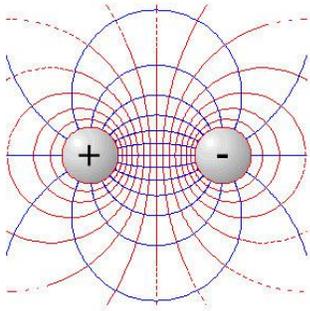


Historical Background of Hearing Loop Technology

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Although such illustrious names as Franklin, Faraday and Tesla had been experimenting with [electromagnetic fields](#) (the core scientific principle behind the operation of a hearing loop) as early as the 1700's, it was not until 1937 when [Joseph Poliakoff](#) filed for a patent in the UK on an [Induction Loop Hearing Assistance System](#) featuring what was called a 'telephone coil' that hearing loop technology really started to be developed.

In early designs such as this, the telephone coil was designed to pick up the magnetic field produced by a telephone handset speaker coil, which could then be converted back to an audio signal.

The advantage of this for the hard of hearing was that it picked up only the audio signal from telephone and none of the acoustical distortion, making the speaker's voice more intelligible, as is still the case today. The telephone coil name would later be shortened to 'Telecoil' or 'T-Coil'



This patent was picked up by the UK's [Multitone Electric Company](#) in 1938 that then brought to market what is thought to be the first Telecoil enabled hearing aid, the Multitone VPM, which fitted into a user's top pocket (Vest Pocket Model) and was fitted with external earphones.

The implications and benefits for combining an induction loop, driven by an amplifier, that completely surrounded a user carrying Telecoil enabled hearing aids was obvious. Experimentation with systems was prevalent in the late 60's and 70's in Scandinavia and many were fitted into places of worship and schools. In the early 1970's the first 'behind the ear' [hearing aids](#) featuring Telecoils were developed, and in 1974 the UK's [National Health Service](#) began prescribing the technology to large numbers of hearing impaired patients. This encouraged the development of [loop amplifier technology](#) that would make a more reliable and powerful magnetic field that covered larger areas, and would work in modern buildings with metal construction, that can weaken and distort the magnetic field produced.



In 1987 [Ampetronic](#) was established and began to rapidly develop the technology in the UK. In 1991 Ampetronic developed the first '[phased array](#)' systems (multiple induction loops operating together out of phase to create constructive interference) capable of covering large areas in modern buildings with metal construction and/or to control spill.

In 1995 [Ampetronic](#) introduced sophisticated '[metal loss control](#)' systems to allow the successful application of loop

systems in proximity to metal structures and still meet quality and use standards and the company began to expand globally, entering the US market in 1999.

During 2005 [Ampetronic](#) developed the first computer aided [design software](#) that made the accurate modeling of the magnetic field produced by different induction loop layouts possible. This new technology made it possible to design a system for virtually any environment and the company began to expand globally, entering the US market in 1999.



In 2009 the [Hearing Loss Association of America](#), with the assistance of European manufacturers and other technology advocates, started a campaign to introduce Hearing Loops to America, which had previously not picked up on the technology in favor of [FM](#) and [Infra-Red systems](#); this

produced a rapid expansion in the take-up of the technology and its popularity with hearing aid users.

In 2012 Listen Technologies formed a partnership with [Ampetronic](#) to distribute the technology and to provide market education and technical support to the growing number of US based installers.