

## OPTICAL ENGINEERING NOTE #72 GOOD SCOPESMANSHIP

The first cathode ray tube was invented by Karl Ferdinand Braun (1850-1918) in 1897\*. It was used as an **oscilloscope**, (*oscillon*, Gr. wave; *scope*, Gr. view) to visualize the fluctuating current of the output of an AC power plant to determine its frequency.

Just like Braun's tube, contemporary oscilloscopes deflect the beam of electrons vertically in response to voltage, while the horizontal movement or sweep is controlled by the **Time Base** to see the change in voltage with respect to time.

Write in your own description of the controls of an oscilloscope for this very early version of this handout.

**INTENSITY:**

**FOCUS:**

**VERTICAL DISPLAY:**  
(Voltage)

**HORIZONTAL DISPLAY:**  
(Time Base)

**TRIGGER:**

**STORAGE:**

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\*He shared the Nobel Prize for Physics in 1909 with Guglielmo Marconi for their work in *wireless telegraphy*.