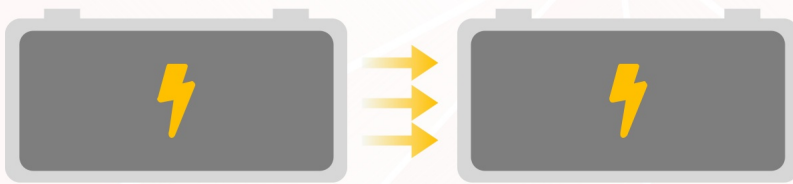
M1 Breaker Card

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



Ignition Switch

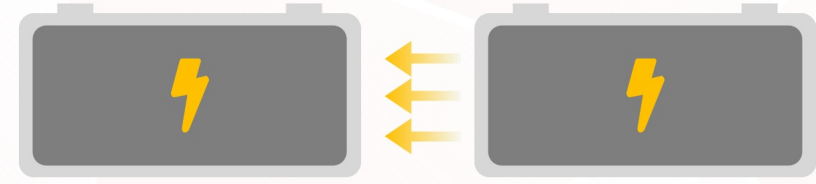




## CHASSIS BATTERY

- 13.3V+ Or Higher
- 30 Seconds
- V+

## HOUSE BATTERY



## CHASSIS BATTERY

- 12.4V+ Or Lower
- 30 Seconds
- V+

## HOUSE BATTERY

- 12.5V+ Or Higher
- 30 Seconds
- V+

## MERGE LOGIC - CHASSIS CHARGING HOUSE

The merge solenoid will engage if the following conditions are present:

- Engine run or ignition signal is present and chassis voltage is above 13.3V (charging) for 30 seconds.

The merge solenoid will disengage under either of the following conditions

- Engine run or ignition signal is removed
- Chassis voltage drops below 12.6V for more than 30 seconds (unmerge until engine is started again)

## MERGE LOGIC - HOUSE CHARGING CHASSIS

The merge solenoid will engage if the following conditions are present:

- House voltage is above 12.5V (charging) and chassis voltage is below 12.4V (low battery voltage) for 30 seconds

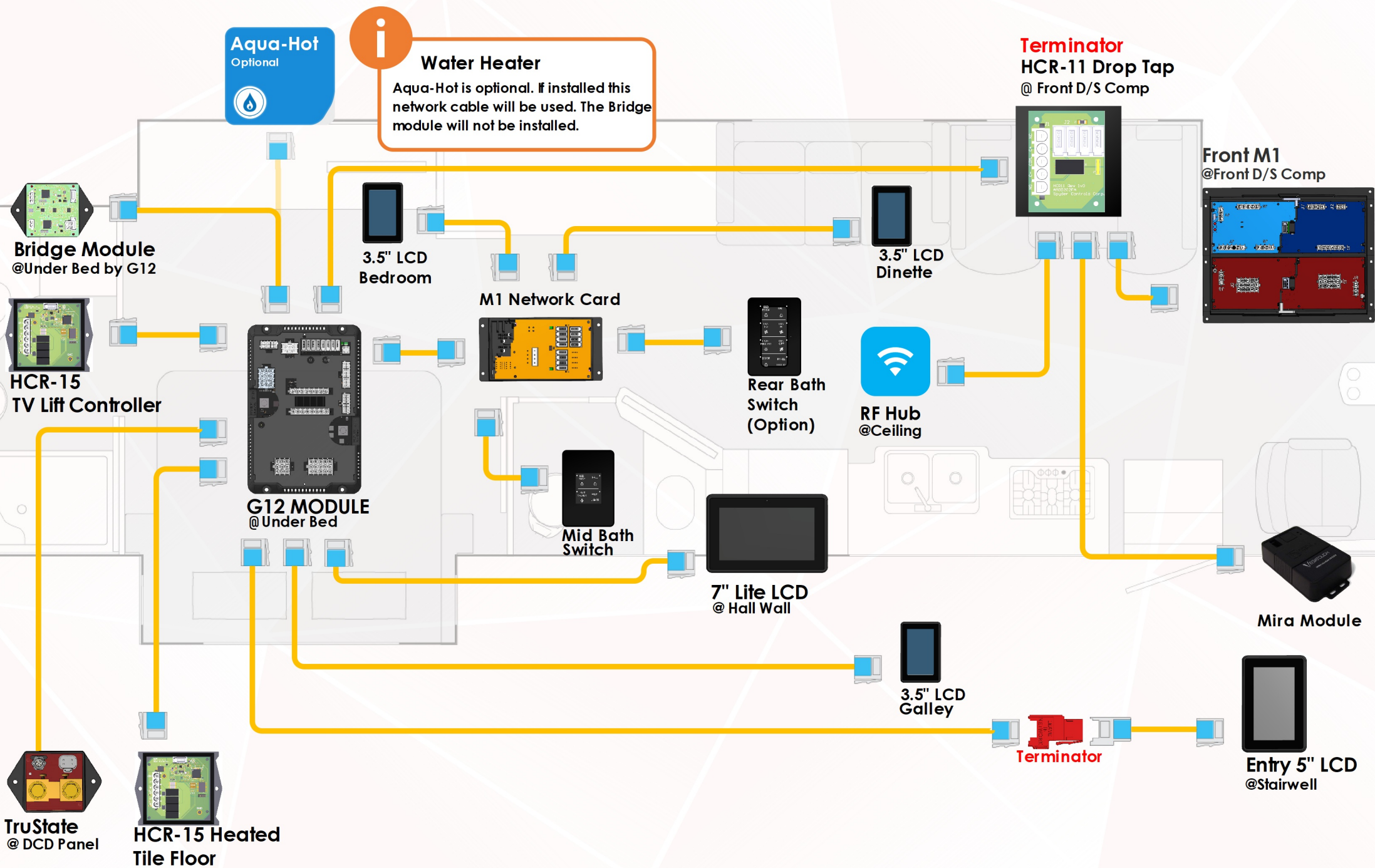
The merge solenoid will disengage under either of the following conditions:

- House voltage drops below 12.2V for more than 30 seconds, OR
- 60 minutes timed battery merge period expires. Re-merge will occur again if the merge conditions are still present



### Merge Logic - Note

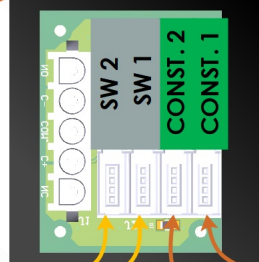
The voltages used in this spec are what are read directly at the merge solenoid which is installed at the DCD panel and may vary from the voltages displayed on the LCD screens for general informational purposes



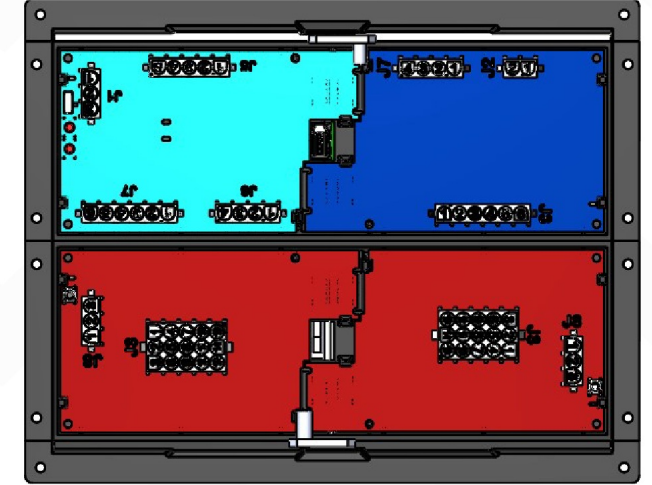
**THE ORDER OF THE NETWORK CABLES AT THIS TAP IS IMPORTANT !**

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

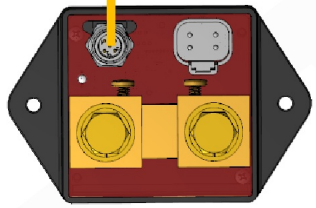


Tiffin P/N: 5126983  
**Front M1 Panel**  
@ Front D/S Comp

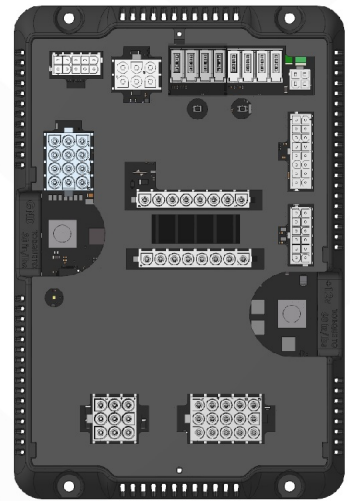


Switched

Always On



**TruState**  
@ DCD Panel



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

**Terminator**



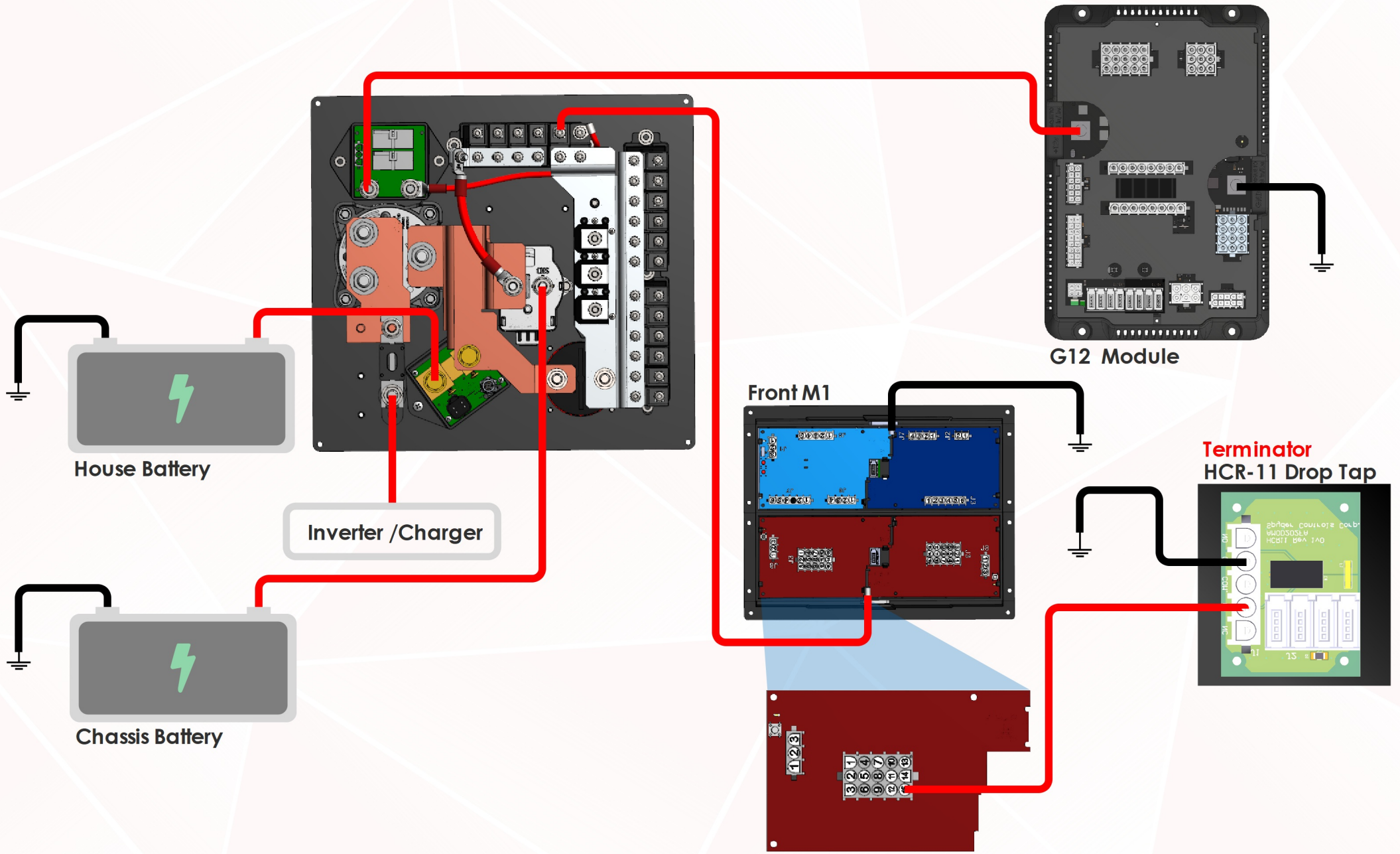
**RF Hub**  
@Ceiling

**i** **Always On Network**

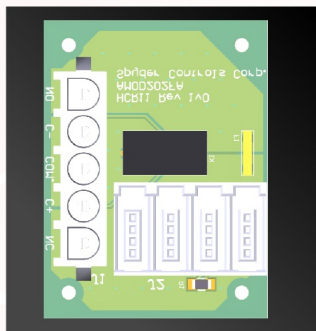
This network to remain powered while house disconnect is off.

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

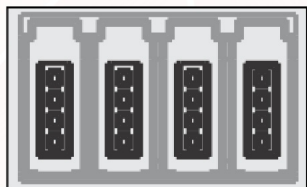
\*(Ensure power does not transfer through the network cable to the G12, but does transfer to the RF Hub)



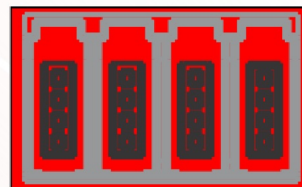
**TERMINATOR**  
**HCR-11**  
 Tiffin P/N: 5105426



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



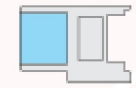
**G4 Terminator Drop Tap**  
 Tiffin P/N: 5051936



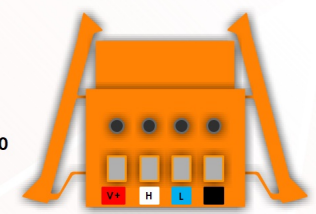
Mini-Clamp Plug  
 Tiffin P/N: 5066157  
 3M P/N: 37104-2165-000 FL 100



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



4 Pos Wago Connector  
 Tiffin P/N: 5015508



Wago Hook Tool  
 Wago P/N: 231-131

