THE BIGGEST TECHNOLOGICAL ADVANCEMENT OF THE 20TH CENTURY: THE TRANSISTOR

The first radios, the first telephones and the first televisions used an essential electronic component called the vacuum tube, detailed previously. However, at the end of the 1940s, resulting from research on semiconductors, a new component appeared and replaced all vacuum tubes: the transistor! The transistor has it all. It is lighter, smaller, more robust. It requires lower voltages, and operats almost instantaneously ... It was invented in 1947, but it was not until 1954 that Texas Instruments used it for the first time in a radio: In the Regency TR-1 radio.

The transistor allows miniaturization of radios

Although the size of the radios has already decreased since the early 1920s, the transistor, much smaller and less energy consuming, accelerates this miniaturization: it is the end of the bulky vacuum tubes. The amount of required batteries is greatly reduced. The design of models knows no limits. Some are tiny, others have a very elegant design. Production is moving to Japan, and major North American brands often get their supplies from the same Japanese manufacturers. You can take your radio everywhere, just one earpiece, so you don't miss the games of baseball or hockey, or hoping that the hosts will play our favorite song in the next few minutes.

Advertisement for transistors, 1953

Boot footprint of astronaut Buzz Aldrin on the a Moon, 1969

The first radio transmission ... from the Moon!

Fifty years after the advent of radio, for the first time the Americans set foot on the Moon. It is a radio signal that allowed us to hear the famous phrase of Neil Armstrong: "A small step for man, a big step for humanity".

The conquest of space was in full swing and influenced several models of radios.

What is a transistor for?

The transistor is often used to amplify the received signal as well as to impose the direction of the current. Its roles have multiplied since its invention. The transistor has taken an important place in all our electronic components.

Several billion transistors in our phones

The transistor, at the origin of this explosion of diversity in radios, has itself miniaturized over the years ... until it reaches a size of around ten nanometers. This means that more than 200 million transistors could be held in a pinhead. Besides, your phone itself contains several billion!

200 million transistors