## TYPE 219 DECADE CONDENSER

**USES:** The TYPE 219 Decade Condensers find uses in every laboratory as tuned circuit elements, bridge impedances, filter elements, or as components of any circuit where a wide-range variable condenser is necessary.

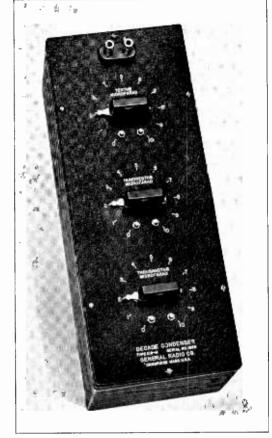
**DESCRIPTION:** The TYPE 219 Decade Condensers are assemblies of two or three TYPE 380 Decade-Condenser Units mounted in a shielded cabinet. Each decade has eleven positions, 0 to 10 inclusive, so that the dials overlap. A positive detent mechanism allows the switch to be set accurately.

**FEATURES:** The TYPE 219 Decade Condensers are direct-reading units covering a wide range of capacitance values. Although not designed as standards, their accuracy is good and sufficient for most laboratory work. The zero capacitance has been kept at a minimum and its value is marked on each box for ready reference. By employing mica condensers on all decades except the 0.1microfarad decade of the TYPE 219-L and TYPE 219-M, the power factor has also been held low.

TYPE 219-K uses mica dielectric throughout and has many uses where the comparatively higher losses of paper condensers cannot be tolerated. For applications where still lower losses are desired, boxes using TYPE 505 Condensers throughout can be built to order.

Accuracy: All units are accurate at the decade terminals within 1%, except the 0.1-microfarad decades of the TYPE 219-L and TYPE 219-M which are within 2%. To obtain these accuracies at the box terminals, account must be taken of the effective zero capacitance of the box, which is made up of the true zero capacitance and the mutual capacitance between units. The values for the different boxes follow:

Type	Effective Zero Capacitance
219-K	35 μμf
219-L	20 µµf
219-M	$30 \ \mu\mu f$
219-N	20 µµf



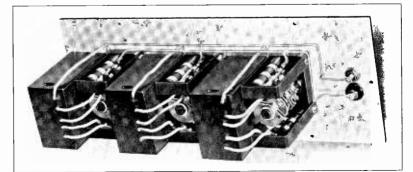
## SPECIFICATIONS

These values are engraved on the Instruction Plate on every box.

**Power Factor:** The power factor for the individual decades is given in the specifications for the TYPE 380 Decade-Condenser Units. For the very lowest decades the power factor may be increased slightly because of the losses in the switches and mounting.

Maximum Voltage and Frequency: These values for the different decades are given in the specifications for the TYPE 380 Decade-Condenser Units. The limiting values for the different TYPE 219 Decade Condensers are engraved on the Instruction Plate for each box.

Terminals: Standard jack-top binding posts with a 34-



Inside view of TYPE 219-M Decade Condenser