

Glow Worm cxi, hxi & sxi PCB - Components

C802 = 47uF 400V
 C805 = 47uF 63V
 C813 = 100uF 35V
 C809 & C810 = 470uF 35V. Suggest 63V!
 C708, 812, 816, 817, 823 = 10uF 63V

T705 = C33725 / BC337
 T706 = BSN254A / BS107A

User Interface uP = PIC16C72A-04

D100 = 1N4007
 Z100 = ?
 U102 = 4N35
 U500 = L78L05
 U503 = LM317?
 U800 = L7818CV
 U801 = TOP247YN
 T100 = KSP44-028 or MPSA44
 Z800 = BZX55C 7V5
 uP = PIC16C72A-04

USER INTERFACE PCB
 1 = Brown = Ignition 1
 2 = Blue = Sense 4
 3 = Black = Ground 2
 4 =
 5 =
 6 =

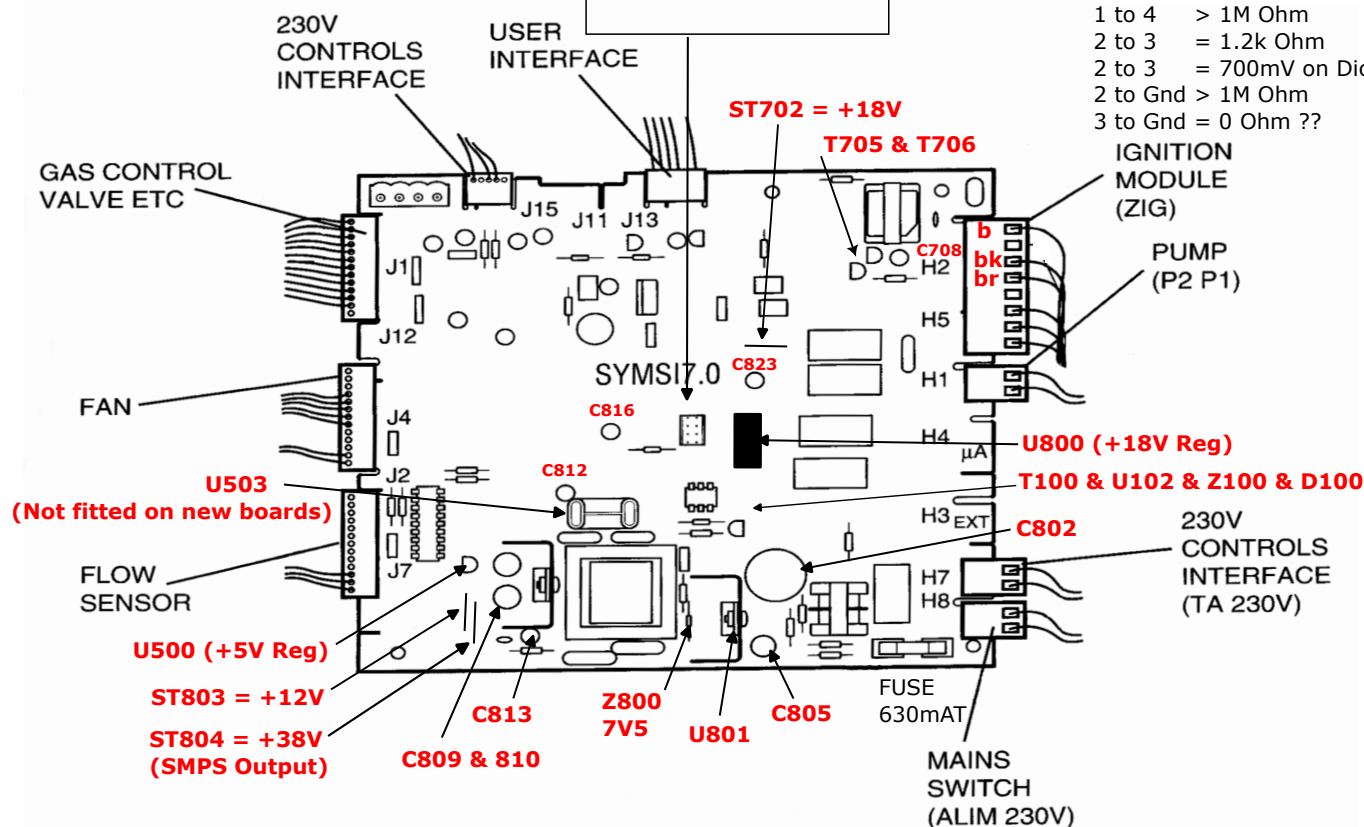
Switch Settings (not sure about this)
 Pump Operation | On | Off | Heating Temp & Pump?
 | 4 x | On On Off Off
 | 3 x | On Off On Off
 On Off On Off | 2 x | 53c | |
 On On Off Off | 1 x | 87c | |
 | | | With Heat Demand 53c |
 | | | Continuous 73c
 | | | With Burner
 Continuous
 x = Factory Position (all off)

IGNITION MODULE (ZIG)	PCB Connection
1 = Brown = Ignition	1
2 = Blue = Sense	4
3 = Black = Ground	2

1 to Grd > 1M Ohm
 1 to 2 > 1M Ohm
 1 to 4 > 1M Ohm
 2 to 3 = 1.2k Ohm
 2 to 3 = 700mV on Diode Test
 2 to Gnd > 1M Ohm
 3 to Gnd = 0 Ohm ??

J3ZI Test Pins	
uP Pin	OLD NEW
+5V	Busy
15/16	RxD
18	?
19	Reset
?	?
	0V, Grd
	Data

uP Pin
 12
 13
 0V
 14



NOTES

The main DC voltage from the SMPS is around 40V. Interesting that the smoothing capacitors C809 & C810 are 35V working!! Perhaps use 50V or 63V replacement caps here.

The 12V and 38V supplies are from separate secondary windings. +5V is derived from the 12V rail. They all share the common Gnd.

As C809 & C810 capacitors work the hardest they should be replaced as a matter of course (with 50V or 63V working 105deg). C802 is an HV capacitor and should be replaced. C813 is for the 12V rail and again should be replaced as it is next to the heatsink. As should C805. All with 105deg spec parts.

br = Brown g/y = Green/Yellow
 b = Blue p = Pink gn = Green
 bk = Black g = Gray y = Yellow
 w = White r = Red or = Orange

F1 Ignition Fault (Boiler failed to light)
 F4 Ignition Fault (Boiler went out when lit)
 F5 Overheat Fault
 F6 Central Heating Flow Thermistor Fault
 F10 Central Heating Return Thermistor Fault
 F11 Main Board Connection Fault
 F12 User Interface Connection Fault
 F13 Main PCB Fault
 F14 Central Heating Flow Temp Too High

F16 Gas Valve Fault
 F17 Power Supply Less Than 170V
 F18 User Interface Fault
 F19 CH Thermistor Unplugged
 F20 Software Incompatibility
 F24 CH Return Temp Too High
 F25 Max Temp Rise Slope to High
 F26 Max Delta Temp Too Low