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Amplifier Interfaces

- Extremely versatile
- Two models available:
  - — Modular for plugging directly linto Modular Universal Oscillographs, see page I66
  - — Freestanding for direct connection to Data Acquisition Systems, see pages I102 to I146, Student Oscillograph or other recording devices, see pages I65 to I70

Transducer Interface

The Modular Interface receives its power from the Modular Universal Oscillograph. The Freestanding Interface is AC powered. This interface handles six transducer types using a six-position switch, see page I66.

Transducer Types:

Isometric For force of muscle contraction, use with Harvard Apparatus Isometric Force Transducers, see page I8. Two series of isometric transducers are available in various load forces, see Harvard Apparatus Isometric Transducers and UF1 Series Isometric Transducers.

Isotonic For isotonic muscle contractions, use with BS4 50-6360 Harvard Apparatus Isotonic Transducer, see page I8. Pivoting beam of Isotonic Transducer gives electrical output proportional to angular rotation.

Pressure For direct blood pressure, use with the Blood Pressure Transducer, see Cardiovascular Section J. Blood Pressure Transducer features removable transparent dome, two Luer fittings, minimum volume and displacement and range of ±300 mmHg. For indirect blood pressure, use with BS4 50-4472 Armcuff with Microphone.

Pneumograph For human respiratory waveform, use with BS4 50-8028 Pneumograph with Transducer. Pneumograph consists of a corrugated bellow that straps around chest and pressure transducer that transforms chest excursion into voltage suitable for recording.

Plethysmograph For human arterial pulse, use with BS4 50-8093 Finger Plethysmograph. Plethysmograph is practical finger transducer that responds to blood density changes produced by peripheral pulse.

Potentiometric In this mode, Transducer Interface responds to changing resistance from potentiometer, as found in BS4 50-1676 Student Spirometer, see page F52. Front panel DC level control permits compensation of DC component of input signal. 7-pin DIN female input connector is also located on front panel of Transducer Interface and allows connection of variety of transducers.

Specifications

Dimensions, H x W x D:	
Modular	50 x 120 x 120 mm (2 x 4.75 x 4.75 in), approx.
Freestanding	95 x 165 x 138 mm (3.75 x 6.5 x 5.25 in)
Freestanding Weight	750 g (1.7 lb)

Catalog No.	$	Product
BS4 50-8861		Modular
BS4 50-7970		Freestanding, 115 VAC, 60 Hz
BS4 50-7996		Freestanding, 230 VAC, 50 Hz
BS4 50-9158		Replacement 7-Pin Female Input Connector for Front Panel
BS4 50-9141		7-Pin Male Connector for Mating with Front Panel Female Connector
BS4 50-9166		7-Pin Female In-Line Connector for Use in Making Extension Sets

AC/DC Preamplifier Interface

- For ECG, EMG, ENG and EOG
- High gain, low noise and drift
- Step gain switch, x10, x50, x100, x200, x500, x1000
- AC/DC selector switch
- DC level control

This is a general purpose differential Preamplifier for animal use only. There is a 6-position gain switch (x10, x50, x100, x200, x500 and x1000), an input selector for AC or DC coupled, a filter selector (3 dB at 15 Hz, 150 Hz and 15 kHz) and a DC level control giving a maximum offset range of ±4 volts. Common mode rejection is greater than 80 dB and the maximum gain when used with a Harvard Apparatus Oscillograph is 30 µV/cm of pen deflection. The input impedance is 4.7 MΩ. Input is via a 7-pin binder socket and output via edge connector into the Universal Oscillograph or Interface Adapter.

Catalog No.	$	Product*
BS4 50-8879		AC/DC Preamplifier Interface
BS4 50-9836		3-Lead Surface Electrode Set
BS4 50-9802		3-Lead Animal Electrodes
BS4 50-7954		Male 3-Pin DIN Input Connector

** For Biopotential Leads and Electrodes, see pages I71 to I77.*

Amplifier Modules on pages I60 to I62 are designed to interface with Harvard Apparatus's Amplifier Case, see page I69, Chart Recorders, see pages I65 to I70 and the CEPTU physiology system, see pages I65 and I64.