

P5

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

FROM OUR NEW CHAIRPERSON . . .

It was quite an unexpected honour to be asked to become Chairman (or Chairperson !) of the Severnside Television Group.

But first I will pass on my sincere thanks for all the time and effort the officers and committee have put in during the last year.

The repeater continues to work very well, the new logic has been installed and further improvements are in hand to improve reception for the fringe areas, giving a test tone for adjusting your RX audio, teletext type pages for information on group events, socials etc.

The next social evening is Sunday 28th May at 7.45 pm.

Satellite receivers are still being requested by members. Supplies are very limited at the moment, when the situation improves members on the waiting list will be informed.

To the many members who helped on the stand at the BATC Coventry, a big thank you. It was a very good day for the group, we sold out of all the stock which we had for sale.

A new stock of aerials and pre-amps will be available at the Longleat Rally (Sunday 25th June) and also on display will be a film recently made by members of the group.

It would be very much appreciated if members can return their membership forms to me as soon as possible, so that work can progress on improving the repeater for everyones benefit. Thank you to those of you that have already done so, please pass on a spare membership form to somebody else.

See you all soon ! . . . Viv G1IXE.

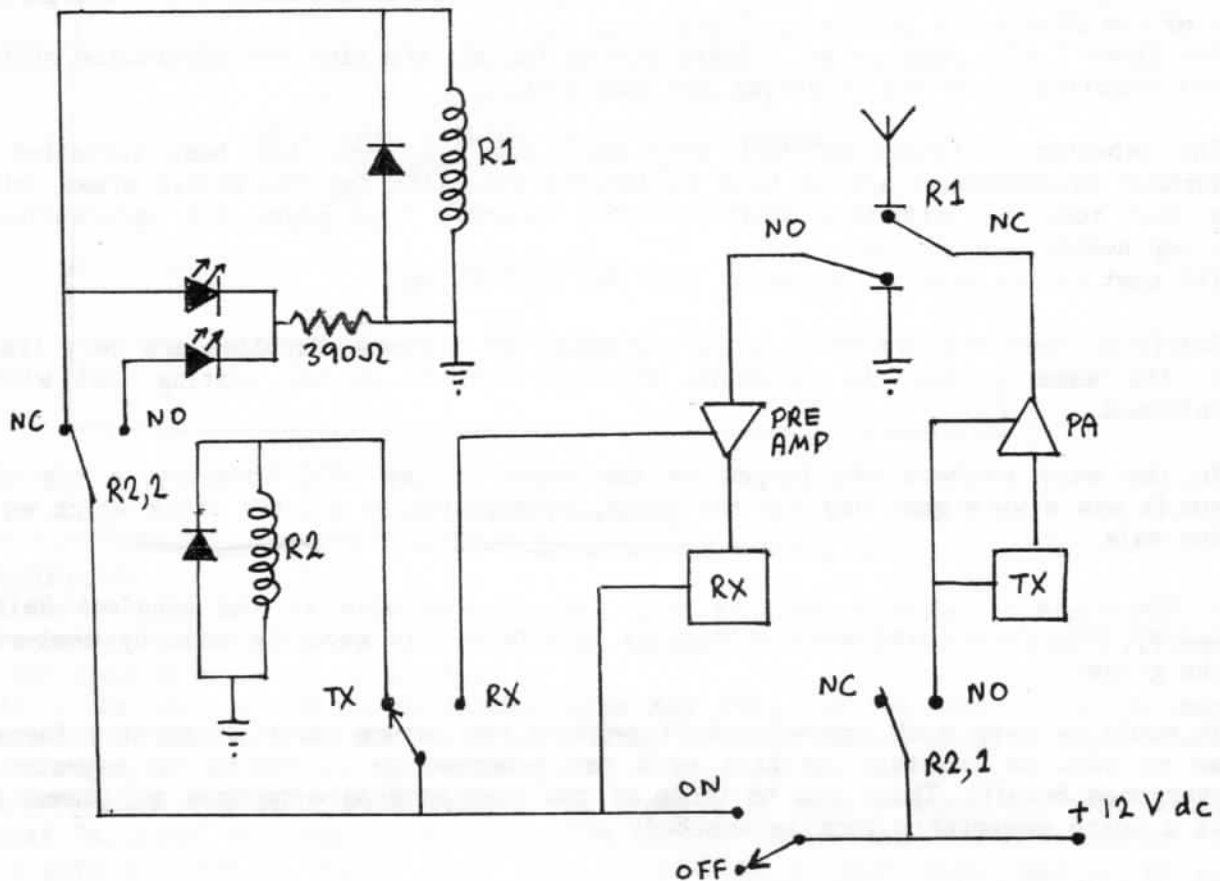
GB3ZZ TECHNICAL REPORT.

As most of you will have observed, the new BBC microcomputer based logic is now in use on GB3ZZ. At present, the software is fairly basic, but the first major update will provide a massive expansion of facilities. This is due in the near future, and will be the subject of a separate article written by Bryan GW6BWX, who along with Steve G8KUU is the only person who understands it !.

Ivor and Ken have been carrying out trials with new receive aerials. In place of an omnidirectional Alford slot, a small low gain yagi is being used. Despite being lower in height, not having the GaAsFET pre-amp in line and using fairly ordinary cable, these have exhibited similar sensitivity to the Alford slot. The big advantage is that they almost eliminate the ghosting and multi-reflections which plague the Alford slots on some signals. We are now contemplating installing 4 or 5 of these on the mast, which in conjunction with the Alford slot, would be electronically switched by the new logic, acting under commands from the user sent by DTMF tone encoders. A suitable 6 way electrically operated co-axial switch has been obtained, and further trials are planned. At present, the alternative aerial is switched in by a time clock for about an hour each evening. For further information on these trials, which are being changed quite often, speak to Ivor or Ken on air.

AERIAL CHANGE OVER SYSTEM FOR TV TRANSCEIVERS
by Shaun O'Sullivan G8VPG.

The circuit given below may prove useful in turning a separate TV receiver and transmitter into a combined transceiver unit. Such a system is very useful for repeater use, where short QSO's and rapid automatic change over is a definite advantage.



Relay R1 is an RF co-axial change over device, which unfortunately is not cheap but is essential if unacceptable losses are to be avoided. Expect to pay about £50 brand new. Be careful to choose one that grounds the input port that is not routed through to the output port. This greatly improves the isolation characteristics between the two input ports. The relay is connected so that the receive input is grounded when not in use (for lightning/static protection) and in the event of R1's coil going open circuit, the transmitter cannot be run into a dead short.

The heavy current path to the transmitter and PA is routed through relay R2, so make sure that its contacts are adequately rated. R2 introduces a slight delay during change over, thus avoiding simultaneous operation of a sensitive GaAsFET pre-amp and a high output PA. The receiver is left powered, since there is usually sufficient leakage to enable you to monitor the outgoing signal.

One last point - don't forget to fit reverse biased diodes across the relay coils, to suppress any nasty back EMF's when they are switched off.

CONTEST NEWS.

Until March 1989, I think that the Group had led a somewhat charmed life during contests - we had never really had bad weather or rain during the contest weekend. As some of you know from personal experience, the charm ended in March.

On the Wednesday before the contest, we arranged for the tower to be towed to the site (Once again - thank you Tony G6WLX and the Gordano ARG). It was pitch dark and very wet indeed at 8.00 in the evening. Viv & Ivor arrived first and went to inspect the contest site over the field. On the way back, their van became firmly stuck in the mud. In the pouring rain, wooden pallets were inserted under the vehicle and it was slowly jacked out of the mud, a process which took nearly an hour. Needless to say, Viv & Ivor were soaked right through !.

Tony arrived with the tower, thankfully with a 4 wheel drive vehicle. Viv and myself paid a visit to the farmer, picking our way across a dark farm yard with torch batteries rapidly fading. Judging by the smell, I don't think it was mud that we were 6 inches deep in !. The farmer was most amused, having watched all the proceedings from the comfort of the farmhouse. Finally, with the tower positioned, we retired to the pub for beer and sandwiches and a warm up.

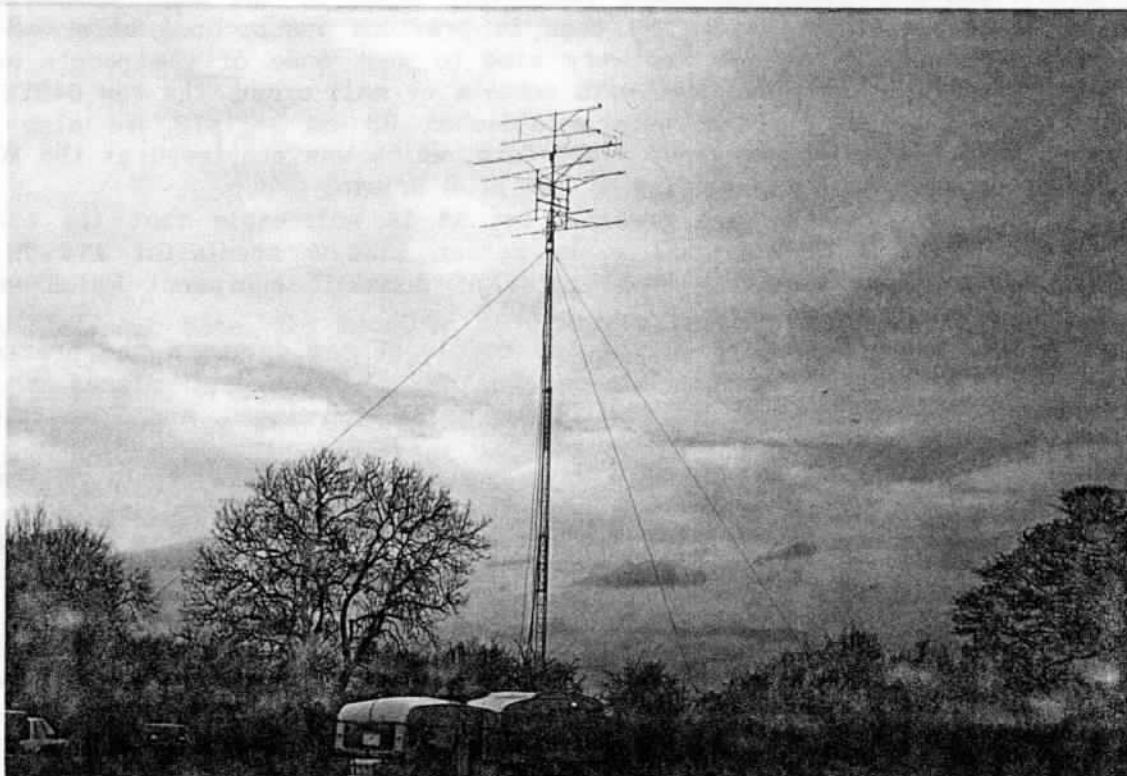
Luckily, the Saturday of the contest was a much better day. It was dry and the sun even showed itself in the afternoon. However it was very wet underfoot, and everyone's cars had to be pushed out of the mud at some point in the day. We made an early start and everyone had arrived on site by 10.00 am. As usual, we had the North Bristol ARC caravan for the shack (Thank you once again NBARC) and for the first time, we used our new Group caravan as Kitchen and Mess Room. This worked out very well, giving Viv much more room to cook the fry ups !!. The gas fire kept us nice and warm until the gas ran out just before the end of the contest.

Also in use for the first time were our new 70 cm aerials - 4 stacked and bayed 21 ele TV special Tonnas (Thank you to Random Electronics for the special price deal on these). Ivor and Ken had worked hard making a mounting frame and all the phasing harnesses, and they all went together very easily. The performance was very good, although it must be stated that conditions were flat as a pancake.

The station was on air before the start time and we prepared ourselves for the rush. However, it was fairly quiet, perhaps because of the weather and propagation conditions. None the less, we worked 34 stations on 70 cm, gaining 4496 points (best DX 197 km), which made us second in the UK, our best 70 cm placing yet.

On 23 cm, we gained 975 points, which once more made us first in the UK. We were first in the UK on 23 cm in the International in September 1988, and have since heard that we were third in Europe.

The next contest is on 10/11th June, so please listen out for G7ATV/P and give us some points.



AGM REPORT.

The group held its AGM on 11th April. Despite the pleasant social that took place after, attendance was a little disappointing. Never mind, what we lacked in quantity we made up for with quality !.

The AGM marked the retirement of Roger G4ZQF, as our founding Chairman. Unfortunately, Roger was abroad on business and was not able to hear all the various eulogies made about him. The meeting was expertly chaired by the retiring Chief Engineer & Vice Chairman Ted G3JMY. Also retiring at the AGM were Treasurer Richard G4NYK and Bryan G4YQR. To all of these, we say a big thank you for all your hard work, I know that most of them will continue to work for the group in other roles.

All these retirements mean that we have some new blood on the committee. As you will have already seen, our new Chairperson is Viv G1IXE, who is very well known to all members, and many other ATVers around the country through her contest work and various magazine appearances. Assisting her as Chief Engineer & Vice Chairman is Ken Stevens G4BVK, another long established ATV station. The new Treasurer is Jean GOAWX. I wonder how many other clubs and groups can boast of so many YL committee members, especially in such important officers positions ?. Your Editor drew the short straw for secretary again, never mind you'll have another chance to get rid of me next April !.

New committee member Alan Tink G7DRU joins the other members of the team, Ivor G1IXF, Steve G8KUW, Bryan GW6BWX and Phil G1HIA. Finally, although Ted G3JMY has retired as a formally elected officer, we just couldn't do without him altogether, so he has been co-opted onto the committee. We will continue to benefit from his experience of GB3ZZ which goes back to the groups very earliest days.

BATC CONVENTION, COVENTRY.

The annual BATC Convention was held at a new venue on 30th April, the Post House Hotel at Coventry. A large exhibition suite provided inside accomodation for the whole event. The STG stand was most favourably sited in the main concourse, and benefitted from far more passers by than in previous years. Once more, we had a very good days trading, and it was very nice to meet some of the people we have worked in contests or have supplied with aerials by mail order. The new G4BVK group pre-amps sold out, as did our well established 23 cm aerials. We also ran a continuous showing of the new group video film, which was previewed at the AGM and had its premiere at the April meeting of the RSGB Bristol Group.

Most of the usual traders were present, but it is noticeable that the event is becoming more like a conventional rally rather than a specialist ATV / UHF / microwave event. There were the usual piles of domestic equipment which seem to appear at all rallies these days.

The new venue was very crowded during the middle of the day, and the pressure on the car park spaces was quite intense. The Hotel management missed a golden opportunity to make a fortune. The bar in our suite was closed, and I am told that food was difficult to obtain.

Never the less, the TV Convention is always one of my favourite events of the year, and this year was no different. It was good to see all the old familiar faces again, and our thanks must go to the BATC for organising it once more. One last point, if you didn't buy a copy of the new ATV Compendium, send for one now since it is well worth having.

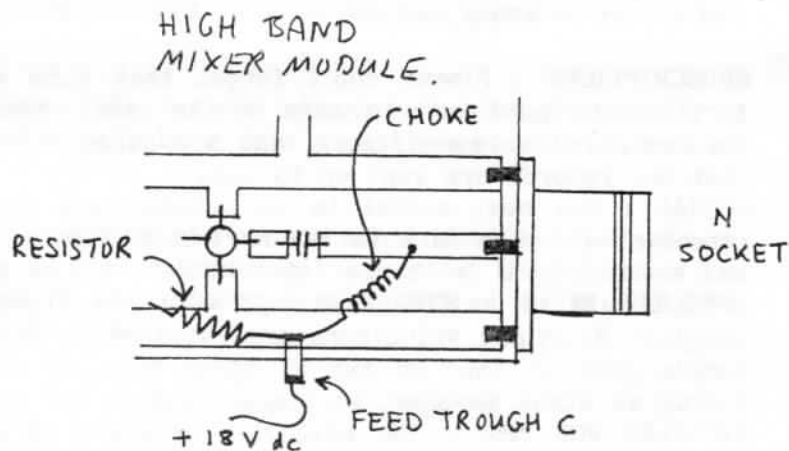
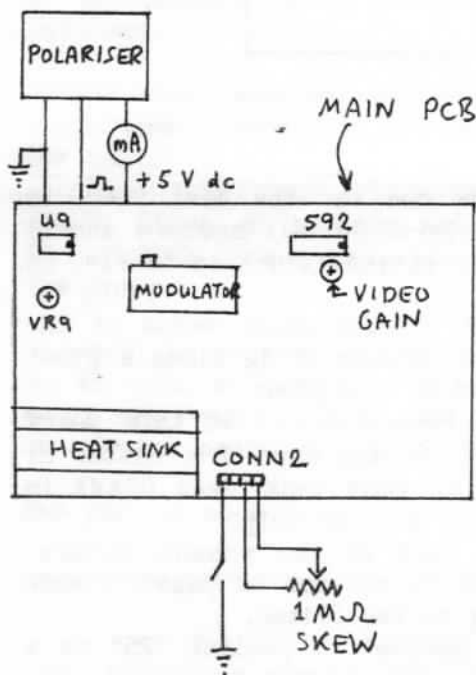
FURTHER NOTES ON THE CONNEXIONS SATELLITE RECEIVER
by Shaun O'Sullivan G8VPG.

Users of Group supplied Connexions satellite receivers may be interested in the following further points, learned by experience of use.

Some receivers do not have a front panel control for a polariser. A polariser is an electro-mechanical device that shifts the polarity of incoming satellite signals by 90 degrees. However, even if the front panel does not have the controls, the main circuit board usually has all the necessary circuitry. Look at the rear left hand side of the board for "U9", a 555 timer/oscillator chip and adjustment pot VR9.

Now look at the right hand side of the big heat sink for "CONN2", a four way connector. All you need to do is connect a 1 M Ohm pot and a SPST switch as shown. There is room next to the S meter, if the existing switches are temporarily moved. The switch changes from vertical to horizontal polarisation, whilst the pot provides fine adjustment in either position (skew).

Setting up the polariser is easy, but there are some important checks which you should carry out. It is simpler to adjust the polariser on the bench, connected to the receiver by a short length of 3 core cable. The rotation can be visually checked and you can hear when the motor is operating. Set the pot to minimum, and adjust VR9 to give the required 90 degrees of rotation. Connect a milliampmeter in line with the 5 V feed to the polariser. The quiescent current is just a few milliamps, but when the motor is on, it will draw up to about 100 mA. It is very important that neither VR9 or the skew control are set such that the motor remains energised at the end of its travel, or else premature failure will result. If you have a 'scope available, you can monitor the control pulse line, which operates in a similar manner to a proportional pulse width radio control system used in model planes etc..



On a different note, the receiver may benefit from adjustment to the video output level. To reach this control, carefully remove the high band mixer, mounted over the right hand side of the main board. (2 screws on back panel and 4 screws around N socket). Look for the 592 video amplifier chip, and immediately below it is a trimmer pot. Adjust this for best results, or if you have a 'scope available, for a video output of 1 V peak to peak into 75 Ohm termination. You will find that it needs to be near maximum for GB3ZZ, but can be wound back for satellite use, which have higher deviation.

Finally, a detailed sketch showing the location of the 18 V dc feed from the high band mixer to the LNB. Disconnect the choke for GB3ZZ use, but reconnect it for satellite use. Always leave the resistor connected to the feed through capacitor, or else the whole module will loose power. If you have to make this change over frequently, it might be worth while to fit a second feed through capacitor, thus enabling the supply to the choke to be remotely switched by a front panel control.

FOR SALE - MEMBERS ADS.

Wood & Douglas ATV 1 70 cm TV TX - £70.00.
Microwave Modules 70 cm 20 W Linear - £70.00.
Redifusion Telebox Tuner - video & audio outputs - £10.00.
Tandy video enhancer - £20.00.
Video selector - £15.00.

Roger G4ZQF - Tel. 0272 693 240.

Sharp 14" video monitor - 2 inputs - £29.00.
Indesit 12" B&W TV - 4 presets - £30.00.

Shaun G8VPG - Tel. 0225 873 098.

Microwave Modules 70 cm TV TX.
Microwave Modules 70 cm TV Converter.
BNOS 70 cm RF filter.
£140.00 the lot - but will split.

Cliff GOFDD.

NEWS BRIEFS.

SUBSCRIPTIONS : Please don't forget that subs are now due for the next year, to April 1990. There is no change in the rate, which is only £5.00. All members should have received a renewal form, and are asked to complete it and return it to Viv, so that our records are kept up to date.

SOCIAL : The next social is on Sunday 28th May 1989, at the usual venue of the repeater site, Elm Park Parish Pavillion, Filton, Bristol. Please bring along a guest and something to drink - a light buffet will be provided by the group.

LONGLEAT RALLY - SUNDAY 25th JUNE : The Group will have a stand at this years Longleat Rally, and volunteers are required to man it during the day. If a number of people give an hour or two of their time, it will be an easy task. Jean GOAWX is acting as stand manager, so please contact her if you are able to help.

ARTICLES FOR "P5" : The editorial cupboard is rather bare at the moment. Several members have promised to write something, but have yet to put pen to paper. Please send your letters, comments, complaints, ideas, anything to the editor.

COMING SOON IN THE NEXT ISSUE : The committee have decided to publish "P5" on a quarterly basis. A time table is being drawn up, and I will attempt to keep to the publishing schedule. The next issue will contain an article on constructing the Solent Scientific/Worthing Group TV Transmitter, containing hints and tips from several local members.

If all goes well, the next issue will mark the introduction of high tech publishing. Now that Fleet St. has gone over to electronic publishing, "P5" is set to join them. Yes, your editor has bought a desk top publishing programme, and if I can master the instruction book in time, the next issue will be at least partially produced using it.