

Smart Ceiling Fan and Light Combination

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Introduction

- Energy Crisis
- Energy Efficient Smart Appliances
 - Saves energy
 - Safer
 - Automated Control, No user intervention needed

Our Product

- Smart Ceiling Fan/Light Combination
 - Adjusts light intensity based on lighting condition
 - Adjusts fan speeds based on atmospheric temperature
 - Alarming Features
 - Alerts under intense heat (fire)
 - Occupancy Sensing Capability
 - Multiple user input choices

Current Product in Market

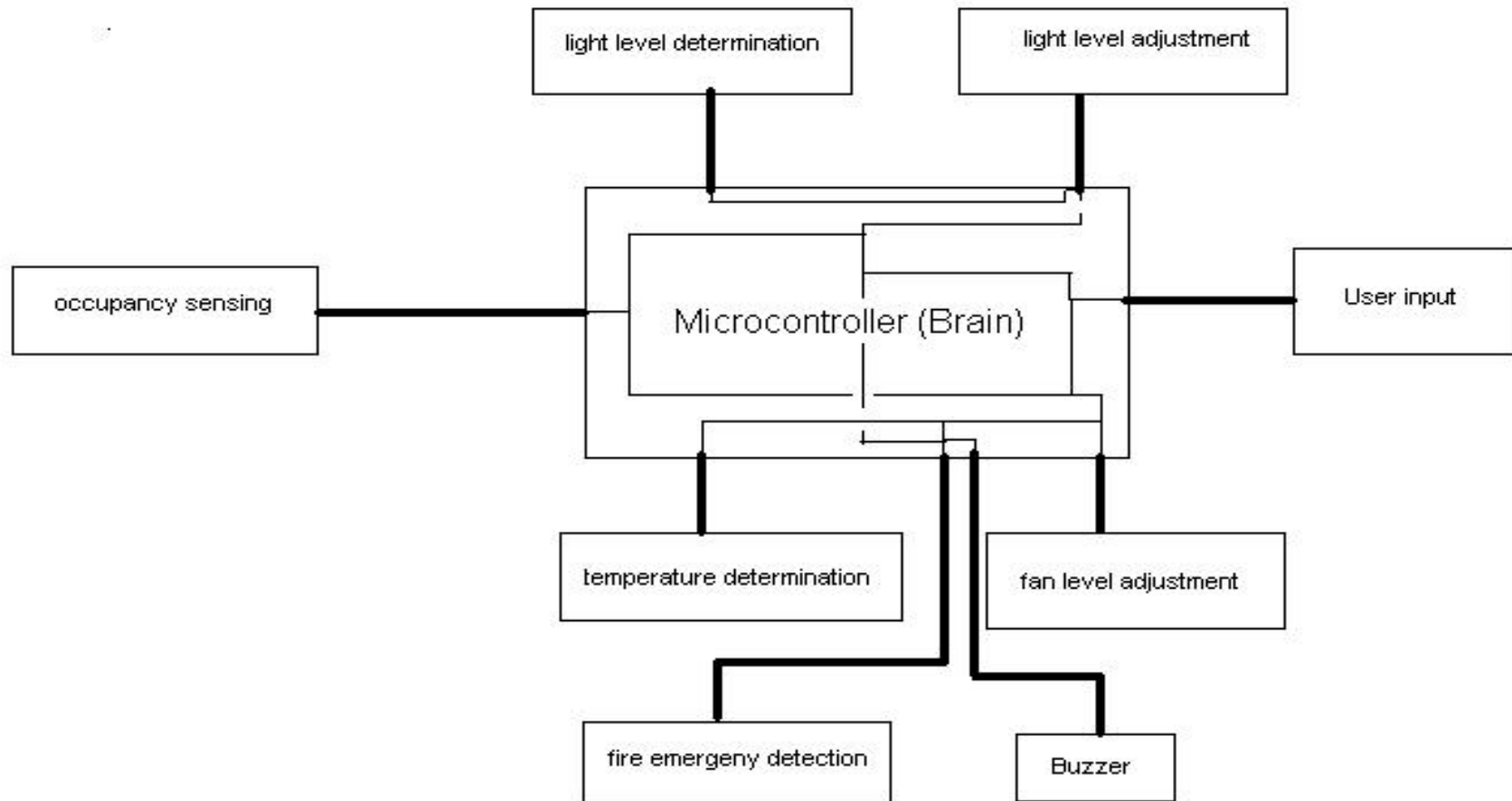
LAMPS PLUS



The traditional Casa Vieja fan is nicely finished in white with 5 white blades. It features a 52" blade span, 14° blade pitch, 3-speed pull chain, and a lifetime motor warranty. Light kit (75527) takes a 10 watt energy saving fluorescent and is optional and extra. Comes standard with 3" downrod.

LAMPS PLUS Price \$176.98

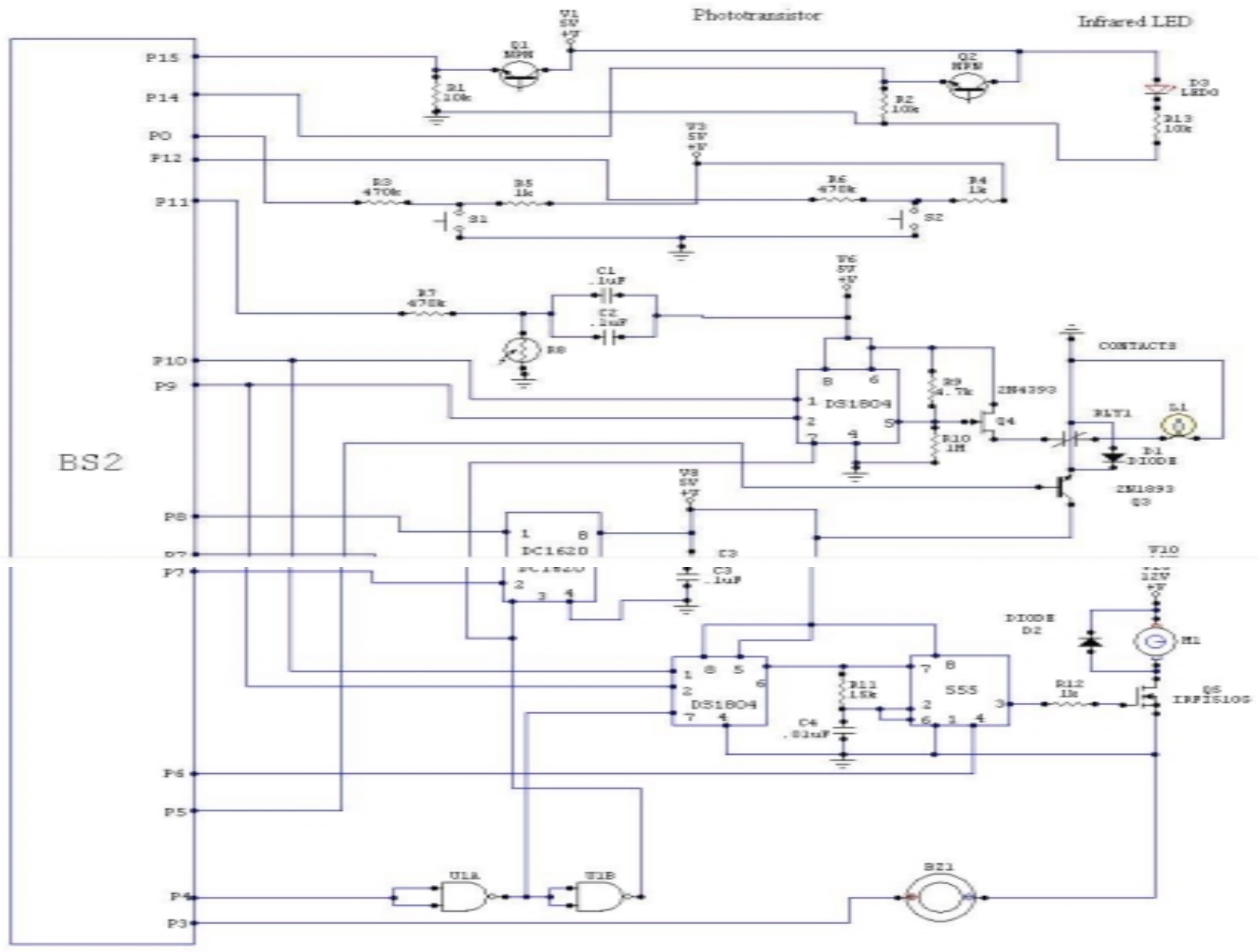
Flow Diagram



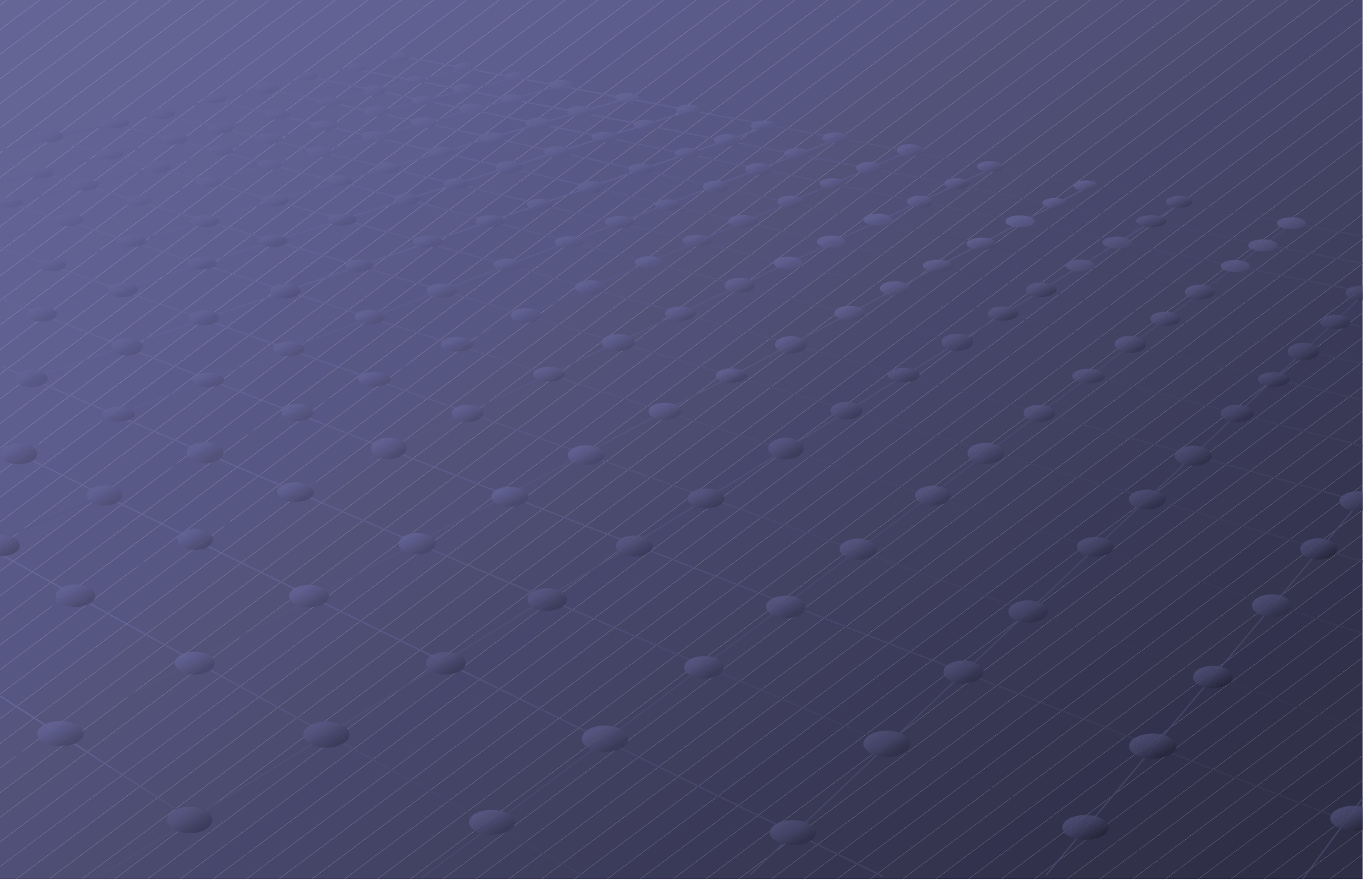
Main Components

- Embedded Microcontroller (Basic Stamp 2)
- Temperature Sensor (DC 1620)
- Light Sensor (Photo Resistor)
- Infrared Sensor (Infrared LED)/ Receivers
- Power MOSFET
- BJT and JFET
- Digital Potentiometer
- 555 Timer (PWM)
- Reed Relay

Schematics



BS2 Program



Estimated Cost (Prototype)

● Basic Stamp with Board of Education kit	(\$100)
● DC Fan	(\$20)
● Light	(\$1)
● DS1804, Digital Potentiometer	(\$2 X 2)
● 555 Timer	(\$2)
● DC1620 Temperature Sensor	(\$2)
● Power MOSFET	(\$2)
● Reed Relay	(\$1)
● Infrared LED	(\$2)
● Infrared Phototransistor	(\$1X2)
● Photoresistor	(\$1)
● BJT and JFET	(\$2)
● Other Components	(\$5)

● Total Cost	(\$144)

Possible Future Upgrades

- Electrocution Protection
- Statistical Data
 - Temperature
 - Traffic Flow
- Better User Interface