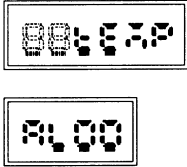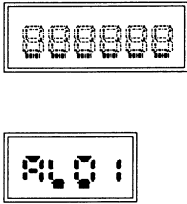# 8. Troubleshooting

The chamber will display error codes corresponding to the main types of failure on Temperature (and humidity) controller. They will also sound the alarm to warn the operator of the chamber status. If the self-diagnostic function detects a failure or error and displays an error code, carry out the actions listed in the appropriate column of the Alarm Tables.
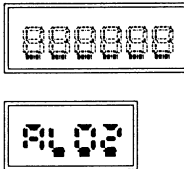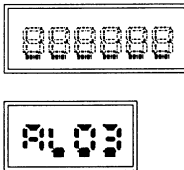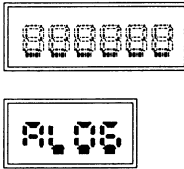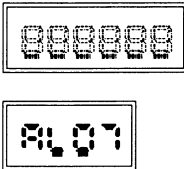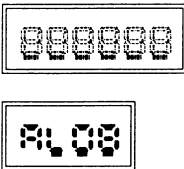
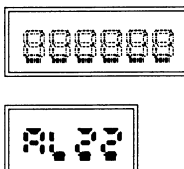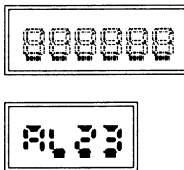Contact the place of purchase or TABAI ESPEC CORP. if:
* The table lists the error as requiring a "Service Call".
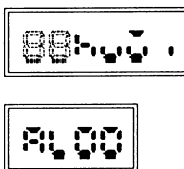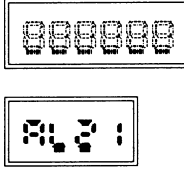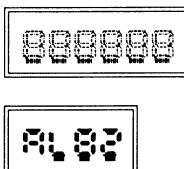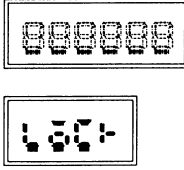
* The chamber continues to function abnormally even after carrying out the recommended procedures.

Alarm Tables

Message	Type of Failure	Safety device	Cause	Action
[display: tEnP] [display: AL00]	Temperature sensor abnomality (Dry-bulb)	Temperature (and humidity) controller	Disconnected temperature sensor or faulty connection.	* Service call
[display: 888888] [display: AL01]	Chamber temperature higher than setting on temperature (& humidity) controller (Overheating)	Temperature (and humidity) controller	* Excess heat generation by specimens	* Reduce heat from specimen.
			* Reduced refrigerator performance	* Clean condenser (See section 7.1)
			* Excessive ambient temperature	* Decrease ambient temperature to 35°C or less. * Provide space around chamber for ventilation. (See section 2.1).
			* Too low setting on temperature (& humidity) controller	* Set the temperature to 10°C or more. (See the section under "Setting the Alarm Temperature and Humidity" in User's Manual for Temperature (& Humidity) Controller.
			* Operation at low temperature with door open	* Close door, and resume operation.

Message	Fault	Safety device	Cause	Remedy
░░░░░ AL02	Chamber temperature higher than upper limit alarm temperature setting	Temperature (and humidity) controller	* Too low upper limit alarm temperature setting	* Increase the setting. (See the section under "Setting the Alarm Temperature and Humidity" in Instruction Manual for Temperature (& Humidity) Controller.
░░░░░ AL03	Chamber temperature lower than lower limit alarm temperature setting	Temperature (and humidity) controller	* Too high lower limit temperature setting	* Lower the setting. (See the section under "Setting the Alarm Temperature and Humidity" in Instruction Manual for Temperature (& Humidity) Controller.
			* The heater does not turn ON.	* Service call
░░░░░ AL06	Chamber temperature higher than setting on overheat protector	* Overheat protector * Thermal fuse	* Too low setting on overheat protector	* Increase the setting on overheat protector (See section 5).
			* Heater will not shut down.	* Service call.
			* Air circulator shutdown	* Service call
	Chamber temperature lower than setting on overcool protector (to S1 specifications only)	Overcool protector	* Too high setting on overcool protector	* Lower the setting on overcool protector.
░░░░░ AL07	Overloaded or faulty air circulator	Temperature switch on air circulator	* Too high ambient temperature	* Lower ambient temperature to 35℃ or less. * Provide space around chamber for ventilation (See section 2.1).
			* Faulty air circulator	* Service call
░░░░░ AL08	Abnormal refrigeration circuit	Overload relay	* Too high ambient temperature	* Lower ambient temperature to 35℃ or less. * Provide space around chamber for ventilation (See section 2.1).
			* Too low supply voltage	* Connect to 100V+/-5% power supply. (See section 2.3). * Stop using extension cable.

Message	Fault	Safety device	Cause	Remedy
`ⱠⱠⱠⱠⱠ·` `AL00`	Abnormal temperature sensor (Wet-bulb) (for Model SH)	Temperature (& humidity) controller	* Wire break in temperature sensor, or poor connection	* Service call
`ⱠⱠⱠⱠⱠⱠ` `AL21`	Humidifying boiler boiled dry (for model SH)	Temperature switch	* Impossible to fill humidifying boiler with water.	* Faulty pump (Service call) * Add water to water supply tank (Service call). * Adjust water level in humidifying boiler (See section 5).
			* Humidifying heater will not shut down.	* Service call
`ⱠⱠⱠⱠⱠⱠ` `AL22`	Chamber humidity higher than upper limit alarm humidity setting (for model SH)	Temperature (& humidity) controller	* Dry wick	* Replace wick with a new one (See section 5).
			* Too low upper limit alarm humidity setting	* Increase the setting (See the section under "Setting the Alarm Temperature and Humidity" in User's Manual for Temperature (& Humidity) controller.
`ⱠⱠⱠⱠⱠⱠ` `AL23`	Chamber humidity lower than lower limit alarm humidity setting (for model SH)	Temperature (& humidity) controller	* Too high lower limit alarm humidity setting	* Lower the setting. (See the section under "Setting the Alarm Temperature and Humidity" in User's Manual for Temperature (& Humidity) Controller.
`ⱠⱠⱠⱠⱠⱠ` `AL82`	Abnormal alarm temperature and humidity setting	Temperature (& humidity) controller	Too high or low alarm temperature and humidity setting for setting specified in program for programmed operation	* Rewrite program so that the setting specified in the program does not exceed alarm temperature and humidity setting.
`ⱠⱠⱠⱠⱠⱠ` `LOCt`	Keylock alarm	Temperature (& humidity) controller	Keys operated to change setting, turn on power or perform other operations in spite of keylock.	Unlock keys before changing setting or performing other operations. (See the section under "Setting KEYLOCK" in User's Manual for Temperature (& Humidity) Controller.

⚠ CAUTION
When the leakage breaker trips by itself, eliminate the cause of trouble before reactivating the power.   Turning power ON when the chamber is in anything but proper working condition could result in electric shock and/or fire.