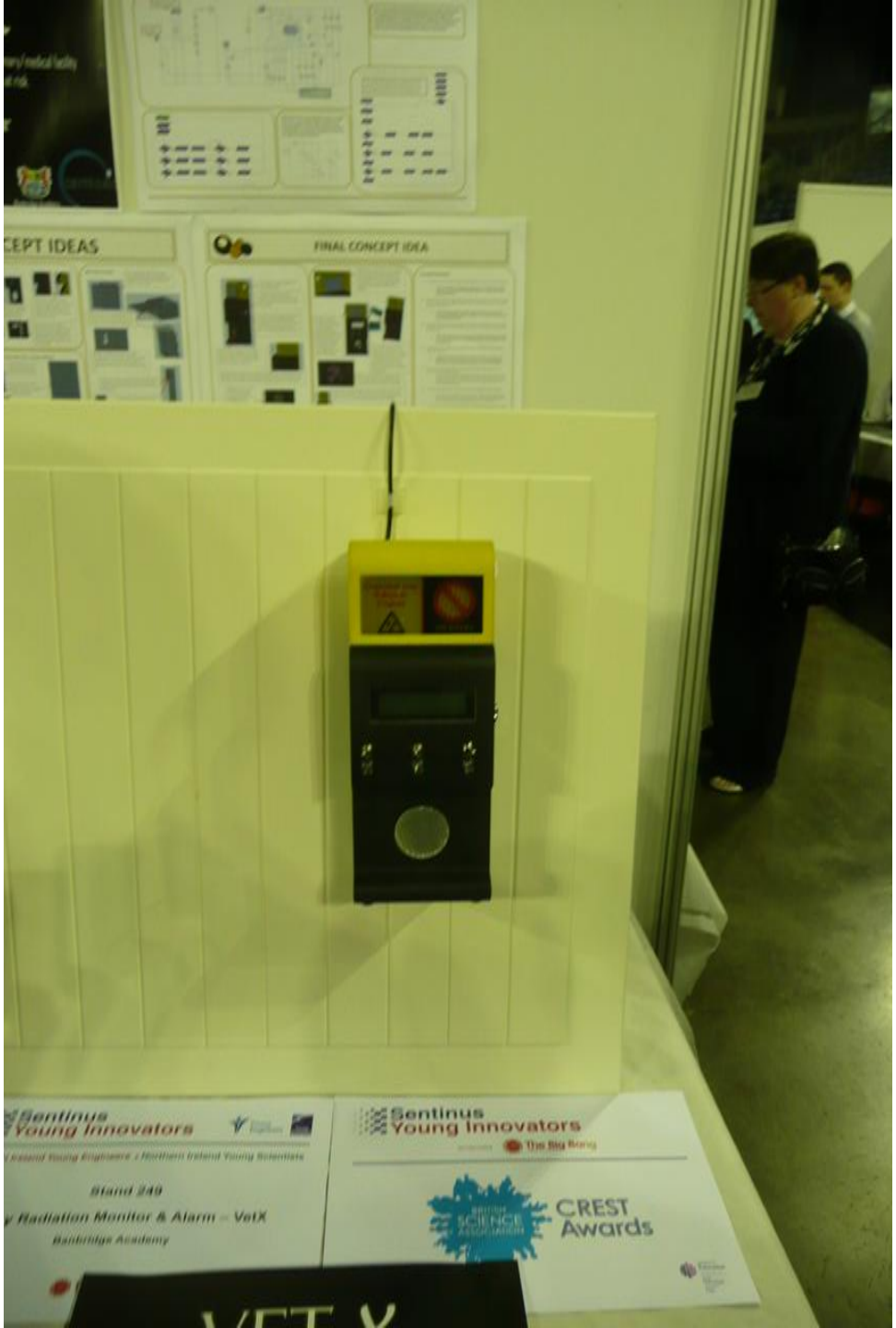
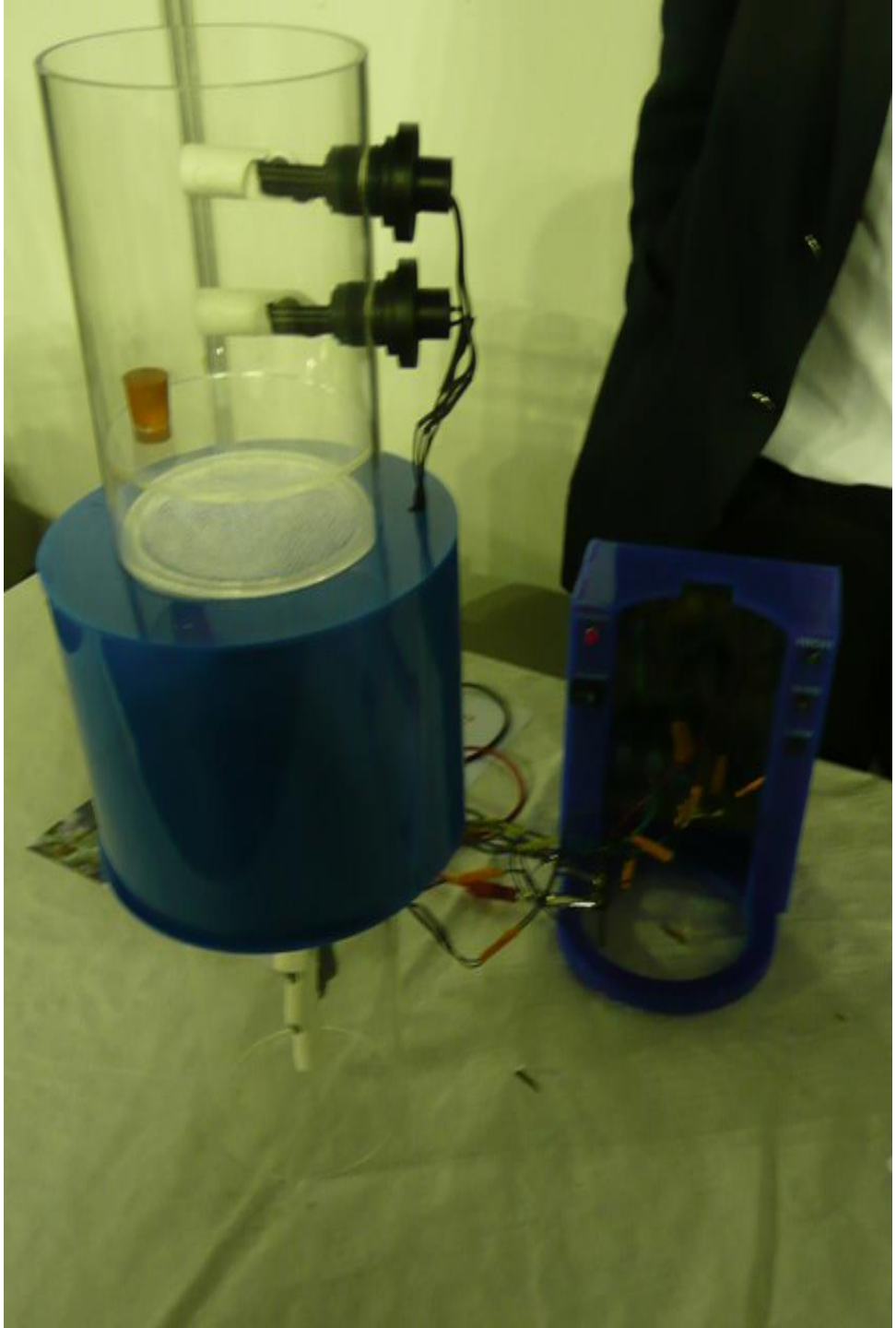
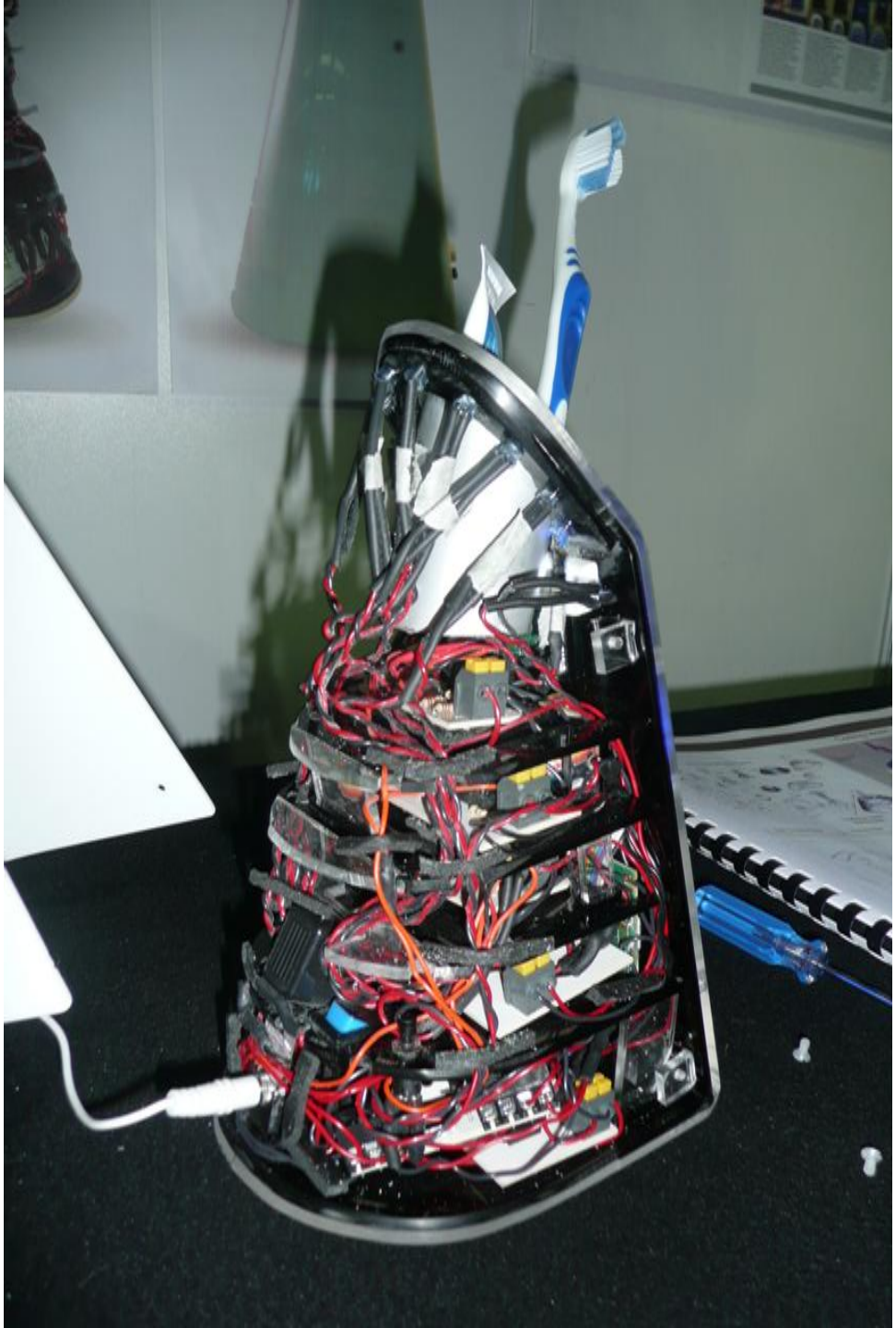

On/Off
1976
6427
5798
3235


Bottle Sorter
Green
Clear


CEPT IDEAS
FINAL CONCEPT IDEA
Sentinus
Young Innovators
Stand 249
Radiation Monitor & Alarm – VetX
Sentinus
Young Innovators
CREST
Awards




Timer
120




Design Selection
SolidWorks
Final Product
Development
Development
Final Product
Plastic
Bill


Development
Parts for Final Assembly
Design Selection
SolidWorks
Final Product
Development
Final Product
Development

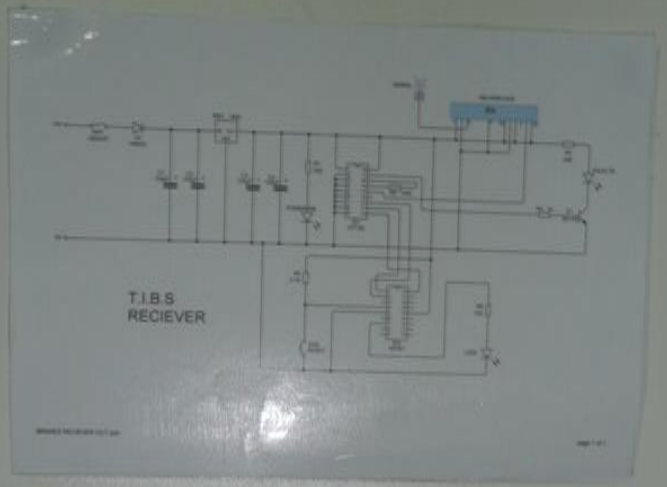

TURISMO RACE
Section 1
Product Design
Section 2

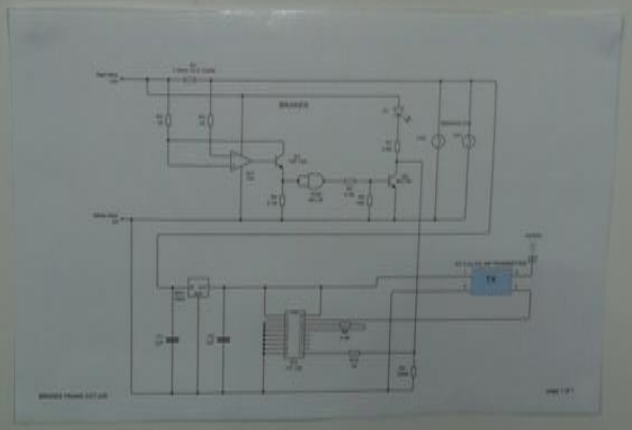

Process of the base
Shoe Stand Finished
Shoe Stand Finished
Design Problem
Changes made during manufacture


WARNOMATIC
ATTACH TO TRAILER
CAR SOCKET
TRAILER PLUG
WIRE BROKEN
BULB BLOWN

Sentinus

The Big Bang



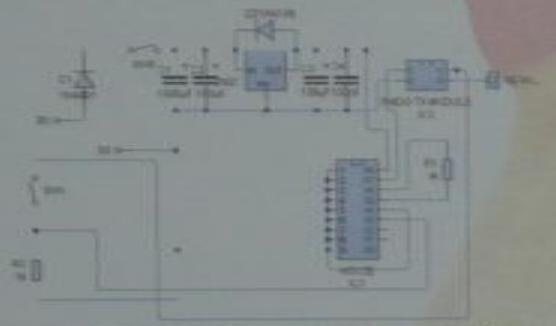



Identification Of Problem
Concepts
Final Design
Circuit Development
Program Development
Testing
Improvements
UV LIGHT LEVEL
8

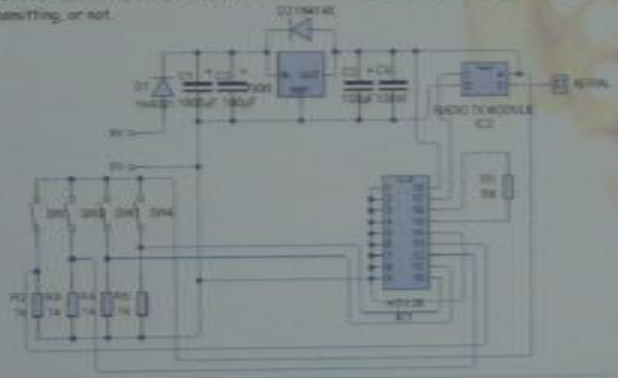

Signal
Power
On/Off
Ch1
Ch2
Ch3
Ch4
Holds the battery and switches in place
Screws can be removed to allow the cover to slide off

1. Circuit design Transmitter

The circuit will be built using a PIC chip. Bellow is a circuit that would be built and given to all 4 children. Each one would be modified so that it would output a different frequency to uniquely identify each circuit separately. SW5 controls the power being provided to the circuit. SW1 controls whether the circuit is transmitting, or not



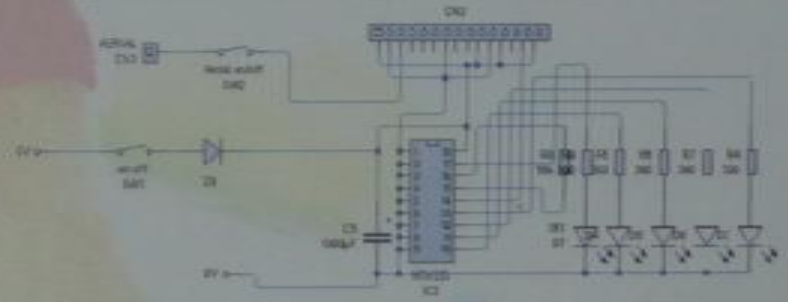
Below is the circuit that I will be building. It can control the transmission of all 4 radio frequencies from the one circuit, which represents the actual 4 different circuits if they were to be built. SW1, SW2, SW3, SW4 controls whether each of the 4 frequencies are transmitting, or not



2. Circuit design- receiver

Radio Receiver Module

I will first begin with the radio control module and circuitry and explain its functionality

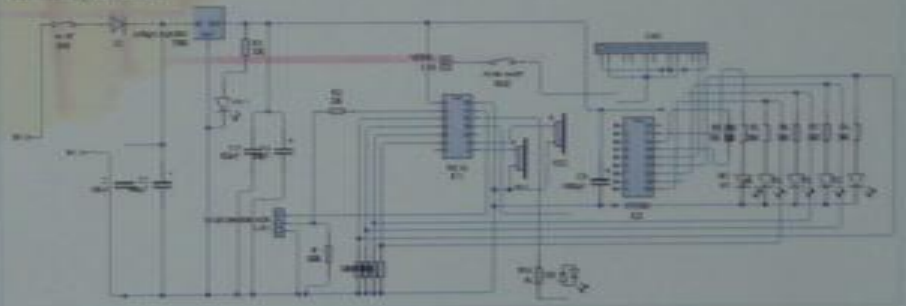


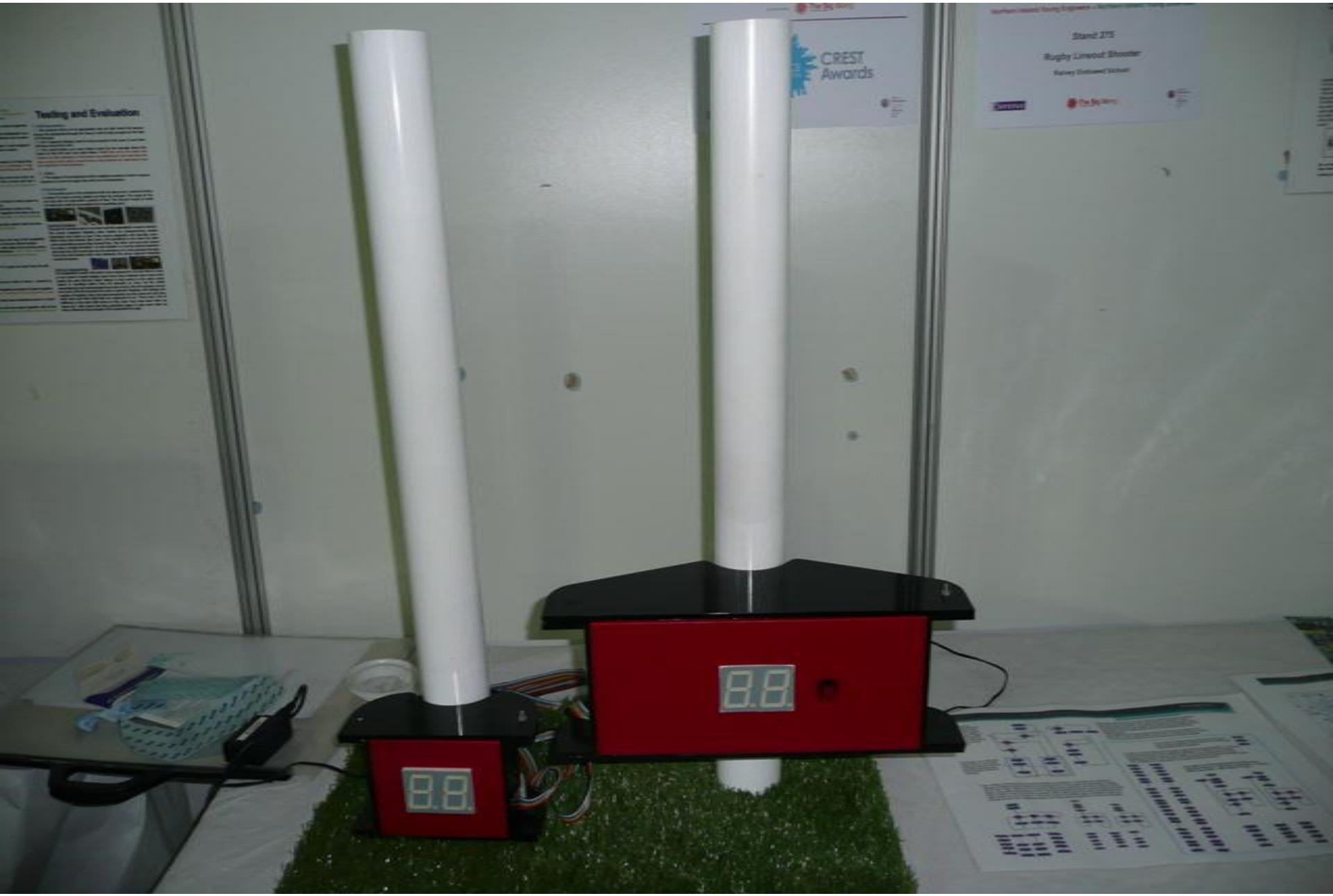
This is the circuit used to control the radio receiver module. CN2 is the Radio receiver component itself. When it receives a signal transmitted from one of the transmitters at the set frequency it will light up the corresponding LED (D4, D5, D6, and D3).

When using the test radio circuit in the class section, I found that the length of the aerial directly affects the range of the receiver. That is why I have included a switch on the aerial which means when the switch is open it limits the range to a small distance e.g. 10m, but when the switch is on then I open the aerial to maximum range and with the "Faraday shield" outlined earlier, it allows the child to be tracked over a large distance.

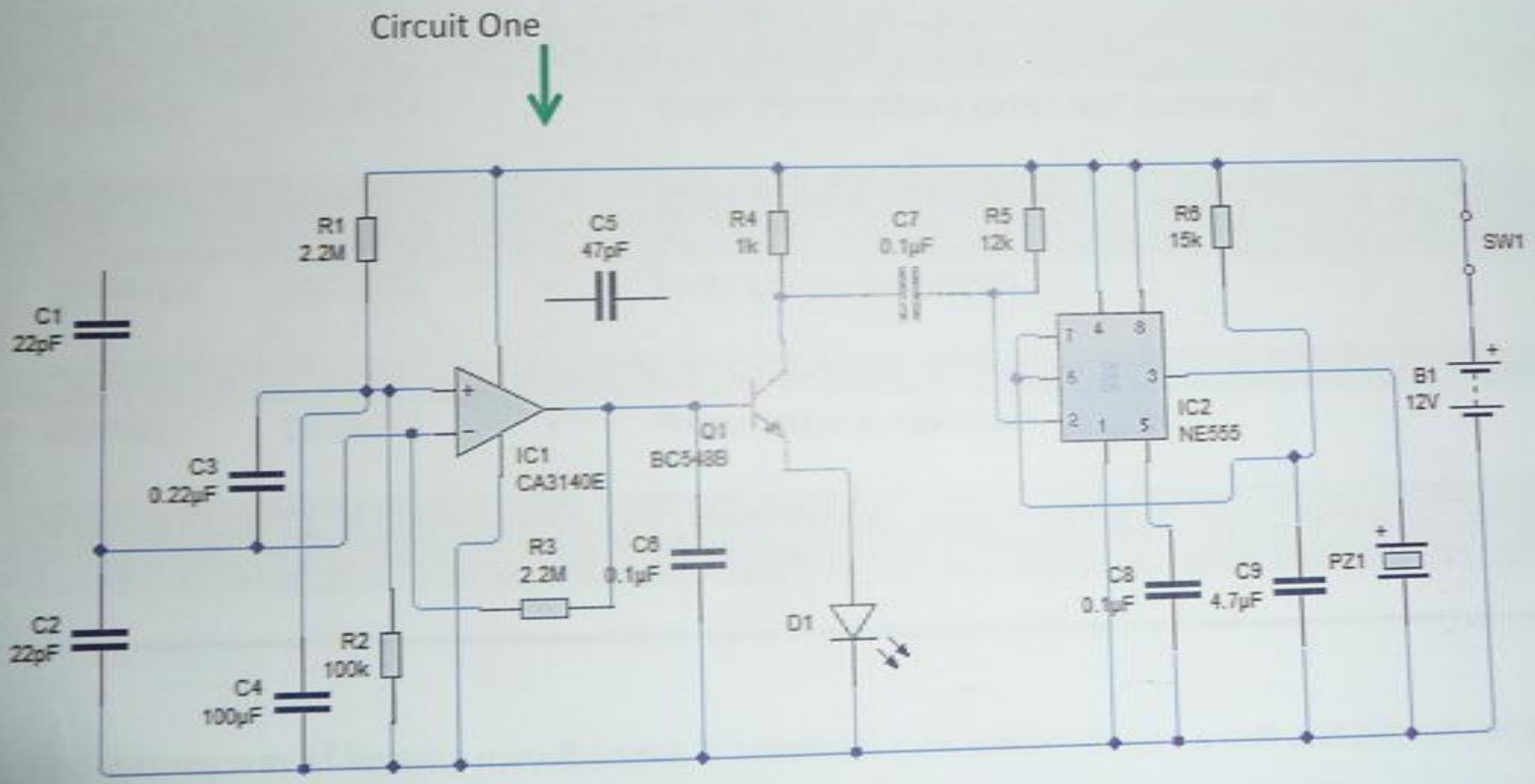
Complete Circuit

The circuit will be built using a PIC 6wine as this chip has the capacity to hold a much larger program which will be needed to program the commands outlined in the receiver flow chart on page 11. The PIC 6wine chip is then integrated into the circuit above to give a final circuit which includes all the components outlined in the flow chart. The PIC 6wine can then be programmed to carry out the required tasks.



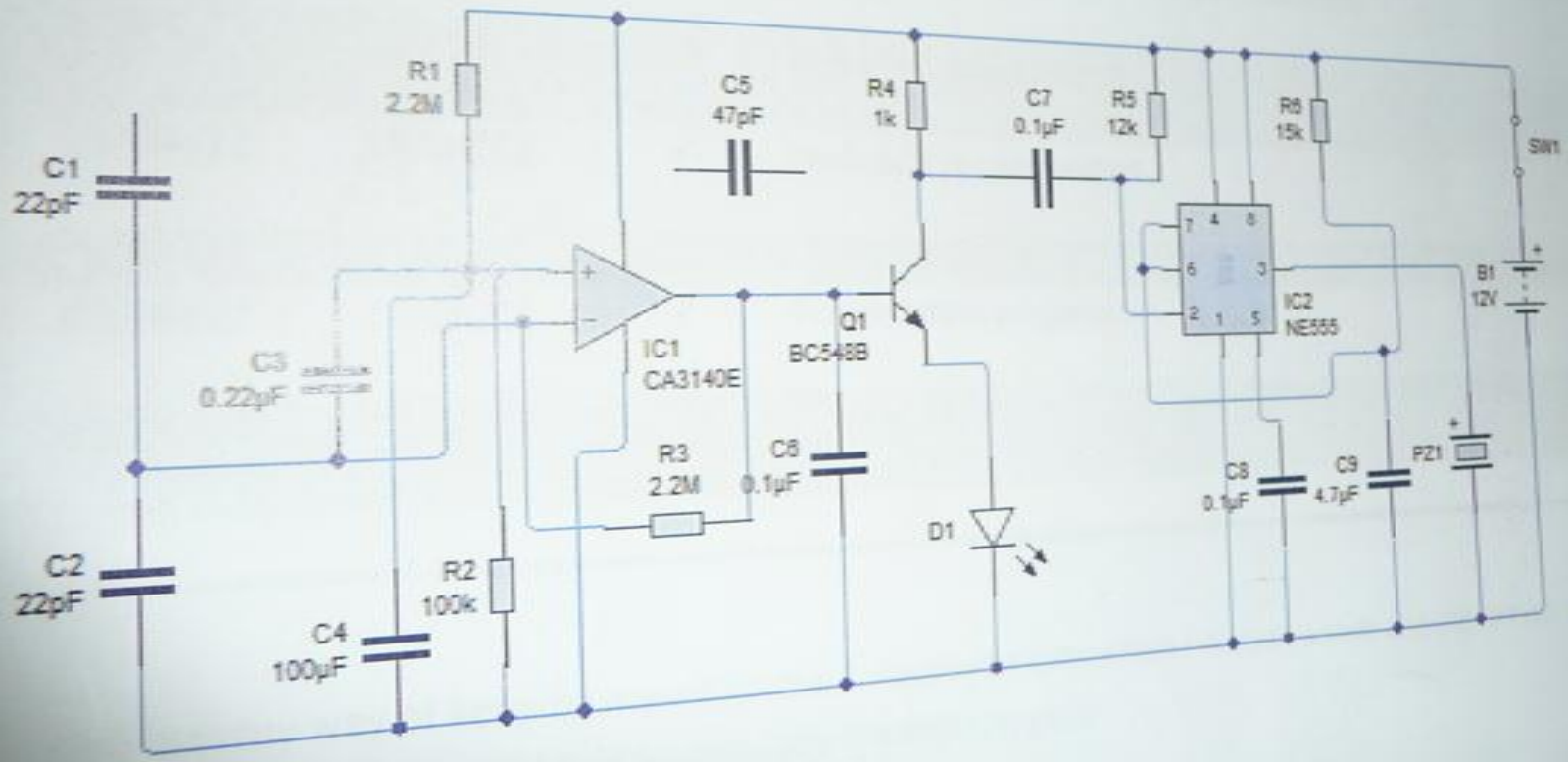

Testing and Evaluation
CREST Awards
Stand 275
Rugby Lineout Shooter

This (Diagram One) shows the final design for my outer casing, as I have said it is to be both basic and small.



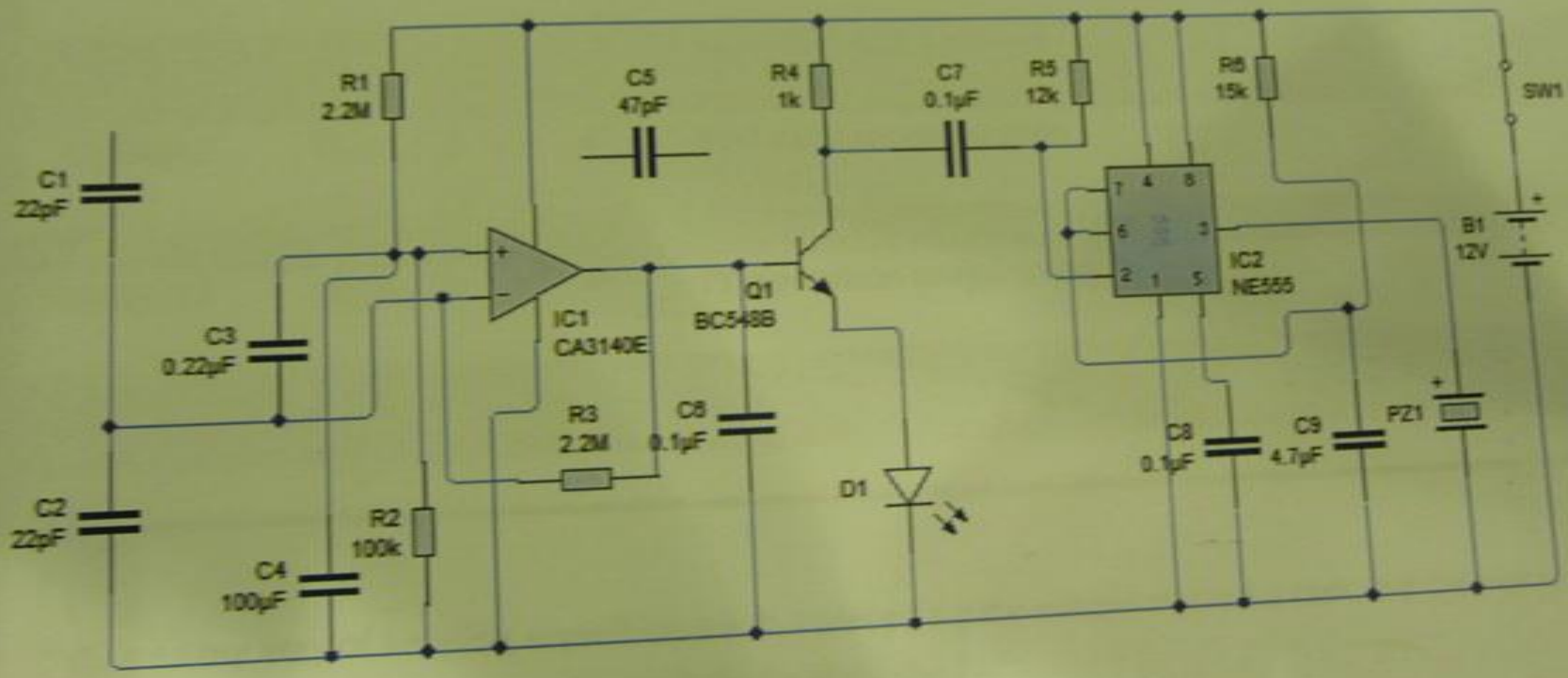
...g, as I have said it is to be both basic

Circuit One



and small.

Circuit One

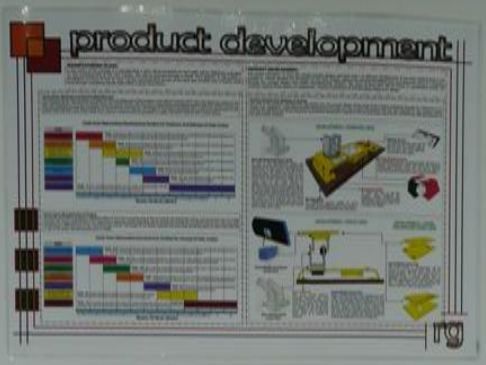



START
POSITION


Sales


START
POSITION


software development: introduction
manufacture & software development
further software develo
POWER TO THE
rowan griffin
THE KEY IS SOLAR ENERGY
initial ideas: concept sketches
hardware development

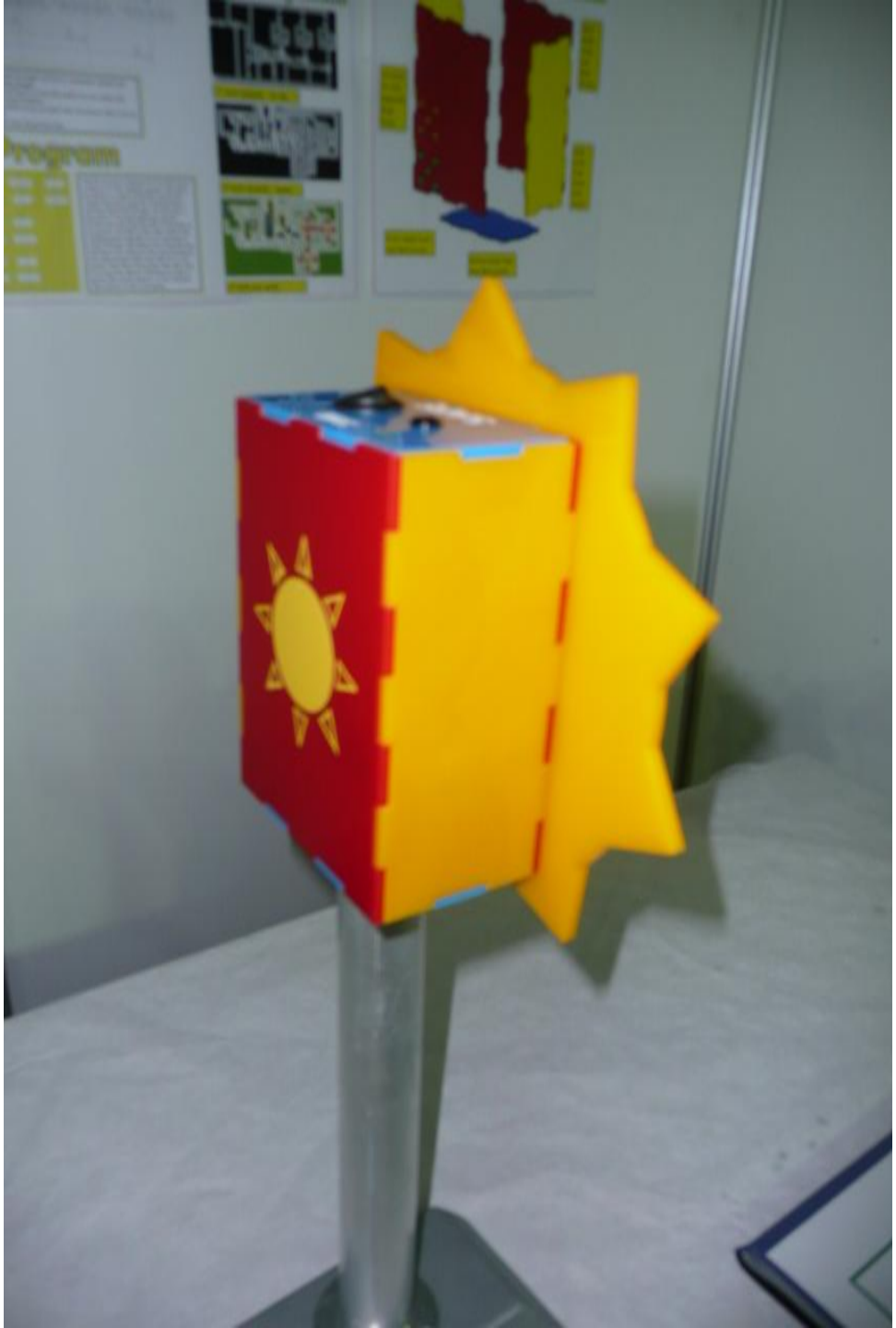

product development


further software development


manufacture & testing


product development


Final Program



Problem identification and market research

Testing

Ritalin
Tramadol
Concerta
Kapake
Inhaler

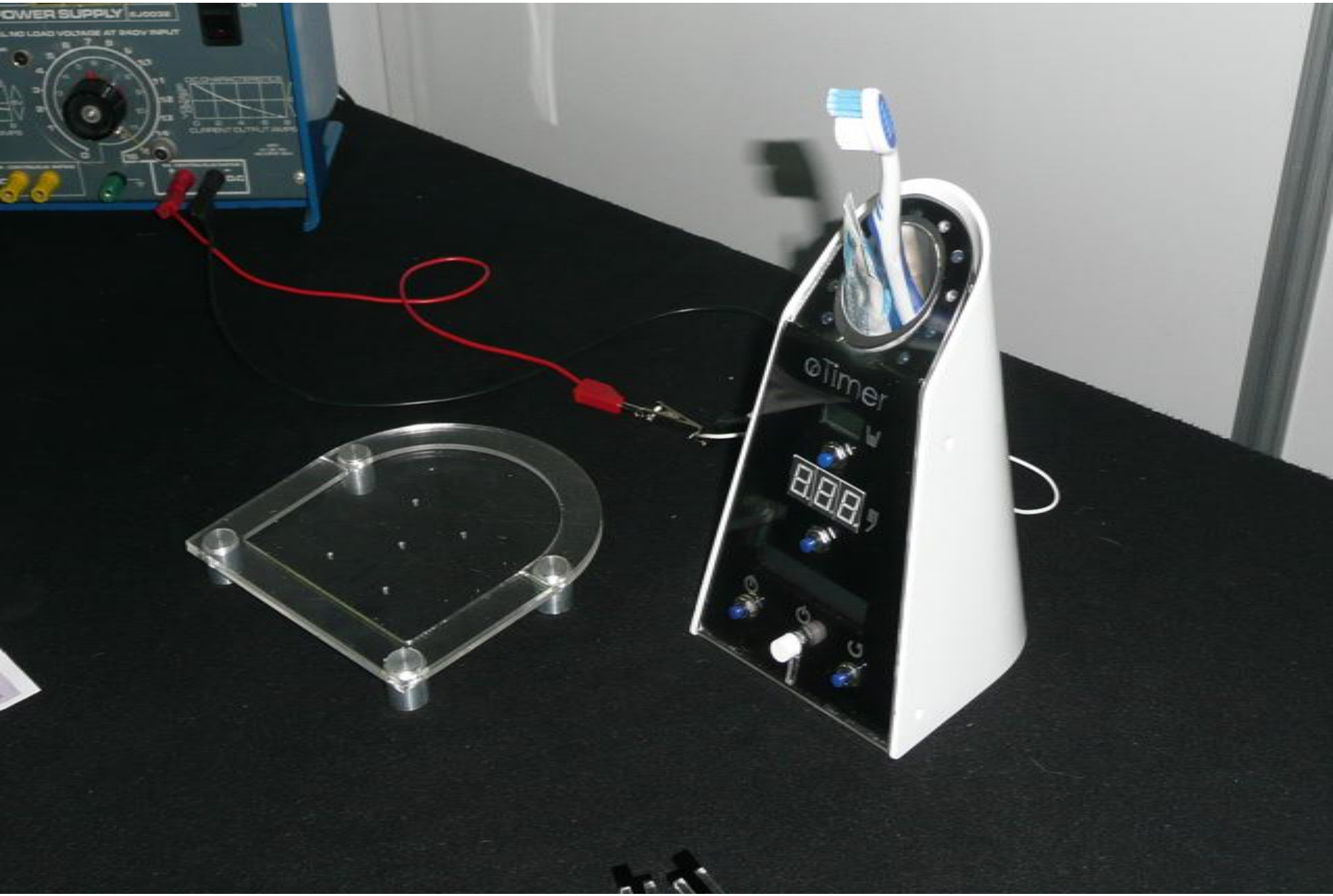
esearch

'THE INVISIBLE CLOCK'
£39.95
Function- the function of this product is to sound and alarm whenever the

6 Alarm Clock
- Voice Alarm

'E-PILL MED CENTER'
£54.95
Function- the function of this device is to allow the customer to set up to six alarms

£9.95
Function- the function of this device is to


POWER SUPPLY
øTimer