JUBI-GAME

The JUBI-game is a multifunctional gadget. It can be used as a eye catcher with four easy to setup cheerful lighting effects. In addition, the JUBI game can test your reaction speed. The GO! LED light at any moment, and how quickly can you press the "start" button? This time is then displayed on the LED bar.
If you think you are fast enough, then you can play the JUBI-game. You have to improve your reactions time under a certain limit to win the game The max response time limit reduces during the game ,... but if you win you can get a unique light effect as a reward. If you swing the JUBI-GAME back and forth the text "100" will be written in the sky (100-in-the-sky).

Construction of the JUBI-GAME

In the building kit of the JUBI-GAME you will find the following components:
• Double sided board for the JUBI-GAME
• two push-buttons
• a position switch →
• three capacitors of 10 nF
• a 100 nF capacitor
• 14-pin IC socket
• programmed micro-controller Attiny24A
• four battery terminals
• five red LEDs
• two yellow LEDs
• two green LEDs

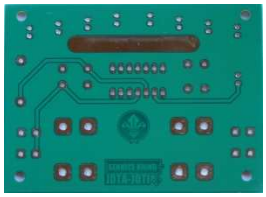


Fig. 1 Solder side

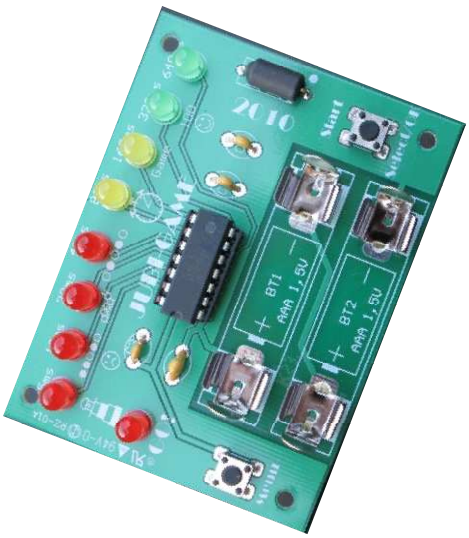


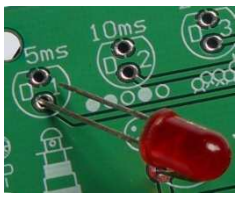
Fig.2 Componentside

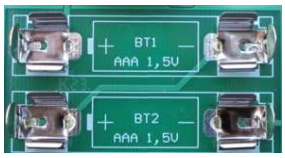
Assembly

All parts are placed on the component side of the board. Put the legs of the components from the label side of the PCB. Make sure all legs of the components through the holes (double folded legs may not be!).

The following construction sequence works best:

1. 14 pins IC socket, note the notch in the socket and the printing on the board
2. Two buttons, this should easily fit on the PCB. If that is not the case, the buttons may be rotated one quarter.
3. The position switch, which is the black- round part, and rattle when shaken, has a golden leg on one side and on the other side a silver one. When mounting, place the golden leg in the whole, marked with a dot.
4. Capacitor C1 100 nF (104)
5. Capacitors C2, C3 and C4 of 10 nF (103)
6. Red LEDs (D1, D2, D3, D4 and D9), noting the flat side of the LEDs (the short leg) to point to the top of the PCB.
7. Yellow LEDs (D5 and D6)
8. Green LEDs (D7 and D8)
9. The four battery terminals may be soldered. Note that the open sides of the battery terminals facing each other, otherwise the battery does not fit in between.
10. Finally, the Attiny24A in the IC-footing. Observe the notch on the IC socket and the IC. Please note that no legs are folded ore bend wrongly.





TIP: on the rear side of the board is a large silver colored island. On this location you could solder a large safety pin on it, so you can stick it on your on your scarf ore uniform

JUBI-GAME

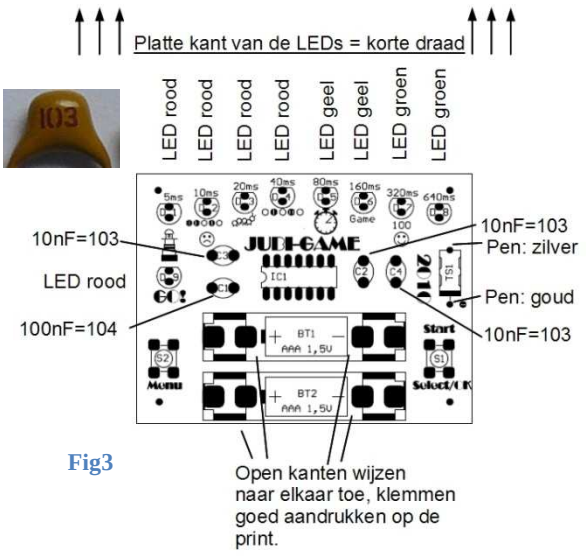


Fig3

When inserting the batteries, the LEDs will flash randomly and the GO! LED will react to the position of the board. Tilt the JUBI-GAME from you, the GO! LED switch to ON. Tilt the JUBI-GAME to you, the GO! LED switch to OFF If so, then probably everything is mounted correctly and your JUBI-GAME is ready for use! Have fun!

CAUTION! Note the polarity "+" and "-" of the batteries, if the batteries are placed the wrong way, the JUBIGAME will go defect!

Playing with it

Now part two of the fun begin. Playing with the gadget. When you press and hold the Start / Select / OK button you are going true all the effects and the game starts when you let go. The comprehensive game manual can be downloaded from http://www.kitbuilding.org and your helping hand can also explain how it work Enjoy

Fig 4 the effects

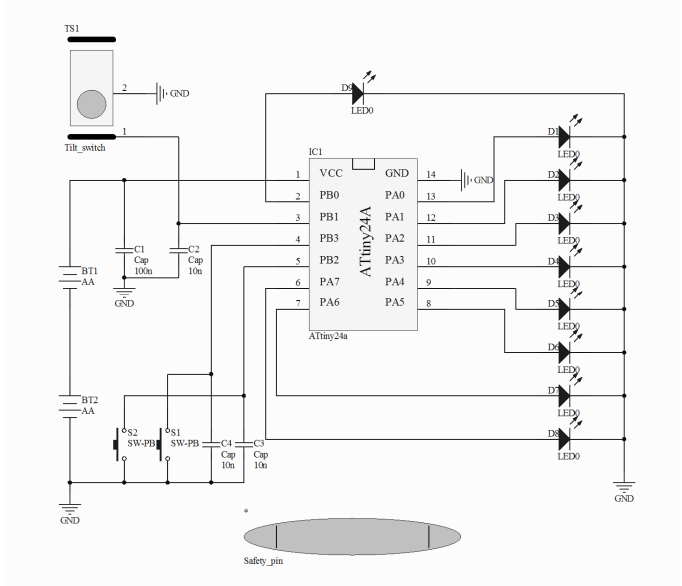


Fig5 Schematics

SYMBOL	LED	FUNCTION
Lighthouse	D1	blinking
●●○●○	D2	Random variable signal
Caterpillar	D3	Chase
○●○●○	D4	Doubbel Knight-rider effect
Stopwatch	D5	Reaction-seedtester
GAME	D6	JUBI-GAME
100	D7	100-in-the-sky