

# CM4-S COMPUTER OPERATION (PROGRAMMED FOR CHURCH'S)



## Church's Operation

CM4-S computers on fryers prepared for Church's are specially programmed for use with either the restaurant's chicken or french fried items.

The cooking programs are different and the computers must be set for their intended menu.

The computer is set by the factory to the chicken menu. Follow the instructions at right to set the computer to either menu.

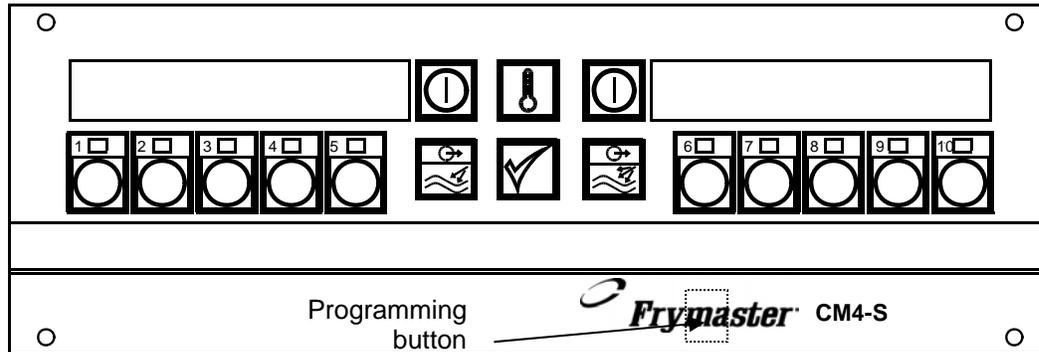


Figure 1: CM4-S Computer

## Setting up the Fryer for Initial Use

Follow these instructions for the initial filling of a new fryer:

1. Boil out the frypot as described on page 5 of this chapter to clear any debris associated with manufacturing.
2. Fill the frypot with liquid shortening to the lower of the two etched marks in the frypot. If using solid shortening, cut the shortening into small squares and pack tightly into the frypot. Lift the elements on an electric fryer to pack the lower frypot. Press the elements into the shortening until they assume their normal position (a safety switch prevents element operation if the elements are not in the "down" position). Continue to pack shortening around the elements until reaching the lower etched line in the frypot. Pack the shortening tightly around and under the tubes of a gas fryer.



### WARNING

Never set a complete block of shortening on top of heating elements or heating tubes. To do so will damage the fryer and void the warranty.

## Setting the Computer for French Fry or Chicken Operation

To set the computer for Chicken, follow these steps:

1. With the display showing OFF. Press the programming key. See Figure 1 above.
2. With the numbered keys, enter 1113. CHICKEN FRYER will be displayed for about 10 seconds and the fryer will return to OFF.
3. Press the ON button. The fryer will begin to heat to setpoint.
4. Press a product key and the LEDs in all programmed product keys will light.
5. When the fryer reaches setpoint the computer will display dashed lines. Press a product button to launch a cook cycle.

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**To set the computer for french fries follow these steps:**

1. With the display showing OFF. Press the programming key. See Figure1.
2. With the numbered keys, enter 1114. *F R E N C H F R Y E R* will be displayed for about 10 seconds and the fryer will return to OFF
3. Press the ON button. The fryer will begin to heat to setpoint.
4. Press a product key and the LEDs in all programmed product keys will light.
5. When the fryer reaches setpoint, the computer will display dashed lines. Press a product button to launch a cook cycle.

**Operating the Fryer after Setting for Church's Operation**

With the computer set for the appropriate menu, product keys will be programmed as indicated in the grids below.

<b>Church's Chicken Menu</b>				
<b>Key</b>	<b>Product</b>	<b>Time</b>	<b>Temp</b>	<b>Filter Count</b>
1	40 pieces, dark meat	15:00	340°F	5
2	40 pieces, white meat	12:30	340°F	5
3	24 pieces or less	15:00	340°F	3
4	Tenders	3:30	340°F	3
5	Steak	4:00	340°F	
6	Wings	7:00	340°F	3

<b>Church's French Fry Menu</b>				
<b>Key</b>	<b>Product</b>	<b>Time</b>	<b>Temp</b>	<b>Filter Count</b>
1	Fries	3:15	360°F	1
2	Fries	3:15	360°F	1
3	Okra	3:30	360°F	1
4	Okra	3:30	360°F	1
5	Pies	6:00	360°F	
6	Bombers	2:00	360°F	
7	Hushpuppies	2:30	360°F	



### Daily operation with the fryer set to either Chicken or French Fry Mode

1. Turn the fryer on by pressing the  button on the computer.
2. The display will show *L O W* as the fryer enters a melt cycle, slowly heating the shortening.
3. When the fryer reaches setpoint, dashed lines appear on the computer display.
4. Press a product key for the desired product.
5. The cook cycle begins. Self-canceling alarms sound, indicating the product should be shaken, at preset points in the cook cycle.
6. *D O N E* is displayed on the computer at the end of the cook cycle.
7. Press the product button to end display.

### Filtration

The filter pan must be clean before beginning filtration. Follow these steps to prepare the filter pan for filtration:

1. Open fryer cabinet doors and remove the pan from the fryer cabinet.
2. Lift filter-leaf assembly from pan.
3. Separate filter-leaf components, clean, and dry thoroughly.
4. Clean pan interior.
5. Clean the crumb tray and place debris in a fireproof container.
6. Replace filter pan lids and return filter pan to fryer cabinet.
7. Ensure the connection to the fryer's oil-return line is properly connected.
8. Close fryer cabinet doors.

### Computer Prompts for Filtration

The computer display will flash *F I L T E R* at the completion of a cook cycle, indicating the fryer has completed a preset number of cook cycles and must be filtered. Follow these steps to filter the fryer. The fryer must be at operating temperature to filter.



#### **WARNING**

Hot oil is extremely dangerous.  
Wear proper protective clothing and use caution.

1. Computer flashes *F I L T E R*.
2. Leave the computer ON.
3. Ensure the filter pan is empty, and the filter screen assembly is clean and in place. Ensure the connections are properly connected.
4. Use the fine mesh skimmer to remove large particles and debris from shortening prior to draining frypot. Pour 12 ounces by volume of Magnesol filter powder into the vat. Stir the filter powder into the shortening with the fine mesh skimmer.
5. Open the drain valve by pulling (gas fryers) or lifting (electric fryers) the red-handled lever in the fryer cabinet. As the shortening drains, use a metal scraper to gently remove debris from walls above shortening level in frypot.



6. *OPEN DRAIN* is displayed on the computer. Shortening flows from the frypot to the filter pan.
7. While the frypot is draining, connect the rinse hose to the connection inside the filter cabinet. After all shortening has drained, remove the frypot wire rack. Use a dry scrub pad to clean the walls of the vat.
8. Position the hose nozzle inside the frypot. Turn the blue-handled lever in filter cabinet to "WAND" to start the 3-minute rinse process. Do not remove the hose nozzle from frypot during the rinse process.
9. Hold the hose nozzle at a 45-degree angle towards the back of the frypot. This washes debris towards the drain valve and helps prevent the drain valve from becoming clogged. Rinse the frypot for approximately 2-½ minutes (allow 30 seconds to disconnect and drain the hose wand). Turn blue-handle to OFF, disconnect and drain rinse hose into the filter pan.
10. At 3 minutes after opening the drain valve, the computer display will alternate between *OPEN DRAIN* and a countdown of the filtering time. Replace the frypot wire rack before continuing.
11. Turn the filter pump on by pulling the yellow-handled lever that coincides with the frypot being filtered. Leave the drain valve open. Allow the shortening to circulate through the frypot for the remainder of the 10-minute cycle. This process is known as "Polishing".
12. At the completion of the filter cycle, the computer display will change to *FILL*.
13. Close the drain valve by pushing (gas fryers) or pressing down (electric fryers) the red-handled drain valve lever. The frypot will fill.
14. As the filter pan is emptied, bubbles will form in the frypot. An audible alarm sounds when the frypot is full.
15. Press in the yellow-handled filter pump handle, which shuts off the filter pump. Add new shortening to bring level to the upper OIL LEVEL line. Remember, the shortening is at operating temperature.
16. Press the  button. The fryer will return to operating temperature. Continue to filter other frypots as needed until finished.

### Delaying Filtration

The filtration can be delayed, if necessary, by following these steps.

1. At the completion of a cook cycle, the computer display flashes *FILTER*.
2. Press the  button to turn computer OFF.
3. Press the hidden programming button. See Figure 1.
4. *CODE* is displayed on the left side of the computer.
5. Enter 1111 with the numbered keys. The display changes to a steady display of *FILTER*.
6. Cook cycles can be launched, however, *FILTER* will be displayed until a filter operation is completed.



Never drain more than one fryer at a time. The filter pan will overflow. When unclogging a valve, do not insert anything into the drain from the front. Hot oil will rush out, creating an extreme hazard.



The crumb tray must be emptied into a fireproof container at the end of frying operations each day. Some food particles can spontaneously combust if left soaking in certain shortening material.



## Canceling Filtration Prompt

The filtration can be eliminated, if necessary, by following these steps. This process zeros the filter count

1. At the completion of a cook cycle, the computer display flashes *FILTER*.
2. Press the  button to turn computer OFF.
3. Press the hidden programming button. See Figure 1.
4. *CODE* is displayed on the left side of the computer.
5. Enter 1119 with the numbered keys.
6. CLR FLTR FUNCTION flashes in display and computer displays OFF
7. Turn the computer on to continue cooking.

**Note:** Using the 1119 code zeros out the cook count, which triggers a filter prompt. A filter prompt will not reappear until the cook count reaches the preset number for a filter prompt.

## Boil Out

Boil out is necessary before using a fryer for the first time and at prescribed times as part of preventive maintenance. Follow these steps to boil out a frypot:

1. Ensure the shortening is at operating temperature.
2. Press the  button to turn computer OFF.
3. Pull (gas fryers) or lift (electric fryers) the red-handled drain-valve lever. The shortening will flow into the filter pan.
4. Close the drain valve when all shortening is drained.
5. Ensure the Shortening Disposal System is connected and working properly. Turn the blue handle in the filter cabinet to DISPOSE to dispose of spent shortening in the filter pan. Ensure all shortening is pumped from filter pan and lines before turning blue handle to OFF. Remove and thoroughly clean filter pan and components. Do not replace filter pan until boil-out procedure is completed.
6. Fill the frypot to the top OIL LEVEL line with clean water.
7. Pour in boil-out cleaning detergent.
8. Press the hidden programming key on the computer (See Figure 1).
9. *CODE* appears on the left display of the computer.
10. Enter 1115.
11. *BOIL OUT* appears in the left display. *PRESS CHECK TO START* appears in the rights display.
12. Press the  button.
13. *BOIL OUT* appears in the left display; a time display, which starts at 30:00



### DANGER

Never leave the fryer unattended during boil out. If the boil-out solution boils over, turn the computer off immediately and let the solution cool before resuming the process.



### WARNING

Do not drain boil-out solution into the built-in filtration system. It can damage the filter pump.

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appears in the right and counts down the boil out.

14. The water/detergent solution heats to 195°F.
15. The computer displays *D D N E* and beeps at the end of the boil out.
16. Press the  button to turn computer OFF.
17. Drain the boil-out solution into stockpot capable of holding contents of the frypot and
18. Rinse frypot with clean water, stockpot and dry the frypot.
19. Fill with fresh shortening to the LEVEL line on the back of the
20. Press the  button to turn the computer ON. The oil will reheat.

 **DANGER**

Remove all drops of water from the frypot before filling with oil. Failure to do so may cause spattering of hot liquid when the oil is heated to cooking temperature.

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