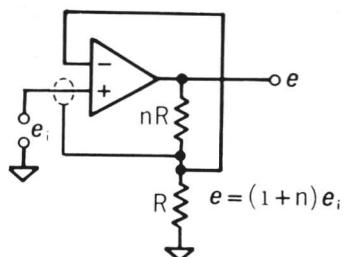


Need a follower-amplifier? Choose the appropriate all-silicon solid-state Philbrick Operational amplifier; use it in this circuit to provide isolation and impedance transformation with precise programmable gain.

APPLICATIONS

- Impedance transformation
- Measurement of voltage at high impedance
- Sample and hold
- Unloading of passive structures
- Precise unity-gain follower (when $n = 0$)
- Unloading of circuit capacitance (with positive capacitive feedback)



FOLLOWER WITH GAIN CIRCUIT

GENERAL

All of the following amplifiers are available from stock. The first three types utilize premium grade, hermetically sealed semiconductors. All are all-silicon, all solid state.

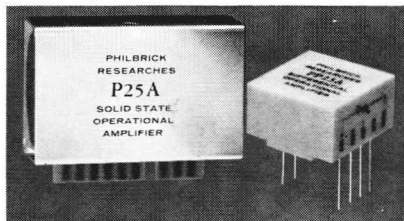
Philbrick Engineering Representatives

Ala.: Huntsville 536-8393; **Ariz.:** Phoenix 265-3629; **Cal.:** Los Angeles (213) 937-0780, Palo Alto (415) 326-9800, San Diego 222-1121; **Colo.:** Denver 733-3701; **Conn.:** Stratford 378-0435; **Fla.:** Ft. Lauderdale 564-8000, Orlando 425-5505; **Ill.:** Chicago 676-1100; **Ind.:** Indianapolis 356-4249; **La.:** New Orleans 242-5575; **Md.:** Baltimore 727-1999; **Mass.:** Wakefield 245-5100; **Mich.:** Detroit 838-7324; **Minn.:** Minneapolis 545-4481; **Mo.:** Kansas City 381-2122, St. Louis 966-3646; **N.M.:** Albuquerque 268-3941; **N.Y.:** DeWitt (315) 446-0220, Lancaster (716) TF 5-6188, Valley Stream (516) 561-7791; **N.C.:** Winston-Salem 725-5384; **Ohio:** Dayton 298-9964, Westlake 871-8000; **Pa.:** Norristown 735-3520, Pittsburgh 371-1231; **Tex.:** Dallas 526-8316, Houston 781-1441; **Utah:** Salt Lake City 466-4924; **Va.:** Alexandria 836-1800; **Wash.:** Seattle 723-3320; **EXPORT: N.Y.:** New York (212) 246-2133.

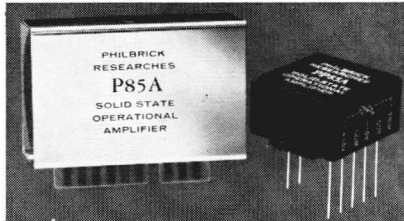
CANADA: Quebec: Montreal 482-9750, Ontario: Toronto RU 9-4325.



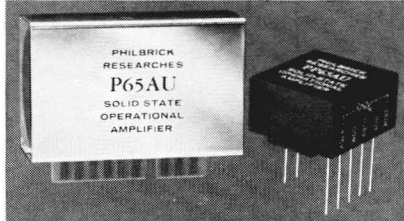
SP2A....price (1-4) \$227.00



P25A, PP25A....price (1-4) \$154.00



P85A, PP85A....price (1-4) \$95.00



P65AU, PP65AU....price (1-4) \$35.00

**ELECTRONIC ANALOG
COMPUTING EQUIPMENT
for
MODELLING, MEASURING,
MANIPULATING
and MUCH ELSE**



PHILBRICK

CHARACTERISTICS*

SP2A (modulator type)

ERROR CURRENT.. $< 10^{-12}$ amp.

NOISE CURRENT $< 10^{-13}$ amp.

INPUT IMPEDANCE (with guard circuit) > 1 million megohms

TRACKING ERROR $< 0.01\%$ for unity-gain follower

OUTPUT SWING .. $\pm 10V @ 2mA$ see Philbrick for versions having greater voltage or current capability

P25A, PP25A (f.e.t. type)

ERROR CURRENT typically $< 10^{-10}$ amp.

INPUT IMPEDANCE of the order of 10^{12} ohms

COMMON MODE REJECTION $> 1000 : 1$

PACKAGING compact plug-in and wire-in series available

P85A, PP85A

ERROR CURRENT (when compensated) well below 100 nanoamperes

INPUT IMPEDANCE > 100 megohms

COMMON MODE REJECTION $> 10,000 : 1$

PACKAGING compact plug-in and wire-in series available

P65AU, PP65AU (economy types)

ERROR CURRENT (when compensated) well below 100 nanoamperes

INPUT IMPEDANCE > 20 megohms

COMMON MODE REJECTION $> 1000 : 1$

* measured at $25^{\circ}C$

For complete information, consult your local Philbrick Representative or Philbrick Researches, Inc., 22-J Allied Drive at Route 128, Dedham, Mass. 02026 Telephone: (617) 329-1600