

P5

JUNE 1992

NEWSLETTER
OF THE
SEVERNSIDE
TELEVISION GROUP
EDITED BY
SHAUN O'SULLIVAN
G8VPG

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DETAILS OF OUR NEW AERIAL PRODUCTS
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ANNUAL GENERAL MEETING REPORT

Our AGM was held on 14th April. Despite the poor weather on the day, we had a reasonable turn out of nearly 20 members. The following is an edited version of the reports presented by the key Officers at the meeting. If you would like to see the full minutes of the meeting, please contact the Secretary.

CHIEF ENGINEERS REPORT :

The Chief Engineer G8KUW presented the following report ;

"I will outline the current situation of GB3ZZ and some of the plans for the future.

The main addition to the repeater in 1992 was the weather satellite system, this facility has proved very popular and of great interest to regular users of GB3ZZ.

It is hoped that "P5" will print some features dealing with the whole subject of weather satellites and remote imaging. Schedules of the channel 1 and channel 2 MET 4 images will be published as soon as they become available.

The repeater has proved very reliable this year up to its usual break down time just before the AGM !. Infact the problem with the BBC mother board sockets showed again just last Thursday. That was rectified within 2 hours, but a more serious problem has since arisen with the yagi antenna selector. It appears that a mechanical failure in the switch has resulted in the unit not latching to the correct input. I have taken the switch out of service until a PIN diode electronic switcher can be completed.

The new receiver is near completion. Paul G8YMM has kindly agreed to make a PCB for the computer interface to the receiver, this will permit the signal strength facility already built into the software to be used. The receiver seems to be somewhat deaf, preliminary tests with G1HIA on simplex were disappointing. This will be looked into when time permits.

Another new addition that is now well advanced is a sync and video processor. This complex device should eliminate some of the video distortion that presently occurs.

I hope to serve again this year in the capacity of Chief Engineer, however imminent family commitments will no doubt mean that my time available to devote to STG projects will be limited. I hope you will understand if I cannot undertake any lengthy building projects on behalf of the STG for the next 18 years or so !.

The Group will be carrying out link testing on 10 GHz throughout this summer in anticipation of being granted a licence to operate a 10 GHz TV repeater in the Bristol area. There are no firm plans regarding the siting of the new repeater, but we hope to network the new repeater into GB3ZZ by using signalling on secondary inter-carriers. This will permit users outside the current service area, for example the inner city of Bristol, to gain access to all the current facilities on GB3ZZ merely by gaining access to the 10 GHz repeater and commanding a link to GB3ZZ. This will be yet another first for the STG.

Finally for those interested in satellite systems or aerial products, I have negotiated a 10 % discount with a Birmingham firm for members of the STG. I have photocopied their advertisement for reference".

SECRETARIES REPORT :

G8VPG reported that during the past year, the committee had met on occasions, the Group attended 3 rallies, gave 5 talks and demonstrations, participated in a JOTA station and entered 2 ATV contests. The Group had organised a coach trip to the London AR Show. Sales of Group products were continuing satisfactorily, helped by regular advertising in CQ-TV. The general recession had lowered our sales, but margins were slightly improved. At the end of the month, we were going to launch several new products which it is hoped will stimulate an increase in sales. These will be a 38 element high performance version of our current aerial (cost £25), a 20 element extension kit for owners of the present 18 element device (cost £12), a new trough reflector design of aerial (cost £18) and finally a new book entitled " A Guide to 23 cm Television ". Besides these items, the committee had spent time discussing the 10 GHz beacon/repeater project, the weather satellite project, finance and banking matters and arrangements for Socials, Talks, Rallies and Contests.

TREASURERS REPORT :

The Treasurer G0AWX introduced the accounts sheet for the past year. She drew attention to the fact that our expenditure on GB3ZZ had nearly doubled, largely due to the very hard work raising funds done by a few members, including our Chairperson, attending rallies and shows. The income from donations, raffles and auctions was also important and most generous. GB3ZZ had been able to be further improved as a result of our good financial position, and it was hoped that with continued support and hard work, more can be spent in the next year. However it was noted that but for our income from bank interest, we would have made a loss for the year. None the less our underlying position is strong with a healthy bank balance. G0AWX also wished to thank the Auditor G0FGZ and G8VPG for their help in finalising the accounts. There were no questions from the floor of the meeting and the accounts were approved unanimously. G0AWX then stated that the committee recommended the annual subscription remain at £5.00, which was accepted by all present.

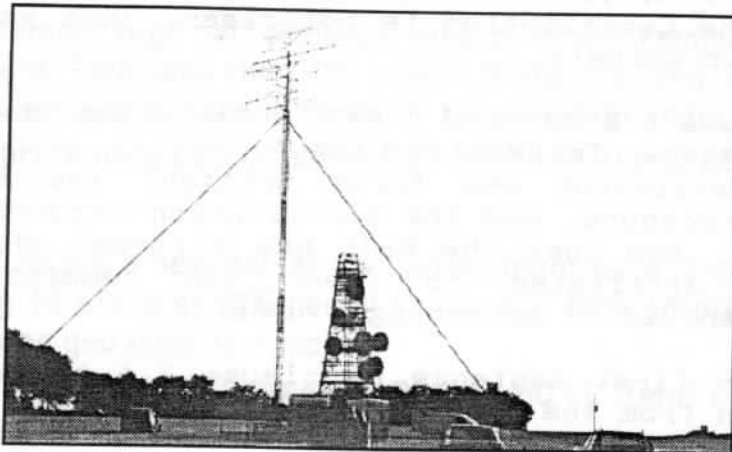
CHAIRPERSONS REPORT :

G1IXE wished to thank the Officers and Committee for all of their hard work during the past year, much of it done unobserved behind the scenes. She also thanked those members not on the committee for their help. Much assistance had been given to new members to get them on the air, including home visits. It reduced the load on the committee when members helped out with this. She hoped that our new book " A Guide to 23 cm Television " would be of great assistance to new members. Membership had ended the year at 69, a very satisfactory figure although slightly reduced on last year. Much time was going to have to be given to our proposed 10 GHz project in the next year. It is hoped that a site at Dundry might be available. She asked that all members please fill in the questionnaire attached to their membership renewal forms, the committee will be analysing these replies at their next meeting. She finally reminded members not to send copyright material through GB3ZZ. She stated that activity on GB3ZZ was continuing to increase and hoped for a further year of growth for the Group.

NOW AVAILABLE!

SEVERNSIDE TELEVISION GROUP

A GUIDE TO



23cm TELEVISION

SHAUN P. O'SULLIVAN

This book is intended for the Radio Amateur who is interested in Amateur Television on the 23 cm band. No previous knowledge of ATV or 23 cm is assumed, and the largely non-technical information will guide the reader through the mysteries of Aerials, Cables, Connectors, Receivers, Transmitters, Repeaters and much more. It is essential reading for anyone who has wondered whether they could participate in ATV, since it strips away all the jargon and reveals how simple and inexpensive ATV operating can be.

SEVERNSIDE TELEVISION GROUP is proud to announce its first venture into book publishing. Just released is "A Guide to 23 cm Television", a complete beginners introduction to the process of setting up an ATV station.

Over the past 6 years, we have given many talks and demonstrations to clubs, and we are convinced that there is a demand for a book that simply explains how to get started on 23 cm ATV. There are other books on the subject which are good, but they quickly delve into complex circuit diagrams and constructional detail, which is often beyond the beginner. Our book tells you in simple terms everything you need to know, including the basics like what type of cable or connectors to use. It has been professionally produced with laser printed artwork and is fully bound, A4 page size.

Why not give it a try?. Copies are available ex-stock, price £3.00 each plus £0.60 postage.

CHANGES TO THE CONSTITUTION :

The following changes to our Constitution were agreed at the meeting.

a) Add to the end of the second sentence of clause 2.2 " or the sale of goods and services ".

When the Constitution was first written, it envisaged the Group being funded by subscriptions, donations or loans. In addition to these, we obtain substantial income from the sale of goods and services, and the amendment seeks to regularise this situation.

b) Add the following clause " 3.3 In recognition of outstanding service to the Group, the committee may at its absolute discretion appoint Honorary Members. These shall be entitled to the same privileges as ordinary members, except that no subscription shall be due from them ".

The Group does infact already have one Honorary Member, but their position in the Constitution is not clear. This amendment defines the category more precisely.

c) Amend clause 5.2 to read " BATC : The Group shall be affiliated to the British Amateur Television Club ".

When our Constitution was first written, the BATC had no formal affiliation procedure, and the Constitution required us to "associate" with the BATC. Now that the BATC has a formal affiliation procedure, and we are affiliated to them, the committee feel that the Constitution should be accordingly updated.

d) Amend the first sentence of clause 7.1 to read " The financial year shall run from the First of March each Year ".

The financial year currently runs from 1st April each year. Experience has shown that the Treasurer and Auditor do not have sufficient time to prepare the annual accounts for the AGM, which must be held in April. The amendment will allow time for bank statements to be finalised and other arrangements to be made at a more relaxed pace than the current provisions demand.

NEW OFFICERS & COMMITTEE FOR 1992/3 :

Finally a reminder of your hard working new committee for the next year ;

Chairperson ; Mrs.Viv Green G1IXE,
Chief Engineer & Vice Chairman ; Steve Walsh G8KUW,
Honorary Secretary ; Shaun O'Sullivan G8VPG,
Honorary Treasurer ; Mrs. Jean Fletcher G0AWX.

Committee members ;

Ivor Green G1IXF, Ken Stevens G4BVK, Brian Kelly GW6BW, Paul Stevenson G8YMM and John Hudson G3RFL.

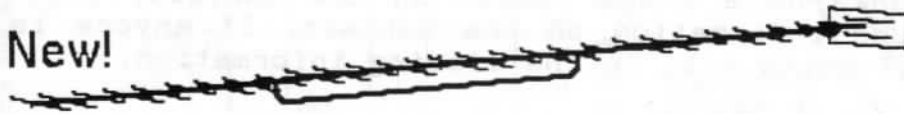
G1IXE thanked retiring committee member G3JMY who had served the Group in several capacities from its very earliest days. Although he was leaving the committee, Ted would continue to be one of the major driving forces behind our 10 GHz project.

G1IXE also welcomed new committee member John Hudson G3RFL and looked forward to his help on the committee during the next year.

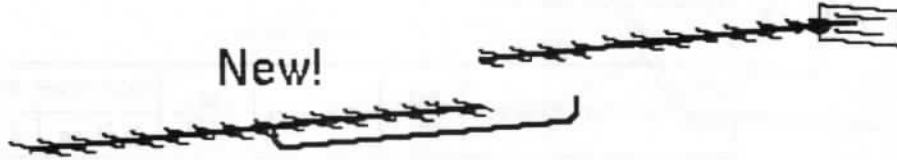
Dr. Chris Newton G0FGZ had once again agreed to act as Auditor.

Sevenside Television Group Aerial Products

New!



New!



New! A 38 element high performance version of our famous 23 cm aerial 14 db gain, SWR less than 1.5:1 and 1.8 metres long. Remember - all STG aerials are wideband to cover the repeater input and output.
Launch price only £25.00 each, P&P £3.50 (1 item) £5.00 (2+ items)

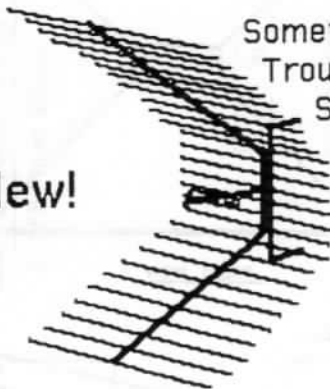
New! No need to buy a new aerial, our 20 element extension upgrades your existing 18 element STG aerial to the full new 38 element specification. Everything you need is supplied.

Launch price only £12.00 each, P&P £3.50 (1 item) £5.00 (2+ items)

The original 18 element wideband aerial is still available. 10 db gain SWR is less than 1.5:1, 90cm long and it covers the repeater input and output.

Still only £14.00 each, p&p £3.50 (1 or 2 items) £5.00 (3+ items)

New!



Something different for the mast! A 23 cm wideband Trough Reflector. 11 db Gain across the whole band SWR is less than 1.5:1 Overall dimensions: 55cm high, 35cm wide and 30cm deep. Supplied as a complete kit of pre-formed & pre-drilled parts for easy "screwdriver" assembly, no tuning is needed.

Launch price only £18.00 each, P&P £3.50 (1 item) or £5.00 (2+ items)

See our other advert for more products



We regret that we can only post aerials to UK addresses. Delivery 28 days. Cheques Payable to "Sevenside Television Group". Send to 15 Witney Close, Saltford Bristol BS18 3DX. Tel: 0225 873098 (after 7pm & weekends only please)

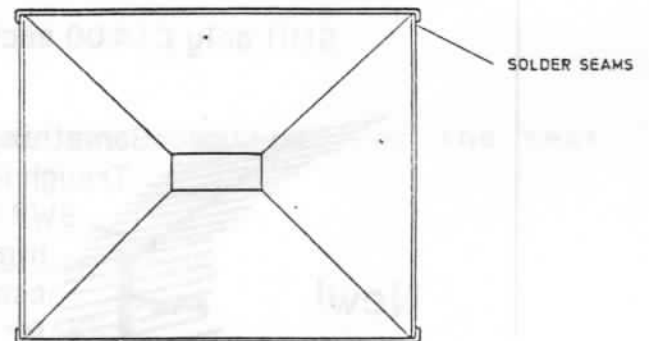
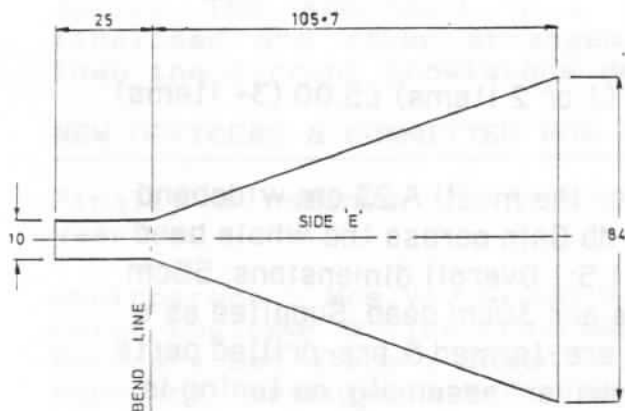
HORN AERIALS FOR 10 GHZ
by John Hudson G3RFL

We are grateful to our new committee member John G3RFL for the following details of 5 designs for 10 GHz Horn Aerials. These have been extracted from a longer paper on the subject, which gives some more background information on the subject. If anyone is interested, John or myself could fill in the missing information.

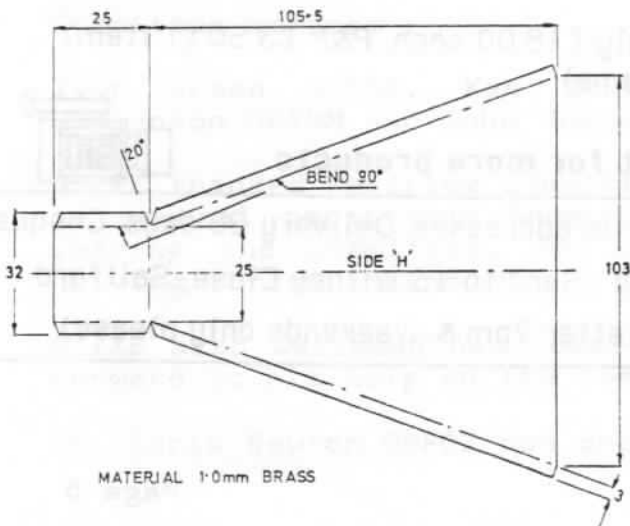
Results: $f = 10.70\text{GHz}$

Antenna Description	Ref. No.	v.s.w.r.	Abs. Gain*	Half-power Beamwidth	
				H plane	E plane
Optimum horn, $l = 4\lambda$ (E plane flare)	1	1.20	16.0	23°	15°
Optimum horn, $l = \lambda$ (E plane flare)	2	1.27	13.2	40°	30°
Horn $l = \lambda$ (both planes)	3	1.17	11.2	40°	50°
Horn $l = 1.65\lambda$ (E plane flare)	4	1.3	13.5	30°	30°
Dielectric Antenna	5	1.15	15.6	24°	27°

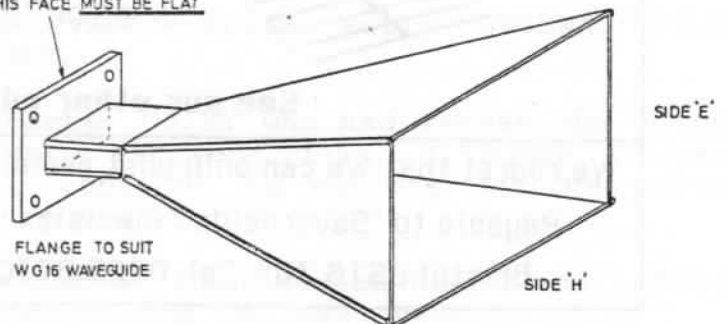
* NOTE: Absolute gain is that referred to an isotropic radiator or one which radiates equally in all directions.



FRONT VIEW



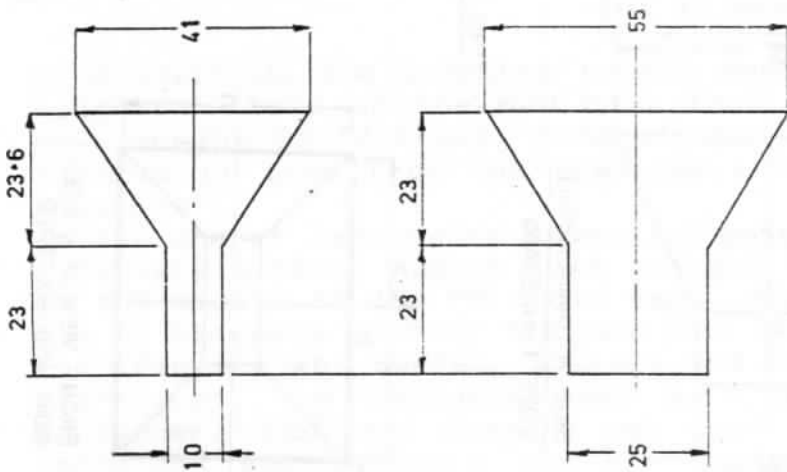
THIS FACE MUST BE FLAT



PERSPECTIVE VIEW OF 23° BEAMWIDTH HORN

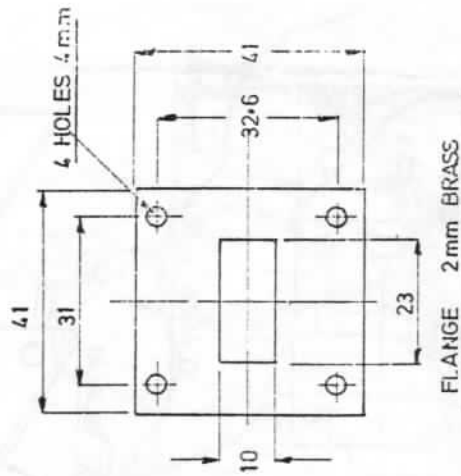
ANTENNA 1. OPTIMUM HORN $l = 4\lambda$ (E PLANE FLARE)

ANTENNA 2. OPTICAL HORN 1 - A
(E FLARE FLARE)



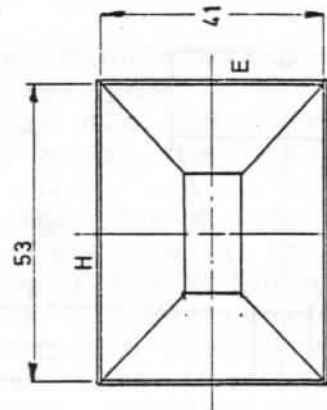
SIDE 'H' (Dimns in Flat)
2 OFF 1mm BRASS

SIDE 'E' (Dimns in Flat)
2 OFF 1mm BRASS



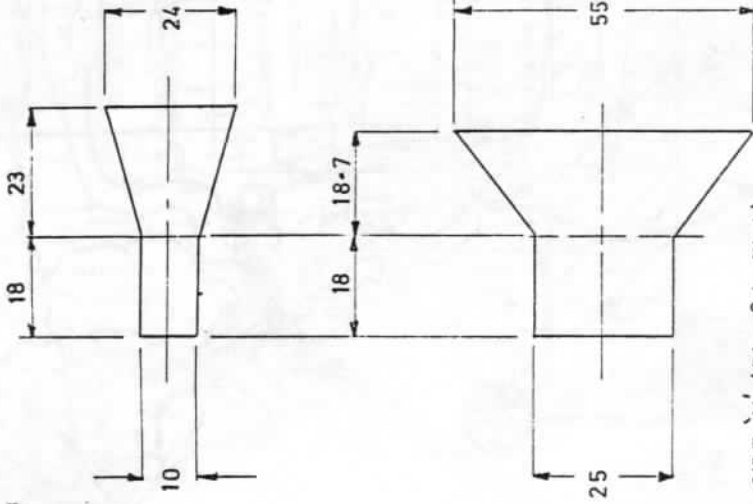
FLANGE 2mm BRASS

THIS FACE MUST BE FLAT



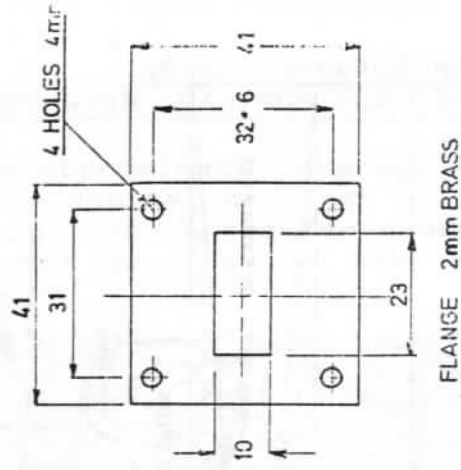
FRONT VIEW OF 4 SIDES
BENT AND SOLDERED

ANTENNA 3. HORN 1 - A
(EOTH PLANES)



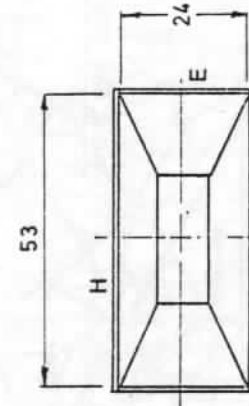
SIDE 'H' (Dimns in Flat)
2 OFF 1mm BRASS

SIDE 'E' (Dimns in Flat)
2 OFF 1mm BRASS



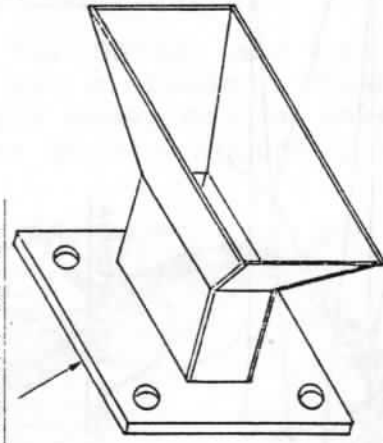
FLANGE 2mm BRASS

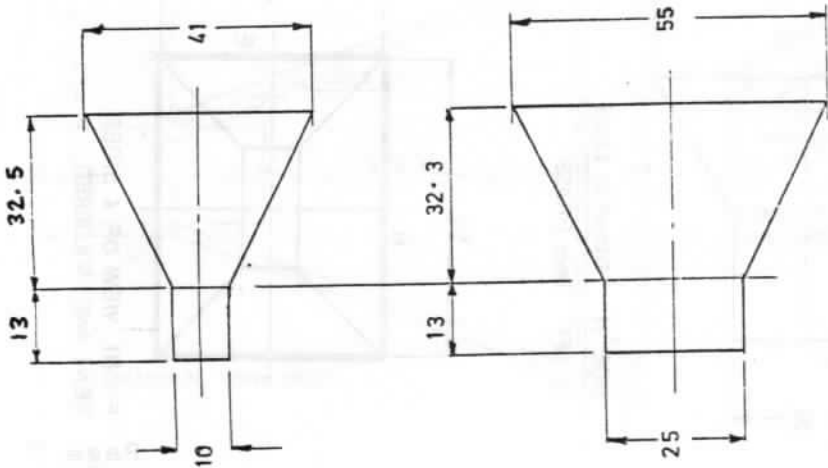
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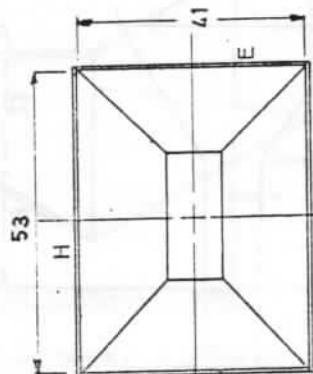
FRONT VIEW OF 4 SIDES
BENT AND SOLDERED.

PERSPECTIVE VIEW OF HORN





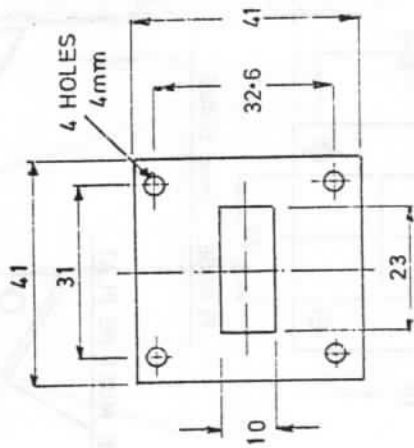
SIDE 'H' (Dimms in Flat)
2 OFF 1 mm BRASS



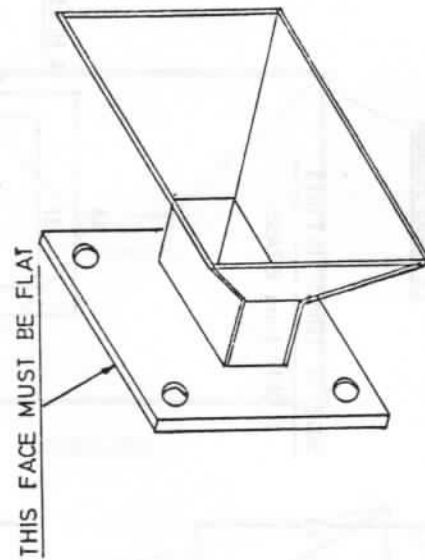
FRONT VIEW OF 4 SIDES
BENT AND SOLDERED

ANTENNA 4. HORN 1 - 1.65λ
(E PLANE FLARE)

SIDE 'E' (Dimms in Flat)
2 OFF 1 mm BRASS



FLANGE 1 OFF 2 mm BRASS



PERSPECTIVE VIEW OF HORN

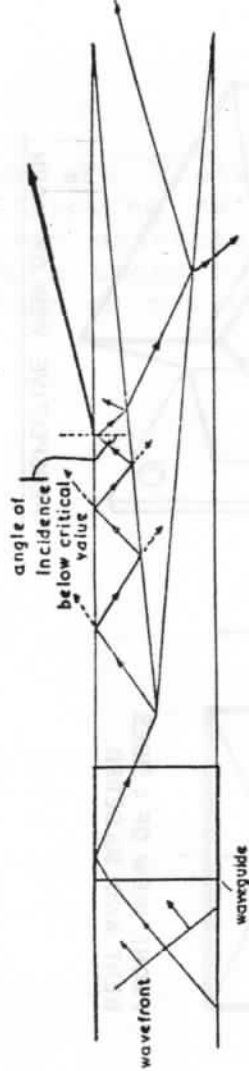
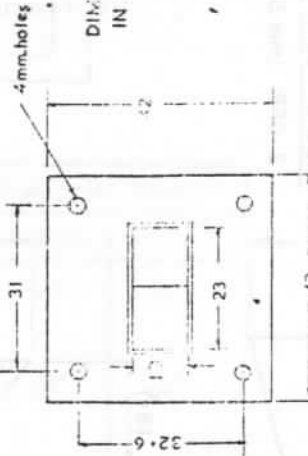
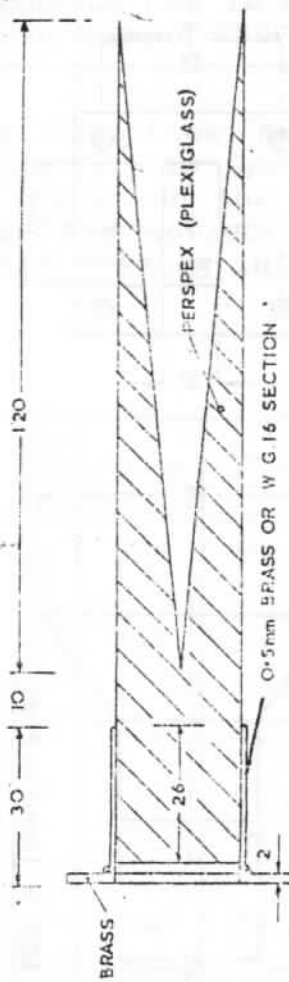


FIG. 6. RAY TRACING DIAGRAM FOR ANTENNA

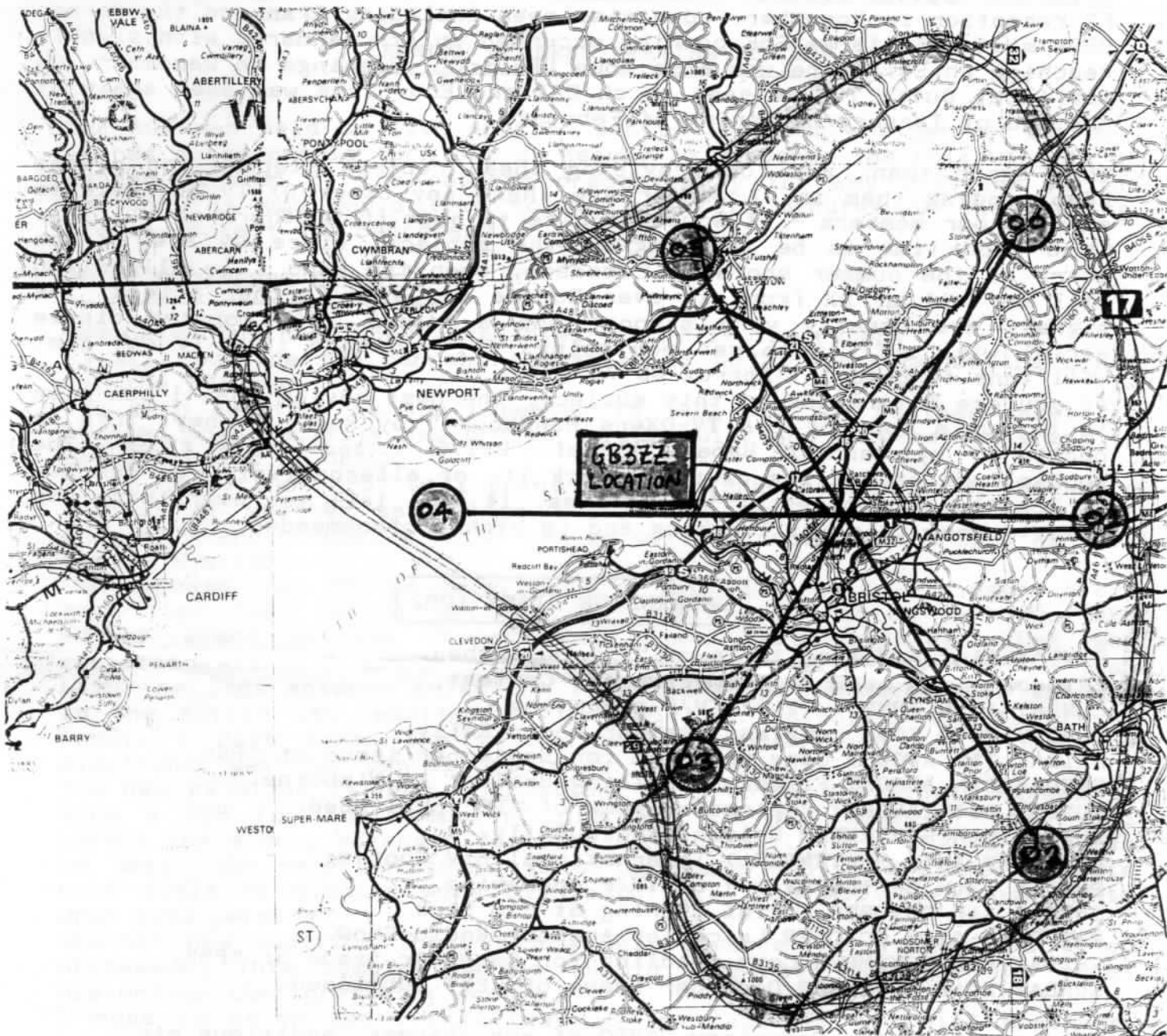


DIMENSIONS
IN mm.

ANTENNA 5 WITH HOLDER

GB3ZZ COVERAGE MAP
TOGETHER WITH HEADINGS FOR THE SIX MINIBEAMS

The following is an approximate coverage map for GB3ZZ, and has been marked up to show the nominal headings of the six minibeams. These are used for receive only, and as regular users will know, may be selected by sending the correct sequence of DTMF tones on the incoming sound sub-carrier.



DX TV NEWS

Once again we are indebted to STG member Stephen Michie G7KXD (many congratulations on the new call that you got last year !) for our news on the DX-TV front. Some of this is a little old, because I had to hold it over from the previous issue. Sorry about that, but here goes now :

At the end of last years season, Stephen writes that 7th & 13th August were very active. August 13th brought TSS Soviet signals up to ch.12S in the middle of the FM radio band. Also noted were TVR Romania on R3 and TV Slovenia showing TRV Lubijana test card and HTV E4 Croatia. The 18th brought Sweden, Iceland and Norway. Reception died down from Mid-August, but September was more active than last year. On 2nd September, USSR and Hungary was seen. On the 4th, Spanish Regionals Barcelona and Valencia and RTP Portugal. On the 18th, Swedish and Estonian signals were observed.

October was very quiet, RAI ONO was seen on the 21st and on the 25th, Hungary on R1, RAI ONO on 1A and OIRT FM radio on 68-77 MHz. In the afternoon there was the first F2 opening of the winter season from 1340 to 1440 with IRI B Iran test card, the picture quality being above average for F2 reception. Stephen recommends monitoring ch. E2 or R1 during the winter for F2 openings.

A further letter from Stephen later in the winter brings news of more F2 reception in November, countries seen including Iran and the former USSR states. A large SpE opening occurred on 4th January, with signals reaching ch.E4. There was also some UHF trop. openings in December. On the 14th, Dutch Tv was seen on ch.E27 and E30. This was seen again at the end of January/beginning of February.

Once again thank you for providing these reports Stephen and please keep sending them in. I wonder are there any other DX-TV enthusiasts amongst our members - it would be nice to hear from others aswell. Now is a good time to be thinking of the subject, since we are at the start of the summer sporadic E season, when the Band I Tv allocation will be full of DX from all over Europe and even further afield. The signals are usually very strong, and a simple loft mounted dipole aerial will suffice to get you going. All you need is a TV set that will tune to Band I (Approx 40-70 MHz).

If you are interested in this subject, the best advice that I can give is to buy a copy of " A TV-DXers Handbook " by Roger Bunney. This is published by Bernard Babani (ref. BP176) and costs £5.95. The booksellers at Rallies usually stock it, or alternatively you can buy it locally at Georges or Waterstones. It will tell you everything you need to know to start TV-DXing and is highly recommended.

SEVERNSIDE DIARY 1992

SUNDAY 31st MAY June issue of "P5" published.
SATURDAY 13th JUNE) Summerfun ATV Contest,
SUNDAY 14th JUNE) G7ATV/P operating.
SUNDAY 28th JUNE Longleat Amateur Radio Rally.
FRIDAY 7th AUGUST Copy deadline for September issue of "P5".
SUNDAY 9th AUGUST Flight Refuelling Hamfest at Wimborne.
SUNDAY 30th AUGUST September issue of "P5" published.
SUNDAY 6th SEPTEMBER Bristol Radio Rally.
SATURDAY 12th SEPTEMBER) International ATV Contest,
SUNDAY 13th SEPTEMBER) G7ATV/P operating.
SUNDAY 4th OCTOBER Social Evening at Elm Park.
SATURDAY 31st OCTOBER Leicester Amateur Radio Show.
FRIDAY 6th NOVEMBER Copy deadline for December issue of "P5".
SUNDAY 29th NOVEMBER December issue of "P5" published.

Please advise the Secretary G8VPG of any changes, additions etc.

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