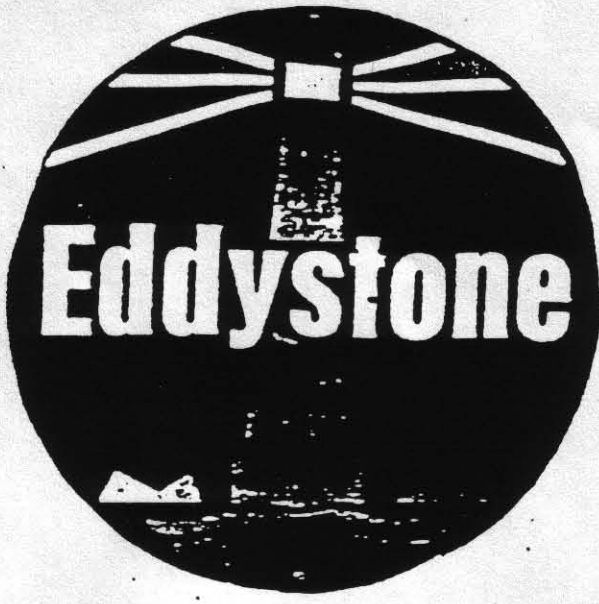


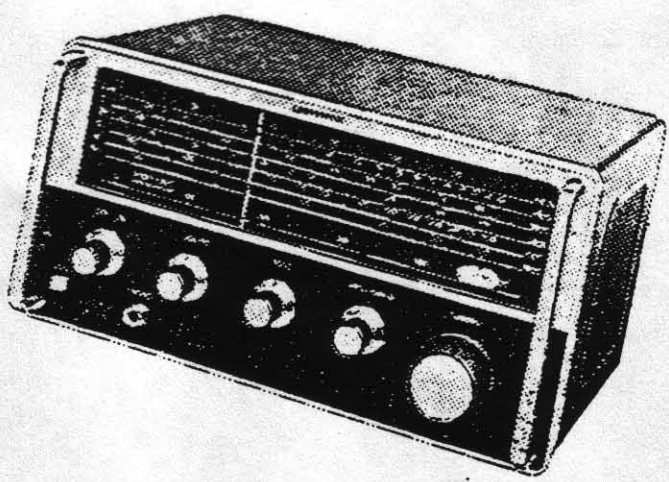
11

EB35

770R - 4, 6  
PSU - 8  
830/8 - 13  
S440 - 21  
888 - 9  
EB35 - 11



# Eddystone Users Group



EB35

ISSUE NO. 11.

JANUARY / FEBRUARY, 1992.

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

Featured Model this issue - EB35.

A non-profit-making newsletter for Eddystone users.

Address all mail -

W. E. Moore, Moore Cottage, 112 Edgeside Lane,  
Waterfoot, Rossendale, Lancs. BB4 9TR

- Overseas Members Please Note.-

- Re your subscriptions , if you look at the stamps on this issue of newsletter you will see that multiplied by six, your annual subs do not even cover postage and that E.U.G is in fact subsidising your newsletter. This was okay whilst membership in 'far flung places' was quite low. Three factors now mean that your subscriptions must be increased to cover costs, firstly the big increase in overseas members, secondly the recent Post Office increase in rates for first class mail, and thirdly the increase in size of the newsletter. This last is of course our fault ! Despite going over to printing double sided the issues are getting bigger. Subs for Year three will be as follows,-

U.K. - £8.00

Europe and Scandinavia. - £9.00

Other Overseas,Airmail. - £18.00

Surface mail. - £16.00

- Sorry about this but even so incidental postage costs will not be covered. We did not mind paying out at first but when membership mushroomed things got out of hand.

Kath & Ted.

\*\*\* SPECIAL ANNOUNCEMENT !!! \*\*\*

A PREZZIE FOR ALL YOU FAITHFUL E.U.G MEMBERS ???  
CHRIS PETTITT THE M.D OF EDDYSTONE HAS PUT UP  
THE IDEA OF AN OPEN DAY, EVEN OPEN WEEKEND, AT  
THE FACTORY NEXT YEAR WHERE MEMBERS CAN BE SHOWN  
OVER THE FACTORY AND MAYBE EVEN TALK WITH FORMER  
EMPLOYEES WHO DESIGNED AND BUILT THE VALVED  
MODELS. PLEASE LET KATH & MYSELF KNOW WHETHER  
YOU WILL BE INTERESTED SO WE CAN PASS THE INFO  
ON TO CHRIS, DON'T WRITE AND BOTHER HIM ! C.U.



1/

- Issue 11. -

- In this issue the featured model is the EB35, this appeared in four versions, the EB35, the Mk II, the MkII/S, & the Mk III. All have sufficient differences for us to consider them as separate models for the featured models article, since so many have asked the MkIII will be featured later. Having had long spells of listening to my own EB35 recently I can vouch for its performance on a random 15 feet 'skywire'. A baby Eddystone but with real high user satisfaction.

- As last issues crossword with Eddystone orientated clues & answers was popular with members another is in preparation.

- Membership levels continue to rise, a pleasing trend to Kathy & myself, knowing that the work we put into your newsletter is appreciated. The one surprising & satisfying trend to me has been the number of members who send in their next years subscription months in advance ! Shows faith in E.U.G. The weekly postbag from members has increased considerably with our increase in members, to the point where nowadays I am only passed those letters requiring a technical answer or giving information to be included in future issues. All other mail, subs, back copies and badges is now the sole province of Kathy. We try to reply to all mail needing a reply within a few days, but do please include an S.A.E. if you want a reply. The newsletter makes no profit and is in fact subsidised. A time to say thanks to those members who send a little extra with their subs to help out. We have many overseas members and I would ask that they look at their newsletter envelope and multiply the postage by six, they will see what I mean about 'no profit'. Australia New Zealand, Canada, Norway, all over Europe, the Gulf States, but surely our most remote is still Geoff who is on Diego Garcia Isle in mid Indian Ocean. Surely the strangest statistic of all remains the large number of members living in Wales, beats the total for the English members. We also have more in Australasia than in Scotland. If anybody has a theory to explain these figures then please enlighten us all.

- We have a member who was in an original Eddystone Club, run by the Company I believe. His membership badge dates from 1933, year I was born. (now you all know !). Yet another member who worked at the 'Bath-Tub' in the 1950 era. Age groups of members seem to go from the teens to the eighties. Nice to know that the younger SWL s appreciate our hollow-state technology. As one of our older members, Dave says 'a 740 has that certain look of quality about it'. We have members with but one Eddystone, many with two or more, a fairnumber have a

collection say ten or more, one member has over a hundred and twenty and still looking. Several of our members have none but just aspire to owning an Eddystone. Whether you have an 840A or a rare EK20 the newsletter is your window on the world of Eddystone. To forestall queries I had best tell you what I have been told about the EK20 by Bill who at the time worked in the design dept of Eddystone. It was a prototype and only two were built, an all amateur bands, pre-WARC, it used 13 transistors and 7 diodes, was similar in size and look to the EC10 II. A double superhet with crystal controlled front end convertors as per the EA12. He has one but who has the other? He cannot recall why the model was not put into production but it may have been a decision by the Parent company!

-----  
- SPERICS. -

- Whilst on the subject of 'exotic' models a member in Birmingham has an Eddystone 'Homelander' which having been recovered from his grandfathers loft is now working, not from batteries but from a PSU he has built for it. See elsewhere in this issue.

-----  
- Between 1900 & 2300 the following were heard on my EB35, BBC W/S, VOA, Deutsche-Welle, Kol Israel, R.Finland, R.Sweden, R.Moscow, R.Lithuania, R.czechoslovakia, R.France International, R.Canada, R.Austria, B.R.T., Swiss Radio International and R.Havana. All these on a 15 foot bit of wire, not bad for a 1968 model.

-----  
- Think on this, If you have a P.M.E earth system on your house and you then connect a receiver ground system as well to your radio then any fault currents from appliances in your home and your close neighbours will probably choose the shortest path to earth through your ground rod, since it will likely have a lower resistance path than the neutral line back to the substation. Horrific thought isnt it? If you do use your own ground system for your equipment then the mains earth must not be connected too.

-----  
- The plus or minus five per cent allowed by the Electricity Company, quite often this is not adhered to, means that your supply at various times of day or night can be anywhere between 228 volts & 254 volts.

-----  
- In answer to Tim, Bletchley Park was the Government Communications & Cypher Section, or GCHQ. It was the WWII code cracking HQ and was where the Enigma intercepts were decoded. Mostly RAF & civilian staff.



- Most usual interelectrode shorts are heater to cathode, a member has recently had the 6V6GT in his 640 go anode to screen short, after a period of operating in hot weather. Result of course was no AF o/p. Since the reading on his meter shows a full short between pins 3 & 4 I am wondering whether the short is actually in the valve base, I do know of this happening if the base is slightly loose and the glass 'bottle' is turned slightly.

-----

- An S640 for £27-10-0. sorry £27.50 bought at a recent rally. Cheap yes it was but also this was the price NEW in 1947.

-----

- From a member who has recently bought a nice 830/7 from there, he says that Centre Electronics of 345 Stockfield Road is still open in Yardley Birmingham and ~~Harold~~<sup>HOWARD</sup> Turner is still running it. Just about the best source for Eddystone spares I know of.

-----

- For general components such as resistors and condensers I and many other members get good quick service from John and his staff at Birkett's of The Strait. Lincoln. Sometimes they also have the odd Eddystone tucked away too.

-----

- So far no complaints but some nice comments re double sided issues of the newsletter, only complaints are re schematics & poor quality, bear with us, we are both beginners.

-----

- Another happy member in Cheshire, thanks to our 'haves & needs' lists we put him in touch with somebody able to satisfy his needs, no need for an ad ! A good idea from one of our members to keep a list and then put members in contact direct.

-----

- Kathy's regular Saturday morning trip to the village post office now is an armful of large packets (back issues etc;) and a bag full of small packets (badges) this apart from the daily letters put in the postbox during the week, she has the rank of honorary E.U.G. publisher/printer/secretary/postal clerk.

-----

- Pete Roberts GW6AYM has finally tracked down the origin of the Qrp transmitter in a 640 receiver to a circa 1950 SWX. maybe we will be able to print the full article soon.

-----

4/

- Hints. -

- If you really must substitute diodes of the 1N4004 type for a valve rectifier then for protection purposes do fit series resistors and parallel condensers as per the circuit on page 8, this issue.

-----

- Colin has two outside aerials, a 250 foot N-S longwire and a 75 foot E-W longwire, he has separate top-band ATU configurations to match either into his transmitter and S640. See p.7.

-----

- Another member, Steve sends in his favoured ATU circuit used to match his 940 into either a 50 foot outside wire or a 20 foot loft aerial. I recognise this circuit from having used it in the past & it did work well. See p.8.

-----

- For Paul who wants to construct an external S meter for his 640 until such time as he can locate the real matching item. the circuit is on page 7, together with equivalent scale readings for S points from one to nine. These are predicated on a 6 db per S point change in signal strength, as on the original.

-----

- An open circuit condenser in the screen of V1 of the 640, it is C8 on the diagram, this caused modulation hum. (when a station was tuned in), the replacement cost eighteen pence at Norbreck rally and cured the problem.

-----

- S.O.S.-

... - - - ...

- A member asks is a GEC model 666 an Eddystone in disguise? I have to say no, I think this is just the model number of a GEC model of the domestic breed, nothing pedigree about it.

- Does anybody use his Eddystone for QSOs these days besides Ken Ellis, he has an EA12 run with his home-brew CW transmitter on 14, 21 & 28 Mc/s. Any offers?

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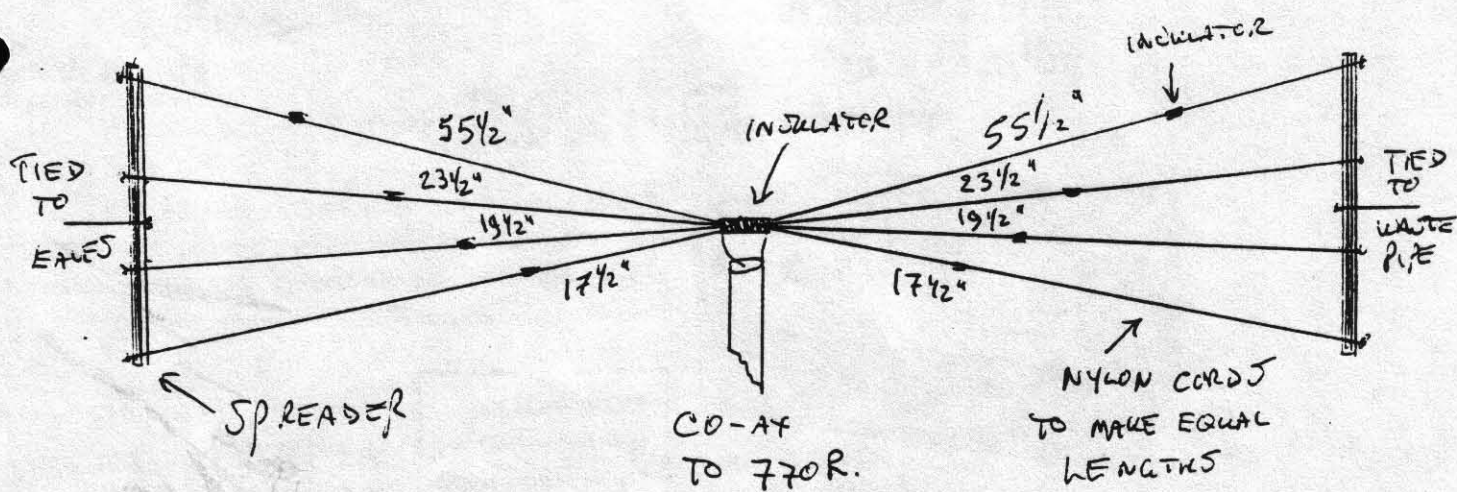
- Solution to the 770R aerial problem.-

- The item in the last issue from our member in South Wales has caused a fair amount of mail, mainly asking why no diagram and fill in description with measurements. Just goes to show that people are reading this Newsletter. His interest is in mainly



the 50 Mc/s amateur band, the airband, the 2 metre amateur band, and the 156 Mc/s marine band. This latter of course abuts onto the utilities band and the same aerial serves well for both. A total of nine one inch pieces of perspex have two holes drilled in them and they act as the necessary insulators, all were cut from an 'offcut' bought for 75 pence. The wire lengths are cut from whatever you are using, his was 14 SWG tinned copper wire, two off 58 inches, two off 26 inches, two off 22 inches, and two off 20 inches. These lengths will leave a total of two & a half inches for the terminating on the insulators. Through each hole on the central insulator are fed four lengths of aerial wire plus one side of the co-ax feed. These are twisted together firmly and soldered, then a coating of some protective varnish is put on. The eight wires are now each terminated with a perspex insulator, soldered and again protected with varnish. Eight lengths of nylon cord as used on roller blinds is now attached to the eight insulators so that the total length of each aerial, end to end is 15 feet. Two wooden spreaders twelve inches long are now drilled, a centre hole and four others equally spaced along its length. The two outer aerials, for 50 Mc/s and for 156 Mc/s are measured off equally and terminated as per the diagram, at each spreader. If the system can be temporarily stretched out near the ground this job is much easier. The other two lengths are now terminated at each end so that all eight lengths are equally taut. The system is now ready for hoisting in to position. Hope that this satisfies those of you who wrote in for the measurements.

-----



NEST OF DIPOLES AS PER ITEM IN ISSUE 10/

6/

### U. H. F. Communications Receiver

THE Eddystone "770U" receiver embodies many unique features, including the unusual frequency coverage of 150 Mc/s to 500 Mc/s. The set is a double superheterodyne having a specially designed "front-end" unit consisting of a small, but very sturdy, 6-range coil turret (with 18 coils), a small three-gang variable capacitor, r.f. and oscillator valves and a germanium crystal mixer giving an i.f. output on 50 Mc/s.

The 50-Mc/s amplifier has one cascode stage and one r.f. pentode and the second frequency change to 5.2 Mc/s is effected in a double triode. The cascode-pentode amplifier and triode mixer are followed by two 5.2-Mc/s i.f. stages and together they provide a high i.f. amplification at a low noise level. This portion of the receiver can be used independently if required and

a 50-Mc/s external signal applied to the 50-Mc/s cascode amplifier and the amplified output taken from a cathode follower after the last 5.2-Mc/s i.f. stage.

Switching provides for either a.m. or f.m. reception, the latter using a Foster-Seeley discriminator and the former a crystal diode. The circuit includes an a.m. noise-limiter, "S" meter, two a.f. amplifiers and a small output pentode (6AM5) with negative feedback. The output transformer is tapped for 2.5-Ω and 600-Ω output loads. The h.t. for all oscillators and the r.f. unit is stabilized.

Other features of interest in the specification are: 15-kc/s overall i.f. bandwidth; 25-dB image attenuation at 400 Mc/s and 40-dB at 200 Mc/s; sensitivity better than 10μV for 15-dB signal-to-noise ratio at 50 mW output on all six ranges; built-in a.c. power supply and provision for battery operation.

The receiver is housed in one of the distinctive metal cabinets employed for all Eddystone sets, with separately calibrated scales and a subsidiary logging dial. The overall size is 16½ × 15 × 8½ in. the weight is 60 lb and the price is between £250 and £300. The makers are Stratton and Co. Ltd., Eddystone Works, Alvechurch Road, West Heath, Birmingham, 31.

MARCH 1956.



Eddystone 150-500 Mc/s communications receiver, Model 770U.

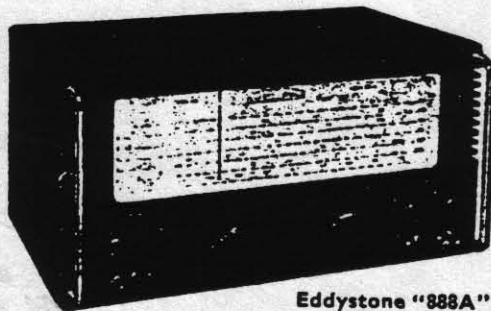
# Adventurous?

... the world is  
your oyster

with an **EDDYSTONE** RECEIVER



Eddystone "870A"  
A.C. or D.C. Mains £33.18s.

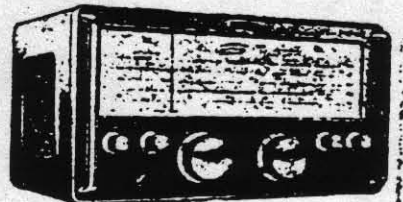


Eddystone "888A"  
Amateur Bands Com-  
munication Receiver  
£110

With an Eddystone Receiver the world's radio is at your fingertips. Webb's stock the complete range, including the "840C", a new set with everything that makes a great Communications Receiver. It replaces that established favourite, the "840A".

All Eddystone Equip-  
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APRIL 1962.

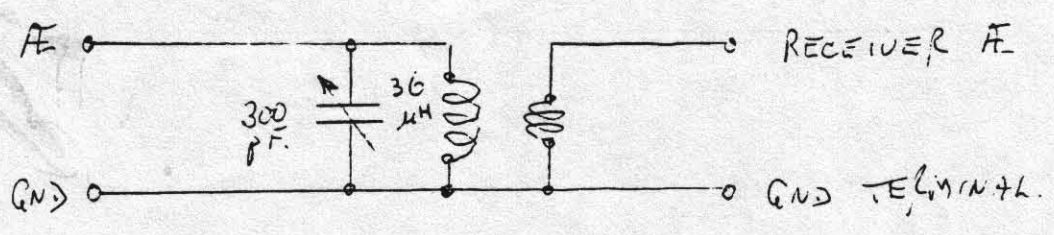
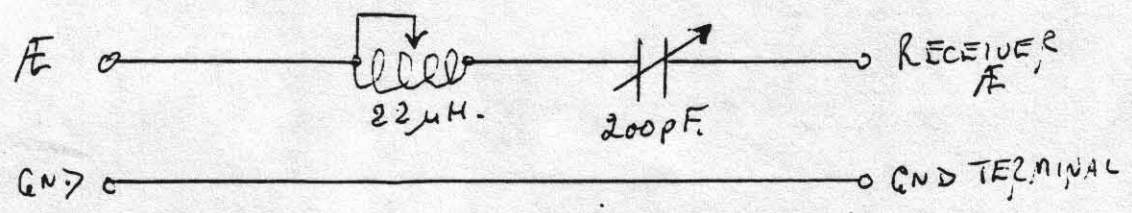


- ANSWER TO YOUR XMAS CROSSWORD.-

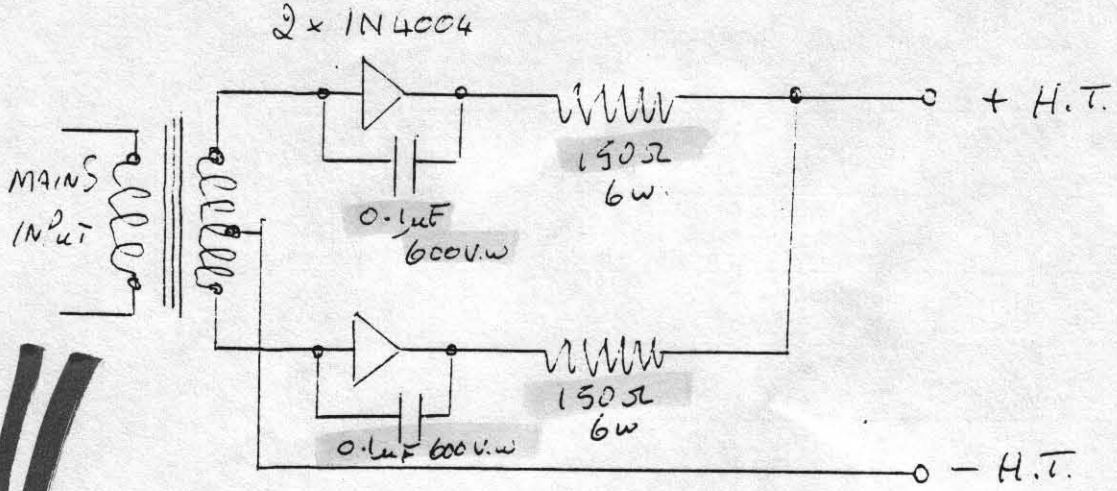
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13	G	14	M	15	E	16	X	17	A	18	S	19	N	20	V	21	A				
17	H	18	M	19	E	20	N	21	E	22	Q	23	E	24	V						
19	T	20	I	21	M	22	I	23	N	24	G	25	E	26	N	27	V	28	Y		
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26	H	27	T	28	H	29	R	30	E	31	E	32	O	33	E	34	S				
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32	U	33	P	34	Y	35	T	36	R	37	E	38	E	39	A	40	H				
35	S	36	U	37	B	38	A	39	R	40	I	41	R	42	X	43	I				
39	E	40	S	41	T	42	I	43	M	44	A	45	T	46	E	47	D	48	I	49	N
43	H	44	U	45	I	46	M	47	P	48	E	49	S	50	S	51	X				

- The solution to your Xmas xword, surprising how many of you could not wait two months for the solution and wrote in for it !

- Aerial configurations for use on Top Band ,160m , as in use by by Colin Sinott with his S.640 and two external aerials a 75 foot random wire & a 250 foot long wire.



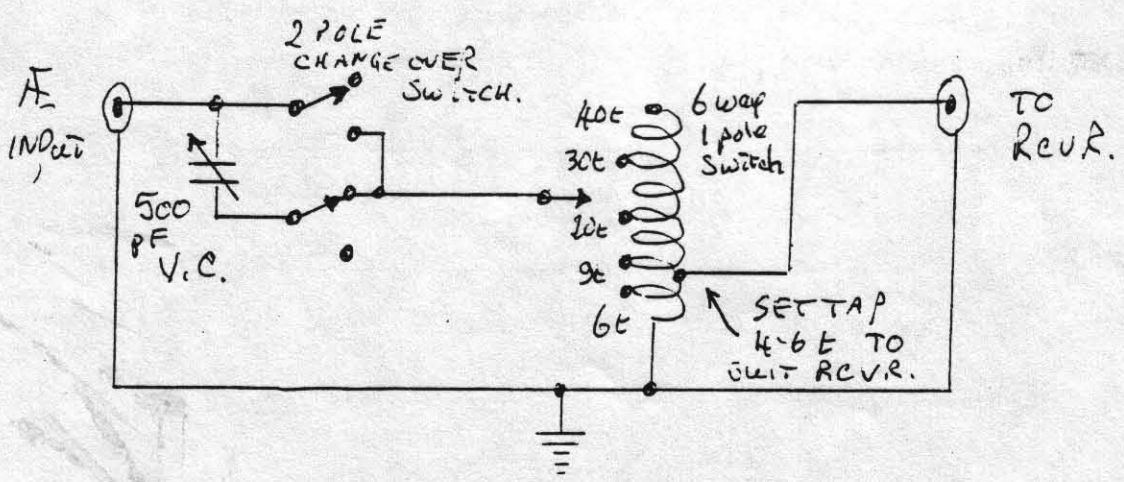
8/



- Semiconductor substitution for full wave valve rectifier circuit. The diode shunt condensers should be high quality 0.1 mF with a working voltage of at least 600. Polystyrene type preferred do not be tempted to omit these nor the 150 ohm resistors.

- ATU circuit from Steve Tibbitt, used with success from 500 Kc/s to 30 Mc/s with either a 50 foot random wire outside or a 20 foot loft mounted wire.

The whole ATU is best built in a metal or at least a screened box. Plastic box with RFI screening spray on coating as used on computer cases is okay.





-READERS LETTERS. -

- Queries re the 840C, the two high value resistors in the aerial input circuit, each 2.2 megohms, are for static drain to eliminate the 'raindrop' effect which is so common when a long external aerial is fed direct to a high impedance input with no direct path to earth to prevent voltage build up.

The high value, 2.2 megohm resistor which goes directly from the anode of V7 the output valve, back to the anode of V5 the AF amplifier valve, is negative feed back and this does help reduce any tendency for reproduction of remanent mains hum from the half wave rectifier circuit. The 500 pF from the anode of V5 to earth does in effect form a selective feed back filter in conjunction with the 2.2 megohm resistor.

The so-called RF gain on the 840C is in fact a combined RF and IF gain control which operates on both V1 and V3. I have seen a mod done on several receivers where the V3 cathode is removed from the RF gain circuit and taken to chassis so giving fixed IF gain and pure RF gain control, I don't consider that this is either desirable for operating purposes nor is it a 'selling point' to do mods such as this.

The length of 'cord', or drive wire, which is needed to renew the drive on this model is a recommended forty four and three quarter inches but it is far easier when doing the job to leave the 'cord' slightly longer and then cut off the extra before terminating the extremity. Make it a full 48 inches seems to be good length.

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- Queries re the 888A, when using a high impedance long wire or similar aerial directly into the low impedance input of the 888A this reader experienced several instances of spurious signals from strong signals in the 80 metre band. The cure was to use an atu to match the high impedance aerial to the low impedance receiver input. Another possible but less satisfactory cure would have been the addition of a series capacity of low value, say 10 to 15 pF between aerial leadin and aerial terminal.

This member asks re use of his 888A with a roof mounted 16 foot whip, as is this might just be an approximate quarter wave on 29 Mc/s, on all other bands it would need to be used with an atu to match the aerial to the Receiver, at the very least a variable series loading coil would be advisable.

A query as to why no arrangement is made on

the 889A for adjusting the gain to take into account the loss of gain experienced when switchin<sup>g</sup> in the AF filter ? What loss ? if the AF filter and BFC are correctly matched then the 'loss' you mention should be less than one decibel ! The human ear cannot notice a one db change in signal strength, so the answer is that no arrangement is needed.

The 'S' meter on my 680X never tallies with the 'S' meter on my Yaesu receiver which is right ? I remember two amateurs nearly coming to blows at a rally some years ago, one saying that 'so & so' had been 'S9 plus' for him whilst the other called him a liar saying that 'so & so' had never been more than 'S5-6' for him. Lets get it straight once and for all the so called 'S' meter is really no more than a comparative carrier level meter. Comparative must be the operative word here, since at any one time and place, the strength of the signal carrier as indicated by this meter will depend upon so many different variables, e.g. - QTH position , type of aerial , matching of aerial into the receiver, meter scaling method, correct setting of zero on meter, operators interpretation of the meter reading, possible parallax error if he is not sat in front of the meter. See why 'S' readings can never be anything more than a comparison ?

If the selectivity of the 680X is varied mechanically then what is the purpose of the resistance capacity network brought into use on the narrow selectivity position ? Think ! on the widest position then this model is capable of reception of good high quality broadcast signals with an almost flat response from 50 c/s up to 10 Kc/s. On the narrow position this wide frequency response of the audio stages is not needed since the highly selective I.F stages will only be interested in a narrow audio bandwidth. For this reason the wafer at the front end of the switching mechanism brings into circuit a 'top cut' R/C network which causes audio r sponse to tail-off from about 2 Kc/s so that at 4 Kc/s the A.F stages response is already about 3 dbs down.

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- A JOKE FROM BRYAN MARSH, NEW ZEALAND. - Why do the lights go dim in Waterfoot at certain times ? Because Ted Moore is firing up his collection of 'hollow state' Eddystones all at the same time. ( Sorry Bryan for wrongly attributing the Eddy-stone lighthouse item in issue 9 to Ross Paton, at least I did get the right country !

-----



11/

- Featured Receiver, the EB35. -

- This 'baby Eddystone' is a mere six by seven by twelve inches and a real lightweight compared to the normal sized models. Designed as a high performance broadcast or cabin receiver with long, medium, short and FM bands, six ranges in all, coverage is 150Kc/s to 22 Mc/s and 88 to 108 Mc/s. The typical sliderule dial with its usual logging scale and inset dial is clearly marked with coloured lines to show the ,then, limits of the various amateur, marine & broadcast bands. A silky smooth flywheel assisted drive system as on its big brother models is a delight to use, especially on the higher frequencies, the stability is especially good and listening for 45 minutes to HCJB I had no need to retune throughout this period. Switching off and then on a few minutes later I was still on frequency. Various power supplies are available for this model from a battery box to hold 6 'D' type cells, a 12/24 volt in and 9 volt out convertor for mobile or marine use, or a standard 120/240 volt mains unit. All fit recessed into the back of the receiver case. Technically now, the bands are

- |                      |                     |
|----------------------|---------------------|
| 1. 8.3 - 22 Mc/s,    | 2. 3.5 - 8.5 Mc/s.  |
| 3. 1.46 - 3.7 Mc/s,  | 4. 0.55 - 1.5 Mc/s. |
| 5. 0.15 - 0.35 Mc/s, | FM. 88 - 108 Mc/s.  |

The FM band uses a separate tuner unit but the same tuning drive system. On AM the IF is 465 Kc/s and on FM it is the now standard of 10.7 Mc/s. A total of 13 transistors and six diodes are used with two of the transistors being located in the FM tuner. On AM the line up is two RF amplifiers, the second being also a mixer stage, a local oscillator whose output is fed back to this mixer stage and thence to two IF stages which are also common to the FM chain. A diode detector on AM feeds the five transistor audio stages, these driving a built in 5 inch speaker or phones. On FM the output at 10.7 Mc/s from the tuner is fed to the first IF stage which is unique to FM, then to the two common IFs and a discriminator the output of which is switched to drive the audio stages as with AM. An interesting system for the aerial inputs has A1 for normal AM using a random wire, A2 for AM or FM use with a short whip aerial. This bypasses the first input tuned stages on AM and will arguably give somewhat less selectivity on HF. The A1 can also be used with AE, normally taken to earth, as input for a doublet or dipole. A separate 75 ohm coax input is also provided for FM. The Audio amplifier section may also be used alone and a break socket is fitted to input audio signals whilst disconnecting any RF signal. A low level audio output is available here for use with a tape recorder or data decoder, I have used this to drive a

RTTY decoder quite successfully. For battery economy the two dial lamps are operated by a momentary, push on switch. Since this first generation receiver uses germanium transistors it has a positive earth circuit, something to be remembered when servicing or operating mobile. Being basically a 'broadcast' type receiver there is no BFO fitted, this said I have come across a fair number which have had BFOs built in later. Since 1969 only very few bugs have shown up, after nearby thunderstorms both TR1 and later on TR11 have had to be replaced. A case of static discharge since no external aerial was in use. On later versions two back connected 1N4004 diodes are fitted across the aerial input connectors. Low battery volts from dry cells can cause audio distortion and on FM no operation at all. Low audio output can be caused by whisker growth in the transistors, no need to replace just isolate the cases from chassis. The stated spec is as follows, sensitivity of 5 microvolt for 15 db S/N on ranges 1 to 3, and better than 15 microvolt on ranges 4 & 5. On FM it is 20 microvolt at 22.5 Kc/s deviation for a 20 db S/N ratio. Selectivity on AM is 5 Kc/s at 6db points and 25 Kc/s at 40 db points. Spurious responses are 50 db down at 2 Kc/s and better than 15 db at 18 Kc/s. IF breakthru' on AM is between 65 and 85 db down. On FM the image ratio is better than 25 db and IF breakthru' better than 50 db. AF output is 750 milliwatt to the 5" speaker or an external one. Response is level within 6db over the range of 100 c/s to 10 Kc/s. Aerial impedances are 75 ohm for FM, 75 ohm balanced or unbalanced on ranges 1 to 3 and nominally 400 ohm on range 4 & 5. A block schematic is included in this issue. The Yark II is basically the same circuit but has a more linear tuning scale, the Yark III is a different animal being negative earth chassis, using an IC for IF and AF functions, all silicon devices. This will be dealt with in another issue.

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 - Colour Codes. -

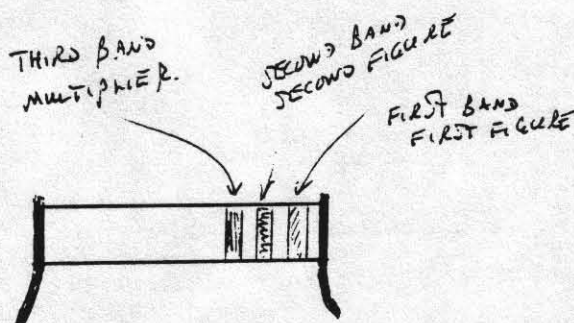
- These seem to change with the seasons having gone from a basic three colour body, end, dot system to a three, four, five or even six band code. latest miniature resistors, and condensers, have no code but are marked with the value, shades of Philips in the 30s & 40s, even newer surface mount types have no marking whatever on the component, it is marked only on the packing material! For our hollow state models we are concerned with little more than the first three colours, the resistance value, and whilst to most of us reading these is second nature it can be confuddling for newcomers. One must also be on the look out for wrongly marked components. Resistors bought in bargain bags at rallies should be metered before use. Not unusual to



find them out by a factor of ten ! For those neophytes the colour code as they need to know it is shown here:-

<u>COLOUR.</u>	<u>1stFIGURE.</u>	<u>2nd FIGURE.</u>	<u>MULTIPLIER.</u>
BLACK	0	0	-
BROWN	1	1	10
RED	2	2	100
ORANGE	3	3	1000
YELLOW	4	4	10K
GREEN	5	5	100K
BLUE	6	6	1M
PURPLE	7	7	10M
GREY	8	8	100M
WHITE	9	9	1000M

So that a resistor with a red body, purple end and yellow dot will be a 270,000 ohm or 270 kilohm. If marked with bands the first band nearest one end would be red then the next a purple band and the third band would be yellow. Refer to the diagrams below.



- An 830/S on RTTY. -

- Both my 830 and my EA12 perform well on RTTY and AMTOR if a suitable warm up and stabilising period is allowed them. It is assumed when the above statement is made that the VR150/30 is in good condition and is doing its job. I do know that at Hanslope park these were run on continuous use, 24 hours, and used on RTTY circuits as well as the more esoteric piccolo system. This is a multiple tone system and can be still found on HF today. Having several types of decoding terminals to try out with the 830/S, a Tasco 675, a Pocom AFR 2000 and a FAX1 I have been able to run tests on various types of signals. The terminals are usually used with modern solid state receivers and their performance is well known. First off was to power up the 830 and leave it to attain a thermally stable condition, I usually take 20 minutes to half an hour as sufficient for this. It was tuned to YSF and after a suitable period when drift had all but stopped I coupled up the FAX1 unit and was able to copy FEC on the 518 Navtex channel over several hours

14/

with no difficulty and only one slight reset with the IF tune facility  
Next was amateur RTTY on 80 meters but the shortish QSOs were no good  
for long term stability checks. A French Navy station which churns  
out test tapes for hours on end was found on about 4.2 Mc/s and  
this was then copied for almost two hours with ease, no touch up  
being needed to the tuning. Pass, up around 17 Mc/s with a test tape  
and frequency sked, was a good signal and again good long copy was  
made from this signal. When the station went over to a permanent  
mark at the end of its broadcast I left the 830 tuned to zero beat  
and over three hours later the drift was so little as to be in the  
80 to 100 cycles range. One member who now uses his 830/9 for RTTY  
was at first unable to prevent drift and frequent retuning was nec-  
-essary, the eventual cause was found to be a stabilised supply which  
was not only not stable but was hovering around 165 volts ! Used  
with my AFR2000 results have been just as good with various types  
of signal being resolved and held easily. The experiment has proved  
that the 830 series can be used quite successfully on RTTY and other  
similar forms of telegraphy and mine is now quite often used with  
the Tasco decoder which has a built in printer, to monitor the main  
news agency broadcasts. Allen Pately.

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- 2 metres with Eddystone. -

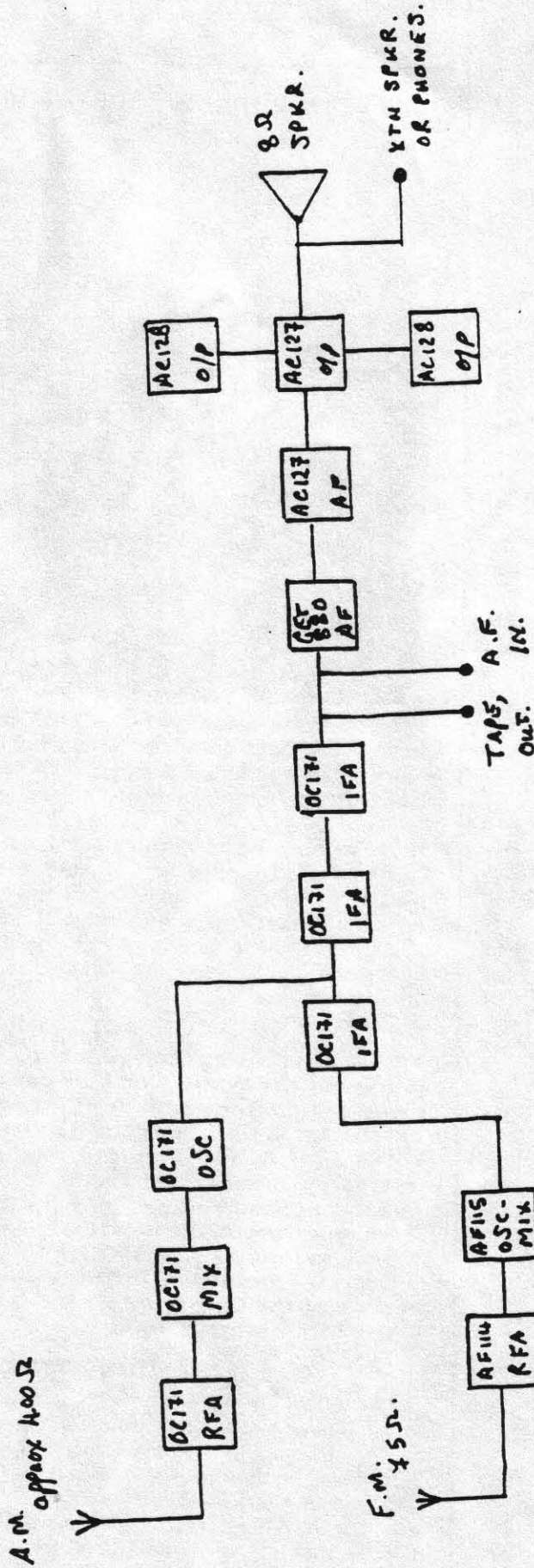
- Carl Rainer has a 1950s Eddystone 2metre, 4 element beam mounted in  
the roof space of his home, this feeds a 4 valve 2 to 10 meter convertor  
which is straight out of an Eddystone Short Wave Manual and uses the  
EF50 series of valves, Eddystone type tuning assemblies are used in two  
stages of the convertor which feeds his 888A receiver. despite the age  
of this equipment some good results are still possible.

-----  
- Pat Martindale writes to say he has an EC10 and a 750. His listening  
is mainly to marine & airband stations , some good stuff on USAF & RAF  
long haul flights. Being on the coast near a Rescue coordination centre  
he gets some good listening on MF too. He wants a featured receiver  
bit on the 750, it's on it's way Pat , be patient.

-----  
- Charles Whistlecroft of Droitwich writes that he has an 830/3 and an  
830/9. This latter minus the Piccolo filter, Arent they all ? but as he  
suggests no reason for not fitting a normal Narrow CW filter. Maybe he  
will let us all know the results when the job is done.  
-----



# ALL GERMANIUM TRANSISTORS.



(POSITIVE EARTHED!)

OPERATION 9 VOLTS NEGATIVE SUPPLY.

P.S.U. 924 GIVES 9 VOLTS FROM 24VOLT SUPPLY.

P.S.U. 945 " " 240 " "

MK II IS DIFFERENT CABINET + STYLING ONLY.

- 0 2 5 4 MK II

## Let's Keep the Pirates

You have published many letters and articles in your pages against Pirate radio stations. One of the more recent letters dealt with the shortage of medium-wave channels. Has anyone ever looked to see how many channels are allocated to this country and how efficiently they are being used? It seems to me that using nine channels for the Home Service alone, is not doing things efficiently. Surely by using synchronised transmitters on one channel, we could release eight channels at once for other services. Any regional variations, few and sporadic as they are, could be accommodated on v.h.f.

The public has proved the demand for what the Pirates are providing. Why not let them provide it from land-based stations using channels already allocated to the UK?

R. E. Tinson.

Wilford,  
Nottingham.

## Comments from New Zealand

This is a somewhat belated reply to H. C. Pryse who wrote in the December issue of PRACTICAL WIRELESS, concerning his inability to obtain spares for his H.E.30 receiver. The Lafayette brand name is only one of many names used on this receiver which is made by the Trio Corporation, 6-5 Ichome Shibuya, Shibuya-KU, Tokyo, Japan, to which he may care to write.

Many amplifiers and receivers which are sold in the USA with American names on them are made in Japan and as to Mr. Pryse's inability to receive a reply from the Lafayette Co. I am in full sympathy with him. I find there are quite a few British firms including advertisers in PRACTICAL WIRELESS who do not answer my letters when I request information or catalogues. I get the impression that British firms are not interested in overseas orders!

S. Burrage.

Auckland,  
New Zealand.

## Ease of Pronunciation

There has been a certain amount of controversy over the last few months on the subject of changing cycles to Hertz. I personally do not care one way or the other since it is just as easy to write MHz as it is to write Mc/s.

The point that seems to be overlooked is the pronunciation of the new term. For example, Mc/s and kc/s are usually pronounced "Megs and and Kay-cess". The new terms MHz and kHz will now, I suppose, be pronounced "Megger hurts and Killer hurts".

V. E. Green.

Rudditch,  
Worcestershire.

# NEWS AND

## EDDYSTONE RADIO FOR "EDDYSTONE" LIGHTHOUSE



The Eddystone Lighthouse has been presented with a transistorised receiver by Eddystone Radio Limited. This new receiver type EB35 will provide the lighthouse keepers with high quality reception on all the broadcasting frequencies in the long, medium, short and f.m. wave bands.

The receiver was presented at the lighthouse by Mr. A. C. Edwards, Director of Eddystone Radio Limited, and accepted, on behalf of Trinity House, by Principal Keeper Emerson. Mr. Edwards is seen here with Principal Keeper Emerson (centre) on the afterdeck of the Trinity House vessel *Stella* as the receiver was being delivered to the lighthouse. The Eddystone lighthouse and Smeaton's Stump can be seen in the background.

## "CONTACT" FOR THE SWL

We have recently received a copy of "Contact", the monthly journal of the World Communication Club of Great Britain. It gives useful information for the SWL and contains articles of a nature that would also appeal to Hams.

The aims of the Club are: to interest more people in the international aspect of radio; to provide fellowship to all interested; to encourage and help DXers in their hobby and to learn more about the world we live in through the medium of short wave radio.

If anyone would like further information and details of membership of the Club, contact Mr. S. Green, 26 Tolhouse Street, Great Yarmouth, Norfolk.

## ST. DUNSTAN'S CALLING

On Saturday, 8th April, a new callsign was heard on the amateur bands, GB3STD. This was the temporary callsign allocated to St. Dunstan's Holiday Home and Training Centre for men and women blinded on war service, when they held a weekend reunion of war-blinded radio Hams at their centre at Ovingdean near Brighton. The station was equipped with the very latest in amateur radio equipment. They had as their host, Lord Fraser of Lonsdale, St. Dunstan's Chairman who, despite his blindness, was one of the pioneers of amateur radio.

P.W. June - 67



- S.640 Prices. -

- Just a few comments from Pat Hawker, G3VA, to E.U.G re the original new prices for the 640. Most adverts that we see in the various magazines of the era give the price of £27.10.0d what does seem a fair price as things were in those early post WW II times. However Pat remarks that in fact when first put on the market the 640 was priced at £51.11.0d as purchase tax had been added to the price. Some time later it was realised that communications models were not subject to purchase tax and this was removed. No doubt sales of the 640 soared at that time !

-----  
- Hanslope Park. -

- This, the station for the Diplomatic Wireless Service, was first opened in 1942. At this time the receiving equipment was almost entirely the , then, ubiquitous HRO. In the R.A.F whilst I was in this was considered to be one of the most anti-social receivers we had. Reason being the massive amount of local - oscillator extraneous radiation. Local 'cross-camp' QSOs were often set up keying the H.T of the HRO and coupling the local oscillator to the aerial ! Memories of Ismaelia!

- When last visited by the member who wrote in,Hanslope Park in the late 1960s,was using Eddystone receivers coupled with Marconi synthesisers for the Piccolo circuits, these would no doubt have been the 830/9 which has the necessary switching circuitry for use with external synthesiser equipment. I do wonder whether the synthesisers were in fact Eddystone made but badged Marconi, as was so much stuff produced at the West Heath factory around this time.

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- Hi Fi Phones.-

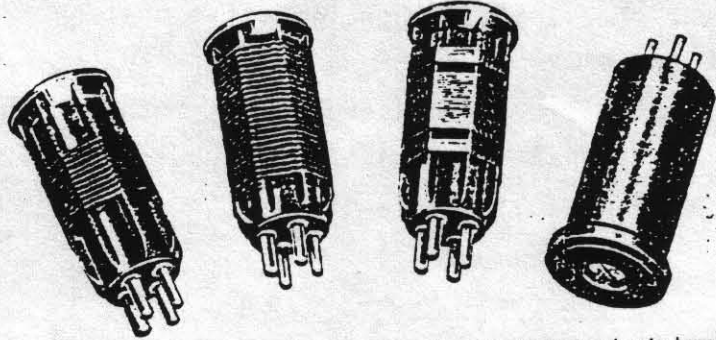
- A comment from Ray Baxter to the effect that if you do want to use these low impedance type phones with your valve receiver then try using them from the loudspeaker terminals instead of the phones socket. This will ensure a closer match between receiver output and phones. It will not however help in reducing the tendency for the Hi Fi phones to reproduce all the noise which would be filtered out in the mechanical design of 'communications' type phones.

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181

# EDDYSTONE

## Miniature Plug-in Tuning Coils



**Cat. No. 706.** A range of high quality tuning coils, with four pin plug-in bases. The coils are wound to close tolerances and are designed for use with modern valves and circuits. Three windings are provided, the connections being indicated below. The coils are colour-coded for quick and easy identification. Overall length  $2\frac{1}{2}$ " Dia.  $\frac{7}{8}$ ".

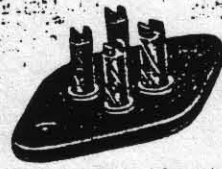
The first three types (Blue, Yellow and Red) are wound on a ribbed moulded former, the inductance being fixed. The four lower frequency types (White, Pink, Green and Brown) are wound on a former fitted with an adjustable dust-iron core, the winding being enclosed in a protecting shield. Movement of the core will affect the inductance value, hence the figures given can only be approximate.

The tuning range stated is obtained with a variable condenser of 140 pF maximum capacity. The Cat. No. 586 (see page 8) is recommended for this purpose.

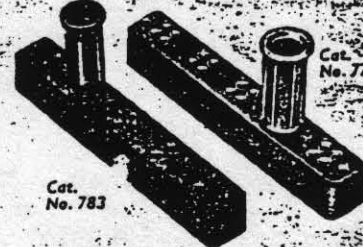
PIN CONNECTIONS VIEWED FROM FREE END OF PINS.



Coil Type	Frequency Coverage	Inductance Tuned Winding	Price
706/LB Blue	33 — 15 Mc/s.	65 uH	4/3
706/Y Yellow	16 — 6.7 Mc/s.	3.45 uH	4/3
706/R Red	7.5 — 3.1 Mc/s.	17 uH	4/3
706/W White	3.3 — 1.35 Mc/s.	90 uH	5/3
706/P Pink	1.4 Mc/s. — 720 Kc/s.	300 uH	5/3
706/G Green	750 — 300 Kc/s.	1.65 mH	5/3
706/BR Brown	370 — 150 Kc/s.	6.5 mH	5/3



Miniature four-pin Socket, of special insulating material, to take the Cat. No. 706 Coils listed above. Ample clearance is afforded with a  $\frac{1}{8}$ " hole in the chassis. Two fixing holes ( $1\frac{1}{8}$ " apart) to take 6 BA screws.  
Cat. No. 707 ... .. 1/9



Cat. No. 775  
Cat. No. 783  
**Coil Stand**  
Of polished black bakelite, to take up to five spare 706 coils. Provided with holes for screwing down.  
Cat. No. 775 ... .. 2/6





- Thanks to the many members who are sending in copies of their Eddystone Catalogues and Short wave manuals the newsletters will be including articles and circuits from the past. Valve type convertors and simple receivers built from mainly Eddystone components. Possibly even the odd circuit for a transmitter. There is a wealth of interesting articles and circuits in these publications and one member does get a lot of pleasure from building these circuits and using them some fifty or more years after their original conception. The following simple Pre-selector is just a beginning.

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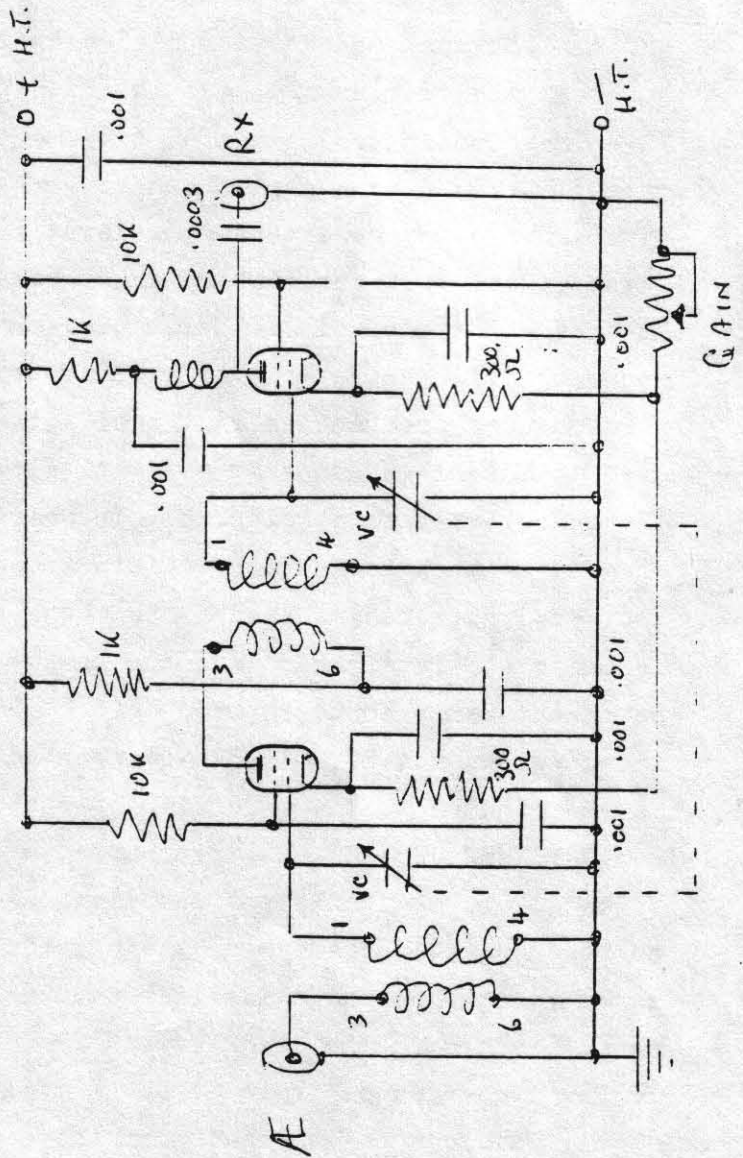
- Two valve Pre-Selector. (Short Wave Manual, No: 5) -

- Whether used with a straight or superhet type of receiver the pre-selector will provide just that extra amount of gain to bring the almost inaudible signal up out of the noise whilst giving the extra adjacent channel selectivity needed on today's crowded bands. With a superhet the problem of image interference will be all but eliminated.

- The circuit uses two EF39 type pentodes and using the coils type 6LE, 6BB & 6R a continuous coverage from 3.5 to 32 Mc/s is given. Range may be extended to lower frequencies but unless you are using a very poor aerial the advantages of a pre-selector will be much less. The Eddystone full vision dial can be individually calibrated for each coil used. Variable gain control is fitted and on at full gain on some frequencies self oscillation will occur. This can be used to advantage since at or just below the threshold of oscillation the selectivity is considerably increased. The pre-selector is built on a diecast chassis which in turn is enclosed in a metal cabinet. Two metal screens are needed one above chassis and one below. Wiring is quite straightforward and the use of small tagboards enables some component parts to be mounted before these tagboards are fitted in the chassis. C4, R2, C3, R1 are mounted on a five way tagboard which is then bolted to the underside of the chassis close to V1 valve holder. Similarly R4, C6, C7, R7 are mounted on another tagstrip which is then fitted close to the V2 valve holder. See the diagrams. The other small components are suspended on their leads. The lead between the anode of V1 and the second coilholder should preferably be a short length of co-ax, as should the lead between C9 and the output socket. The two EF39 valves need 6.3 volt at 0.6 amp and an H.T of about 250 volt at 15 mA. This can be obtained from the accessory socket on some models or a separate small PSU can be made up, a circuit is given. A screened lead must be used from the output of this unit to the aerial input of your station receiver to prevent extraneous pickup.

Components List.	Catalogue number.	Components list.
1 diecast chassis,	Eddystone no; 615.	2 EF79 valves.
1 small metal case,	.. 644.	2 octal valveholders.
2 6 pin coil bases,	.. 961.	1 2 gang 100nF condenser.
2 6 pin coils, 6BB,	.. 959.	2 co-ax sockets.
2 .. .. 6LB,	.. 959.	2 co-ax plugs.
2 .. .. 6R,	.. 959.	2 5 way tag boards.
1 RF choke,	.. 1010.	1 3 way tag strip.
2 midget insulators,	.. 1019.	2 1 way ..
1 full vision dial,	.. 598.	7 mica .001 mF.
1 skirt knob, 1 3/4",	.. 2416P.	1 .. .0003 mF.
1 flexible coupler,	.. 1009.	2 300 ohm 1/2 watt res;
		2 1 Kohm 1/2 .. ..
		2 10 Kohm 1/2 .. ..
		1 10 kohm pot;

COILS USED IN ORIGINAL WERE  
 # 6LB, # 6BB, # 6R,  
 10M. 10M, 15M. 30M.  
 20M. 40M. 80M.





- New Years resolutions. -

- Issue 11 is the first of 1992, EUG has come a long way since our first seven page issue. The bumper issues of today are due in a large degree to the enthusiasm of members throughout the world. It is a rare week when we do not get a large and bulky envelope from somebody, containing a pile of photocopied or original Eddystone stuff for the newsletter. If you do send originals, bear with Kathy and I, you will get them back but our time is limited. Some come from the UK others from as far as Australia or New Zealand. If we happen to attribute something wrongly please excuse it, regulars are Tor Marthinsen of Norway, Bryan Marsh and Ross Paton of N. Zealand. The Eddystone related ephemera will be sorted and eventually will be used in the newsletters. There are several items of Eddystone past products which EUG and several members are trying to get info on. The one that is of interest also to the Eddystone Company is the VHF R/T equipment which was apparently of Stratton Co manufacture and was used in the 'D' day landings. Several publications do document this equipment but no details can be found. Can anybody help here? The second item most mentioned is the 'yacht' receiver for small boat use which had dial markings for Time signal stations, and for Nav aids. The most peculiar model is the one described as 'A battery operated receiver with pressure drive horn loudspeaker for communal listening out of doors, in tropical conditions.' A note in W.W. of October 1950 mentions the last two. If you can help out with info on any of these, or in fact any unusual Eddystone model then do share your knowledge with all of us. Ross Paton is trying to get replacement wafers for the selectivity switch on his 680/2, can anybody help us? You can let EUG know and we will pass the info on.

- As all members will know the P.O in its wisdom decided that we were not paying enough and so last year increased the postage rates, it does mean that we will have to put subs for next year at £9.00 for the U.K. The subs for Overseas members have up to now been subsidised by us, as you will see from the stamps on your newsletter envelopes. As overseas membership has increased considerably this subsidy has become too onerous and so their subs will have to go up to cover the true cost of postage and newsletter. Sorry about this, and thanks to those of you who have noticed already and sent extra to cover extra costs.

- Many thanks to all of you who have written to say how much you do appreciate the newsletter, it is what you make it remember and if your item is not in straight off be patient. Kathy & I do try to please.

- RADIO RELATED READERS ADS. -

- WANTED,- transistorised Broadcast model, e.g. EB35, EB36, EB37, call Peter on 0372-454381. (Surrey.)
- WANTED,- either model EC10 MkII or EC958 , please contact James Reilly, 9 Churchill Crescent, Ballymacconnell, Bangor, N Ireland, BT20 5RN.
- WANTED,- model 830/7 or later (/8, /9, /12,). Sensible price please, Jack Read on 0270-67059. (Cheshire).
- Wanted by EUG, info on the 659/670. Have info on 659 and on 670 but what are the differences between these two and the hybrid 659/670 ?

FOR SALE - SILENT KEY OLD VALVE SIGNAL GENERATOR (TAYLOR ELECTRIC INSTRUMENTS), MODEL 68A1M. OSCILLOSCOPE - MARCONI, SENSIBLE OFFERS PLEASE. Dobson TEL. NO. 0270 81132, QUOTE EUG.

- WANTED, - dial glass and escutcheon for model 840, also dropper resistor for same model. James M Thompson, 2 Wilton Hill, Hawick, Roxburghshire. TD9 8BA.
- WANTED, - EC10 Mark II and Eddystone round speaker, will swop for my Avo Valve Tester and Sig; Generator, with manuals, which are for sale at £25 each, Bill Gibson, 180 Castlemilk Rd, Glasgow, G44 4NS.
- WANTED,- by EUG, the schematic of the 659/670. We do have that for the 659 and that for the 670, but not the one for the hybrid model, can copy and return.

WANTED - MODEL EC10, WOULD ALSO BE INTERESTED IN EITHER EB35 OR EB36. FLYNN, GARDEN FLAT, 97 COTHAM BREW, COTHAM, BRISTOL BS6 6AS

WANTED: EDDYSTONE LOGO FOR MODEL 659, ENAMELLED LIGHTHOUSE TYPE, OR SCORCE FURONE. JONES 10 DENBIGH ST. LLANIVRIST L16 6DL

Early payment of Year 3, subscriptions will help us and you, by ensuring continuity of the membership mailing list here and for you , that you get your newsletter with no delay. The first of Year 3, will be issue 13, it is hoped that a newly updated model listing compiled by EUG member A.R Clayton will be ready to go out with issue 13, special thanks to him for his work in compiling this list from EUG notes, and thanks also to Richard Baker for his invaluable help in putting together the list. So many members have written in expressing their appreciation of the last Listing that it looks like this is going to have to be a regular thing.

Kath & Ted.

PS.

WANTED: MAINS TRANSFORMER FOR TSC OR INFO RE AROUND COMPANY. CONTACT ROB MANNION EDITOR PRACTICAL WIRELESS ALSO INTERESTED IN BUYING EPH12 AT A REASONABLE PRICE