Amplifier Interfaces

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 UFI 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
This is a general purpose differential Preamplifier for animal use only. There is a 6-position gain switch (x10, x50, x100, x200, x500, 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 160 to 162 are designed to interface with Harvard Apparatus’s Amplifier Case, see page I69, Chart Recorders, see pages 165 to 170 and the CEPTU physiology system, see pages 165 and 164.