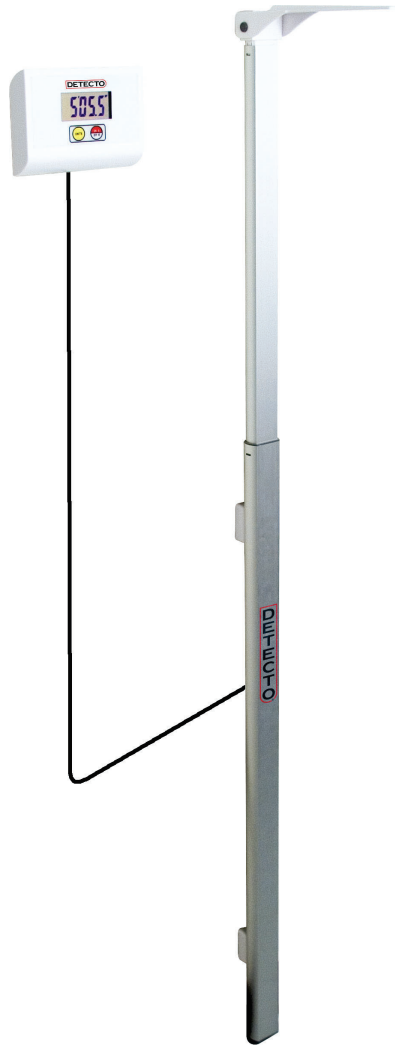


DETECTO®



DHRWM **Wall Mounted** **Digital Height Rod** **Owner's Manual**

INTRODUCTION

Thank you for purchasing our DETECTO DHRWM Wall Mounted Digital Height Rod. Your digital height rod has been designed for simple and straightforward use and to ensure accuracy and dependability for years to come.

Please read this manual thoroughly before attempting to use your scale and keep it handy for future reference. It contains important instructions for the installation and proper operation of your scale.

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All rights reserved. Reproduction or use, without expressed written permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein.

DISCLAIMER

While every precaution has been taken in the preparation of this manual, the Seller assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from use of the information contained herein. All instructions and diagrams have been checked for accuracy and ease of application; however, success and safety in working with tools depend largely upon individual accuracy, skill, and caution. For this reason, the Seller is not able to guarantee the result of any procedure contained herein. Nor can they assume responsibility for any damage to property or injury to persons occasioned from the procedures. Persons engaging in the procedures do so entirely at their own risk.



FCC COMPLIANCE STATEMENT

This equipment generates, uses, and can radiate radio frequency, and if not installed and used in accordance with the instruction manual, it may cause interference to radio communications. It has been designed within limits for a Class A computing device pursuant to Subpart J of Part 15 of the FCC rules to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference, in which case the user will be responsible for taking whatever measures are necessary to correct the interference.

The booklet *How to Identify and Resolve Radio-TV Interference Problems* (Second Edition, September 1982), prepared by the Federal Communications Commission, may be helpful. It can be ordered from the U.S. Government Publishing Office, Superintendent of Documents, P.O. Box 37082, Washington, DC 20013-7082. The stock number is 004-000-00345-4.

Serial Number _____
Date of Purchase _____
Purchased From _____

RETAIN THIS INFORMATION FOR FUTURE USE

PRECAUTIONS	
Before using this scale, read this manual and pay special attention to all "WARNING" symbols:	
	
IMPORTANT	ELECTRICAL WARNING

SPECIFICATIONS

Height Units	Feet/Inches or Centimeters (selectable)
Height Range.....	3' 7" to 6' 7" (110 to 200 cm)
Power Requirements	Four (4) "AA" size Alkaline batteries (<i>not included</i>)
Display	Five-digit, seven-segment, 1.0 inch (25 mm) high LCD
Cable Length	69" (175 cm)
Operation Temperature	50 to 104 °F (+10 to +40 °C)
Function Keys	UNITS and ON/OFF
Dimensions	
Display	5.25" H x 7.75" W x 2.125" D (13.4 cm x 19.7 cm x 5.4 cm)
Height Rod (includes bracket)	
(collapsed)	43.3" H x 3.35" W x 2.56" D (111.0 cm x 8.5 cm x 6.5 cm)
(extended)	98.8" H x 3.35" W x 2.56" D (251.0 cm x 8.5 cm x 6.5 cm)
Shipping Weight	8.20 lb (3.70 kg)

CARE AND CLEANING

- DO NOT** submerge the height rod or display in water.
- DO NOT** pour or spray water directly on the height rod or display.
- DO NOT** use acetone, thinner, or other volatile solvents for cleaning.
- DO NOT** expose the height rod and display to temperature extremes.
- DO** clean the height rod and display with a damp soft cloth and mild non-abrasive detergent.
- DO** remove power before cleaning with a damp cloth.

DISPLAY MESSAGES

The DETECTO DHRWM Wall Mounted Digital Height Rod is equipped with software that tests various portions of its circuitry and verifies proper operation. The following messages are displayed to alert the operator should a problem be detected.

Display	Meaning
<i>bAt</i>	Displayed when the batteries are near the point they need to be replaced.
- - - - -	This will be displayed when attempting to use the Digital Height Rod without the height rod in the starting position. The inner sliding tube must be down completely inside the outer stationary tube, and the headpiece folded flat against the outer stationary tube.

UNPACKING

Remove the height rod, display, hardware pack, and other components from the shipping carton. After removing from the carton, check for any damage that may have taken place during shipment. *Keep and use the original carton and packing material for return shipment if it should become necessary.* The purchaser is responsible for filing all claims for any damages or loss incurred during transit. Remove all plastic wrapping, foam fillers, and cardboard material from the height rod, display, and other components. You should have the following components:

- (1) DETECTO Wall Mounted Digital Height Rod (DHRWM)
- (1) Remote Display
- (1) Display Wall Bracket "A"
(Includes four (4) feet for desk or table mounting)
- (1) Display Wall Bracket "B"
- (1) Hardware Pack, containing:
 - (4) M3.0x25 Screws
 - (4) Plastic Wall Anchors



ASSEMBLY

The DHRWM does not require any assembly. After installing the batteries, the DHRWM is ready for wall mounting and operation.

BATTERY INSTALLATION

1. Turn the display over so that the keypad is facing down and locate the rectangular battery cover on the back of the display.
2. Remove the cover, install four (4) "AA" size batteries¹ and then replace the cover.
3. Turn the display over to the normal operating position.
4. Make sure the height rod is in the starting position.
5. Press the **ON/OFF** key to turn the display on.
6. The display will turn on, show all digits, then show *1 10.0 cm*.
7. If the display did not turn on, remove the battery cover and check for one or more improperly positioned batteries.
8. The digital height rod and display are now ready to be installed.

¹ See page 8 for detailed instructions on installing the batteries.

INSTALLATION



IMPORTANT! The height rod requires a 7/8 inch (22 mm) clearance between the wall and the back of the rod. Prior to beginning the installation, measure any wall trim to ensure there will be adequate space between the trim and height rod.

Mounting the Height Rod

1. Choose the location to mount the height rod on the wall. The location should be free of temperature extremes and water. It should be where it is within easy reach of the operator.
2. Make certain the structure and mounting hardware are of sufficient strength to support the height rod. The mounting bracket should be securely fastened to the wall so that it cannot break loose from the mounting surface.
3. Referring to Figure No. 1 and using the height rod as a template, place the height rod against the wall and mark the holes to use to mount it. The lower mounting hole should be 6 13/32 inches (162.5 mm) from the floor, and the upper mounting hole should be 30 25/32 inches (782.0 mm) from the lower hole.
4. Remove the height rod and drill two (2) 13/64" (5 mm) holes in the wall for the mounting wall anchors.
5. Insert the wall anchors in the wall until they are flush with the wall.
6. Place the height rod against the wall and insert the two (2) M3.0x25 screws through the bracket and into the wall anchors.
7. Partially tighten the screws to hold the height rod in place.
8. Make sure the bottom of the height rod is 25/64 inch (10 mm) from the floor, and then tighten the screws to secure the height rod to the wall.

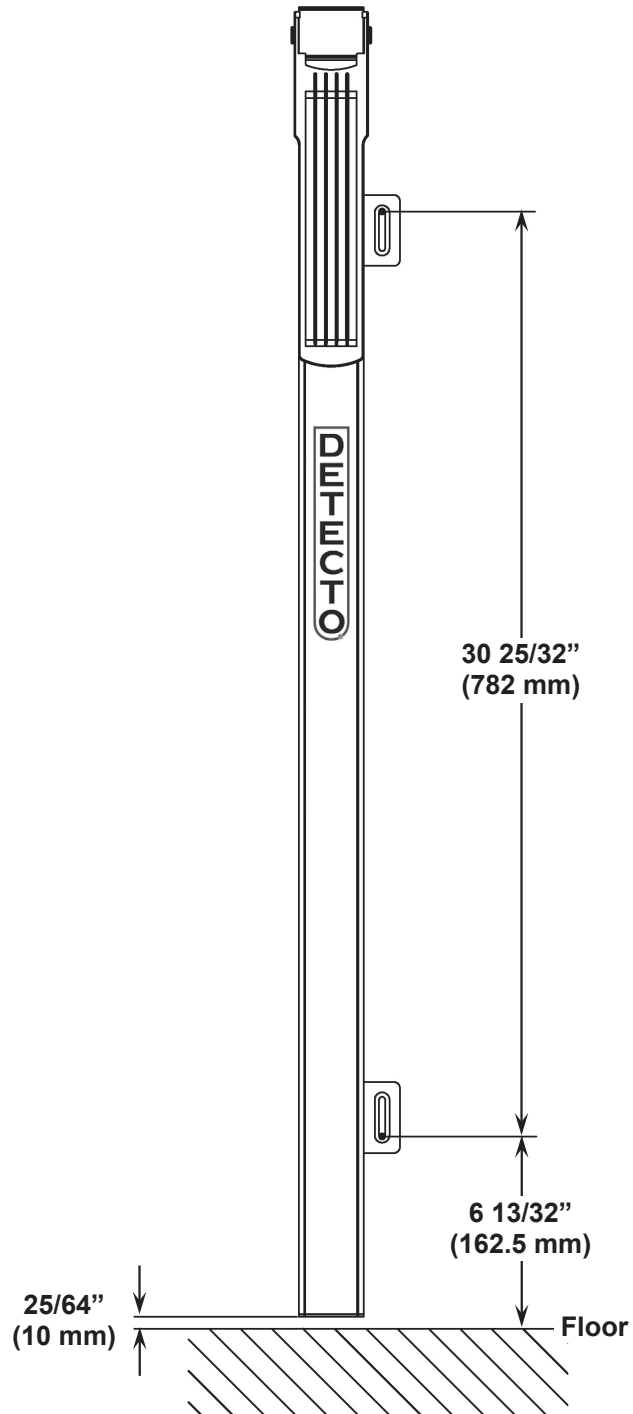


Figure No. 1

INSTALLATION

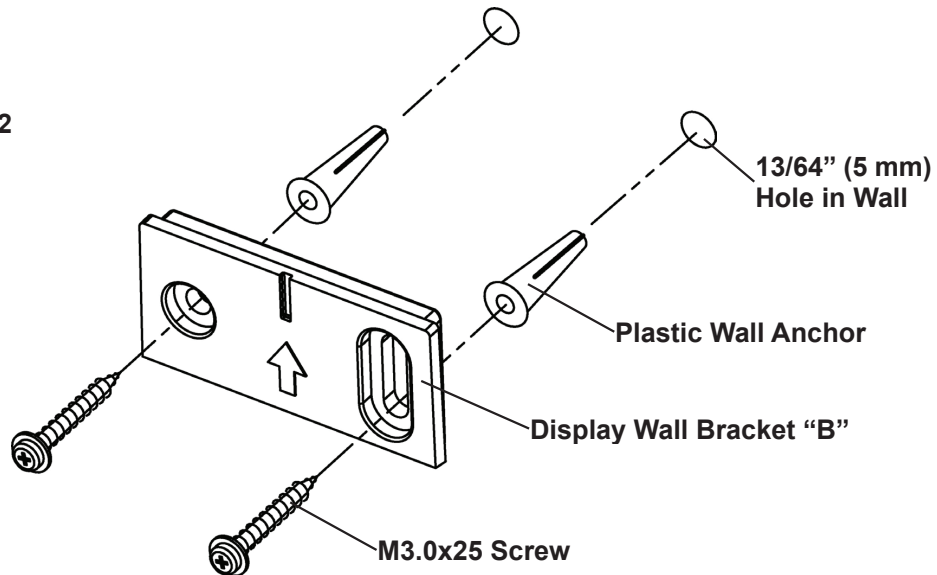
Mounting the Display

The DHRWM display has a 69" (175 cm) cable to allow it to be placed at a convenient position away from the height rod. A bracket is included to mount the display on a wall, or the bracket (and included feet) can be used to place it on a desk for easy viewing.

Wall Mounting

1. Choose the location to mount the display on the wall. The location should be free of temperature extremes and water. It should be where the display can be easily viewed, not subject to direct sunlight, and where the keypad is within easy reach of the operator.
2. Make certain the structure and mounting hardware are of sufficient strength to support the display. The mounting bracket should be securely fastened to the wall so that it cannot break loose from the mounting surface.
3. Referring to Figure No. 2 and using Display Wall Bracket "B" for a template, place the bracket against the wall (*notch and arrow pointing up*) and mark the holes to use to mount it. Remove the bracket and drill two (2) 13/64" (5 mm) holes in the wall for the mounting wall anchors.
4. Insert the wall anchors in the wall until they are flush with the wall.
5. With the notch and arrow pointing up on Display Wall Bracket "B", insert the two (2) M3.0x25 screws through the bracket and into the wall anchors.
6. Tighten the screws to secure the bracket to the wall.

Figure No. 2



INSTALLATION

Wall Mounting, Cont.

7. Referring to Figure No. 3, make sure the four (4) feet of Display Wall Bracket "A" are placed in the bracket.

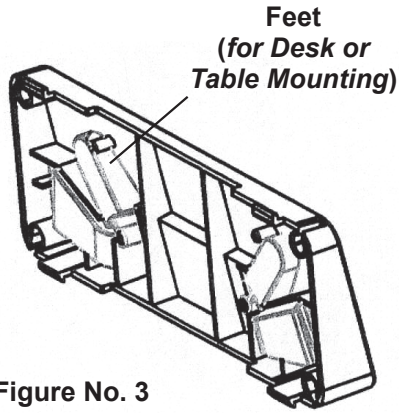


Figure No. 3

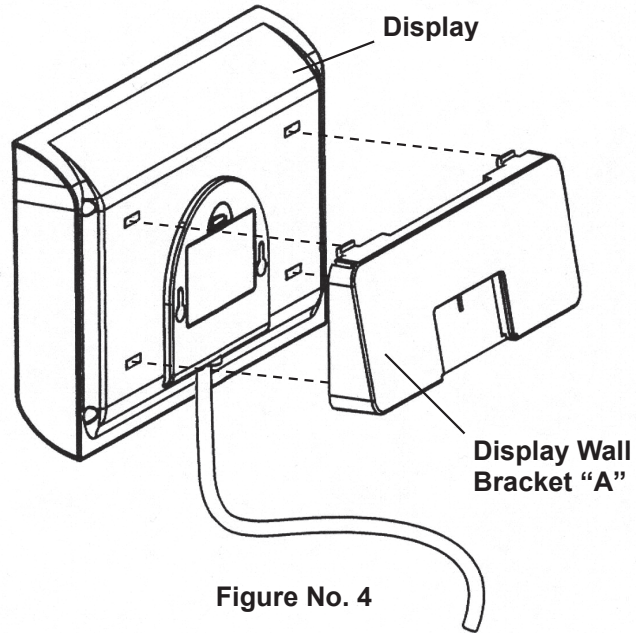


Figure No. 4

8. Next, locate the four (4) slots on the back of the display and align them with the four (4) tabs on the Display Wall Bracket "A". Refer to Figure No. 4.
9. Insert the tabs into the slots and press together until the bracket locks to the back of the display.
10. Referring to Figure No. 5, align the cutout in Display Wall Bracket "A" with Display Wall Bracket "B" and gently pull down to secure the display to the wall.

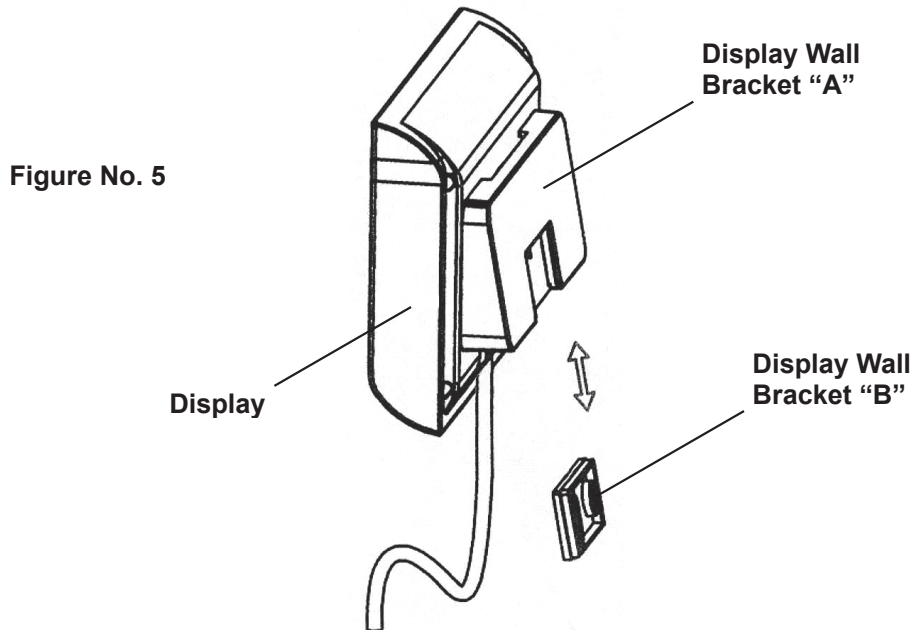
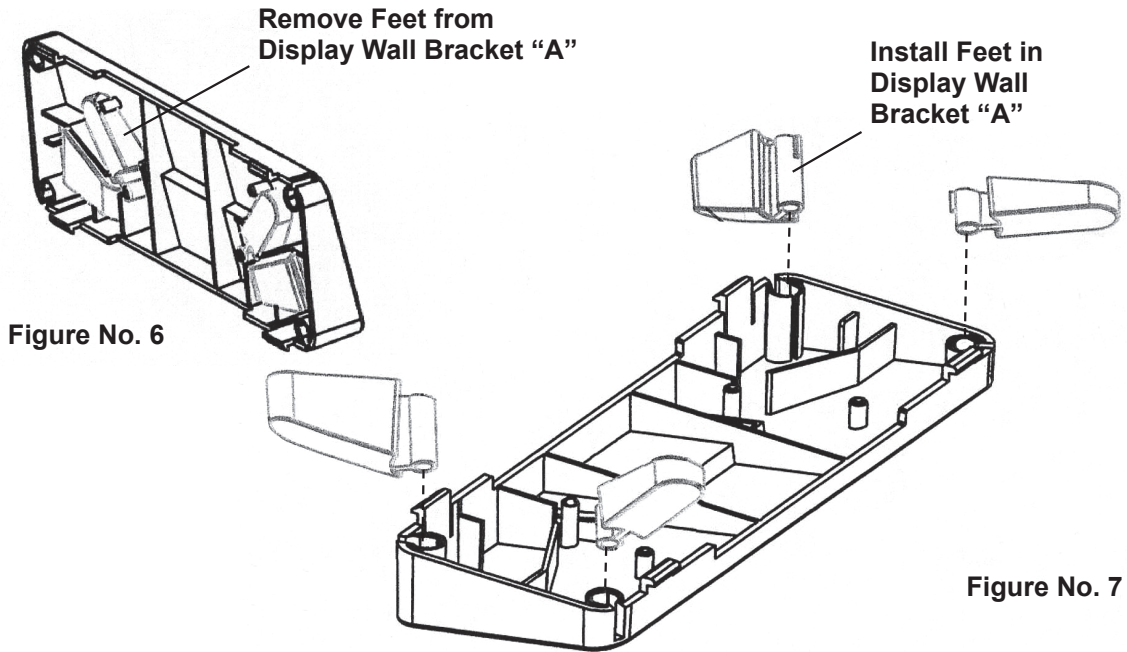


Figure No. 5

INSTALLATION

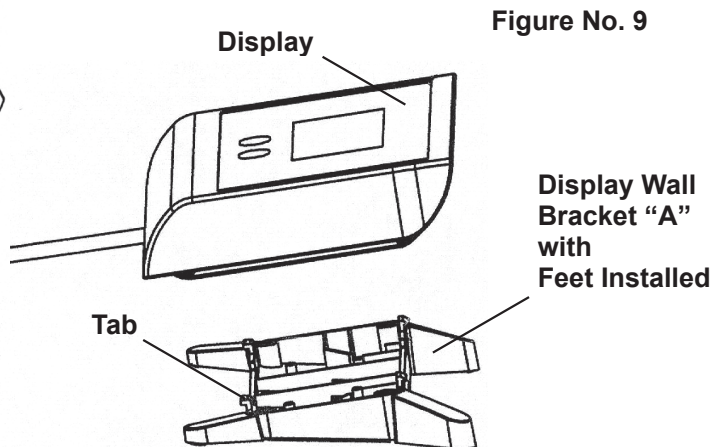
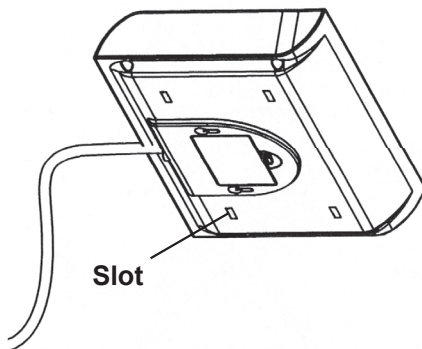
Desk or Table Mounting

1. The location chosen should be a stable, level surface (either a desk or a solid table), free of temperature extremes and water. The display should be where it can be easily viewed, not subject to direct sunlight, and where the keypad is within easy reach of the operator.
2. Referring to Figure No. 6, remove the four (4) feet from inside Wall Bracket "A" and install them in each corner of the bracket as shown in Figure No. 7.



3. Next, locate the four (4) slots in the back of the display. Refer to Figure No. 8.

Figure No. 8



4. Referring to Figure No. 9, align and insert the tabs on the bracket with the slots in the display back and press together until the bracket locks to the back of the display.

BATTERY OPERATION

Battery operation is a standard feature of the DETECTO DHRWM Wall Mounted Digital Height Rod, although the batteries are optional (not included). You must first obtain and install four (4) AA-size alkaline batteries before operations can begin. Batteries are contained in a battery holder inside the display. Access is via a removable cover on the back of the display.

Installation / Replacement

To install or remove the batteries, the following steps should be followed:

1. If wall-mounted, remove the display by sliding it up and away from Display Wall Bracket "B".
2. Turn the display over so that the keypad is facing down on the desk or table.
3. Remove Display Wall Bracket "A" and locate the rectangular battery cover on the back of the display.
4. To install or replace the batteries, first remove the battery cover by pushing in on the tab and lifting it up. See Figure No. 10.
5. If installing new batteries, proceed to step 6. If replacing the batteries, remove all four (4) batteries from the battery holder, then proceed to step 6.
6. Install the four (4) new "AA" size batteries in the battery holder, noting the polarity markings located in the battery holder. See Figure No. 11.
7. Replace the battery cover (it will click when locked in place) and return the display to the upright position.
8. Press the **ON/OFF** key.
9. The display will turn on, show all digits, then show *110.0 cm*.
10. If the display did not turn on, remove the battery cover and check for one or more improperly positioned batteries.
11. The display is now ready for normal operation.

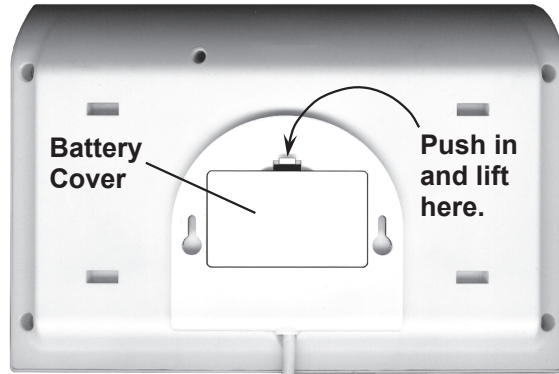


Figure No. 10

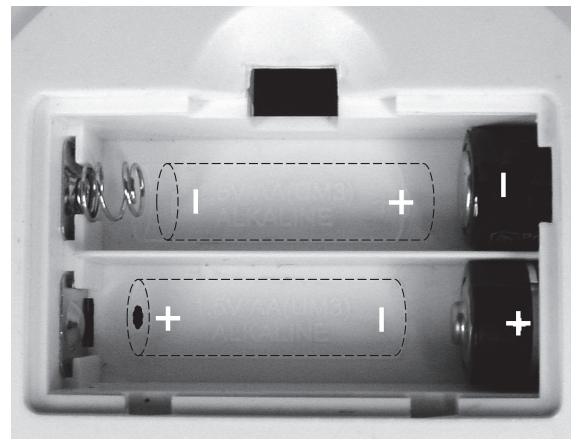


Figure No. 11

NOTE:

- If the display is wall-mounted, follow steps 8 to 10 on page 5 to reinstall it on the wall.
- Follow steps 3 and 4 on page 6 if using the display on a desk or table.

Low Battery

When the batteries are near the point they need to be replaced, the display will show *bAt*. If the battery voltage drops too low for accurate measurements, the display will automatically shut off, and you will be unable to turn it back on. When the *bAt* message is displayed, the operator should replace the batteries.

Automatic Shutoff

The Automatic Shutoff feature will turn the display off after one (1) minute of inactivity to prolong battery life. To turn the display back on, you simply press the **ON/OFF** key.

OPERATION

Keypad Functions



DO NOT operate the keypad with pointed objects (pencils, pens, etc.). Damage to the keypad resulting from this practice is **NOT** covered under warranty.

The **UNITS** key is used to change the height units between feet/inches and centimeters.

With the display off, pressing the **ON/OFF** key will apply power and turn on the display. If the display is on, pressing it will turn the display off.

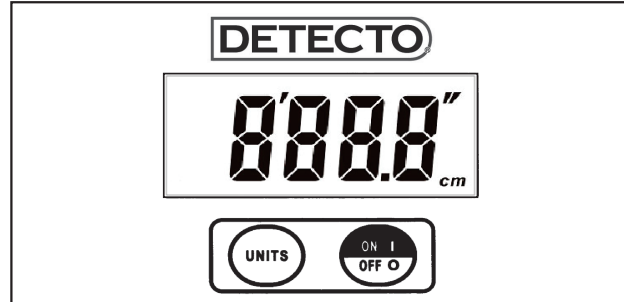


Figure No. 12

Annunciators

The annunciators are turned on to indicate that the display is in the mode corresponding to the annunciator label or that the status indicated by the label is active.

The ' ' ' ' annunciators are turned on when the displayed measurement is in feet and inches.

The **cm** annunciator is turned on when the displayed measurement is in centimeters.

Measuring Patients' Height



IMPORTANT! The digital height rod must be returned to its "starting position" before every use (the inner sliding tube must be down completely inside the outer stationary tube) and the headpiece folded flat against the stationary tube. Otherwise, - - - - will be displayed.

1. Make sure the height rod is in the starting position.
2. Press the **ON/OFF** key.
3. The display will turn on, show all digits, then show *10.0cm*.
4. Press the **UNITS** key to toggle between centimeters and feet/inches. The **cm** (centimeters) or (' ') (feet/inches) annunciator will turn on to show which measurement unit is active.
5. Grasp the height rod at the hinge pin (see Figure No. 13) and raise it well above the patient's head, and then lift the headpiece to the horizontal position.
6. The patient may now step under the height rod headpiece.
7. Carefully lower the height rod until the headpiece rests on the top of the patient's head.
8. Read and record the height of the patient.
9. While holding the headpiece horizontal, raise the height rod well above the patient's head.
10. The patient may now step away from the height rod.
11. Return the height rod to the starting position.
12. To turn the display off, press the **ON/OFF** key.



Figure No.13

NOTE: If the DHRWM is not used again within one (1) minute, the Automatic Shutoff feature will turn the display off.

STATEMENT OF LIMITED WARRANTY

DETECTO warrants its equipment to be free from defects in material and workmanship as follows: DETECTO warrants to the original purchaser only that it will repair or replace any part of equipment which is defective in material or workmanship for a period of **two (2) years from date of shipment**. Detecto shall be the sole judge of what constitutes a defect.

During the **first ninety (90) days** DETECTO may choose to replace the product at no charge to the buyer upon inspection of the returned item.

After the first ninety (90) days, upon inspection of the returned item, DETECTO will repair or replace it with a remanufactured product. The customer is responsible for paying for the freight both ways.

This warranty does not apply to peripheral equipment not manufactured by DETECTO; this equipment will be covered by certain manufacturer's warranty only.

This warranty does not include replacement of expendable or consumable parts. This does not apply to any item which has deteriorated or damaged due to wear, accident, misuse, abuse, improper line voltage, overloading, theft, lightning, fire, water or acts of God, or due to extended storage or exposure while in purchaser's possession. This warranty does not apply to maintenance service. Purchased parts will have a ninety (90) day repair or replacement warranty only.

DETECTO may require the product to be returned to the factory; item(s) must be properly packed and shipping charges prepaid. A return authorization number must be obtained for all returns and marked on the outside of all returned packages. DETECTO accepts no responsibility for items lost or damaged in transit.

Conditions Which Void Limited Warranty

This warranty shall not apply to equipment which:

- A.) Has been tampered with, defaced, mishandled or has had repairs and modifications not authorized by DETECTO.
- B.) Has had serial number altered, defaced, or removed.
- C.) Has not been properly grounded according to Detecto's recommended procedure.

Freight Carrier Damage

Claims for equipment damaged in transit must be referred to the freight carrier in accordance with freight carrier regulations.

This warranty sets forth the extent of our liability for breach of any warranty or deficiency in connection with the sale or use of the product. DETECTO will not be liable for consequential damages of any nature, including but not limited to, loss of profit, delays or expenses, whether based on tort or contract. Detecto reserves the right to incorporate improvements in material and design without notice and is not obligated to incorporate improvements in equipment previously manufactured.

The foregoing is in lieu of all other warranties, express or implied including any warranty that extends beyond the description of the product including any warranty of merchantability or fitness for a particular purpose. This warranty covers only those DETECTO products installed in the forty-eight (48) contiguous continental United States.



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