Troubleshooting

The following is a list of actions to be taken if the unit is not working properly:

Screen is blank
Check to make sure the battery is inserted correctly. Open battery door on the bottom rear of the unit. The battery is inserted with the terminals on the inside. The + and - symbols on the battery should match the corresponding + and - symbols on the inside of the battery compartment.

Unit does not measure all wires
Ensure that horizontal distances between wires are within the sonic beam, as shown in the Performance section of this manual.

Incorrect readings
Ensure the Calibrate mode switch is in correct position, i.e. CABLE for cable height measurement, and WALL for horizontal distance to object measurement. Ensure no walls or similar obstructions are within 7 feet (2m) of either side of the unit, as reflections from these can interfere with correct operation.

Warranty

Each unit is guaranteed against malfunction caused by faulty components or manufacture for a period of 12 months from the date of purchase (excluding battery). At HD Electric Company's sole discretion, it will be decided either to repair, modify or replace the unit. Should the Cable Distance Meter develop a problem, contact HD Electric Company. For further information, contact:

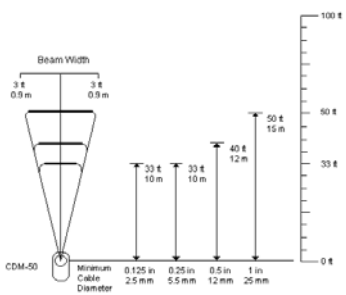
HD Electric Company
1475 Lakeside Drive
Waukegan, IL 60085 USA
Phone: 847-473-4980
Fax: 847-473-4981
Web: www.HDElectricCompany.com

SPECIFICATIONS*

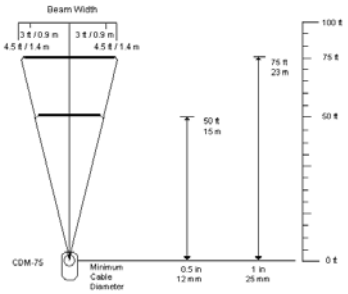
	Model CDM-50	Model CDM-75
1 inch (25mm) Cable Diameter	10' - 50' (3m - 15m)	10' - 75' (3m - 23m)
0.5 inch (12mm) Cable Diameter	10' - 50' (3m - 15m)	10' - 50' (3m - 15m)
0.25 inch (5.5mm) Cable Diameter	10' - 40' (3m - 12m)	N/A
0.125 inch (2.5mm) Cable Diameter	10' - 33' (3m - 10m)	N/A
No. of wires measured	6	6
Accuracy	0.5% ± 2 digits	
Resolution (less than 33')	0.25" (5mm)	
Resolution (more than 33')	0.5" (10mm)	
Minimum gap between wires	6" (150mm)	
Operating Temp. Range	14° F to 104° F (-10° C to 40° C)	
Battery Life	50,000 measurements (Long Life Alkaline type)	
Measurement units	Imperial (feet/inches) or metric (meters)	
Auto power off delay	3 minutes	
Dimensions	8.5" x 4" x 3" (205mm x 100mm x 70mm)	
Weight	1.1 lb. (0.5kg)	

** Based on ambient temperature of 68° F (20° C)*

PERFORMANCE



CDM-50 Measurement versus Cable Diameter



CDM-75 Measurement versus Cable Diameter

ORDERING INFORMATION

Item	Order No.
Cable Distance Meter, take measurements for 6 wires up to a distance of 50 feet (15m), includes carrying bag	CDM-50
Cable Distance Meter, take measurements for 6 wires up to a distance of 75 feet (23m), includes carrying bag	CDM-75

HD Electric Company is committed to ongoing review and improvement of its product lines, and thus reserves the right to modify product design and specifications without notice.

HD Electric Company products are available through HD sales representatives worldwide.

CABLE DISTANCE METER

Operating and Instruction Manual

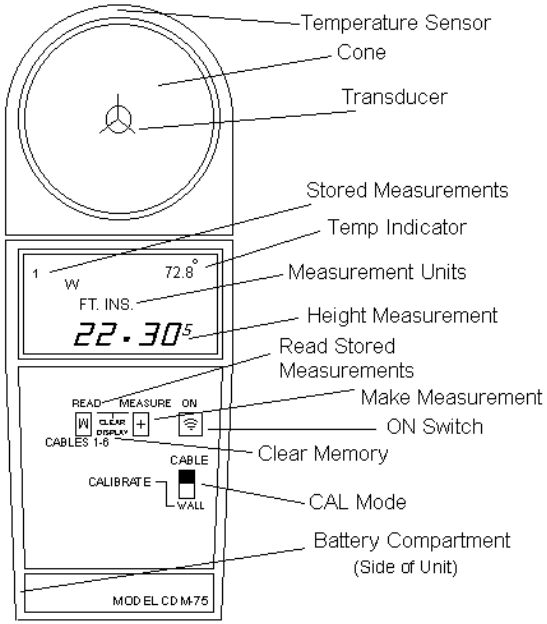
Models CDM-50 CDM-75

HD ELECTRIC COMPANY
1475 LAKESIDE DRIVE • WAUKEGAN, ILLINOIS 60085 U.S.A.
PHONE 847.473.4980 • FAX 847.473.4981 • website: www.HDElectricCompany.com

Introduction

The Cable Distance Meter is a unique, handheld instrument, primarily used for the measurement of the height of overhead cables. The Cable Distance Meters measure up to 6 cables.

The CDM-50 model measures to a height of up to 50 feet (15m). The CDM-75 model has an increased range of up to 75 feet (23m).



The unit operates by transmitting an ultra-sonic signal towards the wires, and measuring the time it takes to pick up the echo from that signal. It automatically compensates for the fact that the speed of sound varies with temperature by monitoring the ambient temperature using the internal temperature sensor. The display continuously shows the ambient temperature reading. Because the temperature sensor reacts relatively slowly to large temperature changes, it is necessary to wait about a minute after taking the meter suddenly from a warm to a cold environment before taking a measurement, e.g. taking the unit from inside a warm vehicle to outside.

To make a measurement

1. Select the required measurement units by setting the switch at the back of the unit to display in feet and inches (**I**) or meters (**M**).

2. Set the Calibrate switch to the **CABLE** position.

2. Press the **ON** key to power on the unit.

3. Position unit directly under the cable(s) to be measured.

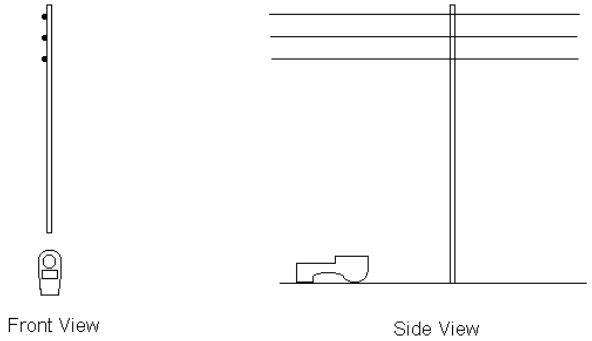
4. Press the **MEASURE** key to take a measurement. The distance to the first cable is shown in the **Height Measurement** location in the display. If there is more than one cable present, the difference in height between each cable is stored in memory.

5. Press the **READ CABLES 1-6** key to display each of the cable height differences stored in memory (**Stored Measurements**).

The unit will automatically turn off 3 minutes after the last key has been pressed.

Hints & Guidelines

Position the unit on the ground, directly underneath the cable to be measured. Align the unit in the direction of the cable, with the cone pointing towards the cable, as shown.



When taking cable measurements, ensure that there are no walls or buildings within a distance of 7 feet (2m) on either side of the meter, as reflections from these will distort the readings. Also ensure there are no trees or other overhanging objects in the vicinity.

When measuring more than one cable, ensure that none of the cables are outside the sonic beam, as shown in the Performance section of this manual. If the cables are not vertically above one another, this could be the case. In this instance, it will be necessary to take a number of separate readings from different positions.

Water and moisture can cause the Cable Distance Meter to malfunction. Therefore, the meter should not be used in rain or snow. If water does get into the cone, leave it upside down in a dry, warm area.

If the display shows - - -.- - -, this indicates a "poor target" and normally happens when the cables are moving due to wind, etc. Wait until the wind dies down to get an accurate reading.

Calibrate Mode

The Calibrate mode switch allows the user to periodically check the unit to ensure that it is still operating within specification. For cable distance measurement, this switch should be in the CABLE position. When the switch is put to the WALL position, horizontal measurements to large objects, e.g. walls, can be taken.

When the unit is first used, a horizontal reading to an object, e.g. wall, from a fixed position should be taken. The reading should be entered, together with the date, into the table below. Whenever the unit is to be checked for accuracy, a reading should be taken from the same point, noting the result and date in the table. If the reading is outside of specification, the unit should be returned to HD Electric for calibration.

Date					
Reading					