











Multiplex Integration Schematic

2020 Allegro RED

Schematic Connections Legend	
 Constant Ground	 Reverse Polarity
 Constant 12V+	 Signal
 Switched Ground	 120 VAC Line
 Switched 12V+	 Network Cable

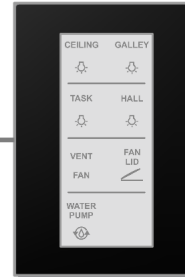
2020 Tiffin Allegro RED General Component Locations Diagram

(Components not to scale)

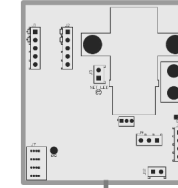
7" Lite Touch Screen
Tiffin P/N: 5090548



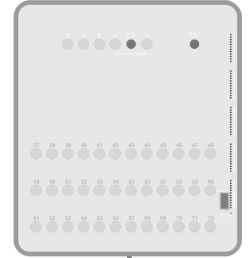
Galley



2019 RED PMM
Tiffin P/N: 5079063



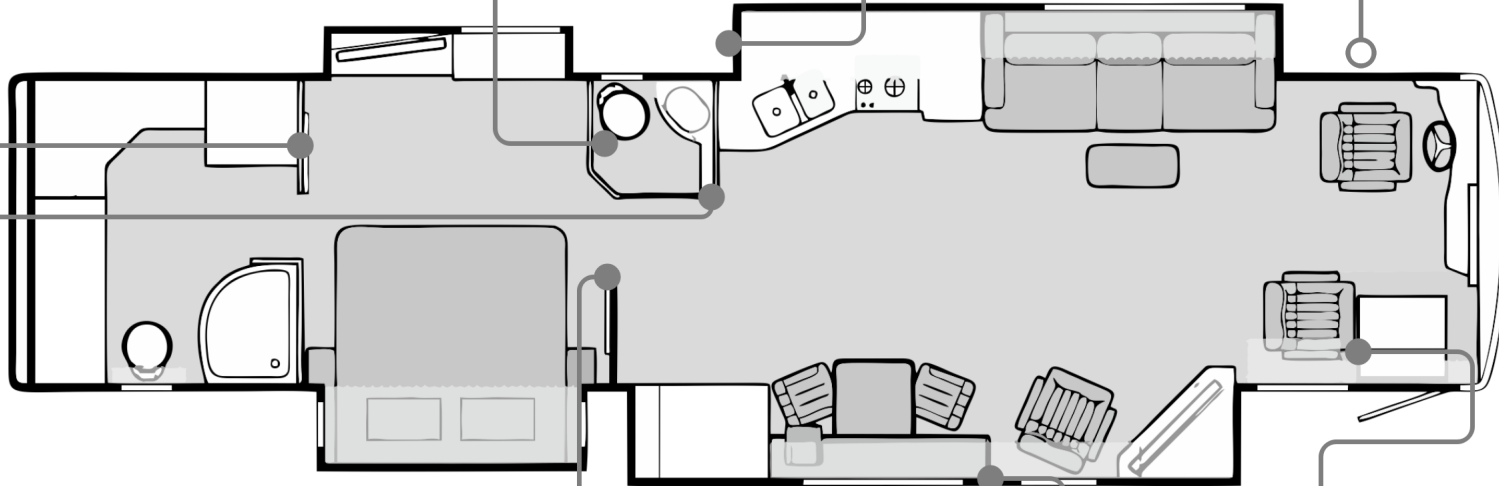
G6 Chassis Panel
Tiffin P/N: 5093306



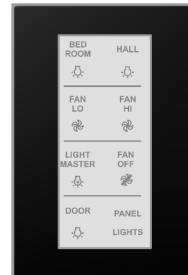
Bathroom



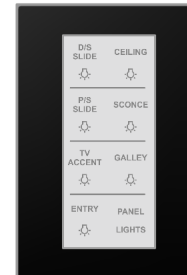
G6 House Panel
Tiffin P/N: 5089749



Bedroom



Dinette



Entry



Module located on exterior or under coach bay

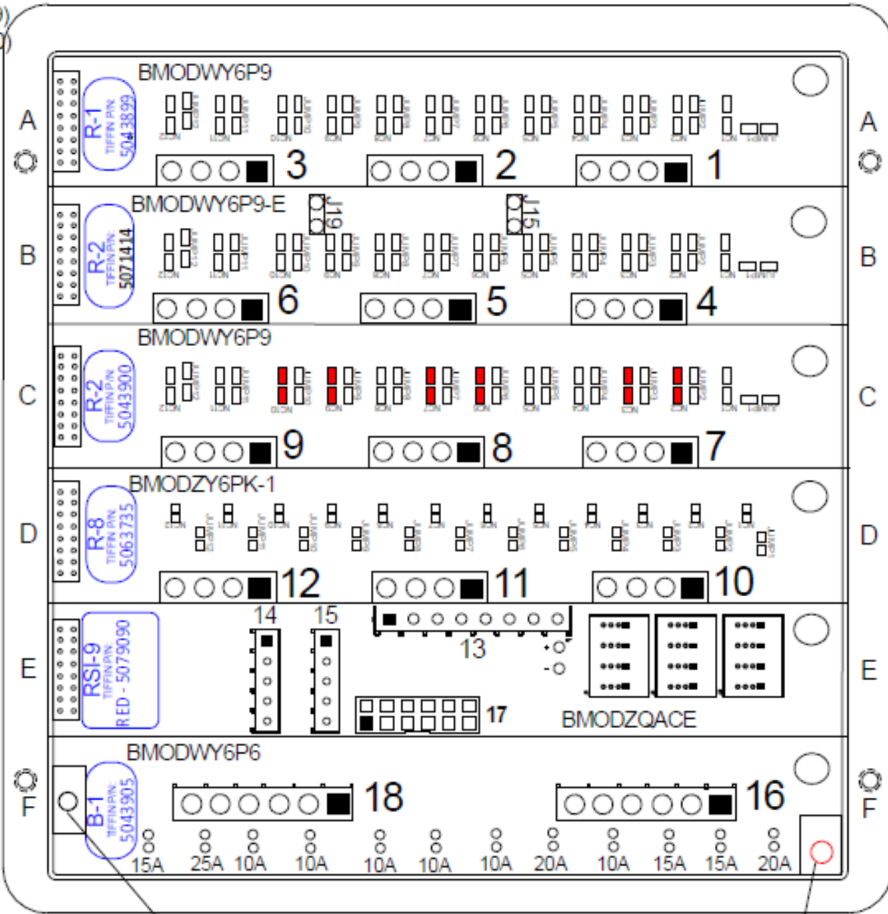


Module located inside the coach



G6A CONTROL PANEL LAYOUT
Tiffin PN: 5089749 Spyder PN: BENCZ52CR
2020 RED - HOUSE
PRELIMINARY PINOUT DIAGRAM - 2019.07.18

Back View



OPERATIONAL GROUND PEM STUD

12V Power Stud

- CONNECTOR 4**
- 4-1 REAR BATH/MID SINK CEILING LIGHTS - (G6 LED 13)
 - 4-2 TASK LIGHTS - (G6 LED 14)
 - 4-3 MID BATH CEILING LIGHTS - (G6 LED 15)
 - 4-4

- CONNECTOR 5**
- 5-1 TV LIFT UP - (G6 LED 17)
 - 5-2 TV ACCENT LIGHTS - (G6 LED 18)
 - 5-3 FR ZONE HT EXCHANGER - (G6 LED 19)
 - 5-4 RR ZONE HT EXCHANGER - (G6 LED 20)

- CONNECTOR 6**
- 6-1 TV LIFT DOWN - (G6 LED 21)
 - 6-2 PORCH LIGHT - (G6 LED 22)
 - 6-3 ELECTRIC WTR HT - (G6 LED 23)
 - 6-4 DIESEL / GAS WTR HT - (G6 LED 24)

- J15---- FR TV LIFT COMMON
- J19---- FR TV LIFT COMMON

- CONNECTOR 10**
- 10-1 A/C ON/OFF 1 - (G6 LED 37)
 - 10-2 A/C 1 LO - (G6 LED 38)
 - 10-3 A/C 1 HI - (G6 LED 39)
 - 10-4 A/C 1 STRIP HT - (G6 LED 40)

- CONNECTOR 11**
- 11-1 A/C ON/OFF 2 - (G6 LED 41)
 - 11-2 A/C 2 LO - (G6 LED 42)
 - 11-3 A/C 2 HI - (G6 LED 43)
 - 11-4 A/C 2 STRIP HT - (G6 LED 44)

- CONNECTOR 12**
- 12-1 A/C ON/OFF 3 - (G6 LED 45)
 - 12-2 A/C 3 LO - (G6 LED 46)
 - 12-3 A/C 3 HI - (G6 LED 47)
 - 12-4 A/C 3 STRIP HT - (G6 LED 48)

- CONNECTOR 17 THERMISTOR INPUTS**
- BAY ZONE THERMISTOR INPUT
 - MID ZONE THERMISTOR INPUT
 - REAR ZONE THERMISTOR INPUT
 - FRONT ZONE THERMISTOR INPUT

- CONNECTOR 14 (12V+ INPUTS)**
- 14-1 WTR HTR STATUS
 - 14-2 IGN 12V+ INPUT
 - 14-3 AQUAHOT EXCHANGER INPUT (AQUAHOT PIN 7)
 - 14-4 FLUID FULL
 - 14-5

- CONNECTOR 15 (GND INPUTS)**
- 15-1 WATER PUMP SW
 - 15-2 PARK BRAKE INPUT
 - 15-3 CLOSET LIGHT SW
 - 15-4 ENTRY DOOR PIN SW
 - 15-5

- CONNECTOR 18**
- 18-1 FRONT THERMO - BREAKER #67
 - 18-2 MID THERMO - BREAKER #68
 - 18-3 TOILET/REAR THERMO - BREAKER #69
 - 18-4 BRKR TO RR SLIDE - BREAKER #70
 - 18-5 FRIDGE - BREAKER #71
 - 18-6 - BREAKER #72

- CONNECTOR 16**
- 16-1 MACERATOR TOILET - BREAKER #61
 - 16-2 FRONT FURNACE - BREAKER #62
 - 16-3 REAR FURNACE - BREAKER #63
 - 16-4 SWITCHER / LP/IR - BREAKER #64
 - 16-5 OUTSIDE TV - BREAKER #65
 - 16-6 BRKR TO FR SLD - BREAKER #66 / SHD MOD

NOTE: CONNECTORS ARE SHOWN HERE IN THE LOADED (REAR) VIEW.

- CONNECTOR 1**
- 1-1 MAIN O/H / LIV RM LIGHT 1 - (G6 LED 1)
 - 1-2 ENTRY / FLOOR LIGHT - (G6 LED 2)
 - 1-3 PS SLIDE LIGHTS - (G6 LED 3)
 - 1-4 DS SLIDE LIGHTS - (G6 LED 4)

- CONNECTOR 2**
- 2-1 MID HALL LIGHTS - (G6 LED 5)
 - 2-2 FURNACE 12V+ TRIGGER - (G6 LED 6)
 - 2-3 BAY HT EXCHANGER - (G6 LED 7)
 - 2-4 GALLEY LIGHTS - (G6 LED 8)

- CONNECTOR 3**
- 3-1 SCNCE - (G6 LED 9)
 - 3-2 MAIN O/H / LIV RM LIGHT 2 - (G6 LED 10)
 - 3-3
 - 3-4 BEDROOM LIGHTS - (G6 LED 12)

- CONNECTOR 7**
- 7-1 GALLEY FAN ON/OFF - (G6 LED 25)
 - 7-2 GALLEY FAN UP - (G6 LED 26)
 - 7-3 GALLEY FAN DN - (G6 LED 27)
 - 7-4 CLOSET LIGHTS (OPTIONAL) - (G6 LED 28)

- CONNECTOR 8**
- 8-1 MID BATH FAN ON/OFF - (G6 LED 29)
 - 8-2 MID BATH FAN UP - (G6 LED 30)
 - 8-3 MID BATH FAN DN - (G6 LED 31)
 - 8-4 REAR BATH / MID SINK FAN ON/OFF - (G6 LED 32)

- CONNECTOR 9**
- 9-1 REAR BATH / MID SINK FAN UP - (G6 LED 33)
 - 9-2 REAR BATH / MID SINK FAN DN - (G6 LED 34)
 - 9-3 CEILING FAN LO - (G6 LED 35)
 - 9-4 CEILING FAN HI - (G6 LED 36)

- CONNECTOR 13**
- 13-1
 - 13-2
 - 13-3 GND (COMMON FOR SENSORS)
 - 13-4 LPG SENSOR INPUT
 - 13-5 BLACK TANK SENSOR INPUT
 - 13-6 GREY TANK SENSOR INPUT
 - 13-7 FRESH TANK SENSOR INPUT
 - 13-8

Card Legend

- R=RELAY CARD
- B=BREAKER CARD
- RSI-9=INPUT MODULE
- D=DIMMER CARD
- = JUMPED

G6A CONTROL PANEL LAYOUT
 Tiffin PN: 5093306 Spyder PN: BENCZ54CR
 2020 RED - CHASSIS
PINOUT DIAGRAM - 2020.04.16

Back View

MUST HAVE SIDE MOUNTING TABS ON G6 PANEL

- CONNECTOR 4**
- 4-1 WATER PUMP
 - 4-2
 - 4-3 DOOR / ASSIST HANDLE
 - 4-4

- CONNECTOR 5**
- 5-1 DOOR AWN RET
 - 5-2 DOOR AWN EXT
 - 5-3 PATIO AWN RET
 - 5-4 PATIO AWN EXT

- CONNECTOR 6**
- 6-1 GALLEY SHADE UP
 - 6-2 GALLEY SHADE DN
 - 6-3 GEN START
 - 6-4 GEN STOP

- PARK BRAKE SIGNAL
- IGNITION SIGNAL

- CONNECTOR 13**
- 13-1 MAP LT / RADIO / FANS - BREAKER #49
 - 13-2 USB POWER - BREAKER #50
 - 13-3 KEYLESS POWER - BREAKER #51
 - 13-4 ENTRY STEP SWITCH - BREAKER #52
 - 13-5 ENTRY STEP POWER - BREAKER #53
 - 13-6 CARGO LIGHTS (CONST) - BREAKER #54

- CONNECTOR 15**
- 15-1 POWER SEAT #1 - BREAKER #55
 - 15-2 CB - BREAKER #56
 - 15-3 ELEC STEP COVER - BREAKER #57
 - 15-4 SATELITE - BREAKER #58
 - 15-5 SHADES - BREAKER #59
 - 15-6 POWER SEAT #2 - BREAKER #60

- CONNECTOR 0**
- 0-1 FRONT SLIDE MODULE
 - 0-2 VANITY SLIDE MODULE
 - 0-3 BED SLIDE MODULE

- CONNECTOR 1**
- 1-1 D/S FR SLIDE RET
 - 1-2 D/S FR SLIDE EXT
 - 1-3 P/S FR SLIDE RET
 - 1-4 P/S FR SLIDE EXT

- CONNECTOR 2**
- 2-1 D/S RR SLIDE RET
 - 2-2 D/S RR SLIDE EXT
 - 2-3 P/S RR SLIDE RET
 - 2-4 P/S RR SLIDE EXT

- CONNECTOR 3**
- 3-1 HYDRAULIC PUMP - D/S SLIDE
 - 3-2 HYDRAULIC PUMP - P/S SLIDE
 - 3-3
 - 3-4

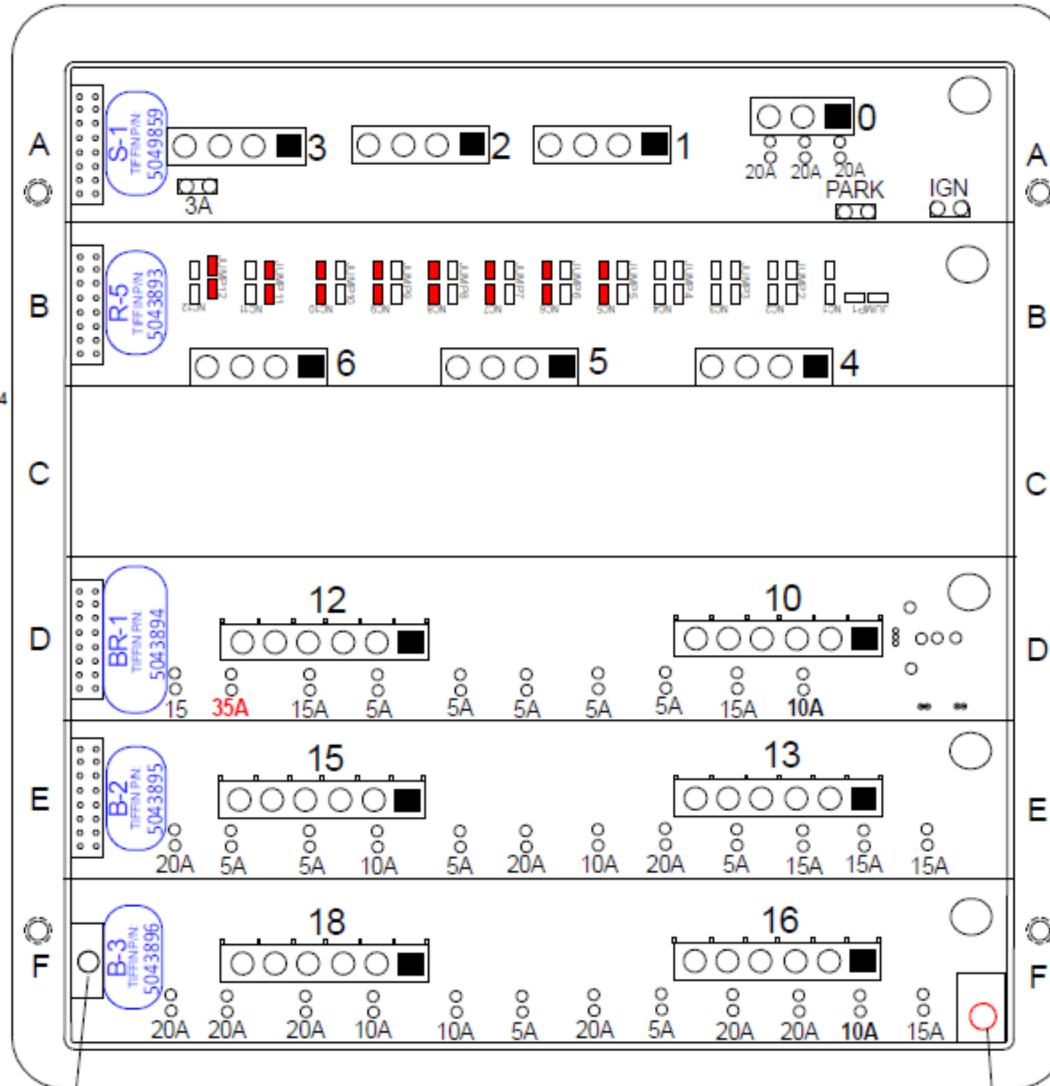
- CONNECTOR 3A**
-

- CONNECTOR 10**
- 10-1 - BREAKER #37
 - 10-2 - BREAKER #38
 - 10-3 DENSO A/C PWR IGN(YLW) - BREAKER #39
 - 10-4 MIRRORS - BREAKER #40
 - 10-5 CAMERA IGN - BREAKER #41
 - 10-6 JACK BUZZER - BREAKER #42

- CONNECTOR 12**
- 12-1 PANEL LAMP/HEADLT LED - BREAKER #43
 - 12-2 FRIDGE - BREAKER #44
 - 12-3 ENTRY STEP IGN - BREAKER #45
 - 12-4 DOCK LIGHT - BREAKER #46
 - 12-5 WIPER - BREAKER #47
 - 12-6 POWER WINDOW OPTION - BREAKER #48

- CONNECTOR 16**
- 16-1 RADIO MEMORY / XM PWR - BREAKER #61
 - 16-2 DENSO A/C POWER - BREAKER #62
 - 16-3 12V+ OUTLET #1 - BREAKER #63
 - 16-4 12V+ OUTLET #2 - BREAKER #64
 - 16-5 ENGINE PREHEAT SWITCH - BREAKER #65
 - 16-6 HYDRA-HOT (option) - BREAKER #66

- CONNECTOR 18**
- 18-1 EMS MODULE - BREAKER #67
 - 18-2 CORD REEL - BREAKER #68
 - 18-3 HOSE REEL - BREAKER #69
 - 18-4 FRONT SLIDE MODULE - BREAKER #70
 - 18-5 VANITY SLIDE MODULE - BREAKER #71
 - 18-6 BED SLIDE MODULE - BREAKER #72



OPERATIONAL GROUND PEM STUD

12V Power Stud

NOTE: CONNECTORS ARE SHOWN HERE IN THE LOADED (REAR) VIEW.

Card Legend

R=RELAY CARD

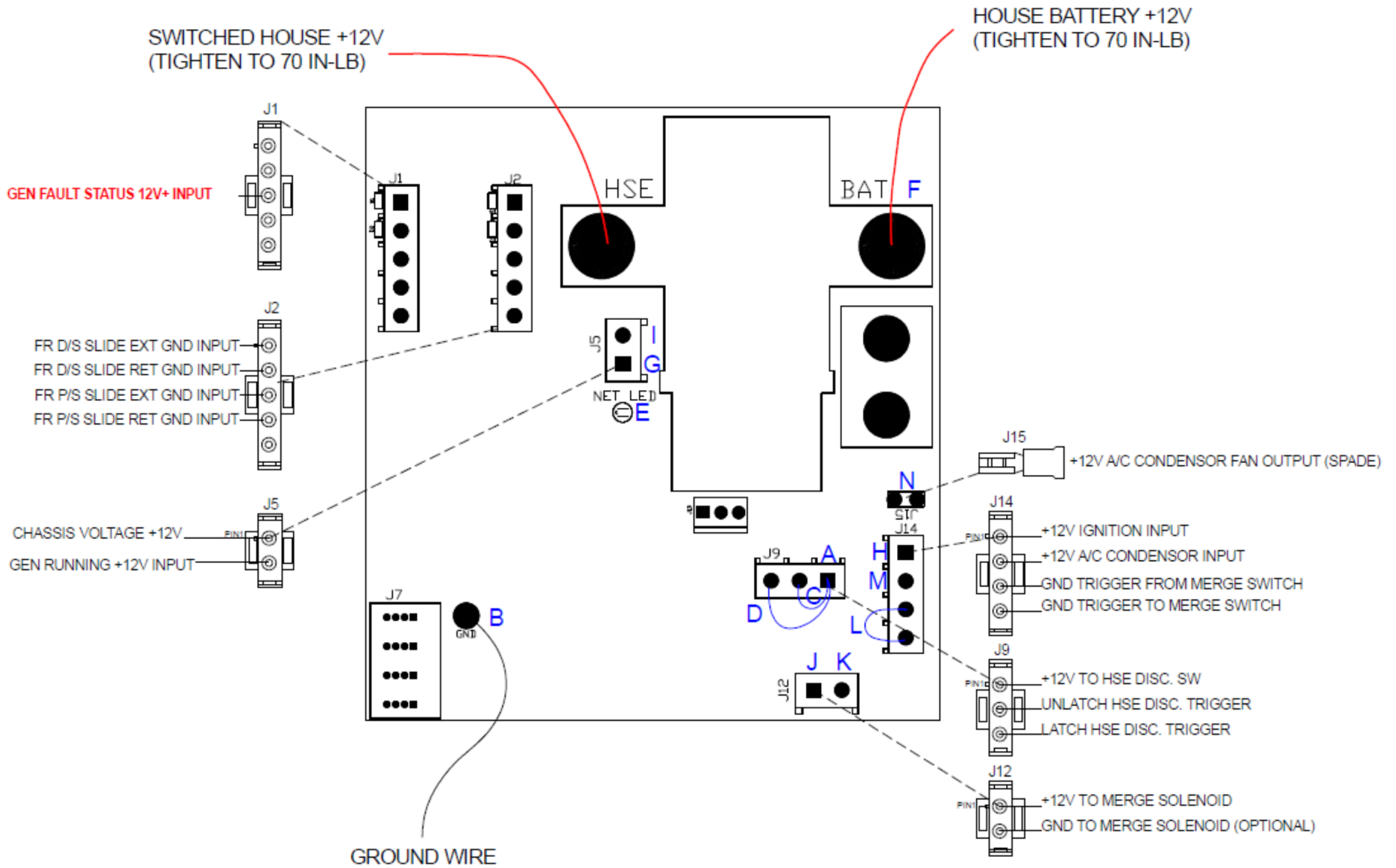
B=BREAKER CARD

**BR=BREAKER/
RELAY CARD**

D=DIMMER CARD

= JUMPERED

Tiffin Motorhomes
Power Management Module
2019 Tiffin RED, Breeze, Bay
Tiffin PN: 5079063 | Spyder PN: BENCZP8CE
03.21.2018

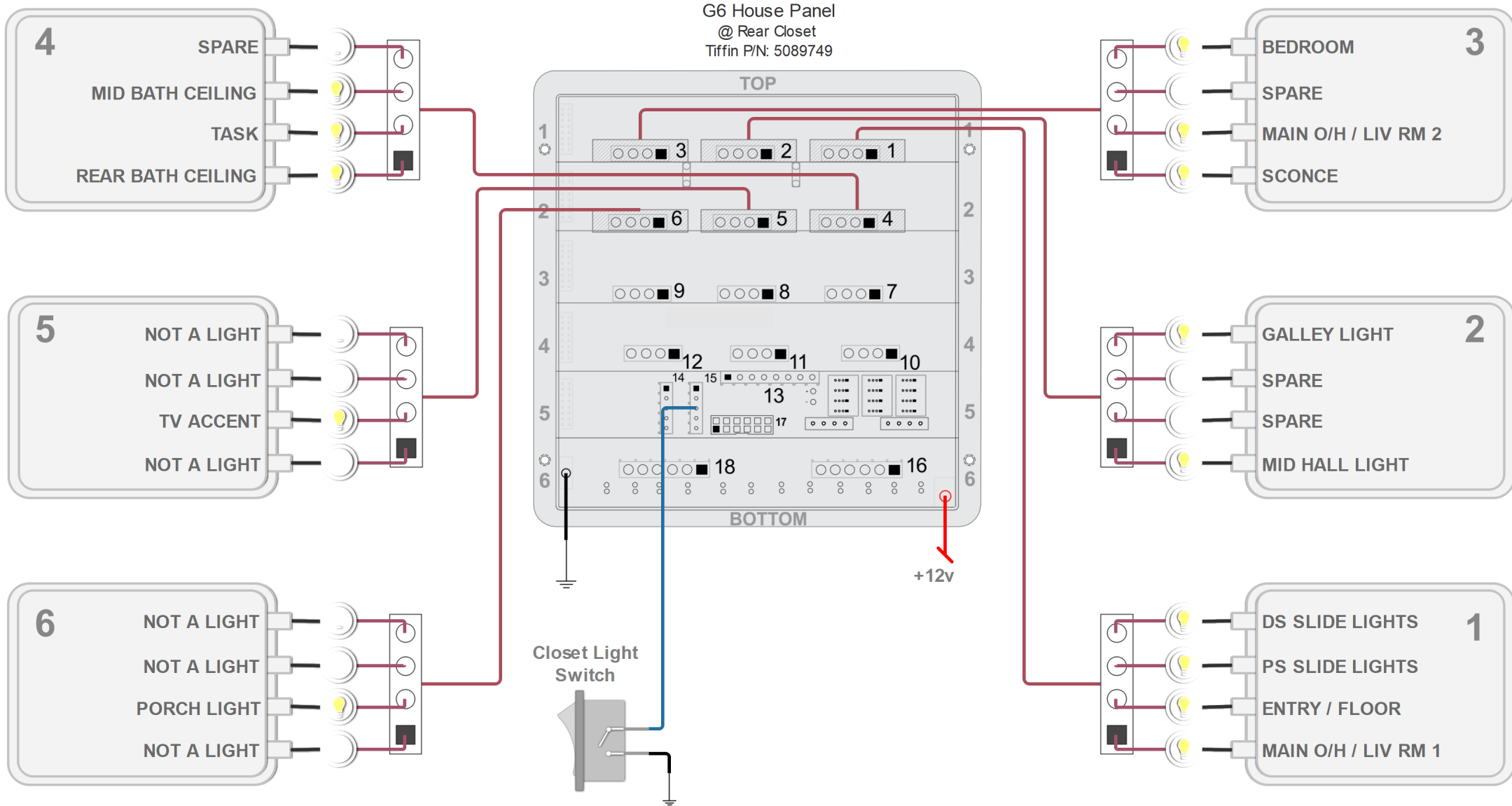


NOTE: CONNECTORS ARE SHOWN HERE IN THE LOADED (REAR) VIEW.

2020 Tiffin Allegro RED Lighting System

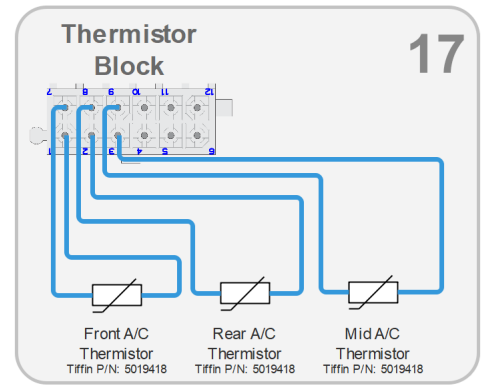
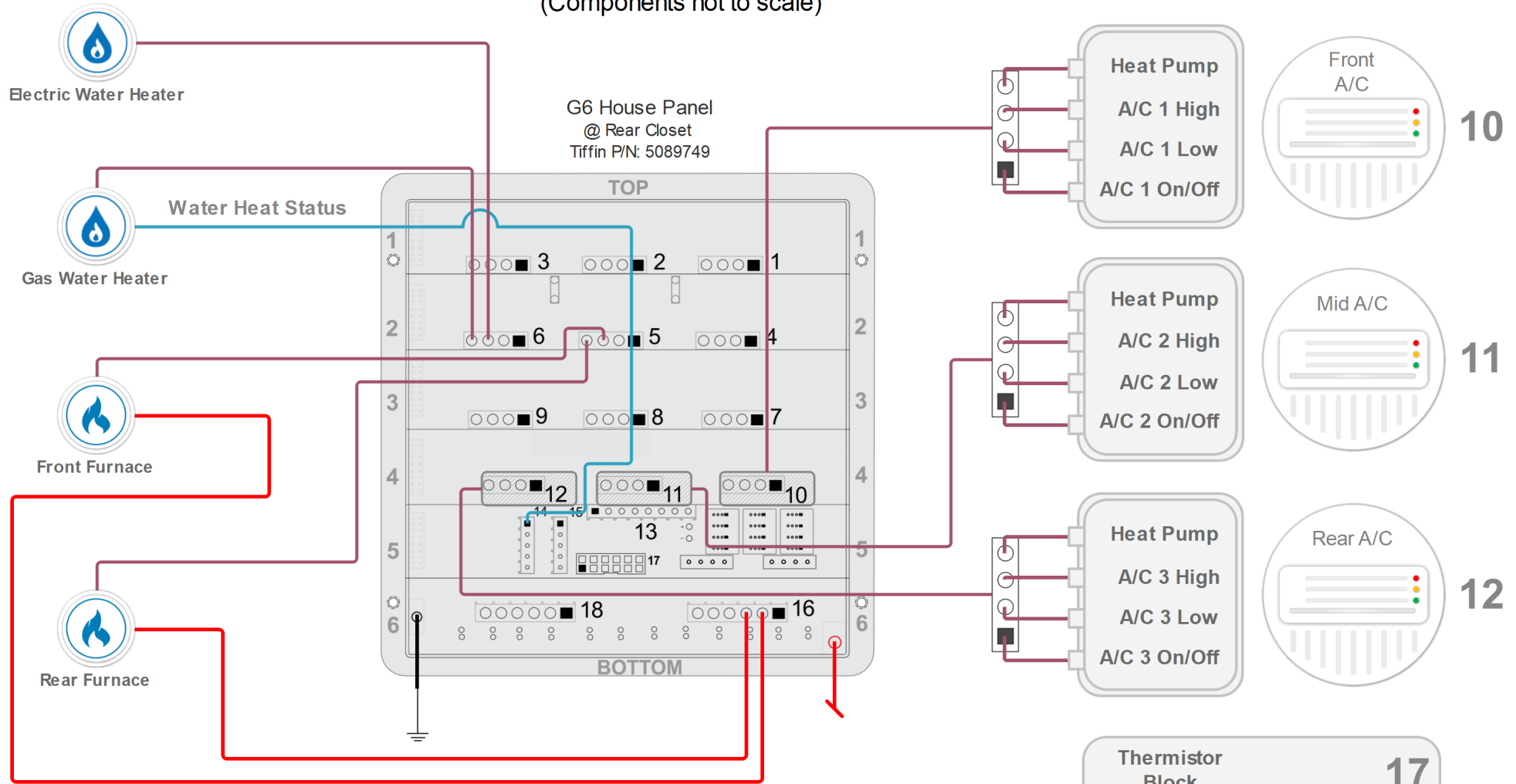
(Components not to scale)

All lights listed do NOT dim



2020 Tiffin Allegro RED HVAC System

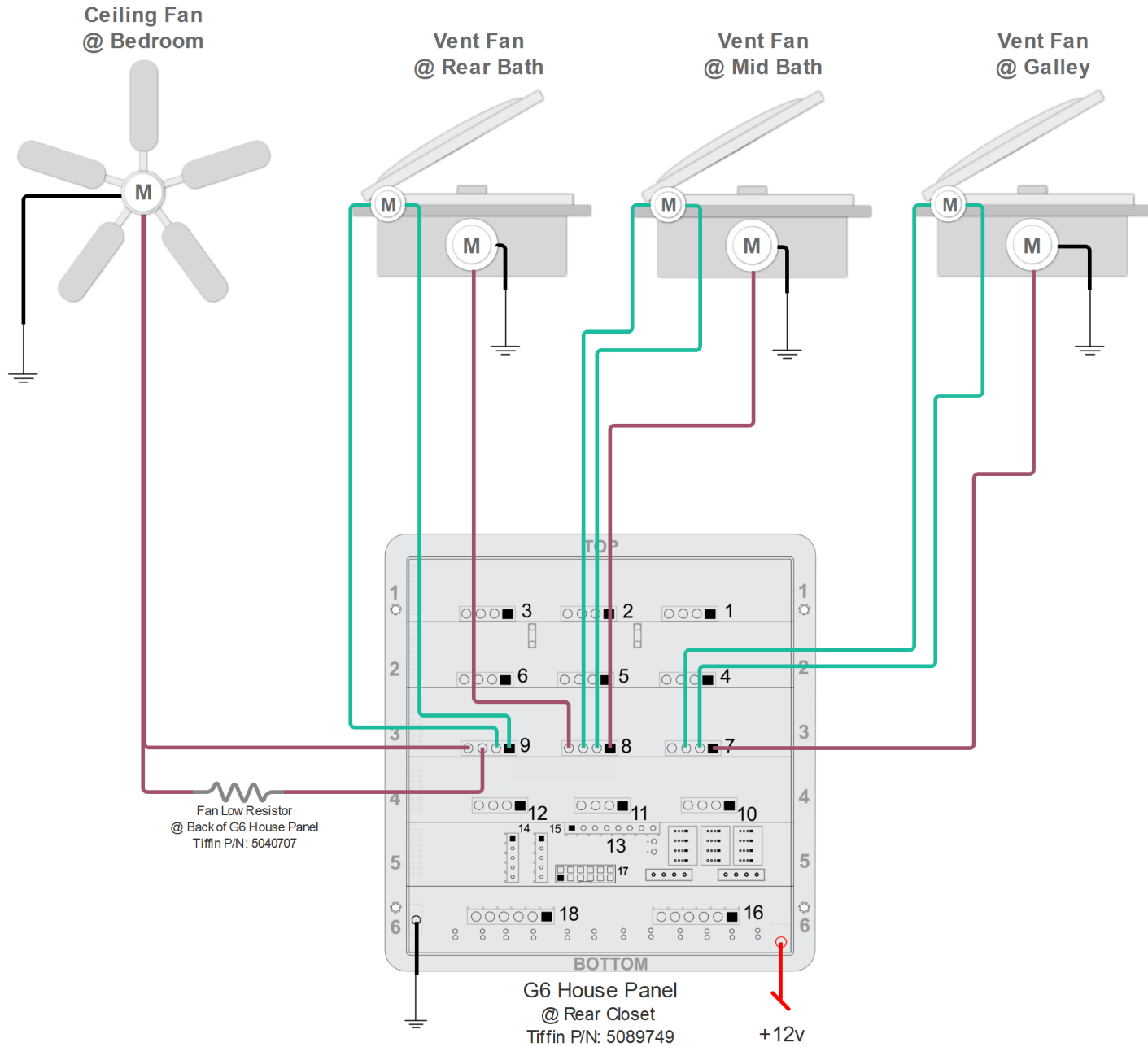
(Components not to scale)



HVAC thermistors - 100K ohms @ 25 C

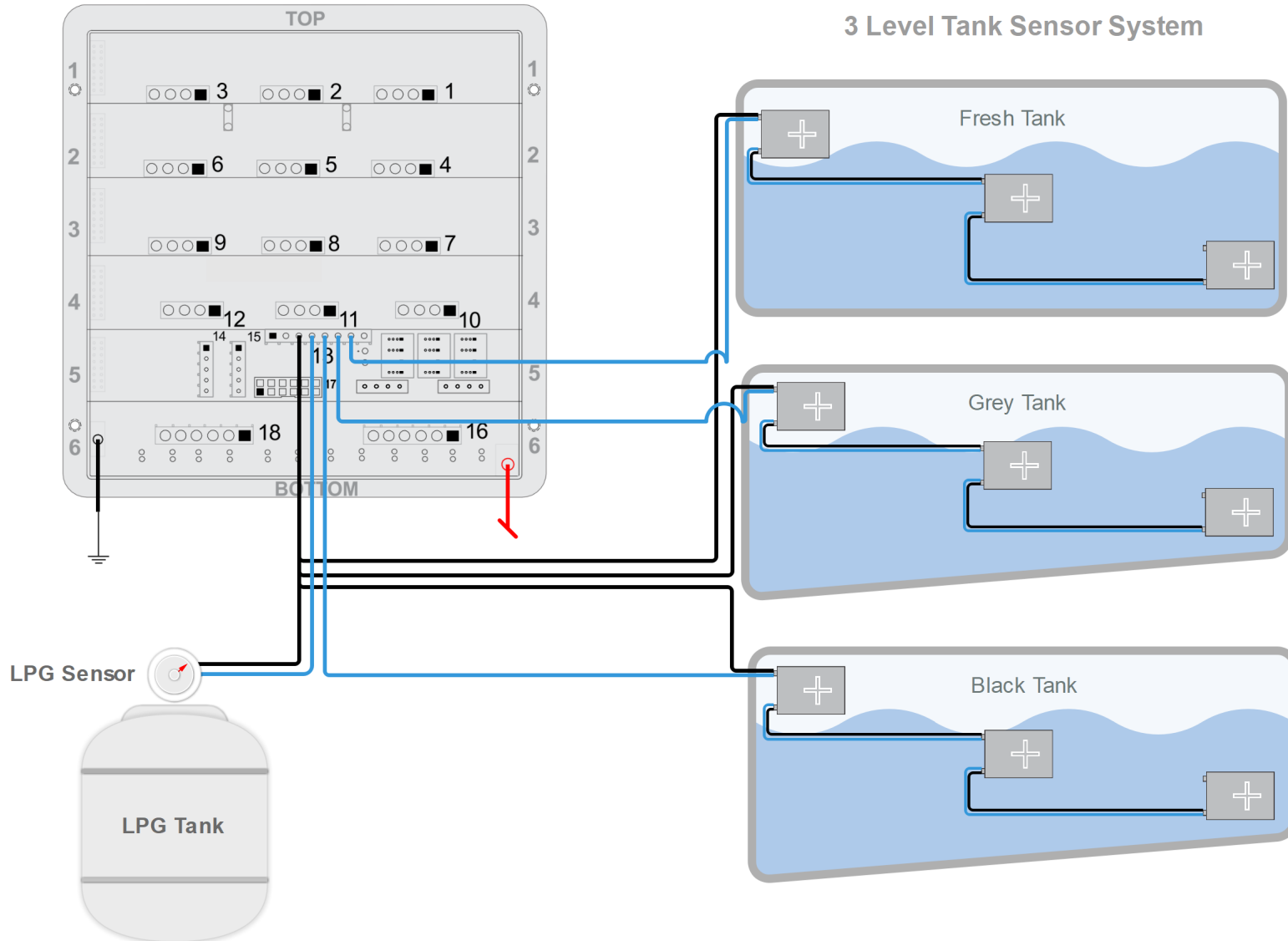
NOTE:
As the temperature increases the resistance lowers

2020 Tiffin Allegro RED Vent Fan & Ceiling Fan System (Components not to scale)



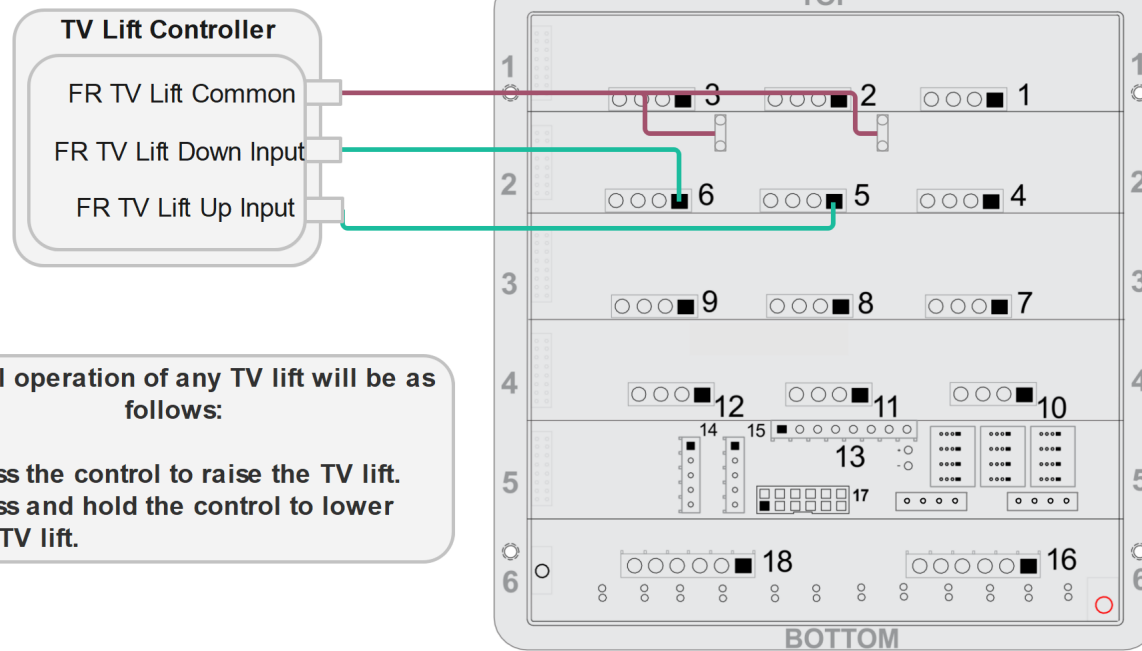
2020 Tiffin Allegro RED Tank Level System (Components not to scale)

G6 House Panel
@ Rear Closet
Tiffin P/N: 5089749



**2020 Tiffin Allegro RED
TV Lift System**
(Components not to scale)

G6 House Panel
@ Rear Closet
Tiffin P/N: 5089749



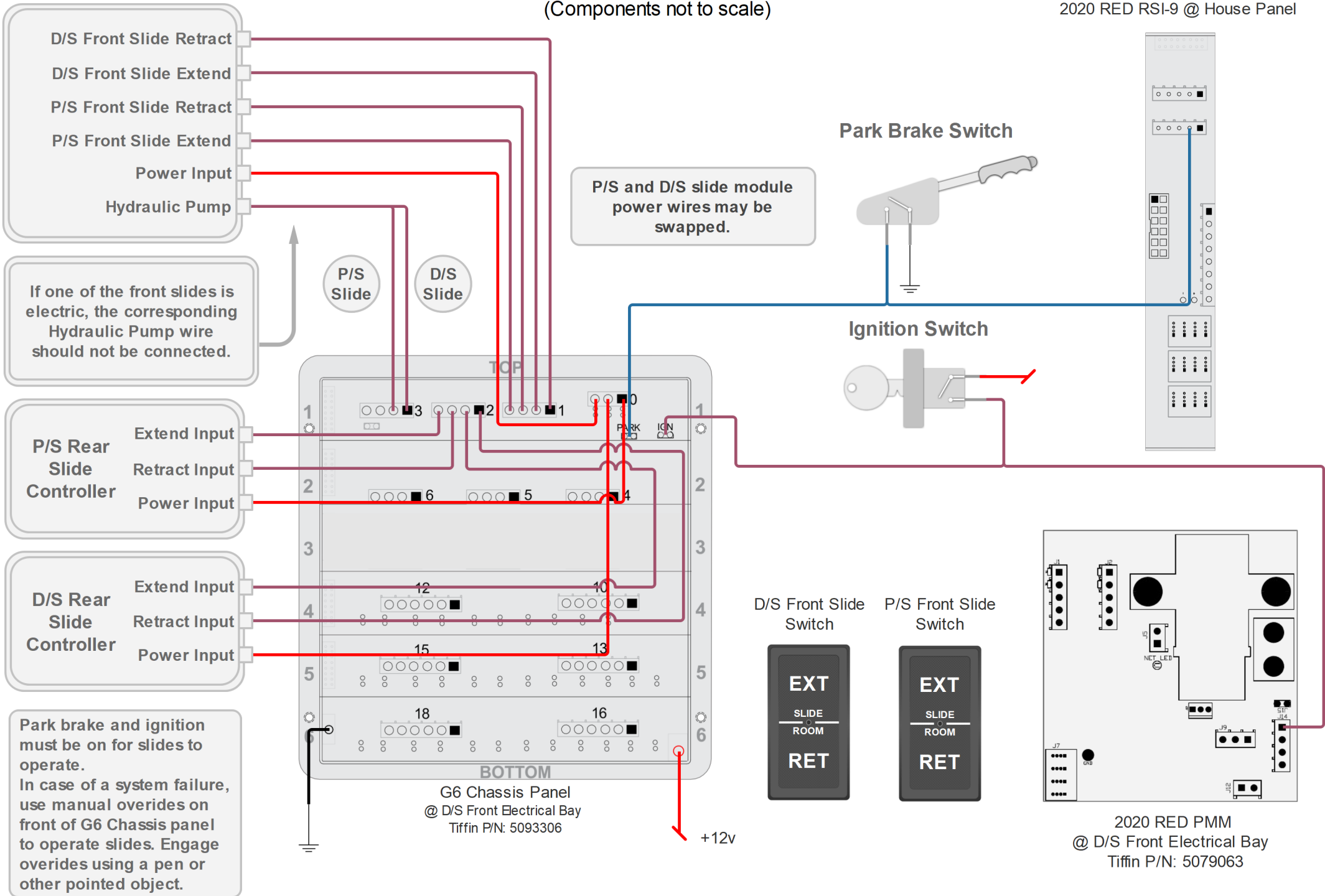
Normal operation of any TV lift will be as follows:

- Press the control to raise the TV lift.
- Press and hold the control to lower the TV lift.

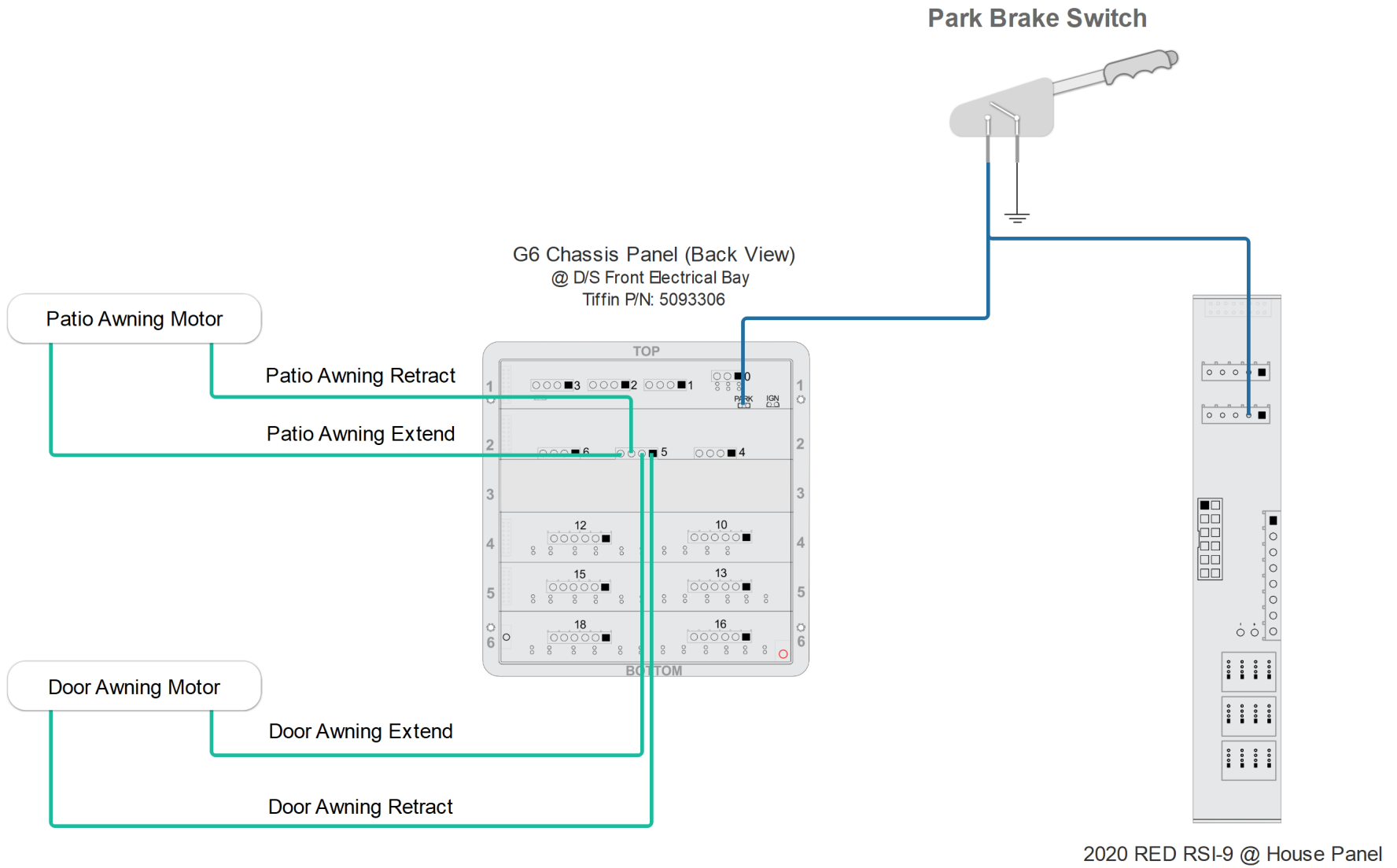
2020 Tiffin Allegro RED Slide System

(Components not to scale)

2020 RED RSI-9 @ House Panel

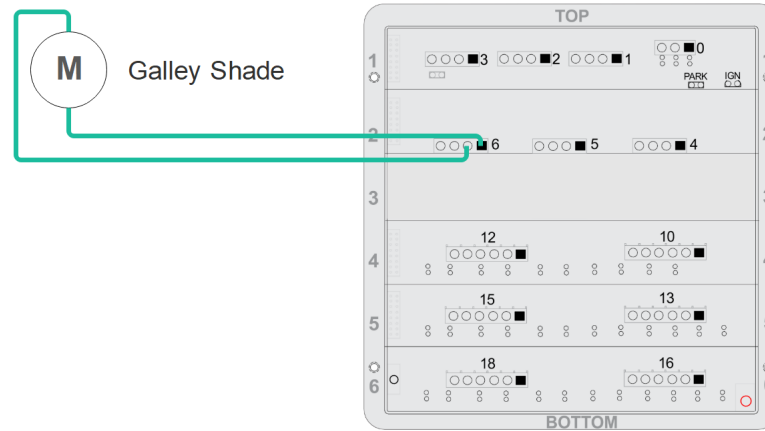


**2020 Tiffin Allegro RED
Front Shade System
(Components not to scale)**

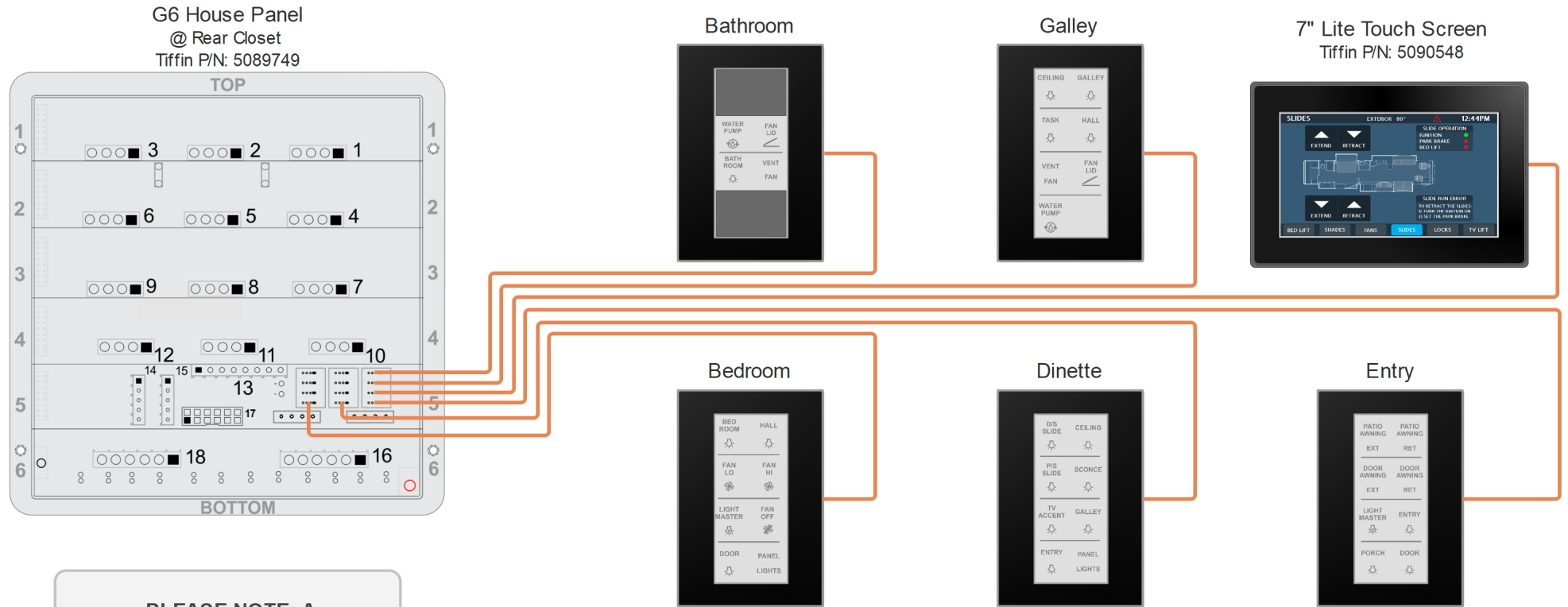


2020 Tiffin Allegro RED
Front Shade System
(Components not to scale)

G6 Chassis Panel (Back View)
@ D/S Front Electrical Bay
Tiffin P/N: 5093306



2020 Tiffin Allegro RED
 Switch and Screen Network
 (Components not to scale)



PLEASE NOTE: A NETWORK CABLE CAN BE PLUGGED INTO ANY NETWORK PORT ON THE RSI-9

PLEASE DO NOT ORDER A REPLACEMENT SWITCH PANEL UNTIL YOU HAVE CALLED SPYDER CONTROLS. IT IS VERY RARE FOR A SWITCH PANEL TO FAIL

866-919-9092

2016-2020 Allegro Red / Breeze Battery Merge Logic

Case 1 – CHASSIS CHARGING HOUSE batteries

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

- Ignition signal present for 30 seconds; AND
- Chassis voltage is above 13.3V (charging)

The merge solenoid will dis-engage if under the following conditions:

- Generator starts – unmerge and lockout all merge functionality until the generator running signal is removed (or until the ignition signal is removed); OR
- Ignition signal is removed; OR
- Chassis voltage drops below 12.6V for more than 30 seconds, unmerge until the ignition signal is cycled

Case 2 – HOUSE CHARGING CHASSIS batteries

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 dis-engage if under 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

Pre-Service Bulletin House Voltage

Service Bulletin Took Affect 2016-01-01

Case 1 – CHASSIS CHARGING HOUSE batteries

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

- Ignition signal present for 30 seconds; AND
- Chassis voltage is above 13.3V (charging) AND
- House voltage is below 12.4V (Low Battery Voltage)

The merge solenoid will dis-engage if under the following conditions:

- Generator starts – unmerge and lockout all merge functionality until the generator running signal is removed (or until the ignition signal is removed); OR
- Ignition signal is removed; OR
- Chassis voltage drops below 12.6V for more than 30 seconds, unmerge until the ignition signal is cycled

Case 2 – HOUSE CHARGING CHASSIS batteries

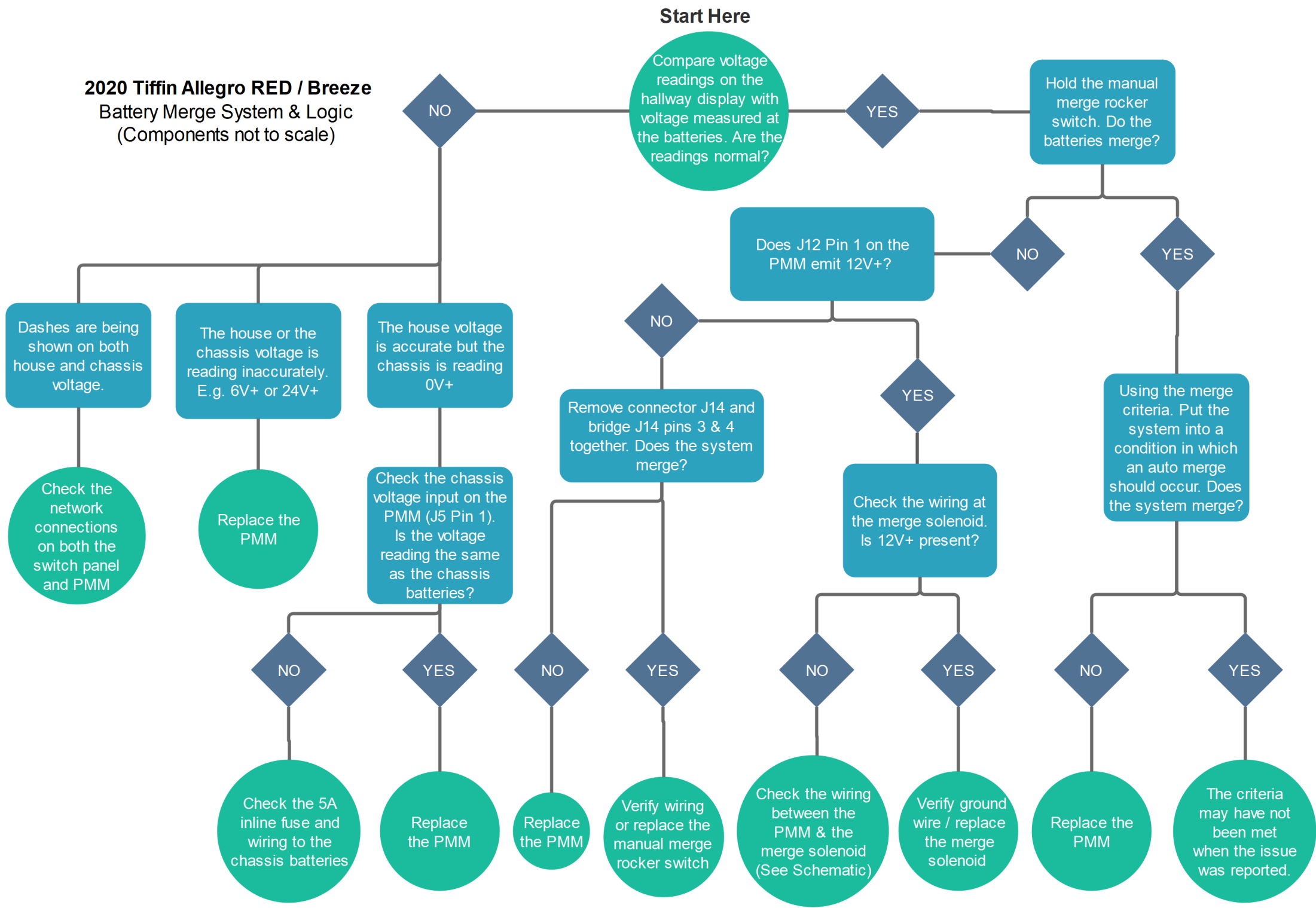
The merge solenoid will engage if the following conditions are present:

- House voltage is above 13.3V (charging); AND
- Chassis voltage is below 12.4V (low battery voltage) for 30 seconds

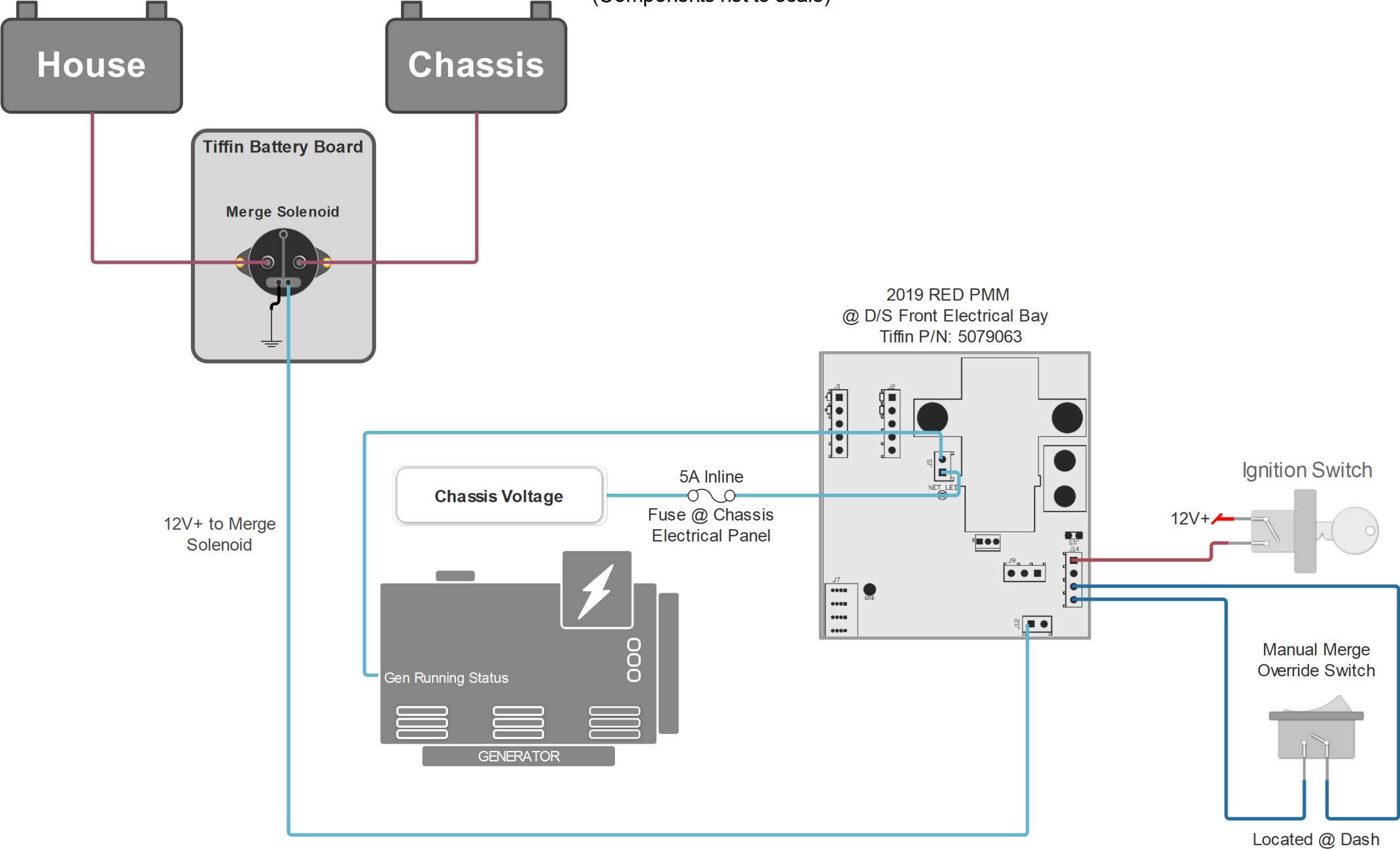
The merge solenoid will dis-engage if under the following conditions:

- House voltage drops below 12.6V 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

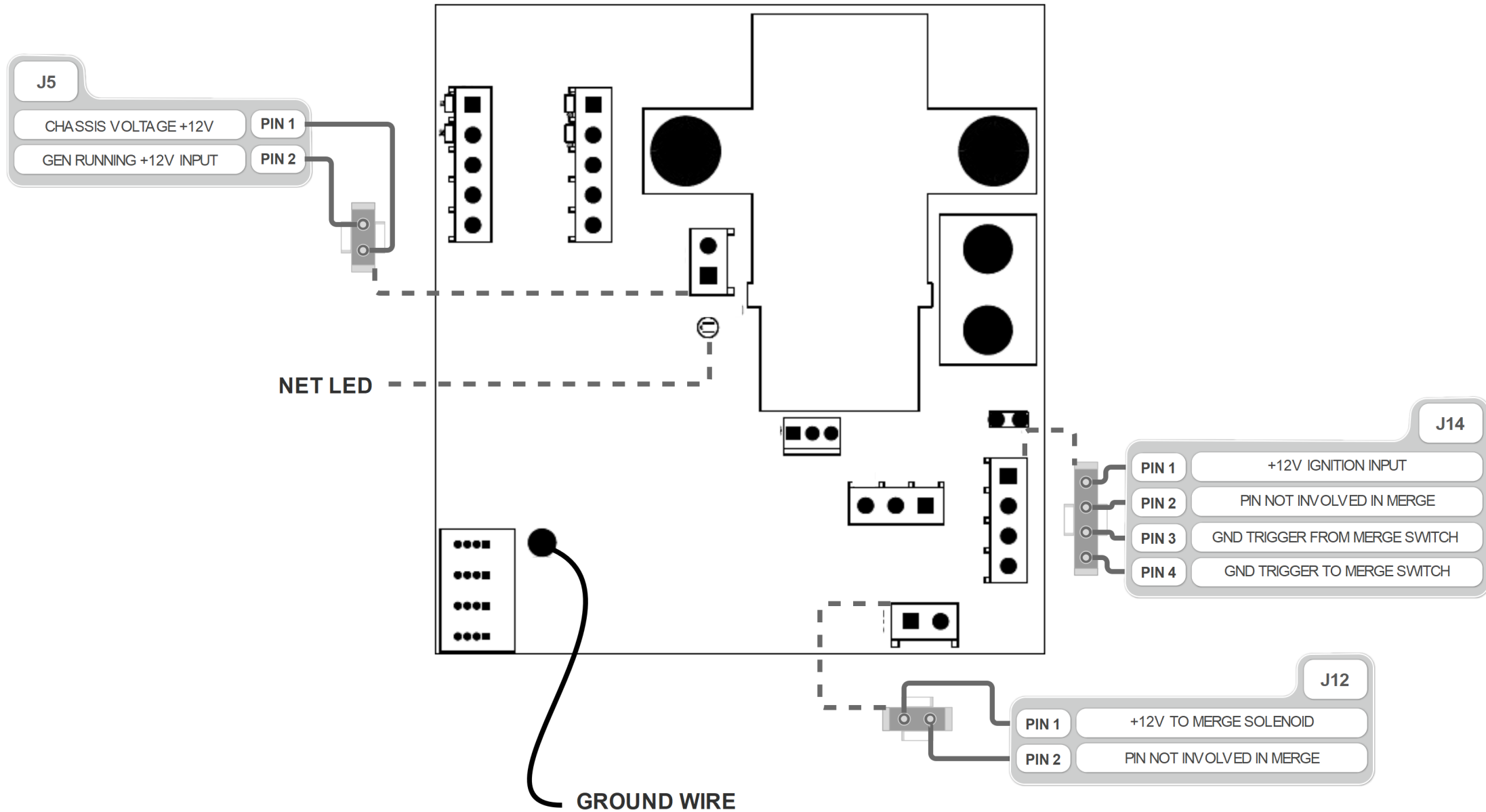
2020 Tiffin Allegro RED / Breeze
Battery Merge System & Logic
 (Components not to scale)



2020 Tiffin Allegro RED
Battery Merge System & Logic
(Components not to scale)

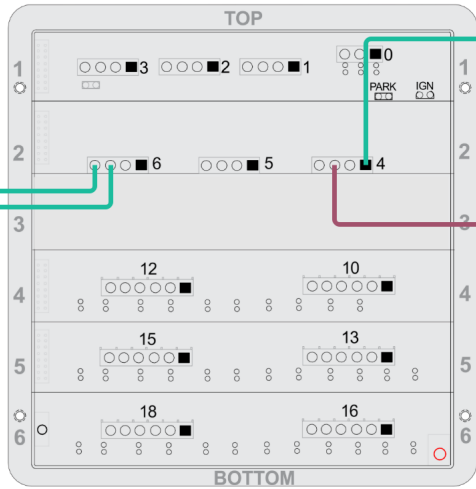


2020 Allegro RED PMM
@ D/S Front Electrical Bay
(2019 - Tiffin P/N: 5079063)



2020 Tiffin Allegro RED Miscellaneous (Components not to scale)

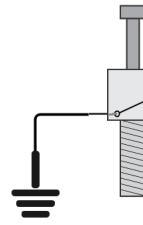
G6 Chassis Panel (Back View)
@ D/S Front Electrical Bay
Tiffin P/N: 5093306



Water Pump

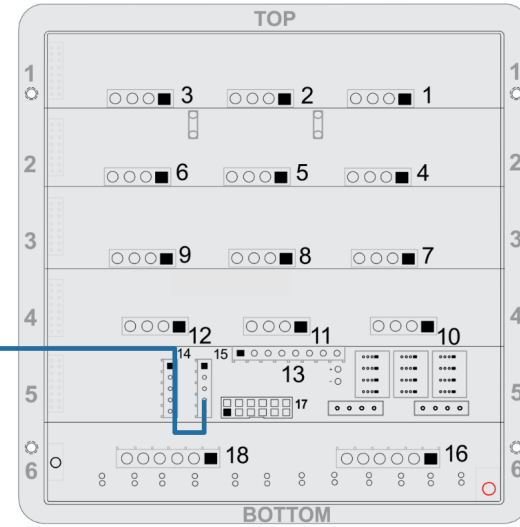


Entry Door
Plunger Switch

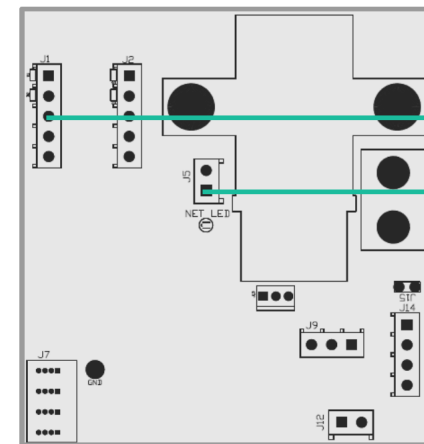
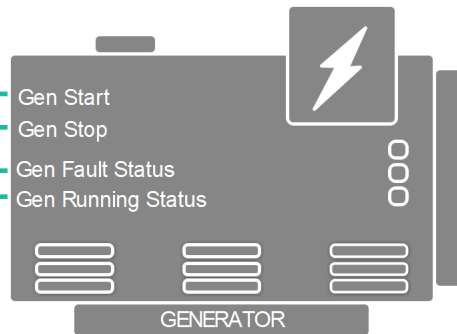


Door/Assist Handle

G6 House Panel
@ Rear Closet
Tiffin P/N: 5089749



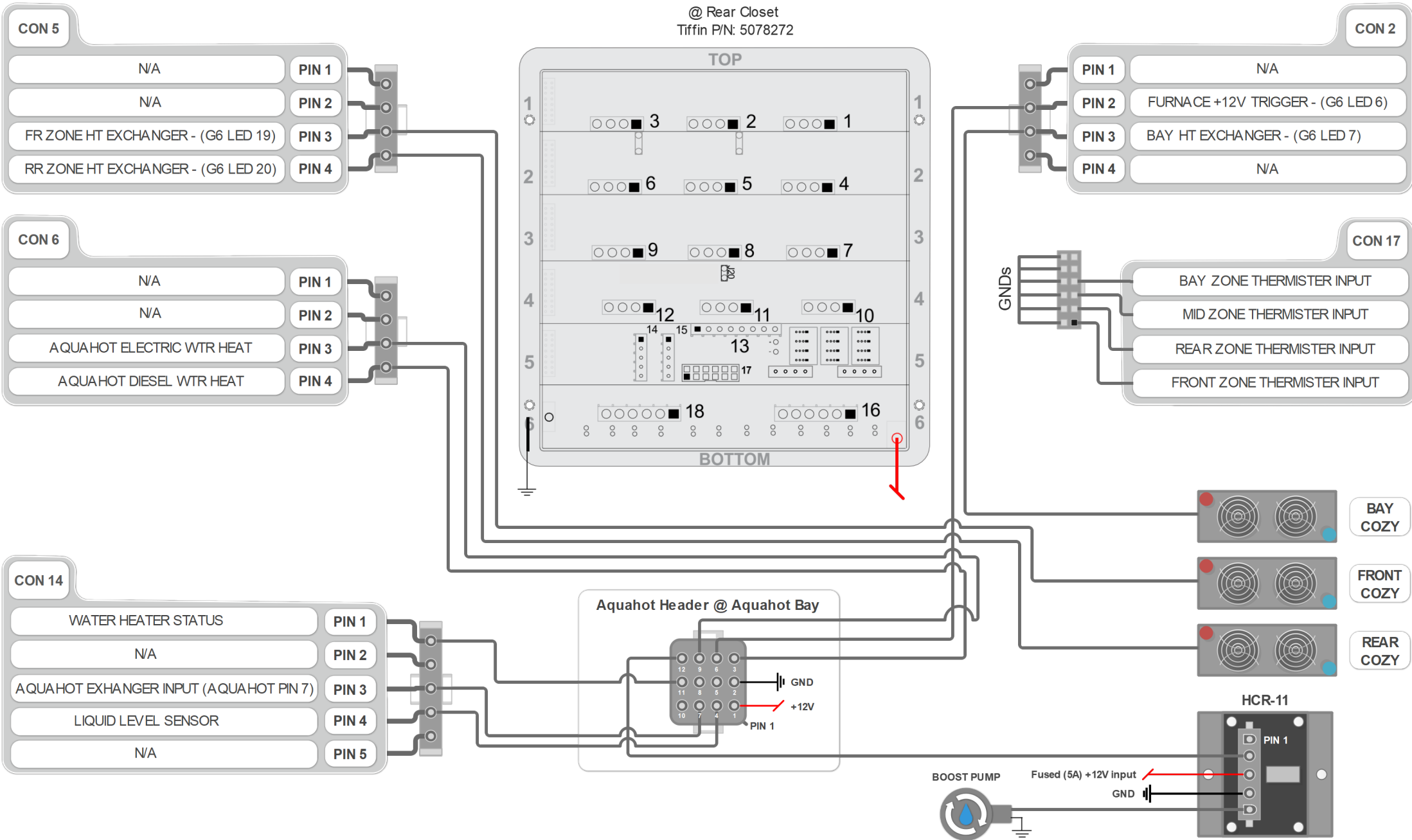
When the door is opened,
the Entry Light turns on for 2
minutes, the Door Shade
lifts, and panel lights on the
Entry switch panel turn on.



2019 RED PMM
@ D/S Front Electrical Bay
Tiffin P/N: 5079063

Aquahot 250D

G6 House Panel
 @ Rear Closet
 Tiffin P/N: 5078272

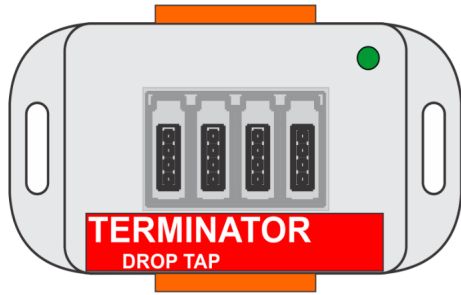


2020 Tiffin Allegro RED

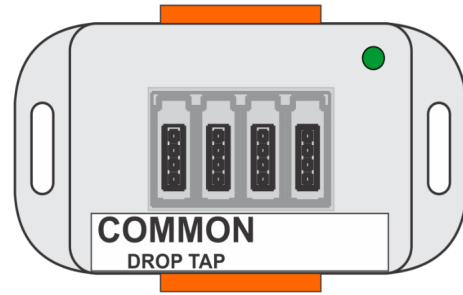
Network Connectors and Related Parts

(Components not to scale)

G3 Terminator Tap
Tiffin P/N: 5051935



G3 Common Tap
Tiffin P/N: 5027834



G4 Common Drop Tap
Tiffin P/N: 5016592



Mini-Clamp Plug
Tiffin P/N: 5066157



G4 Terminator Drop Tap
Tiffin P/N: 5051936



Mini-Clamp Socket
Tiffin P/N: 5066158



4 Pos Wago Connector
Tiffin P/N: 5015508

