ProFan™

Operating Manual

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1. BEFORE YOU BEGIN

ProFan Overview

ProFan is a professional DMX-controlled fan capable of producing high velocity air current. It can operate from 100 to 240VAC. Multiple ProFans can also slave together to increase air flow or to achieve complex flow patterns for special effects. The ProFan is designed to mount upon a stand or (using ProBurger Accessory clamps or couplers) suspend from a truss or other suitable support. The external Back Pack controller allows DMX or manual control. Manual control, using the onboard slide fader, adjusts fan speed from zero to full.
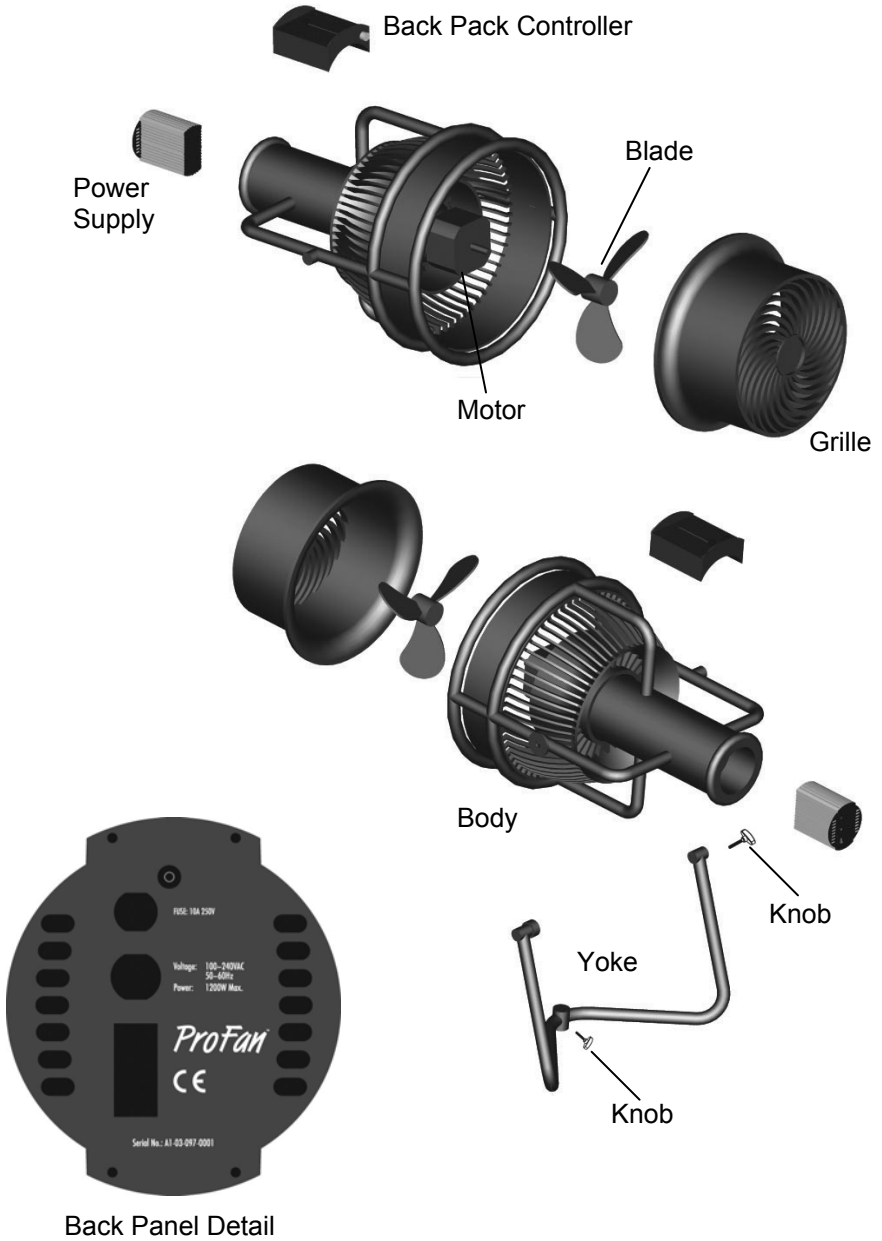
The ProFan housing is molded lightweight polymer; the venting area is protected with rugged tubular steel. The 11" one-piece three-blade vane and spiral front grille creates a focused wind effect.

ProFan applications range from general wind effects to blowing smoke, haze, bubbles and confetti with programmable effect and distance. Additionally, air circulation, ventilation and ambient cooling can be equally controlled with repeatable characteristics and effects.

Unpacking Instructions

Immediately upon receiving the fixture, carefully unpack the carton and check the contents to ensure that all parts are present (see exploded view) and have been received in good condition. Notify the shipper immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling.

Back Pack Controller

Blade

Power
Supply

Motor

Grille

Body

Knob

Yoke

Knob

FUSE: 10A 250V

Voltage: 100–240VAC
50–60Hz
Power: 1200W Max.

ProFan

CE

Serial No.: A1-03-097-0001

Back Panel Detail

2. SAFETY INSTRUCTIONS

> ProFan is designed to be used by professionals, and is NOT intended for household use. Improper use can cause severe injury due to electrical or mechanical hazards.

Preventing Fire and Electric Shock

- Always ground (earth) the machine electrically.
- ProFan has a built-in speed control. Do not connect ProFan to any external solid-state speed control device or dimmer circuit.
- Disconnect the machine from power before removing any components or servicing, and when not in use.
- Moisture can cause dangerous electrical faults. Do not aim fog output at electrical connections or devices.
- Do not expose this machine to excess moisture. ProFan is NOT waterproof.
- Do not spill fluid over the machine. In the event of a fluid spill, disconnect the machine from power and clean with a damp cloth. If fluid is spilled onto electrical components, contact TMB.
- Do not dismantle or attempt to repair a faulty machine. Refer all service to TMB.
- Do not operate the machine if the power cable or connector is damaged. A damaged cable or connector must be replaced with a new item, available from TMB.
- Do not operate the machine with damaged, deformed or missing parts.

Preventing Injuries

- Never allow any object or part of the body to enter the path of the fan blades. Ensure that clothing, cables or other items cannot be sucked into the fan.
- Disconnect power before removing cover or grille. Do not operate unless all covers and grilles are installed and securely fastened.

- Ensure that any supporting structure or surface can hold at least 10 times the weight of all installed devices.
- Use approved secondary attachment when possible, such as a safety cable.

3. MOUNTING

Mounting Options

ProFan may be suspended, mounted on a suitable stand, or stood alone on its own steel yoke.

As delivered, the ProFan is ready for stand alone use. Included with the ProFan is a yoke assembly for mating the unit to a floor stand or suspension clamp. The yoke assembly easily attaches to the ProFan using the provided fasteners and wrench.
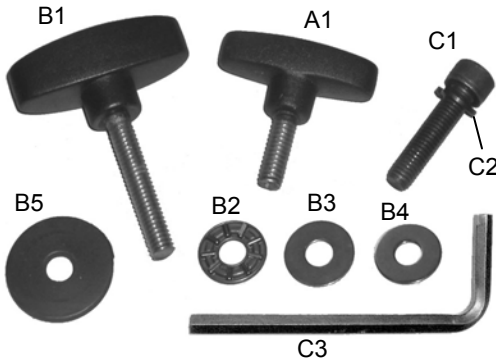
A1	Small head, short shank, T-Handle Knob
B1	Large Head, long shank, T-Handle Knob
B2	Thrust Washer
B3	Flat Washer
B4	
B5	Aluminum Bushing
C1	Allen Bolt
C2	Split Washer
C3	Allen Wrench

Attaching the Yoke Assembly

1. Place the ProFan face down upon its front grille with the hinge barrel side on the left and the hinge flat side on the right.
2. Place Item B3 flat washer upon the shank of Item B1 T-Handle, followed by Item B2 thrust washer and Item B4 flat washer.
3. Place the yoke bracket into position. Insert the shank of Item B1 T-Handle through the flat face hinge until the shank just protrudes from the flat face.
4. Insert Item B5 aluminum bushing between the ProFan housing's tubular bracket and the yoke assembly hinge's flat face.
5. Rotate the T-Handle clockwise until the T-Handle has threaded into the ProFan tubular housing bracket. Do not tighten completely at this point.
6. Place Item C2 split washer onto Item C1 Allen bolt. Place the Allen bolt through the barrel portion of the ProFan hinge and rotate the bolt until it threads into place.
7. Tighten the Allen bolt and the T-Handle until the yoke assembly is fixed and not easily moved.
8. At this point the ProFan is ready for mating with a stand or clamp. Grip the fan by its tubular housing brackets when lifting or mounting to avoid pinching hands or fingers.
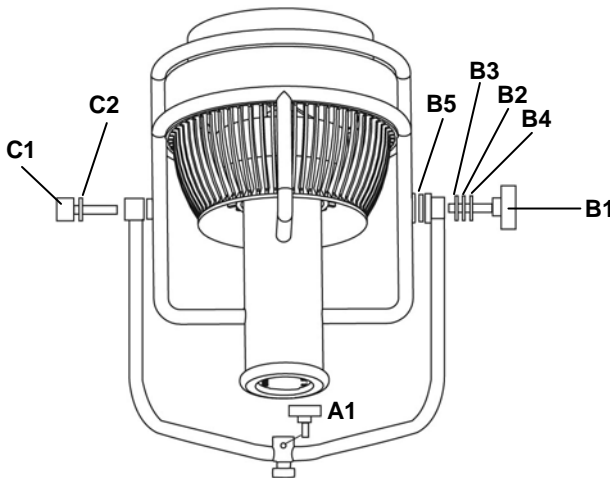
Overhead Rigging

Recommended ProBurger rigging clamps:
1. PRBHC3/8 or PRBHC1/2 Half Couplers
2. PRBSNC1/2 Snap Coupler.

It is recommended that any structure used to support the unit can support at least 10 times the total weight of all installed fixtures, clamps, auxiliary equipment, etc.
1. Check that all rigging clamps are undamaged and can support at least 10 times the weight of the unit.
2. Clamp the fan to truss or similar support.
3. Loosen the swivel locks and tilt the fan to the desired angle. Turn the swivel locks clockwise to tighten. Make sure that fan, hardware, and safety attachment are secure before applying power.

Support Stand

A professional stand, rated to support a weight greater than the unit, must be used to support the ProFan. TMB ProStands, supplied with a PRXTVMP adapter, provide a reliable floor-standing solution

4. REMOTE CONTROL

Basics of DMX Control

There are 512 channels in a DMX-512 connection. Channels may be assigned in any manner. A fixture capable of receiving DMX-512 will require one or a number of sequential channels. The user must assign a starting address on the fixture that indicates the first channel reserved in the lighting console. There are many different types of DMX controllable fixtures and they all may vary in the total number of channels required. Choosing a start address should be planned in advance. Channels should never overlap. If they do, this will result in erratic operation of the fixtures whose starting addresses are set incorrectly. You can however, control multiple fixtures of the same type using the same starting address as long as the intended result is that of unison movement or operation. In other words, the fixtures will be slaved together and all will respond in the same way.

DMX fixtures are often designed to receive and transmit data through a DMX daisy-chain. A DMX daisy-chain is where the DMX THRU of one fixture connects to the DMX IN of the next fixture. The order in which the fixtures are connected is not important and has no effect on how a lighting console communicates to each fixture. Use an order that provides for the easiest and most direct cabling. Connect fixtures using shielded two-conductor twisted pair cable with 5-pin XLR male to female connectors. The shield/ground is pin 1, while pin 2 is Data Negative (D-) and pin 3 is Data positive (D+). Pins 4 and 5 are not used according to the DMX-512 standard.

DMX Data Cable

Use a ProPlex® PC222P, PC224P, or equivalent cable which meets the specifications for EIA RS-485 applications. Standard microphone cables cannot transmit DMX data reliably over long distances. The cable should have the following characteristics:

Minimum 2-conductor twisted pair plus a shield
Maximum capacitance between conductors – 22 pF/ft.
Maximum capacitance between conductor and shield – 41 pF/ft.
Maximum resistance of 14.5 ohms / 1000 ft.
Characteristic impedance of 80 – 110 ohms

Cable Connectors

Cabling must have a male XLR connector on one end and a female XLR connector on the other end.

DMX connector configuration
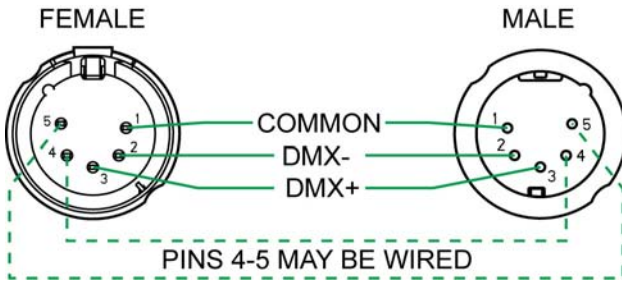
The maximum recommended DMX data link distance between fixtures is 300 meters (984 ft.)

DMX Termination

Use of a DMX terminator is strongly recommended for the last fixture in a DMX chain. Comprised of a 120Ω resistor across XLR pins 2 and 3, a terminator prevents electrical reflections from traveling back down the signal chain and corrupting the DMX data stream. External XLR terminators such as the ProPlex "Arnold" are available for such use.

DMX TERMINATION

120Ω 1/4W Resistor connected between pins 2-3 of the last fixture in the DMX Chain.
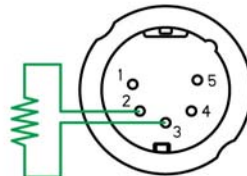
CAUTION: Another consideration to prevent the corruption of DMX data is to not allow contact between the common (pin 1) of a DMX cable and the fixture's chassis ground. Grounding the common can cause a ground loop, and your fixture may perform erratically.

Test cables and terminators with a continuity tester to verify correct polarity and to make sure the pins are not grounded or shorted to the shield or each other.

3-Pin to 5-Pin Conversion Chart
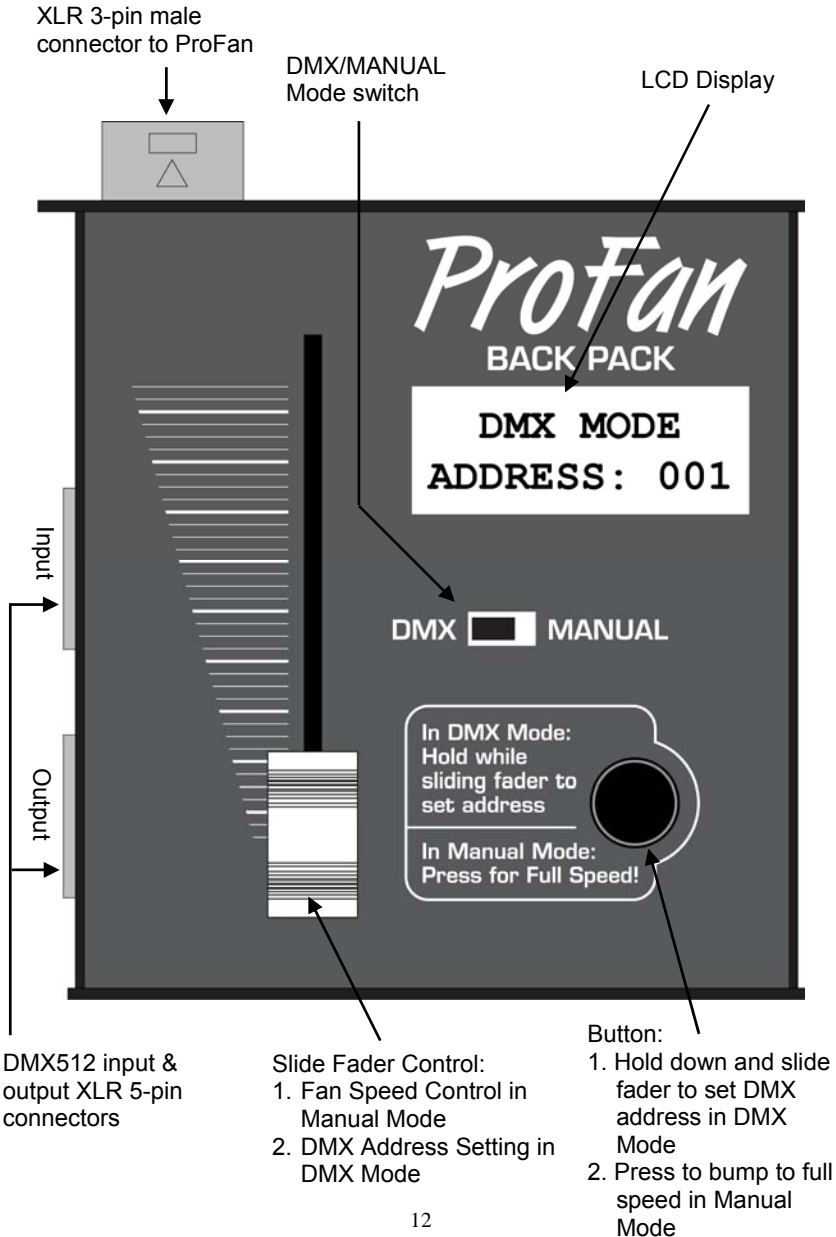
If you use a console with a 3-pin DMX output connector, you will need to use a 3-pin to 5-pin adapter. The chart below details a proper conversion:

3-Pin Male (Input)	5-Pin Male (Output)	Purpose
Pin 1	Pin 1	Ground / Shield
Pin 2	Pin 2	Data (-) signal
Pin 3	Pin 3	Data (+) signal
	Pin 4	Not Used
	Pin 5	Not Used

5. OPERATING INSTRUCTIONS

Back Pack Overview

XLR 3-pin male
connector to ProFan

DMX/MANUAL
Mode switch

LCD Display

ProFan
BACK PACK

DMX MODE
ADDRESS: 001

Input

Output

DMX ■ MANUAL

In DMX Mode:
Hold while
sliding fader to
set address

In Manual Mode:
Press for Full Speed!

DMX512 input &
output XLR 5-pin
connectors

Slide Fader Control:
1. Fan Speed Control in
   Manual Mode
2. DMX Address Setting in
   DMX Mode

Button:
1. Hold down and slide
   fader to set DMX
   address in DMX
   Mode
2. Press to bump to full
   speed in Manual
   Mode

Connecting the Back Pack Controller

With rear fan power switch in OFF position:

Connect the integral male XLR on the Back Pack directly to the integral female XLR on the fan body. If desired, the Back Pack can be removed and connected using a standard 3-pin XLR microphone cable up to 60 ft / 20 m in length.

Attaching the Back Pack to the Fan Housing

The Back Pack is secured to the fan housing by: 1) two snap-in clips; 2) an internal magnet; 3) the XLR connection.

Prior to connecting the Back Pack to the integral female XLR on the fan body, notice that two flat slots exist on the top and bottom of the Back Pack housing. These flat slots mate with the mounting bracket fixed to the top of the fan housing.

Place the Back Pack with the sliding fader to the left. Push the Back Pack forward to mate with the integral female XLR while gently pressing the Back Pack against the fan body. While inserting the Back Pack onto the integral female XLR, ensure it aligns with the slot in top face of the Back Pack. Once fully connected to the integral female XLR, the bottom edge of the mounting bracket will snap into place fixing the bottom of the Back Pack by locating into the bottom housing slot.

CAUTION: Double-check that the Back Pack is securely fixed to the fan housing prior to use.

Note: Ensure the ProFan is pointed in a direction where considerable wind will not cause a disturbance or any safety issues.

Turn ProFan on using rear Power switch.

DMX Mode

When the recessed switch on the Back Pack is switched to "DMX", the display will indicate that the unit is in DMX Mode and will display the current address of the ProFan. If no incoming DMX signal is detected, the display will then read "No DMX Found".

To change the address of the unit, press and hold the Full Speed button while adjusting the fader. With the fader moved all the way up, the address will change to 512. With the fader moved all the way down, the address will change to 1. Anywhere in between will change the address proportionally between those values. To store the new address, simply release the button.

Manual Mode

When the recessed switch on the Back Pack is switched to "MANUAL", the display will indicate that the unit is in Manual Mode. The display will also indicate the current speed of the fan, based on the position of the fader and whether the Full Speed button is depressed.

In this mode, a Back Pack controller also acts as a master controller for up to nine ProFans slaved to it via the DMX OUT connector. See Master/Slave Operation for details.

Master/Slave Operation

Up to nine ProFans can be locally controlled by one Back Pack using a DMX data link. To link multiple ProFans, use 5-pin XLR DMX cables between each pair of fans, as well as female and male ProPlex "Arnold" DMX terminators on the first and last ProFans in the chain respectively. Arnolds are wired per the ESTA DMX512A specification and are available pre-wired from TMB.

Connect each controller to each fan via the XLR 3-pin line female connector. Connect the 5-pin female Arnold to the 5-pin XLR male connector on the "master" (i.e. first) ProFan Back Back controller. Use 5-pin XLR cables to connect the master ProFan output to the next "slave" ProFan input. Continue connecting ProFans output to input as needed, up to nine units total. Connect the 5-pin male DMX terminator to the DMX output of the last ProFan in the chain
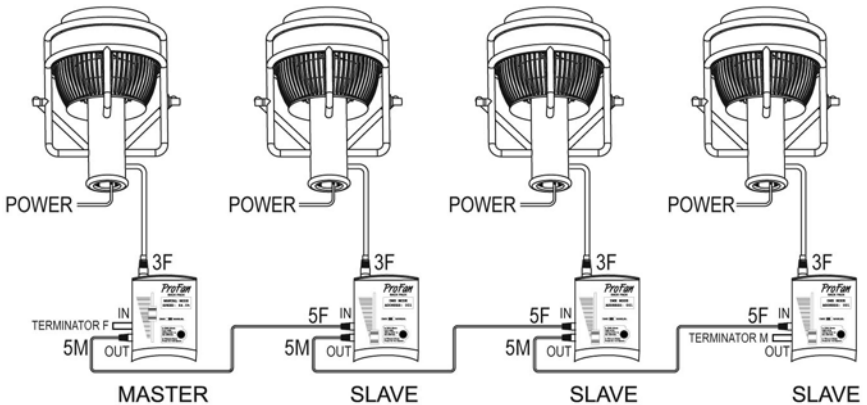

Set the mode switch of the master controller to "MANUAL", and set all the slave controllers to "DMX" at address 001.

Using ProFan with a Smoke Machine

When using ProFan with smoke, fog or hazer machines, place the fan behind the machines as illustrated below. Do not place the fan in front of the machine. This will cause residue build-up on the fan blades and degrade the quality of the smoke, fog, or haze.

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Incorrect ProFan placement in front of fogger/hazer
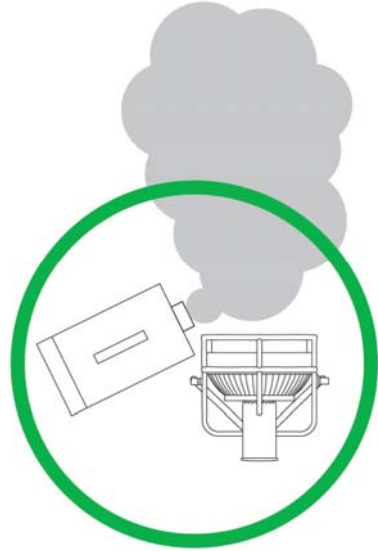
Correct ProFan placement behind or to the side of fogger/hazer

6. TROUBLESHOOTING AND MAINTENANCE

Troubleshooting

Problem	Symptom/Cause	Suggested Remedy
Power is supplied, but fan does not operate via DMX	Display says "No DMX Found"	Connect DMX
	Incorrect DMX address	Press button and move fader until correct address appears
	In Manual Mode	Switch control switch to DMX mode
Back Pack display is blank	No Power	Check power supply and connection
	Fuse blown	Replace fuse with one of same type and rating
	Back Pack not connected	Check connection
Reduced airflow	Low voltage supply	Check AC supply

Cleaning

Clean the outside of the fan with a damp cloth only. Do not use solvents. Periodic cleaning of the fan blades and grilles is necessary to maintain peak performance. Cleaning frequency depends on the operating environment. Inspect the fan regularly for dust and smoke residue buildup. Clean as soon as there is significant dirt buildup on fan blades or if airflow through grilles becomes restricted. Use a soft brush and vacuum to clean grilles and fan blades.

Cleaning Steps:
1. Disconnect power
2. Remove the screws to clean the housing and blades
3. After cleaning, make sure that screws are securely tightened

Replacing the Fuse

The fuse can be replaced if necessary.
1. Turn the fuse knob counter-clockwise
2. Replace fuse
3. Turn fuse knob clockwise

7. APPENDIX

Limited Warranty

ProFan products are warranted against defective materials or workmanship for a period of 12 months from the date of shipment.

Parts and components that are not the product of the Seller (TMB) shall be subject only to the terms of any warranty that may be extended by the original manufacturer. Seller's warranty shall be restricted to the repair or replacement of any part that proved to be defective and for which a claim is submitted to the Seller before the expiration of the applicable warranty periods.

This warranty shall not apply to any defect arising from accident, misuse or improper or unauthorized adjustment or repair. No warranty is given with respect to color media or lamps, or with respect to normal wear and tear.
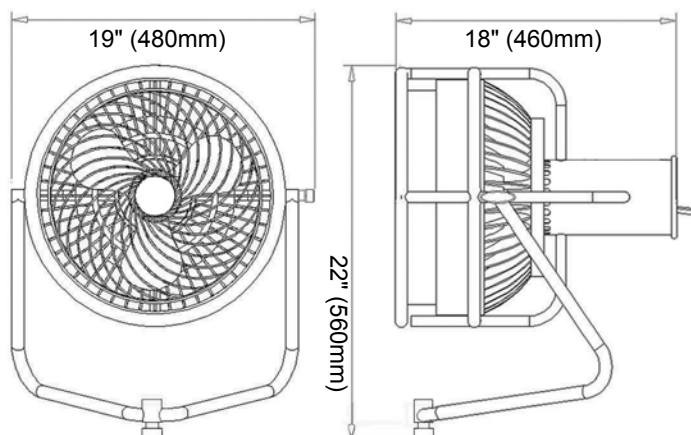
Any claim for defective merchandise, imperfect manufacture, shortage in count, or for any other defect known by the Customer to be existing at time of delivery is waived by the Customer unless made in writing within 30 days after delivery.

All warranty parts will be charged to the customer until faulty parts (or product) are returned to TMB for valuation. These parts must be returned within 30 days of receipt or warranty is void and parts/shipping become billable items.

Seller will not assume any responsibility for any labor expended or materials used to replace and/or repair any equipment without Seller's prior written authorization. Any labor charges for repairing or replacing equipment in the field will be negotiated only between the Seller and general contractor. Freight terms on warranty repairs are FOB Seller's warehouse or factory. If warranty parts and/or repairs are required, Seller agrees to pay destination ground freight charges on the aforementioned items leaving the Seller's facility.

Technical Specifications

PHYSICAL	Width	19" (480 cm)
	Height	22" (560 cm)
	Depth	18" (460 mm)
	Weight	27.6 lbs (12.5 kg)
	Mounting	Adjustable swivel yoke
	Color	Black
ELECTRICAL	Nominal voltage	100-240VAC, 50-60Hz
	Maximum power consumption	1200W
PERFORMANCE	Air Volume	1,700 cubic meters/hr
	Wind Speed	60 km/hr
	RPM	0 to 3,500 variable
	Acceleration	Zero to full within 2 sec.
BACK PACK CONTROLLER	Protocol	DMX-512A in/out
	Control Modes	DMX and Manual
	Electrical connection to fan housing	3-pin XLR male
	DMX data in	5-pin XLR male
	DMX data out	5-pin XLR female
	DMX XLR pinout	1 — Shield/Ground
		2 — Data (-)
		3 — Data (+)
		4 — -
		5 — -

19" (480mm)   18" (460mm)

22" (560mm)

Contact Information

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