**KASON**

**1967-3 Testing and Troubleshooting Instructions**

If the display reads . . . . . .

HOT – If the temperature is over 75F it will read HOT. The unit is only designed for cooler and freezer environments.

“Off” - The probe connector needs to be plugged in or needs to be replaced.

"- - -" – If display is stuck on “- - - “ and doesn't ready anything thing else, this is a frozen code. Reset the power to see if it cleans it up. If it happens again the unit needs to be returned.

EoT – This is not an error code that is programmed in. This is likely a bad display on the unit. To verify follow the steps below.

**How to test 1967-3**

Step 1: Determine if it’s a display issue.

* Remove the battery from the unit.
* Turn off the power to the unit at the beaker and turn back on.
	+ Watch the LED's cycle through the display one by one. Look for a skipped LED or a repeated LED. Let it continue to cycle through the display. LED’s will all light up at the end of the cycle test to make 3 digital "8". If they all light up and look evenly illuminated the display is working properly.
* If display isn't working properly - return for replacement.
* Else go to next step.

Step 2: Determine if the Temperature Probe is working.

* With power on the unit attach temperature probe - either probe location is ok.
* Displays will show temperature in F or C depending on the Unit Jumper - see instruction
* Display will show the units on the display window F or C - small LED will illuminate selected.
* Temperature of the probe will be detected and displayed.
	+ With a known source (ice cold water / room temperature) see if the temp is within 1 deg - this might take a few minutes because the probe is potted and requires acclimation.
	+ If the display reads "Off" the probe connector needs to be plugged in or needs to be replaced.
	+ If the display reads "CoL, C1 or C2" then the temperature, then the unit assumes the room is a cooler.
		- Why CoL? C1, C2? The 1967-3 can display two different temperatures for two different rooms. This will help determine if it is one of two coolers or freezers or one cooler and one freezer.
		- Display can only show one value at a time, so the unit has to display the CoL or FrE. There will also be a series of "- - - " to denote the temperature display is changing to the next room temperature.
		- If the display reads "FrE, F1 or F2" then the temperature, the unit assumes the room is a freezer.
		- If the display reads "Hot" the room temperature is over 75F.
		- Why show this? This is an internal test of the program to see it is triggering the program properly.
		- If it reads "- - -" but doesn't ready anything thing else this is a frozen code. Reset the power to see if it cleans it up. If it happens again the unit needs to be return.
		- If it reads a number that is "counting down" it is in door open count down mode.
			* This means two things have happened,
1. The door sensor is installed, the door is open and there are no temperature probes connected. Attach probe if temperature is required for the display.
2. Temperature probe wiring has been pinched or is internally shorted. Replace temperature probe.
* Else, Program is not functioning properly - replace unit.

Step 3: Determine if touch is working.

* Apply power to unit.
* Touch the sensor on front of unit.
	1. Did you hear a relay click?
		+ Yes - Did the light come on?
			- Yes - go to the next step
* No - is the wire connected properly?
	+ Yes - verify you are not in battery mode and you have 120V or 240V connected.
		- Yes - return unit (relay or traces on pcb are bad)
			* If traces are bad it is important to verify how large of a current damaged the unit.
			* Look for shorts on wiring, bad light bulbs, verify there is less than 15 amps on relay load.

 Failure to verify may cause another unit to fail.

* No - reconnect wiring properly and retest
	1. Did the indicator light come "on" at the front of the unit?
		+ Yes - relay is working properly
		+ No - check wiring
	2. Did the indicator go "off" at the front of the unit?
* Yes - check wiring likely the wire for "indicator" is connected to the "3way" contact.