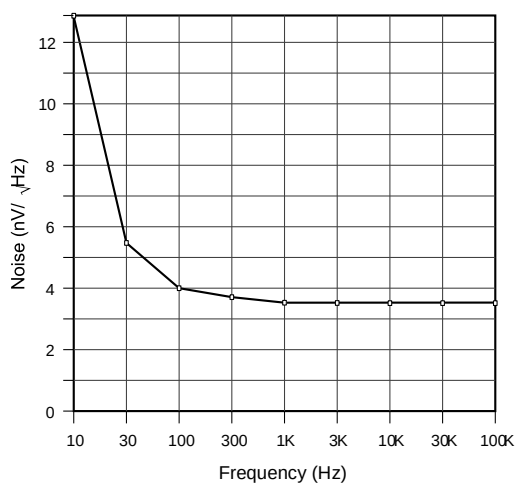
Lock-In Preamplifier

SR550 — FET input preamplifier

- 3.6 nV/√Hz input noise
- FET input, 100 MΩ 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

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).



SR550 noise plot

SR550 Specifications

Input impedance	100 MΩ + 25 pF
Inputs	Single-ended or differential
Maximum input	250 mVrms for overload 100 VDC, 10 VAC damage threshold
Noise (typ.)	3.6 nV/√Hz at 1 kHz 4.0 nV/√Hz at 100 Hz 13 nV/√Hz at 10 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)
Full-scale sensitivity	10 nV to 200 mV
Gain accuracy	2 % (2 Hz to 100 kHz)
Gain stability	100 ppm/°C
Outputs	A (signal, 600 Ω, single-ended) B (shielded ground)
Maximum output	7 Vpp
Weight	3.0 lbs
Mechanical	3.0" × 1.3" × 5.1" (WHD)
Warranty	One year parts and labor on defects in materials and workmanship

Ordering Information

SR550	Lock-in preamplifier