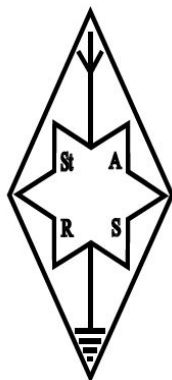


STARLITE

THE JOURNAL FOR THE STOURBRIDGE AND DISTRICT A.R.S.



**G6OI
G6SRS**



ISSUE: NOVEMBER 2020



G4CVH

**STOURBRIDGE & DISTRICT AMATEUR RADIO SOCIETY
INCORPORATING
OLD SWINFORD HOSPITAL SCHOOL RADIO CLUB**

MEETINGS HELD AT

**OLDSWINFORD HOSPITAL SCHOOL
HEATH LANE
STOURBRIDGE
[8:00 TO 10:00 PM]**

VISITORS ALWAYS WELCOME

**THE SOCIETY HOLDS ITS MEETINGS
EVERY MONDAY (EXCLUDING BANK HOLIDAYS)**

RSGB AFFILIATED SOCIETY

STARLITE

Telephone Enquiries to:-

Hon. Secretary
John Clarke M1EJG
[01562] 700513

Or by Email to:-

honsec@g6oi.org.uk
johnclarke.m1ejg@btinternet.com

All correspondence/enquiries should
be addressed to the Hon Secretary at:-

StARS
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21 Mill Lane
Blakedown
Kidderminster
DY10 3ND

StARS Website URLs:-

www.g6oi.org.uk
<http://g6oi.ross-lewis.co.uk>

StARS Facebook Page:-

<https://www.facebook.com/groups/stourbridge.ars/>

Forthcoming Meetings

November 2 nd	Club Net: 145.325MHz FM & Zoom Video. 8pm
November 9 th	Club Net: 145.325MHz FM & Zoom Video. 8pm
November 16 th	Club Net: 145.325MHz FM & Zoom Video. 8pm
November 23 rd	Club Net: 145.325MHz FM & Zoom Video. 8pm
November 30 th	Club Net: 145.325MHz FM & Zoom Video. 8pm
December 7 th	Club Net: 145.325MHz FM & Zoom Video. 8pm
December 14 th	Club Net: 145.325MHz FM & Zoom Video. 8pm
December 21 st	Club Net: 145.325MHz FM & Zoom Video. 8pm
December 28 th	Club Net: 145.325MHz FM & Zoom Video. 8pm
January 4 th 2021	Club Net: 145.325MHz FM & Zoom Video. 8pm
January 11 th 2021	Club Net: 145.325MHz FM & Zoom Video. 8pm.
January 18 th 2021	Club Net: 145.325MHz FM & Zoom Video. 8pm
January 25 th 2021	Club Net: 145.325MHz FM & Zoom Video. 8pm
February 1 st 2021	Club Net: 145.325MHz FM & Zoom Video. 8pm

Editor's Comment

I understand that the Monday night Club Net on 145MHz and Zoom is still going strong, with the same members attending each week. But there are those of you who are not joining this group. It appears that the current Covid situation will continue for the foreseeable future, so I would ask if you will tell us what **you** have been doing since our last pre-Covid meeting. Please forward your submission to the Editor at:

g4xom@g6oi.org.uk

I believe that Alan M7ALS (President) has asked for ideas to help keep the Society relevant and active during this unfortunate time. If you have any thoughts, then you could have a word with Alan on the Monday night net or, possibly, via John M1EJG (Secretary), whose email address is given on page 2 of every issue of Starlite.

I have no other news or comment to make, so here is a photo from happier times. It's SSB FD in the 1980s with Clive G4IEB, Bob G4XOM and Julian G7BVV. If there are photos from earlier periods, I would love to see them and could feature them in a future issue.
Editor (email given above)



StARS HISTORY OF NATIONAL FIELD DAY

Notes From A Presentation By John Bills G3KZG

StARS WAS A VERY COMPETITIVE RADIO SOCIETY. SOME MEMBERSHIP WAS LOST BECAUSE OF THE ACCENT ON CONTESTS. BUT WE GAINED SOME EXTREMELY COMPETENT CW OPERATORS AS MEMBERS, SOME OF WHOM ONLY TURNED UP FOR NFD, DID THEIR BIT AND WERE NOT SEEN AGAIN UNTIL THE NEXT NFD. THEY PAID THEIR SUB BY POST OR GAVE IT TO ANOTHER MEMBER.

THE MONTHLY MEETING BEFORE WAS DEVOTED TO THE FINAL ARRANGEMENTS AND THE MEETING AFTER WAS DEVOTED TO A POST MORTEM. I HAVE TO SAY THAT MUCH OF THE EARLY DETAILS ARE FROM THE DEPTHS OF MY MEMORY, SO THERE MAY BE SOME MINOR INACCURACIES OR GAPS.

1947 WAS THE FIRST ATTEMPT. ONE STATION WAS ON THE CLENT HILLS AND THE OTHER SOMEWHERE IN KIDDERMINSTER AREA, BUT I HAVE NO MEMORY OF THIS ONE AT ALL. WE CAME 78th OUT OF 104.

1948. THIS IS THE FIRST NFD THAT I CAN REMEMBER. IT WAS A 2 STATION ENTRY. BOTH STATIONS SITUATED ON THE GRAMMAR SCHOOL PLAYING FIELDS AT THE REAR OF THE CHURCH IN AMBLECOTE. IT APPEARED TO ME, AS AN ELEVEN YEAR OLD, THAT IT WAS QUITE A HEATH ROBINSON AFFAIR. WE CAME 76TH OUT OF 100.

1949. I DO NOT KNOW WHERE THIS TOOK PLACE. I HAD BEEN SENT TO BOARDING SCHOOL IN THE JANUARY AND THE ONLY FACT THAT I CAN GET FROM THE RECORDS IS THAT WE CAME 60th OUT OF 105.

1950. I CANNOT FIND ANY RECORDS AT ALL NOT EVEN THE PLACINGS.

1951. THINGS STARTED TO GET SERIOUS AND WE BEGAN TO MOVE UP THE PLACINGS. WE ACQUIRED SOME GENERATORS (VERY TEMPERAMENTAL) AND VARIOUS TEAMS WERE DEVELOPED. FRANK BILLS G3CLG AND MAC MACINTOSH LOOKED AFTER THE GENERATORS. ERIC BRICKSTOCK G3IVQ WAS IN CHARGE OF MAST ERECTIONS, ALEC HIGGINS G8GF WAS IN CHARGE OF "A" STATION AND TOM G3BMY WAS IN CHARGE OF "B" STATION. THE GEAR, EXCEPT FOR THE RECEIVERS, WAS STORED AT MY DAD'S' HOUSE IN KINVER, AND THE *MANIACS* AS MY DEAR MOTHER USED TO CALL US, USED TO MEET ON FRIDAY EVENINGS PRIOR TO THE CONTEST AND ALL THE EQUIPMENT WAS CHECKED OUT. THE TUBULAR SECTION MASTS WERE GREASED AND THE ANTENNAS CONSISTING OF DIPOLE 160M, CROSSED DIPOLES 80M, CROSSED DIPOLES AND A VERTICAL 40M, CUBICAL QUAD 20M.

THE QUAD WAS A WORK OF ART AS REGULATIONS WOULD NOT ALLOW A METAL STRUCTURE, SO THE ELEMENTS WERE WIRE SUPPORTED BY BAMBOO CANES. ERIC DID AN EXTREMELY GOOD JOB BECAUSE, NOT ONLY DID HE HAVE THE SUPERVISION OF TWO TEAMS OF AERIAL ERECTORS, HE SOMETIMES HAD TO SUFFER THE WRATH OF THE SENIOR OPERATORS, WHO WANTED TO BE UP AND RUNNING ON THE AIR. BEAR IN MIND THAT IN THOSE DAYS MOST PEOPLE HAD

TO WORK ON SATURDAY MORNING. THE ONLY ONES THAT I CAN REMEMBER THAT DID NOT WORK WERE ALEC AND DAI BARLOW G3HGI. IN FACT, DAI DID NOT WORK AT ALL, HE HAD PRIVATE MEANS. HE USED TO COLLECT THE BATTERIES AND RETURN THEM FOR US. SO FROM ABOUT 13.00 MEMBERS WERE ARRIVING AT DAD'S TO COLLECT THEIR APPOINTED GEAR AND OFF TO SITE. ERIC AND HIS TEAMS HAD TO WORK VERY HARD TO GET THE SITES UP AND RUNNING FOR A 17.30 START, IF I REMEMBER CORRECTLY. AS A RESULT OF ALL THIS MASSIVE EFFORT WE ACHIEVED 24TH

IN **1952** THE OPERATION WAS MOVED TO THE SHEEPWALKS. THE EXACT LOCATION IS NOT IN THE ARCHIVES. I WOULD ASSUME THAT THE TEAMS WERE THE SAME AS IN 1951, BUT FROM A DIFFERENT LOCATION. HOWEVER WE MOVED UP ONE PLACE TO 23RD.

1953 AND 1954 THE ONLY INFORMATION I CAN GET IS THE RESULTS. I CAN ONLY ASSUME THAT THE LOCATION WAS THE SAME AS IN 1952. ANYWAY WE CAME 9TH OUT OF 113 IN '53 AND 6TH IN '54.

1955. THE OPERATION WAS MOVED AGAIN. THE "A" STATION WAS AT HIGH TREES FARM AT SHATTERFORD, NOW OWNED BY ROBERT PLANT AND "B" STATION WAS LOCATED AT HILL FARM, KINVER, QUITE NEAR TO THE CHURCH. OPERATORS WERE "A" STATION G8GF, G3HXI, ASSISTED BY LOGGERS AND "B" STATION OPS WERE G3BMY, G2OG, G3AAQ AND WE CAME 3RD.

1956. WAS MY FIRST INVOLVEMENT IN THE LOGGING. I HAD RECENTLY QUALIFIED AS A WIRELESS OPERATOR IN THE RAF AND WAS IN THE MIDDLE OF A COURSE AS A WOP "A" BEING TAUGHT THE SKILLS OF INTERCEPTION. I HAD HAD MY LICENCE FOR ABOUT A MONTH. THIS YEAR BOTH STATIONS WERE BROUGHT TOGETHER AT COMPTON PARK FARM. THE FARM HOUSE WAS UNOCCUPIED AT THE TIME, SO WE WERE ALLOWED THE USE. THIS ENABLED US TO HAVE THE USE OF THE AGA FOR COOKING, BEDS FOR THE OFF DUTY OPS TO REST AND, ALSO, SET UP A LISTENING STATION. KEN DAVIES LOOKED AFTER THE CATERING WITH ANY VOLUNTEERS THAT HE COULD GET. THE OPERATORS WERE THE USUAL, ALEC RUNNING "A" STATION AND TOM "B" STATION. WE CAME 2ND.

1957. I MISSED OUT ON THIS ONE, AS I WAS SERVING IN HONG KONG. THE STATION WAS SET UP THE SAME AS IN 1956 AND FROM THE RECORDS THE ONLY FACT IS THE RESULT. WE CAME 4TH.

1958. STATION SETUP THE SAME AS IN 1958. SAME OPS AND WE CAME 3RD.

1959. SAME AS THE PREVIOUS YEAR. WE CAME 2ND LOSING TO GRAVESEND BY 3 POINTS.

1960. SAME SETUP, BUT AGAIN WE JUST MISSED OUT. WE WERE 2ND TO STAMFORD.

1961. THIS WAS THE YEAR THAT **WE WON** FOR THE FIRST TIME. IVAN EAMUS AND MYSELF WERE PROMOTED TO THE OPERATING TEAM, WHICH WAS ALEC, BOB

ASHMAN, MYSELF AND TOM, JOHN HOGG, IVAN EAMUS WITH JAKE GOING TO WHICHEVER WOULD HAVE HIM. HE ACTUALLY DID A GOOD JOB ON THE MONITOR STATION. THE SITE WAS THE SAME AS PREVIOUS.

1962. THIS WAS A **WIN** FOR THE SECOND TIME. THE STATIONS AND OPS WERE THE SAME AS 1961. DO NOT FORGET THAT THIS WOULD NOT HAVE BEEN POSSIBLE WITHOUT THE EFFICIENT WAY THAT ERIC AND HIS TWO TEAMS PERFORMED ALONG WITH KEN ON THE CATERING AND MAC ON THE GENNIES. *INCIDENTALLY, THIS WAS THE YEAR THAT G6OI WAS ADOPTED BY THE SOCIETY.*

1963 WAS THE LAST YEAR OF TWO STATION ENTRIES. WE WERE DESPERATE TO DO THE HAT TRICK. HOWEVER THIS WAS NOT TO BE AS WE RETIRED WITH A TX FAULT.

1964 TO 1968 WERE ALL SINGLE STATION ENTRIES, AGAIN FROM THE SAME SITE WITH THE SAME FACILITIES. WE WON ONE OF THE YEARS, BUT I CAN'T REMEMBER WHICH. DURING THE PERIOD OF SINGLE STATION ENTRIES, MYSELF AND IVAN RAN A STATION OVER AT STOKE PRIOR TO WHICH ANYONE WHO WANTED TO HAVE A GO WAS WELCOME. THIS WAS NOT A COMETITIVE STATION, BUT JUST A WAY OF SAYING THANK YOU TO ALL THOSE MEMBERS WHO LOGGED FOR US ALL THOSE YEARS.

New RSGB amateur radio videos for newcomers

To help the thousands of people who've taken their amateur radio Foundation exam in the past 6 months the RSGB have released a collection of videos about six practical skills

The six short videos describe:

- Setting up your station
- How to use an AMU or ATU
- Making your first SSB contact
- Adjusting antenna length to give lowest SWR
- Making your first FM contact
- Using modes other than voice

They are also combined in a single 30 minute video.

Further details at

<http://rsgb.org/foundation-practicals/>

RSGB YouTube Channel

<https://www.youtube.com/user/TheRSGB/videos>

Online Training Resources Page

<https://rsgb.org/main/clubs-training/for-students/online-training-resources-for-students/>

Ofcom to introduce new spectrum licence conditions

Ofcom is [introducing new licence conditions for spectrum users](#), to ensure their equipment continues to operate within international electromagnetic field (EMF) guidelines.

All use of spectrum generates electromagnetic fields.

There are international safety guidelines – developed by the International Commission for Non-Ionizing Radiation Protection (ICNIRP) – that set the maximum levels of EMF exposure for protection of the general public. These levels are endorsed by Public Health England.

Manufacturers, installers and operators of wireless equipment should already be aware of the ICNIRP guidelines, and factor them in to how they plan their services.

To ensure this always remains the case, we proposed new conditions for spectrum licensees earlier this year. Following consultation, we have now decided to introduce the new licence conditions.

This means licensees using equipment that is authorised to transmit at power levels higher than 10 Watts must operate within the ICNIRP guidelines as a condition of their Ofcom licence – including keeping data and records of any testing to demonstrate their compliance.

New online tool

While most spectrum licensees should already be factoring the ICNIRP guidelines into their services, we will be launching an online tool (our EMF calculator) to help make it as simple as possible for people to check whether the use of their radio equipment is likely to comply with the guidelines. This will be available on a trial basis initially and we will take account of the feedback we receive before launching the full version.

Next steps

Alongside our decision to introduce the new licence condition, we have published a consultation covering the updated wording of the condition; our updated Guidance on EMF Compliance and Enforcement; and a trial version of our new online EMF Calculator. We welcome feedback to this by 16 November, after which we will then begin varying the relevant licences to include the new condition. We will also launch our finalised online EMF calculator

EMF: Ofcom propose new Amateur Radio licence conditions

Ofcom has ignored the advice of many highly-regarded organisations and are pressing ahead with unnecessary changes to licences that will impose a significant bureaucratic burden on licensees

Radio amateurs have been operating for over a century yet in all that time Ofcom is unable to cite a single health issue resulting from a station's EMF. It is completely inexplicable as to why Ofcom would wish to impose these regulations on radio amateurs.

In the consultation document Ofcom says *"penalties for breach of a spectrum licence can include an unlimited fine and/or prison sentence of up to 51 weeks in England and Wales (or 6 months in Scotland and Northern Ireland)."*

Ofcom are now conducting a public consultation on the implementation of the new licence regulations which will apply to any licence that permits more than 10 watts EIRP, which is all amateur licences.

Responses from radio amateurs and other interested parties must be submitted by 5pm on November 16, details at

<https://www.ofcom.org.uk/consultations-and-statements/category-1/limiting-exposure-to-emf>

The new consultation document with the proposed licence changes is at

https://www.ofcom.org.uk/__data/assets/pdf_file/0017/204056/emf-implementation-consultation.pdf

Among comments to the first EMF consultation were:

BAE Systems described Ofcom's proposals as *"at best nugatory and at worst counter-productive."*

Sky pointed out that EMF exposure is already managed under product safety legislation, health and safety legislation and planning policy, and said *"it was unclear why Ofcom was now proposing to introduce additional and unnecessary burdens on operators."*

The Royal Yachting Association (RYA) said it did not believe the proposals were a proportionate response to the identified issues and would be impossible to enforce. It said Ofcom had offered no evidence of the existing regulations being broken by maritime users.

SeaCall said the 10 Watt threshold was far too low, especially where exposure is brief. It pointed to the lack of evidence of harm to human health from transmissions below 100 Watts as long as a 1 metre separation was observed

Ofcom EMF Calculator

https://www.ofcom.org.uk/__data/assets/file/0018/204057/emf-calculator.xlsx

ITU Radio Regulations 2020 released

The ITU has made the Radio Regulations 2020 available as a free download

The **ITU Radio Regulations** facilitate equitable access to and rational use of the natural resources of the radio-frequency spectrum and geostationary satellite orbits. They also ensure the availability of the frequencies provided for distress and safety purposes and assist in the prevention and resolution of cases of harmful interference between the radio services of different administrations. Further, the regulations facilitate the efficient and effective operation of all radiocommunication services and, where necessary, regulate new applications of radiocommunication technology.

ITU Radio Regulations 2020

<https://www.itu.int/en/myitu/Publications/2020/09/02/14/23/Radio-Regulations-2020>

Direct link to Zip of PDF documents

<https://www.itu.int/myitu/-/media/Publications/2020-Publications/PDF---EN---Radio-Regulations-2020.zip>

EURAO Newsletter September 2020

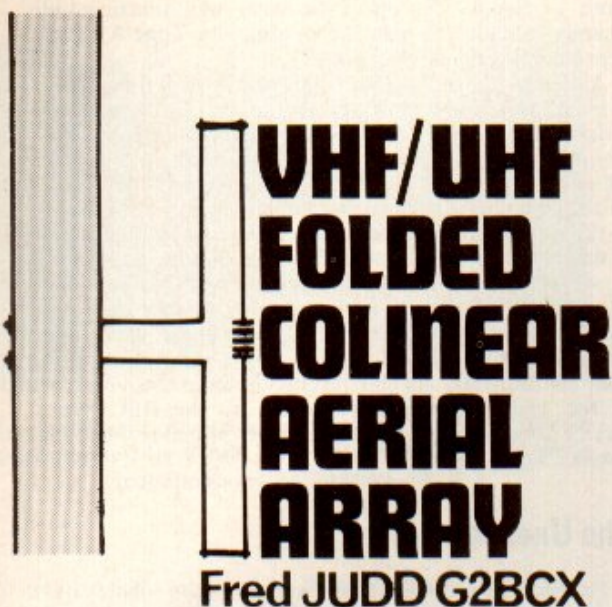
In this issue you will find:

- EURAO participation in CEPT web-meetings
- EURAO General Assembly 2020 : held online
- EURAO Radio Amateur Insurance certificate : ready to be downloaded
- EURAO Party - Summer 2020 : working on 80m and 40m bands
- EANET Sprint Contest 2020 : for international clubs and hams
- News in brief
- ...

EURAO Newsletter comes out quarterly, either in pdf format and as a website. Spread the word!

<https://www.eurobureauqsl.org/newsletter/>

Folded dipole for 2mtr and 70cm



This aerial is a two-element colinear design for vertically polarised (omni-directional) radiation. It may be constructed for use on either the 2m or 70cm amateur bands and is a development of the very successful "Slim Jim", published in April 1978.

WRM124

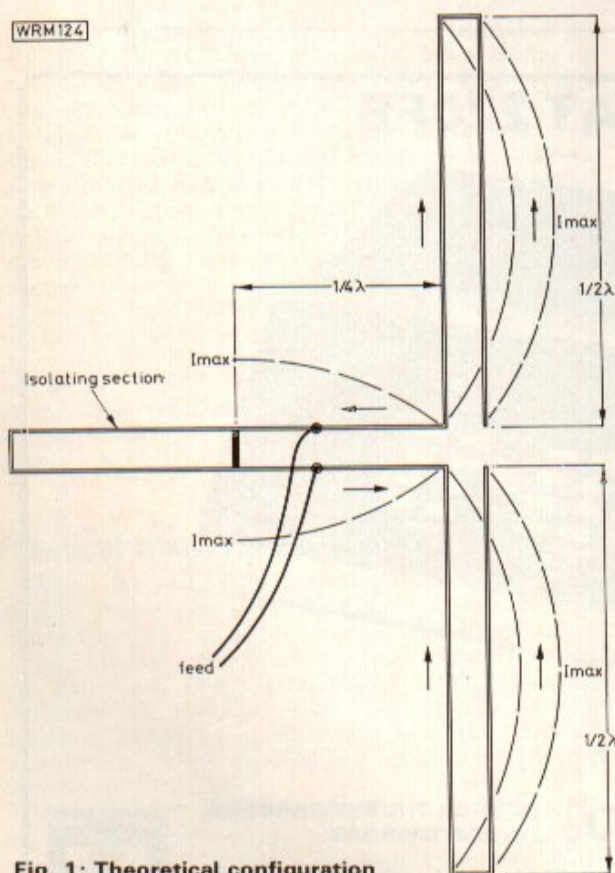


Fig. 1: Theoretical configuration of the colinear array

Two folded half-wave elements driven in phase from a quarter-wave stub constitute the active parts of the device, originally built for use on the Norwich 70cm repeater. The requirement called for a pair of aerials with at least 3dB gain which could be mounted on a mast without undue effect on their omni-directional properties—i.e. with minimal distortion of the otherwise circular radiation pattern.

The theoretical configuration is shown in Fig. 1. Experimentation indicated that the minimum tolerable distance from a metal mast producing the least effect on radiation was 0.625λ . Accordingly, a long stub section is employed which also serves as a supporting mount for the aerial.

The folded radiating elements are voltage driven from a quarter-wave section of the whole stub, the current distribution being indicated by the arrows. The increase in gain over a conventional two-element colinear (gain normally around 1.8dB) is obtained by the use of the folded elements, which contribute an additional 1.6dB. This aerial therefore has a total gain of 3dB over a dipole. Note the break between the return sections, necessary to create a standing wave.

Construction

The diagram of Fig. 2 should provide enough information to enable this aerial to be constructed for either 70cm or 2m, detailed dimensions being given in Table 1. For u.h.f. the aerial will self-support but for v.h.f. some form of boom at right-angles to the mast may be necessary to take the weight of the stub and elements—which are, of course appreciably longer than their u.h.f. counterparts. This could be constructed from wood, and reach at least as far as the quarter-wave section shorting bar. An alternative would be the use of larger diameter tubing for the elements and stubs, say 12.7mm ($\frac{1}{2}$ in).

Connections to the feed point must be protected from rain and the prototype used an oblong plastic box with tight-fitting lid for this purpose. The insulator linking the two folded element sections should be of high quality material, such as ptfе, which is drilled to fit over the ends.

A piece of aluminium about 10mm square may be used for the quarter-wave shorting bar, drilled to take the stub lines and tapped for the 4BA screws which lock the bar to the lines. Element dimensions are given for both versions, the velocity factor having been taken into account.

Adjustment

When the aerial has been completed it should be set up in fairly clear surroundings, approximately 2 metres above ground, with the full length of feeder cable attached. Adjust the feed tapping points and quarter-wave point (shorting bar) for maximum power and v.s.w.r. All v.h.f. aerials operate most efficiently when high up and clear of rooftops or other obstacles, such as tall trees. This is particularly true in the case of colinears with zero-angle radiation. Sizeable trees in full leaf can attenuate v.h.f. and u.h.f. signals by as much as 20dB when placed in the path of radiation, even in dry weather. Brickwork can reduce signals by 10dB or more.

The vertical angle polar pattern of Fig. 3 was taken from the Author's display unit and clearly shows the radiation characteristics of the u.h.f. prototype.

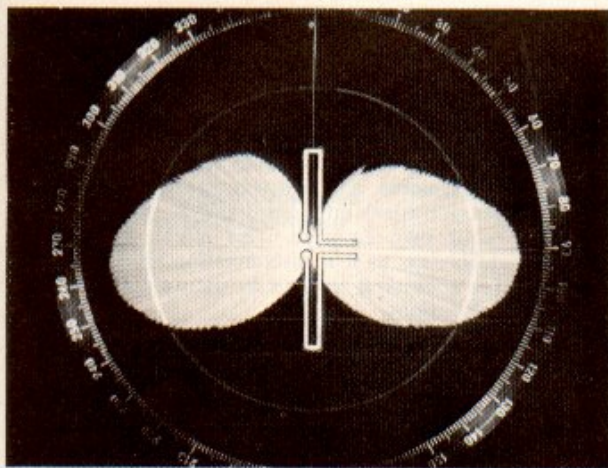
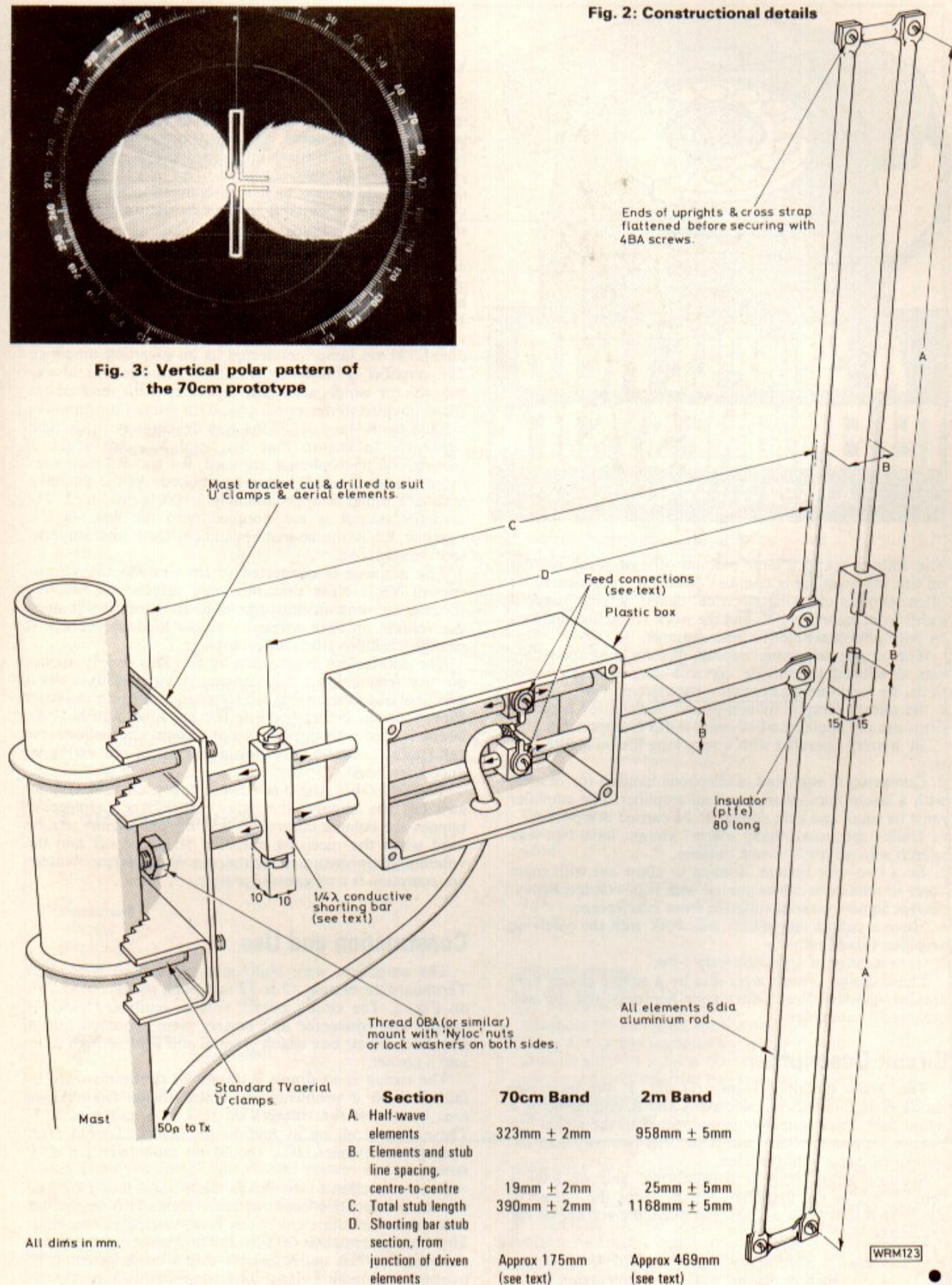


Fig. 3: Vertical polar pattern of the 70cm prototype

Fig. 2: Constructional details



Radio Signals From Mars

On October 4th, an amateur radio operator in British Columbia picked up a radio signal ... from Mars.

It came from NASA's Mars Reconnaissance Orbiter flying just 274 km above the Red Planet's surface. Such a detection is possible because, right now, Mars is unusually close to Earth.

Malta Added To CEPT Radio Amateur Licence

At the request of EURAO (European Radio Amateurs' Organization) this week it will be approved a modification of CEPT Recommendation T/R 61-01, also called CEPT Radio Amateur Licence, during the webmeeting WGFM#97.

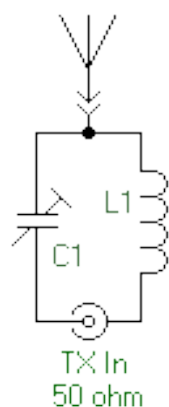
The modification is considered a simple editorial amendment and adds Malta to the list of administrations in Annex 2 of this recommendation because it recently (2020-01-10) implemented this recommendation at the national level.

Malta was already included in the CEPT Recommendation T/R 61-02 (HAREC) since 2009.

This modification will avoid problems, like the one EI8GVB had with LoTW in a recent activity of yours on the island.

<https://www.eurao.org/>

End-fed halfwave and Matching Unit



This antenna system was first described by M0AJL in Sprat #97. I've modified it to use a toroidal inductor. No counterpoise is necessary and the antenna gives good results on either band of choice.

L1 (20m) 29 turns 26A/W/G on T68-6
L1 (40m) 45 turns 26A/W/G on T68-2
C1 75pF air-spaced trimmer
40m antenna 67 ft, 20m antenna 34ft



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