GSK-184 UFO CHASING LIGHTS, 8 LEDs

This is a chasing light circuit with multiple selectable patterns and adjustable chasing speeds. The small, low-voltage PC board makes for easy placement in any location.

Technical Specifications
- Power supply: 9 VDC.
- Consumption: 150 mA Max.
- Chasing speed adjusted up to 12 levels.
- 17 chasing patterns available.
- PCB dimensions: 2.20" x 2.20".

How it works
The circuit diagram is shown in Figure 1. The most important part is the microcontroller IC1 which was programmed by the factory. The program was designed to select various chasing patterns by **MODE** switch. The chasing speed can also be adjusted by using **SPEED** switch.

Circuit Assembling
External connecting and component locations are shown in Figure 2. It is recommended to assemble the circuit starting with lower height component first, i.e., diodes, resistor, electrolytic capacitors and transistors, etc.
Be careful while assembling and check for matching of PCB and component polarity before soldering as shown in Figure 3.
Use a maximum 40W soldering iron and solder with a tin and lead ratio of 60/40.
Recheck the assembled circuit for proper placement and solder joint. Use a solder-sucker or a solder-absorber in case of misplacing component to protect PCB from damage.

Testing and Using
When the assembly is completed, supply 9 VDC and the **LEDs** will begin chasing. This means the circuit is correct and ready to operate.

Changing the pattern (see table 1)
1. Push and hold **MODE** switch until **LEDs** turn on, then release **MODE** switch.

2. If you want to select all patterns, push and hold **MODE** switch until **LED** light is on, and push **SPEED** switch until all **LED** lights are on, release both switches. But if you want to chase one pattern, push and hold **MODE** switch until **LED** light is on, and release switch.

Changing the chasing speed (see table 1)
Push **SPEED** switch will be increased speed by one step. When the speed is adjusted to No.12, it will return to No.1.
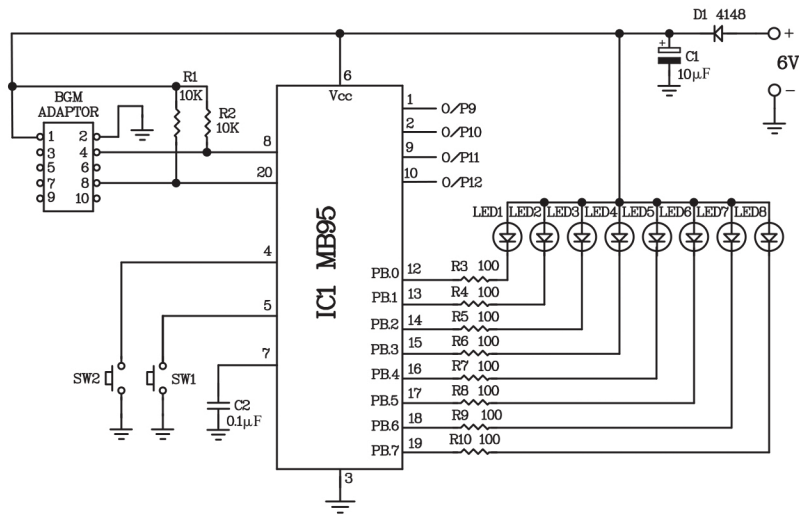
Figure 1. UFO Chasing Light 8 LED Circuit

TABLE 1: Speed of Chasing LED (No.1-12) and Pattern Indicator (No.1-17)

No.	LED1	LED2	LED3	LED4	LED5	LED6	LED7	LED8
1	●	○	○	○	○	○	○	○
2	○	●	○	○	○	○	○	○
3	○	○	●	○	○	○	○	○
4	○	○	○	●	○	○	○	○
5	○	○	○	○	●	○	○	○
6	○	○	○	○	○	●	○	○
7	○	○	○	○	○	○	●	○
8	○	○	○	○	○	○	○	●
9	●	○	○	○	○	○	○	○
10	●	○	○	●	○	○	○	○
11	●	○	○	●	○	○	○	○
12	●	○	○	●	○	●	○	○
13	●	○	○	○	○	○	○	○
14	●	○	○	○	○	○	●	○
15	●	○	○	○	○	○	●	○
16	●	●	●	○	○	○	○	○
17	●	●	●	○	○	○	○	○

● = ON ○ = OFF

** No.1 is a minimun speed in Chasing LED.

Figure 2. Circuit Assembling

This point is connecting to FUJISU programmer.
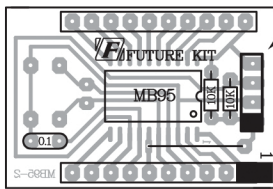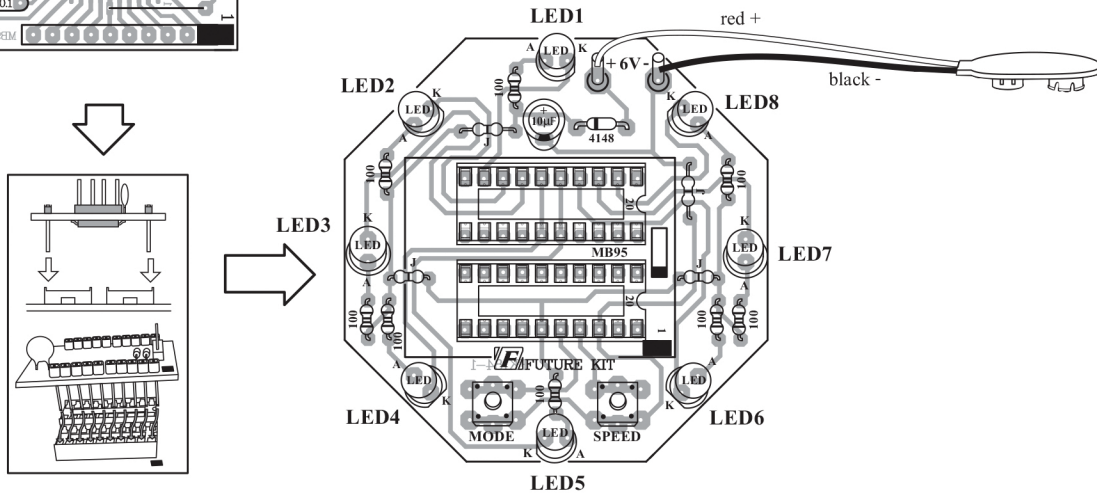

NO.1

RESISTORS 1/8W

R1-R2   10kΩ   - brown-black-orange-gold

R3-R10   100Ω   - brown-black-brown-gold

ELECTROLYTIC CAPACITOR

C1   =   10μF

CERAMIC CAPACITOR

C2   =   0.1μF or 104

DIODE

D1   =   1N4148

IC   IC1 = MB95F264 or MB95F564

Figure 3. Components Installing

RESISTOR   R .....Ω

ELECTROLYTIC CAPACITOR   C .....μF   Watch the polarity!

DIODE

LED

TACT SW