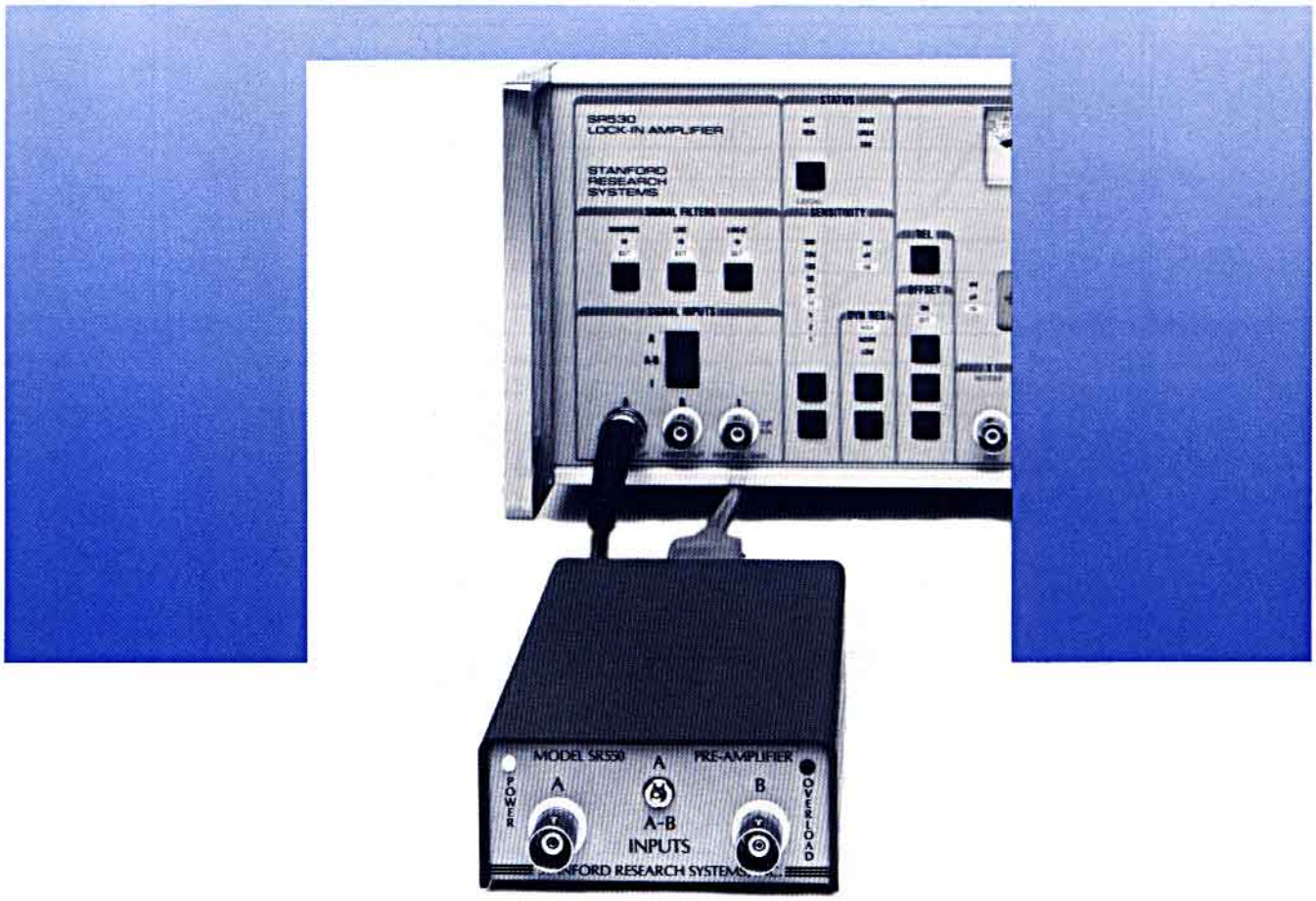
SR550 and SR552
VOLTAGE PREAMPLIFIERS

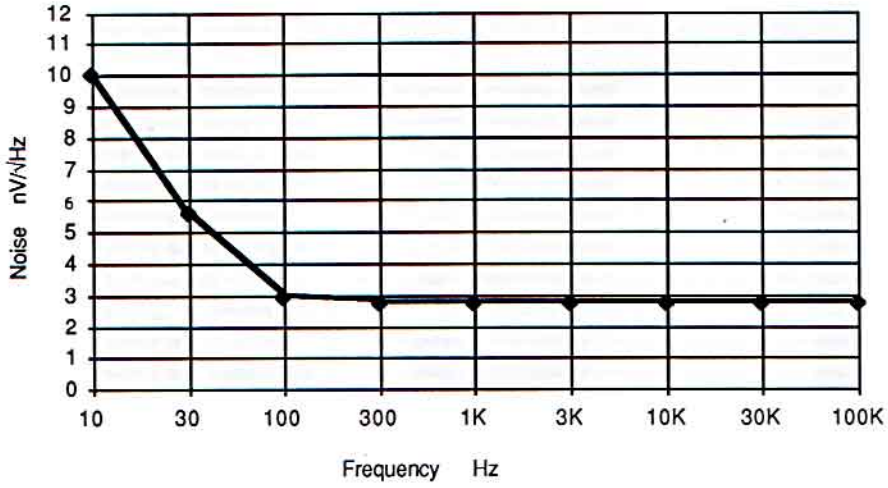


FEATURES

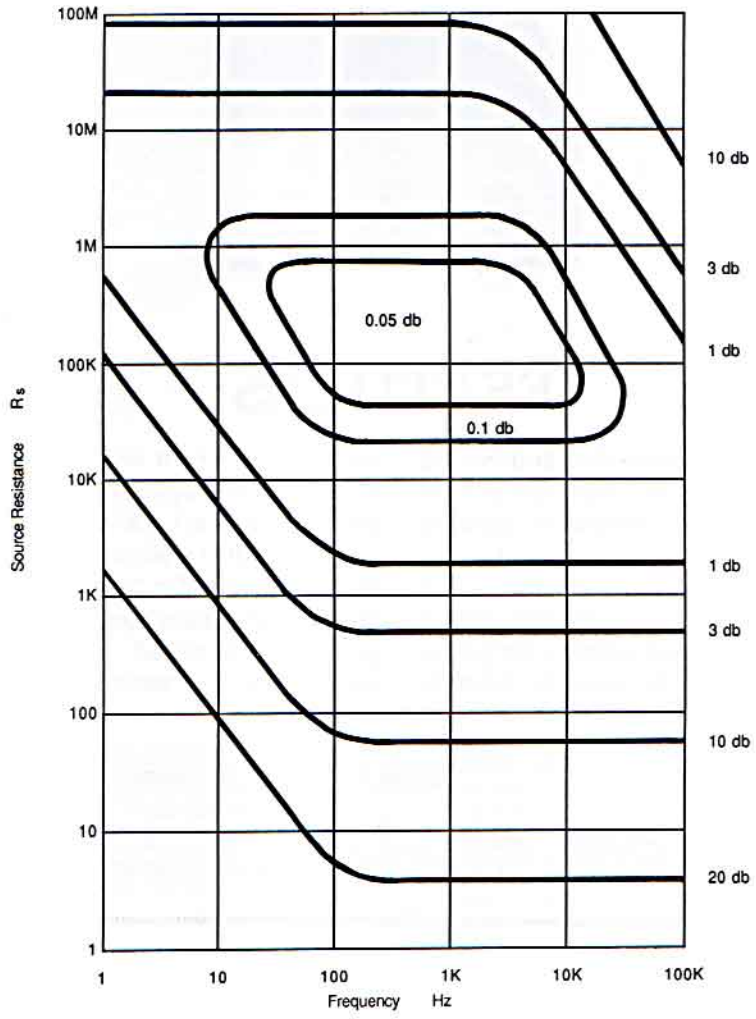
The SR550 Remote Voltage Preamplifier and SR552 Remote Low Noise Preamplifier, are designed to work with all Stanford Research Lock-In Amplifiers, allowing the user to obtain signal gain right at the experiment, thus minimizing noise and pickup in the connecting lines, and reducing measurement time in noise limited experiments. Ideal for measuring very small signals, the gain is set automatically by the Lock-In Amplifier to optimize noise performance without compromising the dynamic reserve of the system. Power and control signals are brought from the Lock-In by a cable that is included with the preamplifier. Preamplifiers may also be used without the Lock-In amplifier by supplying bias ($\pm$20Vdc, +5Vdc) to the appropriate rear panel connector pins and by grounding selected pins to control the gain, as described in the Preamplifier operating manual.

	SR550	SR552
GAIN	1, 2, 5, 10	10, 20, 50, 100
INPUT IMPEDANCE	100 MΩ + 25 pF	100 KΩ + 25 pF
NOISE (TYPICAL)	2.8 nV/√Hz at 1000 Hz	1.4 nV/√Hz at 1000 Hz

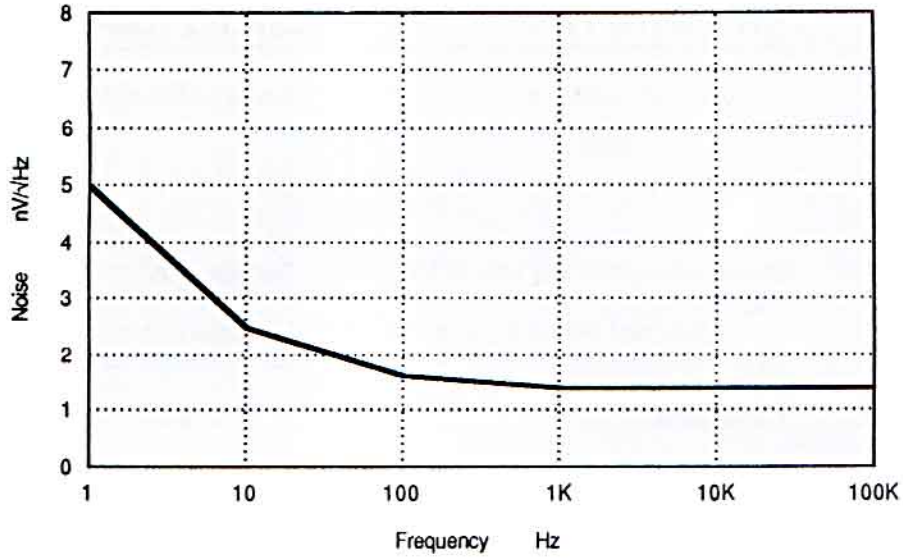
Noise vs. Frequency (Typical)



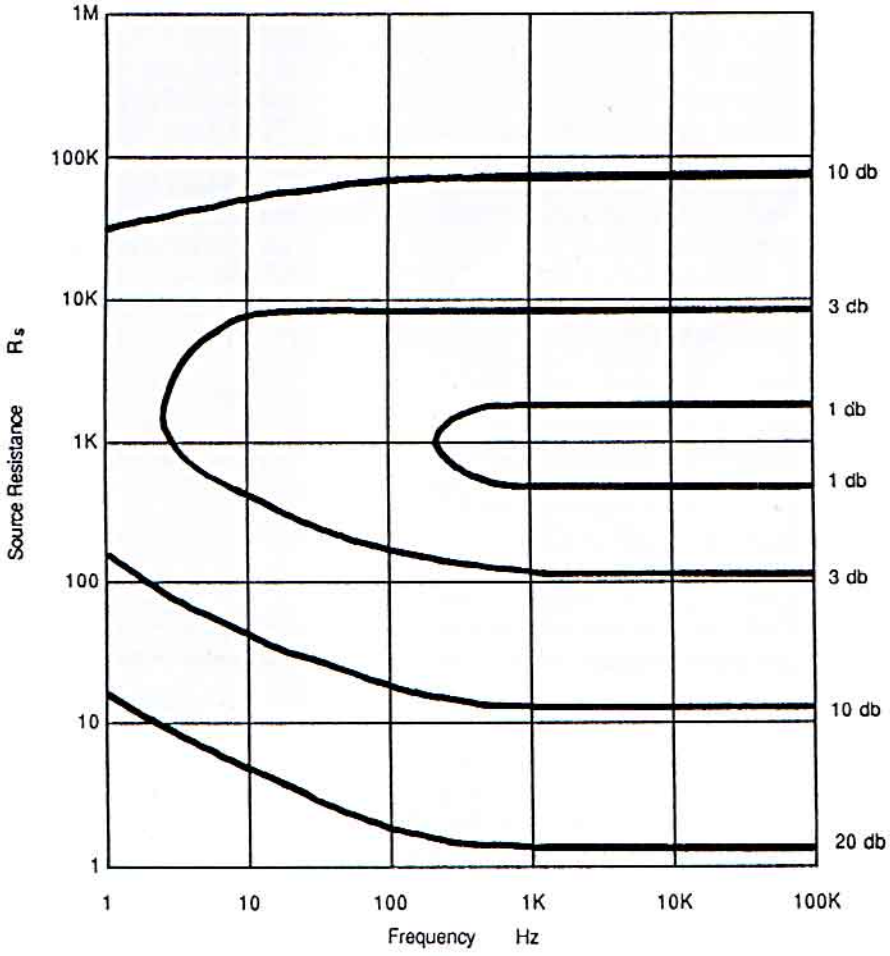
Noise Figure Contour (Typical)



Noise vs. Frequency (Typical)



Noise Figure Contour (Typical)



SPECIFICATIONS

	SR550 (FET)	SR552 (BIPOLAR)
Inputs	Single ended or differential (switch selectable)	Single ended or differential (switch selectable)
Input Impedance	100 MΩ, 25 pF	100 KΩ, 25 pF
Maximum Inputs	250 mV rms for overload Damage threshold: 100 Vdc, 10 Vac	70 mV rms for overload Damage threshold: 50 Vdc, 20 Vac
Outputs	(A) single ended (600 Ω impedance) (B) shielded ground	(A) single ended (600 Ω impedance) (B) shielded ground
Maximum Output	7 Volts peak	10 Volts peak
Noise	2.8 nV/√Hz at 1000 Hz (typical) 3.0 nV/√Hz at 100 Hz 10 nV/√Hz at 10 Hz	1.4 nV/√Hz at 1000 Hz (typical) 1.6 nV/√Hz at 100 Hz 2.5 nV/√Hz at 10 Hz
Common Mode	Range: 1 Volt peak	1 Volt peak
	Rejection: 110 dB at 100 Hz 110 dB at 1 kHz 90 db at 10 kHz	110 dB at 100 Hz 100 dB at 1 kHz 80 dB at 10 kHz
Gain	1, 2, 5, 10 Automatically set by the SR510 or SR530 Lock-In, depending on sensitivity and dynamic reserve. Sensitivity ranges from 10 nV to 200 mV full scale (with expand off). SR850 always sets gain to 10.	10, 20, 50, 100 Automatically set by the SR510 or SR530 Lock-In, depending on sensitivity and dynamic reserve. Sensitivity ranges from 1.0 nV to 20 mV full scale (with expand off). Note: Lock-In readings must be divided by 10. SR850 always sets gain to 100.
Gain Accuracy	1% (2 Hz to 100 kHz)	1% (2 Hz to 100 kHz)
Gain Stability	100 ppm/°C	200 ppm/°C
Power	Supplied by Lock-In via control cable.	Supplied by Lock-In via control cable.
Mechanical	Size: 1.3" × 3.0" × 5.1" Weight: 1 lb.	1.3" × 3.0" × 5.1" 1 lb.
Warranty	One year parts and labor on materials and workmanship.	One year parts and labor on materials and workmanship.

SRS

Stanford Research Systems, Inc.

1290-D Reamwood Avenue, Sunnyvale, CA 94089
Telephone (408)744-9040, Fax (408)744-9049
email: info@thinkSRS.com, Web: www.thinkSRS.com