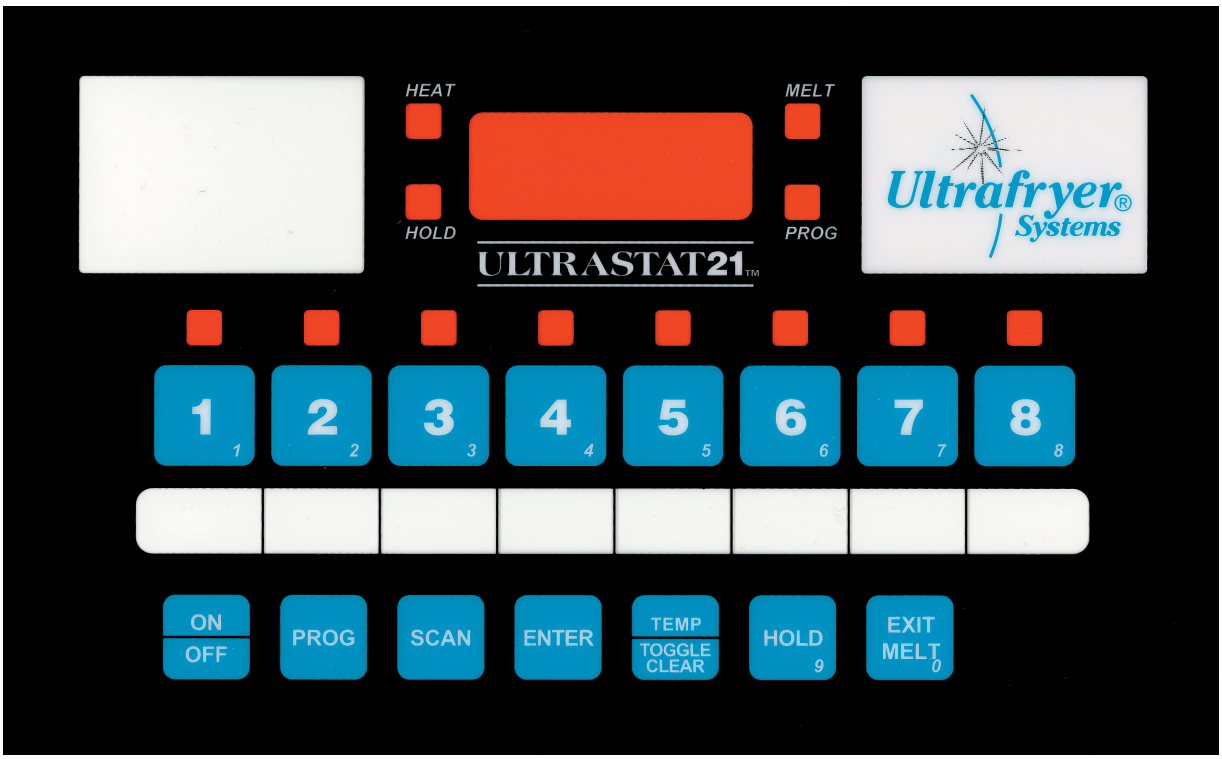
Ultrafryer® Systems



ULTRASTAT21

Ultrafryer Computer Operation Instructions

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PREFACE

This manual was written and published by the Technical Publications Department, Ultrafryer Systems, for use by store personnel who operate an Ultrafryer Fryer equipped with the Ultrastat21 Cooking Computer. This manual complements and should be used in conjunction with the Ultrafryer Fryer Maintenance and Repair Manual provided with each Ultrafryer Fryer.

TECHNICAL PUBLICATIONS DEPARTMENT
ULTRAFRYER SYSTEMS
302 Spencer Lane
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NOTE: This manual is applicable to both Electric and Gas Fryers equipped with an Ultrastat 21 Cooking Computer.

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I. INTRODUCTION

This computer is designed to simplify the timing process and allow operators to spend more time with customers and other important responsibilities. Quality control of cooked products is assured through the various features, notification displays and alarms designed into the computer.

A. SAFETY - The Ultrastat21 Cooking Computer operates on 24 volt single phase electrical power, and like other electrical equipment, should not be operated with wet hands or while standing in water. Water should NEVER be sprayed on or at the computer, as there is a danger of electrical shock and / or serious damage to the computer circuitry. Should the computer accidentally be sprayed with water, 1) IMMEDIATELY turn the Power OFF at the Main Power Switch and, 2) IMMEDIATELY contact a qualified service agent to check the computer. The Computer is located in close proximity to hot liquid shortening and care must be taken to avoid serious burns. The floor in front of, and area around the fryer should be kept clean and dry. Whenever anything is put into a cooking vat, care should be taken to not splash the hot shortening. Products should always be "placed" into the shortening, not thrown.

B. SAFE CLEANING PROCEDURE - Before performing any cleaning routine, electrical power to the Ultrastat 21 cooking computer should be turned OFF at the Main Power Switch. A SLIGHTLY dampened cloth may then be used to clean any debris from the face of the computer. DO NOT USE any cleaner or de-greaser solvent as they may mar the face or damage the internal circuitry of the computer. Any questions regarding correct cleaning procedures should be directed to the Customer Service Department at 1-800-525-8130.

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II ULTRASTAT21 COOKING COMPUTER

A. COMPUTER FEATURES

1. Programmable Stage Times
The user will have the ability to program certain cook times in each stage of a cook cycle for each product key. The computer is programmable in minutes (up to 59) and seconds (up to 59).

NOTE: Multiple cook starts are not allowed if a product key has more than one stage programmed.

2. Programmable Stage Temperatures
The user will be able to program certain cook temperatures in each stage of a cook cycle for each product key. The valid temperature range is 250 to 390°F (121 to 199°C).

NOTE: The user will be able to program from one (1) to ten (10) stages in a cook cycle for each product key.

3. Programmable Timing Mode
The user will be able to program the timing mode (flex or straight) for each product key. If a product is configured for flex time, the computer will adjust the actual cook time taking into consideration the temperature variation due to load size, initial product temperature, product moisture content, and other factors affecting the cook cycle, to insure the computer provides consistent, high-quality product. Under straight time mode, the computer will cook only for the specified time without adjusting for these variations.

4. Programmable Action Alarms
The user will be able to program up to three action alarms on each product key. An action alarm is an indication to the operator to perform some action at a pre-programmed time.

5. Programmable Hold Times
Product key hold times can be programmed to track product quality through its specified holding period. Hold time countdown begins as soon as the cook cycle is complete. The computer will sound an alarm when the product's hold time has expired alerting the user to discard the product.

6. Programmable Hold Time Linking
Each product key can be linked to an independent hold timer or multiple product keys can be linked to a single hold timer.

7. Programmable Filter Lockout Cycle Count
The user will be able to program a single filter lockout cycle count (valid range is 0 to 50) for each product key. To disable filter lockout, enter 0 for lockout cycle count.

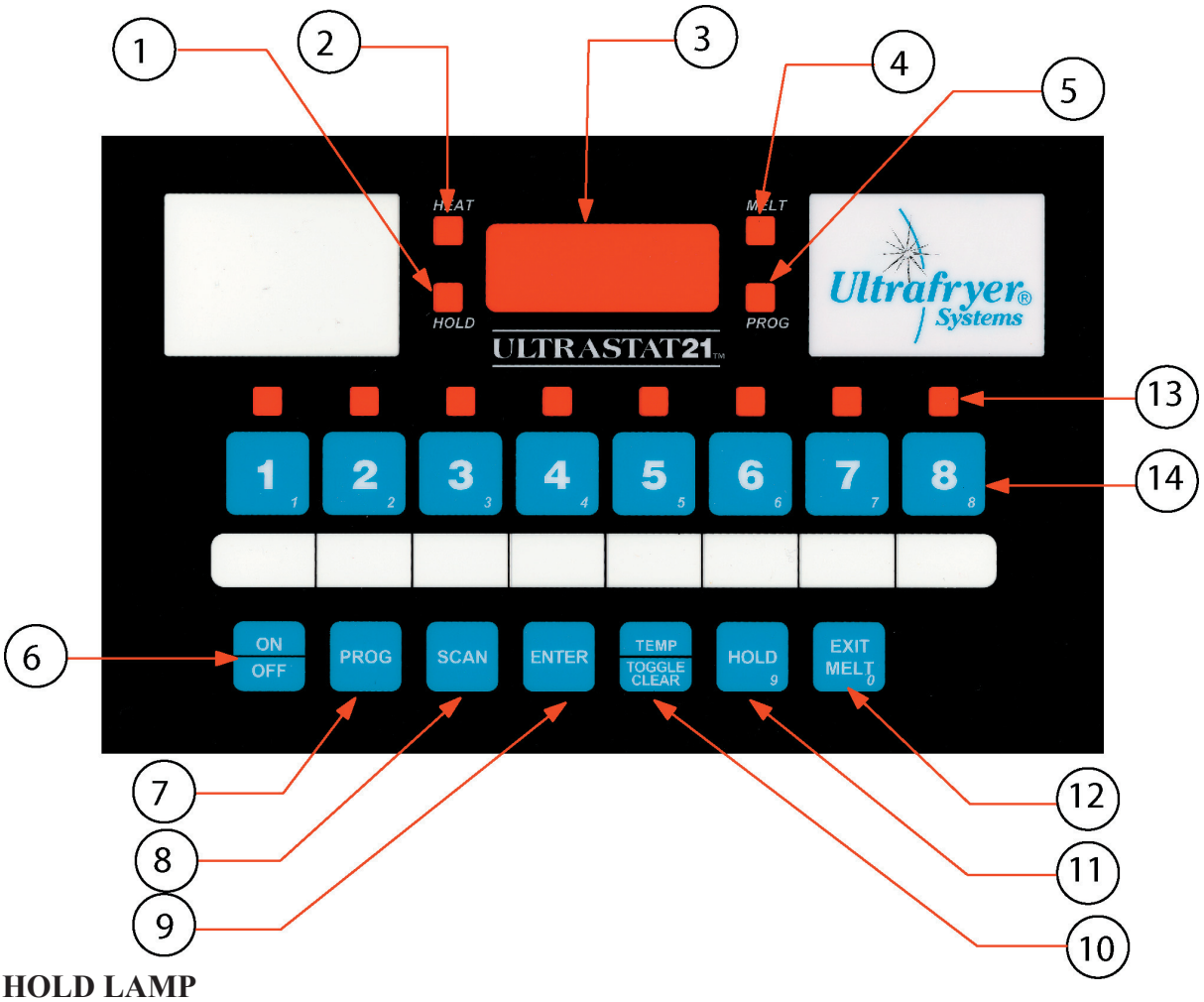
8. Automatic Least Hold Display
The product with the least amount of remaining cook time will be shown in the display. Pressing and holding the SCAN key allows you to view each product's remaining cook time.

9. Melt Cycle

When the computer is ON and the vat temperature is below the Melt Limit Temperature, the computer will control the melting of the shortening. After the vat temperature is above the Melt Limit Temperature, the user may press the "EXIT MELT" key to enter normal cooking mode. Each time the computer is turned ON, it will automatically enter the Melt Cycle and must again be overridden by pressing the "EXIT MELT" key.

CAUTION: IT IS ABSOLUTELY IMPERATIVE THAT THE USER CHECK TO SEE THAT THE HEAT MECHANISM IS COMPLETELY COVERED WITH "LIQUID" SHORTENING BEFORE PRESSING THE "EXIT MELT" KEY. FAILURE TO DO SO COULD RESULT IN PERSONAL INJURY AS WELL AS DAMAGE TO THE FRYER.

B. COMPUTER PANEL KEY DESCRIPTIONS



1. HOLD LAMP

When lit (bright) indicates a product hold time is being tracked.

2. HEAT LAMP

When lit (bright) indicates the computer is calling for heat.

3. DISPLAY

Displays modes, functions and operations of the computer.

4. MELT LAMP
When lit (bright) indicates the computer is in the melt cycle.

5. PROGRAM LAMP
When lit (bright) indicates the computer is in the program mode.

6. ON/OFF KEY
Turns the computer ON and OFF when the fryer power switch is in the ON position and the drain valve lever is in the closed UP position.

7. PROGRAM KEY
a. In "operating" mode, allows access to the programming mode.
b. In "programming" mode, allows access to the operating mode.

8. SCAN KEY
a. In "operating" mode, displays the remaining cook time on every product currently in a cook cycle and lights the respective products "LED" for 2 seconds.
b. In "programming" mode, steps to the next function to be programmed.

9. ENTER KEY
In "programming" mode, used to accept the information and "enter" it into the computer memory.

10. TEMP/TOGGLE CLEAR KEY
a. In "operating" mode, displays the actual temperature followed by the programmed "set" temperature.
b. In "programming" mode, allows the user to "toggle" (switch) between choices in an entry field and "clear" values from a data field.

11. HOLD KEY
a. In "operating" mode, used to view remaining hold times.
b. In "programming" mode used to enter numerical value 9.

12. EXIT/MELT KEY
a. In "operating" mode, used to manually exit the shortening melt cycle.
b. In "programming" mode, used to enter numerical value 0.

13. PRODUCT LED
a. When lit (bright) in the "operating" mode, identifies the product data being displayed.
b. When let (bright) in the "programming" mode, identifies the product being programmed.

14. PROGRAMMING AND PRODUCT COOK KEY
a. In "operating" mode, used to start and stop a product's cook cycle.
b. In "programming" mode, used to enter numerical values 1 to 8.

C. DISPLAY DESCRIPTIONS

The unit is in the Operating Mode. The actual vat temperature is more than 10ºF (5ºC) below the programmed vat temperature.

The unit is in the Operating Mode. The actual vat temperature is within the proper cooking temperature range. The vat is ready to start a cook cycle.

The unit is in the Operating Mode. The actual vat temperature is more than 40ºF (22ºC) degrees above the programmed vat temperature. A continuous audible alarm sounds simultaneously.

The computer probe is either open or shorted; accompanied with an audible alarm, if shorted. Check or replace the probe.

The unit is in the Operating Mode and a cook cycle is in process.

The unit is in the Operating Mode and a cook cycle has been completed.

The unit is waiting for a pass code to be entered.

The unit is in the Product Key Programming Standby Mode.

A stage cooking time (1-10) is displayed.

A stage cooking temperature (1-10) is displayed.

A stage timing mode (1-10) (flex or straight) is displayed.

Product key action alarm programming standby mode.

The action alarm status is displayed.

The unit is in Product Key Filter Lockout Programming Standby mode

After the fryer is filtered, this display prompts you to refill the fryer with shortening.

D. OPERATING THE COMPUTER

1. Starting a Cook Cycle

To start a cook cycle, simply press the product key 

for the product you wish to cook. If the product key is programmed, the correct cooking time will be displayed 12:00 (example) and this time will immediately start to count down in minutes and seconds. If donE is displayed immediately and the unit starts to signal, the key being operated is not programmed. If correctly programmed, it will count down to :00 followed by donE and start to signal.

Cancel this signal by pressing, 

and holding for 3 seconds, the same cycle product key used to start the cook cycle.

2. Action Alarms

If the unit is programmed with action alarms, the action alarms will signal at a preset time during the cooking cycle :30 (example). This signal, a dual rhythm beeping, will last 5 seconds and then self-cancel. The display will flash the action alarm time and the unit will then start counting toward :00 .

3. Holding Timers

If the unit is programmed with holding times, they will automatically start counting upon expiration of the cooking cycle.

When there are active hold times, the HOLD indicator will be lit. To view all active hold times, press and hold the 

key. Upon expiration, the timer will display HLd 1 and pulse with an audible tone.

To cancel, press the 

key.

To view the hold time with the least amount of time remaining, press the 

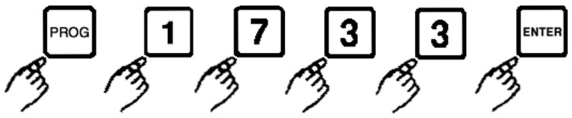
key.

4. BOIL MODE

CAUTION: PLEASE CONSULT AND FOLLOW THE ENCLOSED GUIDELINES IN SECTION III E FOR BOILING OF THE FRY VATS.

The boil function accurately maintains the fryer temperature at 190ºF (88ºC) to assist in the cleaning of fry vats. To start the boil process, turn the appliance OFF. Empty the fry vat of shortening. Once the vat is emptied of shortening and refilled with cold water, the computer and fryer may now go into boil.

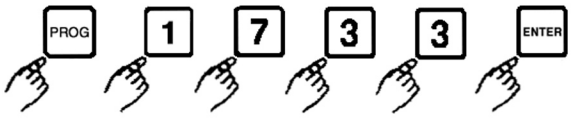
To Enter Boil Mode:



The fry vat will maintain a temperature of 190ºF (88ºC) to allow the boil function to be performed.

Note: The fry vat must be below a temperature of 200°F (93°C) to enter the boil mode.

To Exit Boil Mode:



Turn the appliance off. The computer will no longer have [boiL] in the display.
Empty the water from the vat, wipe all remaining water from the vat. Once dry, refill the vat with shortening following procedures in paragraph B1 below.

CAUTION: Refill the vat with shortening ONLY when it is completely dry.

5. FILL MODE

If the unit is programmed for filter lockout, the FLtr display will appear after the pre-programmed number of cook cycles allowed and the computer will stop operating until the fryer is filtered. After filtering the display will read FiLL.
At this time, the fryer MUST be refilled with shortening.
When this step is complete, press ENTER to resume normal operations.

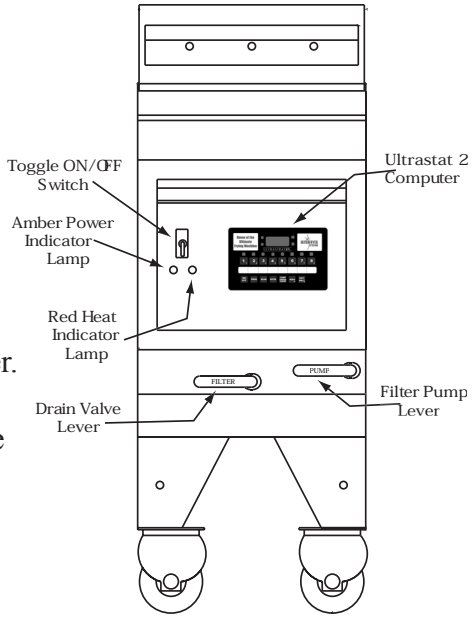
III ULTRASTAT21 COMPUTER OPERATING INSTRUCTIONS

A. TURNING THE ULTRASTAT21 COMPUTER ON/OFF

To operate the Ultrafryer, BOTH the Ultrafryer Toggle ON/OFF switch and the Computer ON/OFF Key must be in the ON position.

NOTE: The Ultrafryer Drain Valve Lever must be in the closed **COMPLETELY UP** position to turn the computer **ON**.

1. **TOGGLE ON/OFF SWITCH**
   a. The Toggle On/Off switch is located in the upper left hand corner of the front access panel of the Ultrafryer. When this switch is **OFF**, shortening can be **FILTERED** but the Computer **CANNOT** be turned **ON**. When this switch is **ON** the Computer can be turned **ON** but shortening **CANNOT** be filtered.
   b. To turn the Ultrafryer **ON**, turn the Toggle ON/OFF SWITCH to the **ON** position. The **AMBER** Power Indicator Lamp will **LIGHT** and **OFF** will appear in the DISPLAY of the Computer.



NOTE: The Ultrafryer Heat Mechanism cannot be activated when the Computer is **OFF**.

2. **TURNING THE COMPUTER ON**
   To turn the Computer ON the Ultrafryer Toggle ON/OFF Switch must be in the **ON** position and the Drain Valve Lever must be in the closed **UP** position.
   a. The Computer Toggle ON/OFF Key is located in the lower left corner of the Computer panel.
   b. To turn the Computer **ON**, press the ON/OFF Key, the **MELT** lamp will **LIGHT** to indicate the computer is in the **SHORTENING MELT MODE**; and the **RED HEAT** lamp will cycle **ON** and **OFF** indicating the Heat Mechanism is being periodically turned **ON** and **OFF** to gently heat the shortening.

3. **TURNING THE COMPUTER OFF**
   The Computer can be turned **OFF** as follows:
   a. Turn power to the Ultrafryer **OFF** by turning the Toggle ON/OFF switch to the **OFF** position.
   b. If a "Cook Cycle" **HAS NOT** been activated, simply push the Computer's **ON/OFF** Key.
   c. If the Computer **IS IN** a "Cook Cycle", push the Computer **ON/OFF** Key and **HOLD IT FOR 4 SECONDS.**

NOTE: When the Computer is **OFF**, the Heat Mechanism **CANNOT** be activated.

B. MELTING SHORTENING

Each time the Computer is turned **ON**, it will enter the **SHORTENING MELT MODE**. This mode is used to "gently" melt **SOLID** shortening in a vat after BOIL-OUT as well as **CONGEALED** shortening in a vat prior to store opening. While the Computer is in this mode it will periodically turn the Ultrafryer Heat Mechanism **ON** and **OFF** to gradually warm the shortening.

NOTES: 1) The Computer will keep the Ultrafryer in the **MELT CYCLE** until the operator **MANUALLY** pushes the **EXIT MELT** key.

2) The Computer **CANNOT** be taken out of the **SHORTENING MELT MODE** until the shortening temperature reaches the **MELT LIMIT TEMPERATURE**. The Melt Limit Temperature is factory set for a **HIGH** exit temperature (**135ºF (57ºC**)) or a **LOW** exit temperature **(75ºF (29ºC))** according to the customer's specifications. Once the Melt Limit Temperature is reached the Melt Mode may be canceled by pushing the **EXIT MELT** Key.

3) The following **MELT CYCLE OPTION**, which determines the amount of time the **HEAT MECHANISM** is turned **ON** and **OFF** to gently melt shortening, are factory set based on the type of fryer equipped with an Ultrastat 21 Cooking Computer.

TYPE FRYER	MELT CYCLE OPTION
Ultrafryer Model EU Electric, ZRT Express or ZRT Counter Top Electric Fryer	**E -** Heat Elements are turned **ON** for **FOUR (4)** seconds and **OFF** for **36** seconds
Ultrafryer Model Par-2 Gas Fryer	**G -** Burners are turned **ON** for **EIGHT (8)** seconds and **OFF** for **32** seconds
Ultrafryer Model Par-3, ZRT Express or ZRT Counter Top Gas Fryer	**P -** Burners are turned **ON** for **12** seconds and **OFF** for **28** seconds

WARNING: DO NOT PUSH THE "EXIT MELT" KEY UNTIL THE VAT IS CHECKED TO ASSURE THE HEAT MECHANISM IS "COMPLETELY" COVERED WITH LIQUID SHORTENING.

1. **MELTING SOLID SHORTENING -** The preferred method of heating solid shortening in a computer equipped fryer is as follows:
   a. Cut a block of solid shortening into small pieces.
   b. **PACK** small pieces of solid shortening between, below and above the **HEAT MECHANISM.** While packing solid shortening is messy and time consuming, it is the fastest way to melt solid shortening.
   c. Turn the Ultrafryer Toggle ON/OFF Switch **ON**; then place the Computer in the **SHORTENING MELT MODE** by pressing the **ON/OFF** key. The **MELT** lamp will **LIGHT** to indicate the Computer is in the **SHORTENING MELT MODE**; and the **RED HEAT** lamp will cycle **ON** and **OFF** indicating the Heat Mechanism is periodically being turned **ON** and **OFF** to gently heat the shortening.
   d. When the heat exchanger tubes are **COMPLETELY** covered with **LIQUID** shortening and the shortening is **ABOVE** the Melt Limit Temperature, replace the grill in the fryer vat; then push the **EXIT MELT** key on the Computer.

WARNING: DUE TO THE LOCATION OF THE COMPUTER'S TEMPERATURE PROBE, IT IS POSSIBLE FOR THE SHORTENING LEVEL TO BE ABOVE THE PROBE WITHOUT COVERING THE HEAT MECHANISM. THEREFORE, VISUALLY CONFIRM THAT LIQUID SHORTENING IS AT LEAST TWO (2) INCHES ABOVE THE HEAT MECHANISM BEFORE PRESSING THE EXIT MELT KEY.

   e. Continue adding solid shortening as follows:
      1) Place small pieces of solid shortening into a fry basket.
      2) **CAREFULLY** lower the basket into the fryer vat.
      3) **GENTLY** turn the basket to allow these pieces of solid shortening to float away.
      4) Repeat the above steps until liquid shortening is even with the middle line of the **"E ⟵ "** in the word **LEVEL** of the applicable shortening level mark on the rear wall of the fryer vat.

2. **WARMING CONGEALED SHORTENING -** Each morning when the Ultrafryer and Computer are first turned **ON**, the Computer will be in the **SHORTENING MELT MODE** and the Ultrafryer Heat Mechanism will be turned **ON** and **OFF** to gradually warm congealed shortening to the **MELT LIMIT TEMPERATURE**. When shortening temperature rises to the Melt Limit Temperature the operator can push the **EXIT MELT** key to heat shortening to its **PRESET** temperature.

C. OPERATING THE COMPUTER

1. COOKING FEATURES

NOTE: COOKING TIME, TEMPERATURE, TIMING MODE (FLEX / STRAIGHT), ACTION ALARMS and **HOLDING TIME** are factory set according to the customers' specifications.

a. PROGRAMMED STAGED TIMES/TEMPERATURES - Some Computers are pre-programmed with a **STAGED COOK CYCLE** for cooking chicken. When the Computer is in a **STAGED COOK CYCLE** it controls the Ultrafryer so shortening is heated to a **CERTAIN TEMPERATURE** at a **CERTAIN TIME** in the cook cycle. For example a product key would be programmed as follows:

SETTING	TIME	TEMPERATURE
1	14:00	330ºF / 166ºC
2	13:55	305ºF / 152ºC
3	6:00	310ºF / 154ºC
4	4:00	320ºF / 160ºC
5	2:00	330ºF / 166ºC

The **SETPOINT** temperature of that product key is **330ºF (166ºC)**. When product is dropped the shortening temperature will DROP and the Computer will control the Ultrafryer to maintain shortening temperature at **305ºF (152ºC)** for about **7 MINUTES** (13:55 to 6:00 in the cook cycle). At the end of **8 MINUTES**, the Computer will control the Ultrafryer to increase shortening temperature to **310ºF (154ºC)** for **2 MINUTES** (8:00 to 10:00 in the cook cycle). At the end of **10 MINUTES**, the Computer will control the Ultrafryer to increase shortening temperature to **330ºF (166ºC)** for the last **2 MINUTES** of the cook cycle (12:00 to 14:00).

NOTE: These times and temperatures are examples **ONLY** and **ARE NOT USED BY ANY KNOWN COMMERCIAL RESTAURANT.** Multiple products **CANNOT** be simultaneously cooked in a fryer vat programmed for a **STAGED COOK CYCLE** because a staged cook cycle requires a fryer to be at a **CERTAIN TEMPERATURE** at a **CERTAIN TIME** in the cook cycle.

b. MULTIPLE COOK TEMPERATURES - Computers can be programmed with **COOK CYCLES** that require different shortening temperatures for different products cooked in a fryer vat. For example, **PRODUCT KEY 1** could have a **SETPOINT** temperature of **330ºF (166ºC)** and **PRODUCT KEYS 2, 3** and **4** could have a **SETPOINT** temperature of **350ºF (177ºC).**

NOTE: When the Ultrafryer and Computer are first turned **ON**, shortening in that fryer vat will be heated to the **LOWEST** SETPOINT temperature **330ºF (166ºC)**. If a product requires the **HIGHER** SETPOINT temperature, press the Product Key for that product.

c. FLEX/STRAIGHT TIME MODE - Some Computers are pre-programmed for the **FLEX** time mode and others are set for the **STRAIGHT** time mode. The **FLEX** time mode automatically adjusts the **COOK TIME** taking into consideration: 1) shortening temperature drop when the product is placed into the shortening, 2) initial product temperature, 3) product moisture content and 4) other factors affecting the cook cycle to insure a consistently high quality product is cooked. In **FLEX** time the computer displays **"FLEX"** time rather than **"STRAIGHT"** time. In the **STRAIGHT** time mode, a product is cooked for the amount of time the Computer has been programmed without any variation of time.

NOTE: When **FLEX TIME MODE** is being used the **TIME** being displayed will appear as if it were **REAL TIME** elapsing, but this time is running **SLOWER** or **FASTER** than real time depending on whether the **ACTUAL** temperature is below or above the setpoint temperature.

d. FILTER LOCKOUT - A Computer can be programmed for **FILTER LOCKED** for one or more product keys which would occur after **1 TO 50** cook cycles. If this feature is used FLtr would appear in the display after the pre-programmed number of cook cycles and the Computer **CANNOT** be operated until the fryer shortening is filtered. After shortening has been **FILTERED** the display will read FiLL and the fryer **MUST** be refilled with shortening. When shortening has been replaced in the fryer vat press ENTER to resume normal operations.

2. COOKING - When the Computer is taken out of the **SHORTENING MELT MODE** each morning, shortening in the fryer vat will be heated to its **SETPOINT** temperature and **"LO"** will appear in the display to indicate the shortening temperature is **MORE** than **10ºF (4ºC) BELOW** the setpoint temperature. When shortening temperature rises to the **SETPOINT** temperature ---- will appear in the display indicating a **COOK CYCLE** can be started.

a. STARTING A COOK CYCLE- 1 To start a cook cycle simply press the product key for the product you wish to cook. If the product is programmed, the correct cooking time will be displayed 12:00 (example) and this time will immediately start to count down in minutes and seconds. If donE is displayed immediately and the unit starts to signal, the key being operated is not programmed. If correctly programmed, it will count down to :00 followed by donE and start to signal. To turn this signal **OFF** and reset the Computer, press the 1 product key used to start the COOK CYCLE.

b. CANCELLING A COOK CYCLE - If a cook cycle was inadvertently started it may be cancelled two (2) ways:

1) Press and hold the same product key 1 used to start the cook cycle for **4 SECONDS**. This prevents an accidental cancelling of a cook cycle while a product is being cooked.
2) A cook cycle can be **CANCELLED** at any time by turning the Ultrafryer Toggle ON/OFF Switch to the **OFF** position.

c. ACTION ALARMS - Some Computers are pre-programmed for **ACTION ALARMS** when cooking certain products to alert the operator it is time to take some action such as stirring the product. When this feature is used; the Computer will alert the operator with a **DUAL RHYTHM BEEPING** that will last for **5 SECONDS** then self-cancel, and the display will flash the first **ACTION ALARM TIME** then continue counting towards the next action alarm time. For example, a product key could be programmed with three (3) action alarms:

PRE-ALARM	TIME	OCCURRENCE TIME IN A 14 MIN. COOK CYCLE
1	9:00	5:00
2	6:00	8:00
3	3:00	11:00

The first action alarm would be signaled when the Computer counts down to 9:00 (5 minutes after start of the cook cycle), the second alarm would be signaled when the Computer counts down to 6:00 (8 minutes into the cook cycle), and the last signal would occur when 3 minutes is left in the cook cycle (11 minutes into the cook cycle).

d. HOLDING TIMERS - Computers can be programmed with up to three (3) **HOLDING TIMES**. When this feature is used, the Computer will automatically start counting upon conclusion of the **COOK CYCLE**. For example, if a Computer has been programmed for one (1) holding time; the **HOLD** lamp will be lit to indicate a **HOLDING TIME** is being tracked. When the holding time has expired HLd 1 will appear in the display and an audible tone will be emitted to alert the operator. To **CANCEL** the audible tone and extinguish the hold lamp press the HOLD key.

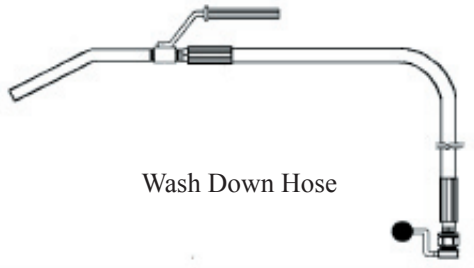
NOTES: 1 - To view all hold times programmed, press and hold the HOLD key.
2 - To view the hold time with the LEAST amount of time remaining, momentarily press the HOLD key.

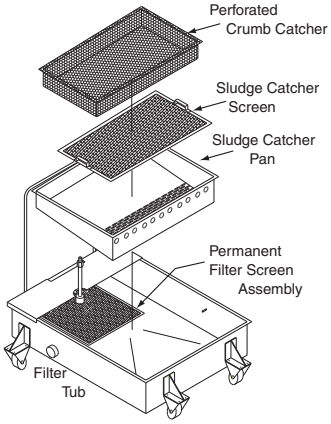
D. FILTERING SHORTENING - The shortening in the Ultrafryer should be filtered at least twice a day, once after the lunch rush and again after the dinner rush. The fryer vat used to cook French Fries should be filtered **FIRST**, followed by fryer vats for other products. The instructions listed below "complements" step-by-step procedures contained in the applicable Ultrafryer Fryer Maintenance and Repair Manual which should be used along with this manual when FILTERING SHORTENING. The Ultrafryer Fryer Maintenance and Repair Manual was provided with the Ultrafryer. If another copy is required it can be ordered through normal supply channels by calling 1-800-545-9189. **ABBREVIATED** filtering procedures are as follows:

ULTRAFRYER MODEL	**MANUAL PART NUMBER**
Par-1 or Par-2 Gas Fryer	30A012 & 30A046
Par-3 Gas Fryer	30A047
EU Electric Fryer	30A013

1. ULTRAFRYER FILTERING PROCESS

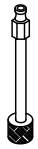
a. Set up the Filter Tub as follows:

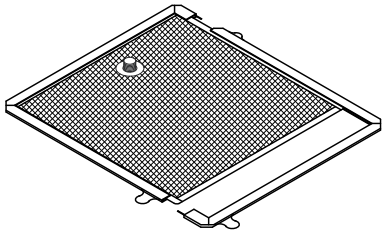




NOTE: Crumb Catcher Pan, Sludge Catcher Screen and Pan are only provided with Filter Tubs used for Model S and SC Fryers.

1. Make sure the FILTER TUB, FILTER SCREEN ASSEMBLY, STANDPIPE ASSEMBLY, and STANDPIPE SUCTION FITTING are clean and dry.
2. Assemble the Permanent Filter Screen as follows:





a) Insert the **SUCTION FITTING** on the baffle in the hole of the upper filter screen; then place these items on top of the lower filter screen.

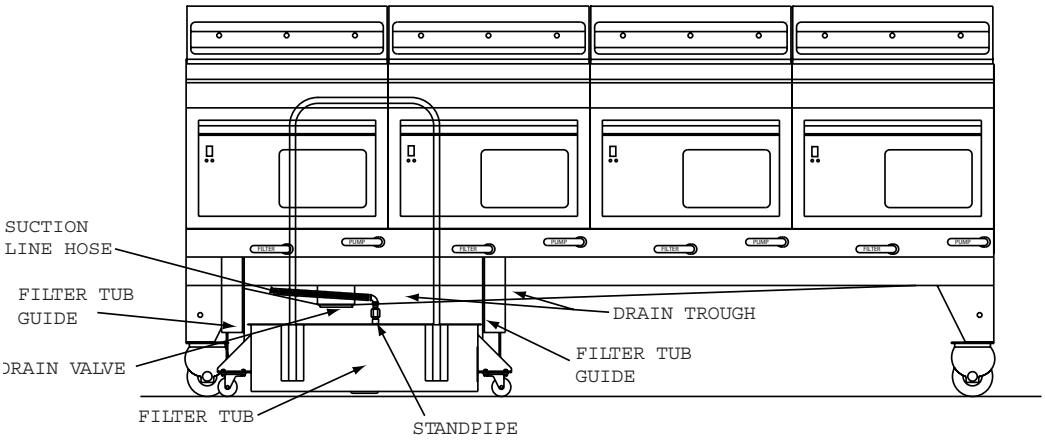
b) **ENSURE** all sides of the **FILTER SCREEN** assenbly are aligned, place the **PIN** end of **FRAME A** on the **FILTER SCREENS**, place the **CHANNEL** on the frame adjacent to the **PIN** end over the **FILTER SCREENS**; then **HINGE** the frame so the edge of the **FILTER SCREENS** are inserted in the other **CHANNEL** of **FRAME A.**

c) Place the **PIN** end of **FRAME B** on the **FILTER SCREENS** so the **PIN** is seated in the **CHANNEL** of **FRAME A** near the **FINGER LOOP**, place the **CHANNEL** on the frame adjacent to the **PIN** end over the edge of the **FILTER SCREENS**; then **HINGE** the frame so the edge of the **FILTER SCREENS** are inserted in the other **CHANNEL** of **FRAME B** and the **PIN** on **FRAME A** is seated in the **CHANNEL** of **FRAME B.**

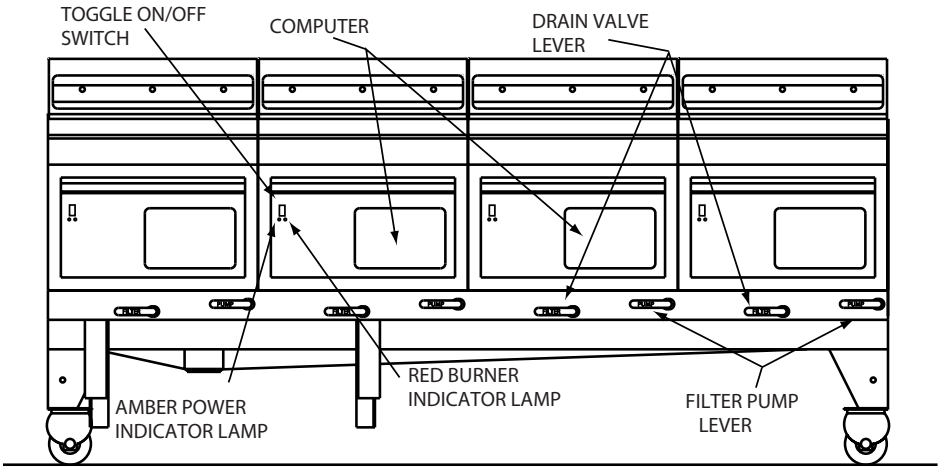
d) Adjust **FRAME A** and **B** so both **PINS** are properly seated in the **CHANNEL** of the opposite frame; then **CAREFULLY** connect the **KNURL KNOB** on the **STANDPIPE** to the **SUCTION FITTING** on the **FILTER SCREEN** assembly. **DO NOT OVERTIGHTEN!**

b. Place the **FILTER SCREEN ASSEMBLY** beneath the hold down rods in the **FILTER TUB**, place the **COVER** on the **FILTER TUB**, and if applicable, place the **SLUDGE CATCHER PAN, SLUDGE CATCHER PAN SCREEN,** and the **CRUMB CATCHER PAN** in the Filter Tub.

c. Position the assembled filter tub in front of the **FILTER TUB GUIDES**, beneath the **LEFT** side of the fryer bank; then roll the filter tub under the fryer until it is butted against the **FILTER TUB STOP**, beneath the rear of the fryer as shown below:



d. Turn the **TOGGLE ON/OFF SWITCH** and if applicable, the **MANUAL GAS VALVE** for the vat to be filtered and polished **OFF**; then connect the **SUCTION LINE HOSE** to the standpipe on the filter tub.



e. Place **16 OUNCES (.454 kg)**, by volume, of **FILTER AGENT** in a 20" (508 mm) and 18" (457 mm) deep fryer vat; **14 ounces (.397 kg)** in an 18" (457 mm) shallow fryer vat; and **8 ounces (.227 kg)** in a 14" (356 mm) fryer vat; thoroughly stir the filter agent into the shortening using the skimmer, then skim the shortening to remove any floating crumbs.

CAUTION: PRIOR TO PROCEEDING TO THE NEXT STEP, PUT ON SAFETY GOGGLES, NEOPRENE INSULATED GLOVES AND AN APRON.

f. Carefully open the drain valve on the vat to be filtered and polished by turning the **DRAIN VALVE LEVER** slightly downward. When the bottom of the filter tub is covered with about two 2" (51 mm) of shortening, **OPEN** the drain valve and slowly drain shortening to allow the heat mechanism to gradually **COOL**.

g. When all shortening in the vat has drained into the filter tub, use the **DRAIN ROD** to stand the wire rack on one side of the vat.

h. Use the drain rod and/or the **"L"** shaped brush to pull the sediment on the bottom of the vat towards the valve opening, then use the rod to push sediment through the valve opening.

i. **SECURELY** connect the Wash Down Hose **QUICK-CONNECT COUPLER** to the **QUICK-CONNECT STEM** on the rear wall of the vat or the accessory outlet on a Model SC Fryer (pull the coupler bracket with the **BLACK** knob towards the hose, place the coupler over the stem until it is **SEATED**, then release the coupler bracket). A distinct **CLICK** will be heard when the coupler seats on the stem.

CAUTION: IF THE COUPLER IS NOT SECURELY ATTACHED TO THE STEM, HOT SHORTENING WILL BE DISCHARGED AROUND THIS CONNECTION WHICH COULD CAUSE SEVERE BURNS.

j. Place the Wash Down Hose Nozzle into the vat and hold it firmly against the inner wall. This prevents the hose from "jumping" when the Filter Pump is turned on.

k. Turn the **FILTER PUMP LEVER** to the open **(DOWN)** position, hold the nozzle at a 45 degree angle from the bottom of the vat causing the shortening and debris to bounce off the rear wall of the vat and flow towards the drain valve.

l. Use the drain rod to push the sediment through the drain valve to keep the drain clear. Hose off the Heat Mechanism and all walls of the vat until all the shortening and residue at the bottom of the vat has been flushed through the drain into the filter tub.

m. Turn the **FILTER PUMP LEVER** to the closed **(UP)** position, and then disconnect the Wash Down Hose **QUICK-CONNECT COUPLER** from the **QUICK-CONNECT STEM** on the rear wall of the vat, or the accessary outlet on a Model SC Fryer.

n. Replace the wire rack in the fryer with the **SHORTENING DEFLECTOR** on the **RIGHT SIDE** of the vat, COVERING the quick-connect stem.

o. Set a Timer for for the amount of time established by your Operations Department for **POLISHING** the shortening; then turn the **FILTER PUMP LEVER** to the open **(DOWN)** position to allow shortening in the filter tub to circulate through the system.

CAUTION: DO NOT POLISH THE SHORTENING LONGER THAN THE ESTABLISHED TIME AS IT WILL PUMP EXCESS AIR INTO THE SHORTENING CAUSING SHORTENING BREAKDOWN.

NOTE: The filter pump system can **ONLY** be operated when the fryer's Toggle **ON/OFF** switch is in the **OFF** position and the filter pump lever is in the **OPEN (down)** position. When the filter system is in operation, the Computer **CANNOT** be turned **ON** and the Heat Mechanism **CANNOT** be activated.

p. When **POLISHING** is complete, turn the **FILTER PUMP LEVER** and **DRAIN VALVE LEVER** to the closed **(UP)** position.

q. Turn the Filter Pump Lever to the open **(DOWN)** position to automatically return the shortening in the filter tub to the vat.

r. When all shortening has been returned to the vat, turn the Filter Pump Lever to the closed (UP) position, then CAREFULLY remove any sediment from the permanent filter screen using the Filter Tub Scraper.

s. Add shortening to the fryer, if applicable.

t. Repeat step e through s to filter shortening in the remaining vats.

u. When all vats have been filtered **IMMEDIATELY** hang the Wash Down Hose assembly in an upright position so shortening can drain into a container, and disconnect the **SUCTION LINE HOSE** from the **STANDPIPE**, and remove the filter tub from beneath the fryer bank.

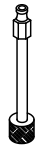
NOTE: Failure to hang the Wash Wand Hose in an upright position to drain may cause the hose to become clogged with hardened shortening.

v. **THOROUGHLY** clean the Filter Tub Assembly as follows:

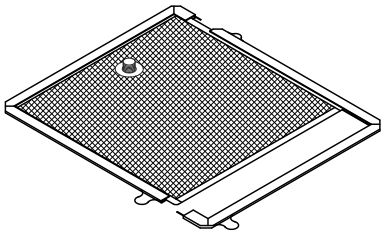
1) Remove the Cover and Permanent Filter Screen Assembly and if applicable, the **SLUDGE CATCHER PAN, SCREEN,** and **CRUMB CATCHER PAN** from the filter tub, remove any sediment on the bottom of the tub with the scraper, and wipe the tub dry using paper towels.

2) Clean the Permanent Filter Screen as follows:

a) Flush any sediment from both sides of the Filter Screen Assembly with **HOT WATER**!



b) Remove the STANDPIPE from the FILTER SCREEN assembly, grasp the **FINGER LOOP** on **FRAME A** and adjacent **FINGER LOOP** on **FRAME B**, **EVENLY** pull the frames apart, then **HINGE FRAME A** to remove it from the FILTER SCREENS **FIRST**.



c) Grasp the **FINGER LOOP** on the straight side of **FRAME B**; then **HINGE** it to remove **FRAME B** from the FILTER SCREEN.

d) Separate the **UPPER** FILTER SCREEN and BAFFLE from the **LOWER** FILTER SCREEN.

e) Clean both the inside and outside of the Filter Screen and Baffle in the 3 compartment sink with **HOT WATER** and allow these items to air dry. **DO NOT USE SOAP!!**

f) When the Filter Screen and Baffle are dry, re-assemble the filter screen assembly as follows:
(1) Insert the **SUCTION FITTING** on the BAFFLE in the hole of the **UPPER** FILTER SCREEN; then place these items on top of the **LOWER** FILTER SCREEN.
(2) ENSURE all sides of the **FILTER SCREEN** assembly are aligned, place the **PIN** end of **FRAME A** on the **FILTER SCREENS**, place the **CHANNEL** on the frame adjcent to the **PIN** end over the **FILTER SCREENS**; then **HINGE** the frame so the edges of the **FILTER SCREENS** are inserted in the other **CHANNEL** of **FRAME A**.
(3) Place the **PIN** end of **FRAME B** on the FILTER SCREENS so the **PIN** is seated in the **CHANNEL** of **FRAME A** near the **FINGER LOOP**, place the **CHANNEL** on the frame adjacent to the **PIN** end over the edge of the FILTER SCREENS; then **HINGE** the frame so the edge of the FILTER SCREENS are inserted in the other **CHANNEL** of **FRAME B** and the **PIN** on **FRAME A** is seated in the **CHANNEL** of **FRAME B**.

(4) Adjust **FRAME A** and **B** so both **PINS** are properly seated in the **CHANNEL** of the opposite frame; then **CAREFULLY** connect the **KNURL KNOB** on the **STANDPIPE** of the **SUCTION FITTING** on the **FILTER SCREEN** assembly.
DO NOT OVER TIGHTEN!

3) If applicable, remove any sediment on the **SLUDGE CATCHER PAN, SLUDGE CATCHER PAN SCREEN,** and **CRUMB CATCHER PAN** with the scraper; then wipe these items dry using paper towels.

4) Re-assemble the filter tub as described above.

2. RESUME NORMAL OPERATION

VISUALLY check and if necessary add fresh shortening to each fryer vat until shortening reaches the middle line of the **"E ←— "** in the word **LEVEL** of the applicable shortening level mark on the rear wall of the fryer; then turn the Toggle ON/OFF switch and Computer ON/OFF button to the **ON** position to return to normal operation.

NOTE: The drain valve lever must be in the closed **(UP)** position to turn the computer on.

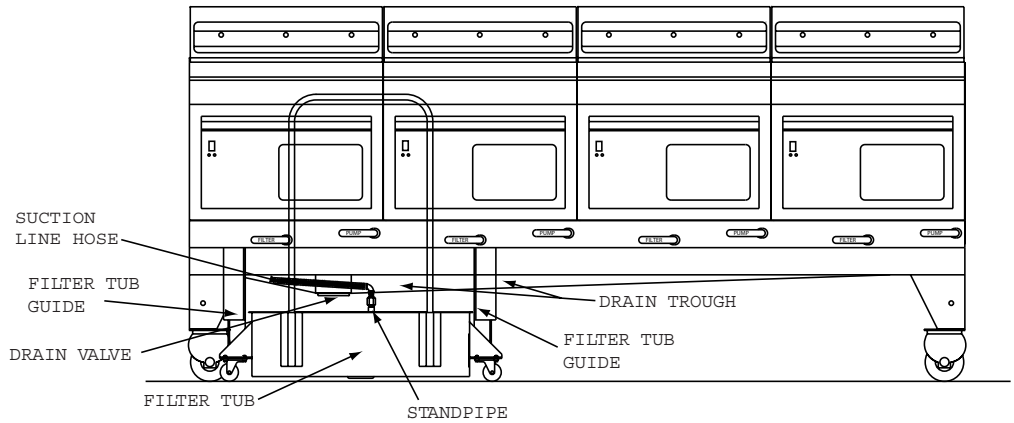
E. ULTRAFRYER BOIL-OUT

The instructions listed below "complement" step-by-step procedures contained in the applicable, Ultrafryer Fryer Maintenance and Repair Manual which should be used along with this manual when **BOILING OUT** a fryer. The Ultrafryer Fryer Maintenance and Repair Manual was provided with the Ultrafryer.
If another copy is required it can be ordered according to paragraph III D, page 13 of this manual.

1. SHORTENING REMOVAL/DISPOSAL

a. If the store is equipped with a Shortening Disposal System, remove used shortening from the fryer vat that is **CLOSEST** to the Shortening Disposal System connector. If the store is **NOT** equipped with a Shortening Disposal System, remove used shortening from the first fryer vat.

b. Position the assembled filter tub in front of the **FILTER TUB GUIDES** beneath the **LEFT** side of the fryer bank; then roll the filter tub under the fryer until it is butted against the **FILTER** TUB STOP beneath the rear of the fryer as shown below:



c. Turn the **TOGGLE ON/OFF SWITCH** and if applicable, the **MANUAL GAS VALVE** to the first vat **OFF**; then connect the **SUCTION LINE HOSE** to the **STANDPIPE** on the filter tub.

CAUTION: PRIOR TO PROCEEDING TO THE NEXT STEP, PUT ON SAFETY GOGGLES, NEOPRENE INSULATED GLOVES AND AN APRON.

d. Turn the venthood Exhaust Fan **ON** and drain shortening from **EACH** fryer vat as follows:

1) Carefully open the drain valve by turning the **DRAIN VALVE LEVER** slightly downward. When the bottom of the filter tub is covered with about two (2) inches of shortening, **OPEN** the drain valve and slowly drain shortening to allow the heat mechanism to gradually **COOL**.

2) When all shortening has drained into the filter tub, use the DRAIN ROD to stand the wire rack on one side of the vat.

3) **SECURELY** connect the Wash Down Hose **QUICK-CONNECT COUPLER** to the **QUICK-CONNECT STEM** on the rear wall of the vat or accessory outlet on a Model SC Fryer (pull the coupler bracket with the **BLACK** knob towards the hose, place the coupler over the stem until it is **SEATED**, then release the coupler bracket). A distinct **CLICK** will be heard when the coupler seats on the stem.

CAUTION: IF THE COUPLER IS NOT SECURELY ATTACHED TO THE STEM, HOT SHORTENING WILL BE DISCHARGED AROUND THIS CONNECTION WHICH COULD CAUSE SEVERE BURNS.

4) Place the Wash Down Hose Nozzle into the vat and hold it firmly against the inner wall. This prevents the hose from "jumping" when the Filter Pump is turned on.

5) Turn the **FILTER PUMP LEVER** to the open **(DOWN)** position, hold the nozzle at a 45º angle from the bottom of the vat causing the shortening and debris to bounce off the rear wall of the fryer and flow towards the drain valve.

6) Use the drain rod to push the sediment through the drain valve to keep the drain clear. Hose off the heat mechanism and all walls of the fryer vat until all the shortening and residue on the bottom of the vat has been flushed through the drain into the filter tub.

7) Turn the **FILTER PUMP LEVER** and **DRAIN VALVE LEVER** to the closed (**UP**) position.

8) Dispose of used shortening as follows:
   a) Restaurants **NOT** equipped with a Shortening Disposal System:
      (1) Place the Wash Down Hose nozzle into a **METAL** container and hold it firmly against an inner wall. This prevents the hose from "jumping" when the Filter Pump is turned on.
      (2) Turn the **FILTER PUMP LEVER** to the open (**DOWN**) position and pump shortening from the filter tub into the metal container.
      (3) When all shortening in the filter tub has been pumped into the metal container, turn the **FILTER PUMP LEVER** to the closed (**UP**) position and remove any sediment from the permanent filter screen using the filter tub scraper.
      (4) Repeat steps dl), d2), d3), d4), d5), d6), d7), d8), a1; d8)a2) and d8)a3) above to remove shortening from remaining vats to metal containers.
   b) Restaurants **EQUIPPED** with a Shortening Disposal System:
      (1) Remove the Wash Down Hose from the stem on the rear wall of the vat and **SECURELY** connect the Shortening Disposal Hose to the stem.
      (2) **SECURELY** connect the fitting on the other end of the Shortening Disposal Hose to the Disposal System connector on the wall.

(3) Turn the Filter Pump Lever to the open (**DOWN**) position and pump shortening from the filter tub into the exterior rendering tank.
(4) When all shortening has been suctioned from the filter tub, turn the Filter Pump Lever to the closed (**UP**) position, and remove any sediment from the permanent filter screen using the Filter Tub Scraper.

NOTE: Leave the Shortening Disposal Hose connected to vat stem and Disposal System connector.

(5) Repeat steps d1), d2), d3), d4), d5), d6), and d7) to drop shortening from the next vat into the filter tub.
(6) Remove the Wash Down Hose from the stem on the rear wall of this vat; then turn the Filter Pump Lever on the fryer **CLOSEST** to the Shortening Disposal System to the open (**DOWN**) position to pump shortening from the filter tub into the exterior rendering tank.
(7) When all shortening has been suctioned from the filter tub, turn the Filter Pump Lever to the closed (**UP**) position, and remove any sediment from the permanent filter screen using the Filter Tub Scraper.
(8) Repeat steps d8)b5, 6, and 7) above to remove shortening from the remaining fryer vats to the exterior rendering tank.
(9) Remove the Shortening Disposal Hose/Wash Down Hose from the stem on the rear wall of the fryer and replace the wire rack in each vat with the **SHORTENING DEFLECTOR** on the **RIGHT SIDE** of the vat **COVERING** the quick-connect stem.
(10) **IMMEDIATELY** hang the Wash Down Hose and, if applicable the Shortening Disposal Hose in an upright position and **THOROUGHLY** clean and reassemble the filter tub.

2. FRYER VAT BOIL-OUT

a. **BOIL-OUT** each fryer following cleaning instructions contained in the Cleaning Manual provided by your approved chemical supplier. The following are generic procedures:

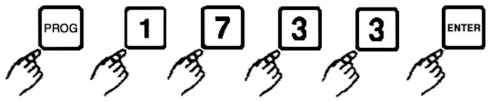
1) Ensure all Drain Valve Levers are in the closed (**UP**) position, then add water to each vat until it reaches a point two **2" (51 mm) BELOW** the middle line of the **"E←— "** in the word **LEVEL** of the **UPPER** shortening level mark on the rear wall of the vats.

2) Add the amount of **BOIL-OUT COMPOUND** in each fryer vat prescribed in the Cleaning Manual provided by the Chemical Supplier.

3) Turn the Toggle ON/OFF switch and, if applicable, Manual Gas valve for each fryer vat to the **ON** position; then press the Computer ON/OFF key to the **ON** position.

NOTE: The drain valve lever must be in the closed **UP** position to turn the computer **ON**.

4) Place the Computer in the **BOIL MODE** by pressing the following Computer keys in the order shown:

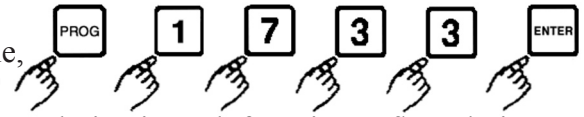


NOTE: boil will appear in the Computer display and the Computer will turn the Ultrafryer heat mechanism ON and OFF to heat and maintain the boil-out solution to **190ºF (88ºC)**.

5) When the boil-out solution reaches **190ºF (88ºC)** set a timer for 30 minutes. Frequently scrub the sides, front and rear of each fryer vat with a long handled scrub brush.

6) After the boil-out solution has **'BOILED'** for 30 minutes and the timer sounds press the following computer keys in the order shown to **EXIT BOIL MODE**:

7) Turn the Toggle ON/OFF Switch and, if applicable, the Manual Gas Valve for each fryer to their **OFF** position and **CAREFULLY** dispose of the boil-out solution in each fryer into a floor drain.



NOTE: Do not use the filter pump to remove water from the vats as this will cause premature pump failure and void the pump warranty.

8) Use a scrubbing pad to remove carbon buildup from the top of the heat mechanism. To remove carbon buildup on the sides and bottom of the heat mechanism; slide one end of a stropping pad under each section, grasp that end with a pair of tongs, and rock the pad up and down along the length of each section until all encrusted material has been removed.

9) Rinse each fryer with hot water until the water coming out of the drain valve is clear.

10) Mix a solution of **ONE PART** vinegar to **25 PARTS** of water. Place this mixture into a one gallon garden pressure sprayer; and **THOROUGHLY** spray this solution onto the **SIDES**, **HEAT MECHANISM**, and **BOTTOM** of each fryer to neutralize the Boil-Out Compound.

NOTE: Boil-Out Compound will cause shortening to break down rapidly if it is not neutralized.

11) **THOROUGHLY** wipe the sides, heat mechanism, and bottom of each fryer with clean, lint-free, dry towels to remove any remaining water; then fill each fryer with **NEW** shortening following procedures in Paragraph III B of this manual.

IV ULTRAFRYER ULTRASTAT21 COMPUTER SETTINGS AND PROGRAMMING

The Ultrastat Cooking Computer has two (2) modes of operation:

OPERATING MODE - Pre-programmed cook times and temperature for standard products plus action alarms.

PRODUCT PROGRAMMING MODE - Allows customers to add, delete or modify cook times and temperature for new products.

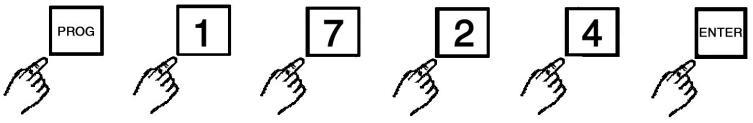
CAUTION: DUE TO THE COMPLEXITY OF AN ULTRASTAT21 COMPUTER, PROGRAMS SHOULD ONLY BE CHANGED BY AN AUTHORIZED OPERATIONS MANAGER/SUPERVISOR OR A SERVICE AGENT APPROVED BY ULTRAFRYER SYSTEMS' CUSTOMER SERVICE DEPARTMENT.

8 button units have a single, dual-purpose display that will alternate information; for example:  and then)  .

SCAN advances you to the next setting for the same function, **ENTER** completes programming for that function and advances you to the next function.

A. ENTERING PROGRAMMING MODE

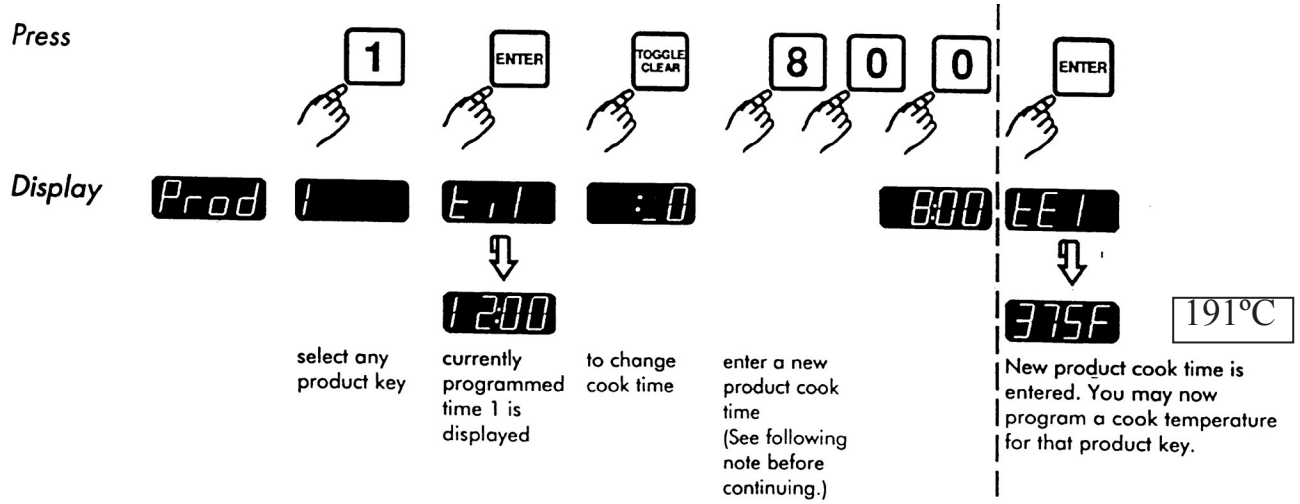
PRESS



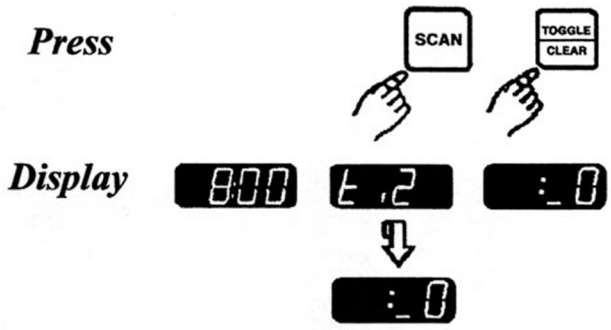
DISPLAY

The Computer is now in Product Key Programming Standby Mode.

B. PROGRAMMING A PRODUCT KEY COOK TIME



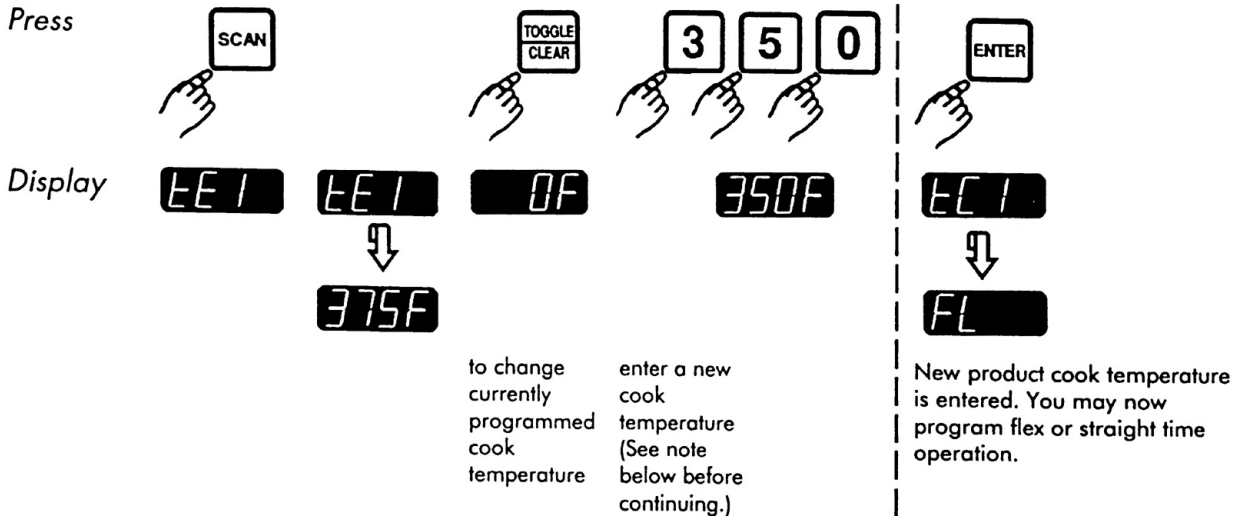
NOTE: To program additional cook times for that product key, press **SCAN** instead of **ENTER** after inputting the new product cook time.



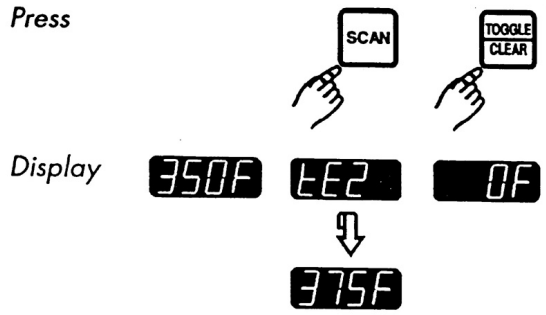
Input new cook time as previously shown. Press **SCAN** to advance to next time; or press **ENTER** to advance before to "Programming a Product Cook Temperature." (Up to 10 different stages can be programmed per product key.)

NOTE: It is recommended that for ease of programming, scan through all stages inputting the desired values before entering and moving to the next function. Continue the same process for each function.

C. PROGRAMMING A PRODUCT TEMPERATURE



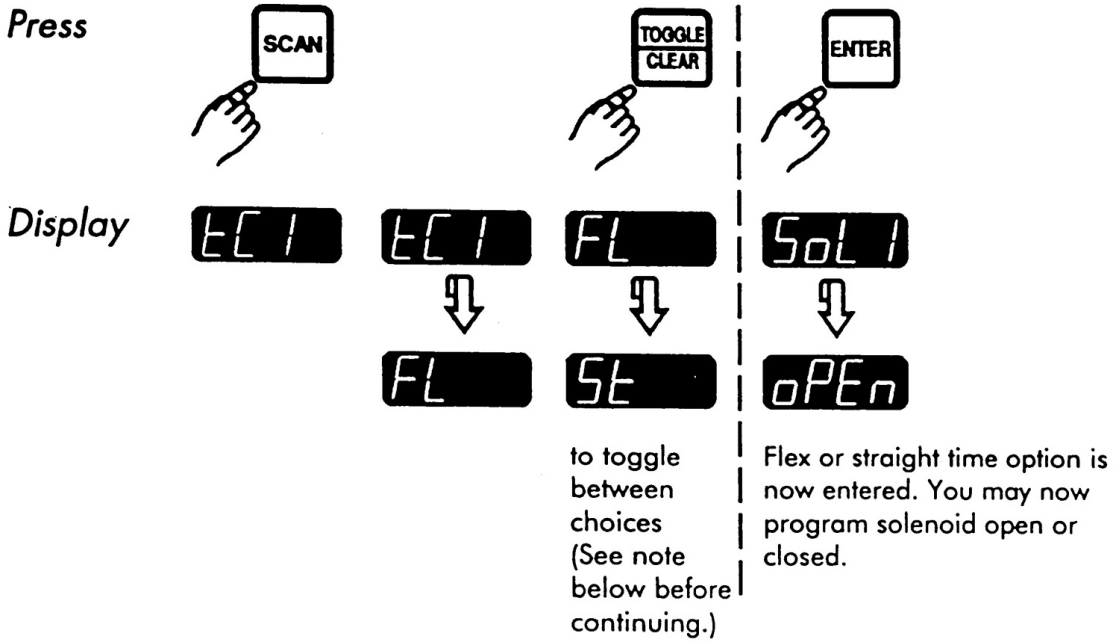
NOTE: To program additional cook temperatures for that product key, press SCAN instead of **ENTER** after inputting the new product cook temperature.



Input new cook temperature as shown above. Press SCAN to advance to next cook temperature; or press ENTER to advance to "Programming Flex or Straight Time Operation." (Up to 10 different cook temperatures can be programmed per product key.)

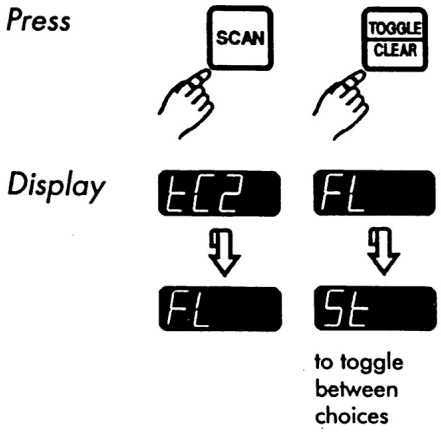
The controller will only "SCAN" through as many stages as programmed in the time section. For example, if the time for stage 3 is zero, no other parameters for that stage can be programmed.

D. PROGRAMMING FLEX OR STRAIGHT TIME OPERATION



NOTE: To enter flex or straight time operation options for that product key, press 

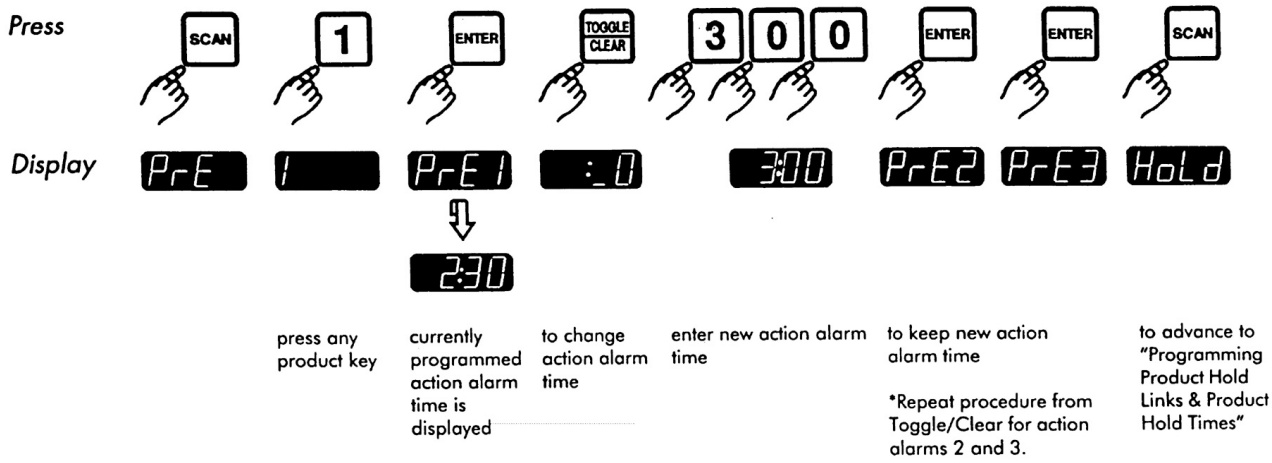
instead of **ENTER** after making your choice.



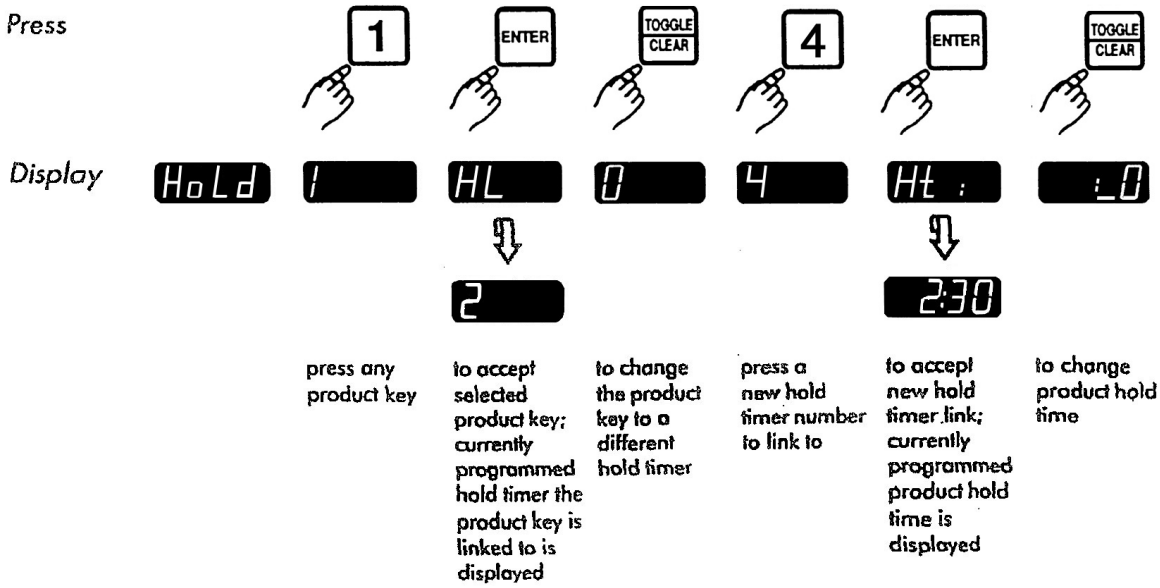
Choose either flex or straight time option as shown above. Press SCAN to advance to next flex or straight time option for that product key;

The controller will only "SCAN" through as many stages as programmed in the time section. For example, if the time for stage 3 is zero, no other parameters for that stage can be programmed.

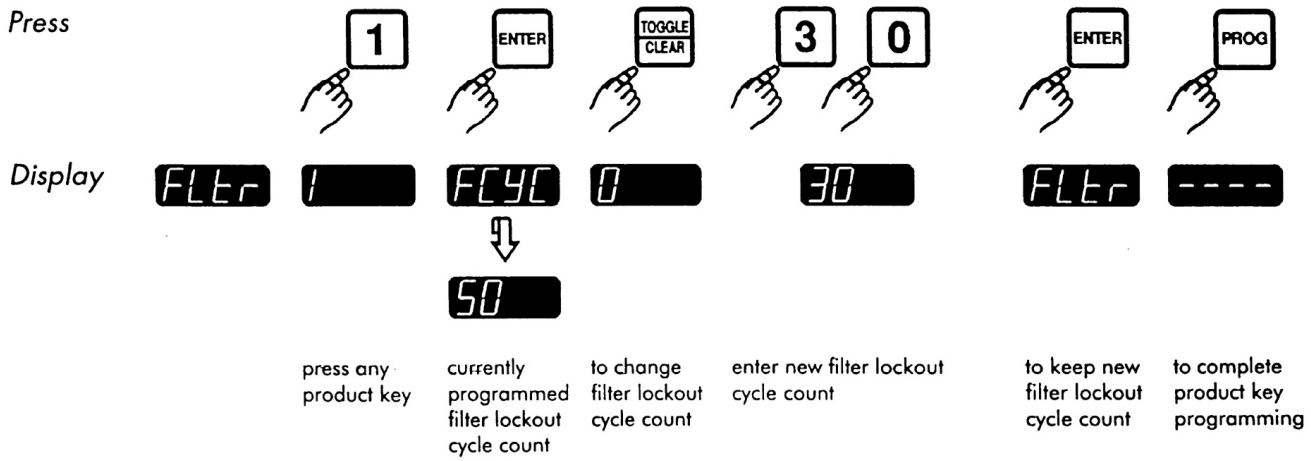
E. PROGRAMMING ACTION ALARM TIMES



F. PROGRAMMING PRODUCT HOLD TIME LINKS & PRODUCT HOLD TIMES



G. PROGRAMMING PRODUCT KEY FILTER LOCKOUT



H. EXITING PROGRAMMING MODE

Press 

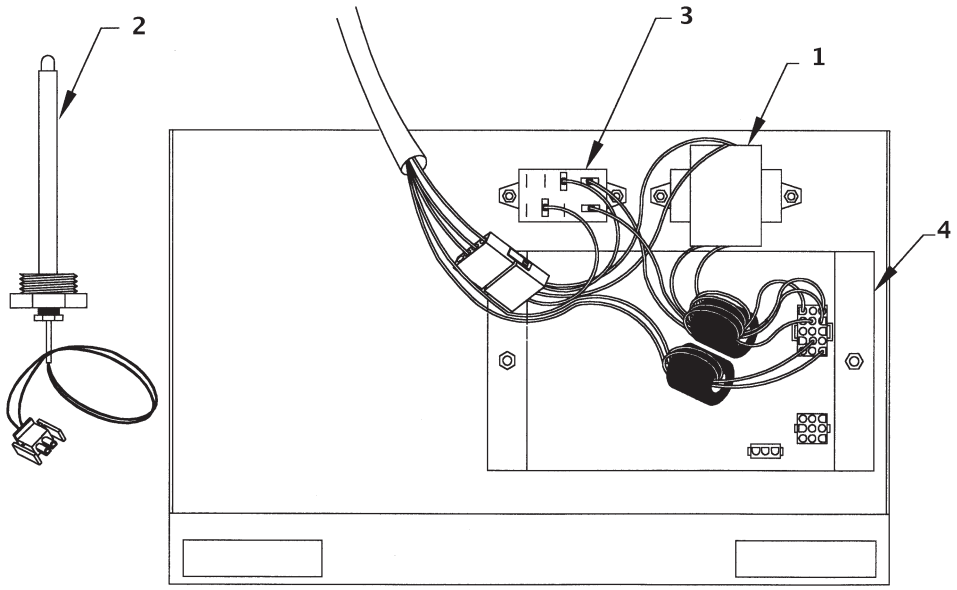
Press PROG when any of these functions are displayed.

Display 

NOTE: Toll free technical assistance is available 24 hours a day, 365 days a year by calling 1-800- 243-9271 (from the U.S., Canada and the Caribbean) for those times when help is needed immediately.

V PARTS LIST AND SUPPLY

Items identified below may be obtained from Ultrafryer Systems or by calling an order clerk at 1 - 800 - 549 - 9189.



TEMPERATURE CONTROL ACCESS PANEL (IN LOWERED POSITION)			
INDEX NUMBER	**PART**	**PART NUMBER**	**DESCRIPTION**
1	Transformer	21A233	120 to 24 Step Down, No. 120-10035 with Wiring Harness.
2	Probe	18A006	Temperature, No. 130-60035
3	Relay	23A023	24 Volt SPDT, No. 130-12003
4	Computer	(NOTE)	Programmed at Factory

NOTE: To obtain a replacement "Programmed" Ultrastat21 Cooking Computer contact Customer Service Department at **1-800-525-8130** and provide the following Information:

TYPE STORE: Church's, Popeyes', Company Store, Franchise Store, etc.
TYPE FRYER: Electric or Gas
VAT SIZE: 14, 18, or 20", etc.
PRODUCT: Chicken, French Fries, etc.
TYPE SHORTENING: Liquid or Solid