

## SERVICE MANUAL Model: SF-INC36 - Instructions -

## 1. Introduction

NOTICE! DO NOT discard any hardware while servicing. Some hardware must be reused.

This manual will assist a qualified service technician in the replacement of parts. Contact your dealer to arrange a service call by a qualified service technician.

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WARNING! Risk of Shock! Disconnect power before disassembly or servicing.

WARNING! Risk of Shock! Always turn off circuit breaker and ensure the heating element on the heater is cool before cleaning or servicing.

WARNING! Risk of Fire! To reduce risk of fire, do not store or use gasoline or any other flammable vapors or liquids in the vicinity of the appliance.

WARNING! Risk of Electrical Shock! Servicing outlined in this document must be performed by an authorized service representative.

WARNING: If the information in these instructions is not followed exactly it may result in personal injury and/or property damage.

CAUTION! Risk of Cuts, Abrasions or Flying Debris. Wear protective gloves and safety glasses during installation and service. Sheet metal edges are sharp.

## **Tools and Supplies Needed**

Before beginning the installation be sure that the following tools and building supplies are available.

Gloves Safety glasses #2 and #3 Phillips screwdrivers Needle-nose pliers 3/32 slotted head screwdriver/or equivalent 1/4 in. Nut Driver 1/8 in. Hex Key

## 2. Replacement Parts



Figure 2.1 Replacement Parts Diagram

## 3. Replacement Instructions

#### 3.1 Decorative Front Removal

#### Removal

- Remove decorative front from the appliance by grasping the front and lifting up and pulling forward slightly to disengage the Front from the hanging brackets or shoulder bolts.
- 2. Disconnect the appliance buttons control board jumper wire harness to disconnect the front from the appliance.
- 3. Before Proceeding with any servicing, flip the main power switch on junction box to the OFF position.

#### 3.1.1 Appliance Buttons Control Panel / Harness Replacement

- 1. Set face down on a soft/non-marring surface.
- 2. Remove 4 screws securing vanity panel to decorative front. See Figure 3.1.
- 3. Assemble in reverse order. If replacing the Door Button Jumper Harness, disconnect the existing harness from the appliance BECM control and reconnect with replacement harness.
- 4. After service is complete flip switch on junction box to ON position before attaching front



Figure 3.1 Vanity Panel Assembly Removal



Figure 3.2 Disconnect Button Control Panel

### 3.2 Controls Replacements:

Follow the Decorative Front Removal Steps in 3.1 to gain access to the control cavity beneath the digital display.

## WARNING! Risk of Shock! Always disconnect power before disassembly or servicing.

#### 3.2.1. Computer Replacement

- 1. Cut zip tie securing existing computer. Pull up on computer to disengage the hook/loop fastener securing the computer to the component tray.
- 2. Disconnect the two USB, one HDMI and one DC cable from the computer.
- 3. <u>If Replacing Computer Power Supply:</u> The replacement computer includes a new power supply. To replace the existing power supply, disconnect the DC output plug from the BECM DC input jack labeled "Power Supply", pull up on the power supply to disengage the hook/loop fastener and remove it from the component tray. Connect the new power supply to the BECM DC input jack labeled "Power Supply" and place it in the same location.
- 4. Reconnect cables in the same manner as they were removed, and place the computer in the same location, as the old computer. See Figure 3.3.



Figure 3.3 Computer Wiring

#### 3.2.2. LED Power Supply Replacement

- Disconnect the LED power supply's Black/Yellow wire connector from the Auxiliary Control Module (ACM) and White/Black Wire connectors from the AC power cord. See Figure 3.5.
- 2. Remove the existing LED power supply from the component tray by lifting to disengage the hook/loop fastener.
- 3. Install the replacement in the reverse order.

#### 3.2.3. Basic Electronic Control Module (BECM) Replacement

- The BECM may be replaced by disconnecting the cables attached to it: the DC "BECM Output" Plug; the LED Power supply "Power Supply" plug; the USB-B cable; the Button Control Panel Jumper Harness.
- 2. Cut the zip tie from above the BECM and pull up on the BECM to disengage it from the ACM.
- 3. Replace with a new BECM by snapping it into place onto the ACM and reconnect the cables in the same manner. See Figure 3.4.



Figure 3.4 BECM Wiring

### 3.2.4. Auxiliary Control Module (ACM) Replacement

- 1. The ACM may be replaced by removing the attached BECM and disconnecting the cables attached to it: LED Light Harness; LED Power Supply; AC power cord.
- 2. Cut the zip tie from above the ACM and pull up on the ACM to disengage it from the hook/loop fastener.
- Replace with a new ACM into the same location and reconnect the cables and the BECM in the same manner. See Figure 3.5.

#### 3.2.5. USB A to B, DC Cable Replacement

 After the Decorative front has been removed, following the Removal Steps in 3.1, the USB-A to USB-B cable and the DC male to DC male cable between the BECM and the computer are fully accessible and may be replaced.

#### 3.3. Logs, Media, Refractory, and Ember Tray Removal/Replacement

#### Removal

- 1. Follow the REMOVAL step from 3.1, to remove the Decorative Front.
- 2. Remove logs, Refractory, Ember Media, and orange light filter from Ember tray.
- 3. From the underside of the Display Bracket Shelf, bend the two tabs securing Ember tray straight downward. See Figure 3.6.
- 4. Lift the Ember Tray/Grate assembly up and away from the display bracket.

#### Replacement

- To replace the Ember Tray, remove the grate from the existing tray assembly, by removing two Phillips screws from the underside of the Ember Tray. Retain and reuse the screws to secure the Grate to the replacement Ember Tray.
- 2. Ensure the tabs of the replacement ember tray are bent down vertically to make it possible to position them through the slots in the Display Bracket Shelf
- 3. Secure by bending the tabs 90° and flush with the underside of the Display Bracket Shelf.

#### 3.3.1. Fuel Bed Light Filter

1. If replacing the bottom fuel bed light filter, set the new filter in place on top of the ember tray before reinstalling the ember tray, media, and logs.

#### 3.3.2. Fuel Bed LED Replacement

- 1. Follow the removal steps through 3.3 to remove the ember tray and gain access to the fuel Bed LED
- 2. Disconnect the White/Blue/Red/Brown 4-Wire LED harness from the LED light bar.

- 3. Remove the LED Light Bar, lifting up to disengage Hook/Loop fastener.
- Replace the self-adhesive Hook/Loop to the replacement LED Light Bar, reconnect and position the replacement LED Light Bar

#### 3.3.3. Grate Replacement

- 1. Follow the removal steps through 3.3 to remove the ember tray and gain access to the underside of the ember tray.
- 2. Remove the two Phillips screws securing the Grate to the Ember Tray. See Figure 3.6.
- 3. Install replacement grate by reinstalling the removed Phillips screws.
- 4. Reassemble the appliance by following all the performed REMOVAL steps in reverse.

#### 3.3.4. Log Replacement Refractory Replacement Ember Media Replacement

1. Follow the Refractory, Media and Log placement instructions found in the appliance installation manual.





#### 3.4. Side Panel Removal / Replacement

#### Removal

- 1. Remove the 2 fasteners on each Side Panel by using a ¼ in. Hex nut driver (SF-CHAF/HAL Fronts Only) or a 1/8 in. Hex Key (SF-FOL Fronts with Shoulder Bolts).
- 2. If installing a SF-CHAF or SF-HAL style Decorative Front, the hanging brackets will be removed with the side panels.

#### Replacement

- Install replacement Side panels using the existing 4 screws, ensuring the door hanging brackets (SF-CHAF/SF-FOL ONLY) are positioned beneath the side panels. To position the side panels, lift slightly on the Display Bracket shelf to place the bottom flange of the side panel under the ember tray for support.
- 2. Follow the performed REMOVAL steps in reverse to reassemble the appliance.

## 3.5. Digital Display (8) Removal and Replacement

#### Removal

- 1. Follow the REMOVAL steps through 3.3, removing the Decorative Font, Side Panels/Door Hanging Brackets (If equipped), Media and Ember Tray assembly.
- 2. Prepare a soft non-marring surface to rest the display on once removed.
- 3. Disconnect the HDMI and USB-A to RS-232 cable attaching the Display to the Computer.
- 4. Unplug the AC Power cord from the display to the Junction Box Assembly Outlet.
- 5. Remove the 1- Phillips screw centered below/behind the display, securing the Display Bracket to the back wall of the appliance.
- 6. Lift up  $\frac{1}{2}$  in. (13mm) to disengage the bracket hooks from the back wall of the appliance.
- 7. Pull the Display away from the appliance and place, screen-side down on a soft surface.

#### Replacement

- 1. Disconnect the HDMI and the Display Jumper cables from the rear of the Display.
- 2. Remove the 4 Phillips screws securing the display to the Display Bracket.
- 3. Install replacement display following the steps in reverse and reconnecting all cables in the same manner.

#### 3.5.1. Display Cables Replacement

1. Follow the removal Steps through 3.5 to gain access to replace the HDMI, USB-A to RS-232, Display Jumper cables. Install and route new cables in the same manner as those being replaced.

#### 3.6. Blower Cover Assembly Removal / Replacement

## WARNING! Risk of Shock! Disconnect Power Before Servicing.

#### Removal

- 1. Follow the removal steps through 3.4 to remove the Decorative Front and Side Panels.
- 2. Remove six Phillips screws attaching the blower cover assembly to the appliance. See Figure 7.
- 3. Disconnect the LED wire harness from the Top LED Light Bar. Remove the Blower cover assembly form the Appliance.

#### Replacement

- 1. Install replacement Blower Cover Assembly using the existing six screws.
- 2. Follow the performed REMOVAL steps in reverse to reassemble the appliance.

#### 3.6.1. Top Light Filter Replacement

- 1. If replacing only the Top LED Light Bar Follow the RE-MOVAL steps 3.1, 3.3, and 3.6 to remove the Decorative Front, Side Panels, and Blower Cover Assembly.
- 2. Remove the 2 Phillips screws securing the LED Light Bar from the Blower Cover.
- 3. Reconnect the LED Light Wire Harness to the LED Light Bar and reassemble by following the performed removal steps in reverse order.

## 3.6.2. LED Light Bar Harness Replacement

- If replacing the LED Light Bar Harness Follow the RE-MOVAL steps through 3.6 to remove the Decorative Front; Logs, Media, Refractory and Ember Tray; Side Panels; Digital Display; and Blower Cover Assembly.
- 2. Replace the LED Light Bar Harness by disconnecting the existing harness from both the Top LED Light Bar, the Fuel Bed LED. Make the connections using the replacement harness.
- 3. Reassemble the appliance by following all the performed REMOVAL steps in reverse.



Figure 3.7 Blower Cover Removal

#### 3.7. Heater/Blower Replacement

### WARNING! Risk of Shock! Disconnect power before servicing.

- 1. Follow the REMOVAL Steps through 3.6 to gain access to the Heater/Blower assembly.
- Make note or photograph the wiring labels and locations and harness routing. Disconnect all 8 Spade wire connections from the heater and Blower motor. See Figure 3.8 and Figure 3.11.
- 3. Support the Heater/Blower Assembly while removing the three Phillips screws from the front of the Heater/ Blower Assembly mounting Bracket. See Figure 3.8.
- 4. Swing the front of the Heater/Blower Assembly downward then pull the assembly away from the appliance disengaging the mounting tabs from the appliance. See Figure 3.8.
- 5. Remove the attached the mounting bracket from the removed Heater/Blower Assembly and attach it to the Replacement Heater/Blower by removing and reusing the four Phillips screws.
- 6. Wire the new Heater/Blower harness by matching the wire labels with locations as noted and shown in Figure 3.11.
- 7. Reassemble the appliance by following all the performed removal steps in reverse order.

#### 3.7.1. Heater Harness Replacement

- 1. Follow the REMOVAL Steps through 3.6 to gain access to the Heater/Blower assembly.
- 2. Make note or photograph the wiring labels and locations and harness routing. Disconnect all 8 spade wire connections from the Heater and Blower motor. See Figure 3.11.
- Disconnect the 5-Wire Heater Harness from the top of the Junction Box Assembly using a small, 3/32 in., slotted screwdriver to disconnect and remove the harness connector from the Junction Box Assembly. See Figure 3.12.
- 4. Route and wire the new Heater/Blower harness by matching the wire labels with locations as noted and shown in Figure 3.11.
- 5. Reassemble the appliance by following all the performed removal steps in reverse order.



### 3.8. Junction Box Replacement

## WARNING! Risk of Shock! Disconnect power before servicing.

- 1. Disconnect AC Power Supply to the Appliance.
- 2. Remove the Decorative front by following the Removal steps in 3.1.
- 3. Remove the Termination Cover Plate on the right wall of the control cavity by removing the two Phillips screws, and lifting up and away from the control cavity. See Figure 3.9 and 3.10.



Figure 3.9 SecuringTermination Cover



Figure 3.10 Termination Cover Installation

- 4. Disconnect the AC power input lines from the splice connectors attaching them to the Junction Box. Flip the splice lever up on the splice connector to release the wire. See Figure 3.13.
- 5. Disconnect the 5-Wire Heater Harness from the top of the Junction Box Assembly using a small, 3/32 in., slotted screw-driver to disconnect and remove the harness connector from the Junction Box Assembly. See Figure 3.12.
- 6. Disconnect all four AC Power cords from the Junction Box receptacles.
- 7. Remove and retain the Phillips screw securing the component tray to the tab to the left of the computer. See Figure 3.12.
- 8. Remove and retain the ¼ in. Hex/Phillips grounding screw securing the component tray tab to the back wall of the appliance. See Figure 3.12.
- 9. Lift the entire component tray assembly from the floor of the appliance, while cables are connected to the Display. Pull the Component tray assembly out from the appliance just enough to access and remove the one Phillips screw from the left side of the Junction Box Assembly. See Figure 3.12.
- 10. Lift up on the Junction Box Assembly to remove it from the Component Tray.
- 11. Reconnect all wires and attachment points in reverse order to install the replacement Junction Box Assembly. See Figure 3.13.



Figure 3.11 Blower / Heater Assembly Wiring



Figure 3.12 Junction Box Removal



Figure 3.13 Junction Box Wiring

## 4. Remote Pairing Guide

To pair a remote with the appliance, press and hold the Left (Flame) and Middle (Heater) appliance buttons, located on the lower right of the appliance's Decorative Front, to activate the on-screen remote pairing guide. See Figure 4.1.





Figure 4.1 Remote Pairing Guide

		$\bigcirc$	$\bigcirc$		
	Left Button	Middle Button	Right Button	Button press time	Action
Advanced functions					
WIFI SETUP GUIDE	Х	Х	Х	Hold for 10s	WiFi Reset (Takes user to <b>WiFi Setup Guide</b> and will turn off lights, heater, thermostat, timer)
REMOTE PAIRING GUIDE	Х	Х		Hold for 10s	Remote Pairing (Takes user to <b>Remote Pairing Guide</b> )
FACTORY RESET	х		Х	Hold for 10s	Factory Settings Reset (Takes user at any time to <b>Welcome</b> Guide and resets settings to factory state)
COMPUTER RESTART		Х	Х	Hold for 10s	Computer Restart (Restarts the computer and takes user to <b>Welcome Guide</b> )
SKIP	Х			Single Press	Use the flame button to SKIP out of Wi-Fi Setup or Remote Pairing screens

Table 4.1 Advanced Functions with Appliance Buttons

Main Menu	Submenu	Options
	ON	N/A
HEATER	OFF	N/A
	LIGHTS	HIGH
		MEDIUM
PRICHTNESS		LOW
DRIGHTINESS		OFF
		High
	FIREPLACE	Low
		15min
TINACD	ON	
TIMER		120min
	OFF	N/A
		6°C/43°F
	ON	
THERMOSTAT		37°C / 99°F
	OFF	N/A
		ENABLE
	HEATER	DISABLE
		STATUS
SETTINGS	SYSTEM	DIAGNOSTICS
		RESET
	NETWORK	ABOUT
	NEIWORK	SETUP
	TEMD °C /°E	°C
		°F

Table 4.2 Menu Navigation

## 5. Troubleshooting Guide

This appliance comes with a built-in diagnostics tool to help with basic troubleshooting. To access and run diagnostics, navigate to "SETTINGS" > "SYSTEM" > "DIAGNOSTICS" in the menu.

Symptom	Possible Cause	Corrective Action
	Batteries are installed incorrectly.	Remove batteries and install correctly.
	Batteries are dead.	Remove batteries from remote and replace with new batteries.
	Remote is out of range.	Ensure remote is within range of fireplace.
	Remote is not paired to appliance.	Use remote pairing button combination to pair the remote.
Remote control does not work	Appliance is in the "OFF" position at the junction box.	Toggle the power switch located on the appliance junction box to the "ON" position.
	Computer is turned off.	Turn on computer.
	Loose power supply.	Verify connections are secure or replace if damaged.
	Different appliance remote is paired.	Use remote pairing button combination to pair the remote.
	Remote is defective.	Replace remote.
Circuit breaker trips or fuse blows when unit is turned on	Exceeding current rating of the circuit breaker or fuse, perhaps from operating other appliances on the same circuit as the fireplace.	Verify circuit rating, install on dedicated circuit. 120VAC: Install unit onto a dedicated 15 amp circuit.
Lights in room dim while the unit is on	Unit is drawing close to circuit current rating.	
	Wire connector between appliance and buttons is disconnected or damaged.	Properly connect wire or replace.
Appliance will not turn on when	Buttons misaligned.	Ensure buttons are installed correctly.
using the appliance buttons but	Buttons defective.	Replace.
will turn on with remote	BECM defective.	Replace.
	USB cable from computer to BECM loose/disconnected/damaged	Verify connections are secure or replace if damaged.
	Appliance is in the "OFF" position at the junction box	Toggle the power switch located on the appliance junction box to the "ON" position.
Appliance will not turn on with	No incoming power from the electrical outlet or electrical box.	Check breaker panel switch to ensure power is supplied to the appliance.
appliance buttons or remote	Computer is turned off.	Turn on computer.
	Loose or damaged cables.	Verify connections are secure or replace if damaged.
	Loose power supply.	Verify power connections and voltage.
	Hard-wire connections not correct.	Review wiring instructions to ensure correct connection.
Thermostat mode not working	Remote disconnected or out of range.	See troubleshooting section "Remote control does not work".
	Remote location does not reflect average room temperature.	Place remote in a location that is exposed to average room temperature.
	Room temperature is read every 5 minutes.	Wait 5 minutes for room temperature to read again.
Flame has visual defect	HDMI cord is loose or damaged.	Verify connections are secure or replace if damaged.
Flame appears dark/dim	Fireplace brightness set to "LOW".	Change fireplace brightness to "HIGH".
Appliance turns on by itself	Normal operation during power up	During initial power up the appliance turns on automatically.
		During a power cycle the appliance returns to previous state (Note: heater will reset to Off).
	Another user is turning on the appliance from the IntelliFire App.	Only one user should control the fireplace at a time.
	Different remote is paired to the appliance.	Pair the correct remote with the appliance.

# SimpliFire Troubleshooting Guide (continued)

Symptom	Possible Cause	Corrective Action	
	Thermostat mode is on and room temperature is higher than the temperature set point.	Increase thermostat set point on the appliance, or turn off thermostat mode.	
	Heater is disabled in "SETTINGS".	Enable heater in "SETTINGS".	
Heater will not turn on	Appliance has overheated and safety thermal switch has tripped.	First, turn off power at junction box or circuit breaker and allow it to cool for 15 minutes. Then, turn power back on at junction box or circuit breaker and turn fireplace on.	
	Loose or damaged cables.	Verify connections are secure or replace if damaged.	
	Defective heater assembly.	Replace heater assembly.	
	Defective ACM.	Replace ACM.	
Heater shuts off automatically or won't stay on	Thermostat mode is on and room temperature is higher than the temperature set point.	Increase thermostat set point on the appliance, or turn off thermostat mode.	
	Heater setting automatically turns "OFF" after 3 hours of continuous operation.	Turn thermostat mode or heater "ON" to resume heater operation.	
	Appliance has overheated and safety thermal switch has tripped.	Ensure the front is installed in the correct position. Ensure the heater output is unobstructed. Turn off power, at the Junction Boy Main Device Switch or given the product Theory	
	Appliance has overheated due to blocked heater output.	allow the appliance to cool for 15 minutes. Return power to the appliance and wait for it to start up.	
	Exceeding current rating of the circuit breaker or fuse, perhaps from operating other appliances on the same circuit as the fireplace.	Install unit onto a dedicated 15 amp circuit for 120VAC. Install unit onto a dedicated 20 amp circuit for 240VAC.	
	Another user is operating the appliance from the IntelliFire App.	Only one user should control the fireplace at a time.	
Heater emits an odor	Normal operation.	It is normal for the heater to emit an odor for a brief amount of time after turning on. It is burning off dust that has accumulated on the heater.	
Fuel bed and accent lights	Lights are set to "OFF"	Turn lights "ON".	
don't work		Verify connections are secure or replace if damaged.	
Fuel bed lights don't work but	Loose or damaged cables.	Verify connections are secure or replace if damaged.	
accent lights do OR Accent lights don't work but fuel bed lights do	Defective LED lights.	Replace lights.	
Excessive noise with heater on	Interference with fan blade.	Inspect heater assembly and fan for obstructions or interference.	
	Defective heater assembly.	Replace heater assembly.	
Difficulty installing front	Ember tray is interfering with vanity panel on front.	Ensure vanity panel clears the ember tray when installing.	
Blue light visible from fuel bed area	Insufficient black glass ember coverage in ember tray (power indicator light isn't covered).	Add or rearrange black glass embers in the ember tray.	
Unable to successfully complete WiFi onboarding	WiFi network password incorrect.	Verify network password on phone or tablet and retry setup process (delete location in the app first if one already exists).	
	Incorrect IntelliFire App version installed on phone.	Inception requires Android App Version 0.29.8 or above or IOS 0.138 or above.	
	WiFi signal at the appliance location is insufficient.	Verify WiFi signal level using available tools for Windows PCs, Mac, iOS, or Android. A signal level greater than -65dBm (Ex: -70dBm, -83dBm) may have intermittent connectivity issues.	
	Cannot connect to hidden SSIDs.	Connect to available SSID.	

# SimpliFire Troubleshooting Guide (continued)

Symptom	Possible Cause	Corrective Action
Unable to control a previously set up appliance with the IntelliFire App	Appliance is not connected to the internet.	Ensure WiFi router is connected to the internet.
	IntelliFire app account login issues.	Log out and log back into the IntelliFire app account.
	Appliance has been factory reset.	Delete the appliance from the IntelliFire App and perform Network Setup again in Settings.
	Router, SSID or network password has changed.	Delete the appliance from the IntelliFire App and perform Network Setup again in Settings.
Unable to control with voice assistant	Voice assistant integration has become unlinked from IntelliFire.	Verify IntelliFire App is functional first. If it is, refresh the integration by unlinking and relinking the specific voice assistant to IntelliFire using the Alexa or Google Home apps.

## 6. Wiring Diagrams



Figure 6.1 Inception Wiring Diagram



Figure 6.2 BECM Wiring Diagram



Figure 6.3 ACM Wiring Diagram



Figure 6.4 Computer Wiring



Figure 6.5 Blower / Heater Assembly Wiring



Figure 6.6 Junction Box Wiring

SimpliFire, a brand of Hearth & Home Technologies 7571 215<sup>th</sup> Street West, Lakeville, MN 55044 www.hearthnhome.com