AC rectification
5V rail generation
11.4–12.7 V
Z4
DZ23C12
CR17
PDS560
Vbuf
C29
1000u
R1
10k
U10
LM7805_TO220
VCC
MCU_44
L3
C19
C8
MCU_22
VSS
Q36
ZXMP4A16G
Q37
ZXMP4A16G
R151
4k3
R150
4k3
J9
Conn_01x03_Male
C57
R149
4k3
R148
4k3
Q34
ZXMN4A06G
Q35
ZXMN4A06G
Z1
AZ23C12
U13
LM317EMP
R52
1k24
U13_adj
White
C33
TP9
TestPoint
U15B
74HC74
U15C
74HC74
Heater+ control
Flip flop –> PNP –> NPN –> P–channel ?
CR1
BZT52–B10
R106
75k
ZXMP4A16G
Q2
Red
another via to somewhere
R87
7k5
TP19
TestPoint
Q19
MMBT3904
R88
43k
R80
30k
R90
39k
R89
15k
MMBT3906
Q20
U15A
74HC74
R125
47k
R86
33k
MCU_43
TP27
TestPoint
R84
270k
R85
270k
R92
3k3
R91
10k
U1C
LM339
Zero crossing detection
driving flip flop clock?
J1
Handle
Blue
White
Red
Green
Appears to be 1k9
resistor between
white & blue
R49
0R
C21
L1
TP14
TestPoint
TP16
TestPoint
MH1
U1B
LM339
R2
1k
R5
10k
R6
10k
MCU_15
C4
C
U1E
LM339
C6
C
U1A
LM339
U1D
LM339
2V5 reference
CR10
LM385M3–2.5
R34
20k
TP10
TestPoint
+2V5
R33
47k
C2
C
R30
10k
R7
20k
R4
270k
Vbuf
R9
47k
R10
100k
TP5
TestPoint
MCU_10
RST
Q3
MMBT3906
C5
C
Y1
Oscillator
MCU_21
MCU_20
1 kb EEPROM
U6
93C46BISN
MCU_19
MCU_18
MCU_17
C63
C
R124
2k4
ISB sensor
J4
Conn_01x04_Male
MCU_5
R18
0R
C27
C
U2
TC500ACOE
C14
C12
C15
R26
100k
C13
C
C25
C
CINT
VSS
CAZ
BUF
ACOM
CREF–
CREF+
VREF–
VDD
DGND
CMPTR
B
A
VIN+
VIN–
VREF+
MCU_14
MCU_3
MCU_2
+2V5
U24
CD74HC4052PW
From U4 pin 6
From U5 pin 6
MCU_4
R8
10k
C1
C3
C
U13_adj
R42
39k2
R41
13k7
CR2
BAV199
Current
shunt
R3
0R05
To U1
TP7
TestPoint
R23
1k47
C35
C
CR4
BAV199
C17
C
C30
C
C18
C
R45
39k2
13k7
R35
C32
C
U5
OP177G
TP39
TestPoint
Via to somewhere
below R24
R32
178k
TP30
TestPoint
R50
1k47
Red
C47
C
R53
100k
174k
R24
U4
OP177G
To U24
TestPoint
TP38
TP8
TestPoint
Bi–color LED and 7 segment power
R44
47k
R46
47k
MCU_38
R60
680R
Q15
MMBT4403
Q4
MMBT4403
R61
680R
MCU_37
D1_9
D1_12
R72
270
R71
180R
CR12
LED_Dual_ACA
MCU_31
Q7
2N7002
–5V rail generation
U17
ICL7660ACBAZA
TP13
TestPoint
L4
C53
C
C51
C
C52
TP3
TestPoint
7 segment power and control
U7
ULN2003A
R48
10k
MCU_24
R27
10k
MCU_25
R25
10k
MCU_26
R22
10k
MCU_27
R21
10k
MCU_28
R19
10k
MCU_29
R17
10k
MCU_30
R36
180R
R37
180R
R38
180R
R39
180R
R40
180R
R28
180R
R29
180R
D1
XDxx10x3
DP1
DP2
DP3
DPX
CA1
CA2
CA3
D1_12
D1_9
MCU_36
R59
680R
47k
R43
Q?
MMBT4403
Switches
R31
47k
SW1
MCU_9
R47
47k
SW2
MCU_8
R119
47k
SW3
MCU_7

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