

**PENTAX** | R-1500N Series

# Total Surveying Solution

- Long EDM range measuring distance in reflectorless up to 500m and in prism mode up to 3,000m
- Large internal memory: 60000 points.
- Dual display as a standard equipment
- Easy transfer to a PC via SD card, USB mini and RS-232C data port
- Pre-loaded versatile software functions
- Dual battery system for long time use



**INCREASE YOUR  
WORK EFFICIENCY**

**FASTER  
TURNAROUND**



Model		R-1501N	R-1502N	R-1503N	R-1505N
<b>Telescope</b>	Image			Erect	
	Magnification			30 x	
	Effective Aperture			45mm	
	Resolving Power			3.0"	
	Field of View			1°20'	
	Minimum Focus			1.0m	
	Focus			Manual	
	Laser Class			Visible Laser: Class IIIa (Reflectorless, sheet) / Class I (Prism)	
<b>Measurement Range (Good condition) *3</b>					
	Reflectorless *1			1.5 ~ 500m	
	Reflector Sheet *2			1.5 ~ 800m	
	Mini Prism			1.5 ~ 800m	
	1P			1.5 ~ 3000m	
	3P			1.5 ~ 5000m	
<b>Accuracy</b>	Prism			±(2+2ppm x D)mm	
	Reflector Sheet			±(3+2ppm x D)mm	
	Reflectorless			2.0m ~ 200m: ±(3+2ppm x D)mm	
				200m ~ 300m: ±(5+2ppm x D)mm	
			300m ~ 500m: ±(10+2ppm x D)mm		
Minimum Count			0.1mm (Fine mode), 1mm (Normal mode), 10mm (Track mode)		
<b>Measurement Time *4</b>	Repeat Meas.	Fine (0.1mm)		Prism / Ref.sheet 3.0sec., Ref.less 3.0sec. (over 300m 5.0sec.)	
		Normal (1mm)		Prism / Ref.sheet 2.0sec., Ref.less 2.0sec. (over 300m 4.0sec.)	
		Track (10mm)		Prism / Ref.sheet 0.4sec., Ref.less 0.4sec. (over 300m 0.4sec.)	
	Initial Meas.	Fine (0.1mm)		1.5 ~ 300m 3.5sec., over 300m ~ 13sec.	
		Normal (1mm)		1.5 ~ 300m 2.4sec., over 300m ~ 12sec.	
		Track (10mm)		1.5 ~ 300m 2.5sec., over 300m ~ 12sec.	
<b>Angle Measurement</b>	Measuring Method			Absolute rotary encoder	
	Detection Method			Vertical / Horizontal angle	
				2 sides	
	Minimum Count			1" / 5"	
Accuracy (ISO17123-3)		1"	2"	3"	5"
<b>Compensator</b>				2 axis	
<b>Compensator range</b>				3' 30"	
<b>Tangent Screw</b>				1 Speed/Clamping (<30°)	
<b>Sensitivity of Vials</b>	Plate Level			30"/div. (electrical)	
	Circular Level			8'/2mm	
<b>Plummet</b>				Visible Laser, ±0.5mm (instrument height 1.5m)	
<b>Base</b>				Detachable	
<b>Dust and Water Protection</b>				IP55 (instrument only)	
<b>Ambient Temperature</b>				-20°C ~ 50°C / -4°F ~ 122°F (Working range)	
<b>Tripod Thread</b>				5/8" x 11	
<b>Dimensions/Weight</b>	Dimensions			183 (W) x 342(H) x 167(L)mm	
	Weight (incl. Battery)			5.4 kg	
<b>Carrying Case</b>				440(W) x 370 (H) x 275 (L)mm /3.9 kg	
<b>Battery Pack</b>	Power Source			Li-ion 2,500mAh X 2 = 5,000mAh (hotswap)	
	Operation Time			Continuous approx. 9.0 hrs (ETH+EDM) with approx. 2.5hrs. of charging time	
	Weight			5400g	
<b>Battery Charger and AC Adapter</b>					
	Input Voltage (AC05)			AC 100 ~ 240V	
	Output Voltage (BC05)			DC8.4V	
<b>Data Process</b>	Data Recording Method			Internal Memory	
	Capacity / Coordinates Data			Up to 2GB / 60000	
	Special Function			PowerTopoExpress 2	
	I/F			RS-232C, SD CARD, USB mini, Bluetooth (class2)	
<b>Display / Keyboard</b>	Display Type			Graphic LCD / 20 characters x 8 lines / 240 x 96 pixels	
	Quantity			2	
	Keys			22 each (12 numeric / 5 function / 5 special)	
<b>Display Back Light</b>				Intensity settings: 10 steps	
<b>Laser Pointer</b>				Yes	
<b>Date Clock</b>				Yes	

\* Specifications are subject to change without notice

- \*1 The measurement range and accuracy of reflectorless, and time required to measure may vary by the shape, size of surface area and reflection rate of the target and its environment.  
The measurement range of reflectorless is determined by the white side of the Kodak Gray Card.
- \*2 Reflector sheet: Genuine Reflector sheet
- \*3 The measurement range may vary by conditions of the environment.  
Normal conditions: 20km visibility with slight shimmer  
Good conditions: 40km visibility with overcast, no heat, no shimmer and moderate wind.
- \*4 EDM measuring time is determined in good conditions. It may takes longer than usual to measure the distance exceeding 4000m in prism mode and 300m in reflectorless mode.

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