



# USER MANUAL

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Marking by the symbol CE indicates compliance of this device as a Class 1 medical device with the Medical Device Directives 93/42/ EEC, 2007/47/CE.



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# INTRODUCTION

## ABOUT THIS MANUAL

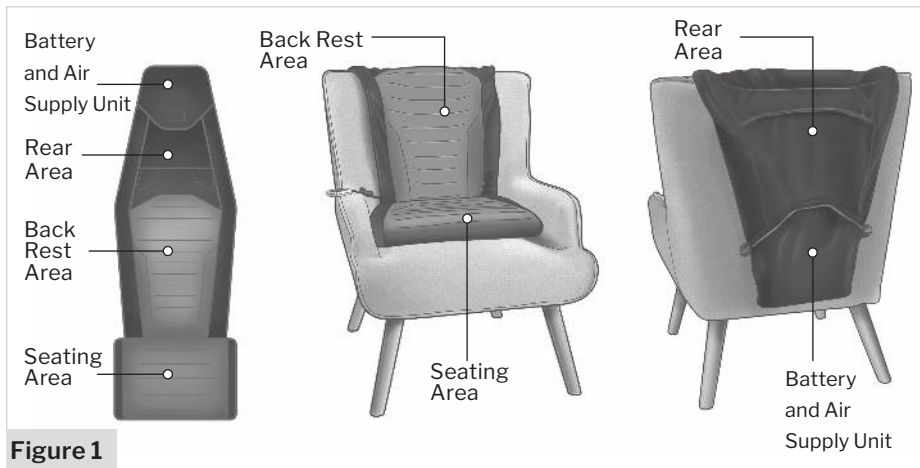
This manual provides the information necessary to operate **Life Assistant SitnStand – Portable Smart Rising Seat** in a safe and efficient manner. Please read and understand this manual before operating the system. If any part of this manual is unclear, contact your supplier or **Life Assistant** Customer Support for clarification.

Please contact your local **Life Assistant** distributor/representative for translated versions.

## Life Assistant Sitnstand Product Overview

**The SitnStand – Portable Smart Rising Seat** is a lightweight, portable inflatable system that is safe, simple and easy to operate. It comprises an electronic control system, multiple air valve, multiple air sealed layers and an air pump that is portable and can supply the required pressure and air capacity to assist standing up and sitting down with minimum/no help needed.

**The SitnStand – Portable Smart Rising Seat** was solely designed to help people suffering from the difficulty of moving from a sitting position to a standing position and vice versa due to chronic illness or disability (according to VAT Notice 701/7) from a seat, chair, couch etc.



## In the Box:

- 1 **SitnStand** unit
- 1 Li-Ion 14.4VDC rechargeable battery
- 1 Wall battery charger with 1m cable and connector
- 1 User manual

## Special Messages: Warnings, Cautions and Notes

Three types of special messages appear in this User Manual:



A **WARNING** indicates the possibility of injury to the patient or operator.



A **CAUTION** indicates a condition that may lead to equipment malfunction.



A **NOTE** provides other important information.



## Conditions for Use

### INTENDED USE

**The SitnStand** is a powered inflatable cushion intended for assisting patients suffering from mobility difficulties in rising from a seated position to standing, and in sitting down from a standing position. **The SitnStand** is intended to be used with chairs, wheelchairs and toilet seat, depending on its model.

**The SitnStand** is intended to be used in the home care environment while performing everyday activities, as well as in medical care facilities.

### INTENDED USERS

**The SitnStand** is intended for the home care environment, to be used by elderly people and/or people with compromised mobility or difficulties.

**The SitnStand** is intended to be used by people with chronic or acute mobility difficulty.

**The SitnStand** is intended to be used by cognitive impairment patients while assisted by a caretaker in order to understand instructions in this manual.

# SAFETY

## General Warnings and Cautions



**WARNING: DO NOT USE BEFORE READING AND UNDERSTANDING THIS MANUAL.**



**WARNING:** To avoid the potential for electrical shock, use only designated charger provided with the device. Using any other charger may cause an electrical and/or electromagnetic hazard.



**WARNING:** To avoid the potential for electrical shock, the power supply must be disconnected from the power mains prior to cleaning.



**WARNING:** To avoid the potential for electrical shock, service should be performed by authorized **Life Assistant** personnel only. The only user-serviceable components in the system are the battery and cushion jacket.



**CAUTION:** Changes or modifications not expressly approved by **Life Assistant Ltd** can affect the safety and effectiveness of the system and will void the system's warranty.



**CAUTION:** Do not operate with damaged cords or plugs. If damaged, have the cord or plug replaced immediately by a qualified service technician.



**CAUTION:** At the end of its useful life, the system and battery must be disposed of in accordance with local law and/or code concerning electrical and electronic equipment.












**CAUTION:** Do not use the device while under the influence of narcotics or alcohol.



**CAUTION:** The **SitnStand** is intended for use by a single person, do not use while holding a child or infant.

# **LABELS AND SYMBOLS**

SYMBOL	DESCRIPTION
	Consult instructions for use
	Year of Manufacture
	Special Requirements for Waste of Electrical and Electronic Equipment (WEEE Directive)
	Compliance with Medical Device Directive 93/42EEC
	Manufacturer
	Type B applied part (IEC60601-1)
	Catalog Number
	Serial Number
	Keep dry

# **USING THE SITNSTAND**

## Setting Up

Setting up **the SitnStand** is performed by the user.

The setting up process consists of three steps:

- A. Charging the battery for the first time
- B. Setting up **the SitnStand** on a suitable seat
- C. Connecting the battery

### A – CHARGING THE BATTERY FOR THE FIRST TIME-FIGURE 2

Charge the battery for at least 12 hours before use:

1. Take out the battery from the box
2. Plug in the battery charger to an electric wall socket
3. Connect the battery charger connector to the battery charging socket
4. When the green light is on, battery is fully charged
5. When red light is on, battery is not fully charge



**NOTE:** To prevent falling over any tangled cable, place the battery close to the charger.

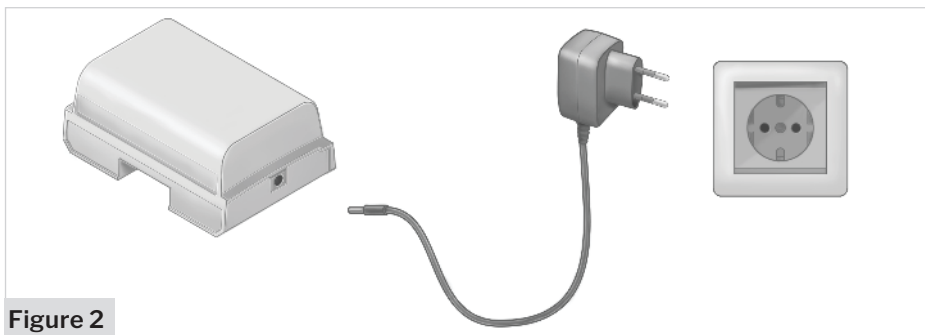


Figure 2

## **B – SETTING UP THE SITNSTAND ON A SUITABLE SEAT**

Selecting proper seat.

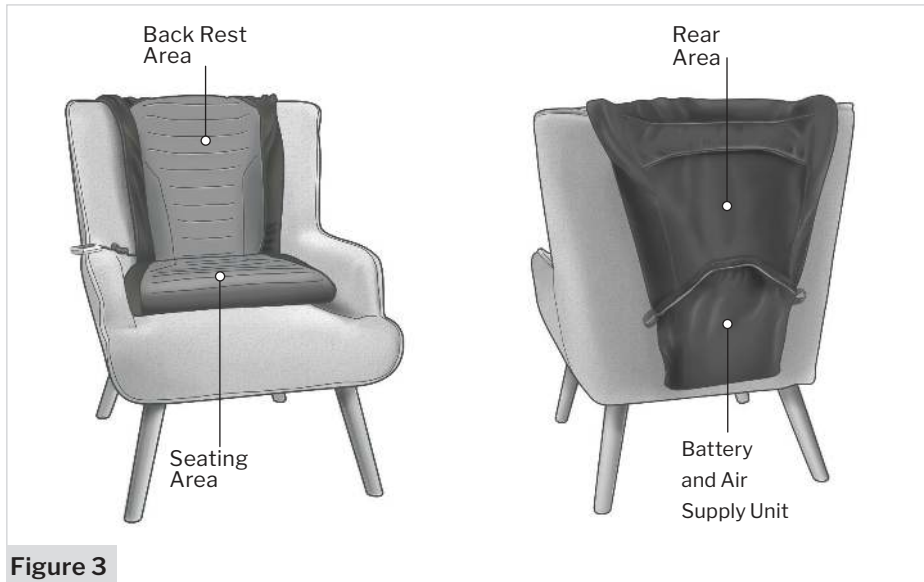
When selecting the seat on which ***the SitnStand*** will be situated, it is advised to select a seat that will be steady, stable and cannot be easily moved. An armchair is preferable.

When selecting the seat on which ***the SitnStand*** will be situated, it is advised to select a seat that is at least the size of ***the SitnStand*** seating area in its deflated state and that has at least one arm rest.



## Setting Up the SitnStand on a Chair

Place the sitting area of **the SitnStand** straight onto the chair seat.



**Figure 3**

In most cases **the SitnStand** line between the seat area and the backrest area should be aligned with the same line in the seat itself, however, in some cases location should be adjusted differently.

The rear area of **the SitnStand** should be laid over the back seat of the chair, as shown in **Figure 3**.

Placing a standard back pillow between **the SitnStand** back rest area and the chair backrest is an option.

## C – PLACING THE BATTERY IN ITS PLACE

Slide the charged battery to its place within the air supply unit, as shown in **Figure 4**.

*The SitnStand* is now in standby mode, and is ready for use.

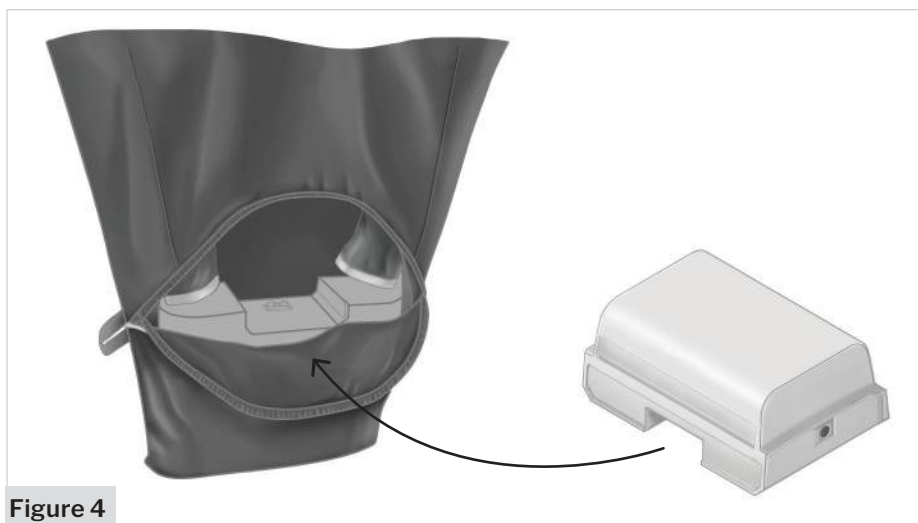
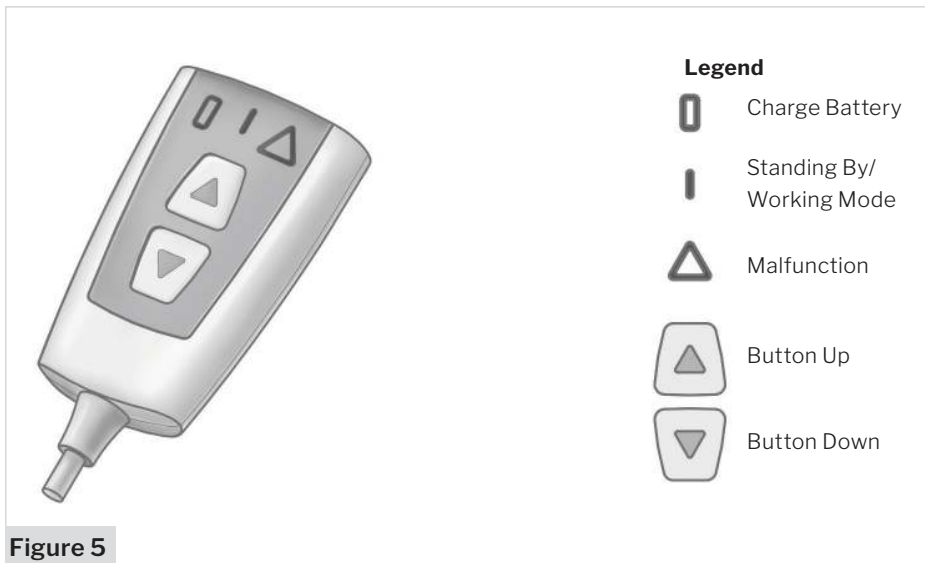


Figure 4

## Controller Indicators Modes- Figure 5

1. **Standby mode** – the green light flashes slowly (about one flash per second) – **The SitnStand** is ready to use and is waiting for your input.
2. **Working mode** – the green light flashes quickly (about 5 time a second) – **The SitnStand** is at work (while in this mode, the buttons will not respond).
3. **Charge battery** – the orange light is on while the Standby/ Working mode green light is working as shown in 1 or 2 – Battery needs charging.
4. **Charge battery** – the orange light is on and Standby/Working mode green light is off – Battery is depleted, in this case the **SitnStand** cushion can only be deflated.
5. **Error** – the red light flashes quickly – **The SitnStand** identified a system fault – contact the service department.



## Sitting Down

For sitting down – inflate the cushion using the controller to 1,2,3 or 4 layers (according whichever is best for you), sit down on the pillow facing forward.

When you feel steady, start deflating the cushion by pressing on down arrow button on the controller.



**NOTE:** One press on the down arrow button deflates the air from one layer only. Continuous pressing on the down arrow will deflate air from the next layer automatically.

## Standing Up

For standing up – start inflating the cushion one layer at a time by pressing the up arrow button on the controller.



**NOTE:** One press on the up arrow button inflates the air in one layer only and does not continue to the next layer until the previous is inflated and the button is pressed again, continuous pressing on the up arrow will inflate the next layer automatically.

**The SitnStand** has 4 layers however, Inflation can be stopped at any time when the level of elevation is sufficient.

Do not try to stand up before the layer is totally inflated and there is no sound from the air pump.

**The SitnStand** may remain inflated until the next time it is used for sitting down.

## Replacing the Battery

When the Charge battery indicator turns orange, battery should be charged.

Open the zipper covering the air supply unit and remove battery by sliding it towards you **Figure 6**.

The battery is connected by a magnet to the air supply unit.

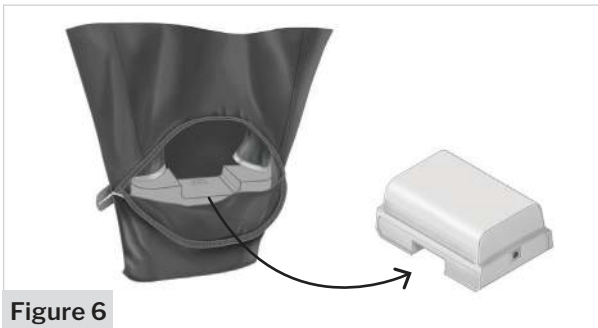


Figure 6

## Charging the Battery- Figure 7

1. Plug in the battery charger to an electric wall socket.
2. Connect the battery charger connector to the battery charging socket.
3. When the red light on the charger will change to green, battery is fully charged.
4. When red light is on, battery is not fully charged.

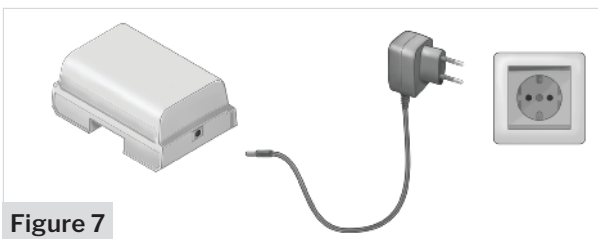


Figure 7

# **TROUBLESHOOTING**

Before addressing the troubleshooting table, please check and confirm the following:

1. The battery is attached to **the SitnStand**
2. The battery is charged. (low battery indicator is off, standby/ready indicator is on)

## Basic Troubleshooting

MALFUNCTION	STEP 1	STEP 2
Battery not charging	Charge the battery	Contact service
No light on the controller		
Product is not working when pressing the controller		
Does not deflate		
Does not inflate		
Air leaking	Contact service	
Red triangle light on remote controller		

# **MAINTENANCE AND SERVICE**



In order to maintain **the SitnStand** system, please note the following:

- Keep **the SitnStand** away from dust or dirt
- Use a soft dry brush to clean the fabric surfaces (e.g. seat area).
- The cloth jacket of the seat may be removed and washed, return only after the jacket is completely dry
- Do not iron the cloth jacket
- Use a damp cloth for cleaning the plastic surfaces (e.g. air supply unit)
- Do not use solvents or detergents for cleaning on any part
- Do not allow liquids near the system openings



**WARNING: To avoid potential for electrical shock**, the power supply must be disconnected from the power mains prior to cleaning.



**WARNING: To avoid potential for electrical shock**, service should be performed by authorized **Life Assistant** personnel only.



**NOTE:** No portion of the system should be immersed in water or other fluids.



**NOTE:** Never spray or otherwise apply any cleaner directly into the openings or seams of the system. Always apply the cleaner to the cloth instead.

## Obtaining Service:

Contact the **Life Assistant SitnStand** representative:

**Life Assistant LTD**, 8 Harod St. Afula, 1871208, ISRAEL

Tel.: +44 (0)20-38088224

<http://www.lifeassisfanf.co.il>

# **OPERATING SPECIFICATIONS**



**NOTE:** Unless otherwise indicated, all specifications are subject to change without notice. Specifications and test methods will be made available upon request.

## 1.1. Environmental

### 1.1.1. TRANSPORT AND STORAGE ENVIRONMENT

**Temperature range:** -25°C to +70°C

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**Relative humidity range:** Without relative humidity – 93%

### 1.1.2. OPERATION ENVIRONMENTAL CONDITIONS

**Temperature range:** +5°C to +40°C

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**Relative humidity range:** 15% to 93%, with no condensation

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**Atmospheric pressure:** 700 – 1060 hPa

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**Transport altitude:** 0-2000 meters

## 1.2. Electrical

**Battery type:** Lithium-Ion Rechargeable, 14.4 V, 2.6 Ah

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**Operation Voltage:** DC 14.4V @ 10A

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**Charger Input:** 100 to 240VAC

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**Charger output:** 16VDC, 0.5A (8W)

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**Frequency:** 50 - 60Hz

---

**Battery life:** ~500 charging cycles / two years under warranty that the battery should be over 80% of its capacity

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**Inflation / deflation cycles between charges:** ~90

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**CAUTION:** At the end of its useful life, the system and battery must be disposed of in accordance with local law and/or code concerning electrical and electronic equipment. Do not discard to standard trash bin.

### 1.3. Physical and Operational

<b>Seat footprint – Deflated:</b>	40 x 53 x 10 (cm)
<b>Seat footprint – Inflated:</b>	40 x 48 x 65 (height of back) (cm)
<b>Carrying package dimensions:</b>	39 x 54 (cm)
<b>Product Weight:</b>	3 kg
<b>Max supported weight:</b>	120kg
<b>Nominal Operation time (inflate/deflate):</b>	~20 sec
<b>Control mechanism:</b>	Up / down pushbutton Green LED: system ready Yellow LED: low bat. Red LED: Error
<b>Air capacity:</b>	~1.7 L/Sec @ 1 AT pressure
<b>Device lifetime:</b>	~10000 inflating cycles / 5 years

# **APPLICABLE STANDARDS**

The following list of standards applies to the system:

- **EC/EN 60601 – 1, Medical electrical equipment – Part 1:** General requirements for basic safety and essential performance
- **IEC/EN 60601 – 1-2, Medical electrical equipment – Part 1-2:** General requirements for safety – Collateral standard: Electromagnetic compatibility – Requirements and tests
- **IEC 62366 -1, Medical devices – Part 1:** Application of usability engineering to medical devices
- **IEC 60601 -1 -11:** Medical electrical equipment – Part 1 -11: General requirements for basic safety and essential performance – Collateral standard: Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment
- **IEC 62304:** Medical Device Software – Software Lifecycle Processes
- **EN ISO 14971:** Implementation of Risk Management for Medical Devices
- **ISO 15223 -1:** Labeling and Marking Symbols for Medical Devices
- **EN 1041:** Information supplied by the manufacturer of Medical Devices
- **BS EN 12182:** Assistive products for persons with disability – General requirements and test methods
- **EN 1021 -1 and EN 1021 -2:** – Furniture – Assessment of the ignitability of upholstered furniture – Part 1: Ignition source smoldering cigarette. – Furniture – Assessment of the ignitability of upholstered furniture – Part 2: Ignition source match flame equivalent
- **BS 5852:** Methods of test for assessment of the ignitability of upholstered seating by smoldering and flaming ignition sources
- **BS 5852:** Methods of test for assessment of the ignitability of upholstered seating by smoldering and flaming ignition sources

# LIMITED WARRANTY



**Life Assistant Ltd.** guarantees this product for a period of two years from the date of purchase.

The guarantee covers defects in material and workmanship and comprises system, assemblies, components and labor, and excludes battery and textile/fabric.

**Life Assistant Ltd.** guarantees the battery and the textile/fabric for one year from the date of purchase. The guarantee covers defects in material and workmanship and comprises system, assemblies, components and labor.

The guarantee is not valid in the case of abnormal wear and tear, willful damage, neglect, misuse or unauthorized repair or alteration of the product or any of its parts or accessories.

The following statements do not affect the consumer's statutory rights. This product is sold on the understanding that in the event of any defect of manufacture or material appearing within two years of the date of receipt of this product, the defect will be amended free of charge providing that evidence of date of ownership is provided. Such evidence may be an invoice, delivery note, etc. and, evidence that the defect is not attributable to accidental damage either in transit or otherwise, misuse or unauthorized repair or alteration.

**Product Serial Number:** \_\_\_\_\_

**Battery Serial Number** \_\_\_\_\_

**Place of purchase:** \_\_\_\_\_

**Date of purchase:** \_\_\_\_\_

**Delivery note/Invoice No.:** \_\_\_\_\_

# **EMC STATEMENT**

## Warnings



**WARNING:** Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.



**WARNING:** Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.



**WARNING:** Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of **the SitnStand**, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.


## Electromagnetic Emissions

- **SitnStand** is intended for use in the electromagnetic environment specified in the following tables. This is not a life-sustaining device.
- The user and/or installer of the unit must ensure that it is used in such an environment.

DECLARATION – ELECTROMAGNETIC EMISSIONS		
Emissions test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group1 Class B	<b>The SitnStand</b> uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
Harmonic emissions IEC 61000-3-2	Class A	<p><b>The SitnStand</b> is suitable for use in all establishments other than domestic, and may be used in domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes, provided the following warning is heeded:</p> <p><b>WARNING:</b> This equipment/system is intended for use by healthcare professionals only. This equipment/ system may cause radio interference or may disrupt the operation of nearby equipment. It may be necessary to take mitigation measures, such as re-orienting or relocating <b>the SitnStand</b> or shielding the location.</p>
Voltage Fluctuations And Flicker IEC 61000-3-3:2013	Complies	

DECLARATION – ELECTROMAGNETIC IMMUNITY			
IMMUNITY test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	8 kV contac 2, 4, 8, 15kV air	8 kV contact 2, 4, 8, 15kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burs IEC 61000-4-4 t	2 kV for power supply lines 1 kV for input/output lines	Evaluated during AC/DC adapter approval	Mains power quality should be that of a typical commercial or hospital environment
Surge IEC 61000-4-5	1 kV line(s) to line(s) 2 kV line(s) to earth 2 kV Signal input/output) to earth	Evaluated during AC/DC adapter approval	Mains power quality should be that of a typical commercial or hospital environment
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0% UT; 0.5cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% UT; 1cycle and 70% UT; 25/30 cycles Single phase at 0° 0% UT; 250/300 cycle	Evaluated during AC/DC adapter approval	Mains power quality should be that of a typical commercial or hospital environment. If the user of <b>the SitnStand</b> requires continued operation during power mains interruptions, it is recommended that <b>the SitnStand</b> be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 (A/m)	30 (A/m)	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment

 **NOTE:** UT is the a.c. mains voltage prior to application of the test level.

DECLARATION – ELECTROMAGNETIC IMMUNITY			
IMMUNITY test	IEC 60601 TEST LEVEL	Compliance level	Electromagnetic environment – guidance
Conducted RF IEC 61000-4-6	3V, 6V	3Vrms, 6V	Portable and mobile RF communications equipment should be used no closer to any part of <b>the SitnStand</b> , including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance:  $d = \left[ \frac{3.5}{V_1} \right] \sqrt{P}$ $d = \left[ \frac{12}{V_2} \right] \sqrt{P}$ $d = \left[ \frac{12}{E_1} \right] \sqrt{P} \quad 80\text{MHz to } 800\text{MHz}$ $d = \left[ \frac{23}{E_1} \right] \sqrt{P} \quad 800\text{MHz to } 2.5\text{GHz}$ where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).
	10V/m	10V/m	
Radiated RF IEC 61000-4-3	3V from 0.15 to 80MHz; 6V from 0.15 to 0MHz and 80% AM at 1kHz	3V from 0.15 to 80MHz; 6V from 0.15 to 80MHz and 80% AM at 1kHz	Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range. D Interference may occur in the vicinity of equipment marked with the following symbol: 
	10V/m from 80MHz to 2.7GHz	10V/m from 80MHz to 2.7G	

<b>RECOMMENDED SEPARATION DISTANCES BETWEEN PORTABLE AND MOBILE RF COMMUNICATIONS EQUIPMENT AND THE SITnSTAND</b>				
Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)			
	150 kHz to 80 MHz outside ISM bands $d = \left[ \frac{3,5}{V_1} \right] \sqrt{P}$	150 kHz to 80 MHz in ISM bands $d = \left[ \frac{12}{V_2} \right] \sqrt{P}$	80 MHz to 800 MHz $d = \left[ \frac{12}{E_2} \right] \sqrt{P}$	800 MHz to 2,5 GHz $d = \left[ \frac{23}{E_1} \right] \sqrt{P}$
0.01	0.12	0.2	0.4	1
0.1	0.37	0.64	1.3	2.6
1	1.17	2	4	8
10	3.7	6.4	13	26
100	11.7	20	40	80



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