

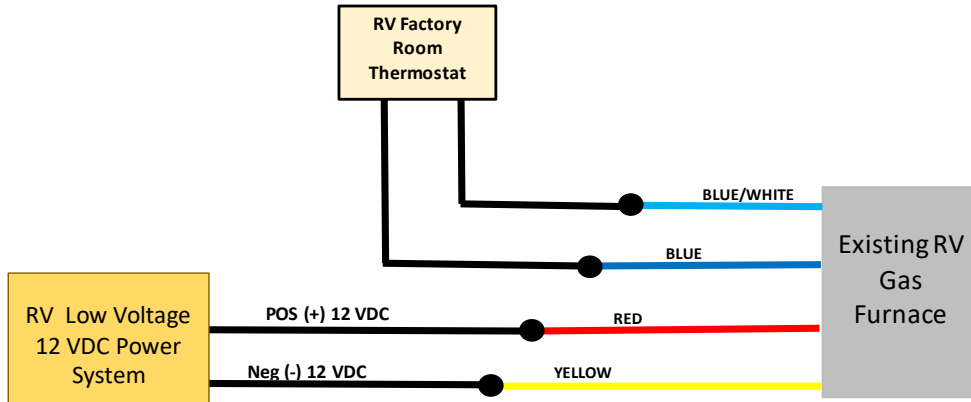
Service Tech Manual



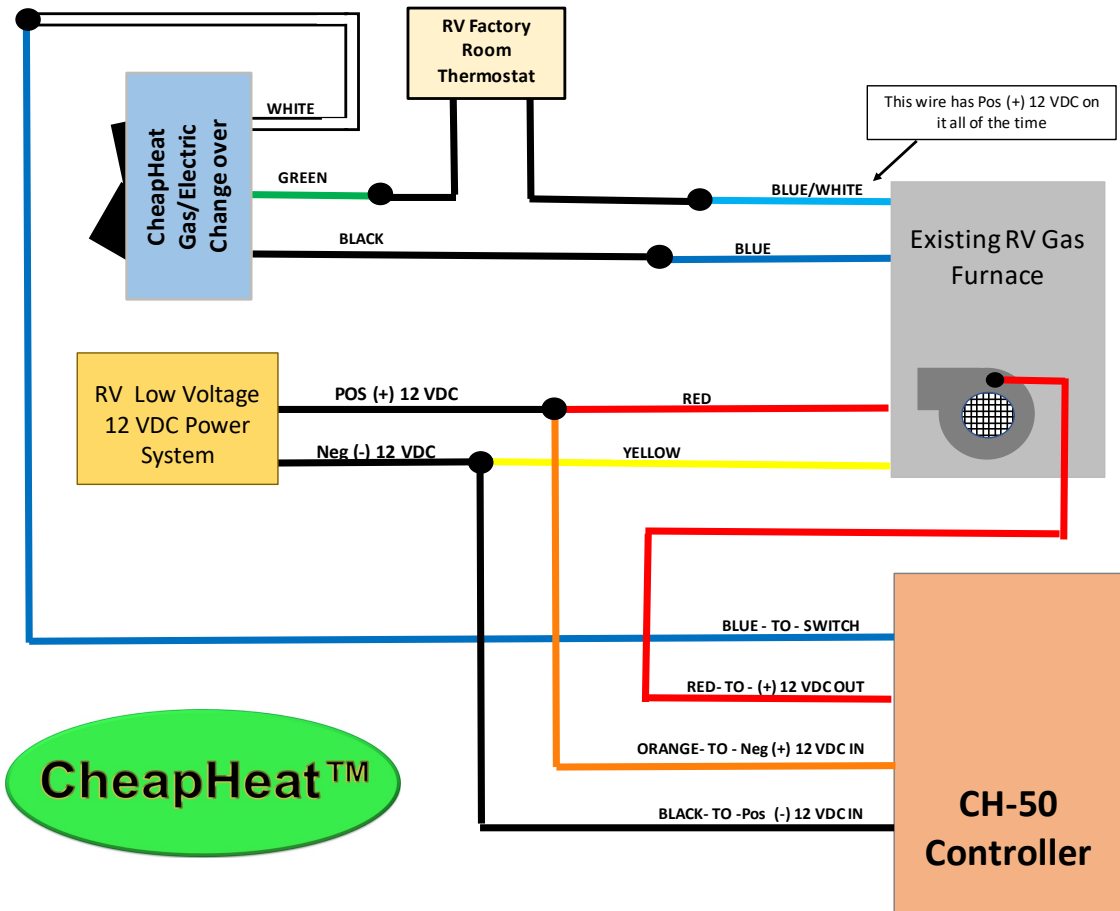
RVComfortSystems LLC.

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Low Voltage 12 VDC wiring for Gas Furnace



Picture above shows furnace wiring before CheapHeat system is installed



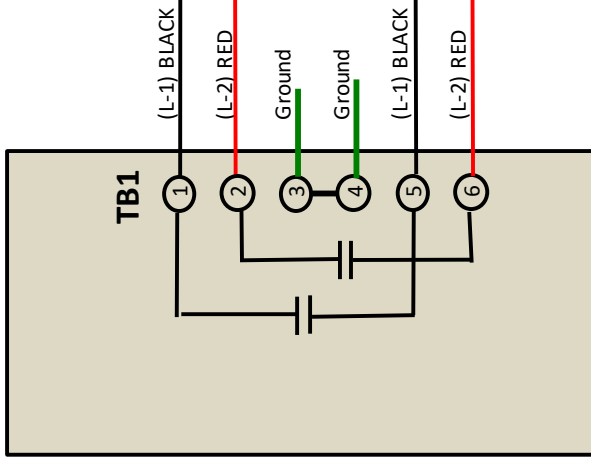
Picture above shows furnace wiring With the CheapHeat system is installed

RV Comfort Systems LLC.

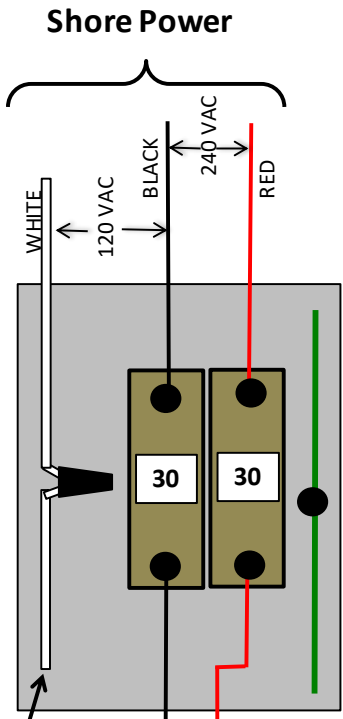
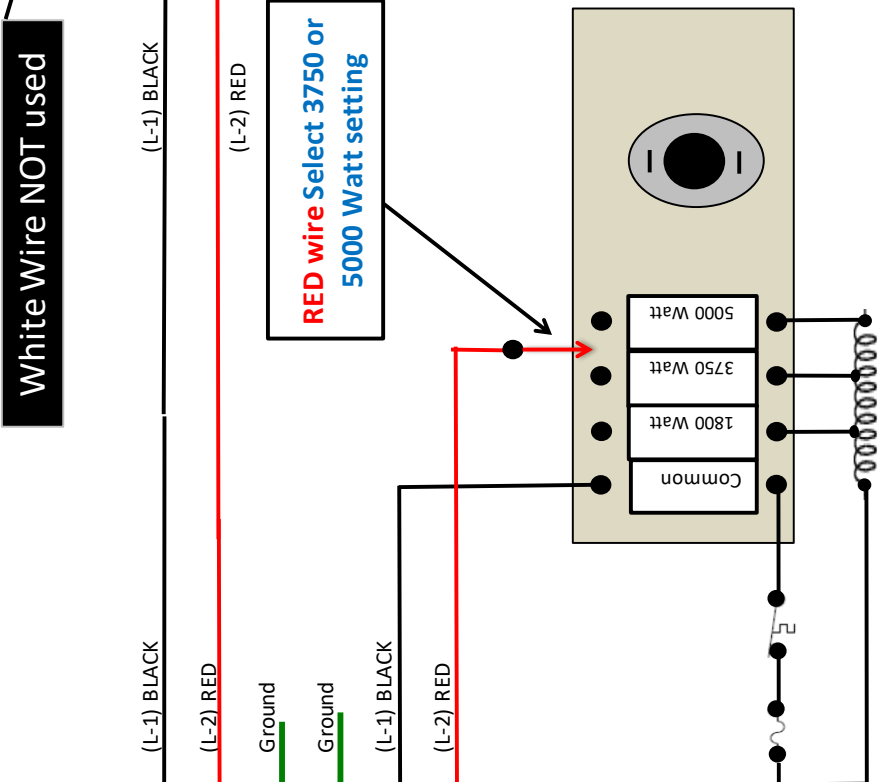
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High Voltage Wiring For Hi Voltage 3750 or 5000 Watt System

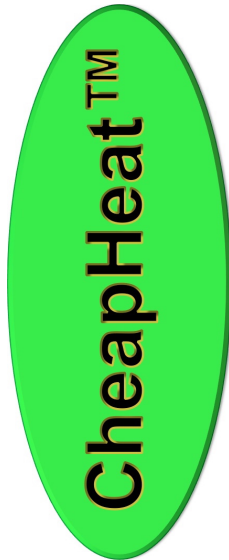
CH50 Controller



Wire color codes and wiring to terminals must be followed EXACTLY as shown.



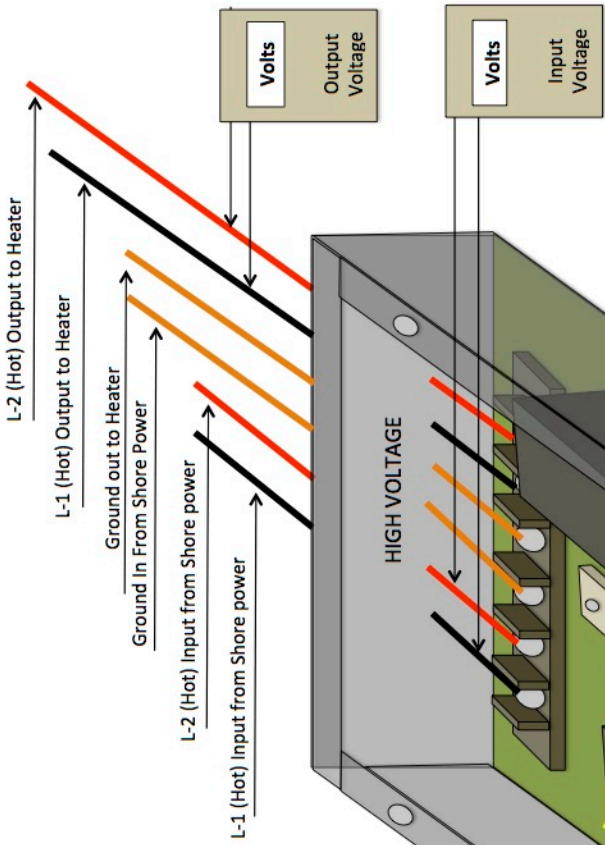
240 VAC Breaker Panel
 3750 Watt 2-20 Amp Breakers --- 12 Gauge wire
 5000 Watt 2-30 Amp Breakers --- 10 Gauge Wire



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DH18-37-50 Electric Heater Element

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LOW VOLTAGE

****Heat Calling (ON)****
 Black to Orange ----- 12 VDC
 Black to Red ----- 12 VDC
 Black to Blue ----- 12 VDC

**** Heat Not Calling (OFF)****
 Black to Orange ----- 12 VDC
 Black to Red ----- Zero VDC
 Black to Blue ----- Zero VDC

Actual Volts (ON)
 Black to Orange _____ VDC
 Black to Red _____ VDC
 Black to Blue _____ VDC

System on Readings Voltage Testing
 When testing voltage all test should be made L-1 to L-2 Hot to Hot, NOT Hot to ground.

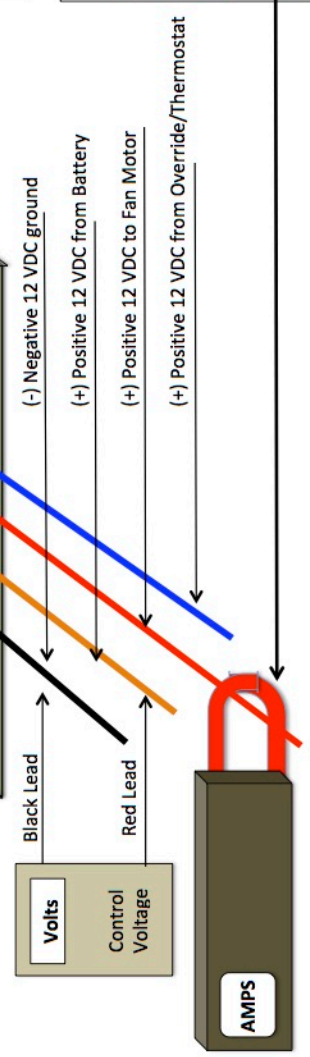
Correct Readings
 Low Heat (1800 Watts) = 120 VAC
 Med Heat (3750 Watt) = 240 VAC
 High Heat (5000 Watts = 240 VAC

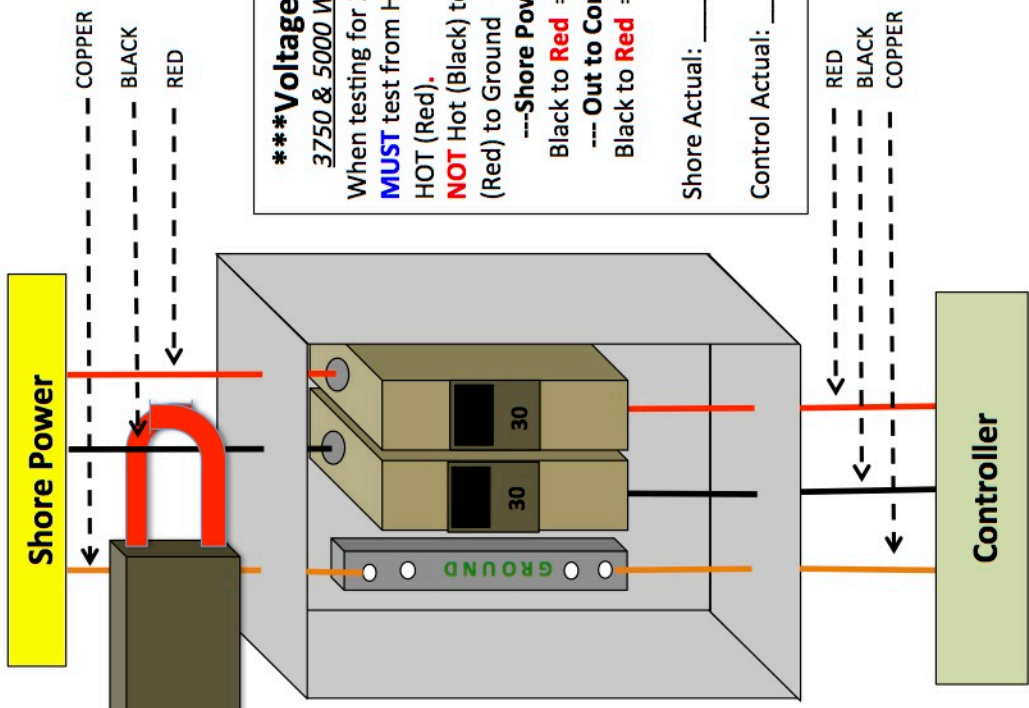
Actual Input _____ VAC
 Actual Output _____ VAC

Blower Motor Test
 Voltage Red to Black ----- 13.5 to 14.1 VDC
 Actual Black to Red _____ VDC

Current Check
 If rating is not with-in 10% of factory rating you have:
 Low Voltage, or Supply ducting blockage, or Defective motor.

Furnace Manufacture Rating _____ Amps
 Actual Current Reading _____ Amps





*****Current Test*****
 When testing for Current you **MUST** only clamp your meter around **ONE** hot wire at a time. It doesn't matter which side of the breaker your on
 ----5000 Watts----
 Black or **Red** = **21 Amps**
 --- 3750 Watts---
 Black or **Red** = **16 Amps**
 --- 1800 Watts---
Black or White = 16 Amps
 Amps Actual: _____Amps
**** Note: ONLY ONE BREAKER USED ON 1800 WATT 120 VAC SYSTEM**

*****Voltage Test*****
3750 & 5000 Watt System
 When testing for 240 VAC you **MUST** test from HOT (Black) to HOT (Red).
NOT Hot (Black) to Ground, Hot (Red) to Ground
 ---Shore Power In---
 Black to **Red** = **240 VAC**
 --- Out to Controller---
 Black to **Red** = **240 VAC**
 Shore Actual: _____VAC
 Control Actual: _____VAC

*****Voltage Test*****
1800 Watt System
 When testing for 120 VAC you **MUST** test from HOT (Black) to Neutral (White).
NOT Hot (Black) to Ground, Neutral (White) to Ground
 ---Shore Power In---
 Black to **White** = **120 VAC**
 --- Out to Controller---
 Black to **White** = **120 VAC**
 Shore Actual: _____VAC
 Control Actual: _____VAC

*****WHEN TESTING RESISTANCE MAKE SURE ALL POWER IS TURNED OFF*****

Resistance Testing

Common to 1800 = 8 Ohms (+ or - 1)
 Common to 3750 = 14 Ohms (+ or - 1)
 Common to 5000 = 12 Ohms (+ or - 1)

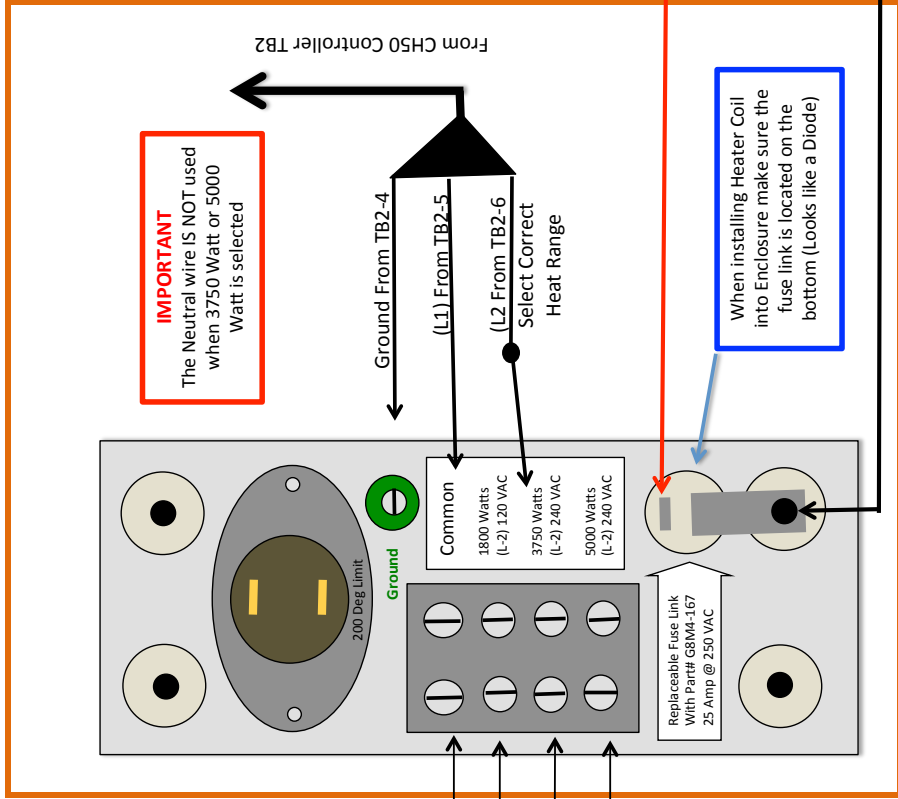
Fusible Link

Red to Black probe points = 0 Ohms

Actual Test

Common to 1800 _____ Ohms
 Common to 3750 _____ Ohms
 Common to 5000 _____ Ohms
 Fusible Link _____ Ohms

In EVERY case if the Fuse link is open (Burned out) it was caused by a lack of air flow from restricted supply duct or a intermitment/bad blower motor.



Ohm's

Red Wire Test Probe

Black wire Test Prob

Black L-1 All Heat Ranges Common

White Neutral L-2 to 1800 Watts

Red Hot L-2 to 3750 Watts

Red Hot L-2 to 5000 Watts

Ohm's