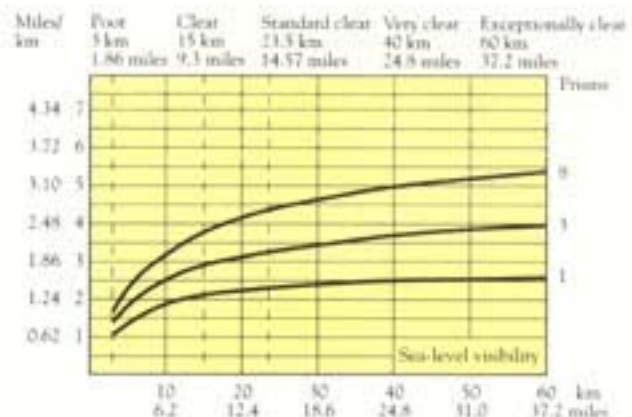


# GEODIMETER® 440

## DISTANCE MEASUREMENT

Range using Geodimeter Prism 571 125 021	Number of Prisms 1 3 8	Standard Clear 2 300 m (1.4 miles) 3 200 m (1.9 miles) 4 300 m (3.0 miles)
Shortest Possible Range	0.2m (0.7 ft)	
Distance Accuracy (M.S.E)	Standard Measurement: $\pm(5 \text{ mm} + 5 \text{ ppm})$ (0.02 ft + 5 ppm) Fast tracking – max 4 m/s (13 ft/s): $\pm(10 \text{ mm} + 5 \text{ ppm})$ (0.03 ft + 5 ppm) Arithmetic Mean Value ( $\bar{D}$ ): $\pm(3 \text{ mm} + 3 \text{ ppm})$ (0.01 ft + 3 ppm)	
Distance Reading (least count)	Standard Measurement 1 mm (0.005 ft) Fast tracking 10 mm (0.01 ft) Arithmetic Mean Value ( $\bar{D}$ ) 1 mm (0.005 ft)	
Measuring Time	Short Range 5 s Long Range 7 s Fast Tracking 0.4 s	
Light Source	Infrared GaAs diode	
Beam Divergence	2.5 mrad (25 cm/100m) (2.5 ft/1000 ft)	
Atmospheric Correction	-60 to 195 ppm continuously	

### Range/Visibility



Maximum range with Geodimeter prism 571 125 021. The range is also dependent on atmospheric conditions and background radiation.

Poor:	Strong haze or very bright sunlight with severe heat shimmer.
Clear:	Light haze or moderate sunlight with light heat shimmer.
Standard clear:	No haze, overcast or moderate sunlight with very light heat shimmer.
Very clear:	No haze, overcast with no heat shimmer or clear with no heat shimmer.
Exceptionally clear:	No haze, overcast with no heat shimmer or clear with no heat shimmer.

## ANGLE MEASUREMENT

Angle Accuracy (DIN 18723)	Standard Measurement/Tracking/ Arithmetic Mean Value ( $\bar{D}$ ): 0.4 mgon = 4 <sup>CC</sup> (1°) Standard deviation based on DIN 18723	Angle Reading (least count)	Standard Measurement/Tracking: 0.5 mgon = 5 <sup>CC</sup> (2°) Arithmetic Mean Value ( $\bar{D}$ ): 0.1 mgon = 1 <sup>CC</sup> (1°) Number of decimals can be specified by the user
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## GENERAL

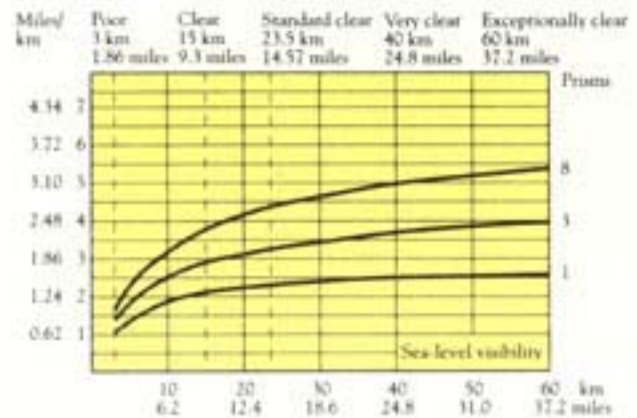
Automatic Level Compensator	2-axis compensator with working range of $\pm 100 \text{ mgon} = 10^{\text{CC}}$ (6°)	Power Consumption	6W, 0.5 A
Levelling	Circular level on tribrach 10/2 mm. Electronic 2-axis level in the LC-display with a resolution of 2 mgon = 20 <sup>CC</sup> (6°)	Battery	Internal rechargeable NiCd battery 12 V, 1 Ah. Operating time 2 h (when using 6W) External rechargeable NiCd batteries are available for up to 12 h operating time
Centering	Optical plumb on tribrach	Aiming	Two speed fine adjustment slow-motion screws
Telescope	Magnification 30X. Focussing range 1.3 m – ∞	Weight	7.9 kg (17.4 lbs) incl. internal battery and tribrach
Operating Temperature	-20°C to +50°C (-5°F to +122°F) -30°C (-22°F) on request	Software	Software available as options: UDS 400, View 400, Edit 400, Pcod 400, SetOut 400, FS/SetOut 400, DistOb 400, Roadline 400, IZ/Z 400, RefLine 400 and all future programs.
Unicom Transmitter	100% modulation Range 1 000 m (0.6 miles)	Memory Devices (options)	Internal Memory 32k (900 points) External Memory 32k (1 500 points)
Tracklight (Optional)	Built in dual-intensity lamp		
Data Input/Output	Geo I/O Two-way communication RS-232C		

# GEODIMETER® 424

## DISTANCE MEASUREMENT

Range using Geodimeter Prism 571 125 021	Number of Prisms 1 3 8	Standard Clear 2 300 m (1.4 miles) 3 200 m (1.9 miles) 4 300 m (3.0 miles)
Shortest Possible Range	0.2m (0.7 ft)	
Distance Accuracy (M.S.E)	Standard Measurement: $\pm(5 \text{ mm} + 5 \text{ ppm})$ (0.02 ft + 5 ppm) Fast tracking – max 4 m/s (13 ft/s): $\pm(10 \text{ mm} + 5 \text{ ppm})$ (0.03 ft + 5 ppm) Arithmetic Mean Value ( $\bar{D}$ ): $\pm(3 \text{ mm} + 3 \text{ ppm})$ (0.01 ft + 3 ppm)	
Distance Reading (least count)	Standard Measurement 1 mm (0.005 ft) Fast tracking 10 mm (0.01 ft) Arithmetic Mean Value ( $\bar{D}$ ) 1 mm (0.005 ft)	
Measuring Time	Short Range 5 s Long Range 7 s Fast Tracking 0.4 s	
Light Source	Infrared GaAs diode	
Beam Divergence	2.5 mrad (25 cm/100m) (2.5 ft/1000 ft)	
Atmospheric Correction	-60 to 195 ppm continuously	

### Range/Visibility



Maximum range with Geodimeter prism 571 125 021. The range is also dependent on atmospheric conditions and background radiation.

Poor:	Strong haze or very bright sunlight with severe heat shimmer.
Clear:	Light haze or moderate sunlight with light heat shimmer.
Standard clear:	No haze, overcast or moderate sunlight with very light heat shimmer.
Very clear:	No haze, overcast with no heat shimmer or clear with no heat shimmer.

## ANGLE MEASUREMENT

Angle Accuracy (DIN 18723)	Standard Measurement/Tracking/ Arithmetic Mean Value ( $\bar{D}$ ): 0.6 mgon = 6 <sup>CC</sup> (2°) Standard deviation based on DIN 18723	Angle Reading (least count)	Standard Measurement/Arithmetic Mean Value ( $\bar{D}$ ): 0.1 mgon = 1 <sup>CC</sup> (1°) Tracking: 0.5 mgon = 5 <sup>CC</sup> (2°) Number of decimals can be specified by the user
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## GENERAL

Automatic Level Compensator	2-axis compensator with working range of $\pm 100$ mgon = 10 <sup>CC</sup> (6°)	Power Consumption	6W, 0.5 A
Levelling	Circular level on tribrach 10 <sup>7</sup> /2 mm. Electronic 2-axis level in the LC-display with a resolution of 2 mgon = 20 <sup>CC</sup> (6°)	Battery	Internal rechargeable NiCd battery 12 V, 1 Ah. Operating time 2 h (when using 6W) External rechargeable NiCd batteries are available for up to 12 h operating time
Centering	Optical plumb on tribrach	Aiming	Two speed fine adjustment slow-motion screws
Telescope	Magnification 30X. Focussing range 1.3 m – ∞	Weight	7.9 kg (17.4 lbs) incl. internal battery and tribrach
Operating Temperature	-20°C to +50°C (-5°F to +122°F) -30°C (-22°F) on request	Software	Software available as options: UDS 400, View 400, Edit 400, Pcod 400, SetOut 400, FS/SetOut 400, DistOb 400, Roadline 400, IZ/Z 400, RefLine 400 and all future programs.
Unicom Transmitter	100% modulation Range 1 000 m (0.6 miles)	Memory Devices (options)	Internal Memory 32k (900 points) External Memory 32k (1 500 points)
Tracklight (Optional)	Built in dual-intensity lamp		
Data Input/Output	Geo I/O and RS-232C Two-way communication		

# GEODIMETER® 444

## DISTANCE MEASUREMENT

Range using Geodimeter Prism 571 125 021	Number of Prisms	Standard	Clear
	1	3 300 m	(2.0 miles)
	3	4 500 m	(2.8 miles)
	8	6 000 m	(3.7 miles)
16	7 000 m	(4.4 miles)	

**Shortest Possible Range** 0.2m (0.7 ft)

**Distance Accuracy (M.S.E)** Standard Measurement:  
 $\pm(5 \text{ mm} + 5 \text{ ppm})$  (0.02 ft + 5 ppm)  
 Fast tracking – max 4 m/s (13 ft/s):  
 $\pm(10 \text{ mm} + 5 \text{ ppm})$  (0.03 ft + 5 ppm)  
 Arithmetic Mean Value (D):  
 $\pm(2 \text{ mm} + 3 \text{ ppm})$  (0.007 ft + 3 ppm)

**Distance Reading (least count)** Standard Measurement 1 mm (0.005 ft)  
 Fast tracking 10 mm (0.01 ft)  
 Arithmetic Mean Value (D) 1 mm (0.005 ft)

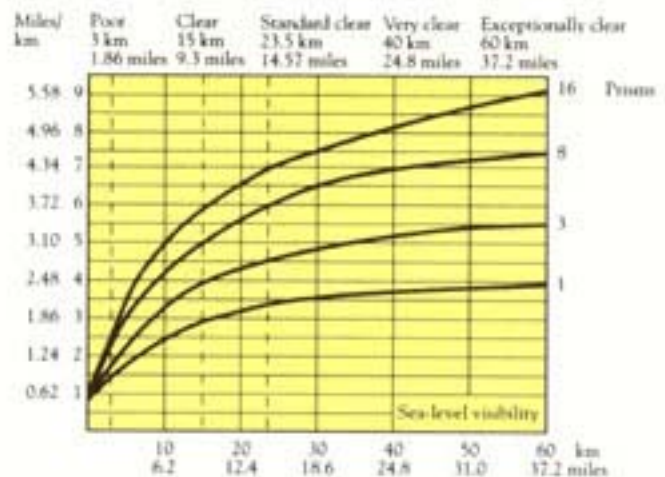
**Measuring Time** Short Range 5 s  
 Long Range 7 s  
 Fast Tracking 0.4 s

**Light Source** Infrared GaAs diode

**Beam Divergence** 2.5 mrad (25 cm/100m) (2.5 ft/1000 ft)

**Atmospheric Correction** -60 to 195 ppm continuously

### Range/Visibility



Maximum range with Geodimeter prism 571 125 021. The range is also dependent on atmospheric conditions and background radiation.

**Poor:** Strong haze or very bright sunlight with severe heat shimmer.  
**Clear:** Light haze or moderate sunlight with light heat shimmer.  
**Standard clear:** No haze, overcast or moderate sunlight with very light heat shimmer.  
**Very clear:** No haze, overcast with no heat shimmer or clear with no heat shimmer.  
**Exceptionally clear:** No haze, overcast with no heat shimmer or clear with no heat shimmer.

## ANGLE MEASUREMENT

**Angle Accuracy (DIN 18723)** Standard Measurement/Tracking/  
 Arithmetic Mean Value ( $\bar{D}$ ):  
 $0.3 \text{ mgon} = 3^{\text{CC}}(1^{\circ})$   
 Standard deviation based on DIN 18723

**Angle Reading (least count)** Standard Measurement/Arithmetic Mean Value ( $\bar{D}$ ):  $0.1 \text{ mgon} = 1^{\text{CC}}(1^{\circ})$   
 Tracking:  $0.5 \text{ mgon} = 5^{\text{CC}}(2^{\circ})$   
 Number of decimals can be specified by the user

## GENERAL

**Automatic Level Compensator** 2-axis compensator with working range of  $\pm 100 \text{ mgon} = 10^{\text{CC}}(6^{\circ})$

**Levelling** Circular level on tribrach  $10^{\circ}/2 \text{ mm}$ .  
 Electronic 2-axis level in the LC-display with a resolution of  $2 \text{ mgon} = 20^{\text{CC}}(6^{\circ})$

**Centering** Optical plumb on tribrach

**Telescope** Magnification 30X. Focussing range 1.3 m -  $\infty$

**Operating Temperature**  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  ( $-5^{\circ}\text{F}$  to  $+122^{\circ}\text{F}$ )  
 $-30^{\circ}\text{C}$  ( $-22^{\circ}\text{F}$ ) on request

**Unicom Transmitter** 100% modulation  
 Range 1 000 m (0.6 miles)

**Tracklight (Optional)** Built in dual-intensity lamp

**Data Input/Output** Geo I/O and RS-232C  
 Two-way communication

**Power Consumption** 6W, 0.5 A

**Battery** Internal rechargeable NiCd battery 12 V, 1 Ah. Operating time 2 h (when using 6W)  
 External rechargeable NiCd batteries are available for up to 12 h operating time

**Aiming** Two speed fine adjustment slow-motion screws

**Weight** 7.9 kg (17.4 lbs) incl. internal battery and tribrach

**Software** Software available as options:  
 UDS 400, View 400, Edit 400, Pcod 400, SetOut 400, FS/SetOut 400, DistOb 400, Roadline 400, IZ/Z 400, RefLine 400 and all future programs.

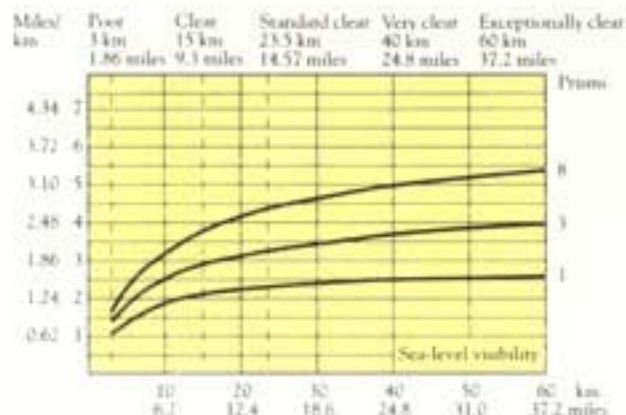
**Memory Devices (options)** Internal Memory 32k (900 points)  
 External Memory 32k (1 500 points)

# GEODIMETER® 460

## DISTANCE MEASUREMENT

Range using Geodimeter Prism 571 125 021	Number of Prisms 1 3 8	Standard Clear 2 300 m (1.4 miles) 3 200 m (1.9 miles) 4 300 m (3.0 miles)
Shortest Possible Range	0.2m (0.7 ft)	
Distance Accuracy (M.S.E)	Standard Measurement: ±(5 mm + 5 ppm) (0.02 ft + 5 ppm) Fast tracking – max 4 m/s (13 ft/s): ±(10 mm + 5ppm) (0.03 ft + 5 ppm) Arithmetic Mean Value ( $\bar{D}$ ): ±(3 mm + 3 ppm) (0.01 ft + 3 ppm)	
Distance Reading (least count)	Standard Measurement 1 mm (0.005 ft) Fast tracking 10 mm (0.01 ft) Arithmetic Mean Value ( $\bar{D}$ ) 1 mm (0.005 ft)	
Measuring Time	Short Range 5 s Long Range 7 s Fast Tracking 0.4 s	
Light Source	Infrared GaAs diode	
Beam Divergence	2.5 mrad (25 cm/100m) (2.5 ft/1000 ft)	
Atmospheric Correction	-60 to 195 ppm continuously	

### Range/Visibility



Maximum range with Geodimeter prism 571 125 021. The range is also dependent on atmospheric conditions and background radiation.

Poor	Strong haze or very bright sunlight with severe heat shimmer.
Clear	Light haze or moderate sunlight with light heat shimmer.
Standard clear	No haze, overcast or moderate sunlight with very light heat shimmer.
Very clear	No haze, overcast with no heat shimmer or clear with no heat shimmer.

## ANGLE MEASUREMENT

Angle Accuracy (DIN 18723)	Standard Measurement/Tracking/ Arithmetic Mean Value ( $\bar{D}$ ): 0.6 mgon = 6 <sup>CC</sup> (2°) Standard deviation based on DIN 18723	Angle Reading (least count)	Standard Measurement/Arithmetic Mean Value ( $\bar{D}$ ): 0.1 mgon = 1 <sup>CC</sup> (1°) Tracking: 0.5 mgon = 5 <sup>CC</sup> (2°) Number of decimals can be specified by the user
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## GENERAL

Automatic Level Compensator	2-axis compensator with working range of ±100 mgon = 10 <sup>CC</sup> (6°)	Power Consumption	7-8W, 0.5 A
Levelling	Circular level on tribrach 10 <sup>CC</sup> /2 mm. Electronic 2-axis level in the LC-display with a resolution of 2 mgon = 20 <sup>CC</sup> (6°)	Battery	Internal rechargeable NiCd battery 12 V, 1 Ah. Operating time 1.5 h (when using 8W) External rechargeable NiCd batteries are available for up to 10 h operating time
Centering	Optical plumb on tribrach	Aiming	Servo-driven. Endless fine-adjustment screws
Telescope	Magnification 30X. Focussing range 1.3 m – ∞	Weight	9.5 kg (21 lbs) incl. internal battery and tribrach
Operating Temperature	-20°C to +50°C (-5°F to +122°F) -30°C (-22°F) on request	Software	Software available as options: UDS 400, View 400, Edit 400, Pcod 400, SerOut 400, PS/SetOut 400, DistOb 400, Roadline 400, IZ/Z 400, RefLine 400 and all future programs.
Unicom Transmitter	100% modulation Range 1 000 m (0.6 miles)	Memory Devices (options)	Internal Memory 32k (900 points) Internal Memory 128 k (3 600 points) External Memory 32k (1 500 points)
Tracklight (Optional)	Built in dual-intensity lamp		
Data Input/Output	Geo I/O and RS-232C Two-way communication.		