

Trouble Shooting Guide

3100 Series / Test Mode

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This mode is intended for use as a production tool during testing and a service tool for installing and/or troubleshooting problems with the incubator. When in the test mode, all incubator control is disabled.

To access the test mode, simultaneously press and hold the <- and -> arrow keys. The incubators microprocessor only checks for this key sequence every 5 seconds, so the keys should be held until the display reads TEST MODE

Listed below are the options available in test mode. To exit test mode, press the mode key and the system will resume normal operation.

MAX LOAD ON/OFF Manually turns ON/OFF all heaters, and valves so that the unit is under full load.

MAIN HT ON/OFF Manually turns ON/OFF the main chamber heater.

DOOR HT ON/OFF Manually turns ON/OFF the glass door heater.

MOTOR ON/OFF Manually turns ON/OFF the blower motor.

GG VALVE ON/OFF Manually toggles the Gas Guard Valve. (Gas Guard option only)

CO2 VALVE ON/OFF Manually toggles the CO2 Valve.

PUMP ON/OFF Manually turns ON/OFF the IR & O2 Auto Zero pump. (IR or O2 option, was eliminated in IR units with release of DCS IR sensor)

O2 LRGE ON/OFF Manually turns ON/OFF the large O2 valve. (O2 option only)

O2 SML ON/OFF Manually turns ON/OFF the small O2 valve. (O2 option only)

ALM CNTS ON/OFF Manually toggles the remote alarm contacts.

PULSE 485 sends a 2 second long data stream to the RS-485 connector.

WTEMP XX.X C Displays the cabinet water temperature.

TMPOFF XX.X C Displays the offset amount the air temperature has been changed during calibration.

RHOFF XX % Displays the offset amount the RH has been changed during calibration. (RH option)

NEW O2 CELL Pressing <ENTER> causes a manual AUTO CAL of the systems O2 sensor. The procedure will take approximately 75 seconds, and the message AUTO CAL will be displayed during the procedure. (O2 option only) (This screen has moved to Config mode in all versions of software after 4)

O2 XX.X MV Used to display the O2 cell millivolt reading. (O2 option only)

ACLIN XXX Allow the ACLINE voltage on the micro board to be calibrated in 1 V increments.

MTR +/- XXX A number from - 300 to +300, which is used to calibrate the line voltage to the motor to the appropriate, setting.

RESETS XX Displays the number of times the units have been powered up. This can be cleared by pressing the up arrow and can be used to troubleshoot possible power problems. (i.e. brownouts, resets)

DFLT MAIN EE Pressing < ENTER > reloads the entire contents of the Main Micro Processors Nonvolatile memory to defaults. When < ENTER > is pressed the message **ARE YOU SURE** will appear, press < ENTER > to perform the default, otherwise press any other key to cancel. **Caution: This should only be used if problems indicate that the memory has been corrupted or erased. Default the entire contents of the micro board non-volatile memory.**

DFLT SETP Pressing < ENTER > reloads all system set points in non-volatile memory to defaults. **Caution: Defaults all previous set points that have been programmed into the unit.**

DFLT CALIB Pressing < ENTER > reloads all system software calibration in non-volatile memory to defaults. **Caution: Defaults all previous software calibration.**

DFLT HW CAL Pressing < ENTER > reloads all system hardware calibration in non-volatile memory to defaults. **Caution: Defaults all previous hardware calibration.**

DFLT GASP EE Pressing < ENTER > reloads the IR/O2 board s microprocessor s non-volatile memory. (IR or O2 option). (Removed from all units except O2 after release of DCS sensor) **Caution: Defaults the entire contents of the Gas Processor s Non-Volatile memory.**

MN VERS XX Displays the main boards software version number.

GP VERS XX Displays the IR/O2 gas processor board s software version number. (IR or O2 Option) (Removed from all units except O2 after release of DCS sensor)

Note: When in test mode, the processor will check if the analog board option exists. If it does, the processor will write out the following information to the analog board during any test mode menu: 20.0 degrees C, 20.0 %CO2, 20% RH, and 20.0% O2.

Note: When in run mode with SYSTEM OK showing in the display, pressing the down arrow will cause the water temperature to be displayed in the lower 7-segment display. Pressing the up arrow will cause AC line voltage to the micro board to be displayed in the upper 7-segment display.