**SERVICE SUMMARY**

Refrigeration
US CA

**IMPORTANT! SAVE THESE INSTRUCTIONS**

This information is intended for use by individuals possessing adequate experience in servicing electrical, electronic and mechanical appliances. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

**IMPORTANT SAFETY INSTRUCTIONS!**

CAUTION: This machine must be electrically grounded. It can be grounded through the grounding lead in the 3-prong power cord, if plugged into a properly grounded appliance outlet or through a separate No. 15 (14 gauge (1.5 mm)) or large wire from the cabinet to an established ground. In all cases the grounding method must comply with any local electrical code requirements. Certain internal parts are intentionally NOT GROUNDED and may present a risk of electrical shock only during servicing. To reduce the risk of shock, disconnect the power supply cord before servicing.

CAUTION: ALL TERMINALS AND INTERNAL PARTS SHOULD BE TREATED AS LIVE.

If grounding wires, screws, straps, clips, nuts or washers used to complete a path to ground are removed for supply cord before servicing.

**TECHNICAL ADJUSTMENT**

To adjust compartment temperatures:
1. The PC compartment LED will automatically be illuminated. The temperature will show as a series of LEDs.
2. Use the or to adjust the PC temperature.
3. To adjust the FC compartment temperature press the button once so the FC compartment LED is illuminated.
4. Use the or to adjust the FC temperature.

**TEMPERATURE SETTINGS**

The default set temperatures are shown below:

<table>
<thead>
<tr>
<th>PC</th>
<th>Temperature Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>°C</td>
</tr>
<tr>
<td>PC</td>
<td>-22.0</td>
</tr>
</tbody>
</table>

**ELECTRONIC/ELECTRICAL FAULTS**

Fault codes

- The icon will appear automatically if there is a fault in the temperature measuring system, defrost system, fans or low ambient heater. When the PC door is opened an alarm will sound.
  - The number of beeps will indicate the fault code.
  - Off adding the value of illuminated LEDs will indicate the fault code.

**UNDERSTANDING THE FAULTS**

Fault indicated on Internal control panel

- The temperature LEDs display the fault reading in a binary code.

- The value for each temperature LED (read from right to left)

**VALUE OF FAULTS**

<table>
<thead>
<tr>
<th>VALUE</th>
<th>TABLE OF FAULTS</th>
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<tbody>
<tr>
<td>1</td>
<td>Reason: On last power up, the power module failed self test. Primary action: Replace power module.</td>
</tr>
<tr>
<td>2</td>
<td>Reason: The previous 2 defrost were aborted after 40 minutes. Primary action: Check defrost element.</td>
</tr>
<tr>
<td>3</td>
<td>Reason: The resistance of all the temperature sensors is outside the normal range (+45K Ohms). Primary action: Check the connector at the power module.</td>
</tr>
<tr>
<td>4</td>
<td>Reason: The resistance of all the temperature sensors is outside the normal range (&lt; 660 Ohms). Primary action: Check the connector at the power module.</td>
</tr>
</tbody>
</table>

**INTERNAL LED DISPLAY INTERFACE**

All models are fitted with an internal display which consists of several LED indicators and several capacitive touch buttons. Three versions of the internal display are shown below.

**EXTERNAL LED DISPLAY INTERFACE**

Ice & Water models are fitted with an external display.

- The external display for Ice & Water models

**KEY PRESSURES**

Secondary functions are entered through multiple button presses on the LED display interface. These are:

**FUNCTION**

- **Key Lock**
- **Spanner**
- **Filter change indicator**
- **Sabbath mode**
- **Key Mute**

**KEY PRESSES**

- **Key Lock**
- **Spanner**
- **Filter change indicator**
- **Sabbath mode**
- **Key Mute**

**ACTION**

- **On/Off**
- **Hold for 4 seconds**
- **Reset**

**PRESS TIME**

- 4 seconds

- **FC**

- **PC**

**VALUE**

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Diagnostic mode 1

Optical Download
- This sends encoded data through the Key Lock LED indicator at the top of the display.
- A light pen is required to retrieve information from the power/control module.
- Light Pen (425930) & a laptop computer with F&P Smart Tool diagnostic program installed.

1. Enter diagnostic mode.
2. Scroll to the Optical Download mode by pressing the  button once.
3. Place a light pen over the Key Lock LED indicator until download is complete.
4. Return to normal operation by pressing the  button.

Diagnostic modes 2, 3, 4, 6 and 7

Temperature Sensor Indication
In these modes LED indicators and temperature LEDs are used to show the temperature reading of sensors. The following table shows which LED indicators are used to represent the various temperature sensors.

<table>
<thead>
<tr>
<th>TEMPERATURE SENSORS</th>
<th>LED INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 – PC temp</td>
<td>PC Compartment</td>
</tr>
<tr>
<td>3 – FC temp</td>
<td>FC Compartment</td>
</tr>
<tr>
<td>4 – EV temp</td>
<td>PC + FC Compartment</td>
</tr>
<tr>
<td>6 – PC2 temp/Ambient temp (FD models)</td>
<td>PC compart + Blinking</td>
</tr>
<tr>
<td>7 – Ice tray temp</td>
<td>Ice On/Off</td>
</tr>
</tbody>
</table>

The temperature LEDs display the temperature reading in a binary code.

The value for each temperature LED (°C)

CAUTION!
In reading sensor temperatures there is a need to enter the required diagnostic mode as soon as possible as temperatures will change rapidly once door is opened.

1. Enter diagnostic mode and then scroll to the desired mode using the  button.
2. Add up the binary number indicated by the temperature LEDs.
3. Subtract 40 from the result in order to get the temperature.
4. Return to normal operation by pressing the  button.

Diagnostic mode 5

Input/Output display
The Input/Output Status menu displays what devices (eg light, PC door, FC door, compressor, etc) are currently running or turned on.

In this mode, the state of each peripheral input and output is displayed.

To enter the mode, the steps are:
1. Enter the diagnostic mode.
2. Scroll to the Input/Output mode by pressing the  button 3 times.
3. The respective LED turns on when a device is running, as shown in Fig.1 above.
4. Return to normal operation by pressing the  button.

Diagnostic mode 8

Fault History
The fault history will indicate the last fault that occurred with the appliance. This will be displayed for a period of four days, after which it can only be accessed via optical download.

Fault history is displayed in the same format to normal fault code except the LEDs are not flashing.

Manually force harvest
Press and hold  and  together for 4 seconds then close the door(s). The ice tray will flip. Force another cycle. The ice tray will flip and spill the water into the ice bin. Empty water and replace bin.

Not activating harvest
Check icemaker sensor continuity.

Environmental health and safety

When servicing products, consider safety and health issues and requirements which must be adhered to at all times. Specific safety issues are:

1. Electrical safety.
2. Electrostatic discharge.
3. Vapors while brazing.
4. Reclaiming of refrigerant.

Good practice and safety

1. Take care when removing or servicing any electrical components to avoid electrical shock or short circuit conditions.
2. Take care when removing plastic components at low temperatures as breakages can occur with these components.
3. Extreme heating of plastic components can cause distortion of those parts being heated.
4. Avoid overheating temperature sensitive devices such as the element thermal fuses and cabinet sensors.
5. Avoid using solvents, citrus-based cleaners on all plastic parts. We advise only warm soapy water be used.

If further help is needed concerning this appliance call:
Toll free: 1.888.9.FNP.USA (1.888.936.7872)
Website: www.fisherpaykel.com