



## Morse Code Signalling Lamp

A character code invented by Samuel Morse that is represented by the duration of a single tone. Written as dots, dashes and spaces, the first Morse code message was sent in 1844 over a newly constructed telegraph line between Baltimore and Washington. It was also used in World War II for signalling with flashes of light.

In 1836, the American artist Samuel F. B. Morse, the American physicist Joseph Henry, and Alfred Vail developed an electrical telegraph system. This system sent pulses of electric current along wires which controlled an electromagnet that was located at the receiving end of the telegraph system.

In the original Morse telegraphs, the receiver's armature made a clicking noise as it moved in and out of position to mark the paper tape. The telegraph operators soon learned that they could translate the clicks directly into dots and dashes, and write these down by hand, thus making it unnecessary to use a paper tape. When Morse code was adapted to radio communication, the dots and dashes were sent as short and long pulses. It was later found that people became more proficient at receiving Morse code when it is taught as a language that is heard, instead of one read from a page.

To reflect the sounds of Morse code receivers, the operators began to vocalise a dot as "dit", and a dash as "dah". Dots which are not the final element of a character became vocalised as "di". For example, the letter "c" was then vocalised as "dah-di-dah-dit".

Radio telegraphy using Morse code was vital during World War II, especially in carrying messages between the warships and the naval bases of the Royal Navy, the Kriegsmarine, the Imperial Japanese Navy, the Royal Canadian Navy, the Royal Australian Navy, the U.S. Navy, and the U.S. Coast Guard. Long-range ship-to-ship communications was by radio telegraphy, using encrypted messages, because the voice radio systems on ships then were quite limited in both their range, and their security. Radiotelegraphy was also extensively used by warplanes, especially by long-range patrol planes that were sent out by these navies to scout for enemy warships, cargo ships, and troop ships.

In addition, rapidly moving armies in the field could not have fought effectively without radiotelegraphy, because they moved more rapidly than telegraph and telephone lines could be erected. This was seen especially in the blitzkrieg offensives of the Nazi German Wehrmacht in Poland, Belgium, France (in 1940), the Soviet Union, and in North Africa; by the British Army in North Africa, Italy, and the Netherlands; and by the U.S. Army in France and Belgium (in 1944), and in southern Germany in 1945.

During World War II some of the Morse Code receivers were so skilled that they could tell who a sender was just by the small variations in how the dots and dashes were transmitted!

