Radiance Arena System

Operators Manual

ultratec special effects

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Table of Contents

Introduction 1
Warning 1
Safety Precautions 1
Technical Specifications 2
Technical Drawings 3
Arena System Setup..... 4
Radiance Setup..... 5
Twister X Setup..... 5
Hanging /Sitting Bracket 6
Twister X DMX Operation.....6
Radiance DMX Operation..... 7
Twister X Stand Alone Operation..... 8
Twister X Stand Alone Operation..... 9
Operation with Hand Remote..... 10
Radiance Maintenance Procedure 11
RadianceTroubleshooting..... 11
Recommended Fluid 11
Twister X Maintenance Procedure 12
Twister X Troubleshooting 12
Warranty 13
Contact Information 14

Introduction

Radiance Arena System

The Radiance Arena System is our latest hazer touring system for events in large arenas. Packaged in a durable wheeled road case, it includes the Radiance Hazer with its award winning 4-Port Rapid Vaporizer. It's a major advancement in water-based haze technology.

Complete hazer and fan control is achieved via four DMX channels. Hidden in the base, the fan tray slides smoothly into position, giving the road case full support via the fifth wheel. The TwisterX Fan rotates 180 degrees providing wide haze dispersion in forward direction and focused dispersion in reverse direction. This system will push haze up to 1,500 cubic feet per minute.

Warning!!

Important Safety Instructions:

1. Do not touch, place hands or expose skin within 20"(50cm) of the discharge nozzle.
2. Do not remove the outer case.
3. Persons suffering from asthma or allergenic sensitivity may experience irritation, discomfort or allergic symptoms when exposed to fog effects.
4. Ensure that this unit is grounded at all times. Failure to do so may result in serious injury.
5. Use Ultratec Special Effects Luminous 7 Water Base Haze Fluid **ONLY**. A Luminous 7 SDS is available at www.ultratecfx.com

Safety Precautions

1. Ensure that any operation of the machine is supervised by suitably trained and authorized personnel.
2. Do not modify the machine or use a machine which has been damaged in any way.
3. Allow sufficient air circulation around the machine at all times.
4. Protect the machine from direct weather effects and wet locations. Suitable for dry locations only.
5. Only use Luminous 7 Water Base Haze Fluid by Ultratec Special Effects.
6. Do not continue to produce haze in an enclosed area when visibility is reduced below 20"(50cm).
7. Avoid direct haze output continuously at persons, structures or objects within close proximity of the discharge nozzle.
8. Ensure that adequate exhausting arrangements are available in the event of an emergency.
9. Do not place hands or exposed skin within the first 20"(50cm) of the discharge nozzle at any time during haze production.
10. Haze effects can trigger smoke alarms and detectors. Please take suitable precautions to prevent false alarms.

Technical Specifications

Part Number:

CLF-2484	Radiance Arena System 110V
CLF-2487	Radiance Arena System 220V
CLF-2489	Radiance Arena System - Road Case Only

Length:	24 in / 60.96 cm
Width:	20 in / 50.80 cm
Height:	37 in / 93.98 cm
Net Weight:	160 lbs / 72.57 kgs

Regulatory Compliance: This product has been certified to CSA/UL Standards by QPS Canada Inc.

Specification Footnote:

ROAD CASE SPECIFICATIONS

Width: 20 in / 50.80 cm
Depth: 24 in / 60.96 cm
Height: 37 in / 93.98 cm
Net Weight : 160 lbs / 72.57 kgs

RADIANCE HAZER SPECIFICATIONS

Power Cord: 6 ft - 1.8 m
Heater Watts: 500 Watts
Rating: 110 volt AC 50/60 hz 5 amps.
Rating: 220 volt AC 50/60 hz 2 amps.

TWISTERX FAN SPECIFICATIONS

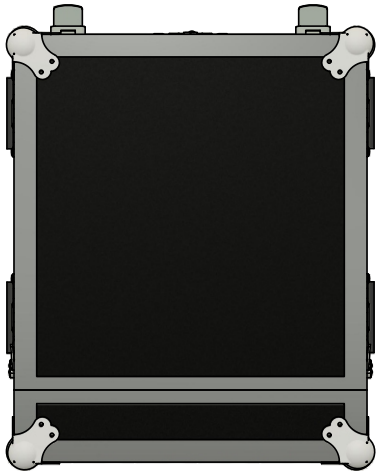
Output: 1,500 cfm @ 2,750 fpm
Rating: 110 volt AC 50/60 hz 4 amps.
Rating: 220 volt AC 50/60 hz 2 amps.
Noise Level: 72 dB (full speed focused)

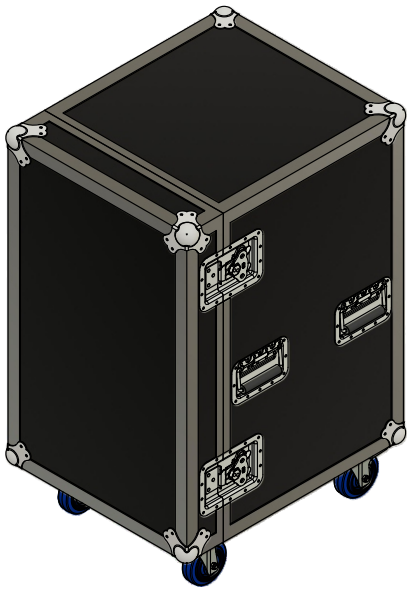
Features

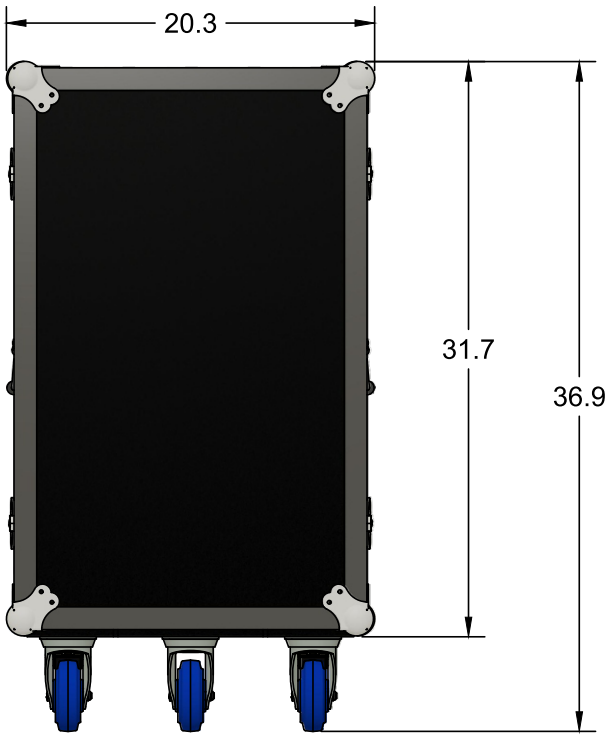
Continuous operation
Fluid Consumption settings from 27 - 380 cc/ hour
TwisterX Fan as wide dispersion in forward direction
TwisterX Fan has narrow dispersion in reverse direction
1,500 CFM at 2,750 FPM at full speed output
Radiance Hazer tray slides out for easy access
Access panel on the back of wheeled road case
Fifth wheel under the fan tray provides full support
Ships with 5-pin DMX cables installed & daisy chained for quick & easy setup

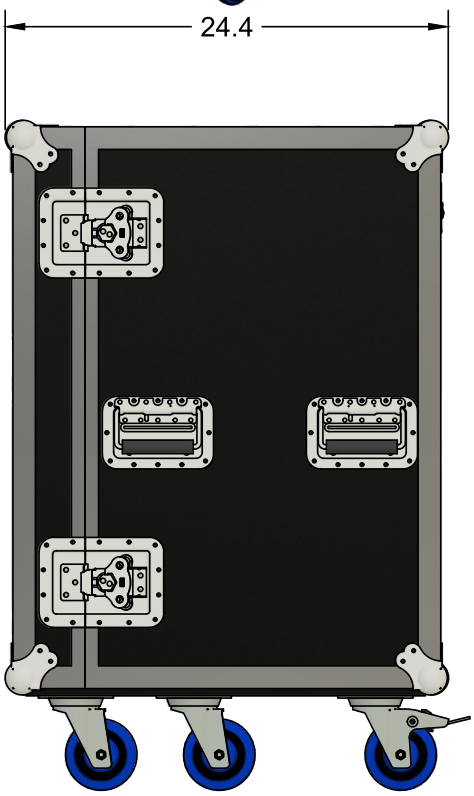
Fluid: Ultratec Special Effects Luminous 7 Water Base Haze
Fluid Consumption settings from 27 - 380 cc/ hour
Even lower output is achieved by using the Interval Timer.

Technical Drawings









Arena System Setup

1. Find a suitable location to setup.

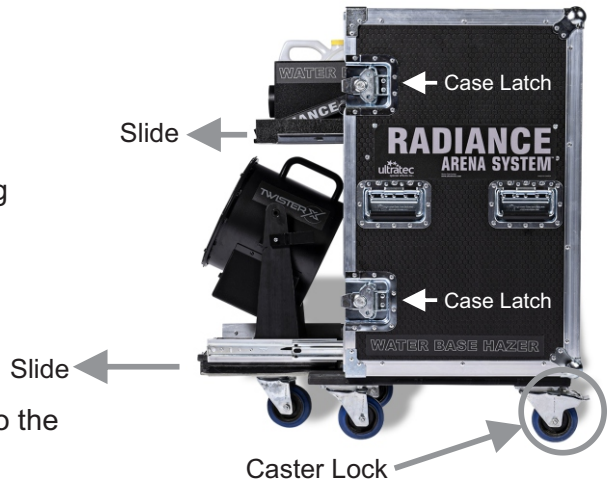
2.Lock Casters by pressing lock levers.

3.Remove case front and open Back control Window by turning latches.

4.Pull out slide(s) and Position Fan as Desired.

5.Connect Power Cord from road case to power source.

6.Connect DMX Line(s) by plugging the incoming DMX cable to the DMX IN Connector of the Radiance Hazer



7.Plug a 2nd DMX cable to the DMX OUT connector of the Radiance Hazer. Plug the other end of the DMX Cable into the DMX IN Connector of the Twister X Fan.

Radiance Setup

1. Insert a 2 or 4 Liter Jug of Ultratec Special Effects Luminous 7 Haze Fluid into the fluid jug holder.

2. Remove the cap and break the foil seal. Insert the fluid pickup tube into the jug and tighten the lid. Ensure the fluid filter located at the end of the tube sits at the lowest end especially if the machine is not mounted level.

Twister X Setup

Hidden Display:

The Twister X has the option of hiding the DMX address display (default), or always visible DMX address display.

NOTE: During first time operation the display is in hidden mode.

After power up, the rear display will momentarily show the code revision levels in the machine and then display the DMX setting for several seconds. The display will blank after a short period of time. Touching an arrow key will relight the display. Further activation of the keys will alter the DMX setting.

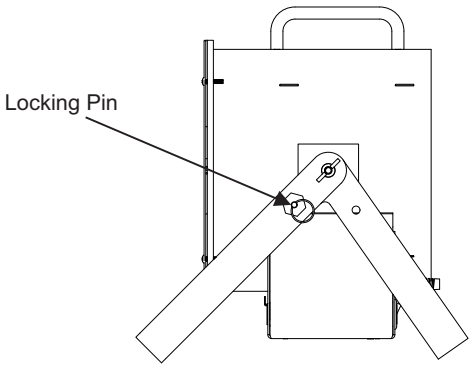
Holding the hundred's button during power up, will switch to DMX visible mode. To return hidden, hold the ones's button during power up.

NOTE: Unit will retain the last display setting at next power up

NOTE: The hidden / visible DMX display setting only applies to the valid DMX address ranges. When the unit is in the Stand-Alone mode the display will continuously stay visible regardless of which display mode it is set to.

Hanging/Sitting Bracket:

The bracket is adjusted by pulling the locking pin and moving the arms to the desired position and releasing the pin, locking it back in place.



Operating Procedure

DMX Operation

Twister X

For DMX Operation make sure the mode selector switch is in AUTO position.

The DMX control will occupy 2 consecutive channels. The first channel controls the fan speed.
The second channel determines beam focus/direction of flow.

The unique design of the Twister X allows for a focused beam flow of air or a wide beam flow of air. Forward direction of flow will create a wide beam flow output in one direction, and a focused beam flow output when turning in the opposite direction.

DMX Address = Allows speed adjustment of fan.
0% = OFF 1% - 100% is low to high speed

DMX Address +1 = Allows adjustment of focused flow or wide beam flow .
0% - 49% is focus flow (forward)
50% - 100% is wide beam flow (reverse)

Note: If the unit is in the native hidden display mode; The display goes to sleep when not in use. Touching any key once wakens it. Further activation of the keys will alter the DMX setting.

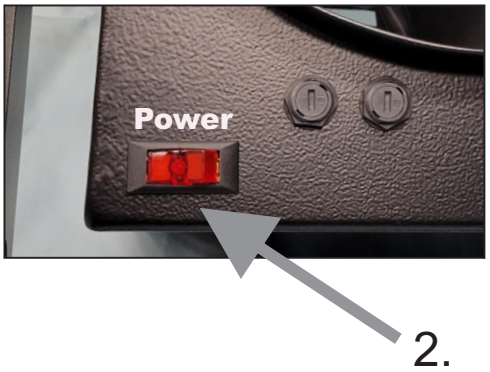
1. Turn power switch to ON position; it will illuminate if power is present.

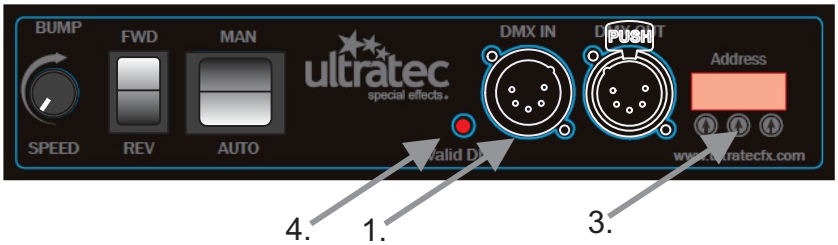
2.. Set desired DMX address on the digital display (using the arrow keys) between 001 to 511.

3.. If valid DMX signal is present, the red valid DMX LED will be on solid.

4.. Adjust DMX levels to control fan speed and beam /direction.

Note: DMX control is indicated when the valid DMX light is solid RED.





RDM

The DMX connection is also RDM enabled.
Basic instruction set includes identification and DMX re-addressing.

DMX Operation
Radiance Hazer

1. Turn power switch on and it will illuminate if power is present.

   The heat up time is approximately 8 minutes before haze can be produced.
   The Green LED indicates “Heating” when “Flashing” and “Ready” when LED is “Solid”.
   A three-flash pattern indicates an over temperature error.

2. Select the desired base DMX address for the Hazer on the digital display from 1-511 as 2 sequential addresses are required.

   Note: The display goes to sleep when not in use. Touching any key once wakens it. The selected address is the Haze rate and the selected address + 1 is the fan speed. Control is from 0 - 100% with '0' turning the output off.

The fan has a minimum setting and should always run when the power is applied. The fan only speeds up when haze is produced.

3. 15 Minutes prior to shutting down your Radiance Hazer, adjust your output setting to “0” Doing this will consume any haze fluid that is still in your distribution feed tubes and processing block. Failure to do so will result in raw fluid being discharged from your output nozzle when you operate it next start-up and will help reduce (not stop) the residue buildup

Note: DMX Operation overrides hand held held remote operation controls.

RDM Functions

RDM features will allow remote identify by flashing the DMX display, DMX address changing and machine temperature monitoring. As well the machine's group and manufacturer identification data are available.

Stand Alone Operation
Twister X

For Stand Alone Operation make sure the mode selector switch is in MANUAL position.

Note: Stand Alone Operation overrides DMX.

The fan can be controlled locally by the Fan Speed Control, The BUMP button and the Fan Direction switch.

1. The momentary BUMP Button is used to achieve bursts of full speed fan rotation while depressed. When not depressed, the fan returns to it set speed.

2. The Fan Speed knob is used to adjust the speed of the fan rotation. At its most counter clockwise position, the fan is at its lowest speed, and increases as the knob is turned clockwise.

3. The Fan Direction switch is used to control the direction of rotation of the fan. Forward direction of flow will create a wide beam flow output in one direction, and a focused beam flow output when turning in the opposite direction.

A second method of stand alone operation can be achieved by the following process (With the Mode switch set to Auto):

4. The fan can be controlled locally by using higher numbers in the DMX display.
   700-799 will give focused beam/forward fan speed settings of 0-99 which equates to OFF to 100% full on.
   800-899 will give wide beam/reverse fan speed settings of 0-99 which equates to OFF to 100% full on.

Note: Stand Alone Operation overrides DMX

Note: The hidden / visible DMX display setting only applies to DMX Mode. When the unit is in the Stand-Alone mode the display will continuously stay visible regardless of which display mode it is set to.

Stand Alone Operation
Radiance Hazer

After power up, the rear display will momentarily show the code revision levels in the machine and then display the DMX setting for several seconds. The display will blank after a short period of time. Touching an arrow key will relight the display. Further activation of the keys will alter the DMX setting.

1. Plug main power cord into a suitable power source. Turn each machines power switch on and it will illuminate if power is present. The heat up time is approximately 8 minutes before haze can be produced. The Green LED indicates “Heating” when “Flashing” and “Ready” when LED is “Solid”. A three-flash pattern indicates an over temperature error.

2. Haze Rate is limited to 8 steps plus OFF. The DMX address buttons are used to select the desired operation. Place the DMX address to 600 on the display. The display will stay illuminated indicating this mode is selected. Allow the machine to heat fully by watching the green LED's progress. The 'Tens' button controls the haze rate. '0' is off, 1-8 runs from low to full (9 is the same level as 8). For minimum Flow Rate use DMX or Optional Hand Remote Control.

3.Fan rate is also controlled by DMX Address, Place DMX Address to 7xx or 8xx for forward/reverse, tens and ones control fan speed.

4. 15 Minutes prior to shutting down your Radiance Hazer, adjust your output setting to “0” Doing this will consume any haze fluid that is still in your distribution feed tubes and processing block. Failure to do so will result in raw fluid being discharged from your output nozzle when you operate it next start-up and will help reduce (not stop) the residue buildup.

Radiance Operation with Hand Remote

When using the handheld remote, the Twister X fan must be operated in stand alone or DMX mode and adjusted accordingly.

1. Plug the Hand Remote cable into the rear connector marked remote.

2.Plug the unit into a suitable power source.

3.Turn the main power switch on and it will illuminate if power is present.

Note: For the Hand Remote to work, a valid DMX address must be set from 001 to 511.
The display goes to sleep when not in use. Touching any key once wakens it. DMX control will override the hand remote settings. DMX control is indicated when the valid DMX light is solid RED.

4. The heat up time is approximately 8 minutes before haze can be produced. The Hand Remote indicates the heating cycle when the haze switch light is flashing. When the unit is ready to haze the light will be solid. A three-flash pattern and the fan turning on to full speed indicates an over temperature error. The rear panel Green LED indicates the same status.

5. The haze rate can be switched on, off and varied by using the Hand Remote controls. Haze output increases as the variflow knob turns clockwise.

6. The assist fan is always on low. Fan speed can be increased by rotating the fan knob clockwise. The fan only speeds up during haze output. The Versa Fan Power Port output will also be adjusted.

5. The interval knob is used to provide cycled output. It must be set fully counterclockwise (off) when continuous haze output is required. The hazer will produce 10 seconds of output at the requested flow, spaced by a 1 - 300 seconds interval dependent upon the dial position.

6. 15 Minutes prior to shutting down your Radiance Hazer, adjust your haze output setting to “0” Doing this will consume any haze fluid that is still in your distribution feed tubes and processing block. Failure to do so will result in raw fluid being discharged from your output nozzle when you operate it next start-up and will help reduce (not stop) the residue buildup.

Hand Held Remote (optional)

Maintenance Procedure

For information and instructions regarding the cleaning procedure, please refer to the “Radiance Hazer Service Manual”or “Radiance Hazer Service Maintenance Procedure Video” located under the Radiance product page under the support tab under FAQ Maintenance and Service "Radiance - How to clean the 4 port Vaporizer" at www.ultratecfx.com

Troubleshooting

UNIT NOT POWERING UP
1) Check that IEC power cord is securely connected to unit.
2) Check that unit is connected to a suitable power source.
3) Check that the power switch is in the ON position.
4) Check that the 8A fuse inside the fuse powered entry module has not blown.
5) Check that unit has not shutdown due to over temperature condition and that mechanical safety temperature fuse (Thermal Disc) has not open.
Wait about 1 hour and then check again to see if temperature fuse (Thermal Disc) has reset and if unit powers back up.
Contact Ultratec Special Effects for further help.
6) Check both fused on circuit board if blown open. Note: Fuses are soldered onto circuit board.
Contact Ultratec Special Effects for more help with this.

UNIT DOES NOT PRODUCE HAZE
1) Check that fluid pick up hose is sufficiently submerged into fluid in jug.
2) Ensure fluid pickup line is fully primed with fluid.
3) Ensure that green heater status LED is ON solid, indicating that unit is fully heated.
4) If using Standalone Mode, ensure DMX address is set to 600 and that the 10's column is set between 1 - 8
5) If using DMX control, ensure that DMX address on Radiance is set between 001 to 511 range.
6) If using DMX control, ensure that red Valid DMX LED is ON solid and that correct DMX channel on the DMX console matches DMX address set on the Radiance.
7) If using hand held optional remote, ensure that DMX address on Radiance is set between 001 - 511.
8) If using hand held optional remote, ensure that red Valid DMX LED is not turn ON solid. This should be off. Remove DMX signal or cable if connected to hazer to use remote.
9) Check that heater block is not plugged when unit is cool. Complete heater block maintenance if necessary.
10) Contact Ultratec Special Effects for for further help.

RADIANCE FAN NOT TURNING ON
1) Check the unit is connected to a suitable power source.
2) Check that the power switch is in the ON position.
3) Check that the fan motor and fan blades are not full of dust/debris. Disconnect power and clean fan.
4) Check that fan blades spin freely with a long metal tool, when machine is powered off and disconnected from power. Fan motor / blades may be dirty and need cleaning. Fan may be seized up and need replacing.
Contact Ultratec Special Effects for more help with this.

Recommended Fluid

Ultratec Special Effects Luminous 7 Haze Fluid:
This fluid was specifically designed to be used in our Radiance Haze Machine. This water-based fluid creates an evenly dispersed haze that is dry and long lasting without leaving any residue. It produces a premium quality, beautiful haze that illuminates the light and laser beams from ceiling to the floor. Luminous 7 Haze Fluid has a high concentration of an active ingredient that allows for low fluid consumption and is completely safe.

Ultratec Special Effects Luminous 7 Haze Fluid

Maintenance Procedure

Exterior
The casing of the Twister X is steel with a powder paint coating. To clean simply wash with mild soap and warm water. **Ensure the power is disconnected when cleaning!!!**

Troubleshooting

NOT POWERING UP:

1) Check that power switch is in ON position on and illuminated.
2) Check power cord is securely inserted and locked into Fused Power Entry Module and connected to an appropriate power source.
3) Verify that the supplied voltage is correct for the fans setup.
4) Check that either one of the two fuses located on the chassis have not failed.
5) Contact Ultratec Special Effects Service Department. .

RADIANCE FAN NOT TURNING:

1) Check that fan blades are not full of dust / debris.
Clean fan blades (Ensure unit is disconnected from any power source).
2) Look for visual damage to fan blades / motor.
3) Contact Ultratec Special Effects Service Department.

If in Auto/ DMX Mode:

1) Check that DMX address is set to correct address being used.
2) Verify that Valid DMX LED is ON solid confirming good DMX signal.
3) Verify that correct DMX address is being sent to unit from DMX console.
4) Ensure Auto/Manual mode switch is set to Auto.
5) Contact Ultratec Special Effects Service Department.

If in Manual Mode:

1) Ensure Auto / Manual mode switch is set to Manual.
2) Check that manual speed control dial is not damaged and is adjustable.
3) Contact Ultratec Special Effects Service Department.

Warranty

Hardware products come with a five-year warranty on parts and labor. If the unit in question has a material defect or fault that is caused in manufacturing, Ultratec Special Effects will provide free parts and labor to remedy the equipment. Ultratec Special Effects service department must be advised in a timely manner after defect appearance and the date of warranty request must be within five years of sale/purchase. Proof of sale and/or proof of purchase will be required for warranty to take effect.

Warranty service will be performed as follows: faulty parts will be repaired or replaced with the same or comparable parts, based on availability. Freight to our facility for warranty requests will be prepaid by the user/dealer. Upon completion of the repair, Ultratec Special Effects will return the unit via the most economical means available. Should you require the item express-returned, the user/dealer is responsible for indicating this request and for any difference in freight cost.

Warranty will be voided, and customer will lose all rights guaranteed by the warranty if any of the following are observed/occur:
If any non Ultratec Special Effects fluid is used at any point of operation.
If any adjustments or repairs are done to the machine in question by repair technicians not authorized by Ultratec Special Effects.
If our repair technicians observe any signs of incorrect handling/treating of machine in question.

Warranty services do not cause an extension of the warranty nor does a repaired product start a new warranty. This warranty only applies to the product supplied by Ultratec Special Effects, Ultratec Special Effects is not responsible for any losses, costs, or damages from the use of a defective product.

Any additional costs incurred are the responsibility of the Dealer and/ or the customer.
An RA (Return Authorization) number must be noted on the outside of each box being returned to our facility. Any package(s) without an RA number clearly marked, will not be accepted by our receiving department.

Export Distributors are required to carry out the warranty repair, parts will be supplied by Ultratec.

Please do not forget to remove any liquid from the machine when sending in for repair.

Please remember to include the RA Number on all items being shipped for repairs.
To request a Return Authorization number please refer to our website - instructions below:
1) Go to www.ultratecfx.com
2) Along the top banner click or hover over the Support tab
3) Click on REQUEST RMA
4) Fill in the required information
5) Click the SEND button
If you have any questions or require assistance please contact service at 519-951-3355/866-534-5557 or by email at Service@Ultratecfx.com.

Contact Us

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