

### 3.7 ESP and PK Experiments

*Nihil est in intellectu quod non prius fuerit in sensu.*  
(Nothing is in the intellect that was not passed before by the senses.)

Unknown Latin author

Extrasensory perception and psychokinesis or telekinesis form one of the most important fields in paranormal research. The aim of these two phenomena lies in the powers of the mind. Can a person read others' minds? Can a person know what is happening in other places? Can a person move an object on a table using his mind powers?

To conduct research with these paranormal phenomena, the reader can be assisted by several electronic devices. The space we have in this book is insufficient to describe all the devices that are suitable for experiments in this field. Therefore, we have selected some that are simple to build and easy to use in practical experiments.

The circuits intended for ESP are random number generators. In experiments in this area, as described before, researchers may use the electronic devices for various purposes.

#### Project 38: Random Number Generator

A random number generator is an important device for use in experiments involving ESP. Zener cards can be affected by either the subject or the researcher when they are handled. Dies and coins can also be influenced by the researcher or the subject in an experiment. But we can consider an electronic device that chooses random numbers to be a subject-validation device, as it can be influenced by the subject when it displays a number or card but not by the researcher.

The circuit described here is ideal to perform both ESP experiments and PK as, in the first case, the subject must use his mind to guess what number has been chosen by the circuit and, in the second case, he must try to predict what number is about to be chosen by the circuit.

A principal advantage of this circuit is that it is powered from a 9 V battery and can be used in any convenient location. The circuit can be used in several experiments as suggested below.

#### Experiments

- The researcher can use the device to choose a number that he does not yet know and make tests with subjects who try to guess the number using ESP.
- The subject can try to control what number is chosen by the circuit in psychokinesis experiments.
- In radiesthesia experiments, the device can be used to determine if the pendulum activity can alter the numbers chosen by the circuit.

### How It Works

Q1, Q2, and Q3 form an oscillator that is programmed to produce a random number of pulses when S is pressed and released. The secret of this circuit is that it does not stop the circuit when S is released, avoiding the influence of the subject in the selected number of pulses. When S is released, the oscillator's frequency slows down until it stops some seconds later. The time span between the instant in which S is released and the circuit stops presenting random numbers is determined by C1 and R1. These components can be changed to suit the experiments.

Now, let us see in detail how this stage operates. When S1 is pressed, C1 charges with the power supply voltage biasing Q1. Q1 controls the relaxation oscillator formed by a unijunction transistor (UJT). When biased at the moment in which S is pressed, Q1 starts with the UJT oscillation at a frequency adjusted by R1 and basically determined by C2. These components determine how fast the numbers will run in the sorting process.

The pulses produced by the UJT are amplified by Q3, driving a decade counter formed by the CMOS IC 4017. In this application, the counter is programmed to count up to six, meaning that the device can generate one of six numbers. If necessary, the reader can alter the circuit to count up to other numbers (between 2 and 10).

When receiving the pulses, the outputs of the 4017 go to the high logic level in sequence, driving transistors Q4 to Q9. As a load, these transistor use LEDs, but the circuit can be altered to drive small incandescent lamps (up to 50 mA).

When the last output goes to the high logic level, the circuit is reset and, in the next pulse, the first output again comes to the high logic level, driving the corresponding LED. This means that, as high as the number of pulses can be, there is always one LED remaining high after the cycle.

To avoid stopping the circuit when S is released, we have the capacitor C1 in the circuit. When S is released, C2 needs several seconds to discharge through the transistor, maintaining it in conduction, and so the oscillator remains on. As long as the capacitor discharges, the resistance between the emitter and collector of Q1 increases, and then the frequency of the oscillator falls. The final effect is the gradual reduction of the running speed of the LEDs until the moment in which only one of them remains on. This corresponds to the generated number. To start the process again, the reader has only to press and release S again.

### Assembly

Figure 173 shows the random number generator's diagram. The components are placed on a small printed circuit board as shown in Fig. 174.

Common red LEDs are used. Keep the terminals long, as shown in Fig. 175. This way you can fix the printed circuit board in the box and the LEDs will appear in the holes in the panel.

It is important to observe the position of polarized components such as the LEDs, electrolytic capacitors, bipolar and UJT transistors, and battery. The other

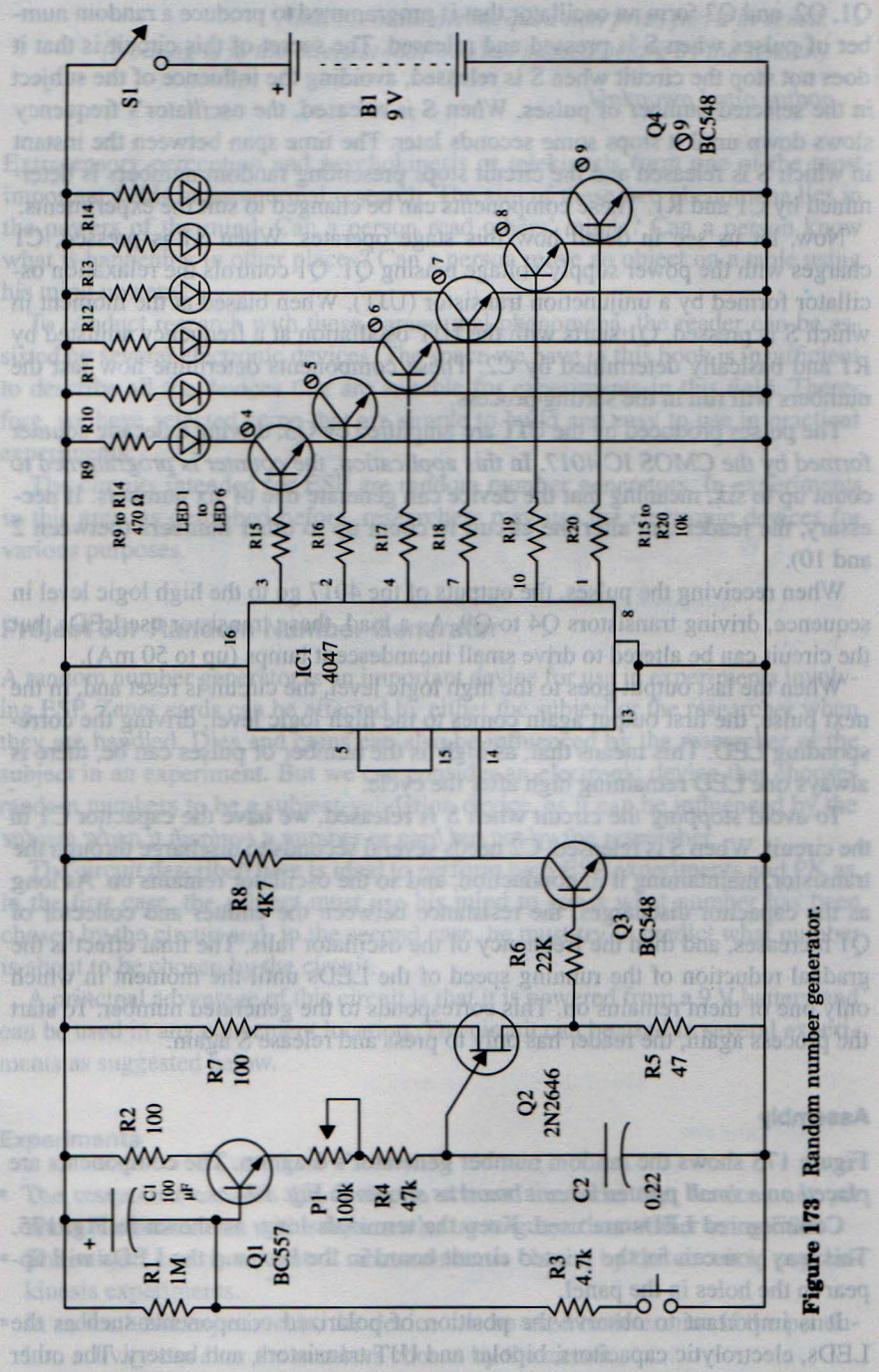


Figure 173 Random number generator.

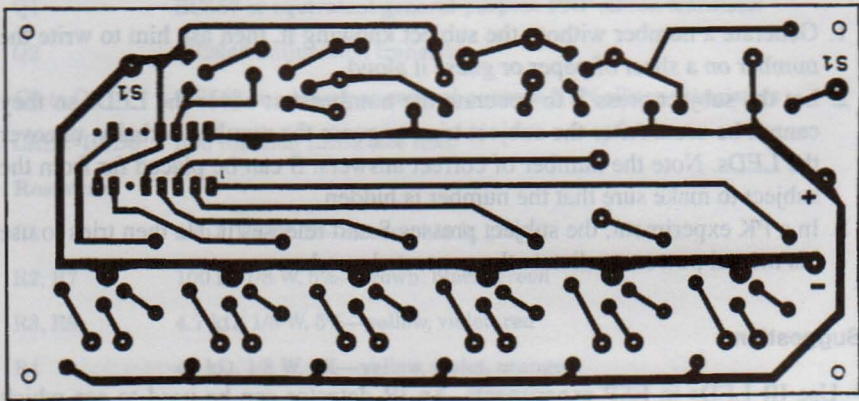
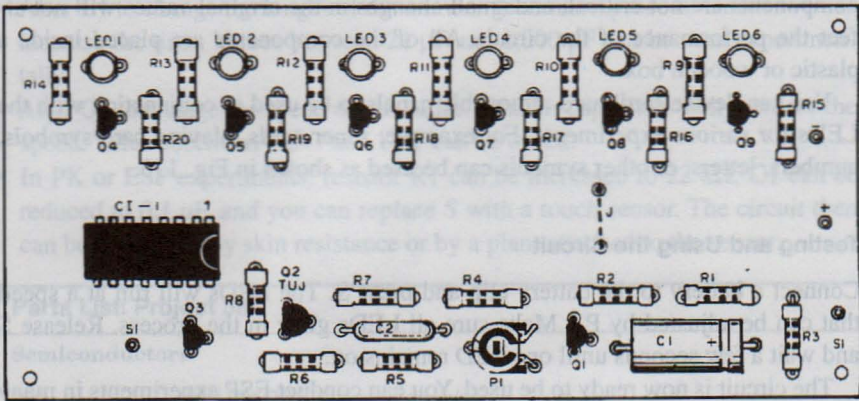


Figure 174 Printed circuit board for Project 38.

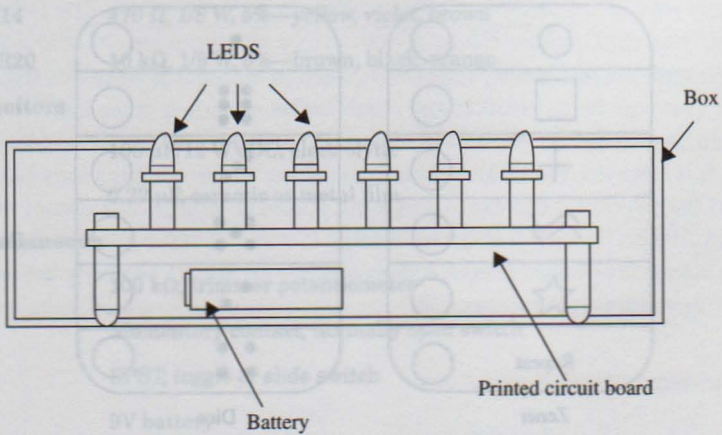


Figure 175 Installing the printed circuit board in a box.

components are not critical, and small changes in the original values will not affect the performance of the circuit. All of the components are placed inside a plastic or wooden box.

You can devise cardboard removable panels to be used in conjunction with the LEDs for various experiments. For example, zener cards, playing card symbols, numbers, letters, or other symbols can be used as shown in Fig. 176.

### Testing and Using the Circuit

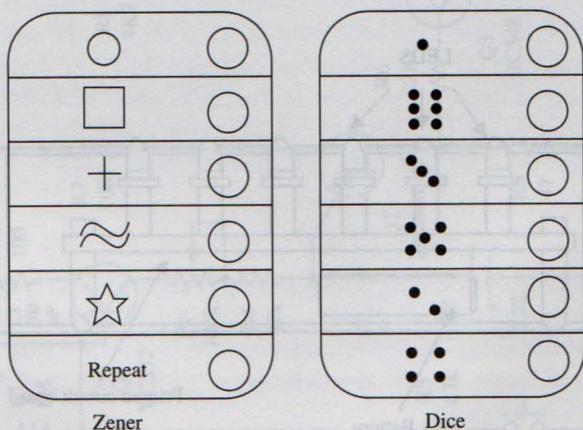
Connect a battery to the battery clip and press S. The LEDs will run at a speed that can be adjusted by P1. Make sure all LEDs glow in the process. Release S and wait a few seconds until one LED remains on.

The circuit is now ready to be used. You can conduct ESP experiments in many forms.

1. Generate a number without the subject knowing it, then ask him to write the number on a sheet of paper or guess it aloud.
2. Let the subject press S to generate the number, but cover the LEDs so they cannot be seen. After the subject tries to guess the number verbally, uncover the LEDs. Note the number of correct answers. S can be placed far from the subject to make sure that the number is hidden.
3. In a PK experiment, the subject presses S and releases it. He then tries to use his mental powers to dictate the generated number.

### Suggestions

- Use IR LEDs in ESP experiments. An IR detector can be used to see which LED is on during the experiment.



**Figure 176** Cards to be placed in the box. *Figure 176*

- Alter C1 to change the length of the number generation process. Greater values increase the time. Values between 22  $\mu\text{F}$  and 1,000  $\mu\text{F}$  can be used experimentally.
- Alter C2 to change the speed of the LEDs. Smaller capacitors will increase the speed. Values between 0.047 and 1  $\mu\text{F}$  can be tested.
- In PK or ESP experiments, resistor R1 can be increased to 22 k $\Omega$ , C1 can be reduced to 0.1  $\mu\text{F}$ , and you can replace S with a touch sensor. The circuit then can be controlled by skin resistance or by a plant attached to the sensor.

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### Parts List: Project 38

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#### Semiconductors

IC1	4017 CMOS integrated circuit
Q1	BC557 or equivalent general-purpose PNP silicon transistor
Q2	2N2646 unijunction transistor
Q3 to Q9	BC548 or equivalent general-purpose NPN silicon transistors
LED1–LED6	Red common LEDs (see text)

#### Resistors

R1	1 k $\Omega$ , 1/8 W, 5%—brown, black, green
R2, R7	100 $\Omega$ , 1/8 W, 5%—brown, black, green
R3, R8	4.7 k $\Omega$ , 1/8 W, 5%—yellow, violet, red
R4	47 k $\Omega$ , 1/8 W, 5%—yellow, violet, orange
R5	47 $\Omega$ , 1/8 W, 5%—yellow, violet, black
R6	22 k $\Omega$ , 1/8 W, 5%—red, red, orange
R9–R14	470 $\Omega$ , 1/8 W, 5%—yellow, violet, brown
R15–R20	10 k $\Omega$ , 1/8 W, 5%—brown, black, orange

#### Capacitors

C1	100 $\mu\text{F}$ /12 WVDC, electrolytic
C2	0.22 $\mu\text{F}$ , ceramic or metal film

#### Miscellaneous

P1	100 k $\Omega$ , trimmer potentiometer
S	Momentary contact, normally open switch
S1	SPST, toggle or slide switch
B1	9V battery

Printed circuit board, battery clip, plastic or wooden box, wires, solder, etc.

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