



*Newsletter of the Severnside Television Group
 Edited by Shaun O'Sullivan G8VPG*

1991 AGM REPORT

Our AGM was held on 9th April. Attendance at 20, representing 25% of our membership of 79 was better than in previous years. The full minutes will be read at next years AGM, but the following is a brief summary of the main business.

STG Chief Engineer G8KUW outlined the improvements made to GB3ZZ in the past year. It is worth listing these, since they represent a significant achievement ; the installation of the VCR, version 2.83 software, the new AZTEX transmitter (although there were currently some teething troubles with this), the new receiver was almost complete and now needed only to be built into a modular case, the 10 GHz beacon which has been used for manned trials, a new 2 m rig in the repeater shack, new TCG patterns and improvements to the TCG sync pulses and finally the replacement of aerial mast guy lines. Problems encountered were limited to the above mentioned teething troubles with the new transmitter, and a power failure caused by the electricity supply cable to the building being severed, which resulted in a 5 hour loss of service from GB3ZZ. Major improvements planned for the next year included the addition of a Meteosat weather satellite facility, including developments of the software to facilitate this.

Secretary G8VPG reported that during the past year, the committee had met on 7 occasions, the Group attended 5 rallies, gave 3 talks and demonstrations, participated in 2 JOTA stations and entered 2 ATV contests. A permanent demonstration of GB3ZZ had been set up at the new Amdat shop, and GW6BWX and GW8AGI had produced a new video film of the repeater. 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. Two new products had been added ; inter-digital filters made by G3JMY and an RGB PAL colour encoder board made by G8KUW. All orders for AZTEX products were now sent direct to G4BVK. Much attention was currently being given to the design and testing of a new aerial product, which it was hoped to launch in the next year. Membership ended the year at 79. Besides these items, the committee had spent time discussing inter-linking to other repeaters, a 10 GHz beacon/repeater at the GB3ZZ site, the weather satellite project, finance and banking matters, our new caravan and the threat from 1.3 GHz packet links.

Treasurer G0AWX introduced the accounts sheet for the past year. She drew attention to the fact that our turnover had doubled, largely due to the very hard work 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.

G0AWX stated that the Groups long standing banking arrangements with Lloyds had just been terminated, as a result of their decision to levy charges of 20 p per transaction. We now enjoyed free banking with TSB.

G0AWX also wished to thank the Auditor G0FGZ for his help in finalising the accounts.

G0AWX then stated that the committee recommended the annual subscription remain at £5.00, which was accepted by all present.

Chairperson G1IXE drew attention to two significant items from the accounts ; the increased subscription income of £435, and the £691 that had been spent on GB3ZZ. She was sorry that G7DRU had chosen not to stand for the committee this year, and thanked him for all his past work.

She asked members that used 70 cm for talkback on GB3ZZ to let others know what was going on, by superimposing the talkback frequency in use on through video, or switching on inter-carrier sound. Many members with only 2 m talkback facilities obviously found this frustrating. She stated that activity on GB3ZZ was continuing to increase and hoped for a further year of growth for the Group.

In Any Other Business G7DRU asked if attempts had been made to establish relations with the Bath repeater GB3UT team, which was well sited for inter-linking with GB3ZZ. G8VPG replied that the Mendip Repeater Group Technical Manager G8XZD was a good friend, and they kept in touch at intervals through the year. However GB3UT needed a bigger user base, and much more support and development from MRG, which with its 4 other repeaters to support it probably could not afford to give. G4BVK mentioned that he had considered a sub-repeater site on the Mendips. GW6BWX stated that there was much interest in ATV in his locality, but due to the terrain, local sub-repeaters were needed. Trials from his QTH had shown some promise. G8VPG stated that the committees interest was currently directed towards the North, ie the Midlands.

G0FDD asked if an audio test tone could be added to the repeater, to help align inter-carrier sound receivers. GW6BWX replied that this idea had been considered right back in the first days of GB3ZZ, but that it needed careful control since it could be an annoyance to many viewers. A new tone generator would be needed to produce the necessary pure tone.

G8YMM asked all members to pass on any ideas that they may have for fund raising projects or activities - don't just rely on the committee to do this. Similarly, articles for "P5" were always appreciated by the Editor.

Finally, a reminder of our new committee for 1991/92 ;

Chairperson, Mrs.Viv Green, G1IXE.

Chief Engineer & Vice Chairman, Steve Walsh G8KUW.

Honorary Secretary, Shaun O'Sullivan G8VPG.

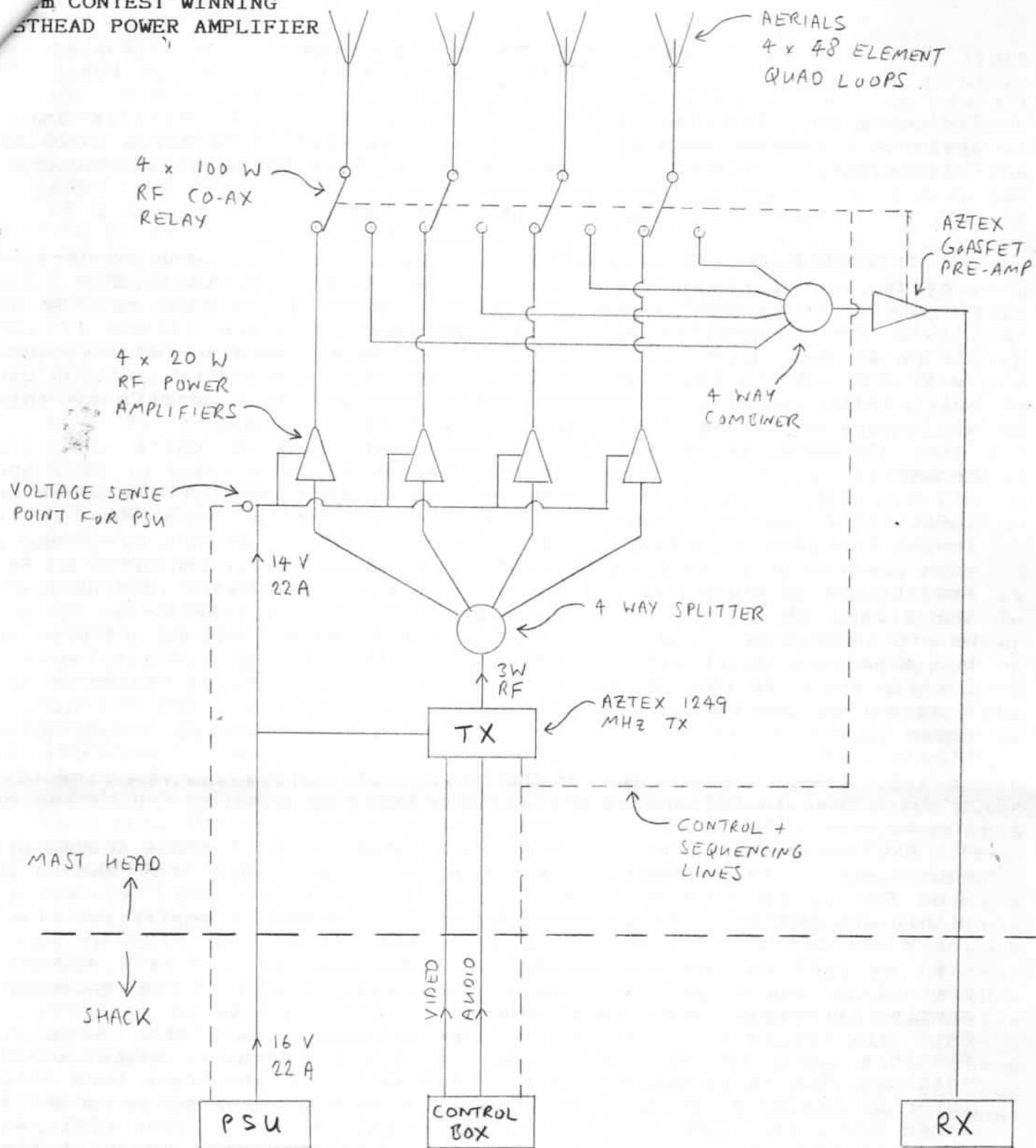
Honorary Treasurer, Mrs.Jean Fletcher G0AWX.

Committee Members, Ivor Green G1IXF, Paul Stevenson G8YMM, Ted Halliday G3JMY, Ken Stevens G4BVK and Brian Kelly GW6BWX.

Honorary Auditor, Dr.Chris Newton, G0FGZ.

PLEASE DON'T FORGET
TO RENEW YOUR ANNUAL MEMBERSHIP PROMPTLY
AND CONTINUE TO BENEFIT FROM
* GB3ZZ, THE MOST ADVANCED REPEATER IN THE UK
* "P5", OUR QUARTERLY NEWSLETTER PACKED WITH NEWS AND TECHNICAL TOPICS
* G7ATV/P, OUR VERY SUCCESSFUL CONTEST TEAM
* REGULAR SOCIAL EVENINGS DURING THE YEAR

23 CM CONTEST WINNING
MASTHEAD POWER AMPLIFIER



Shown above is a schematic of our very successful 23 cm masthead power amplifier, designed and built by Ivor G1IXF. Starting at the top, the four 48 element quad loop yagis, built by Ken G4BVK, feed four RF change over relays. The receive ports feed a 4 way combiner which is connected to an AZTEX GaAsFET pre-amp. A feeder is then taken down to the receiver in the shack.

Each aerial has its own 20 W power amplifier, which are driven by the outputs of a 4 way splitter. This is driven by a masthead located AZTEX transmitter, which has been modified for complete remote control from below. Video and audio are fed up to it from the shack. Because of the heavy current drawn on transmit, loss of output due to volt drop in the power cable is compensated for by the PSU sensing its control voltage at the load, ie up the mast.

A GUIDE TO 23 cm TELEVISION
by Shaun O'Sullivan G8VPG.

Following on from the September 1990 edition of "P5", this issue includes a further chapter from the serialisation of "A Guide to 23 cm Television", this time taking a detailed look at cable and connectors.

3. CABLE AND CONNECTORS

3.1 INTRODUCTION - RF cable together with its associated connectors provide the vital link between the aerial and your equipment. Its purpose is to convey signals in either direction, whilst causing as little loss (attenuation) as possible. Therefore, since it was stated in the chapter about aerials that the standard aerial impedance is 50 Ohms, it is important that the cable and connectors that you use match this impedance. If they do not, a mismatch will result, and this will cause additional losses and a poorer SWR on transmit.

Other factors of some importance in choosing a cable are its mechanical strength and ruggedness, flexibility (or lack of it) and its diameter. Finally of course, for most people cost will also be an influencing factor. However, it must be borne in mind that cable losses increase with increasing frequency, and at 23 cm they assume a much greater proportion than on the lower bands of 70 cm and 2 m. For example, it is quite easy to build up total feeder cable loss of 3 dB. The effect of this will be to absorb 50% of the transmitter output power, liberating it as waste heat from the cable. This is not what we buy expensive amplifiers to achieve!. Similarly on receive, such a loss is added to the overall noise figure of the receive system. Hence a sensitive pre-amp or receiver with a GaAsFET front end yielding a noise figure of say 1 dB, will be delivering an overall system noise figure of 4 dB, a very serious degradation. The answer in this case is to either move the pre-amp to the mast head, before the run of cable, or to invest in better cable. Lets now consider some of the cables on the market.

3.2 UR67 or RG213 - Whatever the type number, both of these cables are equivalent. This is really the minimum quality cable that should be used for 23 cm. The only exception to this is for very short runs within equipment, or between say a transmitter and an amplifier, where the flexibility and convenience of a smaller 5.5 mm diameter cable such as UR43 may be useful. An alternative such as 0.141" diameter semi-rigid cable could be used, although this and the necessary special connectors are more expensive.

Returning to UR67, this is 10.3 mm diameter cable that is quite flexible, and is thus suitable for making turning loops around rotators. The cable has a plastic oversheath, beneath which is a thick layer of braiding. A thick polythene dielectric reveals a substantial inner conductor made up of 7 stiff strands of wire. Many different manufacturers produce cable to this specification, two of the better known amongst which are Permanoid and Kabelmetal.

It is a very popular cable in the Amateur Radio fraternity, and is widely used on the 2 m and 70 cm bands. However, at 23 cm it produces a loss of 7.3 dB per 25 m length. This is rather high, and in view of the better performance alternatives now available for very little extra cost, I would not recommend its use. Being 10.3 mm in diameter, standard N plugs were made to fit it. It is also possible to find BNC plugs to fit it directly, although these are rather expensive.

3.3 H100 - This cable is produced by the Dutch manufacturer Popes, and is available from the well known Amateur Radio cable supplier W.H. Westlake. It has a slightly smaller diameter than UR67, 9.7 mm. This is one of its major failings, since standard N connectors are not a very good fit, and special connectors to suit it do not seem to be

generally available. Beneath its plastic oversheath is a very light braid covering a layer of copper foil. Beneath this is a semi-airspaced dielectric covering a solid centre conductor. The overall construction is significantly less flexible than UR67, and the copper foil screening is liable to fracture if flexed excessively. Hence it is definitely not recommended for turning loops around rotators. The good news is that the loss is much less than UR67, at about 4.2 dB per 25 m and it costs only about 20 p per metre more. However, in view of the difficulty of fitting connectors to it, and the availability of an alternative, it is once again not particularly recommended.

3.4 WESTFLEX 103 - This cable is a special once again available from W.H. Westlake. As its name implies, it has a diameter of 10.3 mm, thus fitting standard N connectors with the exception that the inner conductor is slightly larger than UR67. This can be overcome by filing it down a little, or by using the special connectors which are now available from Westlakes (price about £5.00 each). Westflex 103 is also quite flexible. The loss characteristics are very similar to H100. It is thus a combination of the better qualities of UR67 and H100, and the cost is about the same as H100. Hence it is the first cable which I would recommend for 23 cm use.

3.5 ANDREWS HELIAX - Andrews Heliac is manufactured by the American Company Andrews, who produce a wide range of RF equipment for professional use. Being a professional product, the new cost is probably beyond that which most amateurs can afford. However, it is the practice of many professional radio equipment installers to replace lengths of cable on a strict time basis, regardless of whether it is faulty or not. These secondhand lengths of cable often appear on the market at rallies for a fraction of the new cost, and are a good buy. However, do not buy any such lengths if they exhibit dents in the sheath, serious mechanical damage or puncturing, or any sign of internal dampness.

Now lets consider the cable itself. Generally, Heliac cables are constructed from a corrugated solid copper sheath with a plastic outer covering. The dielectric is composed of a rigid white foam, and this covers a solid inner conductor. It is available in a variety of sizes, the most common of which are LDF2-50 (3/8" nominal, 11 mm diameter) and LDF4-50 (1/2" nominal, 16 mm diameter). Special Andrews connectors are needed for all types, and be warned, they are not cheap !. However, these are often available "surplus" at rallies for much less than the new cost. This cable is not very flexible, a fact recognised by Andrews who also produce flexible Heliac cables if this property is needed. However, I have never seen these flexible Heliac cables available at rallies. The RF performance is excellent, LDF2-50 producing a loss of 3.3 dB per 25 m, LDF4-50 2.2 dB per 25 m. These cables are thus highly recommended for fixed runs, provided you can obtain some at a reasonable cost. Brand new, the cost may be somewhat prohibitive for most Amateur budgets.

3.6 JAPANESE FB SERIES CABLES - These cables with their distinctive white oversheath are imported from Japan by the Portsmouth based firm of Nevada. The construction comprises the aforementioned white plastic oversheath, beneath which is a thick layer of braiding. This covers a foil screen and a rigid white foam dielectric. The inner conductor is a solid core. The cable is available in 3 sizes ; 5D-FB is 8.1 mm in diameter, 8D-FB is 11.1 mm in diameter and 10D-FB is 13 mm in diameter. It is just possible to use standard N connectors with 8D, but the other sizes require special connectors which are about twice the cost of standard types. 8D produces a loss of 4.2 dB per 25 m, whilst the best type 10D is 3.4 dB per 25 m. Hence 8D has similar loss characteristics to H100, but far superior construction. It is just about flexible enough to be used in a turning loop around a rotator. It costs about 50% more than H100 or Westflex 103.

10D offers very similar performance to LDF2-50 Heliax, at about twice the cost of H100. Even though the essential special N connectors for it cost about twice as much as standard types, it is a high performance cable that is affordable on an Amateur budget. This largest size is best suited to fixed runs, since it is starting to become a little inflexible. In conclusion, these Japanese cables are highly recommended.

Finally in this chapter, let's consider the all important connectors which are used to terminate the cable runs.

3.7 UHF SERIES CONNECTORS - Their name belies their function, since these well known connectors are far from suitable for UHF use, let alone the lower microwave bands. The plug is known as the PL259, the corresponding socket as the SO239. They were developed before the last war for video connections in radar sets, and are still very commonly used on video monitors and cameras. This is about the only application for which they are suitable, despite their widespread appearance as aerial sockets of HF and 2 m Amateur Radio rigs. Because they are not a constant impedance device, they perform poorly at VHF frequencies and above. PL259's are available in a wide variety of styles, to suit both 10.3 and 5.5 mm diameter cables, although none of the types that I have seen are waterproof.

3.8 N CONNECTORS - N Connectors are the main type used for 23 cm equipment. The N stands for Navy, an indication of for whom they were originally developed. They are mostly used for 10.3 mm diameter cables, although versions are available for 5.5 mm diameter cables. There are also special types for use with Heliax, Westflex 103 and the Japanese FB series cables. They feature a threaded locking collar, and internal gaskets mean that in theory the joint between cable and plug and plug and socket are waterproof. That said, I would not trust only the internal gaskets for a connector located permanently outside, and would recommend either several layers of PVC tape topped off with a coat of varnish, or a tightly bound layer of self-amalgamating tape. These plugs can be used up to several GHz and are ideally suited for 23 cm use. However, they are available in two impedances, 50 and 75 Ohms, both of which are mechanically and electrically mutually incompatible. The 75 Ohm type can usually be recognised if it is not marked, by its notably thinner centre pin. Beware of cheap plugs at rallies, they are often the much less useful 75 Ohm type. If you cannot establish the impedance for certain, I would leave well alone since a 75 Ohm plug is useless in a 50 Ohm system. Although these plugs are made by a wide variety of companies, brands which I have found reliable include Greenpar, Transradio, Amphenol and Kings.

I prefer the type with a captive centre pin. The centre pin is mechanically locked between two pieces of dielectric, and cannot move within the body of the plug. In the non-captive variety, the centre pin is held in position only by the inner conductor of the cable. Whilst this is more satisfactory with 10.3 mm diameter cables and their sturdy inner conductors than it is with BNC types, over a period of time the centre pin can be forced out of position, resulting in a less than perfect connection with the plug. Good N plugs cost about 4 times as much as a PL259.

3.9 BNC CONNECTORS - The Bayonet Navy Connector is a smaller constant impedance device, usually used with 5.5 mm diameter cables. Versions are available for use with 10.3 mm diameter cables, as well as smaller diameter cables. The plug features a bayonet locking collar, although there is also a TNC with a threaded locking collar. Internal gaskets make the joint between cable and plug waterproof, but the joint between plug and socket is not. Once again there are the two impedances of 50 and 75 Ohms available, and the same comments as for N connectors above apply.

The RF performance of these plugs is inferior to that of N types, but

they can be used at 23 cm for short links within or between adjacent items of equipment. The point about captive centre pins is very important, since I have found the non-captive types very difficult to assemble and very poor in service. A good BNC plug is about twice the cost of a PL259.

Whilst there are a number of other RF connectors commonly used in professional circles, most Amateur 23 cm stations are restricted to the N and BNC types.

BOOK NEWS

It is a feature of ATV that there is a greater proportion of active experimenters and builders of equipment than exist in Amateur Radio as a whole. As such, I am sure that many of you will be interested in some very good new books that have recently been published.

THE ARRL UHF/MICROWAVE EXPERIMENTERS MANUAL is a 1990 American book available from Practical Wireless for £13.50 plus postage. Within its 446 pages is a wealth of useful information on UHF and microwave techniques. The book starts with a history of microwave development and an important chapter on RF safety. Further chapters include information on microwave construction techniques and the components used. A particularly good chapter is devoted to the use of MMIC's, which I am sure are going to have a lot of applications in ATV and 23 cm equipment. There are several chapters about aerials, including optimised designs which could be scaled for other bands.

Overall I think that the book is good value and a useful reference book for the bookshelf. Please note though, it doesn't have many fully developed designs for complete pieces of equipment.

The RSGB have just published **VOLUME TWO OF THE MICROWAVE HANDBOOK, SUBTITLED CONSTRUCTION AND TESTING**. (£13.40 inc. postage to members). The book follows a similar pattern to the ARRL volume, with chapters on construction techniques and RF safety. However, there are more fully developed designs, including the well known 1152 MHz source and amplifiers which have appeared in Radcom over the past few years. A further chapter on repeaters and beacons is useful for anyone considering building one. Other chapter titles include Filters, Test Equipment and a useful reference data section. It is noticeable that this volume is significantly cheaper than Volume I was when it was first published, and I think it is good value. Volume I has just been reprinted, but if you are quick you might catch the last few of the first print at only £9.40.

Finally, the RSGB have just published the **SPACE RADIO HANDBOOK** (£11.34 inc. postage to members). This book is really interesting, being a complete beginners guide to all aspects of space experimenting. It includes how to work Amateur Radio satellites, receiving weather satellites, working via meteor showers and the moon, and receiving downlinks from the space shuttle, Mir etc. There are also chapters on the physics of space and orbits, and how to calculate when the various satellites can be heard, aswell as amateur radio astronomy. As one who is no great expert on satellite matters, I found this book quite fascinating and recommend it highly. It is nice to see the RSGB moving away from their previous tendency of not publishing anything which is not strictly on the amateur bands. Many Radio Amateurs have a wide ranging interest in radio matters, and other organisations have responded by publishing information about these, which has rather left the RSGB behind over the past few years. It is good to see them catching up now.

NEWSBRIEFS

* **LONGLEAT RALLY, 30th JUNE** : This years Longleat Rally will take place on Sunday 30th June. Once again STG will have a stand in the main Bring & Buy tent, and we will also be representing the BATC. Longleat is outside of GB3ZZ's coverage area, so we cannot stage a live demonstration as we do at the Bristol Rally, but nonetheless we will have an interesting display for all ATV enthusiasts. STG products will be available for purchase.

Most of the committee will be available at sometime during the day on the stand, so I hope you will all come along to say hello. If you have some spare time yourself, you might volunteer to keep an eye on the stand for a while, and allow the committee to see the Rally !.

* **COACH TO LONDON AR SHOW** : Our first coach trip to the London AR Show was judged to have been a success by all who came. The number on the coach was a little disappointing, but there was enough to cover the costs, and make a small surplus for group funds. The Show was quite good, being almost the size of Leicester, although not quite capturing the same atmosphere. It was held on the weekend of the March ATV contest, and the weather was such that we were all very glad to be indoors in London !. I suspect that the committee will repeat the event next year.

* **ATV CONTEST, 8-9th JUNE** : STG will be entering the next ATV contest on 8-9th June. For the first time, we hope to be using our new caravan as the shack. We will be at our usual site on the Mendips, and the 60' tower has been booked. As always, we would be grateful for help with setting up the station (Friday evening/Saturday morning) and in dismantling it (Sunday afternoon). Of course, you will be very welcome to view the station in operation, Sunday morning usually being the best time, since we have worked most of the regular stations by then. Don't forget to work us yourself, on both 70 and 23 cm if possible !. The callsign to look for is G7ATV/P.

* **WEATHER SATELLITE PROJECT** : Progress on our latest project, the addition of a facility to view Meteosat weather satellite images on GB3ZZ is progressing well. We were held up for nearly 2 months because Cirkit were out of stock of the 137.5 MHz receiver which we use as one stage in the down-conversion chain. We now have this, and once it is boxed up, the only remaining work will be to buy the 1691 MHz aerial and downconverter. This will be a factory assembled module, and once it arrives, will simply need installation and alignment of the aerial. Brian GW6BWX has modified the software to provide the necessary hang time (currently 2 minutes) to view the picture. This could be changed subject to experience in use.

* **AMDAT SHOP NOW OPEN** : Members in Bristol will probably know that Amdat have now opened their shop at 4, Northville Road, Filton. It is open 6 days a week. Besides the full range of Icom equipment, they sell a variety of scanners and receivers by other manufacturers. They are specialists in Packet Radio, with many TNC's, interfaces etc on display. There are also computers and amateur radio software, books and all the popular magazines, and aerials. A new line is the popular Tonna range, complete with ATV special versions. On a more mundane level, there is a wide variety of plugs and connectors, cable, accessories and small components. Well worth a visit !.

* **SECOND ASTRA SATELLITE NOW OPERATIONAL** : Those of you with satellite TV equipment may have noticed that the second ASTRA satellite recently became operational. It is in a very similar orbital position to first ASTRA satellite, and hence it should not be necessary for people with fixed position dishes to move them. The 16 channels seem slightly further up the band, and at the time of writing, many contained just testcards. However, some European channels have been seen aswell.

Video Basics Part 1

Vidicons

This is the first in a short series of articles for P5 dealing with some basic topics of interest to Amateur Television enthusiasts.

This part explains the theory of an elderly but still popular device for producing TV pictures, the **VIDICON**.

The device is a thermionic (emitting electrons by heat) tube. The **anode**, or positive electrode is a photo-sensitive layer that has the property of conducting electrons in the presence of light. The light is focussed on the anode, or **target**, by a lens mounted in front of the camera. A common material used in the target is selenium. The target is scanned from behind by an electron beam, when the beam strikes a portion of selenium that is illuminated, current flows. As the current flows from the electron gun, through the target and down the target load resistor, a voltage is developed across the resistor. This voltage is amplified and becomes the video signal.

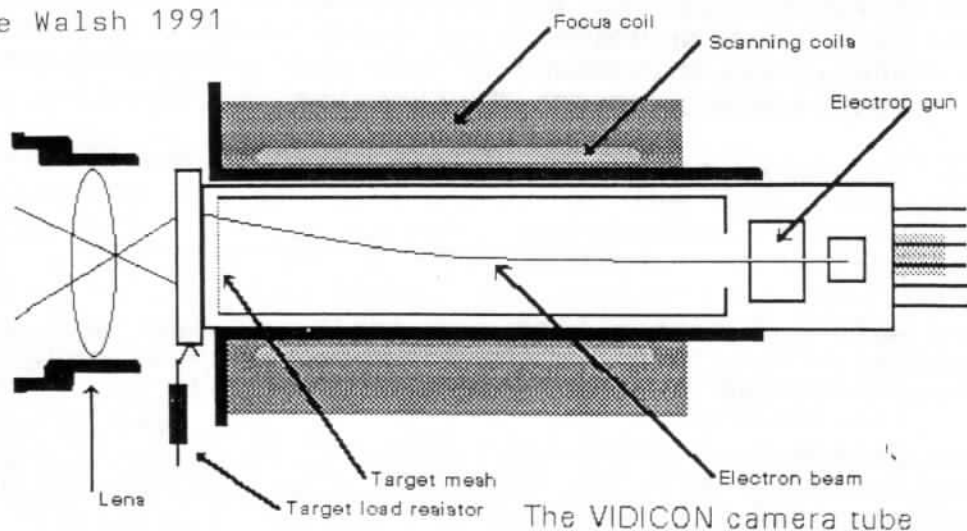
The electron gun is similar in design to the electron gun found in the **CRT**. The gun is a conventional design of a heated **cathode** and a grid. The main difference is that the electron flow is not modulated in the vidicon gun as it is in the **CRT**. The electron beam is magnetically scanned and focussed by varying current through coils mounted around the vidicon.

Mounted just behind the target, is the **mesh**. This serves to attract the electrons towards the target.

Many cameras found on the surplus market are vidicon cameras, unfortunately they probably have images or scars burned onto the target due to prolonged use. However new vidicons are still available and reasonable results can be obtained from aged cameras merely by replacing the vidicon tube. Two sizes of vidicons are commonly found, the 1" and $\frac{2}{3}$ ". Mechanically these are very simple to change but care must be taken when adjusting the Target volts and beam current to ensure the best results.

Colour vidicons (e.g. Saticons) are also to be found on the surplus market. These devices are similar in principle to monochrome vidicons except the target. The colour target usually has stripes of different colour-sensitive areas deposited onto the inside of the faceplate glass. These are scanned in the normal manner but colour information is separated out by sampling the target signal synchronised to the frequency at which each of the colour stripes are scanned. A common problem found on the surplus camera is a green tint over the image, this surprisingly, is due to poor electrical focusing and not a colour balance adjustment. The reason for this odd symptom is that the colour information cannot be properly extracted from a scan that is not in focus because of the way the sampling system works, as outlined above.

Steve Walsh 1991



HELP REQUIRED !

THE GROUP ALWAYS NEEDS AND APPRECIATES THE HELP OF MEMBERS.
CURRENTLY, WE NEED YOUR ASSISTANCE FOR THE FOLLOWING :

PLEASE DO NOT TRANSMIT BLANK CARRIERS THROUGH GB3ZZ
IT IS BORING FOR THE VIEWERS
AND MAKES OUR ENGINEERING TEAM THINK THE COMPUTER HAS CRASHED

PLEASE DO NOT USE DTMF CODES OTHER THAN THOSE PUBLISHED
CERTAIN HIDDEN CODES CAN CAUSE PROBLEMS
WHICH REQUIRE TIME AND A SITE VISIT TO CORRECT

ARTICLES AND NEWS ITEMS FOR "P5"

RECRUITING NEW MEMBERS

ASSISTING THE BRISTOL RSGB GROUP AT LONGLEAT
WHO DONATE OUR STAND TO US FREE OF CHARGE !

CONTACTING THE EDITOR

When you telephone me, please do not forget that although my postal address is a Bristol one, my telephone number is a Bath one !. The correct local code from Bristol is 92, and for those further afield, the STD code is 0225. There is a Bristol 873 098 who are fed up with getting calls intended for me !.

Also, for those of you with Packet Radio equipment, you can now leave me a message at GB7IMB on 144.650 MHz. I have a personal mailbox (G8VPG-2), but since I don't leave the TNC on a great deal, it is better to leave my mail at IMB.

SEVERNSIDE DIARY 1991

SATURDAY 8th JUNE)
SUNDAY 9th JUNE) ATV Contest
SUNDAY 30th JUNE STG stand at Longleat Rally.
FRIDAY 5th JULY STG talk at Hereford ARS.
FRIDAY 9th AUGUST Print deadline for September issue of "P5".
SUNDAY 1st SEPTEMBER "P5" September issue published.
SATURDAY 7th SEPTEMBER)
SUNDAY 8th SEPTEMBER) International ATV Contest.
SUNDAY 15th SEPTEMBER STG stand at Bristol Rally.
SUNDAY 6th OCTOBER STG Social Evening.
SATURDAY 26th OCTOBER STG at Leicester Amateur Radio Show.
FRIDAY 8th NOVEMBER Print deadline for December issue of "P5".
SUNDAY 1st DECEMBER "P5" December issue published.
SUNDAY 8th DECEMBER STG Christmas Party.

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