
ANODE

Volume 5 Issue 1

May 1995

From the Chairman's desk.....

Welcome to this second edition of ANODE since the long break we experienced at the beginning of this year.

Activity on the radio front has, somewhat like the curate's egg, been good and bad in parts. The good bits mainly relate to the contest side of the Branch activity whereas the bad bits the rather poor attendance at monthly Branch meetings.

Contestwise, the results of the VHF/UHF contest have been released; as expected we fared pretty well all things being considered. Depending upon whether the Johannesburg Branch are successful in defending their suspension we will come in second or third in the Multi-operator field station category. This puts us in a good position for the Branch Participation Trophy because we are similarly third in that race. We are planning a more effective station for the second leg of the contest to be held later this year when we will be located about 100kms or thereabouts from Johannesburg which helps to maximise the scoring opportunities for each contact. It will not be possible to run the station with limited manpower as we did March operation and we will be looking for more assistance from members.

In this latter connection, I was chatting to some newer members earlier this week when the question of members participation in Branch activities arose. There would seem to be some perceptions that these are reserved for the "favoured few" and not open to the general membership. This is of course not the position at all; the opposite holds true. The activities of the Branch are open to all members, their family and friends. Unfortunately we have to rely upon bulletins and ANODE to advertise the activities and cannot personally call each member to participate. Volunteers are always sought after but like all volunteers are sometimes difficult to get hold of. Thus, if you would like to participate in activities or initiate new ones please contact the Chairman, other committee members or the activity organiser and see how you can assist.

The bad parts referred to above have been looked at briefly but to amplify really relate to attendance at Branch Meetings. Chris Botham puts a fair amount of time into getting new and interesting speakers to our meetings but has in the past been faced with an almost empty hall. Please try to remember that our Branch meetings are always held on the second Monday of the Month starting at 19:30. Winter always causes problems in that the evenings are cold and dark; nevertheless, the clubhouse is open on these days and there will always be someone there to greet you. Who knows, maybe some of Keith's famous homemade soup will be on offer.

This edition of ANODE carries mostly news about branch activities for the ensuing months. Hope to see you at many of these gatherings. In particular the Annual General Meeting to be held on Saturday 8 July at 14:00. Please make every effort to attend this function together with your entry for the constructors trophy. Till then

73 de Cedar ZS6JQ

Club House to open of an evening

It has long been the desire of branch committees to open the club house on Friday evenings for a social get together as well as providing the opportunity for members to operate the club equipment. Timing and the fact that the station was not quite ready meant that this concept never saw the light of day. The committee agreed that we need to maximise the use of the club hence the reason to complete the operating table and generally tidy up so that these social events can commence. The first one will be held on Friday night 2 June starting at 18:00 and again on 30 June. Why not drop into the club and spend some time operating the various radios, enjoy some of Dave Lloyds famous curry and rice, play a

game or two of darts or simply just chat with the others there. Depending upon the attendance we will look to offering other forms of entertainment as time progresses. But lets try to make this work.

VHF Simplex promotion

Repeaters; love them or hate them they are here to stay. Too often however, thinks that if the local repeater is off the air the all amateur radio activities must cease. On the contrary, it is in just such cases that we can start to enjoy ourselves with VHF simplex operations. By simplex we mean point - to - point communications without the assistance of the repeater. This means that one needs more than just the "rubber duck" antenna supplied with the rig but more complex beams and the like because without this simplex working is nigh impossible. It does not take much sophistication to improve performance; a simple 5 element beam on 2 meters will bring in suprisingly good results and allow you to work distances comparable to the repeater but without the "dubious" assistance of the repeater. Why not move to a simplex/direct frequency after initial contact has been made on the repeater. Not only does this assist the repeater usage by freeing it up for more contacts (possibly between two or more operators who cannot communicate on simplex but it will also draw you into home construction as well as that interesting world of VHF DX and as we've said before "Don't knock it if you have not tried it !!!"

To increase the usage of simplex operation, either FM or SSB we will be holding a regular monthly "simplex" which is the first Sunday Night of the month starting at 19:30 on a frequency of 145,500 MHz FM for the first 15 minutes and then moving to 144,250 MHz SSB. Join us for 30 minutes of a new view into amateur radio. These sessions will be held on the following evenings:

4 June
2 July
6 August
3 September
1 October
5 November
3 December

Constructors Trophy Rules

We have decided to introduce a Constructors Trophy"as one of the Branch Awards. The rules are as follows:
PLEASE NOTE THAT THIS TROPHY MUST BE AWARDED AT THE BRANCH ANNUAL GENERAL MEETING WHICH WILL BE HELD ON SATURDAY 8 JULY AND SO CONSTRUCTORS WILL HAVE TO MAKE HASTE TO GET THEIR ENTRY IN ON THAT DATE. ALSO, THIS TROPHY IS NOT RESTRICTED TO QRP/RF EQUIPMENT BUT ALL HOME CONSTRUCTED PROJECTS. THIS WILL BECOME CLEARER AS WE PROGRESS WITH THE RULES WHICH ARE AS FOLLOWS:

2 categories are catered for.

Standard category for a project which contains less than 50 components

Advanced category which contains more than 50 components

The same item may not be submitted in subsequent years.

The judges will be Cedar ZS6JQ; Rina ZR6RM plus Peter ZS6ZM

The project should be radio related but any electronics item which is home built can be entered.

Point scoring will be as follows:

5 points for the enclosure with an extra 2 points if the entire cabinet is home made.

1 point if the project is not working

2 points if it "limps along"

3 points if it works 100%

10 points for quality of construction plus additional points allocated as follows:

if the pc board is home generated or made -- an additional 2 points.

if less than 50% of the components are store bought an additional 2 points will be scored

An additional 2 points overall will be awarded if the project is your own design.

If a kit is submitted then the entrant automatically enters in the advanced category.

As time is running out for projects to be started or better still completed, potential entrants had better get going.

The prize for both categories will be a certificate plus the latest version of the ARRL Handbook.

Branch BBS making good progress

It is now some time that we reported on the status of the Branch packet radio bulletin board system started about 9 months ago. After much effort Dave Cloete has now got the system running on two channels (144,700Mhz and 438,025 Mhz) with forwarding (ie messages being received inwards from other systems) links established with Cliff ZS6BJU. Our system is now virtually complete and will be installed at the Houtkoppes Satellite Resources Centre in the next few weeks or so. Keep a look out on the either of these two frequencies because coverage is expected to be pretty extensive from that site. Whilst on this subject, it seems as if the Weather Satellite transmissions on 439,975 MHz will also be starting one of these days as soon as the 1691 MHz picture acquisition system (also at Houtkoppes) and 70 cm link to the transmitter can be completed. Realistically, August is the time we are hoping for to have these elements of our "space" programme completed. But like all our tasks, we are constrained by other time pressures and some slippage might result. Finally, the planned 6M repeater is also slowly taking shape and as soon as the alignment of the transmitter is complete it will be installed. August seems like the commissioning date.

Branch meeting 12 June 1995

Chris Botham has managed to get the services of Joop Hesp ZS6AJS for this Branch Meeting. Joop will be talking about the use of computers for log keeping but more specifically, will be demonstrating **SWISSLOG** the unparalleled log book program. We used this for scoring both the Field Day and VHF contests. What a wonderful improvement on writing log books !! Join Joop and the rest of the gang on 12 June to see the advances made in computers and how these can be put to good use in and around the shack. See you there.

Last words

Finally, a big thank you to Steve Gommersall who has persisted with our membership database and is now in a position to print labels for all our mailings as well as provide other data about the membership in general. However, for this to work we do need to update our records. Enclosed with this edition of ANODE is a brief questionnaire for your completion. Please make every effort to fill in the questions and return it to us either via the Branch's Post Office Box number, send it to Cedar ZS6JQ on packet radio to the following address "ZS6JQ @ ZS6AI.TVL.ZAF.AF" or better still, bring to one of our next Branch meetings or QRP/Satellite interest group meetings held on the first Monday evening of each Month.

This month's Technical Topic

This month's technical topic is a novel 13.8v 20 amp power supply presented by George Cooke ZS1JD. This article has been extracted from the April 1995 edition of QSX PE the monthly newsletter of the Port Elizabeth Branch. Thank you to them for allowing us to use the article.

PS Why not construct one of these and submit it for the constructors trophy ??

13.8 Volt 20 Amp Power Supply

BY GEORGE COOKE, ZS1JD

Having seen many DC supplies of various makes it was obvious to me that, for the most part, they left a lot to be desired as far as regulation is concerned, and also the danger that they could open up and put the full DC voltage of approximately 17 volts into your transceiver - with disastrous results.

My design has very good regulation - the output voltage drops 1/10th of a volt at a load of 20 Amps. It also has a SCR, which will trigger at 15 volts and blow the fuse. *Save that radio!!*

Circuit details

The transformer was custom made. It has a 210, 220, 240V tapped primary and a tapped secondary of 17 and 19 Volts at 20 Amps. The DC rectifiers can be made up or, better still, solid state rectifier blocks are readily available. The rectifiers are mounted on a heat sink. Don't use more than 100 000 μ F for C1, the smoothing capacitor, as this will only put a severe load on the rectifiers when the supply is switched on. In fact, 10 000 μ F should be quite enough.

Q1 is a 2N3055 driving a MJ802. This combination is more than adequate. An MJ802 will

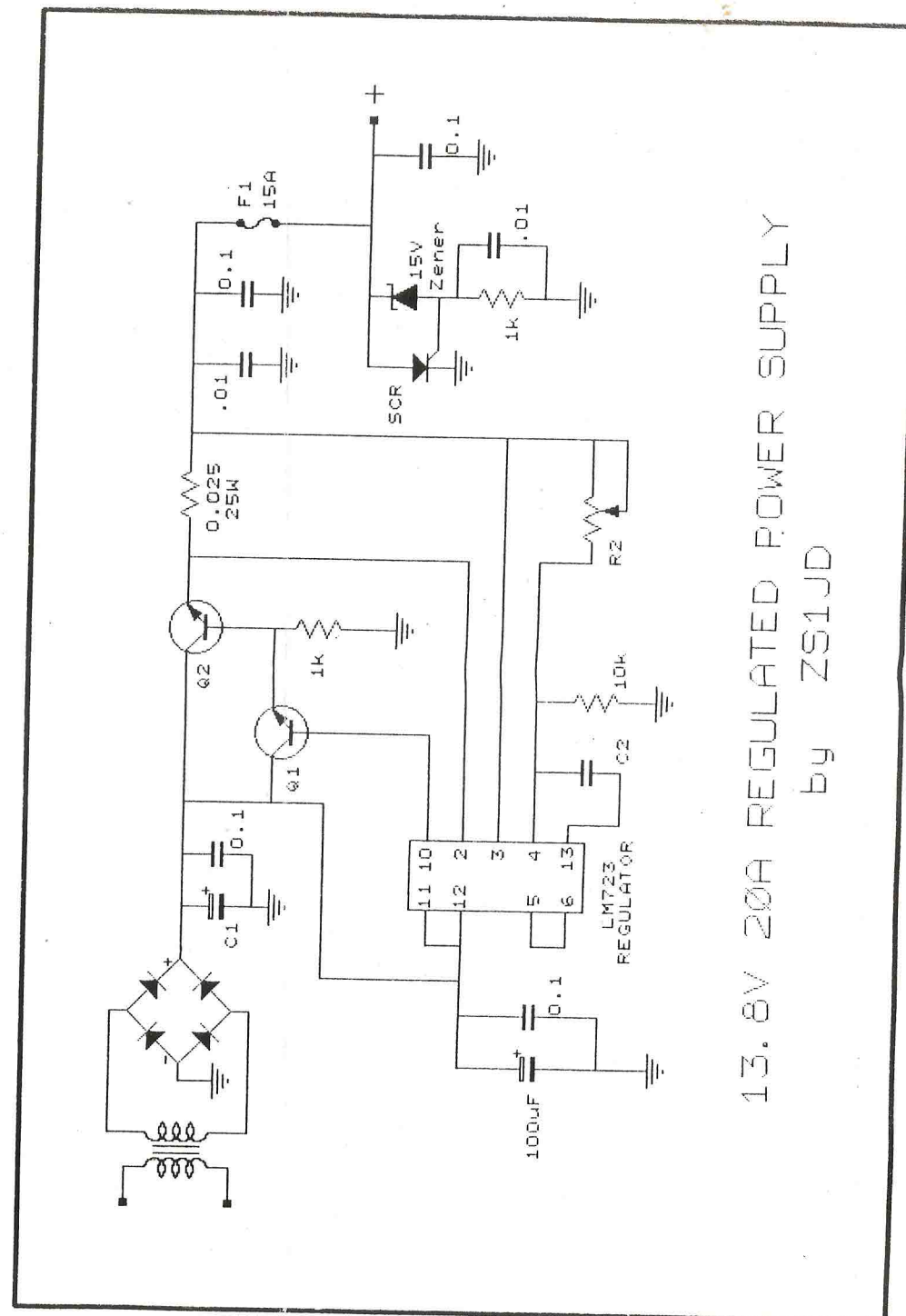
handle 30 amps. Both of these can be mounted on the heat sink - just insulate the whole heat sink from the rest of the circuit. Make the heat sink as large as possible without going overboard.

Use a 15 amp fuse on the output and not a 20A fuse. For the SCR, use a 2N681 or any other type suitable for the application. The DC voltage at the capacitor C1 must not drop below 17 volts to maintain good regulation. The output voltage is adjustable by R2. I have built many supplies with this circuit for commercial transmitter installations and found no problem.

One final point: use point-to-point heavy wire for the DC side. Also, use only one earth point for all negative leads, otherwise ground loop problems can occur.

The circuit diagram appears on the following page.

Q



13.8V 20A REGULATED POWER SUPPLY
by ZS1JD