



SUDOSCAN

HOST PC - SANGO

EN Installation guide



POM.10_EN

Rev. 04

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ENGLISH VERSION

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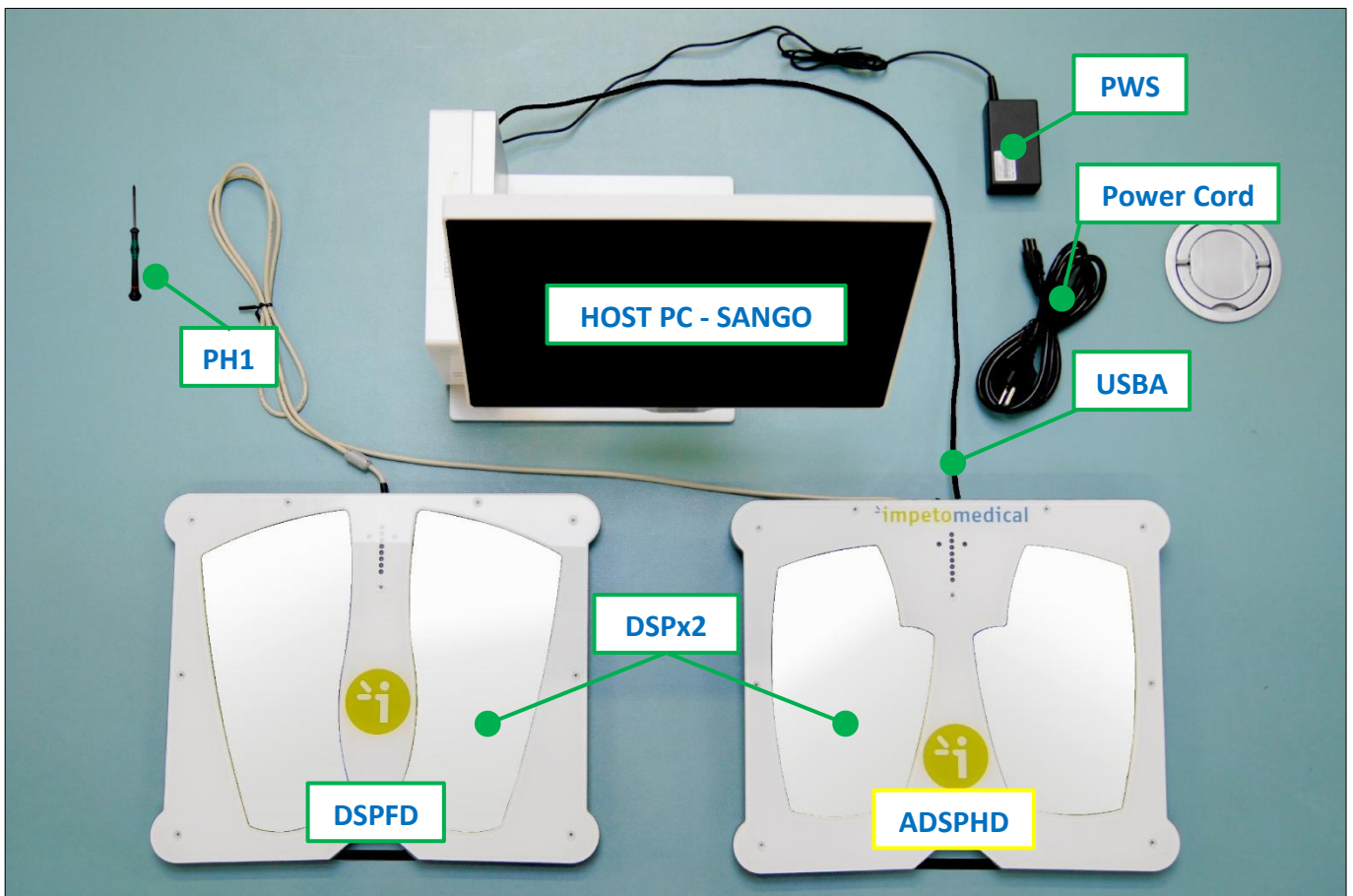
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1 SUDOSCAN INTRODUCTION

This guide explains how to install and set up the SUDOSCAN device. It covers the preparation of the HOST PC (SANGO), the connection of the hand and feet docks, tips to avoid common installation errors, detailed procedures for replacing Smart Electrodes, the final quality check to ensure the system is ready for use and a summary of the product's technical specifications. Please contact Impeto Medical when in need of assistance, setting up, using or maintaining the device or to report unexpected operations or events. Any serious incident occurring in relation to SUDOSCAN should be reported to Impeto Medical and the competent authorities in your country of residence. The contact information is in section 9.3 of this document.





You can find the PDF version of this installation guide on the desktop of the SUDOSCAN or on the website: <https://www.sudoscan.com/>.

1.1 SUDOSCAN MAIN COMPONENTS



HOST PC	Host Computer	UMSA	Installation Guide + Host PC User Manual Guide + Safety Test + Quality Check report
ADSPHD	Hand Smart Dock	ELOCKSA	Cable locking support
DSPFD	Feet Smart Dock	PH1	Screwdriver
DSPx2	Smart Electrodes SET	PWS	Power supply
USBA	USB Cable	Power Cord	Power cord
PPPHD	Protective Polycarbonate plate for Hand Smart Dock		

1.1.1 HOST PC (SET 2)

			
HOST PC SANGO	Power Cord	Power Supply	Host PC User Manual Guide







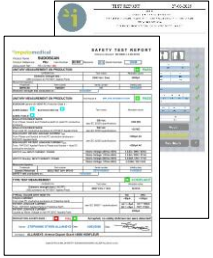


- **Do not place this device near, next to, or on top of other equipment. This can cause the system to work incorrectly.**
- **Maintain a minimum distance of 20 cm (8 inches) around the Host PC and the smart docks.**
- Place the Hand Smart Dock on a stable, flat surface so it does not fall and break.
- **Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) for any part of the device, including cables. Otherwise, degradation of the performance of the device could result.**

- Do not cover or block the vents of Host PC in operation.
- Do not use the device in a dusty environment.
- Do not use the device in an oxygen-rich environment containing flammable vapors or gases, near or with flammable products.
- Keep away from any flammable source.
- Do not sterilize the device.
- Do not use the device outside.
- Use the device in a dry environment.
- After unboxing and installation, keep the device in a clean and dry room.

- PLEASE CALL THE TECHNICAL SERVICE IN CASE OF FAILED QC
- **NO MODIFICATIONS OF THIS EQUIPMENT IS ALLOWED.**
- THE PATIENT MUST NOT TOUCH THE MASTER UNIT.
- WARNING: TURN OFF THE COMPUTER COMPLETELY BEFORE DISCONNECTING THE POWER CORD. IF YOU UNPLUG THE CORD DURING OPERATION, YOU CAN LOSE PATIENT DATA.
- **DO NOT INSTALL ANY SOFTWARE OR SOFTWARE UPDATES ON THIS PC WITHOUT PERMISSION FROM IMPETO MEDICAL. ONLY BASIC PRINTER DRIVERS ARE ALLOWED.**
- **WARNING: DO NOT CONNECT OTHER BLUETOOTH OR USB ACCESSORIES DURING A SCAN. THEY CAN CAUSE SIGNAL INTERFERENCE.**

1.1.2 SUDOSCAN (SET 1)

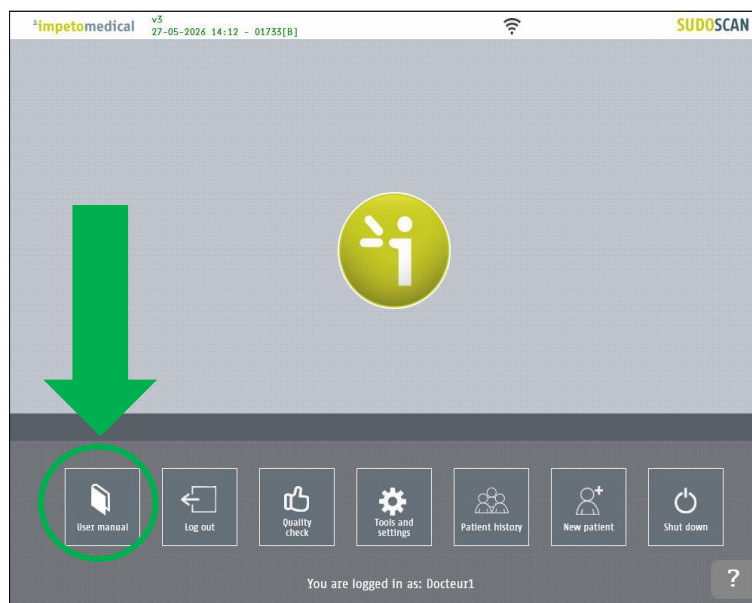
			
Hand Smart Dock ADSPHD	Feet Smart Dock DSPFD	Smart electrodes DSPx2	
			
USB Cable USBA	Screwdriver PH1	Cable locking support ELOCKSA	Safety test and quality test reports

1.2 USER GUIDE INFORMATION

The complete digital User Guide is available on the application home screen. Click on the booklet icon labeled "User manual". It is also available on Impeto Medical website: <https://www.sudoscan.com/resources/user-manuals/>

You can request a free-of-charge paper copy of these User Guides. This paper copy will be provided no later than seven (7) calendar days following receipt of your request. To ensure that the correct version is provided, please clearly state the specific SUDOSCAN's software option used and the Serial Number (SN) when submitting your request.

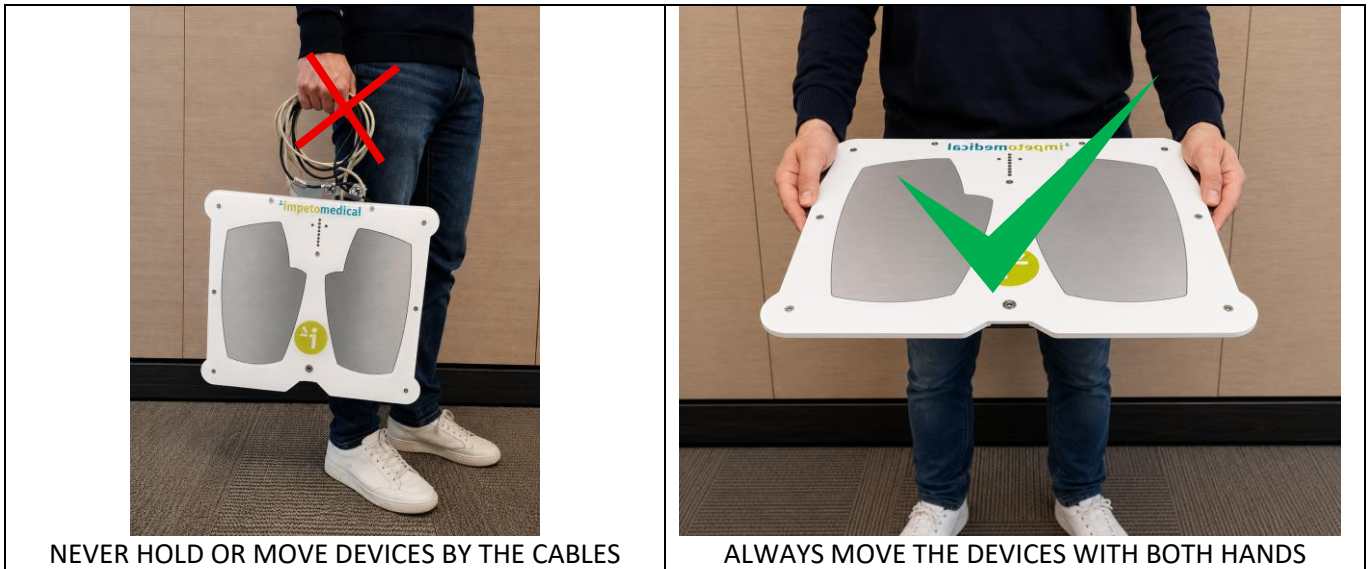
Please submit your request to the Manufacturer using the following contact details: contact@impeto-medical.com



2 INSTALLATION

Note: Unpack all parts from the boxes before you start the installation.

To ensure correct installation, carefully follow the install guide instructions of the SUDOSCAN and the Host PC. The complete installation takes about 15 to 20 minutes.



Feet Smart Dock:

- Verify that the smart electrodes are correctly inserted and locked

Hands Smart Dock:

- Verify that the smart electrodes are correctly inserted and locked.
- Verify that the Feet Smart Dock cable is correctly connected to the purple connector located on the underside of the dock.
- Verify that the USB-A cable is correctly connected to the grey "host computer" port located under the Hand Smart Dock.
- Verify that the ElockSA bracket locks both cables in place.

Host PC:

- Verify that the USB-A cable is correctly inserted into the USB ADSPHD port located on the back of the host computer.
- Verify that the Wi-Fi/Bluetooth dongle is present on the back of the host computer.

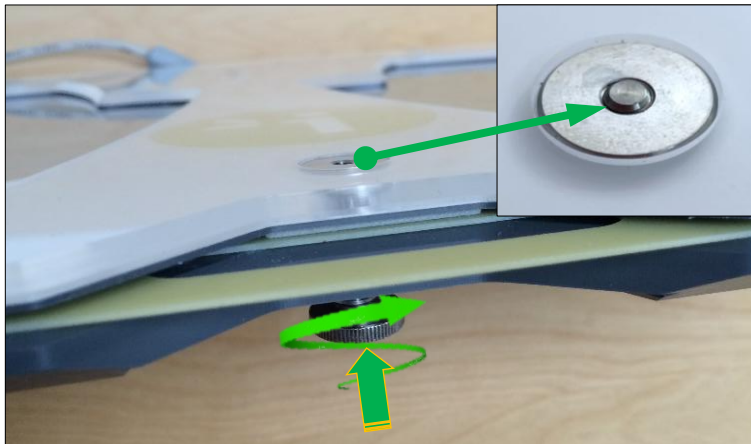
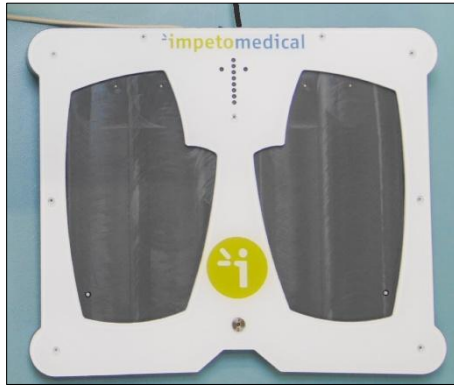
Do not unplug the USB Dongle!!! It must remain connected for the system to function.

- Verify that the power adapter is properly inserted into the power connector on the back of the host computer.
- Verify that the power cord is properly connected to the power adapter.

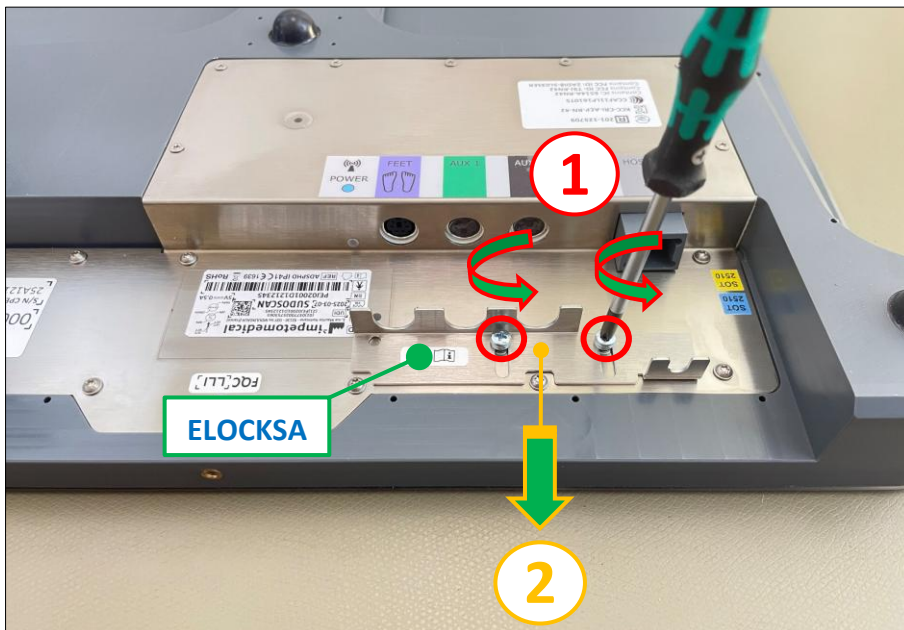
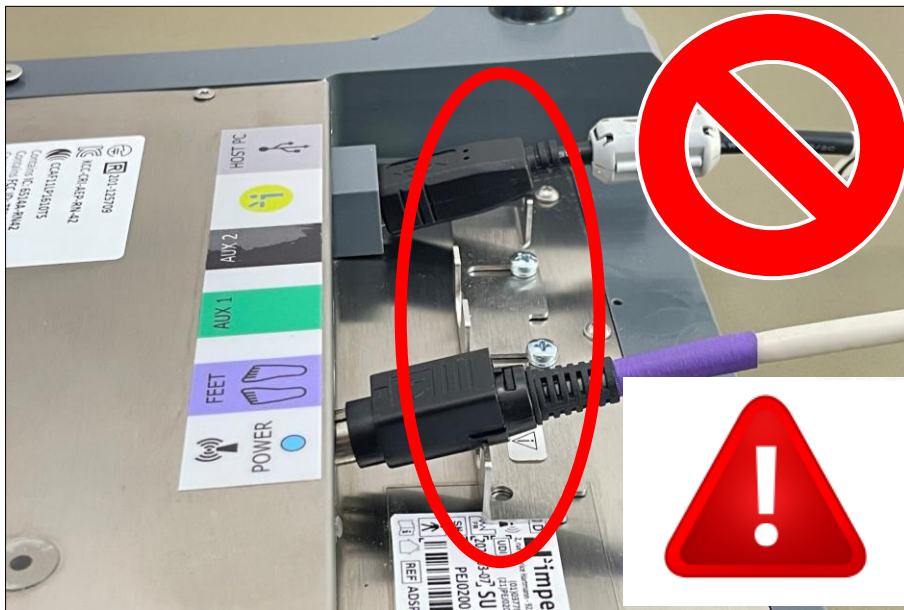
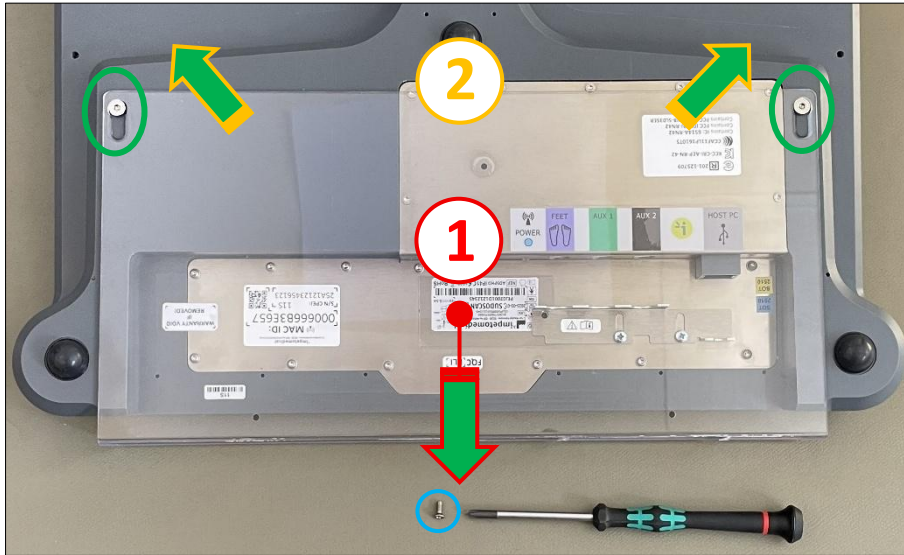
2.1 SUDOSCAN – SET 1

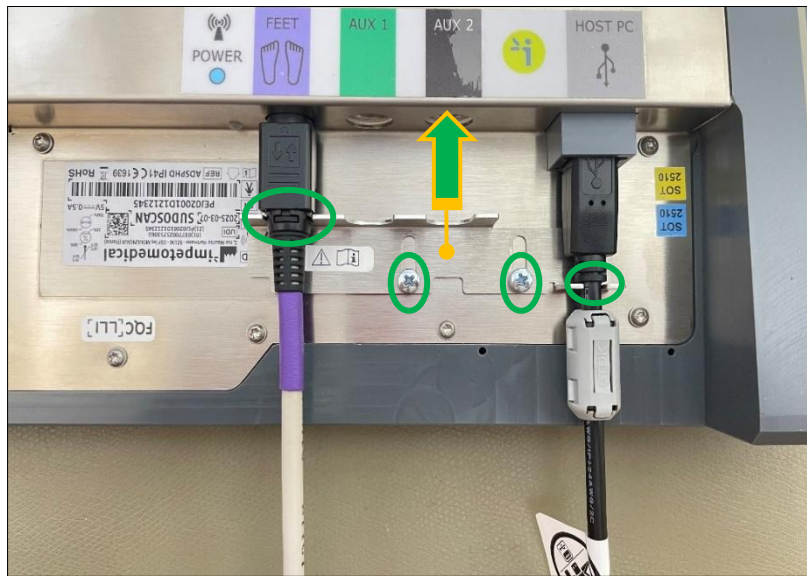
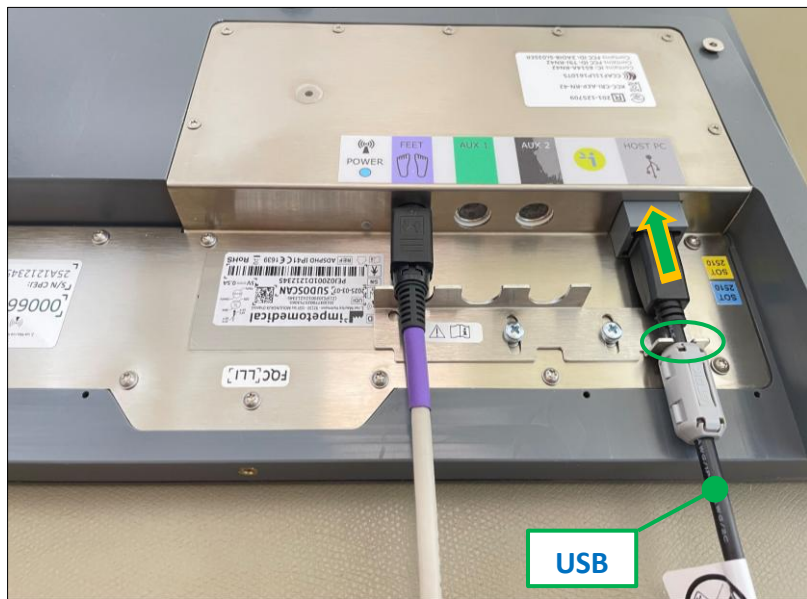
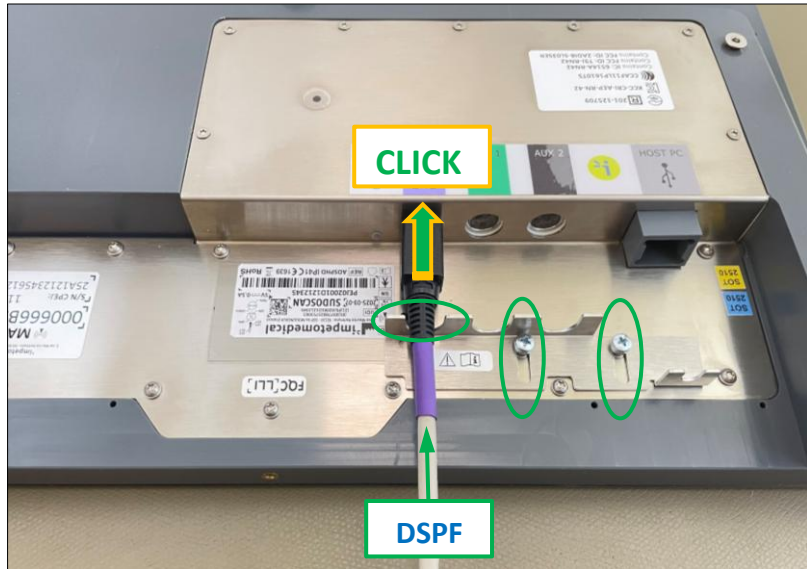


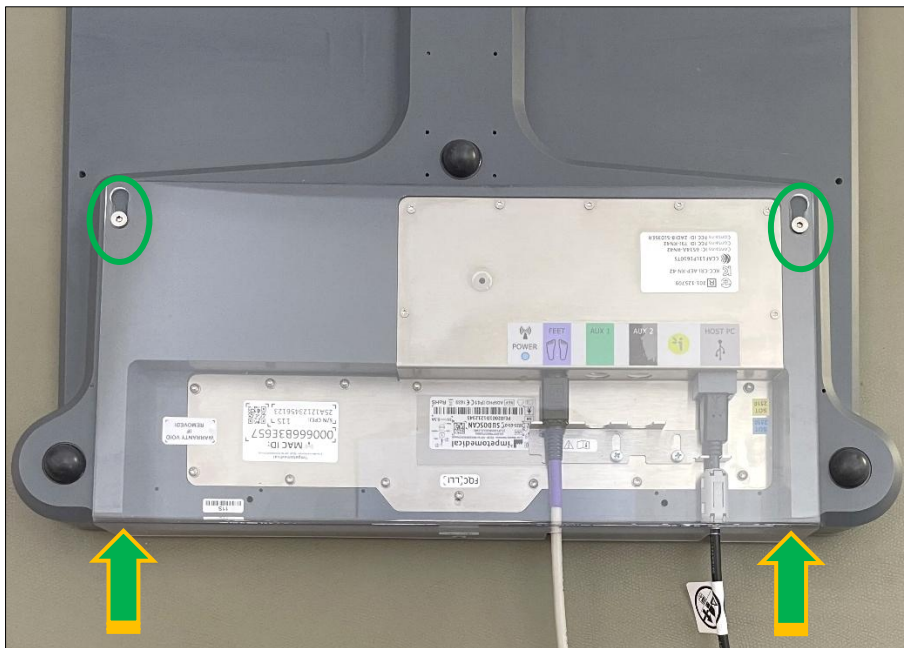
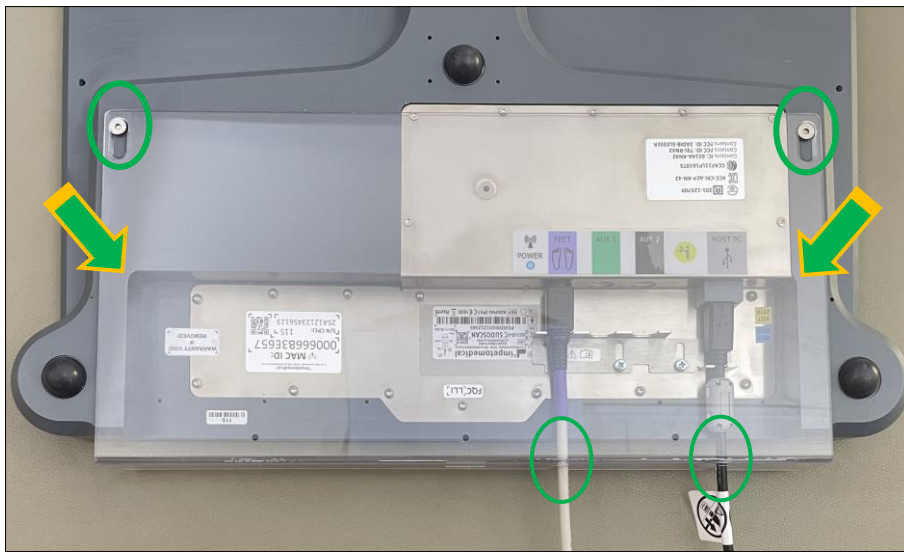
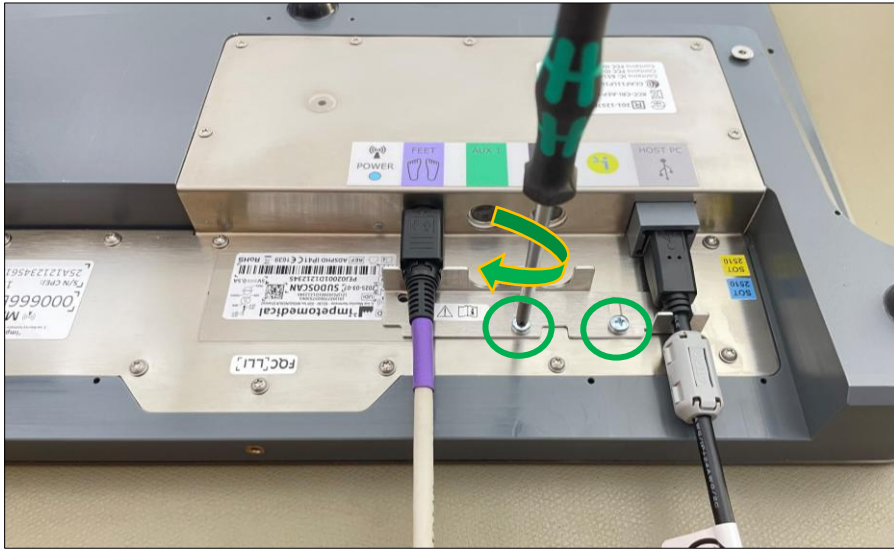
You can put your FEET SMART DOCK on the ground

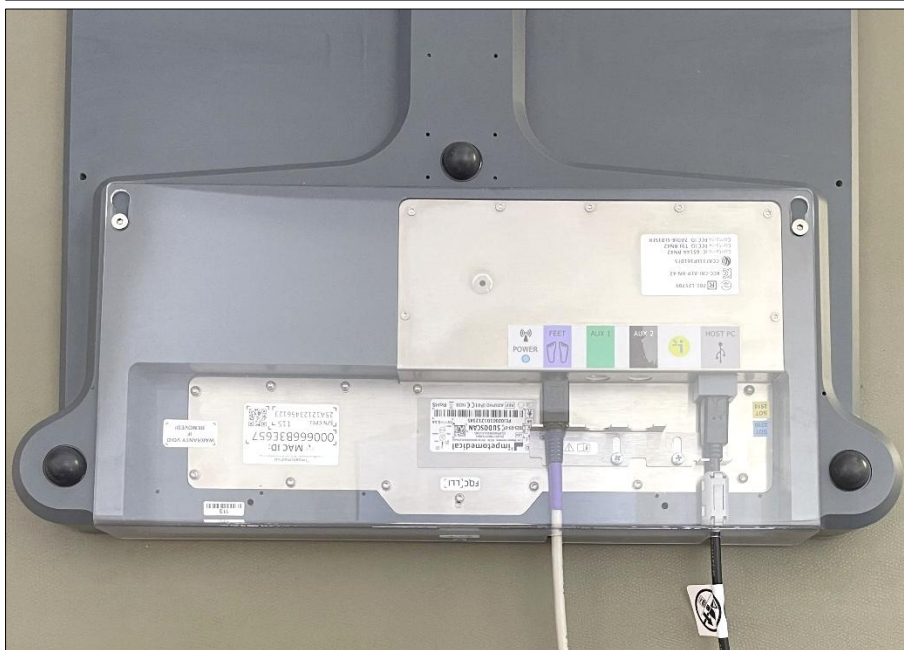






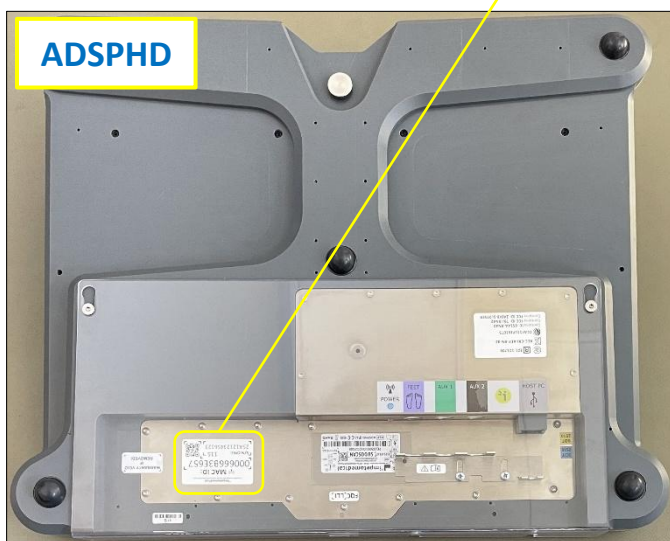
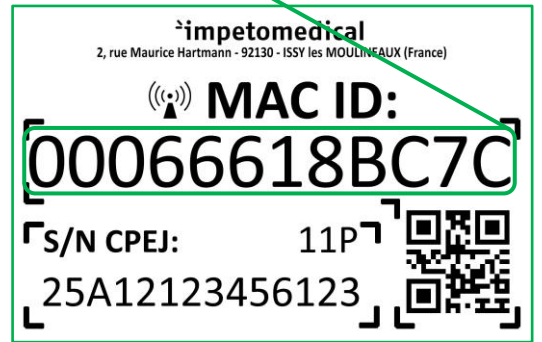
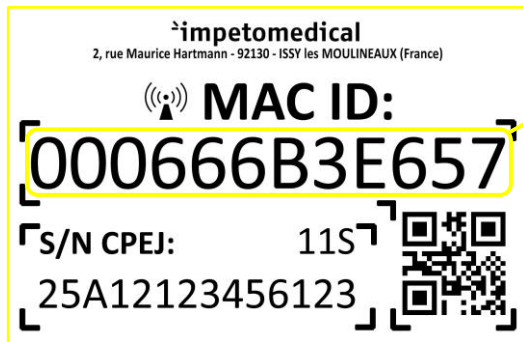
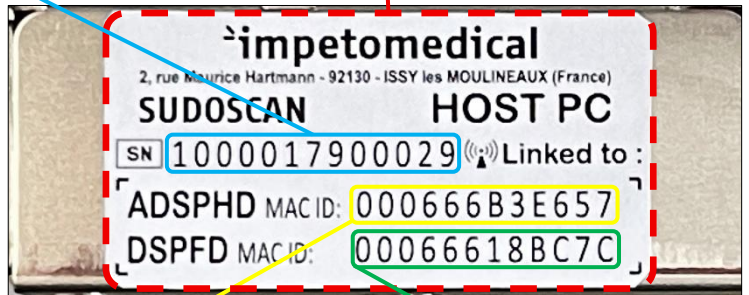
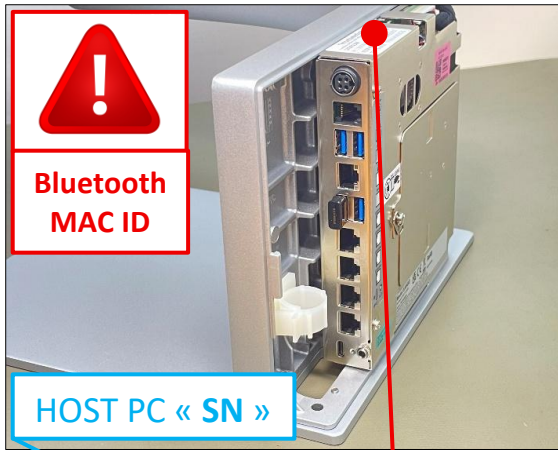
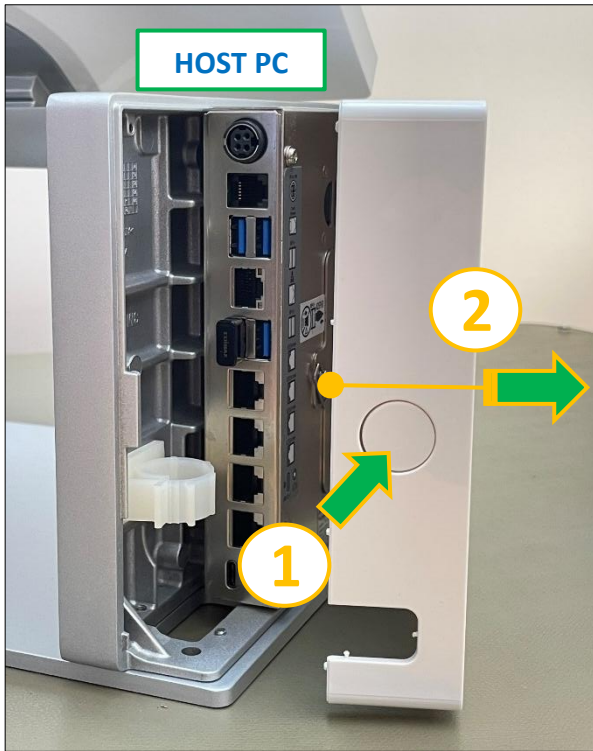


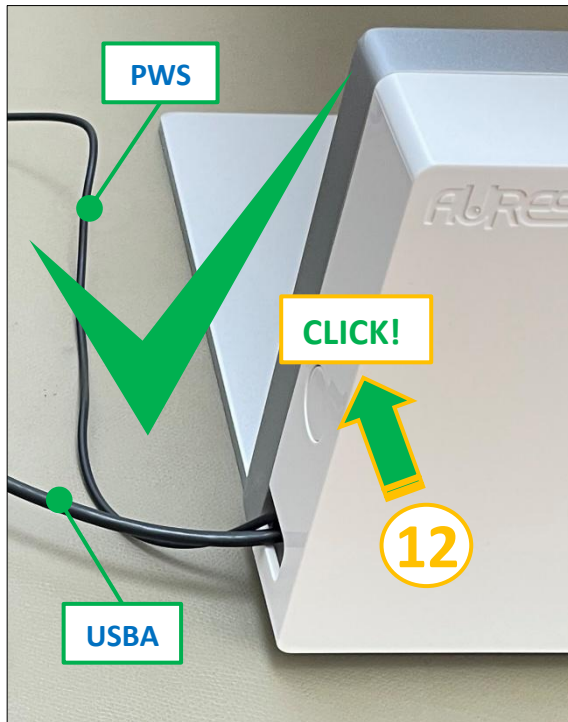
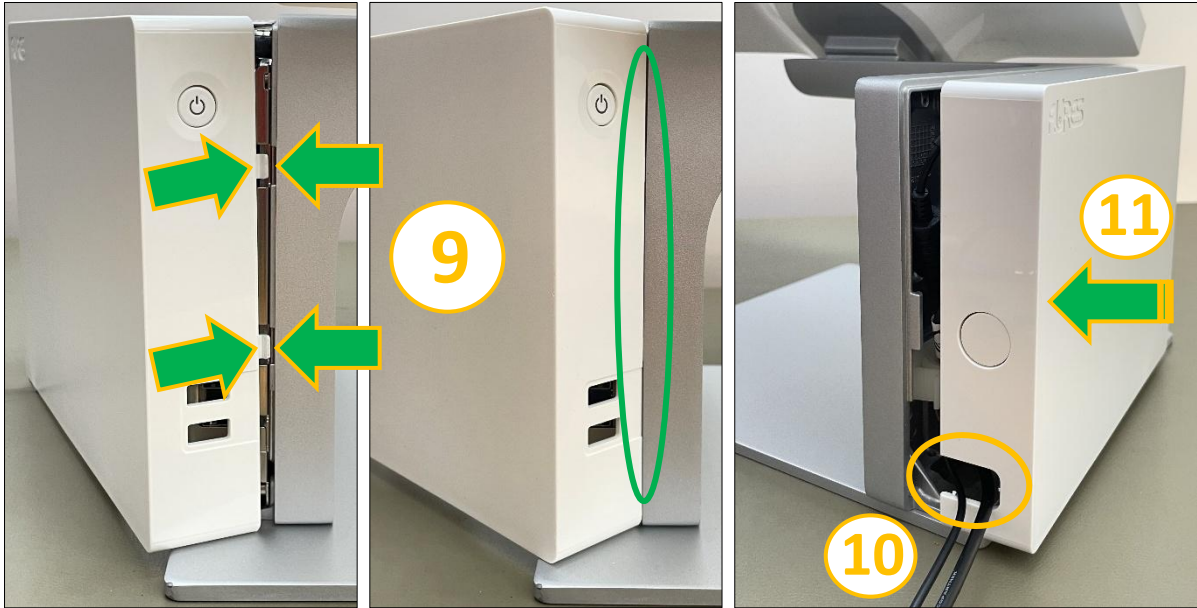




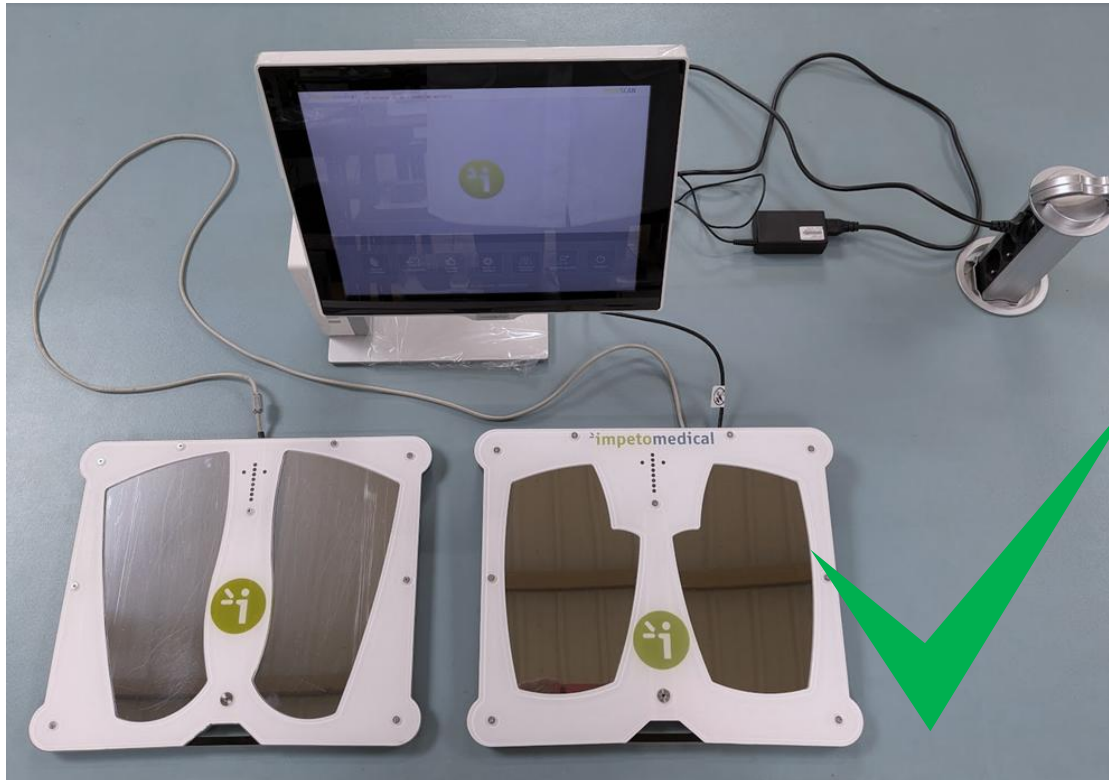
- Verify that the locking screws on both Smart Docks are properly tightened.
- Verify that the Feet Smart Dock cable is securely connected to its socket
- **Connect the cable to the socket with the same color.**
- NEVER UNPLUG the USB cable when the application runs.
- The SUDOSCAN system only works with the original Smart Docks included in the box.

2.2 HOST PC – SET 2









This picture above only illustrates the correct connection between the different parts of the SUDOSCAN

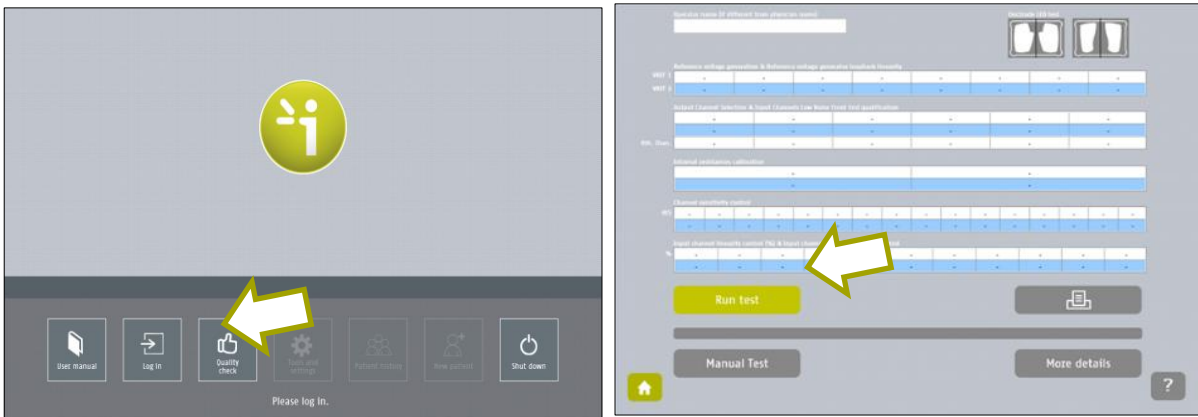


Example of correct installations of the SUDOSCAN device.

Please make sure your device is installed correctly before contacting customer support service.

3 QUALITY CHECK

3.1 Quality Check OK



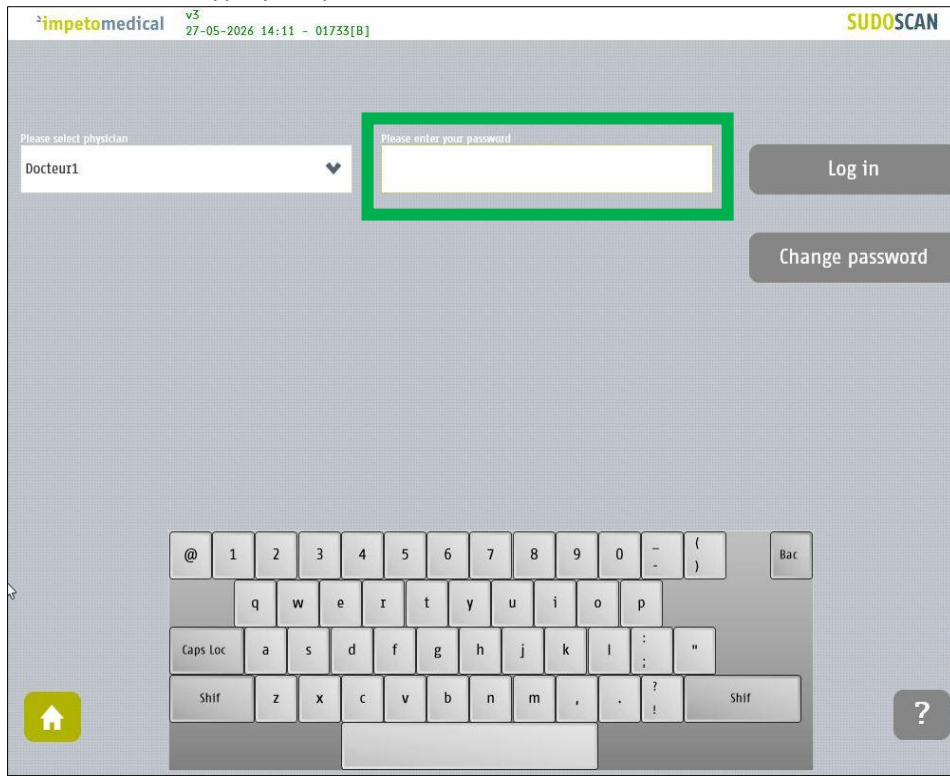
3.2 Quality Check NOT OK



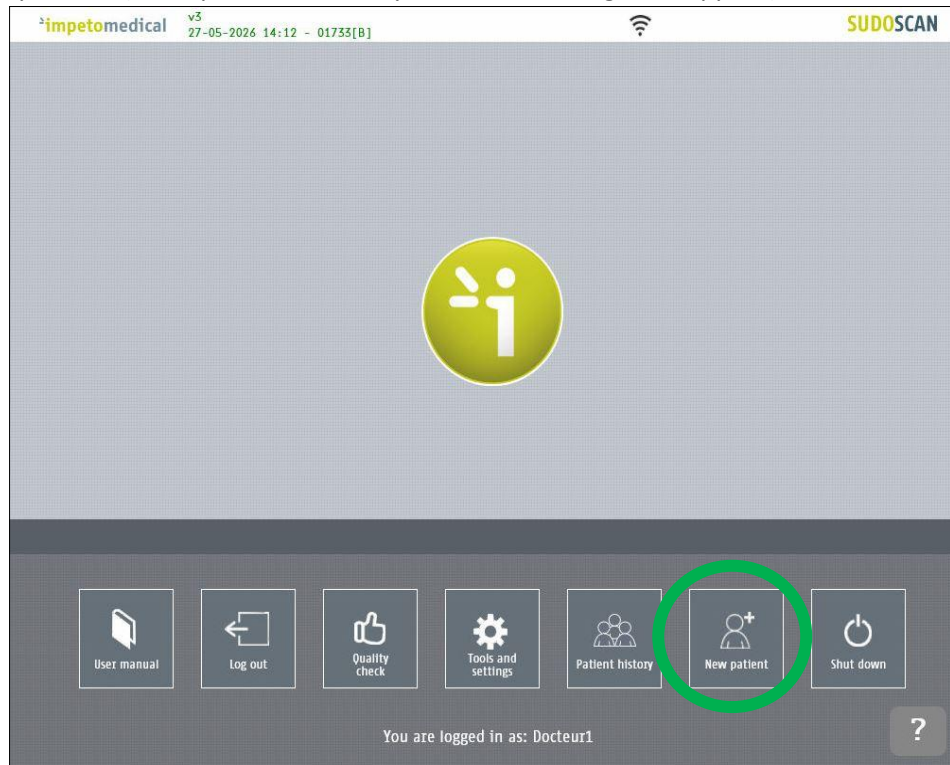
→ IF THE QUALITY CHECK FAILS, PLEASE CONTACT THE CUSTOMER SUPPORT SERVICE (See page 32)

4 HOW TO START A NEW TEST

- Power up the Host PC
- On the Home Page, click the "Log in" button.
- Select your user account and type your password.



- Click on "new patient" (if the patient is already known, a message will appear).



- Add patient information

impetomedical v5 27-05-2026 14:14 - 01733[B] Scan#: 81 [Remaining scans: 100] SUDOSCAN

PATIENT INFORMATION (* indicates a required field)

Last name: Patient First name: New Email: new_patient@impeto-medical.com

Date of birth (Day-Month-Year) *: 1 January 2005

Female * Male *

Age: 21 Weight (kg) *: 100 Height (cm) *: 180

Waist (cm): 0 BMI: 30 SBP/DBP (mmHg): 0 / 0

Compute Nephropathy score (Nephro Sc.)

Compute Cardiac Autonomic Neuropathy (CAN Sc.)

Scan Clear patient data

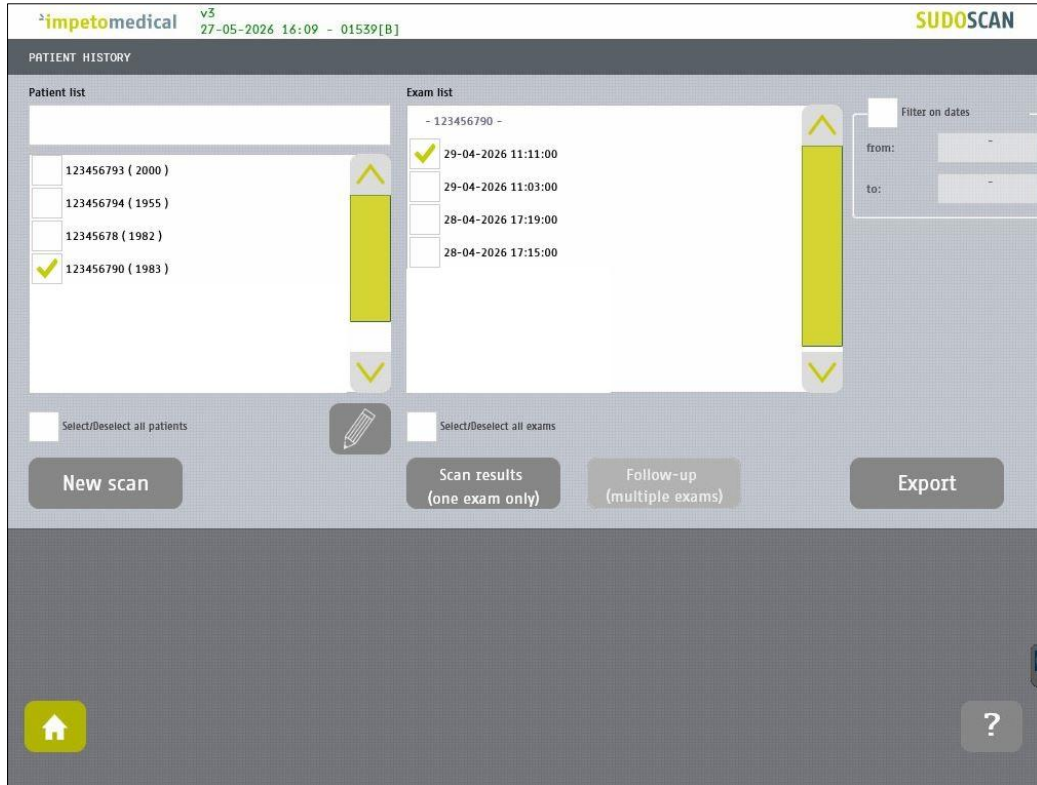
- The patient steps onto the Sudoscan
- Then, the patient must lean forward to apply weight on the Hand Smart Dock.



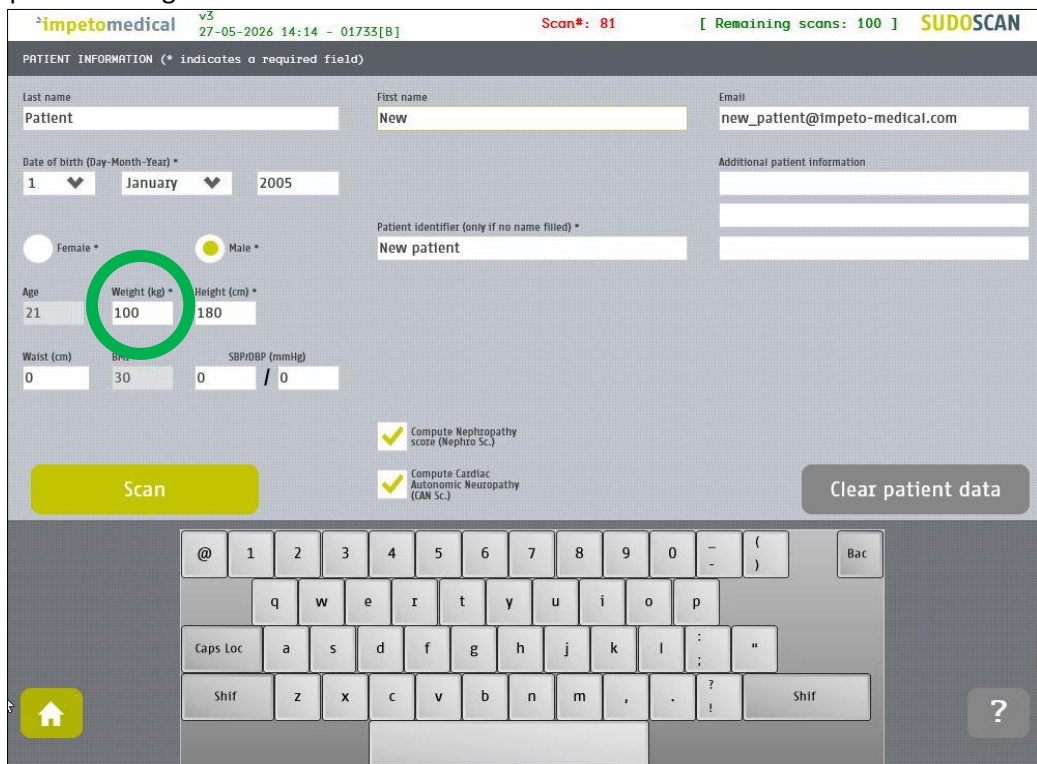
- Click on “new scan”
- The patient must stand still and not move during the scan

If the patient is already known in the system go to:

- "Patient History Page"



- Find the patient profile
- Enter the patient's weight.



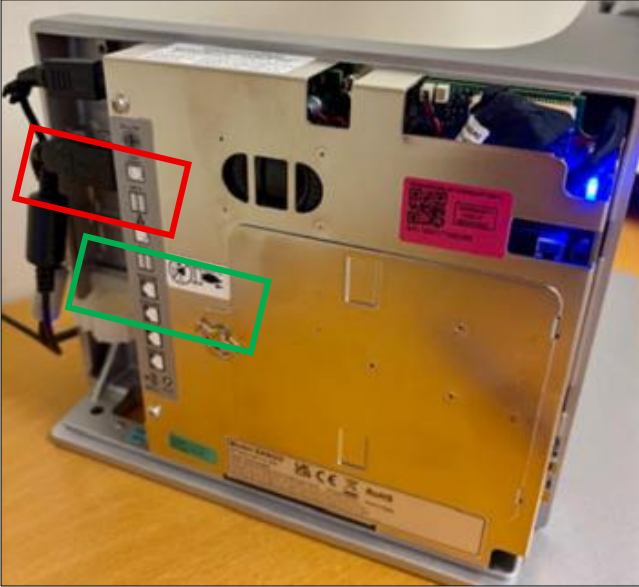
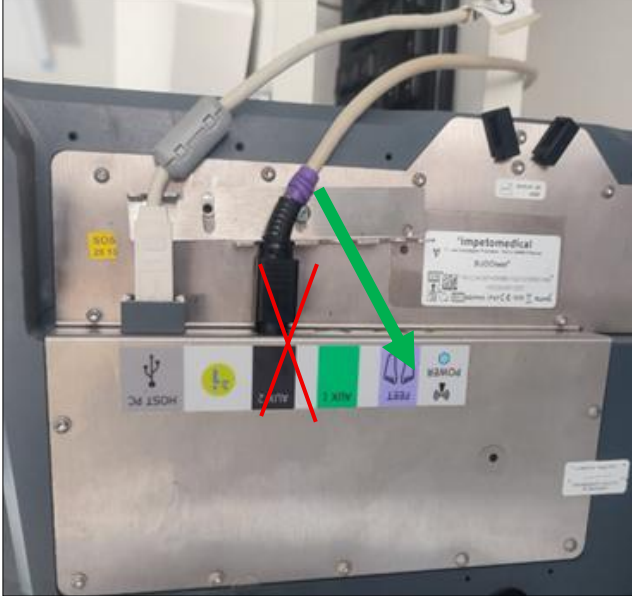
- Click on "scan"

For more information check the user guide (See page 5)

5 EXAMPLES OF INCORRECT INSTALLATIONS

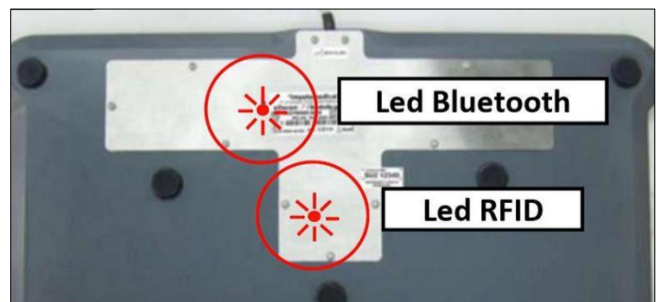
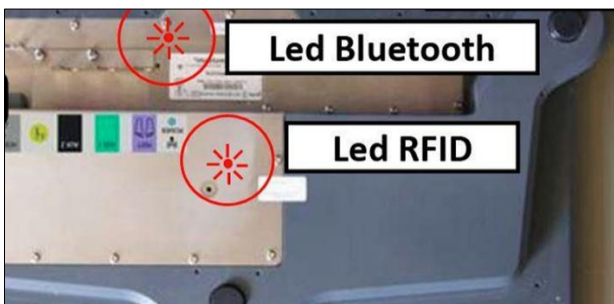


Most technical problems happen because of incorrect installation. Before contacting customer support, please check the following common mistakes:

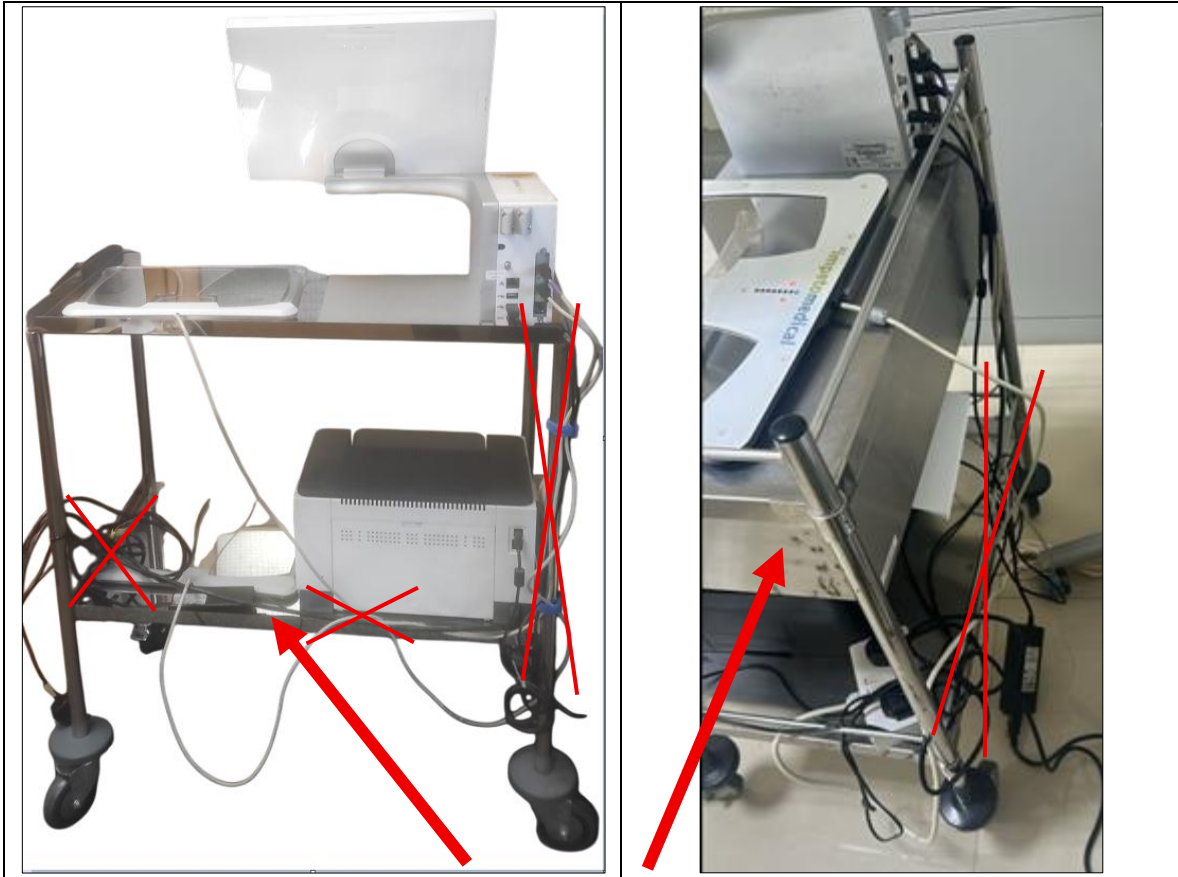
	
<p>Mistake: The USB cable is connected to the wrong USB port on the host PC. Correction: It must be connected to the labelled port.</p>	<p>Mistake: Connecting the feet cable to the "AUX 2" port. Correction: You must connect the feet cable to the purple "FEET" port for the system to work.</p>



If the LEDs under the smart docks are blinking, there are no connections, you can try to reconnect the cables or contact the customer support service (see page 33).



Below are shown poor device installations, mostly the cables are either coiled or tangled, in both cases it creates interferences and might degrade the device performances. A metallic cart can cause signal interference. We recommend using a cart made of glass, plastic, or wood.



Problem : Metallic cart and tangled cables



Problem: Coiled cables

6 TROUBLESHOOTING

Problems	Causes	Actions
The device does not turn on.	<ul style="list-style-type: none"> -Power supply issue -Power adapter is defective -Bad connection between components 	<ul style="list-style-type: none"> -Check that the machine is correctly connected to the mains power supply -Check that the green indicator light on the power supply is lit -Check the connections of the power cord / connector
QC fails	<ul style="list-style-type: none"> -Incorrect electrode (hands/feet) connections with Elock(SA) -The electrode cables are loose, misaligned, or the ElockSA bracket is missing. -A person is standing or touching the smart dock during the Quality Check -Plates are wet -The smart docks are placed near objects that cause electromagnetic interference. -Faulty interface board -Microsoft Security Essentials / Windows Defender enabled 	<ul style="list-style-type: none"> -Make sure the color codes are correct (green for hands and purple for feet) and secure the cables with the ElockSA bracket. -Check that the Elock(SA), locking clamp is properly installed -Make sure no one is touching the plates electrodes during QC - Make sure the smart electrodes are completely dry. If they are wet, wipe them with clean cloth -Log in as Supervisor. Go to the Quality Control tab. Open "Manual Test" to check for signal interference. -Check if QC Passes without the plates electrodes connected to the system -Disable Microsoft Security Essentials/ Windows Defender real time protection
WARNING CPU HIGH USAGE	<ul style="list-style-type: none"> -CBS log files too large on the hard drive -Microsoft Security Essentials enabled/ Windows Defender 	<ul style="list-style-type: none"> -Contact Impeto Medical Customer Service -Disable Microsoft Security Essentials/ Windows Defender real-time protection
USB NOT CONNECTED error message	<ul style="list-style-type: none"> -Cable plugged in incorrectly or not plugged in at all -Internal machine issue 	<ul style="list-style-type: none"> -Check the connections according to the install guide -Contact Impeto Medical Customer Service
Error message Electrodes comm. error	<ul style="list-style-type: none"> -Bluetooth board issue -Pairing issue -Disabling the Bluetooth feature on Windows. -Enabling Airplane Mode on Windows -Dongle Bluetooth is not present on the host PC -Plates placed in an environment with electromagnetic interference 	<ul style="list-style-type: none"> -Contact Impeto Medical Customer Service -Contact Impeto Medical Customer Service -Enabling the Bluetooth feature on Windows -Disable Airplane Mode on Windows -Check the presence of the Dongle Bluetooth on the correct USB port -Place the plates on a nonmetallic surface or put an insulation material underneath (cardboard, wood, plastic, etc.)
Unable to find my patient history	<ul style="list-style-type: none"> -Machine moved, BIOS battery issue 	<ul style="list-style-type: none"> -Reset the machine's OS time and date
Cannot connect the machine to Wi-Fi	<ul style="list-style-type: none"> -Invalid password -Secured network -Bad network -Bad connection 	<ul style="list-style-type: none"> -Verify the password provided by the ISP -Contact the ISP to authorize internet access for Sudoscan -Check signal strength in Windows taskbar -Contact the ISP to improve internet access

The machine does not complete a scan	<ul style="list-style-type: none"> -Microsoft Security Essentials enabled/ Windows Defender -Other applications installed on the machine -Device not installed properly -Presence of printer monitoring software -The device is in an environment with high electromagnetic noise. -Another antivirus installed on the machine 	<ul style="list-style-type: none"> -Disable Microsoft Security Essentials/ Windows Defender real time protection -Uninstall applications or contact Impeto Medical Customer Service -Check the connections according to the installation guide -Uninstall the printer monitoring software -Check the installation and the environment around the device -Contact Impeto Medical Customer Service
The machine is slow	<ul style="list-style-type: none"> -Corrupted RFID tag -Device not installed properly -Presence of printer monitoring software -Other applications installed on the machine -Machine not connected to a secure network -Microsoft Security Essentials/ Windows Defender “Realtime Protection” enabled 	<ul style="list-style-type: none"> -Contact Impeto Medical Customer Service -Check the connections according to the installation guide -Uninstall the printer monitoring software -Contact Impeto Medical Customer Service -Check with the IT service regarding MAC or IP address filtering and address configuration settings. -Disable Microsoft Security Essentials/ Windows/ Windows Defender real time protection in windows
Unable to print a report	<ul style="list-style-type: none"> -Printer powered off -Printer not connected to Sudoscan -Print spooler full -Printer incorrectly configured in Windows -Printer not configured in the application -An inkjet printer is being used. 	<ul style="list-style-type: none"> -Verify printer is powered on -Ensure the printer is connected via USB or Wi-Fi to Sudoscan -Cleaning / Restart -Check that the settings are configured using the TCP/IP method -Ensure printer is selected under “Tools and Settings” -Use a laser printer or contact Impeto Medical Customer Service.
My printer is not recognized by the system	<ul style="list-style-type: none"> -Missing driver on the system -Printer too old -Printer powered off -Printer incorrectly configured on OS -Printer not compatible -Printer incorrectly configured in Windows 	<ul style="list-style-type: none"> -Verify printer is powered on - And contact Impeto Medical Customer Service
The machine turns on but the screen remains black	<ul style="list-style-type: none"> -USB key plugged into the system -Antivirus installed on the machine -Touchscreen connector not properly connected -Windows update in progress 	<ul style="list-style-type: none"> -Check that no USB key is connected to the system -Contact Impeto Medical Customer Service -Check if touchscreen connector is correctly inserted and not crooked -Wait a few minutes.

MY ISSUE IS NOT LISTED: PLEASE CONTACT THE CUSTOMER SUPPORT SERVICE (<https://www.sudoscan.com/who-we-are/contact-us/>)

7 SMART ELECTRODES REPLACEMENT



Please order new smart electrodes before your current scans reach zero.

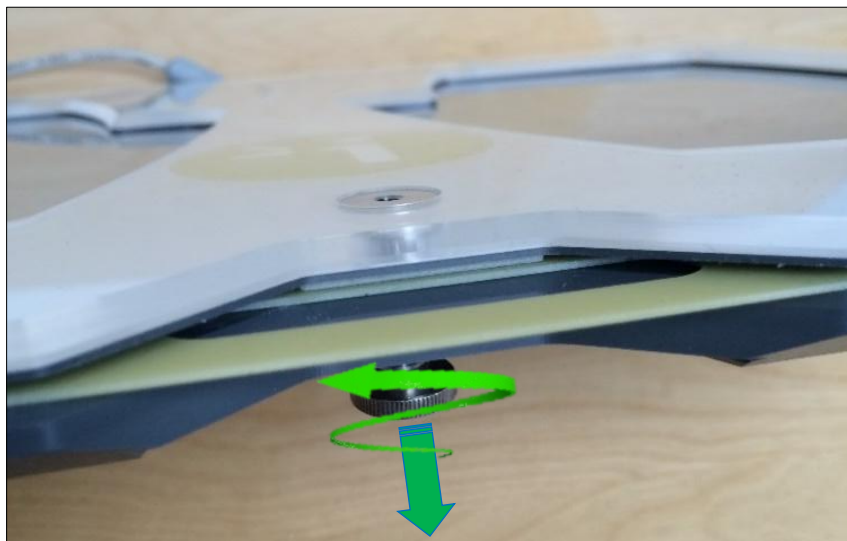
When you order a replacement, a new set of electrodes will be shipped to you. Install them only when the current system indicates zero remaining scans.

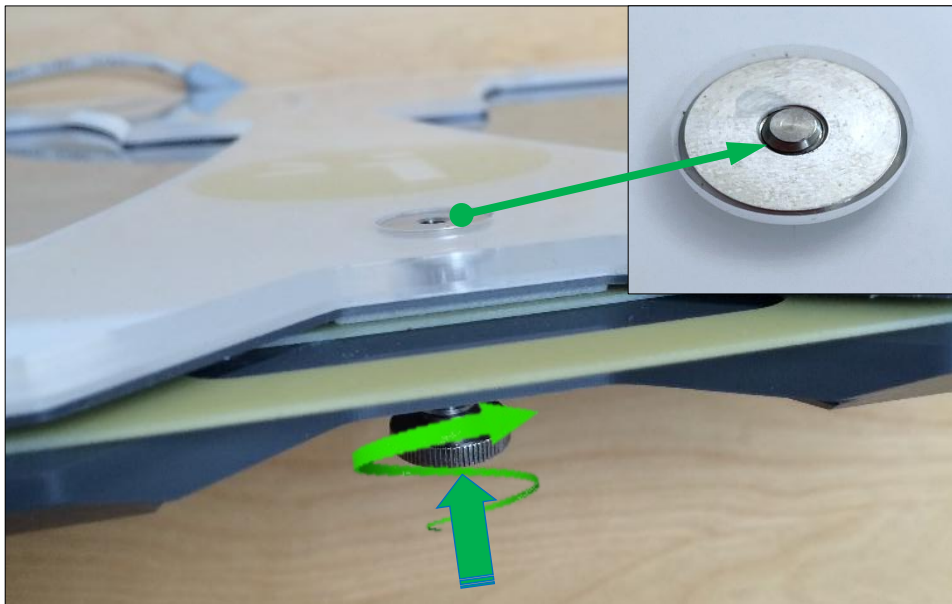
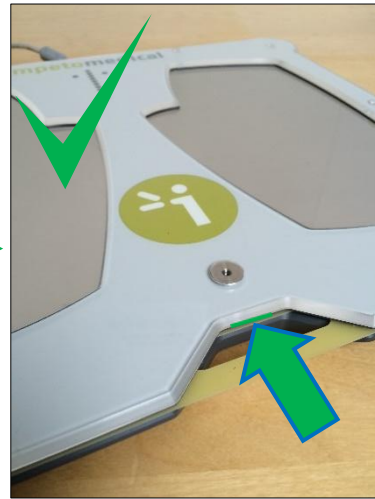
When there are no scans left, the system prevents the user from starting a scan “[No scan left]” and the scan button shows “Change Plates” and turns red instead of showing “Scan” and being green.

Go to the main screen and shut down your PC before changing the electrodes.

Be sure to change hand electrodes and foot electrodes at the same time.

Do not disconnect electrode docks from the Host PC to replace electrodes.





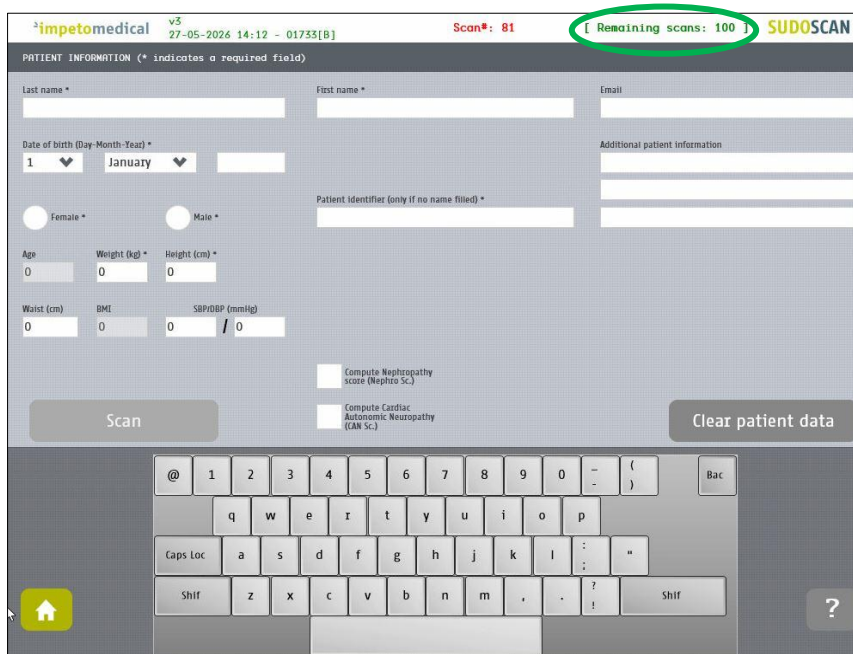
After the change of smart electrodes, power up your PC and return to the « New Patient » screen.
 The remaining number of scans will be updated and displayed on the top right header of the program.



IF DOCKS HAVE BEEN DISCONNECTED FROM THE SYSTEM, PLEASE PLUG THEM IN AGAIN AND RESTART THE SYSTEM. SMART ELECTRODE REPLACEMENT DOES NOT REQUIRE THE DOCKS TO BE DISCONNECTED FROM THE SYSTEM.

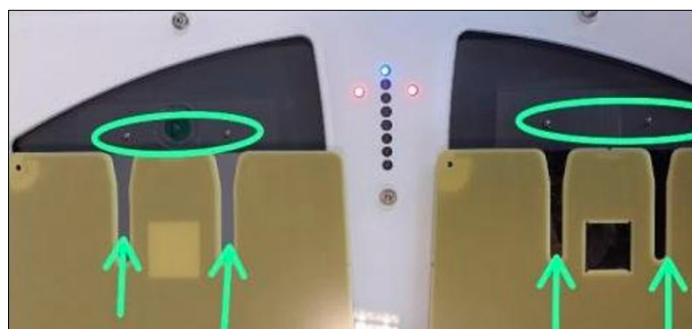
WHEN PLUGGING THE CONNECTOR IN OR OUT OF THE SYSTEM, ENSURE THAT THE PLUGS ARE CORRECTLY INSERTED IN THEIR SOCKET AND REMEMBER TO PULL THEM GENTLY.

When you replace the smart electrodes, you can safely dispose of your old smart electrodes or recycle them in accordance with your local regulation and/or recycling process.



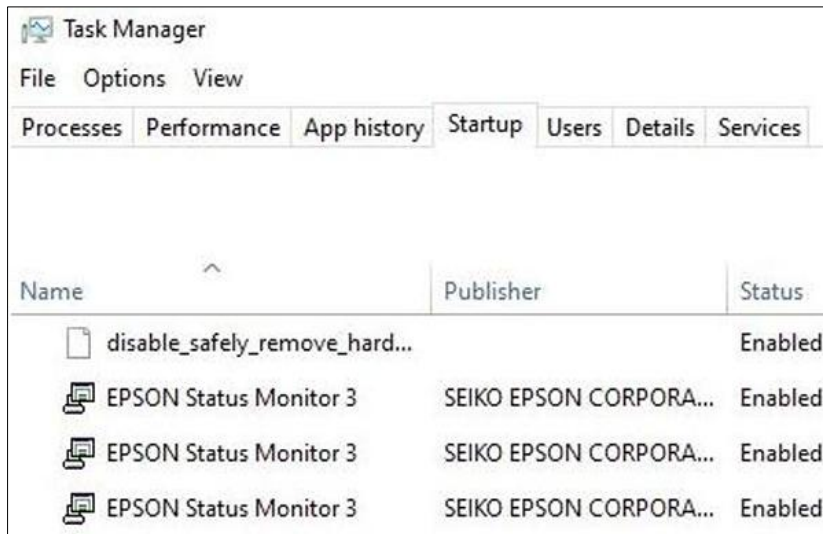
After each test, you must clean the smart electrodes by following the manufacturer information. That information is available on the user guide and on the website: <https://www.sudoscan.com/>

Every 100 to 200 scans, clean the 4 metal contacts on both the smart electrodes and the smart docks.



8 PRINTER INSTALLATION

You must install only basic manufacturer’s driver, not a full suite package!



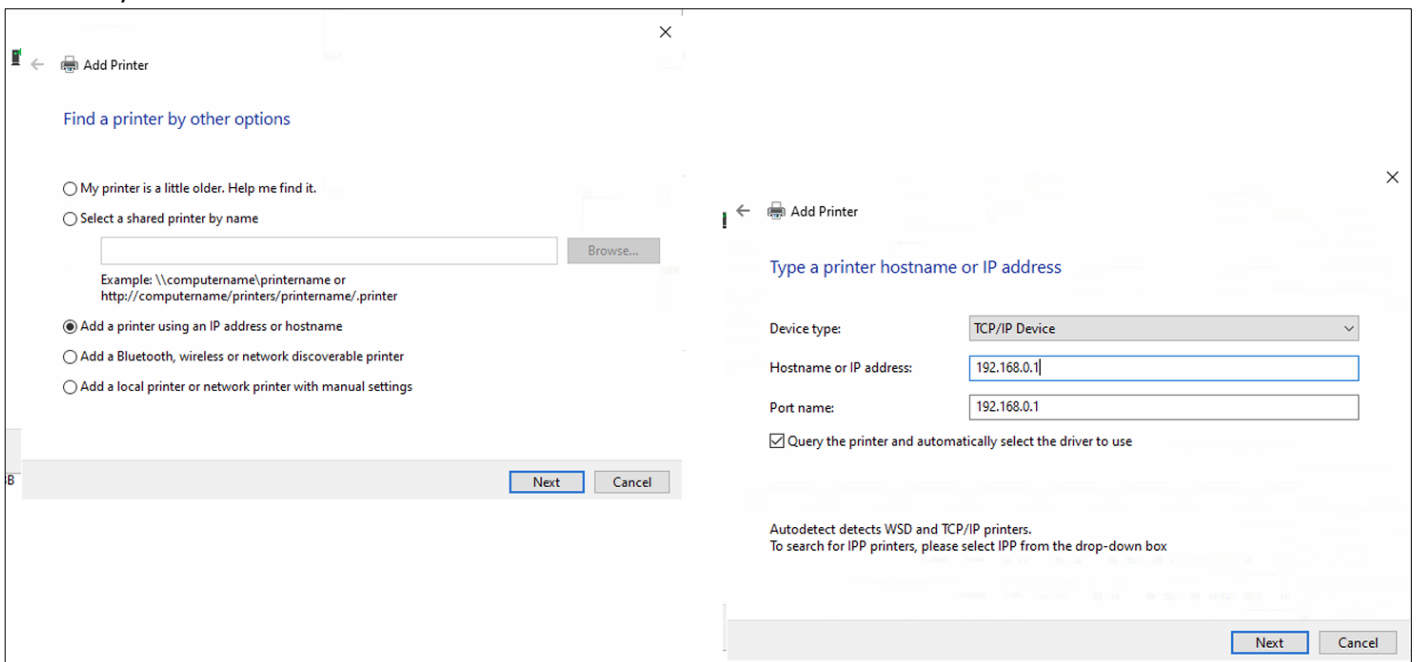
Other printer software can slow down the computer and block the SUDOSCAN application. After installing the printer, check the startup menu to see if any printer monitoring software is installed and disable it.

Set the new printer as the default printer in Windows and configure it for each doctor in the Sudoscan software, in the "Tools and Settings" section.

To use a network printer, you must install it using an IP address (TCP/IP).

On the desktop and parameters, go to “Device and Printer”, select “Add Printer”, “Enter IP address”

Install only basic driver



9 CUSTOMER SUPPORT CONTACT

9.1 General information

PLEASE CALL CUSTOMER SERVICE IN CASE OF FAILED QUALITY CHECK.

NO MODIFICATION OF THIS EQUIPMENT IS ALLOWED.

REMOVING THE POWER CORD FROM HOST PC OR FROM WALL SOCKET BEFORE COMPLETE UNIT SHUT OFF MAY IRREDEMIABLY CORRUPT DATA.

IT IS EXPRESSLY FORBIDDEN TO INSTALL ANY THIRD-PARTY APPLICATION OTHER THAN PRINTER DRIVERS WITHOUT REFERRING TO IMPETO MEDICAL FIRST.



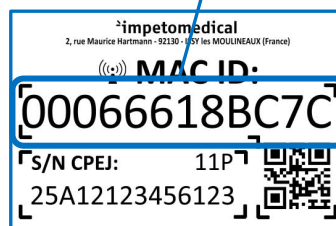
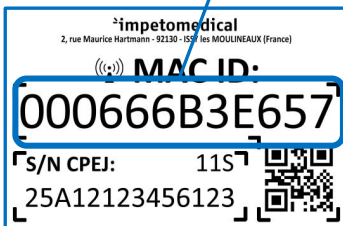
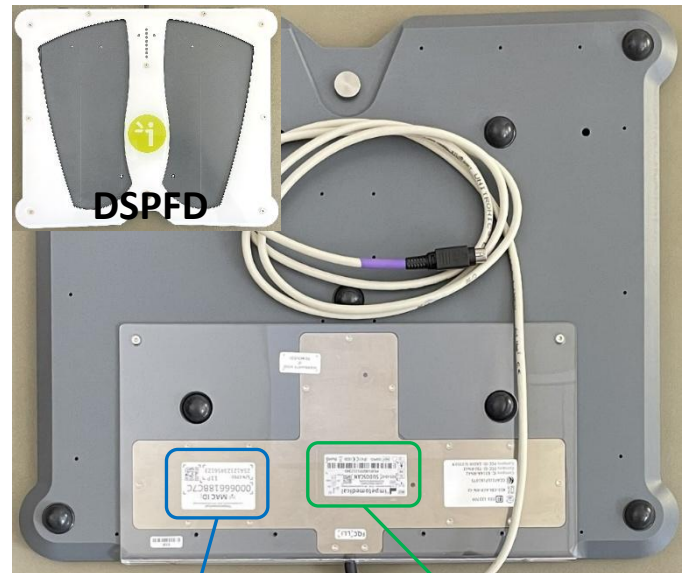
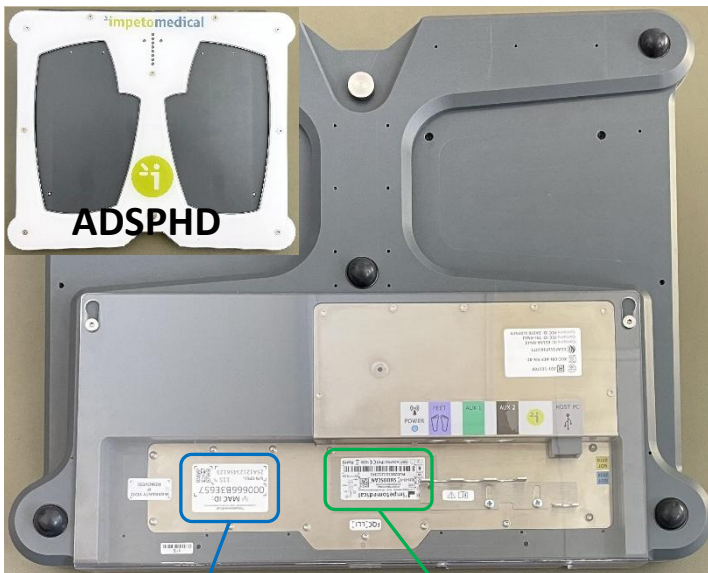
Please note that the application generates patient data, your environment must be sufficiently protected to avoid any unexpected use of this data. Please ensure you can back up your data frequently.

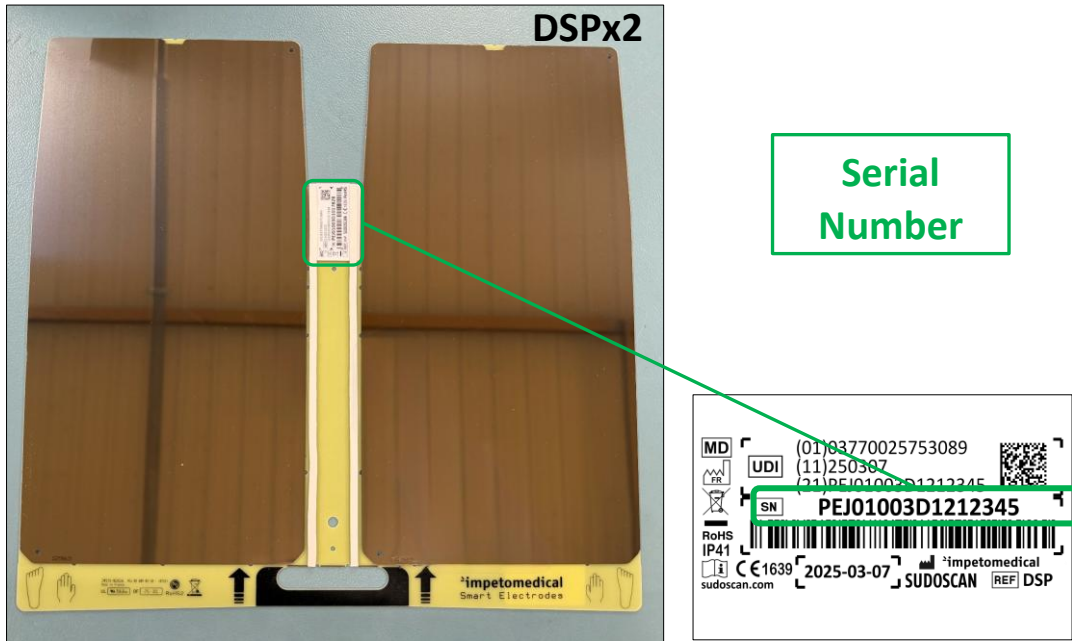
9.2 Information needed for customer support services

To contact the customer support team, you need to indicate the serial numbers of your device (ADSPHD + DSPFD + DSPx2)

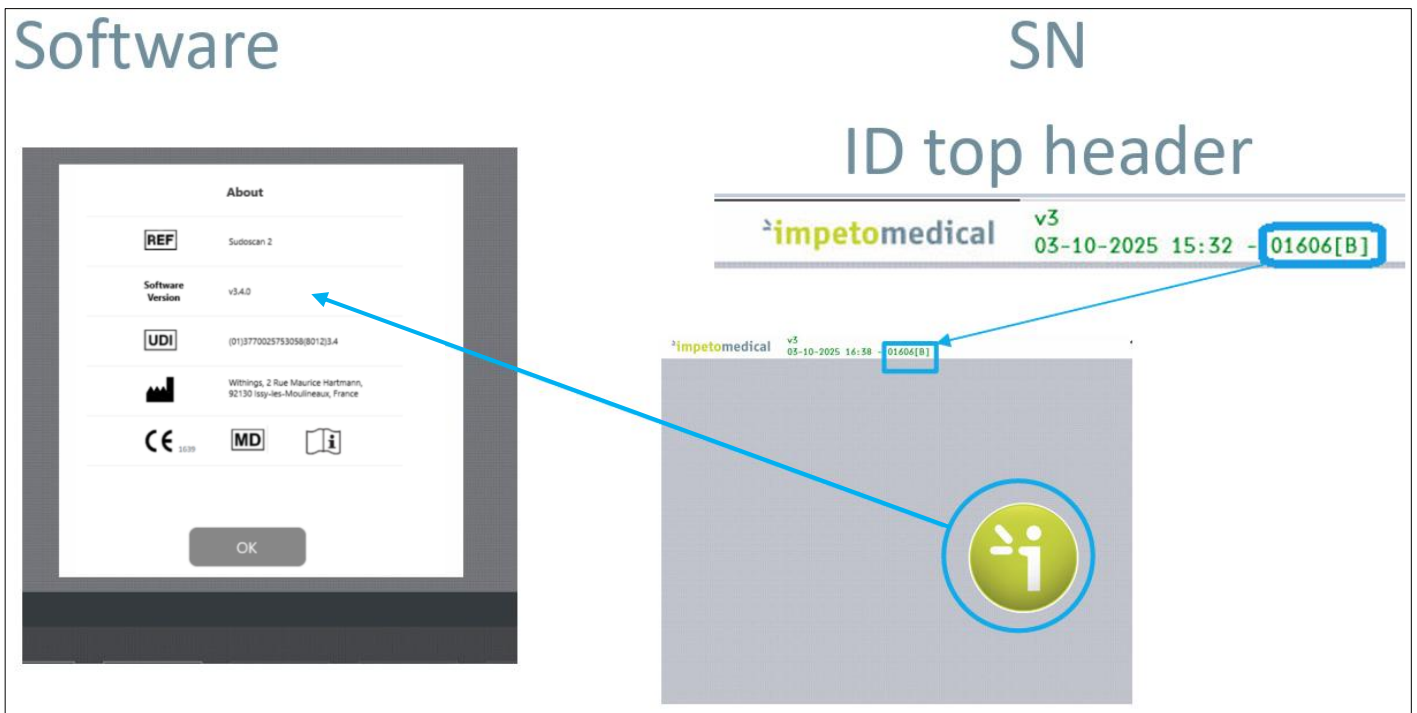
Serial
Number

Bluetooth
MAC ID





The software version and the serial number can be found on the SUDOSCAN application



9.3 How to contact customer support

See the contact info on the last page of this guide.

If you have a question or a problem, you can open a new request directly on the website (<https://www.sudoscan.com/who-we-are/contact-us/>) or at support@impeto-medical.com

For any incidents, please use dedicated contact on the website.

Send us a message

"" indicates required fields

Select a contact:

Company or organization:

Country:

Name:

Email:

Phone:

Last:

Choose a request:

After sale/services requests

To send your request to our service, please fill out the contact form on this page.

After sale/services requests

To send your request to our service, please fill out the contact form below.

Step 1 of 2

50%

File

Aucun fichier choisi

Max. file size: 128 MB.

Customer identification

Customer Name (Required)

Address (Required)

Contact Name (Required)

Email address (Required)

Phone

9.4 Upgrades of the devices

Windows Update Information:

If your device is connected to the internet, Windows Updates are required. Updates can take several hours if the system has not been connected to the internet for a long time. Do not disconnect or turn off the device during an update.

Do not force the device to shut down during updates or while it restarts.

It is necessary to let the device finish the installations, when it's done you can turn it off and restart the device at least twice.

10 TECHNICAL CHARACTERISTICS

WIFI / Bluetooth and Flight Mode

Do not activate "Airplane mode" in Windows. This will turn off the Wi-Fi and Bluetooth connections.

If you disable the Bluetooth devices the software cannot communicate with smart docks or sudotest.

It's forbidden to unplug the WIFI/Bluetooth dongle on the Host PC.



Wireless Mouse and Keyboard

If you use a wireless mouse or keyboard, these accessories connect via Bluetooth and can disconnect or disrupt the communication between the host PC and the smart docks.

Acquisition

Mode of compression	Without
Frequency of acquisition	100 Hz
Resolution	10 nS (nano Siemens)
Display units	μS (micro-Siemens)
Display precision	+ or – 1 digit
Accuracy	2%



Electrical

Measurement voltage	1V - 4V DC typ.
Frequency	0 Hz (DC current)
Dynamic resolution	10 bits
Power and I/O interface	5V DC – 500mA High Power USB 2.0/3.0 and > port, type A, Full Speed
Insulation	4KVac/1min (Type BF)

Index of Protection

Smart Docks	IP41
Smart Electrodes	IP41

Dimensions and weights

	<p>Hand dock, Foot dock & 2 smart electrodes</p> <p>7,9 kg (17,4 lbs.)</p>
	<p>SET 1</p> <p>11,0 kg (24,3 lbs.) 47,5 x 26 x 40 cm (18,7' x 10,2' x 15,7')</p>

Environment

Temperature	18° - 35°C (65° - 95°F)	5° - 45°C (41° - 113°F)	-5° - 50°C (23° - 122°F)
Moisture (without condensation)	20% - 80%	10% - 85%	10% - 90%
Pressure *: exclusively with one Host PC certified to function up to 3000 m of altitude	700 - 1060 hPa*	500 - 1060 hPa	500 - 1060 hPa

11 CONTACTS



Impeto Medical



Legal Manufacturer

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