



## PHASER Model V1000

*Portable Velocity Meter*



Reliable  
Non-Insertion  
Velocity  
Measurements



### Easy to Use

To take velocity measurements, point the PHASER Model V1000 at the water's surface and turn it on. You can measure the water's surface velocity flowing towards or away from you with unparalleled accuracy and reliability.

### Outstanding Features

- Proven technology
- Works at shallow flow depths
- Easy to read LCD with backlight
- Both vertical and horizontal angle compensation
- Rechargeable AA cells
- Rugged field tested case





## PHASER Model V1000 Specifications

### General

Type	Handheld Directional Doppler radar
Accuracy	+/-0.1 ft/s (+/-0.03 m/s)
Ambient Operating Temperature	-22 deg F to +158 deg F (-30 deg C to +70 deg C)
Angle Compensation	Vertical and Horizontal
Controls	Mode, Select, Power
Display	LCD with backlight
Features	DSP, 32-bit processing, user selectable directional modes (away, towards, or both)
Finish	Black, scratch resistant, powder coated
Frame	Rugged ABS polycarbonate blend
Maximum Humidity	90% relative humidity @ 98.6 deg F
Power	Six (6) NiMH AA cells or detachable 12 Vdc power cable with lighter plug
Speed Measurements	Feet-per-second or meters-per-second
Speed Range	.1 ft/s to 43 ft/s (0.03 ms/s to 13 m/s)
Standard Warranty	2 years parts and labor
Water Resistance	Meets International Standard, IEC 529.1989 and European Community Standard EN60529 Classification IP55

### Mechanical

Dimensions	10.25 by 3 by 7.25 in. (H x W x L) (26.3 by 7.6 by 18.4 cm)
Weight	2.1 pounds (0.925 kg)

### Microwave

FCC Identifier	HTRCR-1K
Frequency	24.150 GHz nominal (K Band)
Beam Width	12 degrees nominal
Polarization	Linear
Power Density	<= 1 mW/cm
Power Output	7 mW nominal

### Features

Bi-directional	Measures the speed coming towards or away from the gun
Angle Compensation	Compensates for the cosine error that occurs when the gun is not directly in line (parallel) with the target
Horizontal Angle Compensation	Adjustable from 0 deg to 45 deg in increments of 5 deg to compensate for cosine angle error
Vertical Angle Compensation	Tilt sensor automatically compensates for vertical error

### Electrical - Power

Power Requirements	Six (6) AA NiMH cells or detachable 12 Vdc power cable with lighter plug
Voltage Range	+6.1 Vdc to +8 Vdc
Low Voltage Shutdown	+6.1 Vdc
Detachable Cable	Plugs into automobile lighter outlet

### Power Consumption, Backlight ON

Standby (antenna off)	0.105 A
Antenna ON (no target)	0.170 A
Antenna OFF (with target)	0.172 A
Antenna OFF (segment check)	0.166 A
Antenna ON (segment check)	0.180 A