

Morse Code or CW

During the 1830s and 1840s the world was given the gift of rapid long distance communication. Samuel Morse and other inventors were playing with the idea of sending electrical signals over wire between stations. In order to be able to distinguish letters, numbers, words in this electrical signal, a system was developed called Morse Code. This was a system of “dits” and “dahs”, or known in their written form as “dots” and “dashes”, that when combined created words that could then be written down by someone on the other end. The first message was sent in 1844 when Morse sent a telegraph message from Washington, D.C. to Baltimore, Maryland.

Later with the invention of the radio and wireless, it was realized that these same “dits” and “dahs” could be sent by radio without the need for wire to transmit. The simplicity of the Morse Code became useful in this new form of communication.

These “dits” and “dahs” are simple on-off transmission signals. Letters, numbers, some punctuation are simply just a series of these signals. A “dit” is a short signal and a “dah” is a signal that is three times the length of the “dit”. So long and short signals make up the letters and numbers which then make up words and messages.

Today what was known as Morse Code is called CW for Continuous Wave because of the mode that it is sent. Since it is using radio waves it is using a carrier wave or continuous wave that is interrupted to create the “dits” and “dahs”.

Do radio operators still learn Morse Code today? Is it relevant at all? The answer is yes to both. Though no longer required for a license, it still holds a place in radio.

1. CW uses low frequencies and little power thus is can be very simple and inexpensive to use.
2. It can get through when SSB (single side band) fails or is less than ideal. Especially if you are trying to contact a far distant county. The advantage of CW can be 10-20 dB over a SSB signal. It also can take place in a bandwidth of about 300 Hz as opposed to the usual 2.5 KHz of SSB.
3. Repeaters identify themselves in CW. If you know CW then you can know which one your listening to as well as the code needed to access.
4. Beacons also identify themselves with CW. You can use this to learn what countries you can hear on the 10m band.
5. It is simple to actually make a CW transmitter whereas a SSB transceiver is a bit more complex.
6. CW is more efficient than SSB, AM or FM. Because of this you don't need as effective of antennas and can use lower power to make contacts. You can also cause less interference.
7. A sidelight is that Morse Code can be sent in many different ways in an emergency. One can use a car horn, mirror, or a flashlight.
8. There are a series of Q Codes that CW operators around the world know. So it can be a way to communicate with someone with whom you do not share a common language but there is enough flexibility in the codes that one can communicate. It becomes a universal language of sorts.
9. Even if you speak the same language as another, what if accents make it hard to understand what another is saying or someone to understand you. CW helps as it doesn't matter how you say it.
10. It is actually quite good exercise for the brain, and in tests, those who have learned it improved task specific neural activity in their brain.
11. There is a case where an old ship radio operator had a stroke and could not talk. His doctor was a HAM operator and he communicated with blinking his eyes.
12. It is fun!

List of training courses, aides and apps for learning CW <http://www.arrl.org/learning-morse-code>