White Reader®
DATA MATRIX CODES

PRODUCT PRESENTATION

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White Reader®: the reader for DataMatrix codes engraved on surgical instruments

Who needs the White Reader®'s new technology ?

The new White Reader® is recommended for:

• **Medical sterilization department managers**
who want to follow up, one by one, their surgical instruments. They can be confident, with the White Reader®, that the set of instruments is checked and complete,

• **Hospital CFOs**
who want to identify how many instruments the structure exactly needs to work properly. With the White Reader®, they will automatically know how many sterilizations have been done with each instrument and when they will have to order new ones (maintenance reasons).

Since the project started, ergonomics has been a main issue. Thanks to a partnership with doctors and sterilization professionals, it has been developed in order to ensure a comfortable use and an optimum efficiency.

The White Reader® is the best solution because:

• its ergonomics (adjustable stand, aiming window…) offers comfort and rapidity to sterilization operators,

• its efficiency helps the hospitals with the inventory of the instruments they possess and use. Thus, they can rely on the check-ups of the instrument's sterilization (responsible for hospital-acquired infections).

DataMatrix code reading, a complex subject ?

Surgical instruments are usually composed of various complex shapes and materials. Flat or round, convex or concave, out of titanium, stainless steel, steel or even plastics…

These instruments, manufactured differently, can get various strengths and appearances (colors, matt or shiny aspect…).

Even if all the instruments have been engraved the same way, with the same machine, the codes will not automatically look the same on all the surgical instruments. For example, the DataMatrix codes can be more or less deeply engraved.

Innovation, a productivity booster

Reading DataMatrix codes on surgical instruments is a complex subject for camera vision. As we will show you, lighting is a key issue for vision system.

The White Reader® has been designed by our team and partners, thanks to their renowned knowledge in surgical devices.

Indeed, an efficient light really improves the reading performances of a camera. With a good lighting, the camera enables a faster codes checking in hospitals.

The three different lightings of the White Reader® optimize the contrast between the code and the instrument itself, whatever the instrument's color or material are, and no matter the engraving type is (dot peen/laser).

The lighting technology, developed for the White Reader®, is worldwide patented.

Use the 3 colors of the White Reader® lighting system:

the green light reads all laser engraved codes

the blue light reads dot-peened codes on matt and flat surfaces

the red light is highly efficient for dot-peened DataMatrix codes, especially on shiny materials (including gold and silver) and convex shapes

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The scheme below shows examples of various surgical instruments lighted with the 3 different colors.

The bold squared pictures show the most efficient color regarding the kind of DataMatrix code presented.

		RED LIGHT	BLUE LIGHT	GREEN LIGHT
CURVED AND MATT DOT PEEN		✓		
CURVED AND GOLD DOT PEEN		✓		
CURVED AND SILVER DOT PEEN		✓		

FLAT AND MATT DOT PEEN		✓	✓	
FLAT AND SHINY DOT PEEN			✓	
FLAT AND MATT LASER				✓
CURVED AND MATT LASER				✓

LEGEND : ✓ ››› best contrast

Ergonomics, a key advantage

The White Reader® is a workstation that allows the user to keep both hands free to check the set of instruments.

The adjustable stand makes the user entirely free to choose the best working position regarding his size and his working space.

While processing the instrument toward the lens, the operator can easily locate the code thanks to the window on the top of the White Reader®. Inside, a mirror clearly shows the code upon the instrument.

The window on the top of the White Reader® shows the code location

The White Reader® reads the instrument

What the operator can see through the window

The most efficient reader of the market

According to surveys conducted in several French hospitals, ATH Medical's White Reader® can read a set of surgical instruments 3 times faster than any other reader of the market.

There are several explanations for that :

• the DataMan 100X camera, integrated into the reader, is very efficient,
• the ID Max software helps to decode DataMatrix codes very quickly,
• the workstations are better organized thanks to the "hands free" design,
• the users easily put the code directly in front of the camera's focus, thanks to the window.

Speed reading
< 0.5 second*

* on average, according to Landanger's statistics and ours.

Cable 1

Cable 2

Set up and using advice

EQUIPMENTS :

The White Reader® is delivered in a unit pack, in a single box.
Dimensions : 30.5 x 25.5 x 9.5 cm.

The White Reader® delivery box includes :

- a White Reader® power supply 24V and its instrument leads – cable 1,
- a cable to connect the White Reader® to your computing system – cable 2,
- an adjustable stand and its 2 fixing screws + 1 Allen key,
- an installation and user's guide.

SET UP :

Fix the stand with both screws with the help of the Allen key.
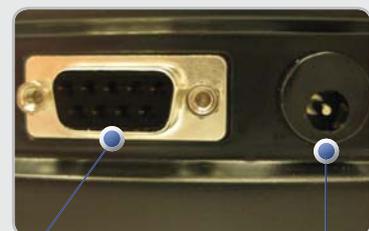Adjust the stand if needed.

PLUG & PLAY :

Connect the cables as described below :

Wiring for the computer and power plug

Plug Play &

Adjustable stand

Computer connection (cable 2)

Power plug connection (cable 1)

White Reader® Ignition

HOW TO START :

As soon as the White Reader® power supply is plugged, a green light appears, and then turns orange. Then the White Reader® is "READY" to decode.

HOW TO USE IT :

Put the codes in front of the White Reader® lens. Press the instrument against the stainless steel circle, and, if needed, slightly rotate it (about 30°) to make different reflects appear on the instrument. If you can see the code properly through the window, it means that the reader can easily read it too !

When the White Reader® successfully reads the code, a green light on the top and a beep sound confirm the validation.

The green light progressively switches off. So, you can be assured that the detection has been successfully done, especially when several machines are working at the same time, in a small room.

As soon as the White Reader® beeps, the information is directly sent to the dedicated software on the operator's computer. The White Reader® perfectly works with any software and computer.

Colors switching

Confirmation light
(successfully read)

Aiming window

ON/OFF light

Where instruments
must be presented

Summary of the technical properties

PERFORMANCE	
Red LED light	630nm +/- 20nm
Blue LED light	470nm +/- 20nm
Green LED light	525nm +/- 20nm
Codes Read	1D: Barcode 2D: DataMatrix code
Engraving technologies accepted	Laser & Micro-percussion + infodot
Reading speed ability	45 codes/second maximum
Unscrambling algorithm	IDMax
Wiring	Fits all computers via a RS232 plug
SPECIFICATIONS	
Shape	table workstation
Dimensions (without stand)	169mm x 135mm x 91mm
Weight (stand included)	1,7 Kg
Link to the computer	wire
Communication with the computer	RS232 connector Female - Male
Power supply	110-220VAC
Power consumption	4 Watts
Material	LURAN ASA
Consumables necessary	NONE
Operating systems	Windows, MAC OS, Linux
ENVIRONMENT	
Operating temperature	0 – 40°C (32°F-104°F) @ 90% humidity Not condensed level
Storage temperature	0 – 40°C (32°F-104°F) @ 90% humidity Not condensed level
Resilience	IK03
IP protection	IP54
Labels	CE /RoHs / DEEE Worldwide Patent pending

This product is classified "non dangerous" for users around, thanks to the NFEN 2471 standard (December 2008) of photobiological safety.

ATH Medical
TRACEABILITY OF SURGICAL DEVICES