21 Smart Porch Light

☐ For convenience and security, you can't beat this smart porch light. Whenever someone rings your door buzzer with S1, on comes the front porch light. One to three minutes later, depending on the setting of R3, it goes off. If a burglar rings the doorbell while you're away (trying to ascertain whether or not the house is empty), the light will fool him. But even if he's smart enough not to be

fooled, he'll think twice about breaking in. After all, there are likely to be more electronic booby traps and alarms waiting for him inside.

You can activate the light timer without ringing the buzzer by pressing S2. Do this as you leave the house at night, and you'll never stumble over a skateboard again.

PARTS LIST FOR SMART PORCH LIGHT

BZ1—6-VAC buzzer
C1, C2—220-uF, 25-VDC
electrolytic capacitor
C3—100-uF 25-VDC electrolytic
capacitor
C4, C5—0.1-uF ceramic disc

capacitor
D1—1N4003 rectifier diode

D2-15-VDC, 1/2-watt Zener diode

D3-D5-1N914 diode

IC1-555 timer integrated circuit

I1—incandescent porch light

K1-6-VDC, 500-ohm relay

Q1-200-VDC, 6-A triac

R1—10,000-ohm, ½-watt resistor (all resistors 10% unless otherwise noted.)

R2-220,000-ohm, 1/2-watt resistor

R3—1,000,000-ohm trim potentiometer

R4-470,000-ohm, 1/2-watt resistor

R5-68-ohm, 1-watt resistor

R6-1,000-ohm, 1-watt resistor

S1, S2—pushbutton switch, normally open

T1-6.3-VAC transformer

