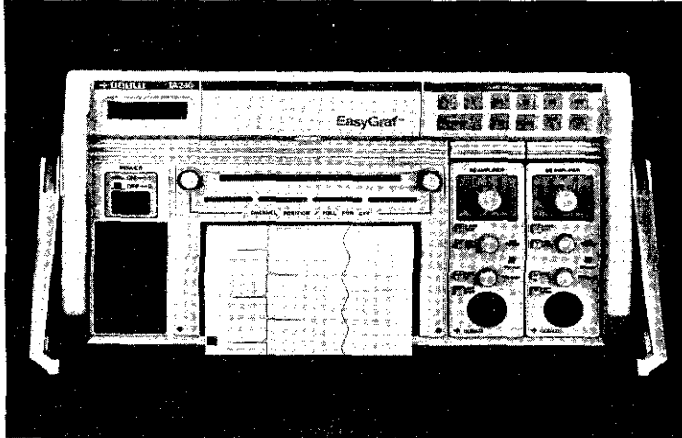




GRAPHIC RECORDERS

EasyGraf™ THERMAL ARRAY RECORDERS TA240 2 AND 4 CHANNELS



- Two and four channel versions to fit your specific application requirements
- User selectable push buttons to choose 21 chart speeds from 0.01 mm/s to 125 mm/s
- Optional battery pack for remote line-free operation
- Accommodates a wide selection of 6600 series signal conditioners offering isolated, differential inputs
- Rugged metal construction and protective front panel allows operation in many environments

Easy to use

EasyGraf recorders are easy to use, easy to carry, easy to configure, and very affordable. These lightweight, rugged, thermal array recorders can be used in a variety of applications to monitor up to four analog inputs and six event channels.

Whether your application is troubleshooting production lines, routine machine maintenance, motor set-up, or research and development, EasyGraf recorders provide you with answers without operating headaches.

EasyGraf recorders feature high frequency thermal array recording, extensive chart annotation, high performance plug-in signal conditioning and 21 chart speeds from 0.01 mm/s to 125 mm/mn.

Easy to carry

EasyGraf recorders are lightweight and compact. The power supply is designed for 100-240 VAC, 50/60 or 400 Hz line; and 10 to 30 VDC operation. An optional battery pack allows line-free operation in the most remote locations. Its rugged metal construction and protective front panel cover allow you to take EasyGraf recorders anywhere. And it operates horizontally or vertically.

Easy to configure

Choose the EasyGraf recorder right for you: Basic (two channels or real time recording); 2+2 (two or four channel with extension case); and 4S (four channels of compact realtime recording in a single package). Using two 6600 series dual channel AC/DC signal conditioners converts the basic 2-channel recorder to a compact 4-channel unit.

Easily affordable

EasyGraf recorders are the result of 50 years of high quality recorder experience. Gould offers the most economical high performance field recorder available.

In addition, Gould provides you with experienced world-wide support and service. And our applications engineers and service organization are readily available to assist you throughout the world.

Battery pack

The battery pack quickly attaches, providing up to eight hours of line-free operation in the field. When connected to a power line, the EasyGraf recorder will operate while the battery pack is automatically charged. If external power is interrupted, the battery supply takes over automatically, without disturbing recorder operation. And a compact battery charger is available for off line recharging.

6600 series signal conditioners

Compact 6600 series signal conditioners with differential inputs fit virtually any industrial, scientific or medical application. These signal conditioners automatically report their status on the chart paper, along with a five digit channel identification number.

In addition, a low cost coupler with BNC input connectors permits use of 4600 or 5700 series signal conditioners with the EasyGraf recorder.

Protective cover

The protective cover permits the unit to be carried without risk of damaging the front panel. It provides operating instructions and a convenient storage for input cables and paper.

EasyGraf RECORDER SPECIFICATIONS

Number of Channels: Select from 1 to 4 channels.

Chart Width: 120 mm (4.75 inches).

Usable Chart Width: 104 mm (4.09 inches)

Writing Method: Direct thermal array.

Vertical Resolution: 8 dots/mm.

Horizontal Resolution (time axis): 32 to 8 dots/mm.

Chart Speeds: 1, 5, 10, 25, 50, 100, 125 mm/s, mm/mn and ± 100 .

Chart Capacity: Fan fold only: 300 sheets 120 x 150 mm (45 m or 148 ft).

Chart Formats: 100 mm overlap, 2 x 40 mm or 4 x 20 mm.

Real Time Display: LED array showing the position of each trace.

Channel Position: 0 to $\pm 100\%$ full scale.

Number of Event Channels: 6 standard with TTL low or contact closure input, two actuated via front panel.

Input Sensitivity: 20 mV to 500 V full scale with 6600 DC signal conditioner. For other 6600 series signal conditioners, consult pages 68 to 72 and page 98.

Input Type: Isolated input to output, differential; 2 x 1 M Ω impedance with 6600 DC signal conditioner.

Input Connectors: 8- or 14-pin DIN with 6600 series signal conditioners.

Sampling Frequency: 5 kHz per channel.

Frequency Response: DC to 500 Hz full scale $\pm 2\%$ (recorder only).

Time Marks: 1 and 10 s, 1 and 10 mn depending on chart speed selected.

System Annotation: Time, date, chart speed, chart paper page number.

Channel Identification: Channel number, status from 6600 Signal Conditioner, at bottom of channel with line joining the trace to the number.

Grid Patterns: 100 mm, 2 x 40 mm and 4 x 20 mm.

Remote Control: TTL low active/contact closure: chart stop, event markers.

Input Power: 100 to 240 V, 50/60 or 400 Hz and 10 to 30 VDC.

Power Requirement: 150 W maximum

Dimensions:

2 channel: 7.63 in. H x 15 in. W x 15 in. D (19.4 cm H x 38.1 cm W x 38.1 cm D)

4 channel: 7.63 in. H x 19 in. W x 15 in. D (19.4 cm H x 48.3 cm W x 38.1 cm D).

Weight

two-channel recorder: 22 lb (10 kg) with two signal conditioners and cover.

four-channel recorder: 31 lb (14.1 kg) with four signal conditioners and cover.

battery pack: 20 lb (9.1 kg).

Operating Temperature: 5° to 45°C (41° to 113°F).

Storage Temperature: -40° to 85°C (-40° to 185°F).

Relative Humidity: 10 to 90% non-condensing.

Shock and Vibration: Meets MIL Spec. 810E.

Accessories Supplied with Recorder: Front panel protective cover, mating connectors and one pack of paper.

ORDERING INFORMATION

Model Number	Price
42-8240-10 TA240, 2-Channel Recorder without signal conditioners, 100 - 240 V, 50/60 Hz and 10 - 30 VDC (Order with one or two 6600 series signal conditioners.)	\$4295
42-8240-40 TA240 , same model as 42-8240-10 plus 400 Hz line operation	\$4295
42-8440-10 TA240, 4-Channel Recorder without signal conditioners, 100 - 240 V, 50/60 Hz and 10 - 30 VDC (Order with up to four 6600 series signal conditioners.)	\$5495
42-8440-40 TA240 , same model as 42-8440-10 plus 400 Hz line operation	\$5495

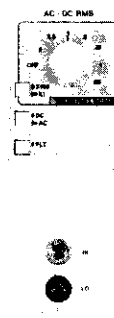
Accessories

CL-814223- Two-channel extension case with power cable to recorder	\$895
CL-814224- Battery pack	\$795
CL-714591- Battery charger	\$295
CL-814593-1 2-channel recorder 19-in. RETMA standard rack-mount kit	\$175
CL-814593-2 4-channel recorder 19-in. RETMA standard rack-mount kit	\$175
CL-614592- Cigarette lighter adapter for DC operation	\$50
CL-814555- Protective front cover (provided standard with 2-channel recorder)	\$75
CL-815270- Protective front cover (provided standard with 4-channel recorder)	\$75
13-6615-9 Blank module	\$45

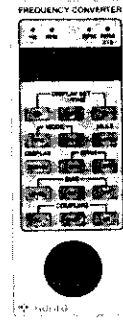
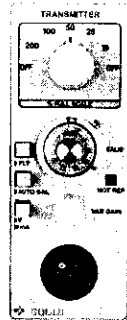
For 6600 series signal conditioners, refer to pages 68 to 72 and page 98.



Four-channel EasyGraf recorder is a compact instrument, rugged enough to work precisely even in harsh conditions. A variety of 6600 series signal conditioners allow configuring an instrument to exactly meet your application.



	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage
Type	AC/DC	Basic AC/DC	Basic AC/DC Dual Channel	AC/DC RMS	Basic AC/DC RMS	AC/DC RMS Dual Channel
Model No.	13-6615-105	13-6615-11	13-6615-12	13-6615-205	13-6615-21	13-6615-22
Measurement Range Full Scale	20 mV to 500 V DC and AC	50 mV to 500 V DC and AC	50 mV to 500 V DC and AC	20 mV to 500 V DC, AC, RMS	50 mV to 500 V DC, AC, RMS	50 mV to 500 V DC, AC, RMS
Input Circuit	Differential	Single ended, floating	Single ended, floating	Differential	Single ended, floating	Single ended, floating
Input Impedance	2 M Ω	1 M Ω	1 M Ω	2 M Ω	1 M Ω	1 M Ω
Frequency Response	DC to 10 kHz (-3 dB)	DC to 5 kHz (-3 dB)	DC to 5 kHz (-3 dB)	DC to 10 kHz (-3 dB)	DC to 5 kHz (-3 dB)	DC to 5 kHz (-3 dB)
Max. Common Mode Voltage (Input to Chassis)	500 VRMS	500 VDC or peak AC	500 VDC or peak AC	500 VRMS	500 VDC or peak AC	500 VDC or peak AC
Common Mode Rejection on most sensitive range (Input to Chassis)	90 dB at 60 Hz with 1 k Ω unbalance	70 dB at 60 Hz with 1 k Ω unbalance	70 dB at 60 Hz with 1 k Ω unbalance	90 dB at 60 Hz with 1 k Ω unbalance	70 dB at 60 Hz with 1 k Ω unbalance	70 dB at 60 Hz with 1 k Ω unbalance
Filtering	20 Hz low pass	20 Hz low pass	20 Hz low pass	20 Hz low pass	20 Hz low pass	20 Hz low pass
Zero Suppression	x1: 0-5 VDC x100: 0-500 VDC	None	None	x1: 0-5 VDC x100: 0-500 VDC	None	None
Transducer Excitation	None	None	None	None	None	None
Type of Isolation	Input to output	Input to output	Input to output	Input to output	Input to output	Input to output
Special Features	Reports front panel status; high input impedance	Economical and easy to use	Economical; two channels in one compact package	Measures AC waveforms with crest factors to 10:1	Economical and easy to use	Economical; two channels in one compact package



	Strain Gage Transducer	Low Level Current Loops	Transducer	Temperature	Temperature	Frequency
Type	DC Bridge	Universal Transmitter	Transducer	Thermocouple J, K, T	RTD, 100 Ω Pt	Frequency Converter
Model No.	13-6615-30	13-6615-33	13-6615-50	13-6615-40	13-6615-45	13-6615-60
Measurement Range Full Scale	250 μV to 1 VDC	0 to 100 mA; 0 to 10 VDC	100 μV to 0.5 VDC	-100 to 1000°C or -148 to 1832°F	-100 to 500°C	1 Hz to 100 kHz; 60 RPM to 99990 RPM
Input Circuit	Differential	I: single ended to isolated common V: differential	Differential	Single ended, floating	Differential	Single ended, floating
Input Impedance	2 MΩ	2 MΩ	4 MΩ	1 MΩ	2 MΩ	1 MΩ
Frequency Response	DC to 5 kHz (-3 dB)	DC to 10 kHz (-3dB)	DC to 5 kHz (-3 dB)	-3 dB at 25 Hz	-3 dB at 7 Hz	1 Hz to 100 kHz
Max. Common Mode Voltage (Input to Chassis)	12 VDC or peak AC	250 VRMS	12 VDC or peak AC	500 VDC or peak AC	1500 VDC or peak AC	500 VRMS
Common Mode Rejection on most sensitive range (input to Chassis)	80 dB at 60 Hz with 100 Ω unbalance	100 dB at 60 Hz with 1 kΩ unbalance	80 dB at 60 Hz with 100 Ω unbalance	80 dB at 60 Hz with 1 kΩ unbalance	140 dB at 60 Hz	100 dB at 60 Hz
Filtering	15 Hz low pass	5 Hz low pass	0.5 and 100 Hz low pass	20 Hz low pass	None	None
Zero Suppression	x1: ±50 mVDC x10: ±500 mVDC	None	x1: ±50 mVDC x10: ±500 mVDC	±1000°C or F in 1° increments	±500°C in 1°C increments	None
Transducer Excitation	1 to 10 VDC	±15 VDC or 30 VDC	1 to 10 VDC	None	1 mA	+12 VDC at 50 mA
Type of Isolation	None	Input to output	None	Input to output	Input to output	Input to output
Special Features	Bridge completion board for multiple strain gage inputs	Measures pressure velocity, flow humidity and temperature	Auto balance and front panel calibration	Cold junction compensation and linearization	Most accurate, stable and linear temperature readings	Measures frequency, frequency deviation & RPM