Seq.No.	Operation Details	Remarks
1	General Instruction	
2.0	*Table 1* ***Problems*** / ***Check Points***	
	Not powering ON	1) Check Test point voltage
		2) Check R51 to determine if the input voltage is 240V
		3) Replace C32 and verify.
		4) Chek R48, R37, R41,42, R43, C44,R23,R24,R22,C21&C17.
		5) Check controller short.
		6) Check solderability across XT1, C31 & C30.
		7) Check solderability across u13, u9,R100,R101,C49,C35,C61R93 & R71.
		8) Check solderability across D2,D14,D12,R5,R7,R8,R9,U1,C38,U10,R16,R18,R21,R20,C47R46,&U11.
		9) Check solderability across C25, C34, R30, R44.
		10) Check solderability across D4,D3,D1,L2,R4,C22,D15,R49,C18,C37,C36,R50,D15,C48,C3,C4 & C12.
		11) Check solderability across L6, C2, U4, C78, R29,R64,R67R39,R29,R28,U5.
		12) Check solderability across U12, C15, R105, R106, Q1,C35R110,R104R99,R103,D11,C15.
		13) Check for TP2 if not coming – Check voltage across U1 all the pins w.r.t ground it will come near 150 to 160 V AC) – Replace U10 & U11 and verify.
		14) Check short short across D16 & C22 (if remove D16, C22 and verify short) if shorted replace it.
		15) Remove U9 and verify short across D16 (It is ok then replace U9) or remount it.
		16) Remove U7 and R30 & check short across D16 (it is ok then replace U7 and R30).
		17) Remove D11 and check short across D16 (If is ok then replace D11).
		18) Remove U4, R29, R28 & check short across D16 (if it ok then replaces U4).
		19) Remove R105 and verify TP2 (Remove controller and verify tp2 , If it ok replace controller).

Seq.No.	Operation Details	Remarks
2.1	**Backlight Not Glowing** **EEPROM Error**	1) Check R3 getting 5V and R65 getting 3V or replace backlight. 1) Check for proper EEPROM & F/W 2) Check U13 (64KB) & U9 and its peripheral components 3) R15,R17, MCU Pins 34,35.	
2.2	**Communication**	1) Check OPQ1 and OPD1 polarity 2) Check R35, R36,R33,R38, Q2	
2.3	**RF Communication**	3) check CN1 pins 4) check 1 and 2 for voltage (TP9).	
2.4	**LCD**	1) Check for connection on LCD Pins & MCU Pins. 2) Check R6, C20,C41,C42,C43	
2.5	**Not Pulsing**	1) Check LED1 for polarity	
2.6	**Pulsing Slow/ Not pulsing in Phase**	1) Check R1 MCU Pins 64.	
2.7	**Battery mode not working** **SW1**	1) Check for shorting of SL1 2) Check for Battery B2 and D26 mounted properly 1) C13,R14 and MCU pins 21	
2.8	**Initialization**	1) Check R34 and MCU pin 3	
2.9	**Magnet Sense**	1) Check U6 for proper mounting 2) Check R86, R87, C64 and MCU Pins 19,20	
2.10	**Display Blank**	1) Check for solder short in LCD and controller.	
2.11			
2.12	**CT tamper & anomaly failures**	1) Check scrolling switch, magnetic sensors, cover open circuit, battery circuit (check battery voltage), crystal, voltage, and current circuits	
2.13	**TP2 Voltage 0**	1) Primary Buck not functioning. 2) At 240V Vin, if voltage across C1 & C18 is above 330V. Check for the components U4, L1, D14 Related components.	
2.14	**TP3 Voltage 0**	1) Check TP8 is ok or not 2) If TP8 is ok, Check for components U12, C15 and C35 3) If TP8 is not ok, go to TP8 Debug instructions.	
2.15	**TP4 Voltage 0**	1) Check component D26.	

Seq.No.	Operation Details	Remarks
2.16	**TP5 Voltage 0** 1) Check Battery B2 status.	
2.19	**TP7 Voltage 0** 3) Check battery BAT1 and C79.	
2.19	**TP8 Voltage 0** 1) Check components U9,L4, R107 ,R108 ,C80 ,C82,R75,C81,R73,R74,C54,C55 and R8	
3.0	**TP9 Voltage 0** 1) Enable Field mode. 2) Check U11.	
3.1		
3.2	Annexure. Test point Voltage and current Limits.	

Battery mode short SL1 short link

Test point	Location	Min(v)	Max(v)	Nominal(V)
Primary Buck Output	TP2	11.5	12.7	12
LDO Out	TP3	3.1	3.3	3.3
VDD	TP4	2.9	3.3	3.1
Main Bat B2	TP5	2.9	3.3	3
Rtc Batt BAT1	TP7	2.9	3.3	3
SC charger, RF VDD in	TP8	3.9	4.2	3.8
RF VDD	TP9	3.9	4.2	3.8
SC Voltage	TP11	0	2.5	1 to 2.5
Sleep mode uA	TP5,TP6	1	4	2
ground	TP13,TP14,TP15	**0**	**0**	0