Chapter 8 Troubleshooting

8.1 Alarm and Action

WARNING

ELECTRIC SHOCK! Before working on the power circuit on the primary side of the main power switch (leakage breaker), shut OFF primary power supply and check the line is dead. Also, take measures to prevent accidental charging.

Working with primary power supply ON runs the risk of electric shock.

Shut OFF power from the main power switch (leakage breaker) BEFORE detaching the electric parts compartment cover.

This chamber is equipped with a buzzer that sounds when trouble occurs as well as self-check features which display the trouble on the screen.
Displayed alarm codes and their content are given in the *"Alarm Table"* on the following pages. Remedy trouble as described therein.
For trouble which is undetected in self-checks, see *"Before You Call for Service".* If the trouble cannot be remedied after taking the prescribed action, contact the place of purchase or ESPEC CORP. (Call for service.)

8.2 Errors and Warnings

This chamber recognizes trouble conditions separately as errors or warnings.

Error (E): Normal control is not automatically restored even after the cause of the trouble has been eliminated. The measures outlined in error messages must be taken.

Warning (W): Normal control is automatically restored after the cause of the trouble has been eliminated. Once control has been restored, the entry in the alarm log can be deleted as explained in the confirmation message.

■Errors

<Procedure>

1) Press the ALARM/BUZZER to stop buzzer.
2) Check the error message displayed on the alarm screen.

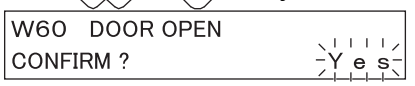
3) Press the ⏻ to deactivate control power.
4) Set the main power switch in the OFF position.
5) Remedy the trouble for the alarm displayed on the alarm screen as explained in the *"Alarm Table"* of this manual.

■Warnings

<Procedure>

1) Press the ALARM/BUZZER to stop buzzer.
2) Check the error message displayed on the alarm screen.

3) Remedy the trouble for the alarm displayed on the alarm screen as explained in the *"Alarm Table"* of this manual.
   The chamber restores to normal control automatically.
4) Push ∧, ∨ keys, confirmation window displays, select "Yes".



Alarm log is deleted.

8.3 Alarm Table

Alarm type	Displayed alarm	Alarm name	Trouble	Cause	Remedial action
Warning	W02 DEV. TEMP.	Upper deviation limit temperature	The temperature inside the chamber has risen above the upper deviation limit. The heater has been stopped. (The air circulator continues running to protect specimens and the oven. Also, if equipped with the optional automatic damper, the damper opens fully.)	Either specimens inside the chamber are generating heat or the upper deviation limit is set too low.	Reduce the heat-generating from specimens and set the upper deviation limit about 10°C. When chamber inside temperature returns within range, normal control is restored.
Error	E00 UPPER TEMP.	Absolute upper temperature limit	The temperature inside the chamber has risen above the absolute upper limit. The heater has been stopped. (The air irculator continues running to protect specimens and the oven. Also, if equipped with the optional automatic damper, the damper opens fully.)	Either specimens inside the chamber are generating heat or the absolute upper temperature limit is set too low.	Reduce the heat-generating from specimens and set the absolute upper limit about 10°C higher than the target temperature. After the operation is restored, if the same alarm occurs again, call for service.
	E01 LOWER TEMP.	Absolute lower temperature limit	The temperature inside the chamber has dropped below the upper deviation limit. The heater has been stopped. (The air circulator continues running to protect specimens and the oven. Also, if equipped with the optional automatic damper, the damper closes fully.)	Either excessive ventilation inside the chamber or the absolute lower temperature limit is set too high.	Narrow the damper opening. Also,set the alarm level correctly. If the same alarm occurs again, call for service.
	E04 HEATER ERR	Heater trouble	The heater's circuit breaker tripped because operating current was high. The chamber has been stopped.	Short-circuit or overcurrent in the heater circuit	Set the main power switch (leakage breaker) in the OFF position and reset the heater's circuit breaker on the electric parts chassis (electric parts compartment). Then, reactivate the system from the main power switch (leakage breaker), and press control power switch to restore operation. If the same alarm occurs again, call for service.

Alarm type	Displayed alarm	Alarm name	Trouble	Cause	Remedial action
Error	E06 OVER HEAT	Overheat protector tripped	The temperature inside the chamber has risen above the upper deviation limit. The heater has been stopped. (The air circulator continues running to protect specimens and the oven. Also, if equipped with the optional automatic damper, the damper opens fully.)	Either specimens inside the chamber are generating heat or the upper deviation limit is set too low.	Reduce the heat-generating from specimens and set the absolute upper limit about 15°C higher than the target temperature. After the operation is restored, if the same alarm occurs again, call for service.
	E60 FAN ERROR	Air circulator trouble	Temperature switch of the air circulator or temperature switch inside electric parts compartment tripped. The chamber has been stopped.	Overloaded or locked air circulator motor	Stop the chamber operation for a while to cool down the air circulator motor. If the same trouble occurs after restarting operation, call for service.
	E63 DAMPER ERR (for optional automatic damper only)	Damper trouble	Damper trouble detecting circuit tripped. The chamber has been stopped.	Damper drive unit circuit has trouble.	Set the main power switch (leakage breaker) in the OFF position, then detach the exhaust damper maintenance port cover and check for objects caught in the exhaust damper. If the same trouble occurs after restarting operation, call for service.
	E70 BURN -OUT	Sensor disconnection	An abnormal value has been input in test area temperature detecting circuit. The chamber has been stopped.	Temperature sensor is poorly connected of disconnected.	Set the main power switch (leakage breaker) in the OFF position and restart operation. If the same alarm occurs again, call for service.

* If non-listed alarm is displayed, stop operation, and call for service.