

GEMINI ROBOT KITS

Life Lites Assembly Instructions

Parts List

| DESCRIPTION | QTY | PART # |
|---------------------------------|-----|--------------|
| <u>Resistors</u> | | |
| 470 ohm (YEL-VIOLET-BRN-GOLD) | 1 | CCF25470 ohm |
| 1K ohm (BRN-BLK-RED-GOLD) | 1 | CCF251K |
| 100K Potentiometer | 1 | 91EK100K |
| <u>LEDs</u> | | |
| Red LEDs | 16 | 276-41 |
| <u>Capacitors</u> | | |
| 4.7 microfarad 35v Electrolytic | 1 | CAE4.7MF35v |
| <u>Headers</u> | | |
| 2 pin right angle single male | 1 | 929835-01 |
| <u>Sockets</u> | | |
| 24 pin socket | 1 | ICN-246-55-T |
| 16 pin socket | 1 | ICN-163-33-T |
| 14 pin socket | 1 | ICN-143-53-T |
| 8 pin socket | 1 | ICN-083-53-T |
| <u>ICs</u> | | |
| 74 HC 154 | 1 | 79HC154 |
| 74 HC 00 | 1 | 79HC00 |
| 74 HC 193 | 1 | 74HC193 |
| ICM 7555 | 1 | ICM555IPA |
| Life/Lite circuit board | 1 | Life Lite bd |

Assembling the Life Lites Board

1. Insert and solder all sockets into their proper location. Take note as to where pin 1 is located.

- () U1 - 8 pin socket
- () U2 - 14 pin socket
- () U3 - 16 pin socket
- () U4 - 24 pin socket

2. Insert and solder the resistors into their proper location.

- () R2 - 1K (BRN-BLK-RED-GOLD)
- () R3 - 470 ohm(YEL-VIOLET-BRN-GOLD)

3. Insert and solder the potentiometer into its proper location.

- () R1 - 100K potentiometer

4. Insert and solder the capacitor into its proper location. Note that the positive lead of this cap should be facing R2.

- () C1 - 4.7 microfarad 35v electrolytic

5. Insert and solder the LEDs into their proper location. Note that the short lead must be placed towards the right side of the board.

6. Insert and solder the header into its proper location. Note that the bent pins are inserted into the circuit board so that the remaining two pins point towards the right side of the circuit board.

7. At this point we recommend that you clean the board. You can use either alcohol and a scrub brush or you can purchase Flux Remover at your nearest electronic supply store.

8. Insert the ICs into their proper sockets. Make sure that the legs on the ICs go into the holes on the sockets properly and do not bend underneath the chip.

- () U1 - ICM7555
- () U2 - 74HC00
- () U3 - 74HC193
- () U4 - 74HC154

The board is now complete.

