For low-level d-c measurements
Use these new, triple-purpose
D-C INDICATING AMPLIFIERS

stabilized for zero and gain

Voltage-balance feedback (above) and current-balance feedback stabilize gain...provide virtual null balance.

SPECIALIFICATIONS

MICROVOLT UNIT
Catalog No. 9835
FULL SCALE RANGES WITH BUILT-IN 4" METERS
0 to 50 or —25 to +25 Microvolts; scale multipliers: 1,2,4,10, 20,40

MICRO-MICROAMPERE UNIT
Catalog No. 9836
0 to 1000 or —500 to +500 Micro-Amps; scale multipliers: 1, 2, 5, 10, 20, 50, 100, 200, 500, 1000, 2000

ACCURACY
Of amplifier: ±0.4% of reading ±0.5 Microvolts; Of meter: ±1%
Of amplifier: ±0.5 to 0.8% of reading ±20 Micro-Microamps; Of meter: ±1%

STABILITY
Zero and Gain stabilized automatically. No trimmer controls required.

*SOURCE RESISTANCE
Up to 10,000 ohms.

RESPONSE TIME
2 to 3* sec.

OUTPUT
For full scale input on any range; 10 millivolts at output impedance of 500 ohms for null recorder; 1 volt for 20,000-ohm external meter.

Front panel fits standard 19" relay rack.

*Accuracy and Response Time depend on Source Resistance.

USE AS
- DIRECT-READING MICROVOLTAMETER
  OR MICRO-MICROAMMETER
- RECORDER PREAMPLIFIER
- NULL DETECTOR

These new instruments are not only D-C Indicating Amplifiers but are stable, accurate measuring instruments as well. You can use them in measurements with thermocouples, strain gages, bolometers...bridge and potentiometer circuits...ionization, leakage, and phototube currents...almost any measurement of extremely small direct current or voltage.

Through a combination of a-c amplification and unique balanced feedback network, zero and gain stability are designed right into the instrument. Trimmer controls are designed out—eliminated.

Actually three instruments in one, these amplifiers can be used as—
Direct-reading instruments...At the turn of a scale-multiplier knob, you simply select the range in which you want to work.

Recorder preamplifiers...with broad flexibility. For instance, one or two degrees temperature difference can be spread across an entire Speedomax recorder scale.

Null detectors...more sensitive than most reflecting galvanometers, yet with full scale response time of only 2 to 3 seconds. Leveling is unnecessary. There's no worry about shock or vibration. At the turn of a range knob, you have available a wide choice of sensitivities. External shunts are not required. And when using non-linear response, not only does the instrument stay on scale at extreme unbalance; sensitivity increases automatically as the null point is approached.

For details, write to us at 4926 Stenton Ave., Phila. 44, Pa.
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**Permas Weights are manufactured** exclusively by the Fisher Scientific Company and Eimer & Amend. They are adjusted to tolerances well within the range required by the National Bureau of Standards.

**Permas Weights are harder.** The surface resists abrasive action better than brass, bronze, gold, platinum, or any plating used on analytical weights.

*Permas—permanent mass—is a coined word, registered in the U. S. Patent Office, and is pronounced per'-mass.

**Permas Weights are non-magnetic.** They will not attract metallic particles and they are not affected by the damping magnets frequently used in analytical balances.

**Permas Weights are corrosion resistant.** They are not altered by the corrosive fumes often encountered in the laboratory.

**Permas Weights are not lacquered or plated.** They do not have the disadvantage of taking up moisture as all lacquered surfaces do.

**Permas Weights are machined,** by tungsten carbide tools, from rolled bar stock and polished to a permanent, durable, mirror-like finish.

Write for full information on all Fisher Permas Balance Weights.

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*The 100-gram set of Fisher Permas Weights illustrated at right is adjusted to tolerances required by the National Bureau of Standards for class "S" analytical weights. Price $52.00*
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& scientific photography

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Orthophot converted for photomacrography. Adjustable macro-stand replaces microscope. Same highly-controllable illumination and split-micron focusing used.

Orthophot into precision photoenlarger. Quick, needle-sharp focusing with illuminated target on table and using reflex mirror.

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Convention Booth
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Table of Contents

An Ethical Code for Scientists:
Ward Pigman and Emmett B. Carmichael ..... 643
Catalysis and Carbonium Ions in Petroleum
Formation: Benjamin T. Brooks ......................... 648

Technical Papers
Houseflies Resistant to Benzene Hexachloride:
James B. Gahan and John M. Weir ................... 651
Acceleration of CO Elimination in Man by
High Pressure Oxygen: Nello Pace et al. .......... 652
Further Investigation of the Reducibility of
Lyophilized Catalase: Alexander L. Dounce
and Robert R. Schwalenberg ......................... 654
Methods of Preparing Bone and Tooth
Samples for Viewing in the Electron Microscope:
R. A. Robinson and F. W. Bishop ...................... 655
Arrest of Development of Plasmodium gallinaceum
in Mosquitoes by Radiation Effect of P32:
P. F. Hahn et al. .......................................... 657
Toxicity to Mice of Chlordane Vapor and
Solutions Administered Cutaneously:
Hubert Frings and Joseph E. O'Tousa .......... 658
Stability of the Adenosinotriphosphatase
System in Animal Tissues:
Mona Marquette and B. S. Schweigert ............ 660
A Modern Periodic Chart of Chemical
Elements: John D. Clark .............................. 661
Dry Mounts of Amphibian Cleavage Stages:
Mychyle W. Johnson .................................. 663

Rooting of Haden Mango Leaf-Bud Cuttings:
M. J. Dijkman ........................................ 663
Niacin Content of Waxy, Sugary, and Dent
F2 Segregating Kernels in Corn:
Earl R. Leng et al. .................................... 665
Relation of Strength of Sediments to Water
Content and Grain Size:
Parker D. Trask and Jack W. Rolston ........... 666
Interchangeable Pencil-Type Micromanipulator:
Georg v. Bekésy ....................................... 667
An Electron Microscope Study of Isolated Nu-
clei of Liver Cells from Laboratory Animals:
Juan J. Angulo and John H. L. Watson .......... 670
Blood Findings in Men on a Diet Devoid of
Meat and Low in Animal Protein:
Leonora Mirone ....................................... 673

Comments and Communications
Biologists in Military Service; Fluorescence
of Amino Acids; Use of a Fathometer for Sur-
velling Shellfish Areas; The Chalkley Equation
Applied to Open Figures; Structure of Aero-
peptides; Conversion of Phosphorylase A to
Phosphorylase B by Blood Tryptase ................. 675

Association Affairs .................................. 679
Scientific Book Register ......................... 680
News and Notes ..................................... 681
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71-645 Pipettes, Machlett Automatic, Pyrex, gravity filling with support.

<table>
<thead>
<tr>
<th>Pipette capacity, ml</th>
<th>5</th>
<th>10</th>
<th>25</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reservoir cap., ml.</td>
<td>1000</td>
<td>1000</td>
<td>2000</td>
<td>2000</td>
</tr>
<tr>
<td>Each</td>
<td>$20.50</td>
<td>21.50</td>
<td>23.00</td>
<td>24.00</td>
</tr>
</tbody>
</table>

8-566 Burettes, Machlett Automatic, Pyrex, gravity filling, with support.

<table>
<thead>
<tr>
<th>Capacity, ml.</th>
<th>2</th>
<th>5</th>
<th>5</th>
<th>10</th>
<th>25</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subdivisions, ml.</td>
<td>0.01</td>
<td>0.05</td>
<td>0.05</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Reservoir cap., ml.</td>
<td>500</td>
<td>1000</td>
<td>1000</td>
<td>2000</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>Each</td>
<td>$22.50</td>
<td>23.75</td>
<td>23.00</td>
<td>25.00</td>
<td>27.00</td>
<td>28.50</td>
</tr>
</tbody>
</table>

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