Amplifier Interfaces

Transducer Interface

- Extremely versatile
- Two models available:
  - Modular for plugging directly into Modular Universal Oscillographs, see page I62
  - Freestanding for direct connection to Data Acquisition Systems Student Oscillograph or other recording devices

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.

Transducer Types

Isometric

For force of muscle contraction, use with Harvard Apparatus Isometric Force Transducers, see page I4. 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. When used with pivoting beam of Isotonic Transducer, this 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 PY2 50-4472 Armcuff with Microphone.

Pneumograph

For human respiratory waveform, use with PY2 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 PY2 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 PY2 50-1676 Student Spirometer, see page I61. 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), approximately
Freestanding	95 x 165 x 138 mm (3.75 x 6.5 x 5.25 in)
Freestanding Weight	750 g (1.7 lb)

Order #	Product
PY2 50-8861	Transducer Interface, Modular
PY2 50-7970	Transducer Interface, Freestanding, 115 VAC, 60 Hz
PY2 50-7996	Transducer Interface, Freestanding, 230 VAC, 50 Hz
PY2 50-9158	Replacement 7-Pin Female Input Connector for Front Panel
PY2 50-9141	7-Pin Male Connector for Mating with Front Panel Female Connector
PY2 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.

Order #	Product*
PY2 50-8879	AC/DC Preamplifier Interface
PY2 50-9836	3-Lead Surface Electrode Set
PY2 50-9802	3-Lead Animal Electrodes
PY2 50-7954	Male 3-Pin DIN Input Connector

**For Biopotential Leads and Electrodes, see pages I66 to I72*