straumann®

INSTALLATION MANUAL

STRAUMANN® CARES® SCAN CS2

COMMITTED TO
SIMPLY DOING MORE
FOR DENTAL PROFESSIONALS℠

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1. FOREWORD

Dear User,

Thank you for your interest and welcome to Straumann!

These installation instructions show you how to install the Straumann® CARES® Scan CS2 scanner.

Please read these installation instructions and the provided Software User Manual carefully to become familiar with the instructions prior to use. Please keep these installation instructions safe in case you require them again in the future.

This device was manufactured and packed with the greatest care; however, should you experience problems with it or if a part listed in chapter 3 is missing, please contact your local Straumann representative immediately.

The information in this manual corresponds to the latest state of the art; nevertheless, it must be noted that the specifications of the scanner may be changed without previous announcement. The relationship between Straumann and the user is exclusively governed by the General Terms and Conditions of Straumann. Straumann products must be used in accordance with their accompanying instructions for use.

If you would like additional information on the proper use of Straumann products, please contact your local Straumann distributor.

2. INTENDED USE

The Straumann® CARES® Scan CS2 is a 3D scanner of high precision for objects of the dental area. It is used for 3D measurements of single preparations, abutments, models of the jaw with up to 14 elements, and different impressions. Together with the corresponding software, the scanner gives dental technicians the ability to scan models, design a restoration (crown, bridge, abutment, etc. in a wide range of materials) and send the resulting data file directly to the manufacturing facility.

Notes

- The surface of the materials must be scannable and therefore it must be matte (not shiny/reflecting).
- In addition, the surfaces should have a homogeneous color gradient.

Please note

Practitioners must have appropriate knowledge and instruction in the handling of the Straumann product described herein ("Straumann Product") for using the Straumann Product safely and properly in accordance with these instructions.

The Straumann Product must be used in accordance with the instructions for use provided by the manufacturer. It is the practitioner's responsibility to use the device in accordance with these instructions for use and to determine if the device fits to the individual patient situation.

The Straumann Product is part of an overall concept and must be used only in conjunction with the corresponding original components and instruments distributed by Straumann USA, LLC, its ultimate parent company and all affiliates or subsidiaries of such parent company ("Straumann"), except if stated otherwise in these instructions. If use of products made by third parties is not recommended by Straumann in these instructions, any such use will void any warranty or other obligation, express or implied, of Straumann.

Validity

Upon publication of these instructions, all previous versions are superseded.

3. SCANNER, COMPUTER, MONITOR AND ACCESSORY KIT

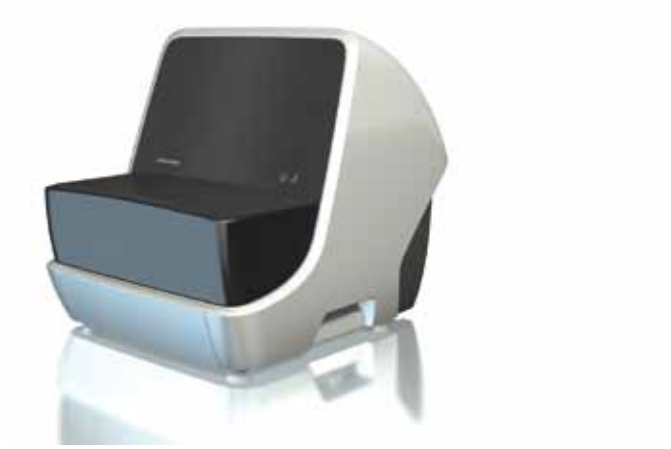
The Straumann® CARES® Scan CS2 scanner is delivered in transport packaging, which is designed to prevent any damage of the scanner during transport. Please check the packaging for external damage. Should you discover such damage, please inform your local Straumann representative immediately, as potential complaints will otherwise expire.

Please store the transport packaging in case you need to safely transport your scanner.

Contents of the delivery include:

1. Straumann® CARES® Scan CS2 scanner
2. Computer box
3. Monitor box
4. Accessory kit

3.1 Straumann® CARES® Scan CS2 scanner



The illustration may differ from the current configuration

3.2 Computer box

The contents of the computer box may vary in different countries. For further information, please contact your local Straumann representative.

Content of the computer box:
- Computer

The illustration may differ from the current configuration

3.3 Monitor box

The contents of the monitor box may vary in different countries. For further information, please contact your local Straumann representative.

Content of the monitor box:
- Monitor
- Monitor signal cable(s) (DVI/VGA)
- Monitor manual

The illustration may differ from the current configuration

3.4 Accessory kit

The contents of the accessory kit may vary in different countries. For further information, please contact your local Straumann representative.

Content of the accessory kit:

- Power cable for scanner
- Power cable for computer
- Power cable for monitor
- USB cable for scanner – computer
- Complete set-up aid kit
  (set-up aid kit, putty holder and putty)
- One copy of Software User Manual
- Installation manual for Straumann® CARES® Scan CS2 scanner
- Keyboard
- Mouse
- Network cable (blue), length 10 m (optional)
- Socket strip (optional)
- One small can of CopyCAD wax (optional)

4. WARNINGS: PRECAUTIONARY MEASURES

If the unit develops smoke, smells burnt or produces unusual noises, immediately pull out the main power cable and ask your local Straumann representative or technical support for advice.
Attempting to work with a faulty device can be dangerous.

Keep small objects and liquids away from the unit.
Small objects may inadvertently drop through the ventilation slots of the unit's housing and thereby cause fire, electric shock or damage of the unit. Should an object or liquid get into the housing, immediately pull out the main power cable of the unit. Have the unit checked by a qualified Straumann technician before you work with it again.

Place the unit on a suitable and stable surface.
Otherwise, the unit could be damaged and there is a risk of fire and electric shock.

- Do not use the unit outdoors.
- Do not use the unit in a moving vehicle (ship, aircraft, train, car, etc.).
- Do not install it in dusty or damp environment.
- Do not place it in the vicinity of a heat-generating device or an air humidifier (recommended temp range 15–35 °C, 59–95 °F, humidity 5–60 %).
- After unpacking and before making any electrical connections, allow the unit to acclimate to ambient temperature and humidity for 2 hours.

Use the enclosed main power cable for connection to the national standard line voltage. Make sure that the nominal voltage of the main power cable is not exceeded.
Otherwise, there is a risk of fire and electric shock.

The unit must be connected to a correctly grounded wall outlet.
Otherwise, there is a risk of fire and electric shock.

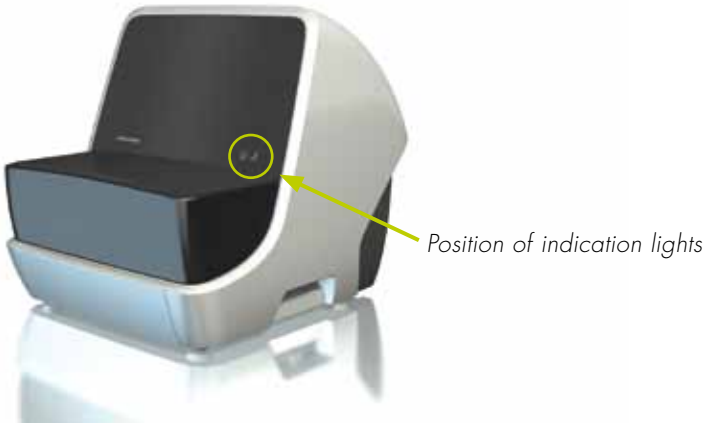
Connect the main power cable to an easily accessible wall outlet.
Make sure that you can quickly pull out the main power cable in case of an emergency.

⚠ Caution

- Do not block the ventilation slots of the housing (on the back of the scanner).
- Do not place any books, papers or other objects on any ventilation slots.
- Do not install the unit in a constricted space without ventilation. Blocking the ventilation slots so that air can no longer circulate may cause fire or other damage.

5. OPERATING ELEMENTS AND CONNECTIONS OF THE SCANNER

5.1 Description of operating elements



Scanner as illustrated from the front

Scanner status *Laser status*

Status of scanner and laser based on indication lights
Indication lights and meanings:

Status	Scanner status LED (left)	Laser status LED (right)
Scanner off	Off	Off
Scanner and PC turned on, setting up the connection	Yellow, flashing slowly	Off
Connection established and HighSpeed USB active	Green	Off
Scanner in standby	Yellow	Green
Ready to load/unload scanner (loading position, unloading position)	Green	Green
Scanning	Green	Yellow, flashing
Referencing	Green	Yellow, flashing
Positioning	Green	Yellow, flashing
Stop	Green	Off
Problem, please contact service support	Red, flashing	Red, flashing

Description of ports

Ports on the back of the scanner

(1) USB connection to computer

USB connection for scanner control which must be connected to the computer with the supplied serial cable.

(2) Port of power supply

This port of the scanner must be connected to the power supply with the supplied main power cable.

(3) Fine fuse holder

For changing the fine fuses (insert), please refer to chapter 10.

(4) On/off switch for scanner power supply

Rocker switch for switching the scanner on and off

⚠ Warning

- The fine fuse insert may be opened only with the main power cable pulled out.
- If the line voltage is selected incorrectly, the unit may be destroyed and there is a risk of fire.

6. SETUP AND INSTALLATION

The scanner works within a voltage range of 100–240 V AC.

Arrangement/setup of the system

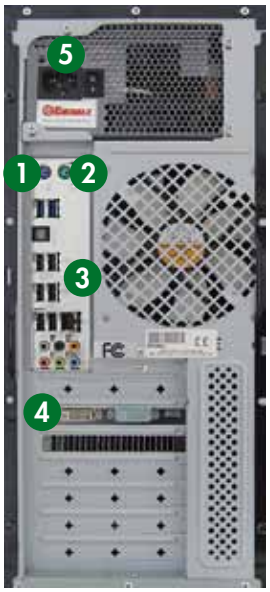
- All plug connections should be easily accessible.

6.1 Unpacking of the scanner

Please remove the individual components (foam parts) while unpacking the scanner. Store the foam components in a safe place in case you need to ship the scanner in the future. Please refer to chapter 12 to see the individual packaging components.

6.2 Setup of the computer and monitor

1. Plug the keyboard (preferably via the PS/2 connector) into the designated port on the back of the computer.
2. Plug the mouse (preferably via the PS/2 connector) into the designated port on the back of the computer.
3. Plug the scanner into the designated port on the back of the computer (USB).
4. Plug the monitor signal cable (preferably the supplied DVI cable) into the designated port on the back of the computer.
5. Connect the computer to a power outlet with the enclosed main power cable.



6.3 Setup of the scanner

Follow these steps to set up the scanner (refer to the illustration on the right):

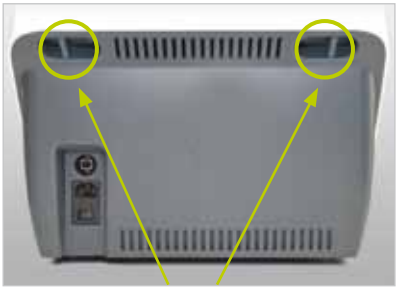
1. Release the transportation lock on the right side of the scanner and the two transportation locks on the back before the scanner is turned on.
   Important: All transportation locks have to be released before operation.

Transportation locks:
One lock on the side of the scanner

This symbol indicates that the scanner is in a locked position.

2. Use the supplied USB cable to connect the scanner to the computer (port 3 on the back of the computer).
3. Connect the scanner to the power outlet with the enclosed main power cable.

For more information regarding the connections and operating elements of the scanner, please refer to chapter 5.



Transportation locks:
Two locks on the back of the scanner

⚠ Caution

Place the scanner on a stable and flat surface. Ensure that no external vibration is influencing the scanner while in operation. Do not continue operation in the event of scan objects or any other objects being lost inside the scanner.

7. GETTING STARTED

After you have carefully connected all components according to the instructions, the Straumann® CARES® Scan CS2 scanner as well as the computer and monitor can be switched on. Directly after switching on the system, the left (green) LED on the scanner will light up. The right LED on the scanner will not light up since the scanner is not in operation.

After registration/login on the start screen, the scanner is ready to use. Please refer to the Software User Manual for more information.

7.1 my.Straumann® CARES® Desktop

As a Straumann customer, the default option to set up the my.Straumann® CARES® Desktop is activated. With the pre-setting, the server and client are automatically started and guides you immediately to the my.Straumann® CARES® Desktop which contains individual tiles with Straumann® applications.

8. SETUP OF THE INTERNET CONNECTION

Provided that you did not order a special system configuration before delivery, the default setting is routing via DHCP.

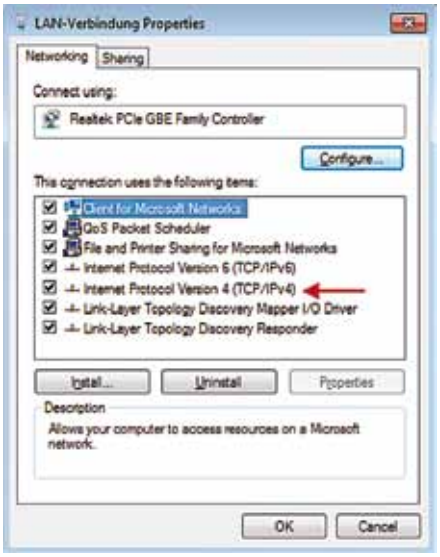
8.1 Configuration of the internet connection

To establish an internet connection, it is necessary to connect the network card on the back of the computer with a router via the network cable. For information on configuring and setting up further connections for your router, please read the relevant operating instructions or contact your service technician.

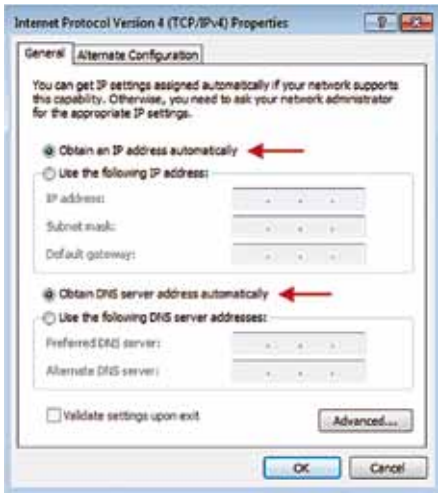
8.2 Configuration of an internet connection with a dynamic IP address (DHCP)

1. Log into the Windows operating system.
2. Click on the **Start** button.
3. Enter **Network connections** in the search field and then click on **Show network connections**.
4. Right-click on **Local Area Connection** and then select **Properties**.

5. Select **Internet Protocol (TCP/IPv4)** using the left mouse key and then click on **Properties**.



6. Select both **Obtain an IP address automatically** and **Obtain DNS server address automatically**.

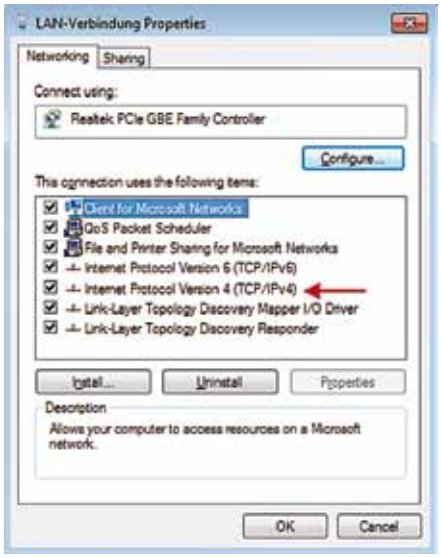


7. Then click **OK**.
8. Start Internet Explorer to test the connection; if the home page is displayed, your computer is connected to the internet.

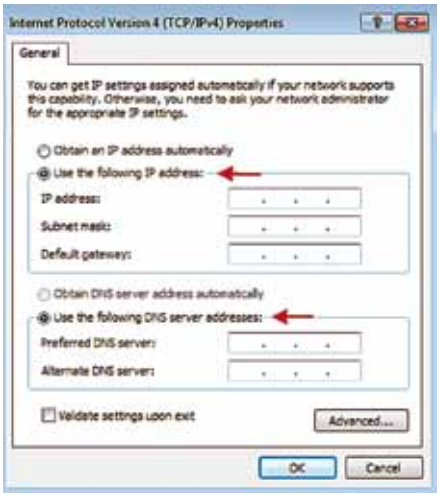
8.3 Configuration of an internet connection with a static IP address

1. Log into the Windows operating system.
2. Click on the **Start** button.
3. Enter **Network connections** in the search field and then click on **Show network connections**.
4. Right-click on **Local Area Connection** and then select **Properties**.

5. Select **Internet Protocol (TCP/IPv4)** using the left mouse key and then click on **Properties**.



6. Select both **Use the following IP address** and **Use the following DNS server addresses**.



7. Enter valid IP addresses in both fields.
8. Then click **OK**.
9. Start Internet Explorer to test the connection; if the home page is displayed, your computer is connected to the internet.

9. TROUBLESHOOTING

Please refer to the Software User Manual to find potential causes for errors and their solutions.

10. CHANGING FINE FUSES

If necessary, remove the insert with an appropriate screwdriver and change the corresponding fine fuses (5 x 20 mm, 2.0 AT 250 V AC compliant with IEC 60127-2 SS 3).

Note
Be sure to unplug the power before changing fuses.

11. CLEANING NOTES

The following recommendations refer to the scanner, the standard PC housing, the plastic housing, and the LCD monitor with surface made of coated and/or painted plastic.

Cleaning of scanner

- Use a damp towel to clean the outside of the scanner. Please make sure that the scanner is unplugged while doing so.
- Use a dry towel to clean the inside of the scanner. Do NOT use any wet or damp towels to clean the inside. Do NOT use compressed air to clean the inside.

Damp cleaning of monitor

- If you damp clean an electrical device, always switch the device off first and disconnect it from the power supply. After cleaning let the device dry.
- Never use aggressive cleaning agents such as thinners, scouring liquid, wax, petroleum, spirit, spray cleaners, acids or alkalis. Do not use any hard or rough cleaning media such as scouring sponges. These can destroy the coating of the screens.
- A damp cloth is sufficient for cleaning (microfiber cloth recommended). Be sure to wring out the cleaning cloths well so that no excess water can get to sensitive electronic components. The screen surface should be cleaned with as little pressure as possible to avoid abrasion of the coating.
- If you use a special screen cleaner, never spray it directly on the device, but spray on the cloth instead. Fine spray mist could possibly reach sensitive components. Under no circumstances should you wipe off the screen surface with paper towels since these are too hard and scratch the surface.

Keyboard

- Keyboards should be cleaned with the computer switched off or disconnected from the computer.
- Dust and other dirt particles between the key gaps can be removed with a soft and dry long-fiber brush. The use of compressed air is preferred. A hair dryer which can blow cold air may also be used.
- The keys should then be freed from dirt and grease traces with a slightly moistened cloth. No moisture should penetrate the keyboard, as this could damage the built-in electronics or lead to errors in data transmission to the PC at a later stage. In case of doubt let the keyboard dry or dry it with warm (not hot) air.

Dust in the interior of the computer

If you suspect dust in the scanner, PC housing, plastic housing, or the LCD monitor do not open. Contact Straumann technical support. Opening the housing of any hardware will void the warranty.

⚠ Caution

Do not open the housing while the computer is connected to the power supply. Otherwise, there is a risk of electric shock.

12. PREPARATION FOR TRANSPORTATION (PACKING OF THE SCANNER)

Important: The scanner needs to be in parking position and locked to ensure safe transportation (please note that the actual transportation packaging may vary from the following illustrations).

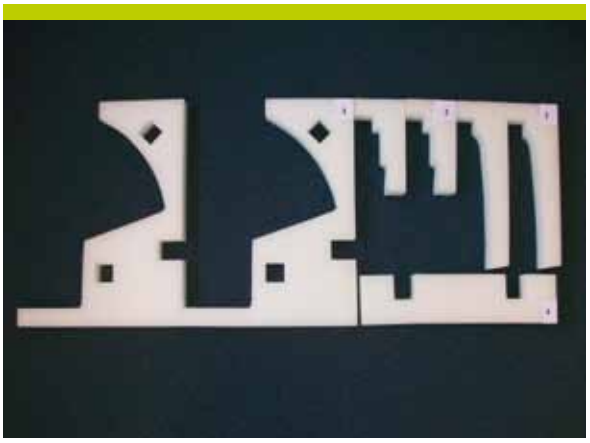
1. In order to park the scanner, please open the software and go to **Scanner** in the task line. Click on **Scanner in parking position**. This puts the scanner in the parking position for transportation.

2. Lock the scanner with the one transportation lock on the right side and the two locks on the back of the scanner (see description in chapter 6.3, including the symbol indicating the correct locking position).

Foam parts for transportation
It is necessary to use the original packaging components for the safe transportation of the scanner.

Straumann® CARES® Scan CS2 – Packaging overview
Transportation box for the Straumann® CARES® Scan CS2 scanner

Foam components number 1 to 3 (2 for each side; left and right) and component number 4 (one piece for the top). Please note that the actual pieces are not numbered and that this is an illustration only.

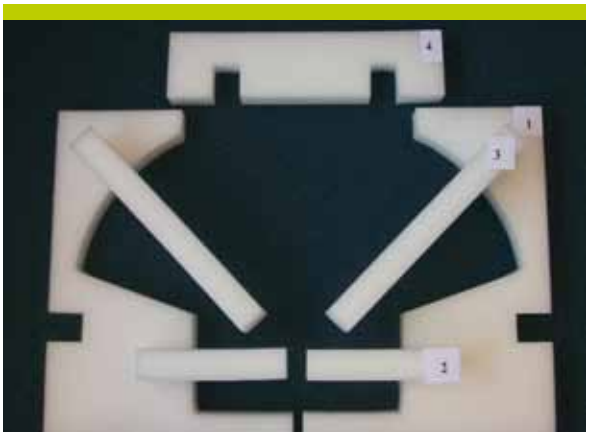


Foam components for the bottom of the box (numbers 5–7). Please note that the actual pieces are not numbered and that this is an illustration only.

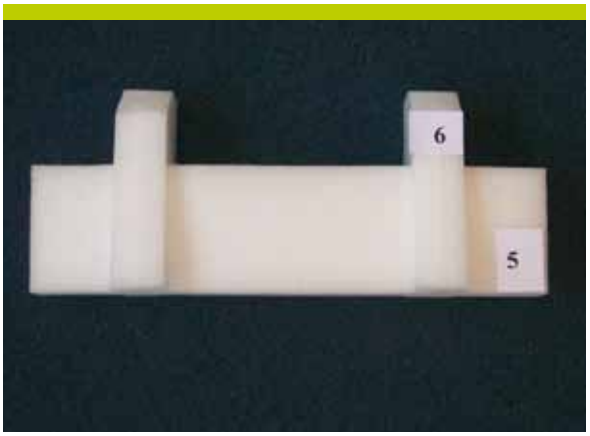
Step-by-step

Please follow the steps below to pack the scanner.

1. Insert components 2 and 3 into 1 as shown in the picture on the right.



2. Insert component 6 into component 5.



3. Place component 7 on the bottom of the box as illustrated.

4. Insert components 5–6 (as illustrated in step 2) as protection on the back of the box.

5. Carefully place the scanner into the box.

6. Cover the scanner with a protective plastic wrap.

7. Position components 1–3 (prefabricated as described in step 1).

8. Place component number 4 across as shown in the illustration on the right.

9. Close the lid of the box and tape it shut.

13. TECHNICAL DATA

Technical data

Model designation:	CARES® Scan CS2
Connections:	USB 2.0 High-speed/power supply
Power:	100–240 V AC 50–60 Hz
Power Input max.:	900 mA
Laser protection class:	Class 1, 1M
IP protection:	IP20

– 10 moving axes for scanning dental preparations by means of laser light sectional method

Scan time

Single die:	25–45 sec. (Smartscan)
Jaw model:	20–90 sec. (Smartscan)
Scan method:	Automated scanning of dies and jaw models by multiple scanning angles. 35°–75°

Additional Information

Weight:	15.2 kg
Degree of pollution:	Degree of pollution 2: Laboratory environment
Altitude:	Recommended altitude below 2'000 m, 6'600 ft
Environment:	Recommended temperature 15°–35 °C, 59–95 °F, humidity (5°–60°)
Theo. Measuring field	Width: 16 mm Height: 42 mm
Max. die height	22.3 mm
Max. jaw height	30 mm (preparation share)
Laser classification	1M
Measuring tolerance	± 10 µm (pot object)

Structure of the serial number

SN= ABBBBCCCC:

A = Scanner generation
B = Year of manufacturing
C = Number
The serial number 220101001 means: 2nd generation scanner, manufactured in 2010, as scanner number 1001

Tested according to IEC 60825-1 (TÜV), Standard: 2007

14. EXPLANATION OF SYMBOLS

Protective Earth

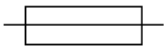
Laser radiation

Laser warning

Caution – Risk of electrical shock

Serial number

Order code



Fuse

Consult instructions for use

Do not dispose of with household waste

Rx only

Caution: Federal law restricts this device to sale by or on the order of a dental professional.

Fragile, handle with care

Keep dry

This way up

NOTES

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