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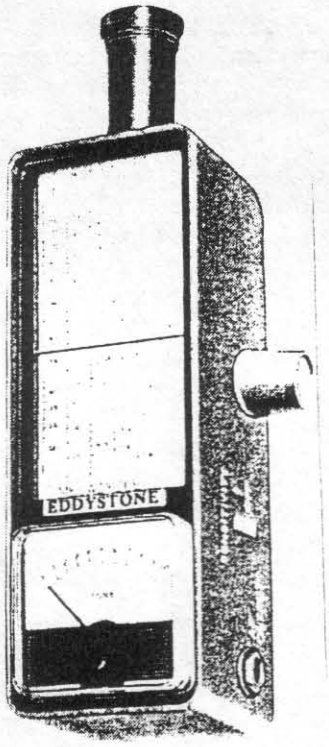
Eddystone User Group Newsletter

Issue No: 42 April 1997

Featured Model: Edometer Test Instrument



A non profit newsletter for Eddystone Users

*Information quoted from Eddystone Literature by kind permission of Chris Pettitt, G0EYO, Managing Director of Eddystone Radio Limited

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15 Sabrina Drive,
Bewdley,
Worcs, DY12 2RJ
Tel:01299 403372

This is issue 42 of the newsletter and is the sixth of six issues for the year 1996/97. If you join after this issue you will get issue number 43 which will be the first issue of year 1997/98. Members are now reminded that subscriptions for the new year are now due. (See the fly sheet included with this newsletter)

Subscriptions
Subscriptions are £10 per year UK and £11 per year overseas. Metals EUG badges are available at £2 each. Any remittances for subscriptions, badges or manuals must be by cheque or money order and in sterling. We cannot cope with foreign currency as the bank charges for conversion are more than the value of the subscription. Make your cheques payable to **Eddystone User Group**.

Manuals and Circuits
Copies of manuals and circuits are available for most Eddystone receivers through the EUG with discounts for EUG members. Manuals cost between £3 and £10 depending on size, and whether original or a copy. Most manuals are now copies. Back copies of all newsletters are available at £2 each post paid. Contact Graeme Wormald G3GGL whose address is on the front cover.

This issue sees the second episode of Bob King's specially commissioned autobiographical adventures; it may run to four before he is finished, as it will include his recent construction of a replica Eddystone Shortwave Two.

A reminder that we look forward to seeing many of you again at the National Vintage Communications Fair at the NEC, Pavilion Hall on Sunday 4th May. This is a chance to put faces to names, to pick up those handbooks and back issues of the newsletter and look at some of the older sets. Graeme tells me he has got some good ideas for the display this year and will have copies of the Eddystone Short Wave Magazines of 1932-1939.

Graeme showed me a copy of the Amateurs Radio Directory of British and Continental Call Signs compiled by Popular Wireless in January 1925. We are thinking of reproducing this as a Xmas extra this year.

Chris Pettitt -G0EYO
Managing Director.

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- Issue 42.-

Here we go with another issue and one very important item is the bit about Eddystone and Space Research. I have mentioned the use of the 770 sets by NASA in the past and got a very long letter from Geoff saying that this model was long past its prime when real space research came along. that he doubted an organisation such as Nasa or their contractors would utilise British sets when there simply must have been a comparitive USA model.

Well thanks to a little bit of Archive-Busting by the redoubtable EUG Sherlock we have here some proof that 770 sets, and Mark Is at that, were used 'over there'.

I had no doubts myself having seen them rack mounted with my own eyes, but had no photos to prove my assertion. It took Graeme Wormald, G3 GGL, our very own Sherlock to come up with this proof. The photo I have is a colour photocopy print and I am not too sure what sort of quality it will give when reproduced but it ought to be good enough. Enjoy this N/L.

Ted.

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Featured Model, The Edometer.-

A bit of a change this one, the EDOMETER or model ED902 was, well still is, a multi-function test instrument which is completely portable and powered from an internal battery supply.

There are two versions, the original EDOMETER, no mark number was used, and the later EDOMETER Mark II.

The actual circuitry and operation is unchanged in the new model, Mark II, but it looks slightly different in having a different scale, meter and knobs. Several components in the circuit differ also. Functionally they are identical however and as the attached circuit shows they are a basic two tranny oscillator and meter amplifier with audio output stage cum tone generator.

A set of seven coils are supplied to enable full coverage from LF (390 Kc/s),up to VHF (115 Mc/s).

As a special offer a copy of the original blue booklet as supplied with the first version ED902 will go to the first person who can supply a good detailed photo of an EDOmeter, a reply to this must be sent to TED via JIM to get the ORIGINAL ED902 Booklet !

See page 3 for the full schematic of this model, the Edometer Mk II.

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FREE MEMBERS ADS.

FOR SALE,- Hallicrafters FRM-20 vintage transistorised Transceiver, needs attention & TLC, write to Doug Bishop, EUG. 17 Russel Street. Bath. BA1 2QF. Thanks.

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- Solid State 5Z4G.-

This valve is used in such sets as the 770 series and the following info may be used on other such octal based types of power rectifiers.

Best thing is to either start with a duff 5Z4G valve or to buy one of those octal plugs from such as RS, yes these are still sold.

The whole idea is to replace the valve with suitable silicon power diodes, thus reducing LT consumption and increasing reliability whilst getting rid of some of that unwanted heat,

MY choice is to use not two but four of the 1N4007 diodes which are available for just a few pence each. Wire them as two series diodes for each half of the old valve, thus increasing reliability by reducing stress. The two in series can then be wired across the correct terminals of the octal plug, check this on the circuit diagram and make sure you get the polarity right. Use high melting point solder and not the low M.P. stuff as sold for pcb use. If you are using the old valve base this may be filled up with resin or pitch once the soldering is completed and checked out. You now have a perfect good solid state replacement for your 5Z4G valve which will not generate any heat to add to the problems of your ageing set. Tom.

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The 909A receiver.-

Not often we get this set mentioned in the mail is it ? Don has one and wants to know about replacing the WX3 Westinghouse diode as used in the 909As noise limiter.

Replacement WX3s are just not available these days and fitting one of those versatile 1N914 types seems to cause excess cutting of AM signals so my suggestion to Don is that he try two of this type of silicon diodes in series, making certain that the polarity is correct. Let me know Don how it goes as others may need to know this in the future. Ted

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Free Members Ads.

WANTED,- Jim McGowan is looking for an EC10, Mk II and also for EB35, EB36, and one of the Model 1000 series plus a Diecast Speaker unit. Any offers please to Jim on 01708-340304 (Essex). Thanks in advance !

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WANTED,- by Ben, G4BXD, HF range coils for the 358X, have some 'double letter' coils for the 400 to swop. Would consider swopping this 358X for a suitable item of Military hardware. Also need good copy or photo of S.504 scale plate from which to make new scale. Phone 01562-743253 (Worcs;).

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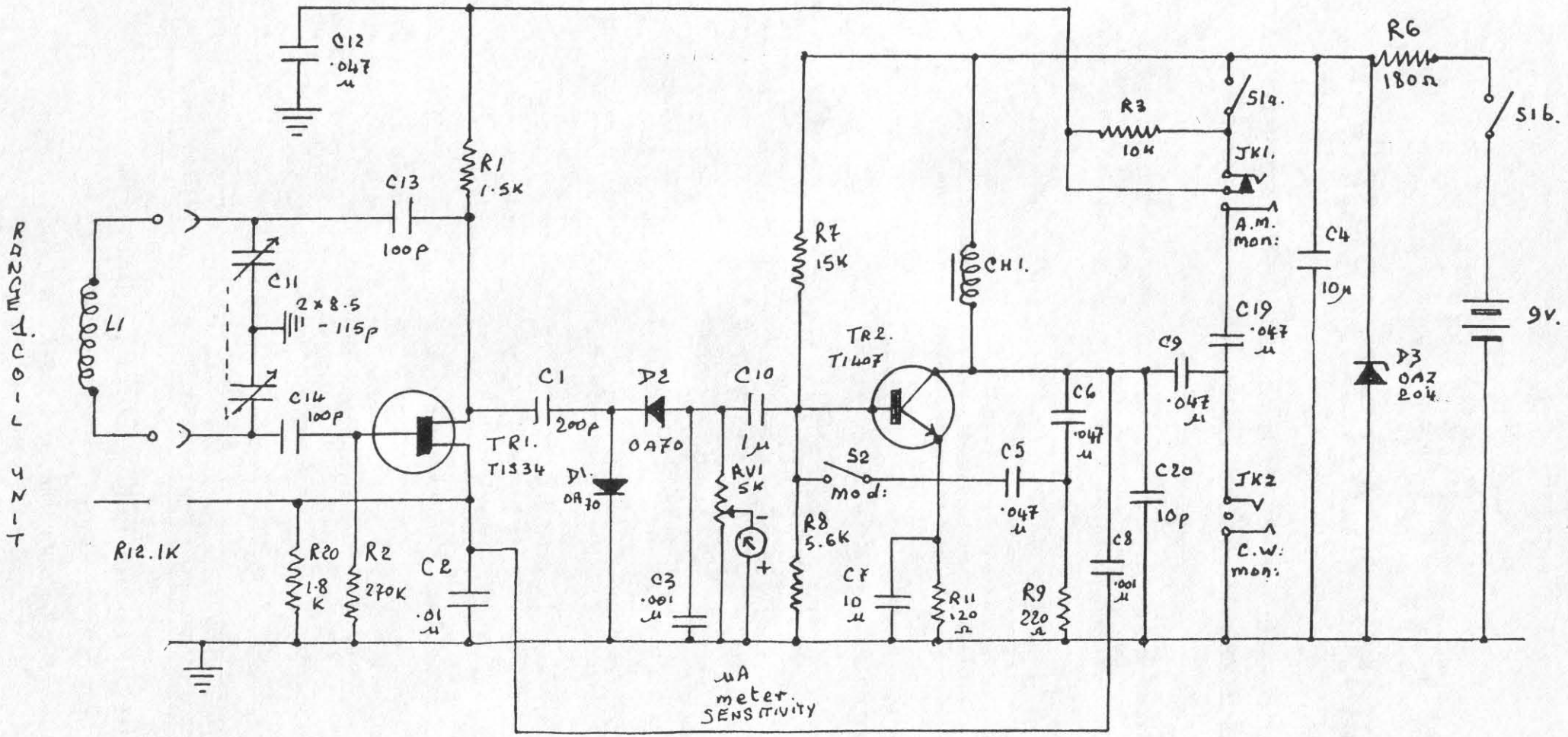
EDOMETER Mk II.

S1 a + b = SUPPLY SWITCH GANGED, TO RV1.



from:- BP 1226. 8-11-67.

From: Webb's Information Folder (1953-4?)

THE NEW EDDYSTONE "840" COMMUNICATIONS RECEIVER

FULFILS A LONG FELT NEED FOR AN EFFICIENT COMMUNICATIONS RECEIVER TO WORK FROM A.C. or D.C. MAINS

The Eddystone " 840 " communications receiver is an A.C./D.C. model, having a continuous coverage from 30 Mc/s. (10 metres) to 480 kc/s. (620 metres), and is recommended for professional or amateur use. The receiver is a sound engineering product, designed to give the highest efficiency. The signal-to-noise ratio, sensitivity, selectivity and other technical characteristics are excellent and a good all-round performance is obtainable.

The tuning mechanism, which is gear-driven and flywheel loaded, gives a silky yet wholly positive control. A reasonable degree of bandspread is provided by the auxiliary scale, visible in the top right-hand corner of the main dial. In effect, it opens out each range to a length equivalent to sixty inches and is invaluable for logging purposes.

Materials of the highest quality are used throughout, construction is extremely robust, and the workmanship is unexcelled.

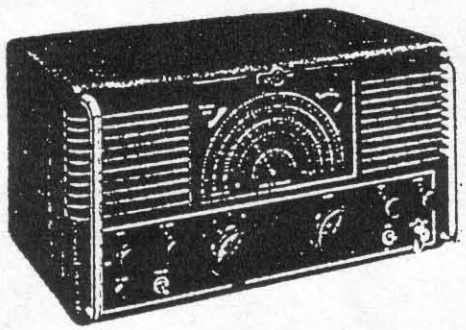
The " 840 " operates equally well from A.C. or D.C. mains, a selector being provided for inputs of 100/110 and 220/250 volts. The insulation between the metal cabinet and the interior has received special attention and is more than adequate.

CIRCUIT

The receiver is a seven valve superheterodyne as follows :

V1	UAF42	RF Amplifier.
V2	UCH42	Frequency Changer.
V3	UAF42	IF Amplifier and AGC.
V4	UAF42	AF Amplifier and Detector.
V5	UL41	Output.
V6	UAF42	Beat Frequency Oscillator.
V7	UY41	Rectifier.

All valves have B8A bases.



TECHNICAL PERFORMANCE

Sensitivity is better than 10 microvolts for a 15 db signal-to-noise ratio. Selectivity 30 db down 10 kc/s. off resonance. Image ratio better than 15 db at 30 Mc/s. and correspondingly higher at lower frequencies.

Undistorted audio output ·75 watts. Maximum output exceeds 1·2 watts.

TUNING RANGE

Range 1 30·6 Mc/s. to 10·5 Mc/s.
Range 2 10·6 Mc/s. to 3·7 Mc/s.
Range 3 3·8 Mc/s. to 1·4 Mc/s.
Range 4 205 Metres to 620 Metres.

The first three ranges are directly calibrated in frequency and the fourth in wavelength, to an accuracy of better than 0·5%. Range 4 includes the International Distress frequency.

TUNING MECHANISM

The tuning is controlled by a gear-driven, flywheel-loaded mechanism, having a reduction ratio of approximately 140 to 1. It is smooth, positive and free from backlash. In the top right-hand opening is an auxiliary band-spread scale which gives an equivalent of 60 inches per range and permits accurate re-setting.

LOUD SPEAKER

A high-flux loudspeaker is fitted internally, the connections being brought out to the rear to permit an easy changeover to an external speaker when desired. The latter should have an impedance of 2·5 ohms, the Eddystone No. 688 being recommended. On the front panel is a jack to take high resistance telephones, the insertion of which automatically mutes the speaker.

AUTOMATIC GAIN CONTROL

The delayed AGC system maintains the output within 25 db for a change in input of 80 db above 3 microvolts. AGC is switched off when the BFO is brought into use.

WEIGHT AND DIMENSIONS

The weight is 30 lbs. The dimensions are : Overall width 16¾" ; Depth, 10½" ; Height, 8¾".

POWER SUPPLY

Inputs of 100/115 volts and 220/250 volts are catered for, and current consumption is approximately 0·275 amperes. The receiver operates equally well from D.C. mains or A.C. (25/60 cycles) mains.

BEAT FREQUENCY OSCILLATOR—Gives a variation of plus or minus 3 kc/s.
NOISE LIMITER—Optional by front panel switch. Effective against ignition and similar noise.

List Price (in U.K.) **£45 : 0 : 0** (Exempt from Purchase Tax)

Comprehensive instructions and a 12 months Guarantee accompany each receiver.

Webb's Radio, 14 Soho Street, London, W.1. (Tel : Gerrard 2089)

EDDYSTONE

OUTPUTS

Normal radiation from the exposed coil is used when a signal for test work is required. To modulate the signal, the modulator switch is placed in the ON position.

The right-hand jack socket delivers the audio signal, the frequency being nominally 1000 c/s, the amplitude 100 millivolts, and the output impedance around 5000 ohms. With a plug inserted, the r.f. oscillator is disabled.

Using the instrument either as a modulation monitor or as a heterodyne wavemeter, output is taken to a telephone headset from the left-hand jack socket.

COILS

The coils are of robust construction. The windings are coated with epoxy resin, both as protection and to prevent change of inductance.

POWER SUPPLY

A PP3 battery (9 volts) is fitted inside the case and can easily be replaced when necessary.

DIMENSIONS

The unit measures 6⅜" by 2¼" by 2¼", not allowing for the projections. The weight is 25ozs. complete with battery.

INSTRUCTIONS

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

Cat. No. 902

In the interests of continued improvement, we reserve the right to amend this specification without notice.

Manufacturers :

EDDYSTONE RADIO LTD.

ALVECHURCH ROAD, BIRMINGHAM, 31

Telephone: PRIORY 2231 Cables: EDDYSTONE, BIRMINGHAM

Telex : 33708

Printed in England

Issued July 1965

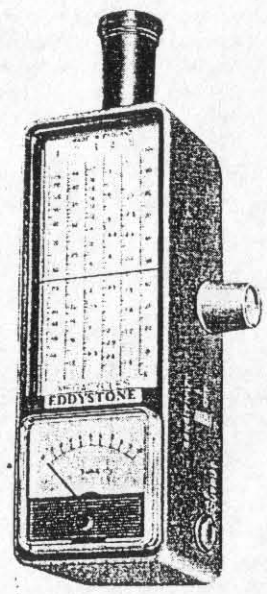
THE 1965

EDDYSTONE

"EDOMETER"

TEST INSTRUMENT

ED902.



Provides the following facilities :—

- ★ Standard Dip Oscillator
- ★ Absorption Wavemeter
- ★ Heterodyne Wavemeter
- ★ Simple Signal Generator
- ★ Modulation Monitor
- ★ Audio Tone Source

Designed, Developed and Manufactured by

EDDYSTONE RADIO LTD.

ALVECHURCH ROAD, BIRMINGHAM 31

INTRODUCING THE "EDOMETER"

For many years the valve-operated "grid dip oscillator" has been a most useful tool, the term arising from the fact that a reduction of grid current is found when resonance occurs between the oscillating circuit in the G.D.O. and a separate circuit to which it is coupled. The drawback is that a power supply (HT and LT) has to be provided, usually operating from AC mains, involving external leads and creating a difficulty when it is required to use the meter away from a mains supply source.

The answer is to produce a transistorised version, containing its own battery supply, hence the introduction of the Eddystone "EDOMETER." It is difficult to get away from the "Grid-dip" term but at least the meter movement still gives a dip to indicate resonance with the circuit under test.

The opportunity has been taken to include facilities which increase the versatility of the instrument as a whole, and it can be used in the following ways:—

standard dip oscillator

absorption wavemeter

heterodyne wavemeter

simple signal generator, modulated or unmodulated

modulation monitor

audio tone signal source

The illustration gives a good idea of the appearance of the EDOMETER, the length of the case (without a coil) being approximately 6⅜". It will be noted that both the scales and the meter can be read very easily.

The frequency coverage when used as a dip resonance indicator is from 1700 kc/s to 115 Mc/s, two additional coils being provided for signal generation over the range 390 kc/s to 1600 kc/s.

The instrument forms a most useful and practical addition to any electronics laboratory, workshop, or service department.

EDDYSTONE

TECHNICAL DETAILS

The EDOMETER makes use of two transistors and three diodes. The first transistor — an AFZ12 — functions as an r.f. oscillator, the second — an OC71 — as a combined audio amplifier and tone generator. Two of the diodes (both OA70) act as a voltage doubling rectifier detecting the signal across the tuned circuit. The third diode (OAZ204) stabilises the supply voltage, to maintain constant performance throughout the useful life of the battery.

With the instrument in use as a dip-meter, the rectified d.c. output from the diodes is applied to a sensitive meter movement through a potentiometer which allows the overall sensitivity to be set at the desired level.

In the heterodyne wavemeter function, the first transistor operates as a combined oscillator/mixer, and for monitoring modulation, it becomes a simple detector. In both cases, the audio output is amplified by the second transistor to provide adequate volume for a telephone headset.

The second transistor can be made to operate as an audio oscillator, modulating the r.f. output of the first transistor, the whole then functioning as a relatively simple type of signal generator. The audio tone is available separately, for use as a test signal with amplifiers, modulators or for Morse code practice.

With the battery supply off, the instrument becomes a straightforward absorption wavemeter, indication of resonance being given on the moving-coil meter.

FREQUENCY COVERAGE

Seven plug-in coils are provided. Five of these give a continuous coverage from 1.6 Mc/s to 115 Mc/s, and read-out is directly against the calibrated scale. Coils 6 and 7, corresponding with Ranges 6 and 7, are mainly for alignment purposes, with the instrument functioning as a signal generator. They cover from 1700 kc/s to 390 kc/s, and a separate slip-on scale is provided, again allowing direct frequency readings.

CONTROLS

There are only three controls, arranged for convenient operation with the instrument held in the hand. The TUNING KNOB operates a geared reduction drive, which makes for easier adjustment.

The SUPPLY SWITCH/SENSITIVITY control is of the edge-operated type, the knurled surface being rotated downwards to switch on the power supply. Further rotation affects the sensitivity, the meter deflection being adjusted to give a constant reading on all ranges.

The MODULATION SWITCH determines the function of the second transistor, which becomes an audio amplifier in the OFF position and a tone generator in the ON position.

- Space Technology and Eddystone.-

You better believe it pal ! Really, this is no April Fools joke at your expense. This advert for Marconi* shows one of those famous 770 sets, rack mounted, and obviously they WERE used in this context.

I know that when I commented in the past re my having seen 770s rack mounted at Canaveral I got a silly letter from one member, maybe NOW he will accept that 770s were used on space orientated programs. Just turn the page !

* I THINK TED MEANS 'GENERAL ELECTRIC' - Graeme.

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- IF Convertor Model 959.-

One EUGer having seen the simple circuit for this unit has begun to build one so as to be able to use his EP17R panadaptor with his 990R, instead of with his 770R.

Progress so far has been limited to the acquisition of a suitable diecast box, several OC171 trannies, and a suitable piece of PCB. There seems no problem with the fixed components such as resistors and condensers but he is at present still awaiting prices from several dealers for the requisite 15.9 Mc/s crystal. He expects to be shocked by the prices asked and is wondering if this is a common value used in any readily available equipment ? Anybody out there can help, write to me at EUG and I shall pass on the gen. Ted.

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- EB35 models Phone socket.-

The original, now called the Mark I, EB35 had its phone socket on the front panel, very handy, or user friendly as they say nowadays.

The EB35 II had its socket on the rear panel, a step backwards in my opinion - says Steven. Looking at the inside face of the front panel casting it is obvious that the same casting has been used for all of the EB35 versions as well as for the EB36, 37, and EC10 versions.

The required hole for fitting the phone socket on the front panel exists but is blanked off by the different facia panel.

Now Steven is not concerned with authenticity in his set that is quite obvious as he has simply made the necessary hole in the facia plate of his EB35 II and has fitted the phones socket there, as on the 'I' version. It makes the set better in his eyes as he can more easily swop from phones to speaker.

I know of another set where this was done successfully by Graeme, but he had to fill in a hole that had been made by a previous owner. I do not like the idea of doing such mods which cannot be rectified at a later date, but then IT AIN'T MY SET !

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Avionics

STABILIZATION AND CONTROL SYSTEM for the NASA Orbiting Astronomical Observatory is undergoing static test in a dynamic balancing facility at General Electric's Missile and Space Div. Valley Forge facility. Because the star tracker is operating, no white light source can be used. But the tracker is not sensitive to the red light, which is used here for illumination and casts the purplish glow over the instrumentation.

- The EY11, Yachtsman, so far.-

Well the find by Graeme recently prompted me to go back through all my files and extract evrything that I have on this model. Everything is, in fact, very little indeed.

First knowledge that it existed came from a Listing of Eddystone models that I received from Chris, via Pat Hawkins, back in mid 1990. This Listing was a computer print-out supplied by Richard Baker, who was incidentally one of the original founder members of EUG.

Looking at the Listing now I see that Richard had the EY11 down as;-

- EY11 - Maritime version of the EC10 - Yachtsman - 01-12-69

No more and no less ! But Richard did not have one himself in his vast collection so what more could he have said ? Maybe given his source for this info ?

For several years I could get no further, neither from info held at the Bath Tub nor from the ex Company employees with whom I corresponded, it really seemed like a lost cause.

At a Leicester Rally I met up with Richard and mentioned this model but he could not help further, apart from the fact that he had seen one 'somewhere'.

The Company move to a new site last year seemed to bring forth so much in the way of old archival material that I once more became hopeful of something turning up. For other models we did find an inestimable quantity of paperwork that we had been seeking for EUG files, both old and more recent models. For the EY11, it was another big ZILCH however.

The recent letter from Graeme, to the effect that he had come across an EY11, the original development model serialised as DEV 0001, was akin to a miracle. Where had it been hiding all this time ? How come none of us had seen it ?

I know from experience that over the span of years, in any company, development models or early production models seem to get spread around the plant, sometimes used to listen to the football in the canteen, used by the various departments as footrests, to hold up one end of a sagging bookshelf maybe ! I know this because it has happened to me many a time.

Suffice to say that DEV 0001 has suddenly appeared, amongst the other sets at the Factory. Graeme has had a quick scan of its 'vital statistics' and has passed them on to me. Maybe now we can hope for the emergence of some paperwork ?

I shall repeat here what Graeme says about the EY11 in his first letter on the subject.

"I've found the EY11... yes, the original one, serial DEV 0001,tucked away in a corner of the new museum. As you rightly say it's in the format of the EC10 (actually the Mk II because it has a meter fitted in the same place, although it is labelled 'Battery', not Tuning). The height and depth are the same but the width is about one inch less, which is odd because it meant all the hardware had to be 'special'. No handles on the front but a single chrome carrying handle on the top of the case in the side-to-side position. The controls are as follows;-

VOLUME RF GAIN DF-SENSE-NORM WAVECHANGE TUNING

p.t.o -

Below these knobs set as per the EC10 series you have the front panel phone jack to the left and then the centrally positioned push-button switch bank of four switches marked as;-

AF FILTER - CONSOL - AGC - DIAL

The four ranges are 1;- 150 - 400 Kc/s
2;- 480 - 1250 Kc/s
3;- 1·1 - 2·5 Mc/s
4;- 2·5 - 6·2 Mc/s "

Well now you all know what I know about the EY11. To my eyes there is one peculiar feature and that relates to the numbering of the ranges. Historicaly all known post WW II Eddystone models number their ranges from '1' as the Highest Frequency Range down to 4, 5 or whatever as the Lowest Frequency Range. This model seems to go the other way ! Strange, I wonder why this odd one ? Must double check with Graeme re this idiosynchrasy.

Now for my usual, from the heart plea. **if anybody out there can help with further details, especially brochures or schematics, then PLEASE DO.**

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- The Eddystone B34 Receiver.-

Well so it was advertised in the catalogue for Chas Miller's Vintage Auction. The advertiser must have got a bit mixed up because it was an Eddystone 358 and this was **called** a B34 when used by the Royal Navy, but never by Strattons/Eddystone !

I have an original Strattons manual for the 358 and it has a simple rubber stamped designation on the cover saying "Receiver Type B34" and bearing the usual bit about official documents and secrecy.

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- Second Thoughts.-

The writer's S.870 had died during an afternoon session of listening. One cannot complain as it is the first recorded failure of set or valves in more than 17 years of ownership.

This time though it was dead, the valves could be seen to be lit without taking it out of the case but just a hum from the speaker, and this remained the same no matter what the position of volume control, range switch or tuning.

It is the only receiver in the workshop and provides exotic background music from such as Radio Exterior d'Espana or Radio Moscow, which ever had 50s type music on at the time.

Having got the set out of its case by removing the four screws at the rear it was a case of fault-finding with an old DC Avominor on ohms.

This did not give results on the higher value of resistor and so a 3 volt bike battery was put in series. After some tests had been done it was found that the 22 Kilohm resistor in the anode of V3 had gone o/c, it read a definite infinity !

The resistor was replaced with a modern metal oxide type and the set was bench tested for a few minutes with no observed problems.

Boxing it up and putting it back into service I noticed that the set seemed a bit less sensitive, and had a slightly higher treble sound than previously, or was it my imagination (says Tom).

Half an hour later when the 870 packed up again I did not think any longer that my imagination had been playing up.

The set was unboxed again, and back to R10 to find that the new component had visibly been getting hot, in the event it was o/c.

This was the classic trap - to replace the dud bits and not find out why they were duds.

More tests and it was found that only when the applied volts were above about 50-55 the decoupling e'lytic C37 would fail and go full short, this took the HT line down to earth through the 22 Kilo. BUT, a 22 kilohm across about 100 volts ought not to burn out, why did not the smoothing choke go first as it ought to have done. Just work out the milliamps involved at 100 volts across 22,000 ohms. It is less than 5 mA and this gives about ·45 watts in a half watt resistor !

The replacement had been only a ¼ watter of course and so it was replaced by a halfwatter and has since worked okay with a 4.7 muffs in place of the dud 4 muffer.

Still the original was big enough to look like a half watt type as needed in such cataclysmic failure conditions. Of course in normal use a ¼ watter is good enough as the ·47 meg in series with R10 and the valve drop the current to microamps in normal service. But the mystery remains and Tom is not happy without finding proof of his theorising.

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- The EM34.-

This set is rare in its Eddystone guise but pretty plentiful as a badged MIMCO 3837A cabin tuner. It was also sometimes badged as an Elettra by Marconi.

The example that was acquired by George over the last New Year holiday was in first class nick and worked equally as well as it must have when new in 1967.

The only problem was that the magic eye was dim and failed to respond to anything except a ½ magawatter in the next doors garden.

This valve is a DM70 and usually has a pretty finite life in any receiver. The EM34 was no exception to the rule and first thoughts went to buying a replacement, but it was New Years Day after all. The case came off easily and the DM70 removed from its slip-on socket. Now came some static tests of the passive components in the magic eye circuit. It was soon found that the series resistor was a goner, and as soon as a replacement was fitted the DM70 came back to life, ALLan says that blaming the valve is often just too easy, and that a check on the associated passive components will frequently eliminate a dud valve as being the problem. He says that high value resistors are often the cause of dead stages.

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- Anonymous.-

I don't like these letters and the only reason I am printing this one is the "Eddystone related" text. No signature at all, not even A.N. Other or A.N. Onymous ! Not even a Dear Ted to start with ! Here goes.

- - I do not like your pushing the Eddystones as the best on the market because they aren't. I would bet my AR88 against any of your Eddystones, even one of the recent ones like the 1830. Even the HRO Senior can knock spots off an Eddystone so there. _ _

Funny chap isn't he, very opinionated but no desire to provide his name. Fact of the matter is that I cannot even say if he is an EUGer !

Anyway, to his comments. If you know the RCA AR88 then you will know that it is a good set. I used it in the RAF and have much regard for it, BUT it isn't exactly USER-FRIENDLY is it ? That tiny dial and tuning scale so cramped that a Ham band takes up mere milimetres - compare it with the 888 or EA12 with a full length scale for each band. How about the controls then ? Those on the AR88 are so numerous and so badly sited that it takes a long time to become intimately acquainted with them, to be able to use them automatically without searching about for them. The Eddystone range have their controls, in most cases, similarly placed. The left hand side has mainly RF and IF controls, with the AF controls to the right. The main tuning is the right hand one and the band-change to the left.

How about the HRO, better placed controls yes, a nice smooth tuning system but not exactly a nice easy scale to read. The one known and universally agreed problem with both of these models is their noise level. It is high, nobody can deny it and the HRO has always been spoilt for me by just that problem.

Those that I used in the RAF, and those that I have owned since, myself, have been quite noticeably noisier than any Eddystone that I have had to compare with them.

The recent sets such as the 1830 he says - well is the 1830 really a "recent set" ? Now come on that model has been out for years. My files tell me it is a 1972 model. But keeping with the older models I still say they beat most other makes of their era !

If the writer wants to discuss this matter further then I urge him to write to me, name and address please - thanks.

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FREE MEMBERS ADS.

Newly restored x TWO s.358X receivers bith for sale, one resprayed, one as is, both with x 10 coils in box and psus. Both fitted all new 0.1 muffs. Also for sale one EC10 and have lots of spares. Phone P. Lepino on 01372-454381 or 0374-128170 at anytime, (Surrey).

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- Drift Problems with an EC10 II.-

John Green, F5 VAR, also ex G3 and VK4, has been corresponding with me recently regarding a problem with drift on Range 3 - only - on his EC10 II receiver.

John says that he had replaced R12 with a 150 ohm, this in place of the original 22 ohm. He then snipped off the earthed fourth leg of the RF and IF trannies. Made a further check on the alignment.

Despite the above he finds that the Range 3 drift is still worse than on other ranges, but is better than before the above work was done. John considers that it may now be considered to be within acceptable limits. He does now find that the tracking on Range 3 is correct, previously it had been quite impossible to get correct tracking.

My further suggestions to John have been to check out the zenered voltages, both the 9 volts ex the psu and the 6 volts for the oscillators. Done with a good DVM any drift can be compared with change in volts.

As a PS to his letter John says that he may try to join in the EUGNET on 80 - Graeme has been so advised. Ted

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-Steam Radio or Smoke Radio ? -

This is the question that Bill asked himself on one evening recently. Arrived home from a shopping trip he made his way up to the shack and turned on his EA12, take a while to warm up these oldies ! so Bill began sorting out some paper-work and waited the usual few minutes for the EA12 to warm up and stabilise. He didn't have long to wait before something happened, and it was not what he was expecting. A whiff of burning, hot varnish, and dimming of the dial bulbs on the EA12 made him push the panic button which knocks off all power in the shack. With the exception of a ceiling light, a safety factor built-in to the shack supplies.

The smell came quite unmistakeably from the EA12 and not the other equipment that had also been switched on. So with sheer dread in his heart (Bill's very own words) he pulled the set out and began to remove the cover by unscrewing the 4 knurled screws at the rear. This done the case slid off and he was able to lift the chassis over to the bench (table) on the other side of the room. The first thing noticed was that the mains transfo was very warm indeed, far more so than after a full days use on a hot summer day. Turning the set upside down it was seen that both of the 140 ohms dropper resistors in series with the silicon diodes were badly burnt, the insulating covering had begun to peel off both and one was later found to have gone o/c.

Reasoning that the problem lay somewhere after the diodes in the psu circuitry Bill first chopped out both by now useless 140 ohms resistors and the diodes, they might be okay but for the pennies that new ones would cost he preferred the peace of mind of fitting new 1N4007 types. A check on the resistance between Ht plus at this point where the two diodes joined and

went to the choke and electrolytic, C138, showed only about 20 ohms, with the choke dissed from C138 the reading remained the same on this condenser but the rest of the HT line, via the choke measured more normal.

The electrolytic was obviously the original built into the set as new, so too had been the diodes and resistors. it was a 50 muffs at 450 v.w.DC. The junk box yielded up a 47 muffs at 450 v.w and so this was fitted. The diameter was only very slightly less and with a wrap of insulating tape it was a good fit.

No 140 ohm resistors could be found despite the ample size of the station junk box, a pair of new unused 120 ohms rated at 10 watts were available and since space was not at a premium they were utilised. The motto of 'No Irreversible Mods' was kept in mind of course and in this situation it was thought that these items could be used.

The big worry whilst all this was being done had been the possible damage done to the mains transfo, as yet an unknown quantity. The set was powered up whilst a DVM was left across the HT line at the point where the two diodes joined together. An older Avo 8 was put across the two halves of the secondary to check them for matching AC voltages, to see if there might be any sign of shorted turns. The volts read on these AC and DC points seemed okay and the set came on with normal volts being read at several points after the due warm up period. It was apparent that there could be no serious damage to the transfo and so Bill could begin breathing normally again. The set was boxed up and left on soak for a couple of hours, it was too late to begin a listening session anyway. There appeared to be no more problems but it has been decided to do one simple mod that will give a little more peace of mind in future. A fuse holder of the 'in-line' type will be purchased and will be fitted in the centre-tap, to chassis line of the transformer secondary, fitted with a 250 mA fuse this should act as safeguard should anymore electrolytics decide to die an early death.

This is such an inexpensive mod that it would be well worth fitting in any expensive comms receiver, be it Eddystone or otherwise. Bill does have both a 740 and a 750, the 750 is already fitted as original with such a protective fuse in the secondary centre-tap to earth position. It is intended to fit one in the 740 also as mains transfos must be one of the hardest spares to get hold of, and the most expensive to replace by rewinding. On this point a recent check showed that £38 was being asked by one company in the North of England. As much and more as was paid for the 740 set last year !

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- An 'S' meter for a Fiver ! -

Attendance at a recent Club Swop-meet brought a bonus for one EUGer in the West Country. Just browsing around he spotted a model 669 'S' meter in a pristine die-cast base, the offering price was £7 but when it was pointed out that the cable was frayed and badly worn along its length, and disconnected, almost, from its Octal plug the seller was happy to accept a £5 note in exchange.

Replacing a frayed cable was no hardship to this intrepid

bargainer of an EUGer ! He did this job as soon as he got home and then found that the unit simply did not work, not at all. The possibility of a duff meter did cross his mind but then he opened up the unit and did a few checks, it was nothing more than a duff rheostat, the wirewound track was o/c at one end and it looked like corrosion as the wire had turned green at the point of breakage. A clean up to get rid of the green stuff with switch cleaner and then a resoldering job put the pot; back into normal operating condition, the 'S' meter unit now worked a treat and has continued to give good service with the station 750 ever since.

Some months previous a phone call to the London area in response to an ad had resulted in the offer of an 'S' meter unit such as this for £35 - quite a bit of difference eh ?

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- Duff Mains Switch, and Problems. -

When the mains switch on the 730/4 went open circuit, most likely jammed inside due a faulty spring, there was nothing remotely similar in the junk box. Nor could a similar type of mains rated toggle switch be located in the catalogues, okay some were the same size, had the correct Single Pole configuration, but the 'dolly' did not match up. It was usua;;y too long on those checked out.

Eventually it was decided that to ensure matching front panel switches it would be necessary to change all four of the toggle switches used. A look at the diagram did not seem to produce any problems, samples already checked out had included a number of DPST, double pole single throw types and a matching double pole double throw type, all four were bought for £6 plus the bus fare into town.

The mains switch on the 730 is a Single pole switch in the mains input, not the best arrangement to my idea. It was proposed to make this circuitry into a double pole, live and neutral switching arrangement.

Next along was the AVC switch, again a single pole was needed, to ensure double protection against dirty contacts it was proposed here to parallel the two poles of a switch.

The same with the N.L which called for a single pole switch, both poles of the DPST type were paralleled.

In the case of the AF filter the DPDT type was used here and apart from double checking of the wiring before and after the swop it was a straightforward job.

The retaining washer for the phones jack was cleaned up to match the new switches and this gave a fair enough match to the switches. The long-arm operating switch for the selectivity was already a neat enough match to the new items.

Whilst doing this job the other black knobs were removed and cleaned, as was the finger-plate.

This work all gave a quite different appearance to the front of the set as the front casting and case are always kept cleaned and polished with furniture polish. Not having to worry about dicky switches for the forseeable future is a boon when operating such an old set.

Time taken was about 4 evenings work, interspersed with numerous tea-breaks and family interruptions however this kind

of work is not classed as 'WORK-work' but more as HOBBY-work and is a pleasure not a chore. Ian.

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- 830 Mods; -

My usual cry is "don't do it, please don't do it" but in this case the letter from Paul did emphasise that all mods were easily put back to normal, and he had gone to the trouble of attaching a stick-on label detailing the mods, so here goes.

The standby facility is never used by Ian, being a listener only so he decided to make use of the S/Bi facility for a switched degree of attenuation, in this case he removed the 47K fixed resistor that is switched in or out by the S/Bi switch under normal use. In its place he fitted a 4.7K ½ watt resistor, i.e. half the value of the RF gain pot;
- the idea here being that when a loud station is tuned in he can just flip the S/Bi switch and get an immediate drop in signal level, easier than twiddling the RF gain pot; each time. It worked fine and so is now permanent.

Next was the Calibrator push and hold switch. This had been somewhat unreliable for several years and so it was swopped for a similar matching Push once ON and push twice OFF switch that came in the latest catalogue. It fitted okay and the black plastic 'button' seemed to blend in okay with the other controls although the end was a bit more bulbous than the original. This of course meant it was no longer necessary to have one finger on the Calibrate switch whilst tuning to locate the 'pip'- a bit onerous to do.

Next mod was to remove the 6AL5 and to wire two signal diodes across the requisite pins on the underside of the valve base. Taking care to get the polarity right ! After a few tests it was found that the nearest match was obtained with 1N914s, although there was not a lot of difference using any of the other types available ex stock. This lightened the load on the mains transfo a bit and it removed the problem of recurrent blown 6AL5s.

A lot of thought went into the next mod, but it was done and is an improvement. The phones are fed by an RC network direct from the anode of the output valve, in the event the network of R58, 59 and C118 was left in situ but the phones socket was now wired across the 2.5 ohms speaker winding, cutting off the speaker as usual when phones were plugged in. This meant that in use the AF gain could be backed of about one third for the same signal in a set of 200 ohm phones. It was tried out for a while and found beneficial and so is now in situ permanently.

The set has two fuses in the mains input, in live and neutral sides of the mains. The one in the live side was left untouched but the one in the neutral side was taken out of circuit and the wiring made good. This fuse was then re-wired into the centre-tap of the transfo secondary, giving a good protection for this winding should a short develop in the HT line. A 250 mA fuse was fitted.

The mains tapping was rewired for operation on the new 230 volt AC system, it had been on 240 volts ever since the 830/5 arrived some 10 years ago. The mains never seems to get above about 216 at this QTH anyway, being some distance from

the sub-station.

No end to these simple mods is there ? anyway last one coming up. This involved taking the 3 scale lamps off the normal LT line and removing them from their sockets. They were replaced with three soldered into place hi-intensity green LEDs. The wiring that had gone to the LT circuit was now taken to a fullwave bridge circuit that was wired across the spare LT3 winding, in the event with a suitable dropper resistance it was enough to use the 5 volt tapping and not the 6.3 volt tap.

All these mods have been done in a quite professional manner and they all contribute to making the 830 into a more user-friendly set. The total cost was minimal compared with the pleasure that is experienced in use.

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- S.504 meter zero problem. -

In many years of use the zero adjust pot had never been touched, says John. When it was finally decided to make a slight adjustment it was found that the whole pot collapsed in pieces, no there was no undue violence used, honest !

The circuit says that a 600 ohm pot is needed but these are like gold bricks, especially wire wound types. A 500 ohm type was bought at a rally, wire wound & linear as specified, if necessary a 10 ohm would have been fitted at one end or the other, in practice this proved unnecessary. The normally broad tolerances found in valve equipment allowing for this loss of 10 ohms.

The meter could now be zeroed okay and the set was put back into service. Allan.

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- Rare EB36 Found, and Fixed.-

This set was bought for £20 at a local church jumble sale and although externally it looked okay, when opened up at home it revealed a "plenitude of problems".

For a starter the battery box was full of corrsion due to battery leakage in the far distant past. All surface corrosion was washed and scrubbed off with detergent and a green pad liberated from the XYLs supply. A neutral solution of bi-carbonate of soda was brushed on and then simply wiped off. the whole box was then treated with 'No-Rust' as sold for car repair use, before being repainted in the same grey colour, again with an aerosol of car type cellulose paint.

The chassis itself showed no signs of corrosion and so was simply cleaned up and left as was. Not so the scale glass which was very dusty inside and out. The inner surface was cleaned with detergent on an artists paint brush and then a wash and wipe with tissues fed down between scale and glass. This is easier said than done but with a little patience it CAN be done !

Next job was the repair of several small tears in the paper of the speaker cone, these were cured with judicious dabs of UHU glue and the tears pushed together gently onto the glue.

Reproduction was pretty good and seemed not to be affected by these repairs.

The spring loaded scale light switch was inoperative and had to be replaced by a non-spring loaded type which in use seemed to be an advantage over the old one. At this time it was decided to remove the two push in type of scale bulb and to fit 4 wired in series Green LEDs with a series dropper of 56 ohms, this gives a very clearly illuminated scale and is much more usable than the old filament bulbs did, with a much reduced current consumption - meaning that the scale can remain illuminated full time even when used on batteries. The LR20s do not notice a mere 16 mA increase in consumption.

This set was to be used with an ARA500 active antenna and so the aerial/earth connector did not suit the coax feed. A new adaptor was made up from a Belling-Lee coax socket and two spare wander plugs minus the plastic covers. These were soldered directly to the coax socket with the required spacing. The adaptor plugs directly into the rear panel connector, the coax lead from the active antenna plugs into the adaptor, much more convenient.

Some thought had been given to the many comments in the N/L and other publications about the dreaded 'whisker' syndrome that affects old germanium trannies. This problem had developed in the past with the station 960 and cutting the earth-screen leg had effected a full cure. It was now decided that as there had been no unwelcome manifestations of instability in the former case then the same would be done on the trannies of the EB36 - to pre-empt any such faults should they happen ! The set seemed fine afterwards on all ranges.

The EB36 had required several weekends of work to get it back to normal state for use but it was felt to be well worth while. it is now intended that the EB35 will have some of these jobs done to it, especially the LEDs for filament bulbs mod. All the above mods are quite minor and are reversible should a new owner decide that he wants an 'original' set. No it is not for sale !

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- Rare model 1964 bought by EUGer.-

This set has rarely featured in the N/L but that may change in the future. An EUGer has bought two of this MF/HF model at a sale of ex trawler kit on Tyneside. He paid £30 for the two and intends to keep both for himself.

The 1964 is a switched, crystal controlled, MF/HF set in 19" rack mount format with a small monitor speaker on the right of the front panel, there is also a 600 ohm line output at the rear. Both sets have a full complement of crystals and the new owner is now busily engaged in working out the aerial/signal frequencies involved and then comparing these with frequency allocation lists.

My only comment on this EUGers letter is that I had never known of these sets being used on board trawlers, however I do not pretend to know everything so am always willing to learn. The crystals fitted may provide a surprise for the new owner as they have a Gov't type arrow on them !! I shall be delighted to get further news on these sets, please Jim. Ted.

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- Prefix Inconsistency ? -

In a letter from Keith Norton, one of our Australian members, he mentions that he has discovered what appears to be an inconsistency in the use of the S. prefix for equipment model numbers.

The model in question is the S.1670. It is so described in an Company spec; sheet - and incidentally so described in the Compendium.

Keith suggests that it is possible that the S. prefix is misused in this case to describe the Synthesised 1670, where the 'S' refers not to Strattons but to Synthesised.

I cannot clear this up from checks on my EUG files but it could just be as Keith suggests, maybe a comment from some former Eddystone employee will enlighten us all, any offers please ???

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- Plinth Speakers.-

Dev has made up a set of 6 of these using thin sheet steel that he cut and then Mig-welded himself. The metal work for all six was completed in a weekend and the spray painting and fitting of speakers was completed during several evenings of that week. He now has a plinth speaker for each of his five Eddystone receivers, with a spare - Dev is sure he will be increasing his collection in the future !

The speakers used are elliptical types that are used in many of todays 'alien' made Tv sets, they are obtainable from many dealers who repair such sets. All are 4 ohms impedance and this means that there is no problem with matching to the valve type Eddystones.

One improvement that Dev has made is that whereas in the original Plinths the receiver was bolted to the plinth, in Devs setup he has welded pegs made from brass rod into place on the top surface of the plinth, this means it is possible to simply 'sit' the receiver on the plinth. This makes for easier installation or removal.

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- Browns Almanac.-

In a recent letter from Tor he mentions that a friend had picked up an old copy of a Browns Nautical Almanac.

The frontispiece sported an advert for Eddystone Marine Radio. There were also some six pages of ads for Eddystones from a dealer called Alf Willings and Co;

One page contained a list of some 300 vessels which had been fitted with Eddystone receivers.

Tor comments further that many of the vessels named were Norwegian ships, there might even be one built in his home town as ships were built there up into the 1970s. Thanks Tor for the gen, your letters are always welcome.

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- Crystal Filters and the 358 Series.-

Again from Tor, the origin of those filters as used in the 'X' variants of the 358 and the 400.

These are described as 'Simmonds-Robinson' filters and some time back Tor sent me a copy of an advert for this company which depicted a camel !!!

Anyway Tor has now come up with a bit from an old WW dated November 1940 where it is stated unequivocally that the filters used did come from this company - another supplier of Eddystone parts has thus been identified.

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- Low Level of AF on Phones ? -

This has come up several times in recent mail. It is usually when those modern moving coil type phones - so called HiFi types,are used with one of the older valve type sets.

I have detailed what can be done elsewhere in this issue and in fact this works with many other models. The idea is to diss the capacity fed high Z AF source and to connect the low Z speaker winding to power the phones, the wiring is perfectly straight forward and a look at the schematic will show what is needed. Alan says in his letter that simply upping the value of the feed condensers, usually around 0·001 muffs, to something like 0·5 to 1 muff. Worth a try I guess but I would imagine you might still need the AF gain turned up high. If you try this let EUG know how it goes, please. Ted

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- An S.S.S.S.V.-

Good idea this one, Peter has had an S358 for almost 50 years now, just after demob in 1946 ! The set has had several new sets of valves over the half-century and in between times it has gobbled up a number of extra EB34 double diodes. In all cases this was caused by open circuit heaters, and is a known problem. (known but not known exactly WHY ! Ted.).

Now normally Peter has a spare kept on the shelf for just such an eventuality, but when it happened before Xmas there was NO spare. He had simply forgotten to get one after the last failure some years back.

The prospect of a long Xmas break with no 358 to listen to was unthinkable to Peter and as this was a Sunday morning something had to be done.

The now useless EB34 was used as a base by carefully filing around the circumference of the ebonite valve base with a triangular needle file. When the bottom part with the 8 pin base came away from the top part with the valve atached the connecting wires were carefully snipped through and the top half with glass bottle was 'dumped' in the bin.

Using a good hot iron the solder that held the remaining wire stubs into the pins was melted and with a sharp tap on the bench the wire stub fell out, as did all the solder.

This left a perfectly functional octal valve base, or plug, with about a $\frac{1}{4}$ inch well. Two 1N914 diodes were cannibalised from an old scrap PCB, others such as the 1N4148 will do.

These were soldered into the correct pins - 3/4 and 5/8 of the valve base taking care that they went the correct way around !! The new unit was tested in the 358 and found to function perfectly, so no more duff EB34s, says Peter. As a final touch the rest of the 'well' in the valve base was filled with epoxy resin - so creating a simple i.c.

Oh yes, the title of this article ? well according to Peter it refers not to some new fangled version of Concorde but to a "Simple Solid State Substitute Valve".

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- 750 & Hum.-

When the station Rx started to behave in a peculiar way, with distorted output whenever the AF gain was turned up above about a ¼ way, the set was taken out of use and opened up, no workbench here at Evan's QTH just the table in the boxroom.

After a few basic tests with the ancient DC Avominor it seemed that the problem was excessive DC volts on the grid of the output valve, first thoughts went naturally to the condenser C62 which feeds the AF from the anode of the voltage amplifier. This 0·01 muff is a mica type and in the event it proved to be blameless. Then a further scrutiny of the schematic revealed a 6, Yes just 6 puff, condenser which went from the anode of the output valve back to its own grid. This proved to be the culprit. Evan removed and replaced the item with a modern ceramic Hi-volts type and the set returned to normal operation. On a test the 6 puff mica condenser showed normal insulation with the Avominor, but when a higher voltage was applied - some 80 volts from a bench supply - the condenser went almost full short circuit. Not only that but it self-healed after a while and showed normal insulation on low volts again ! A puzzler this one says Evan.

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- 680X 'S' Meter.-

Several re-adjustments to the zero pot; of the 680X 'S' meter had brought the pot; to the end of its track, no more adjustment and the meter needle obstinately stayed stuck at about S4, this with the aerial and earth terminals shorted with a stout bit of tinned copper wire.

In desperation a correspondence was begun with Ted as to any possible, or probable cause. The list of items which could be responsible was gone through one by one, whilst having a good knowledge of modern digital electronics I had little gen on the old stuff.

Eventually it was found that R56, a 27 Kilohm resistor in the meter bridge circuit had changed value to such an extent that the 5 Kilohm pot; could no longer cope. The original carbon rod type of resistor was replaced with a modern 'oxide' type of similar (1 watt) rating and the meter was re-zeroed with ease. Total cost was a few nice words to the storekeeper at work !

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- EC10 BFO Problems.-

This member had written in to complain that his recently purchased EC10 had worked okay for a few days but that the BFO had gradually died out whilst listening to RAF Volmet.

There appeared to be no change in frequency of the BFO note as the signal simply reverted to Donald Duck language.

I wrote back offering what tips I could give as to the possible cause.

In trying out the suggestions it soon transpired that there was no DC supply to the BFO stage. Operating the pushbutton switch on the front panel made no difference and the meter needle on the Avo did not budge. Some tests were made following back the wiring from the PCB and it was found that nothing was getting through the contacts on the pushbutton switch. Using a magnifying glass it was quite easy to see that there was a coating of some kind of corrosion on the switch, but how come that the BFO had died out during use ? One would have thought that the existence of this coating would have prevented any operation at all !

A strip of Jiffycloth moistened in medical alcohol was passed several times between the contacts using a slight amount of friction, this appeared to get rid of the coating from the contact surface and the required supply was now found to be available with the operation of the BFO being as before. It was an easy fault to clear with the information supplied and the list of tips has been kept for any possible future problems.

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- No RF Gain on Your Set ? -

Andy has an EB35III which he uses for SW listening and when using the station aerial, a random wire with about 60 feet horizontal plus some 30 feet vertical, there were often times when the input to the set was overloaded by some of the QRO signals on the bands. A home built ATU of the LC type was in use and since it had no attenuator but did have spare space on the front panel.

Rather than build up a switched type of attenuator it was decided to fit a pot; on the front panel - no Db values were marked on it, just an arrow showing min and max attenuation.

After some experiments a 5 Kilohm pot with Linear characteristics was chosen, values from 500 to 10,000 ohms had been tried initially.

The two outer tags of the pot went to the original ATU output terminals, A and E. The centre tag went now to a new terminal mounted alongside the others.

Operation is just as simple as when your receiver has its own RF gain control, it is used in the same manner. There are no mods necessary to the EB35III at all.

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- Replacement of those Ancient Metal Rectifiers.-

Some of the older models such as the AC/DC series used

metal rectifiers in lieu of valves. There have been a number of mentions in recent mail of failed rectifiers and the absence of replacements means that another kind of rectifier must be used.

The simplest way is to fit suitably rated silicon diodes and the small size of these means that they require no special mounting arrangements

The original Metal rectifier unit was left in situ with the input tag being used to act as mounting tag and connecting point for the new diode. The output wire from the old unit was dissed from its point and taken to the output tag of the new diode. The new item is so small as to be hidden behind the large old rectifier and the set works just as well, possibly there is a slightly higher HT voltage available but there is no appreciable change in operating conditions.

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- 990 Drift.-

The 990 is a second generation solid state set using individual trannies, not yet into the ICE age, sorry make that the I.C age !

One problem that arises with these sets is that with age they tend to drift, I have found it most prevalent with the 990S model, having had to service a few of these over the years where the drift problem was mentioned.

I was lucky in that I had dealt with this set on a profesional basis and that I had the necessary test gear and a workshop in which to do the job. It is not a 'kitchen table' repair job, believe me.

Take a look at the circuit in the manual, check out the input stages. The local oscillator is an AF239 tranny and this is associated with normal switching of the Yaxley type. Now this method is not reliable at VHF, it was completely thrown out for example in the 770 series where a turret tuner gave better results.

What happens here with this method of switching is that leakage paths develop across the insulation between the contacts, and slight movements of the rotor of the switch causes jumps in frequency.

Normal switch cleaning methods are first used, with squirt on Switch Cleaner liquid and a fine tipped brush, with accompanying to and fro switching of the range switch from Range 1 to 4. Next step is to check and if necessary tighten up the nuts holding the switch wafer banks together, do not be surprised if these are loose, they do come loose with usage and vibration.

Now power up the 990 again and switch to a known stable signal or to the inbuilt calibrator signal. Leave the set on with the gain turned up to a comfortable level, check the signal for drift, or switch in the calibrator to do so.

It is almost certain that your drift problems will have disappeared - easy isn't it ?

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- More on WW II and VIs.-

Bill Peters is not a member of EUG however his attention was drawn to the Group by a pal after the mention in Radcom of the use by VIs of Eddystone 2 valve receivers for listening to enemy transmissions. Here is what is said in his letter.

"For the first 14 months of my listening I utilised my own receiver that had been returned to me from the local Police Station where all of my amateur equipment had been since the outbreak of war. This receiver was a 1935 version of the well-known Kilodyne 4, the name itself is a misnomer since this set was the AC version and it had thus 5 valves. From recollections I think I am correct in saying that the line-up consisted of a VP4 vari-mu pentode as an aperiodic (untuned) RF amplifer stage, this was followed by - I think - a 354V triode which was a combined grid-leak detector and first AF amplifier. The next stage was a further 354V used as a voltage amplifier of the AF signals. The output stage had originally been a PM24M pentode but I had done the suggested mods and the output valve was now an Osram KT2 giving a bit more gain and power for the speaker. The speaker was little used during my VI work, this was all done on 'phones as the sounds of morse issuing from the spare bedroom would have no doubt brought immediate denunciation from friends and neighbours as a spy.

The fifth valve which belied the model nomenclature of a 'Four' was the AC mains rectifier valve, in my case a DW4/350 double-diode used in a full-wave rectifier circuit.

This receiver had been in pre-hostilities use for almost 4 years and besides its complete reliability it offered a maximum of sensitivity on the short wave bands, when used in conjunction with the almost 100 foot long aerial that ran from the eaves above the spare room to a wooden flag pole mast at the bottom of the garden. No aerial matching unit was used but it was noticed that matching at the higher frequencies appeared to improve when the set was operated with a loose coil of wire on the shack floor in place of the ground rod earth that came out best on frequencies up to about 4 Mc/s.

After about fourteen months of my listening on behalf of the war effort I answered a knock at the door and received the wonderful gift of what was in those days the ULTIMATE in a radio enthusiasts favoured receiver. This was a new and crated HRO with 5 coilsets in their own wooden box.

For a while the Kilodyne 4 (plus 1) was relegated to a shelf under the operating table, quite an ignominious fate for a reliable old friend. The new toy had pride of place and indeed its performance was much improved over the Eddystone TRF that this superheterodyne had replaced. There had to be a downside to this as nothing is perfect. It was noticeable that the noise level of the HRO was much higher than on the simple TRF receiver. After several months when I thought that I had mastered the HRO I decided to revert to the Kilodyne for a few days and was pleasantly surprised by the much lower perceived noise level. It was a long time before I went back to the HRO. Some 2 years later the VP4 of the TRF set went open-circuit during a set listening period and I hastily dug out the HRO and its box of coils to continue my monitoring. No spare was quickly available for the VP4 and so the remainder of the war was spent using the HRO. A second hand valve was obtained after the war ready

for the time when my HRO was repossessed - it never was ! A quirk of officialdom maybe but nobody asked for it back.

In early postwar years I was able to operate both receivers side by side on the shack bench and found that on many occasions the Kilodyne would be able to resolve CW signals that even with use of the crystal filter the HRO could not drag up out from the noise.

Both sets were kept - and used - until the early 1950s when I was offered an almost new 640 for the then princely sum of fifteen guineas. A deal was done whereby the HRO went in part exchange and with a reduced sum of eight pounds I got the 640. The Kilodyne 4 was soon sold off to pay for the components to build a modern transmitter, this was a 6L6 crystal oscillator followed by an 807 power amplifier and with a 5U4G providing the HT supply.

I still have and occasionally use the above 640 / 6L6-807 rig on 40 metres CW.

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- 830 and the 6AL5 -

The 830 receiver series utilise a 6AL5/EB91 double diode valve as noise limiter valve. In this case both diodes are strapped in parallel and fed from a separate winding on the mains transfo for its heater supply. This winding is also taken out to the rear panel for use with any accessory needing a 6·3 volts heater supply.

Over the years several valves in this position had succombed to burnt out heaters, this is a commonly remarked upon problem with the 6AL5/EB91 when used in the N.L position.

Seeing that the supply was available on the rear panel mounted Jones plug it was decided that a monitor would be put on this heater supply. A bench DVM was put on pins 1 & 2 of the SK5 Jones plug and switched to AC volts range.

It had been half suspected but was now proven that there was/is a reason for the burnt out heaters.

The lightly loaded LT2 supply was evidently meant to supply loads of several amps but in the event of no accessories it was supplying just 0·3 amps ! The result was that almost 8·5 volts was on the valve for some seconds after warmup which appeared to drop to about 7 volts as the set began to draw HT from the transformer. This situation must surely be detrimental to a valve requiring 6·3 volts. The reason for using a separate winding is to minimise hum produced when the N.L is in use. To this end the centre tap of the LT2 winding is taken to a potential divider across the 150 volts HT3 supply.

The simplest cure for the frequent need to replace the valve in the N.L was to substitute a solid-state device.

Solid-state diodes come in many varieties and a choice was available in the junk box. After a number of experiments it was decided to solder into place an OA90 germanium diode, this was put directly across the pins of the V7 valve base & the 6AL5/EB91 was now redundant. The N.L is - if anything - improved in its operation, the 830 is never used for any kind of music listening and so the slight 'chop' of loud passages in music is not a problem. Used on SSB or on CW the OA90 gives a definite cut in impulse noise. A simple tie-on label has been

attached to one of the case fixing screws at the rear to detail to any future user the mod that has been performed, it is very much a permissible mod as it can be returned to spec; easily and there are no external changes to the aspect of the 830.

Ken.

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- A Hybrid 670A -

Bill has recently become the owner of a 670A receiver which is almost certainly one of the very first of those to leave the factory.

The reason for saying this is that whilst it is externally very definitely a suffix 'A' set, and whilst the internal RF and PSU chassis are also of suffix 'A' types the combined IF and Audio Output chassis is that of the older 'no suffix' model the 670. This has the distinctive twin UAF41s in a phase splitter stage followed by twin UL41s in a push-pull output stage.

Those who know the 670A will recognise that there ought to be just a single UAF42 followed by a single UL41 here.

I have seen several sets like this and long ago had a conversation with a former Bathtub employee who told me that already built IF/AF chassis of the early 670 ilk were utilised for a number of the newer 670A sets rather than leave these unused chassis on the shelf. It seems a logical action when one considers that even in 1954 the economic fortunes of such companies as Eddystone would still be in a precarious state following the privations of WW II.

Whether this increases the value in financial terms of the set that Bill now owns is debatable, it might well do so for the serious collector. Historically I would say that it certainly is a set to keep, if Bill is intent on increasing his small collection of 5 Eddystones ! Ted.

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- Unidentified Model ??? -

A letter from Geoffrey brings back an old problem, well a problem for the likes of me.

Some advertising of Eddystone receivers for the 1947-8 era shows a receiver identified as the model 659 'Export Broadcast Receiver, and this is sat atop a large metal cabinet containing louvres behind which is certainly a large ;oudspeaker.

Tentative guesses at dimensions, using the 659 as a scale guide, show that the cabinet was circa 18" wide by 30" high by 10 to 12" deep.

Fair enough but in none of the literature that I have is this speaker unit identified. In one advert below the 659 and this speaker cabinet is a paragraph headed Eddystone Speakers and this para extols the virtues of the 5" (652) and 7" (697) round diecast speakers but not a word about the ginormous cabinet model pictured just above ! So what gives ? Can anybody out there identify the monster ? HELP PLEASE !!! Ted.

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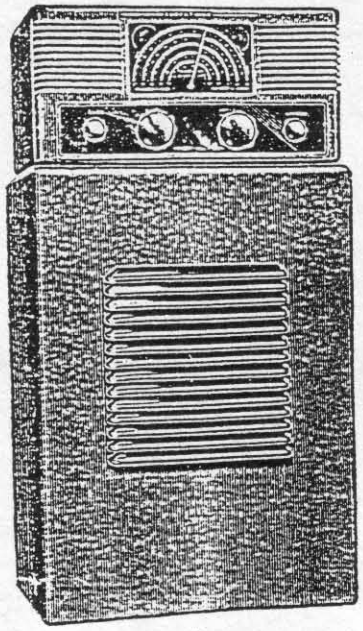


OTHER EDDYSTONE PRODUCTS

All Eddystone Receivers are sound engineering jobs. They are robustly constructed and built to stand up to hard service. Each receiver is fully tropicalised and can be used with confidence in any part of the world.

You or your friends may be interested to know what other types of Eddystone Receivers are available and below you will find brief details of two current models. We shall be happy to furnish full details upon application. Registered Eddystone Agents exist in many parts of the world and interested parties can be put in touch with one or more of them.

THE EDDYSTONE "659" EXPORT BROADCAST RECEIVER

A high quality broadcast receiver, complete with a specially designed high fidelity Console Speaker. First class performance on short and medium waves. Coverage identical to that of the "670," as also is the finish, colour, size, etc. Six valve (plus Rectifier and Tuning Indicator) superhet circuit.

Available in two models — one for A.C. operation (110 and 200/250 volts), the other for 6 volt battery operation.

EDDYSTONE SPEAKERS

FOR COMMUNICATION AND EXTENSION PURPOSES.

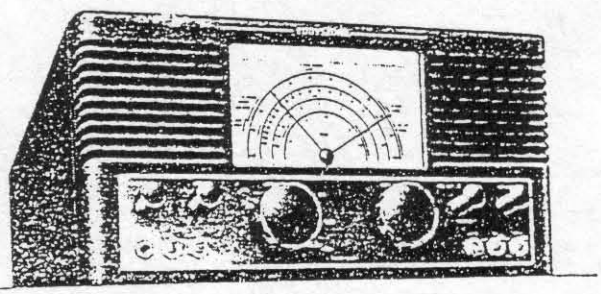
Two sizes of Speaker are available. They are particularly recommended for use with Eddystone Receivers, which they match physically and electrically.

The Cat. No. 652 (Black or Grey) has an overall diameter of 5", the unit being a 3½" one, and is suitable for communication purposes.

The Cat. No. 697 is 7" diameter and is fitted with a 5½" unit. This Speaker is recommended for broadcast reception. Alternative finishes can be supplied (Cat. No. 688 Black ; Cat. No. 698 Grey).

Construction of both Speakers is similar. The housing is an aluminium diecasting, fitted with a special baffle to ensure maximum performance.

THE EDDYSTONE "640" COMMUNICATIONS RECEIVER



A general purpose 8 valve (plus rectifier) communications receiver with continuous coverage from 31 to 1·7 Mc/s. Fitted with R.F. stage, Electrical Bandspread, B.F.O., Crystal Filter, two I.F. Stages, Noise Limiter, etc. Capable of very good performance.

For use with A.C. mains (110 and 200/250 volts). By the addition of the Eddystone Cat. No. 687 Vibrator Unit, the "640" may be operated equally well off a 6 volt battery. Separate matched "S" Meter available.

STRATTON & Co., Ltd., West Heath, Birmingham, 31
Cables : "STRATNOID" Birmingham
Telephone : PRIory 2231-2-3-4

- HELP - HELP - HELP - What is the speaker model depicted above, please ???

- Necessary Reminder.-

A letter from Anthony Richards to the effect that he was working on his EC10 recently when the 4 way connector that connects the psu to the receiver happened to short to chassis. Yes he remembered too late that there is both 9 volts DC and 230 volts AC on this connector !!!

What to say ? except that it is something that we all must have either done, or very nearly done, if we own an EC10 or EB35/36/37 receiver.

In Anthony's case there appears to have been some kind of catastrophic or calamitous result as his EC10 is still duff after he has replaced the psu fuses.

Maybe after he has tried out my suggestions and got the EC10 working - hopefully - then Anthony will share his results with us all. Ted

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- THE INDEX -

So far there have been 11 letters with comments on the N/L Index that was compiled by Anthony Richards. It does seem to have fulfilled a very much needed slot in EUG files and I myself find that it is frequently used. Get that new Halo did you Anthony ? Ted

- - - - -

- Tobacco Pong.-

This from an EUGer who has recently bought an Eddystone receiver that needs to be de-ponged. For non-smokers the smell of tobacco smoke on recently purchased sets can spoil enjoyment of the new toy.

I have often had this problem and to begin with I used paraffin and a 1" new paint brush, to brush over the entire inner and outer surface of the receiver case, then to do the same on the topside of the receiver chassis. This worked fine and with the valve sets the internally generated heat soon drove away the pong of the paraffin.

When I tried it with such as the EB35 or EC10 sets the paraffin smell lingered for weeks - no heat to fully evaporate it see !!

Well next time I tried meths and the paint brush since this stuff evaporates easily at room temperature. It was successful and so this became my modus operandi thenceforth.

I guess that there are other cleaning liquids that can be used but beware of such things as Thawpit, Carbon Tetrachloride, Trichlorethane etc; - those fumes are toxic in closed rooms/shacks. Ted

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* * * SFERICS * * *

- The EC10 purchased by Jim McGowan was off on all bands and it was apparent that this was not so much an electronic fault but was due to mis-placement of the scale cursor when the set had been 're-corded', careful readjustment of the cursor and final checking cured this and one last task was to realign the vernier dial to zero, by loosening the fixing screw. The scale cursor set to '0' with the variable condenser fully enmeshed was the starting point, the vernier dial was then set to '0' at the 12 'o' clock position and the fixing screw was re-tightened.

- When looking for the reason for a low output on CW/SSB Ted Edwards discovered that R97(47 ohms) in the grid of V17 was reading high at 160 ohms. I have had this myself in the past with varying values up to @ 400 ohms and came to the conclusion that overheating was the cause. Yet the resistor appears to have been correctly rated for power - if the manual is anything to go by. Ted is continuing to delve into the 880/2 and envisages many happy hours of work on his 'hot-hollow state' receiver.

- Another ex Bath Tub engineer has come out of the woodwork to join in the EUG ! F.C. Sharples has lived in Germany for many years and it is more than 30 years since he left Eddystone but his memory does not appear to have faded in any way. Cliff mentions that the licence holders at the Bath Tub in the old days were numerous and he lists the following,-

G6 XJ	-	A. Edwards, then Sales Manager.	(S.K.)
G5 JU	-	J. Walker, Home Sales.	(S.K.)
G2 CLN	-	J. Gwynne, Home Buyer.	(S.K.)
G2 XN	-	E. Hopkins, Production Foreman.	(S.K.)
G0 ION	-	W. Cooke, Dev; Chief Tech:	
G3 ANN	-	W. Williams, Production Foreman.	(S.K.)
G5 SS	-	A.W. Summers, Prod; & Paintshop.	(S.K.)
G6 WI	-	R. Crutchley, Paintshop.	
G3 AYW	-	G. Woodburn, Test Dep't;	(S.K.)
G3 FRO	-	M. Hudson, Test Dep't;	(S.K.)
G3 ANH	-	F.C. Hartles, Test Dep't; NOW DJ0 OS.	

These calls all date from more than 30 years ago and to the knowledge of Cliff all are S.K. (silent keys) except for himself and Bill Cooke, now operating with a GW prefix. The status of R. Crutchley is at present unknown, maybe somebody out there can help ?

- Mail betwen Graeme and myself is a bit out of step at present, partly due to the fact that Graeme is 'wearing several hats' at the moment and partly due to the inefficiencies of the Royal Mail (can they get any worse ???). One point of note in his last letter is that he has contributed some 72 valves type 6C5 to the Bletchley Park Trust for use in their replica Colossus computer project. These are direct equivalents for the more common 6J5s that BP were seeking.

- On another matter Graeme announces his newly formulated theory as regards that 'whisker syndrome' which appears to affect (effect ?) all those tin can type Ge trannies. It is Graeme's

impression that this syndrome only comes into existence after the trannies have been put to use following a long period of 'dormancy'- as he says most Eddystones have at some time in their life gone through a period of 'dormancy'. It does seem to be a logical explanation to me and so I shall in future refer to this as Graeme's **'Theory of Dormancy'** which may even go down in history alongside Einstein's Theory of Relativity.

-Another 'replica' is on the boards, joke that word as the one that Brian is building is just that, a baseboard 2 lunger which he hopes will end up in a case and be a pretty fair chinese copy of the Twin - I have sent him a photo of Graeme's **REAL** Twin to help with the build.

-EUGer Tony Watkiss has suggested that members send in details of any wireless/radio related events to be held in their area. This would be okay for insertion in the N/letter if the sender would bear in mind the long time lag involved in compiling, printing,posting of the N/letter. This would mean a minimum of 2 months advance notice or the event would be over and done with before the N/letter got to EUGers !!!

- A request from Ian that we publish lists of members own VHF/UHF scanner frequency lists - this would not really be of interest to members and is more the province of such as SWM or one of the dedicated Scanner mags; so, sorry Ian.

- Peter Lankshear has got his hands on an Edometer, serial number AO 0135 minus the coils and wants either the coils or info on making them **-see this N/letter.**

- W.M. Lane, G3 MWL has acquired an 840C and sent off for the manual. He asks for my comments re the NON fitting of series resistors and parallel condensers when silicon diodes are used in mains psu circuits. Frankly I would still fit them even though the rationale for fitting them may not be so strong these days.

- The request for info on Woodsons of Aberdeen has elicited the following reply from EUGer Jim Cameron.

"I noticed that someone wanted info on Woodsons of Aberdeen. Well they are still very much in business and are major players as far as the North Sea Oil business and for commercial fishing boats. They supply, install and service the latest state of the art kit including Satcomms systems. Actually the Buckie branch of Woodsons is run by a pal of mine (Jim's) who has been with them since he served his 'time'. And that wasn't yesterday either ! I recall him mentioning the receivers they made as well as marine whip aerials. I shall write to him and see what he can dig out on their Eddystone 'type' receivers." We shall wait and see what Jim can find out for us.

- Anthony Richards mentions that he has finally got all 3 of his recently acquired 'baby' Eddystones working. They are an EC10, an EB35 and an EB35 III the Statesman model.

- The letter from Cliff Hartles mentions that when employed at the Bath Tub many years back he was involved in the supply of a large number of 770Rs for China and also a good consignment

of ditto for Brazil. Maybe we shall eventually get EUGers in those countries someday !

- He also mentions the book presented to long term employees in 1960. this was a hardback titled **"A Century of Achievement"** all about the Company of Strattons through the years. I would love to get hold of a copy of this book for my Eddystone archives so does anybody know of a copy going unwanted ???

- EUGer Eric Rutter writes in re the Carrier Level meter on his EA12 which obstinately refuses to read correctly for what he considers an S9 signal. I have had this where the value of the components in the meter bridge network have changed with age.

- Ron Pearce writes in re an EUG QSL card, possibly with the Lighthouse logo possibly with a collage of various models, the idea is to be passed to Chris Pettitt by Graeme, thanks Ron.

- Trevor Blinco, G8 KNJ, mentions that his recently acquired 840C had a problem where it would intermittently go into a state of uncontrollable oscillation. This could usually be cured by a good smack. (What ! Corporal Punishment still allowed ?). in the event it was found that the wire to pin 1 of V7 was a dry joint and when resoldered the problem disappeared.

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- The All World One. -

This is a modern version of a 30s one valver and whilst circuitry may owe something to Eddystone designs the set is very modern in its results. I am printing overleaf the gist of Ron's letter to me and the circuit + photos that he has sent in. Hope that the photos come out okay. With only 8 components plus the phones, box and batteries this set must be within the pocket of any EUGer. So come on try your hand at making one and get away from those horrible alien black boxes which need a second mortgage before they are yours !

Ron mentions that the AW1 does now boast of an original Eddystone variable condenser as utilised in several of those models depicted in the ESWMs. This is a brass vaned type with a total capacity of ·00016 muffs, but this is not essential. There are often similar ·00015 muff types available at rallies.

I now know of 7 replicas, or pseudo-replicas which are being made by EUGers so we shall see more of these in future issues.

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- Those ESWMs and YOU ! -

Seems unnecessary really but then I have to mention it again. Those reprints of the Eddystone Short Wave Manuals and the accompanying USW GUIDE cost £5 each which is inclusive of p & p. This cost covers little more than copying and postage

so they are a bargain. BUT please DO specify WHICH one you want as Graeme is not too well up on ESP, even if YOU are so.

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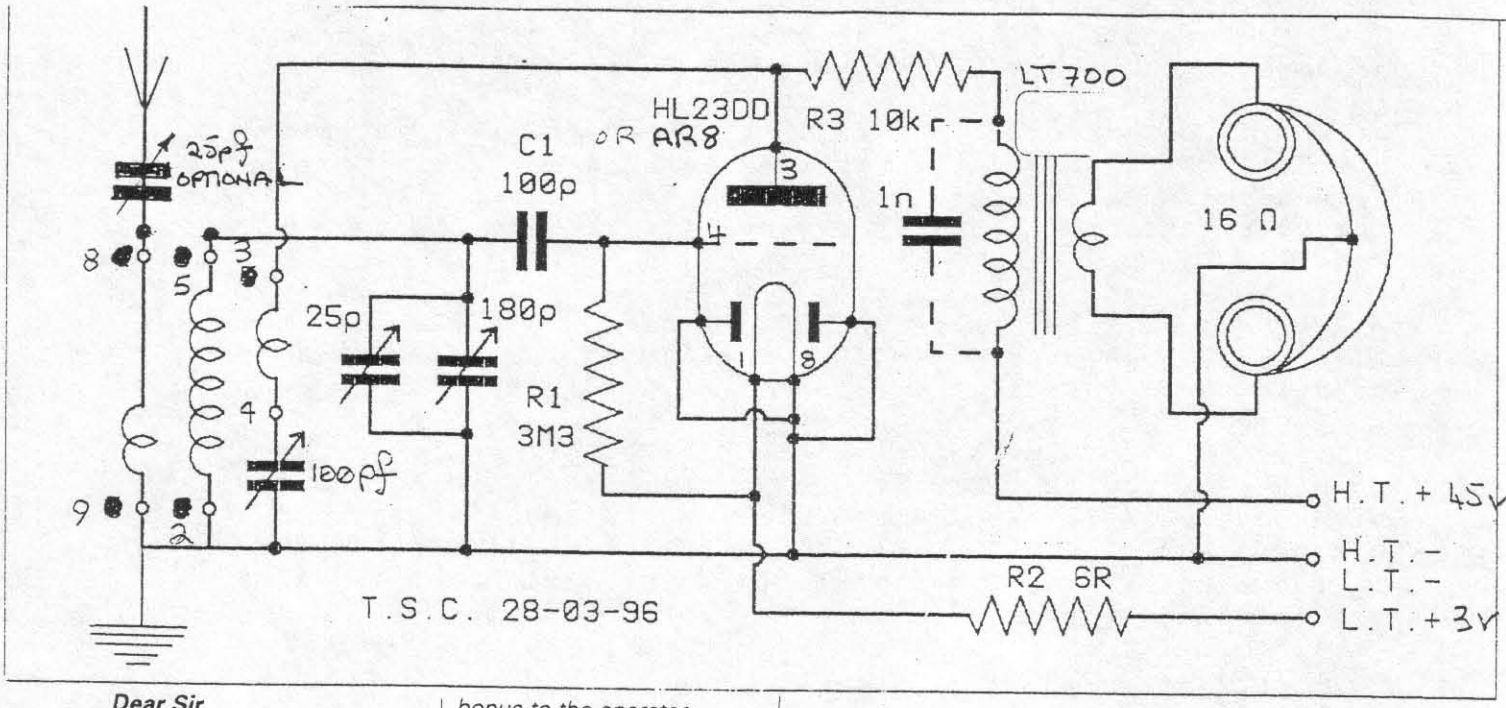
- Ron Pearce's AW-1 Receiver.-



Dear Sir

As a one-valve RX enthusiast, I was very interested to read about the 'joy' experienced by Patrick Connar on receiving Radio Australia using his 0-V-0 'Codar Clipper' (July SWM).

The letter from Mr McKay on the same page, regretting the purchase of a magic Black Box, says it all.

I have been operating a trouble-free, one-valver for ten years and my album of QSL cardsis testimony to the efficiency of this simple set.

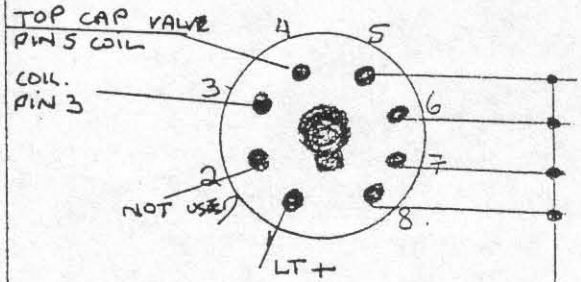
Apart from the low cost of constructing a one-valver, the absence of background noise generated by the more sophisticated receivers is a bonus to the operator.

The silent background is due no doubt to the fact that only eight components plus headphones, box and batteries are required. The whole set can be built for about £14 if you shop around for the components.

My advice to Mr McKay and with all due respect to the Black Box manufacturers; is get cracking with a soldering iron and I can guarantee you won't have a lemon or a burnt-out front end on your hands.

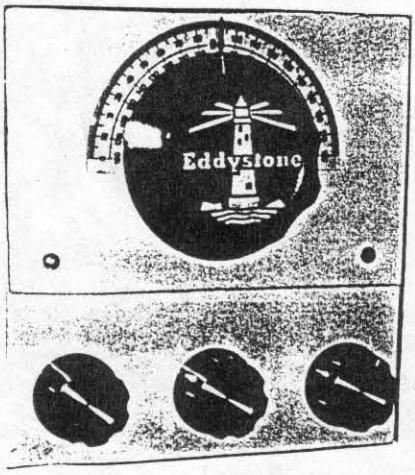
RON PEARCE
BUNGAY
SUFFOLK

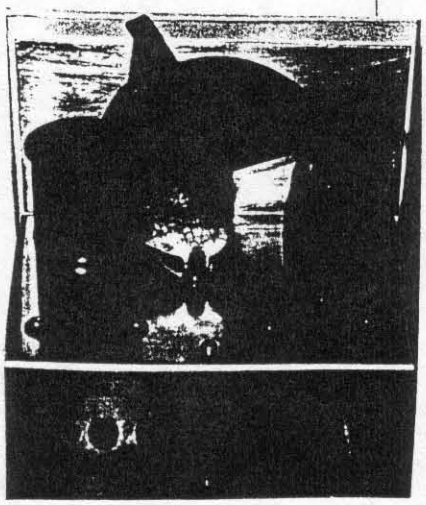
PINS 5 6 7 + 8 TO EARTH.



VALVE HOLDER
UNDERNEATH VIEW
VALVE TYPE AR8 OR HL23 DD.

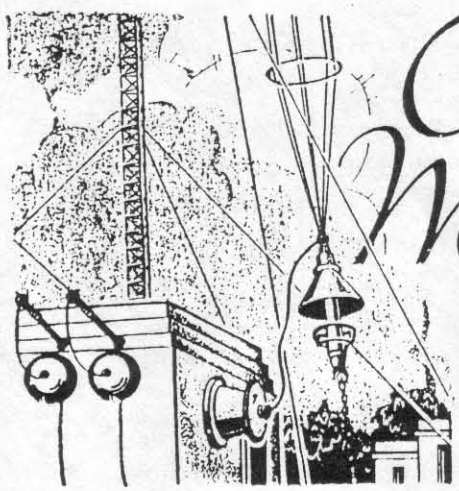
COLOMOR ELECTRONICS LTD.
170 GOLDHAWK ROAD, LONDON
W12 8HJ 0181-743-0899



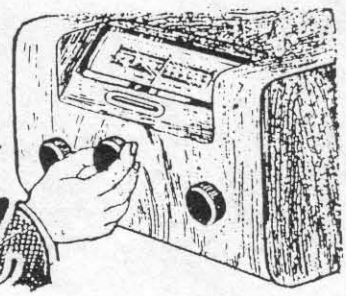


*Plus ça change, plus c'est la même chose . . .**

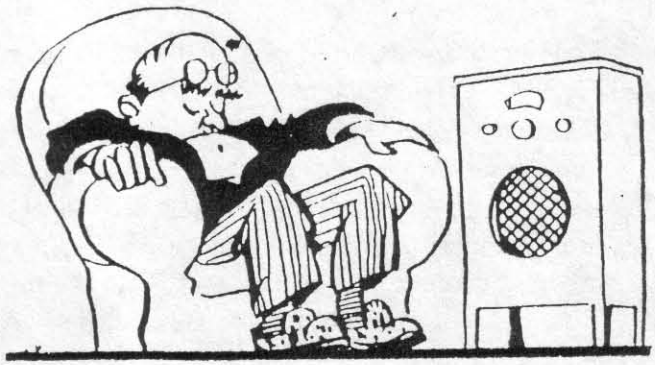
In times gone by it was usual to have 'feature columnists' in the wireless press, such as 'Unbiased' by "Free Grid" and 'Random Radiations' by "Diallist" in the Wireless World. Practical Wireless revelled in the contributions by "Thermion" in a column entitled 'On Your Wavelength'. In November 1935 the country was in the throes of the General Election in which the Right Honourable Stanley Baldwin, M.P. for the Bewdley Division of Worcestershire, was to be returned as Prime Minister for the third and last time.
The following paragraph is taken from 'Practical and Amateur Wireless' (as Practical Wireless was then known) for November 16th 1935.



On Your Wavelength



By Thermion



Sitting up late listening to election results.

The General Election

In common with all other listeners, I shall sit up and listen to the election results, a most exhausting business, for politics always seem more terrifying in the early hours of the morning. You watch your party's progress with rising interest or descending gloom, and the whisky bottle provides a barometer of your feelings. If your party is winning it is just cause for celebration, if it is losing you take double doses. How you hate the announcer when with monotonous regularity he tells you that your political opponents are winning. He seems to be on their side; he seems a decent sort of chap, however, when the announcements tell you of sweeping successes for your own party. I listened in to the political speeches broadcast before the General Election, and came to the conclusion (1) that none of the parties had any constructive policies, (2) that they all seemed as bad as one another, (3) that the whole lot of it was carefully planned eye-wash, (4) that each of the parties had selected points on which it could catch most votes, irrespective of the needs of the country, (5) that the speeches consisted of internecine conflict and recriminations and (6) that I would make a better politician than all of them put together. The salary of £400 per annum, however, does not attract me. You cannot expect good men for such a low salary, and perhaps that is why some politicians are unsuccessful, drawn from the have-nots and the never-wassers, who would like to be amongst the I-ams and the would-bes, yet only succeed in becoming never-will-bes. This social climber business is terrible.

* *'The more it changes, the more it is the same thing.' - Jean Baptiste Alphonse Karr, 1849.*

Memories of Another Age - Continued

In the last EUG Newsletter (No 41) Bob King, G3ASE, described how, as a young schoolboy in 1937, he caught the radio bug. By 1939 he was making his own regenerative receivers and had become adept at reading the morse code, in those days the most common mode used by radio hams. After the start of World War Two he was recruited by the Radio Security Service as a V.I. or 'Voluntary Interceptor', monitoring German military shortwave signals on an Eddystone 'All World Two' receiver. By 1941 he was an expert in the field and not yet eighteen years old. Now read on . . .

EDDYSTONE, its contribution in WWII (part 2) By Bob King G3ASE

'Throughout 1941 I spent nearly all my spare time listening to those weak signals sending messages in 5 letter code which meant nothing to me. In fact it was to be more than 30 years before I even discovered who was sending them. I left the fire service but kept up the ATC as, like most young men, I wanted to be a fighter pilot, although I knew that I would probably fail on my eyesight. The memory of sitting night after night straining to hear the faint morse through interference on my two-valve Eddystone remains with me, and I had to find excuses for not being out with my pals. I wound a medium wave coil to enable me to tune in to Churchill's speeches, which of course I never missed.

Then early in January I received a letter from a Captain Bellringer from the very address to which I had been sending my logs, in a double envelope, to Box 25, Barnet, Herts. This letter said that the RSS were ready to take on more full-time operators and that in view of my age (and impending callup) they would be prepared to take me on. If I declined they would have to let me go and I would then be called up in the usual way to serve elsewhere. This put me in a quandary and it was some time before I decided to forfeit the chance of the glory and medals etc and throw in my lot with an organisation of which I knew little. Hence on January 17th 1942 I found my way to Arkley (a village north of Barnet) and, getting off a bus from Watford, found myself standing in deep snow with only trees and the road in sight. After wandering about I found a gate with 'Arkley View' on it and walking up the drive I was stopped by a blue cap military policeman who allowed me to pass after studying the letter from the Captain which I had produced. Entering a large oldish building I was shown into Bellringer's office where this man, with a black moustache, informed me that as I was under 18 I could not be enlisted. Before I really had time to consider why he had wasted my time, he added that he could put my age up if I agreed and that I would not be the first to do so. I did agree but discovered that I was certainly the first to do so in the RSS and probably the only one. On the spot I was enlisted into the Royal Corps of Signals, later known as the Royal Signals. It always surprised me that in spite of all the army records making me out to be six months older than my birth certificate stated, on demob my age reverted to the correct figure and no one ever questioned the discrepancy.

After being billeted in Barnet I was sent to the intercept station in Ravenscroft Park, also in Barnet, where a large house had been requisitioned, along with many others, for RSS

activities and billeting. Here I saw my first array of HROs in sets of two, for locating both ends of a contact. A few Eddystone 358s were around. A kindly warrant officer, who was a Post Office operator in civilian life, gave me a morse test which established me as an operator of a suitable grade, but an operator I was not to be! For some unknown reason I was sent back to Arkley View to work in 'Discrimination', probably because I had taken the trouble to swot up Q-codes and knew 160 of them 'off pat'. Here I found myself, along with half a dozen others, scrutinising logs of the type I had been providing as a V.I. I became familiar with many amateur callsigns and could recall them for many years afterwards. Few are still alive today as the younger amateurs were enlisted in the services.

The purpose of 'Discrim' was to identify the 'wanted' stations which had appeared on the bands and which did not fit into any previously known category. One learned much later (in the '70s) that these signals were coming from the German Abwehr (military intelligence), Gestapo and Sicherheitsdienst (secret service) and spread over occupied Europe and beyond. I got to know what was wanted and what belonged to the military, commercial and our own undercover organisations. I had a set of rubber stamps and an ink pad to enable me to wield with authority such advice as: wanted, unwanted, suspect, please watch, more please, and unwanted hun. When I started there work was already advancing on discovering who was working whom and, with the help of the excellent direction finding system, which networks were which. Mostly there was a central control station working any number of outstations and we divided them into groups numbered from 1 to 14. Group number 2 (nicknamed Bertie because the main control was in Berlin) was the largest, and the various links or services were also numbered. For example 2/141 might be Berlin working Madrid, but there could be several transmitters operating from Berlin at the same time to various places. When a group was identified I marked it '2/?' and sent it off to the section dealing with group 2. If I was lucky I might even be able to name the service and mark it accordingly. This was not easy as callsigns tended to change and later changed daily, so a more reliable guide was 'time and frequency' or the type of procedure used. In those days I could easily recall dozens of callsigns, frequencies, times, and telephone numbers of girl friends; the latter were not understood to be of direct help to the war effort. Later on instead of all the unidentified log sheets coming to my group, more staff were recruited. We worked in teams, each dealing with a specific frequency band, as the volume of logs increased. We also then had to handle the massive number of logs from the full time intercept stations dotted around the country. These operators often copied large quantities of traffic, so bundles of up to 20 sheets from one enemy station could be labelled and sent off to the right group. After checking and logging, these would find their way by dispatch rider to Bletchley Park for deciphering.

As the war entered 1944/45 the tedium was relieved quite a bit as the areas from where our messages came were overrun by the allied armies and our work diminished. We watched with satisfaction as the links on a wall map shrank and operators made remarks such as "No QRX" and "Closing down, Goodbye" in plain English. There being no point in keeping up any pretence of secrecy. But strangely I do not remember any comments in any other languages, although others have reported German being used.

Much, probably most, of the traffic used the Enigma enciphering device, but where messages were going to agents 'in the field' a hand cipher would be used. This was because the Enigma machine was too secret, bulky and tedious for one operator, who would also need to be in

possession of the rotor, key and plug board settings. The Enigma machine produced a cipher with so many possible solutions that cracking it was impossible, except for .....?

Except for what? In our next Newsletter Bob King continues with his fascinating narrative of the war of the airwaves; don't miss it.

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EUG 80-METRE NET REPORT (by Graeme - G3GGL)

After the February Edition's huge Net Report things seem to have calmed down a little, so here goes. You will remember that due to the dreadful conditions on the first Sunday in February (band jammed out with the French Fone Contest) members decided to hold a net on the First Thursday also, and see how it went. The answer was that it went very well. On Thursday 6th February the band was fresh, open, and beautifuly free from QRM. Not a lot of stations, but all of them 5 and 9. The were myself (G3GGL), Anthony (GW4RYK), Alwyn (G0TPE), and Tony (G0MDZ).

ON SUNDAY 2nd MARCH the Net started up with strong QSB, then severe QRM, then cleared up nicely just in time for everyone to go QRT! In the beginning (09.45) my AM signals from the KW Vanguard were worked by John G3VDL at 5 and 7-9 and Bill GW0ION joined in but was very weak with me. At 10.00 the SSB Net got under way and members signing in (all at 5/9 when QSB allowed it) were GW4RYK Anthony; G3PJK Vic in Manchester; G3TVM David in Cambridge; G3ZEH Dave in Lowestoft; G0SKE Dave in East Anglia; G4DAN Pete in Harwich; Gi0WJI Reg in Co. Down; and a welcome visitor calling in was Bob G3ASE, author of our feature (above), to let us know he'd received his copy of episode one.

THURSDAY 6th MARCH was what I call a 'spaghetti day', where some stations are very strong (at the other end of the same piece of spaghetti) and others are terrible, but conditions then change as He up there stirs the spaghetti! I made very heavy weather on AM with Bill GW0ION, then worked Tom GW3LJS near Carmarthen 5 & 9 both ways. Tom was using his vintage Labgear LG300 Tx. When we went over to SSB Paul G3JDM in Stafford reported in; Rod G3ZEH in Lowestoft gave me a roasting for not listening on AM, sorry Rod... Vic G3PJK came in and told us that the Lancashire 'Treacle Miners' Net takes place every Thursday on 3694kc/s; we need to keep clear of them. I had to go QRT early on this day and so worked nobody else. Ron (G8URU) reported that he had heard all the above OK in Cumberland.

FOR THE TIME BEING the Net will continue to take place on the First Thursday and First Sunday at 10.00 local time (09.00 GMT during the Summer months). When available I'll continue AM tests 15 minutes earlier.

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READERS' ADVERTS

FOR SALE: Eddystone models 840C, 770R, EC10, and manual for 730/7. Offers for these to Jack (Sheffield) 0114 233 5522.

FOR SALE: Eddystone EP14 Panadaptor GWO £100 or exchange for EC10. Call Roy (Powis) 01938 580280.

FROM EUG: EDDYSTONE SHORTWAVE MANUALS; No 1 (1932), No 2 (1934) No 3 (1938), No 4 (1939), No 5 (1946), No 6 (1947), £5 each inc post and packing from Graeme G3GGL, 15 Sabrina Drive, BEWDLEY, Worcestershire DY12 2RJ. (In my opinion No 3 & 4 are the best!)

- Radio of the month Club.-

Some time back Graeme mentioned a conversation he had with Howard turner of Centre Electronics. Howard had commented that Eddystones were becoming scarce on the second hand market.

Graeme, being Graeme, replied that it was no wonder when he like other EUGers had amassed quite a collection over the last few years.

That snippet brought to mind the cartoon shown below which was lifted by an EUGer from an unknown mag; my apologies and acknowledgements to both the mag; and the cartoonist. To Graeme also if he thinks it needed ! Go on pal, Frame It.

- ENDIT - ENDIT - ENDIT -

That is it again, hope that you got a good read from this issue of YOUR favourite Newsletter. Remember we need YOUR input to keep it going. Keep your mail - be it queries or contributions long or short - coming in. To ME via JIM, to GRAEME for ADMIN & SUBS please.

There is really a lot of work involved in running EUG and it is all done by volunteers who contribute not just labour and time but often their own cash to keep things going smoothly.

The ladies at the factory have their own jobs to do and that must be a prime consideration. Sending EUG mail or FAXES to the Factory causes unnecessary work for them. It will also mean a delay in getting your reply since the mail will have to be sent on to US. It may even mean that you letter disappears forever into one of those Black Holes so beloved of Royal Mail.

73,

Ted.

FREE MEMBERS ADS.

WANTED S.556B preferred, or 504, any condition, will collect. Also wanted 687 vibrator psu to suit 750, 640, etc; any condition. Please phone Mike, G8 RCG on 01565-722262 eves or w/ends. (Cheshire).

Newly restored x TWO s.358X receivers bith for sale, one resprayed, one as is, both with x 10 coils in box and psus. Both fitted all new 0.1 muffs. Also for sale one EC10 and have lots of spares. Phone P. Lepino on 01372-454381 or 0374-128170 at anytime, (Surrey).

DON'T FORGET TO VISIT THE
NATIONAL VINTAGE COMMUNICATIONS FAIR
AT THE NATIONAL EXHIBITION CENTRE
BIRMINGHAM, ON 4th MAY 1997

EDDYSTONE USER GROUP
WILL BE THERE

(SAVE POSTAGE AND PAY YOUR SUBS!)