

<b>BEFORE YOU BEGIN .....</b>	<b>1</b>
1.1 WHAT IS INCLUDED.....	1
1.2 UNPACKING INSTRUCTIONS .....	1
1.3 SYMBOLS.....	1
1.4 DISCLAIMER.....	1
1.5 SAFETY NOTES.....	1
1.5.1 PERSONAL SAFETY .....	1
1.5.2 MOUNTING AND RIGGING.....	2
1.5.3 POWER AND WIRING.....	2
1.5.4 OPERATION.....	2
<b>2 INTRODUCTION .....</b>	<b>3</b>
2.1 DESCRIPTION .....	3
2.2 FEATURES .....	3
2.3 PRODUCT OVERVIEW .....	3
<b>3 TECHNICAL SPECIFICATIONS.....</b>	<b>4</b>
<b>4 SETUP.....</b>	<b>4</b>
4.1 AC POWER.....	4
4.2 AC PLUG.....	4
4.3 RESETTING THE BREAKER .....	4
4.4 DMX LINKING .....	5
4.5 MOUNTING .....	5
4.5.1 ORIENTATION .....	5
4.5.2 RIGGING .....	5
<b>5 OPERATION .....</b>	<b>5</b>
5.1 COOLING WITH ICE .....	5
5.2 PREPARING FOR OPERATION .....	5
5.3 ON-DEVICE CONTROL PANEL .....	5
5.4 ON-DEVICE CONTROL MODE & OPERATION.....	6
5.4.1 PROGRAMMING .....	6
5.4.2 MENU MAP .....	6
5.5 WIRELESS REMOTE-CONTROL MODE & OPERATION.....	8
5.6 DMX MODE & OPERATION.....	8
5.6.1 STARTING ADDRESS.....	9
5.6.2 DMX MODE MENU MAP .....	9
5.6.3 DMX CHANNEL ASSIGNMENTS AND VALUES .....	9
5.7 AUTO RUN LAST SETTINGS.....	9
5.8 FLUID SENSOR.....	9
5.8.1 TRIGGER "NO-FLUID PROTECTION" .....	9
5.8.2 CLEAR "NO-FLUID PROTECTION" WARNING .....	9
<b>6 TECHNICAL INFORMATION .....</b>	<b>10</b>
6.1 MAINTENANCE.....	10
6.2 STORAGE .....	10
6.2.1 MACHINE STORAGE.....	10
<b>7 WARRANTY .....</b>	<b>10</b>

# BEFORE YOU BEGIN

## 1.1 What Is Included




- FFM-TITAN-ICE Machine
- Power Cord
- W-4 Remote Wireless Controller with A27 battery
- User Manual

## 1.2 Unpacking Instructions

Carefully unpack the product immediately and check the container to make sure all the parts are in the package and are in good condition.

If the box or the contents (the product and included accessories) appear damaged from shipping, or show signs of mishandling, notify the carrier or dealer/seller immediately. In addition, keep the box and contents for inspection.

## 1.3 Symbols

Symbol	Meaning
	<b>Caution</b> Critical installation, configuration, or operation information. Not following these instructions may make the product not work, cause damage to the product, or cause harm to the operator.
	<b>Important</b> Important installation or configuration information. Failure to comply with this information may keep the product from working correctly.
	<b>Information</b> Useful information.

## 1.4 Disclaimer

The information and specifications contained in this User Manual are subject to change without notice. Froggys Fog assumes no responsibility or liability for any errors or omissions and reserves the right to revise or to create this manual at any time.

Copyright © 2019 Froggys Fog. All rights reserved.

## 1.5 Safety Notes

Please read the following Safety Notes carefully before working with the product. The notes include important safety information about installation, usage, and maintenance.

### 1.5.1 Personal Safety

- Always connect the product to a grounded circuit to avoid the risk of electrocution.
- During heating up and operation, the housing will be scalding hot. Do not touch.
- Condensation may form on the bottom of the product, creating damp or wet conditions under and around the machine. Use caution! Surfaces around the product may become slippery.
- The product is very hot during operation and it remains hot for a long time after operation has stopped. Do not touch the product's nozzle.
- Make sure that children, unauthorised people and animals do not obtain access to the machine.

- Never drink fog liquid. If it is ingested, call a doctor immediately for any discomfort. If liquid comes in contact with skin or eyes, rinse thoroughly with water.

### 1.5.2 Mounting and Rigging

- For safety reasons, we do not recommend mounting the product in any capacity. Operate the product while it is on the ground only.
- To prevent risk of fire or shock, do not expose the product to rain or moisture.
- CAUTION: When transferring product from extreme temperature environments, (e.g. cold truck to warm humid ballroom) condensation may form on the internal electronics of the product. To avoid causing a failure, allow product to fully acclimate to the surrounding environment before connecting it to power.
- Do not mount the product on a flammable surface (linoleum, carpet, wood, paper, carton, plastic, etc.).
- Do not use in a confined space. Always install the product in a location with adequate ventilation, at least 20 in (50 cm) from adjacent surfaces.
- Be sure that no ventilation slots on the product's housing are blocked.

### 1.5.3 Power and Wiring

- Always make sure that the voltage of the outlet to which you are connecting the product is within the range stated on the decal or rear panel of the product.
- Make sure the power cord is not crimped or damaged.
- Never connect this product to a dimmer pack or rheostat.
- Never disconnect the product from power cord by pulling or tugging on the cord.
- To eliminate unnecessary wear and improve its lifespan, during periods of non-use completely disconnect the product from power via breaker or by unplugging it

### 1.5.4 Operation

- Do not operate this product if you see damage to the housing or cables. Have the damaged parts replaced by an authorized technician at once.
- Make sure there are no flammable materials close to this product while it is operating.
- Do not cover or plug the output nozzle during operation.
- Never carry the product by the power cord or any moving part. Always use the handles.
- Drain the melted ice reservoir before transporting the product.
- The maximum ambient temperature is 104 °F (40 °C). Do not operate the product at higher temperatures.
- Always disconnect the product from the power source before cleaning.
- This product contains no user-serviceable parts. Any reference to servicing in this User Manual will only apply to properly trained, certified technicians. Do not open the housing or attempt any repairs which can lead to damage or malfunction.
- In the event of a serious operating problem, stop using the product immediately.
- Using Only Froggys Fog approved fluids will ensure optimal performance and longevity.
- Only specifically designed water based scent additives may be added to the fog fluid. Never add flammable liquids of any kind (oil, gas, non-application specific perfumes). Pay attention to all warning labels and instructions printed on the exterior of your machine.



Keep this User Manual for future use.

## 2 INTRODUCTION

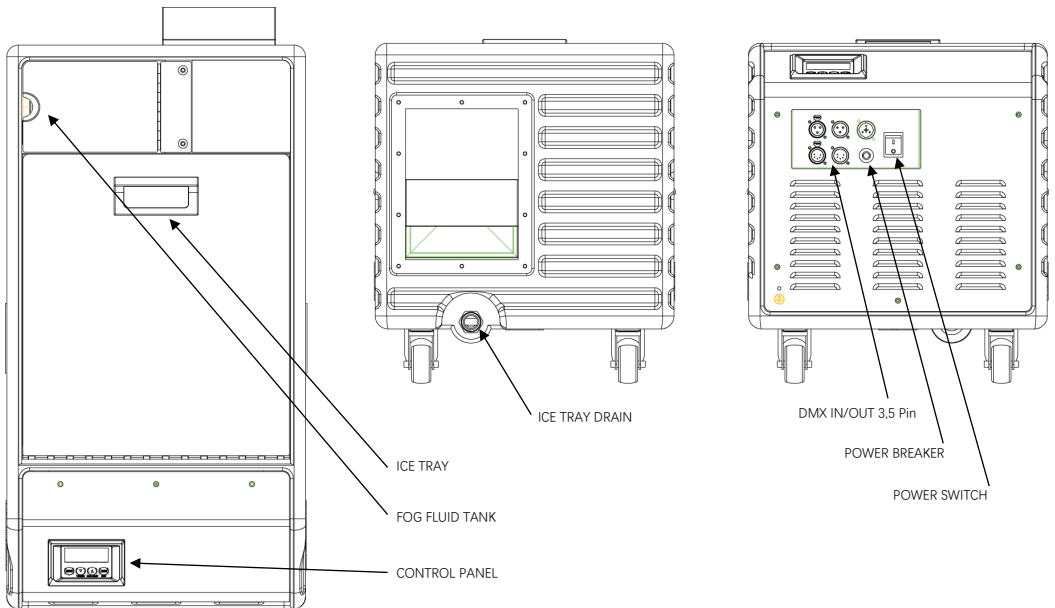
### 2.1 Description

FFM-TITAN-ICE Ground Fog Machine creates a continuous and low-lying fog that hugs the floor and dissipates without rising. Its environmentally friendly, economical, and convenient for creating a constant cloud of fog. The Titan Ice is perfectly suited for small clubs, stage productions, outdoor scenes and events.

### 2.2 Features

- Long-lasting body design with lightweight and rugged molded plastic chassis
- Integrated in a flight case (with castors), applicable for touring
- Advanced No-Fluid protection
- Locking power plug
- Built-in LCD control, 3pin and 5pin DMX control
- Digital Timer Controls
- Wireless On/Off Control

### 2.3 Product Overview



## 3 TECHNICAL SPECIFICATIONS

<b>AC Power</b>	<b>Input Voltage &amp; Rate</b>	<b>100-120 V, 50/60 Hz</b>
	Current Limiter Type (Heater)	Breaker
	Current Limiter Specifications (Heater)	15 A, 250 V
	Total Power Consumption	1600 W
<b>Heating</b>	Heat Up Time	4.0 min
<b>Capacity</b>	Fog Fluid Tank Capacity	0.8 Gal
	Ice Tray Capacity	20 lbs
<b>Output</b>	Adjustable Volume	√
	Volume Adjustment Level/Range	1-100%
	Fog Fluid Consumption @ full volume	25.0 mL/min
	Ice Consumption @ full volume	20 lbs/ Hr
	Continuous Output	√
	Max Continuous Output Level	100%
	Electronic Thermo-Control	√
	Adjustable Output	√
	Adjustable Fan Speed	√
	No-Fluid Protection	√
<b>Control</b>	On-device Manual Control	LCD control board
	Wireless Control	W-4 / RF 433MHz / Built-in
	Wired Control	DMX
	Control Protocol	DMX-512
	DMX Channel Range	2
	Data Connectors	3- and 5-pin XLR
<b>Weight &amp; Dimensions</b>	Net Weight	<b>71 lbs</b>
	Gross Weight	<b>80 lbs</b>
	Machine Dimensions	<b>31 / 15.4 / 17.7 in</b>
	Packing Dimensions	<b>34 / 18.1 / 20 in</b>

## 4

### SETUP

#### 4.1 AC Power



Always connect the product to a protected circuit (circuit breaker or fuse). Make sure the product has an appropriate electrical ground to avoid the risk of electrocution or fire.



Never connect the product to a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel serves only as a 0 to 100% switch.

#### 4.2 AC Plug

The FFM-TITAN-ICE comes terminated with a lockable power connector on one end. It is designed to be safely connected and disconnected under live load.

#### 4.3 Resetting the Breaker

This product is equipped with a resettable external breaker for the fog heater core. If the breaker trips, all sections of this product will lose power.

- Remove the power cord from mains power.
- Allow unit to cool for 15 minutes.

- After 15 minutes, you may attempt to reset the breaker by pressing the button with your finger.
- Plug the product's power cords into the power outlet and continue using as recommended.

## 4.4 DMX Linking

You can link the FFM-TITAN-ICE to a DMX controller using a 3- or 5-pin DMX connection. If using other DMX-compatible products with this product, you can control each individually with a single DMX controller. Instructions for connecting and configuring this product for DMX operation are described further on Pg. 9.

## 4.5 Mounting

Before mounting the product, read and follow the safety recommendations indicated in the Safety Notes.

### 4.5.1 Orientation

For safety reasons, we do not recommend mounting the product in any capacity. Operate the product while it is on the ground only, and make sure there is adequate room for ventilation, configuration, and maintenance.

### 4.5.2 Rigging

FROGGYS FOG recommends using the following general guidelines when mounting this product.

- Before deciding on a location for the product, make sure there is easy access to the product for maintenance and programming purposes.
- Make sure that the structure or surface onto which you are mounting the product can support the product's weight, including consumables (see the Technical Specifications).
- When installing the product on the floor, make sure that the product and cables do not pose a tripping hazard.

# 5 OPERATION

## 5.1 Cooling with Ice

The machine achieves low ground fog by chilling hot fog down to temperatures below the ambient air temperature. This creates a low ground fog effect until the fog reaches ambient air temperature and starts to rise. Proper ground fog formulas are designed to dissipate once the fog reaches ambient air temperature.

## 5.2 Preparing for Operation

- After checking that all the parts are intact and complete, position the machine on flat and level surface.
- Always connect the product to a grounded circuit. Before powering on, make sure the unit is connected with the rated voltage.
- Turn on the machine, it will immediately start heating up.
- Fill the Fog Fluid Tank with high quality fog fluid designed for low fog applications.
- Fill the Ice Tray with ice while still allowing room for the lid to fully close and seal.

## 5.3 On-device Control Panel

To access the control panel functions, use the four buttons located underneath the LCD display.



	Display	Description	Parameter Range
<b>Standby Page</b>	Ready 2 Ice Fog Titan Ice	Finished heating up, ready to work.	
<b>Working Status Pages</b>	Interval 600s Titan Ice	Interval countdown of TIMER mode	
	Duration 300s Titan Ice	Duration countdown of TIMER mode	
	Fog Output 100% Fan Speed 100%	Output status of VOLUME mode	
<b>Setting Pages</b>	Fog Output 100%	Press ▲ or ▼ to set fog output of VOLUME mode	1-100%
	Fan Speed 100%	Press ▲ or ▼ to set fan speed of VOLUME mode	1-100%
	Timer Interval 600s	Press ▲ or ▼ to set timer interval of TIMER mode	5-600s
	Timer Duration 300s	Press ▲ or ▼ to set timer duration of TIMER mode	5-300s
	Timer Fog Output 100%	Press ▲ or ▼ to set fog output of TIMER mode	1%-100%
	Timer Fan Speed 100%	Press ▲ or ▼ to set fan speed of TIMER mode	1%-100%
	DMX Address 512	Press ▲ or ▼ to select DMX starting address	1-512
	Fluid Sensor ON	Press ▲ or ▼ to activate/deactivate fluid sensor to turn on/off no-fluid-protection function	ON/OFF
	Wireless ON	Press ▲ or ▼ to turn on/off wireless control function	ON/OFF
	Auto Run Last Settings YES	Press ▲ or ▼ to set if the machine will automatically run previous setting when power on again	YES/NO
Keypad Tone Off	Press ▲ or ▼ to turn on/off Keypad Sound	ON/OFF	



- Connect a DMX cable from the DMX output of the DMX controller to the DMX input socket on the product.

### 5.6.1 Starting Address

When selecting a starting DMX address, always consider the number of DMX channels. If you choose a starting address that is too high, you could restrict the access to some of the product's channels.



**FROGGYS FOG® FFM-TITAN-ICE DMX set the starting address in the 001 - 512 DMX range and uses 2 DMX channels, which defines the highest configurable address to 511 to have all channels controllable.**



**Connect a DMX cable from the DMX output of the DMX controller to the DMX input socket on the product, or press repeatedly "MENU" button until the LCD shows "DMX Address". Press "▲" or "▼" to set desired DMX starting address.**

### 5.6.2 DMX Mode Menu Map

When connected with DMX controller and receiving a DMX signal, the display will always show current DMX starting address. You may adjust the starting channel anytime by pressing ▲ and ▼.

DMX Address 512
--------------------

### 5.6.3 DMX Channel Assignments and Values

Channel	Function	Value	Description
1	Fog	0 -10	No Function
		11 - 255	1-100%
2	Fan	0 -10	No Function
		11 - 255	1-100%

### 5.7 Auto Run Last Settings

If the machine is shut off while it is operating in standalone mode (On-device & Wireless control), the "Auto Run Last Setting" will allow the machine to recover its previous same operating status when the unit is powered on again without pressing any buttons.



- **Shut off: Get disconnected from power source, or turn off the power switch**
- **Power on: Get connected with power source, or turn on the power switch**

### 5.8 Fluid Sensor

This machine uses a software-based fluid sensor to detect whether there is fluid inside the tube so as to protect the pump from being damaged. Turn on the "Fluid Sensor" to activate "No Fluid Protection" function.

Fluid Sensor ON
--------------------

#### 5.8.1 Trigger "No-Fluid Protection"

When the Fluid Sensor is ON, the software-based "no-fluid protection" function will be activated. After the program continues to detect the machine working with no fluid inside the tube for 1 minute, the pump-shutoff will be activated with the flickering warning page showing on the screen.

Fog Fluid Low Refill
-------------------------

When this warning message is displayed, the machine will stop working but the LCD warning will continue.

#### 5.8.2 Clear "No-Fluid Protection" Warning

When the machine is under the no-fluid protection, after refilling the fluid, there are three ways to clear the warning.

- Press <STOP> first, then press ▼/<VOLUME> to let the machine run again, the warning will disappear once fluid has pumped and filled the tube.

- Under the DMX control mode, bring down channel 1 to OFF (value 0-9), then back to ON (value 10-255), to let the machine run again. The warning will disappear once fluid has pumped and filled the tube.
- Turn off "Fluid Sensor" in the menu.

The LCD will keep flickering whenever it shows the warning message or regular operation menu pages until the fluid is sensed by software.



**Fog output should be stopped when opening the ice tray lid to avoid fog from coming out unexpectedly.**

## 6 TECHNICAL INFORMATION

### 6.1 Maintenance

After every 40 hours of continuous operation, use Distilled water through the fog fluid system and fog 10-15 minutes after finish heating-up to prevent the accumulation of particulate matter in the heating element.

The recommended cleaning procedure is as follows.

- 1) Unplug the product from power.
- 2) Empty all fog fluid from the tank.
- 3) Add distilled water to the fog fluid tank.
- 4) Connect the product to power and allow it to heat up.
- 5) Run the product in a well-ventilated area for 10-15 minutes. Do not allow the pump to run dry.
- 6) After fog operation with solely distilled water, drain the water from the fog fluid reservoir and fill with fresh fog fluid and run additional for a few minutes. The machine is best stored with fresh fog fluid in the pump mechanism.
- 7) Empty the ice water reservoir through drain outlet. This should be stored dry to avoid mildew.
- 8) Excessive dust, fluid residue and dirt will degrade performance and cause overheating. Remove dust from air vents with an air compressor, vacuum or soft brush. The casing should be cleaned with the damp cloth.



**Test-run your FROGGYS FOG® FFM-TITAN-ICE on a monthly basis to achieve the best performance.**

### 6.2 Storage

#### 6.2.1 Machine Storage

Before storing the machine, clean it as described in the cleaning procedure above. Do not store the machine long term with water in the drains. Verify that fog fluid resides in the pump mechanism before storing the machine. Cleaning the system prior to storage will help prevent any particles from condensing inside the pump or heater while not in use.

## 7 WARRANTY

Save these instructions. 2 Year Limited Warranty: Valid from the date of purchase. Warranty covers manufacturing defects only and does not cover misuse or abuse of the machine. Serial number, place of purchase with dated valid receipt must be submitted at time of service. Warranty is only valid with-in the United States. Buyer may be responsible for shipping fees associated with repairs.