## **Lock-In Preamplifier**

SR550 — FET input preamplifier



The SR550 Voltage Preamplifier is designed to work with SRS lock-in amplifiers. Preamplifiers provide gain close to the experimental detector, before the signal-to-noise ratio is permanently degraded by cable capacitance and pickup. The SR550 minimizes noise and pickup in the connecting lines and reduces measurement time in noise-limited experiments. Power and control signals are brought from the lock-in by a 9-pin cable. The SR550 may also be operated independently by applying appropriate biasing (±20 VDC, +5 VDC).

- · 3.6 nV/√Hz input noise
- $\cdot$  FET input, 100 M $\Omega$  input impedance
- Gain of 1, 2, 5 or 10
- · Single-ended and differential inputs
- · AC coupled input
- · High common mode rejection
- Powered by SRS lock-in amplifiers

## **SR550 Specifications**

Input impedance  $100 \,\mathrm{M}\Omega + 25 \,\mathrm{pF}$ 

Inputs Single-ended or differential Maximum input 250 mVrms for overload

100 VDC, 10 VAC damage threshold

Noise (typ.) 3.6 nV/ $\sqrt{\text{Hz}}$  at 1 kHz

 $4.0\,\mathrm{nV/\sqrt{Hz}}$  at  $100\,\mathrm{Hz}$  $13\,\mathrm{nV/\sqrt{Hz}}$  at  $10\,\mathrm{Hz}$ 

Coupling AC (0.016 Hz)
CMRR (1 V input) 90 dB at 100 Hz

Gain settings 1, 2, 5, 10 (automatically set by

SR510 or SR530 lock-in) 10 nV to 200 mV

Full-scale sensitivity
Gain accuracy

Coin stability

10 nV to 200 mV

2 % (2 Hz to 100 kHz)

Gain stability 100 ppm/°C

Outputs A (signal,  $600 \Omega$ , single-ended)

B (shielded ground)

Maximum output 7 Vpp

Power Supplied by SR510, SR530, SR810,

SR830, SR850 or SR124 via

connector cable

Mechanical  $3.0" \times 1.3" \times 5.1"$  (WHD)

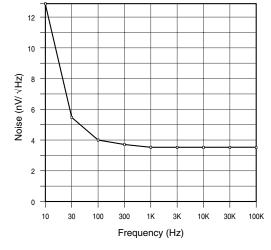
Weight 1 lbs.

Warranty One year parts and labor on defects

in materials and workmanship

## Ordering Information

SR550 Lock-in preamplifier



SR550 noise plot



