

# Coordinate AC Potentiometer General Electric, the USA



## **History of the Coordinate A.C. Potentiometer:**

#### • **Development**:

- Specialized electrical measurement instrument for accurate AC voltage measurement.
- Used in electrical engineering, physics experiments, and calibration processes.
- Evolution:
  - Evolved from early potentiometric methods developed in the early 19th century by Joseph Henry and others.

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• Early devices were designed for DC measurements.

### • Advancements:

- Need for accurate AC measurements arose with the growth of AC systems.
- Developed to meet this need with advanced features.
- Design integrates coordinate axes for detailed and accurate readings across frequencies and amplitudes.

# **Instructions on How to Use the Coordinate A.C. Potentiometer:**

- Preparation:
  - Calibrate the potentiometer according to manufacturer's instructions.
  - Connect to a stable power source and ensure proper grounding.



#### • Setup:

• Connect the reference voltage source to designated terminals. • Connect the AC voltage source or circuit to be measured to the input terminals.

## • Operation:

- Adjust the reference voltage to match the known source voltage.
- Balance the potentiometer using coordinate adjustment controls (e.g., X and Y axes) to nullify the voltage difference. • Read the measurement from the display or calibrated scales.

# • **Recording and Analysis:**

- Record measurements accurately.
- Repeat measurements for accuracy and consistency.

# • Shutdown and Maintenance:

- Disconnect all connections carefully.
- Store in a dry, dust-free environment.
- Periodically check and calibrate according to manufacturer's recommendations.

References:

- 1. <u>https://en.wikipedia.org/wiki/Potentiometer</u>
- 1. <u>https://opg.optica.org/fulltext.cfm?uri=josa-12-3-217</u>
- 1. <u>https://www.scribd.com/document/471884861/POTENTIOM</u> ETERS-AC

