

# Lock-In Preamplifier

*SR555 — Current preamplifier*

- 10 V/ $\mu$ A fixed gain
- 120 kHz bandwidth
- Bias voltage input
- Powered by SRS lock-in amplifiers

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SR555  
Specifications

The SR555 is a low-noise, high-bandwidth, fixed-gain current (trans-impedance) amplifier designed to work with SRS lock-in amplifiers. Current amplifiers provide gain close to the experimental detector, allowing the user to minimize input cable length and its corresponding input capacitance. The SR555 minimizes noise and pickup before they permanently degrade the signal-to-noise ratio, reducing measurement time in noise-limited experiments. Power is brought from the lock-in by a 9-pin cable. The SR555 can also be operated independently by applying the appropriate DC power.



Gain	$10^7$ V/A
Bandwidth	120 kHz (–3 dB)
Input noise (typ.)	42 fA/ $\sqrt{\text{Hz}}$ at 1 kHz
Current input	
Impedance	$<50 \Omega$
Bias current	$<3$ pA
DC bias input	
Range	$\pm 5$ VDC
Settling time	$<150$ ms
Impedance	1 M $\Omega$
Gain accuracy	1 %
Gain stability	$\pm 50$ ppm/ $^{\circ}\text{C}$
Output	20 V <sub>pp</sub> max. balanced differential 10 mA max., 50 $\Omega$
Power	Supplied by SR510, SR530, SR810, SR830, SR850 or SR124 via control cable
Mechanical	3.0" $\times$ 1.3" $\times$ 5.1" (WHD)
Weight	10 oz.
Warranty	One year parts and labor on defects in materials and workmanship

### Ordering Information

SR555

Lock-in preamplifier