



BIDDLE® **CHM Series**

- Dramatically reduces measuring time
- Inherently safe
- Designed for ease-of-use
- Hand-held portability
- Calibration and maintenance free operation
- No physical connection to cables or wires
- Measures the height of up to six overhead cables

Cable Height Meters

DESCRIPTION

The Biddle CHM Series of Cable Height Meters utilize ultrasonic sound to determine the height of up to six overhead cables and wires. The instruments are designed to address specific measuring requirements on cables up to 75 feet (23 m). The CHM600 (C/N 659600) and CHM600E (C/N 659600E) are designed primarily for power cable applications, while the CHM2000 is designed for telecommunication applications.

The Cable Height Meters emit short bursts of sound which originate from the cone shaped transmitter. The microprocessor in the instruments calculates the elapsed time for the bursts of sound to be reflected from the cable back to the instruments. The result can be displayed in either feet and inches or meters. However, before the final measurement can be displayed, the air temperature must be measured because the speed of sound varies at approximately 0.2 percent per degree Celsius.

A temperature sensor, mounted at the front of the instruments, senses the actual air temperature. This information is sent to the microprocessor and incorporated into the algorithm. The

distance is then displayed in meters or feet and inches depending on which was selected.

APPLICATIONS

The Cable Height Meters are capable of measuring the lowest or highest cables (provided it is within range). Additionally the spacing between the next five cables, by selection of "Bottom Up" mode or "Top Down" mode, can be displayed. This is accomplished by standing directly beneath the cable and aligning yourself longitudinally (looking down the line). Simply press the "ON" button to power the instrument up and allow the temperature to stabilize. Press the 'MEASURE' button and if necessary gently "rock and tilt" the instrument until a stable reading is obtained. Applications include measuring cable heights of:

- Telephone lines
- Distribution lines
- Transmission lines
- Cable television (installers and contractors)
- Street lights
- SAG (lowest point to ground)
- Separation between up to six cables

The instrument can be used to ensure that OSHA overhead clearance regulations are met at construction sites. It also provides a safer way to measure cable heights on highly congested roadways.

Additionally the Cable Height Meters offer an easy way to check whether the device has remained in calibration since its purchase date. Switching to 'CAL' mode also allows the instruments to be used indoors.

FEATURES AND BENEFITS

- Ease-of-use — Simple, three button operation ensures fast, effective measurements with a minimum of operator training.
- Compact size — Its light weight and hand-held portability allows easy transport and multiple measurements.
- Inherently safe — No physical connection to cables or wires required to obtain measurement.
- Battery condition indicator — Shows the battery warning symbol when the battery voltage falls to approximately 6 volts.

- Automatic power off — Conserves battery power when idle after three minutes.
- Calibration and maintenance free operation — Minimal down time.
- Pre-selectable measuring modes — Will read in either meters or feet and inches for universal use.
- Six cable measurement capability — Handles almost any field application.
- Quicker measurement of cable height — Saves time and money.

SPECIFICATIONS

Resolution

1/4 inch (5 mm) if ≤ 10 m
 1/2 inch (10 mm) if > 10 m

Accuracy

Typically less than 0.5% error ±2 digits

Power source

9 volt alkaline leak-proof battery (included)

Operating Temperature

14° F to 104° F (-10° C to 40° C) with compensation over the full range.

Storage

Store in dry area. Do not expose to extremes of temperature. Use only leak proof batteries.

Battery Life

> 50,000 Measurements

Dimensions

3 H x 4 W x 8.5 D in
 (70 H x 100 W x 205 D mm)

Weight

1.1 lb (.5 kg)

Measuring Ranges

	(Minimum Cable Size)			
	1.00 in. (24.4 mm)	0.50 in. (12.7 mm)	0.25 in. (6.5 mm)	0.125 in. (3.2 mm)
CHM600 C/N 659600	10 to 50 ft. (3 to 15 m)	10 to 50 ft. (3 to 15 m)	10 to 39 ft. (3 to 12 m)	10 to 32 ft. (3 to 10 m)
CHM600E C/N 659600E	10 to 75 ft. (3 to 23 m)	10 to 50 ft. (3 to 15 m)	— —	— —
CHM2000	7 to 35 ft. (2 to 10.7 m)	7 to 35 ft. (2 to 10.7 m)	7 to 35 ft. (2 to 10.7 m)	7 to 32 ft. (2 to 9.7 m)

Measurement ranges are on the assumption that the air temperature is approximately 68° F (20° C). At lower temperatures, the range increases and conversely, at higher temperatures, the range decreases.



The CHM2000 being used to measure the height of the overhead cable.

ORDERING INFORMATION

Item	Cat. No.
Cable Height Meter, (50 ft. max. height)	659600
Cable Height Meter (75 ft. max. height)	659600E
Cable Height Meter (35 ft. max. height)	CHM2000
Optional Accessory	
Leather case for Cat. No. 659600 and 659600E only	659601