## Specification

### Frequency

#### Range

0.01Hz to 10MHz. Selected by six pushbuttons in decade ranges from 10 to 10M, plus (Hz/1000) switch position applicable to all ranges.

#### Range Overlap

Frequency dial calibrated nominally 1 to 10, with over-range from 0.2 to 12

### Main Output

#### Waveforms

Sine, Square, Triangular, with pushbutton selection

#### Source Impedance

50Ω

#### Amplitude

10V pk-pk maximum open circuit

#### Amplitude Control

Single continuous control calibrated 0 to 10V pk-pk (at nominal 1V pk-pk intervals)

#### Stepped Attenuator

Two fixed attenuators selectable x0.1 each

#### Offset

Adjustable from −5V through 0 to +5V giving unipolar signal capability. All combinations of signal and offset are free of clipping. Offset not subject to continuous output amplitude control

#### Termination

BNC socket

### Mark/Space

#### Control

Affects all waveforms from main and auxiliary outputs. Continuous control operational in three switch positions:

a) fixed mark, variable space, continuously variable from 1:1 to 1:19

b) Continuously adjustable mark space ratio from 19:1 to 1:19, at a fixed frequency of approximately x0.1 main frequency setting.

c) variable mark, fixed space, continuously variable from 1:1 to 19:1

## Sweep Facility

### Control

Slide switch enables internal or external sweep (VCF) to be selected

### External

Gives normal unswept operation, but a voltage applied to the 'VCF' socket modifies the frequency of operation as follows:

***Linear mode:*** Voltage applied to the VCF input increases frequency at the rate of about +0.3V per 1 major scale divison (negative voltages decrease frequency).

***Logarithmic mode:*** Voltage applied to the VCF input decreases frequency at the rate of about 5V per factor of 10.

### Internal

Provides a triangular waveform from the socket 'TB out ⩘' and a corresponding square waveform from the 'TB out ⨅' socket. Sweep frequency rate adjustable by single logarithmic control from 50Hz to 0.001Hz.

***Triangle amplitude:*** 5V pk-pk (0V to +5V) from 1kΩ.

***Square waveform TTL:*** (0V to +5V) to drive two standard loads available from 'TB out ⨅'.

### Operating Modes

Lever switch 'run/S–S/trig' gives continuous operation in 'run' position. When moved from 'run' to 'S–S' (single shot) the triangle output goes to zero and then executes a half cycle (0V to +5V) when the switch is moved to the 'trig' position. When operated in the 'S–S' condition the 'TB out ⨅' may be used as a 'pen lift' control for X–Y recorders. The 'set max–min' spring return lever switch over-rides the sweep triangle generator to hold the waveform at its maximum (5V) or minimum (0V) excursion. In the run condition this maximum or minimum is held only during the operation of the 'set max–min' switch. In 'single-shot' the conditon of maximum or minimum is held until some other condition is initiated.

### Frequency Marker

An effective bright-up marker for use with oscilloscope displays of frequency responses is available as a hesitation in the sweep triangle voltage. The position of this is controlled by a 'marker' control. The triangular voltage and frequency at which this occurs can be held by an associated 'marker' pushbutton.

### Sweep Width

This control gives the proportion of the sweep triangle voltage used to control the frequency of the internal sweep generator. The scale is calibrated from 0% to 80% for linear sweep, and from 0 to 3 decades for logarithmic sweep. In both conditions ('lin' and 'log') the maximum frequency is set by the main dial and occurs when the triangle output voltage from 'TB' is maximum (+5V). The calibration on the sweep width control indicates the sweep width as a proportion of the main frequency setting. e.g. linear mode, main dial 50kHz, sweep-width 80%, gives sweep from 10kHz to 50kHz, sweep-width two decades, gives sweep from 500Hz to 50kHz.

**Auxiliary Outputs**

TTL Square wave

*Amplitude* TTL compatible (nominal 0 to +5V)

*Rise time* <50ns unloaded
or (50+4.4C) ns with CpF added capacitance

*Sink capacity* Two standard TTL loads

*Termination* BNC

Triangular wave

*Amplitude* 1V pk-pk

*Impedance* 50Ω

*Termination* BNC

**Power Requirements**

Line voltage
110/220/240V, 50 or 60Hz, selected by external slide.

Consumption

25VA

Fuse

315mA slow blow (20mm x 5mm)

**Dimensions and Weight**

| | |
|---|---|
| Width | 300mm (12in) |
| Height (with feet) | 115mm (4.5in) |
| Depth | 226mm (9in) |
| Weight | 2.7kg (6lb) |