

## 1 Overview

The Honeywell HPT724 is a programmable LCD timer that is designed to support a wide range of applications. Such applications can include: home and building automation, security, access control, lighting control, etc. The HPT724 is equipped with an independently controlled form "C" relay contact that provides many latching and/or momentary operations during a program schedule of your choice. The EE prom memory allows for programming 24 hour 365 day events prior to/during field installation. Events may be set for single or multiple operations on a daily and/or weekly schedule. The block programming feature enables repeating and event on any combination of consecutive days. The HPT724 will compensate for daylight saving time if desired. Individually selected holiday exceptions can be programmed to over-ride regularly scheduled events.

## 2 Specifications

- 12/24 volts, 500mA AC or DC operation.
- Standby Current: 10 mA (relay off), 50 mA (relay on).
- Battery Charging Current: 100 mA.
- Form "C" relay contacts are rated 10 amp @ 120 VAC/28 VDC.
- EE Prom memory protects against loss of programming due to power failure.
- Accurate crystal-controlled clock (displays time in military format).
- Momentary and/or latching events.
- 50 individually programmed daily/weekly events.
- Block programming capacity can accommodate a total of 350 events per week.
- 10 programmable holiday dates.
- "First man in" option.
- Alphanumeric LCD display simplifies programming.
- Standard or daylight saving settings.
- Automatic compensation for leap year.
- Built-in charger for 12 VDC sealed lead acid or gel type batteries (standby battery maintains operation during power failure until discharged).
- Lithium battery backup maintains clock (optional; battery is 3V, model CR2032).
- Board Dimension: 5.25"W x 3"L x 1"D (approximate).

## 3 Installation Instructions

1. Mount HPT724 in desired location, using suitable standoffs/fasteners, tape or HST34 snap track.
2. Connect 12 or 24 volts at 500 mA of AC or DC to terminals marked [+DC-- ~AC~]. (When using DC, carefully observe polarity.)
3. Connect 12 VDC battery (optional) to terminals marked [+BAT-- 12VDC].
4. Insert lithium battery (optional/not included) in battery holder with the positive (+) side facing up (Fig-1).
5. Connect devices to be controlled to the dry outputs marked [NO, C, NC].
6. Program clock and desired event schedule (see Sec-5).

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*NOTE: When connecting DC powered electromechanical devices such as Mag Locks, Electric Strikes, Bells, Relays, etc. install a catch diode across the positive (+) and negative (-) terminals of the device. Connect diode as close to the device as possible with the banded side facing the positive (+) terminal. This will reduce the possibility of interference.*

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## 4 Basic Operation

The HPT724 controls an independently operated dry form “C” relay output. Relay can be programmed to: turn on (latch), turn off (release latch), or pulse (momentary toggle) at a specified time and day (this is referred to as an event). Events are programmed via the push buttons and LCD display. Events may be programmed to occur on any day of the week at any time. In addition, events may be repeated at a specific time on two (2) or more consecutive days (i.e. M-F, Sun -Th, etc.). Multiple combinations of individual and block events may be programmed. Holiday exceptions are individually selected by date and will override all regularly scheduled events.

The four (4) output relay modes consist of:

Relay OFF -- De-energizes the relay until a relay ON event is detected.

Relay ON -- Energizes the relay until a relay OFF event is detected.

Disable -- Used to cancel an existing programmed event.

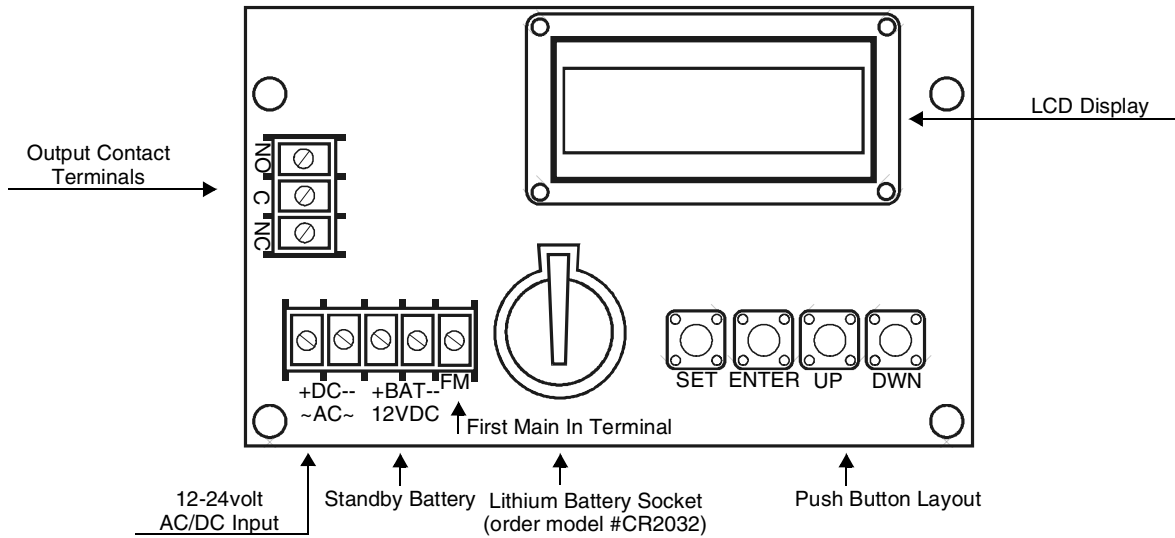
Pulse -- Momentarily energizes the relay for a selectable time period of 1 to 15 seconds.

(Time is displayed in 24 hour military format.)

## 5 Terminal Identification Table

NO C NC	Dry contact output used to switch controlled devices. When these relays are energized (ON) the NC and C terminals are open and the NO and C terminals are closed. When this relay is de-energized (OFF) the NC and C terminals are closed and the NO and C terminals are open.
+ DC -- ~ AC ~	AC or DC input 12 to 24 volt. When using DC, carefully observe polarity.
+ BAT -- 12VDC	12 VDC standby battery input (battery leads provided).
FM	When this terminal is connected to DC neg. (-), the “First Man In” feature is enabled. The relay will remain in its present position until the connection is terminated. At that time the relay will resume normal operation and latest scheduled events will occur.

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## 6 Push Button Description Table

Push Button	Function/Description
SET	Scrolling keys for programming. Escaping out of existing programming.
ENTER	Accepts selections made to programming.
UP	Scrolls through selections.
DWN	Scrolls through selections.

**UP** and **DWN** keys can be used to select data entries. After scrolling to the correct entry, depress **ENTER** to accept.

## 7 Programming Instructions

### A. Setting Clock/Calendar:

Upon initial power up RLY OFF  
SU 01:01 will appear in display.

Depress **SET** ENTER to  
SET TIME will appear in display.

Depress **ENTER** 01/01/01  
SU 01:01 will appear in display.

Enter the current date, day of the week and time (military) by depressing **UP** and **DWN** to make the selection, then depress **ENTER** to accept. Next, select either DS (daylight savings mode) or ST (standard time mode) by depressing **SET** until "ENTER to SET BK: appears in display as shown below.

ENTER to  
SET BK

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Depress **ENTER** to scroll until flashing cursor appears under DS (daylight savings mode) in display. To change mode depress **UP** or **DWN** once and ST (standard time mode) will appear in display. Depress **ENTER** to accept correct selection. *Note: The flashing cursor denotes location of data entry selection to be made.* If an entry was made in error or requires changing, depress **SET** to backspace, make the correct selection and depress **ENTER** to accept data and advance the cursor.

To change or program clock/calendar simply repeat the steps above.

### B. Setting Events

Depress SET until 

ENTER to SET EVENT
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 appears in display.

Depress ENTER 

#01^OFF SU 00:00
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 will appear in display.

Depress **ENTER** until the flashing cursor appears under OFF in display. Now select type of event required by scrolling using the **UP** and **DWN** push buttons until either ON, OFF, or PL appears in display (ON-Relay ON [latching mode], OFF-Relay OFF [latching mode], PL-Relay Pulse [momentary]). Depressing **ENTER** will make selection. When selecting pulse mode PL01 will appear in display. It is now necessary to assign the length of time (duration of relay activation). The pulse can range in length from 1 to 15 seconds and is selected using **UP** or **DWN** push buttons then depressing **ENTER** to accept. *Note: If pulse duration is not selected relay output defaults to 1 second.* Next, select the day of the week and time (military) by using **UP** or **DWN** and depressing **ENTER** to accept. You may continue to program events by repeating the previous steps or exit programming by depressing **SET**. *Note: When programming additional events it is necessary to select the next consecutive event number following the last event program to continue. Also, when it is required to have the same event repeated on two (2) or more consecutive days of the week (block programming), enter the first day followed by the last day by depressing SUN through SAT. Example--Monday through Thursday, depress MON followed by THURS. For Wednesday through Sunday, depress WED followed by SUN.*

### C. Setting Block Events (weekly repeat):

Depress SET until 

ENTER to SET BK
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 appears in display.

Depress ENTER 

BK=SA/SU TIME=DS
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 will appear in display.

A flashing cursor will appear at the location of the first day of the week desired. Depress **UP** and **DWN** to select day. Depress **ENTER** to confirm selection, then cursor will appear at the location of the last day of the week desired. Depress **UP** and **DWN** to select day. Depress **ENTER** to confirm selection. Depress **ENTER** again to escape.

### D. Setting Holiday Events:

Depress SET until 

ENTER to SET EVENT
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 appears in display.

Depress ENTER 

#01^ON HL 00:00
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 will appear in display.

Next, select HL to indicate as holiday event and time by using **UP** and **DWN** push buttons and depress **ENTER** to accept. You may continue to program more holiday events by repeating the previous steps or exit programming by depressing **SET**.

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**E. Setting Holiday Dates:**

It is now necessary to assign these holiday events specific calendar dates on which they are to occur. To select holiday events depress SET until “ENTER to SET HOL” appears in display as shown below. Note: Holiday events will override all regularly programmed events.

ENTER to  
SET HOL

Depress ENTER

#01^HOL  
SU 00:00

will appear in display.

**F. Delete/Disable Event or Edit Event:**

Previously programmed regularly scheduled and/or holiday events may be deleted/disabled without having to erase all events.

Depress SET until

ENTER to  
SET EVENT

appears in display.

Depress ENTER

#01^ON  
TU 00:00

will appear in display.

Now scroll, using **UP** and **DWN** push buttons, to the event you wish to delete, then depress **ENTER** to move flashing cursor under relay option then depress **UP** and **DWN** push button until DIS is displayed, depress **ENTER** to confirm.

**G. Delete All Events:**

All previously programmed events can be deleted by depressing **SET** until “ENTER to CLR MEM” appears in display as shown below.

ENTER to  
CLR MEM

Depress ENTER until

CLEAR  
MEMORY?

appears in display.

Depress ENTER

PRESS UP  
& ACCEPT

will appear in display.

Depressing UP push button will now clear all events previously programmed. If you wish to escape from this selection, depress any of the other push buttons; **SET**, **ENTER**, or **DWN**.

For additional information:

- Visit our website at <http://www.honeywellpower.com>
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