

LR 1050DD LONG RANGE ALIGNMENT DIGITAL LASER THEODOLITE

The ultra versatile and compact LR1050DD can back site as well as turn horizontal and vertical angles down to 5 arc seconds while delivering the maximum allowable 5 milliwatts of laser power to your forward target. This gives you the power and precision to tackle the toughest long range alignment applications.



LR 1050DD shown with straight beam

FREQUENT APPLICATIONS:

- PIPE JACKING
-
- MICRO TUNNELING
-
- OFFSHORE DREDGING
-
- MINING
-
- TUNNELING
-
- CONVEYOR ALIGNMENT
-
- CENTERLINE CONTROL



LR 1050DD shown with fan lens

FEATURES LR 1050DD DIGITAL LONG RANGE LASER THEODOLITE

The LR1050DD was designed for long range distance alignment applications where the ability to turn an angle is desired or required. The LR1050DD features a large, easy to read LCD Direct Reading Digital Display for horizontal and vertical angles. This adds versatility in hard to set up locations, allowing the operator to turn angles from a known point. A foresight is not a necessity. The laser beam is fixed

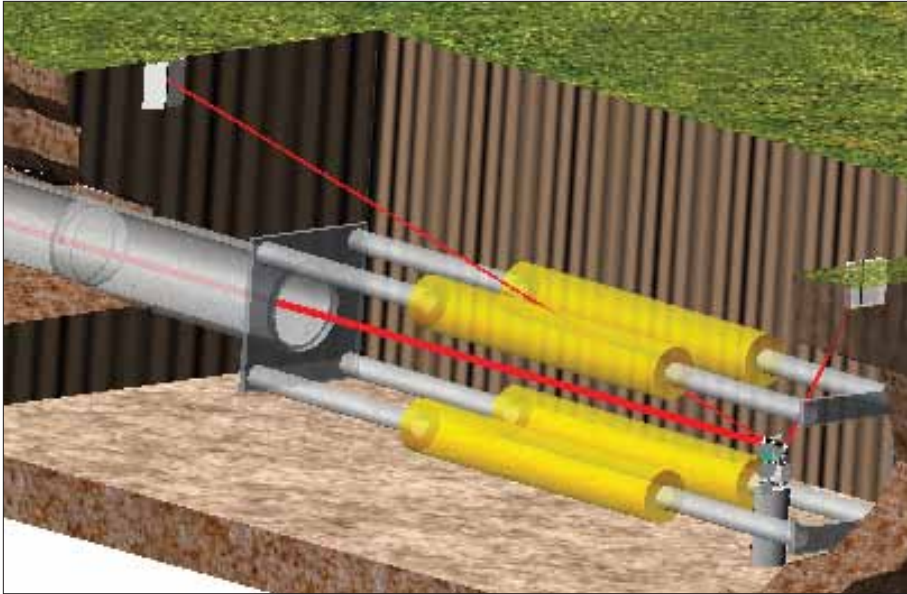
High power 5 mW
ultra long range laser
Maximum grade range – read in
degrees or percent of grade
Ability to back-site
Digital display of horizontal and
vertical angle down to 5 arc seconds
Bright 30x spotting scope
Use as theodolite or as a laser control
Low power drain
Compact
Accurate • Reliable • Stable

to the vertical cross hair of the spotting scope, thus eliminating the need for a reflector or penta prism as a foresight.

The laser beam is fixed focused to infinity. This provides the smallest possible spot over the longest possible distance.

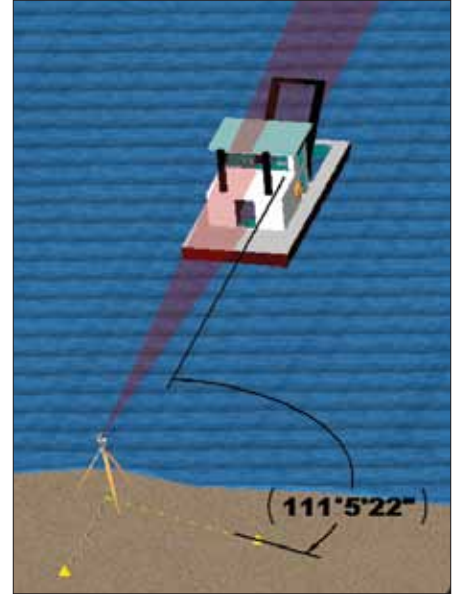
5 milliwatts of power assures you of more range to target area even in adverse weather or when shooting through a series of forward targets.

Typical Jacking Pit or Micro Tunneling Setup



The LR1050DD allows you to pick up centerline at top of pit, both at the front and rear, to wiggle in for precise line control. Once line is established, the LR1050DD is set to grade, giving you both line and grade for your operation.

Typical Marine Alignment Application



The LR1050DD used with a fan lens allows you to back site to pick up centerline, or turn a precise angle for centerline.

LASER SPOT SIZE CHART

DISTANCE	DIAMETER	DISTANCE	DIAMETER
500' (152m)	0.8" (2.0cm)	2000' (610m)	1.7" (4.3cm)
1000' (305m)	1.1" (2.8cm)	2500' (762m)	2.0" (5.1cm)
1500' (457m)	1.4" (3.6cm)	5280' (1609m)	4.0" (10.2cm)

NOTE: Atmospheric conditions can reduce the working range of the laser by distorting and/or apparently enlarging the laser spot at distance. For "line and grade" applications, in good conditions, 2,000 feet (610 meters) is about the maximum range. For center line control, using a fan lens, out to four miles (6,436 meters) or more is not uncommon.

ACCESSORIES

Fan Lens 2000-0035

Changes laser beam from a spot to a vertical plane of laser light. The fan lens expands the laser beam in the vertical direction at 1320 feet per mile while maintaining the horizontal width expansion at 4 inches per mile. Use with T-2000 Series lasers.

Power Converter 1140

Converts 110 or 220 VAC to 12 VDC. Internally protected from short circuits and overloads. Resets automatically – no fuses or circuit breakers. Use with all models.

Universal Tunnel Mount 2000-10

An ultra solid, yet versatile multi-positioning platform for all models of lasers. The mount gives you the ability to both horizontally and vertically position the laser to the pre-determined point that you require. In addition to offering tremendous versatility for your laser positioning, it is very rugged and stable.

LR 1050DD SPECIFICATIONS

Laser	635nm class IIIA
Power	5mW (Nominal)
Beam Diameter	.07" at exit. See chart for distance.
Power	10-14 VDC at 0.1 amps per hour
Telescope	30x with stadia
Optical Plummet	2.2x
Leveling Base	3 screw tribrach
Accuracy	5 or 10 arc second selectable
Height	12 7/8" (30.70 cm)
Length	7 5/16" (17.78 cm)
Width	6 7/16" (15.64 cm)
Operating Temperature	0° / 120° F (-18° / +50° C)
Storage Temperature	-40° / +150° F (-40° / +65° C)
Shipping Weight	29 Lbs (13.2 kg)

