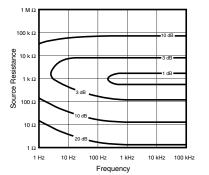
Lock-In Preamplifier

SR552 — BJT input preamplifier

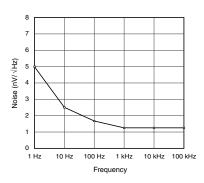


The SR552 Voltage Preamplifier is designed to work with SRS lock-in amplifiers, providing gain where it is needed most—right at the experiment. The preamplifier minimizes noise and pickup in the connecting lines and can reduce measurement time in noise-limited experiments. The SR552 has a bipolar front-end design (100 k Ω impedance, 1.4 nV/ $\sqrt{\text{Hz}}$ noise). Power and control signals are brought from the lock-in by a 9-pin cable (included). The SR552 may also be operated independently by applying appropriate power supply voltages (±20 VDC, +5 VDC).

- 1.4 nV/√Hz input noise
- \cdot BJT input, 100 k Ω input impedance
- · Gain of 10, 20, 50 or 100
- · Single-ended and differential inputs
- · AC coupled input
- Powered by SRS lock-in amplifiers



SR552 noise contour



SR552 noise plot

SR552 Specifications

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

Inputs Single-ended or differential Maximum input 70 mVrms for overload

50 VDC, 20 VAC damage threshold

Noise (typ.) $1.4 \text{ nV}/\sqrt{\text{Hz}}$ at 1 kHz

 $1.6 \,\text{nV}/\sqrt{\text{Hz}}$ at $100 \,\text{Hz}$ $2.5 \,\text{nV}/\sqrt{\text{Hz}}$ at $10 \,\text{Hz}$ AC $(0.016 \,\text{Hz})$

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

Gain 10, 20, 50, 100 (Automatically set by SR510 or SR530 lock-in)

Full-scale input 10 nV to 200 mV Gain accuracy 2% (2 Hz to 100 kHz)

Gain stability 200 ppm/°C

Outputs A (signal, 600Ω , single-ended)

B (shielded ground)

Maximum output 10 Vpp

Power Supplied by SR510, SR530, SR810,

SR830, SR850 or SR124 via

control 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

SR552 Lock-in preamplifier



