GENERAL DESCRIPTION

The Eddystone Model 40A is a portable Radio Frequency Interference (RFI) measuring set, manufactured to British Home Office design to meet the special requirements of The British Post Office and, in general, the conditions set down in CISPR 1. The equipment is primarily intended for the investigation of RFI in the frequency range 130kHz to 32MHz, but is also ideally suited to many industrial uses, including acceptance testing on a wide range of electrical appliances.

Measurements can be taken of the voltage or field strength of CW signals, or impulsive noise with pulse repetition frequencies as low as 1Hz. Integral ferrite loop aerials or the "whip" aerial supplied, are utilized for interference tracing. Separate correction and conversion tables are supplied with calibrated aerials specifically intended for field strength measurements or radiated noise measurements, or to facilitate the assessment of conducted noise using a suitable artificial mains network.

The equipment is extremely simple to operate and long term accuracy of a high order is assured by standardising the overall system gain against an internal impulse calibrator, prior to taking each reading. Power is derived from a self-contained battery supply (type LP3627) utilizing six International Type D dry cells ("U2" or equivalent) for field operation.

Alternatively, a standard AC source in the range 105-125/190-270V 40-60Hz can be used via the mains power supply module (type LP3618) supplied.
TECHNICAL DATA SUMMARY

Frequency range: 130kHz to 32MHz.
500 ± 10% at the tuned frequency with 10dB or more
attenuation being used.
(equivalent sinewave p.d. input) 0dBμV to 100dBμV
with use of 10 IF 20dB facility. An extra 5dB range
at any point is obtainable using the meter, but with
a slight reduction in accuracy (0.5dB).

IF Output

IF Frequency

External power supply input

Weight

Dimensions

Bandwidth

Bandwidth at 60dB

IF and image rejection
(150kHz - 30MHz)

Spurious response rejection

Accuracy of sinewave voltage
measurement

Screening

Internal noise

Pulse response (CISPR selected):
n.b. When 'LONG' is selec-
ted the variation in response at
low prfs is widened by a few dB.

1.75MHz.

+8.0 to +10.5V DC for optimum operation (n.b. this
input is diode protected against accidental reversal
of polarity).

= 10kg total package (approx).

Width: 385mm (inc. handle)

Height: 161mm Depth: 358mm (inc. feet)

9kHz ± 1kHz.

36kHz maximum.

better than 40dB.

better than 40dB.

within ± 2dB (at 'SET CAL' mark on meter).

With the receiver in an RF field 80dBμV/M in fre-
cquency range 130kHz-32MHz, the indication on the
meter shall not exceed 'SET CAL' after calibration.

Does not exceed -5dB point on meter after calibration.

Between 150kHz and 30MHz after calibration.

PRF (Hz) Relative equivalent level of pulse for
'SET CAL' on meter (dB)

<table>
<thead>
<tr>
<th>PRF (Hz)</th>
<th>Relative equivalent level of pulse for 'SET CAL' on meter (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>-4.5 ± 1.0</td>
</tr>
<tr>
<td>100 (ref)</td>
<td>0 (ZERO)</td>
</tr>
<tr>
<td>20</td>
<td>+6.5 ± 1.0</td>
</tr>
<tr>
<td>10</td>
<td>+10 ± 1.0</td>
</tr>
<tr>
<td>2</td>
<td>+20.5 ± 2.0</td>
</tr>
<tr>
<td>1</td>
<td>+22.5 ± 2.0</td>
</tr>
<tr>
<td>Isolated pulse</td>
<td>+23.5 ± 2.0/−3.0</td>
</tr>
</tbody>
</table>

Within ± 2%.

At least 100mW into an 8Ω load at the front panel
phone jack.

Equipment meets DEF 135 for category III equipment.
Operating temperature - range -5°C to +55°C RH
not exceeding 30% and 0°C to 40°C, RH not less
than 95% at +40°C.

6 x International Type D dry cells (or external DC
source).

105-125/190-270V 40-60Hz.

With 240V AC mains input, consumption is of the
order of 3VA.

The above figures are typical only and do not form the basis of a Contractual test specification.

Our equipment is designed generally to meet "British Defence Specification 133 Class L2".

As we are always seeking to improve our products, the information in this document gives only general indications of product capacity, performance and suitability, none of which shall form part of any contract. The information herein is subject to confirmation at the time of ordering.