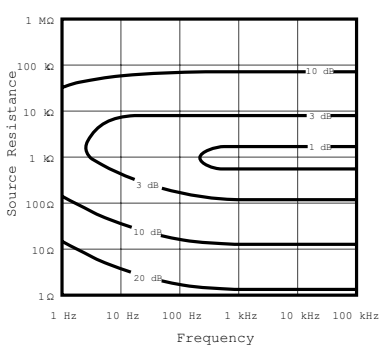
Lock-In Preamplifier

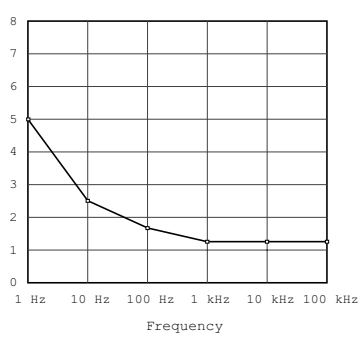
SR552 — BJT input preamplifier

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

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 kΩ impedance, 1.4 nV/√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).



SR552 noise contour



SR552 noise plot

SR552 Specifications

Input impedance	100 kΩ + 25 pF
Inputs	Single-ended or differential
Maximum input	70 mVrms for overload 50 VDC, 20 VAC damage threshold
Noise (typ.)	1.4 nV/√Hz at 1 kHz 1.6 nV/√Hz at 100 Hz 2.5 nV/√Hz at 10 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, 600 Ω, 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" × 1.3" × 5.1" (WHD)
Weight	1 lbs.
Warranty	One year parts and labor on defects in materials and workmanship

Ordering Information

SR552	Lock-in preamplifier