

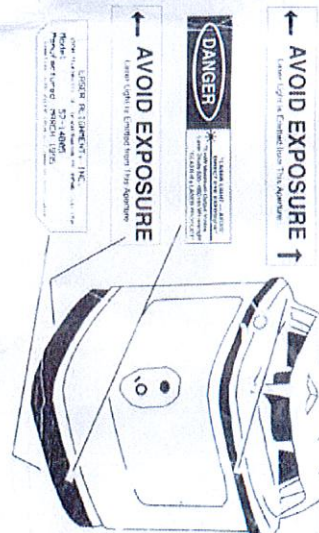
A Safety Instructions

- Read and understand this manual before operating the LB-9.
- Use only the Charger provided to recharge the LB-9's battery pack. Other Chargers can cause damage.
- Do not stare into the laser beam.
- Avoid pointing the laser light in the direction of other people.
- Whenever possible, set up the LB-9 so the laser light is above or below "eye-level."
- The LB-9 has three safety and information labels. Do not remove or damage these labels. See the "Federal (U.S.) Safety Information" below for locations.
- Operators must follow all instructions and must make periodic alignment checks when using the LB-9. Laser Alignment, Inc. or its representatives assume no responsibility for improperly installed material or improper use including any direct or indirect damage or loss of profits.

A Federal (U.S.) Safety Information

This laser product has been manufactured in accordance with the U.S. Department of Health and Human Services, and is designed to provide a product that can be safely used.

Warning: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. All repairs requiring the opening of the housing must be performed by a Laser Alignment, Inc. authorized service center.



Warranty

Laser Alignment, Inc. warrants all products it manufactures to be free of defects in materials and workmanship under normal use and service for a period of 12 months, provided that the product has been properly used and cared for as stated on the warranty registration card.

Laser Alignment, Inc.'s liability under this warranty is limited to repairing or replacing any component returned to the factory or an authorized service center for that purpose. The purchaser will pay one-way shipping costs to the nearest authorized service center. Warranty repairs made in the field by a factory-trained technician will be covered by the above warranty for parts and labor. Travel and other expenses incurred are not covered and are the responsibility of the purchaser.

The Warranty Registration Card must be completed and returned to Laser Alignment, Inc. in order to

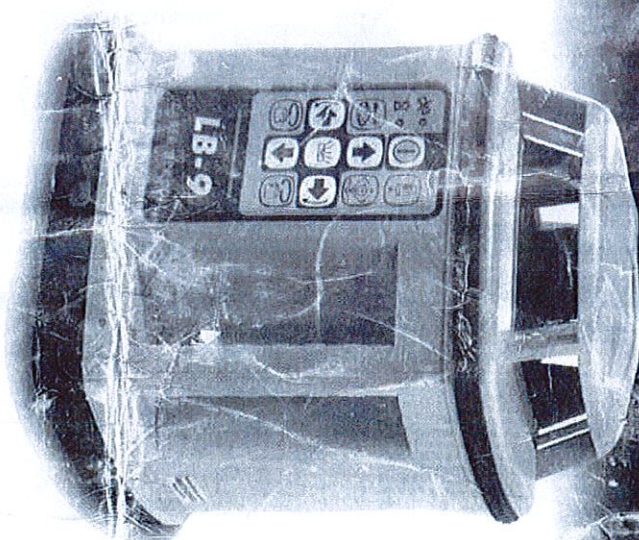
validate the warranty. This will eliminate the need to show a proof of purchase at some later date.

Any evidence of negligence, damage, abuse, or attempted repair of the product other than by a factory-trained and authorized technician using factory-certified replacement parts will automatically void the warranty.

The purchaser is expected to follow all operating instructions, periodically checking the product and the work as it progresses. Maintaining the calibration of the product is the purchaser's responsibility.

The foregoing states the entire liability of Laser Alignment, Inc. in connection with the product, and they shall not be held responsible for any consequential or incidental loss or damages of any kind. The foregoing is in lieu of all other warranties expressed or implied.

LASER BEACON® LB-9



Reference Manual

Fold out this manual for operation and functional information for the LB-9 and its accessories. See the *Set-up, Troubleshooting & Calibration Manual* for set-up, calibration and troubleshooting procedures. Read and understand both these manuals before using the LB-9.

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Patent Pending
Laser Beacon is a registered trademark of Laser Alignment, Inc.

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Laser Alignment, Inc., Proprietary Information

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LB-9 Function Description

Rechargeable Nicad Battery Pack — Provides power to the LB-9. The battery pack is integrated into the LB-9 design. To remove the battery pack, turn the screw 1/4 turn counterclockwise and pull to slide the Battery Pack outward. To re-attach the battery pack, make sure the Laser Alignment Inc. logo is facing up, align the battery pack, push it in completely, push in the screw, and turn the screw 1/4 turn clockwise to lock it.

A fully charged nicad battery pack will operate the LB-9 for over 30 hours. The charge jack for the charger is located under the slotted attachment screw.

Bottom Plumb Beam (Model 9135) — Provides a point up to 16 ft. (5 meters) from the bottom of the LB-9. The Bottom Plumb Beam is always 90° to the Rotating Beam.

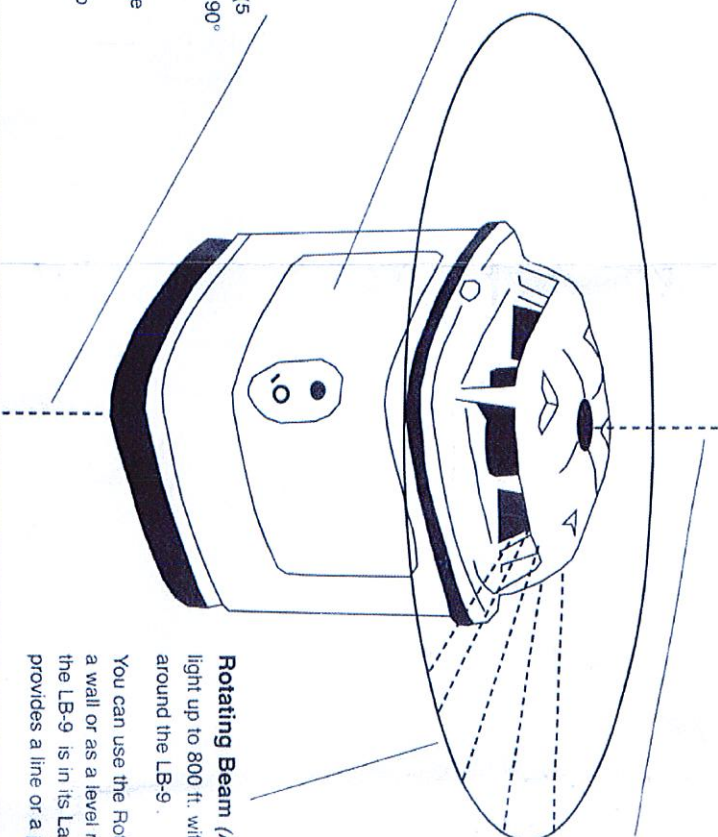
You can use the Bottom Plumb Beam to align the LB-9 with a point on the floor. When the LB-9 is in its Laydown position, the Bottom Plumb Beam provides a reference line that is always in the opposite direction of the Top Plumb Beam.

Power Button — Controls power to the LB-9.
Note: When power is applied to the LB-9, it continues operation with the same settings as when it was turned off. For example, if the Rotating Beam was rotating at 10 rps in Manual Mode, the LB-9 begins operation with the Rotating Beam at 10 rps in Manual Mode.

Off-Level Indicator — A red LED that indicates when the LB-9 is in Manual Mode. The indicator blinks rapidly to warn you that the LB-9 can not self-level itself in Manual Mode.

Low Battery Indicator — A red LED that indicates when the battery charge is low. The LB-9 can not operate when the Low Battery Indicator is lit.

Rotation Speed Button — Controls the speed of the Rotating Head. The Rotation Head has five speed selections: 0, 1, 2, 5, and 10 revolutions per



Top Plumb Beam (Optional) — Provides a point up to 300 ft. (91 m) from the top of the LB-9. The Top Plumb Beam is always 90° relative to the Rotating Beam.

You can use the Top Plumb Beam to locate a point on the ceiling that corresponds to a point on the floor. When the LB-9 is in its Laydown position, the Top Plumb Beam provides a reference line you can adjust, but is still always 90° relative to the Rotating Beam. This is useful for establishing 90° layout points.

Rotating Beam (All Models) — Provides a plane of laser light up to 800 ft. with sensor (242.25 m) in an area 360° around the LB-9.

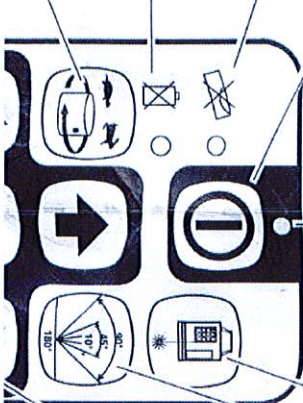
You can use the Rotating Beam to create a horizontal line on a wall or as a level reference for taking grade checks. When the LB-9 is in its Laydown position, the Rotating Beam provides a line or a point reference for a vertical plane.

Bottom Plumb Beam Button (9135) — Allows you to turn on and off the Bottom Plumb Beam. To conserve battery power, you should turn on the Bottom Plumb Beam only when you need it.

Scan Sweep Button — Allows you to select an area for the Rotating Beam to scan instead of completing a full 360° revolution. The Rotating Beam has five scan area selections: 0°, 10°, 45°, 90°, and 180°. The scan area increases each time you press the button. After 180°, the head stops (0°).

Note: If the rotating head is rotating 360° and you press the Scan Sweep Button, the head begins to scan at the area that was last selected.

Head Tilt (Arrow) Buttons — Control the tilt of the rotating head when in Manual Mode and Calibration Mode. (The (↖) and (↗) buttons function in Automatic Mode when the LB-9 is in Laydown.) By tilting the head, you can manually tilt the Rotating Beam and position the optional Plumb Beams.



Laser Emission Indicator — A green LED that indicates when the LB-9 is emitting a laser beam. The indicator blinks rapidly when power is first applied to the LB-9 and then is lit whenever the Rotating Beam is on. (The indicator blinks when the LB-9 is in Automatic Mode and is self-leveling.)

Note: If the rotating head is scanning and you press the Rotation Speed Button, the head begins to rotate at the speed that was last selected.

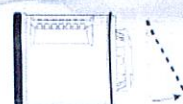
Auto/Manual Button — Allows you to change the operation mode of the LB-9 between Automatic and Manual.

- **Automatic Mode.** The laser beams self-level. (If the LB-9 is in Laydown position, you can use the  and  buttons to position the laser beams.)
- **Manual Mode.** You must use the Head Tilt Buttons to position the laser beams.

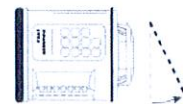


Rotation Direction Buttons — Allow you to position the Rotating Beam by moving it clockwise or counterclockwise when it is stopped or is scanning. Pressing a button moves the Rotating Beam in small increments. Pressing and holding a button moves the Rotating Beam more quickly.

 The Rotating Head tilts in the direction shown. In Laydown, the Top Plum Beam moves **upward**.



 The Rotating Head tilts in the direction shown. In Laydown, the Top Plum Beam moves from **right to left**.



 The Rotating Head tilts in the direction shown. In Laydown, the Top Plum Beam moves **downward**.



 The Rotating Head tilts in the direction shown. In Laydown, the Top Plum Beam moves from **left to right**.



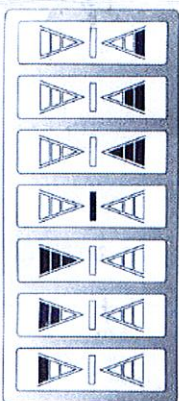
Rod-Eye 8 Function, Description and Specifications

Rod-Eye 8 Specifications

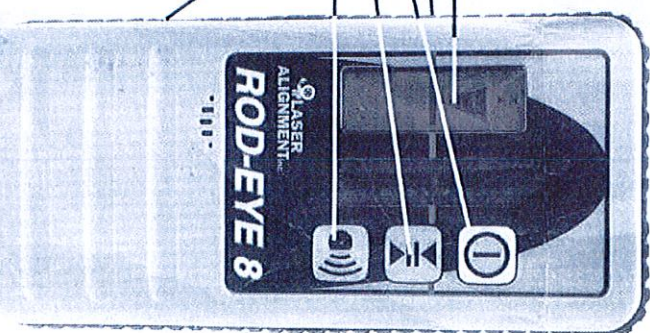
Bandwidths	$\pm 1/32"$ ($\pm .75$ mm)
	$\pm 1/16"$ (± 1.5 mm)
	$\pm 1/8"$ (± 3 mm)
Display channels.....	Seven distinct channels
Speaker Volume.....	High, Low and Off
Auto shutoff.....	After 6.5 minutes of non use
Filtering	Sunlight and electro-magnetically (EMI) filtered
Memory	Indicates the last position of the sensor relative to the laser beam
Reception Angle.....	160°
Offset Mark	2" (50 mm) from the top of the sensor
Dimensions	6.6 x 3 x 1" (169 x 77 x 27 mm)
Weight.....	10 ozs. (275 g)
Seal.....	Waterproof, gasket seal
Battery Type/Life	9 Volt Alkaline/3 months with typical usage

The Rod-Eye® 8

- Liquid crystal displays on front and back
- 2" (5 cm) offset marks on sides of the sensor
- Off/On power switch
- Accuracy selection switch
- Speaker volume switch
- 9 Volt battery compartment on rear.



Seven Channel Readout



Rod-Eye 8 Function

The LB-9 provides a horizontal plane of light rotating a full 360°, which establishes accurate elevations over an entire jobsite. The Rod-Eye 8 Sensor electronically senses the plane of laser light. The sensor can be hand held or clamped to any standard survey rod.

The function of the Rod-Eye Sensor is to give immediate and accurate reference information regarding the position of the sensor in the plane of laser light.

OPTIONAL ACCESSORIES

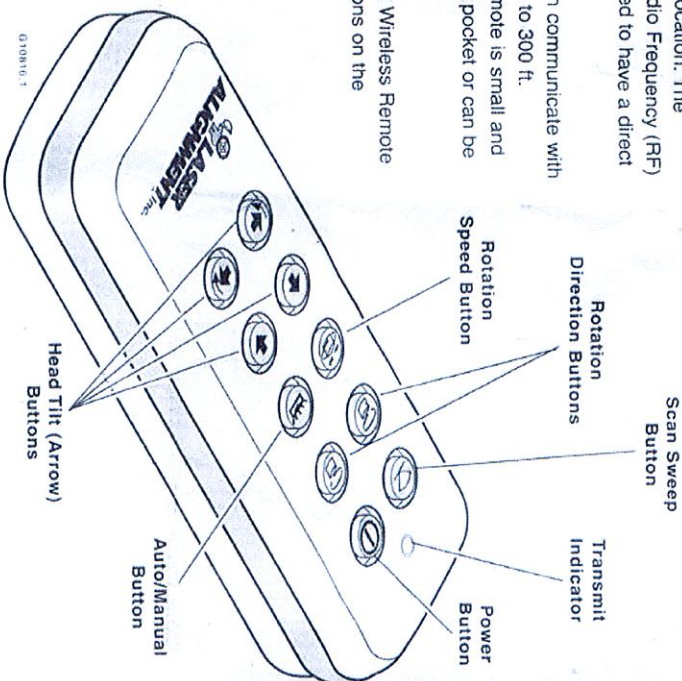
Wireless Remote

Allows you to control nearly every function of the LB-9 from a remote location. The Wireless Remote is a Radio Frequency (RF) device, so you do not need to have a direct line-of-sight to the LB-9.

The Wireless Remote can communicate with the LB-9 at distances up to 300 ft. (90 m). The Wireless Remote is small and easily portable. It fits in a pocket or can be clipped to belt.

Note: The buttons on the Wireless Remote are the same as the buttons on the LB-9's Control Panel. Unfold this manual for a function description of each button.

The Lithium battery in the remote has a life expectancy of five years (nominal).



Laser Beacon LB-9 Specifications

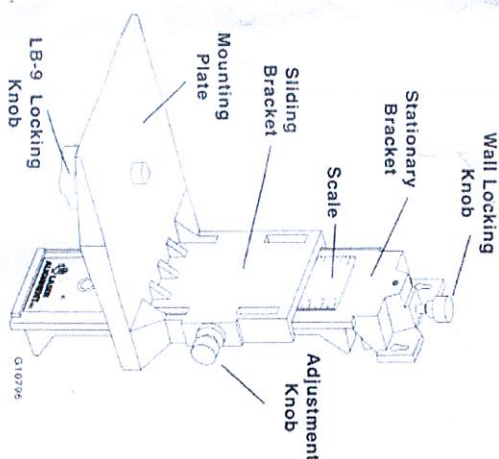
Weight with Battery Pack	6.4 lb. (2.9 kg)
Dimensions	7 x 7 x 9 in. (175 x 175 x 225 mm)
Operating Temperature	0 to 113°F (-18 to 45°C)
Storage Temperature	-40 to 149°F (-40 to 65°C)
Rotation Speeds	0, 1, 2, 5, 10 rps
Scan Sweep Selections	0°, 10°, 45°, 90°, 180°
Self-Leveling Range	±5° (Upright & Laydown)
Horizontal Accuracy	±12 arc sec (1/8" @ 100' or 1.7 mm @ 30 m)
Battery Operation	Nicad, over 30 hours
Working Range	Rotating Beam, over 800' (240 m) Top Plumb Beam, over 300' (90 m) Bottom Plumb Beam, 16' (5 m)
Wavelength (All Beams)	635 nm
Laser Output	3 mW Nominal
Laser Classification	3a/IIa
Waterproof	IPX7

Wallmount Assembly (43190-01)

Allows you to mount the LB-9 on a wall at the necessary height. For example, if you are installing a ceiling, you mount the LB-9 so the Rotating Beam is 2 in. (50 mm) below ceiling height.

The Rotating Beam then provides a reference height, and the LB-9 does not interfere with other work in the jobsite.

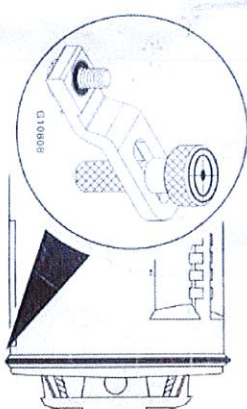
To adjust the height of the LB-9's Rotating Beam, loosen the Adjustment Knob, move the sliding bracket until the laser light intersects the necessary height on the Scale, and tighten the Adjustment Knob.



Adjustable Foot (45703-01)

Allows you to position the LB-9 directly over a point corresponding to its laser light's point of origin. The Adjustable Foot replaces the standard foot in the top position on the LB-9.

You can then pivot the LB-9 around a known point to align or square the laser light to a distant point.



Ceiling Grid Target (46905-01)

Allows you to visually detect the rotating beam throughout a jobsite. The ceiling grid targets magnet attaches to the bottom of a ceiling grid. You can then adjust the grid relative to where the Rotating Beam is hitting the Target.

For most applications, set up the target so the laser light hits the back. View the laser light from the front translucent side or from the back reflective side.

Miscellaneous...

Carrying Case (45626-01)

Provides a convenient place to store and transport your LB-9 and accessories.

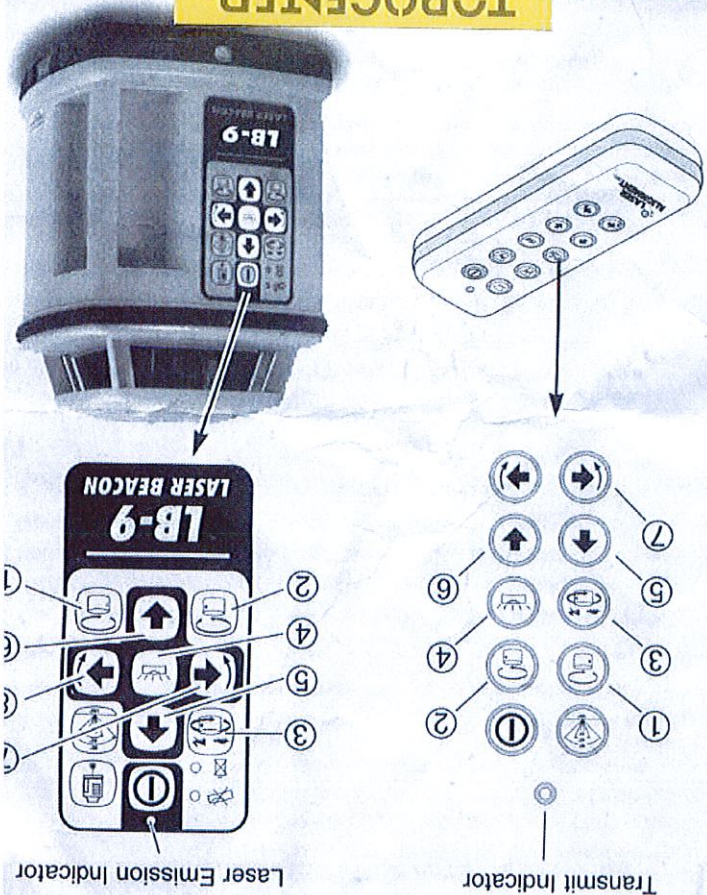
Chargers

Allows you to recharge the LB-9's nicad battery pack from a standard electrical outlet.

P/N 42911-01 — 110 VAC input

P/N 43211-01 — 220 VAC input

Note: The LB-9 operates and the nicad battery pack recharges when connected to the charger.



Einstellung Fernbedienung 9000

ung: Mit der Funkfernbedienung können gleichzeitig mehrere Geräte bedient werden. Sie deshalb jede(n) Fernbedienung/Laser in einem anderen Kanal zu verhindern, daß mehrere Geräte mit einer Fernbedienung bedient werden können.

drahtlose Fernbedienung arbeitet mit dem Rotationslaser 9000 über eine Verbindung mit einer Frequenz von 433.92 MHz. Unten wird beschrieben, wie der Laser die Fernbedienung programmiert werden müssen, damit diese in dem gleichen Kanal arbeiten. Alle Geräte werden in der Grundeinstellung Kanal 8 versandt.

rücke und halte, die nachstehenden Tasten an der Fernbedienung:



s die LED-Anzeige aufleuchtet. Nach 15 Sekunden muß das Programmieren begonnen werden, sonst erfolgt Rücksetzen auf die Grundeinstellung.

rücke ein Kanal/Zeichen (1-7) (den gleichen Kanal wie am Laser). Die LED an der Fernbedienung blinkt zwischen ein und sieben Mal und zeigt somit den eingestellten Kanal an.

rücke und halte die nachstehenden Tasten an der Frontplatte des Lasers:



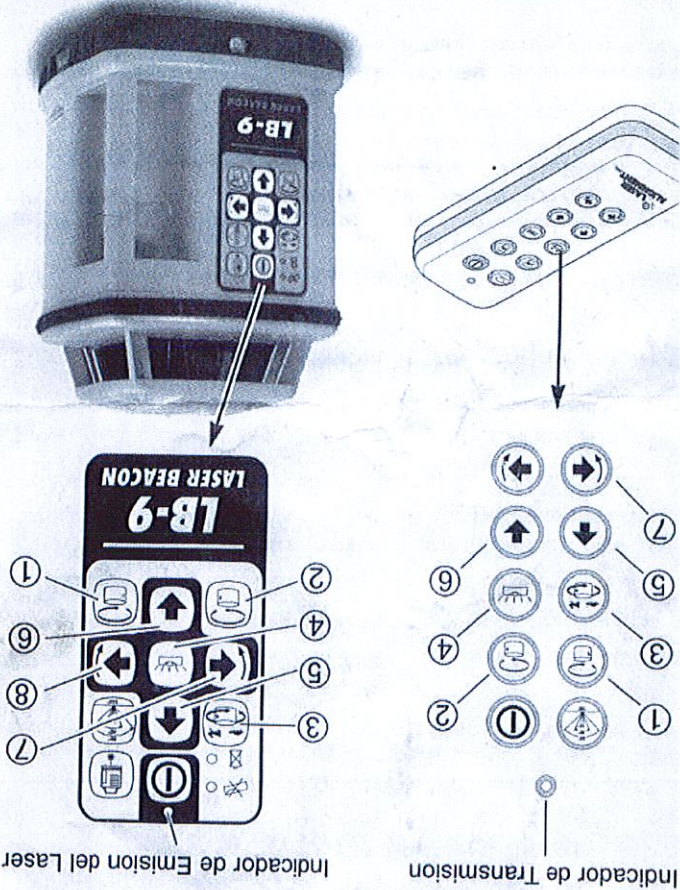
e Laser Emissionsanzeige blinkt schnell und leuchtet anschließend konstant.

ücke eines Kanal/Zeichen (1-7) am Laser (den gleichen Kanal wie an der Fernbedienung). Die LED am Laser blinkt zwischen ein und sieben Mal und zeigt mit den eingestellten Kanal an.

ücke ① um die Einstellung abzuspeichern und den Laser abzuschalten.

reichweite der Fernbedienung liegt bei ca. 90 m. Wände und andere Hindernisse trächtigen die Reichweite.

hte: Der Laser allein kann auf Kanal 8 ➡ eingestellt werden, der Kanal auf den Geräte bei Auslieferung eingestellt sind.



Comment Utiliser la Télécommande Sans Fil

La télécommande sans fil communique avec la série des lasers 9000 par transmission de signaux fréquence radio (RF). Suivre cette procédure pour programmer la télécommande et le laser afin qu'ils soient sur le même canal de fréquence radio (RF).

1. Appuyez et maintenez les touches ➡, ⊞, et ① sur la télécommande jusqu'à ce que l'indicateur de transmission s'allume. Vous avez 15 secondes pour exécuter l'étape 2.

2. Appuyez sur un bouton pour choisir un canal. (Voir les illustrations au dos.) L'indicateur de transmission clignote entre 1 et 7 fois pour indiquer qu'il est sélectionné.

3. Appuyez et maintenez les touches ➡, ⊞, et ① sur le laser et pressez ensuite la touche ①.

L'indicateur d'émission laser clignote puis reste allumé.

4. Répétez l'étape 2 sur le laser. L'indicateur d'émission laser clignote pour indiquer le canal sélectionné.

5. Appuyez sur ① pour sauvegarder la sélection et éteindre le laser.

Note: De multiples canaux fréquence radio (7) permettent l'utilisation de plusieurs télécommandes sur un chantier. Programmez chaque télécommande/laser sur leur propre canal pour éviter de multiples manipulations laser avec une seule télécommande. La portée approximative de transmission de la télécommande est d'environ 90 m de rayon autour de l'appareil (murs et autres obstacles réduisent cette portée).

Note: Seul le Laser Beacon a un canal 8, qui est le canal programmé lors de l'envoi du matériel. Ceci empêche tout accident de mise en route du laser avec le télécommande.