

OPERATING INSTRUCTIONS

Merlin II



Single Function Timers Model No. 740-T8K With Programmable Stages And Express Mode



Model 740-T8K

Prince Castle's second generation of Merlin Timers feature a new slim design which gives you mounting flexibility. The 740 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 a alarm and multi-colored flashing channel buttons alert the operator when timing is complete.

ELECTRICAL

740-Series

120 Volts
50-60 Hz
30 Watts
Single Phase

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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. P.C. Boards are warranted for 3 years from date of purchase, not to exceed 42 months from date of shipment.

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.
- All work must be performed by an authorized Prince Castle Service Agency. Failure to do so will void this warranty.
- 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. Bracket Mounting screws provided
- To mount the timer, place mounting brackets in desired location. Scribe location of mounting holes, center punch, and drill holes. Attach timer to mounting brackets placing star washer between bracket and timer.

DISPLAYS AND INDICATORS

TIME Display	Shows the time for the selected channel number.
CHANNEL Display	Shows the channel number selected and in use.
H:M	Indicates the time value is in Hours and Minutes .
LED Indicators	Located above each channel timer button, these lights change color depending on the stage of the countdown. There are three colors, and the time-to-color change is programmable (see programming). Green = first stage of the countdown, Yellow = second stage of the countdown, and Red = the final stage of the countdown. An alarm will sound at each color change.

CONTROLS

Channel (Timer) The 740-T8 has 8 channels

SCAN/UP ARROW



In the program mode, it increases time values for each channel. In the Run Mode, it is used in conjunction with logo button to increase the volume.

SCAN/DOWN ARROW



In the program mode, it decreases time values for each channel. In the run mode, it is used in conjunction with logo button to decrease the volume.

PRINCE CASTLE Logo

Activates Program Mode and used to adjust the alarm sound level.

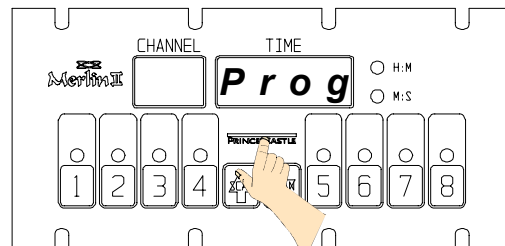
PROGRAMMING

The time is programmable in Hours : minutes only. For example, if the timer is to be set to 30 Min. the time displayed will change in one minute increments only, for example: from 00:28 to 00:29 to 00:30

Each channel has three time zones (Green, Yellow and Red). The maximum time is set for the Green indicator. The Yellow time must be less than the Green and the Red time must be less than the Yellow.

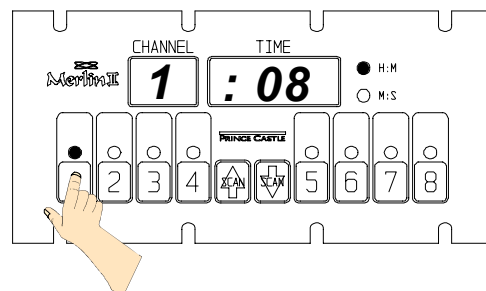
- To program, press and hold the **PRINCE CASTLE** logo for six seconds. The **TIME** display changes from ---- to **Prog**, and a beep will sound. See figure 1.

figure 1



- Press the timer channel to be programmed. The LED indicator for the selected button will turn **Green** and an alarm will sound. The channel number will be displayed in the **CHANNEL** display, the current programmed time in the **TIME** display, and the time value will indicate **H:M**. See figure 2.

Figure 2



- To change the program time for the selected channel, use the **SCAN/UP Arrow** or the **SCAN/DOWN Arrow** button.

IMPORTANT: When the display reaches 59:00, it will automatically change to 1:00 Hour. See figure 3. The program value for the **H:M** indicator is from 1:00 hour to 17 hours: 59 minutes. See figure 4.

figure 3

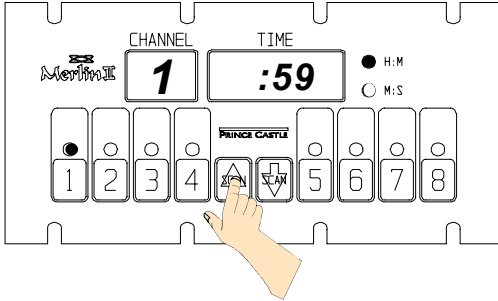
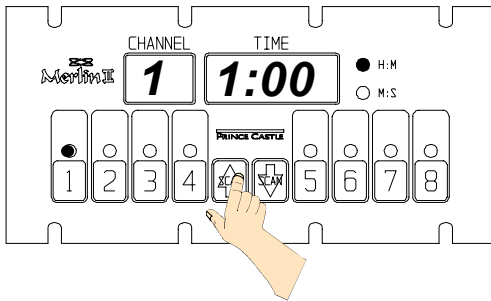


figure 4



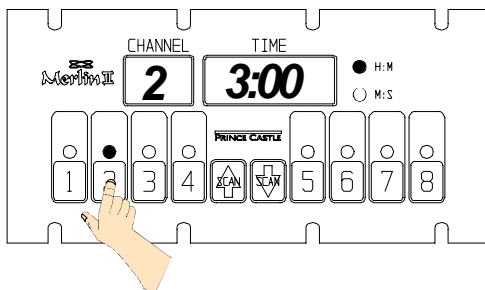
- To program the **Yellow** time, press the timer channel button. The LED indicator will change to **Yellow**. Use the **SCAN/UP** or **SCAN/DOWN** arrow buttons to set the time value.

After setting the **Yellow** time, press the timer channel button to set the **Red** time. The LED indicator will change to **Red**. Use the **SCAN/UP** or **SCAN/DOWN** arrow buttons to set the time value.

IMPORTANT: The time value for the **Yellow** and **Red** can be set to zero. If the **Yellow** time is set to zero, the **Red** time will default to zero. If the **Yellow** time has been set, the **Red** time can be set to zero. No alarm will sound for a zero time value.

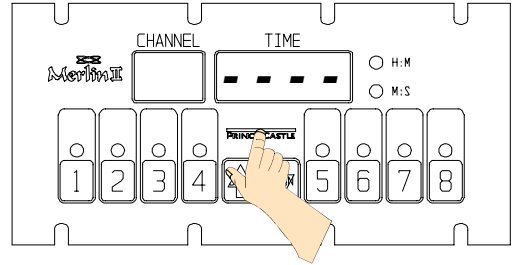
- To program another channel, press the desired channel button. Repeat programming procedures in steps 2 and 3 above. See figure 5.

figure 5



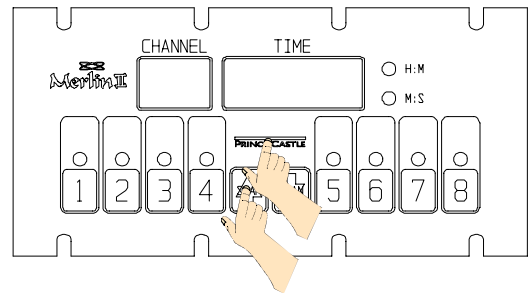
- When finished programming each desired channel, momentarily press the **PRINCE CASTLE** logo to end the Program Mode. This saves the program changes you have made for all channels. See figure 6.

figure 6



- You can change the sound level of the alarm in **RUN MODE**. Press and hold the **PRINCE CASTLE** logo; then, within six seconds, press either the **SCAN UP** Arrow button or the **SCAN DOWN** Arrow button. The **SCAN UP** Arrow button adjusts the sound level to the louder alarm, and the **SCAN DOWN** Arrow button adjusts the sound level to the lower alarm. See figure 7.

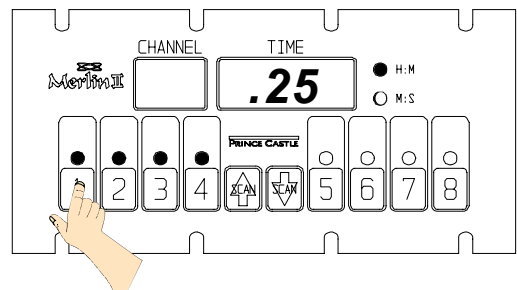
figure 7



OPERATION

- Press a channel button to activate a timing cycle. (All channels can be activated and running at the same time.) The time channel number with the least amount of time remaining will be displayed in the **CHANNEL** display, its time remaining will countdown in the **TIME** display, and the time value **H:M** will be illuminated. See figure 8.

figure 8



2. **EXPRESS MODE** Because the remaining holding time could be less than the programmed time, there is an express time set mode. To change the timer to the remaining hold time, press and release the channel button to activate the timer. Within 5 seconds of starting the timer, use the **SCAN/UP** and **SCAN/DOWN** arrow buttons to set the timer to the final value. The time value can be readjusted until the colon begins flashing. Once the colon starts flashing, the time value is locked.

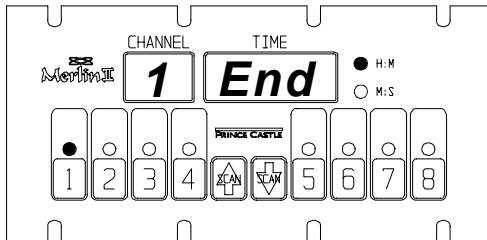
3. To cancel a timer, press and hold the desired channel button for three seconds.

4. An alarm sounds when there is a color change. A set of three double beeps is sounded for a **Green-to-Yellow** or **Yellow-to-Red** change.

If, during the express mode, the set time value is less than the color value, the alarm will sound when the timer starts.

5. The timer will countdown from the programmed value to zero. At zero, the display flashes **End** and the alarm sounds. See figure 9.

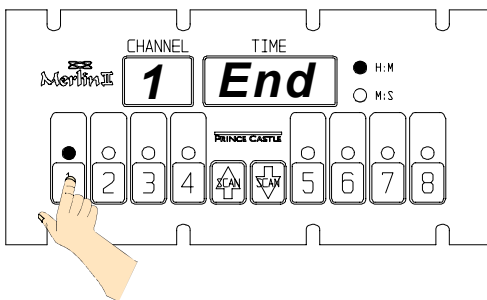
figure 9



IMPORTANT: There are three indicators that signal the operator when the timing cycle is complete: The **CHANNEL** display shows the channel associated with the alarm. The **TIME** display shows **End**. The LED indicator in the channel button flashes red.

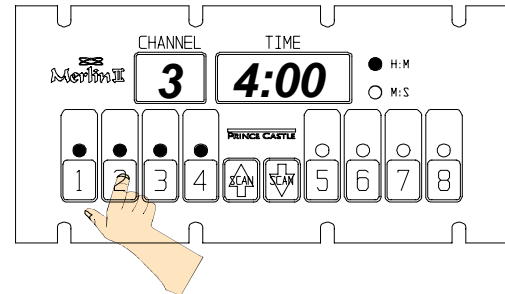
6. When the timing cycle is complete, and the alarm sounds, press the channel button with the flashing red indicator to cancel the alarm. See figure 10.

figure 10



7. The scan feature is used to check the time values on other active channels. If there is more than one channel timing, press the **SCAN/UP** or **SCAN/DOWN** button to cycle through all active timers. If no button is pressed, after 5 seconds, the display will change to show the timer with the least amount of time left. See Figure 11.

figure 11



CLEANING

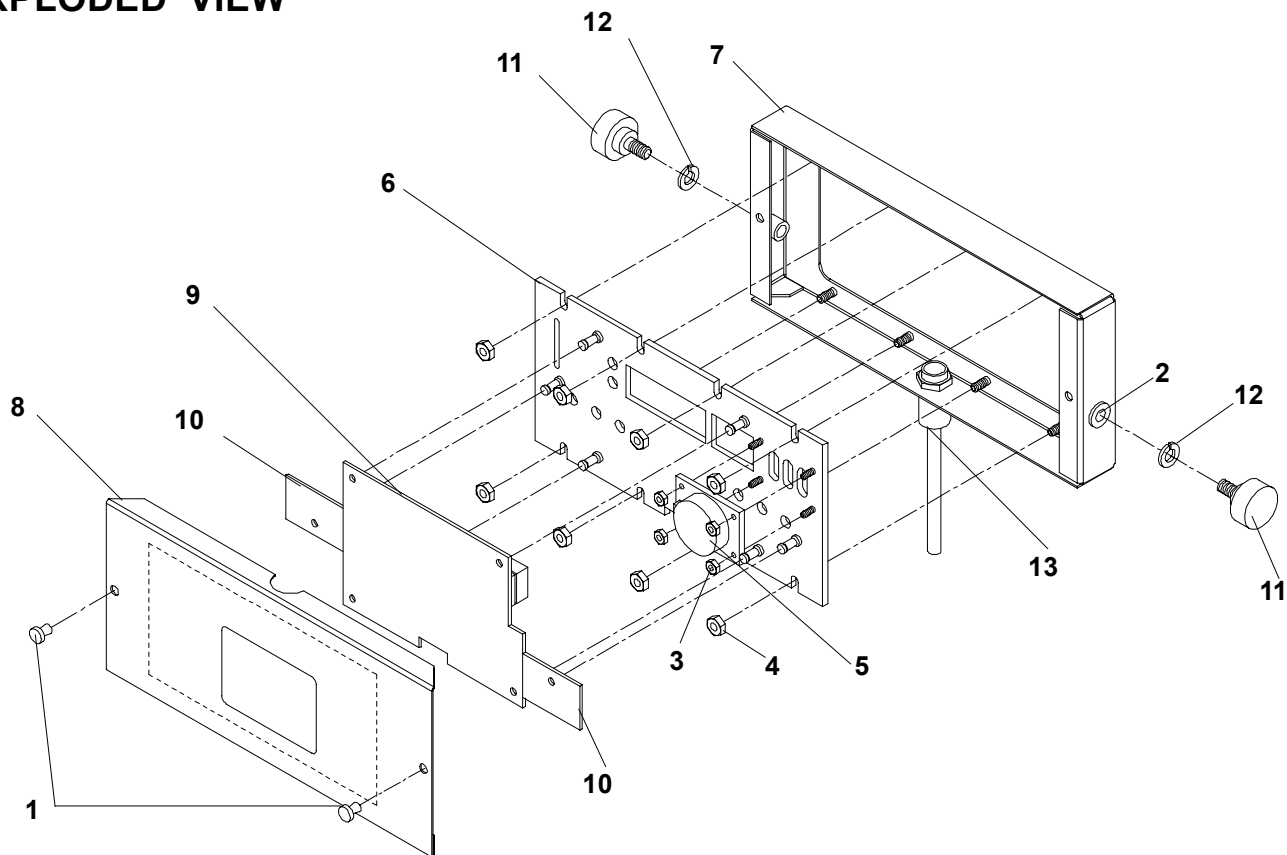
1. Do not allow grease to build up on the timer, wipe it down daily with clean damp cloth.

IMPORTANT: Do not use abrasive or chemical cleaners

PART LIST

ITEM	PART NUMBER	DESCRIPTION
1	69-079	Rivet Plastic Push Pin
2	69-080	Self Retaining Nut
3	73-014	Hex Nut #4-40 S.S.
4	73-021	Hex Nut #8-32 S.S.
5	88-653-2-4S	Speaker Assy.
6	735-205S	Switch Panel Assy.
7	735-226	Front Bezel
8	735-227	Rear Cover
9	740-92S	Main P.C.Board
10	740-13S	P.C.Board Wing
11	70-048	Knob
12	79-079	Washer
13	740-021S	Power Supply Assy.

EXPLODED VIEW



TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
A. 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.
B. Absence of Audio Alarm.	Speaker inoperable. Circuit inoperable.	Replace Speaker. Replace Main Circuit Board.
C. Unit will not enter program mode. Display does not show "Prog" .	Logo Switch inoperable.	Replace Switch Panel.
D. 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 in stop mode. Replace Switch Panel. Replace Main Circuit Board.
E. Unable to start, stop, or store timer presets in program mode. Missing or abnormal characters in displays.	Circuit inoperable.	Replace Switch Panel. If problem persists, replace Main Circuit Board.

WIRING DIAGRAM 740-T8K

