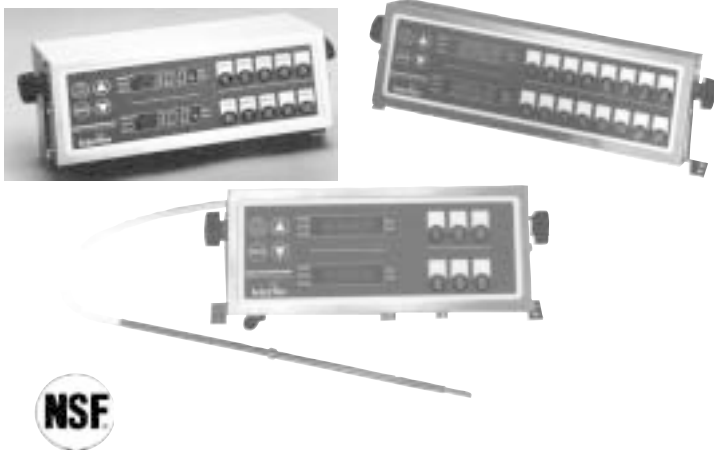


OPERATING INSTRUCTIONS

Multi-Function Timers Model No. 836-C Single Probe & 837-C Dual Probe Series



Prince Castle's 835-T Series Timers are designed so each channel can be programmed independently, and used simultaneously. The timers are simple to program and simple to use. The push of a button activates each channel, and an audible alarm and flashing channel button alerts the operator when timing is complete. Merlin timers operate on any voltage worldwide and are backed by a two-year warranty.

ELECTRICAL

836-C/837-C Series

100-240 Volts
50-60 Hz
4.5 Watts
Single Phase

TABLE OF CONTENTS

	PAGE
Installation	2
Terms and Functions	2
Programming	2-4
Operating	5
Data Tracking Counter	6
Cleaning	7
Installation of Menu Labels	7
Translations (French, German, Spanish, Italian)	8-31
Exploded View	32
Parts List	32
Trouble Shooting	33
Wiring Diagram	33

LIMITED WARRANTY

This product is warranted to be free from defects in material and/or workmanship for a period of two years from date of original installation, not to exceed 30 months from date of shipment from our factory.

Any component which proves to be faulty in material and/or workmanship will be replaced or repaired (at the option of Prince Castle, Inc.) without cost to the customer for parts or labor.

This warranty is subject to the following exceptions/conditions:

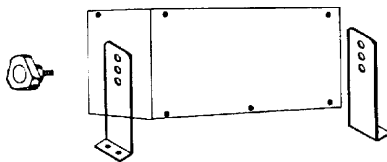
- This equipment is portable, charges for on location service (e.g. trip charges and mileage) are not included in the provisions of this warranty.
- Use of any non-genuine Prince Castle parts voids this warranty. All genuine Prince Castle replacement spare parts are warranted for ninety (90) days from date of purchase.
- Damage caused by carelessness, neglect, and/or abuse (e.g., dropping, tampering or altering parts), equipment damaged in shipment, by fire, flood or an act of God is not covered under this warranty.

INSTALLATION

- After you have removed the timer from the carton, inspect the unit for signs of damage. If there is damage to the unit:
 - Notify carrier within 24 hours after delivery.
 - Save carton and packing materials for inspection purposes.
 - Contact the Prince Castle Customer Sales Department at 1-800-722-7853 to arrange for a replacement to be sent.
- Verify that all parts have been received.

CAUTION: Solid state components in this timer are designed to operate reliably in a temperature range up to 150° F (65.6° C). When installing this timer it should be confirmed that the ambient temperatures at the mounting site do not exceed 150°F (65.6° C).
- Remove power cord, which is separate from the unit, and plug one end into the power inlet located on the unit. After mounting the unit, plug other end into the receptacle.
- Locate mounting brackets in desired location. Scribe location of mounting holes and center punch. Remove timer from brackets. Drill holes with a No. 29 (3.70 mm) drill bit and thread hole with a #8-32 (m 4 X 0.7-6 G) tap. Mount timer with (4) #8-32 screws provided. See figure 1.

figure 1



IMPORTANT: This unit can be mounted to a variety of surfaces. Additional hardware may be required.

This timer has been designed with worldwide voltage. It can be plugged into any voltage range between 100 V and 240 V, 50-60 Hz, single phase outlet.

IMPORTANT: This should be plugged into a dedicated outlet. No other equipment should be operating on this line (i.e. fryers, refrigerators, cash registers, etc.)

IMPORTANT: Customers outside the USA, Canada, Great Britain, and non-CE (Continental Europe) countries must cut off the three prong plug on the end of the power cord or use an adapter (not included).

GLOSSARY OF TERMS

PRINCE CASTLE

Prince Castle Logo is pressed to put the timer in program mode and to return to run mode.



Clock Button allows you to set the timer at minutes and seconds (M : S) or hours and minutes (H : M) while in the program mode.



Data Button allows you to set the alarm volume of the timer while in the program mode. Also sets the data tracking system in the run mode.



Up and Down Arrows allow you to increase or decrease time or alarm volume while in program mode.

Timer

Timer, is the operation time set in the computer.

Duty

Duty Time allows a selected function to be performed at a set time during the cooking process and/or the holding process.

Hold

The **Hold Function** allows you to hold cooked product for a selected time before discarding.

F I L t

A built in **Filter Reminder Option** lets you know when to filter.

OPEN

Open Probe.

S H r t

Shorted Probe.

H I

Probe is sensing a High Temperature.

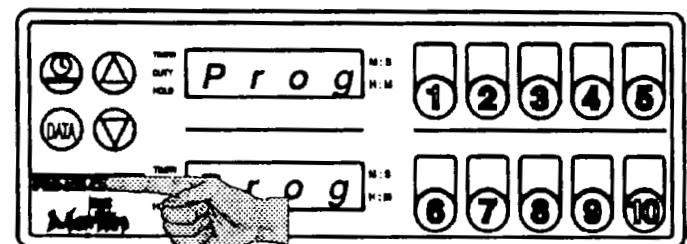
L O

Probe is sensing a Lo Temperature.

PROGRAMMING

- Press and hold the **PRINCE CASTLE** for five seconds until “**Prog**” appears in the displays and the timer beeps. You are now in the Program mode. See figure 2.

figure 2



IMPORTANT: If a channel is not pressed within 30 seconds the display will change to "--:--" and the timer will automatically go back into the run mode.


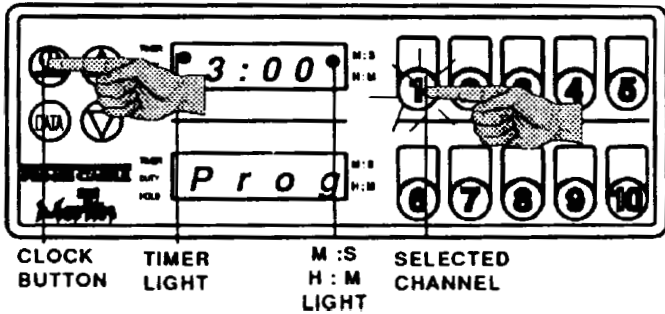
- To set an operation time on a particular channel press the number for the channel. The channel will then light up and flash, and **TIMER** light will come on. The display will show the current complete programmed time that channel. The light by **M:S** will also be lit. To switch time to **H : M** press the  See figure 3.

figure 3





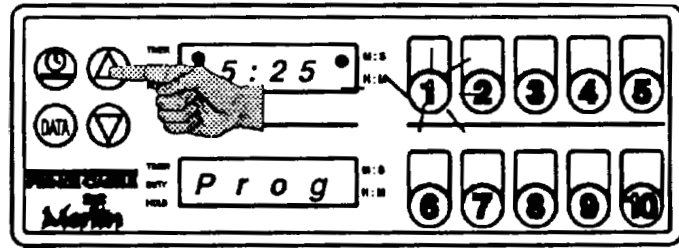
- To change, or set, the time press the  arrow to increase, or the  arrow to decrease. The timer can be set up to 99 minutes and 59 seconds or 99 hours and 59 minutes. See figure 4.

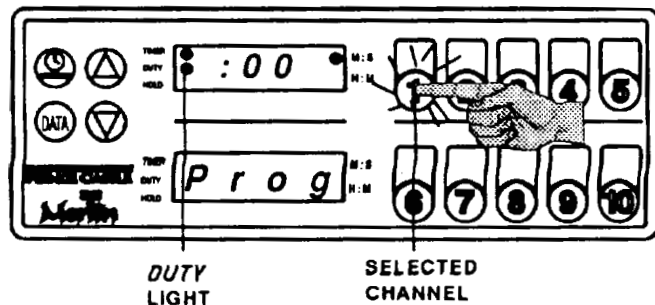
figure 4



IMPORTANT: Pressing and holding the arrow will make the numbers move at a faster pace.

- Once operation time is programmed press the selected channel. The display will show the current duty time and there will be a light by **Duty**. To set a duty time repeat step 3. If no duty time is needed set to :00. See figure 5.

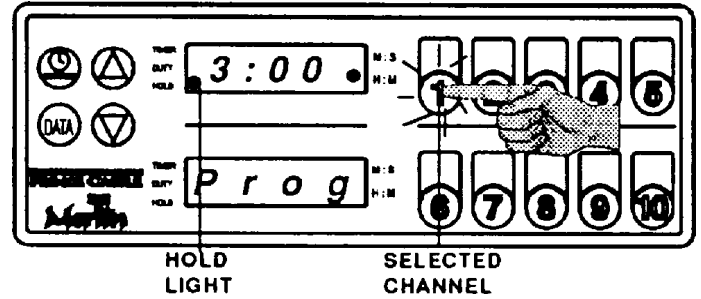
figure 5



IMPORTANT: The duty time must be set in the same time mode as the operation time.

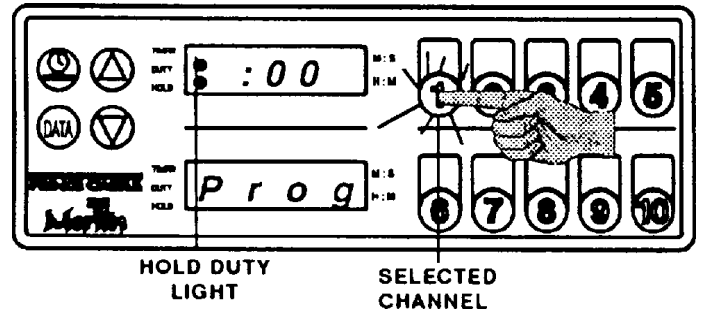
- Press the selected channel number again. The current hold time will be displayed and there will be a light by **Hold**. The hold time can be set in **M : S** or **H : M**. To set a hold time repeat step 3. See figure 6.

figure 6



- After the **Hold** time has been set, press selected channel number once again. The light by **Duty** will be lit. This feature allows a duty time to be set while a product is being held. For example, a **Duty** time can be set to remind the operator to make another run of a product. If no **Duty** is needed the time can be set to :00. Press the selected number again. The display will show "**Prog**". This means programming is completed. Repeat steps 2-6 for all other channels. See figure 7.

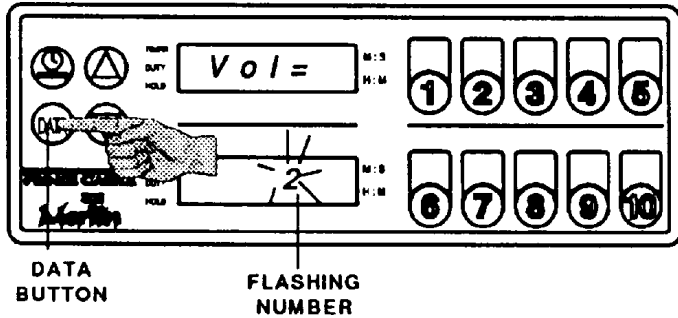
figure 7



IMPORTANT: The duty time must be set in the same time mode as the hold time.

- After setting the times on all channels set the volume. Press the **DATA** on and the top display will show "Vol =". The bottom display will show a flashing number between 0-4. To adjust the audio alarm volume press the **▲** for a louder alarm (4 is the loudest adjustment), or the **▼** to lower the volume (0 is the lowest adjustment). See figure 8.

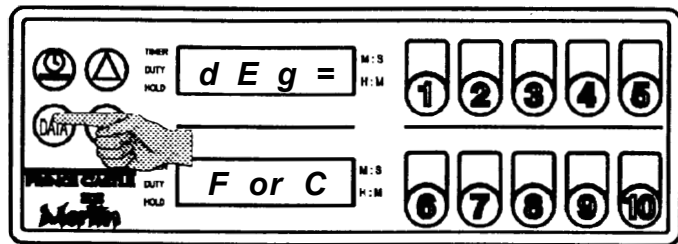
figure 8



IMPORTANT: There are (4) different alarm tunes preprogrammed into the timer for (4) different functions.

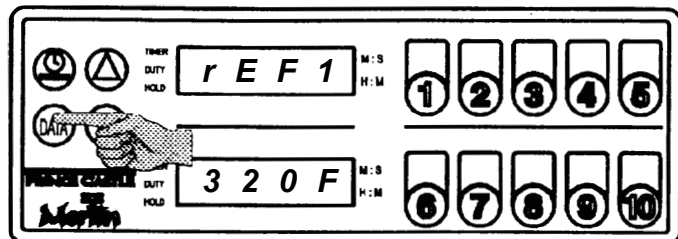
- After setting the volume press **DATA**. The upper display will read **d E g =** and the bottom display will flash "F" for Fahrenheit or "C" for celcius. Press **▲** or **▼** to switch to your desired degrees. Attach probes to unit and set them in the fryer. See figure 9.

figure 9



- Press **DATA** once again and the upper display will read **r E F 1** this is the reference temperature for the left probe on Dual Probe Models. Single Probe Models will read **r E F**. The bottom display will read a set temperature **3 2 0 F**. Your reference temperature should be set to the same temperature as the thermostat on your fryer. Press **▲** or **▼** to set the computer to the right temperature. See figure 10.

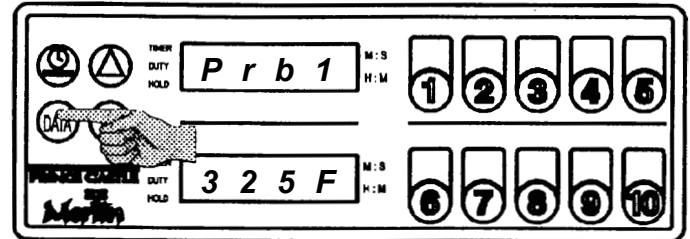
figure 10



IMPORTANT: On dual probe models press to set the reference temperature on the right probe. Follow the same procedure as in step 9.

- Press **DATA**. Once again the upper display will read **P r b 1** and the bottom display will read a temperature. This is the temperature that the probe is reading. See figure 11.

figure 11

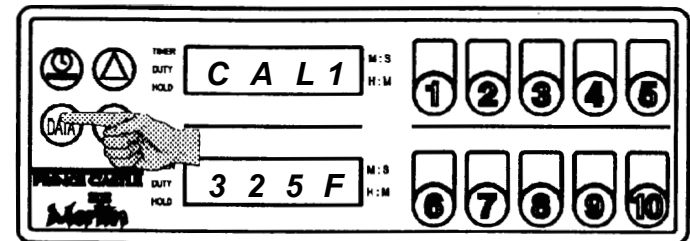


IMPORTANT: This function cannot be set.

IMPORTANT: On dual probe models if you press **DATA** the display will read **P r b 2** and a temperature will be displayed in the bottom display press **DATA** once again to the go on to the calibration funciton.

- Press **DATA**. Once again the upper display will read **C A L 1** and the bottom display will read the current calibrated temperature set in the computer. Using a pyrometer take a reading of the temperature in the vat. Then, calibrate the computer to that temperature by pressing the **▲** or **▼**. This will calibrate the left probe on dual probe models. Press **DATA** to calibrate the right probe. See figure 12.

figure 12

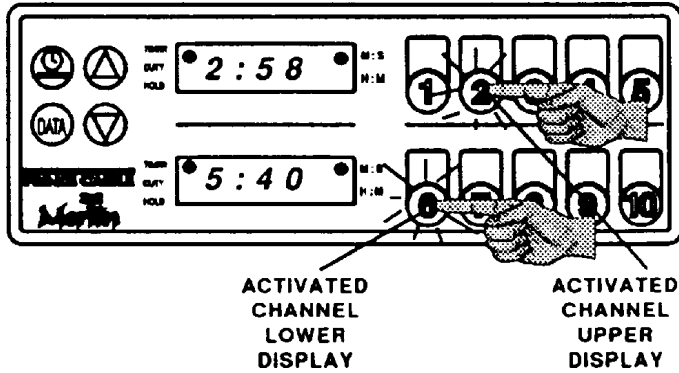


- After you have programmed and calibrated your computer press **PRINCE CASTLE** and the unit will return to Run Mode.

OPERATION

1. To activate a programmed channel press the corresponding number. The number will light up and flash and the display will countdown. See figure 13.

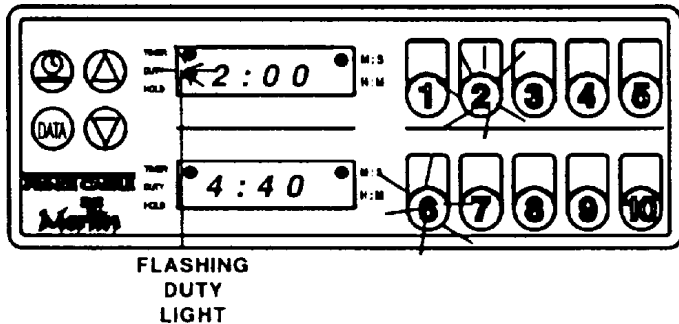
figure 13



IMPORTANT: To cancel a channel after it is activated press the channel number three times quickly. This will cancel the countdown sequence.

2. If a **Duty** time has been set in the timer an audio alarm will sound and the **Duty** light will flash for five seconds before it automatically cancels itself. The display will continue to show the completed cooking time. See figure 14.

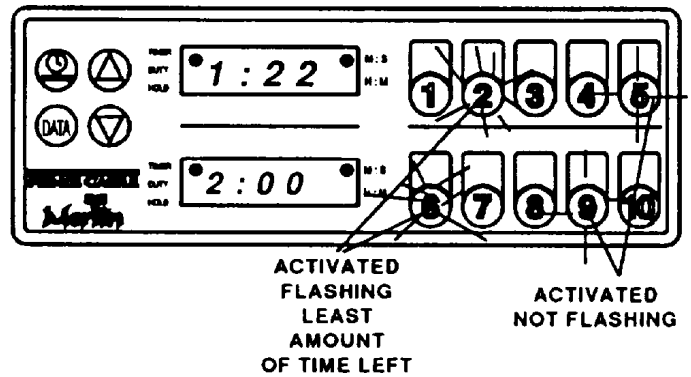
figure 14



3. When more than one channel is activated the display shows the number with the least amount of time left to countdown. The same channel will also be flashing. Other activated channels will be lit but not flashing. See figure 15.

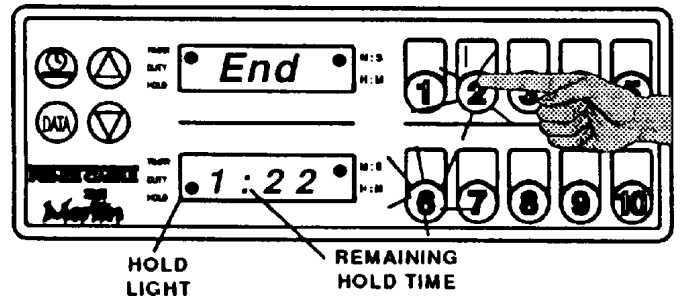
IMPORTANT: To view how much time is remaining on a selected channel press that channel button and the time remaining will show on the countdown display. When the number is released the countdown display will go back to counting down the channel with the least amount of time remaining.

figure 15



4. When the countdown sequence has ended the display will show *End* and an audio alarm will sound. To cancel press the flashing numbered channel. See figure 16.

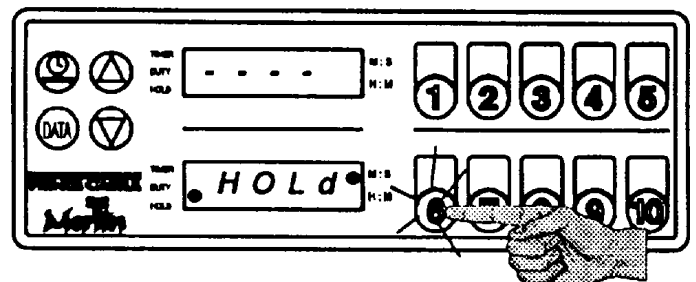
figure 16



IMPORTANT: If no other channels are activated and a **Hold** time has been set the **Hold** time will be displayed and the **Hold** light will be lit. If other channels are counting down the channel that is holding will be lit but not flashing and there will be no **Hold** light.

5. If a **Duty** time was set it will sound an alarm, the channel will flash for five seconds, and the **Duty** light will be lit. When the **Hold** time countdown is completed an audio alarm will sound and the display will flash *H O L d*. To cancel press the flashing numbered channel. See figure 17.

figure 17



IMPORTANT: If no other channels are active the display will switch to *--:--*. If there are other channels counting down the one with the least amount of time will show in the display and that numbered channel will be flashing.

DATA TRACKING COUNTER

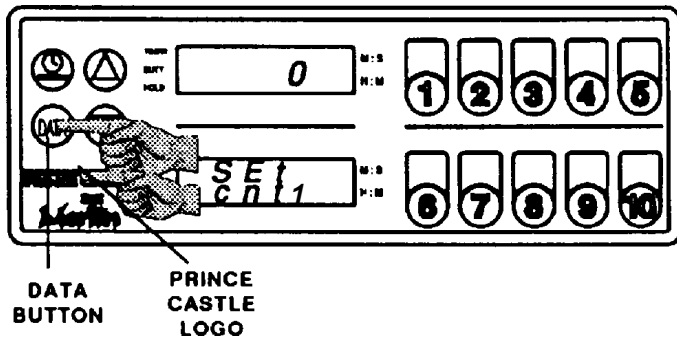
This timer has a special **Data Tracking Counter** which counts the number of times all the timer buttons have been activated. The **Data Tracking Counter** is disabled when shipped by being set to "0". For example, if the grill should be cleaned after 50 runs you can set the **Data Tracking Counter** to 50. When the buttons have been activated 50 times an audio alarm sounds and **FIL t** flashes in the display for five seconds. When no channels are active, the display will continue to show **FIL t**.

PROGRAMING THE DATA TRACKING COUNTER

IMPORTANT: If no pre-set count is desired leave the number set at "0". This disables the Tracking Feature.

1. To set the left probe on dual probe models, press and hold the **DATA** and the **PRINCE CASTLE** for five seconds. The lower display will flash **SEt cnt 1** and the upper display will show "0". See figure 18.

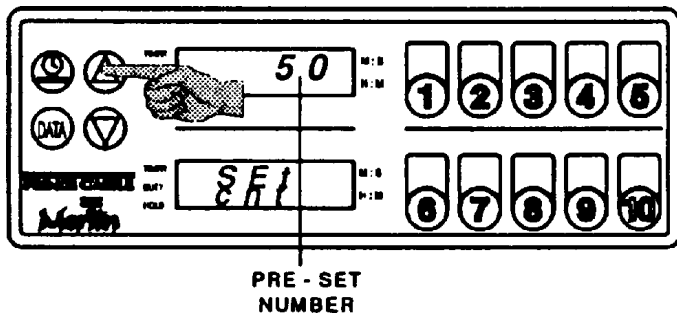
figure 18



To set the right probe press **DATA** after you have set the left probe the display will read **SEt cnt2** you can now set the right probe pre-set number.

2. To set the counter number press the **▲** to increase the number in the upper display or the **▼** to decrease the number. See figure 19.

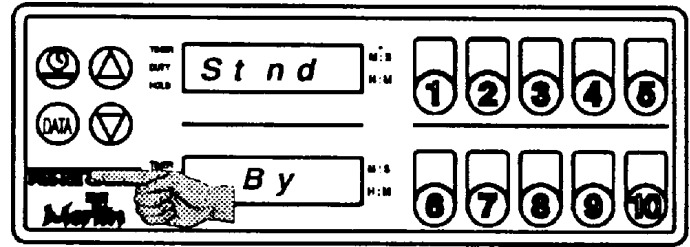
figure 19



PRE - SET NUMBER

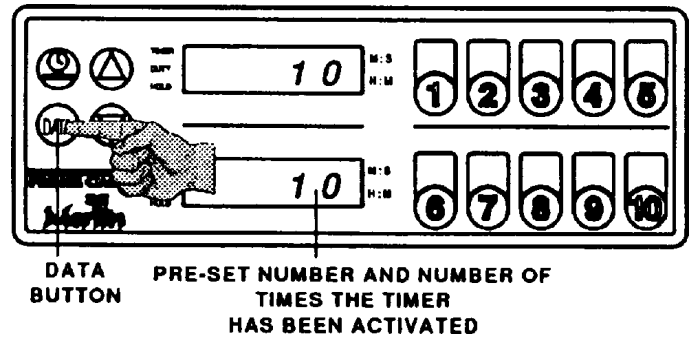
3. After you have set your Tracking Number into the timer press the **PRINCE CASTLE** and the display will flash **Stnd By**. Then it goes back into run mode. See figure 20.

figure 20



4. To check the tracking count while the timer is in the run mode press the **DATA**. Both displays will flash the pre-set number followed by the number of times the channels have been activated on each probe. This allows the operator to see how close the actual number is to the pre-set number. See figure 21.

figure 21

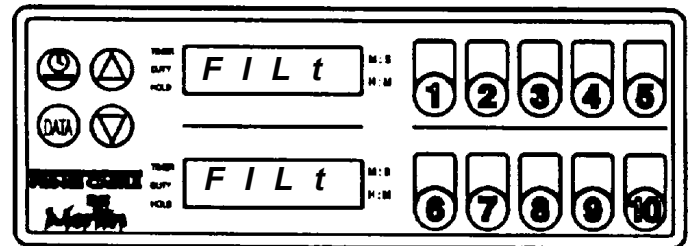


DATA BUTTON PRE-SET NUMBER AND NUMBER OF TIMES THE TIMER HAS BEEN ACTIVATED

IMPORTANT: If the counter is not reset after the pre-set number is reached, the higher of the two numbers will flash first.

5. When the pre-set tracking number has been reached the displays will both flash **FIL t** and an audio alarm will sound for five seconds. See figure 22.

figure 22




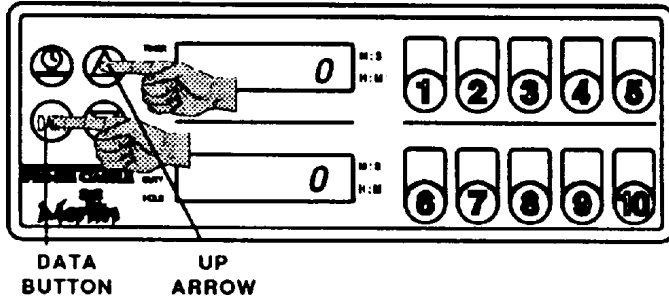
- To reset the tracking number to "0" press and hold the Data Button and the  at the same time for five seconds. The tracking number will reset to "0" and be ready to count to the pre-set tracking number again. See figure 23.

figure 23



INSTALLATION OF MENU LABELS

- Clean above the desire channel with a damp soapy cloth.
- Rinse with a damp cloth.
- Dry area with clean dry cloth.
- Apply label with clean, dry hands. Align label within area.
- Press label in place. For best results do not wipe down for 48 hours to let adhesive cure.



CAUTION: Label will not stick to a greasy area.

CLEANING



CAUTION: This appliance is not of water tight construction. Do not clean with a water jet or a jet spray.



CAUTION: Do not immerse appliance in water.

To prolong the life of this Merlin computer do not allow grease to buildup on the unit. Wipe the Timer down daily with a clean damp cloth. Do not use any chemical cleaners or abrasive pads on the overlay. This may damage the unit.

EXPLODED VIEW

PARTS LIST

ITEM	NUMBER	DESCRIPTION
1	862-2	Front Panel Assy (6 Channel)
	863-2	Front Panel Assy (10 Channel)
	864-2	Front Panel Assy (16 Channel)
2	862-1S	Overlay (6 Channel)
	863-1S	Overlay (10 Channel)
	864-1S	Overlay (16 Channel)
3	72-200-11S	Power Cord (Domestic)
	72-200-1S	Power Cord (Continental Europe)
	72-200-2S	Power Cord (Great Britain)
4	862-13S	Display P.C.Board (6 Channel)
	863-13S	Display P.C.Board (10 Channel)
	864-13S	Display P.C.Board (16 Channel)
5	862-12S	Main P.C.Board (6 Channel)
	862-12S	Main P.C.Board (10 Channel)
	862-12S	Main P.C.Board (16 Channel)
6	70-039	Knob
7	752-6	Mounting Bracket
8	862-4	Cover Assy. (6 & 10 Channel)
	864-4	Cover Assy. (16 Channel)
9	735-61S	Speaker Assy. (All models)

TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
No displays or indicators lit.	Unit unplugged. Store's circuit breaker blown. Defective transformer. Circuit inoperable.	Plug unit in. Reset breaker. Replace Main Circuit Board. Replace Main Circuit Board.
Absence of Audio Alarm.	Speaker inoperable. Circuit inoperable.	Replace Main Circuit Board. Replace Main Circuit Board.
Unit will not enter program mode. Display does not show "Prog" .	All channels are still counting. Logo Switch inoperable.	Wait until channels are in stop mode. Replace Display Board.
Unit enters program mode. Display shows "Prog" , but cannot change times.	The channel is still counting. Arrow switch inoperable. Circuit inoperable.	Wait until channel is stop mode. Replace Display Circuit Board. Replace Main Circuit Board.
Unable to start, stop, or store timer presets in program mode. Missing or abnormal characters in displays.	Circuit inoperable.	Replace Display Circuit Board. If problem persists, replace Main Circuit Board.
Display flashes OPEN and an audio alarm sounds.	Probe Open.	Check Probe Connection Replace Probe.
Display flashes shrt and an audio alarm sounds.	Probe shorted.	Replace probe.
Display flashes HI or LO and an audio alarm sounds.	Probe sensing high or low temperature.	Check temperature of vat.

WIRING DIAGRAM

IMPORTANT ELECTRICAL INFORMATION: This Power Cord has International colored wires. These are color coded differently than Domestic wires. Refer to this chart when replacing your cord.

INTERNATIONAL	DOMESTIC	WIRE TYPE
BLUE/L1	WHITE	NEUTRAL
BROWN/L2	BLACK	HOT
GREEN/YELLOW	GREEN	GROUND