



## Electric circuits

An electric circuit or network is a pathway through which the electric current can flow. A simple circuit consists of a **power source**, two conducting wires, each one attached to a terminal of the source and a **device** through which electricity can flow. This device is called a **load** and it's attached to the wires. If all the parts are properly connected, the current flows and the lamp lights up. This kind of circuit is called 'closed'.

On the contrary, if the wires are disconnected the circuit is called 'open' or 'broken'. The circuit can be opened and closed by a device called a **switch**.

Loads can **turn** electrical energy **into** a more useful form. Some examples are:

- **light bulbs**, which change electrical energy into light energy;
- electric motors, which change electrical energy into mechanical energy;
- **speakers**, which change energy into sound.

The source provides the electrical energy used by the load. It can be a storage battery or a generator. The switch interrupts the current delivered to the load by the source and allows us to control the flow.

When an abnormally high amount of current passes through a network, you get a **short circuit**. This may occur when there is a drop in the **resistance** or a broken insulation. In order to **prevent** short circuits, it is best to use **fuses**, which **melt** when too much current flows through them, interrupting in this way the circuit.

*ESP series: Flash on English*  
 (for electronics & Technical Assistance)

### I-Reading comprehension

1- Read the text again and answer the following questions.

- 1 -What does a simple circuit consist of?
- 2 -Can you name some examples of loads?
- 3-When does a short circuit occur?
- 4- What can we use to prevent short circuits?

2-Match the words with their definitions

- |                  |  |
|------------------|--|
| 1 load           | a -a device which interrupts the circuit     |
| 2 switch         | b -a circuit in which wires are disconnected |
| 3 source         | c- a device which provides power             |
| 4 fuse           | d -a complete circuit with no breaks at all  |
| 5 closed circuit | e -a device which consumes electric power    |
| 6 broken circuit | f -a protective device                       |

### II-Text Exploration

1-Find in the text Words that are closest in meaning to:

Voice= Linked=

2-Find in the text Words that are opposites to:

normally ≠ disconnected≠

3-Complete the following chart as shown in the example.

	Verb	Noun: Actor device	Function: Activity concept
example	interrupt	interrupter	interruption
1	Identify	.....	.....
2	.....	Connector	.....
3	.....	.....	Amplification
4	.....	modulator	.....

**4- Ask the questions that the underlined words answer :**

- a- She usually takes an orange juice for breakfast.  
 .....?
- b- Sally went to Paris last week.  
 .....?
- c- Father always uses my phone.  
 .....?
- e- I bought six oranges.  
 .....?

**5- Classify the following words according to their final "s"**

*Finds – rises – speaks – watches*

/s/	/z/	/ɪz/
.....	.....	.....

**III- Written Expression**

*Use the words below to describe the radio diagram blocks (fig 1) in order to make a paragraph.*

(consists of, connected to, linked to, attached to, then, after that, at first, finally,.....)

- 1-aerial
- 2-tuner
- 3-detector
- 4-AFamp
- 5-volume control
- 6-power amp
- 7-speaker

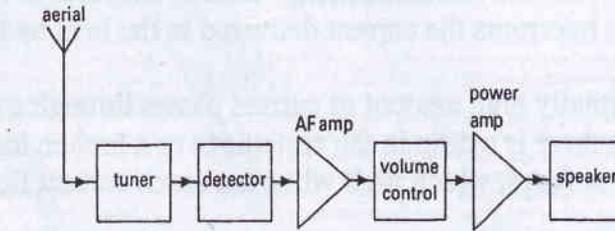


Fig. 1

**GOOD LUCK**