

STARTLING STORIES

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A Complete Book-Length Scientifiction Novel



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By **JACK WILLIAMSON**

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THE LIFE STORY OF HEINRICH R. HERTZ

WHO DISCOVERED RADIO WAVES!

BY Jack Binder



HEINRICH RUDOLPH HERTZ
BORN 1857 - DIED 1894



BORN ON WASHINGTON'S BIRTHDAY, FEBRUARY 22, HEINRICH RUDOLPH HERTZ IS THE FATHER OF RADIO TRANSMISSION. IN FACT, RADIO WAVES WERE ORIGINALLY CALLED "HERTZIAN" WAVES. THE FIRST WEAK IMPULSES WERE PROJECTED OVER THE ETHER IN 1886, AT CARLSRUHE, GERMANY, DYING AT THE AGE OF 37. HERTZ NEVER KNEW THAT HIS STRANGE NEW WAVES WERE DESTINED, THROUGH MARCONI'S DEVELOPMENTS, TO PROJECT THE HUMAN VOICE TO THE REMOTEST CORNERS OF EARTH!



HERTZ'S LABORATORY WAS IN AN ANCIENT PALACE CONVERTED INTO A UNIVERSITY BUILDING. AT TIMES HE TOOK A BREATH OF FRESH AIR ON THE ROOF, OVERLOOKING THE COUNTRYSIDE, LITTLE REALIZING HIS RESEARCHES WOULD MAKE POSSIBLE THE HURLING OF MAN'S VOICE FARTHER THAN HE COULD SEE!



HERTZ FULFILLED A HALF-CENTURY OF PREVIOUS SCIENTIFIC THEORY. FARADAY AND CLERK-MAXWELL BEFORE HIM HAD SUSPECTED THAT THE MYSTERIOUS "ETHER" COULD CARRY OTHER ELECTROMAGNETIC VIBRATIONS BESIDE THOSE OF ORDINARY LIGHT. IT REMAINED FOR HERTZ'S PIONEERING GENIUS TO SEND HIGH POWER THROUGH A COIL IN A SPARK-COIL, INDUCING THE SAME SPARK IN A SIMILAR, THOUGH UNCONNECTED COIL NEARBY, THUS TRANSMITTING WIRELESS VIBRATIONS FOR THE FIRST TIME IN HISTORY. HERTZ'S FIRST RADIO "BROADCAST" WAS FOR A DISTANCE OF FIVE FEET!

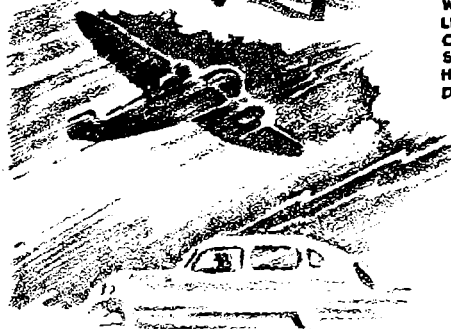
Next Issue: THE LIFE STORY OF BENJAMIN

LIKE A WIZARD WITH A MAGIC WAND, HERTZ OPENED UP THE ENTIRE FIELD OF ELECTROMAGNETIC INVESTIGATION. IT IS LIKELY THAT IF HE HAD LIVED LONGER, HE WOULD HAVE EXPLORED OTHER "OCTAVES" OF THE WAVE-SPECTRUM... X-RAYS, GAMMA-RAYS, EVEN COSMIC RAYS. AS IT IS, SINCE THE TIME OF HERTZ, ONE-FOURTH OF ALL RESEARCH IN PHYSICS HAS BEEN IN THE DOMAIN HE UNLOCKED!

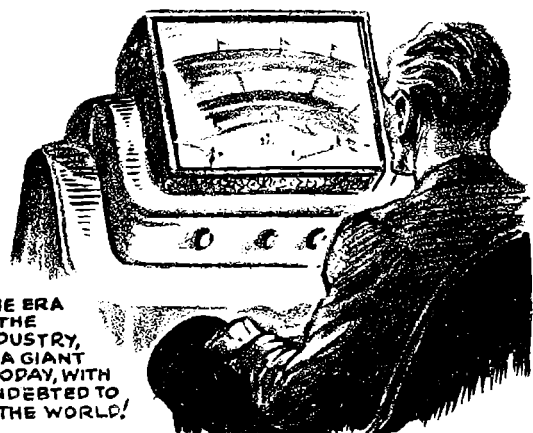


ELECTROMAGNETIC SCALE OF WAVES

HOW OR WHERE PRODUCED	KIND OF RADIATION
INTER-STAR SPACE	COSMIC RAYS
RADIUM METAL	GAMMA RAYS
COOLING X-RAY TUBE	X-RAYS
ULTRA VIOLET LAMP	ULTRA-VIOLET RAYS
ELECTRIC LAMP	VISIBLE-LIGHT RAYS
ELECTRIC IRON	INFRA-RED RAYS
INDUCTION COIL	RADIO WAVES
RADIO TUBE	



OF GERMAN-JEWISH PARENTAGE, HERTZ WAS BRILLIANT AND SENSITIVE BY NATURE. WHEN HIS FIRST PUBLISHED PAPER ON THE WAVE-LENGTHS OF HIS NEW DISCOVERY WAS SHOWN TO CONTAIN AN ERROR OF FIVE-MILLIONTHS OF A SECOND, HERTZ WAS DESPONDENT, BECAUSE OF HIS SINCERE, EARNEST NATURE, ALMOST TO THE POINT OF SUICIDE!



HERTZ DIED JUST BEFORE THE ERA THAT USHERED IN THE X-RAY, RADIUM, THE AUTOMOBILE, AIRPLANE AND MOVIE INDUSTRY, BUT HE HAD LAID THE KEYSTONE FOR A GIANT INDUSTRY EQUAL TO ANY OF THEM. TODAY, WITH TELEVISION IN THE OFFING, WE ARE INDEBTED TO HERTZ FOR THE EYES AND EARS OF THE WORLD!

FRANKLIN, the First of American Scientists