The History of Radio

- The history of radio can be traced through the lives of these people:
  - Maxwell
  - Hertz
  - Heavyside
  - Marconi
  - DeForest
  - Armstrong
  - Farnsworth
  - Sarnoff

Married on December 1, 1928, Howard and Marion Armstrong went to Palm Beach for their honeymoon. Here on the beach Howard tunes in the world’s first “portable” radio, a wedding gift to his bride.
James Clerk Maxwell

- **Unified Electric and Magnetic Theory.**
- Predicted Electromagnetic Wave Propagation
- Theorized that light was an electromagnetic wave.
- Could "low-frequency" waves be generated?

James Clerk Maxwell (1831-1879)
Heinrich Hertz

- Experimentally verified Maxwell’s Theories.
- Generated and propagated “radio waves”
- Built first transmitter, antenna, and receiver apparatus.

Heinrich Hertz (1857-1894)
Guglielmo Marconi

- The “inventor of radio”.
- Improved and commercialized Hertz’ apparatus.
- Used for radio telegraphy.
- Among the first radio engineers.

Guglielmo Marconi
(1874-1937)
Oliver Heavyside

• Mr. Heavyside was perhaps the first true electrical engineer.
• He was an odd recluse, who was entirely self-taught!
• Although unappreciated in his time, he provided mathematical solutions to important problems.
• Among his accomplishments are transmission line theory and Heavyside (Laplace) Transforms.
Lee DeForest

- Invented the "audion" vacuum tube.
- Allowed for amplification and detection.
- Led to first transmission of voice and music.

Lee DeForest (1873-1961)
Edwin Howard Armstrong

• Perhaps the greatest EE in history.
• Inventor of the:
  - feedback amplifier
  - electronic oscillator
  - super-heterodyne receiver
  - FM radio.
• These inventions allowed for the transmission of voice and music.
• His ideas are still widely used today!
Philo T. Farnsworth

- Inventor of electronic television.
- Largely self-taught.
- Developed initial design while in high school!
- A victim of bad timing and small capital.

Philo T. Farnsworth (1907-1971)
David Sarnoff

- Began as telegraph operator for Marconi.
- Originated idea of “broadcasting.”
- Became president of the Radio Corporation of America.
- Was not an engineer — but the only guy who became rich!