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)

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.

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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: .. ± 10V @ 2mA

**P25A, PP25A** (f.e.t. type)
- ERROR CURRENT typically < $10^{-10}$ amp.
- INPUT IMPEDANCE of the order of $10^2$ 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**
- ERROR CURRENT (when compensated) well below 100 nanoamperes
- INPUT IMPEDANCE > 20 megohms
- COMMON MODE REJECTION > 1000 : 1

*measured at 25°C

For complete information, consult your local Philbrick Representative or Philbrick Researches, Inc., 22-J Allied Drive at Route 128, Dedham, Mass. 02026
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