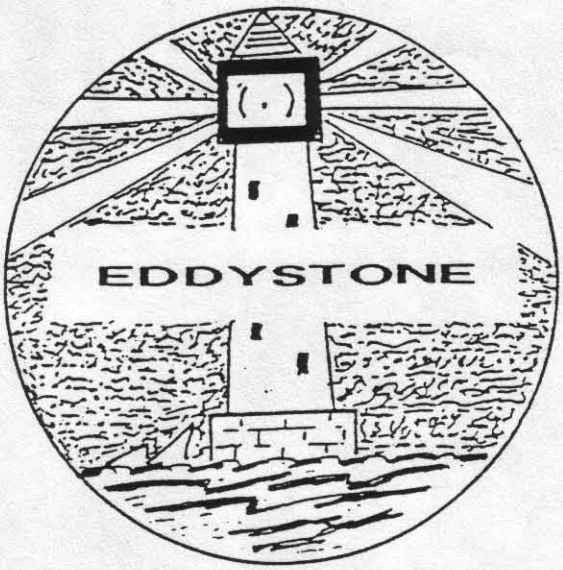
(13)

ALL-WORLD "8"

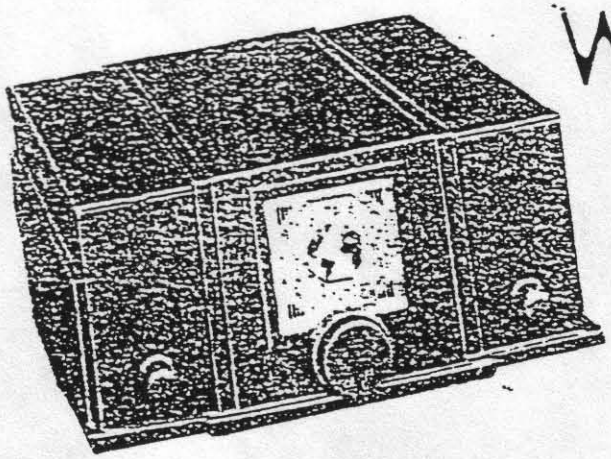
Eddystone User Group



Newsletter

Issue No.-13.

Featured Model,- All World "8".



- A NON PROFIT NEWSLETTER FOR EDDYSTONE USERS.
- INFORMATION QUOTED FROM EDDYSTONE LITERATURE BY KIND PERMISSION OF CHRIS PETTITT, MANAGING DIRECTOR OF EDDYSTONE RADIO LIMITED.
- PLEASE ADDRESS ALL MAIL:-

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- Issue 13.-

- Well this issue may have an unlucky number but to EUG it is a lucky issue, the first of our Third year. Kathy and I are still a bit shaken at the way the Group, like Topsy, just grew. Most of the founder members are still with usand even more enthusiastic than at the outset. Progress to the 20 odd page newsletter of today from issue 1 with 7 pages, has not been easy. The newsletter began as my own personal thing, but not for long. The rapid growth of membership meant that Kathy had to be co-opted into the role of secretary cum treasurer, plus any odd jobs that come along. Quite a lot of the items that come in from members have to be retyped & will eventually find their way into future issues. A big thankyou to all who have done, and are still supplying info on Eddystone products, magazines, adverst, booklets, photos etc; keep it up. Richard Baker especially has dug into his files on several occasions & the featured receiver in this issue, the AW 8, is from a magazine review which he sent. This seemed a nice way to start year 3 and it is a good example of how Eddystone quality has been built into products right from the start. For the 6 newsletters a year the annual subs are not excessive, when compared with other similar groups. No profit is made, nor is any expected, cost of overseas postage is excessive, luckily most of them realise this and send a bit extra. The one thing that knocks us back into the red is the postage when we have to carry on prolonged correspondence with a member who omits to send stamps for return postage. We were very lucky over the badges in that Chris Pettitt was able to help us out with the cost, result is that they have, and still are, selling well with some members buying two each. One for each jacket as Colin says. A matter of interest to many of you are the period adverts relating to Eddystone products, by far the majority of those writing in do like them. Not everybody has a stack of back issues of SWM & WW to pore over for Eddystone ads. One member says he would prefer more text in lieu of such ads, well we have a long way to go before the newsletter gets to the 54/46 split of ads to text as in current copies of PW.

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- Just to answer a few of the queries we get in the mail, -

Yes you can use anything from the newsletter in your club newsletters, no need to ask.

Yes you can send in any item for use in the newsletter if connected with repair, restoration, or just experiences with

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Eddystone products, mind you it may not be in next issue, be patient with us.

Yes you can send in as many free ads as you like related to radio equipment. Sometimes rather than put the ad in I may simply contact another member who is already asking for that item, quicker for both of you. For that reason I keep a list of 'Needs' as your ads come in.

Yes - we can often help you by mail with that fault or spares location problem, we have plenty of manuals, thanks to the Eddystone Company and people such as Richard Baker, do specify the model and suffix, even the serial number. Don't forget postage as mentioned on previous page.

Yes we can supply back copies for year 1 & 2, same cost as sub for that year.

No EUG has not got any Eddystones for sale, sorry about that. Best thing is to try the rallies as they come to your area.

No - I cannot personally do any repairs for members, the 24 hours in a day are not enough as it is for Kathy and I to deal with the newsletter. Why not put an ad in the newsletter asking for a member who does have time to spare ? Who knows but that the chap at the end of the road may be a covert EUG member, one member wrote in to tell of his surprise at seeing the lighthouse logo badge being worn by a local school teacher he has known by sight for many years, they are now good pals.

Spares, - well as I said local rallies or club meetings are a good source. Also Harold Turner of Centre Electronics usually manages to find something. He even has the occasional Eddystone receiver for sale. The address is 345 Stockfield Rd, Yardley, Birmingham. Phone is 021-706-0261.

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- Noise off, Country style.-

- Living in the country can be a plus if you want to have QRM free listening. Exceptions to this rule do happen and can take a lot of sleuthing to track down. In this case the noise was similar to storm static coming through as crackling on the audio. It was far too frequent and was there at the wrong times for it to be rain static or lightning. The QRM began in about March, was there for s several days at a time then absent. The problem was only solved w when a portable radio was taken into the garden and reception was marred by S9 QRM. The QRM was directional, and could be nulled out, some basic DF work with this receiver brought me to a large patch of nettles which grew close to and under a galvanised wire fence, as it happened an electrified fence to keep cattle in. As the wind blew the nettle tops against the wire the QRM came through loud and clear. Nettle tops at this point were brown and dead. A few quick swishes with a walking stick eliminated the static, a similar patch a few yards away was treated in similar fashion, no doubt a temporary cure until they grow again, but at least I now have QRM free reception on my 840A, and I know where to look next time.

- Literary Interference.-

- Whilst using my EB35 on holiday, from batteries and with a 15 foot random wire aerial, my listening was being spoilt by periodic bursts of crackling reminiscent of a distant thunderstorm. It took a while for me to realise that the interference coincided with my wife's turning over the pages of the glossy magazine which she was reading. It was a warm dry evening and the new magazine pages were producing static discharges as she turned the pages. This could be seen when the light was turned off. My wife was in effect operating an illegal spark transmitter. A check showed that whilst strongest on long wave, the QRM was audible even on 10 Mc/s.

- Cure for Mobile QRM.-

- This member uses an EC10 mounted in his Sierra car. At weekends or on long trips this enables him to do some Short wave listening as opposed to the continuous diet of 'pop' dished out by most domestic stations today. On recent trips he has been able to QAP the Edinboro' Rescue Centre whilst in QSO with an SAR helicopter, both sides clearly audible on SSB and with a 5 foot base loaded

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whip. Severeal problems were encountered and cured before mobile use of the EC10 was possible. Ordinary ignition suppression was barely adequate, extra items had to be fitted to accessories. The worst QRM was from the alternator, a whine which increased in tone as the engine speed increased. Suppression condensers as recommended by Ford did help but the final solution was to feed the EC10 directly from the battery terminals via a length of UHF coax cable, easily capable of carrying the current required by the EC10. An in-line choke wound on a length of ferrite rod and a 0.1 mF bypass condenser at the rx end of the coax was the final step. Reception is now clear of any QRM generated by the Sierras electrics, there still remains the problem of QRM from passing vehicles, a bazooka is the only cure for that.

- Intermittent Fault on an 870A.-

- After 14 years my handed down 870A came down with an annoying & intermittent fault. At switch-on everything was normal and continued so for an hour, maybe several hours. The set then went dead, no HT and no heater glow. Allowed to cool the 870A would come back on, only to expire again as the cycle was repeated. Opening up and checking showed nothing at first, it was necessary to wait for it to 'quit' again. This took longer out of the case but eventually it was found that a jab to the topmost wire of the dropper resistor brought the set back to life. The joint looks good but a careful inspection did show some green corrosion on the wire and joint. The joint was carefully remade, after cleaning, and some 3 months later the fault has not re-occured.

- Transmitters in Eddystone Receivers. -

- Previous mentioned cases of QRP transmitters being built inside various models of Eddystone, viz; the 640, have brought mail from a number of members. I have seen two cases myself a simple crystal controlled ~~tx~~ rx being fitted inside a 640, both used a 6V6M valve but there were differences. In one case the AF output stage of the 640 had been modified and used as the Tx, in the other the Tx unit on a separate chassis had been mounted on the inside of the case lid. One member has written to back up my vague memory of seeing an item in the SWM some years back on this subject. Info received so far covers several models and even includes built in convertors for 5 metres (as it was then), for the newer 6 metres, and for 2 metres. Not only this but also RTTY decoders copied from the ARRL handbook

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of the time. We have letters so far re the following, QRP solid state Tx in a 960, a solid state transvertor in a 640, a 7/14 Mc/s Tx in an EA12, this was a two valve job with lo watts O/P, both an 888A and a 940 with built in 2 metre convertors, again from the ARRL book. These old books are a mine of info on such valve and solid state accessories and can be picked up at most rallies for £2-3.

- Replacements for AF Output Transformers.-

- The difficulty found by some members in getting replacements for a dud output or interstage transfo has been solved by one member. Dick has successfully used small mains transfos in lieu. It was after he had read an article in a QST magazine that he had the idea which has enabled him to get his old valve receiver back on the air. His first attempts were with an old RS type of 120/240 input and 6-0-6 output at 6VA rating. He worked out the impedance ratio of the 120 to 6 volt windings as about 400 to 1, with an 8 ohm speaker this gave him a 3000 ohm load for the output stage. Since the stage in question called for a 4500 ohm load he was dubious at first. The mismatch in the event seems not to make any difference and the set is now working again, some 6 months on the output 'bottle' does seem to be surviving okay. Output is more than adequate and quality is surprisingly good. If oscillation or instability does occur try reversing the primary leads, the addition of a 'tone' or 'shaping' condenser across the primary may help. If hum problems occur then a resistor of between 1.0 and 2.0 Mohm connected from the anode of the output valve to the anode of the AF valve will usually effect a cure.

- SFERICS.-

- One member who has recently done up his venerable 840A says that filling in the white spots on the knobs and touching up a few flakes from the scale was made easy as pie by using 'Tippex' liquid paper, it does dry very quickly so any mistakes must be wiped quickly.

- Can't read morse, can't afford a high priced CW decoder ? Stew has made a mechanical morse 'inker' after seeing one in a 1935s science mag; It is fed from the output of his 830/6, a single tran sistor and two diode interface operates a relay which has a felt tipped pen on the armature. Surplus rolls of ½ inch paper bought at

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a rally for 80p each serve well. Motor drive is a 12 volt one with a built in slow motion drive to a rubber pulley from a tape deck. Simple checks show that 15 wpm is easily copied. The electronics needed is shown in this issue, mechanics is up to your ingenuity.

- An AF output meter for 50p, Jack has made one from a CB type SWR meter bought cheap at a rally. The unit was gutted and a new scale drawn on the back of the original, just a 0 -10 arbitrary scale, sufficient for comparative checks. The box was given a respray from an aerosol to hide the logo and name. All bits not needed went into the junk box, never throw anything away. The meter was re-assembled and tested with a 4.5 volts battery and a 50 Kohm pot; to see that the needle travelled full scale with no glitches. A phone socket was fitted in one hole at the rear, a phono type socket in the other, both were paralled to allow different connectors to be used. The circuit as shown in this issue was built in using sockets and meter tags as tie points. The forward/reverse SWR switch now switches a rudimentary attenuator. Whilst power output readings are purely relative the unit is a great help in realigning receivers.

- Is your Eddystone worth stealing ? with prices on the up and up then the answer is yes, even though the weight of most is itself a deterrent. (have you ever tried to carry an 880 ?). Why not postcode it/them, keep a record of the serial/model numbers, and should it go walkies then let EUG know. It is odds on another member could be offered the set for sale. Having details put in the newsletter could help.

- Correspondence over several weeks with a member who had distorted output on his 940 has finally ended happily. The fault only occured after he had cleaned the set inside and out with turps. Why turps I know not. All components in the output stage were checked by substitution, all the various voltage readings were correct as per manual, even a substitute O/P transfo did not help. Eventually by turning the set around and looking in at chassis level it was possible to see small arcings taking place at the top of the valve socket. With the volume turned down and no output - no arcing. This turned out to be caused by residue left from the cleaning job, a further clean with real RS switchcleaner removed the problem. As a safeguard all the sockets and wafers were cleaned again with the RS stuff, 4 months on the problem has not re-occured.

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- Thermistors as used in our AC/DC models 670/840/870 are nearly always available at rallies if you keep your eyes open. I bought 6 of the CZ1 type at Leicester for a total of £3. Another good buy was a packet of 'old' non-metric wander plugs, £1 for 12. This was only a small part of my take home loot. As usual I had to make several trips to the hospital carpark across the road before calling it a day. Make a list of your needs before you go, but don't say NO to items not needed already, the time will come when you DO need them.

- Difficulty in locating a 2.5/3 ohm speaker to fit in that diecast speaker case ? Why not do as one member suggests fit two thinline 8 ohm types one facing front - one rearwards, connect in parallel and they fit nicely. On the other hand I have used 4 ohm speakers of the 'car' type successfully for years in these cases.

- A sodium street light of the orange variety not directly outside the QTH but some 30 yards away was found to be causing QRM on Colins 960 receiver, all up from MF to HF, past 20 Mc/s. That it was this one was proved by a nighttime foray carrying a model 40A Eddystone set as used by the GPO/DTI even today. At the base of the lamp the QRM was S9, would have been more if I had a ladder. QRM went on and off with the lamp too. A letter to the local council lighting dept brought a reply doubting my technical ability, cast doubt on it being their lamp, and pooh-poohed the whole idea whilst also asking if I held a license for my radio equipment. This latter was outside of their jurisdiction and just 'scare' tactics. I replied by quoting not only my electronics qualifications but also citing my training with the GPO many years ago, and that I had 40 years in the profession. I also suggested that a complaint could be made through the proper channels but that in the event of their being proved responsible I would claim back costs. The lamp was replaced with 48 hours, the QRM is cleared, BUT the lamp remains on day and night now, can't get it all right I guess.

- Just where do Eddystones get to ? -

- Further uses for them, discovered since last comment on the subject, - Used by Austin Rover, formerly BMC, for electrical noise interference checks on car engines., a 770R and a 730/9 now owned by an EUG member.

- An 830/9, a 770S and a 770R II, used by Bristol University

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for Ionospheric studies. I now own the 770S !

- An early 958, owned by the RNLI and in use up until 1989, now owned by a member.

- Falkland Isles, a MW and VHF broadcast transmitter unit built into a containerised transmitter/studio and in use up to at least 1990.

- Orion, type 5000, transceivers in use by wildlife park administration in Kenya, still operational says member who saw them whilst on holiday.

- 990R still in use today at small Yorks; flying school for ATC work.

- 958 turned up in a members collection in the United Arab Emirates, ex the British Embassy.

- 958, the Hagenuk version with german lettering, ex an oil barge in the Gulf area, now in a members collection.

- 358X minus valves found at a local tipand bought from the attendant for £5, seems to work okay but only has 3 coilpacks.

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- CAPEL DEWI.-

- In a secluded Welsh valley, just inland from the coast, is a project funded by the S.E.R.C and jointly carried out by the Rutherford Appleton Laboratory and the University College of Wales. The installation is called the 'MST Apparatus', from Mesosphere, Stratosphere & Troposphere. It is designed to study these 3 layers and became fully functional last year. It is, ineffect, a non-rotating radar installation consisting of a large field full of skyward pointing 4 element yagis, 400 of them to be precise and each one is 5 metres tall. They are set out in a 20 by 20 square grid, 5.5 metres apart. The operational frequency is 46.5 Mc/s and they are wired together as a phased array to provide the gain equivalent of a 120 metre dish. By changing the actual phasing it is possible to alter the aiming point some 12 degrees from the zenith. With a peak pulse power of 120 Kwatts pulses are shot up into the atmosphere at a repetition rate of several thousand/second. In the interval between pulses the array is switched to receive and the echoes are fed to a computer for processing. Naturally to those members with some knowledge of radar it is understood that the time difference between the sent & received pulses will give the height of any reflecting layer. It

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is not this however which is of interest to the Capel Dewi staff. Their interest in the received signal is for any slight change in received frequency, the Doppler effect. This can indicate to them wind speed and any slight broadening of the signal will indicate turbulence. That is it's reason for being, the MST project is to investigate the phenomenon of wind sheer and clear air turbulence. It can pick out with ease the slanting surfaces of weather fronts where warm air coming up from the tropics meets the cold air coming down from the polar regions. The project is expected to yield not only the scientific results but also the more economic ones. CAT or clear air turbulence is, together with the jet stream, very important to air transport, weather fronts are of import to the weather forecasters. What has all this to do with EUG ? and with Eddystone products ? Well prior to the MST system becoming fully operational a number of model 990R sets were in use there, mounted on trolleys, run from accumulators, they were wheeled about during the initial setting up of the of the 'aerial farm'. These came from the Rutherford Appleton Lab; originally and were disposed of when the site became operational and more up to date models came on line. Building has been going on since the 1960s and was completed in 1990 so if you have a 990R or a 770R plus an old Band one TV aerial try aiming it in the direction of mid Wales and upwards, tune around the 46.5 point and you may pick up parasitic echoes of the MST signal, as has Brian in Chester. Best time he says is when there are signs of enhanced VHF propagation.

- Ex Military Models.-

- Not only MOD but also any ex professional models, viz; DWS, MCA, Met Office, will probably have been operated on a round the clock basis for their entire service life. Most passive components will have aged somewhat but the valves will almost certainly have lost some degree of kathode emission. Some of the VHF/UHF models, i.e the 770 series, really do need replacements in the in the first three stages to enable them to function at anywhere near top efficiency. After many years of non-stop power-on use little wonder that some are a little deaf, lacking some of the specified sensitivity. Yet, members do write in re the 770 bargain which they took home, powered up with a bit of wire for an aerial, they write of their disappointment at hearing nothing. Valves are still cheap enough

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but for how long ? So why not re-valve your Eddystone, before giving up and maligning a good set that maybe only needs a little TLC. (tender loving care). A recently tested 730/6 had a measured sensitivity of 25 microvolts when tested as per the manual, on range 1, before any work was done. A new set of valves brought this up to 12 micro volts, replacing a few paper condensers & resistors was the last touch and a final check on the alignment showed only minor 'tweaking' was needed to give a full spec; 730/6, and this after 42 years of life. Models such as 770, 730, 830, 680, & 880 can all benefit from a valve change. It is astonishing to me just how many 30 - 40 years old sets are still operating on the original bottles.

- TEMPUS FUGIT.-

- This member writes 'my venerable old 888 has seen a lot of use over the years since purchased new from Mison's in Swansea, circa 1957. It has had several sets of valves, a number of dial bulbs but no other repairs. After a recent period of non operation, a one month absence from home, it was found that whilst all heaters appeared to be lit up there was no output, that there was HT was shown by the purple glow from the stabiliser valve. First thought had been the fuse but the good VR150/30 disproved my theory. The set had to be taken out of its case and put on the bench, nothing untoward could be seen and so the power was re applied & voltage checks made against the list in the manual. It was soon found that R29 a 47 ohm in the anode of the output was O/C, this was replaced by a 1 watt item, the set came back to life but as soon as I switched on the BFO the glow from the VR150/30 disappeared and output stopped. Checks revealed that C91 a tubular paper type concenser, by TCC, was leaky and gave a 4 Kohm reading on the Avo. (always short out any condenser before putting it across your meter, unless you want to see the needle wrap itself around the end stop). It was replaced and before powering up all other paper types were checked, of some 30 I found that 8 needed swopping . It is intended changing all of them when a stock can be bought. For now my 888 is once more performing well and giving me many happy hours on the ham bands. This after 35 years.

- All the Same under the Skin.-

- The EF91/6AM6 valve comes under many different guises, it can be a CV138, an 8D3 or other depending on who made it, or who it was made for, which service used it. Having known and used this valve since about 1949, in the RAF then at Bletchley Park. Later with Decca in

both Radar and the Navigator sets, still later in TV servicing, and all along in ham radio projects. I have developed a personal preference for the blue tinted Mullard EF91 version. Rarely do they give trouble, whereas the Brimar 8D3 are remembered for their propensity to microphony when used in TV sets. The CV138 from Ediswan also developed this habit after some use, especially if it was a high gain stage. They were okay in switching or low gain applications, such as the RTTY terminal and signal shaping units I used in the RAF. If you have a choice for comms receiver use then by all means go for the blue tinted Mullard variety.

- Costs of Eddystones.-

- I am reminded by a member in the USA that we have an advantage over here. He recently bought a very nice, mint, model 940 for 500 dollars, almost £300. A princely sum indeed. This is only his second Eddystone, he does have a 640 taken home with him after UK service. Another case mentioned is a model 840C sold for 450 dollars Australian. Yet we have a UK member who has just paid £38 for a nice 840C - a bargain that. In the UK the prices of all vintage radios are rising as more people begin to collect them. This is especially so for the valve types but latterly good prices are also being paid for the first generation transistor sets. Eddystones are not so well known to the general public as, say, EKCO or PYE but the dealers are fast becoming aware of their collectability, as they do the prices are going up.

- Webbs Radio.-

- David Taylor, one of our members, has sent in the following account of his days during WW II at Webbs Emporium in Birmin ham. - 'January & being 1942 Birmingham was getting its share of the Luftwaffes attention. Night bombing was the regular routine. The local branch of Webbs was on the South side of New Street close to the corner of Stephenson Place. As a 14 year old I stood outside gazing at the notice, Wanted Shop Assistant. Shortly after the notice was removed and I was told to report for work the following monday. On the ground floor was a small photography dept; run by Jan de Vries and his assistant Kath. Two years into the war, very little equipment, even second hand, was in the shop. The business was living on sales of materiel and on the proceeds of Kath's print processing work done in the basement. Also in the basement was the radio dept; In the large showroom was a magnificent RGD radio-gram,

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a Rolls Royce model with a pair of PX4s in push pull driving a trio of loudspeakers, woofer, tweeter, and a pig in the middle. This also had a Garrard record player, the whole being housed in a superb reproduction cabinet. Not for sale though ! England would soon have surrendered to the enemy if deprived of wireless and tea. Hence Webbs kept a good stock of batteries and teapots. Also the famous Morphy-Richards irons, torches, and spare bulbs. And yes, three different models of morse key were in stock - good, bad, and indifferent. I presided over this empire with help from another lad 3-4 years my senior, and with little interference from the manager. He had his desk in an adjoining storeroom with racks for valves, light bulbs and flashbulbs. For much of my last year at school I had developed my hobby into a nice little 'earner' - fixing the neighbourhood radios, collected & delivered on the handlebars of my bike. Hence the low level of technology in my first professional engagement came as something of a big disappointment. However next door between the shop & Stephenson Place was a multistorey block containing Webbs Radio repair shop. Lord of all he surveyed a mechanic ran this with the help of an assistant. I took every opportunity to visit this place, to pick brains and to lust over the test gear. I resolved to work forthis man at the earliest possible occasion, but gave up after a year, transferring my allegiance elsewhere. Over the whole year spent at Webbs the only communications receiver seen there was a Hallicrafters model. Were civilian owners proscribed ? (yes !). Six years later I went to Eddystones Alvechurch works as a trainee development engineer, at the 'Bath Tub'. So named since the production area was the boarded in swimming pool of the old Lido.' from David Taylor.

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- PLEASE, if you have any info or reminiscences on the early days of Strattons or Eddystone then please share them with EUG members. From mail received many of you do want to hear the history of the Company. The mail is full of queries as to original new prices, components & accessories. Thanks to several members EUG is now building up a good stock of info and it will be shared via the newsletter. Our thanks to all those who have taken the trouble to send in such gen for the files.

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* SFERICS *

- Have had several letters from members who have tried to do a service job on their receiver only to come a cropper on the RF / IF alignment process. In one case, having no sig; gen; the set was tuned into a signal on each range and then all trim caps and cores set for maximum signal. This is definitely not the way to go about it. He realises this now, as he says ' plenty of gain around the point on the scale where he did the trimming but almost dead at other places.' IF cores very rarely need to be touched unless somebody has already been at them before you, if they look untouched then leave them so. If they have been 'twiddled' then a sig; gen; is a necessity and it must be either accurately calibrated or set using a digital frequency meter.

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- High Impedance phones for Eddystone models. A good source of inserts for 'phones are the ex-GPO telephone inserts sold at most rallies for around 50p each. Two of these wired in series can be used with the muffs and headband of an dud stereo headset. These too can usually be found at most rallies in the 'junk' boxes. In most cases it is an easy job to remove the stereo inserts and fit the ex-GPO types. The stereo plug too will have to go of course. Whilst not exactly high impedance the two wired in series will present a more natural load to your Eddystone phone output socket. One other plus is that the inserts are tailored both mechanically and electrically to have a 'communications' frequency response, cutting down on a lot of the higher and lower noises that would be reproduced by stereo Hi-FI phones. For very little cash outlay you can get a good pair of comms phones.

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- From available data, from mail mostly, it would seem that most of EUG members have more than one set, more than one Eddystone, and that 77% have more than one comms receiver. Racal, Marconi or Trio seem to be the most common. About 18% own up to having also a home-brew receiver in use alongside their Eddystone.

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- Rain Static, letters from members who suffer from this keep on coming, despite the cure being quite simple. Try a high value of resistor from the aerial lead to earth, a 100 Kohm will not degrade your signal input in anyway and will bypass to earth any DC static

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build up, preventing that popping sound which is so irritating, dangerous too for many solid state sets.

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- The EB35, the 13 digit number on the front panel, just below the tone control. This is a 'Joint-Services/Nato' stock number. It is actually,- 5820 - 99 - 523 - 7337.

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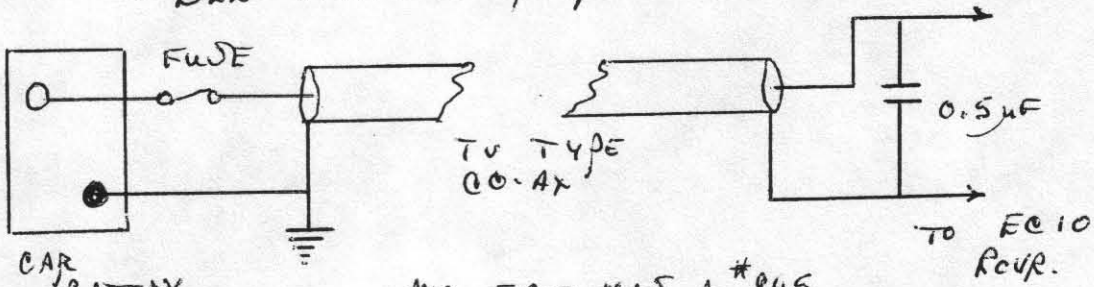
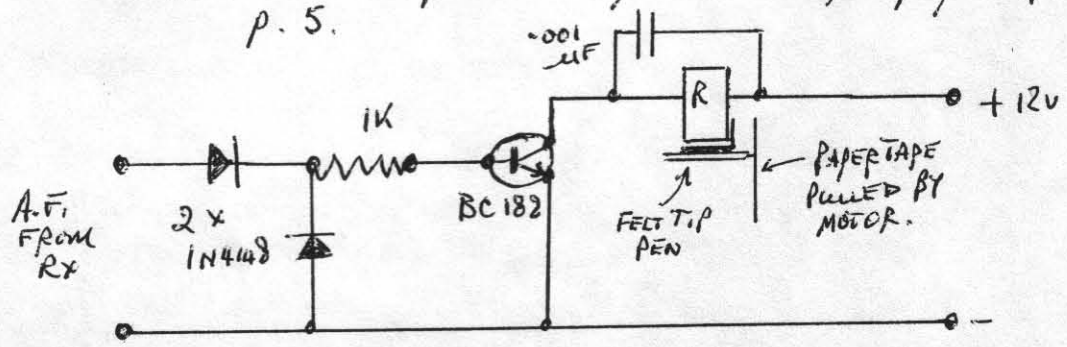
- SEE ITEM ON MOBILE QRM - p. 3.

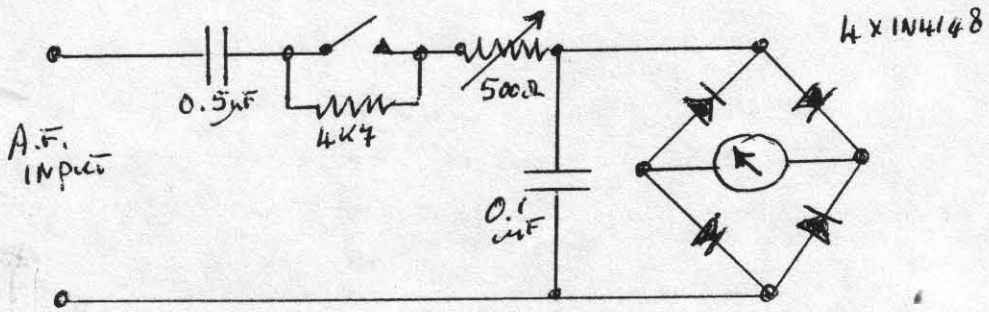


MY EC10 HAS A #945 P.S.U. WHICH ALLOWS 12/24 VOLT OPERATION.

- SEE ITEM re INTERFACE FOR MORSE READER. p. 5.



- SEE ITEM "Output Meter for 50p."



- HINTS.-

- From Dick Lance, the present cost of the N78 valve used as output in the 750 model is circa £9.00 - excessive by any standards. The substitution of an EL95 with bias resistor change to 330 ohm , or a 6AQ5 with a bias resistor of 300 ohm will save quite a bit on the cost. Move the control grid lead to pin 1 on the socket and the wires from pin 7 to pin 6. Leave pin 7 disconnected. Hope we got it right Dick !

- The recent revival of hollow state technology with valve circuits in recent copies of Radcom, SWM, & PW are increasing the requests in our mail for info on sources of suitable components for valve projects. The best of all is to visit rallies, and keep on visiting them until you get what you need, always buy more than you need of items such as electrolytics, valve sockets, valves and half or one watt resistors. Check out the adverts in the magazines, send for the various free or inexpensive catalogues. Keep on on hand the address & phone number of dealers such as Birketts and Centre Electronics, Bull Electrical & Maplins. And remember the previous mentions about the ARRL & RSGB Handbooks of the forties and fifties not just for projects to build but also for all that valve data .

- Hum on the AC / DC models is a problem which seems to occur in a lot of the mail received here. The sites to look for usually are in the power supply circuit, electrolytics going down , or in the heater circuits where it is usually a case of partial heater / Kathode short. This is not always measurable on a cold valve but will show up when the heater is at normal operating temperature. Some say the UY41 is prone to this but I can't say that it has led a bad life in my AC / DC models.

- Third letter on this subject so worth a mention here, noisy and erratic BFO tune on a 960 traced in each case to a worn 50 kilohm linear pot. But for some reason the members concerned ignored this possibility at first & wasted time checking other components.

- All our mentions of using analogue type, Avo or Taylor, meters on valve equipment has sidetracked one or two members who have solid state models. On these it is advised that you use a meter with a minimum of 20 kilohm per volt. Same reason applies here that a lower ohms/volt rating will give erroneous readings and affect the correct operation of the circuit. Check the Eddystone manual or service sheet for the type of meter that they recommend for use with that particular model.

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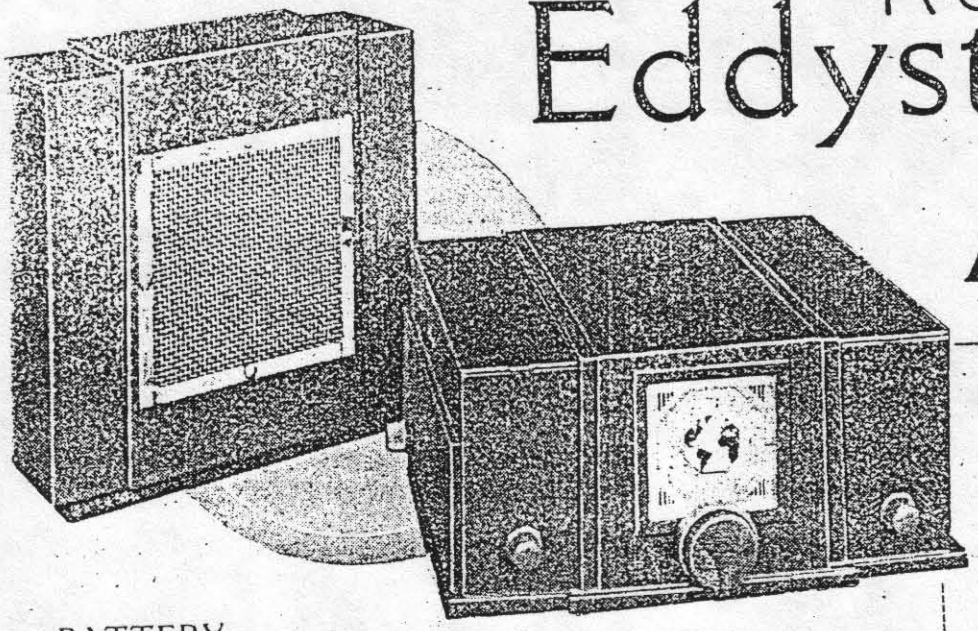
Review of Eddystone All-World



FEATURES. ***Type.***—*Table model battery superheterodyne with interchangeable waverange units.* ***Waveranges*** *(supplied with receiver) (1) 13.4-34.6 metres. (2) 27.2-69.2 metres. (5) 240-573 metres.* ***Circuit.***—*Var.mu pentode RF amplifier — pentode oscillator — pentode frequency-changer — two var.mu pentode IF amplifiers—double-diode-triode second detector—push-pull triode output valves.* ***Controls.***—*(1) Tuning. (2) Volume. (3) Amplification. (4) Tone. (5) On-off switch.* ***Price.***—*Receiver only, £27 10s. Loud speaker £3 10s.* ***Makers.***—*Stratton & Co., Ltd, Eddystone Works, Bromsgrove Street, Birmingham, 5*

A BATTERY SUPERHETERODYNE DESIGNED FOR USE IN THE TROPICS

– OUT 1937.

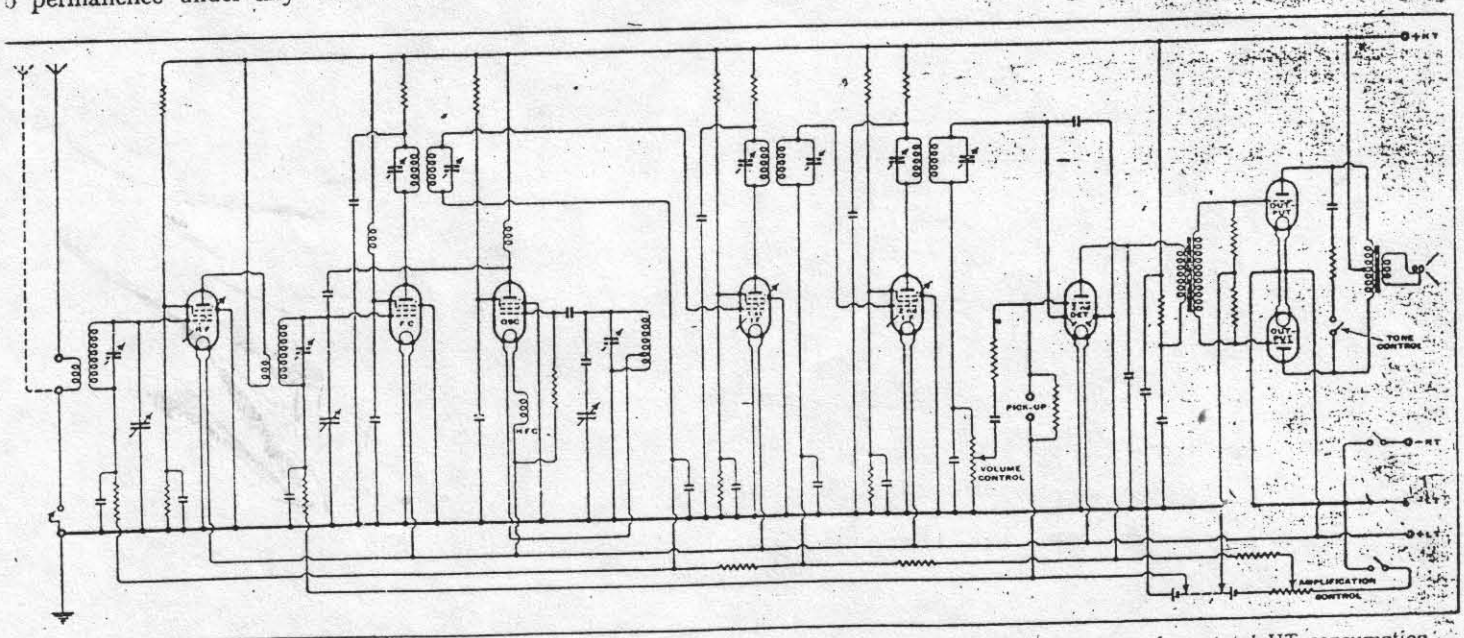
THERE are many all-wave receivers which from the point of view of long-distance short-wave reception can be confidently recommended for use in any part of the world. For the most part, however, they follow domestic broadcast receiver practice in chassis design and layout, and although in a few details the construction may have been modified with an eye to the export market, there seems always to be an element of uncertainty regarding the time that will elapse before the wooden cabinet or even some vital part of the chassis will disintegrate in the hot and humid atmosphere of the Tropics.

No such uncertainty exists in the case of the "All-World Eight," for the designers have made a complete break with the constructional conventions of broadcast receivers and have built with an eye to permanence under any climatic conditions which are likely to be found anywhere on the surface of the earth. Both the cabinet and the chassis are aluminium alloy castings, protected by a hard crystalline enamel. Valve holders, coil bases, etc., are of a special insulating compound known as DL9, which has a wide application in short-wave work. Porcelain pillars are used as anchorages for the wiring and for supporting small components, while every soldered joint is painted over to obviate subsequent deterioration from corrosion.

The decision to use a cast chassis has presented the designers with an excellent opportunity of improving the electric efficiency of the circuit by thorough screening. Both above and below the chassis is divided into cells by integrally cast webs, and the main tuning condenser, as well as the IF transformers, are totally enclosed in this way. In addition all vital leads carrying HF currents are conducted through copper tubing, which in the case of the valves, is taken to within a fraction of an inch of the caps.

Trouble-free Wave-changing

In multi-range receivers the wave-change switch has always been one of the most vulnerable points, and although important improvements have recently been made in switch design, the makers have in this case wisely played for safety by providing interchangeable coil units housed in cast aluminium boxes, together with their trimmers. Three coil units are provided as part of the standard equipment of the receiver, and additional coil-

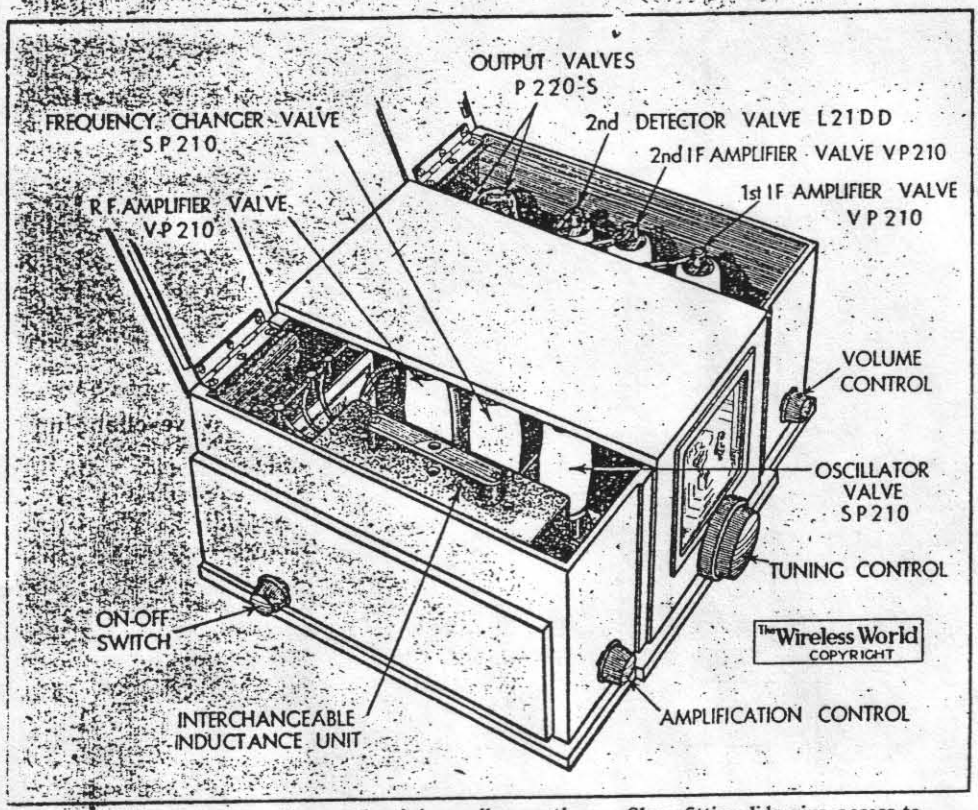


An input RF amplifier and two IF stages give good sensitivity and a push-pull output stage excellent volume for a total HT consumption of only 8 mA.

can be supplied to bridge the gaps between the standard ranges, thus giving a complete coverage from 13.4 to 2,000 metres.

Eight

The circuit is designed for use either with a normal single-wire aerial or with a doublet. There are eight valves in the circuit, the first of which is a variable-mu pentode RF amplifier. The oscillator is a separate valve and is coupled to the frequency-changer grid through a small



Both cabinet and chassis are aluminium alloy castings. Close-fitting lids give access to the valves and interchangeable coil units.

apacity. There are two stages of IF mplification, and the double-diode-triode which follows them performs the usual unctions of signal rectification, AVC upply and first stage AF amplification. The RF amplifier and both IF valves are ontrolled, and there is a variable initial ias derived from a potentiometer across he grid bias battery. This provides a mooth and efficient control of over-all ensitivity and contributes materially to he ease of handling the receiver. The utput stage consists of two triodes in ush-pull, with a fixed tone control across he anodes which is brought into operaion by means of a switch.

The performance of the receiver is at irst somewhat deceptive, for it lacks the xcess vitality which often passes for effiiency in many of the popular all-wave eceivers. But its quiet and unobtrusive performance on the short-wave ranges is really the result of an exceptionally good signal-to-noise ratio, and if the more powerful continental short-wave stations fail to rattle the loud speaker in the manner to which we have become accustomed, this is only because of the restraint exercised by the efficient AVC system. There is, in fact, very little difference in the signal strength and steadiness of the principal short-wave programmes from either side of the Atlantic, and we were particularly impressed with the excellence and reliability of the morning programme from Pittsburgh W8XK, on 13.9 metres.

The quality of reproduction from the permanent magnet loud speaker unit designed for use with this receiver is well suited to distant reception. It is true that on account of the small baffle area there is not much true bass, but, on the other hand, there is complete absence of false resonance, and the top register is of the type which gives clarity without emphasising background noise. In fact, throughout the period of the tests no necessity was felt for making use of the tone control either on short waves or normal broadcast bands.

On Medium and Long Waves

Although the receiver has been designed primarily for short-wave reception, the performance on the medium and long wave broadcast bands could not well be improved upon if the set had been designed from this point of view. On the long waves the selectivity gives clear reception of Deutschlandsender without the necessity of calling in the aid of the tone control, and on the medium waveband, which provides upwards of twenty — twenty-five continental transmissions in daylight, adjacent channel selectivity was possible with the exception of the two Brookmans Park stations, where one channel was lost on either side of their normal settings when using the set in Central London.

The tuning dial is driven by a two-speed reduction gear with ratios of 22 : 1 and 115 : 1. The calibrations for the three inductance units supplied with the set are engraved on a glass scale, behind which the pointer moves with the minimum of parallax error. There is also an arbitrary 0-100 scale, for which a calibration curve is supplied in the case of any extra inductance units which may be subsequently purchased. The tuning scale is backed by a white background which is spaced away from the glass panel, and we think it would have been an advantage, in view of the low current consumption of the set, if a dial light could have been provided. Our reason for making this suggestion is that on account of the low background noise there is every possibility that the receiver may be inadvertently left with the valves running. Actually the measured LT consumption was 0.52 amp. and the HT current consumed at 120 v. varied from 5-8 mA, depending upon the setting of the amplification control.

This is a receiver which provides reliable long-distance reception with unostentatious efficiency, and its construction and workmanship are such that it can be confidently recommended for use in any part of the world.

P.T.O.

News from the Clubs

The Faraday Radio Society

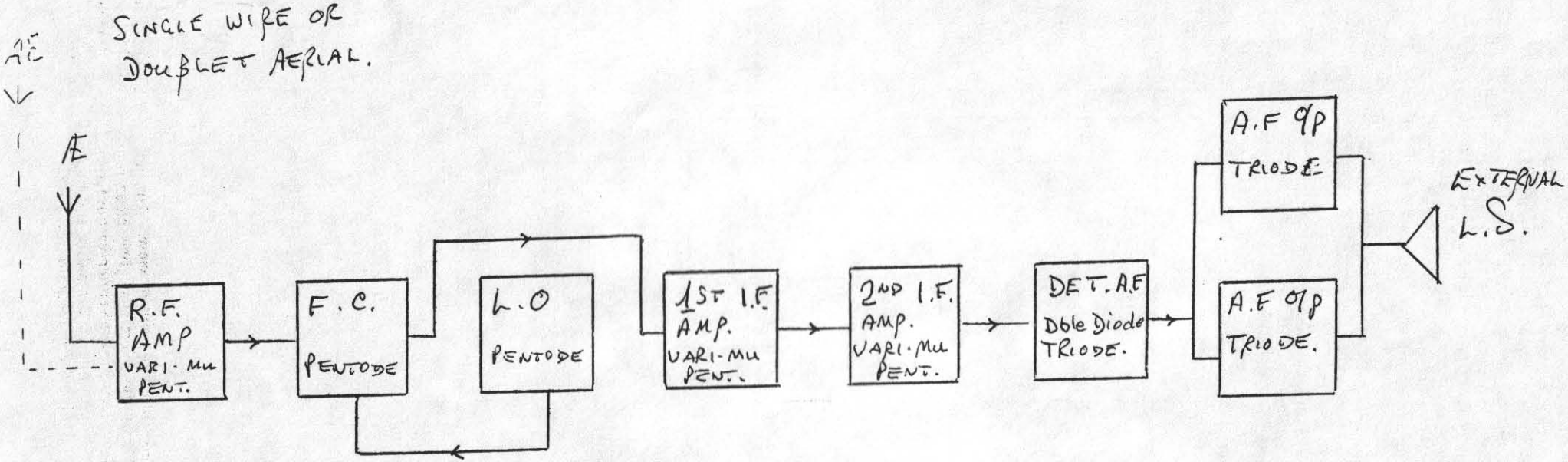
A crystal-controlled transmitter and other apparatus has been placed at the disposal of this Society by the L.C.C. The club is run in conjunction with the Walworth Men's Institute and membership is restricted to men of 18 years of age or over who reside in the L.C.C. area. A very full programme of lectures and visits to places of radio interest has been arranged, and later in the season it is hoped to be able to carry out geophysical prospecting experiments as a change from the usual type of field-day. Morse classes and lectures are held every Tuesday and Wednesday at 8 p.m. at the club's headquarters at the Nelson School, Trafalgar Street, London, S.E. Full details of the society can be obtained from the Secretary, Mr. J. Sykes, 39, Wallington Road, Seven Kings, Essex.

The Halifax Experimental Radio Society

This society holds meetings at 7 p.m. on Thursdays at their headquarters, Room No. 13, Friendly and Trades Club, St. James Road, Halifax. The entrance fee to the society is 1/-. Full details can be obtained from the Hon. Sec., Mr. W. Milner, "Ryburn Radio," Sowerby Bridge, Nr. Halifax.

The Croydon Radio Society

A very interesting programme has been arranged for the second half of the winter session, and readers who are interested are advised to write for full particulars to Mr. E. L. Cumbers, 14, Campden Road, South Croydon. Next Tuesday, at 8 p.m, a lecture will be given on modern sound-film technique at the society's headquarters at St. Peter's Hall, Ledbury Road, South Croydon.



BLOCK SCHEMATIC FOR EDDYSTONE "ALL WAVE EIGHT."

(ALSO KNOWN AS MODEL 1PC OR R.101 WHEN BFO FITTED.)

- EUG Abroad.-

- Both Australia and New Zealand figure on our membership list & members out there have amongst others, various versions of the 680 990, and 880 mo els. In Canada we have 'users' of many types, versions specific to the Canadian forces even. In the States there are members with 640, 670, 840, 830, 888 and EA12. One 'stateside' EUG member has more than 30 Eddystones in his collection. Most of the European countries are now on the mailing list as are the Scandinavian states. In the Gulf area and the Indian Ocean we have members too, one a VIP out there. Both South America and Africa are now included, in fact your newsletter gets just about everywhere these days. Nobody in the Polar regions yet, Anchorage is the nearest so far, but the way membership is going up can't be long before we have a Polar member. Maybe someday can print a photo of a happy Polar Bear, with 'lids' on, listening to his 960.

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- Well that is IT for this issue, from Kathy and I thanks for your faith in EUG as shown by all those re-upping for the third year. Thanks too to those new members just recently joined. Kathy can still supply back issues from issue 1, for all those interested, also of course the EUG badges which seem to be so successful in putting members in touch at rallies. See you all next issue.

73,

Kathy & Ted.

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* FREE MEMBERS ADVERTS.*

Wanted,-740 or 750. D Fletcher. Dave on 0223 (Cambridge) - 8334 after 6.0 p.m please.

Wanted,- Receiver for up to 30 Mc/s, must be capable of SSB reception, valve or solid state model. W Meredith. 0978 (Wrexham) - 262855.

Wanted,- Battery box to fit EC10, EB35 in good conition, no mods, For Sale,- 888A, for all three ring P Lepino, 0372 - 454381 during daytime only please.

Wanted EA12, it will be well looked after, write to Dr I J Dilworth Ashpound Cottage, Pound Lane, Capel St Mary, Suffolk.

Wanted 880/2, for New Zealand member, send replies c/o Devereux, 245 Northumberland Ave; Reading, Berks; RE2 7PZ.

Wanted, model 680X in good condition, Mr B Wallis, P.O Box 6159, Boroko NCD, Papua New Guinea.

Wanted 830/7 - used to have one, would like another in GWO, phone Harry on 081-597-1517.

For Sale, Eddystone models EA12, GWO, £180. 730/4, GWO, £100. Case with front panel for EA12, new in box, £20. One valve set TRF 1936 not working £40. Manuals for sale, 770U, 909, and EA12 at £5 each. Telephone Bolton, 021-350-0824. (Birmingham).

Part Exchange, Nice EB35 for 680, 680X, or 940, phone John on number 0929-480640.

Wanted IF transfo number two, for EC10, Cyril on 0726-842368.

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