

# TIME TRAVEL

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## “The Most Beautiful Woman in the World” and the “Bad Boy of Music” Invented Spread Spectrum Technology



Hedwig Eva Maria Kiesler, better known as Hedy Lamarr, was a beautiful actress of Hollywood’s golden era. Born in Vienna in 1914 into the Jewish upper class, Hedwig began her theatre career at 15, abandoning her engineering studies, in which she was very talented.<sup>1</sup>

When anti-Semitism began to spread in Europe, Hedwig had to flee to the U.S., where she assumed the pseudonym “Hedy Lamarr.” Her career quickly took off, starring in dozens of memorable films including “Boom Town”(1940), “Heavenly Body” (1944) and “Samson and Delilah” (1949).

George Johann Carl Antheil was an eclectic American avant-garde composer. Born in 1900 to a Prussian immigrant family in New Jersey, George’s career as a musician started in Europe, where he met many important artists including Picasso, Hemingway and Stravinsky. His most famous work was “Ballet Mécanique,” a complicated piece based on the mechanical synchronization of sixteen pianos which premiered in Paris in 1926.<sup>2</sup> In the U.S., most of his prolific career was as a Hollywood film score composer. Included among his many films were “Angels Over Broadway” (1940), “Specter of the Rose” (1946) and “In a Lonely Place” (1950).

These two talented stars were destined to work together in the roaring Hollywood years. Indeed, they met in 1940, but their collaboration did not take place in the world of entertainment.

Instead, they created the singular patent of a “secret communication system” for the use of radio-controlled missiles, an ancestor of spread spectrum technology.<sup>3</sup> The core idea arose from Hedy’s knowledge applied to the synchronization mechanism mastered by George.<sup>4</sup>

Unfortunately, the idea was ahead of its time. Only in 1957, after the introduction of the transistor, was the concept practically feasible. A working version of the device appeared during the Cuban Missile Crisis in 1962. In 2014, Lamarr and Antheil were inducted into the National Inventors Hall of Fame.<sup>5</sup> Not bad for “the most beautiful woman in the world”<sup>6</sup> and the “bad boy of music”!<sup>7</sup>

### References

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