



**D-90037**

**Operation and Maintenance Manual  
ALTIMASTER MA8-30 / MA9-30**

**January 3, 2008**

**Rev 4**



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## SPECIFICATIONS

1.	<p><b>Scope</b></p> <p>This manual is intended for use by personnel who are familiar with the basic functions and operation of a military lighted altimeter intended for Freefall Parachuting operations.</p> <p>The manual covers basic operation and maintenance only, it is NOT an instruction manual for use of the altimeter for freefall parachuting.</p>																										
2.	<p><b>MA8-30 / MA9-30</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 45%;">Overall dimensions</td> <td>3.76 x 3.20 x 1.74"</td> </tr> <tr> <td>Weight:</td> <td>10.5 oz</td> </tr> <tr> <td>Max altitude</td> <td>30,000 feet MSL</td> </tr> <tr> <td>Altitude per pointer revolution:</td> <td>MA8-30 = 12,000 feet MA9-30 = 30,000 feet</td> </tr> <tr> <td>Temperature range</td> <td>-40 +80 °C</td> </tr> <tr> <td>Max depth (waterproofing)</td> <td>6 feet for 1 hour</td> </tr> <tr> <td>Body material</td> <td>Aluminum</td> </tr> <tr> <td>Battery Type</td> <td>Qty 2 A76 or equivalent</td> </tr> <tr> <td>Battery life</td> <td>Approx 6 hours</td> </tr> <tr> <td>Low battery detection</td> <td>Illumination flashes 6 times and stays on</td> </tr> <tr> <td>Battery drain prevention</td> <td>Illumination will turn off 45 minutes after being turned on</td> </tr> <tr> <td>Dial face illumination</td> <td>Electroluminescence</td> </tr> <tr> <td>Back-up illumination</td> <td>Qty 2 Chemical light stick 4.5mm x 39mm</td> </tr> </table>	Overall dimensions	3.76 x 3.20 x 1.74"	Weight:	10.5 oz	Max altitude	30,000 feet MSL	Altitude per pointer revolution:	MA8-30 = 12,000 feet MA9-30 = 30,000 feet	Temperature range	-40 +80 °C	Max depth (waterproofing)	6 feet for 1 hour	Body material	Aluminum	Battery Type	Qty 2 A76 or equivalent	Battery life	Approx 6 hours	Low battery detection	Illumination flashes 6 times and stays on	Battery drain prevention	Illumination will turn off 45 minutes after being turned on	Dial face illumination	Electroluminescence	Back-up illumination	Qty 2 Chemical light stick 4.5mm x 39mm
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### INDICATED ALTITUDE ADJUSTMENT

3.



The instrument may be zeroed by rotating the knob at the 3 o'clock position.

The knob may be rotated continuously in either direction.

### DIAL FACE ILLUMINATION

4.



To turn on the light, push and release the button at the 2 o'clock position.

A battery test will be performed and the faceplate illumination will flash once if battery is OK and then stay on for 45 minutes.

Note: If a low battery condition is detected the faceplate illumination will flash 6 times (approx 1 per second) and then stay on. When this first occurs there is sufficient energy in the battery for approximately 30 minutes of illumination. The batteries should be replaced.

To turn light off, push and release the button.

Note: It is not possible to turn the light off within 5 seconds of activation.

**SECONDARY (BACKUP) ILLUMINATION**

5.

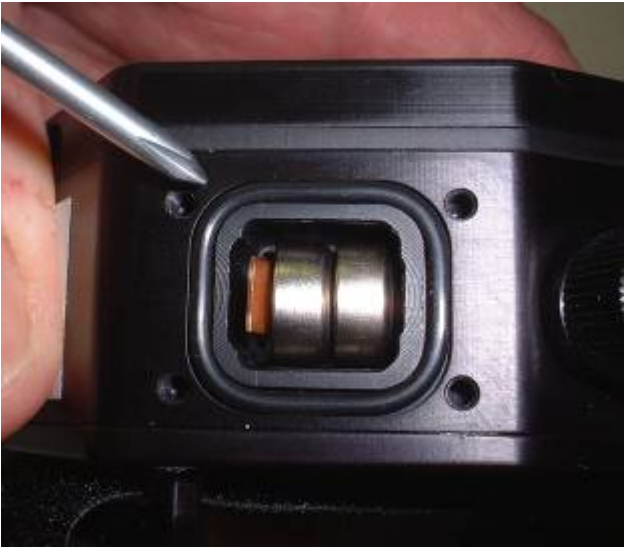


The MA8-30 and MA9-30 have the facility to use mini chemical light sticks for backup illumination. Insert one or two 4.5mm x 39mm light sticks in the aperture at the 5 o'clock position.



NOTE: The chemical light sticks provide emergency illumination only.

NOTE: It is possible that the light sticks will leak if left in the altimeter for a prolonged period. Alti-2 recommends that light sticks are removed after use to prevent leaking liquid from damaging the lens.

## BATTERY REPLACEMENT




6.		<p>The MA8-30/MA9-30 requires 2 x A76 button cell batteries.</p> <p>To change the batteries:</p> <ol style="list-style-type: none"><li>1 Remove the 4 screws retaining the battery cover</li><li>2 Remove the old batteries and discard</li><li>3 Insert new batteries as indicated on the altimeter label</li><li>4 Lightly lubricate O Ring with silicon lubricant</li><li>5 Replace cover</li><li>6 Check for a continuous contact line between the O ring and the transparent cover</li><li>7 Check operation of illuminated faceplate</li></ol> <p>Note: If the faceplate fails to illuminate after battery replacement, remove the new batteries wait 60 seconds and reinsert.</p>
7.	<p><b>Disassembly</b></p> <p>Note: Alti-2 does not recommend that the user disassemble the altimeter. Special equipment is required for re-assembly. Unless specifically described here, all maintenance on your altimeter should be performed by Alti-2.</p> <p>If any of the screws on the top or bottom covers are loosened or removed:</p> <ol style="list-style-type: none"><li>1 Any warranty is voided</li><li>2 The unit is no longer waterproof</li><li>3 The unit should be returned to Alti-2 for resealing and re-certification</li></ol>	

**CLEANING AFTER SALTWATER SUBMERSION**

8.		<p>Equipment needed to clean MA-10 altimeters.</p> <p>Tap, bottled or filtered water.</p> <p>Two (2) clean containers.</p>
9.		<p>Fill two adequately sized containers (for the number of altimeters to be rinsed) with tap, bottled or filtered water.</p>



<p>10.</p>		<p>STEP 2</p> <p>Remove wrist strap</p> <p>Open battery compartment and remove batteries.</p> <p>NOTE: Do not reuse these batteries.</p>
<p>11.</p>		<p>Step 3</p> <p>With the battery door open, completely submerge altimeters in the first container and let soak for 10 minutes.</p> <p>NOTE: Be sure to remove any air pockets from the battery compartment.</p>

12.		<p><b>STEP 4</b></p> <p>When soak time is completed, dunk the soaked altimeters at least five times in the same container.</p> <p>Shake off excess water by hand.</p>
13.		<p><b>STEP 5</b></p> <p>Place the drained altimeters into the second container and again dunk at least five times.</p>
14.		<p><b>STEP 6</b></p> <p>Place rinsed altimeters right side up with battery door open, on a stable surface to drip dry.</p>

15.		<p><b><u>DO NOT attempt to touch the filter!!</u></b> <b><u>The filter is located in the center of the backplate.</u></b></p>
16.		<p><b>CLEANING AFTER FRESH WATER SUBMERSION</b></p> <p>Follow the procedure for "Cleaning After Saltwater Submersion" using one rinse container.</p> <p>NOTE: The removed batteries may be reused.</p>



## Service

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Return Material Authorization (RMA) may be obtained from our web site:

<http://www.alti-2.com/customer support/repairs.htm>

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