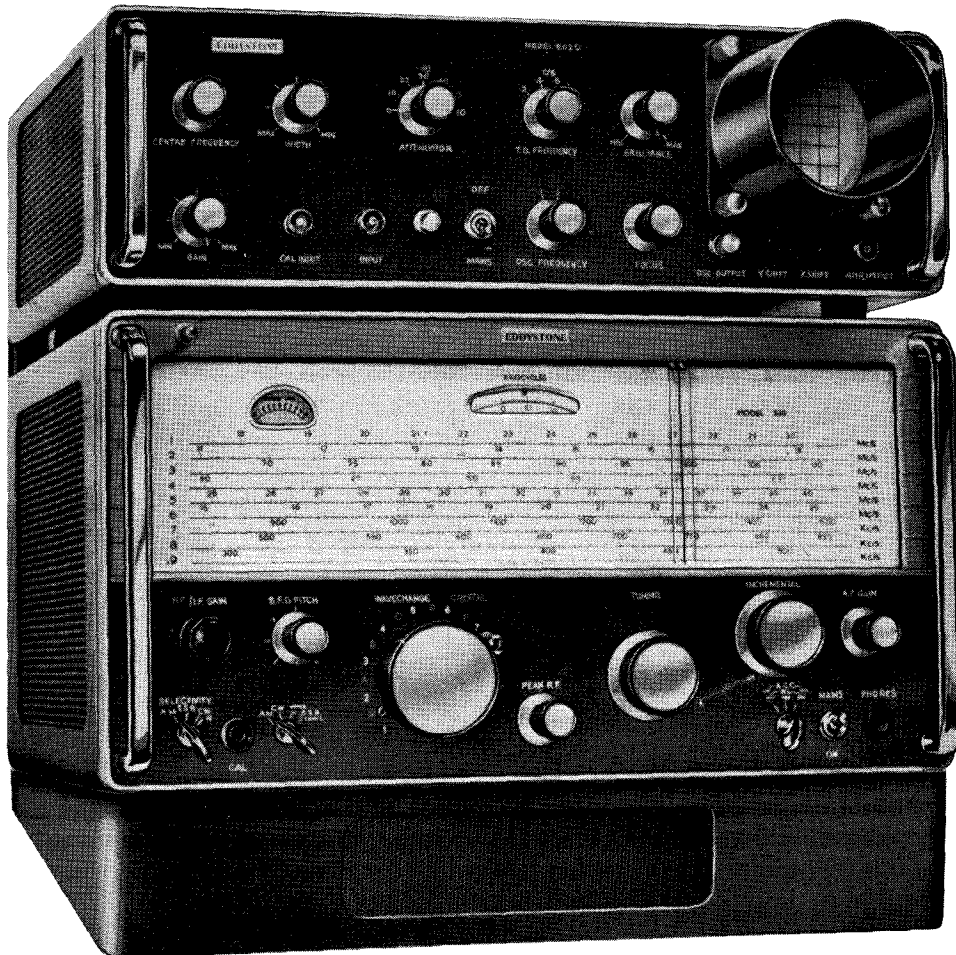


EDDYSTONE

PANORAMIC DISPLAY UNITS

MODELS EP15 & EP20 FOR HF/LF



The "EP20" Panoramic Display Unit is illustrated above, mounted on the "830/7" receiver to which it forms a companion unit.

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Panoramic Display Units



The EP15 and EP20 panoramic display units have a common electrical specification, with minor variations, the difference lying mainly in the physical dimensions and appearance. The EP15 (illustrated above) is intended for fitting into a standard size rack and has switched input tuning to accept signals from any receiver having an intermediate frequency outlet at 100 kc/s or between 400 and 800 kc/s. The EP20 is designed essentially as a companion unit to the Eddystone "830/7" receiver, accepting the 100 kc/s intermediate frequency of this receiver and being finished to match.

Either unit is intended for applications where it is advantageous to obtain a visual display of HF or LF signals, simultaneously with aural monitoring, over a selected portion of the frequency spectrum included in the range of the associated receiver.

The sweep width is variable over wide limits. At maximum, signals within 15 kc/s of the centre frequency (a total scan of 30 kc/s) are displayed, provided the associated receiver has a bandwidth, at the take-off point, of the same order.

A given signal can be studied in detail by setting the control to give a narrow scan. Characteristics such as modulation, amplitude, presence or absence of spurious emissions and of interference can be readily noted at a glance. The panoramic unit is of particular value when setting up a receiver for reception of single sideband and FSK signals. In most cases, the information obtained in this way is clearer and of greater value than when other methods are employed.

The display unit is invaluable both for operational requirements and as a laboratory instrument for measurement and check purposes, since the same technique applies whether the signals of interest come from a distant transmitter or from a local source such as a signal generator or a piece of equipment under test.

An additional facility is that the display unit can be used as a "wobbulator" for the visual alignment of the intermediate frequency stages of receivers.

TECHNICAL SPECIFICATION

Display

The display is linear (20 dB full scale deflection) on a long persistence cathode ray tube of 2 $\frac{3}{4}$ " diameter. A stepped input attenuator increases the dynamic range by 60 dB, and a ruled graticule is provided to assist measurement. A hood is fitted to the panel to reduce extraneous light falling on the face of the tube.

Sensitivity

At full gain, the sensitivity is approximately 25 microvolts for a one centimetre trace deflection, with a sweep width of one kilocycle and a sweep rate of 0.2 cycles.

Input Frequency

EP15 Unit: two switched positions, one accepting 100 kc/s and the other tunable to accept a standard i.f. between 400 and 800 kc/s.

EP20 Unit: Fixed broad-band acceptance at 100 kc/s.

Input Impedance

50/200 ohms unbalanced, to standard coaxial sockets, one on the face of the panel, the other fitted at the rear.

Sweep Width

The linear scan gives a sweep width continuously variable from 30 kc/s to less than 100 cycles.

Swept Oscillator

A switch is provided which changes the frequency of the swept oscillator to a range suitable for visual alignment (wobbulator) applications, coaxial sockets being fitted to the front panel for oscillator output and "Y" amplifier input.

Sweep Rate

Four switched speeds of 0.2, 0.4, 0.8 and 2 sweeps per second are provided.

Resolution

The resolution varies with the rate and the width of the sweep. Maximum resolution is better than 50 cycles.

Centre Frequency Shift

A control is fitted to equalise the display each side of centre.

Intermediate Frequency

The intermediate frequency is 70 kc/s and use is made of series crystal filters giving a very narrow pass-band.

Provision for Calibrator

An input socket is provided on the front panel for the injection of calibrator signals if required.

Controls

The following controls are conveniently arranged on the front panel:

Sweep width; range selection and tuning (EP15 only); centre frequency; internal gain; input attenuator; sweep rate; brilliance and focus; oscillator range switch; mains on/off switch; pre-set controls for "X" and "Y" shift.

Photography

Provision is made for the use of a standard oscilloscope camera, and direct viewing of the screen remains possible with the camera in position.

Valve Complement

All valves used in the unit are standard CV types. Silicon rectifiers are fitted in the power supply section.

Power Supply

Operation is from standard AC mains, 100/125 volts and 200/250 volts, 40/60 cycles, the consumption being approximately 55 volt-amps.

Panoramic Display Units

Dimensions and Weight

The EP15 is rack-mounting and measurements are:

Length of panel	19 inches (48.3 cm)
Height of panel	5 $\frac{1}{4}$ inches (13.3 cm)
Depth (excluding CRT hood)	15 $\frac{1}{8}$ inches (38.3 cm)
Depth behind panel (for rack installation) ..	13 $\frac{3}{4}$ inches (34.9 cm)

The EP20 Unit is intended for fitting on top of the "830/7" receiver or for table mounting.

Dimensions are:

Length of panel	16 $\frac{3}{4}$ inches (42.5 cm)
Height of panel	5 $\frac{3}{4}$ inches (14.6 cm)
(including rubber feet)	
Depth (excluding hood projection)	13 $\frac{1}{2}$ inches (34.3 cm)
Weight in each case ..	36 lbs. (16.3 kg)

The EP20 can also be supplied in a rack-mounting version, when the dimensions are the same as with the EP15.

Construction

The unit is of robust construction and high quality components are used throughout. Operating temperature range is from -20°C to $+55^{\circ}\text{C}$, a blower fan being fitted to allow prolonged periods of operation without undue temperature rise. Finish is two-tone grey.

Instruction Manual and Guarantee

A comprehensive instruction manual is supplied with each instrument and our normal 12 months guarantee against faulty workmanship and components (excluding valves and semi-conductors) applies.

In the interests of continued improvement, we reserve the right to amend this specification without notice.



Exclusive Canadian Distributor

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