

## ***Chapter 3***

# ***Maintenance and Specifications***

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## **Maintenance**

Cleaning the exit window is the only maintenance required. A dirty window may affect scanning accuracy.

- Do not allow any abrasive material to touch the window.
- Remove any dirt particles with a damp cloth.
- Wipe the window using a tissue moistened with ammonia/water.
- Do not spray water or other cleaning liquids directly into the window.
- Do not remove the nose of the scanner.

## **What If...**

**Nothing happens when you follow the operating instructions.**

**You Should:**

- Check the system power.
- Make sure the controller is programmed to decode bar codes of the symbology you are scanning.
- Check for loose cable connections.
- Make sure the symbol is not defaced.
- Try scanning test symbols of the same code type.

If after performing these checks the symbol still does not scan, contact your distributor or call the Symbol Support Center. See *Symbol Support Center* on page ii for the telephone number.

## Accessories

### Standard Accessories

Part Number	Description
70-08041-0X	LT 1800 Product Reference Guide
70-16681-0X	LT 1800/1830 Quick Reference Guide
50-01400-184	Shipping Box

One of Following Cables:

25-06751-01	Standard 9-Pin D Straight Cable
25-08184-01	15-Pin Primary Scanner Port Straight Cable (LL 500)
25-05611-03	9-Pin D Coil Cable for PDT 3300
25-06859-01	RJ-41 Coil Cable for PDT Model 1510
25-08185-01	DB9 UDI Portable Terminal Coil Cable

### Optional Accessories

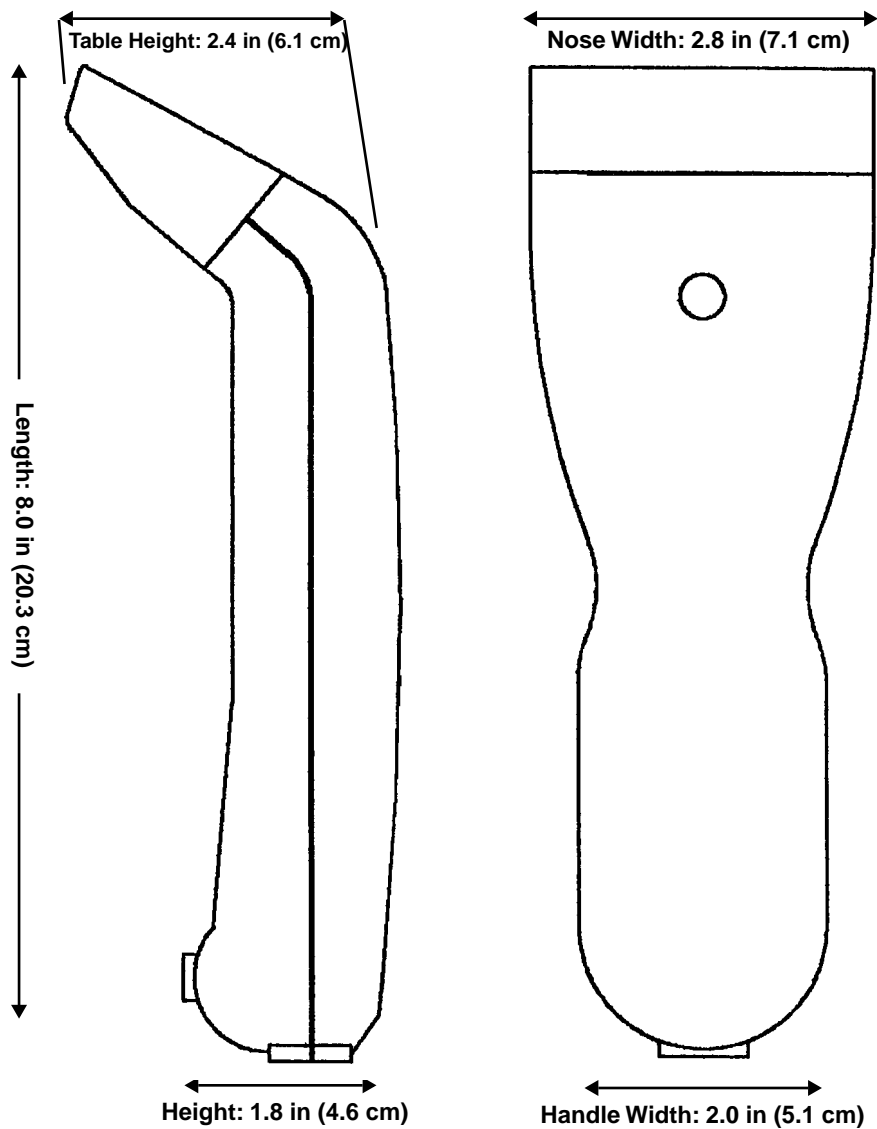
Optional accessories, supplied at extra cost, include additional units of any item listed above and the following items:

Part Number	Description
20-12769-01	Hands-Free Stand - Desk Mount (non-adjustable)
20-08414-01	Hands-Free Stand - Free Standing (adjustable)
20-08415-01	Hands-Free Stand - ECR Mount (adjustable)
21-08288-02	Desk-Mount Stand
21-08288-01	Desk-Mount Stand with Base
23-08253-01	Wall-Mount Stand
20-08416-01	Holster/Belt Clip

## Technical Specifications

ITEM	DESCRIPTION
<b>Power Requirements</b>	4.75 to 14 VDC; 99 mA @ 5 VDC Typical
<b>Decode Capability</b>	Determined by interface controller
<b>Decode Depth of Field</b>	Maximum typical working distance is 5.0 in. (12.70 cm) (100% UPC/EAN); minimum element width resolution is 5.5 mils
<b>Scan Repetition Rate</b>	Approximately 40 ( $\pm$ 3) scans/sec (bidirectional)
<b>Skew Tolerance</b>	$\pm$ 35° min. (from normal)
<b>Pitch Tolerance</b>	-20° to +60° (from normal)
<b>Print Contrast Minimum</b>	25% minimum reflectance differential, measured at 675 nm.
<b>Ambient Light Immunity</b>	Immune to direct exposure to normal office and factory lighting conditions, as well as direct exposure to sunlight.
<b>Durability</b>	5 ft (152 cm) drops to concrete
<b>Operating Temperature</b>	32° to 104°F (0° to 40°C)
<b>Storage Temperature</b>	-40° to 140° (-40° to 60°C)
<b>Straight Cable Length</b>	6 ft (183 cm)
<b>Coil Cable Length (extended)</b>	5 ft (152 cm)
<b>Weight (without cable)</b>	6.0 oz. (170 gm)

## LT 1800 Dimensions



## LT 1800 Signal Descriptions

The following signal descriptions apply to the connection between the scanner and the cable, and are for reference only.

PIN	SIGNAL NAME	FUNCTION
1,2	<b>Power</b>	This pin is to be connected to the 4.75 to 14 V (4.75 to 14 VDC) power supply. When pin 4 is high, current to operate the scanner is supplied by pin 1,2 (99 mA @ 5 VDC). When pin 4 is at ground potential, current into pin 1 and 2 is less than 50 $\mu$ A.
3	<b>Ground</b>	Power supply and signal ground return line.
4	<b>Enable</b>	When the decode logic senses that the trigger has been pulled, this input must be driven high (+2.4 to +14 V into a 10 kilohm load) to power-up the scanner electronics and turn on the laser and resonating harmonic scan element. As soon as a decode is successfully completed, if no decode occurs after about 1 second, or when the trigger is released, this input should float or be driven to ground (less than .4 V) to power-down the scanner.
5	<b>Start of Scan</b>	This output synchronizes the decode logic with the scanner. The output is high when the beam sweeps in one direction and low when it sweeps in the opposite direction. This open collector signal is capable of sinking 25 mA. An external pullup resistor may be connected to any voltage up to 20 V. The frequency of scans is 40 scans/sec.
6	<b>Trigger Switch</b>	This output is grounded when the trigger is pulled and floating when the trigger is released. The decode logic uses this switch to signal that the operator wishes to read a bar code.
7	<b>Decode LED and Beeper</b>	This input to the scanner controls the green decode indicator LED and sounds the beeper. Applying a voltage of 2.5 V or greater will light the LED. Maximum voltage that can be applied to this input is 15 V, at which time the input will draw about 3 mA. This current decreases as the voltage is lowered. The decode LED can be activated with this input even when the scanner is not operating, providing power is present at pin 1 or 2. The beeper sounds if the input is toggled at a frequency of 2.5 kHz.

PIN	SIGNAL NAME	FUNCTION
<b>8</b>	<b>Digitized Bar Pattern</b>	Output from the scanner is electrically identical to pin 5, providing a series of pulses with widths proportional to the widths of the bar code elements being scanned. A low output represents a bar, and a high output represents a space. The frequency of the pulses depends on the density of the symbol being scanned.
<b>10</b>	<b>Laser Enable</b>	This input should float or be driven high (+4 to 14V) to operate the scanner laser. When Pin 10 is at ground (less than .4V) the laser and scan LED will power down.

