

# TECHNICAL DATA

## VERTICAL AMPLIFIER and ATTENUATOR

Operating modes	...	...	...	...	...	Channel 1 only Channel 2 only Alternate — Channel switching during flyback Chopped — Channel switching at 100kHz approx. Automatic blanking
3dB bandwidth — d.c. coupled	...	...	...	...	...	d.c. - 10MHz
a.c. coupled	...	...	...	...	...	2Hz - 10MHz
10 to 90% risetime	...	...	...	...	...	35ns nominal
Calibrated deflection sensitivity $\pm 5\%$	...	...	...	...	...	10mV - 50V/cm (12 1-2-5 steps)
Variable gain control provides continuous coverage between ranges						
Maximum Input d.c., a.c. peak or sum of	...	...	...	...	...	400V
Input impedance approx.	...	...	...	...	...	1M $\Omega$ & 40pF

## HORIZONTAL SYSTEM

### Trigger

Internal — Minimum deflection	...	...	...	...	...	2mm
Source	...	...	...	...	...	Channel 1 Channel 2 Alternate
External — a.c. coupled	...	...	...	...	...	1.5Vp-p to $\pm 15V$
Input impedance approx.	...	...	...	...	...	100k $\Omega$ & 10pF
Useful bandwidth approx.						
Automatic	...	...	...	...	...	50Hz - 1MHz
Trigger level	...	...	...	...	...	10Hz - 1MHz with 2mm amplitude 1MHz - 4MHz rising to 5mm amplitude
HF	...	...	...	...	...	1MHz - 10MHz or better

### Sweep generator

Calibrated sweep speeds $\pm 5\%$	...	...	...	...	...	200ns - 2s/cm (22 1-2-5 steps)
Variable control provides continuous coverage between ranges						
Maximum speed range approx.	...	...	...	...	...	40ns - 5s/cm

### Horizontal amplifier

3dB bandwidth	...	...	...	...	...	d.c. - 1MHz
10 to 90% risetime	...	...	...	...	...	350ns nominal
Deflection sensitivity approx.	...	...	...	...	...	600mV - 3V/cm
Input impedance approx.	...	...	...	...	...	1M $\Omega$ & 30pF
Maximum input	...	...	...	...	...	400Vp

### CATHODE RAY TUBE

Display area	...	...	...	...	...	6 x 10cm
Overall post-deflection acceleration	...	...	...	...	...	4kV
Available phosphors	...	...	...	...	...	P31 (standard), P7 & P11
External intensity modulation						
Coupling	...	...	...	...	...	a.c. to first grid
Signal for cut-off at average brilliance	...	...	...	...	...	-20Vp approx.
Time constant	...	...	...	...	...	10ms approx.

### FRONT PANEL OUTPUTS

Calibrator — supply frequency	...	...	...	...	...	500mVp-p $\pm$ 2%
Sweep sawtooth						
Amplitude	...	...	...	...	...	1-35V approx. d.c.-coupled
Minimum load	...	...	...	...	...	30k $\Omega$
Probe test	...	...	...	...	...	500mV approx.

### POWER REQUIREMENTS

Voltage	...	...	...	...	...	100 - 125V in 5V steps 200 - 250V in 10V steps
Frequency	...	...	...	...	...	48 - 440Hz
Consumption	...	...	...	...	...	32VA approx.

### PHYSICAL DATA

Approximate overall dimensions and weight:

	<i>High</i>	<i>Wide</i>	<i>Deep</i>	<i>Weight</i>
<b>D54</b>	24.5cm	21cm	44.5cm	9.25kg
<b>D54R</b>	13.3cm	48cm	45cm	11.75kg

Cooling

Convection

Approximate ambient temperature limits:

Operating	...	...	...	...	...	-15 to +40°C	+ 5 to +104°F
Non-operating	...	...	...	...	...	-25 to +70°C	-13 to +158°F