

# IFT-RC400 & IFT-ACM

## IntelliFire™ Touch Remote Control & Auxiliary Control Module

### Installation Instructions



Leave this manual with party responsible for use and operation.

## 1. Introduction

The IntelliFire™ Touch Remote Control (IFT-RC400) is a hand-held wireless device that is designed to control the functions of Hearth & Home Technologies products equipped with IntelliFire™ Touch technology. It can be used to control the flame ON/OFF, flame height, cold climate and programmable timer functions of a appliance. The IFT-RC400 is also equipped with a temperature sensor which allows it's use as a thermostat to set the desired room temperature.

The IntelliFire™ Touch auxiliary control module (IFT-ACM) is included. The ACM is an AC powered device that controls peripheral devices such as lights, fans and Power Vents approved for use in Hearth & Home Technologies products that are equipped with IntelliFire™ Touch technology. It is connected to and controlled by the IntelliFire™ Touch Electronic Control Module (IFT-ECM).

## 2. IFT-RC400 & ACM Installation

### A. Precautions

This device is tested and safe when installed in accordance with this installation manual. Do not install any components that may be damaged.

Do not modify, disassemble, or substitute any of the components included with this kit. Installation of this unit must be done by a qualified service technician.

The location of this device may affect performance. An assessment of the location should be done prior to installation for optimum performance.

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:

- Installation and use of any damaged system component.
- Modification of the system component.
- Installation other than as instructed by Hearth & Home Technologies.
- Installation and/or use of any component part not approved by Hearth & Home Technologies.

**Any such action may cause a fire hazard.**

- Read, understand and follow these instructions for safe installation and operation.

### B. Determine Location

Determine the location for the IFT-RC400. The selected location should be in the same space as the gas appliance with visual sight of the fireplace. The device must be placed within 30 feet (9.14 m) of the appliance, but should not be exposed to extreme heat. The IFT-RC400 is approved for interior installation and should not be used in exterior applications.

- Keep remote control out of reach of children.

### C. Kit Contents

- IFT-RC400 Remote Control
- Radio Frequency Module (IFT-RFM)
- AAA Batteries (4)
- Wall Mount
- 1 inch #6 Screws (2)
- Drywall Anchors (2)
- IntelliFire™ Touch Auxiliary Control Module (IFT-ACM)
- Power cable that connects AC receptacle to IFT-ACM
- 1 inch sq. Piece of Velcro

### D. Installation Steps

**CAUTION! Do not install damaged components. If you received components that are damaged, contact your dealer for assistance.**

1. Remove the contents from the packaging.
2. Locate the IntelliFire™ Touch electronic control module (IFT-ECM) in the control cavity of the appliance and move the three-position switch to the OFF position. See Figure 1.
3. Connect the IFT-RFM to the IFT-ECM by aligning the pins and tabs and pushing the IFT-RFM into the IFT-ECM until both tabs snap into position. Ensure the two components are fastened securely to one another. See Figure 1.

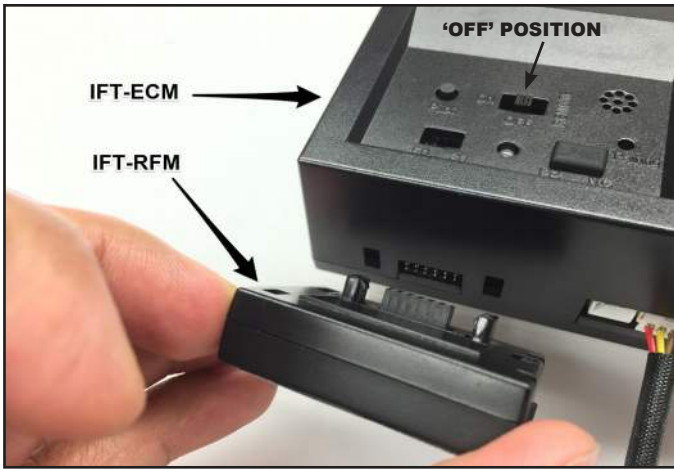


Figure 1. Connect IFT-RFM to IFT-ECM

- Remove protective rubber cap from connector on the top of the IFT-ECM. See Figure 2.

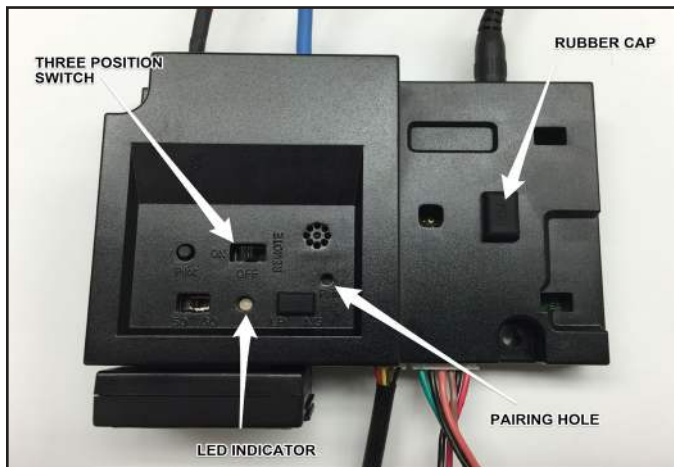


Figure 2. IFT-ECM

- Attach velcro included with the IFT-ACM to the bottom of the ACM. See Figure 3.
- Connect the IFT-ACM to the IFT-ECM by aligning the pins and tabs and pushing the IFT-ACM into the IFT-ECM until both tabs latch in place. Ensure the IFT-ECM and IFT-ACM are aligned with each other and fastened securely. See Figure 3.

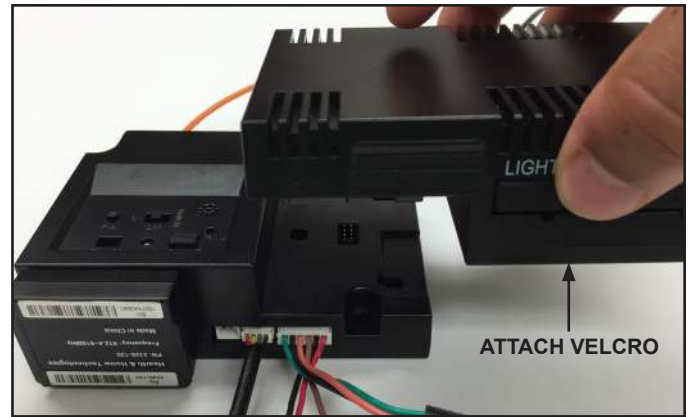


Figure 3. Connecting IFT-ACM and IFT-ECM

**WARNING! Risk of Shock! DO NOT touch male pins.** Leave rubber cap on all ports unless port is being connected to a lead.

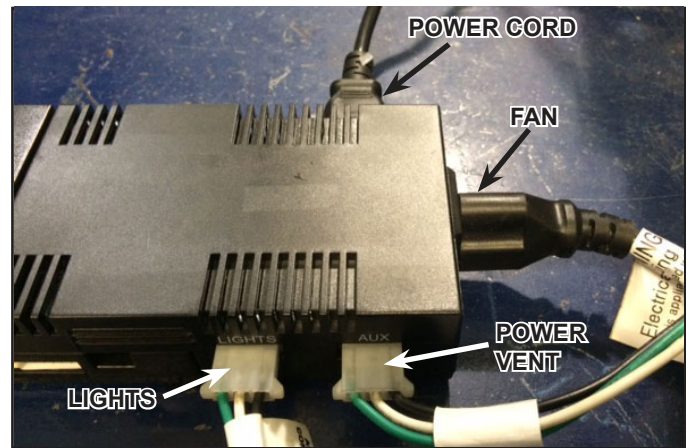


Figure 4. Fan, Lights and Power Vent Connection

- The IFT-ACM can provide power to HHT approved kits including fan, lights and power vent.
  - To connect a fan kit to the IFT-ACM, insert the three prong male plug from the fan into the receptacle located on the right side of the IFT-ACM. See Figure 4.
  - To connect a light kit to the IFT-ACM, remove protective rubber cap labeled 'LIGHTS' and connect to the female cord that was supplied in your lights kit into the three male pins on the IFT-ACM. See Figure 4.
  - To connect a power vent kit to the IFT-ACM, remove protective rubber cap labeled 'AUX' and connect to the female cord that was supplied in your power vent kit into the three male pins on the IFT-ACM. See Figure 4.

**WARNING! Risk of Shock! DO NOT touch male pins.** Leave rubber cap on all ports unless port is being connected to a lead.

8. Connect the female end of the power cable that came with the kit into the IFT-ACM. Ensure that power cable is securely and fully inserted into the IFT-ACM. Plug the three prong male plug into the junction box of the appliance. Verify that the junction box has power. See Figure 4.
9. Move the three-position switch on the IFT-ECM to the REMOTE position. The green LED will blink three times. A few seconds later, an audible “beep” will occur to indicate that the system is ready.
- 10. Set the RC400 face down on flat surface when installing batteries. DO NOT touch the screen during battery installation or removal.
11. Remove the battery cover from the back of the IFT-RC400 and install the four AAA batteries in the proper orientation marked in the battery cavity. Ensure the child lock switch adjacent to the battery cavity is in the UNLOCKED position. See Figure 5.
12. Program the IFT-RC400 for the correct brand of appliance using the “Brand Programming” instructions in Section G of this instruction.
13. Follow the pairing procedure, as described in the Section F of this instruction, to pair the IFT-RC400 to the IFT-ECM.



Figure 5. Install Batteries & Child Safety

## E. Wall Mount Installation (Optional)

1. Detach the IFT-RC400 from the wall mount.
2. Secure the wall mount on a flat wall surface using the two #6 screws and wall anchors provided. See Figure 6.



Figure 6. Install the Wall Mount

3. Place the IFT-RC400 inside the wall mount. See Figure 8.

## F. Pairing the IFT-RC400 to the Electronic Control Module (IFT-ECM)

**CAUTION! Risk of Burns! DO NOT program the IFT Remote Controls to the IFT-ECM when flame or cold climate function is on or when appliance is hot.**

1. On the IFT-ECM, move the ON/OFF/REMOTE switch to the REMOTE position. The green LED will blink three times. A few seconds later, an audible “beep” will occur to indicate that the system is ready.

**Note:** If the green LED continues to blink slowly (system is searching for a clear channel), wait until it stops before proceeding to step 2.

2. Locate the pairing hole on the IFT-ECM. See Figure 7. Using a paper clip or similar item, press and release the pairing button. The IFT-ECM will “beep” once and the green LED will blink for 14 seconds. During the 14 seconds, it is normal for accessories such as lights or fan to energize momentarily.

While the green LED on the IFT-ECM is blinking, tap anywhere on the gray indicator bar located at the top of the IFT-RC400 screen. Tap on the pairing function as shown in Figure 8. If the IFT-RC400 has been paired successfully to the IFT-ECM, a double audible “beep” will be heard from the IFT-ECM.

3. If the pairing is unsuccessful, repeat steps 1 & 2.

**Note:** If additional components are added such as blowers, lights or Power Vent after initial pairing, the pairing process must be repeated again to detect additional components.

**NOTICE:** Only one IFT-RC400 remote control and one IFT-RC150 wireless wall switch can be programmed into an IFT-ECM. To program both an IFT-RC400 and an IFT-RC150 to an IFT-ECM, repeat the same steps separately for the IFT-RC400 and the IFT-RC150.

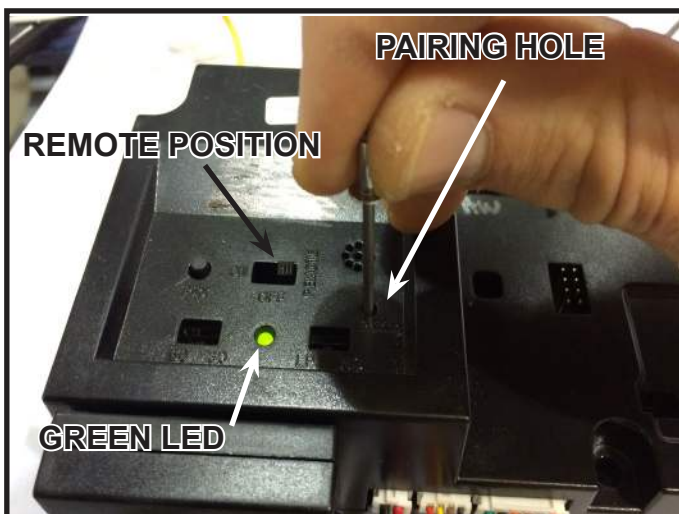


Figure 7. Pairing IFT-ECM



Figure 8. IFT-RC400 Wall Mount / Pairing Screen

## G. Brand/Dealer Programming Procedure

This procedure allows the dealer to select the brand input and dealer information for the consumer's use.

The contact information will be accessible to the consumer through the "Dealer Info" screen on the secondary menu. It is also displayed automatically in the event of an issue with the appliance or as a maintenance reminder.

To access these selections and program your contact information, please follow these steps.

1. Insert batteries into the IFT-RC400. Wait for a beep to confirm the remote is on.
2. Locate the programming hole on the back side of the remote. It is marked as "P" on the right side above the battery cover as shown in Figure 5.
3. Using a paper clip or similar item, press and release the programming button.
4. Select your choice of product brand from the list on the IFT-RC400 screen. See Figure 9.
5. Enter the name of the dealer or service company that will service this customer by entering the name on the screen.
6. Enter the telephone number that the customer will use to contact the service company or dealer.
7. A "splash" screen will appear showing the brand you selected. "MAIN MENU" will appear next, indicating that the programming process is complete.

Note: The screen will time out after 30 seconds if a selection is not made. If this occurs, return to step 2 to access the selections and continue the programming process.



Figure 9. IFT-RC400 Branding Screen

## H. LCD Screen Calibration Procedure



This procedure allows the dealer to calibrate the touch screen, in the event that the screen becomes unresponsive to touch commands.

1. Remove the battery cover. Remove the batteries.
2. Touch and hold LCD screen while inserting the batteries. The following screen will display.

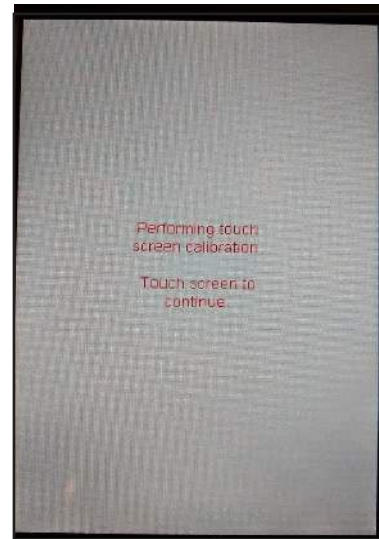


Figure 10. Performing Touch Screen Calibration

3. Touch screen to continue, the screen below will display. Follow the screen instructions, and touch and release on the filled circles. For best results, use a stylus. You will be prompted to repeat this clockwise around the four corners of the screen.

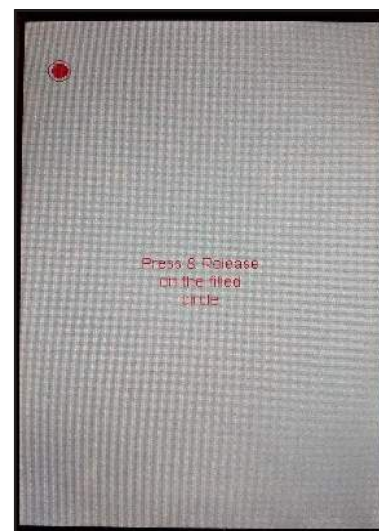
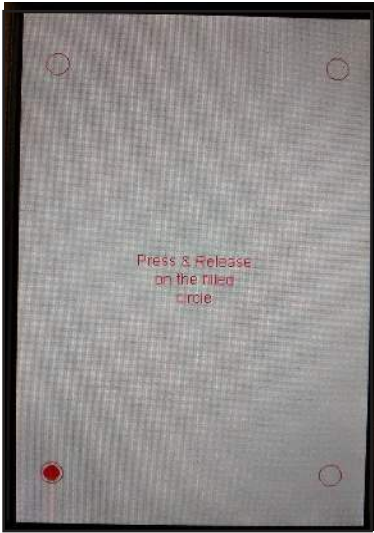
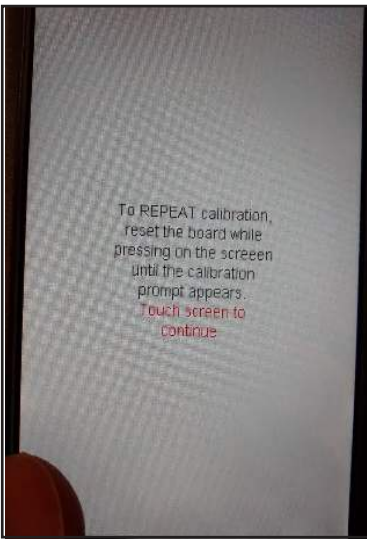


Figure 11. Touch and Release



**Figure 12. Touch and Release**

4. After touching and releasing this last point, the following screen appears.



**Figure 13. Touch anywhere on the Screen**

5. Touch screen anywhere to return RC400 will return to normal screen display.

# I. Wiring Diagram

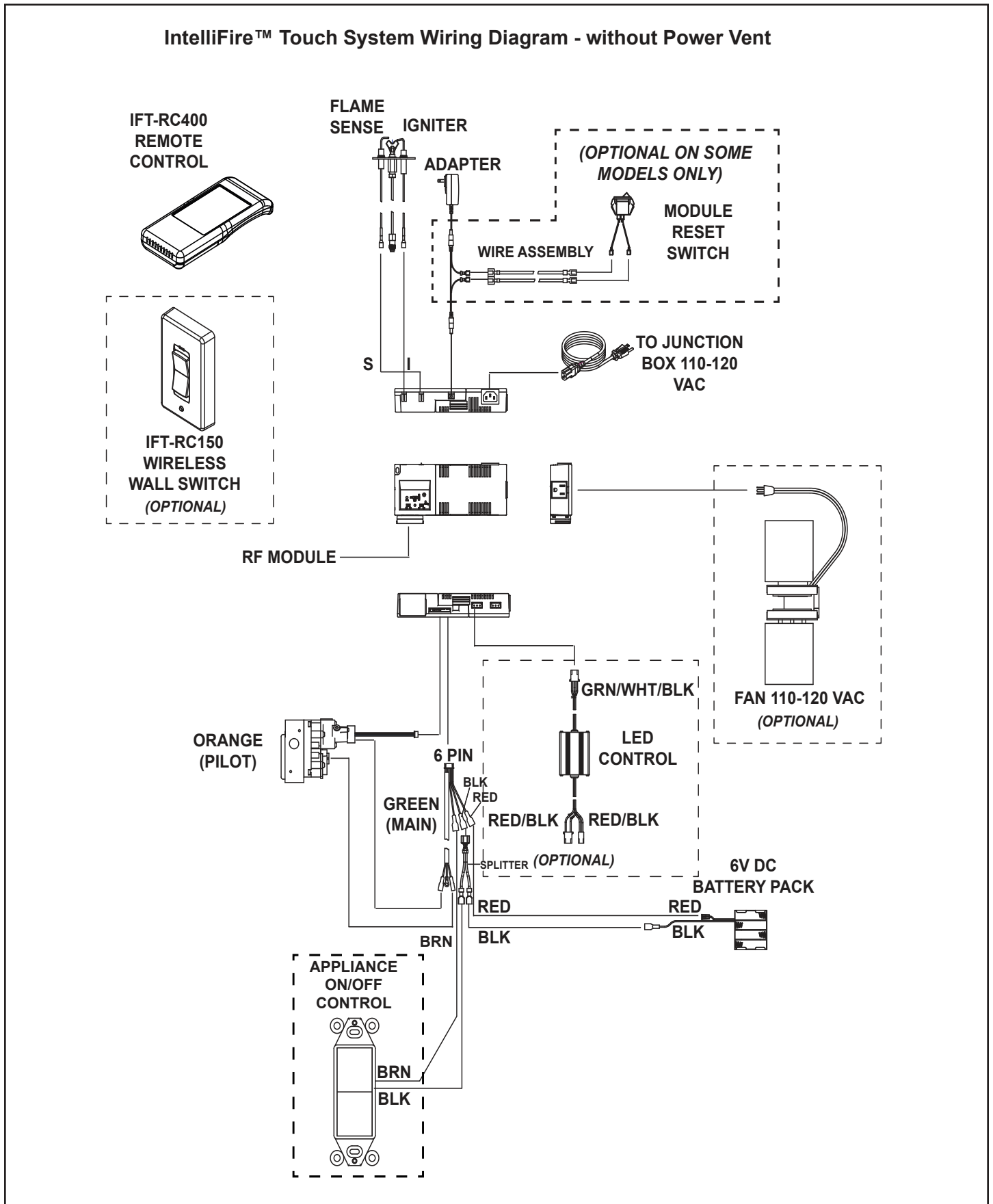


Figure 10. IFT-RC400 Wiring Diagram without Power Vent

# I. Wiring Diagram (continued)

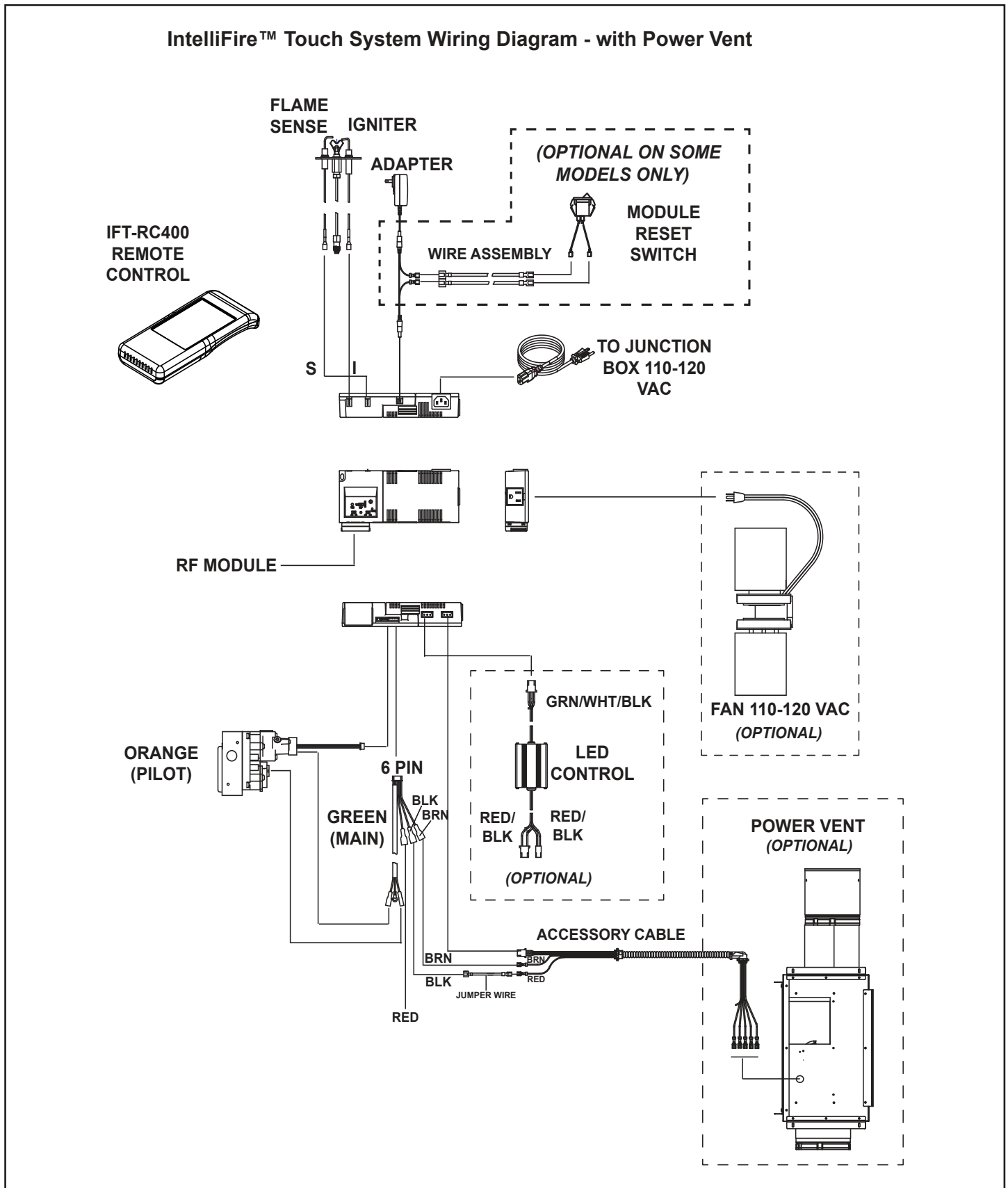
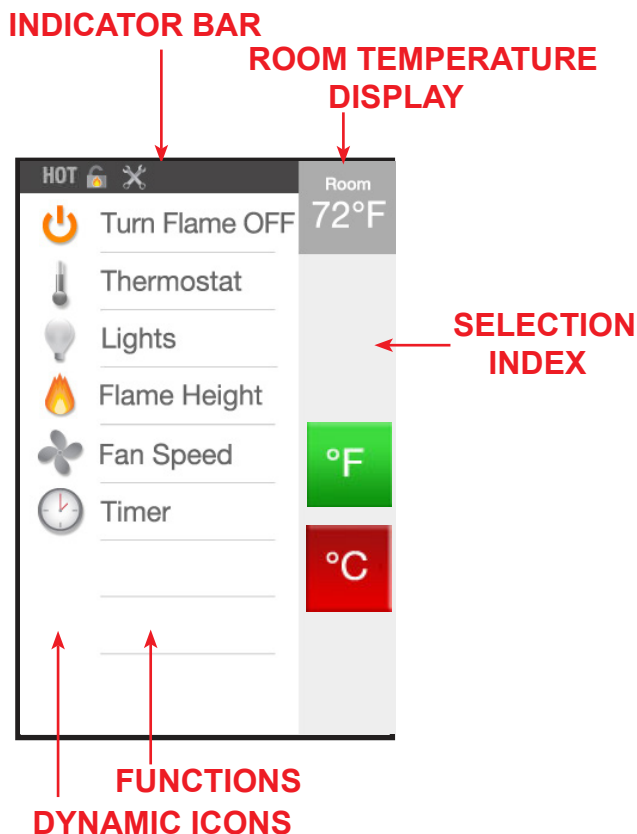


Figure 11. IFT-RC400 Wiring Diagram with Power Vent



### 3. Operation

## SCREEN



## FUNCTIONS

### Turn Flame On/Off

Toggle this function to turn ON or OFF your appliance.

### Thermostat

You can set and maintain your desired room temperature with the thermostat function. This function automatically adjusts your appliance to maintain the desired set temperature (ST).

To achieve the most accurate thermostat function, locate your IFT-RC400 remote control in the same general space that you want to have the temperature controlled by your appliance. For best results, keep your IFT-RC400 control away from direct radiant heat from the appliance, adjacent windows and doors, HVAC vents, and direct sunlight.

To use the thermostat function, access the main menu screen on your remote, and select thermostat. Next, simply select your desired set temperature by using the arrow keys and press ON to confirm the setting. The actual room temperature (RT), measured by your IFT-RC400 remote, will be displayed in the upper right corner of the main menu screen. To turn the thermostat function off, simply select thermostat on the main menu screen and select OFF.

If the RT cools to more than 3 °F lower than the ST for at least 2 minutes, then your appliance will automatically turn ON. The thermostat function will automatically adjust the flame height based on the difference between the RT and the ST. As the RT rises closer to the ST, the flame height will automatically adjust down. If the RT rises 2 °F above the ST for at least 2 minutes, then your appliance will automatically turn OFF.

During thermostat use, you will not be able to set your desired flame height level. Your appliance will automatically adjust flame height based on the difference between the RT and ST.

### Flame Height

You can set your desired flame height level to affect the ambiance and control the heat output.

Your appliance will remember the previous flame height setting and adjust the flame to that level 10 seconds after start.

# INDICATORS

## Timer



For your convenience a timer can be set up to 180 minutes to turn off your fireplace. The timer will turn the flame off automatically at the selected preset time.

To use the timer function, press “Timer” on the main screen, select time by using up and down arrows, then press “on”. To turn the timer off, select timer from main screen and select “off”.

## Child Lock



A child lock is available underneath the battery cover. When the lock is enabled, the screen will lock and no functions can be selected.

## Lights\*



If your appliance is equipped with lighting features, use this function to adjust them to your desired intensity. The lights can be adjusted whether the flame is on or off.

## Fan Speed\*



If your appliance is equipped with the fan feature, use this function to increase or decrease the amount of heat released into your room. A built-in delay timer will turn the fan on three minutes after your appliance has been running to prevent cool air from being pushed into the room. If the flame is turned off with the fan ON, the fan will continue to run for 12 minutes then shutdown as long as the flame stays off.

Your appliance will remember the previous fan speed setting and automatically adjust to that level 10 seconds after start-up.

## Power Vent\*



Power Vent technology makes it possible to install a gas appliance virtually anywhere. The Power Vent is a fan powered accessory that pulls exhaust from the appliance providing longer and more flexible venting configurations.

A Power Vent is a standard accessory on some products and an option on others. When a Power Vent is detected, a pre-purge of 120 seconds is automatically required. During this time, the power icon is temporarily replaced with 2MIN, 90s, 60s, and 30s, denoting the countdown until the appliance turns on. All other functions, except for TURN FLAME OFF are disabled during this time.

The Power Vent is always ON when the flame is ON. When the flame is turned off, a post-purge time of approximately 20 minutes will occur.

Cold-climate function and battery backup are disabled if a Power Vent is used.

## Temperature Display



You can toggle the temperature display between °F and °C by tapping on the Room Temperature area.

## HOT



This indicates that the appliance is still hot, even when the appliance is off.

## Diagnostics Menu



Tap anywhere in the gray indicator bar area to display all functions below. When red, it indicates an error has been detected.

## Cold Climate



This function turns on a small pilot flame and keeps the air inside your appliance warm while not in use. It is a useful feature in colder weather to minimize condensation on the appliance glass.

**Note:** This feature is disabled when a Power Vent is installed on the appliance.

## Remote Control Battery (RC Batt)



Remote control battery life indicator. If the batteries on your remote are low, a notification will display on the screen asking you to ‘replace remote batteries’.

**\*=Optional Feature**

# INDICATORS

## Backup Battery (Backup Batt)



The battery life indicator is for a backup power source located inside your appliance. It is intended to operate the appliance in the event of a power failure. Consult your owner's manual for your appliance on how to utilize this feature.

Batteries should only be used as an appliance power source in the event of a power outage. Batteries should not be used as a primary long-term power source.

**Note:** Battery backup is not available if a Power Vent is installed.

## Pairing



The green icon indicates that the remote is paired to your appliance and can operate it. If the icon is gray, it is not paired. Please contact your dealer and report this issue.

## Call Dealer - Pilot Flame Error



Your appliance has been disabled. Please contact your dealer and report this issue.

## Call Dealer - Appliance Safely disabled



Your appliance has been disabled. Please contact your dealer and report this issue.

## Call Dealer - Power Vent, Fan, Lights



Your appliance has detected that an accessory is not functional. Please contact your dealer to report this issue.

## Fan will turn on within 3 minutes



Your appliance has a built-in delay that prevents the fan from operating within the first 3 minutes of operating the appliance. This allows the air to be heated to a comfortable temperature before the fan circulates it.

## Remote Control Communication Error



Your remote control is not able to communicate with your appliance. Verify that you have power to your appliance. If there is a power outage, verify that appliance battery backup is fitted with new batteries. After taking these actions, communication can be re-established by pressing the screen to activate the IFT-RC400. It may take several minutes for IFT-RC400 to re-establish pairing.

## Replace Remote Batteries



Your remote batteries are low. Recommend immediate replacement before using remote to control appliance.

## Maintenance



Your appliance will remind you to schedule routine service after 300 hours of Flame ON time is accumulated. When the message below appears on your IFT-RC400 display (with your dealer contact info if originally programmed into the IFT-RC400 installation), please contact your dealer for a 300 hour inspection to ensure your appliance is operating at peak performance.

To reset the 300-hour maintenance reminder:

1. Wake-up your IFT-RC400 control display by touching anywhere on the touch screen.
2. Turn the IFT-RC400 over and insert, press and hold a paperclip type object in the 'P' button hole for at least 10 seconds.
3. Double-beep from the IFT-RC400 will indicate that the remote will reset the 300-hour maintenance reminder.

If the IFT-RC400 300-hour maintenance message does not clear on the first try, repeat above steps.

## 4. Frequently Asked Questions/Troubleshooting

Symptom	Possible Cause	Corrective Action
The appliance does not respond to commands from the IFT-RC400 display does not light up when screen is touched.	Batteries are depleted.	Verify batteries are new.
	Batteries are incorrectly oriented.	Verify batteries are installed in correct orientation as shown on batteries receptacle.
→ The display on IFT-RC400 lights up when screen is touched but it does not respond to commands.	Touchscreen has lost calibration.	Touchscreen needs to be re-calibrated. Call dealer to have screen re-calibrated.
	Child Lock is ON.	Check child lock icon located at the top of the IFT-RC400 display. If ON, it will show as a 'locked' symbol. To unlock, remove battery compartment door, locate child lock switch and move to 'unlock' position. Verify child lock icon on screen is now displayed in 'unlock' position.
The IFT-RC400 displays the following message on-screen: No dealer info available	Dealer information not programmed into remote.	Remote will still provide all available functions, and appliance is fully available for use. Call dealer to have them program the IFT-RC400.
The IFT-RC400 displays the following message on-screen: Call "Dealer Name & Number" to schedule maintenance.	300 hours of use. Appliance is still fully functional.	The appliance has been burning for 300 hours and is due for a regular maintenance. Call dealer to have them perform maintenance.
The room temperature displayed on the IFT-RC400 is either slow or quick to respond while operating in thermostat mode.	IFT-RC400 is placed at a very short distance or too far away from the appliance.	Try to keep the IFT-RC400 close to the appliance but not directly in front of it. The remote acts as the thermostat.
	IFT-RC400 is placed in the path of an air draft or vent.	Move the IFT-RC400 away from the direct path of air flow. The remote acts as the thermostat.
	Flame Modulation	The IFT system is designed to automatically adjust the flame intensity based on the difference between the desired room temperature, and actual temperature. In thermostat mode, the hearth appliance will start in HI flame, but as the actual temperature approaches the desired set temperature on the remote, the flame intensity will automatically decrease. Automatic flame modulation will result in more control of the temperature, but will cause the appliance to cycle OFF/ON less.
The appliance turns OFF the flame after extended periods of operation	9 hour safety shutdown timer	This is normal behavior. The appliance has a safety timer that will automatically turn OFF the flame after nine hours of uninterrupted operation.
IFT-RC400 displays the following message on-screen: Fan will turn on within 3 minutes	Functioning as intended.	The appliance has a three minute delay timer before the fan is turned ON. This allows the air surrounding the appliance to be heated before being pushed into the room.
IFT-RC400 displays the following message on-screen: "Replace remote batteries."	Low batteries in IFT-RC400.	Install new batteries in the IFT-RC400.
IFT-RC400 is displaying an incorrect brand.	IFT-RC400 was programmed incorrectly.	Call dealer to have them program the IFT-RC400 with correct branding. The IFT-RC400 is still fully functional and the appliance is unaffected.
After turning flame ON using IFT-RC400, the flame does not turn ON immediately and instead a two minute timer is displayed.	Power vent is installed on the appliance.	This is expected behavior and the two minute timer is called a pre-purge timer. The flame will turn ON at the expiration of the timer.
IFT-RC400 displays the following message on-screen: "Remote Control Communication Error."	No power to appliance.	Verify home circuit breaker is on and master reset is on (if equipped).
	Power outage.	Install new batteries in battery backup.

## Frequently Asked Questions/Troubleshooting (continued)

Symptom	Possible Cause	Corrective Action
<p>IFT-RC400 displays the following message on-screen: Appliance safely disabled. Call dealer for service.</p> <p>In addition the LED indicator on the IFT-ECM will flash twice red and once green indefinitely.</p>	Ignitor wires (orange) or flame sense wire (white) is shorted to chassis ground.	Verify that pilot sense and ignitor leads are not shorted to chassis ground and the protective covering has not melted or is cut. Replace pilot if necessary.
	IFT-ECM is unable to sense flame due to contamination on flame sensing rod.	Measure pilot sense lead resistance. If more than 1 Ohm, clean flame sensor rod with fine steel wool and measure resistance again. If resistance still > 1 ohm, replace pilot.
	Ignitor and sense wires are incorrectly wired.	Verify that the sense lead (white) is securely terminated to the "S" terminal on the IFT-ECM, and that the ignitor lead (orange) is terminated to the "I" terminal on the IFT-ECM.
	Pilot appears to be 'missing' sparks from the ignitor.	Verify that pilot sparks 8 secs ON, 2 secs OFF, and discharges consistently between the hood and the ignitor electrode. Verify spark gap is 0.095 to 0.135 inches, and adjust if necessary.
<p>The room temperature displayed on the IFT-RC400 is either slow or quick to respond while operating in thermostat mode.</p>	IFT-RC400 is placed at a very short distance or too far away from the appliance.	Try to keep the IFT-RC400 close to the appliance but not directly in front of it.
	IFT-RC400 is placed in the path of an air draft or vent.	Move the IFT-RC400 away from the direct path of air flow.
	Flame Modulation	The IFT system is designed to automatically adjust the flame intensity based on the difference between the desired room temperature, and actual temperature. In thermostat mode, the hearth appliance will start in HI flame, but as the actual temperature approaches the desired set temperature on the remote, the flame intensity will automatically decrease. Automatic flame modulation will result in more control of the temperature, but will cause the appliance to cycle OFF/ON less.
The appliance turns OFF the flame after extended periods of operation	9 hour safety shutdown timer	This is normal behavior. The appliance has a safety timer that will automatically turn OFF the flame after nine hours of uninterrupted operation.
IFT-RC400 does not pair or unpair from the IFT-ECM	IFT-ECM is not connected to its power source	Verify IFT-ECM is connected to power and the three position switch is set to REMOTE. If operating off battery backup, ensure that all four batteries are NEW. Follow pairing process listed in section F.
	Noisy radio environment is preventing IFT-ECM and IFT-RC400 from communicating.	The IFT-ECM and IFT-RC400 operate on the 915MHz radio band. Allow up to 10 minutes for the IFT-ECM and IFT-RC400 to establish contact. If the problem does not get resolved try powering OFF and ON both the IFT-ECM and IFT-RC400 and perform pairing function listed in section 2F.
IFT-RC400 displays the following message on-screen: Fan will turn on within 3 minutes"	Functioning as intended.	The appliance has a three minute delay timer before the fan is turned ON. This allows the air surrounding the appliance to be heated before being pushed into the room.
IFT-RC400 displays the following message on-screen: "Replace remote batteries."	Low battery in IFT-RC400.	Install new batteries in the IFT-RC400.
The flame height on the IFT-RC400 does not appear to be doing anything.	Stepper motor is not connected.	Check if the 4 pin wiring harness from the stepper motor is connected to the IFT-ECM.
IFT-RC400 is displaying an incorrect brand.	IFT-RC400 was programmed incorrectly.	Call dealer to have them program the IFT-RC400 with correct branding. IFT-RC400 is still fully functional and the appliance is unaffected.
After turning flame ON using display, the flame does not turn ON immediately and instead a two minute timer is displayed.	Power vent is installed on the appliance.	This is expected behavior and the two minute timer is called a pre-purge timer. The flame will turn ON at the expiration of the timer.

## Frequently Asked Questions/Troubleshooting (*continued*)

Symptom	Possible Cause	Corrective Action
IFT-RC400 displays the following message on-screen: "Remote Control Communication Error."	No power to Appliance	Verify home circuit breaker is on and master reset is on (if equipped).
	Power Outage	Install new batteries in battery backup.
	IFT-ECM Mode	Verify selector switch in "Remote" mode.
	IFT-ECM Power	Verify IFT-ECM connected to AC adapter and AC adapter is plugged into the Junction Box.
The IFT-ACM does not respond to commands from the IFT-RC400	IFT-ACM was newly installed and not paired.	Refer to Section D7 and make sure that the pairing procedure has been followed especially if the IFT-ACM was newly installed.
	The power cord between IFT-ACM and junction box is disconnected.	Refer to Section D7 and make sure the power cable is properly inserted into the IFT-ACM and the junction box.
	IFT-ACM and IFT-ECM are not latched.	Refer to Section D5 and check the connection between the IFT-ACM and IFT-ECM by making sure they are latched together.
IFT-RC400 display the following message on-screen: Call Dealer Error: Fan	Convection blower malfunction.	Using an RMS voltage meter, check the voltage coming out of the fan port on the IFT-ACM when the fan is set to highest level on the IFT-RC400. If the voltage measured is close to 120V AC then power down the appliance and install a new fan and verify if the issue has been resolved.
	Fuse in IFT-ACM is blown.	Using an RMS voltage meter, check the voltage coming out of the fan port on the IFT-ACM when the fan is set to highest level on the IFT-RC400. If voltage measured is closer to zero, then replace the IFT-ACM itself
	IFT-ACM is not responding to IFT-RC400.	Follow steps listed in the previous symptom.
	Fan is not plugged into IFT-ACM.	Check wiring and connections
	Spade connectors are miswired.	Some Fans may be connected to the IFT-ACM using spade connectors. For safety, turn off the power to the appliance and check to see if the wires on either end of the spade connector do not match in color as they might be miswired.
IFT-RC400 display the following message on-screen: Call Dealer Error: Lights	Ember/backlighting malfunction.	Using an RMS voltage meter, check the voltage coming out of the lights port on the IFT-ACM when the lights are set to highest level on the IFT-RC400. If the voltage measured is close to 120V AC then power down the appliance and install a new light kit and verify if the issue has been resolved.
	Fuse in IFT-ACM is blown.	Using an RMS voltage meter, check the voltage coming out of the lights port on the IFT-ACM when the lights are set to highest level on the IFT-RC400. If voltage measured is closer to zero, then replace the IFT-ACM itself.
	IFT-ACM is not responding to IFT-RC400.	Follow steps listed in the second symptom.
	Lights are not plugged into IFT-ACM.	Check wiring and connections.
	LED controller is not functioning.	Some appliances come with an LED controller that plugs into the Lights port on the IFT-ACM. Verify its wiring and that it is functioning and if not replace it and verify if the problem is resolved.
Lights are blinking and/or fan and Power Vent blowers are fluctuating.	Poor quality of power from local power station.	Check with customer if they are also noticing issues with other unrelated appliances and if other lighting fixtures are also blinking/dimming randomly. If so, install a surge suppressor between the hearth appliance and its power source.

## 5. IntelliFire™ Touch Electronic Control Module (IFT-ECM)

### IFT-ECM Detailed Operating Instruction

1. The Electronic Control Module (IFT-ECM) has a three-position ON/OFF/REMOTE selector switch that must be set for proper operation. See Figure 12. When changing switch positions, it is important to pause in each position for 1-2 seconds.

#### OFF Position:

The appliance will not respond to any commands from a wired wall switch, IFT-RC150 or IFT-RC400 remote controls. The unit should be in the OFF position during installation, service, backup battery installation, fuel conversion and to reset the IFT-ECM in the event the system goes into a LOCK-OUT mode as the result of a system error. When switched to the OFF position while the appliance is operating, the system will shut down.

#### ON Position:

The appliance will ignite and run continuously at the HI flame setting. No adjustment in flame height is possible.

**The IFT-ECM has a safety feature that will automatically shut down the fireplace after 9 hours of continuous operation in the ON position.**

#### Remote Position:

The remote position allows operation of the appliance from a wired wall switch, IFT-RC400 or IFT-RC150 remote controls. The IFT-ECM switch must be in this position to pair the IFT-ECM with the IFT-ACM (if installed), and/or IFT-RC400 and IFT-RC150 remote controls. See the IFT-RC400 or IFT-RC150 installation manual for detailed instructions on pairing the IFT-ECM with the remote controls. After successfully pairing a IFT-RC400, all installed accessories can be controlled by the IFT-RC400 (see IFT-RC400 user manual). The RC150 allows the user to turn ON/OFF the flame in the appliance and activate the Cold Climate mode if desired. The IFT-ECM has a safety feature that will automatically shut down the fireplace after 9 hours of continuous operation without receiving a command from the IFT-RC400 or IFT-RC150.

2. If multiple control options are installed, the IFT-ECM will respond to the last command from the wired wall switch, IFT-RC400 or IFT-RC150. The wired wall switch is NOT available if a Power Vent is used.
3. The Pilot button on the IFT-ECM activates the Cold Climate function of the fireplace. This function lights the pilot flame ONLY to provide enough heat in the firebox to reduce condensation in cool, high humidity ambient conditions. To activate the Cold Climate

press and hold the Pilot button for one second and release. The IFT-ECM will flash two green LED blinks, beep twice and light and rectify the pilot flame when pressed to activate. To turn off Cold Climate, press and hold the Pilot button for one second and release. The IFT-ECM will flash one green LED blink, beep once and shut down the pilot flame. If remote controls are paired with the IFT-ECM, this feature can also be activated with the IFT-RC400 and/or IFT-RC150.

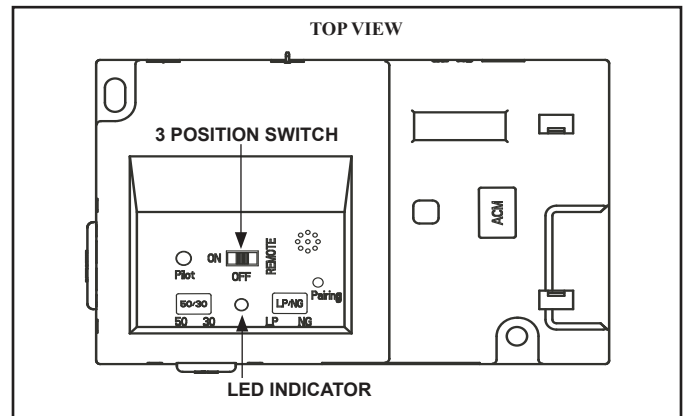


Figure 12. IFT-ECM

4. An IFT-ECM reset is required if the module is in a lock-out condition. When this occurs, the appliance is shut down and the IFT-ECM status indicator LED will be blinking a RED/GREEN error code along with a one-time audible double-beep. If the IFT-ECM is in a lock-out condition, refer to the troubleshooting chart to interpret the error code and take corrective action as required. To reset the IFT-ECM after a lock-out error:

**CAUTION! Risk of burns! Appliance surfaces are hot when operating and during cool down. Use care and wear gloves when opening the front and accessing components inside the appliance.**

- Be aware the appliance may be HOT, use care in accessing the IFT-ECM.
- Set the IFT-ECM 3-position selector switch to OFF position.
- Wait five (5) minutes to allow possible accumulated gas to clear.
- Set the IFT-ECM 3-position selector switch to ON or IFT-REM position. Module will beep once and flash a three GREEN LED code on successful startup.
- If placed in ON position, the appliance will ignite normally if the error condition was corrected.
- If placed in IFT-REM position, use the paired IFT-RC400, IFT-RC150 or wired wall switch to start the appliance; appliance will ignite normally if the error condition was corrected.
- If the IFT-ECM re-enters the lock-out condition after these steps, call your dealer for service.

# **DANGER**



## Risk of Explosion

**DO NOT** cycle the ON/OFF/REM selector switch more than one time within a five minute period. Gas may accumulate in firebox. Call a qualified service technician.

## Troubleshooting

With proper installation, operation and maintenance your gas appliance will provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist a qualified service technician in the diagnosis of a problem and the corrective action to be taken. This troubleshooting guide can only be used by a qualified service technician.

### IntelliFire™ Touch Ignition System

#### Error Codes:

ECM LED Error Codes	Description
3 Red: 1 Green	IFT-RC400 error message: 'Appliance Safely Disabled', pilot sparks for 60 sec, no flame rectification.
2 Red: 1 Green	IFT-RC400 display: 'Error Pilot Flame', pilot valve solenoid not detected.
2 Red: 2 Green	Sparkling feedback signal error, spark coil failure.
5 Red: 1 Green	IFT-RC400 display: 'Error Power Vent' (if installed).

See Troubleshooting matrix for more detail on Lock-out Error Codes, Possible Causes and Corrective Actions.

#### Troubleshooting:

Symptom	Possible Cause	Corrective Action
Pilot won't light, module clicks but no spark 60 sec, 3 Red/1 Green Lock out.	Incorrect wiring.	Verify 'S' (White) sense wire and 'I' (orange) ignitor wire are connected to correct terminals on IFT-ECM.
	Loose connections or electrical shorts in wiring.	Verify no loose connections or electrical shorts in wiring from module to pilot assembly. Verify wire insulation is not damaged. Verify wires are not grounding out to chassis, pilot burner, or any other metal object. Replace any damaged wires.
	Ignitor gap is too large.	Verify spark gap is approximately 0.095" (2.41 mm) to 0.135" (3.43 mm).
Pilot won't light, there is no noise or spark.	No AC power, AC/DC adaptor faulty, backup batteries (if being used) depleted, IFT-ECM slider switch in OFF position.	Verify IFT-ECM slider switch is in ON or IFT-REM position. Verify AC power available to junction box. Verify AC/DC adaptor is plugged into junction box and ECM. Verify AC/DC adaptor output voltage is between 5.7-6.3 Vdc. If battery pack is used, check battery pack voltage is >4.2 V (if not, replace batteries).
	Shorted or loose connection in system wiring or wiring harness.	Verify system wiring configuration. Remove and reinstall wiring harness that plugs into module. Check continuity of wires in valve wiring harness. Replace any damaged components.
	Poor or no system ground.	Verify black ground wire in valve harness is connected to metal chassis of fireplace.
Pilot won't light, there is no noise or spark, 2 Red/1 Green Lockout.	Pilot solenoid not detected.	Check if valve harness orange wire is connected to pilot solenoid valve. Check pilot solenoid resistance, nominal is 40 ohms. If open or shorted, replace valve. Check valve harness wire continuity, if open replace 6-pin harness.
Pilot won't light, there is no noise or spark, 2 Red/2 Green Lockout.	Spark coil failure.	Replace ECM.



## Troubleshooting (continued)

Symptom	Possible Cause	Corrective Action
Pilot sparks for 60 sec, but will not light, 3 Red/1 Green Lockout.	No gas supply.	Verify incoming gas line ball valve is 'Open'. Verify inlet pressure is within requirement for gas type used. Contact gas supplier.
	ECM has poor ground.	Verify wiring, check valve harness black wire is securely grounded to metal chassis.
	Gas valve defective.	Check pilot valve solenoid kick and hold voltages during ignition cycle. Kick V should be >1 V, hold V minimum 0.26 V. If voltages are OK, replace gas valve.
Pilot lights but main burner does not light. Pilot continues to spark for 60 sec then goes into 3 Red/1 Green Lockout.	No flame detected. Flame rectification issue.	Check if white sense lead is securely connected to 'S' terminal of IFT-ECM. Check resistance of sense lead between sense rod tip and connector to IFT-ECM, should be less than 1 ohm - if not, replace pilot assembly. Check system ground, ensure black valve harness wire is securely attached to metal chassis. Check wiring for damage. With system OFF, check resistance between tip of sense rod and pilot hood, should be resistance (>1 M-ohm).
	No flame detected or sense rod contamination.	With glass assembly installed, verify pilot flame is engulfing flame sense rod on pilot assembly. Verify inlet gas pressure is correct for gas type. Polish flame sense rod with fine steel wool to remove any contaminants that may have accumulated.
Pilot lights and rectifies, but main burner does not light.	Main valve solenoid.	Check if green wire in valve harness is connected to green main valve solenoid. Check main valve solenoid resistance, nominal is 60 ohms. If open or shorted, replace valve. Verify valve inlet pressure is correct for gas type.
Pilot and main do not light, ECM goes into 5 Red/1 Green Lockout.	Power Vent (PV) Failure.	Power Vent blower defective - check wiring to IFT-ACM, check if blower is working. Check if PV pressure switch is connected to brown and black wire in 6-pin valve wire harness. Check if pressure switch is closed (shorted) when PV blower is running. Refer to PV troubleshooting instructions.
Appliance lights and runs for a few minutes then shuts down and/or appliance cycle ON and OFF with less than 60 sec of ON time.	Shorted or loose connection in flame detection circuit.	Check if white sense lead is securely connected to 'S' terminal of IFT-ECM. Check resistance of sense lead between sense rod tip and connector to IFT-ECM, should be less than 1 ohm - if not, replace pilot assembly. Check system ground, ensure black valve harness wire is securely attached to metal chassis. Check wiring for damage. With system OFF, check resistance between tip of sense rod and pilot hood, should be resistance (>1 M-ohm).
	Poor flame rectification or contaminated sense rod.	With glass assembly installed, verify pilot flame is engulfing flame sense rod on pilot assembly. Verify inlet gas pressure is correct for gas type. Polish flame sense rod with fine steel wool to remove any contaminants that may have accumulated. Verify no soot deposits are in sense rod to pilot hood gap.
	Logs are set up wrong.	Remove and re-install logs per the log placement instructions.
	Damaged pilot assembly.	Verify the pilot assembly ceramic insulator around the flame sensing rod is not cracked, damaged or loose. Check resistance between tip of sense rod and IFT-ECM connector, should be less than 1 ohm. Replace pilot assembly if damage is detected.

## FCC Compliance Statement:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation of the device.

## FCC Warning

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Caution:** The Federal Communications Commission warns that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## Canadian DOC Notice

This digital apparatus does not exceed the (Class A/ Class B) limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

## Canadian IC Notice

This device complies with RSS-210 of Industry and Science Canada. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Please contact your Hearth & Home Technologies dealer with any questions or concerns.  
For the location of your nearest  
Hearth & Home Technologies dealer,  
please visit [www.hearthnhome.com](http://www.hearthnhome.com).

Hearth & Home Technologies  
7571 215th Street West, Lakeville, MN 55044  
[www.hearthnhome.com](http://www.hearthnhome.com)