REX
recovery exercise X-trainer

Combo Pneumatic Compression System

USER MANUAL

3507.22.01.B

Richmar®

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1. INTRODUCTION

Thank you for purchasing The REX Combo Pneumatic Compression System (Models: DVTREX-L or DVTREX-U) and garments.

The durable, high quality material used in the manufacturing of these products will ensure that you experience long-lasting and uninterrupted performance.

The REX Recovery Exercise X-trainer has a pump and dual lower extremity garments with air cells. The patient puts the garments on and the pump inflates the air cells to compress muscles to temporarily relieve minor muscle aches and/or pains, and to temporarily increase circulation to the treated areas.

Should any problems occur, please contact the dealer where your REX System was purchased or call Tech Support at 800-376-7263.

Manufactured for:
Compass Health Brands Corp.
6753 Engle Road
Middleburg Heights, OH 44130
Ph: 800-376-7263
www.richmarweb.com

2. IMPORTANT SAFETY INFORMATION SYMBOL DEFINITIONS

Symbol	Explanation	Location
	Refer to Documentation before using and servicing	On back of the device and in IFU
	The Pump is Class II Protection	On back of the device
	The garments is Type BF-Applied part	On back of the device
	Separate collection for waste electrical and electronic equipment. Please dispose of the device/accessory/ packing in accordance with the legal obligation in your area	On back of the device
	Warning	In instruction manual
	The address of the manufacturer	On the back of the device
	The manufacturer's batch code	On the back of the device
	The manufacturer's serial number	On the back of the devie
	Protected against solid foreign objects of 12.5mm and greater; protection against vertically falling water drops.	On the back of the device
	Do not tumble dry	On the care labeling code of the garment
	Do not dry clean	On the care labeling code of the garment
	wash by hand maximum temperature 40 °C	On the care labeling code of the garment
	Do not bleach	On the care labeling code of the garment
	Do not iron	On the care labeling code of the garment
	Drip line drying in the shade	On the care labeling code of the garment

3. BASIC SAFETY PRECAUTIONS

⚠ WARNINGS:

- Do not use in the presence of flammable anesthetics
- Unless otherwise ordered by your physician, pressure should not be set any higher than 120mm Hg. High pressure should be set with caution on patients with peripheral arterial occlusive disease.
- Caution must be raised for patients with insensitive, irritated, sunburned, bruised or broken skin, or with skin conditions such as skin cancer, dermatitis, eczema, or psoriasis in or around treatment sites. Should changes in skin appearance occur such as blisters, redness, discoloration, welts, or other noticeable changes in the skin, or if burning, itching, increased swelling should occur, discontinue use and consult with a physician.
- Slip and fall hazard. Do not stand or walk while wearing garments.
- Discontinue use immediately in the event of increased pain, numbness or tingling and contact a physician.

When using an electrical appliance, basic safety precautions should always be followed.

⚠ **DANGER – This Product contains electronic components.**

⚠ **WARNING – To reduce the risk of burns, fire, electric shock or injury to persons:**

- In the event of a power failure, disconnect the garment from the pump to release any residual air and pressure in the garment.
- Use this product only for its intended use as described in this manual.
- Do not use if damaged or defective – if device has a damaged electrical cord or plug, has been dropped or damaged in any manner, dropped into water, or if the product shows any signs of deterioration.
- Do not place near a heat source or water.
- Do not carry this device by the power cord or use the cord as a handle.
- Keep this device out of reach of children or pets.
- Do not take the pump, garment or tubing apart.
- Use only accessories that are recommended by Compass Health Brands Corp.
- Never use pins or other metallic fasteners with this product.
- Do not operate on a soft surface such as a pillow or mattress, or under a blanket or other covering.
- Do not use where aerosols (spray) are being used or where oxygen is being administered.
- Read the entire instruction manual before operating this device.

⚠**WARNING**

If equipment no longer works or is damaged and needs to be disposed of, please comply with your local disposal laws for electronic equipment.

WARNING

Please consult a physician before using this device if:

- You are pregnant or feel weak
- You have an implant at the site of application
- You have a cardiac pacemaker

Do not use the compressor to direct pressurized air towards your eyes, nose, mouth or ears. Doing so may lead to serious injury.

Do not bend or fold the hose.

Do not store the garments near a stove, cigarette or other heat generating devices as this is a fire hazard.

Do not store the garments near needles, scissors or other sharp object as they may damage the garments.

4. GENERAL EQUIPMENT SPECIFICATIONS

REX Combo Pneumatic Compression System (Models: DVTREX-L or DVTREX-U)

DIMENSIONS: H x W x D 285 x 175 x 130mm

WEIGHT: 2.6 Kg

Power: 110-125Vac 60Hz 50VA

Power Plug: JL-201 AC125V 10A 2-pole without earthling contact.

Power Cable: NISPT-1 2*0.824mm^2.

Garment Material: Thermoplastic Urethane

Therapy Time: 0-30 mins

Min/Max Pressure: 20-200mm Hg

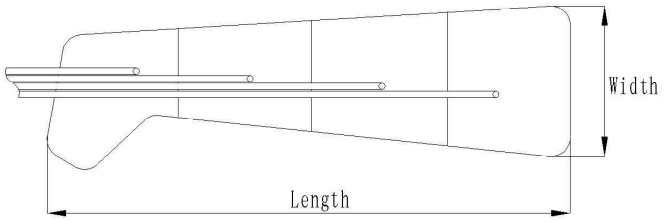
Number of Chambers per Garment: 4

Cycle Time: 70s

Power supply cord and cable must only be replaced by service personnel.

Garment sizes available:

REF	Length	Width
DVTREX-LE-L	44"	12"
DVTREX-LE-U	44"	14"



5. INDICATIONS FOR USE

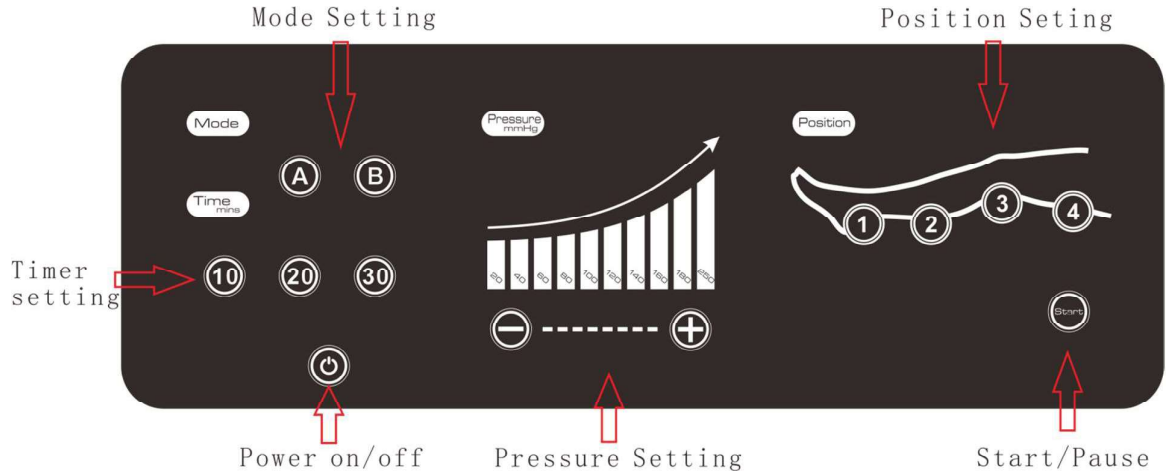
The REX Recovery Exercise X-trainer is intended to temporarily relieve minor muscle aches and/or pains, and to temporarily increase circulation to the treated areas.

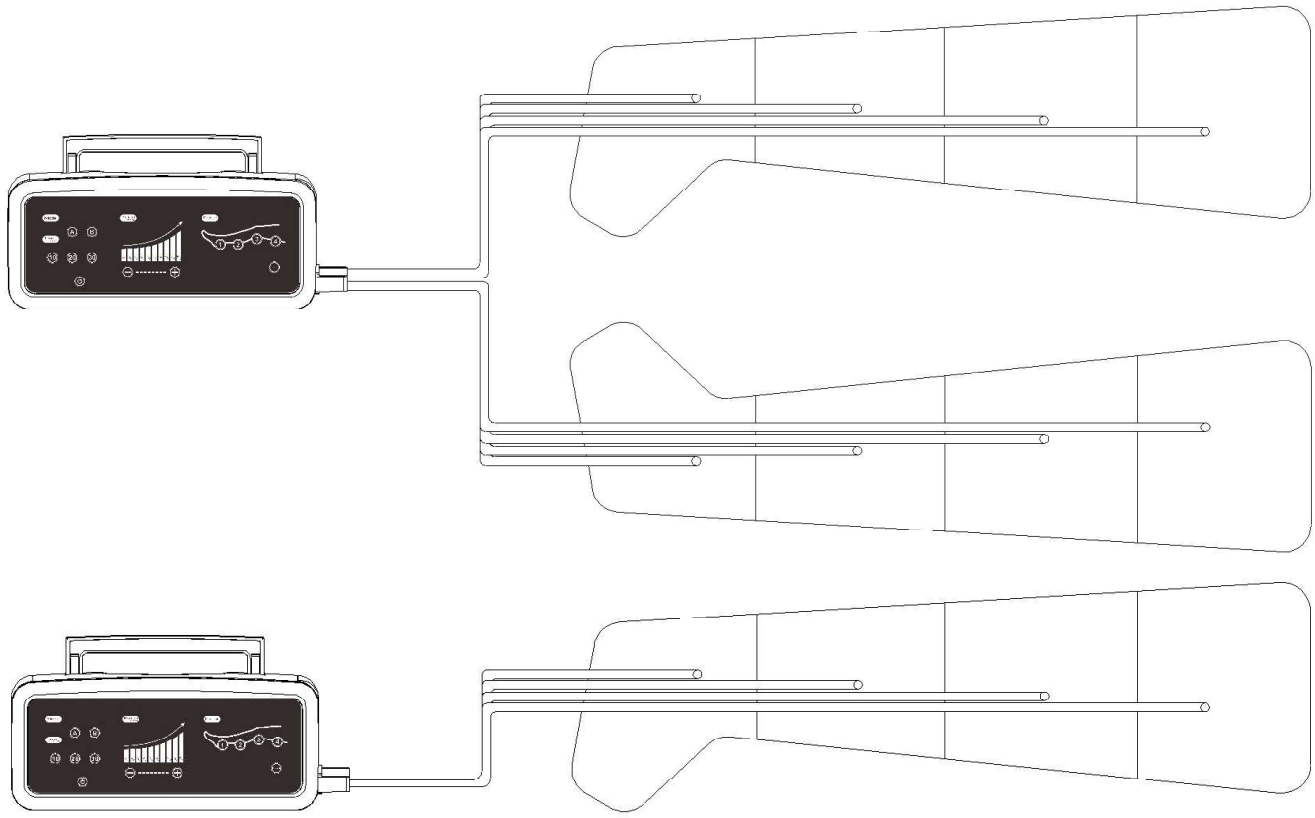
6. CONTRAINDICATIONS

- Do not use this product if you are experiencing inflammation, an infection, pain of unknown origin, or bleeding (internal or external) at or near the site of application or if you have a wound at or near the site of application.
- Do not use-this product if you have any of the following conditions:
  Acute pulmonary edema
  Acute thrombophlebitis
  Acute congenetive cardiac failure
  Acute infections
  Deep Vein Thrombosis (DVT)
  Episodes of Pulmonary embolism
  Wounds lesions or tumors at or in the vicinity of application
  Where increased venous and lymphatic return is undesirable
  Bone fractures or dislocations at or in the vicinity of application

7. SYSTEM AND COMPONENTS

CONTROLS & DISPLAY





8. OPERATING INSTRUCTIONS

8.1 Pump

By laying carton on its side, slide pump out with protective end caps still attached. After removing pump from carton, foam end caps may be detached by gently pulling off each side. NOTE: The carton and end-caps should be saved for reuse.

For initial set-up, remove the wingnut bolt on the bottom of the device and place the enclosed rubber bumper in its place:

8.2 Sleeve/Garment

Remove sleeves from package avoiding the use of sharp objects that could puncture or tear the garment.

9. GENERAL INSTRUCTIONS

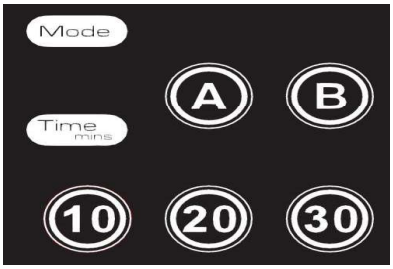
9.1 Plug the pump into an outlet in close proximity to the area where treatment is to be received.
9.2 Put Garments on and pull the zipper.
9.3 Connect the tubing to pump and garment as follows:

- Attach the tubing to the outlet valve on the garment by turning the fitting clockwise until securely fastened;
- To remove the tubing from the garment, simply turn the fitting counter-clockwise and gently pull to disconnect;
- Attach the Quick-Connect end of the tubing to the pump face by pushing firmly inwards until it snaps in place
- To remove the tubing from the pump, press the thumb tab on the connector and gently pull

Note：Quick-Connect sizes and styles prevent mismatch of garments and pumps.

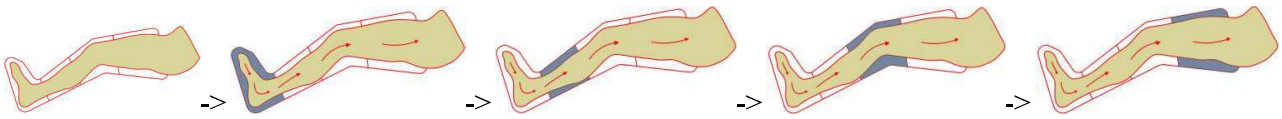
9.4 Turn on the pump by pressing the Standby button and LEDs will be lighted.

9.5 Mode & Time Setting: You can select Mode A or Mode B by pressing the respective button. You can set the timer by pressing the desired treatment time button (10, 20 or 30 min). When the treatment time is complete, the device will enter Standby mode.



Note: Recommended treatment time is 30 mins per day unless otherwise specified by a physician.

Mode A Loop:

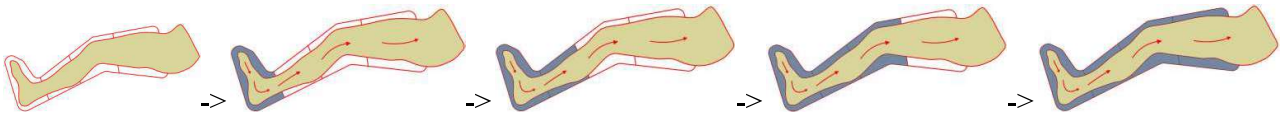


Channels	Time							
	10S	5S	5S	5S	5S	5S	10S	10S
1	●	●	○	○	○	○	○	○
2	○	●	●	●	○	○	○	○
3	○	○	○	●	●	●	○	○
4	○	○	○	○	○	●	●	○

● Inflate

○ Deflate

Mode B Loop:



Channels	Time					
	10S	10S	10S	10S	5S	8S
1	●	●	●	●	●	○
2	○	●	●	●	●	○
3	○	○	●	●	●	○
4	○	○	○	●	●	○

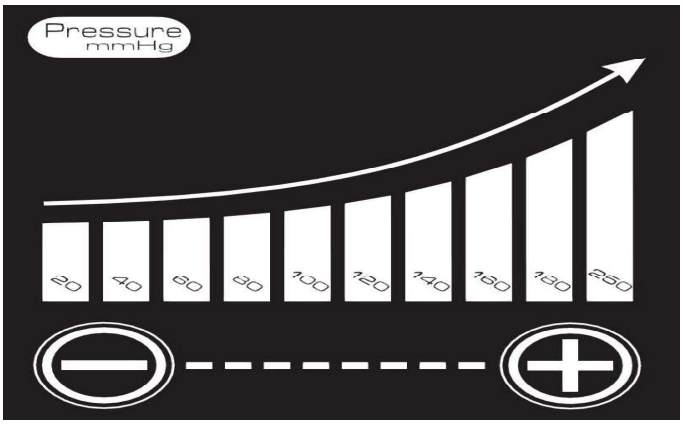
● Inflate

○ Deflate

The gray color represents the way each chamber is being inflated during a cycle of about 70 seconds.

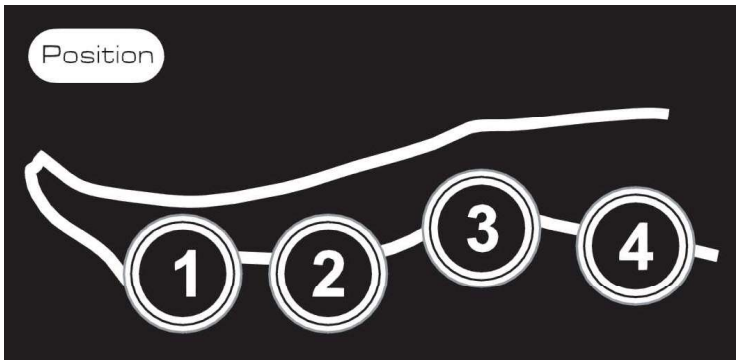
9.6 Pressure Setting

Generally, begin with the minimum pressure and gradually increase. **The pressure setting ranges from 20mmHg to 200mmHg (±20mmHg). The max pressure of the pump core is 230 to 260mmHg. The max flow of the pump core is 16L-18L/min**



9.7 Position Setting

Press corresponding number shown below based on how many chambers you want to inflate.



9.8 Start /Pause

Press the start button when you are ready for the pump to start. Press again if you want to pause the pump.

9.9 Power ON/OFF

Press the on/off button once treatment is complete. It is recommended to unplug the pump if device will not be used for extended periods of time.

> ⚠WARNING!
>
> DO NOT try to service or maintain the device while in use.

10. MAINTENANCE AND STORAGE

10.1 Exterior Pump Case Cleaning Instructions: Clean the exterior case and tubing with a damp (not wet) cloth using mild soap and water solution once per month or as needed.

> ⚠WARNING!
>
> DO NOT allow liquids to enter the pump, as this can present an electrical hazard.
> Only an authorized technician may open the pump.
> Before cleaning, unplug power cord from electrical outlet.

> ⚠WARNING!
>
> ALWAYS allow the pump to dry before using.
> DO NOT use bleach on the pump.

10.2 GARMENT CLEANING/DISINFECTING INSTRUCTIONS: Disconnect garment from device. Open garment to expose all sides either by separating hook and loop closure or by unzipping (depending on type of garment).

10.3 Cleaning solution should consist of 10mL of laundry detergent per 5L of warm tap water. Use either a large sink or plastic tub able to hold enough solution (depending on size and quantity of garments) to completely submerge the garment ***leaving the latch connector bars out of the water***.
10.4 Garment should be soaked for 5-10 minutes.
10.5 Thoroughly rinse garment with warm tap water and allow to air dry.

⚠**WARNING!** Never allow the Latch Connectors to be submerged into water. If water enters the inside of the garment, damage may occur to the device.

10.6 Hard to remove soil on surface of garment may require additional washing by hand with a clean towel while submerged. Avoid using any abrasive materials such as scrubbing pads or chemicals that could cause damage to the exterior surface of garment.

⚠**WARNING!** DO NOT place garment in washing machine.
⚠**WARNING!** DO NOT use the tubing or valves as "handles" for carrying, handing or storing garment.

11. PACKAGING, SHIPPING & STORAGE

The Device is shipped in a specially designed corrugated, reusable carton with protective end-caps that envelope each end of the pump, thereby suspending the pump on all four sides within the carton. This packaging design prevents damage to the pump when the carton is handled roughly by the carriers.

The Device should be stored in a clean, dry area between 15 to 25°C (59 to 77°F). However, short-term exposure to temperatures -20 °C to +44°C (-4 to 111°F) will not harm the unit. To maximize the pump's life, time should be allowed for the pump to adjust to room temperature prior to use when it has been exposed to extreme temperatures.

PUMP ENCLOSURE

The pump enclosure is constructed of ABS/PA-765.
UL FLAME RATING: V-0.

ENVIRONMENTAL SPECIFICATIONS

For transport and storage:
Ambient temperature: -20°C- +55°C (-4°F to +131°F)
Relative humidity: 10% -90%RH
Atmospheric pressure: 80KPa to 106KPa
For operation:
Ambient temperature: +5°C - +35°C (+41°F to +95°F)
Relative humidity: 15% - 85%
Atmospheric pressure: 86KPa to 106KPa

12. TROUBLESHOOTING

If the troubleshooting does not solve the problem, call your distributor or Tech Support at 800-376-7263.

Symptom	Possible Cause	Corrective Action
The pump will not turn on.	No electricity	Check the electrical wall outlet to be sure that the pump is plugged into the outlet correctly. Check the circuit breaker to be sure there is power to the outlet.
	Damaged power cord	Unplug the power cord and look for any damage or defects.
One garment inflates but the second one does not.	Tubing not connected or blocked	Check the garment tubing to be sure they are connected to the pump and to the garment properly. Check the tubing for kinks, punctures, twists and/or folds.
	Damaged garment	Check the garment for damage and leaks.
Regardless of the pressure setting, the garments are applying a very low pressure.	Defective Garment.	Check the garment for adequate connection to the device, leaks, kinks, punctures, twists and/or folds.
	An internal problem	Contact Tech Support for additional help.
The device is making strange and/or loud noises.	Device is on an uneven or unstable surface	Move to a more stable and even surface.
	An internal problem	Contact Tech Support for additional help.

NOTE: In addition to possessing proper tools and testing equipment, authorized service personnel have access to all electrical schematics, calibration instrumentation and criteria and an inventory of authorized replacement parts.
Only authorized personnel can repair device. Please contact your distributor or Tech Support for any repairs.

13. ELECTRICAL SPECIFICATIONS/EQUIPMENT CLASSIFICATION

The Device s interior components are “double-insulated”and do not require a “protective ground.” The device is equipped with an 18 gauge, 2-wire, 6.5ft.powercord, secured through the pump casing with a Heyco strain relief brushing as well as an additional “hold-down”clamp for added safety.

1. Class of protection against electrical shock: CLASS II EQUIPMENT
2. The degree of protection against electric shock: APPLIED PART-TYPE BF
3. Mode: Regular continuous work
4. According degree of protection against ingress of water: IP21
5. The current software revision Version 1.5

EMC Manufacturer’s Declaration

Electromagnetic emissions—manufacturer’s declaration		
This Device is intended for use in the electromagnetic environment specified below. The customer or the user of the Device should assure that it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment— guidance**
RF emissions CISPR 11	Group 1	The Device uses RF energy only for its internal functions. 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 Device is suitable for use in domestic establishments and in establishments directly connected to a low voltage power supply network which supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations / flicker emissions IEC 61000-3-3	Not applicable	

Guidance and manufacturer’s declaration—electromagnetic immunity			
The Device is intended for use in the electromagnetic environment specified below. The customer or the user of the Device should assure 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	± 2, 4, and6 kV contact ± 2, 4 and 8 kV air	± 2, 4, and6 kV contact ± 2, 4 and 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%.
Electrostatic fast transient / burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input / output lines	± 2 kV Not applicable	Mains power quality should be that of a typical home use location.
Surge IEC 61000-4-5	± 0.5 and 1 kV line(s) to line(s) ± 2 kV line(s) to earth	± 0.5 and 1 kV differential mode Not applicable, no ground wire	Mains power quality should be that of a typical home use location.
Voltage dips, short interruptions and voltage variations on power supply input	<5 % U_T (>95% dip in U_T) for 0.5 cycles 40 % U_T (60% dip in U_T) for 6 cycles 70 % U_T (30% dip in U_T) for 30 cycles	<5 % U_T (>95% dip in U_T) for 0.5 cycles 40 % U_T (60% dip in U_T) for 6 cycles	Mains power quality should be that of a typical home use location. If the user of the Device requires continuous operation during mains power interruptions, it is recommended that the Device be powered from an

lines IEC 61000-4-11	<5 % U_T (>95% dip in U_T) for 5 s	70 % U_T (30% dip in U_T) for 30 cycles <5 % U_T (>95% dip in U_T) for 5 s	uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	The power frequency magnetic fields should be at the levels found in a typical home use location.
NOTE: U_T is the AC mains voltage prior to application of the test level.			

Guidance and manufacturer's declaration — electromagnetic immunity

The Device is intended for use in the electromagnetic environment specified below. The customer or the user of the Device should assure 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 Radiated RF IEC 61000-4-3	3 Vrms 15 kHz to 80 MHz 3 V/m 80 MHz to 2.5 GHz	3 Vrms 3 V/m	Portable and mobile RF communications equipment should be used no closer to any part of the Device including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** 80 MHz to 800 MHz 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 meters (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: 

Note 1: At 80 MHz and 800 MHz, the higher frequency range applies.

Note 2: These guidelines may not apply to all situations. Electromagnetic propagations is affected by absorption and reflections 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 Device is used exceeds the applicable RF compliance level above, the Device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Device.

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

Recommended separation distances between portable and mobile RF communications equipment and the Model PT1003

The Device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer of user of the Device can help prevent electromagnetic interference by maintaining a minimum distance between

portable and mobile RF communications equipment (transmitters) and the Device 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 $d = 1.2x P^{1/2}$	**80 MHz to 800 MHz** $d = 1.2x P^{1/2}$	**800 MHz to 2.5 GHz** $d = 2.3 x P^{1/2}$
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 meters (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, 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.

14. WARRANTY INFORMATION - LIMITED WARRANTY

Please contact your dealer in case of a claim under the warranty. If you have to send the unit back to your provider, enclose a copy of your receipt and state what the defect is.

The following warranty terms apply:

The warranty period for device is one year from date of purchase (accessories have a six month warranty). In case of a warranty claim, the date of purchase has to be proven by means of the sales receipt or invoice.

Repairs under warranty DO NOT extend the warranty period either for the device or for the replacement parts.

The following is excluded under the warranty:

- All damage which has arisen due to improper treatment, e.g. non-observance of the user instruction.
- All damage which is due to repairs or tampering by the customer or unauthorized third parties.
- Damage which has arisen during transport from the manufacturer to the consumer or during transport to the retailer.
- Accessories which are subject to normal wear and tear.

Liability for direct or indirect consequential losses caused by the unit is excluded even if the damage to the unit is accepted as a warranty claim. All products must be returned in original packaging and must contain all components, accessories and user manuals. If any components are missing, you will be responsible for the cost of the replacement component and the 25% restocking fee

All returns must be approved with a Return Authorization Number. Please call our Customer Service Team at (800) 376-7263 to obtain a Return Authorization Number. Provide the following information when calling:

• Item Number
• Original Order Number
• Product Serial Number/Lot Number
• Reason for Return

The Return Authorization Number must be marked clearly on the returned carton and is valid for 10 business days from the date of issue.

Returns will not be accepted on items that are:

• Missing their serial number
• Special order items
• Returned more than 30 days after delivery
• Returned without notification