Salute RDX

3-1 Alternating
Anti-Decubitus Mattress Replacement System

User Manual

Prius Healthcare USA

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Content

Warning

- Connect the Salute RDX Master Control unit to a proper power source.
- Do not use the system in the presence of lammable gas, such as anesthetic agents.
- Keep the pump and mattress away from source of liquid.
- Keep pump and mattress away from open flames.
- Keep the mattress away from sharp object.
- The device is not AP/APG protected.
- Keep all heating devices away from the mattress system.

⚠ Caution

- Keep control unit away from humidity and direct moisture.
- Keep tubes free of kinks.
- Disconnect control unit‘s power plug before moving the bed.
- Never unplug the control unit by pulling the cord.
- Use only manufacturer approved parts when maintaining or repairing the Salute RDX 3-1 Alternating Anti-Decubitus System.
- Use only manufacturer approved accessories with the Salute RDX 3-1 Alternating Anti-Decubitus System.
- All parts and accessories supplied are specifically designed for use with the Salute RDX control unit. Use of other parts and accessories in conjunction with the system is not recommended.

1. The Purpose of this Manual

This operation manual is focused on the set up, cleaning and routine maintenance of the ***Salute RDX 3-1 Alternating Anti-Decubitus Mattress Replacement System***. We recommend keeping this manual available to answer question related to this system.

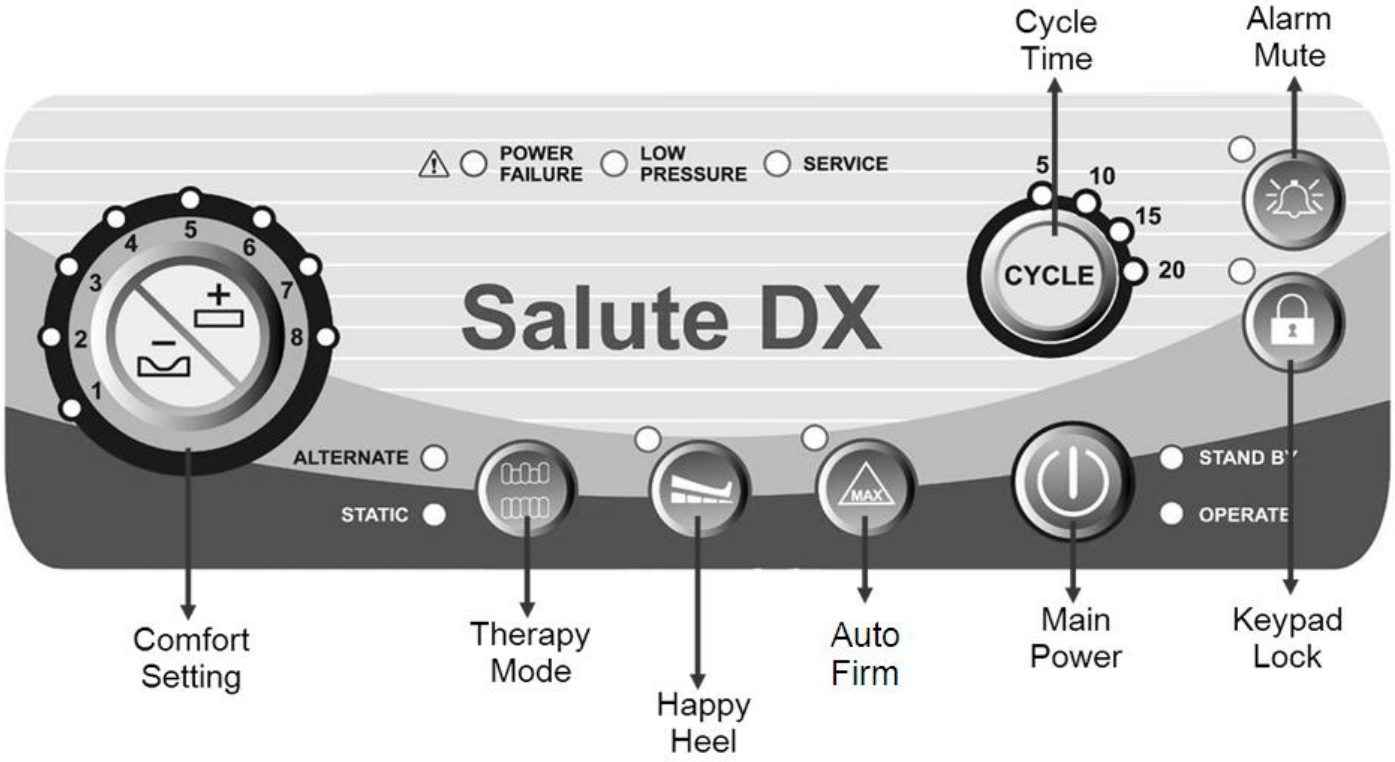
2. Product Description

Salute RDX 3-1 Alternating Anti-Decubitus Mattress Replacement System is a pressure ulcer prevention mattress replacement system designed for use in the home, at a nursing facility or in a hospital environment. Use of this system on a standard bed frame is possible; however the use of this system on a bed frame designed for a healthcare environment is preferred.

The system consists of an electronic control unit with a membrane control panel and a replacement mattress containing 18 air cells arranged in a transverse manner. The air cells are designed with a Micro Low Air Loss feature to assist in managing the moisture on a patient's skin by allowing additional air to circulate on mattress surface. Another unique feature is the **Happy Heel ™** which provides independent comfort control settings for the heel section allowing improved patient outcomes as well as additional patient comfort.

<u>Master Control Unit Features</u>

- 3-1 alternation and static therapy
- Intuitive LED indicator for function status
- 10 adjustable comfort setting
- Visual and audible alarms for low pressure and power failure
- Happy Heel ™ provides extra comfort settings for the heel section
- Keypad lock out function
- Maintenance service LED remainder



Main Feature	Description
	Therapy Mode allows you to select Alternation or Stactic Therapy.
	Happy Heel is an independent pressure control for the heel section of the mattress to assist in improved patient outcome as well improving patient comfort.
	Auto Firm allows for a quick inflation in stactic mode.
	Alarm Mute allows you to mute the alarm while corrective action is being taken to determine the cause of alarm.

Salute RDX Air Mattress Therapy System is recommended for use in the prevention and treatment of decubitus (pressure) ulcers stage I – III (medium risk). For higher risk patients please contact ***PRIUS Healthcare USA*** for additional product offerings to address higher risk patients. (813) 854-5464

⚠ Caution

Alternating pressure therapy is not recommended for patients who have serious pain or pain-sensitive symptom. In such cases please contact ***PRIUS Healthcare USA*** for additional product offerings. (813) 854-5464.

Mattress Features

- Therapeutic micro low air loss helps manage moisture and provides alternating therapy to prevent and treat pressure ulcers
- Modularized design allows for easy cleaning and replacement of air cells.
- Highly vapor permeable and oversized pliable quilted nylon top cover provides low shear, friction and moisture protection
- CPR quick release for rapid deflation
- Integrated power cable management assists in safety and organization of power cables
- Cell in cell design provides addition protection for upper torso and sacrum in the event there is a loss of power.
- Recommended maximum safe working capacity of 500 lbs

3. Technical Data

Master Control Unit

Model No.	FC-PHR0008
Model Name	Salute RDX
Size (inch) LxWxH	13.5“ x 7.3“ x 8.3“
Weight(lbs)	7.1
Cycle Time (min)	5, 10, 15, 20 min
Min Operating Pressure	12 +/- 5mmHg
Max Operating Pressure	47 +/- 5mmHg
Max Flow-rate	≧6 l/min
Rated Voltage	AC 110-120V
Max Current	0.2 Amp
Fuse Rating	1A 250V
Rated Frequency	60 Hz
Classification	Class I, Type BF Not AP/APG type 
Mode of Operation	Continuous
Environment (Temperature)	Operation: 15°C to 35°C (59°F to 95°F)
	Storage:5°C to 60°C (41°F to 140°F)
Environment (Humidity)	Operation: 30% to 75% non-condensing
	Storage: 30% to 90% non-condensing
Standard	IEC 60601-1, CAN/CSA C22.2 No. 601.1, IEC 60601-1-2

Mattress Replacement

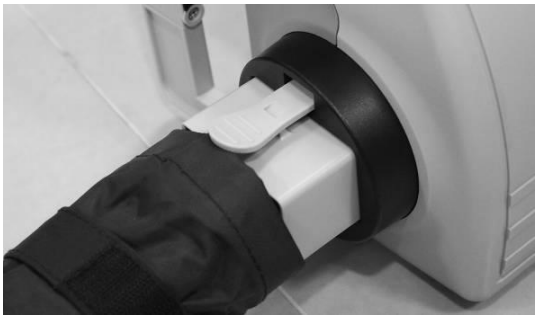
Model No	FM-PHR0006
Size (inch) LxWxH	80“ x 36“ x 8“
Weight (lbs)	22.5
Cells Number	18 cells
Cells Material	Nylon coated with PU
Cover Material	Nylon woven fabric w/ PU coating finish
Base Material	Woven Polyester fabric w/ PVC backing

Symbol Definition

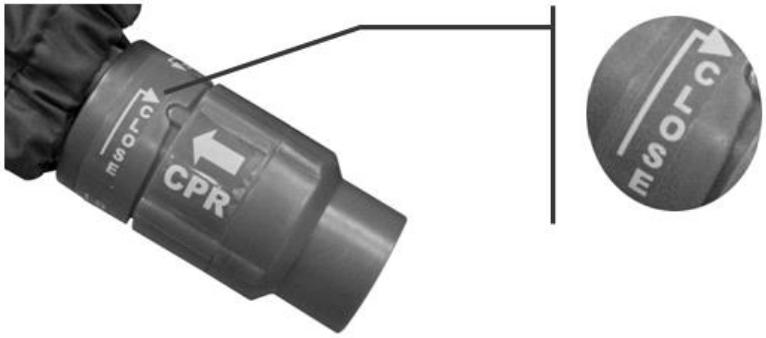
	Refer to Accompanying Documents
	Waste Disposal
	Type BF Applied Part
	Alternating Current
	Caution

4. Instruction for Proper Use

1. Remove the control unit from the box and hang it at the foot end of the bed using the hooks on the back of the control unit.
2. Plug the power cord into and appropriate outlet.
3. If applicable remove the existing mattress from the bed frame.
4. Remove the Salute RDX replacement mattress from its packaging and place it directly on the bed frame.
5. Make sure that the connecting hose is positioned at the foot of the bed near the control unit. .
6. Secure the mattress to the bed frame using the straps on the bottom of the replacement mattress to prevent it from moving.
7. Connect the mattress hose connector to control unit. Make sure the connection is secure.



8. Check the CPR valve to make sure it is set to “Close” position.



9. Turn on the control unit using the power switch located on the side of the unit. Select the auto firm comfort control dial for quick inflation.

10. During the inflation process, the low pressure LED will be displayed until the mattress is properly inflated. The inflation time on a pump unit can take 20 to 30 minutes. For quick inflation a portable blower unit is available. Please contact Prius Healthcare USA for additional information, (813) 854-5464.

11. When the mattress is fully inflated set the dial in accordance with the patient’s size and weight.
    - Run the system check.
    - The system is ready for use.
    - Now the patient can be transferred onto the mattress.

Alarm Function

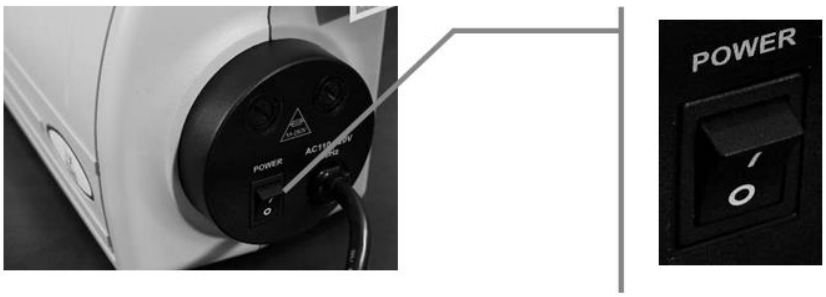
The ***Salute RDX 3-1 Alternating Anti-Decubitus Mattress Replacement System*** is equipped with a visual and audible alarm in the event of low pressure. During the initial inflation period the system is in low pressure mode and the low pressure LED will illuminate. The audible alarm is set with a delay function to take into consideration the inflation time. The alarm will activate automatically after 45 minutes if the unit does not inflate properly.

When the mattress pressure drops from the set pressure during patient re-positioning the audible alarm will switch to a 5 minute delay to avoid undesired alarm activation.

Alarm Indication	Description
⚠ ○ POWER FAILURE	Indicates a loss of power.
○ LOW PRESSURE	Indicates low pressure.
○ SERVICE	Indicates service is required after 6000 hours of use.

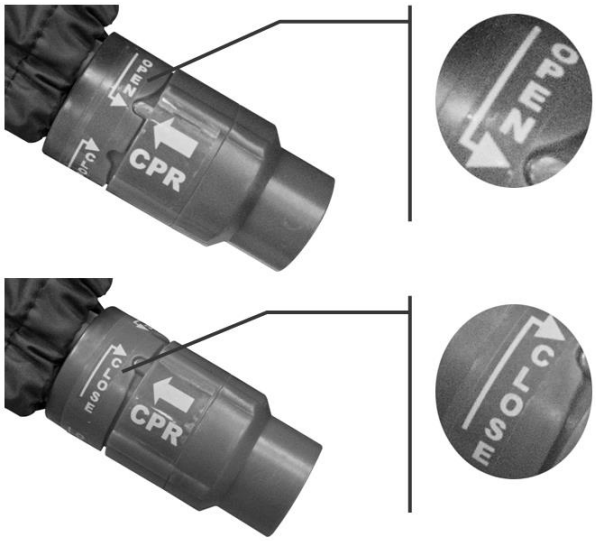
Deactivation of audible alarm:

Switch the pump off then back on to deactivate the audible alarm.



CPR Valve

The ***Salute RDX 3-1 Alternating Anti-Decubitus Mattress Replacement System*** is equipped with a CPR emergency valve which facilitates a rapid deflation by turning thje CPR valve to the “Open“ position.



5. Cleaning

The Mattress

The mattress should be cleaned on the bed weekly using a damp soft cloth and mild detergent. If the top cover or base cover becomes excessively soiled, put on clean gloves, plastic gown and eye protection and remove top and base covers from the air cells and tubing. Place soiled covers in an appropriate container in accordance with your facilities standard operating procedures for contaminated waste, replace mattress with clean covers.

Covers can be washed and thermally disinfected in a washing machine by following the procedures below: **(NOTE: Never use phenol based cleaning solutions)**.

Industrial	Break wash	Cold	10 minutes
	Main wash	60°C(140°F)	6 minutes
	Main wash	70°C(158°F)	10 minutes
	Extraction		2 minutes
	Cold Rins		
	Extraction		5 minutes
Domestic	Pre-wash	Cold	
	Main Wash	70°C(158°F)	10 minutes
	Extraction		2 minutes
	Cold Rinse		
	Extraction		5 minutes

Tumble Drying or Tunnel Drying is not recommended.

Mattress Cells can be wiped down with a solution of sodium hypochlorite 1000ppm or any other non-phenol based germicidal cleaning solution.

The Master Control Unit

⚠Caution

SWITCH OFF THE ELECTRICAL SUPPLY TO THE PUMP AND DISCONNECT THE POWER CORD FROM THE MAIN SUPPLY BEFORE CLEANING AND INSPECTION

The pump unit should also be cleaned weekly using a damp soft cloth and mild detergent.

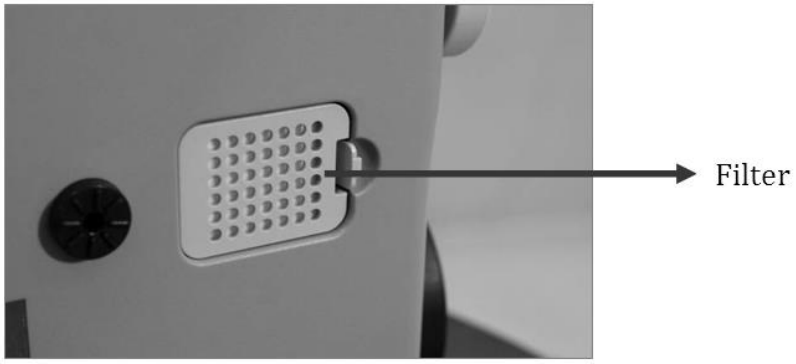
The pump casing is manufactured from ABS plastic, if the case is soiled the pump can be wiped down with a sodium hypochlorite solution to dilution of 1000ppm or any EPA approved hospital grade disinfectant.

(NOTE: Do not use phenol based cleaning solution).

The air filter should also be cleaned and checked as often as possible at a minimum every six months. The air filter can be accessed through the air filter cover on the back of the unit. To remove pinch center of the filter and pulling outward.

Replace Air Filter

1. Remove air filter cover to access air filter. Pinch center of air filter and pull outward , replace with a new filter.
2. If air filter opening is soiled use a soft bristle brush to remove dust and difficult dried-on soil.



NOTE:

1. Do not use a phenol based cleaning solutions.
2. Switch off the electrical supply to the pump and disconnect the power cord from the main supply before cleaning and inspection.

Waste Disposal

This Product has been supplied by an environmentally conscious manufacturer that complies with the WEEE.
This product may contain substances that could be harmful to the environment if disposed of in places that are not approved by your state, local or federal laws. Please be environmentally responsible and recycle this product through your recycling facility at its end of life.

6. Storage and Care

Master Control Unit:

- Check the power cord and plug for abrasions or excessive wear.
- Plug in the control unit and verify air flows from the units hose connection ports.
- Place in plastic bag for storage.

Overlay Mattress:

- Check the air manifold for kinks or breaks and replace if necessary.
- Turn the CPR valve to the open position and disconnect the air tubes from the control unit to allow the mattress to quickly deflate. Starting at the head end of the mattress roll the unit up and use the base mount straps to secure.
- Place mattress in a plastic bag of storage.

Please follow the recommended guidelines below when the system is being stored or transported to another location:

Temperature limitations:	5°C (41°F)~ 60°C (140°F)
Relative Humidity:	30% to 90%

7. Maintenance & Troubleshooting

No daily maintenance is required. This equipment should only be serviced by a qualified and authorized technician. For common trouble shooting tips please refer to the chart below.

Symptom	Inspection Procedures	Possible Solution
The pump is not functioning.	1. Check power source connection. 2. Check for blown fuse.	1. Connect to proper power source. 2. Replace fuse. 3. Refer to qualified service technician if problem persist.
Low pressure LED is constantly illuminated or mattress is not inflating while pump is in operation.	1. Check for loose hose connections. 2. Check CPR valve. 3. Check for air cells for holes or tears other than where designed.	1. Make sure connectors are secured. 2. Make sure CPR valve is set to "CLOSE" position. 3. Replace damaged air cell if necessary. 4. Refer to qualified service technician if problem persist.
Pump is noisy.	1. Make sure pump is resting against solid surface.	1. Reposition the pump. 2. Refer to qualified service technician if problem persist.

8. EMC Related Notifications

Guidance and manufacturer's declaration – electromagnetic emissions		
The air pump is intended for use in the electromagnetic environment specified below. The customer or the user of the air pump is responsible for making sure that it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment – guidance**
RF emissions CISPR 11	Group 1	The ari pump 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.
RF emissions CISPR 11	Class B	The air pump is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Recommended separation distances between portable and mobile RF communications equipment and the air pump			
The air pump is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the air pump can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the air pump as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	**Separation distance according to frequency of transmitter** m		
	150 kHz to 80 MHz $d = 1{,}2\sqrt{P}$	**80 MHz to 800 MHz** $d = 1{,}2\sqrt{P}$	**800 MHz to 2,5 GHz** $d = 2{,}3\sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer. NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

Guidance and manufacturer's declaration – electromagnetic immunity			
The air pump is intended for use in the electromagnetic environment specified below. The customer or the user of the air pump is responsible for making sure that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment – guidance**
Electrostatic discharge (ESD) IEC 61000-4-2	⍰6 kV contact ⍰8 kV air	⍰6 kV contact ⍰8 kV 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/burst IEC 61000-4-4	⍰2 kV for power supply lines ⍰1 kV for input/output lines	⍰2 kV for power supply lines ⍰1 kV for input/output lines	The main 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	⍰1 kV line(s) to line(s) ⍰2 kV line(s) to earth	The main power quality should be that of a typical commercial or hospital environment.
interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % *U*T (>95 % dip in *U*T) for 0,5 cycle 40 % *U*T (60 % dip in *U*T) for 5 cycles 70 % *U*T (30 % dip in *U*T) for 25 cycles <5 % *U*T (>95 % dip in *U*T) for 5 sec	<5 % *U*T (>95 % dip in *U*T) for 0,5 cycle 40 % *U*T (60 % dip in *U*T) for 5 cycles 70 % *U*T (30 % dip in *U*T) for 25 cycles <5 % *U*T (>95 % dip in *U*T) for 5 sec	The main power quality should be that of a typical commercial or hospital environment. If the user of the air pump requires continued operation during power main interuptions, it is resommended that the air pump be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: *U*T is the a.c. mains voltage prior to application of the test level.			

Guidance and manufacturer's declaration – electromagnetic immunity

The air pump is intended for use in the electromagnetic environment specified below. The customer or the user of the air pump is responsible for making sure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the air pump, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d = 1{,}2\sqrt{P}$ $d = 1{,}2\sqrt{P}$ 80 MHz to 800 MHz $d = 2{,}3\sqrt{P}$ 800 MHz to 2,5 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). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,a should be less than the compliance level in each frequency range.b Interference may occur in the vicinity of equipment marked with the following symbol: 
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.
NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures objects and people.

a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the air pump is used exceeds the applicable RF compliance level above, the air pump should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the air pump.

b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

9. Warranty

- Prius Healthcare guarantees this equipment to be free from defects in material and workmanship for up to 12 months from the date of delivery.
- All warranty work will be performed at the service address below, shipping charges prepaid.
- At Manufacturers descreton we agree to service, repair or replace any equipment or part found to be defective at no charge.
- This warranty excludes equipment damaged through shipping, tampering, improper maintenance, carelessness, accident, negligence, misuse, or which has been altered, repaired or dismantled other than with the manufacture's written authorization and by its approved procedures and by properly qualified technicians.
- In no event shall Prius Healthcare be liable for any direct, indirect or consequential damage or loss resulting from the use of equipment.
- Warranty is non-transferrable.

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