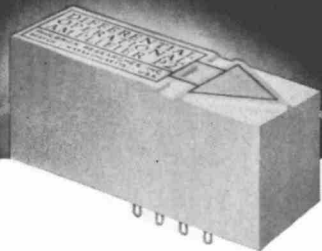


## The all-new, all solid-state Philbrick P2 amplifier



**NO TUBES, NO CHOPPERS, NOTHING BUT PERFORMANCE.** An ingenious arrangement of all solid-state components endows this operational amplifier with the most remarkable and versatile characteristics. But let's let them speak for themselves. *Full differential input:* truly floating with respect to ground. *No common mode error.* *Low input current:* typically  $10^{-11}$  amps. *Low noise:* typically under 10 microvolts in the dc to 1 kc range. *Sub millivolt long term stability:* less than 100 microvolts drift per day. *Cool running:* typically 330 milliwatt dissipation. *Wide band pass:* typically 75 kc as a unity gain follower. *High open loop gain:* typically 30,000. **\$210.** *Truly low cost:*

Use the P2 for instrumentation, analog computation, and other applications requiring high reliability and accuracy. Discover its marvelous versatility and convenience. Add, integrate, scale, invert with it. Take advantage of its differential inputs to perform very high impedance voltage following (or amplification), precise current driving, and many other useful applications. The P2's output delivers 1 ma at  $\pm 10$  volts. The cast aluminum housing fits right in your hand.

Please write for further information to:

GEORGE A.  
**PHILBRICK**  
RESEARCHES, INC.

127 CLARENDON ST. BOSTON 16, MASS.  
COMMONWEALTH 6-5375, TWX; BS 1032, FAX; BSN  
REPRESENTATIVES IN PRINCIPAL CITIES  
EXPORT OFFICE: 240 W. 17TH ST., N. Y. 11, N. Y.  
TEL. CHELSEA 3-5200, CABLE: TRILRUSH

### Manufacturers' Literature

**Electronic Instruments**—Three 8-p. pamphlets give a detailed presentation of amplifiers—five models, including rack-mounting and frame-mounting versions; four square-wave and pulse generators; four time-mark and sine-wave generators.—*Tektronix, Inc., P. O. Box 500, Beaverton, Oregon.*

**Torque Measurement**—12-p. brochure, how to measure the torque characteristics and speed of motors, microgear trains, servo mechanisms, potentiometers in the torque range from  $\frac{1}{4}$  gm-cm to 200 lb-in.—*Power Instruments, Inc., 7352 North Lawndale Avenue, Skokie, Illinois.*

**Gas Chromatography**—A series of data sheets describe sensing units, programmer chassis, pneumatic control accessory, building-block sampling systems, and column materials available for various process stream applications of the model 184B vapor fractometer.—*Perkin-Elmer Corporation, Norwalk, Connecticut.*

**Electronic Instruments**—12-p. catalog digest E, summarizes specifications and applications of more than 60 test instruments including spectrum analyzers, frequency response plotters, communications systems analyzers, and telemetry test instruments.—*Panoramic Radio Products, Inc., 520 South Fulton Avenue, Mt. Vernon, New York.*

**Tachometers**—4-p. bulletin covers line of electric tachometers.—*The Electro-Mechano Company, 241 East Erie Street, Milwaukee, Wisconsin.*

**Accelerometer Frequency Calibration**—28-p. technical review describes the electrical and mechanical performance characteristics of the model 4290 high frequency calibration exciter.—*B & K Instruments, Inc., 3044 West 106th Street, Cleveland, Ohio.*

**Chromatography**—Bulletin No. 841, 8 pp., the Kromo-Tog, model K-7, an ionizing instrument for gas chromatography.—*Burrell Corporation, 2223 Fifth Avenue, Pittsburgh 19, Pennsylvania.*

**Pressure Regulators**—Bulletin 112, 4 pp., low pressure regulators for domestic appliances, and commercial and industrial applications such as batch ovens and furnaces.—*Amercian Meter Company, 920 Payne Avenue, Erie 6, Pennsylvania.*

**Electronic Timing Modules**—Bulletin PD-1016, 5 pp., dimensional drawings, table of characteristics, and complete specifications for G-V types 406-1, 406-2, and 406-3 microminiature timing modules covering time delays from 0.1 to 60 sec.—*G-V Controls, Inc., 101 Okner Parkway, Livingston, New Jersey.*

## New Philbrick 6033 solid-state power supply



**BALANCED OUTPUTS, COMPUTING GRADE.** The 6033 is the latest addition in the distinguished line of Philbrick power supplies. It will energize at least 10 Philbrick P2 amplifiers and other transistorized electronic equipment. Like the P2, its remarkable characteristics speak for themselves. *Low internal impedance:* less than 2 milliohms. *Low noise and hum:* guaranteed less than 150 microvolts rms (0.001%). *Highly regulated outputs:* against load, less than 300 microvolts; against line, less than 200 microvolts. *Low long term drift:* typically 0.1%. *Short transient recovery time:* no load to full load, less than 1 millisecond. *Unique short circuit overload protection:* inherent in the 6033's design with no extra circuitry to deteriorate performance. *Truly low cost:* about half that of supplies with comparable performance: **\$285.**

Operates from 115 volt, 50-400 cycles, providing up to 150 ma at plus AND minus 15 volts, slaved to a common reference. Conveniently packaged, cool running, and highly reliable. Available as bench model or modular plug-in. Bench model dimensions:  $3\frac{1}{2}$ " h x  $5\frac{1}{2}$ " w x  $7\frac{1}{2}$ " d. Also available with 300 ma output.

Complete facts are waiting for you. Please write:

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