

# NEW PRODUCT SPECIFICATIONS

## COMPONENTS



No. 10037  
NO-STRING ILLUMINATED DIAL



No. 51001  
HIGH VOLTAGE R-F SWITCH

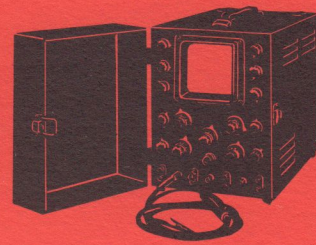


No. 69100  
KNOB TUNABLE COIL FORM



No. E-223  
MINIATURE BINDING POST

## EQUIPMENT



No. 90954  
PORTABLE INDUSTRIAL OSCILLOSCOPE



No. 90925  
CATHODE RAY OSCILLOSCOPE



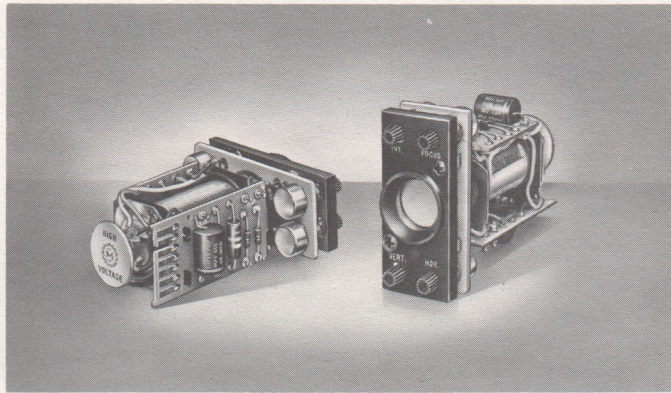
No. 92201  
TRANSMATCH JUNIOR



No. 90975  
MINIATURE MODULE OSCILLOSCOPE

# JAMES MILLEN

MANUFACTURING COMPANY, INC.



**No. 90975  
MINIATURE MODULE OSCILLOSCOPE**

1 1/4" wide overall x 2 3/4" high x 3 1/2" deep behind panel  
3/4 INCH FLAT FACE TUBE

The Millen No. 90975 is an ultra-small, economical 'scope with a flat face shielded 1DP1 C.R.T. that requires little power. Mounts on panel and has a plug on rear for all input connections.

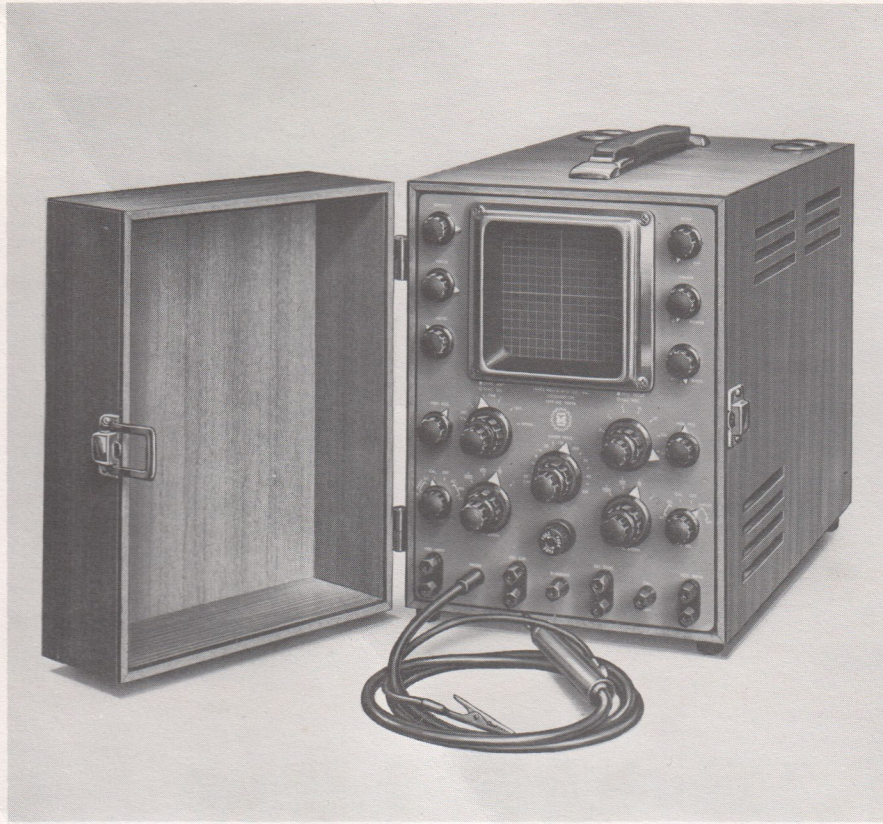
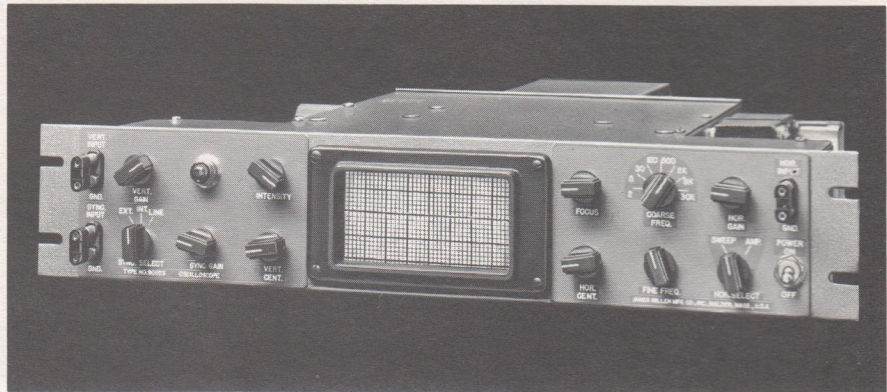
SENSITIVITY (using Millen 90202 Power Supply available for this application): VERTICAL: 35 VRMS max. per 1/4" deflection; 100 V. peak to peak max. per 1/4" deflection. HORIZONTAL: 41 VRMS max. per 1/4" deflection, 117 V. peak max. per 1/4" deflection.

Power Supply Requirements: from 670 VDC @ 2.1 Ma to 1090 VDC @ 3.6 Ma. 6.3 VAC @ 215 Ma. Panel Controls: Intensity, Focus, Vertical Centering, Horizontal Centering. Weighs only 5 1/2 oz. including tube.

**No. 90925  
COMPACT CATHODE RAY  
OSCILLOSCOPE**

Compact general purpose 5 inch 'scope on a 3 1/2" rack panel. Uses 5BXP-4 4 5/8" x 2 5/8" rectangular face cathode ray tube. For monitoring or production test. Both amplifiers DC to 550 KC. Vertical sensitivity — 0.18 volt peak to peak per cm. deflection. Horizontal sensitivity — 0.3 volt peak to peak per cm. deflection.

Repetitive very linear sawtooth sweep generator covers 2 c.p.s. to 30 kcs/sec. in 7 ranges. 3 1/2" h x 19" w x 18 3/4" d. 25 lbs.



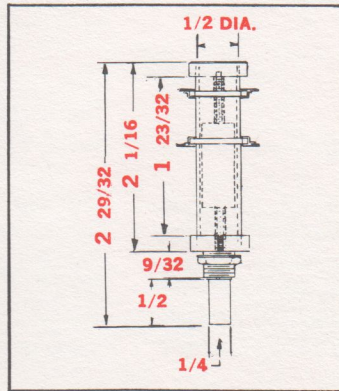
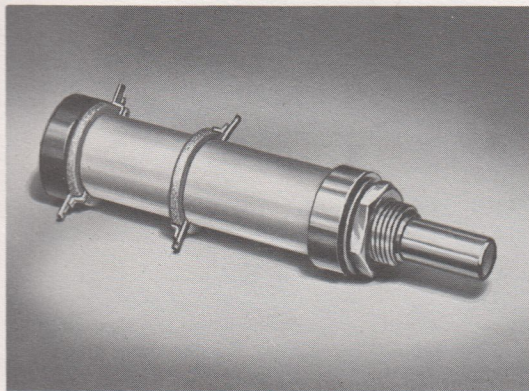
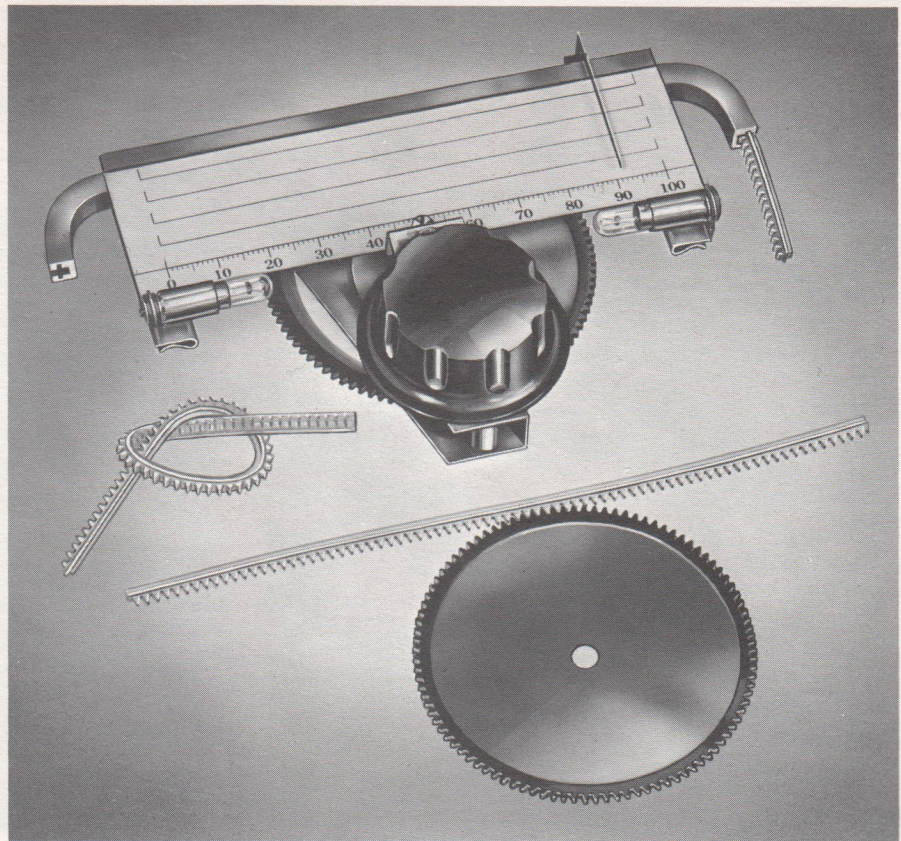
**No. 90954  
PORTABLE INDUSTRIAL  
FIELD OSCILLOSCOPE**

Completely insulated cabinet and front panel provides complete safety with input up to 1500 V p/p. Compact and light weight — cabinet is 7 1/2" w x 9 1/2" h x 16 1/4" d including cover. Weighs only 25 lbs. Very effective magnetic shielding permits use in high mag. fields. No phase shift between amplifiers from DC to 1 mc. permits accurate measurement of phase shift. Both amplifiers DC to 1 mc +0, -3db. Vertical sensitivity — 0.1 volt peak to peak per cm. deflection. Horizontal sensitivity — 0.15 volt peak to peak per cm. deflection. Triggered or recurrent very linear sawtooth sweep generator covers 1 c.p.s. to 30 kcs/sec. Retrace blanking. Sweep generator includes a unity gain sweep linearizing amplifier. Sweep synch, applied through a limiter. Uses 4KP-3, 3 1/2" square face CRT. Very stable trace because all amplifier dc voltages are regulated. 7 accurate calibration voltages. Input impedance 5 megs. and 20 pf. Efficient heat dissipation. 21 front panel controls. 105 to 125V 50/60 cps 80 watts.

**No. 10037  
NO-STRING  
ILLUMINATED DIAL**

Reduction 11:1 Scale Length 6 1/2"

The No. 10037 is a sturdy mechanically engineered "Designed for Application" dial assembly which completely eliminates the annoyances of string-driven pointers, eliminates all indicator stutter or wobble and provides positive pointer travel and resetability. The pointer is driven positively by a flexible but non-elastic molded gear driven rack which cannot slip, break or fall off a pulley. The geared flexible rack rides in a multi-slot extruded aluminum channel. This girder-like extruded piece provides mechanical rigidity to the assembly. The drive mechanism is a smooth friction drive with 180° rotation of the output shaft. Teflon bearings which never need oil assure a lifetime of smooth operation. The 1/4" output shaft is supplied with a MILLEN anti-backlash flexible coupling to facilitate installation. 5 1/2 turns of the knob results in 6 1/2" of pointer travel. The dial face has one scale printed 0-100 plus blank scales. The dial has a convenient adjustable zero-set, anti-parallax pointer and a knob with a comfortable feel. The dial is supplied with a scale bezel for the front of the panel. Outside dimensions of the scale bezel are 7 3/8" w x 2 3/8" h. The behind-the-panel space required is 9" w x 5 3/4" h x 1 3/16" d overall.

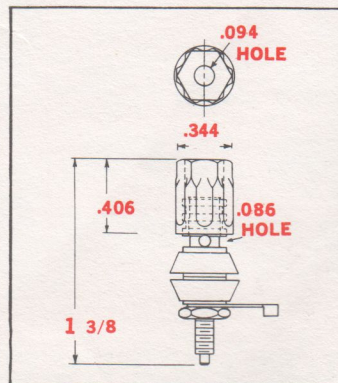


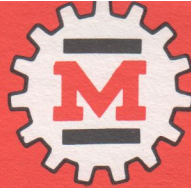
**No. 69100  
KNOB-TUNABLE  
CERAMIC COIL FORM**

The Millen No. 69100 is a "Designed for Application" ceramic coil form which may be panel mounted and operated by a knob without the knob moving in and out. 25 knob turns produces an inductance change of approximately 3.5 to 1 using a powdered iron tuning core. Movable terminal rings. Standard core recommended for use at 0.1 to 1.5 mc. Special core materials available on special order. 1/2" diameter ceramic form.

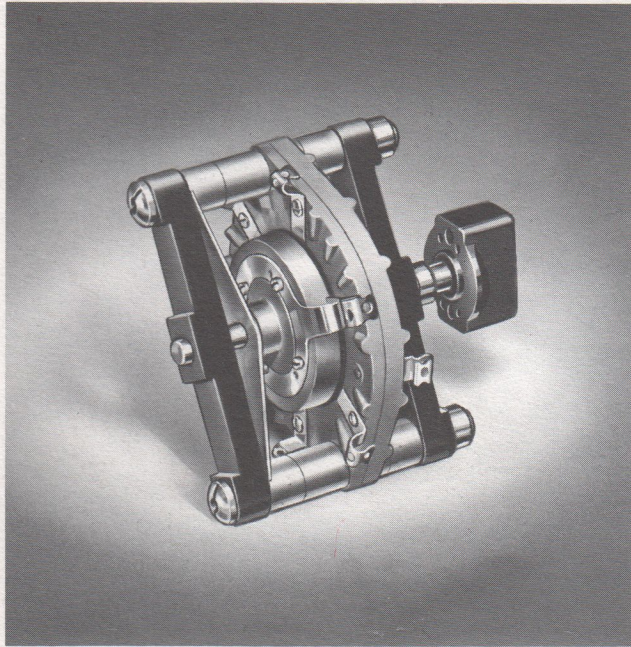
**No. E223  
MINIATURE INSULATED BINDING POST**

The No. E223 is a modern miniature binding post designed for use in restricted space requirements in chassis and panels. Fits panels up to 1/4" thick. All metal parts are nickel-plated brass. Non-removable, molded Delrin head with threaded brass insert accepts a midget banana plug (.094 hole), and phono-tips can be inserted in wire hole (.086). Rated for 15 amps, 100 volts, accepts up to #12 AWG wire. Colors: black, gray, green, blue, maroon, and yellow.





"Designed for Application"®



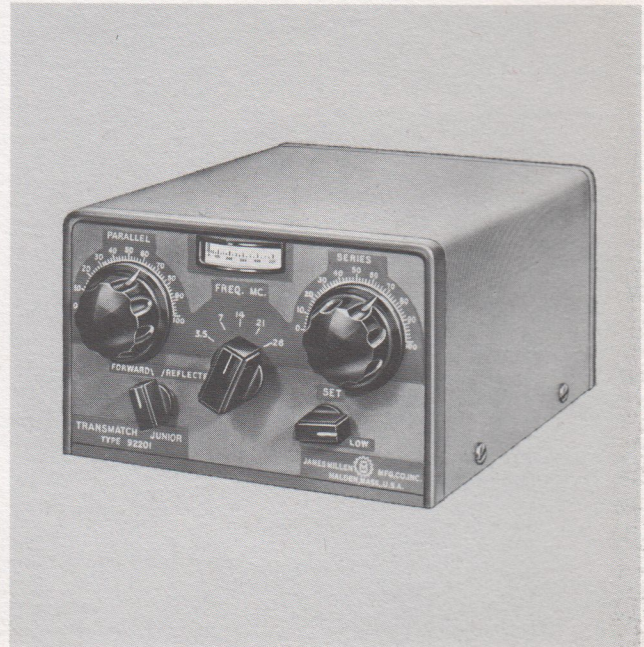
**No. 51001**  
**R-F SWITCH**

*High Voltage R-F Switch designed for high frequency requirements*

The No. 51001 features high voltage breakdown, and a non-arc tracking and arc resistant molded frame. Both collector and switched contacts break contact. Additional features include heavy duty silver contacts, and insulated mounting. The No. 51001 has self-cleaning wiping action on contacts, insulated shaft, and is available with two to six contacts.

**ADDITIONAL FEATURES:**

- Positive Snap Action
- Contacts Break Clean
- Positively Non-Shorting
- Large Air Gaps
- Long Leakage Paths between Contacts
- Rugged Construction



**No. 92201**  
**TRANSMATCH JUNIOR**

*Converts impedance of any 10 to 500 ohm coaxial fed antenna system to 50 ohms*

The No. 92201 TRANSMATCH JUNIOR is a 300 watt band-switching r.f. transformer with a reflectometer as the indicator. The TRANSMATCH JUNIOR, inserted between a transmitter and a transmission line, will convert the impedance of any 10 to 500 ohm coaxial fed antenna system to 50 ohms so that the transmitter may, at all frequencies, work into the impedance for which it was designed.

**TECHNICAL SPECIFICATIONS**

**Input impedance** (transmitter) 50 to 70 ohms single-ended.  
**Output impedance** (transmission line) 10 to 500 ohms coaxial: 5 to 1000 ohms at most frequencies.  
**Frequency range** — 3.5, 7, 14, 21, 28 MC. amateur bands band-switched.  
**Power handling capability** — 300 watts peak.  
**Indicator** — 50 ohm reflectometer using a 500 microampere meter.  
**Cabinet size:** 7" W. x 4¾" H. x 9" D. (including knobs)  
**Weight:** 6 lbs.

**JAMES MILLEN MANUFACTURING COMPANY, INC.**

MAIN OFFICE AND FACTORY

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