YC-1893D Type Meter Test Bench Solution

First: Solution base on the indication light and buzzer conditions

Item	Component	Indication light	Condition	Buzzer	Condition	Error describe	Possible reason	Solution
1	YC01-003-158 PCB	L100 (file.1)	Always on			Because voltage of voltage-feedback is too high, lead to equipment protection action and L100 on.	1. Output of voltage amplifier was open circuit. 2. Voltage amplifier did not return feedback signal. 3. Voltage range relay is broken. 4. Automatic gain circuit board 131-2 is bad. 5. Power supply of Voltage amplifier is failed. 6. Power supply of 158PCB is failed.	1. Check whether the voltage power amplifier output to the voltage booster circuit open is opened.(file.2) 2. Check whether the YC01-003-131PCB voltage range relay is not respond accordingly and the feedback line is loose.(file.3) 3. Detecting voltage amplifier output waveform with Oscilloscope.(file.4) 4. Check the connecting line between the 158 board and 187 PCB and 193 PCB.(file.5) 5. Change the automatic control board 131-2. 6. Check the two sets of voltage amplifier power supply (±50V and ±30V).(file.6) 7. Check the power switch function between ±50V and ±30V.(file.7) 8. Check the power supply 158 PCB.(file.8)
2	YC01-003-158 PCB	L300(file.1)	Always on			Because voltage of current-feedback signal is too high, lead to L300 on.	1. The current circuit of the calibration device is opened-circuit. 2. The current range relay or the matching relay is broken. 3. Current amplifier load circuit open. 4. No feedback of current amplifier. 5. Automatic gain circuit board 131-2 is bad. 6. Power supply of current amplifier has failed.	1. Check the connection of tested meter and the test bench connector.(file.9) 2. Check connection of the current terminals of the rack.(file.9) 3. Check whether the current range relay (file.10) or matching relay is not responded. (file.11) 4. Check whether the current amplifier output is open circuit. (file.2) 5. Check whether the current feedback line is loose.(file.12) 6. Check current waveform of current power amplifier with oscilloscope.(file.4) 7. Check the connecting line between the 158 board and 187 plate and 193 board.(file.5) 8. Change the automatic control PCB 131-2.

							7. Power supply of 158 PCB has failed.	9. Check the two sets of voltage amplifier power supply (±50V and ±30V).(file.6) 10. Check the power switch function between ±50V and ±30V.(file.7) 11. Check the power supply 158 PCB.(file.8)
3	YC01-158 PCB	L901(file.1)	Always on	SP901	buzzing	Because voltage of voltage-feedback signal is too high, lead to equipment protection action and L901 on.	1. Current or voltage amplifier power supply has failed. 2. Current or voltage amplifier transistor failed. 3. Current or voltage amplifier load has a short circuit 4. 187 board failed 5. Automatic gain 131-2 board failed. 6. 158 board failed.	1. First of all, in series with the mains power supply power by 100-200 w light bulb(incandescent lamp) to current limit protection.(file.17) 2. Locate the phase the buzzer alarm and light indication (on the 158 board), And then disconnect the current or voltage amplifier power supply of that phase, if the alarm disappear, means the relative phase is failed . 3. Check the two sets of voltage amplifier power supply (±50V and ±30V). (file.6) 4. Check the power switch function between ±50V and ±30V. (file.7) 5. Check whether the current or voltage amplifier transistor is failed.(file.13) 6. Check voltage or power amplifier output waveform with oscilloscope.(file.4) 7. Check whether the connection plug from the 187 board is loose, If no loose change of 187 board.(file.5) 8. Change the automatic control PCB 131-2. 9. Change the 158 board
4	YC01-131-2 PCB	L1(file.1)	Always on	SP	buzzing	Because voltage of voltage-feedback signal is too high, lead to L1 on.	The same as the item 1, 2	The same as the item 1, 2
5	Plate	Over-load indication light(file.1)	Always on	SP901	buzzing	Because voltage of voltage-feedback signal is too high, lead to SP901 on.	The same as the item 3	The same as the item 3
6	Plate	Power indication light(file.1)	Always off			The fuse of program-controlled power supply is broken, or main	1. Light is broken. 2. 5 v switching power supply is damage.	1. Testing whether the light is damage. 2. Testing whether Switching Mode Power Supply damage.

						power switch or emergency stop switch is broken.	3. 190 power supply board is damage.	3. Testing whether 190 power board is failed. 4. Check whether the program-controlled power s upply fuse burn-out or master switch or sto p switch is damaged. 5. Check whether the programmable power trans former is broken.
7	Test bench	Green light(file.1)	Always off			The fuse of program-controlled power supply is broken, or main power switch or emergency stop switch is broken.	The same as item 5.	The same as item 5.
8	Test bench	Yellow light(file.1)	Always off			YC01-131-2 PCB has failed or no signal output.	1. 14p line、4P plug disconnect. 2. No signal output of U1 pin on YC01-132-2 3. YC01-081 PCB is broken. 4. Communication problem of the power source.	1. Check whether the 14 p line, 4 p plug contact .(file.14) 2. Measuring 131-2 plate U1 foot presence of signal output, If not just change the board. 3. Testing for + 24 v output. 4. Test 081 relay board is bad. 5. Check the communication between communication board and YC01-003-158PCB.(file.15)
9	Test bench	Red light(file.1)	Always on	SP901	buzzing	Because of voltage feedback output voltage is too high, SP901 display.	The same as the item 3.	The same as the item 3.
10	Test bench	Yellow light(file.1)	on			No current or voltage output.	1. 158PCB not have D/A signal output 2. Power amplifier fuse burn -out.	1. Check the power supply of the 158 board.(file.6) 2. Check the DA signal of 158 board.(file.16) 3. Check the transistor on the amplifier tube.(file.13) 4. The above test normal, than replace the fuse of power amplifier.
11	Rack	No indication(file.1)				Fail to turn on the test bench	1. Wiring connection of the Power supply PCB YC01-003-190 was loose. 2. The rectifiers on the rectifier bridge were	1. Check the connection of 190PCB, disconnect the port and reconnect them. 2. Check the rectifier one by one.(file.18)

							failed. 3. Emergency stop off.	