

MODEL 571

100 MHz VOLTAGE PREAMPLIFIER

The Model 571 Wideband Preamplifier is designed as a general purpose gain block for instrumentation such as oscilloscopes, spectrum analyzers and analog-to-digital converters. It offers switchable 20 or 40 dB amplification of signals up to 100 MHz. The input coupling is switchable between direct, single-ended mode (with choice of 50 or 1000 Ω input impedance) and 50 Ω, ac, floating, transformer mode. Designed for low impedance sources (e.g. 50 Ω), the amplifier provides excellent self-noise characteristics.

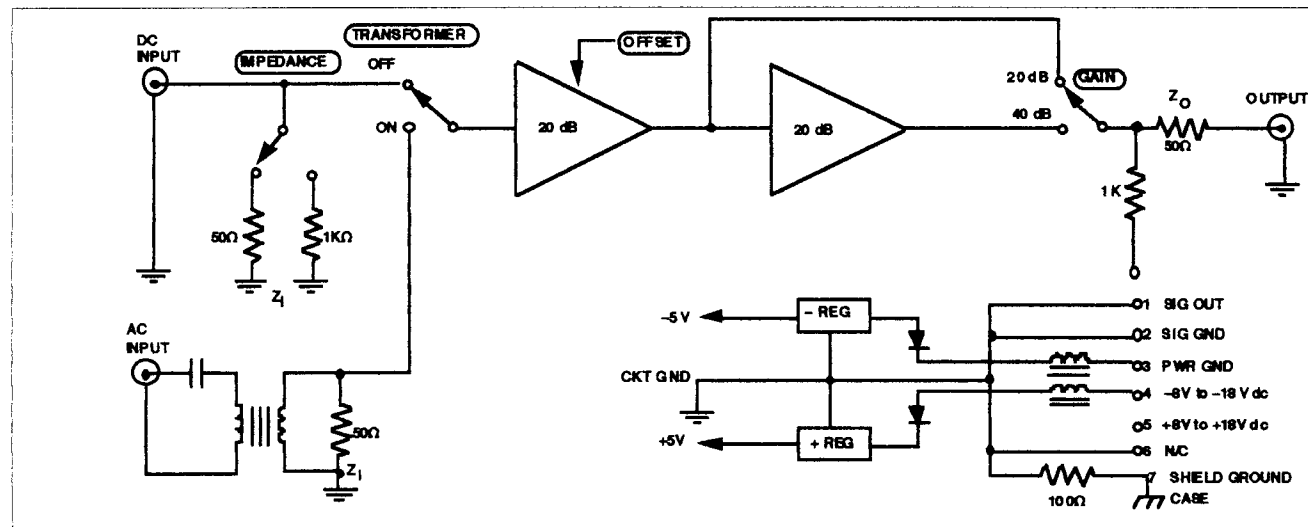
Unlike the other 500 and 1600 Preamplifiers, the 571 is *not* intended to function as an accessory to DL Instruments lock-in amplifiers, electronic filters or instrumentation amplifiers. Its dc power requirements are not compatible with the majority of these instruments and the bandwidth is unnecessarily large. Only 450 Series Amplifier and 4100 Series Filter rack supplies or the Model 511 Power Supply have sufficient current. Otherwise it is expected that the customer will wire in an external line powered or battery powered dc supply via the Model 560AE connector supplied with the preamplifier.

SPECIFICATIONS

- INPUT** Switchable between transformer coupled BNC connector and direct amplifier input BNC connector
- GAIN** Switchable 20 or 40 dB
- INPUT IMPEDANCE** Transformer 50 Ω, floating. Amplifier Switchable 50 Ω or 1 kΩ

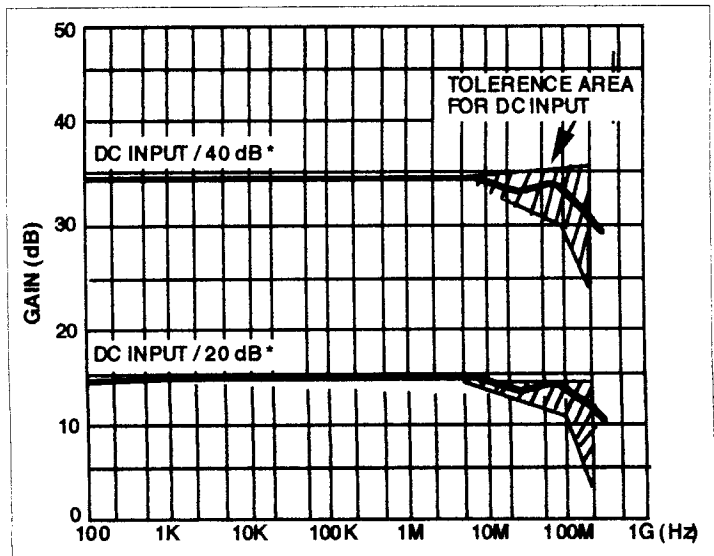
SPECIFICATIONS (Continued)

- INPUT DAMAGE THRESHOLD** Transformer ±50 V dc, 5 V rms ac. Amplifier ±5 V peak (50 Ω source) ±12 V peak (1 kΩ source)
- BANDWIDTH** Transformer 10 kHz – 50 MHz Amplifier dc – 100 MHz
- INPUT NOISE** Typically 4 nV/√Hz; for f > 10 kHz
- INPUT OFFSET** Trimmable to zero, drift typically ±10 μV/°C
- INPUT CURRENT** Maximum 5 μA
- OUTPUT IMPEDANCE** BNC connector: 50 Ω. Cable connector pin 1: 1 K
- OUTPUT DRIVE** 50 Ω BNC ±3.5 V peak unloaded. ±1.5 peak, 50 Ω load
- OUTPUT POLARITY** non inverted
- POWER REQUIREMENTS** External. ±8 V to max. ±18 V, typ. ±12 V @ 150 mA
- TEMPERATURE AND HUMIDITY**
 - Operating 0 to +45°C, 10 to 90% R.H.
 - Storage -20 to +60°C, 10 to 80% R.H.
- DIMENSIONS** 60 x 80 x 54mm (2.36" x 3.15" x 2.12"). Aluminum case (housing, exclusive of switches/connectors).
- WEIGHT** 0.35 kg (.77 lb)
- MATING CONNECTOR** DL Model 560AE



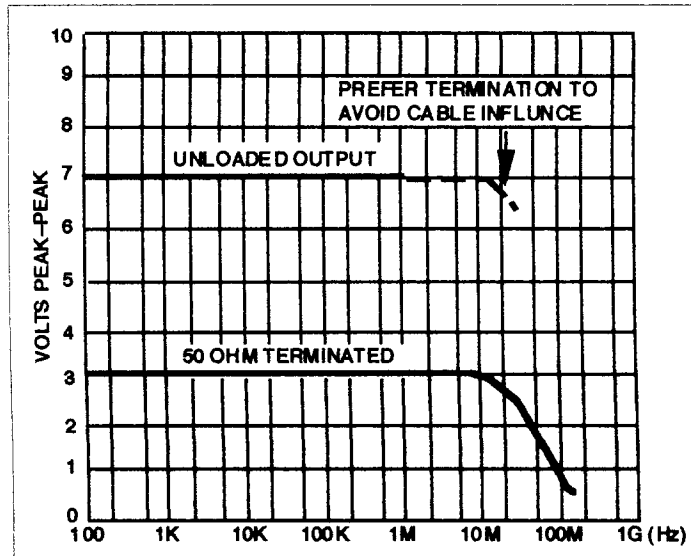
Model 571 100 MHz Preamplifier Block Diagram

MODEL 571 100 MHz VOLTAGE PREAMPLIFIER

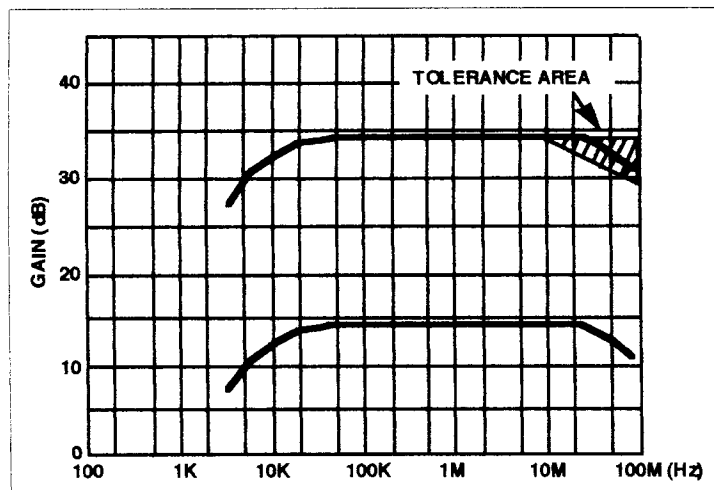


Direct Frequency Response

* Gain equals ratio of loaded input ($Z_T = 50 \Omega$) to loaded output ($Z_o = Z_L = 50 \Omega$)



Maximum Output Voltage vs Frequency



Transformer Input Frequency Response

For more information contact