



*The controller provides complete access to all advanced features of the Ultima® X Gas Monitor through its full-function keypad. The controller is used for basic calibration functions along with displaying minimum, maximum and average gas values, displaying date of last calibration, setting span-gas values and alarm values, setting the real time clock, and changing address. It is completely password-protected.*

## Calibration & Instrument Selection

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### Ultima Controller Summary

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- ON – Press 'ENTER'
- OFF – Press 'CLEAR' for 5 seconds or unit turns off automatically after 100 seconds

### Calibration Signal

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- Disable / enabling
- Press 'SEND'
- Press 'CAL'
- + / - to select 'CAL SIGNAL ENABLE'
- Enter
- Aim
- Press '0' or '1'

### Select Ultima or Ultima X

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- Ready
- Display
- Press '0' or '1'

### Calibration Procedure

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#### **Zero Only**

- Ready
- Aim controller
- Press "ZERO"

#### **Zero & Span**

- Ready
- Aim controller
- Press "CALIBRATION"

## Information Display

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### Information Retrieval

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- Ready
- Send
- Display
- Use +/- to scroll to desired item  
(min, max, avg, zero, span value, alarm values, etc)
- Aim
- Enter

### Display All Information

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- Ready
- Send
- Hold display button until display all
- Aim
- Press '1'

# Settings

## Setting Span Values

- Ready
- Send
- Span
- Use +/- for gas list (i.e. 500 ppm CO)
- Enter
- Put in number (i.e. 300)
- Aim
- Enter

## Set Date or Time

- Press and hold Date or Time
- Prompt appears
- Put in new date or time
- Enter

## Send Date or Time

- Send
- Aim
- Date or Time

## Setting Alarm Values

- Ready
- Send
- Alarm
- 0 – set point
- Use +/- for gas type
- Enter
- Point #
- Enter
- Point value
- Aim
- Enter
- 1 – On/Off
- Use +/- for gas type
- Enter
- Point #
- Enter
- (Alarm prompt) or OR
- 1 – Enable    0 – Disable
- Latched / non-latch

## Reset Latched Alarms

Send any command and it will reset a latched alarm once it is below the alarm value.

## Send Average Time Interval

- Ready
- Send
- Average
- Use +/- for 1, 8, 24 hours
- Aim
- Enter

# Programs

You can create Programs 1–9 for repetitive items. (See Manual)

## Example

- Press and hold 'PROGRAM' button until 'Enter Program #'
- Enter number '1 – 9'
- Enter
- Ready
- Hit keystrokes and listen for 2 beeps
- Send
- Display
- +/-
- Previous Cal Date
- Enter (saving)

## Program Run

- Press 'PROGRAM'
- Enter #
- Aim
- Enter

## Program O

- Repeats last command
- Press 'PROGRAM'
- Enter '0'
- Aim
- Enter

## Clear Programs

- Hold in #0
- Reset Prompt Yes/No
- Aim
- Press 0 = N, 1 = Y

## Notes

<b>Regular Calibration</b>	Point Controller at detector, press "CAL" button, zero and span is automatic
<b>Initial Calibration</b>	Press and Hold the SPAN button – 3 seconds, press 1 for yes, zero and span is now automatic, with 30 second countdowns.
<b>To abort span cal</b>	hit, zero/cal/or address button.
<b>Set Time</b>	Press and hold the TIME button
<b>Set Date</b>	Press and Hold the DATE button
<b>Battery Life</b>	"READY" displayed in capital letters indicates strong batteries "ready" displayed in lower case indicates weak batteries
<b>Default Controller Password</b>	9999

## Troubleshooting Tips

<b>CAL FAULT</b>	<ul style="list-style-type: none"> <li>You did not pass calibration – Do over</li> <li>A. May have used wrong gas</li> <li>B. Adjustment limits exceeded – Do "I Cal"</li> </ul>
<b>I CAL</b>	<ul style="list-style-type: none"> <li>Overrides factory adjustments</li> <li>Hold "SPAN" button down until prompt asked for "I Cal"</li> <li>Aim</li> <li>Press "1"</li> </ul>
<b>SENSOR RESET</b>	<ul style="list-style-type: none"> <li>Press "SEND" twice</li> <li>Prompt asked for reset</li> <li>Aim</li> <li>Press "0" or "1"</li> </ul>
<b>CALIBRATION ABORT</b>	<ul style="list-style-type: none"> <li>You can press "CAL" or "ZERO" button during countdown and it will abort calibration</li> </ul>

## MSA Controller Menu Table

SEND / DISPLAY		SEND / SPAN	SEND / CAL
<ul style="list-style-type: none"> <li>Current Gas Value</li> <li>Minimum Gas Reading</li> <li>Maximum Gas Reading</li> <li>Average Gas Reading</li> <li>Zero Value</li> <li>Span Value</li> <li>Alarm 1 Setpoint</li> <li>Alarm 2 Setpoint</li> <li>Alarm 3 Setpoint</li> <li>Current Time</li> <li>Future Cal Time</li> <li>Average Time</li> </ul>	<ul style="list-style-type: none"> <li>Current Date</li> <li>Future Cal Date</li> <li>Previous Cal Date</li> <li>Sensor Address</li> <li>Cal Interval</li> <li>Cal Sig Status</li> <li>Range Value</li> <li>Alert Option</li> <li>Gas Table Value</li> <li>Swap Delay Option</li> </ul>	<ul style="list-style-type: none"> <li>Ultima X Span Value</li> <li>Ultima X Range</li> <li>Ultima X Gas Table</li> </ul>	<ul style="list-style-type: none"> <li>Sensor Swap Delay</li> <li>Alert Option</li> <li>4-20</li> <li>Cal Sig Enable</li> <li>Days per Auto Cal</li> <li>Start Hr of Cal</li> <li>Next Cal Date</li> </ul>

Note: This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



**ID 0720-159-MC / January 2015**  
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