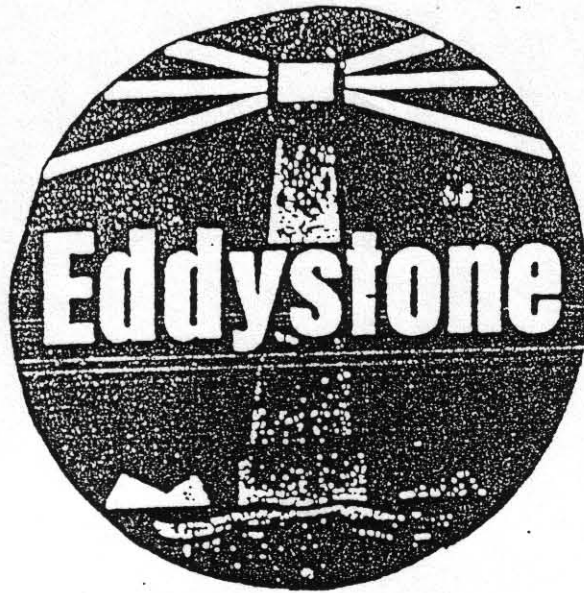


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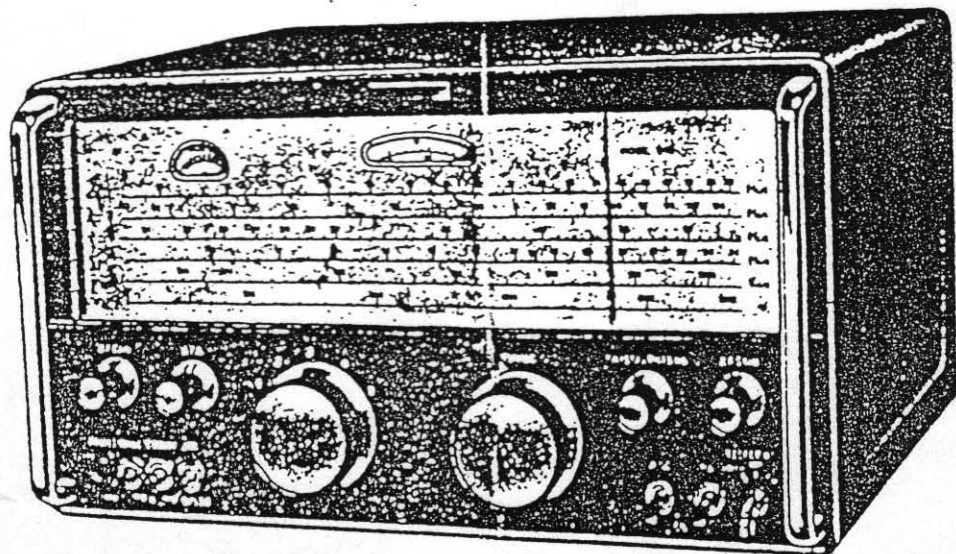
940



Eddystone

Users

Group



ISSUE No; 2.

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Information quoted from Eddystone Co; manuals by kind permission of Chris Pettit. Managing Director. Eddystone Radio Ltd.

Featured model this issue - 940.

A non-profit newsletter for Eddystone users. *Subscription on request*  
Address for all mail; - W.E.Moore. 112 Edgeside Lane, Waterfoot.  
Rossendale. Lancs; BB4 9TR.

#### EDDYSTONE RECEIVERS.

we do have one quite well known personality as a member and another who, whilst not so well known to the general public is known in broadcasting. They both request that their names are not printed so the first will be low to us and the second is Alan. Low tells us that he has had his 730 with a 0-fiver in almost continuous use since 1951, when bought new. It has been re-valved once, needed a new EI41, just two years back, at which time he also changed some leaky paper decoupling caps and two resistors gone so high as to affect the performance. It is otherwise as when new, and he reckons it will last another forty odd years. The "0-fiver" for those uninitiated is a BC453 "command" receiver of WW2 vintage. Made for the U.S. signal corps by various companies it is a very compact 6 valve superhet having a very low IF of 85K/cs. it covers the range 190-550K/cs which includes the IF frequencies in common use then. By feeding it with a whiff of the 740 IF signal it became an outboard 2nd IF to the main receiver, thus providing very much enhanced selectivity, and the much sought after "single signal" effect. Alan for his part has a 730/4, bought recently to replace a 730/1 sold some time back. He has had problems getting this receiver back in good order, the latest being re-stringing it. Hopefully he is by now able to sit back and listen to his 730 whilst reading this. He has promised to do us a short article on the joys of re-furbishing an Eddystone, maybe next issue?

S.O.S. ....

F.Penny has a 2k/w variac in wood box with v/meter, 0-270 volts out from mains in at £50-00, ring me for address.

C.J.Jaggar would like to buy very good condx EA12, he means very good so he is prepared to pay good price, ring me for address or ring him on 0734 477482.

## EDDYSTONE Communication Receivers (Type E.C.R.)

We are very proud to present the Eddystone E.C.R. Communication Receiver. We believe the appearance, construction and performance will satisfy the most critical.

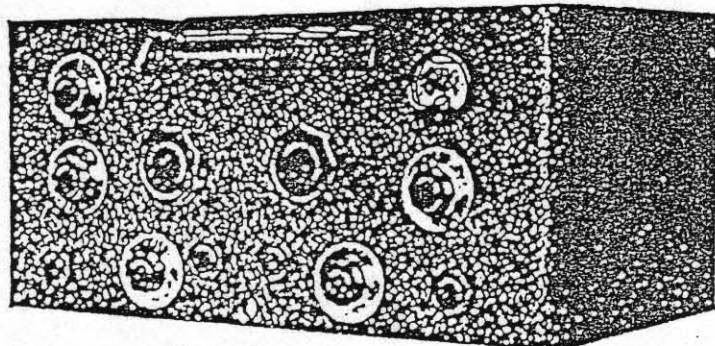
The Chassis, Coil Unit and Crystal Unit are die-cast, and the most complete screening is employed everywhere. The layout is such that all leads are a minimum length. No more valve stages than necessary are employed and reduction of noise level has been an ever present thought during the design.

The Superheterodyne circuit comprises 10 valves, including Rectifier, with the following stages:—High Frequency, Mixer, Electron Coupled Oscillator, Two 465 KC's, IF's, Doubled Diode Detector, Beat Frequency Oscillator, LF Amplifier, Tetrode Output and full wave Rectifier.

Switched coils cover a waverange of 9.5 metres to 190 metres. 33 megacycles to 1.6 megacycles, divided into 4 wavebands. Electrical bandspread tuning is employed. A crystal gate is fitted with phasing condenser and variable selectivity control. Volume controls for RF and LF adjustment. An "R" meter calibrated in decibels is on the front panel. BFO control and switch and AVC on and off. The following data is given relative to the performance.

Average overall sensitivity better than 3 microvolts for 50 milliwatts audio output.

Average IF sensitivity 12 microvolts with crystal out.



Average IF sensitivity 15 microvolts with crystal in.

Dial is calibrated in Kilocycles for five ranges, and also in degrees.

Selectivity. 9-KC's at 20 db. down. 16 KC's at 40 db. down.

Output. High and Low resistance output (2,000 and 120 ohms).

Control. Radio frequency and Audio frequency gain controls. Beat frequency pitch and oscillator vernier. AVC and BFO on/off switch.

Price — £45-0-0

## AERIALS FOR 770 R/U SERIES.

Several members have queried the type of aerial that they need to use with their 770 type receivers.

There cannot be any simple one-off answer to this, no two persons will be using their set for the same purpose. One may be interested in simply listening to the two-metre amateur band, another may want to browse up and down the whole range of the particular model, as is my case.

For the 770 R & U which I have 'on line' there is a choice between an active aerial, the Dressler ARA900 on a 40 foot pole or a chimney mounted whip either with or without dedicated preamplifiers for my favourite bands.

My QTH is rather better than the average, I am lucky enough to live about 850 feet above sea level, actually on the top of the Rossendale Valley. This does mean that I have a pretty good take-off in all directions. In fact it is somewhat of a family anecdote that some years back when we were looking for a house to buy the necessary criteria included, apart from a spare bedroom for my radio-room, no electricity pylons within a couple of miles, no factories or industrial complex to produce a high interference level, and sufficiently high up, in the open countryside, with room for a good long long wire. Nothing like that showed up in the estate agents of course, but then serendipity took a hand and whilst out driving one day, there it was, my ideal QTH. The fact that my wife found it her 'ideal house' also was Luck with a big 'L'.

Let's get to possible systems, the manual for the 770 series includes a chapter on possible types of aerial to be used for either vertical or horizontal polarisation, being either the well-known disccone or what they call 'the bi-conical disccone which is a wide band dipole in the form of two disccones side by side as shown, some dimensions are given and members will have to decide what they are able to put up themselves, it will not take too much ingenuity to build an indoor, loft-mounted version of the bi-conical dipole, it can be done from fine gauge chicken mesh, built up from soldered copper wire or whatever other means suggests itself to the builder. I know of one made from cooking foil over a cardboard former.

These are unlikely to give the necessary gain needed for our use, they are wide band aerials though and can be followed by one or several switched pre-amps, say one for two metres, one maybe for the marine band [156 megs;] yet another for the amateur fifty meg band. Switching these in or out can produce quite a versatile receiving system.

I must emphasise that if a wide band pre-amp is used there is danger of the receiver input being swamped, de-sensitised, by one strong local signal, this would prevent other weaker ones from being heard and could result in that one strong signal being received on various parts of the scale.

If you decide to go the way of the "commercial active aerial", as I did for one system, then it is advisable to have a switchable attenuator in line to prevent overloading.

Some possible combinations of aerial, pre-amp and receiver are included.

Whilst on the subject of the 770 series it must be said that these receivers are not exactly renowned for their sensitivity, even when newly manufactured it was not an easy job to get one 'on spec'; I have spent hours on my various models, especially the 770S, trying to get it up to the original makers specification.

Although many owners realise that their particular set was designed and built for the armed forces, land, sea or air, do any of them suspect what other esoteric uses they may have been put to.

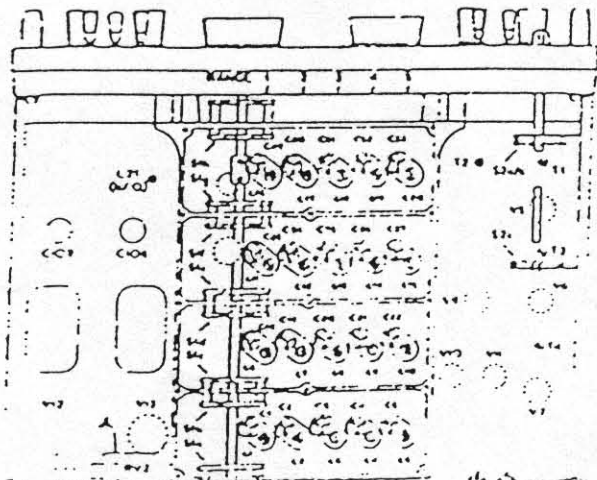
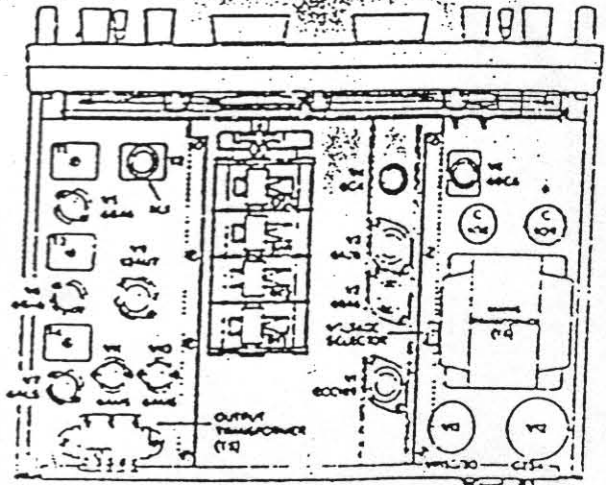
Some Valves found in Eddystones, and their Equivalents.  
[this does not pretend to be a complete list, there have been quite a few enquiries however as to equivalent types for the CV types fitted to so many ex-MOD receivers.

Brim, etc.	Use.		
454	EF93	6BA6	RF Pen
2128	ECH81	6AJ8	fr, chgr
140	EB91	6AL5	det, agc
2524	EF94	6AU6	rf/if amp
452	EBC90	6AT6	det/af
136	EL91	6AM5	o/p Pen
453	EK90	6BE6	ssb det
1863	GZ30	5Z4	ht rect
5331	ECC189	6ES8	rf pent
133	EC90	6C4	RF osc
492	ECC83	12AX7	af amp
1862	EL90	6AQ5	af o/p
1832	0A2	150C2	stab;
3998	E180F	6688	rf amp
5215	ECF80	6BL8	if amp
455	ecc81	12at7	af amp
1833	0B2	108C1	stab
1977	UL41	45A5	af o/p
	UAF42	12S7	rf/if amp
	UCH42	14K7	fr, chgr
	UY41	31A3	ht rect
850	EF95	6AK5	rf amp
491	ECC82	12AU7	af/osc
216	0D3	150C3	stab
3929	EF732	5840	osc
5065	ECF82	6U8	af amp/osc
469	EA76	6489	RF amp
1053	EF39	6K7	RF/IF
281	ECH35	6K8	FR.CHNR
587	EBC33	6Q7	det/afamp
509		6V6	o/p tet
554	EB34	6H6	det/agc
394	EM34	6AF7	magic eye
572	EZ35	6X5	HT rect
	UAF41	D121	RF/IF
	UCH41	CF141	fr/chgr
3883	EAF42	6CT7	det/agc
897	ECH42	6C10	fr chgr
3890	EL42	N151	af o/p
	EB41		det/agc
1855	EZ40	U150	ht rect
3711	N78	6BJ5	af o/p
2135	8D5	6BR7	RF/IF
	DH72		det/AF
2453	A2521	6CR4	RF amp
273	EC51	DET22	RF amp
5074	EC94	6AF4A	RF amp
587	DH63		AF/det
5073	EC84		RF amp
138	EF91	6AM6	RF/IF amp

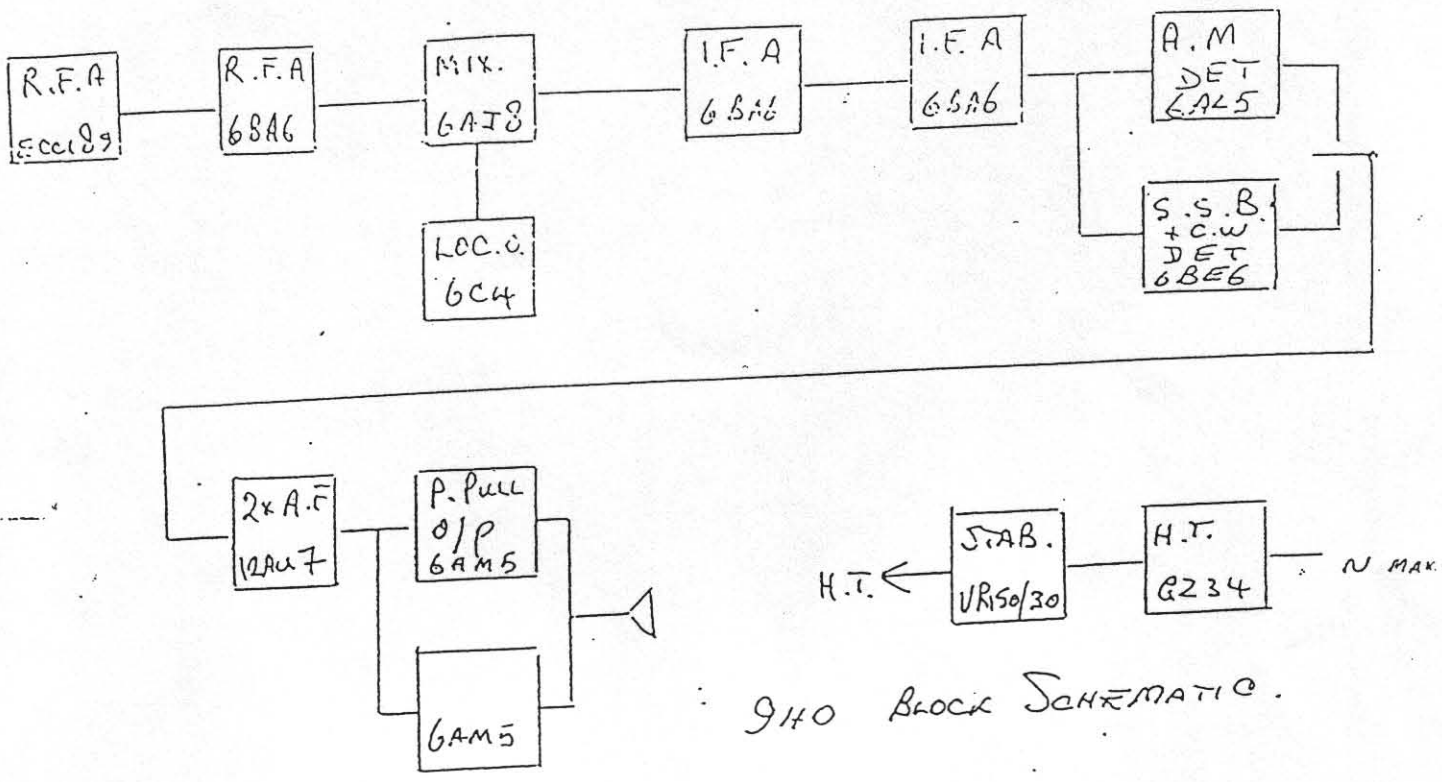
The 940.

This is classed by many as one of the best Eddystone receivers for general coverage use, it has practically the same coverage as the 680/680X but the noise level is lower and on a side by side comparison the 940 is more sensitive, this is especially so on the higher frequencies. The coverage is 480k/cs to 30M/cs in five bands and it is single conversion, thirteen valves including a stabiliser and has push pull output giving a 600 ohm line o/p and speaker o/p with phone socket on the front. The circuit follows usual Eddystone practice with an IF of 450k/cs. Aerial input can be balanced or unbalanced through push terminals. There is a carrier detect meter on the 940 which whilst not being an S meter is a reliable tuning aid. Both local oscillator and BFO are fed from the stabilised supply to improve stability and the RF stages are ECC189 low noise double triodes. In the eight years that my 940 has been in use only one problem has occurred, R19-27k in the V3 HT feed went up to 80k and got noticeably warm. This was traced to a faulty 6AJ8 which read a full short between pins 1 and 2. Now I have been told by a member of EUG that he had the same fault, same resistor gone open circuit and burnt. A point to bear in mind if your 940 goes inexplicably deaf. The same person tells me that instability on the BFO which manifested itself on his return from a two week holiday was traced to green mould on the valve base top, cleared easily with a squirt of switch cleaner and a brush. This is V8 a 6BE6. Apart these items the 940 appears to be remarkably trouble free, mine is usually first choice if I need to locate and monitor any signal within the range it covers. The circuit is on the following page and so as not to get any letters of complaint as I did over the 840A, the view of trimmers and cores is included.

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this the second issue of the EUG may the members offer congratulations to PW on its 100th issue. It really is a superb mag which I personally have enjoyed since my early days in the "forties".



940 BLOCK SCHEMATIC.

WELL, issue 2 has been a lot easier than issue 1, thanks to all who sent in news, views, even complaints - only one thank heavens! Please send in your news, views and your ads. Ads will go in next issue, views might get held over if space is tight. Re the valve listing in this issue. Two subscribers have said they have many spare valves for sale or swap, okay let's have your lists, whether you want just a phone number or or your address printed. I do know some readers are already asking about availability of valves. Please do price them reasonably though since readers will be buying through the newsletter in the hope of keeping repair bills down. I'm hearing some bad news from readers who try to get repair done by dealers, like - £75 to realign a 940, £40 parts & labour to replace AF control & mains switch on a 640. Be nice if we can come up with some body doing these jobs reasonably. Thats it for No; 2 - 73s to everybody, Ted.

### EDDYSTONE and the AMATEUR

## EDDYSTONE TRANSMITTING CONDENSERS

This range of Eddystone transmitting condensers is attracting considerable attention. A standard type of construction is employed in all these, the ceramic and plates being 2 1/2 in. square. Losses are extremely small.

The metal mounting plates supplied provide alternative methods of fitting—either directly to a metal chassis or on small stand-off insulators.

All these are of split sector type, and are therefore suitable for balanced and push-pull circuits. By stripping the sector plates together, additional capacity values are available for use in single ended or series tuning circuits.

The Cat. No. 411 is particularly suitable for use with multi. low capacity triodes such as the 20, 4304, and 1J5. The built-in neutralising condensers enable a very compact and efficient push-pull amplifier to be constructed.

Cat. No.	Cap. per Section	Effective Capacity as Split Sector	As Single unit
411	25 pF	12.5 pF	30 pF
412	50 pF	25 pF	50 pF
413	100 pF	50 pF	100 pF

These units are available in "E" and "S" finishes, as well as in "C" supply version.