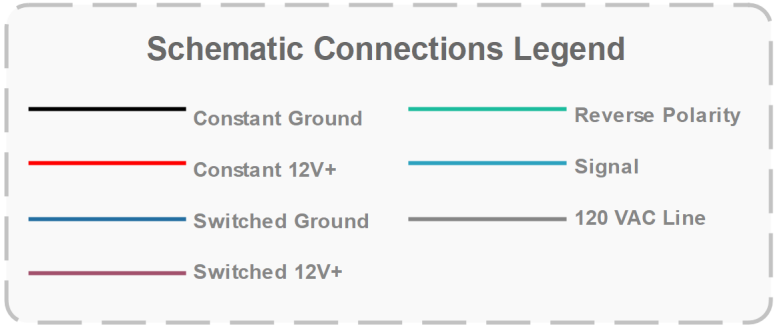
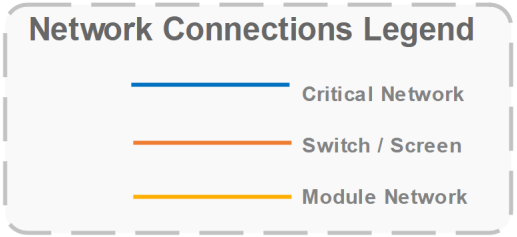
SPYDER CONTROLS CORP

Multiplex Integration Schematic

2021 Allegro Bus





2021 Tiffin Bus
General Info & Support
(Components not to scale)

The CHANNEL LED corresponds with the circuit listed on the house or chassis G6A panels. The LED will turn on or off indicating whether the circuit is on or off. Please refer to the house or chassis panel pinouts for a complete channel list.

The NET PORT is a helpful diagnostic tool. If you are updateing your coach with a programmer switch you will generally plug it in here. Spyder may also ask you to use this port to troubleshoot network issues. The NET LED reports the network status of the G6 panel. Please see the network status chart for more information.

Spyder Controls Website

To access more information on your coach or to contact us by email please navigate to

http://spydercontrols.com/customer-login/

OR

Scan the QR Code below with your smartphone camera. Enter the following into the username and password feilds.

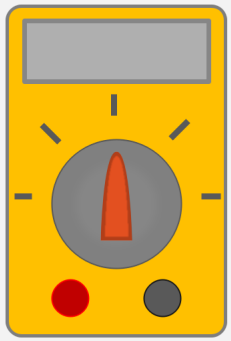
Username: Tiffin

Password: Motorhomes

NETWORK STATUS LED INDICATOR

- SOLID GREEN - Device is connected to network and communcating properley
- LED OFF - Device has no power or has failed completley
- SOLID RED - Device has gone offline and is not connected to the network
- FAST FLASHING GREEN (4 times / sec) - Device is attempting to make intial connection and claim a network address
- SLOW FLASHING GREEN (1 times / sec) - Device is online but has not seen a valid network message in 5 seconds
- ALTERNATING RED & ORANGE - Device has gone offline and is attempting to re-connect (within 30 seconds)
- ALTERNATING GREEN & ORANGE - Device is currentley online but has gone offline 2 or more times

Helpful Tools to Keep on Hand

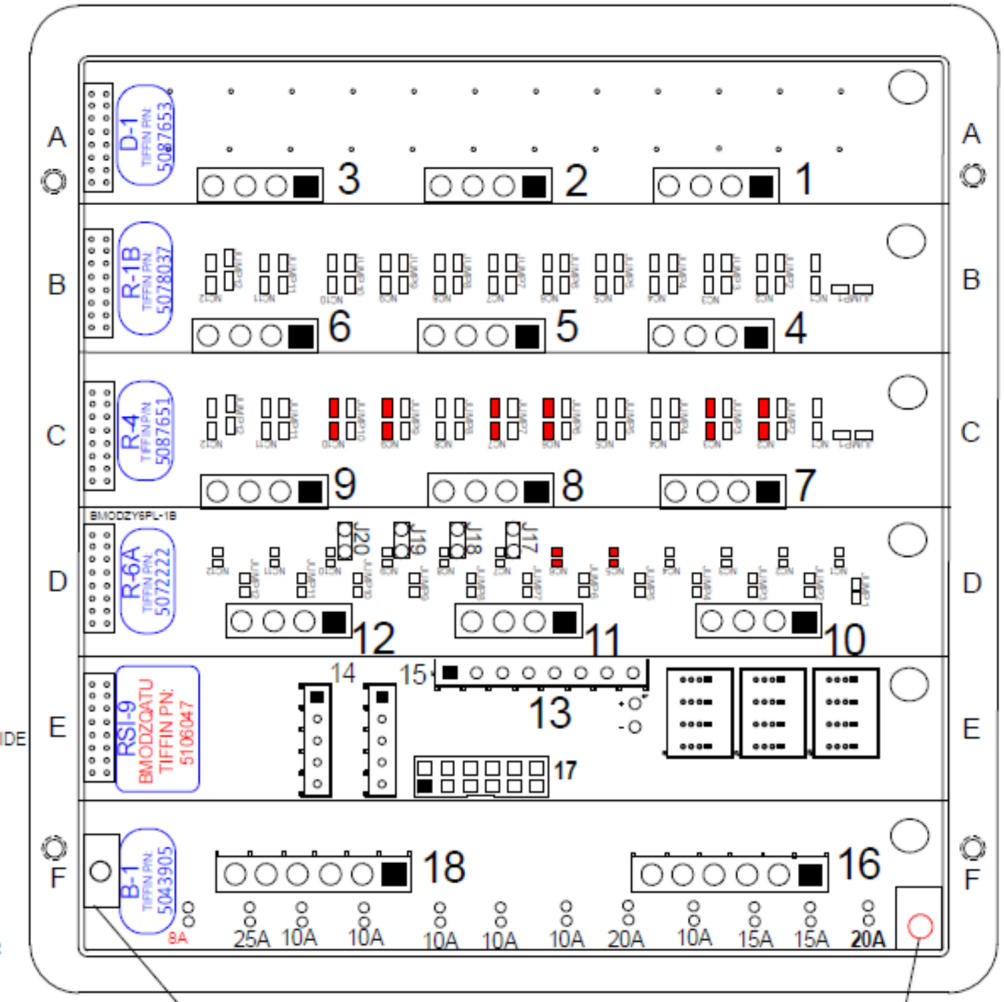


Multi-Meter

- Robertson Head Screwdriver
- Philips Head Screwdriver
- Flat Head Screwdriver

G6A CONTROL PANEL LAYOUT
Tiffin PN: 5104403 Spyder PN: BENCZ52DA
2021 BUS/PHTN - **HOUSE Rev 0vA**
PINOUT DIAGRAM - 2020.04.22

Back View



CONNECTOR 4
- 4-1 (G6 LED 13) REAR BATH/MID SINK CEILING LIGHTS
- 4-2 (G6 LED 14) TASK LIGHTS
- 4-3 (G6 LED 15) MID BATH CEILING LIGHTS
- 4-4 (G6 LED 16) MID BATH VANITY LIGHTS

CONNECTOR 5
- 5-1 (G6 LED 17) REAR BATH/MID SINK VANITY LIGHTS
- 5-2 (G6 LED 18) TV ACCENT LIGHTS
- 5-3 (G6 LED 19) FR ACNT LIGHTS
- 5-4 (G6 LED 20) FR ACNT LIGHTS

CONNECTOR 6
- 6-1 (G6 LED 21) BED ACCENT
- 6-2 (G6 LED 22) SPARE
- 6-3 (G6 LED 23) RR ACNT LIGHTS
- 6-4 (G6 LED 24) RR ACNT LIGHTS

CONNECTOR 10
- 10-1 (G6 LED 37) FLR HT ZONE 1
- 10-2 (G6 LED 38) FLR HT ZONE 2
- 10-3 (G6 LED 39) SPARE
- 10-4 (G6 LED 40) SPARE

CONNECTOR 11
- 11-1 (G6 LED 41) BED LIFT UP
- 11-2 (G6 LED 42) BED LIFT DN
- 11-3 (G6 LED 43) FR TV LIFT UP
- 11-4 (G6 LED 44) FR TV LIFT DN

J17---- FR TV LIFT COMMON
J18---- FR TV LIFT COMMON
J19---- RR TV LIFT COMMON
J20---- RR TV LIFT COMMON

CONNECTOR 12
- 12-1 (G6 LED 45) BED TV LIFT UP
- 12-2 (G6 LED 46) BED TV LIFT DN
- 12-3 (G6 LED 47) FIREPLACE OVERRIDE
- 12-4 (G6 LED 48)

CONNECTOR 17
- GND
- 17-6
- 17-5 REAR AC THERMISTOR
- 17-4 MID AC THERMISTOR
- 17-3 FRONT AC THERMISTOR
- 17-2 REAR FLOOR HT THERMISTOR
- 17-1 FRONT FLOOR HT THERMISTOR

CONNECTOR 14 (12V+ INPUTS)
- 14-1 WTR HTR STATUS
- 14-2 GEN FAULT STATUS 12V+
- 14-3
- 14-4 BED LIFT PLUNGER
- 14-5

CONNECTOR 15 (GND INPUTS)
- 15-1
- 15-2 BEDROOM LIGHT SWITCH
- 15-3 CLOSET LIGHT SW
- 15-4 DASH ACNT LT ON
- 15-5 DASH ACNT LT OFF

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

CONNECTOR 2
- 2-1 (G6 LED 5) HALL / DASH ACCENT LTS
- 2-2 (G6 LED 6) PS SLIDE LIGHTS
- 2-3 (G6 LED 7) SCONCE
- 2-4 (G6 LED 8) DS SLIDE LIGHTS

CONNECTOR 3
- 3-1 (G6 LED 9) FR CRTSY LIGHTS
- 3-2 (G6 LED 10) RR CRTSY LIGHTS
- 3-3 (G6 LED 11) BED SCONCE LIGHTS
- 3-4 (G6 LED 12) BEDROOM LIGHTS

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

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

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

CONNECTOR 13
- 13-1
- 13-2 CONSTANT 12V+ (BATT)
- 13-3 GND (COMMON FOR SENSORS)
- 13-4 LPG SENSOR INPUT
- 13-5 BLACK TANK SENSOR
- 13-6 GREY TANK SENSOR
- 13-7 FRESH TANK SENSOR
- 13-8

CONNECTOR 18
- 18-1 - **BREAKER #67**
- 18-2 - **BREAKER #68**
- 18-3 - **BREAKER #69**
- 18-4 BRKR TO RR SLIDE - **BREAKER #70**
- 18-5 FRIDGE - **BREAKER #71**
- 18-6 - **BREAKER #72**

CONNECTOR 16
- 16-1 - **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 - **BREAKER #66**

R=RELAY CARD

B=BREAKER CARD

RSI-9=INPUT MODULE

D=DIMMER CARD

= JUMPERED

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

G6A CONTROL PANEL LAYOUT
Tiffin PN: 5093304 Spyder PN: BENCZ54CT
2021 BUS/PHTN/ZEPHYR - CHASSIS Rev 1V0
PINOUT DIAGRAM - 05/20/2019

Back View

MUST HAVE SIDE MOUNTING TABS ON G6 PANEL

Card Legend
- R=RELAY CARD
- B=BREAKER CARD
- BR=BREAKER/ RELAY CARD
- D=DIMMER CARD
- JUMPERED

CONNECTOR 4
- 4-1 (LED 13) AWNING LIGHT
- 4-2 (LED 14) HEADLIGHTS (INDICATION FLASH)
- 4-3 (LED 15) DOOR / ASSIST HANDLE
- 4-4 (LED 16) SPARE

CONNECTOR 5
- 5-1 (LED 17) SOFA DAY SHD UP
- 5-2 (LED 18) SOFA DAY SHD DN
- 5-3 (LED 19) SOFA NIGHT SHD UP
- 5-4 (LED 20) SOFA NIGHT SHD DN

CONNECTOR 6
- 6-1 (LED 21) STEP EXT
- 6-2 (LED 22) STEP RET
- 6-3 (LED 23) GEN START
- 6-4 (LED 24) GEN STOP

CONNECTOR 7
- 7-1 (LED 25) U-COACH ACNT (PARK)
- 7-2 (LED 26) WNDSHLD ACNT LT
- 7-3 (LED 27) MAP LT
- 7-4 (LED 28) SPARE

CONNECTOR 8
- 8-1 (LED 29) PASSENGER FAN HI
- 8-2 (LED 30) PASSENGER FAN LO
- 8-3 (LED 31) ROAD LIGHT
- 8-4 (LED 32) PORCH LIGHT

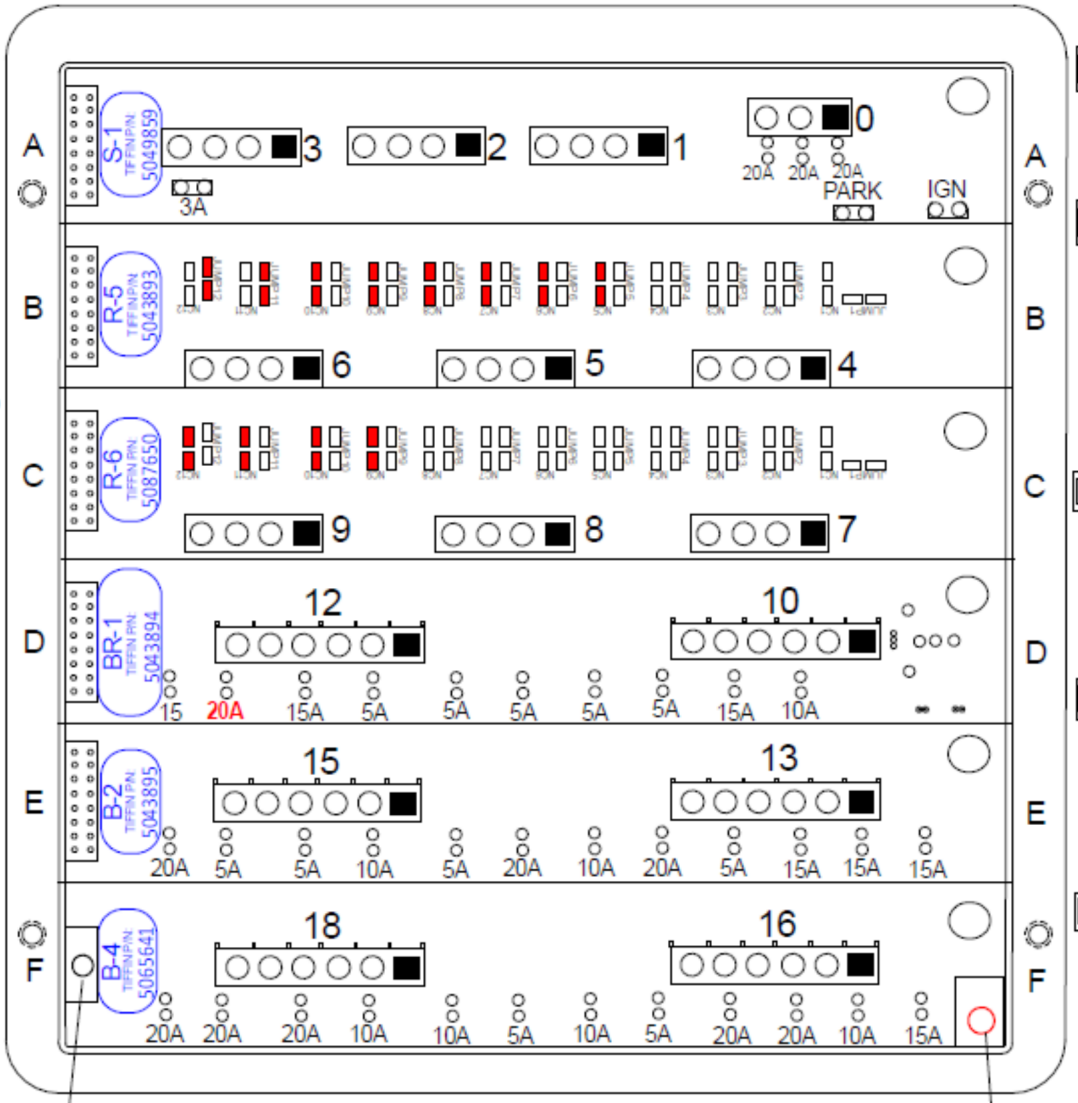
CONNECTOR 9
- 9-1 (LED 33) SPARE
- 9-2 (LED 34) SPARE
- 9-3 (LED 35) GLY NIGHT SHD UP
- 9-4 (LED 36) GLY NIGHT SHD DN

PARK BRAKE SIGNAL

IGNITION SIGNAL

CONNECTOR 13
- 13-1 MAP LT / RADIO / FANS - BREAKER #49
- 13-2 DASH USB POWER - BREAKER #50
- 13-3 - BREAKER #51
- 13-4 ENTRY STEP SWITCH - BREAKER #52
- 13-5 ENTRY STEP POWER - BREAKER #53
- 13-6 - 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 - BREAKER #59
- 15-6 POWER SEAT #2 - BREAKER #60



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

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

CONNECTOR 1
- 1-1 (LED 1) D/S FR SLIDE RET
- 1-2 (LED 2) D/S FR SLIDE EXT
- 1-3 (LED 3) P/S FR SLIDE RET
- 1-4 (LED 4) P/S FR SLIDE EXT

CONNECTOR 2
- 2-1 (LED 5) D/S RR SLIDE RET
- 2-2 (LED 6) D/S RR SLIDE EXT
- 2-3 (LED 7) P/S RR SLIDE RET
- 2-4 (LED 8) P/S RR SLIDE EXT

CONNECTOR 3
- 3-1 (LED 9) HYDRAULIC PMP - D/S SLIDE
- 3-2 (LED 10) HYDRAULIC PMP - P/S SLIDE
- 3-3 (LED 11) PORCH/DOOR AWNING CONST
- 3-4 (LED 12) SPARE

CONNECTOR 3A
- 3A-1

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

CONNECTOR 12
- 12-1 EXT TV RELAY - BREAKER #43
- 12-2 FRONT TV RELAY - BREAKER #44
- 12-3 ENTRY STEP IGN - BREAKER #45
- 12-4 DOCK LIGHT - BREAKER #46
- 12-5 - BREAKER #47
- 12-6 POWER WINDOW OPTION - BREAKER #48

CONNECTOR 16
- 16-1 - BREAKER #61
- 16-2 - BREAKER #62
- 16-3 - BREAKER #63
- 16-4 DASH SUBWOOFER - BREAKER #64
- 16-5 ENGINE PREHEAT SWITCH - BREAKER #65
- 16-6 PASS USB / TRIMARK HANDLE - BREAKER #66

CONNECTOR 18
- 18-1 - BREAKER #67
- 18-2 - BREAKER #68
- 18-3 - BREAKER #69
- 18-4 - BREAKER #70
- 18-5 - BREAKER #71
- 18-6 - BREAKER #72

2021 Tiffin Bus
G8 Module Pinout
(Components not to scale)

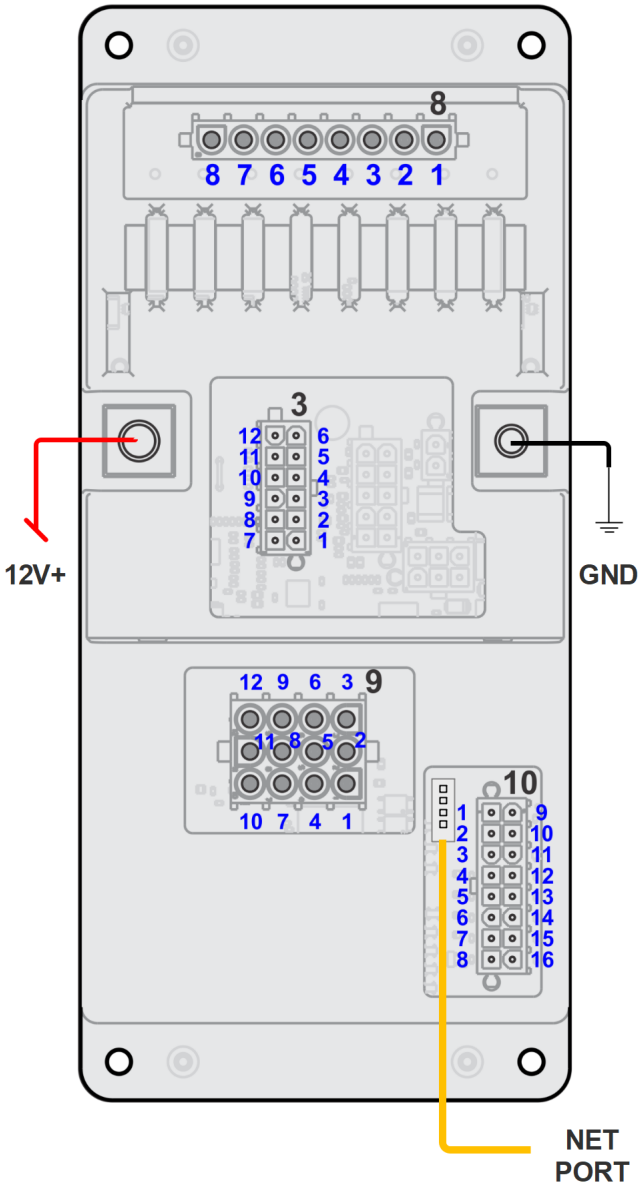
3

Bay Temp #1	Pin 1
Pin 2 EXT Temp #2	Pin 2
Spare #3	Pin 3
Spare #4	Pin 4
Spare #5	Pin 5
Spare #6	Pin 6
GND	Pin 7
GND	Pin 8
GND	Pin 9
GND	Pin 10
GND	Pin 11
GND	Pin 12

9

Electric Water Heater #9	Pin 1
Spare #19	Pin 2
Spare #20	Pin 3
Diesel Water Heater #10	Pin 4
Spare #17	Pin 5
Spare #18	Pin 6
Engine Pre-Heat #11	Pin 7
Spare #15*	Pin 8
Spare #16	Pin 9
FR FURN./AQUAHOT #12	Pin 10
RR FURN./AQUAHOT #13	Pin 11
Door Bell Chime #14	Pin 12

G8 Module
@ D/S Storage Bay Ceiling
Tiffin P/N: 5105311



8

Pin 1	Door Awning Extend
Pin 2	Door Awning Retract
Pin 3	Bay Doors Lock
Pin 4	Bay Doors Unlock
Pin 5	Water Pump
Pin 6	Spare (GND)
Pin 7	Entry Door Lock
Pin 8	Entry Door Unlock

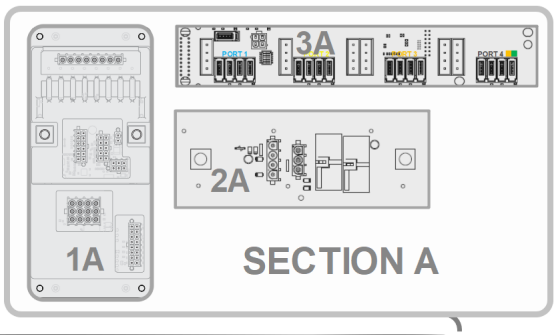
10

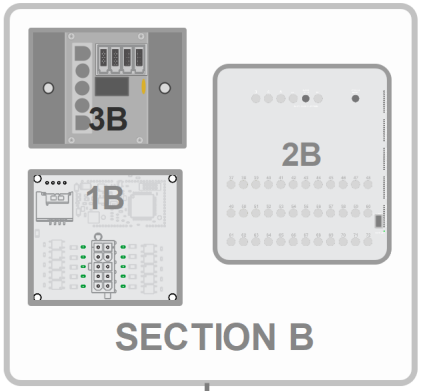
Pin 1	Generator (12V+)
Pin 2	Ignition (12V+)
Pin 3	Merge Output #23 *
Pin 4	Water Pump Switch (GND)
Pin 5	Park Brake (GND)
Pin 6	Spare (GND)
Pin 7	Door Pin Sw (Logic A) (GND)
Pin 8	Door Pin Sw (Logic B) (GND)
Pin 9	CHS Voltage (12V+)
Pin 10	House Disconnect Sense (12V+)
Pin 11	N/A
Pin 12	N/A
Pin 13	Spare (12V+)
Pin 14	Spare (12V+)
Pin 15	Spare (12V+)
Pin 16	Spare (12V+)

2021 Tiffin Bus
Module Locations Diagram
(Components not to scale)

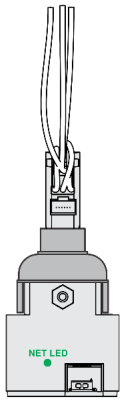
Module located on exterior or under coach bay

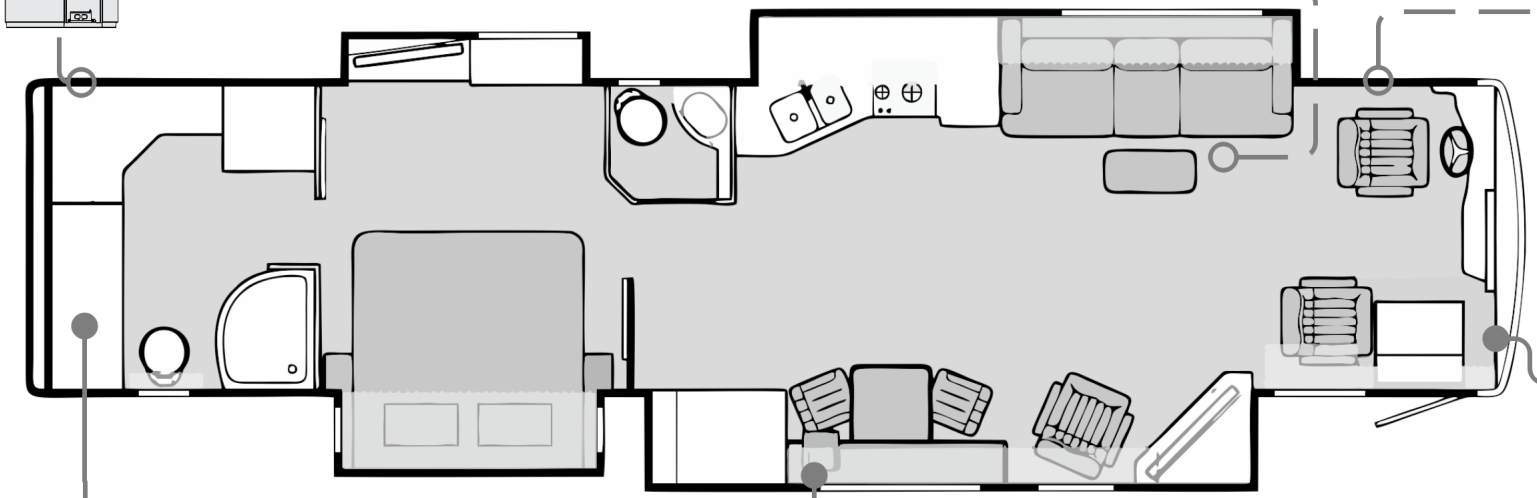
Module located inside the coach



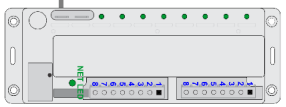


AC Power Monitor
@ Transfer Switch
Tiffin P/N: 5064974

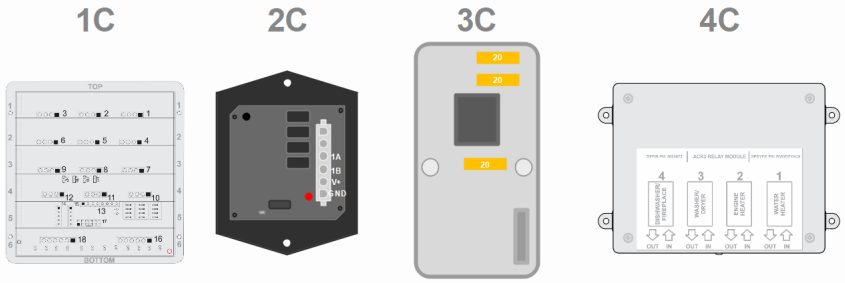




Cockpit G5
Shade Module
@ Cockpit -
Overhead
Cabinetby
Entry Door



Main G5 Shade Module
@ Slide opposite galley
- Overhead Cabinet

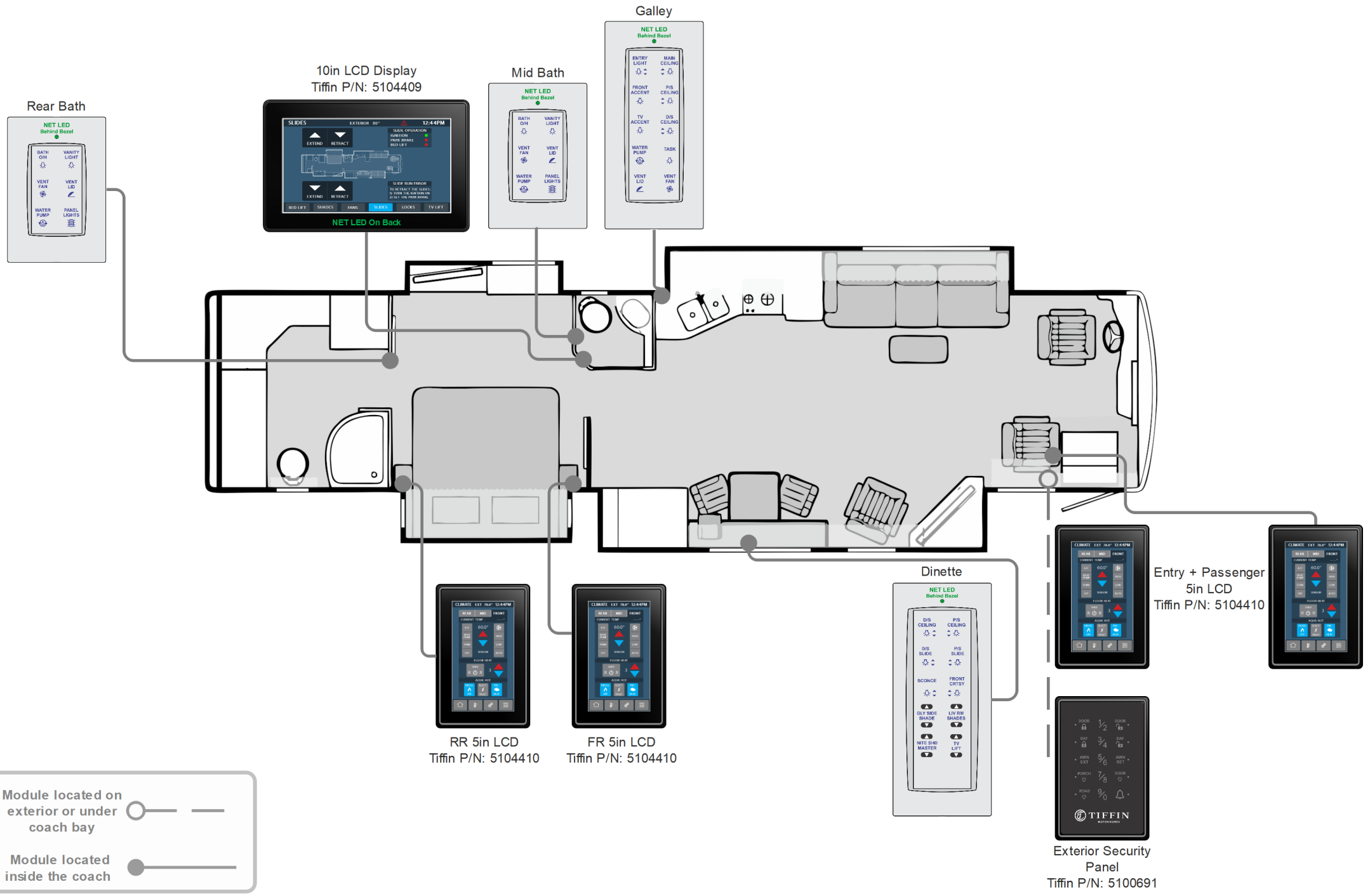


Module in this section can be grouped in the bathroom or in the rear closet of the bedroom depending on floorplan.

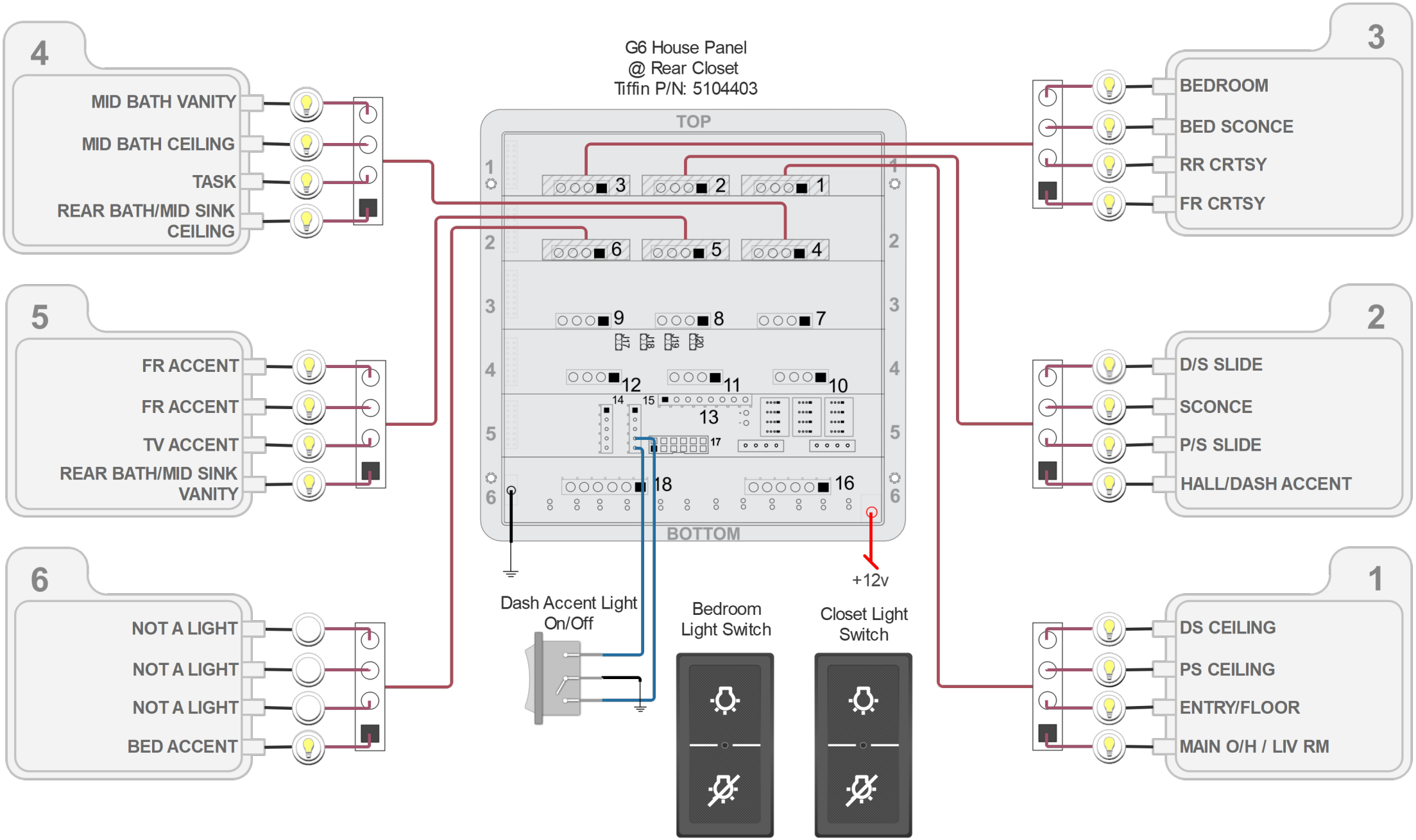
Legend

- 1A - G8 Module Tiffin P/N: 5105311
- 2A - BDC2 Tiffin P/N: 5074515
- 3A - CAN Router Tiffin P/N: 5105677
- 1B - RSI-11 Tiffin P/N: 5092109
- 2B - G6 Chassis Panel Tiffin P/N: 5093304
- 3B - HCR-11 - G4 Tiffin P/N: 5105426
- 1C - G6 House Panel Tiffin P/N: 5104403
- 2C - HCR15 / MoRyde Tiffin P/N: 5092297
- 3C - HCR12 Tiffin P/N: 5076028
- 4C - ACR3 Tiffin P/N: 5091113 (24") or 5091114 (60")

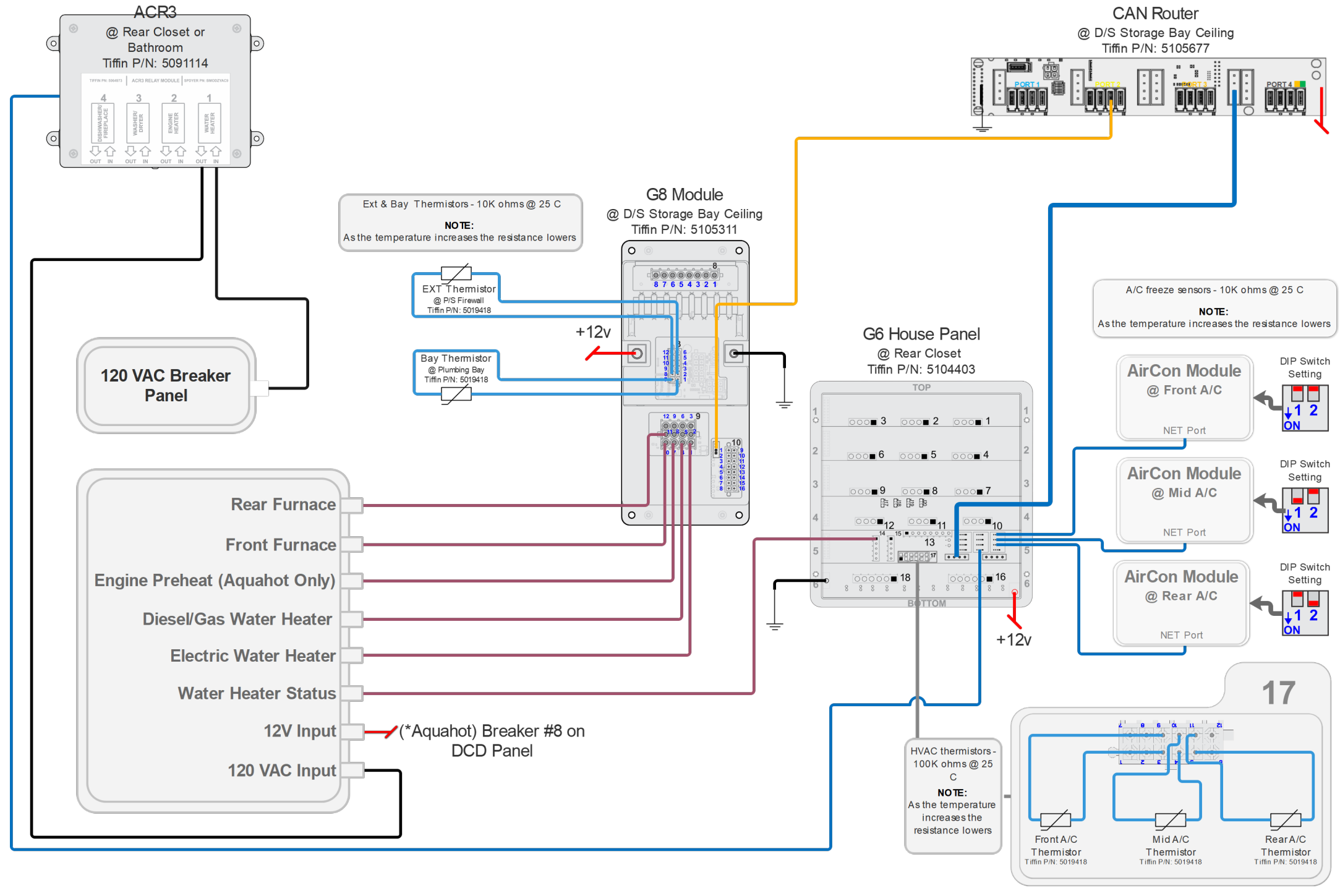
2021 Tiffin Bus
Switch & Screen Location Diagram
(Components not to scale)



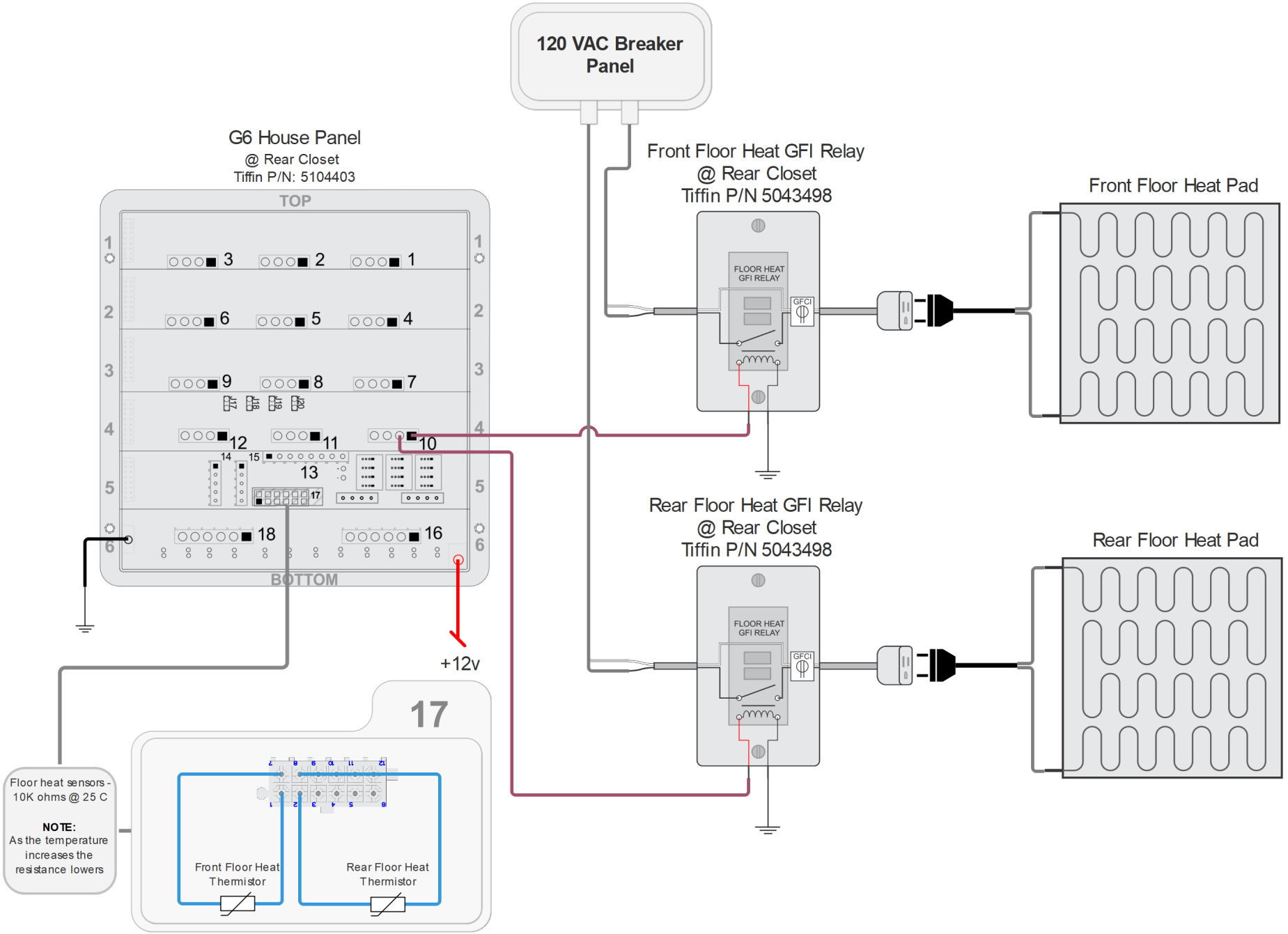
2021 Tiffin Bus
Lighting System
(Components not to scale)



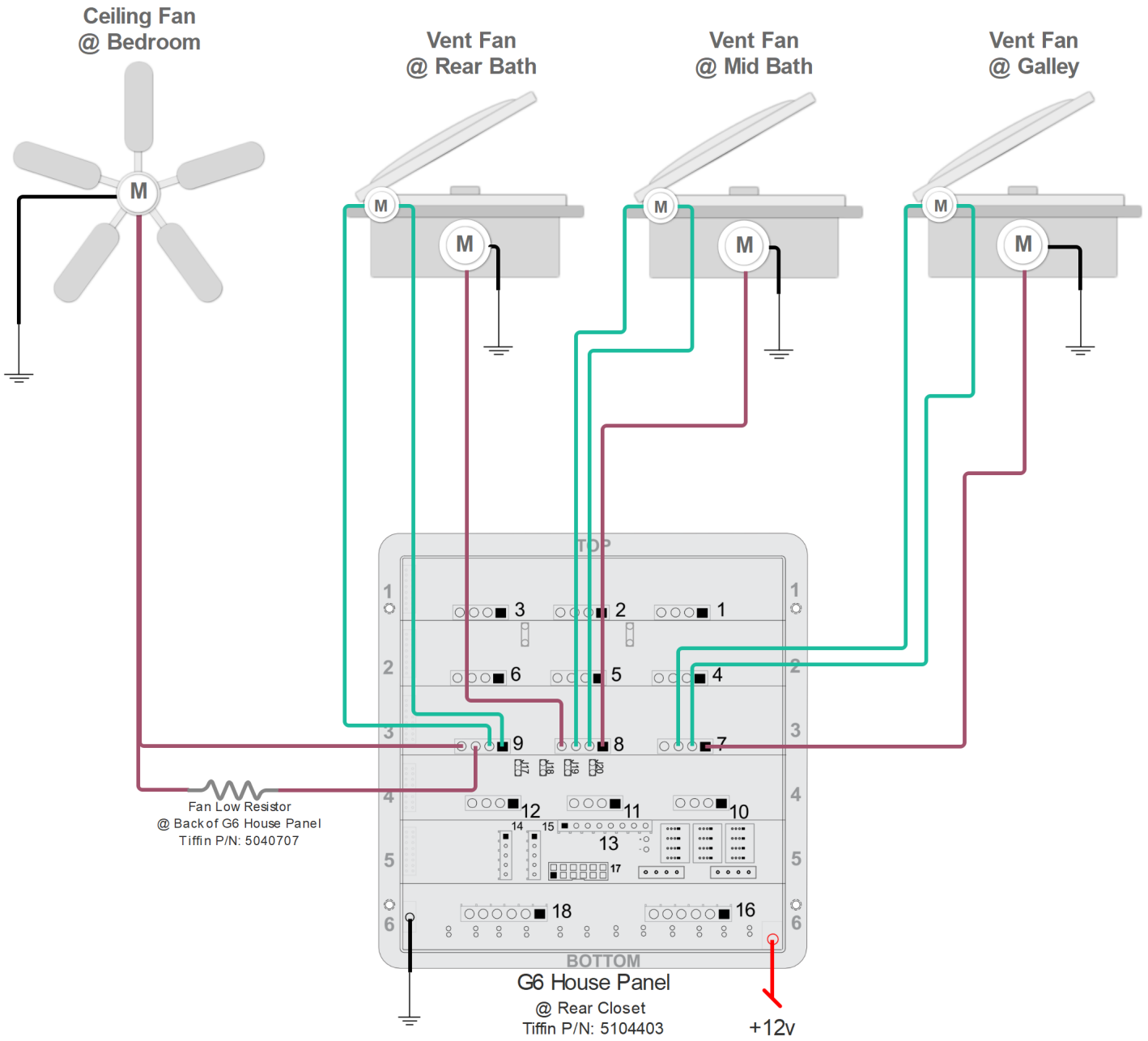
2021 Tiffin Bus
HVAC System
(Components not to scale)



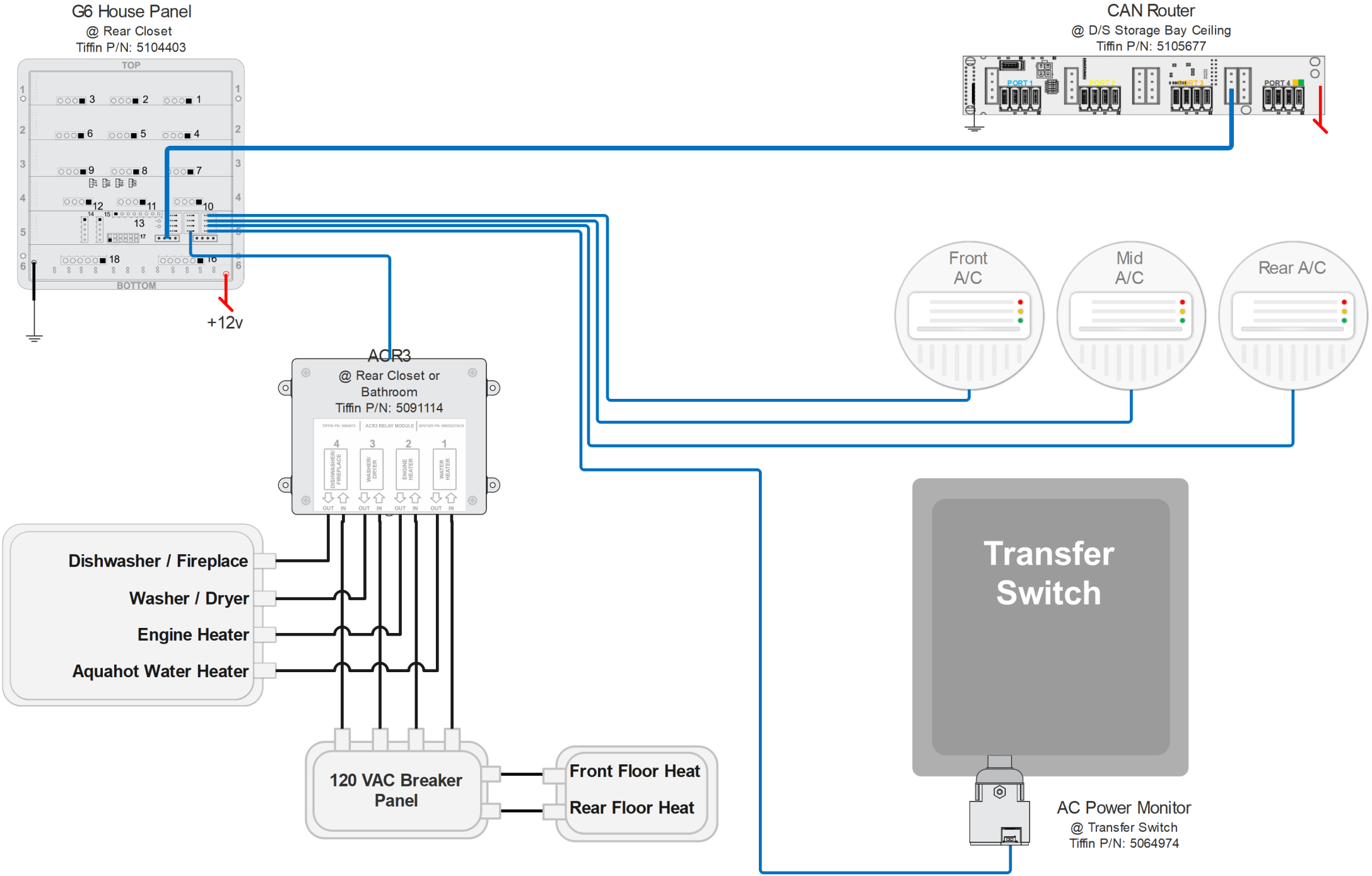
2021 Tiffin Bus
Floor Heat System
(Components not to scale)



2021 Tiffin Bus
Vent Fan & Ceiling Fan System
(Components not to scale)

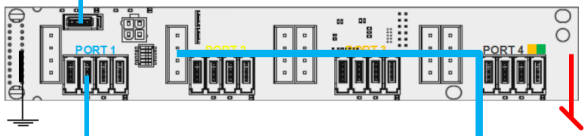


2021 Tiffin Bus
EMS System
(Components not to scale)

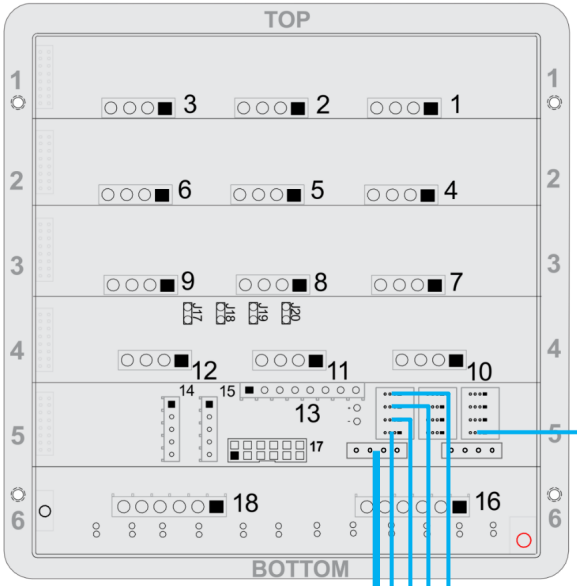


2021 Tiffin Bus
Blue Network
(Components not to scale)

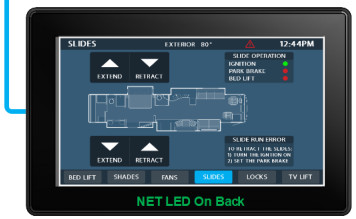
CAN Router
@ D/S Storage Bay Ceiling
Tiffin P/N: 5105677



G6 House Panel
@ Rear Closet
Tiffin P/N: 5104403

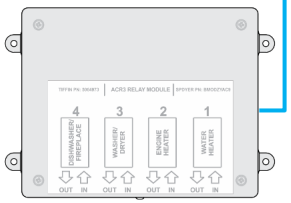


10in LCD Display
Tiffin P/N: 5104409



Magnum
RV-C
Bridge
Module

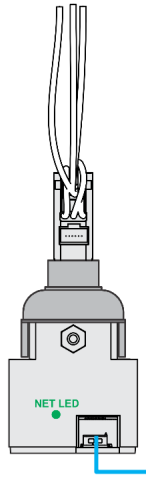
ACR3
@ Rear Closet or Bathroom
Tiffin P/N: 5091114



FR A/C

MID A/C

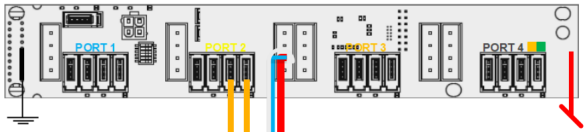
RR A/C



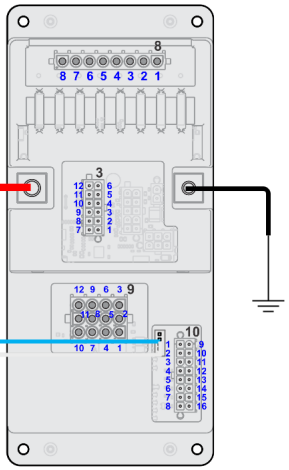
AC Power Monitor
@ Transfer Switch
Tiffin P/N: 5064974

2021 Tiffin Bus
Yellow Network
(Components not to scale)

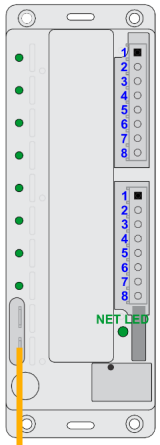
CAN Router
@ D/S Storage Bay Ceiling
Tiffin P/N: 5105677



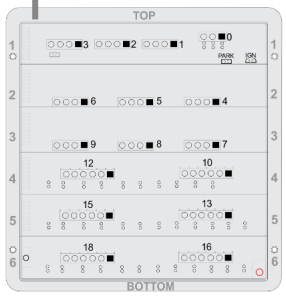
G8 Module
@ D/S Storage Bay Ceiling
Tiffin P/N: 5105311

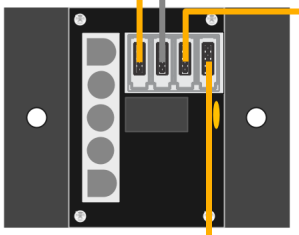


Cockpit G5 Shade Module
@ Cockpit - Overhead
Cabinetby Entry Door

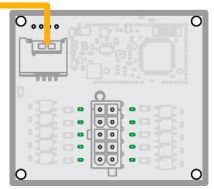


G6 Chassis Panel
@ D/S Front Electrical Bay
Tiffin P/N: 5093304

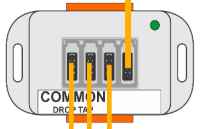




HCR-11 - G4
@ D/S Front Electrical Bay
Tiffin P/N: 5105426



RSI-11
@ D/S Front Electrical Bay
Tiffin P/N: 5092109

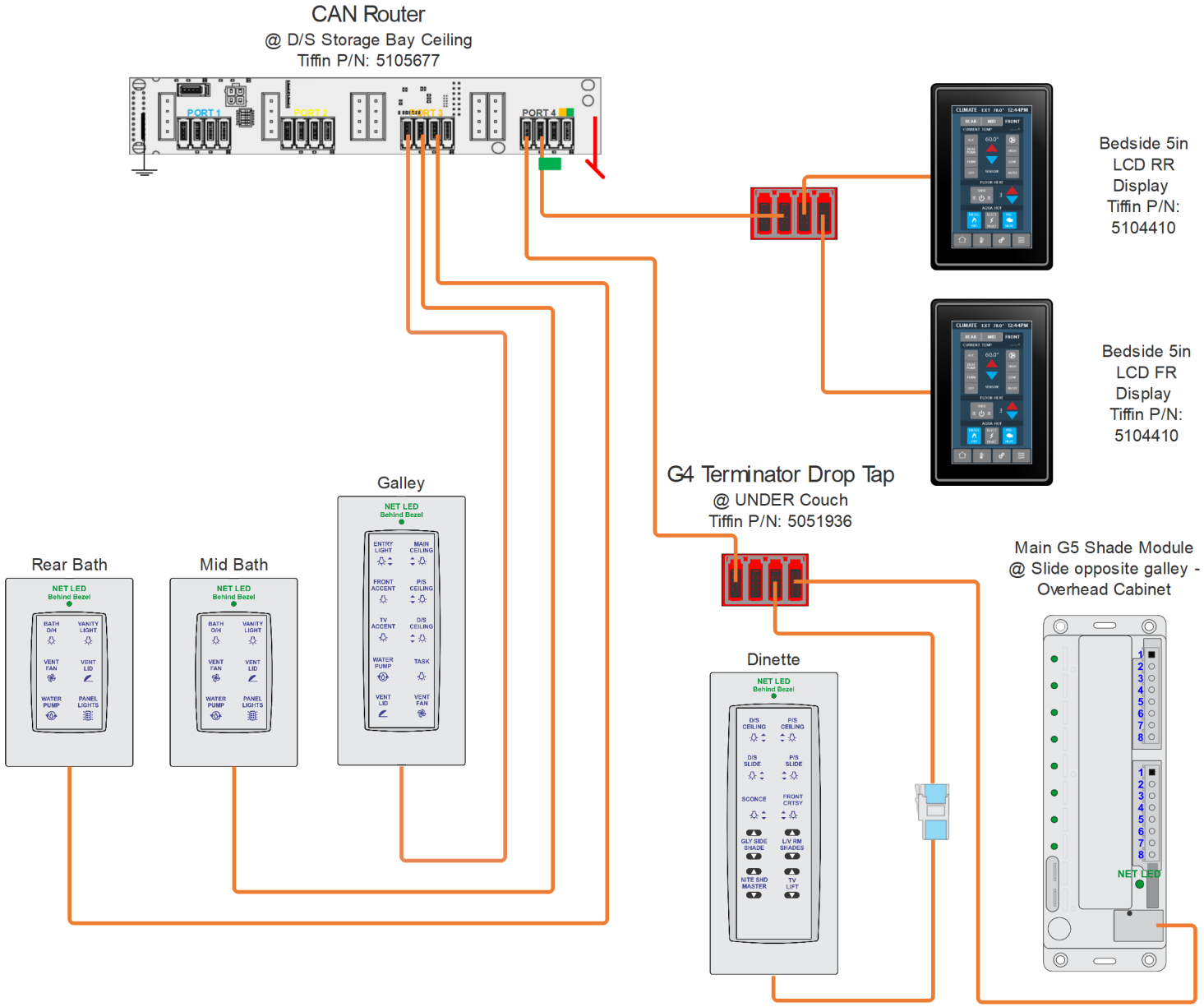


Passenger Console 5in Display
Tiffin P/N: 5104410

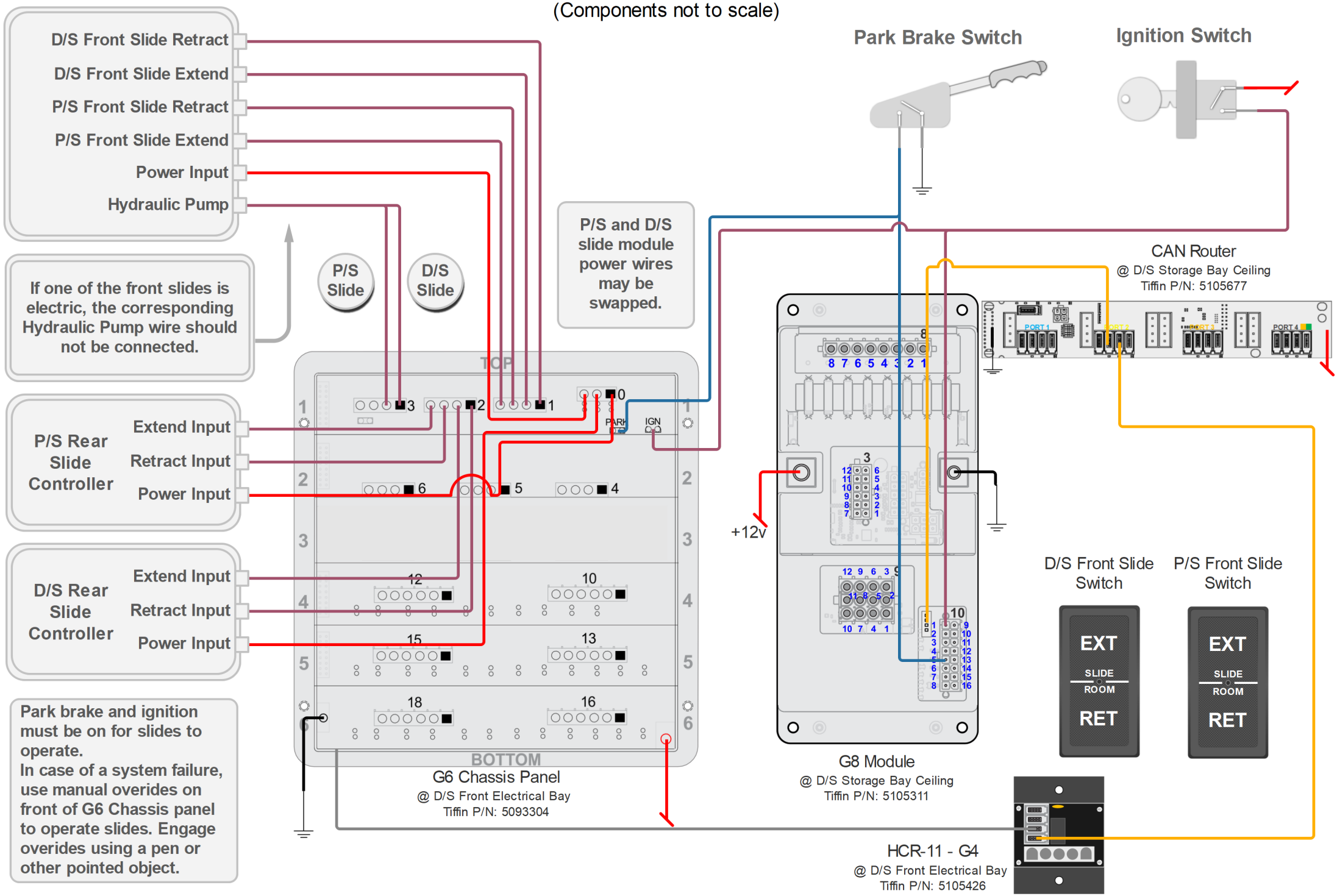
Entry Console 5in Display
Tiffin P/N: 5104410

External Security Panel
Tiffin P/N: 5100691

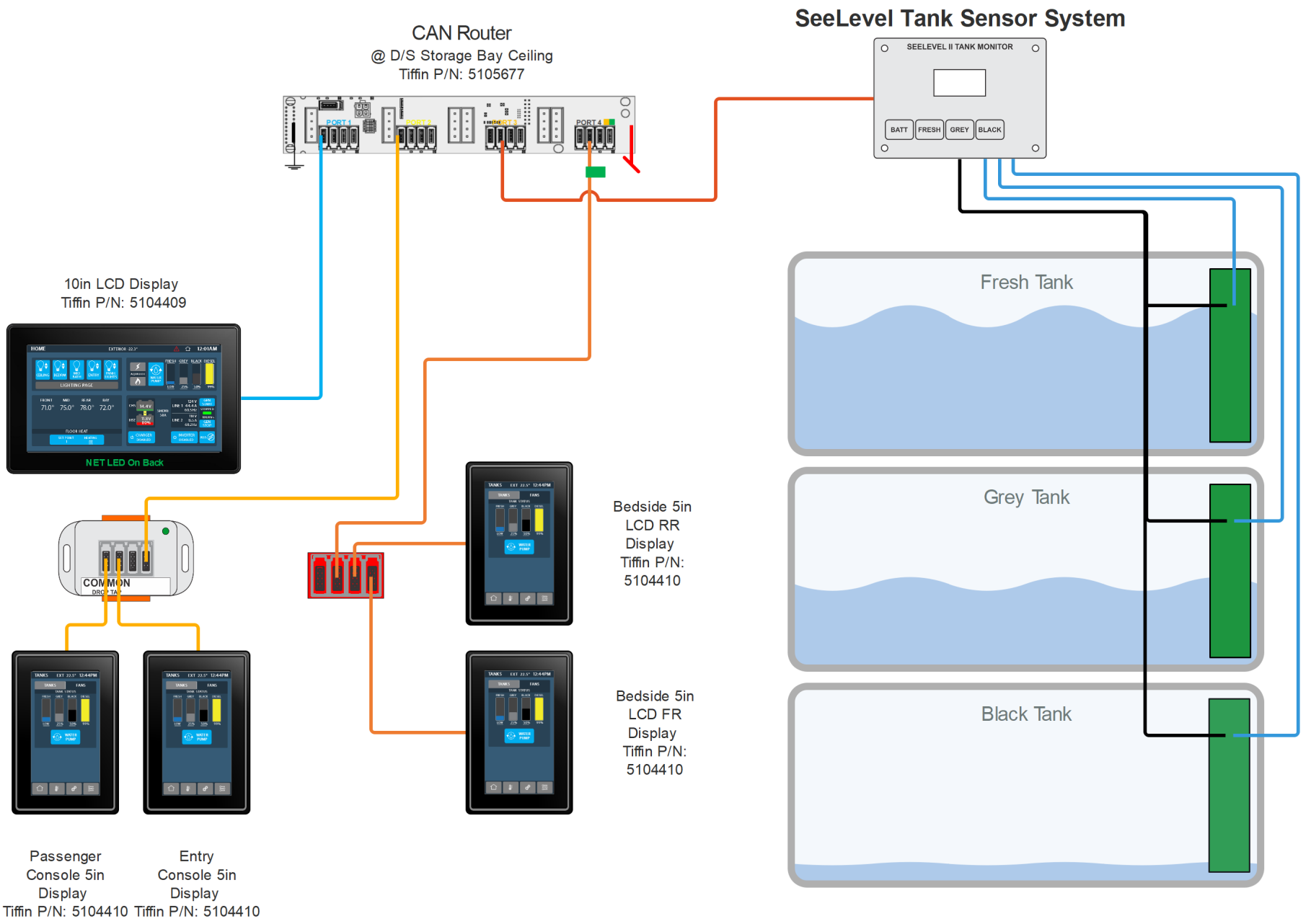
2021 Tiffin Bus
Orange Network
(Components not to scale)



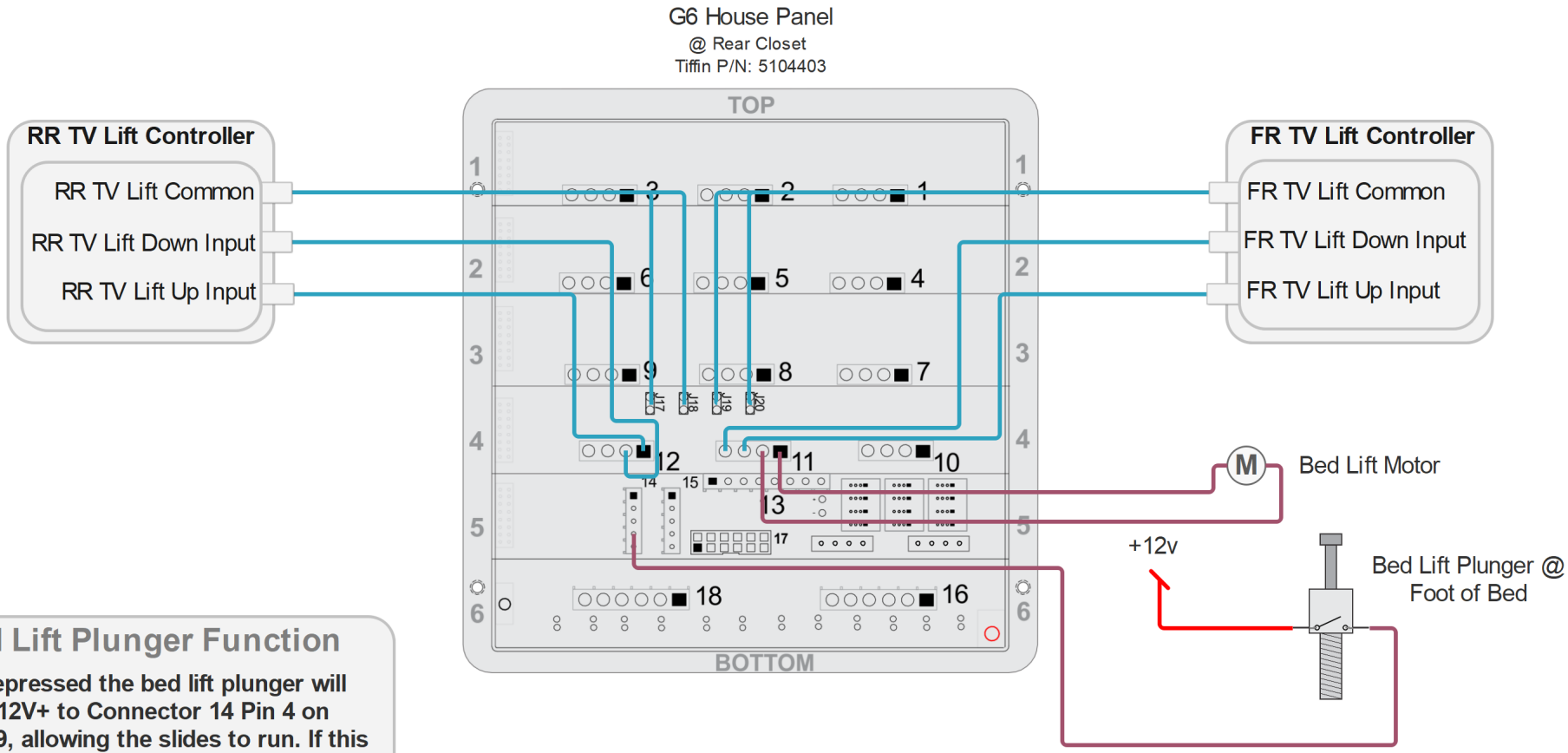
2021 Tiffin Bus
Slide System
(Components not to scale)



2021 Tiffin Bus
Tank Level System
(Components not to scale)



2021 Tiffin Bus
Bed Lift & TV Lift System (If Applicable)
(Components not to scale)



Bed Lift Plunger Function

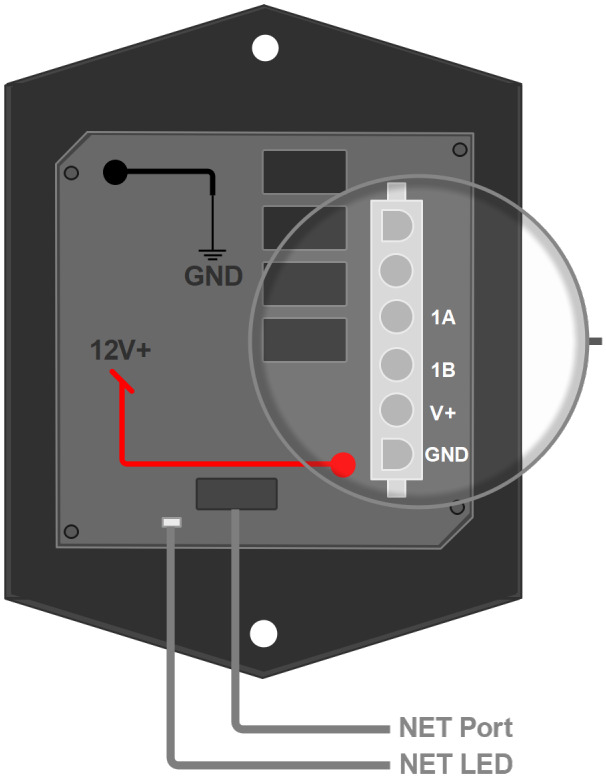
When depressed the bed lift plunger will provide 12V+ to Connector 14 Pin 4 on the RSI-9, allowing the slides to run. If this pin is not drepressed and no 12V+ signal is being recived at the RSI-9 input, the slides will not run.

Normal operation of any TV lift will be as follows:

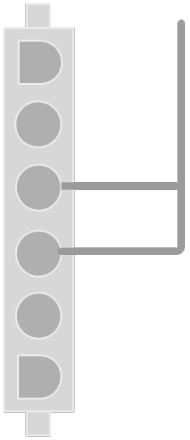
- **Press the control to raise the TV lift.**
- **Press and hold the control to lower the TV lift.**

2021 Tiffin Bus
MORyde TV Lift - If Applicable
@ Rear Closet or Bathroom

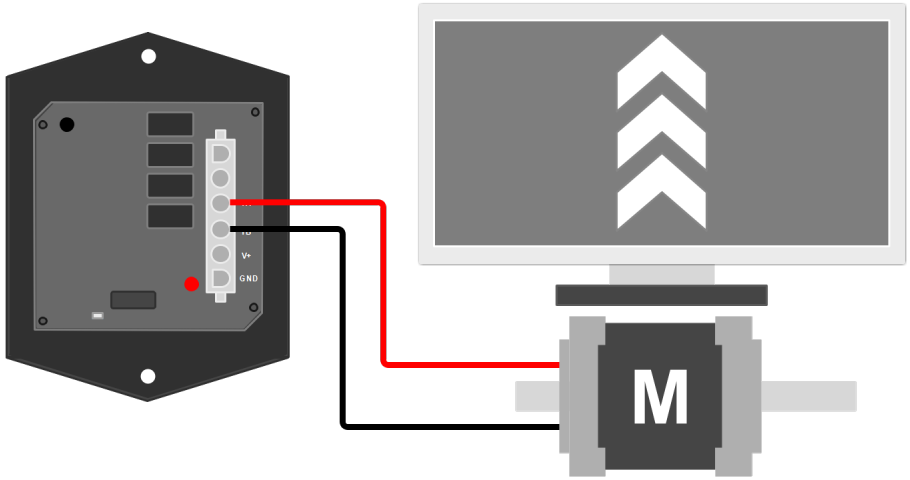
HCR-15 Single Motor Control
Tiffin P/N: 5092297 @ Rear



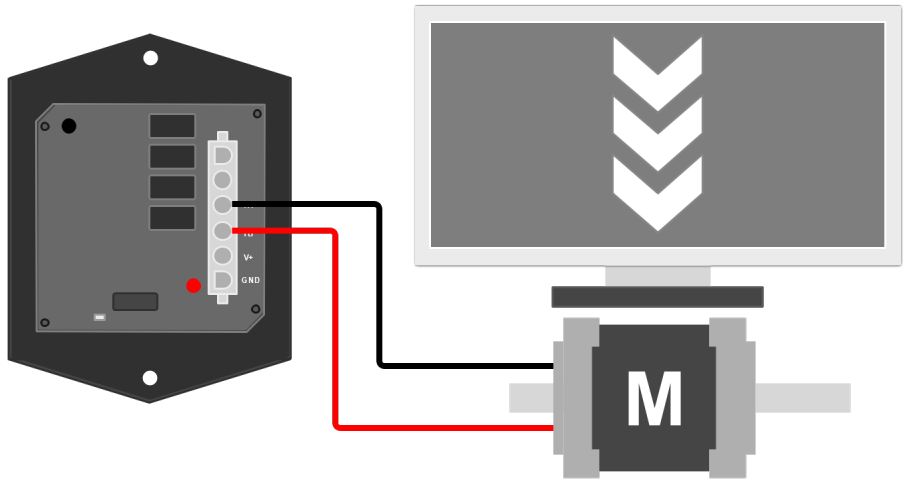
Reverse Polarity Outputs



Up Operation



Down Operation



Trouble Shooting

The information is only applicable to coaches with a MoRyde TV Lift. The module above is a HCR-15 and is responsible for providing reverse polarity output to the MoRyde TV Lift Motor.

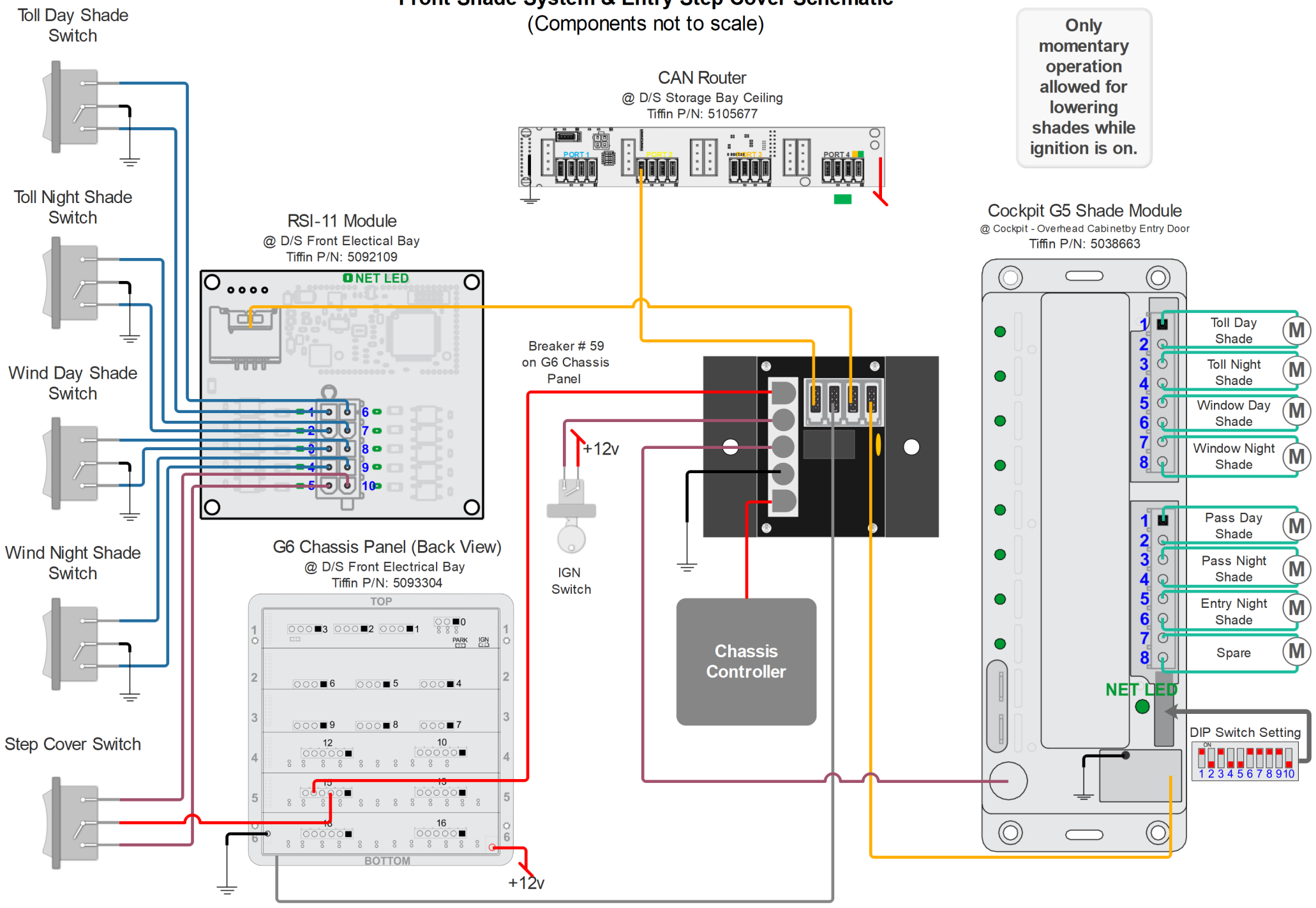
If the TV lift is not raising or lowering check to ensure the NET LED on the HCR-15 is on solid green. If it is flashing or off completely there is an issue with network connectivity. If the module is online (solid green LED) and the TV lift still fails to work, use a multimeter to probe the connector.

Remove the white 6 position header and insert one probe into 1A and the other probe into 1B. Correct function would have the module output 12V+ one direction and ground the other direction. If this is not occurring please call Spyder Controls.

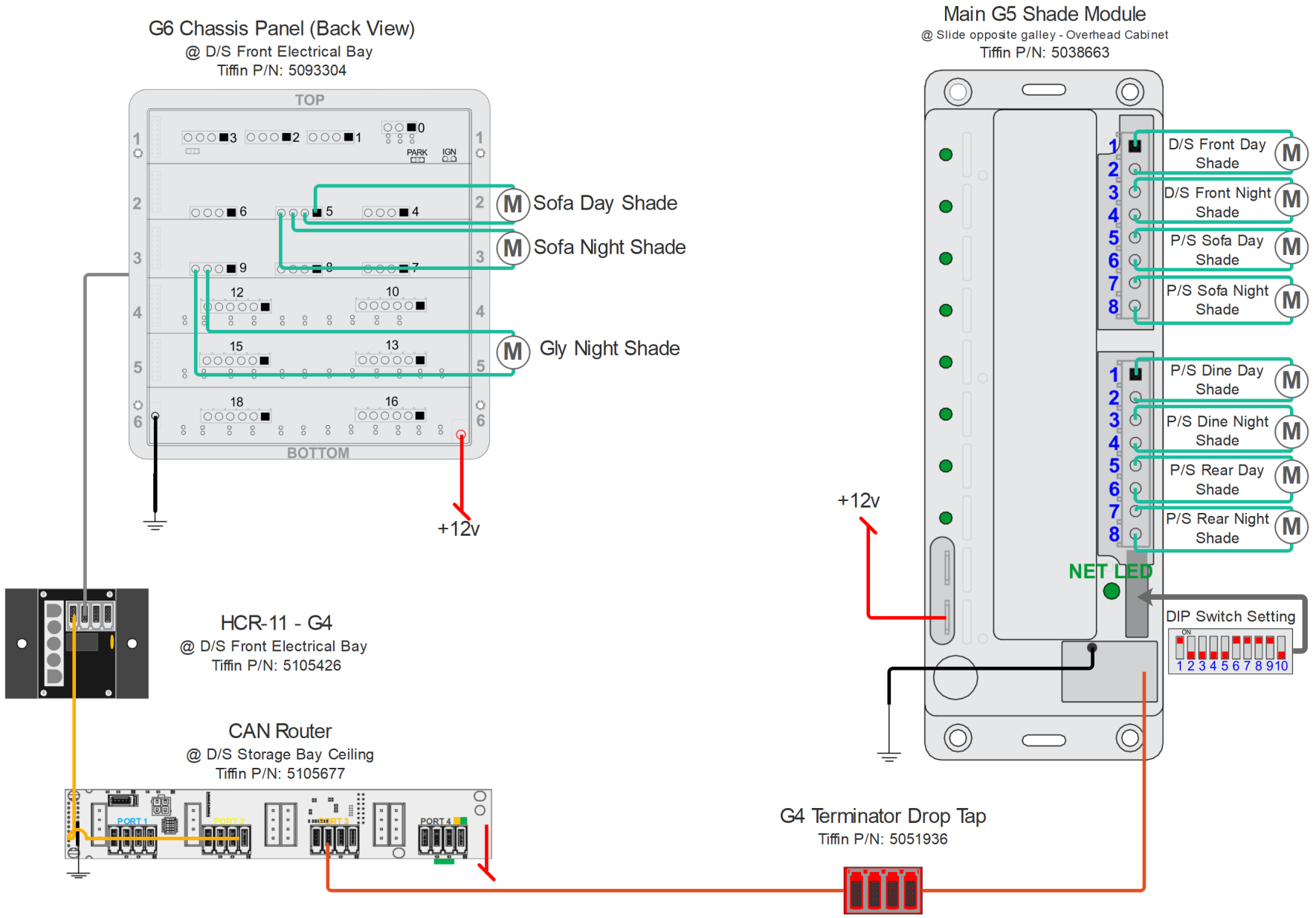
Note

Please note there is only one HCR-15 per TV Lift, above is only an illustration of how the reverse polarity controls the TV Lift motor. For any questions please contact Spyder Controls.

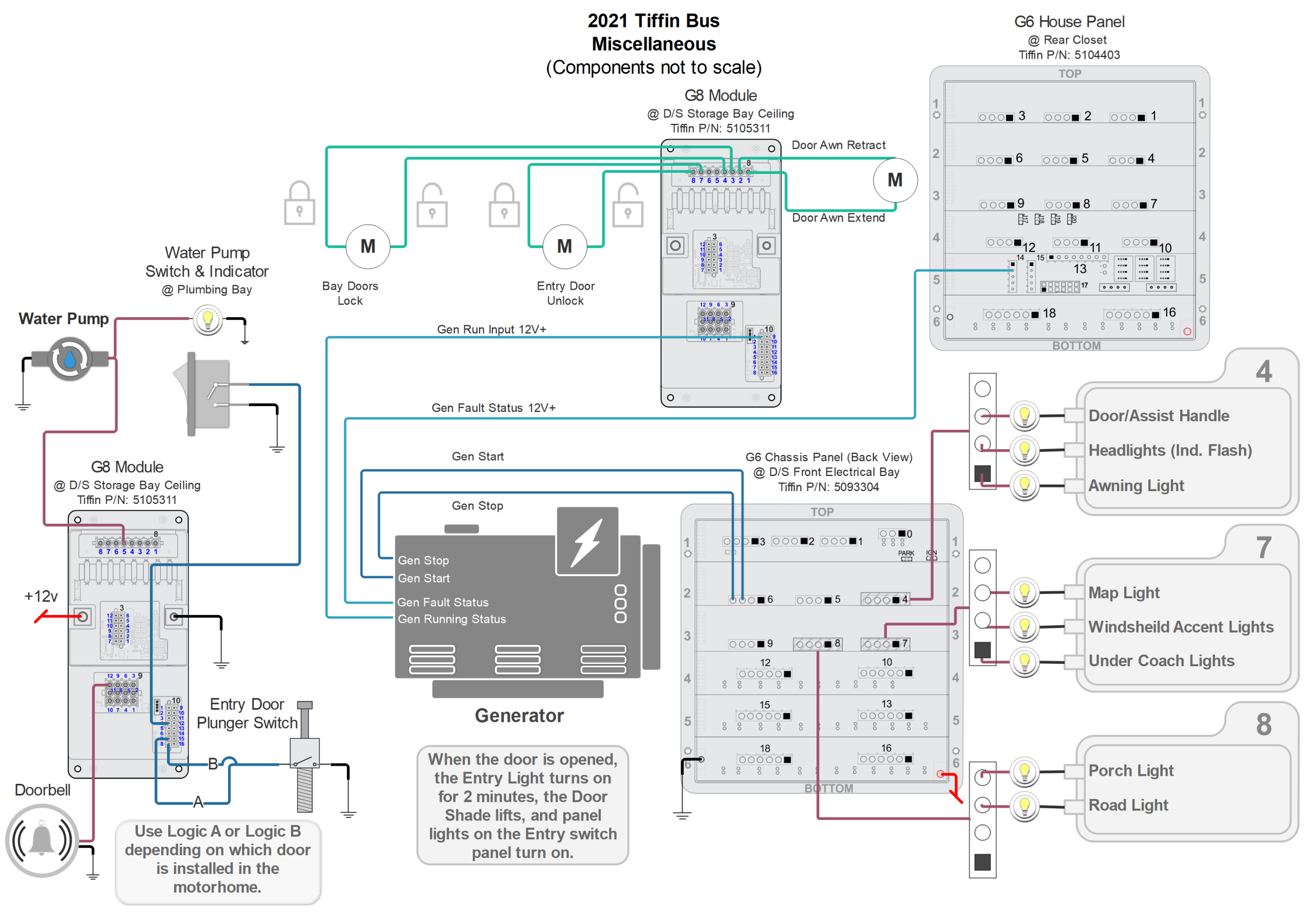
2021 Tiffin Bus
Front Shade System & Entry Step Cover Schematic
(Components not to scale)



2021 Tiffin Bus
House Shade System Schematic
(Components not to scale)



2021 Tiffin Bus
Miscellaneous
(Components not to scale)



2021 Allegro Bus / Phaeton / Zephyr 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 AND

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

2021 Tiffin Bus
Battery Merge System
(Components not to scale)

House

Chassis

DCD Panel

Merge Solenoid

Auto Merge Output
from BCD2

Chassis Voltage

5A Inline
Fuse @ Chassis
Electrical Panel

Gen Running Status

Generator

Ignition Switch

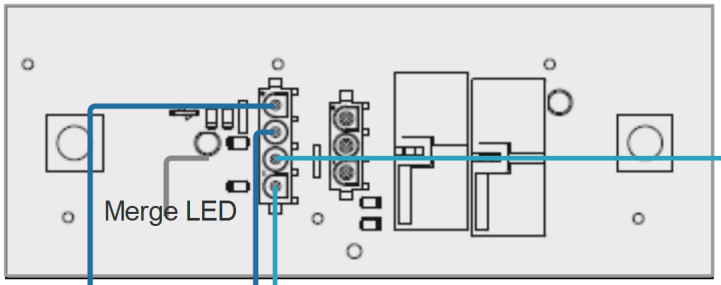
12V+

!!!!!CAUTION!!!!!
The correct solenoid must be used when replacing a merge solenoid.
TE solenoids are grey Gigavac solenoids are black.

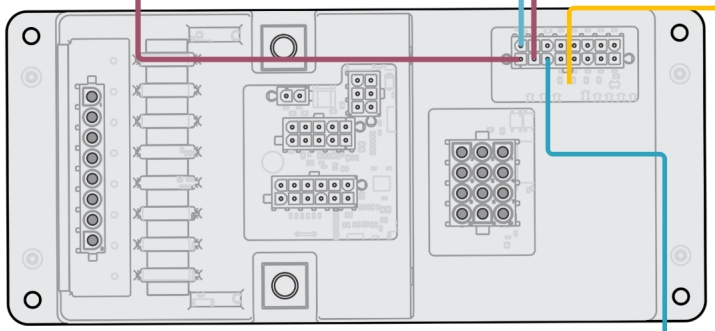
(TE merge solenoid)
Spdyer PN: RLY411718

(Gigavac merge solenoid)
Spdyer PN: RLY411718-G

CAN Router
@ D/S Storage Bay Ceiling
Tiffin P/N: 5105677



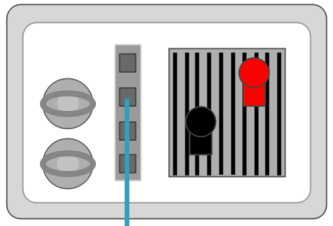
BDC2 @ D/S Storage Bay Ceiling
(2018-2021 Tiffin PN: 5074515)



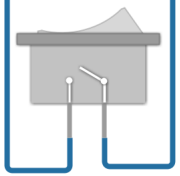
G8 Module @ D/S Storage Bay Ceiling
(2021 Tiffin PN: 5105311)

Magnum
RV-C
Bridge
Module

Magnum Inverter



Auto Merge Output from G8



Manual Merge
Override Switch

Located @ Dash

To read the conditions that must be met to merge or unmerge the batteries
please refer to the Merge Logic and Troubleshooting Page

Auto Merge Troubleshooting

Start Here

Using the Merge Logic provided on the previous page, put the system in a merge condition. Does a yellow line appear between the House and Chassis batteries indicating a merge?

NO → Check the battery readings on your LCD panel.

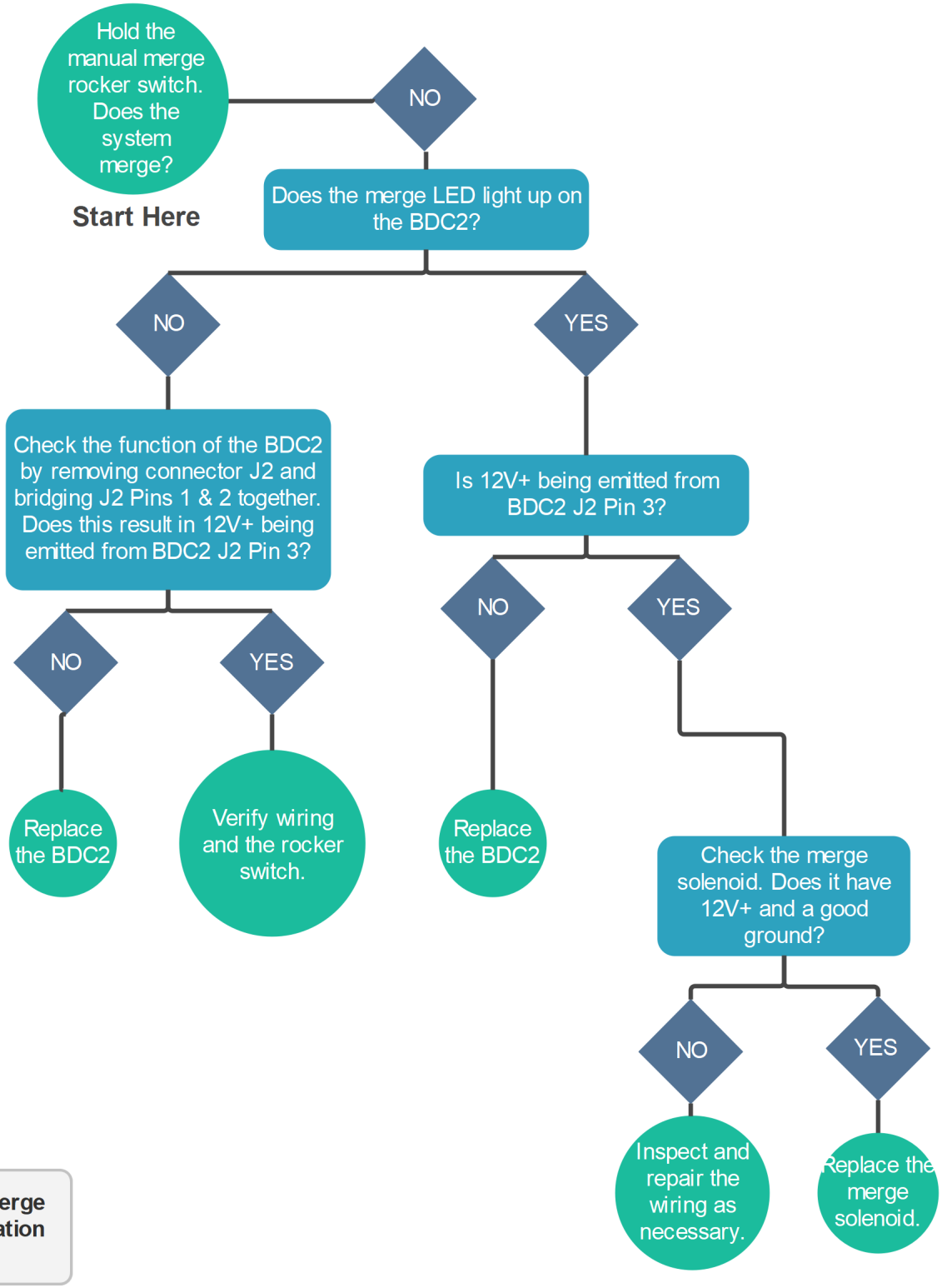
- Dashes are being shown on both house and chassis voltage.
  - Check the network cable at the G8 module. Is it plugged in at both ends and free from damage?
    - NO → Insure the cable is plugged in securely at both ends. If any wiring issues are present repair as necessary.
    - YES → Call Spyder Controls
- The house or the chassis voltage is reading inaccurately. E.g. 6V+ or 24V+ → Replace the G8
- The house voltage is accurate but the chassis is reading 0V+
  - Check the wiring harness pin that connects to G8 J10 Pin 9. Does the voltage being emitted from the pin match the voltage at the chassis batteries?
    - NO → Check the wiring and 5 A inline fuse
    - YES → Replace the G8

YES → Does the G8 emit 12V+ from J10 Pin 3?

- NO → Call Spyder Controls
- YES → Is 12V+ present at the BDC2 J2 Pin 4?
  - NO → Inspect the wiring between the G8 and BDC2
  - YES → Is 12V+ being emitted from the BDC2 J2 Pin 3?
    - NO → Replace the BDC2
    - YES → Check the merge solenoid. Does it have 12V+ and a good ground?
      - NO → Inspect and repair the wiring as necessary.
      - YES → Replace the merge solenoid.

The information above only covers the auto merge system. Please see the next page for information on manual merge & the manual merge rocker switch

Manual Merge Troubleshooting



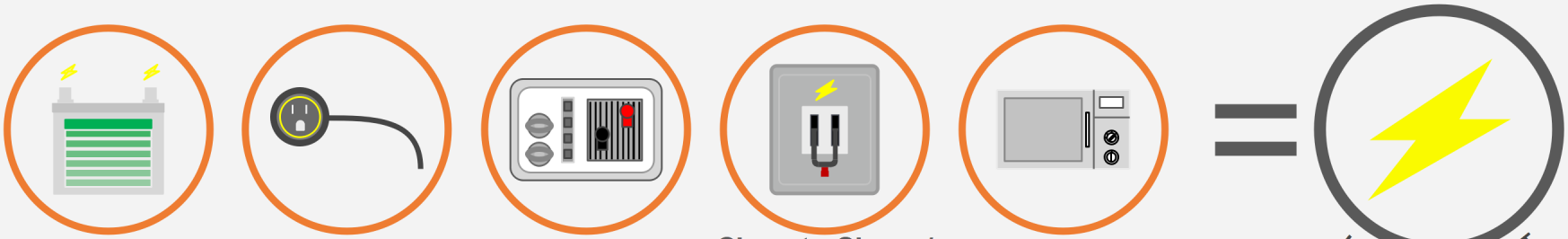
The information above only covers the manual merge system. Please see the previous page for information on auto merge system.

2021 Tiffin Bus
Inverter Assist
(Components not to scale)

Inverter assist is a state in which power is temporarily drawn from the batteries to keep EMS loads from shedding.

INVERTER ASSIST WILL ACTIVATE IF THE FOLLOWING CONDITIONS ARE TRUE

1. SHORE OR GENERATOR POWER IS AVAILIABLE
2. THE CHARGER IS IN FLOAT MODE (BATTERIES ARE CLOSE TO FULL CHARGE)
3. THE CHARGE RATE HAS BEEN REDUCED
4. A NON-EMS INVERTED LOAD IS ACTIVATED, SUCH AS THE MICROWAVE



! If the conditons above are true. To keep any EMS load from shedding the inve will go from passthrough to inverting to temporarily invert for 5 minutes.

! Please note inverter assist will temporarley decrease your battery voltage. This is normal the voltage will stabilize realtivley quickly once the inveter assist period has expired.

! Please note inverter assist can only occur once every charge cycle. Therfore the coach will not freqentley be in inverter assist mode.

! Please contact Spyder Controls Corp for further info.

SSP-22 Quick Guide

Fig.1

Locked

Requires PIN

Fig.2

Unlocked

All Functions Avaialable

Once the keypad is unlocked the two outermost columns will illuminate. These buttons provide quick access to all features shown on the label. Please note pressing door unlock will unlock the entry door and turn on the door light for 30 seconds. Pressing door lock will lock entry door and keypad simultaneously.

Please note the keypad has an auto-lock feature. If you do not interact with the keypad for 5 minutes the keypad will lock.

Parking brake must be engaged to use awnings.

When the park brake is enabled the center column of numbers will be illuminated white, if the center column is not illuminated simply press any button on the keypad for 1 second. Once the center column is illuminated white you may enter your pin. If you wish to set or reset your pin please refer to # in this manual.

As you enter the pin green LED's will light up on the left side of the switch panel. If the pin is accepted the outer two columns will illuminate blue. If the pin is rejected the panel will flash and discard your input, you must enter your pin again. If the wrong pin is entered to many times your keypad will lock for 15 minutes.

The doorbell may be rung even if the keypad is locked. If your doorbell does not work please check to insure you have it enabled on your main LCD panel.

Fig.3

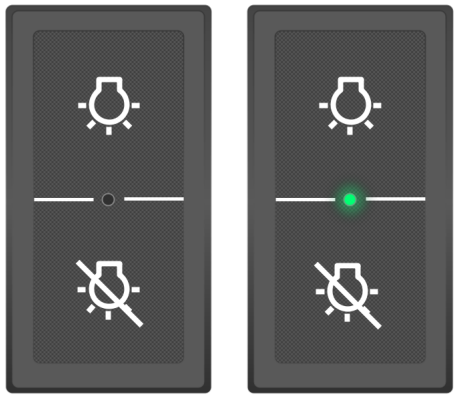
Access to settings related to the exterior keypad can be found on the main Spyder screen. Navigate to settings > screen settings. (Fig.3)

Once on this page various actions can be performed such as enabling or disabling your door bell, setting or resetting your exterior keypad pin and pairing your key fobs.

Instructions are provided on screen for setting or resetting your pin and pairing your key fobs.

Wireless Rocker Switch Quick Guide and Battery Replacment

Not Transmitting | Transmitting



A green LED will turn on when a button is pressed. This is the transmit LED and confirms that the switch panel is transmitting information. This LED will flash occasionally, this indicates the switch panel is transmitting it's battery status.

To Replace The Battery

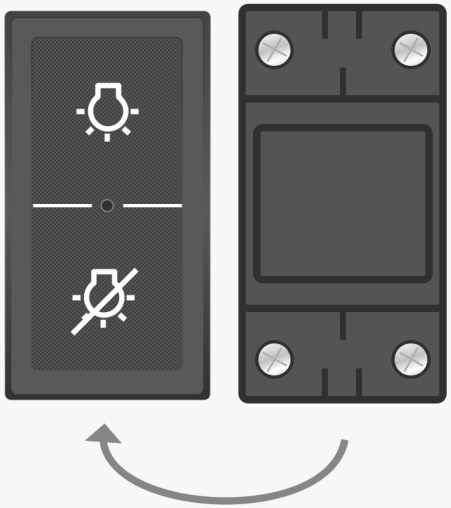
If the wireless rocker switch stops communicating it may be due to a low battery. To ensure the switch panel has a low battery navigate to the settings > switch settings page on your main LCD panel. The wireless rocker switches will display "LOW BATTERY" in the right-hand column. If this is the case you will need to replace the battery.

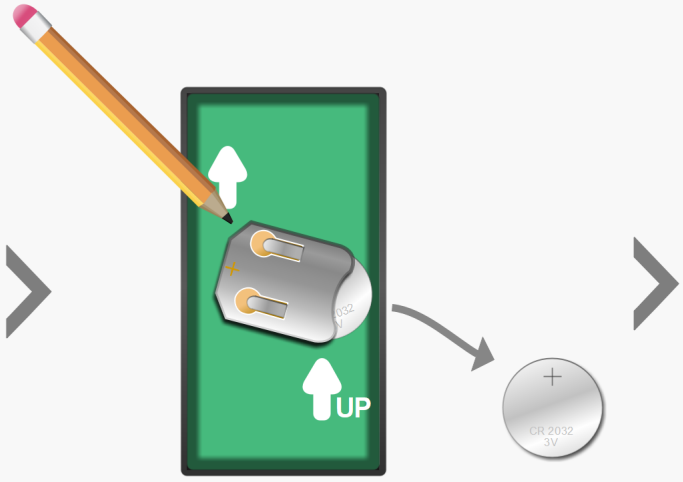
To replace the battery firmly grasp the outside edge of the wireless rocker switch.
Pull to the left or right until the switch snaps off the wall. Use a pen or other thin object to push the coin cell out of the retaining clip. Insert new battery with the + symbol facing upwards, ensure battery is seated into retaining clip all the way.

Use the up arrows on the back of the switch panel to orientate placement back onto the mounting bracket. Snap the wireless rocker switch back into place.

Test the switch and dispose of the old battery responsibly.

Snaps on and off wall bracket

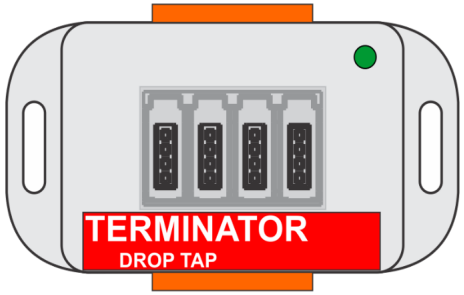




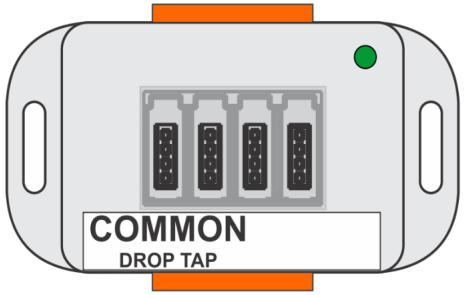
NOTE: ONLY REPLACE THE COIN CELL BATTERY WITH A **CR 2032**. DOING OTHERWISE WILL VOID THE PANEL WARRANTY AND COULD DAMAGE THE PANEL

2021 Tiffin Bus
Network Connectors and Related Parts
(Components not to scale)

G3 Terminator Tap
Tiffin P/N: 5051935

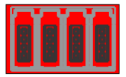


G3 Common Tap
Tiffin P/N: 5027834

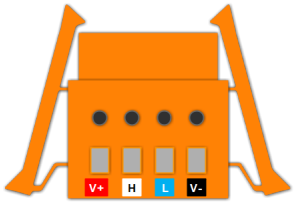


G4 Common Drop Tap
Tiffin P/N: 5016592

G4 Terminator Drop Tap
Tiffin P/N: 5051936



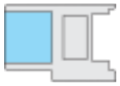
4 Pos Wago Connector
Tiffin P/N: 5015508

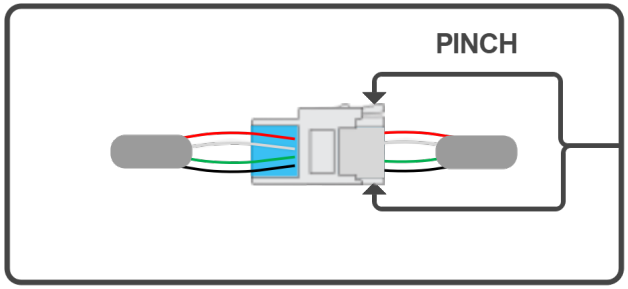


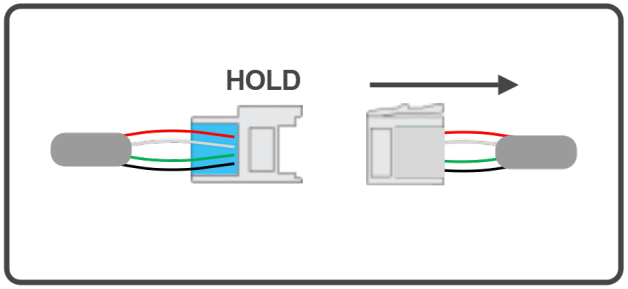
Wago Hook Tool
Wago P/N: 231-131

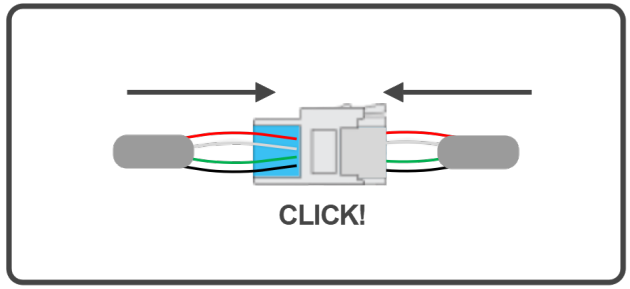
Mini-Clamp Plug
Tiffin P/N: 5066157
3M P/N: 37104-2165-000 FL 100

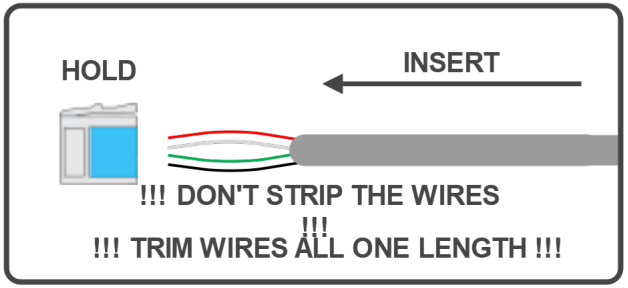
Mini-Clamp Socket
Tiffin P/N: 5066158
3M P/N: 37304-2165-000 FL 100

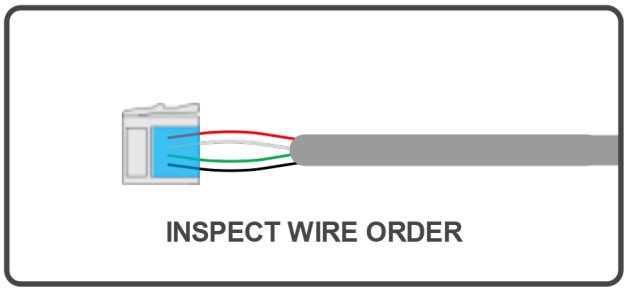


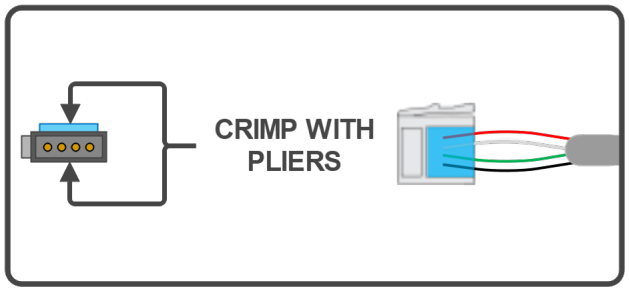


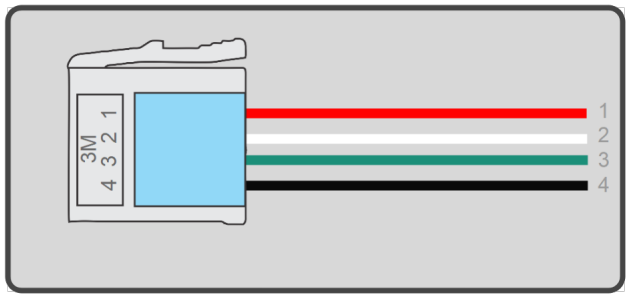












Mate-N-Lok Pin Extractors

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

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