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Metrologic Solaris Review

Product: Solaris
Manufacturer: Metrologic
Type: Omnidirectional Scanner
Support: 2 Year warranty through Metrologic; lifetime support through posguys.com.

The [Metrologic MS7820 Solaris](#) mini-slot scanner keeps checkout lines moving with its aggressive scan engine that scans at 1800 scan lines per second. Featuring a large scanning window for accurate scanning on the first pass, the Solaris combines reliability with excellent performance.

Typical uses and environments:
The overall small footprint of the Metrologic Solaris allows it to easily fit into existing scanner enclosures, eliminating the need for any changes to the current check stand arrangement. Ideally, the Solaris would be used with small items in high volume retail environments, including drug stores or grocery stores.

Unique Features & Advantages:
Setting itself apart from other scanners in its class, the Solaris provides a number of exceptional features. One of the greater advantages of the Solaris is its integrated RF EAS antenna that provides loss prevention. It comes equipped in each scanner, eliminating the need for extra demagnetizing pads.

Another feature that grants optimum convenience is the troubleshooting diagnostic indicator display. When the scanner comes across operation malfunctions, a green, single digit error code appears in the upper left corner of the scanner. The codes range from 0 to 9, including everything from ram error to EAS error. A complete list of the error codes can be found in the Installation and User's Guide. Additionally, the Solaris uses remote flash upgrades and software configurations to provide fast service while reducing on-site service calls.

Touch screen technology was used to create the face of the Solaris, which comes with three buttons. The buttons consist of a volume button to increase or decrease the volume of the scan tone without having to scan any barcodes, a tone button to change the pitch of the scan tone with seven different options or no tone at all, and a power save button that allows the scanner to be put into power save mode when it is not in use.

The touch screen, scratch resistant scan window also features a flat surface without any ridges that eliminates debris accumulation and facilitates quick and simple cleaning. For further protection, Metrologic provides an optional slide-on field replaceable window that slides on directly in front of the current window, which reduces repairs of damaged screens. The slide-on window would be suitable for high volume retail locations with rough merchandise.

Standard Features:
Items in the box include the scanner, cable, power supply, configuration guide, and user's guide. Once the scanner has power, a defaults barcode of the correct interface must be scanned, after which the Solaris can start scanning items.

Standard with the Solaris comes multiple on board interfaces, including RS232, KBW, USB, and IBM, which are covered by a plastic cable cover. Above the cable cover rests a large multi-material round Metrologic logo.

Characteristically of Metrologic products, the Solaris has LED status lights to confirm the state of the scanner. The light on top of the screen will be a constant blue when the scanner has power. Once a barcode has been scanned successfully, the light will flash blue and the scan tone will play a beep.

Aside from the slide-on cover for the screen, other protective measures include two strips of rubber used to prevent the scanner from slipping. The rest of the body does not have any rubber; however the likelihood of the Solaris falling off the counter should be minimal.

If you prefer a stand for the Solaris over resting it on the counter, or mounted in-counter, Metrologic offers an optional 6.3" gooseneck stand. The stand's dimensions are 5.9" by 5.2" and will provide more flexibility to scan medium sized objects.

Drawbacks:
The only drawback we came across with the Solaris is that it cannot easily scan large items as it does not have a tilting function unless you order the stand. It could be picked up if necessary to scan the larger items since it's less than two pounds, but was not designed to do so. Luckily, Metrologic provides answers to this dilemma by adding an auxiliary port to attach a hand held scanner that can easily scan larger items. A scale can also be added to the port, creating a more accurate account of inventory by incorporating weight for items like produce.

Performance Testing:
In testing the Metrologic Solaris' capabilities, we ran it through a set of tests involving optimal scan range, ability to scan wide barcodes, dense barcodes, damaged barcodes, and light resistance. Our testing determined the scanner to perform slightly above its class.

When testing scan range, we used a UPC barcode and determined the Solaris to have an optimal range from contact to 10" out before scanning became unsuccessful. This range falls into the average for omnidirectional scanners. It could read down to 7.1 mils, which is also average for its class. Wide barcodes were read up to 6.4inches or 162.5mm. In most retail environments, barcodes will not exceed beyond a couple inches. The curved and scratched barcodes were hardly any problem for the Solaris. Reading down to 4.9mil high density barcodes at contact, puts the Solaris high on the list for aggressive omnidirectional barcode scanners.

While performing the tests, we noticed that the greatest advantages of the Solaris were the spotlight test and overall aggressive scan engine. It could read a standard barcode when the spotlight was only 6" away, which is very good for omnidirectional scanners. Additionally, the scan engine proved to be very aggressive; most impressively the Solaris could scan a barcode as it passed by the beams after being dropped or thrown past the scanner.
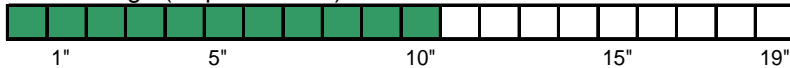
There was not a lot in the way of shortcomings, however the Solaris missed some of the worn and warped barcodes, setting it at average for damaged barcodes overall.

A breakdown of the Metrologic Solaris capabilities is listed in table and graph form below.

Scanner Performance Testing
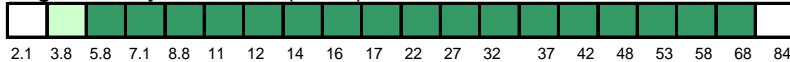
Scan Range (Depth of Field)

1"   5"   10"   15"   19"

Standard 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

Standard range for
retail 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
barcode density

Poor Quality Barcodes*

1	2	3	4	5	6	7	8	9	10
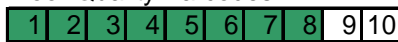
Could read almost every damaged
barcode. Good for retail use

Resistance to Light

Complete Darkness   Retail Lighting | Cloudy   Direct Sunlight
          Indoor   Outdoor
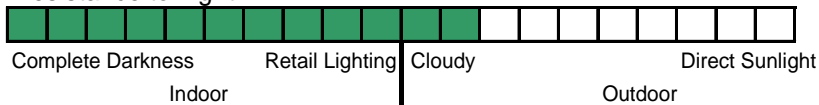
Above average light resistance

1D Results

Highest Density Barcode Scanned	4.9mil	Good
Widest Barcode Scanned	162.5mm	Good
Shortest Barcode Scanned	38 mm	Good
Range Ideal Conditions (Standard 100% UPC-A)	0 inches – 10 inches	Average
Scratched Barcode	3 of 3	Good
Worn Barcode	2 of 3	Average
Warped Barcode	1 of 2	Average
Curved Barcode	2 of 2	Good
Multiple Barcodes in close proximity	Relatively accurate, but dependent on distribution of barcodes relative to thickness of beam	Average
Scan through plastic layers	8 Layers	Good
Multicolored Barcodes Successfully Scanned	Blue, Green, Black on Brown	Good
Multicolored Barcodes Not Scanned	Red, Yellow, Grey	Average
Simulated Sunlight Test	Correct scans until spotlight was at 6"	Great

Conclusion:

The Metrologic Solaris has a variety of features that sets it apart from other scanners, helping to make barcode scanning more convenient. This scanner effectiveness helps reduce the overall cost of owning a barcode scanner. The best conditions for the Solaris would be up to high volume scanning in retail or grocery applications.

To Purchase this product, go to the **Metrologic Solaris** page.

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

For Additional Reviews, visit our **Product Reviews** page.

Metrologic Scanners	Ideal Setting	Description
Metrologic Solaris	High Volume Retail and Grocery	An Omnidirectional scanner that can be in counter or used sitting on top of the counter with or without optional stand. Uses an aggressive scan engine. Has EAS antenna and troubleshoot diagnostic display.
Metrologic Orbit	High Volume Retail and Grocery	An Omnidirectional scanner with the option of white or black models, a tilting head, and has an aggressive scan engine.
Metrologic QuantumT	Medium to High Volume Retail and Grocery	An omnidirectional scanner with a small footprint that is slightly more economically priced than the Orbit. It also includes single-line scanning.
Metrologic Fusion	High Volume Retail	An omnidirectional scanner with option of handheld and includes code gate technology. The head tilts more than the QuantumT and Orbit and it is a more durable scanner.

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