



*Local cabinet (including voltage regulator)*

Height 142.2cm\* (4ft 8in.)  
 Width 58cm (1ft 11in.)  
 Depth 53cm (1ft 9in.)  
 Weight 203kg (448lb)

*Aerial equipment*

Height 10.4m (34ft)  
 Weight 407kg (896lb)

\*Including 22cm (8.75in.) for fan and filter.

Two or more Type AD210C equipments may be connected in cascade, to give separate control channels and increase the frequencies available. Under normal circumstances four channels are considered to be the maximum.

## VELOCITY MEASURING EQUIPMENT

### Electronic Velocity Analyser 'EVA'

The S360/1 Electronic Velocity Analyser uses a radar system employing the Doppler effect of frequency shift which is directly related to the velocity measurement. Consequently the complete analysis is recorded automatically. A very accurate graphical recording is produced incorporating timing and other marks, according to requirements.

Eva is unique among instrumental methods of artillery calibration in that it requires no elaborate procedures; simple calculations produce both velocity and retardation from a permanent (Teledeltos) record; only a single shot is required for calibration.

The S360/1, is a ruggedized design, to Def. Spec. 133, which has been evolved from testing and evaluation operations carried out by the British Army. It will withstand all known operational environments, and can be conveyed in a vehicle, then manhandled into position.

A primary design feature is the development of the Electronic Velocity Analyser for use by field force units as well as at proving and trials establishments for range instrumentation.

#### Features

High degree of accuracy.  
 Changes in velocity often undetected by conventional systems are made apparent.

Clarity of indication by directly produced velocity-time graph.  
 A wide range of velocities is covered.  
 Fully portable equipment.  
 Considerable economy in cost compared with conventional analysing methods.  
 Reliability of operation ensured by durable construction and generously rated components.

#### Data summary

**Frequency of operation:** 9547MHz.  
**Accuracy:** Within  $\pm 2$ ft/sec for velocities lower than 1350ft/sec; otherwise  $\pm 0.15\%$  (99% confidence level) (Brit. War Office Trials Report SXR/80/71).

**Velocity range:** 500–50,000ft/sec obtained by switch selection of:  
 (a) Coarse span 500ft/sec (for velocities in range 1000–5000ft/sec).  
 (b) Coarse span 250ft/sec (for velocities in range 500–1000ft/sec).  
 (c) Fine span 112ft/sec (over full velocity range).

**Horizontal beamwidth:** 20°.

**Vertical beamwidth:** 6°.

**Power output:** 30mW min. c.w.

**Power consumption:** 520W.

**Power supplies:** 200–250V, 50Hz, single phase a.c. Taps at 10V intervals, voltage tolerance  $\pm 70\%$ .

#### Dimensions (approx.):

	Height	Width	Depth	Weight
<i>Aerial unit (legs folded)</i>	99cm (3ft 3in.)	81cm (2ft 8in.)	99cm (3ft 3in.)	16kg (350lb)
<i>Analysing unit</i>	71cm (2ft 4in.)	74cm (2ft 5in.)	51cm (1ft 8in.)	80kg (175lb)
<i>Recording unit</i>	18cm (7in.)	31cm (1ft)	48cm (1ft 7in.)	16.3kg (36lb)
<i>Photo-cell unit</i>	12.7cm (5in.)	7.6cm (3in.)	20.3cm (8in.)	1.4kg (3lb)
<i>Interconnecting cable:</i>	228m (250yds) long, with a weight of 132kg (270lb).			

Full details are given in TD S360/1

