

Lawrence/Engineering Instruments Specially Commissioned Range

The nature of *Original Equipment Manufacturer* models makes compiling a For this range the Lawrence branding is replaced by the commissioning company name and most have no model number. Luckily they are easily identifiable as Lawrence-made because every Lawrence-made model was made from a standardised blank.

Most have non-conventional scale layouts and are so innovative that many designs were copyrighted. They came in various sizes - different sizes of the same model. Not all needed or had a cursor.

Commissioned by (© yyyy)	Size	Model Name/Use
Lakeside Toys – Draft-A-Plan, Minneapolis (© 1961)	5"	Students <i>Learner</i> pocket slide rule – Enhanced Mannheim (“5-B” on box) with A/B,CI,C/D,K but no S,L,T
B.F. Grizzle, Washington and Terre Haute (8" version © 1941, 12" version © 1945)	8" & 12"	Gas Pipe Line Slide Rule for calculating the gas flow capacity/hour through a pipe of a given diameter
B.F. Grizzle, Washington and Terre Haute (© 1941)	8"	Gas Displacement Meter Calculator for calculating gas rates through displacement meters @ various pressures
B.F. Grizzle, Washington (© 1941)	8"	Gas Low Pressure Line Flow Capacity Slide Rule for calculating the pressure drops for a given line flow & gas line size needed to deliver a given amount of gas
B.F. Grizzle, Washington (© 1944)	8"	Pipe Open Flow Capacity Slide Rule for calculating open flow rates based on pilot tube pressure readings
B.F. Grizzle, Washington (© 1939)	8"	Pipe Orifice Meter Calculating Rule for calculating the size of conduit/restriction needed to create a required pressure drop
B.F. Grizzle, Washington (© 1944)	8"	Water Line Capacity Slide Rule for calculating the friction loss in a section of pipe & head loss for a given pipe diameter, length & flow
Madison Manufacturing Company, Michigan (© 1947)	8"	Madison Speed Calculator for calculating drill & cutting speed for a given diameter
Thomas Specialities, California (© 1948)	8½"	Music Transposition for composing, transposing or creating harmonies
Massachusetts Institute of Technology (MIT), Cambridge Radiation Laboratory – c1941 Roy C. Spencer	10"	Antenna Slide Rule (confidential and classified) for calculating radar antenna beam patterns - beam width, gain, etc.
Massachusetts Institute of Technology (MIT), Cambridge High Voltage Laboratory – 1943 W.W. Buechener & E.A. Burrill Jr.	10"	Exposure Slide Rule (possibly for the US Navy in WWII) for calculating exposure times of super high-voltage steel penetrating X-rays of castings & munitions

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C.V. Ore , Illinois (© 1955) (n.b.: Acu-Rule made an OEM plastic version of this rule)	10"	The S-M Slide Rule (DS/CI,C/D/DM) a Simplified <u>M</u> ulti-purpose type of Enhanced Mannheim teaching rule supposedly making it easier to learn how to multiply/divide, etc
Canadian Radium & Uranium Corp. , New York (© 1942)	10"	Gamma-Ray Radiographic slide rule for commercial (steel) rather than medical use
Miller Motor Company , Illinois (© 1950)	10"	Air and Hydraulic Calculator (DIA,A/B,CI,C/D,GAL) for calculating flow rates through different sized pipes
Fun Incorporated , Illinois & Ideas Unlimited , California (© 1950)	6" & 10"	Poker Meter for 5/7 card stud or 5 card draw poker. Based on number and value of cards held, a colour code recommends the best play – “ Get Out ”, “ Stay ” or “ Raise ”
PIC Walsh Freight Co. & Plaza Express Company Inc. (© 1939 M.T. Brockman)	9½"	Traffic Manager's Slide Rule for checking freight shipping charges or shipping rates or shipping truck/carload breaking points and calculating storage costs
US Army (DeYOE)	10"	Artillery Range Finding (“Graphic Table”) for calculating how many guns and how many rounds of high explosive shells are needed to be sure of hitting a target
Murphy & Murphy Inc. , Texas & Caprock Materials Co. , Texas & Warren E. Fennell , Indiana	10½"	Concrete Quantity Calculator for calculating cubic yards of concrete needed for or in a wall of certain dimensions
Tokheim Corporation , Indiana (© 1948)	12"	“K” Factor – using high & low outdoor temperatures and gallons of household fuel oil left, the K factor = days of supply left
Tenbrook Enterprises , Indiana	12"	L.P. Gas – for calculating the temperature correction (°F) needed when making bulk deliveries of propane
L.E. Waddington , (© 1947)	12"	Music & Music Acoustics for adjusting relative vibration rates, degrees of scale, intervals, chord structures, scale indications & transposition data against piano keyboard
Taylor Publishing Co , Ohio (© 1946 credited to Owen T. Taylor)	12"	Copyfitter for font size and letter/word/line spacing in points and picas ⁹ when typesetting (copy of the 12-H)
United States Aviation Underwriters Inc. , (© 1944 Albert J. Smith)	12"	Underwriters slide rule for calculating the risk duration (in days) for aviation related ventures (table on back has cancellation ratio’s/days)
Pioneer (address unknown) & Adler Communications Laboratories , New York (© 1952 J.B. Epperson)	12"	Epperson TV Coverage Calculator for calculating VHF and UHF signal coverage based on a signal strength, FCC propagation curves and antenna height (UV/M and DB conversion table on back)
Radio Corporation of America (RCA) , New Jersey	12"	F.M. COVERAGE CALCULATOR for estimating (according to FCC propagation curves) coverage of FM radio stations according to the type of RCA radio antenna