

Single Side Band (SSB) Modulation

The first US patent for SSB was issued in 1915. However, the US Navy was experimenting with it prior to WWI. Why then wasn't it used commercially until 1927, and then, only in a limited manner?

To understand the answer to that question one needs to understand that the generation and detection of SSB requires very precise frequency control. Until the 1930s it was difficult to provide that degree of stability on the desired radio frequencies. However, as the US prepared for WWII in the 1930s, attention was given to more and more frequency stability as well as a reduction in the size of the equipment. This military emphasis brought SSB into the military sector; however, even the military was slow to fully embrace SSB until the peak of the cold war in the early 1950s..

During WWI and WWII amateur radio operations had been suspended. However, after WWII, many amateurs eager to get back on the air found that high quality military surplus equipment was available. By the late 1940s hams were experimenting with SSB, some using converted AM surplus equipment. Central Electronics was one of the leaders in providing a SSB exciter that used a converted ARC-5 transmitter as the highly stable VFO. However, it wasn't until General Curtis LeMay adopted SSB as a communications backbone for the USAF that commercial entities such as Collins, Hallicrafters, RCA, GE, Eldico, EF Johnson, and others began to market SSB for the commercial and amateur consumers.

For a more detailed discussion of the emergence of SSB, go to this link:

<http://www.arrl.org/files/file/Technology/pdf/McElroy.pdf>

Thus, while SSB was slow to gain acceptance, once it did it became an almost unanimous mode of voice communications on the HF bands.