



RSV^{USB}3

ROUNDED CORNERS SENSOR
WITHOUT CONTROLLER BOX:
SOMETIMES LESS IS MORE!

1.1

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WELCOME



You have recently purchased a digital radiology system from Visident group. We thank you for your trust and we will do our best to meet your expectations. This user manual describes the way to use the new RSV3. Visident company shall not be held responsible for the consequences resulting from non respect of all the precautions described in the present manual. Visident, Visident XP, RSV - Radiology System Visident -, RSV-HD, Visident Imaging, as well as logos are Trademarks of the Visident Group. Microsoft, Windows are Trademarks of the Microsoft Corporation. All the other product names mentioned in the present manual are used for identification purposes and may be brands or trademarks registered by their owners. This manual is the intellectual property of the Visident Group with all rights reserved. Any partial or complete reproduction of this manual in any form is strictly prohibited without the prior written

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RSV^{USB}3

1 SAFETY INSTRUCTIONS AND REGULATIONS

1 | 1 System maintenance

Your digital radiology system Visident must be installed and used respecting all the necessary hygienic and safety instructions (for both practitioner and patient) contained in this manual. Your digital radiology system Visident has to be used only in areas or rooms where regulations regarding electrical safety in medical premises are strictly enforced. This device has to be installed in a dry place free of humidity. Any liquid penetration in the sensor could cause damage, provoke a short circuit or corrosion and prevent the system from working properly. Your digital radiology system Visident should always be disconnected before maintenance work or disinfection is carried out. As they evaporate, some disinfection products form explosive or inflammable mixtures. If this type of disinfectant is used, wait for its complete dispersion before using the system again. Finally, it is advised to transport the system in its original package.

1 | 2 Compliance with standards

The RSV3 complies with EC Medical Devices Directory 93/42/EEC on medical instruments. According to the degree of harmful liquid penetration, it is considered to be a standard instrument. The line complies with European standard applying to this case: general Rules of Safety and Electromagnetic Compatibility (NF EN IEC 60601-1 and NF EN IEC 60601-1-2) as well as with the medical safety and electromagnetic standard IEC 601-1. In accordance with the obligations provided for the EC label, the user is bound to declare to the Ministry of Health or the proper Health Authority any relevant information on incidents related to the device as well as any alteration of the specifications of the device that could cause the death or the worsening of the state of health of the patient or of the person who manipulates the device. At the same time, Visident shall be kept informed of this declaration so that it can perform the obligation provided for the Directive.

1 | 3 Workstation compliance

Before installing your digital radiology system Visident, please read and apply the instructions shown on the diagram carefully.



The computer and display monitor (non-medical electrical equipment) must be situated outside the area shown here (1,5 meters between the patient and parts of the system which can unintentionally be touched or between patient and other persons touching parts of that system). The computer with which the digital radiology system Visident is installed, and all additional devices connected; must have the CE marking (IEC/EN 60950). If not, the equipment must be connected to an isolating transformer (IEC 60989 - withstand 1500 V). In order to have the best image quality, it is advised to position the screen in order to avoid direct light reflections (interior or exterior light).

1 SAFETY INSTRUCTIONS AND REGULATIONS

1 | 4 Marking on packaging



This label guarantees the compliance of the system with EC Medical Directive 93/42/EEC on medical instruments.



Read the enclosed instructions (in this Manual).



This device bears the recycling symbol according to the European directive 2002/96/EC for electric and electronic equipment waste (DEEE or WEEE). Properly disposing of this device will contribute to avoiding any further damage to the environment or human health.



Serial Number.



Manufacturer.

1 | 5 Operational limitations

The device is designed for operation within the following limits :

Non-operating environment :

- Temperature range: -40 to + 70°C
- Humidity range : 10 to 95% RH

Operating environment :

- Temperature range : 10 to 40°C
- Humidity range : 20 to 60% RH
- Liquid penetration : index of penetration IPX0
- Atmospheric pressure: no notable influence in normal operating conditions. 500 hPa to 1060 hPa during transportation and storage. Do not touch the computer screen and the sensor simultaneously ; this could result in severe damage to the sensor.

1 | 6 List of the elements contained in your system

- 1 sensor (size 1 or size 2 depending on the order)
- 1 set positioners
- 1 USB hub
- 1 sensor holder
- 1 box of hygienic covers

1 | 7 Minimal configuration

The computer

The computer plays a vital role since it is responsible for storing the digital X-rays (which are heavy files requiring a considerable amount of disk space) and running the Visident Imaging software.

Its characteristics :

- Intel Processor Pentium 3.1 GHz
- Minimum 256 Mb Ram
- Hard disk 40 Gb Minimum
- CD-ROM player
- USB 2 port
- Video card AGP type 32Mb RAM
- OS Windows XP Professional
- The computer must comply with standard IEC/EN 60950.

Attention : notre système RSV3 ne supporte pas Windows 64 bits.

The Display Monitor

Its role is also very important because it allows you to visualise the digital X-rays in an optimal way. It is recommended to use multisync colour monitor with a minimum display resolution of 1024 x 768 (this resolution can go up to 1280 x 1024). It is also recommended to use a 17inch monitor with a dot-pitch inferior or equal to 0.26 microns.

The X-ray tube

The RSV3 System is compatible with any kind of x-ray tube if the x-ray tube is able to provide an necessary x-ray dose and time exposure. However, it is recommended to use x-ray tube with a voltage between 50 and 70 kV and intensity from 6 to 8mA. The timer should be able to offer an exposure time going from 60 to 350ms. For any other information please refer to the Visident Imaging user manual.

2 | 1 Installation and configuration

Visident Imaging installation

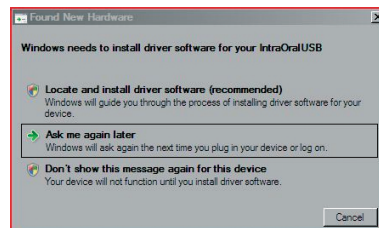
To use the RSV3 system you must install the latest version of Visident Imaging. For this, use the installation CD provided with the system and follow the instructions. Your RSV3 System is provided with its own « Visident Imaging software ». However, it is also possible to use this system with other imaging softwares thanks to some bridging tools that can be provided by Visident upon demand. Visident takes no responsibility for the operation of software other than Visident Imaging.

NB : During installation, please do not plug the sensor on the computer.

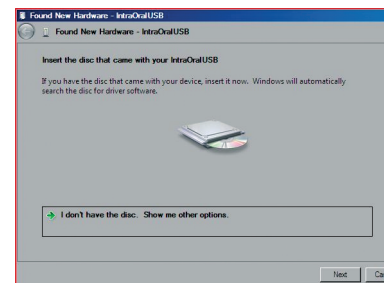
RSV3 Installation

After having installed the Visident Imaging software on your computer, plug the sensor on the USB2 port of your computer.

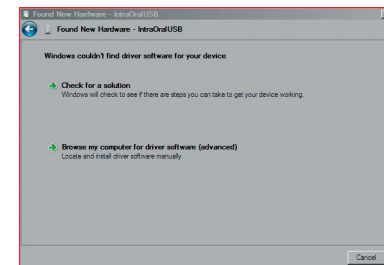
The following window appears.



Click on « Locate and install driver software (recommended) ». If the following screen appears.

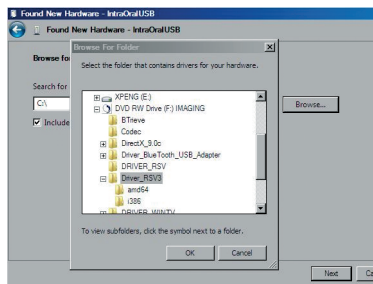


Click on « I don't have the disc. Show me other options.»



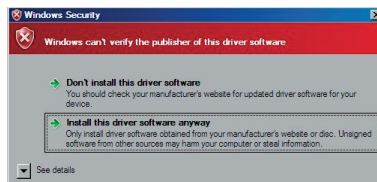
2 RSV3

Then click on « Browse my computer for driver software (advanced) » and browse on CD-ROM to find file « Driver_RSV3 » :

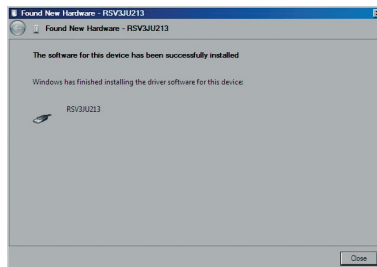


Click on « OK » and then on « Next ».

If you are using Vista operating System, you need to click on « Install the driver software anyway » :



The below window appears; click on « close ».

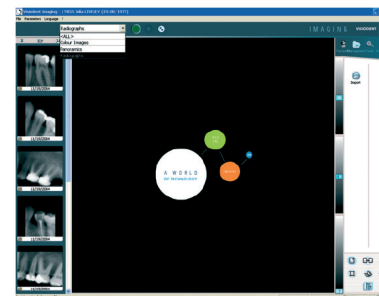


The device has been successfully installed.
Setup of RSV3 in Visident Imaging.

Start Visident Imaging in double clicking on the shortcut of your desktop :



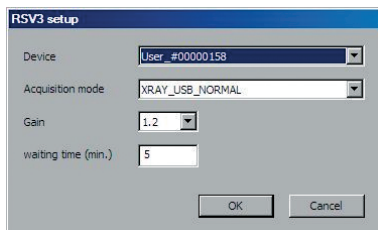
In the imaging module, select the family « Radiographs » in the family list. You will use this family to work with your RSV3 system.



In order to link your RSV3 system with Visident Imaging software, click on « Parameters », then on « Acquisition ». Select « RSV3 sensor » and click on « Setup »:



A new window appears:



Select the device and click on « OK » twice. Your sensor has been setup in Visident Imaging software.

2 | 2 Use

To take an X-ray with your RSV3 sensor, you just need to click on the button.



Connexion status change and the following bar appears :



By default the sensor is programmed to be used within a 5 minute period after having pressed the button.



The remaining time is materialised by the green part of the bar.

During this period, you just need to expose the sensor to X-rays, and the picture will immediately appear on the screen.

2 | 3 Caution in the use of your sensor

RSV3 sensors are high technology devices that need to be handled very carefully. Sensors have a 24 month warranty against eventual manufacturing or materials defects. Claims during the period of the warranty will be taken into account if the sensors have been used in normal conditions, and handled with care as mentioned below.

Caution : The main cause of damage to CMOS sensors is due to violent shocks, excessive pressure on the sensors, excessive bending or electrostatic discharges.

We remind you that the damages caused by this type of abuse are not covered by the warranty.

Caution : how to handle the sensor

In order to prevent damages that may cause problems with your sensor, read the following points : What you can do :

- Wipe your sensor with a disinfecting towelette.
- Put back the sensor in a safe place when you are not using it.
- Use a new hygienic protection cover with each use.

Do not :

- Do not sterilize the sensor with an autoclave.
- Do not soak the sensor in a sterile solution.
- Do not exert too much pressure on the sensor or its cable.
- Do not pull the sensor by its cable when you want to remove the hygienic protection cover or the holder.
- Do not hang the sensor by its cable.
- Do not let your patient bite the sensor.

Static electricity

Static electricity may be a cause of major damage on medical devices. It can be the case when you are using the sensor in an environment with carpets and dry air.

Thus, in order to avoid any problem we advise you to :

- Be sure that your electrical installation is correctly wired
- Install an antistatic floor-covering
- Use antistatic cleaning products
- Use an air humidifier

In order to prevent damages that may cause problems to your cable, read the following points :

What you can do :

- Untwist the cable carefully in letting the connector hang while you keep the sensor in your hands
- Be sure that the cable is not twisted before using
- Hold the connector and not the cable when you want to disconnect the sensor

Do not :

- Do not let the cable lie on the floor
- Do not let the cable hang near a drawer
- Do not clamp the cable
- Do not twist the cable while you are using it
- Do not pull the cable to disconnect the sensor

Caution : Never use latex fingerstalls as hygienic protection for the sensor, but only hygienic protection covers recommended by VISIODENT.

Fingerstalls contain talcum powder and are too tight on the sensor. The use of these fingerstalls may lead to tearing of the connection between the cable and the sensor that will void the warranty.

2 | 4 Technical characteristics

	Size 1	Size 2
EXTERNAL DIMENSIONS	36,73 mm x 24,35 mm	42,80 mm x 30,49 mm
SENSOR TECHNOLOGY	CMOS	CMOS
THEORETICAL RESOLUTION	26.3 lp/mm	26.3 lp/mm
REAL RESOLUTION	> 20 lp/mm	> 20 lp/mm
PIXEL SIZE	19 µm	19 µm
ACTIVE SURFACE	30.02 mm x 19.95 mm	36.00 mm x 25.99 mm
SENSOR CABLE LENGTH	3 meters (10 feet)	3 meters (10 feet)

3 Kit of positionners

The digital radiology system of the RSV-HD line that you have bought is provided with a kit of positionners. These accessories are necessary to maintain the sensor at a right angle with the X-ray tube. They come in a separate case with their own user's manual. There are several kits fitted to the size of the sensor that you have. The positionners sold with your system must be sterilized with an autoclave.

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