Migrating from DC Voltage Dividers to Modern Reference Multimeters

Document(s):

Migrating from DC Voltage Dividers to Modern Reference Multimeters (2.86 MB) (https://download.flukecal.com/pub/literature/2114953C_w.pdf)

Until the late 1980's electrical calibration systems used to compare primary and secondary voltages and resistance standards consisted of several different components. Systems like the Fluke 7105A and the Datron 4900 were the backbone of the majority of electrical calibration laboratories the world over. These systems were specifically combined to provide a traceable source, according to a set of measurement parameters. For example, the Fluke 7105A system comprised the following instruments:

- Fluke 720A Kelvin Varley Divider
- Fluke 750A Reference Divider
- Fluke 335A DC Voltage Standard
- Fluke 721A Lead Compensator
- 845AR High Impedance NullDetectors

Similarly, a comparable system from Datron (later acquired by Fluke in January 2000) was also available. Much like the Fluke 7105A, the Datron 4900 system included:

- 4901 Calibration Bridge/ Lead Compensator
- 4902 DC Voltage Divider
- 4903 DC Calibration Unit
- 4904 Standard Cell Buffer

However, as new innovative technology and techniques were introduced, both the 7105A and 4900 calibration systems were soon replaced. So what caused their extinction?