

PIONEER PRO-PUMP®

USER MANUAL



The Most Dependable IVF
Aspiration Pump

Table of Contents

Table of Contents2

Symbols3

General Information.....4

 Highlights4

 Indications For Use.....4

 Copyright4

 Catalogue Numbers.....4

 Pioneer Pro-Pump® Single.....5

 Pioneer Pro-Pump® Dual6

 Pioneer Pro-Pump® Accessory Kit.....7

Warnings & Precautions8

Servicing the Pioneer Pro-Pump®9

Manufacturing Information9

Safety Instructions.....9

 Supply Voltage.....9

 Packaging.....9

 Positioning and Placement of the Device10

 Initial Inspection10

 Operating the Pioneer Pro-Pump®10

 Recommended Vacuum Settings12

Warranty13

Technical Specifications.....14







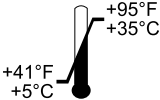
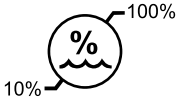
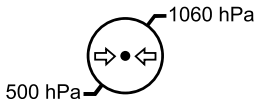








Electromagnetic Compatibility15

Electromagnetic Emissions.....15

Electromagnetic Immunity16

Troubleshooting.....18

Symbols

	Warning & Caution
	Disposal of Device, if you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.
	Alternating Current
	Product Certification Authorized by BSI
	Catalogue Number
	Serial Number
	Temperature Limitation
	Humidity Limitation
	Atmospheric Pressure Limitation
	CF/Defib-proof equipment (IEC 60601-1)
	Foot Switch (IEC 60417-5114)
	Canadian Standards Association
	Consult Instructions For Use
RX Only	By Prescription Only
	Ground
	GS1 DataMatrix Barcode
	Authorized Representative in the European Community
	Manufacturer

General Information

Please familiarize yourself with this manual before using the device.

The Pioneer Pro Pumps are designed to provide low volume suction for use in oocyte collection procedures. Vacuum is activated via a foot pedal controlled by the clinician performing the oocyte collection. The range of vacuum is variable from 10-250 mmHg in standard vacuum mode, the high vacuum mode delivers 450/500 mmHg used to clear occlusions in the tubing.

Highlights

- Illuminated I/O Mains Power On/Off
- Vacuum Control Dial – clockwise to increase, counterclockwise to decrease the set value, fully adjustable and controlled vacuum from 0-500 mmHg
- Vacuum Display (mmHg)
- Foot Control Connection Port for Single & Dual Vacuum Foot Controls
- Reusable Bottle Kit (glass bottle, green neoprene stopper, 2 ports: a hose barb and stainless steel tubing, 2 silicone tubing: one suction port connector, one for needle lure)

Indications For Use

The Pioneer Pro-Pump® is intended for the aspiration of oocytes in relation to the treatment of infertility relating to IVF and other gynecological procedures.

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LifeGlobal Group, LLC, Guilford, CT 06437 USA

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Catalogue Numbers

Description	Description	Cat. #
Pro-Pump Single – 115V	Includes Initial Accessory Kit	GPPS-115
Pro-Pump Single – 230V	Includes Initial Accessory Kit	GPPS-230
Pro-Pump Dual – 115V	Includes Initial Accessory Kit	GPPD-115
Pro-Pump Dual – 230V	Includes Initial Accessory Kit	GPPD-230
Single Foot Pedal	For Cat# GPPS-010	S-footpedal
Dual Foot Pedal	For Cat# GPPD-050	D-footpedal
Pro-Pump Accessory Kit	For Pioneer Pro-Pumps	GPPK-075

Pioneer Pro-Pump® Single



- | | |
|----------------------------|------------------------------|
| 1. Vacuum inlet tube | 6. Vacuum control foot pedal |
| 2. Waste collection bottle | 7. Vacuum reference gauge |
| 3. Vacuum control knob | 8. Power switch |
| 4. Patient tube set | 9. Occlusion button |
| 5. Foot pedal connection | 10. Suction port |

Pioneer Pro-Pump® Dual



- | | |
|-------------------------------|---------------------------------------|
| 1. Vacuum inlet tube | 7. High vacuum foot pedal |
| 2. Waste collection bottle | 8. Vacuum reference gauge |
| 3. Vacuum control knob | 9. Power switch |
| 4. Patient tube set | 10. Maximum occlusion indicator light |
| 5. Foot pedal connection | 11. Suction port |
| 6. Standard vacuum foot pedal | |





Pioneer Pro-Pump® Replacement Kit (single & dual pedal)



1. Patient tube inlet (straight fitting)
2. Patient tube set
3. Waste collection bottle
4. Vacuum inlet tube
5. Vacuum tube inlet (barbed fitting)

Warnings & Precautions







Warning:

-  To avoid risk of electrical shock, this equipment must only be connected to a supply mains with protected earth only.
-  Do not use the Pioneer Pro-Pump® where flammable gases are present.
-  Operation outside of the recommended range may have an adverse impact on the aspiration of oocytes or be hazardous to the patient. The use of high suction levels may lead to excessive fluid flow rates, which may result in damage to oocytes and subsequent reduced fertilization rates. Fluid flow rates are a function of the user supplied handpiece and the suction level as determined by the clinician to be appropriate for the individual case, procedure, and patient details.
-  High vacuum settings are for clearing blockages in the tube set and/or user supplied handset **ONLY**; they are **NOT** to be used for oocyte retrieval. High vacuum setting must **NOT** be used when the user supplied hand piece is in contact with the patient.



CAUTION: Indicates a condition that may lead to equipment damage or malfunction.

Caution:

-  Do not modify this equipment or open the enclosure due to the risk of electrical shock or damage to the device. There are no user serviceable parts inside the enclosure.
-  Fluids should not be allowed to enter the vacuum pump (i.e. from an overfilled waste collection bottle) as this may result to damage to the system.
-  Do not operate the Pioneer Pro-Pump® if it has been dropped or damaged.
-  Federal (U.S.A.) law restricts this device to sale, distribution, or use by or on the order of a licensed medical practitioner.
-  Connect the AC Mains power cord to a properly grounded hospital-grade outlet. The Pioneer Pro-Pump® should be connected to the same electrical circuit as other equipment in use on the patient.
-  User should be aware of the status of the unit at all times during the procedure (i.e. waste collection bottle fluid level).

Servicing the Pioneer Pro-Pump®

Pioneer Pro Pumps are not user serviceable. If service or replacement are required, contact LifeGlobal Customer Service.

Place the unit in the original packaging. Enclose the following information:

Contact Name; Telephone Number; Address; Description of the fault or service required

Ship to:

LifeGlobal Group, LLC, 393 Soundview Rd, Guilford, CT 06437, USA
T: 1-800-720-6375 F: 1-519-826-6947 T: 001-519-826-5800
sales@LifeGlobal.com www.LifeGlobalGroup.com

Manufacturing Information

Manufactured By:

LifeGlobal Group, LLC, 393 Soundview Rd, Guilford, CT 06437, USA
T: 1-800-720-6375 F: 1-519-826-6947 T: 001-519-826-5800
sales@LifeGlobal.com www.LifeGlobalGroup.com

Authorized Representative:

LifeGlobal Europe, Rue de la Presse 4, 1000, Brussels Belgium
T: 32-2 227 1129 F: 32-2 218 3141

Safety Instructions

This manual describes the operation and intended use of the Pioneer Pro-Pump®. It is important that you familiarize yourself with the details of operating the unit before use. Failure to follow these instructions may result in injury to the patient or operator and may lead to damage to the device.

This manual is not a guide to oocyte retrieval procedures. The use of high vacuum levels increases the risk of damaging oocytes and may reduce fertilization rates.

High vacuum settings are for clearing blockages in the tube set and/or user supplied handset **ONLY**; they are **NOT** to be used for oocyte retrieval. High vacuum setting must **NOT** be used when the user supplied hand piece is in contact with the patient.

Supply Voltage

The device operates at a voltage of either 115V or 230V (depending on the model). Make sure the power cord is properly grounded, and undamaged.

Packaging

Pioneer Pro-Pump® packaging has been designed for safe transportation of the unit and its accessories. After unpacking, keep all packaging for transportation of the device in case of return.

Positioning and Placement of the Device

The Pioneer Pro-Pump® must be placed on a stable, level surface away from sources of heat or water. Do not expose to direct sunlight. Operating temperature range is +5 to +35°C (+45 to +95°F). Do not use in the presence of flammable gasses. User should be aware of the status of the unit at all times during the procedure (i.e. waste collection bottle fluid level).

Initial Inspection

1. Remove the Pioneer Pro-Pump® from its packaging and unwrap all items. Remove the manuals and excess packaging material. Save all packaging material in case of return.
2. Check the unit for any damage. Report any damage to **Customer Service** immediately.
3. Plug the pump into a properly grounded electrical outlet.

Operating the Pioneer Pro-Pump®

Pump Setup

1. Attach foot pedal tubing to port labeled “Foot Control” on the pump housing.
 - a. Dual pedal units; Insert the white plastic fitting into the port and push until it clicks. To release, push down on the metal tab on the top of the connector and pull.
 - b. Single pedal units; attach the foot pedal tubing to the port labeled “foot control” by sliding the proximal end of the foot pedal tube onto the barbed fitting in the center of the foot control port fitting. To release, pull the foot pedal tube off of the foot control port fitting. The foot pedal is normally left attached to devices in daily use unless removed for storage.
2. Connect the correct power lead to an electrical supply. (115V or 230V depending on the model)
3. Turn the power switch I/O (front panel) to on. The switch will illuminate when power is on.
4. Connect vacuum inlet tube to the waste collection bottle.
 - a. Attach the vacuum inlet tube to the vacuum inlet (barbed fitting) of the waste collection bottle.
 - b. Connect the other end of the vacuum inlet tube to the port labeled “suction”.
5. Connect the patient tube set to the waste collection bottle.
 - a. Connect one end of the patient tube set to the patient tube inlet (straight fitting) on the waste collection bottle.
 - b. Connect the distal end of the patent tube set to the user supplied handpiece.



Setting Low Vacuum

For recommended vacuum settings refer to the section “Recommended Vacuum Settings”.

Operation outside of the recommended range may have an adverse impact on the aspiration of oocytes or be hazardous to the patient. The use of high suction levels may lead to excessive fluid flow rates, which may result in damage to oocytes and subsequent reduced fertilization rates.



6.
 - a. Block the distal end or pinch the patient tube set.
 - b. Depress the Low Vacuum (left) foot pedal (Pro-Pump Dual) or the single foot pedal (Pro-Pump Single).
7. Rotate the vacuum control knob clockwise to increase vacuum pressure to the desired setting. To decrease the value, rotate counter clockwise.
8. When the desired value is reached, release the foot pedal.



High Vacuum Feature

9. If the tube sets or user supplied handpiece become blocked due to debris or viscous fluids, the tube set and/or handpiece may be unblocked by accessing the high vacuum feature as follows.

Warning:

-  **DO NOT** use High Vacuum feature for oocyte retrieval.
-  **DO NOT** use high vacuum feature when the user supplied handpiece is in contact with the patient.

Pioneer Pro-Pump® Single

10.
 - a. To access the high vacuum feature, depress the occlusion button on the front of the panel and simultaneously depress the foot pedal. The pump will deliver a vacuum of 450/500 mm/Hg.
 - b. To release high vacuum, release the occlusion button and the foot pedal. When the high vacuum feature is released, the vacuum pressure will revert to the low-pressure setting established in Steps 8 to 11.


Pioneer Pro-Pump® Dual

12.
 - a. To activate the high vacuum feature, depress the (right) high vacuum pedal. The occlusion indicator on the front panel will illuminate when a vacuum of 450/500 mm/Hg is reached.
 - b. To release high vacuum, release the foot pedal. When the foot pedal is released, the vacuum pressure will revert to the low-pressure setting established in Steps 8 to 11.

Recommended Vacuum Settings

The recommended vacuum settings for oocyte retrieval are from 80 mmHG to 140 mmHG.

Warning:

-  Operation outside of the recommended range may have an adverse impact on the aspiration of oocytes or be hazardous to the patient. The use of high suction levels may lead to excessive fluid flow rates, which may result in damage to oocytes and subsequent reduced fertilization rates. Fluid flow rates are a function of the user supplied handpiece and the suction level as determined by the clinician to be appropriate for the individual case, procedure, and patient details. High vacuum settings are for clearing blockages in the tube set and/or user supplied handset **ONLY**; they are **NOT** to be used for oocyte retrieval. High vacuum setting must **NOT** be used when the user supplied hand piece is in contact with the patient.

Cleaning and Storage

Cleaning

Caution: The use of isopropyl alcohol is not recommended for use in cleaning the Pioneer Pro Pumps or accessories; IPA has been shown to damage oocytes.

1. Housing
 - a. Disconnect the power cord before cleaning the pump housing.
 - b. Use a damp, lint free cloth to wipe the pump housing.
2. Waste Collection Bottle
 - a. Empty the waste collection bottle as per your facility's waste disposal procedure.
 - b. Rinse the bottle and stopper with warm tap water until visible soil is removed.
 - c. Let the bottle and stopper air dry before returning to service.

3. Tubing

Vacuum Inlet Tube

- a. The vacuum inlet tube should not require cleaning under normal use; if cleaning is required, run warm tap water thru the tube until visible soil is removed.
- b. Air dry tubing before returning to service.

Patient Tube Set

- c. The patient tube set will get soiled during normal use; soak the tube in warm tap water until soil is loosened.
- d. Run warm tap water thru the tube until visible soil is removed.
- e. Air dry tubing before returning to service.

Storage

If the Pioneer Pro Pump® requires storage, clean the housing, waste collection bottle and stopper and tube sets as outlined above.

Pack the Pioneer Pro Pump® and accessories in the original packaging and store in a cool, dry place.

Warranty

LifeGlobal Group, LLC warrants this product to be free from defects in the workmanship and materials, under normal use and service, for a period of 5 years from the date of purchase. If at any time during this warranty period the product becomes defective or malfunctions LifeGlobal Group, LLC will replace it within a reasonable period of time.

If the product is defective please contact:

1. the dealer from whom you purchased it, or
2. LifeGlobal Group, LLC **Customer Service** at 1-800-720-6375, 001-519-826-5800, or email us at customerservice@LifeGlobal.com.
3. Package the defective product, power supply, and other components as described in our “Servicing the Pioneer Pro-Pump®” section with proof of purchase and ship it, prepaid to the following address: LifeGlobal Group, LLC, 393 Soundview Road, Department of Returned Goods, Guilford, CT 06437, USA.

This warranty shall not apply if it is shown by LifeGlobal® Group, LLC that the defect or malfunction was caused by damage, due to negligence, while the product was in the possession of the consumer.

Only purchase replacement parts direct or from a representative to ensure performance and to maintain all your warranties and to know that you are benefiting from the most advanced technology in the market today.

IMPORTANT: LifeGlobal® Group, LLC’s sole responsibility is to repair or replace the product within the terms of this warranty. LifeGlobal® Group, LLC SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND, INCLUDING ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING, DIRECTLY OR INDIRECTLY, FROM ANY BREACH OF ANY WARRANTY, EXPRESSED OR IMPLIED, OR ANY OTHER FAILURE OF THIS PRODUCT. THE WARRANTIES SET FORTH HEREIN ARE EXCLUSIVE AND LifeGlobal® Group, LLC EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY, WORKMANSHIP OR FITNESS FOR A PARTICULAR PURPOSE.

If you have any questions concerning this warranty, please contact our **Customer Service** Department at 1-800-720-6375, 001-519-826-5800, e-mail: customerservice@LifeGlobal.com, or write to Customer Service Department at LifeGlobal Group, LLC, 393 Soundview Road, Guilford, CT 06437, USA.

Technical Specifications

- **Classification:** Class I protection against electric shock
Type CF Degree of protection against electric shock

- **Operating Environment:** +41°F to +95°F (+5°C to +35°C), 10-100% relative humidity (noncondensing), 500 to 1060 hPa

- **Transport/Storage:** –40°F to 158°F (–40°C to +70°C), 10-100% relative humidity (noncondensing), 500 to 1060 hPa

- **Weight:** 6.35 lbs (2.88 kg)

- **Unit Dimensions with Casters:** DxWxH 6.5 in x 9 in x 5 in (16 cm x 23 cm x 13 cm)

- **Shipping Dimensions:** DxWxH 17 in x 15 in x 8.5 in (43 cm x 38 cm x 22 cm)

- **Power Input:** 115V: 115V~, 500VA~, (50/60 Hz) 14/15W
230V: 230V~, 500VA~, (50/60 Hz) 100W

- **Fuse Rating:** 250V, 5A, TYPE T

- **Vacuum Ranges** 0 to 500 mmHg

- **Vacuum Gauge Accuracy:** Lower Scale Reading is 3%
Middle Scale Reading is 2%
Upper Scale Reading is 3%

- **Electromagnet Emissions:** Conforms to the EMC requirements of the Medical Device Directive 93/42/EEC, CISPR Class A. Tested to EN55011 (2005) and CISPR11 (2004).

- **Electromagnet Immunity:** Conforms to the EMC requirements of the Medical Device Directive 93/42/EEC. Tested to IEC60601-1-2:2004, IEC61000-4-2:2001 ESD, IEC61000-4-3:2002 RF, IEC61000-4-4:2004 EFT, IEC61000-4-5:2001 Surge, IEC61000-4-6:2001 Conducted RF, IEC61000-4-8:2001 Magnetic Fields, IEC61000-4-11:2004 Voltage Dips, Interruptions and Variations, IEC61000-3-2:2006 Harmonic Distortion, IEC61000-3-3:2005 Voltage Fluctuations and Flicker.

Electromagnetic Compatibility



Medical equipment needs special precautions regarding electromagnetic compatibility (EMC) and needs to be installed and put into service according to the EMC information provided in this document.

The Single Pioneer Pro-Pump® and the Dual Pioneer Pro-Pump®, comply with IEC 60601-1-2:2007, providing reasonable protection against electromagnetic interference in a typical medical installation. The equipment generates, uses and can radiate electromagnetic interference (EMI), and if not installed and used in accordance with the instructions, may cause interference with other devices in the vicinity.



If interference does occur, correct it using one or more of the following measures:

- Move the receiving device or increase separation between the equipment.
- Consult the manufacturer or members of the hospital's engineering department for more information.

Warning:

-  The use of portable and mobile radio frequency (RF) communications equipment can affect this and other pieces of medical equipment.
-  The monitor should not be used adjacent to or stacked with other equipment; if adjacent or stacked use is necessary, the equipment should be observed to verify normal operation in the configuration in which it will be used.

Caution:


-  Observe precautions for electrostatic discharge (ESD) and electromagnetic interference (EMI) to and from other equipment.
-  Where electromagnetic devices (i.e., electrocautery) are used, patient monitoring may be interrupted due to electromagnetic interference. Electromagnetic fields up to 3 V/m will not adversely affect system performance.

Electromagnetic Emissions

Guidance and manufacturer's declaration – Electromagnetic emissions		
The Pioneer Pro-Pump® is intended for use in the electromagnetic environment specified below. The customer or user of an Aspiration Pump should assure that it is used in such an environment.		
EMISSIONS TEST	COMPLIANCE	ELECTROMAGNETIC ENVIRONMENT - GUIDANCE
RF emissions CISPR 11	Group 1	The Pioneer Pro-Pump® use 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 Pioneer Pro-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	Not Applicable	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not Applicable	

Electromagnetic Immunity

Guidance and manufacturer's declaration – Electromagnetic emissions			
The Pioneer Pro-Pump® is intended for use in the electromagnetic environment specified below. The customer or user of a Pioneer Pro-Pump® should assure that it is used in such an environment.			
IMMUNITY TEST	IEC60601 TEST LEVEL	COMPLIANCE LEVEL	ELECTROMAGNETIC – GUIDANCE
Electrostatic Discharge (ESD) IEC 61000-4-2	+/- 6kV contact +/- 8kV air	+/- 6kV contact +/- 8kV 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	+/- 2kV for power supply lines +/- 1 kV for input/output lines	+/- 2kV for power supply lines +/- 1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	+/- 1kV line(s) to line(s) +/- 2kV line(s) to earth	+/- 1kV line(s) to line(s) +/- 2kV line(s) to earth	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	<5% UT (>95% dip in UT) for 0.5 cycle 40% UT (60% dip in UT) for 5 Cycle 70% UT (30% dip in UT) for 25 cycles <5% UT (>95% dip in UT) for 5 s	<5% UT (>95% dip in UT) for 0.5 cycle 40% UT (60% dip in UT) for 5 cycle 70% UT (30% dip in UT) for 25 cycles <5% UT (>95% dip in UT) for 5 s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Pioneer Pro-Pump® requires continued operation during power interruptions, it is recommended that the unit 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 least characteristic of a typical location in a typical commercial or hospital environment.
			<p>Portable and mobile RF communications equipment should be used no closer to any part of the model DX-4100 or model DX-4102, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance:</p> $d = \left[\frac{3.5}{V1} \right] \sqrt{P}$ $d = \left[\frac{3.5}{E1} \right] \sqrt{P}$ $d = \left[\frac{7}{E1} \right] \sqrt{P}$ <p>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).</p>

			<p>Field strength from fixed RF transmitters, as determined by an electromagnetic site survey^a, should be less than the compliance level in each frequency range.^b</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
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NOTE: Ut is the a.c. mains voltage prior to the application of the test level

NOTE 1: At 80 MHz and 800MHz, 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 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 Single and Dual Vac Pioneer Pro-Pumps is used exceeds the applicable RF compliance level above, the equipment should be observed to verify normal operation. If abnormal operation is observed, additional measures may be necessary, such as reorienting or relocating THE Aspiration Pumps.

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

Recommended separation distances between portable and mobile RF communications equipment and the Pioneer Pro-Pump®.

The Pioneer Pro-Pump® is intended for use in the electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Pioneer Pro-Pump® can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Aspiration Pumps as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter (Watts)	Separation distance according to the frequency of transmitter		
	(meters)		
	150 kHz to 80 MHz $d = \left[\frac{3.5}{V1} \right] \sqrt{P}$	80 MHz to 800 MHz $d = \left[\frac{3.5}{E1} \right] \sqrt{P}$	800 MHz to 2.5 GHz $d = \left[\frac{7}{E1} \right] \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	23
10	3.8	3.8	73
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance in meter (m) can be estimated by using the equation applicable to the frequency of the transmitter, where P is the maximum 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 many not apply in all situations. Electromagnetic propagation is affected by absorption and reflected from structures objects and people.

Troubleshooting

Q. Why is my Pioneer Pro-Pump® not working?

- A.
- Make sure the power cord is connected properly.
 - Make sure That all tubing connections are correct and secure.
 - Make sure the voltage of the Pioneer Pro-Pump® is compatible with the voltage of your system.
 - Make sure the power is ON.
 - Make sure none of the tubing is kinked.

Q. Why is my Pioneer Pro-Pump® not reaching the right pressure?

- A.
- Make sure the tubing from the overflow bottle is attached properly.
 - Make sure you have adjusted the vacuum control.

Q. Why is my Pioneer Pro-Pump® not reaching the maximum pressure?

- A.
- Make sure that the suction is not blocked.
 - In single pedal pump, make sure you have the occlude for maximum vacuum button pressed.
 - In dual pedal pump, make sure you have stepped on the right pedal and the occlude for maximum vacuum light is on.



PIONEER PRO-PUMP®

USER MANUAL

