

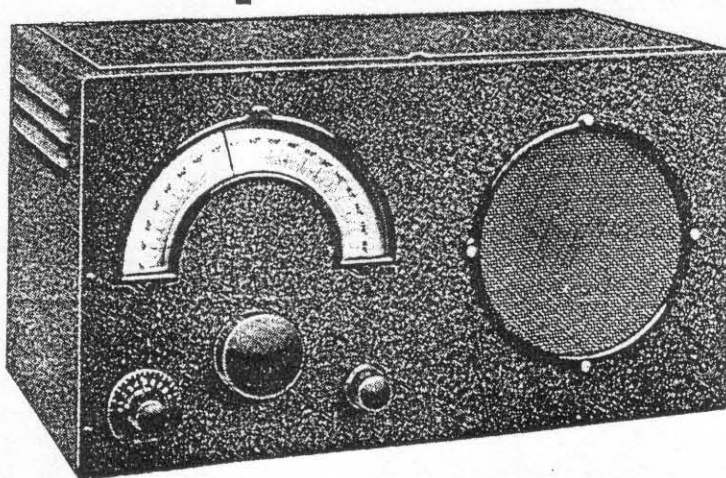
Eddystone User Group Newsletter

Issue No: 45

October 1997



Featured Model: Eddystone Homelander



*A non profit newsletter for Eddystone Users

*Compiled and edited by Ted Moore

*Information quoted from Eddystone Literature by kind permission of
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Sickness amongst the staff who normally copy the EUG material has meant this issue is very late. We apologise for this. This is issue 45 of the newsletter and is the third of six issues for the year 1997/98. If you join after this issue you will get back issues for the year 1997/98.

Subscriptions

Subscriptions are £10 per year UK and £11 per year overseas. Metal EUG badges are available at £2 each. Any remittances for subscriptions, badges or manuals must be by cheque or money order and in sterling. Make your cheques payable to **Eddystone User Group**. Subscription rates will be going up from issue 49 onwards, see previous newsletters for details.

I was interested to see the reference in this months issue to the 1650/6's that have come onto the surplus market. I was not aware that they were on the market until a friend in the trade told me a customer of his had bought one and was trying to modify it. I believe we only sold the last of this series in the past 18 months or so. These sets were specifically modified for the "people with big ears" and as such have no front panel control or demodulators. It will not be possible to modify them for normal use.

The picture of the 1990R/2 set up on page 2 solved a mystery that emerged a couple of days ago when I was sorting out some old sets to put in the museum. I saw a noise measuring unit 1532/1 and the prototype of the output integrator unit. Perhaps the 1535 frequency readout is around somewhere. Actually the museum does not have a 1990 of any type in it. Perhaps someone will donate one some day.

I see that Ted has made reference to the Polish transmitter on page 8. What he does know is that I believe our copies and masters of the blue prints for most of the drawings and circuits referred to in the list are not in our possession. I remember looking for them a couple of years ago when I purchased the transmitter. This is in our museum as I donated it to the company. (We have no budget for purchasing olds sets).

We have recently exhibited at the 1997 International Broadcasting Convention at Amsterdam. Our stand was very good and featured a very nice display of Eddystone's 75 years history. This featured a panel showing a short history of the company and another featuring the three ages of radio that Eddystone have been present in; AM in the 1920's; FM in the 1950's and now digital in the 1990's. We also had a display case with 6 of our older radios. It looked very good and attracted a lot of attention. If possible I might try and include a picture of the stand in this or a future newsletter. If any EUG member knows where we could find a nice glass display case, we could set up a permanent exhibition in our office foyer.

Chris Pettitt -(GOEYO)

Managing Director. (home e mail GOEYC@compuserve.com)

LATE ADDITIONS of FOR SALE ITEMS

FOR SALE. 770R and 770U. Need attention. Buyer collects (Hoylake). WANTED RC Bridge. Call Ted 0151 632 0614

WANTED Model 1650, RACAL 1792, REDIFON R5000, W+J 8626A, in good mechanical condition for restoration for disabled SWL. Also I have battered 1990R suitable for spares. Also does anyone know of organisation like EUG for RACAL and Watkins and Johnson. Contact David 01554 775790 or e mail daiungoed@aol.com or write Dave Jones, 50 New Dock St, Llanelli, Carmarthen, SA15 2HB.

WANTED: Rack mounted 880/2 in GWO and GC; also RACAL RA121 SSB Adaptor. Also wanted twin RF/IF gain pots and knobs for 850/2 (twin 10k:same as EA12 and 830) Call Rob 01636 686392 (Notts)

- Issue 45 -

This issue has some IMPORTANT information for your pockets, if you are contemplating buying one of those 1650 receivers that are being offered for sale at present. READ IT AND TAKE NOTE, Eddystone cannot help you to modify this model and the manuals weigh a ton, are like the London Phone Directory, and copying one is a days work. This makes it prohibitively expensive to copy one for you.

This issue we feature the 1935 model, the HOMELANDER. This is not the recently unearthed Homeland 4 as mentioned in the N/L.

The HOMELANDER was evidently designed as a broadcast model receiver for use by 'ex-pats' in the Colonies. It was a battery operated table model and from the WW review of that year, it was 'quite an interesting short waver for battery operation'.

An interesting unit this issue is the rack mount 1990 with associated digital readout unit and panadaptor, etc; - a nice buy at a good price.

The request for like-minded Eugers in the South may be of interest to you ? If so contact Jim direct, not EUG.

- - - -
- A 1930s Kit Set -

John is asking about the Everyman Four, or 4, and would like it to be featured. This was a home build kit set that came on the market at the end of 1938, as the name implies it was a 4 valver and was battery operated. Okay John, I have the gen so hopefully it will be in the next issue, yours is the third query in recent months so I guess it qualifies.

- - - -
- Those 'Better Reception' Booklets -

I have mentioned on several occasions that EUG, through Graeme and the Factory, can offer copies of several versions of this valuable booklet which was originally provided free with each new receiver bought from the Company. Unfortunately EUG cannot supply these booklets, or any other for FREE. This group is run on a very restricted budget and any such copies of old booklets or manuals etc; must be charged for. Sorry !

Graeme has two versions of this booklet available for SALE to EUGers, both contain many ideas for simple aerial and earth systems for use with Eddystone receivers. They both have a considerable amount of info on suppression techniques for different varieties of appliances. Old stuff but still very much applicable today with the rapid proliferation of QRM producing home items.

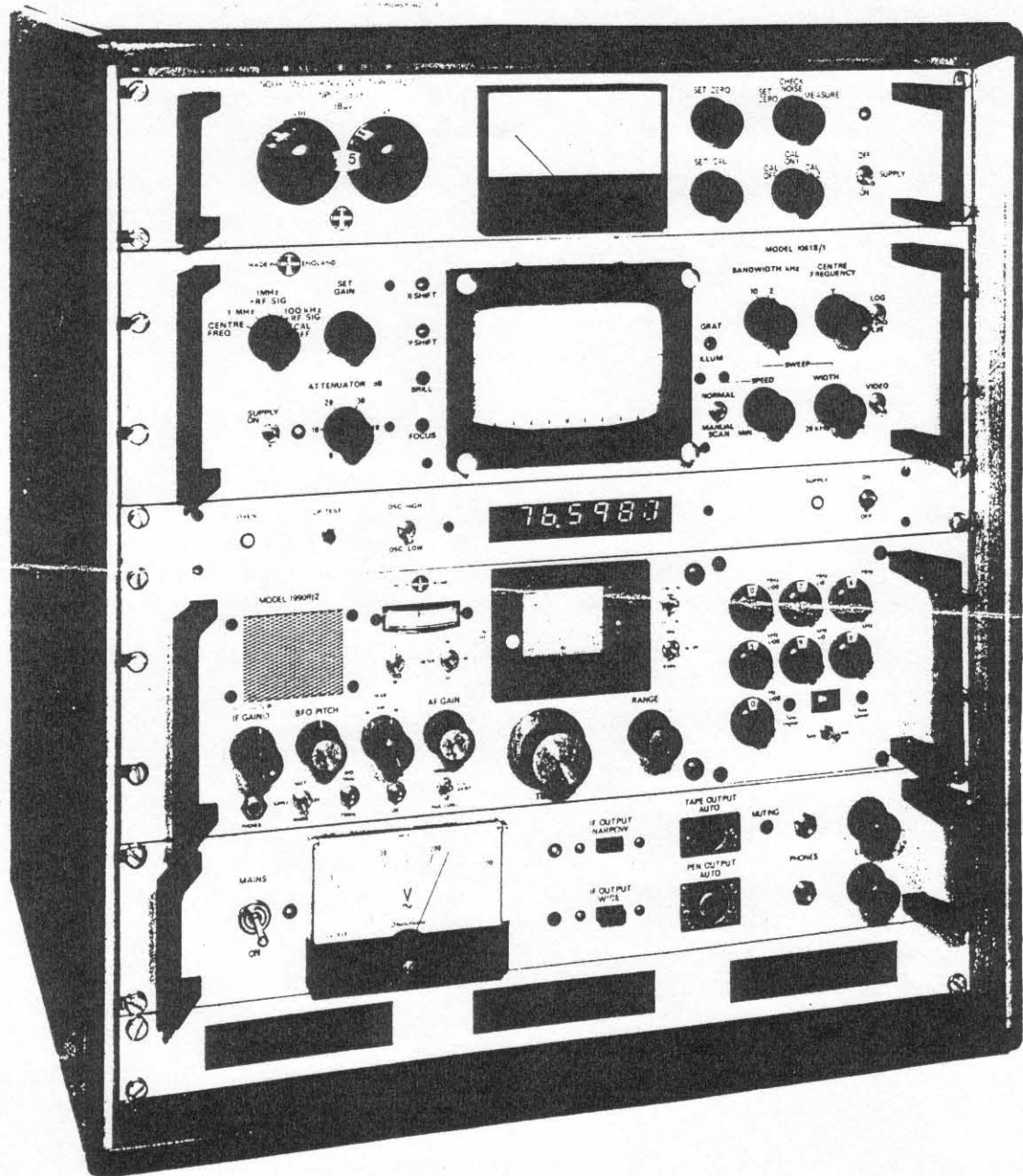
If you do not see the booklet or manual advertised in the N/L then write to Graeme and if he can, he will provide a copy - at a price of course.

- - - -
- Sacrilegious Talk !!! -

Ciano is an EUGer living in the Bahamas and he says that he has 'been

advised to dump the 830 and buy something new' - heaven forbid ! This set when in good condition can cope admirably on today's bands, so please Ciano, have it fixed up and USE IT.

SEE MEMBERS ADD.



1990R/2 + NOISE MEASUREMENT UNIT 1532/1 + PANADAPTOR
 1061B/1 + DIGITAL FREQUENCY UNIT 1535 + MULTIPLE
 OUTPUT INTEGRATOR UNIT WITH IF & F & DC OUTPUTS.

- Did You Know ? -

Have you got an S.680 ? Did you know that you not only have Pick-Up terminals on the rear which allow the AF stages to be used as an audio amplifier with a microphone or gramo pick-up, you also have from the same terminals the facility for recording signals coming through the receiver ?

This was recalled to mind when an EUGer asked me how he could use his S.680 to record off-air signals without too much in the way of 'mods'.

The fact is, of course, that James has no need for any mods at all. Not only are these P.U. terminals across the low level signal path permanently but they also have the Noise Limiter stage in circuit so that QRM clipping can take place if the AF stages are being used to reproduce noisy signals from another this or another receiver.

One further added plus that those who omit to check out the facilities will ignore, the response modification required when the variable selectivity control is used, may also be used when just the AF stages are being used as an amplifier for external signals. These resistor networks provide a switched tone correction for any injected AF signals, if needed. Ted.

- - - - -
- SSB reception on the older Models -

This comes up regularly in my mail, often from those who have previously coped well with a modern 'Black-Box' receiver with switched USB/LSB facilities, but who have now acquired an older valve type Communications receiver, be it Eddystone or otherwise.

Ivor has cut his SWL teeth with the help of a modern alien receiver and having now 'advanced' to using a 680X he is having trouble tuning in SSB signals. He comments that the short time spent on the air by Amateur Ops doesn't give him time to tune them in, before the other side of the QSO comes on.

My advice Ivor is to use one of the quasi-continuous SSB stations such as the Volmet broadcasts from RAF VOLMET or SHANNON VOLMET. These stations are on long enough for you to practice, and perfect, tuning in SSB on the 940.

This model was not of course designed with SSB in mind but the CW facility does enable it to be used successfully on the sideband mode.

Try tuning in the sideband signal on the AM mode position, for maximum signal peaks on the meter. Turn off the AVC and turn on the CW mode. Now set the Selectivity switch to the MAX position, possible slight retuning for maximum peaks on the meter may now be needed.

At this point you will have what used to be called 'Donald Duck' speech which is completely unintelligible.

Use of the BFO tuning control will now enable you to resolve the squawks into perfectly intelligible communications quality speech. Sounds easy ? Well it is, and practice will make it a doddle.

- - - - -
- Early 940 Models -

Many years back I had my first ever 940, I played with it for several years quite happily and then I had the opportunity to acquire, for free, a second 940.

That was when the penny dropped. They were different in several respects, yet performance seemed completely identical - to me.

The first external difference was to be found on the logos on the front panel. The original was simply a 940 but the newly acquired set was called a 940HF, same coverage etc; but the added suffix must have meant something. Next panel difference was that the AM-CW mode switch was thus labeled on set number one, on two it was labeled AM-CW/SSB.

The early version did not have those Platypus bill like plastic ends on the toggle switches.

Going inside and there was just the one obvious difference in the circuitry, different make of resistors.

Apart the above both sets gave a very similar performance on all ranges and handling was so alike that I would have been hard-pushed to tell one from the other in the dark.

I have never been able to find out from any ex-Bathtubber just how many of this first early version came off the production lines but I doubt that there were very many, if you have one then look after it since in a few years it may have the rarity of a Darracq or a Stanley Steamer.

Dave.

- - - -
- The EM34 -

Not often mentioned in this N/L is this model. It was marketed mainly as a Marconi/MIMCO 3873A but there are some Eddystone badged EM34s around. This was proved recently when Stewart was offered an unknown model by a fellow club member who stated "its an Eddystone but thats all I know".

The set was in fair condition having been stored in a dry loft for many moons, it even came with a pair of S.G Brown 'phones - the lot for £30.

Despite the insistent urge to power it up immediately a check with a DVM on the ohms range was made, continuity through the AC input circuit was okay, on high Ohms there was nothing in the way of noticeable leakage from input primary to chassis. Checks on the HT line brought no surprises either and so the set was powered up, with as Stewart puts it "one hand behind my back and my heart in my mouth".

It worked ! Some time was spent checking it out on all bands and all seemed to be okay so the ergs were cut off and a further complete check was made.

The only real surprise was to find that the supposedly 1.5 amp cartridge fuse was a 20 amp fuse, evidently it was a replacement of automotive origin and a suitable, correct, value was fitted.

The set is a seven valve model but inside there is what appears at first glance to be a spare valve socket, it AIN'T so ! This socket is for a transistorised pre-amp for use with a PA system, using the EM34 AF stages. So don't panic.

This model is meant for Broadcast reception use only on board ship and has no BFO or switchable functions such as NLAVC-Selectivity, just the four same size knobs and a mains switch plus the phones socket.

Further research showed that it had also been marketed as the 'ELETTRA' by MIMCO but none of this badged version have ever been seen. After several months it still works okay, no leaky condensers or high resistors evident, and reproduction on a good speaker is good enough for pleasurable listening.

Ted.

The name of the element Silicon (Si) only came to real prominence in the 1960s when its use became common in transistors and diodes. And yet, for Eddystone at least, it was in common usage more than 25 years earlier than this. Semiconductors ? No. Strattons /Eddystone had begun using an alloy of Aluminium and Silicon to form their Die-cast chassis way back in the 1930s when they marketed their All World 8, LPC and then the ECR/ERA series of receivers.

There appears to be a quantity of valve type 6005 on the market lately and for the uninitiated these are the equivalent to our more common 6AQ5/EL90. Not used in Eddystones ? Okay they are not but with just a simple wiring mod they can be substituted for the 6AM5/EL91 AF output bottle.

In the recent HOT weather several members have had problems with overheating of their valve receivers and have had the related problem of burned out mains transfos. To date an 830 and a 740 are known to have expired. In both cases it seems the sets were covered with books, paperwork, or surrounded by other hottish equipment. If your set cannot ventilate the heat that it produces through the mesh areas provided then you are looking for trouble, expensive trouble.

Aerials and static from precipitation (that forgotten item we call rain). Joe in Devon recalls that he has always found that his vertical wire aerials suffer far more from rain-static than do his horizontal wires. He has been experimenting with aerials for more than 30 years now and should know.

This has been said before but maybe needs to be repeated, if your receiver is one of the AC/DC models then running it on the 120 volts tap via a step down transfo will reduce heat production and, of course, power dissipation, by half.

David up in Scotland has the ill-luck to live within about 50 yards of a run of Grid supply pylons and found that his original aerial which was almost parallel to the cables, picked up an S4-5 signal of what appeared to be computer 'mush'. Reorientating his aerial to be at right angles the 'mush' is practically eliminated, no reading on the carrier meter, a tip to remember.

Back in the -60s a Company called SONIC-SOUND in the Tottenham Court Rd advertised in WW claiming to be the sole retail distributors for Eddystone. Can any EUGer provide info on this Company ? Please.

- - - -
- The 1650/6 HF Comms Receiver -

This receiver unit which is but ten years old was a 'No frills, No options' version of the standard 1650 receiver.

Manufactured by Eddystone to conform to a Government specification for a low cost, computer controlled HF scanning receiver, this /6 version was produced in a total of some 400 units only. My informant tells me that at the time of manufacture the Bath Tub employees concerned with this model had to sign the Official Secrets Act, so my surprise that this model is already being sold on the second hand market is very real.

As is, the /6 is of no use whatever to the SWL or Amateur operator, there being for a start no tuning knob ! Tuning is software controlled from an associated computer console.

It is no good writing to ask Eddystone for manuals or conversion data !!! Honestly they have no more manuals and to make photocopies of this manual would take somebody a whole day per manual, they are as thick as a city telephone directory.

So your requests for info will have nuisance value only !

Some manuals are in the hands of those dealers who are selling off the some 150 receivers at present released by Big Brother so I would expect them to make copies available but expect to pay about £60 - £80 per copy, photocopying is expensive pal !

NOW, Once More, Please do not ask either Eddystone or EUG for modification details for using the 1650/6 on an SWL/Amateur basis, we cannot help you. Incidentally, in so far as Eddystone know the Manuals are still on the RESTRICTED list so try not to waste their time by asking.

If and when EUG does get further info on this model then you WILL read about it here.

- - - -
- Dorset & Hants; Volunteers -

EUGer Jim Cameron who lives in Poole is asking whether there are any EUGers in his area who are willing to co-operate with him on restoration work on Eddystones ? Are YOU in that area ? Are YOU interested/willing to get involved ?

Jim asks that you contact him by 'phone in the first instance, Home number is 01202-668446 or Mobile number is 0802-793281.

- - - -
- Rack Mount 1990/2 (or /3) -

This is a somewhat unusual configuration for the 1990 VHF receiver and I hope that the attached picture does it justice.

What we have is a 1990/2 receiver mounted on a standard 19" rack together with an Eddystone 1535 Frequency counter unit.

Also in the rack is custom built integrator unit for taking a whiff of IF output and converting it to feed either a DC pen/stylus feed or a Tape output feed using DIN sockets, and with provision for an analogue level meter.

Above the receiver and the counter unit is a standard Eddystone 1061B/1 Panadaptor and above that is the Eddystone Noise measurement unit type 1532/1 with calibrated Db pads to the left, a central meter, and the necessary Calibrate/Range controls to the right.

From the photo it is clear that the receiver unit is labelled as a 1990/2 yet Jim Cameron calls it a /3 so maybe this is marked somewhere on the complete rack mount unit & the /3 designates the whole unit. If you look in the following Members ads you will see that it is for sale !!! Don't all rush to the telephone and overload BT's lines !!!

- - - -
- Free Members Ads -

Ex MoD HF receiver/scanner SX400, in sturdy aluminium flight case with antenna and operators/service manual and cables/power leads. Covers 26-250 Mc/s, AM/FM, Wideband/Narrowband. Full spec; sheet available. New and unused, recently released. £275 or nearest offer.

Eddystone 1990R/3S general purpose VHF/UHF receiver in rack mount complete with Frequency Display unit 1535, Noise measurement unit 1532 etc; see photo this issue. Asking £295.

Eddystone EC10 HF receiver, original inside and out. Early model with chrome handles, grey knobs and steel speaker frets.

In perfect working order and very clean overall, with handbook. Asking £85.

Eddystone UHF receiver 990S in average condition, ex MoD, complete with manual. Asking £85.

Lambda PSU model LOS-R-6. Regulated 6.0 volts +/- 5% DC, at 23 amps. Asking £35.

Eddystone 40A Receiver/Noise measurement Unit. LF/MF/HF 130 Kc/s to 33 Mc/s in 8 bands, Mains psu and battery pack complete with antenna and handbooks, in case. Mint condition. Asking £195.

Sailor SSB Transmitter model T.2031, compact 2000 series covering 1600-4300 Kc/s with 128 programmed channels and 94 operator programmable channels, J3E,H3E,R3E, 2-tone alarm and 400 watts PEP, fully synthesised solid state for 21.6-31.2 volts DC. Also,-

Sailor Receiver R2022 used with above T2031, SSB duplex comms receiver. J3E,R3E,H3E,A3E, 1605-4500 Kc/s and 140-1605 Kc/s plus VHF/FM band of 88-108 Mc/s. 94 user programmable channels, 6 scanning modes, synthesised, with LCD readout.

All above with telephone, speaker module, mounting rack, cables and connectors, manuals and in perfect working order. Same as presently used by RNLI and Coastguard etc; full specs sent on request, £600 ONO.

Skanti WR600, 2182 Kc/s watch receiver, like new, c/w handbook. £95.

S.G.Brown type F headphones VGC, £8.

For any of above contact Jim Cameron on phone, Home number 01202-668446 or Mobile number 0802-793281.

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- Receiver Production Numbers -

Oh heck ! This does come up from time to time and this time it is my pal Tor Marthinsen who drops me in it - Thanks a lot Tor.

Anyway as you say the quoted figure for the World War II years, in the book 'A Century of Achievement' is given as 6500 receivers. Now this will include various models - some of pre 1939 vintage. The LPC variant of the All World 8 and the R.101C version were still manufactured in WWII for the MoD. The ECR was of more recent vintage (1939) and this too was used in the War. Later came the various versions of the S.358, the 358/1, 358X, 400, and 400X. The VHF models such as the base station S214/215, the mobile version the 440/450 in various VHF ranges. There were also certain more exotic sets of which we have little info, that were made for i.e. Polish Resistance usage.

I am told that a number of two valve Beacon receivers using two x 8D2 pentode valves whilst not designed by the Eddystone/Stratton Company, did get made by them for RAF use.

So you see Tor, it just isn't that easy. The figure of 6500 quoted included quite a miscellany of models.

At the same time of course Strattons were turning out all sorts of small component items, many radio/radar related but many for quite different purposes. Uniform buttons to Shell cases and Shell fuse cases came out of the three Birmingham Factories before the Blitz put an end to them. The work was continued in the Bath Tub after that, and of course in many individual employees homes after the decision was made to 'farm' out such tasks as coil-winding and variable condenser assembly on a 'cottage industry' basis.

P.S.- can anybody recall, was the above mentioned beacon receiver the R.1125, or something similar ? Early versions were in a flat diecast ally box then

when aluminium became scarce they came out in a folded/welded sheet metal box. Anybody remember them ? Ted.

- - - -
- Twin 850s -

Twin 850s in a 6 foot tall rack with a non-Eddystone built FSK/AFSK terminal unit and a psu for 80+/- volts to drive a Creed teleprinter. The proud owner obtained them many years ago and they have graced Jed's shack ever since.

No printer has ever been attached to the unit but the receivers are given a regular airing whilst Dxing NDBs. Used with two separate aerials, one a 100 feet plus horizontal wire and the other a 35 feet vertical wire enable the 850s to give a good account of themselves on the Marine/Air beacon bands.

The sets have an ID plate on the rear of the rack which states 'Property of Salford University' so it would be nice to find out what they were used for by Salford U. Any ideas out there ? Ted.

- - - -
- Catalogue Number 906, Plinth Speaker -

This plinth unit is attached to an 880/2 belonging to Eddy Davis and he is asking whether there is a source of those slim line elliptical speakers to fit this unit ?

My only suggestion is to try some of those utilised for forward facing fit in many types of Tv set. Two of these 8 ohms units in parallel will give 4 ohms which would not cause any impedance matching problems with the 880/2.

The slim line speakers as fitted to the 1000 series sets by Eddystone are the same so I would guess that there may be another source. Ted.

- The ERA-7 -

In the last issue (44), Tor mentioned the different versions of the ERA model as made and sold in the late -30s by Strattons.

Now we have information as to the existence of one of these sets. This ERA-7 has not been powered up for a number of years, being a more or less 'static display' model in Harry's collection of Comms; receivers, some 80 odd at last count.

When first purchased in the 1980s the set was working and was briefly powered up to test the vendor's claim, it did work okay but a recent check showed considerable decay in the insulation of the underchassis and interconnecting wiring.

For this reason Harry is not prepared to push any ergs through it at this time, nor has he the inclination to rewire the set.

Harry states that amongst the sets in his collection are a number of other Strattons/Eddystone models. These include an S.450 VHF receiver, an All Wave Four, an S.504, an S.640, and an EB37. And he adds that NONE are for sale.

- - - -
- That POLISH Transmitter -

This fabled Tx did exist, in fact one of them is owned by Chris Pettitt. Details are a bit sketchy but it was given the model number S.229 back in

1941 and altogether there were 16 known blueprint numbers relating to this set.

A listing of them is as follows, obtained from the original Factory Blueprint Register of which EUG holds a copy.

BP407 Polish Tx S.229, Pictorial view.
 BP408 Speech Amp unit for S.229.
 BP409 Exciter unit for S.229.
 BP410 Buffer HT supply cct; for S.229.
 BP411 Buffer amp cct; for S.229.
 BP412 Final Amp; cct; for S.229.
 BP413 Keying unit cct; for S.229.
 BP414 Double bias supply cct; for S.229.
 BP415 Exciter psu cct; for S.229.
 BP416 Speech amp; psu cct; for S.229.
 BP417 Modulator HT supply cct; for S.229.
 BP419 Valve types/positions for S.229.
 BP421 Temp;/Anode dissipation curves S.229.
 BP422 Modulator S.229.
 BP423 ATU for the S.229.
 BP424 Control unit and delay switching for S.229.

So it would seem that the design and production of this model transmitter was not a short term job, how nice it would be to get hold of more gen on this model, do you have any Polish friends with such info ??? Ted.

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- The Shop for Quality ? -

In the 1928 Harrod's Catalogue there is an advert for the the 'Eddystone Atlantic Two Short Wave Receiver' which is offered at the price of £10-0s-0d with the then mandatory addition of a Marconi Royalty fee of £1-5s-0d.

The whole 'blurb' for this model is well worth quoting,

"This receiver is the result of extensive research on short wave working and considerable practical experience. The instrument is as simple to handle as the usual broadcast receiver and the entire absence of body capacity effects and the delightfully smooth reaction control which is characterised by an entire absence of overflap or pop, make it ideal for reception of the weakest signals.

Transatlantic reception of the US short wave stations is guaranteed and each receiver must receive KDKA and 2XAF before despatch. This latter station can be received extremely well, and nearly always at loudspeaker strength (2 valves).

Great care has been taken to secure the correct components for the purpose, the whole instrument is neatly and properly wired.

Each component is carefully placed so that no interaction or losses occur. Eddystone Short wave Coils, Condenser and SW Choke are incorporated, while the low loss antimicrophonic Valve holders, Fixed condensers and Grid leak are all raised up on pillars to facilitate wiring and to minimise damping. The instrument panel is of plate glass, engraved and lettered; the cabinet is of Oak with a special glass terminal panel at the side for the aerial terminals.

The whole is mounted on EDDYSTONE shock Absorbers which insulates the cabinet from earth and takes up all the shock.

Coils can be supplied for use on the BBC Waveband."

The picture shows that the case and panel are similar in looks to the

Eddystone Twin but internally there are apparently many differences. The tuning coil is apparently plug-in and mounted centrally just behind the glass panel in a horizontal position, the reaction coil is apparently mounted behind this. Controls are twin pots at either side of the two tuning & reaction condenser knobs.

The Atlantic Two is pictured alongside other sets sold by Harrod's. One being the Pye 2 valve receiver at £10-16s-6d and the Varley Interdyne receiver with two versions of this, Short Wave at £25-0s-0d and Long & Short Wave at £42-0s-0d. There is also the Caydon Portable receiver. This, including batteries, accumulator, valves and Royalty came to 35 Guineas.

Maybe I am biased (maybe ???) - well okay I am, but the Atlantic Two is by far the best looking, most professionally presented, set on the page.

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- Those SHORT WAVE MANUALS -

When Ian received his copies of the reprinted Eddystone Short Wave Manuals his idea was to copy the circuit of one or other of the models, not so much a true replica as the precise components are just not available. He wanted to try out the circuitry using those bits to hand in his large 'junk box'.

One item that did attract his eye was the 5 metre Transmitter/Receiver and as Ian knew there is an allotted licence free band on 49 Mc/s, near enough for similar circuitry, well the task was decided.

The 49 Mc/s band is allotted for very low-power use by remote control or surveillance equipment. Such items as wireless Baby Alarms use this band, as do some cordless phones.

So far the necessary valves and most bits for two such Tx/Rxs have been obtained, if the rest can be sourced in time then this is to be the coming winter's evening task. Ian has promised to keep us informed when the job begins, and progresses.

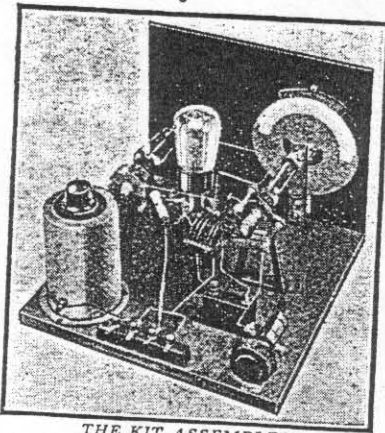
- - - - -
- The One Lung Challenge -

Those of you who read PW will have seen the STAR letter sent in by Graeme, where he discusses the DIY project of a single valve receiver and possibly associated transmitter, will have noted his query as to the use of multiple unit valves such as double triodes, triode pentodes etc; - do they count as one valve ?

We had a discussion about this and my idea was as per that of the PW editor, that a single 'bottle' could have as many units in it as one wished. This leaves the field open to some of those Hi-Mu Tv type valves where you get both a high amplification triode AND a high amplification pentode in the one 'bottle'. The suggestion has even been made that using such as the above configuration one can use a reflex circuit. Whilst not Strattons or Eddystone related I believe that anything such as this which fosters home-building and servicing is useful to our hobby, so GO TO IT Graeme, and if you are interested then I am sure EUGers will be interested.

Eddystone 7-metre Converter Kit Set

WE TEST BEFORE YOU BUY



THE KIT ASSEMBLED

A photograph showing the Eddystone converter ready for use. On the right can be seen the special aerial-coupling condenser, and on the left the unit for controlling the intermediate frequency

WE have recently built up and tried out, so far as conditions would permit, the Eddystone unit designed for the reception of ultra-short-wave signals around 7 metres. This unit works on the super-het system. It can therefore be used only with sets having one or more stages of high-frequency amplification.

Though designed for such very short wavelengths this unit has quite a conventional circuit arrangement. The specially developed feature of the unit is the coupling device between the unit and the aerial terminal of the set.

A screened tuned circuit is employed in the anode circuit of the unit's valve. This is made variable by means of a small condenser knob on the top of the coupling unit's case. The wavelength range covered by the unit is 240 to 500 metres, to which waveband the set must be tuned to give the intermediate frequency in the super-het working.

The tuning and reaction circuits of the one-valver follow general practice, but the tuning and reaction condensers used are simply delightful in operation.

Long extension handles are fitted to both these controls and the tuning is done with one of the finest slow-motion dials we have ever handled.

The assembly of the unit is quite simple. The 7-metre tuning coil with reaction winding is mounted directly

on the terminals of the tuning condenser.

In action the unit behaves just as well as if normal wavelengths were being tuned in. We were able to get on to an amateur at Baldock, the test position being Letchworth, Herts.

BRIEF SPECIFICATION

MAKERS: Stratton & Co., Ltd.
PRICE: £2 11s. for the complete kit of parts.

VALVE COMBINATION: Oscillator-detector, worked with the valves in the broadcast set.

POWER SUPPLY: Batteries of the existing set or, if a mains set, a 60-volt high-tension battery and a 2-volt accumulator are needed.

TYPE: Short-wave converter unit suitable for connection to sets with one or more high-frequency stages.

REMARKS: A very interesting unit of special interest to short-wave enthusiasts.

Any good low-impedance valve seems to work well in this unit.

We found the best position for the intermediate-unit wavelength adjustment was around 240 metres.

One important point is that the aerial length must not exceed 20 ft. or the unit valve will not oscillate.

Ferranti Clock Super-het

FULL details and a test report of the Ferranti standard super-het console were published in the September issue of "Wireless Magazine." Recently a new model incorporating a synchronous electric clock and station dial has been put on the market; this deserves special mention.

The synchronous electric clock is fitted in the centre of the loud-speaker grille. It maintains accurate time and is so arranged that it runs continuously irrespective of whether

the set is switched on or not, that is, providing the mains attachment is plugged into the wall socket. On test, we found that the readings on



A FINE JOB

A front view of the Ferranti clock model super-het. The cabinet is made of solid walnut. There will be no excuse for missing favourite programmes with a clock fitted in the loud-speaker fret

the station dial were extremely accurate.

The dial is illuminated by a beam of light from behind; this falls on the station name, which the listener chooses by rotating the tuning knob.

No change has been made in the design of the set chassis and on test we found that the results were similar to those we obtained with the standard model. At night we logged almost every station worth hearing. Selectivity was so good that on the medium waveband Mühlacker was absolutely clear of London Regional and on the long waveband Königswusterhausen was just clear of Daventry National.

Circuit for Modern Conditions

The circuit has been designed to meet the most rigid modern conditions. An initial stage of high-frequency amplification prevents interference with other receivers, variable- μ valves provide good volume control and band-pass coupling gives selectivity without loss of quality.

Just under the clock there is a little knob which controls the tone. This is a very useful gadget when listening to foreign stations which have a little "mush" or heterodyne whistle, spoiling reception. When the tone control was in circuit background noises were almost negligible.

BRIEF DETAILS OF THE SET

MAKER: Ferranti, Ltd.

PRICE: £26 5s.

VALVE COMBINATION: High-frequency (Osram VMS4), oscillator (Ferranti D4), first detector (Osram VMS4), intermediate high-frequency amplifier (Osram VMS4), second detector (Ferranti D4), power output (Ferranti P4), and valve rectifier (Ferranti R5).

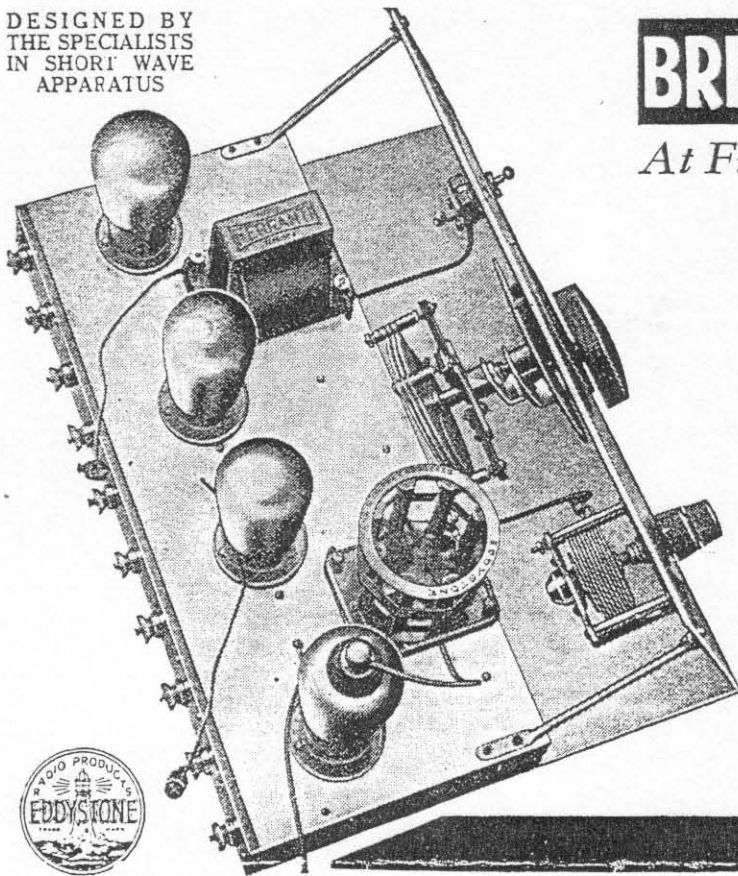
POWER SUPPLY: A.C. mains only, 200 to 250 volts, and special models for other voltages.

POWER CONSUMPTION: 55 watts.

TYPE: Self-contained table set needing only an external aerial and earth to complete installation.

REMARKS: Best value in A.C. super-hets on the market. A synchronous electric clock is incorporated on the front of the cabinet.

DESIGNED BY
THE SPECIALISTS
IN SHORT WAVE
APPARATUS



BRING IN THE WORLD

At Full Loud-speaker Volume!

The Kilodyne 4 is the voice of the world; it receives stations from every Continent and operates at loud-speaker volume. It opens up a vast new field of interest to the wireless fan.

Tunes down to 12 metres and is adaptable up to 2,000 metres, incorporates S.G. H.F. amplification, absolutely no hand capacity, perfectly smooth reaction, one-dial tuning, has been designed by short-wave specialists and praised by leading short-wave critics. It is supplied complete ready for any home constructor to assemble easily, or the individual components are obtainable separately.

TOTAL COST OF ALL PARTS (not including valves £6 17 6
Full constructional details and wiring diagrams for the "Kilodyne 4" are contained in the Eddystone short-wave manual.

Sole Manufacturers:
STRATTON & CO., Ltd.
BROMSGROVE ST.
BIRMINGHAM

London Service Depot:
WEBB'S Radio Stores
164, Charing Cross Road
W.C. 2
Tel: Temple Bar 2944.

THE
KILODYNE
4

EDDYSTONE

SMITH'S RADIO BATTERIES

Anodex Dry Batteries which have been specified for the Harris Ethergram are manufactured by a special High-pressure Process, ensuring long life and absolutely trouble-free performance. Extra power and Triple Power Types are also available.

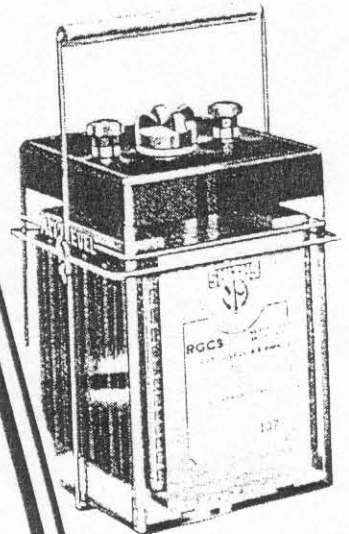
'ANODEX'
120v. H.T.
at 11/-

and
GRID BIAS
9 Volt

Specially
chosen
for the
HARRIS
ETHERGRAM

There is a Smith Accumulator both H.T. and L.T. for every type of receiver and a special range Jelly-Acid Cells for portables. Below: Type R.G.C.9, 48 amps.

Price 12/6
(complete with metal carrier)
Please write for Folders



S. SMITH & SONS (Motor Accessories) LTD., CRICKLEWOOD, LONDON, N.W.2

Advertisers take more interest when you mention "Wireless Magazine"

- A Very Peculiar S.770R -

Having regard to the recently commented upon 1650/6 version of the basic 1650 receiver there comes to mind a rather similar situation for an earlier model, the 770R.

The 770 series which covered from 27 Mc/s up to 1000 Mc/s was already complicated by the very different 770S version which owed far more to the physical design of the 880 series than to the more prosaic 770 series.

Then came the 770R/11 - what to say about this excepting that it was a 770R in name only. Factory blueprint BP1046 gives us the block schematic of this /11 version and some limited info on the circuitry, plus the gem of information that it was a special design for the D.S.I.R (Dep't of Scientific & Industrial Research). The blueprint is dated 30-10-61 which gives us an insight into its purpose, the start of the satellite era !

The /11 was evidently a very limited edition, possibly only a one-off for satellite monitoring in what was then the main satellite transmitting band of 136 - 137 Mc/s.

This limited VHF allocation of a one meg band set the tone for the design of the /11 version. V1 was an RF amplifier with optimised, fixed tuning across the full one meg bandwidth.

Next we have a three valve stage consisting of an oven temperature controlled crystal oscillator running at 29.625 Mc/s fed to a 4 x multiplier to provide a local oscillator frequency of 118.5 Mc/s, this feeds the broadband mixer stage which from the combination of a 136-137 Mcs RF signal and a 118.5 Mc/s local oscillator allows the extraction of the first tunable IF signal of from 18.5 - 17.5 Mc/s.

It is already looking little like a true 770R, but now this signal goes to a combined first IF and second mixer stage.

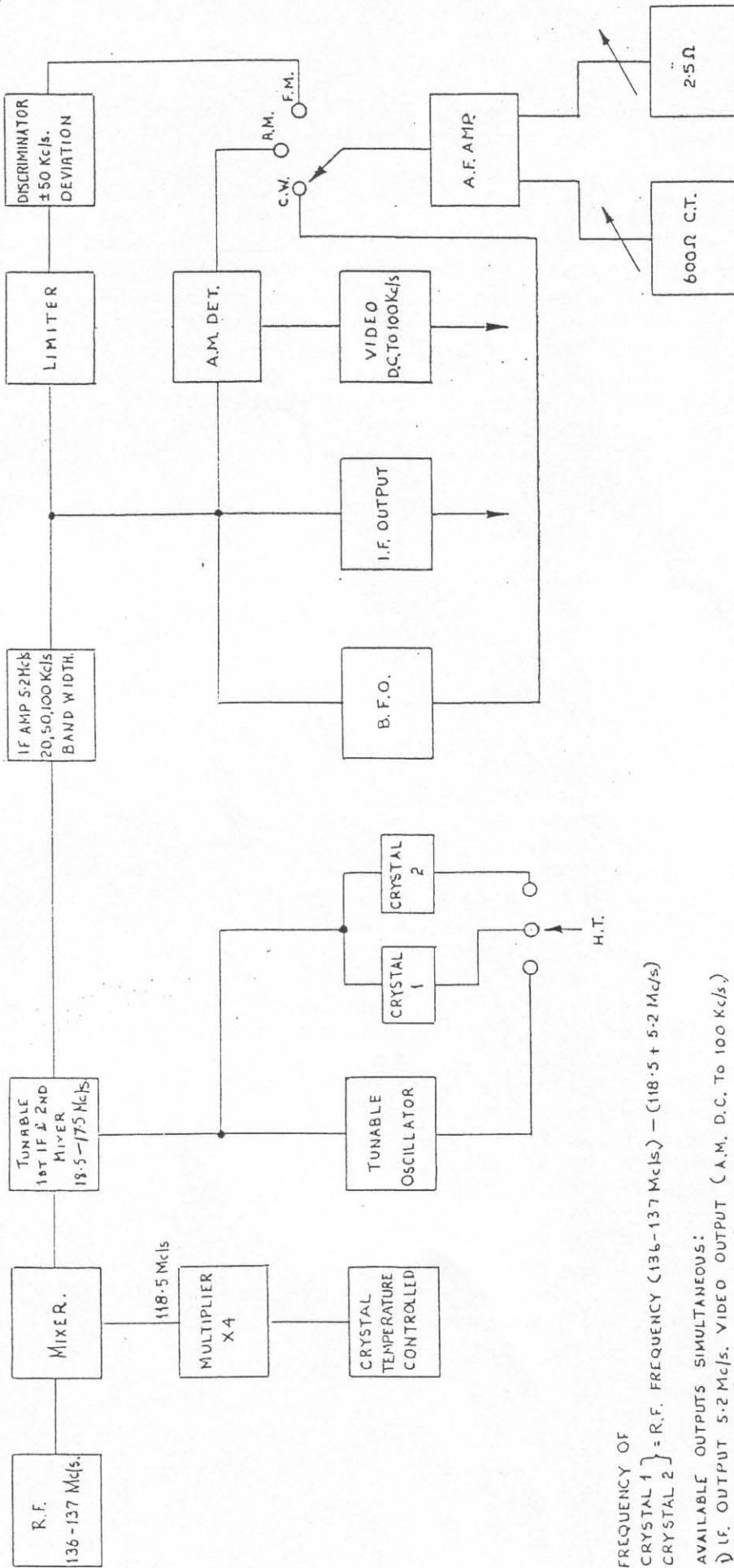
A second local oscillator, either tunable or with a choice of two switched crystal controlled frequencies, now mixes with the 18.5-17.5 Mc/s first IF and from this we get a fixed second IF of 5.2 Mc/s. Recognise this ? At last some connection with the REAL 770R sets. However this second IF amplifier stage has a switched choice of three bandwidths, 20, 50, or 100 Kc/s at will.

Here things begin to get a bit more complicated as this 5.2 Mc/s IF can go many ways, direct to a Foster Seeley FM discriminator thence to a limiter stage with a +/-50 Kc/s deviation, or to an AM detector stage. It also goes to a product detector/BFO stage. These three outputs for FM, AM, or CW are switch enabled and feed an AF amplifier with various outputs for 'phones, speaker, or 600 ohms line.

The output from the last 5.2 Mc/s stage also goes to a kathode follower to provide a standard panadaptor output for such as the EP17R.

From the AM detector stage a further output is tapped off to provide an amplitude modulated video output with a DC to 100 Kc/s bandwidth. Phew ! about the only similarity with a 770R is the second IF of 5.2 Mc/s and the AF stage. Still ours is not to reason why, but to do or die !

It was labelled a 770R/11, it did definitely exist in at least one example, maybe several more. But NO, honest I have never seen one. I would love to see and handle a /11, maybe someday this will happen. Meantime - any info on this rare beast will be very welcome. Ted.



FREQUENCY OF
 CRYSTAL 1 } = R.F. FREQUENCY (136-137 Mc/s) - (118.5 + 5.2 Mc/s)
 CRYSTAL 2 }

AVAILABLE OUTPUTS SIMULTANEOUS:
 1) I.F. OUTPUT 5.2 Mc/s. VIDEO OUTPUT (A.M. D.C. TO 100 Kc/s.)
 & F.M. OUTPUT (A.F. TO 15 Kc/s.)
 A.F. OUTPUTS AT 2.5Ω, 600Ω & PHONES (PHONES DISCONNECT 2.5Ω)

2) I.F. OUTPUT 5.2 Mc/s. VIDEO OUTPUT (A.M. D.C. TO 100 Kc/s.)
 A.M. OUTPUT (A.F. TO 10 Kc/s.)
 A.F. OUTPUTS AT 2.5Ω, 600Ω & PHONES (PHONES DISCONNECT 2.5Ω)

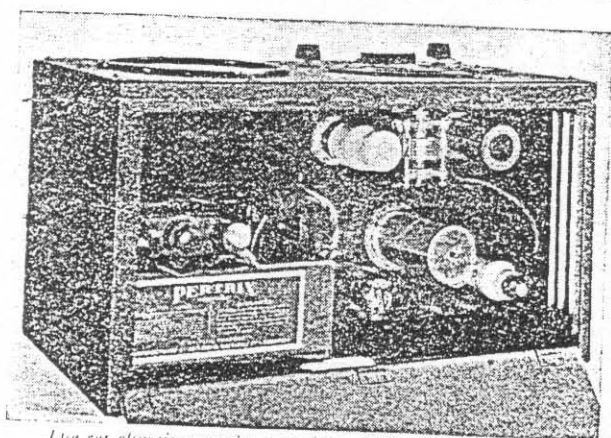
770R/11.
 STRATTON & CO. LTD
 BIRMINGHAM,
 ENGLAND
 DRAWING NO. BP1046
 DRAWN S.M. YOUNG.
 TRACED
 CHECKED
 APPROVED

BLOCK SCHEMATIC DIAGRAM 770R/11 (D.S.I.R.) BP1046.

Eddystone Battery Homelander

QUITE an interesting short-waver for battery operation is the Homelander, a new product of the well-known firm of Stratton & Co., Ltd., of Birmingham. This Homelander is a four-valver of the straight kind, consisting of a high-frequency amplifier in the form of a variable-mu screen-grid valve, triode detector and first low-frequency amplifier with transformer coupling to a Mazda Pen220 output valve.

The circuit diagram is reproduced on the opposite page and from this you will see the fairly simple nature of the design. From the general interest point of view a feature is the simplification of the power supply; the user does not have to bother about grid-bias batteries and tappings, for the grid bias is obtained "automatically," while with careful design and layout the makers have supplied anode current to the anodes of the four valves from a single H.T. + tapping. All the user has to worry about when connecting up are the



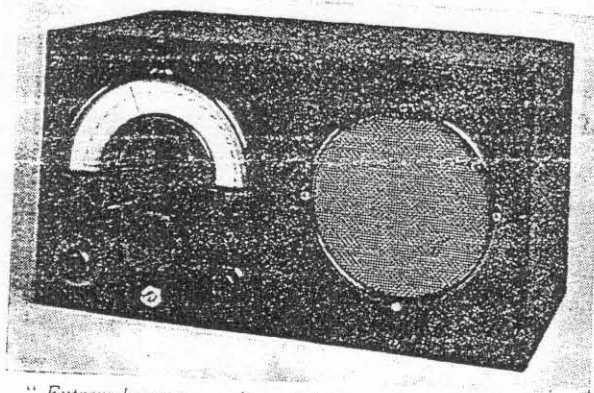
The set chassis occupies one side, while on the other side is the loudspeaker, accumulator and high-tension battery

two tappings for the accumulator and two for high-tension.

Only one tuning coil is used—of the plug-in six-pin type—and this is as a high-frequency transformer with aperiodic primary, tuned secondary and reaction. Four such six-pin coils are supplied as part of the set's equipment and cover wave-ranges of from 12 to 25 metres, 19.5 to 45 metres, 37 to 87 metres and from 245 to 555 metres.

Additional coils are available for covering all other wave-ranges between 80 and 2,000 metres. From an appearance point of view the set is extremely neat; it is housed in a metal box with a black crystalline finish and measures some 17 in. wide, 9½ in. deep and high.

There are the usual four "straight-set" controls on the left; the main



"Extremely neat . . . housed in a metal box with a black crystalline finish"

2-in. tuning control over the on-off switch immediately underneath the full-vision scale with reaction on the left and volume on the right. The full-vision scale—7 in. wide—is calibrated in degrees from 0 to 180—no illumination is provided.

You will see from the lower illustration on this page the arrangement inside the box; the set chassis occupies one side, while on the other is the permanent-magnet moving-coil loudspeaker, the 2-volt accumulator and the 120-volt high-tension battery.

Our first test, as with all battery sets, was to check over the high-tension current consumed by the four valves; this was found to be 11 milliamperes with the volume control set at zero rising to 12.5 milliamperes as the control was turned to maximum. This figure is quite satisfactory for the size of battery fitted.

On the test the Eddystone Homelander gave quite a good account of itself. We are not going to pretend that tuning was very easy. Considerable care was necessary in manipulating the tuner while keeping the reaction control in such a position that the set was on the verge of oscillation.

The set was hooked up to a single 35 ft. outdoor wire; we found that an earth played little part in determining the efficiency of the results. Our first bag was Moscow RKI testing with an American station. Later in the evening we heard an English voice talking with Japan, and two or three North Americans were heard at very good strength on the speaker. Moscow, Rome, and Berlin broadcasting talks for our edification added to the evening's fun. Strangely enough we found no trace of the Daventry Empire stations. PRF5, Rio de Janeiro, was heard at really full loudspeaker strength, while on a Sunday mid-day test the logging of British amateur transmitters was child's play.

In the latter case we experienced some interference between stations which, however, was more or less to be expected with a "straight" receiver.

We made a special test using the medium-wave coil, but of course, with four valves and a single tuned circuit, one could not expect a great deal in the way of selectivity.

BRIEF SPECIFICATION

BRAND NAME: Eddystone.
MODEL: Homelander.
PRICE: £14 including batteries.
VALVE COMBINATION: Four-valve straight circuit employing a high-frequency amplifier (Osram VS24K), followed by a detector (Mazda HL2), first low-frequency amplifier (Mazda HL2) and pentode output (Mazda Pen220).
POWER SUPPLY: 120-volt dry battery and 2-volt accumulator for providing the high- and low-tension supplies respectively.
MAKERS: Stratton & Co., Ltd., Eddystone Works, Bromsgrove Street, Birmingham 5.

REVISIONS.

COURTESY OF EDDYSTONE RADIO LTD
 & GEOFF WOODBURN, FORMER
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STRATTON & CO. LTD.
 BIRMINGHAM
 ENGLAND

DRAWING No. BP 280.

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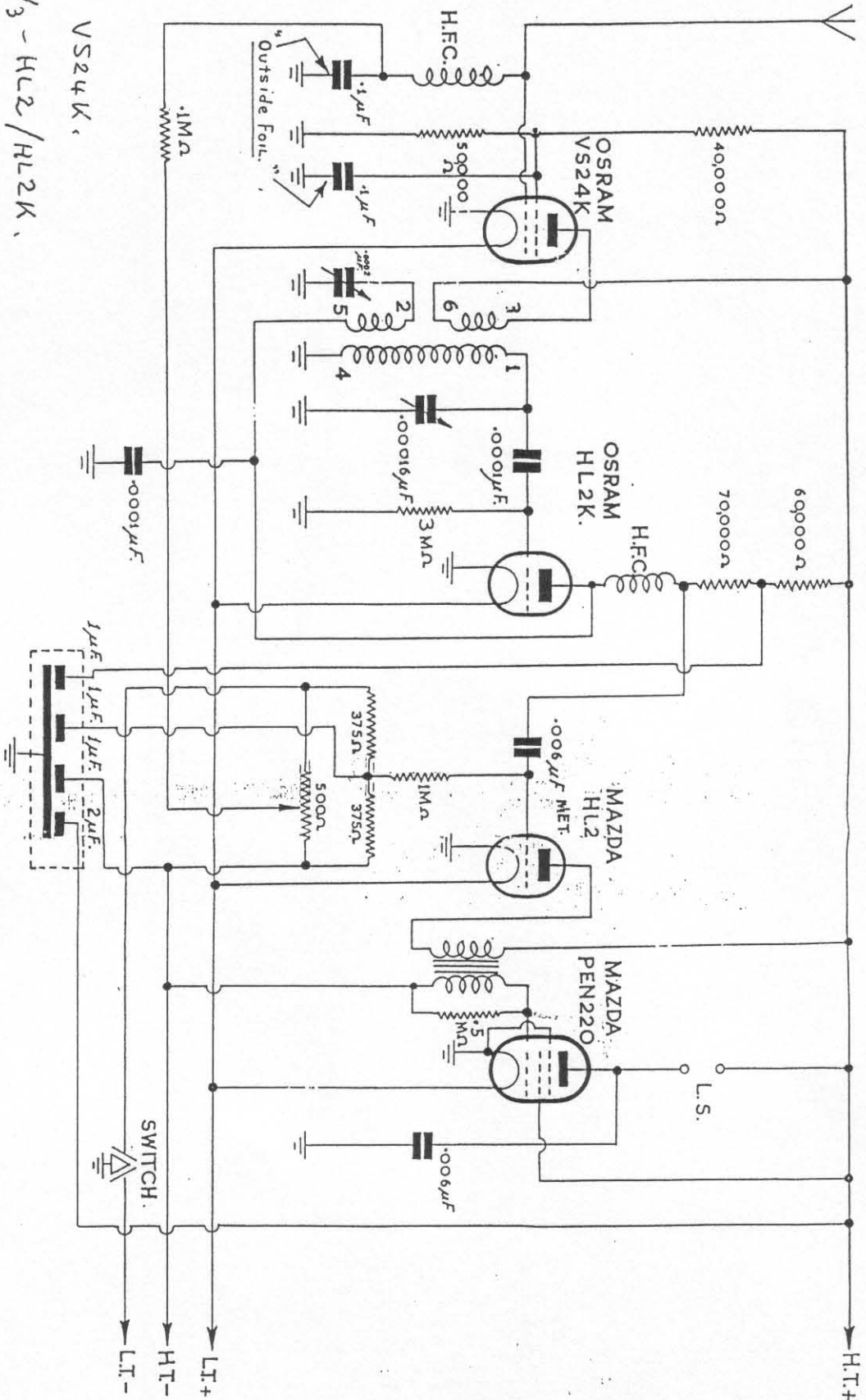
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CHECKED *[Signature]*

EDDYSTONE HOMELANDER RECEIVER.

- V₁ - VS24K,
- V₂ V₃ - HL2/HL2K,
- V₄ - 8EN220/8A22A.

16



MATERIAL.		TOLERANCES
SUPPLIER.		FRACTIONAL ±

- Antarctic Expeditions -

Research by an EUGer !

My plea for info on the 1930s expeditions which made use of Stratton's/Eddystone equipment did not go unanswered.

EUGer Martyn Jones, GW4 XZV, seems to have gone to great lengths to thoroughly research this subject and he has submitted quite a long and highly interesting account of the Graham Land Expedition which utilised the Kilodyne Four model. It is all here in this issue, so Thanks Martyn - from all of us.

- Eddystone Radio in the Antarctic -

Further to the Kilodyne 4 advertisement reproduced in the August Issue of the Newsletter, the following information about the British Graham Land Expedition of 1934 to 1937 may be of interest.

Graham Land is situated in the Western Antarctic; it is a long peninsular off Cape Horn with its tail pointing towards the Falklands and surrounded by the roughest and most violent seas on Earth. At the time of the Expedition it was not yet known if it was in fact joined to the mainland or was separated by a strait, and one of the primary objectives was to determine this, in addition to research into meteorology, geology, biology, apart from general exploration, surveying and mapping.

The Expedition was led by John Rymill, an Australian, who already had gained some experience in Greenland with Watkins. The name of the boat, a converted French fishing schooner, was taken from John Rymill's home in Australia - "Penola". Full support was given by the Colonial Office and the Royal Geographical Society.

A De Havilland Fox-Moth aircraft was taken for reconnaissance and mapping. It had a 130 HP Gypsy-Major engine and was fitted with a pair of Canadian floats with the option of a ski undercarriage. An Eagle Mark III automatic survey camera was carried.

The wireless operator was I.F. Miecklejohn of the Royal Corps of Signals, who was 'loaned' by the War Office. He also operated the aerial camera from time to time. No wireless was carried by the aircraft.

Two Bases were used, one for the first year, in the Argentine Islands about 30 miles from Port Lockray, and the next year farther South at Marguerite Bay in the Debenham Islands. Meicklejohn stayed at the first Base and was in constant radio touch with the party who were attempting to site the second Base. He was also in contact with another aerial expedition i.e. Lincoln Ellesworth and Hollick Kenyon's epic flight to the Ross Sea. Signals were constantly picked up by Ellesworth during his flight.

A two storey base hut was built and the Wireless Room was just 5 feet by 5 feet with the charging motor outside in the hut porch which ran the length of the building. Opposite the operating bench was the kitchen with its Aga cooker which I suppose provided a degree of warmth in addition to the valves in the radio !

When sledging and surveying the determination of Longitude was vital, and for this accurate time signals were required. These were received from Greenwich and Washington at 5, 8, and 11 pm daily. Also whilst sledging signals were received from Buenos Aires. The set was packed in a ration box covered with canvas and always kept outside the tent to avoid condensation. The aerial was 60 feet long and was suspended between two upright skis, thus being about four feet off the ground. This structure had to be erected each time it was needed to avoid it being destroyed by the dogs ! Also on the sledge for surveying purposes were :-

- 1, Batteries (of course).
- 2, A 'P4' Compass.
- 3, A Cyclometer for distances.
- 4, A Watts 3½" Theodolite.
- 5, A Prismatic Compass.
- 6, Aneroids, three in number.
- 7, Nautical and Navigation Tables.

The Penola returned to Port Stanley in the Falklands after establishing the base, it had no transmitter but could receive. All signals used were on CW of course. The operator on board the Penola was, by the way, Duncan Carse - does anybody recall Dick Barton, Special Agent ? (me, Ted !). Carse was the actor and he made quite a name for himself on the radio in later years. The research ship Discovery II was also in the area at this time, and assisted Rymill with the transport of dogs and the aeroplane. Radio communication between this vessel and the Expedition was also maintained.

The Expedition was an immense success, its fame being really swallowed up in the ensuing war (WW II).

It established that Graham Land was a peninsula, and not an archipelago, as had been thought likely. Its mapping was superb, as it was done by combining aerial photographs with established ground survey points. Unlike the Americans whose millions of square miles of photographs were useless as they had not a single ground point as a reference.

It is of interest that Stratton & Co supplied radio equipment for a number of Expeditions to the Polar Regions in the -30s. The Oxford University Expedition (see photos in earlier issue of N/L, Ted) to the Arctic in 1935-36, led by A.R. Glen, and the Ellesmere Land Expedition 1934-35 led by Edward Shackleton (son of the famous Ernest Shackleton), are but two examples. Reference to the list of supplies in the appendices of the explorers writings will often reveal a reference to "Eddystone" or "Stratton & Co".

References;-

- 1, Southern Lights - John Rymill
Chatto & Windus 1938
Travel Book Club 1939
Reprint - Knell Press 1986

Arctic & Antarctic - The Will & the Way of John Riddock
Rymill - John Bechervaise
Bluntisham Books 1995
3, Under the Pole Star - A.R Glen & N.A.C Croft
Methuen 1937

4, Arctic Journeys - Edward Shackleton
 Hodder & Stoughton 1936.

- Model Lists, & Valves Used -

In a Mullard Valve Guide recently obtained there is a comprehensive list of receiver models by all the major manufacturers and this list gives the recommended valve complement for the receivers.

Practically a full page is given over to Stratton & Co products and the list of models is printed below.

- | | |
|------------------------|--|
| - PRE-WAR MODELS | - Battery Models.- |
| All World Four. | VP21, PM1HL, PM1HL, PM22. |
| Battery SW Receiver. | X21, VP2, VP2, TDD2A, PM22A. |
| All Wave Four. | PM12V, PM1HL, PM1HL, PM22A. |
| All World Four. | VP21, PM1HL, PM1HL, PM22(x2). |
| All World Eight. | VP2, SP2, VP2, SP2, VP2, TDD2A, PM2A(x2). |
| Sphinx. | VP21, PM1HL, PM1HL, PM22(x5). |
| Superhet Convertor. | PM12. |
| 1934 Kilodyne Four. | PM12V, PM1HL, PM1HL, PM22A. |
| 1935 Kilodyne Four. | VP21, PM1HL, PM1HL, PM22. |
| Everyman Shortwave. | PM12A, PM1HL, PM1HL, PM2A. |
| Homelander. | VS24K, HL2, HL2, PM22A. |
| SW/HF Amplifier. | SP2. |
| 2 Valve Transceiver. | PM2A, PM22. |
| | - AC Mains Models.- |
| 1934 AllWave Four. | VM4V, 354V, 354V, PM24M, DW2. |
| 1934 Kiloyne Four. | VM4V, 354V, 354V, PM24M, DW2. |
| Sphinx. | VP4, 354V, 354V, PM24M, DW4/350. |
| Super Six. | 354V, SP4, VP4, TDD4, PenA4, IW3. |
| 1935 Kilodyne Four AC. | VP4, 354V, 354V, PM24M, DW4/350. |
| Overseas Four. | VM4V, 354V, 354V, PM24M, DW2. |
| Short Wave AC. | X41, VP4, TDD4, PenA4, DW2. |
| - POST WAR MODELS. | AC Mains Models. |
| S.504. | EF39(x5), ECH35, EBC33, 6V6GT, 5Z4G, EB34. |
| S.640. | EF39(4), 6K8, EBC33, EB34, 6V6, 6X5. |
| S.659. | EF39(2), 6K8, EBC33, 6V6, 6X5, EB34, EM34. |
| S.670. | UAF41(5), UCH41, UL41(2). |
| S.680. | 6BA6(5), X81, 8D3, 6AL5(2), 6AU6(2), 6AM5(2)
5Z4, VR150/30. |
| S.710. | EAF42(3), EL42(2), ECH42. |
| S.750. | 6BA6(3), ECH42(2), 8D3, 6AT6, D77, N78, |
| | cont; 750,- 5Z4, VR150/30. |

* Nota Bene,- not all types listed are MULLARD Valves, included are types by Osram, Mazda and Brimar.

WANTED, STILL LOOKING FOR EC10 Mk II and 680x let me know if you have one please. Phone James Duckworth on 0181-449-3921 evenings (Barnet) or 01628-58-5201 daytime, Thanks.

- Human Interest Story -

Well so goes the title suggested by Graeme, I would like to think of it as showing ESP-like links between a human and an Eddystone receiver !

EUGer Phil Screen was taken out for a spin in the country for his 80th birthday, recently. A farm tractor turned across the path of their car and Phil woke up in hospital. Some three weeks later when he arrived back at the QTH, minus most of the pain, he turned on the beloved 730/4. Guess what ? after warm up it faded away before his eyes ! Empathy between man and beast is well known, but empathy between man and machine we have now.

This looks like a trip to Wolverhampton for Graeme, to collect and sort out the 730/4. Lucky that Phil does not live in the Hebrides.

- - - -
- COIL FORMERS for DIY -

EUGers will be very interested to learn that ISOPLETHICS, Real Radio Resources, are offering new bakelite plug-in octal based coil formers. These are 36 mm in diameter and 50 mm long, at the price of £3.25 inclusive of VAT and p&p, or 70 mm long for £3.75 inclusive.

They can also supply many other new valve-type components and offer a custom chassis service in aluminium and tinfoil. (Example: 0.25p per square cm for 16 SWG ali, valve holes punched in £1.00 each, sheet bends £1.00 per bend) Write to Isoplethics, 13 Greenway Close, North Walsham, Norfolk, NR28 ODE for details. Don't forget to include a large SAE.

- - - -
- The Eddystone Active Aerial -

Seems that friend Graeme has now located and liberated one of these units (what, JEALOUS, ME ??? YES.)

From an initial examination this unit is for LF/MF/HF and is housed in a small Eddystone Diecast Box (of course) with a three transistor circuit and is fed from a 2 foot telescopic whip. This at first, rather cursory test gives the equivalent of a 20 foot aerial. Size ? - well Graeme comments that it is slightly bigger than a box of Swan Vestas. More info and maybe a photo later, when time permits.

- - - -
- EUG Mail -

Neither Royal Mail, nor any other organisation is very worried about whether our EUG mail gets to the right destination, nor just how long it takes from door to door.

Several letters recently have turned up at the OLD, OLD address in Rossendale and this has become somewhat embarrassing, quite apart from meaning delays in your mail getting to us at EUG.

This has been said before several times but with recent events it needs saying again, apparently. The only valid addresses for EUG mail are those of Jim Murphy, Graeme Wormald, or direct to myself Ted Moore.

Mail which goes either to 112 Edgeside Lane, Waterfoot, or direct to

the Eddystone Factory, will be delayed DEFINITELY, in a worst case scenario it may get LOST. So do please all of you TAKE NOTE.

- - - - -
 - The 880/3 Manual -

Graeme has recently been presented with two copies of the Marconi Manual for this model, thanks a million Christine !

Both were somewhat incomplete in that whilst one had the schematic, the other did not. The second lacked several pages that were in the first.

Both were sent to me for checking and from what I have here in my files I was able to complete both copies. I shall keep one for my Archives but the other will go back to be available for copies to be made and sold to those interested.

This find has plugged a gap in our manual stock since there do appear to be an increasing number of the /3 set around. My surprise though is in finding just how slight the differences really are. I have for some time had an amendment sheet in the front of MY copy of the 880/2 manual which says as follows;-

NVS. 6.11.64.

Eddystone Model 880/3

The Eddystone Model 880/3 is a variant of the standard 880/2 receiver produced for The Marconi Company. It differs only from the standard model in the following respects:-

1. The crystals normally fitted in the two half lattice filters provide 6dB bandwidths of 1.1 Kc/s and 2.6 Kc/s. (other bandwidths can be supplied to special order).
2. A separate double triode (12AT7 : CV455) is used as carrier insertion oscillator for SSB reception. Upper and lower sideband selection is retained as on the standard version, the crystals normally fitted being 498.5 Kc/s and 501.5 Kc/s, (SL cut).
3. The tunable beat oscillator for CW reception and the CW/SSB detector are combined in a 6AJ8 (CV2128) triode heptode in lieu of the 6BE6 (CV453) used on the 880/2.

Stratton & Co., Ltd.,
 Alvechurch Rd,
 Birmingham , 31,
 England.

- - - - -
 - Those Inimitable Diecast Boxes -

A highly enlightening 'Works' document which has just come to light amongst my as yet unsorted material is a full description of the Chemical (metallic) Composition of the alloys utilised in the production of certain models (sizes) of these familiar diecast boxes.

There were, and still are many different sizes of these items and seemingly they were not all cast from the same alloy mixture, as I had assumed. One should never take things for granted Ted !

In the same way that until recently I had never considered the possibility of there existing any more unknown models, I had never considered the possibility that the different models of diecast box might need to be made with a different mix of metals. It is really a case for me of 'the more I learn about the Company, the more surprised I am'.

The full document is reproduced on the following page for your perusal. If we have any metallurgist out there maybe he can explain the difference in alloy properties, read on.

STRATTON & Co; BIRMINGHAM, 31.

WJS/GMW

23rd November, 1964.

Diecast Boxes. Material.

Cat. Nos. 650, 845, 896.

Material: MAZAK 3 to B.S. 1004A.

Composition of Mazak 3.

Aluminium	Al	4.1%	Nominal
		3.9%	Minimum
		4.3%	Maximum
Copper	Cu	0.03%	Maximum
Magnesium	Mg	0.06%	Maximum
Iron	Fe	0.075%	Maximum
Lead	Pb	0.003%	Maximum
Cadmium	Cd	0.003%	Maximum
Tin	Sn	0.001%	Maximum
Zinc	Zn	Remainder qsp 100%	

Cat. No. 903.

Material: Aluminium Alloy LM-2 to B.S. 1490.

Composition of LM-2.

Copper	Cu	0.7 - 2.5%	
Magnesium	Mg	0.30%	Maximum
Silicon	Si	9.0-11.5%	
Iron	Fe	1.0%	Maximum
Manganese	Mn	0.5%	Maximum
Nickel	Ni	1.0%	Maximum
Zinc	Zn	1.2%	Maximum
Lead	Pb	0.3%	Maximum
Tin	Sn	0.2%	Maximum
Titanium	Ti	0.2%	Maximum
Aluminium	Al	Remainder qsp 100%	

As the above shows besides the then rare Silicon there are traces of Titanium in the latter formula, Nothing is as simple as it appears on the surface !

- - - -

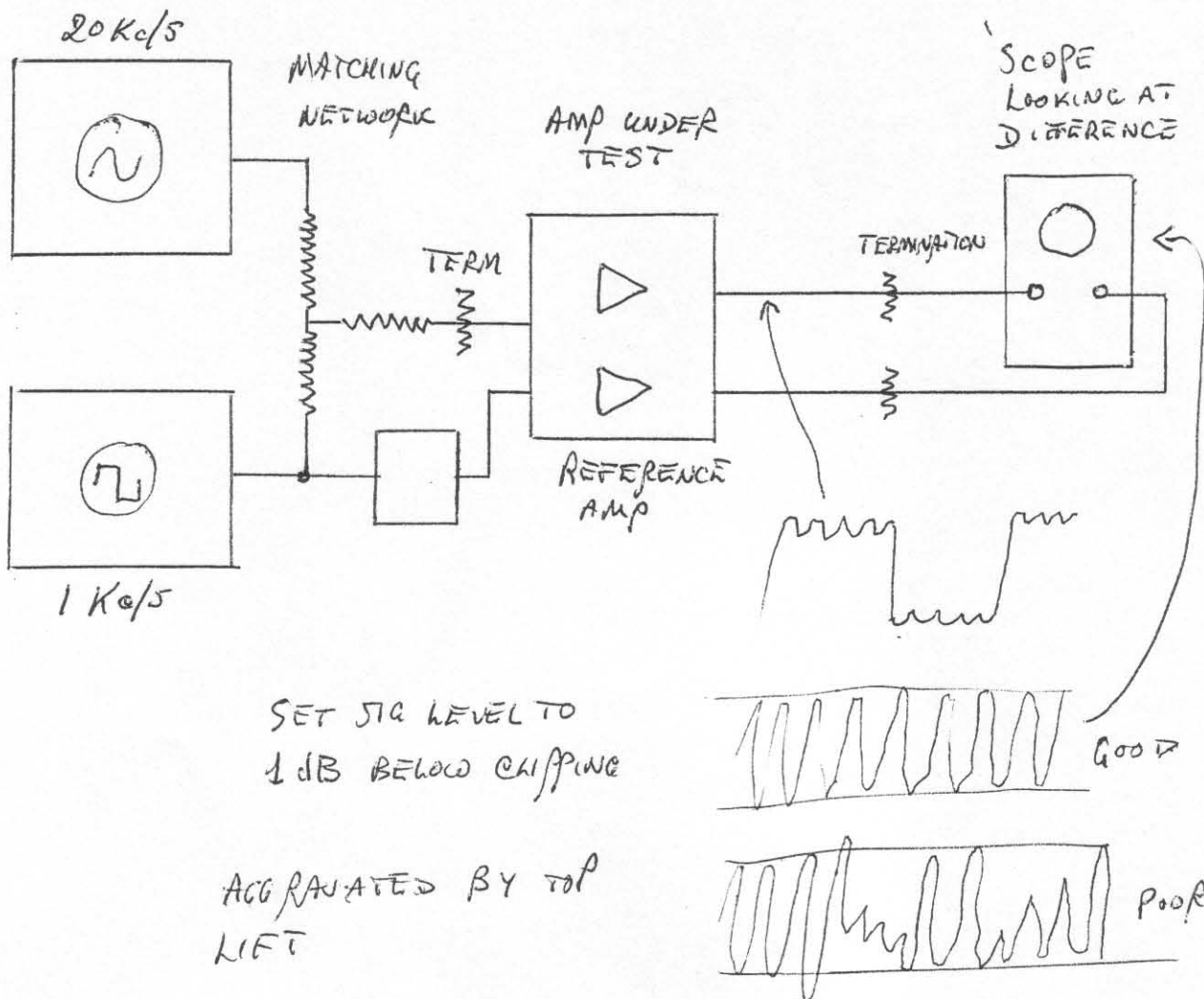
- Transient Intermodulation Distortion Testing -

Amongst the multitude of paperwork that we at EUG have inherited from the files of Geoff Woodburn is a handdrawn description of the equipment used at the Bathtub for the above tests, done on development models.

Whilst checks against Personal Biological Memory Banks show that there is nothing out of the usual in the drawing and data supplied, a copy is printed here since it will be of interest to those collectors of 'ephemera' amongst EUGers.

The sheet is undated but was included with, and stapled to, similar drawings which are dated 1962-3. This dating - whilst not definite - may serve to prevent mail from those members who have more recent information on the figures and line-up of equipment used today. Remember we ARE dealing with data from more than 35 years ago, so you techno-bods of the 1990s do please bear with us. See next page for the drawing,-

T. I. D. TEST.



- Members Free Adverts -

FOR SALE,- Must sell my 680X, case reasonable but grubby as found stored. It does work okay but needs all over cleanup, overhaul and TLC, with manual. ALSO 770U MkII, serial no; HS0912 as supplied by Southern Marine Radio, Southampton, as above but works okay. Price, collected is £100 for the pair but will separate if needbe. Phone Roger Bunney, Romsey, 01794-517497.

WANTED,- MIMCO 2235 by Dynatron, this is a marine receiver, also psu 889, 960,890,930, plus any scrap Eddystones for spares. Please hone Peter Lepino on 01372-454381.

FOR SALE,- model 770R MkII in good condition with manual working okay. Buyer collects at £75. Contact Bob Ellis on 01332-551398 (Derby area).

13, Greenway Close, North Walsham, Norfolk NR28 0DE, UK. Tel: 01692 403230

Graeme Wormald, G3GGL,
Eddystone User Group,
15, Sabrina Fair,
Bewdley,
Worcestershire.

3rd August, 1997.

Dear Mr Wormald,

Thank you for enquiry concerning our chassis services. Leaflets giving the details requested are enclosed.

As a lapsed Eddystone collector - I have had examples of most valved post war and several pre-war receivers - I am of course aware of the EUG and keep up to date with the newsletter courtesy of a local member. My personal interests now centre on home construction of simple valve receivers such as the ST-1993 published in Radio Bygones. Isoplethics has supported valve receiver enthusiasts for several years: we supply specialised transformers, chokes, plug-in coil formers, variable capacitors and drives as well as metal work. We also manufacture older-type iron-dust cores ($5/16$ " types are usually in stock) and could supply replacement older Eddystone types if there was a demand. A sample of the required core would be necessary.

We expect to announce several new products that may be of interest to your members over the next few months. These should include two new types of plug-in coil former; a high-ratio tuning drive; and a headphone adaptor that allows normal stereo headphones to be used where high-impedance (4 k Ω plus) types are needed. We will send details when the time comes. A construction project resulting in what might be described as a mini All-World Two that uses several of our new components should be published in the New Year.

As you will be aware, interest in this type of construction is increasing, but component availability is limited. Newcomers find many published projects frustrating due to lack of sources. We aim to provide a limited selection of '30s style components for this type of project, and would be happy to consider supporting any such project that you may consider publishing. However, replacing the whole '30s range is beyond our resources!

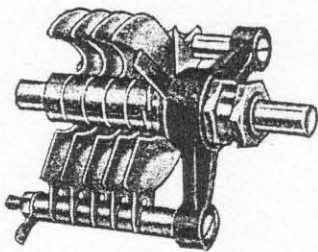
I wish the EUG continued success.

Yours sincerely,



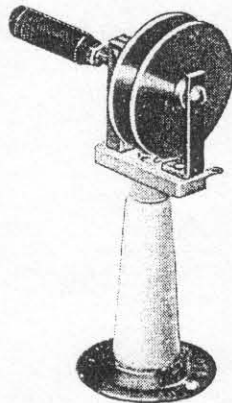
T.S. Christian.

Fine Quality Components



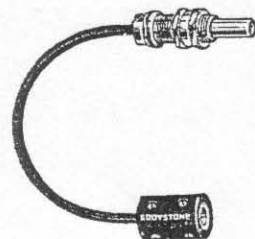
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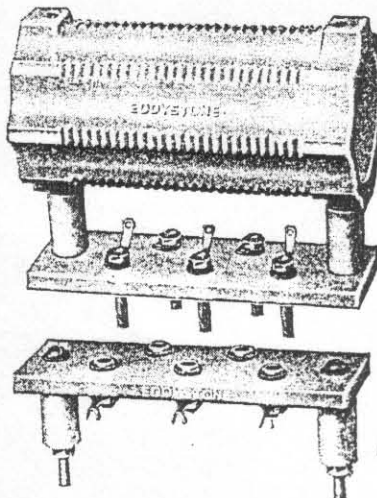
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Cat. No. 1088.
For H.F. circuits using low-capacity triodes. Maximum voltage 2,000 volts D.C. Capacity variation 1-8 mmfd. Frequentite pillar insulator mounting, insulated adjusting knob. Price 6/6



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For front panel control of awkwardly placed components. Will drive through 90 deg. perfectly. One hole fixing. For $\frac{1}{4}$ " Spindle. Price 3/6
Cable length $5\frac{1}{2}$ "



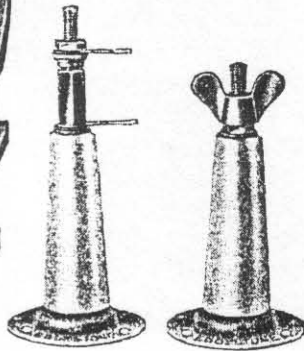
FREQUENTITE LOW LOSS FORMER

Cat. No. 1090.
Ideal for Amateur transmitters. Former size $5' \times 2\frac{1}{2}'$, spiral grooves take 26 turns of wire up to 12 gauge. Winding data supplied with former. Price 4/-

FREQUENTITE SUB-BASE.

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For mounting former No. 1090. Can be used as base for self-supporting inductances. Power plugs ensure positive contact. Price 3/6

FREQUENTITE BASE. Cat. No. 1092.
For mounting former with sub-base. Heavy-duty power sockets for sound electrical connection to former. Price 3/9

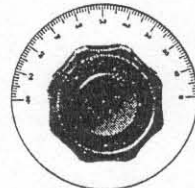


FREQUENTITE PILLAR INSULATORS.

Ideal for mounting inductances, formers, meters, etc. Tested to breakdown voltage of 30,000 volts. Cat. No. 1049 (wing-nut fitting). Price 1/6

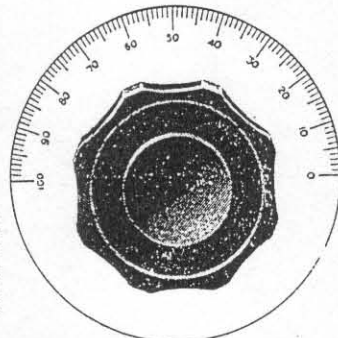
Cat. No. 1095 (2BA Plug and Socket fitting). Price 1/8

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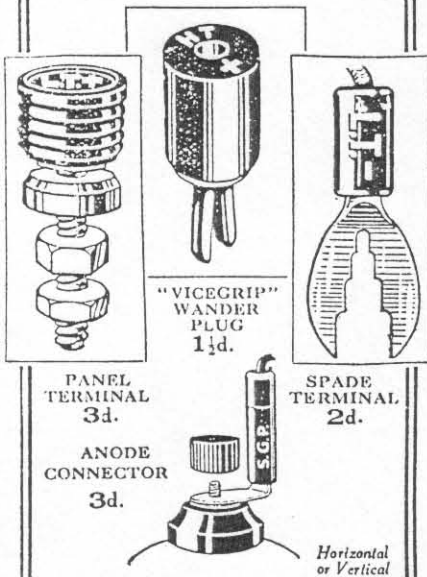
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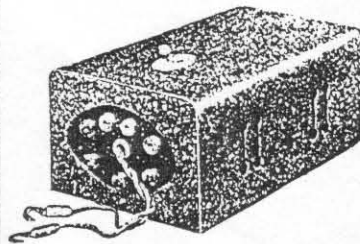
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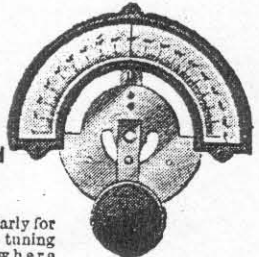
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Blue Spot (with volume control)	27/6	2/6	6	4/6
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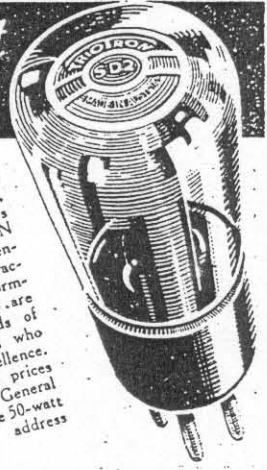
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 - Type 3217
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ADDRESS

Use sealed envelope—1d. stamp. P.R.W.A.

- Time Out -

When a much loved receiver goes Kaput the owner sometimes feels a bit put out, how can it fail him after so long ?

Most of the older sets that we collect and use are well beyond their 'life expectancy' and that they do still perform is a tribute to the care and work that went into their design and manufacture.

Some components such as toggle switches were designed with a 'life' of a half million, or less, operations. In use this will have been exceeded many times over a thirty or forty year period. Hardly unusual if such a switch does fail.

Variable condensers may have been greased at manufacture and never since ! Try that with car parts and see what happens.

Valves are another component which usually far exceed their design life. I have bought WW II models such as the S.358 which have performed well whilst still using their original WD valves, not bad for fifty years down the line.

I pointed these facts out recently to Alan who had a rather unsettling failure on his 830/7. After a break of several weeks whilst the family were on holiday Alan turned on his 830 only to be met with complete silence, a look inside and all valves appeared to be 'glowing okay' but no hum even from the speaker or phones. It took some voltage checks with the Avo to show Alan that both of the surge limiter resistors in the 'anode' side of the silicon diode rectifiers had gone o/c, nothing visible externally but they were o/c !

When asked I told Alan that this usually happened when one or other of the power electrolytics was leaky, in my experience it is usually the 50 muffs C209, but sometimes the 32+32 muffs C207 will go first.

I was only half right in this instance. The smoothing choke had gone o/c and it was this which had provoked C209 by allowing the full offload HT to exist across the 50 muffs.

The parts came to hand easily, a 48 muffs from the junk box and two new 10 watt/150 ohm wirewounds soon had the set chirruping happily again. Alan can now see that his 15 years of ownership plus the MoD years of use mean that he must now expect failures of this kind to happen. He is planning for the future though by buying in spares as they come to hand. A full set of valves to begin with, not cheap but they will someday be necessary. He also bought two spare 150 ohm resistors and will be on the lookout for suitable e'lytics to store on his goodies shelf. He is also interested in obtaining a decrepit 830 chassis to store as a source of 'cannibalised' parts.
Ted.

- - - -

- FREE MEMBERS ADVERTS -

WANTED - still looking for EC10 Mk II and 680X models so please do let me know if you wish to part with either or both of these. Phone James Duckworth on 0181-449-3921 evenings (Barnet area) or 01628-58-5201 daytime, Thanks.

WANTED - Racal Syncal 30 batteries, vehicle psu, mains psu, battery charger, 100 watt linear, and vehicle mounting rack, connecting cables and plugs, plus spare phones/mike and telephones. Manuals too if available. Please phone Jim Cameron on 01202-668446, Thanks.

- - - -

- From New Zealand.-

Ross Paton writes re replacement valves for that very expensive 6AM5/EL91/N77/9D6 - he asks whether anybody has considered using the 6AK6 which is - he says - about as close to the EL91 as one can get, bar the pinout. He also mentions the EL95, sometimes coming from the 'states as a 6DL5. This is a bit taller than the EL91, has a different pinout, but is electrically very close to the EL91.

Ross comments on the Wirewound pots; and their not going down to zero after some usage. He has noticed this in practice but says that a good designer would have allowed for this in design tolerances.

On the matter of the MIMCO 2245A, the badged 670A. He says that his 2245A is bronze coloured has the pushpull UL41s for output. The ranges differ in that this set covers the 75/80m Ham bands and the 60m B'cast band, but NOT the 120m band. It also has no built-in speaker.

- - - - -
- Panadaptors for the 770 series.-

I KNOW that I have said this before, but here we go again. The early 770 versions did not have a 5.2 MC/s IF output for panadaptor use but the later ones did. If you have an early version then the suggested mod was to lift the kathode bypass condenser on the last IF amplifier from chassis. Take it to a new 100 ohms carbon resistor and thence to chassis. From the junction of the old bypass condenser and the new resistor you take a small diameter coax lead to a rear mounted socket. VOILA, you have a 5.2 Mc/s IF feed for a panadaptor. Okay Peter ?

- - - - -
- Field Day under Canvas -

EUGer Jim Cameron says that if anybody is interested in a large 12 x 12 army frame tent for portable/field day use then he has one spare, call him on 01202-668446.

- - - - -
- END IT -

That is IT for this issue, hope you enjoy it all, whether you do or not then write and tell us at EUG. If you have an article for the next N/L then send it pronto.

For next issue I have a full 7 page treatise on "Aerials for use with the 770R and 770U" that was done in the '60s by engineers at the factory evidently for the edification of their customers. I have decided to print the whole thing as these models do generate more than their share of mail. Mostly to the effect that they are 'deaf', or 'won't work on a bit of wet string. 73, Ted.

POST-SCRIPT

Radio Ramblings by Graeme - G3GGL

VALUE FOR MONEY

In the last Newsletter Ted posed me a question: A letter from Stewart had queried the original price of the Eddystone EA12 ham-band Rx, £185 new in 1964. What would that be in today's money, allowing for the reduction in the value of the Pound? Well, there are several yardsticks to work on because although the Pound has fallen the standard of living has gone up. But I prefer to work it on something simple, like the price of jam sandwiches. In 1964 a new Austin Mini cost £400 plus £100 tax (the EA12 didn't carry any tax; wasn't that a good idea!). Practical Wireless Magazine cost 2/- (that's two shillings, for the youngsters, or 10p in modern monopoly money). In 1997 it costs £2.20, just 22 times the price. So at today's prices that puts the EA12 somewhere around £3000. A working man's wage in 1964 was £10-£15 a week; a professional would get £20-£40. And if anybody tells me they were getting differently, yes, there are always those who are luckier or less fortunate than the rest. So let's just enjoy owning our extremely cheap vintage Eddystones!

ON THE AIR

Just a reminder that the E.U.G. 80-metre net is still on the First Thursday and First Sunday of each month. It's got a bit quiet over the summer, just one or two sometimes (and it's difficult to have a net when you're on your own!). AM testing at 09.45, SSB from 10.00 onwards, local British time. Frequency around 3695 +/- QRM.

OLD CODGERS' CORNER

On page 19 of the present issue Martyn Jones, GW4XZV, in his fascinating feature on the British Graham Land Expedition, 1934-37, refers to 'Dick Barton - Special Agent' on the wireless, (c.1946). Ted claims to remember it; OK, does anyone remember 'Monday Night at Seven' on the BBC, presented by Ronnie Waldman? Not 'Monday Night at Eight' but 'at Seven'. As a child I eschewed the adventures of Larry the Lamb and Uncle Mac; 'M.N.A.S.' was my favourite fare (after 'Band Waggon', of course). It was a magazine programme featuring news, quizzes, music, drama, and the original 'Deliberate Mistake'. This was a terminological inexactitude for which you had to listen carefully and write in. It was changed from seven to eight o'clock shortly after the outbreak of World War Two, to allow workers to stay on the job an extra hour and not miss their favourite programme. This was a disaster for me; I was seven years old when the war started and had to be in bed for eight . . .

"It's Monday Night at Seven, Oh can't you hear the chimes?
They're telling you to take an easy chair...
And settle by your fireside, get out the Radio Times,
For Monday Night at Seven's On The Air."

(Signature Tune)

(MORE RAMBLINGS)**EDDYSTONE SHORT WAVE TWO**

I'm not the only one to have completed this project; EUGer Martin Lindars has sent me photographs of a super SW-2 which he has constructed and he points out, quite rightly, that I've got my Eddystones muddled up and that the SW-2 doesn't have the fancy band-spread arrangement of the "All World Two" (battery version) but is quite a simple construction. So come on folks, let's have more reports of D.I.Y. short wave sets using as many Eddystone Components as you can find, comb the flea markets, write to Isoplenics (see letter in this issue), dig in the junk boxes. The satisfaction of tuning your very own Rx is a thrill beyond description. In the next issue I'll feature a report on the technical performance of the SW-2.

E.U.G. BOOKSHOP

All the items listed in the last Newsletter are still available at the prices shown; they all include post & packing. The demand for the various construction manuals continues to be steady. As Ted says earlier in this Newsletter, the handbooks for the 'advanced' solid state models are not really a proposition. They are as big as city phone books and when we quote prices of £3-£10 for a handbook that is for the valve sets and simpler transistor models (EC10 and derivatives; 990 series). Quite frankly, the servicing of anything more recent and complex is beyond the scope of a user group and the expense involved reflects the original price of the set (eg 1990 series; 1560 series; prices from £3,500 plus VAT up to £6,000). When the present very small stock of handbooks for the 958 series is exhausted, the price of a photocopy will be extortionate. As Ted says, it will take Christine and her machine a day to do one.

ADDRESSES

I think this is a good place to review the instructions about sending your mail to E.U.G.

For orders of any paperwork, bookshop items, membership queries, renewals or payments, send to me, Graeme Wormald, G3GGL, 15 Sabrina Drive, Bewdley, Worcestershire DY12 2RJ.

For any technical questions and contributions to the Newsletter, send to EUG Editor and Eddystone Technical Wizard Ted Moore, care of Jim Murphy, 63 Wrose Road, Bradford BD2 1LN.

Please, please, send a stamped self-addressed envelope if a reply is needed. Just remember that one query from each member will cost Ted £80 a year on postage alone. Never, never, use Ted's old Lancashire address; he doesn't live there any more and it will probably get lost. Do you know that people are still writing to the Eddystone Factory at West Heath? They left there well over a year ago!! And in any case, Eddystone are not in a position to handle User Group mail, they have a living to make. They just send it on to me ...