Eddystone
COMMUNICATIONS RECEIVERS

EDDYSTONE radio communications equipment has been manufactured since 1923 and the trademark has become famous throughout the world, being synonymous in fact with the qualities possessed by the well-known lighthouse from which the name is derived. The very considerable value of this long experience is reflected in the current range of professional receivers which are designed, developed and produced to combine high performance, reliability and ease of control. Finish, workmanship, engineering and general construction reach the highest standards. The association that now exists between Eddystone Radio and the Marconi Company will lead to further advancement as time goes on.

A wide range of receivers and ancillary equipment is available, covering frequencies from 10 kHz to 870 MHz. In the design of each item, study has been made of the facilities needed for the majority of applications which arise, bearing in mind these include practical communications, monitoring, field survey work, laboratory research and development, interference investigations and other special uses. The majority are available as table models or for mounting in standard racks.

The abridged details given in this catalogue relate mainly to those receivers intended for professional and commercial operations. The information serves to indicate the suitability of a given model for a project, and amplified information in a separate data sheet is readily available for each piece of equipment.

Your enquiries will receive full and prompt attention.

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Eddystone

850/4
LOW FREQUENCY COMMUNICATIONS RECEIVER

The Eddystone "850/4" receiver is a special low frequency model giving complete coverage from 10kHz to 600 kHz and having the facility for crystal control on eight spot frequencies. It accepts the modes of signal normal to this range of frequencies and a high performance obtains throughout. Eleven preferred type valves are used in the single superheterodyne circuit, and normal communications facilities are provided. Three selectivity positions, two having crystal filters, meet the majority of requirements. In addition, an efficient audio filter reduces the bandwidth to approximately 100 Hz.

Frequency Coverage

Range 1	300 kHz. to 600 kHz.
Range 2	150 kHz. to 310 kHz.
Range 3	80 kHz. to 160 kHz.
Range 4	40 kHz. to 85 kHz.
Range 5	19 kHz. to 40 kHz.
Range 6	10 kHz. to 20 kHz.

Circuit

RF Amplifier : Frequency changer : two IF amplifiers : AM and CW detectors : noise limiter : IF output stage : audio amplifier and output : stabiliser : rectifier.

Tuning Drive and Scales

Geared drive mechanism with 140/1 reduction ratio, having smooth precise movement. Horizontal scales are clearly marked in kilohertz to an accuracy within 0.5% above 100 kHz, and within 2.5% below 100 kHz. A secondary logging scale is provided.

Controls

Tuning : Wavechange : Crystal Selector Switch : Aerial Trimmer : RF Gain : IF Gain : AF Gain : Selectivity : CW/AM : BFO on/off and Pitch : AGC : Noise Limiter : AF Filter : Mains : Meter zero adjuster.

A carrier level meter is fitted and terminals at the rear permit desensitising when necessary. A low impedance IF outlet (720 kHz) is provided and an AGC connection is brought out to terminals at the rear.

Sensitivity

The CW sensitivity is better than 5 uV for a 15 dB signal/noise ratio throughout. An equally good performance obtains on AM signals.

Selectivity (IF)

Position 1 (crystal) ..	400 Hz.
Position 2 (crystal) ..	1500 Hz.
Position 3	6 kHz.

With audio filter in circuit, approximately 100 Hz. (figures are overall bandwidths at 6 dB points).

Image Rejection

Better than 75 dB at 600 kHz and progressively greater at lower frequencies.

AGC

Increasing input level 80 dB above 10 uV (at 600 kHz) results in a change of output not exceeding 10 dB.

Audio Outputs

1 watt maximum into 2.5 ohms ; 10 mW into 600 ohm lines; telephone jack. Audio response is within 6 dB from 200 Hz to 5 kHz.

IF Output

Approximately 100 mV into 75 ohms for an input of 5 uV.

Dimensions and Weight

Width	$16\frac{7}{8}$" (43 cm).
Depth	15" (38·1 cm).
Height	$8\frac{3}{4}$" (22·2 cm).
Weight	50 lb. (22·6 kgs).

Finish

Two-tone grey ; chromium plated handles ; matching finger plate. Available in table and standard rack matching versions.

Eddystone

WITHDRAWN

880/2
HIGH STABILITY HF COMMUNICATIONS RECEIVER

Of most advanced design, this model offers many advantages, and is directly suitable for reception of single-sideband signals. Notable are the extremely high frequency stability, precise frequency setting, and ease of operation. The first oscillator is crystal controlled and the second tunable oscillator is specially designed for high thermal, mechanical and voltage stability. In effect, the "880/2" gives the equivalent of crystal control whilst permitting continuous coverage from 500 kHz to 30.5 MHz. Other advantages are a very low level of radiation, and provision for use in diversity with common oscillator control. The standard table model is easily converted to rack mounting.

Circuit and Valves
Two fully tuned RF stages : mixer : crystal controlled oscillator : tunable IF, mixer and oscillator : three stage 500 kHz amplifier with filters : noise limiter : AM and CW SSB detectors : AF amplifiers and separate stages for line and speaker : voltage stabilisers : silicon diode HT rectifiers. In all, 23 preferred type valves plus diodes.

Intermediate Frequencies
The first IF tunes over either 2500 to 3500 kHz, or 3500 to 4500 kHz, as automatically selected by the range switch. The second IF is 500 kHz, with variable selectivity. Two crystal filters are fitted, one of which gives a 3 kHz bandwidth for s.s.b. signals

Sensitivity
For 15 dB signal/noise ratio, better than 3 microvolts above 1·5 MHz, and averaging 5 microvolts on Range 1 (500 to 1500 kHz) at bandwidth of 3 kHz.

Selectivity
Five positions provided. Bandwidths range from 400 Hz to 14 kHz, at 6 dB points. Audio filter gives a bandwidth of approximately 100 Hz.

Stability
After four hours running, with ambient temperature and mains supply constant, the frequency drift is in the order of $\pm$20 Hz.

Spurious Responses
Attenuated 90 dB at frequencies below 15 MHz, (except Range 1) and greater than 60 dB elsewhere.

Tuning Accuracy
Calibration 1 kHz and re-setting better than 500 Hz.

AGC
Three time-constants provided—fast, slow and s.s.b.

Audio Outputs
0·75 watts for speaker (internal monitor speaker is fitted). Independent 600 ohm line channel with separate level control. Jack for telephone headset.

Aerial Input
75 ohms unbalanced.

Radiation
Does not exceed 5 uV into 75 ohms.

Dimensions
Rack Mounted Version :
Width 19" (48·3 cm) Depth 20½" (52·1 cm).
Height 8¾" (22·2 cm).
Table Mounted Version :
Width 19½" (49·5 cm) Depth 20½" (52·1 cm).
Height 9$\frac{7}{16}$" (23·9 cm).

Weight
Rack Mounted Version : 87 lb. (39·5 kgs).
Table Mounted Version : 99 lb. (44·9 kgs).

Finish
Modern styling and presentation in two-tone grey finish.

Other Features
100 kHz, crystal calibrator : fine tuning control (panel and remotely) : output at second IF : carrier level meter : provision for diversity operation : desensitising.

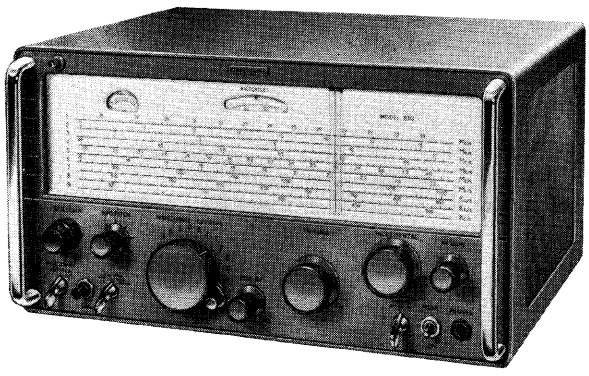
Eddystone

830/7
HF/MF COMMUNICATIONS RECEIVER

A high grade general purpose receiver, having extremely versatile tuning arrangements, including provision for crystal-control and an incremental facility covering 100 kHz above or below the frequency selected on the main scale. It is suitable for the reception of AM, CW and SSB signals, and has a good performance throughout. Standard finish is grey. Normally supplied for table mounting but standard rack-mounting version is available.

Frequency Coverage

Range 1	.. ..	18 MHz to 30 MHz.
Range 2	.. ..	11 MHz to 18 MHz.
Range 3	.. ..	6·7 MHz to 11 MHz.
Range 4	.. ..	4 MHz to 6·7 MHz.
Range 5	.. ..	2·5 MHz to 4 MHz.
Range 6	.. ..	1·5 MHz to 2·5 MHz.
Range 7	.. ..	860 kHz to 1500 kHz.
Range 8	.. ..	480 kHz to 860 kHz.
Range 9	.. ..	300 kHz to 520 kHz.



Circuit
Double superheterodyne on ranges 1 to 6; single superhet on ranges 7, 8 and 9. First oscillator free-running or crystal-controlled on eight spot frequencies. Second oscillator designed for high stability and can also be crystal controlled. Incremental tuning facility, with total coverage of 200 kHz, available from 1·5 MHz to 30 MHz. Second IF is 100 kHz, with variable selectivity.

Sensitivity
On AM, better than 3 microvolts for 15 dB signal/noise ratio, at IF bandwidth of 3 kHz. CW sensitivity approximately 1 microvolt.

Selectivity
Continuously variable, with positions indicated for AM (6 kHz) ; SSB (3 kHz) ; CW (1300 Hz) and a very narrow position (50 Hz) with crystal filter switched in (figures refer to 6 dB bandwidths).

Spurious Responses
Image ratio is better than 50 dB at 30 MHz, and better than 70 dB below 10 MHz. Figures for cross-modulation, intermodulation and blocking are equally good.

Oscillator Stability
Frequency drift is low after the usual warm-up period. Using crystal controlled first oscillator, drift is less than 100 Hz in any one hour. Crystal calibrator and cursor adjuster permit high accuracy of frequency resolution.

Audio Outputs
Plug and socket terminations for 600 ohm line and 2·5 ohm speaker. Output 2·5 watts maximum.

Power Supply
AC mains, 200/250 volts and 100/125 volts, 40/60 Hz. Consumption 85 watts. Ancillary equipment socket at rear.

Physical Details

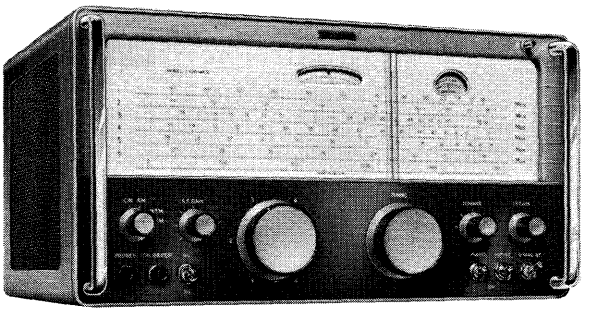
Width	.. ..	$16\frac{3}{4}$" (42·5 cm).
Depth	.. ..	15" (38·1 cm).
Height	.. ..	$8\frac{3}{4}$" (22·2 cm).
Weight	.. ..	49 lb. (22·2 kg).

Other Features
Carrier level meter : noise limiter : fast and slow AGC : output at 100 kHz : independent RF, IF and AF gain controls : fine tuning for SSB : band-pass input circuits on ranges 1 to 6 : provision for muting.

Eddystone

770R
MARK II
VHF COMMUNICATIONS RECEIVER

Fully tunable over the range 19 MHz to 165 MHz, accepting various modes of signal and having many applications in the communications and instrument fields. The combination of six scales and a precision slow motion drive, with a reduction of 140/1, permits relatively fine tuning. Many specially designed units are incorporated and an excellent performance results throughout the range. Operation is from standard AC mains supplies.



Frequency Coverage
Six positions, diecast turret tuning assembly contains coils to give the following ranges:

Range 1	114 MHz to 165 MHz.
Range 2	78 MHz to 114 MHz.
Range 3	54 MHz to 78 MHz.
Range 4	39 MHz to 54 MHz.
Range 5	27 MHz to 39 MHz.
Range 6	19 MHz to 27 MHz.

Circuit and Valves
The circuit is a single superhet, with a fully tuned RF stage. In all, twenty preferred type valves and three germanium diodes are used.

Signal Modes
The receiver accepts CW : AM : FM and NBFM. On CW, a fixed BFO gives a preset beat of 1000 Hz. The two FM deviations are 15 kHz narrow band, and 75 kHz wide band. The degree of selectivity is automatically adjusted to suit the type of signal.

Sensitivity and Noise Factor
Sensitivity on AM, 50 mW output, 15 dB signal/noise, is better than 5 microvolts on all ranges. Noise factor varies from 5 dB on Range 6 to around 14 dB at the high end of Range 1.

Selectivity

AM/CW	6 dB down	15 kHz off resonance
	40 dB down	100 kHz off resonance
FM	6 dB down	40 kHz off resonance
(narrow band)	40 dB down	160 kHz off resonance
FM	6 dB down	150 kHz off resonance
(wide band)	40 dB down	350 kHz off resonance

Image Ratio
Approximately 20 dB at 165 MHz and correspondingly greater at lower frequencies.

Stability
Frequency drift is less than ·003% per degree C and similar for a 5% change of mains voltage.

Crystal Calibrator
A crystal calibrator gives markers at 5 MHz intervals. A device is fitted to permit correct alignment of the cursor.

IF Output
A co-axial socket at the rear provides a wide-band IF signal at 5·2 MHz, for use with auxiliary units.

Input Impedance
75 ohms (co-axial socket).

Audio Output
2·5 watts maximum into 2·5 ohms to terminals. 600 ohms output for line. Telephone jack on front panel.

Physical Details

Width	16¾" (42·5 cm).
Depth	15" (38·1 cm).
Height	8¾" (22·2 cm).
Weight	60½ lb. (27·4 kgs).

Modern styling and two-tone grey finish. Available in table mounting and rack mounting styles.

Eddystone 770U

MARK II UHF COMMUNICATIONS RECEIVER

A versatile instrument having applications for communications, laboratory work, aerial survey and interference investigations. Coverage is continuous from 150MHz to 500MHz using a specially developed six-position turret. Available in table and rack-mounting versions.

Frequency Coverage

Range 1	.. ..	400 MHz to 500 MHz.
Range 2	.. ..	330 MHz to 400 MHz.
Range 3	.. ..	270 MHz to 330 MHz.
Range 4	.. ..	220 MHz to 270 MHz.
Range 5	.. ..	180 MHz to 220 MHz.
Range 6	.. ..	150 MHz to 180 MHz.

Circuit
The front end consists of a grounded grid RF amplifier; diode mixer; 6AF4 oscillator on fundamental frequency. Then follow two IF amplifiers at 50 MHz: a double triode mixer; and further IF amplifications at 5·2 MHz. Other stages include FM limiter and discriminator; muting; noise limiting; audio output. In all, nineteen preferred type valves, four germanium diodes, and one transistor.

Input Impedance
75 ohms (co-axial socket).

Signal Modes
AM and FM, with a deviation acceptance up to ±20 kHz.

Sensitivity
Better than 10 microvolts, 15 dB signal/noise, 50 mW output, on all ranges.

Selectivity
6 dB down 20 kHz off resonance. 40 dB down 100 kHz off resonance.

Image Rejection
25 dB at 400 MHz. 40 dB at 200 MHz.

Crystal Calibrator
A crystal calibrator gives markers at 50 MHz intervals. A device is fitted to permit correct alignment of the cursor.

Audio Outputs
Maximum of 2·5 watts at 3 ohm terminals for speaker. 600 ohm line output. Telephone jack on panel.

Special Features
Two low impedance outlets at the IF of 5·2 MHz are available, offering different bandwidths and permitting direct connection to the Eddystone EP17R Panoramic Display Unit. A further point allows taking off the 50 MHz first IF or feeding in a signal converted to this frequency. Limiter grid current can be measured at a jack on the front panel, and a carrier level meter is fitted as an aid to tuning.

Physical Details

Width	.. ..	16¾″ (42·5 cm).
Depth	.. ..	15″ (38·1 cm).
Height	.. ..	8¾″ (22·2 cm).
Weight	.. ..	52 lb. (23·6 kg).

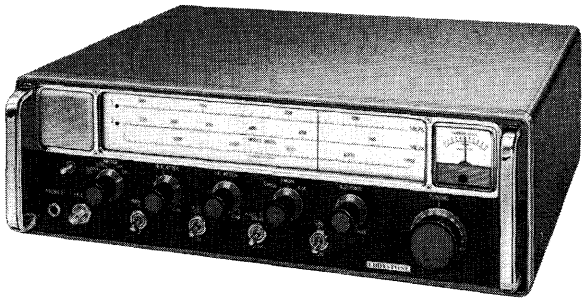
Modern styling and two-tone grey finish. Available for rack or table mounting.

Eddystone

990S

UHF COMMUNICATIONS RECEIVER

A fully transistorised single conversion superheterodyne for reception of AM and FM signals in the ultra-high frequency band from 230 MHz to 870 MHz. Operation is from any standard AC mains supplies or from a 12 volt DC supply. Available in patterns for table mounting or for fitting into a standard rack. Operational temperature range 0 to 50 degrees Centigrade.



Frequency Coverage
Two ranges are displayed on horizontal scale over 9″ wide, the coverage being 470 to 870 MHz on Range 1, and 230 to 510 MHz on Range 2.

Tuning System
Single knob, controlling flywheel-loaded geared drive, with a reduction ratio of 100 to 1.

Calibration Accuracy
The scales are directly calibrated to an accuracy within 1%. By making use of the crystal calibrator and the adjustable cursor, a much higher degree of accuracy is possible.

Tuning Meter
Clearly observable meter with switch to change reading to linear, logarithmic or FM.

Input Impedance
Nominally 75 ohms unbalanced to a BNC socket.

Noise Factor

Range 1	.. ..	10 to 16 dB.
Range 2	.. ..	8 to 12 dB.

Spurious Responses
At least 50 dB down.

IF Bandwidths

AM	.. alternative 6 MHz and 1 MHz positions.
FM	.. 1 MHz (i.f. is 36·5 MHz).

FM Deviation Acceptance
Up to 250 kHz.

Frequency Stability
Better than 1 part in 10^5 per degree C. change in ambien temperature.

Outputs
At i.f. of 36·5 MHz:—50 millivolts at low impedance.
Video:—AM and FM channels, approximately 2·5 volts peak-to-peak into 1000 ohms. Both channels are available simultaneously.
Audio:—500 milliwatts to 3 ohm speaker; 10 milliwatts to 600 ohm line (separate gain control); jack for telephone headset. An internal monitor speaker is fitted.

Physical Details
Rigid light weight construction, with cabinet easily removable. Standard version is table mounting — the addition of brackets converts to rack mounting. Modern styling and two-tone grey finish. Weight is 18 lb. (8·16 kg). Panel measures $16\frac{3}{4}'' \times 5\frac{1}{4}''$ (42·5×13·3 cm). Depth approximately 14″ over projections (34·6 cm).

Panoramic Reception
The addition of an EP17R Panoramic Display Unit and Cat. No. 939 IF. Convertor Unit permits visual display over the whole range of frequencies covered by the receiver. This combination bears the reference EPR29.

Eddystone

990R

VHF COMMUNICATIONS RECEIVER

A solid state single conversion superhetrodyne receiver of advanced design for reception of CW, AM and FM signals in the VHF band 27 MHz to 240 MHz. Operational temperature range 0—50 degrees Centigrade, normally supplied for table mounting but 19″ rack mounting version is available.

Frequency Coverage
The tuning range is covered in four switched bands, the RF unit having three gang-tuned signal circuits prior to the mixer with local oscillator arrangements permitting operation with crystal control on 8 switched frequencies, or external drive in addition to normal continuous tuning.

Range 1	.. ..	130 MHz to 240 MHz.
Range 2	.. ..	75 MHz to 130 MHz.
Range 3	.. ..	46 MHz to 76 MHz.
Range 4	.. ..	27 MHz to 46 MHz.

Calibration Accuracy
The scales are calibrated to an accuracy within 1%. Crystal controlled markers are available at 10 MHz intervals and a higher degree of accuracy can be obtained using these in conjunction with the adjustable cursor.

Frequency Stability
Better than 1 part in 10^5 per degree of C. change in ambient temperature.

Noise Factor
Better than 10 dB on all ranges.

Spurious Responses
All responses (including images) 50 dB down.

Input and Output Impedance
Aerial Input—75 ohms, unbalanced. External Oscillator Input—low impedance. IF Output—200 kHz bandwidth low impedance. IF Output—30 kHz bandwidth low impedance. Video Output—1 volt peak-to-peak into a 1000 ohms load. Intermediate frequency is 10·7 MHz. External Oscillator Input—low impedance to a BNC socket.

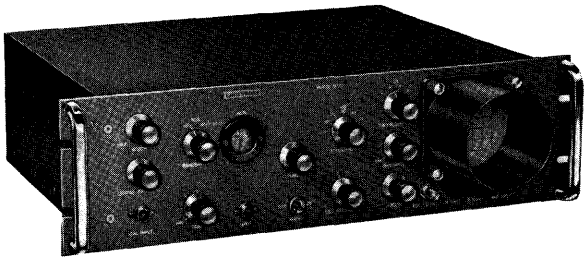
Outputs
IF output 10·7 MHz:—50 millivolts low impedance. Audio output 500 milliwatts to 3 ohm speaker; 10 milliwatts into 600 ohm line.
Internal Monitor speaker is fitted.

Physical Details
Rigid lightweight construction. Weight 19½ lbs. (8·8 kg).
Panel size—16¾″ × 5¼″ (42·5 cm × 13·3 cm).
Depth—approximately 14″

Panoramic Reception
The addition of an EP17R Panoramic Display Unit and Cat. No.959 IF Convertor Unit permits visual display over the whole range of frequencies covered by the receiver. This combination bears the reference EPR30.

Eddystone

PANORAMIC DISPLAY UNITS



To go with receivers already in use, of Eddystone or other make, there are three panoramic display units, two with characteristics suitable for wide band operation, with medium resolution, on very high and ultra high frequencies, and one with fine resolution for narrow band operation on low to high frequencies.

The first units referred to are the EP14 and EP17R, the former having tuned input to match a wide range of intermediate frequencies, whilst the EP17R has a fixed input frequency of 5.2 MHz, as used in the Eddystone 770R and 770U receivers described elsewhere in this Catalogue. Otherwise the electrical specifications are practically identical.

Similarly, the EP15 unit will operate successfully with the majority of HF receivers. The EP15 has tunable input to match a wide range of IF.

Brief details of the specifications are given opposite and full information is available in separate folders.

Frequency Coverage *(intermediate frequencies)*
EP14 : 5·2 MHz (1MHz bandwidth) and tunable 6·2 to 60 MHz.
EP15 : 100 kHz (30 kHz bandwidth) and tunable 400 to 800 kHz.
EP17R : Fixed input at 5·2 MHz.

Sweep Rates
Four selectable speeds are available:—
EP14 and EP17R : 5, 10, 20 and 40 sweeps per second.
EP15 : 0·2, 0·4, 0·8 and 2 sweeps per second.

Sweep Widths
EP14 and EP17R variable from 3 kHz to 1 MHz.
EP15 variable from 100 Hz to 30 kHz.

Resolution
EP14 and EP17R .. 2 kHz at optimum settings.
EP15 .. .. 50 Hz at optimum settings.

Sensitivity (at full gain)
EP14 and EP17R 20 microvolts for full deflection.
EP15 25 microvolts for 1 cm deflection.

Common Features
The *display* is given on a $2\frac{3}{4}$" diameter tube, of medium or long persistence. An *attenuator* acts on the input signal and is calibrated in 10dB steps over a range of 60 dB. Input impedance is 75 ohms. A separate gain control is fitted. Other controls are sweep width; scanning rate; centreing; brilliance; focus. The units can also be used as "wobbulators" for alignment purposes. Operation is from standard AC mains, with a consumption of 55 watts. A blower fan is fitted to prevent undue temperature rise. Dimensions EP17R approximately $16\frac{3}{4}" \times 5\frac{1}{4}" \times 15"$. (Rack mounting EP14 and EP15 19" wide). Weight 36 lb.

Eddystone

EC10
TRANSISTORISED COMMUNICATIONS RECEIVER

Although classed as a general purpose receiver, the "EC10" is finding many applications in the professional field, and is of particular value where portability and operation independent of a mains supply are essential requirements. Continuous coverage is given from 550 kHz to 30 MHz in five ranges and an excellent performance obtains throughout. The receiver accepts CW and AM signals and, whilst not specifically designed for s.s.b., it operates reasonably well in this mode also

Relatively inexpensive, the "EC10" receiver is nevertheless built to the normal high engineering standards associated with Eddystone equipment.

Frequency Coverage
550 kHz to 30 MHz, in five ranges.

Circuit
Single superheterodyne using ten transistors and three diodes. One RF stage, separate oscillator, two IF stages, push-pull class "B" output.

Power Supply
Six HP2 cells housed in a detachable compartment with Zener diode stabilisation to earlier stages. AC mains power supply unit, (Cat. No. 924), interchangeable with battery unit, available as an extra.

Tuning System
Precision slow motion drive, 110 to 1 reduction ratio. Horizontal scales, 9″ long, calibrated to within 1%. Logging and auxiliary vernier scales.

Controls
Independent RF and AF gain; tuning; wave-change; BFO pitch; push-buttons for AF Filter; AGC on/off; BFO on/off; dial lights (biased at off).

Input Impedance
Nominal 75 ohms on ranges 1 to 4, and 400 ohms on medium wave range. High impedance connection for short aerial, effective on all ranges.

Sensitivity
Better than 5 microvolts on Ranges 1 to 4, and 15 microvolts Range 5, for 15 dB signal-to-noise ratio.

Spurious Responses
Image ratio approximately 50 dB at 2 MHz and 20 dB at 18 MHz. Breakthrough at the I.F. (465 kHz) better than 65 dB.

AGC
Not more than 15 dB change of output level when input signal increased 80 dB above 6 microvolts (at 2 MHz on range 4).

Audio Output
Maximum output approaches 1 watt. Internal speaker and panel jack for telephones or external speaker.

Physical Details

Width	.. .. ..	12½″ (31·7 cm).
Height	.. .. ..	6⅜″ (16·2 cm).
Depth	.. .. ..	8″ (20·3 cm).
Weight with battery	..	14 lb. (6·3 kg).

Finished two-tone grey and suitable for use in all parts of the World.

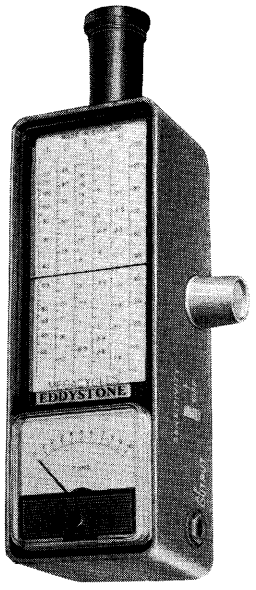
Eddystone

EDOMETER TEST INSTRUMENT

CAT. No. 902

MARK II

A versatile instrument which will be found a most useful and practical addition to the equipment in any radio and electronic laboratory, workshop or maintenance department.



The "EDOMETER" provides the following facilities in the one complete unit:

STANDARD DIP OSCILLATOR

ABSORPTION WAVEMETER

HETERODYNE WAVEMETER

SIMPLE SIGNAL GENERATOR

MODULATION MONITOR

AUDIO TONE SOURCE

The frequency coverage when used as a dip resonance indicator is from 1·25 MHz to 115 MHz, two additional coils being provided for signal generation over the range 380 kHz to 1·25 MHz.

The main function of the instrument is as a dip oscillator, to indicate the resonant frequency of a tuned circuit. Since the unit is transistorised and self-contained, it is available for immediate use in any situation, without the inconvenience of a trailing lead or need of access to a mains supply. The illustration gives a good idea of the appearance, the length of the case (without a coil) being approximately $6\frac{3}{8}$". It will be noted that both the scales and the indicating meter can be read very easily.

Frequency Coverage
Seven plug-in coils are provided and read-out is directly against the calibrated scale. Ranges 6 and 7, are mainly for alignment purposes, with the instrument functioning as a signal generator.

Controls
There are three controls, arranged for convenient operation with the instrument held in the hand. The TUNING KNOB operates a geared reduction drive, which makes for easier adjustment.
The SUPPLY SWITCH/SENSITIVTY control is of the edge-operated type, the knurled surface being rotated downwards to switch on the power supply. Further rotation affects the sensitivity, the meter deflection being adjusted to give a constant reading.
The MODULATION SWITCH determines the function of the bi-polar transistor, which becomes an audio amplifier in the OFF position and a tone generator in the ON position.

Outputs
Normal radiation from the exposed coil is used when a signal for test work is required. To modulate the signal, the modulator switch is placed in the ON position.
The right-hand jack socket delivers the audio signal, the frequency being nominally 1000 Hz, the amplitude 100 millivolts, and the output impedance around 5000 ohms. With a plug inserted, the r.f. oscillator is disabled.
Using the instrument either as a modulation monitor or as a heterodyne wavemeter, output is taken to a telephone headset from the right-hand jack socket.

Coils
The coils are of robust construction and protected against damage.

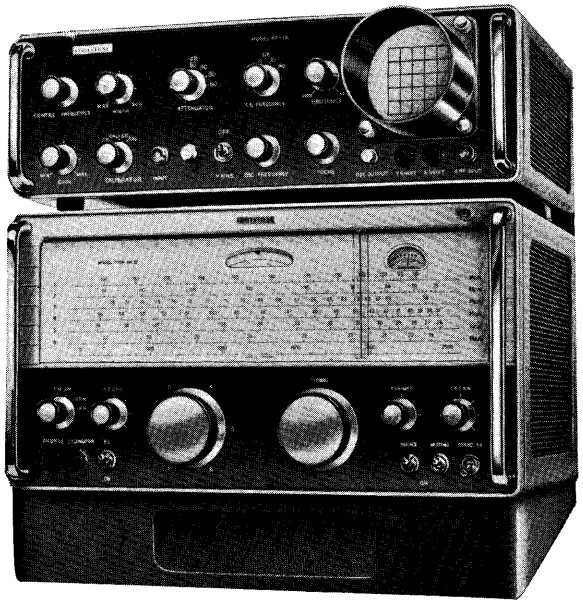
Power Supply
A PP3 battery (9 volts) fits inside the case and can easily be replaced when necessary. (Battery not supplied).

Dimensions
The Unit measures $6\frac{3}{8}" \times 2\frac{1}{4}" \times 2\frac{1}{4}"$ not allowing for the projections. The weight is 25 ozs. complete with battery. For easy carrying, the unit, complete with coils and a comprehensive Instruction Manual covering various applications, is housed in a wooden carrying case.

Instructions
A comprehensive Instruction Manual, covering the various applications, is supplied with the instrument.

Eddystone

PANORAMIC RECEIVERS



In both the communications and laboratory fields, a complete panoramic receiver will often allow tasks to be carried out quickly, simply and effectively, in a way only possible otherwise with a range of expensive equipment, which, where it exists, may well not be available at short notice. Visual monitoring; measurements of frequency, carrier amplitude and modulation; presence or absence of spurious responses and emissions; setting up transmitters and receivers for correct operation on s.s.b. and other modes of signal; studying the character and level of interference; are some of the applications which readily come to mind. It will be appreciated the higher apparent overall sensitivity of the panoramic receiver, whereby a signal barely audible can be clearly seen, is a considerable asset when carrying out bridge measurement operations. The practical communication engineer will obviously find the combination of much value in his work.

Again, as an aid in teaching, the panoramic receiver can be very useful and save much time. A student can observe at a glance variations brought about by changes of amplitude, modulation depth and character, bandwidth insertion of filters, and other factors.

The display unit is designed for secondary use as a "wobbulator", to check the alignment of the receiver unit, with the advantage of knowing thereafter that the overall performance is at a maximum. The addition of the display unit does not in any way affect the operation of the receiver for standard applications.

Three complete combinations of receiver and panoramic display unit are offered, with details as follows. Other combinations can be supplied to special order.

The complete installation is relatively compact and blends well with other equipment. Tie-bars at the rear make for a rigid assembly and, with the inclusion of the speaker plinth, the backward tilt leads to ease of viewing and ready operation of the controls.

EPR26 (v.h.f.)

The illustration shows the EPR26 Panoramic Receiver, which comprises a standard 770R Mark II receiver, EP17R display unit, and Cat. No. 906 speaker plinth. Visual display is obtained over the normal ranges of the receiver, from 19 MHz to 165 MHz. Maximum scan is one megacycle and the other characteristics are as set out elsewhere in this Catalogue. Total power consumption is approximately 150 watts.

EPR29 (u.h.f.)

Panoramic reception of the frequency range 230 MHz to 870 MHz is provided by the EPR29 Panoramic Receiver, which is a combination of the "990S" receiver and the EP17R display unit. The unit operates through an intermediate transistorised converter, Cat. No: 939, which accepts the 36·5 MHz intermediate frequency of the "990S" and supplies a 5·2 MHz input to the EP17R display unit.

Maximum sweep of the unit is one megahertz and resolution under optimum conditions is approximately two kilocycles. Total power consumption is about 110 watts.

The combination is easy to set up and the units match each other electrically and physicallv. The compact overall size is a feature to note.