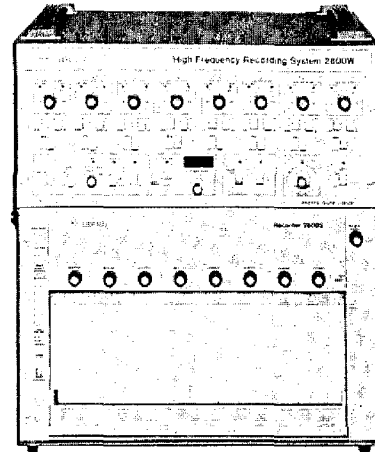
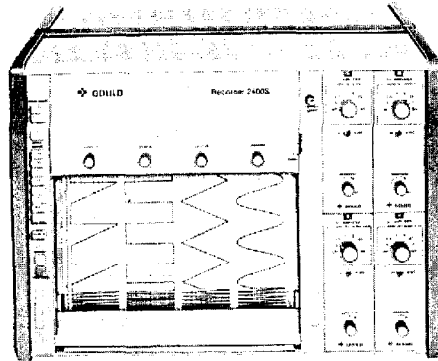


GOULD
Electronics



2400S Recorder

2000W Recorder

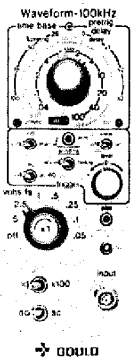
Benefits

- Superb frequency response (DC to 160Hz)
- Annotates date, time, chart speed, test number and user message, up to 50 characters
- User selectable real time clock and IRIG input
- Ultra Quiet
- Portable and rack mount
- 4600 Series Compatible
- Roll, stack to stack, Z-fold paper
- Pressurized ink writing for trace clarity, crispness and uniformity

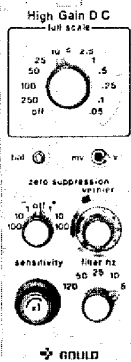
- Dual use: DC Amplifier or Waveform Signal Digitizer selectable on any or all channels
- Simultaneous sampling of all channels at up to 333,000 samples/sec
- Equivalent chart speeds up to 333,000 mm/sec
- Simple and versatile triggering circuit
- Selectable pretrigger viewing
- Auto/Manual operation
- Digital output of stored data via IEEE488 or RS232C

Number of Channels	1, 2, 3, 4, 6, or 8 channels	4, 6 or 8 channels
Writing Method	Pressurized Ink or Thermal	Pressurized Ink or Thermal
Channel Span	40mm, 50mm, 80mm or 100mm	40, 50 or 100mm
Chart Speeds	5, 10, 25, 50, 100 and 200mm/sec with a divide by 60, 100 or 1000 plus variable 40 to 100% of range	Real Time: .002 to 200mm/sec Equivalent: up to 333,000 mm/sec
Frequency Response	@100mm DC to 30 Hz \pm 2% @50mm DC to 50 Hz \pm 2% @40mm DC to 60 Hz \pm 2% @8mm DC to 160 Hz - 3dB	Amplifier mode: 140Hz at 10mm Store mode: 50KHz at full scale
Rise Time	Less than 4msec at 40mm, 5 msec at 50mm and 8 msec at 100mm	Amplifier mode: Less than 4msec for 40mm Store mode: 10 usec all cases
Remote Control	TTL compatible or contact closure	Recorder via TTL or Contact Closure Waveform amplifier via RS 232C or IEEE-488
Event Markers	Two event markers are standard	Two event markers are standard
Linearity	99.65% of full scale	99.65% of full scale

Gould 4600 Series High Performance Signal Conditioners



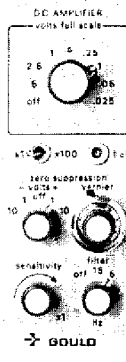
Waveform Storage
Model 13-4616-20
 Digital techniques enable low-cost recording of transients and waveforms up to 100 kHz. Triggers on input signal amplitude and/or frequency. No calculation setup. Also operates as a DC amplifier. Fully floating input.



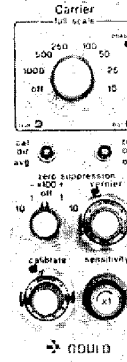
High-Gain DC
Model 13-4615-20
 Range: 50 μ V to 250 V full scale. High input impedance, low-pass output filter. Solid state chopper won't wear out or become noisy. Calibrated zero suppression. Fully floating input.



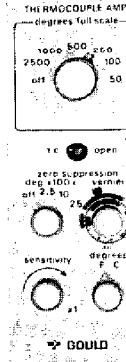
Basic DC
Model 13-4615-00
 Range: 50 mV to 500 V full scale. Response: < -3 dB at 2 kHz. 14 fixed-gain ranges, plus variable sensitivity. Has internally-selectable low-pass filter to attenuate high-frequency noise. 2 M Ω input impedance, differential balanced to common.



General Purpose DC
Model 13-4615-10
 Range: 25 mV to 500 V full scale. Response: < -3 dB at 3 kHz. 16 fixed-gain ranges, plus variable sensitivity control. Calibrated zero suppression from ± 1 V to ± 500 V. 3-position low-pass filter to attenuate high-frequency noise. 2 M Ω input impedance, differential balanced to common.



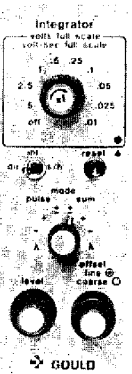
Carrier
Model 13-4615-35
 Operates with strain gage, LVDT and variable reluctance transducers. Incorporates auto balance, calibrated zero suppression, variable 0-10 V excitation at 2.5 kHz. Master/slave synchronization of balance & carrier.



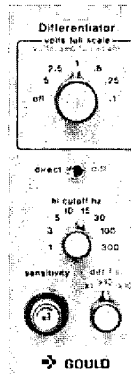
Thermocouple
Model 13-4615-40 thru 45

Model	TC Type	Linearized Range, $^{\circ}$ C
-40	J	-150 to 1000
-41	K	-200 to 1000
-42	T	-200 to 400
-43	E	0 to 1000
-44	R	500 to 1760
-45	S	500 to 1760

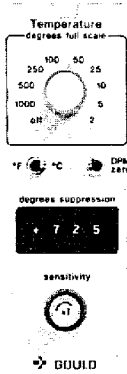
Outputs directly in $^{\circ}$ F or $^{\circ}$ C. Built-in cold-junction compensation, electronic linearization and zero suppression.



Integrator
Model 13-4615-70
 Determines "area under the curve" of outputs from other 4600 Series Amps. Input signals can be offset and $1/2$ -wave or full-wave rectified before integration. Integral sample and hold feature plus 5 reset modes.

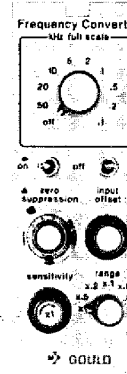
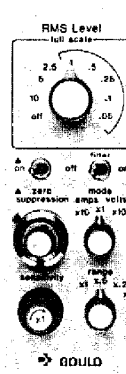


Differentiator
Model 13-4615-71
 Determines rate of change of outputs from other 4600 Series Amps. Finds acceleration from velocity, velocity from position, dP/dt from pressure, etc., in real time. Excellent dc amplifier.

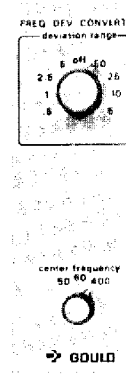


Temperature
Model 13-4615-47
 Wide measurement range ($\pm 2^{\circ}$ to $\pm 1000^{\circ}$ C or F). Linearized for RTDs and YSI Series 400 probes. Calibrated zero suppression, fully floating input.

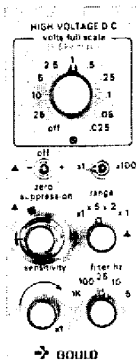
True RMS Level
Model 13-4618-10
 Derives true rms levels of voltage and current waveforms with crest factors to 10:1. Fast rise time detects dip or spike on only one cycle of a 50 or 60 Hz line. 100 kHz response. Calibrated zero suppression, fully floating input.



Frequency-to-Voltage
Model 13-4618-20
 Measures frequency or repetition rate of signals from 1 Hz to 50 kHz. Accepts any waveform and outputs analog dc voltage proportional to frequency. Calibrated zero suppression, fully floating input.



Frequency Deviation
Model 13-4618-00
 Detects zero crossing of ac waveform and outputs dc voltage proportional to frequency above or below standard center frequencies of 50, 60 or 400 Hz. Fully floating input.

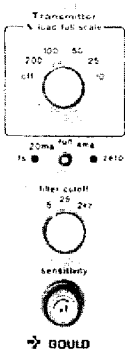
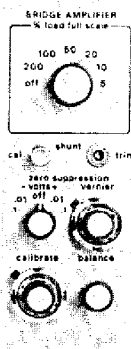


**High Voltage DC
Model 13-4615-90**

Range: 2.5 mV to 1500 V full scale. Calibrated zero suppression allows full scale measurement of small variations in high off-ground potentials. Use for installation, tuneup and maintenance of high-voltage systems. Fully floating input.

**DC Bridge
Model 13-4615-30**

Range: 250 μ V to 100 mV full scale. Operates with strain gages, strain gage-based transducers and RTDs. Direct front-calibration in gage factor or mV/V. Calibrated zero suppression.

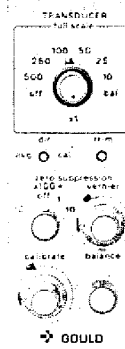
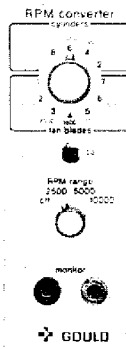


**Transmitter
Model 13-4618-40**

Operates with and provides excitation power for industrial transmitters or high voltage output transducers. Internal current sources provide accurate ($\pm 0.1\%$) reference for measurement system calibration. Input: 1 to 5 mA, 4 to 20 mA, 10 to 50 mA, and 0 to 5 Vdc. Can measure 10% to 200% full-scale input. Has active 3-position, low-pass output filter and calibrated zero suppression.

**RPM Converter
Model 13-4618-30**

Frequency-to-voltage converter calibrated to read out directly in rpm. Designed for automotive industry and for testing all types of internal combustion engines, electric motors, variable-speed drives. Crystal-controlled oscillator assures accuracy. Can be operated in high electrical-noise environments. Accepts any waveform such as sine, square, triangular, ramp or pulse.

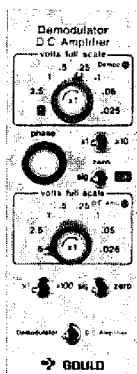
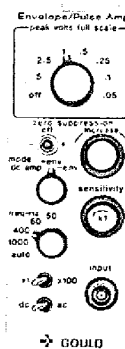


**Transducer
Model 13-4615-50**

Dc amplifier with ultra-stable bridge excitation, balancing, calibration, and zero suppression for dynamic signal expansion. Measurement capability: strain gages, strain-gage based transducers, force transducers, and resistance temperature devices. Simultaneous outputs to digital displays, tape recorder, and monitoring scope.

**Envelope/Pulse
Model 13-4616-30/31**

Multifunction unit outputs the amplitude envelope of analog input signals up to 100 kHz; detects pulses $\geq 50 \mu$ s including pulses extending beyond envelope; and functions as a general purpose 100 kHz dc amplifier. Allows Gould oscilloscopes to outperform expensive high frequency light beam recorders.

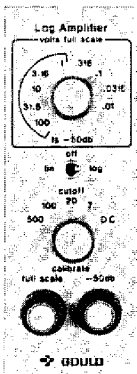


**Phase-Sensitive
Demodulator
Model 13-4616-00**

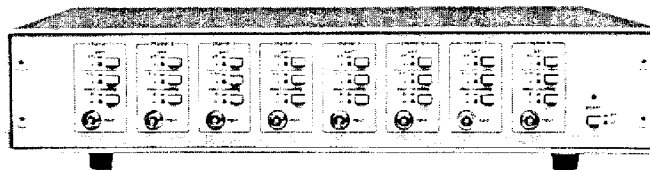
Use to record dynamic performance of amplitude-modulated servo systems operating at base frequencies of 60, 400, or 1200 Hz. Has full-floating inputs of one megohm for both reference and error signal inputs.

**Log-Linear
Model 13-4614-01**

Dc amplifier with ultra-stable bridge excitation, balancing, calibration, and zero suppression for dynamic signal expansion. Measurement capability: strain gages, strain-gage based transducers, force transducers, and resistance temperature devices. Simultaneous outputs to digital displays, tape recorder, and monitoring scope.



8-Channel Isolator Model 13-4381-00



Use to measure off-ground signals on instruments with single-ended inputs. Provides input/output and channel to channel isolation up to ± 500 Vdc or peak ac. Per channel features include 50 kHz bandwidth, selectable gain/attenuation, ac or dc coupling, and scope-probe compatible input.

Portable & Rack-Mounted Cases

Case assemblies provide convenient means of using Gould 4600 Series signal conditioners independently of a recorder. Cases have an individual power-supply module for each conditioner channel, which permits a conditioner to be used with a signal source which is grounded, floating, or driven off-ground.



Gould is constantly expanding its line of industrial signal conditioners. Consult with your local Gould sales engineer for the latest listing, for detailed specifications, or for information about Gould's complete line of biophysical signal conditioners.