



**Model: FK-165-ESC**

**INSTALLATION AND OPERATION INSTRUCTIONS**

**IF YOU CANNOT READ OR UNDERSTAND THESE INSTALLATION INSTRUCTIONS  
DO NOT ATTEMPT TO INSTALL OR OPERATE**

**INTRODUCTION**

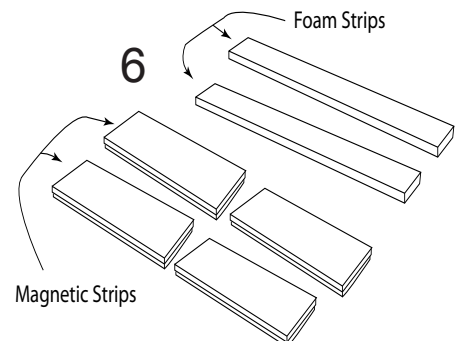
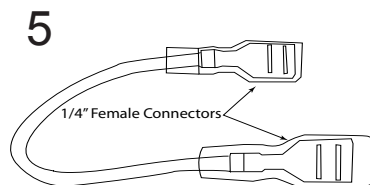
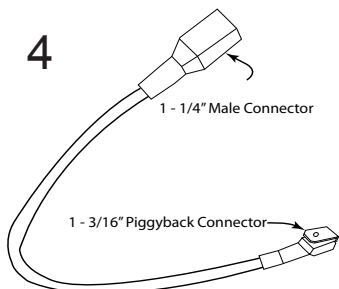
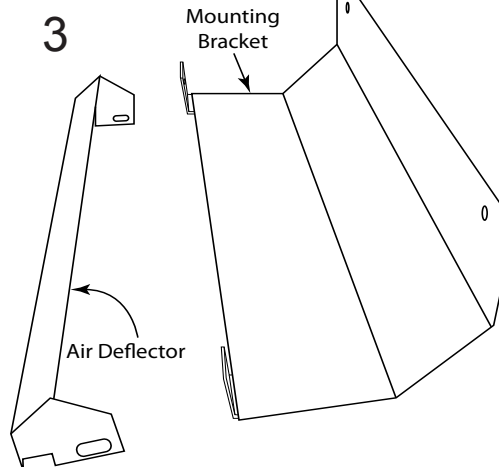
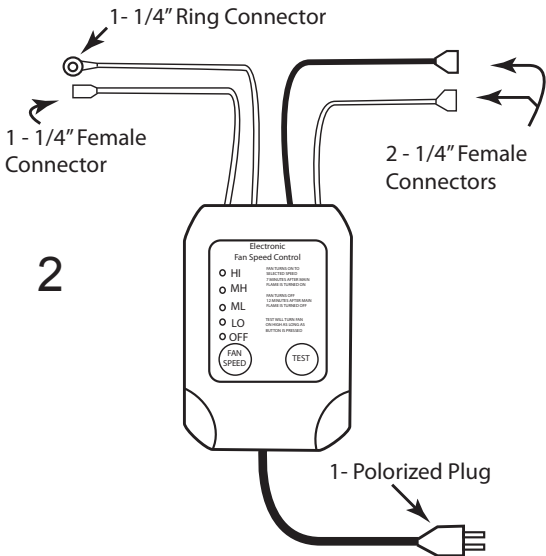
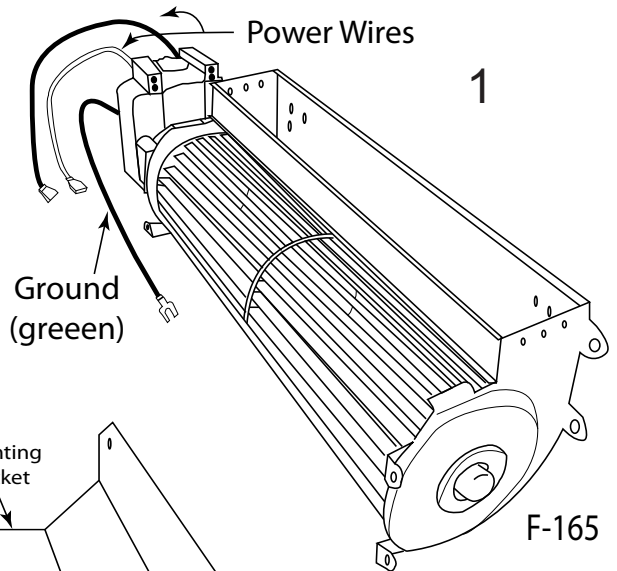
The FK-165-ESC Fan Kit has been designed as a retrofit or new fan kit to circulate room air through many hearth products in the industry. The FK-165-ESC operates on 120VAC, 60Hz power. The fan dimensions are 12-3/4" W x 4" H x 3-1/2" D.

Power must be provided through an approved factory installed junction box from the hearth product's manufacturer.

A speed control (FK-ESC) is provided with the Fan Kit System to adjust the air output. The speed control will turn ON the fan automatically 7-minutes after the main flame has been turned ON and turn the fan OFF 12-minutes after the main flame has been turn OFF. There are four speeds, Hi, Medium Hi, Medium Lo, Lo and OFF. You can manually adjust the speed by pressing the FAN SPEED button on the FK-ESC. The FK-ESC will remember the last setting used and remain on that setting until manually changed.

Compare the contents of your package with the figure drawings below.

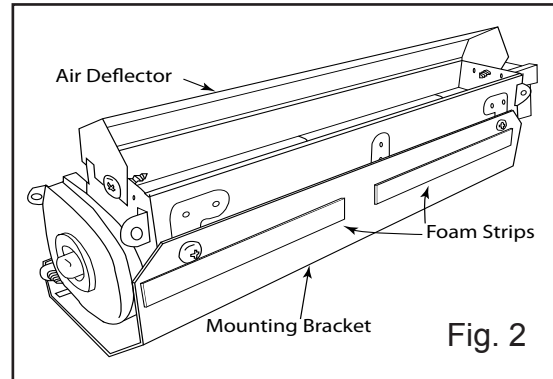
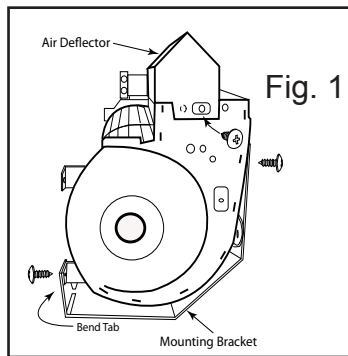
1. F-165-1 Fan with two leads and a ground wire
2. FK-ESC (speed control)
3. Air Deflector and Mounting Bracket
4. Jumper Wire (used for IPI valves only)
5. Jumper Wire (used to jump power strip when applicable)
6. (2) Magnetic and (2) Foam Strips
7. (6) Phillips Sheet Metal Screws (not shown)



## **PRECAUTIONS**

Please read all the instructions before proceeding with installation. **NOTE:** Not all parts included with fan may be necessary for installation.

**CAUTION:** A qualified electrician should complete all wiring. Install following all local codes and in compliance with the National Electric Code ANSI/AFPA NO. 70 or CSA C22.1 for all of North America.

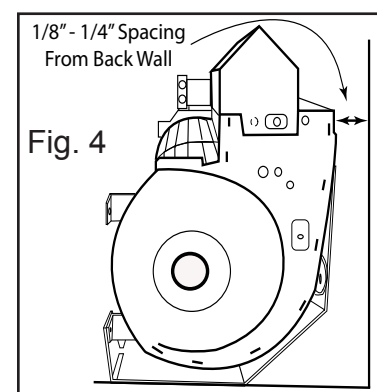
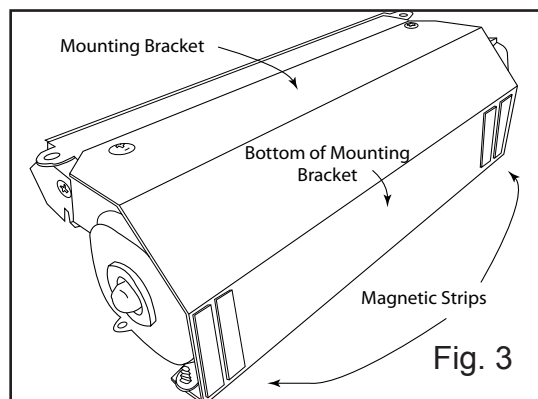


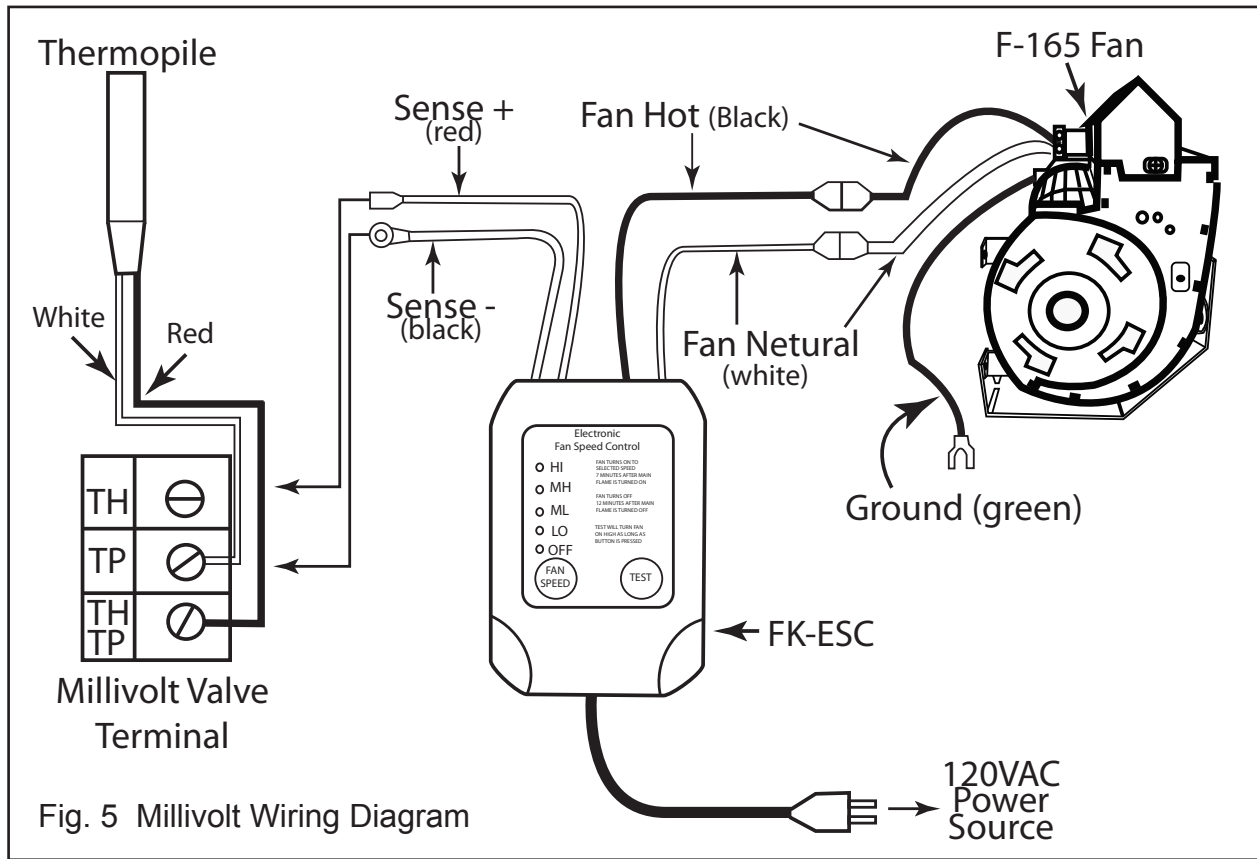
## **INSTALLATION**

**NOTE:** *Novus appliances do not require the use of the air deflector.*

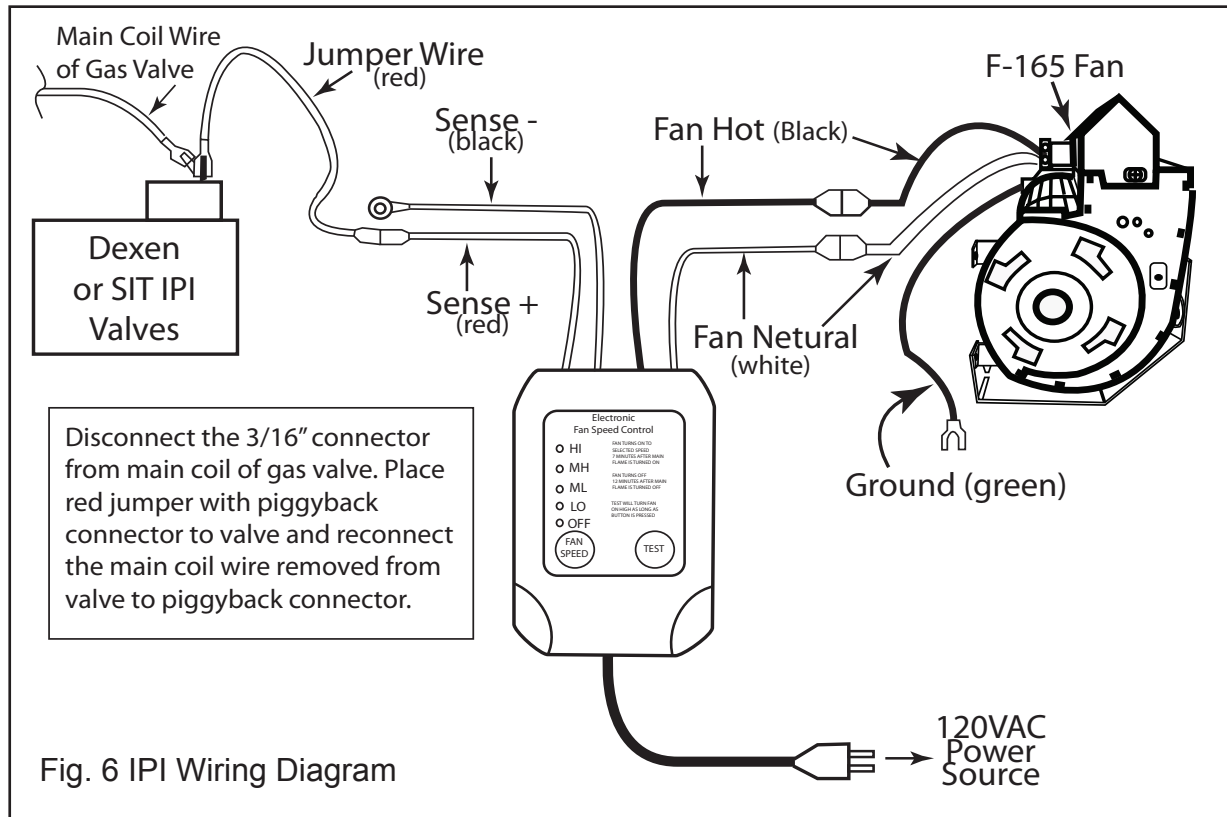
**WARNING:** *Turn electrical power OFF at the circuit breaker before beginning this installation.*

1. Unplug the old fan system (if applicable) and remove it from the appliance. In some cases the existing mounting bracket may be used. If not use the mounting bracket supplied with this fan kit.
2. Mount the air deflector on the F-165-1 fan. See Figure #1. The deflector sits on top of the fan as shown and secures to the middle hole of the fan on each side. **Note:** Some installations may not require air deflector.
3. If using the mounting bracket supplied with the FK-165-1 bend the tabs as shown in Figure #1. **Note:** In some installations you may use the existing mounting bracket from the appliance. Secure the mounting bracket for the fan in four places using the supplied sheet metal screws mating to the aligned holes on the fan housing.
4. Peel the protective covering from the foam strips and place them to the mounting bracket as shown in Figure #2.
5. Cut the magnets in half using tin snips as shown on front page (part #5). Peel the protective coating from the magnets place them on the bottom of the mounting bracket as shown in figure #3. **OPTION:** You can use two of the magnets to secure the FK-ESC to the base of the appliance.
6. Attach the FK-ESC wires to the F-165-1 fan as shown in the wiring diagram (Fig.5).
7. Install the new F-165-1 fan housing in the rear of the appliance where the previous fan was installed.
8. Pull the fan housing slightly away from the back metal wall (1/8" to 1/4") of the appliance. The magnetic feet will hold the housing in place. (See Figure #1)
9. Attach the F-165-1 fan ground (green) wire to an accessible ground source.
10. Plug the FK-ESC into an approved electrical junction box and lay inside appliance accessible for operation.
11. If installing this kit into an appliance with a Millivolt valve system use Figure #5. If installing this kit into an IPI electronic system use Figure #6.





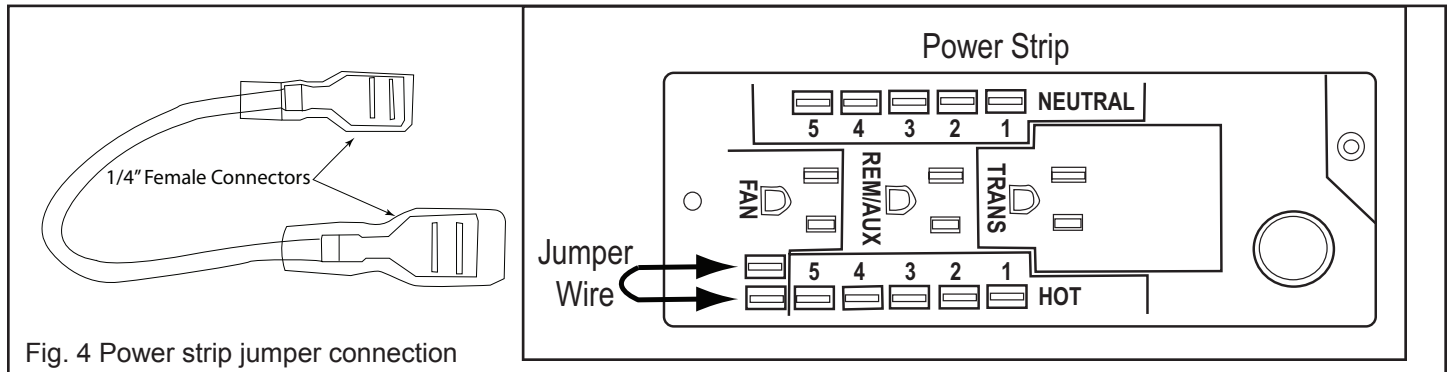
**WIRING NOTES:** *This is a polarity sensitive system. Ensure you wire it exactly as shown in the diagram above. Thermopile wires must also be located with Red at TH/TP and White at TP on the gas valve.*



**WIRING NOTES:** *When wiring an IPI system the Sense - (black) wire must be secure to a ground on the gas valve or to metal on the appliance for proper operation.*

## **POWER SOURCE INFORMATION**

When plugging in the FK-ESC into a 120VAC power source, some fireplaces use a standard metal junction box and other fireplaces may use a power strip. If a power strip is used (as shown below in figure 4) and no power is found in the FAN outlet use the red jumper wire with the 1/4" connectors and attach as shown below. With the jumper installed the FAN outlet will provide the power necessary to operate the FK165-1 system.



## **OPERATION**

The speed control will turn ON the fan automatically 7 minutes after the main flame has been turned ON and turn the fan OFF 12 minutes after the main flame has been turn OFF. There are four speeds, Hi, Medium Hi, Medium Lo, Lo and OFF. Manually adjust fan speed by pressing the FAN SPEED button on the FK-ESC.

To check the fan for proper wiring press the TEST button. This is a manual override that will operate the fan on HI as long as the button is depressed. The FK-ESC will remember the last setting used and remain on that setting until changed.

## **OPTIONAL ACCESSORIES**

16 SPT 2 – Optional 16-inch extension cord to plug into junction box for greater mobility of the FK-ESC.

## **MAINTENANCE**

Cleaning on a semi-annual basis is required to keep the warranty in place. Dust or dirt must be removed from the fan blades, air inlets and blower outlet for the fan kit to maintain the efficiency of the system. Carefully use a vacuum with a brush to remove any dust. If unable to reach fan with a vacuum remove the fan from the appliance for easier cleaning.

## **TROUBLESHOOTING**

**NOTE:** The FK-ESC is designed to operate with a Millivolt or Electronic IPI system. The operational specification for the Sense voltage is 50mV DC to 9VDC. The FK-ESC will not operate with a 24VAC gas valve system.

If using the power strip jumper wire shown in Fig. 4 ensure the jumper is installed properly allowing power to be supplied to the power strip.

**FK-ESC Won't Turn ON in 7-Minutes** - Press the TEST button to ensure there is power to the fan. If no power is present, check the 120VAC outlet the FK-ESC is plugged into. Use a lamp or radio to ensure power is present. If no power is present, check circuit breaker or find another power source.

**FK-ESC Won't Turn OFF in 12-Minutes** - Ensure ALL wires are properly secured and placed on the correct terminals of the gas valve. This is a polarity sensitive system; if wires are reversed it will not turn OFF the fan.



Recognized component according to UL 1004-1 and UL 1004-3 and CSA C22.2 No. 100-04 and CSA C22.2 No 77-95 R2004

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## **TWO YEAR LIMITED WARRANTY**

SKYTECH II warrants this fan system for two years or 24 months from the date of purchase to the original owner. This warranty is NOT transferable to another person. Should any part fail because of defective workmanship or material from the original date of purchase SKYTECH II will repair or replace the part at SKYTECH II option.

Damage to the Fan system caused by accident, misuse, abuse, or installation error, whether by a contractor, service company, or owner is not covered by this warranty. Modification of the Fan System will void the warranty.

The owner must provide a bill of sale, to verify purchase date and establish warranty period. SKYTECH II is not responsible for: Travel expenses, Diagnostic costs, and Service labor to repair the defective Fan system. Freight charges will not be covered on warranty parts or Fan systems.

This warranty does not cover claims, which do not involve defective workmanship or materials.

IN NO EVENT SHALL SKYTECH II BE LIABLE FOR INCIDENTAL AND CONSEQUENTIAL OCCURRENCES, INCLUDING THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS, ARE LIMITED TO THE DURATION OF THE THIS WRITTEN WARRANTY. THIS WARRANTY SUPERSEDES ALL OTHER ORAL OR WRITTEN WARRANTIES.

Some states do not allow the exclusion or limitation of incidental and consequential damages or limitation on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific rights and you may have other rights, which vary from state, province, and nation.

Warranty claims process will start with all information; SKYTECH II will reserve the right to physically inspect the product for defects, by authorized representatives.

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**For Technical Questions Call:           (855) 498-8324**

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