

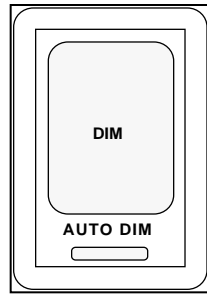
# BRIGHT IDEAS FOR WALL SWITCH LIGHTING CONTROLS

## LS7231-LS7234

See Data Sheet

Figure 5 and

Figure 7



## CONTINUOUS DIMMER WITH UNIQUE DELAYED OFF FEATURE

INITIAL CONDITION	ACTION	RESULT
Off	SHORT TOUCH Dim Pad	Memory intensity or maximum intensity (1)
Off	LONG TOUCH Dim Pad	Varies from min. intensity or mem. intensity (1)(2)(3)
On	SHORT TOUCH Dim Pad	Off
On	LONG TOUCH Dim Pad	Varies from pre-touch intensity (2)(3)
On	PRESS Auto-Dim	Begins auto-dimming to off (4)
Auto-Dimming	PRESS Auto-Dim	No change
Auto-Dimming	SHORT TOUCH Dim Pad	Off
Auto-Dimming	LONG TOUCH Dim Pad	Varies towards minimum intensity (2)
Auto-Dimming	None	Auto-dims to off

(1) Last intensity achieved before turn off is stored as memory intensity.

LS7232, LS7234 have Memory Feature.

(2) If LONG TOUCH remains when max. (min.) intensity is reached, the dimming direction will then go towards min. (max.) intensity.

(3) Dimming direction will continue (reverse) from previous dimming direction. LS7232, LS7233 have Direction Reversal Feature.

(4) Auto-dimming period determined by RC components and intensity level when Auto-Dim is activated.

from LSI COMPUTER SYSTEMS, INC.

## LS7237

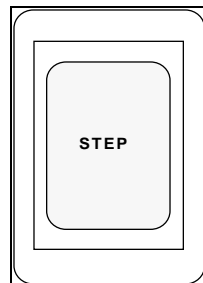
See Data Sheet

Figure 5

or

LS7538/LS7539

See AN703



## SEQUENTIAL STEP DIMMER

INITIAL CONDITION	ACTION	RESULT
Off	TOUCH Step Pad	First step in lighting sequence (1)(2)
On	TOUCH Step Pad	Next step in lighting sequence (1)(2)

(1) LS7237

Sequences

1. Maximum - Off
2. Low - Medium - Maximum - Off
3. Night Light - Low - Medium - Maximum - Off

(2) LS7538

LS7539

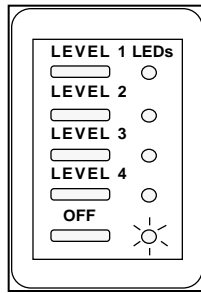
Sequences

1. Low - Medium - Maximum - Off
2. Night Light - Low - Medium - Maximum - Off
3. Maximum - Medium - Low - Off (LS7538)
4. Maximum - Off (LS7539)

**LS7315**

See Data Sheet

Figure 5



**MULTI-LEVEL DIMMER**

**INITIAL CONDITION**

Off  
On  
On

**ACTION**

PRESS Any Level  
PRESS Any Level  
PRESS Off

**RESULT**

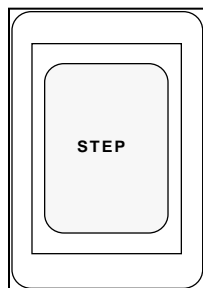
Corresponding intensity level, and LED lights.  
Corresponding intensity level, and LED lights.  
Off, and Off LED lights.

from LSI COMPUTER SYSTEMS, INC.

**LS7338**

See Data Sheet

Figure 5 and AN306



**SEQUENTIAL TIMER WITH  
TIMED-ON AND AUTO-DIM STEPS**

**INITIAL CONDITION**

Off  
Timed-On  
  
Timed-On  
Auto-Dimming  
Auto-Dimming

**ACTION**

TOUCH Step Pad  
None  
  
TOUCH Step Pad  
None  
TOUCH Step Pad

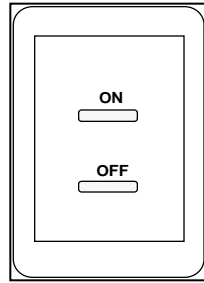
**RESULT**

Timed-On period begins  
On until programmable timer expires then steps to Auto-Dim (1)(2)  
Steps to Auto-Dim (2)  
Auto-dimming to Off occurs over fixed time period (3)  
Off

- (1) Timer is programmed with RC components.
- (2) Transition from Timed-On to Auto-Dim indicated by reduction in light intensity to alert user.
- (3) Auto-dimming period is fixed by the IC at 209 seconds (60Hz). This period is Mask-Programmable.

**LS7340**

See Data Sheet  
Figure 5 and  
AN306



## RETRIGGERABLE TIMER WITH SEPARATE OFF CONTROL

**INITIAL CONDITION**

Off  
Timed-On  
Timed-On  
Timed-On

**ACTION**

PRESS On  
None  
PRESS Off  
PRESS On

**RESULT**

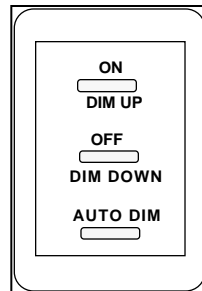
Timed-On period begins  
On until programmable timer expires, then steps to Off(1)  
Off  
Timed-On period retriggers

(1) Timer is programmed with RC components.

from LSI COMPUTER SYSTEMS, INC.

**LS7535**

See Data Sheet  
Figure 5 and  
AN705



## DUAL CONTROL CONTINUOUS DIMMER WITH UNIQUE DELAYED OFF FEATURE

**INITIAL CONDITION**

Off  
Off  
On  
On  
On  
On  
Auto-Dimming  
Auto-Dimming  
Auto-Dimming  
Auto-Dimming  
Auto-Dimming  
Auto-Dimming

**ACTION**

SHORT PRESS On  
LONG PRESS On  
LONG PRESS On  
LONG PRESS Off  
SHORT PRESS Off  
PRESS Auto-Dim  
SHORT PRESS On  
LONG PRESS On  
SHORT PRESS Off  
LONG PRESS Off  
PRESS Auto-Dim  
None

**RESULT**

"Softly" turns On to memory intensity (1)  
Varies from min. intensity towards max. intensity (2)  
Varies towards max. intensity (2)  
Varies towards min. intensity (3)  
"Softly" turns Off  
Begins auto-dimming to off (4)  
"Softly" returns to memory intensity (5)  
Varies towards max. intensity (2)  
"Softly" turns off  
Varies towards min. intensity (3)  
No change  
Auto-dims to Off

- (1) Last intensity achieved before turn off is stored as memory intensity.
- (2) On (Dim Up) varies intensity towards maximum and stops there.
- (3) Off (Dim Down) varies intensity towards minimum and stops there.
- (4) Auto-dimming period controlled by RC components and intensity level when Auto-Dim is activated.
- (5) Last intensity achieved before Auto-Dim started is stored as memory intensity.

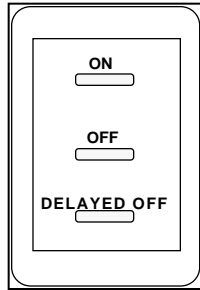
# BRIGHT IDEAS FOR WALL SWITCH LIGHTING CONTROLS

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page 5

## LS7340

See AN704



### ON - OFF - DELAYED OFF

#### INITIAL CONDITION

Off  
On  
On

#### ACTION

PRESS On  
PRESS Off  
PRESS Delayed Off

#### RESULT

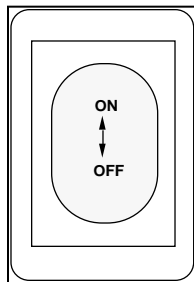
On  
Off  
On until Delayed Off timer expires, then steps to Off (1)

(1) Delayed Off Timer is programmed with RC components.

from LSI COMPUTER SYSTEMS, INC.

## LS7340

See AN305  
and AN 306



### SINGLE PUSHBUTTON

### CONTROL TIMER WITH OFF

#### INITIAL CONDITION

Off  
Timed-On  
Timed-On

#### ACTION

PRESS Button  
None  
PRESS Button

#### RESULT

Timed-On period begins  
On until programmable timer expires, then steps to Off (1)  
Off

(1) Timer is programmed with RC components.

# BRIGHT IDEAS FOR WALL SWITCH LIGHTING CONTROLS

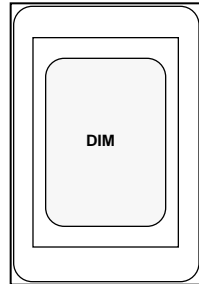
071194-3

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## LS7631-LS7632

See Data Sheet

Figure 5



## CONTINUOUS DIMMER FOR LOW VOLTAGE HALOGEN TRACK LIGHTING

INITIAL CONDITION	ACTION	RESULT
Off	SHORT TOUCH Dim Pad	Soft turn-on to memory intensity or maximum intensity(1)
Off	LONG TOUCH Dim Pad	Varies from minimum intensity or memory intensity (1)(2)(3)
On	SHORT TOUCH Dim Pad	Off
On	LONG TOUCH Dim Pad	Varies from pre-touch intensity (2)(3)

(1) Last intensity achieved before turn off is stored as memory intensity.

Mode 1 for LS7631 and LS7632 has Memory Feature.

(2) LS7631:

If LONG TOUCH remains when max (min.) intensity is reached, the dimming direction will then go towards min. (max.) intensity.

LS7632:

If LONG TOUCH remains when max. (min.) intensity is reached, the dimming will cease to change.

If LONG TOUCH is removed and reapplied, the dimming direction will then go towards min. (max.) intensity.

(3) Dimming direction will continue (reverse) from previous dimming direction.

Mode 1 and Mode 2 for LS7631 and LS7632 have Direction Reversal Feature.

from LSI COMPUTER SYSTEMS, INC.

## GUIDE TO REFERENCED APPLICATION NOTES

AN305 - Adapting the LS7339, LS7340 to Single-Pushbutton Control

AN306 - Accurately Extending the Timing Range of the LS7338-LS7340

AN703 - Using the LS7538, LS7539 in a Wall Switch

AN704 - Using the LS7340 as an On-Off-Delayed Off Light Switch

AN705 - A Dual Dimming Control Light Switch with Unique Delayed Off Feature

# BRIGHT IDEAS FOR WALL SWITCH LIGHTING CONTROLS

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