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Symbol LS4278 Review

Product: LS4278
Manufacturer: Symbol
Type: Cordless Laser Barcode Scanner
Support: 3-Year Warranty through Symbol with lifetime Scan Engine Warranty; Lifetime support from POSGuys.com

The Symbol LS4278 cordless barcode scanner is Symbol's entry into the cordless retail scanning market. It features a rasterizing scan pattern and optional PDF417 decoding capabilities.

Typical uses and environments:
The LS478 would find best use in larger retail environments, warehouses, or light industrial applications. Symbol's aggressive scan engine technology allows it to work in medium and possibly even high volume scanning environments.

Unique Features & Advantages:
To aid in scanning of dirty, damaged, or poorly printed barcodes, the LS4278 features a rasterizing scan pattern which can be enabled via the included quick-start guide.

Standard Features:
The LS478 ships in multiple boxes, for barcode scanner, charging/communications cradle, and cabling. Fortunately, Symbol has created kits that include the parts necessary to get up and running quickly. A quick-start guide is included with the scanner to allow you to perform the most common configurations, such as setting the scanner into BlueTooth mode or adding a carriage return at the end of a scan.

Performance Testing:
To determine the scanning capabilities of the Symbol LS4278, we ran it through a battery of tests designed to reveal the optimal scan range, resistance to light, highest density scanned, widest barcode scanned, and radio range. We tested model LS4278-TRBU0100ZWR, which is the USB interface kit. Our tests showed that the LS4278 is an excellent cordless barcode scanner for its class.

The optimal scan range for the Symbol LS4278 scanning a 100% UPC-A barcode was from .25 inches to 21 inches, about in line with Symbol's advertised range of 0-19 inches. This is excellent for retail as well as inventory management, allowing products to stay in scanning range even when out of reach. The highest density barcode our LS4278 could read was 4.9 mil, much denser than is experienced in retail environments.

The Class II laser in the scan engine allows the LS4278 to be fully immune to indoor and outdoor light, excellent for scanning in any environment. If barcodes are dirty or damaged, such as those on gardening materials, the LS4278 can be configured to scan in a raster mode, quickly sweeping the beam across the barcode to aid in scanning accuracy.

The only weak point on the LS4278 dealt with radio range. At about 70 feet, the barcode scanner would lose communications with its base station, but would reconnect easily when it was back in range. This range is much lower than the competition, though would be ideal for retail locations or smaller warehouses looking for a cordless barcode scanner. Symbol advertises a 50' scanning range, so our test unit did beat expectations.

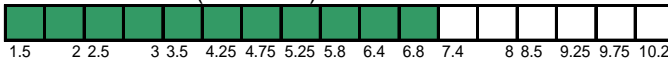A breakdown of the Symbol LS4278 capabilities is listed in table and graph form below.

Scanner Performance Testing

Scan Range (Depth of Field)

1"   5"   10"   15"   19"
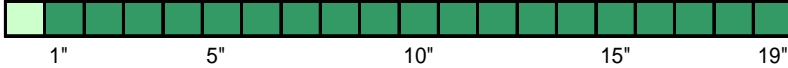
Excellent Scan Range
for retail environments

Wide Barcodes (In Inches)

1.5   2 2.5   3 3.5   4.25 4.75 5.25 5.8   6.4   6.8   7.4   8 8.5   9.25 9.75 10.2

Scans well above standard
retail/light industrial sizes

High Density Barcodes (In Mil)

2.1   3.8   5.8   7.1   8.8   11   12   14   16   17   22   27   32   37   42   48   53   58   68   84
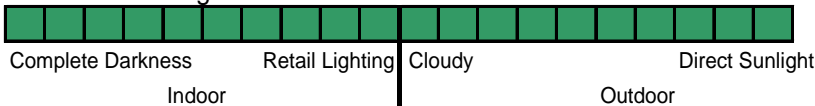
Standard range for retail
and industrial barcode density

Poor Quality Barcodes*

1 2 3 4 5 6 7 8 9 10

Could read every damaged
barcode. Excellent for light industrial use

Resistance to Light

Complete Darkness   Retail Lighting Cloudy   Direct Sunlight

Indoor   Outdoor

Full Light Immunity

Radio Range (in meters)

25   50   75   100
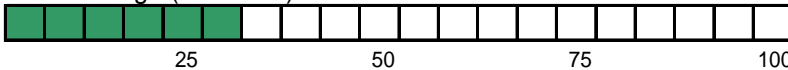
Standard Radio Range
for retail environments

1D Results

Highest Density Barcode Scanned	4.9mil	Good
Widest Barcode Scanned	172.72mm	Great
Shortest Barcode Scanned	38 mm	Good
Range Ideal Conditions (Standard 100% UPC-A)	.25 inches – 21 inches	Average
Scratched Barcode	3 of 3	Good
Worn Barcode	3 of 3	Good
Warped Barcode	2 of 2	Good
Curved Barcode	2 of 2	Good
Multiple Barcodes in close proximity	Relatively accurate, can become difficult when in raster mode	Average
Scan through plastic layers	14 Layers	Good
Multicolored Barcodes Successfully Scanned	Blue, Grey, Black on brown	Good
Multicolored Barcodes Not Scanned	Red, Yellow, Black on Dark Grey	Average
Simulated Sunlight Test	Full light immunity	Excellent

Conclusion:
The Symbol LS4278 barcode scanner provides excellent mobile barcode scanning. While the 70' radio range seems short, it should be more than enough for most retail locations, and the scanning range and optional raster mode put it well ahead of its class.

To Purchase this product, go to the Symbol LS4278 page.

To see our complete line of barcode scanners, visit our Barcode Scanners section.

For Additional Reviews, visit our Product Reviews page.

	Ideal Setting	Description
LS4278	Retail, Light Industrial, Rough Retail	The LS4278 features a rasterizing scan pattern, 21" scan range and 70' radio range to scan barcodes easily in your warehouse or retail location.
LS4208	Retail, Light Industrial Environments, Rough Retail	Similar features to the LS4278, the LS4208 is the cabled version
LS3578	Heavy Industrial Environments	More durable than the LS4278, the LS3578 features a fuzzy logic or extended range scan engine to aid in scanning damaged or long range barcodes, respectively.

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