QSX PE

THIS NEWSLETTER IS PUBLISHED BY THE
PORT ELIZABETH AMATEUR RADIO SOCIETY

WEBSITE: www.qsl.net/zs2pe

PO BOX 10402
LINTON GRANGE
6015

JULY 2004

MONTHLY GENERAL MEETING

The monthly general meeting of the PORT ELIZABETH AMATEUR RADIO SOCIETY will be held on Thursday, 15 July 2004 at the St Hugh's Church Hall, Newton Park, starting at 20:00 (8 pm).

We have now, just a few weeks before the event, been asked to provide communications for the VW Rally, which starts on 16 July (i.e. the day after our meeting) and ends on the 17th. The meeting will therefore be our first and final briefing for the event.

There has not been enough time to ask everyone if they will be able to help. We know that a few regulars are otherwise occupied, so Chris is hoping that there will be enough ready helpers. **Please come along to the meeting if you are one of them.**

All paper work, stickers etc will be issued at the July meeting.

Tea, coffee and biscuits will be provided, and don't forget that there will probably be a ***bring and buy*** table even though we will be talking VW Rally most of the time.

Wrinkly Ravers

We had 14 members at Barney's on 1 July. Situated at the Southern end we found the acoustics not 100% but bearable, and once again the meals were excellent.

Our next get together will be on Thursday, 5 August. Where? At Barney's Steak Bar, Circular Drive, Lorraine, of course.

ANYBODY FOR QSX?

Coming up in October, I will have been editing this rag for 14 years, except for a short period back in 1993/4. ***Does anybody else feel like taking it on?***

I like to get QSX ready for printing about a week before the meeting, but I have a small problem since a minor stroke two years ago, in which I cannot find the correct word for the item I'm talking about. I have to ask Elize or try the dictionary. It puts the brake on the editing.

In addition, we go caravanning the second Thursday to Sunday/Monday every month, and this is followed the next week by our PEARS meeting.

We also want to go travelling, as we used to, with or without the caravan but I first have to check the calendar to see when there is a gap. This gap does not always agree with what we have in mind.

Is there anybody out there who would like to take on the job? There is no problem getting articles. One has to kick one or two of the local authors but their stuff comes along eventually!

Please consider it and let me or the Committee know – Ed.

from The Chairman

PUTTING PRIDE BACK INTO HAM RADIO

Prowling around the numerous ham radio message boards, websites, and listening to the repeaters and HF, I keep hearing about the demise of amateur radio, and dozens of opinions as to why the hobby is failing to attract many new-comers.

This debate may well continue until there are no radio amateurs left.

Not only is amateur radio failing to attract youngsters, it is no longer attracting significant numbers in any age group in this country!

Having been licensed since the mid 1970's, I've been able to make the following observations:

Amateur radio attracted professional people, amongst them, doctors, lawyers, electronic technicians, scientists – and even broadcasters. This, it was able to do even although there was a fairly stiff exam AND the dreaded morse code was the yard-stick for access to the HF bands. What has changed, you may well ask?

In my humble opinion, we are to blame. Apathy has been the down-fall of bigger pursuits than ham radio.

We allowed the "paint-by-numbers" exam to be used in the RAE. This consequently diluted the value of holding a licence, and drove the professionals and serious hobbyists away. An amateur licence used to be a "qualification" with which employment could be negotiated. This is no longer the case. We cannot turn back the clock, but we can move forward sensibly by applying reasonable standards to future RAE's and hopefully regain some lost value to an amateur licence. Once passing an RAE becomes, once again, a negotiable qualification, we will have queues forming to study for, and take the examination.

Then, there is the matter of participation – the turnout at meetings and club events is disheartening to say the very least. If you find club activities boring, and would rather do something else, elsewhere, the question must be asked – what are you doing to contribute to the success of the club, ham radio, and its future. Less than 25% of our membership regularly attend meetings, and no more than 10% make any effort to assist in club events.

Now, ask yourself why our hobby is failing – the answer is you!!

The solution lies with each and every one of us; we must make time to invest in amateur radio. We all have other commitments, but none of us have absolutely no time. When next volunteers are called for, start the ball rolling and offer your time, even if only for an hour. It will make a difference.

If you think my assumptions are wrong, pitch up at the next meeting and I'll gladly debate the subject with you.

73

Rory, ZS2BL

HAMNET / ECARES *NEWS*

As I have said on a few previous occasions, we very seldom have major disasters or out of the normal run of the mill emergencies here in the Eastern Cape.

When something like this does occur, hams are not involved as a rule. One of the reasons for this is that we are not really known to the other emergency organisations and so they do not even think of enlisting our aid.

The solution to this problem is that the more members of the various emergency organisations get to know radio hams and what they do; the more the better.

Even better still is if members of these organisations get ham licences, which will not only provide a communications link among themselves, but also to the hams. They will have access to our excellent repeater system, our communications expertise and knowledge and our help with monitoring and passing of emergency information.

No doubt we can learn a lot from them too.

It is good to know that we have two members of the Mountain Club who are hams, namely Serge Smetryns ZR2SJE and Paul Smith ZS2OE.

We are about to take a big leap forward in that our classes for the November RAE will be attended by twenty members of the Mountain Club of South Africa and associated organisations. We wish all of these members good luck with the examination and assure them that they made a very wise decision to take this step.

Social

John ZS2AH of East London is going to hospital for a knee replacement operation. May it be successful.

Ewalt ZS2EHB is making good progress after his operation.

73,

Al Akers,
Provincial Director:
Hamnet/ECARES

FOR $ALE ★ WANTED ★ SWOP

FOR SALE

* **FT101EX** (12 and 17 metre bands included), plus two unused spare final tubes, excellent condition – R1 000 — Garth Laaks ZS2HB, tel. 041 368 1101.
* Icon **IC 290D** mobile all mode 2m rig in original box with manuals etc. (Bought new from ZS1J while still in Durban); Icon **IC 240** 2m mobile rig with manual; Above in excellent condition — Ewan Mathieson ZS1EM, tel. 084 890 0902 or 021 852 0183 or e-mail to ewanam@xsinet.co.za

WANTED

* **Ribbon cable,** about two inches or so in length, at least 16 leads but with a **1 mm** separation between them — Garth Laaks ZS2HB, tel. 041 368 1101.

ALGOA VW RALLY

As mentioned in the notice of the July meeting, we have been asked to provide communications for the Algoa VW Rally from 16 to 17 July. Some of our regular operators will not be able to take part this year, and Chris wants everyone who would like to do so to come along to the meeting and volunteer. He has circulated those who he believes will help.

At the meeting he will hand out the necessary paper work, maps and other documents, so those who will be able to participate should be there or else get someone to collect theirs.

In the mean time it is suggested that you check over your equipment and ensure that it is all ready and able.

KIDS DAY

Thanks to Bill ZS2ABZ for setting up a Kids Day station at the Boardwalk Casino complex. Apart from Bill, Lynne ZS2MM had a good stab at operating, while Garth ZS2HB at least put in an appearance and took a few photos.

Lynn had some interesting chats, especially to the East London kids on 2 metres, and we had a few youngsters doing some talking from here too. Unfortunately there were very few of them present at the complex – perhaps the cold day kept them away from the area which was overlooking the beach.

Bill had the station set up in the open, and during the last half hour the rain came. While he was getting everything out of the way, someone turned on the taps *in the rain* to water the adjacent grass! There was a hole in the pipe (dear Liza, dear Liza), and Bill got a wet back and sides.

At the ensuing Committee meeting they felt we should have a fresh look at the time of the year and get Kids Day set up for a period when decent conditions can be expected. They will take this up with SARL HQ.

(*No, she wasn't preggie. It's the way she stood!)*

SAY THAT AGAIN?

I cdnuolt blveiee taht I cluod aulaclty uesdnatnrd waht I was rdanieg – THE PHAOMNNEAL PWEOR OF THE HMUAN MNID. Aoccdrnig to a rseearch at Cmabrigde Uinervtisy, it deosn't mttaer in waht oredr the ltteers in a wrod are, the olny iprmoatnt tihng is taht the frist and lsat ltteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it wouthit a porbelm. This is bcuseae the huamn mnid deos not raed ervey lteter by isetlf, but the wrod as a wlohe.

Azmanig, huh? So who ndees a wrod chkceer aywnay? Ω

ADVANTAGES OF WSJT

Hal, ZS6WB, writes:

A comment by Philip, ZS4PV in the May VHF Newsletter about the advantages of being in Division 6 started me thinking about how WSJT has changed all that. VHF digital operation has not only levelled the playing field for VHF operators around the country, but in some respects has tilted the advantage towards stations in some of the more remote areas.

For those of you that have not yet tried the digital modes and learned the benefits, here is a brief summary based on your having at least four elements and 100 watts on 50 MHz or twelve elements and 100 watts on 144 MHz and having a reasonably good VHF location with fairly low noise. It also assumes the station on the other end is similarly equipped.

On tropo you should be able to work consistently any station in a range up to 500-600 km using one of the weak-signal modes such as JT44 or JT65. In the range of 500 to 2000 km you should be able to work any active station on meteor scatter using FSK441. In the range from 500-800 km MS is fairly difficult on 144 MHz because of short infrequent pings, but with patience you will make it.

Based on the PEARS contest rules and assuming that a similar scoring system will be adopted by the SARL, the advantage lies with an isolated station that is within maximum meteor scatter or tropo range of most active stations in the country. If there are more stations active in Division 6 than in Division 1, the advantage lies with a Division 1 station as he can make more long distance contacts with only a few comparatively low-scoring contacts with local stations for the grid multipliers.

Following on from this, V51E theoretically has the best location to win the contest. Virtually all of ZS lies within comfortable MS range and if Kosie were to work all active stations he would gain from 1400-1800 points from each contact plus being able to work all the grid multipliers. A station in Harare is a bit too far north and will be out of range of some of the points and multipliers of Division 1.

The central location of Division 4 actually proves to be a slight disadvantage as ranges to many of the high-activity areas in in the marginal area between maximum tropo and minimum MS range. A Bloemfontein station would have to depend more on tropo contacts and to be competitive would have to have a comparatively large station with higher power and a more efficient high-gain antenna system.

Within South Africa, the most competitive location for a well-equipped fixed station would probably be Polokwane. A portable station in one of the grids further north (KG47 or KG57) should also do well providing they had a good location and antenna system capable of working most of the Pretoria/Johannesburg stations on tropo.

In any contest location and station capabilities contribute a great deal to the final results, but with WSJT the playing field is now much closer to being level than it ever was before. A good station and an all-out effort could win the contest from anywhere below 19 degrees south.

CONTINUITY TESTER

from Johan Terblanche ZS1I

"Why build such a stupid tester if I can use my multi-meter to check continuity?"

The sole reason for constructing this tester is that some off-the-shelf models you can buy suffer from one serious disadvantage: They can end up destroying the component under test!

The design presented here produces a measuring voltage of just 5 mV into a test resistance of 10 Ohm. In theory the measuring voltage can rise to a maximum of approximately 0.8 V but the measuring current will always be limited to the safe value of 0.6 mA to avoid damage to the component under test.

A single 1.5 V battery powers the complete circuit and, when there is no conducting path between the probes, so little current flows that an on/off switch is unnecessary.

A 5 V piezo buzzer is used to indicate when continuity is detected. Operation at 1.5 V was found to be not a problem for the buzzer.

CONSTRUCTION AND TESTING

Figure 1 shows the circuit diagram for the continuity tester. Fitting the components to the PCB shown in Figure 2 should present no great problems; it is only advisable not to fit R3 too closely to the board initially because it may need to be changed.

Once the cables, test probes and battery have been fitted you can proceed with the set-up.

The voltage levels shown on the circuit diagram refer to the voltage levels that can be measured when the buzzer is respectively silent or buzzing.

Touching the test probes together should cause the buzzer to sound but if this does not happen then experiment by soldering a resistor in parallel with R3 to reduce its value. The combined resistance of R3 should not be less than 1 K.

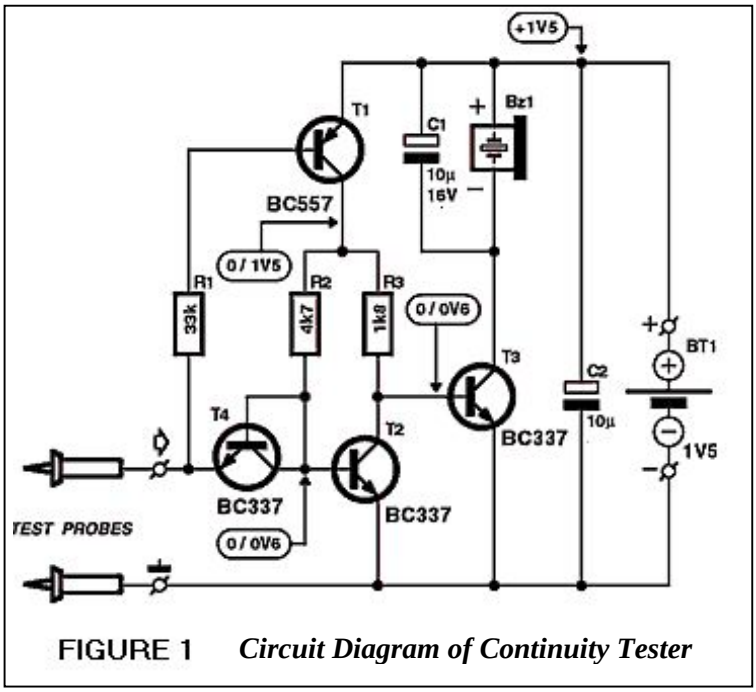


FIGURE 1 ***Circuit Diagram of Continuity Tester***

The buzzer should be silent when the resistance between the probes is greater than about 10 ohm. The final value of R3 is not too important as long as it is less than about 22 K.

When you are happy that the tester is working correctly, pop the PCB and battery into a plastic case and off you go to test continuity. Ω

COMPONENTS LIST

Resistors
R1 = 33K
R2 = 4K7
R3 = 1K8

Capacitors
C1, C2 = 10uF 16V radial

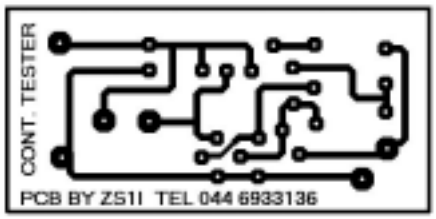
Semiconductors
T1 = BC557
T2,T3,T4 = BC337 or BC347

Miscellaneous
BT = 1,5V Battery
BZ = DC buzzer 5V
Plastic case
Probes

Top Right – Photograph of completed project

Right – Printed Circuit board

Below – Component Overlay



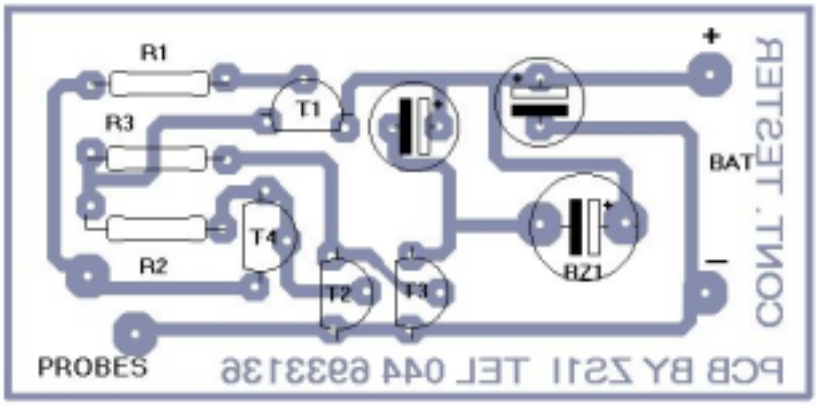


FIGURE 2

WORKING WITH TOROIDS

from Johan Terblanche ZS1I

Perhaps one of the least understood electronic devices is the toroid core. Toroids can be thought of as magnetic cores that are used within inductors for the purpose of increasing the coil inductance.

Toroidal coils or transformers have a fixed value of inductance. Slugtuned coils contain similar core material; however, the inductance here can be varied by positioning the slug core.

The inherent nature of the toroid or magnetic donut enables the wound inductor to become self- shielding. This minimizes interaction with nearby inductors and other components.

Toroids provide high-Q inductors for narrow-band circuits because fewer turns of wire are needed than for an equivalent inductance wound on an air-core coil form. Furthermore, the same-value toroid inductor is a fraction of the size of its air-core cousin.

THE CORRECT CORE MATERIAL

Amateurs frequently experience problems with circuit performance when they attempt to use toroid cores with unknown properties. Sometimes surplus dealers will offer a number of toriod cores at bargain prices. Unfortunately, they do not always specify the core permeability (uj), and they sometimes neglect to say whether the core is made of ferrite or powdered iron.

Permeability is the key to how the core can be used effectively. Generally speaking, the greater the permeability, the lower the recommended frequency of operation in a narrow-band circuit. Such a circuit must have high Q (quality factor) in order to provide selectivity. The wrong core, even with the correct inductance, can spoil a circuit because of low Q.

The Amidon Associates catalog lists recommended operating frequencies for powdered-iron and ferrite cores. The permeability is also listed. Each core has an assigned AL value, which tells the user how many turns of wire to wind on a given core to obtain a desired inductance. Without this vital information it becomes an exercise in futility to design a toroidal inductor or transformer by the hit-and-miss method.

The incorrect core material in slug-tuned coils can also ruin circuit performance.

TOROID SIZE

As circuit power requirements increase, so must the size of the toroid core in order to avoid core saturation. Small cores can be stacked and cemented together with epoxy glue in order to increase their power-handling ability. This also changes the AL factor, which means fewer turns of wire are needed.

The calculations for correct core sizes are detailed in the Amidon Catalog and in the Ferromagnetic Core Design and Application Handbook published by Prentice Hall, Inc. A safe rule of thumb is to not use any core that, while in an operating circuit, becomes hot. Moderate warmth to the touch after sustained operation is okay.

WHAT IS PERMEABILITY?

Permeability is simply a measure of the comparative ease with which the magnetic flux can be set up in a material. Typically, it is the ratio of the flux density in the material to the flux density in air. The mathematical symbol is the Greek letter (u).

WHAT IS SATURATION?

Saturation occurs when the rated flux

density of the core is exceeded. The core becomes hot and changes permeability. Powdered-iron cores can recover from this abuse and will return to their specified permeabilities. A ferrite core, on the other hand, may never regain its characteristic permeability. In a worst-case situation it may crack or shatter.

Flux density is specified in gauss. The manufacturer's data sheets contain this information.

FERRITE OR POWDERED IRON?

Ferrite is a less stable compound than is powdered iron. For this reason ferrite material is seldom used in oscillators that require high orders of stability.

The permeability of ferrite changes substantially with variations in temperature. This causes severe frequency drift. Certain powdered-irons are quite stable and are commonly used in oscillators.

Ferrite cores are preferred for broadband transformers. This is because the high available permeability in ferrite allows the designer to obtain large winding inductances with very few turns of wire.

Most broadband transformers must operate efficiently over several octaves of frequency, such as 1.8 to 29 Mhz. The ferrite core has a unique property that makes this possible: As the operating frequency is increased, the core tends to become more and more nonexistent, as seen by the circuit. Thus, the core permeability is highly effective at the low-frequency end of the range, which provides the required high inductances or reactance (XL).

As the operating frequency increases, the effective permeability of the core diminishes more and more until only the winding is seen by the circuit. At that frequency the core can be thought of as merely a ceramic coil form.

Ordinarily, such a broadband transformer uses a ferrite core with a permeability of 850 to 2000, depending on the design requirements. Most of my broadband transformers are wound on Amidon No. 43 ferrite cores (850 uj).

PROTECTING THE WINDING

Most ferrite cores are not tumbled as part of the manufacturing process. This means that sharp edges can exist, and they can cut through the enamel insulation of the wire. Ferrite cores are semiconductors, and this means that shorted turns can exist if the bare wire touches the core. A shorted turn destroys the Q of the winding.

There are some preventative measures you can take to avoid abrading the wire. I suspend my ferrite cores on a thin piece of wire and spray them with two coatings of polystyrene lacquer.

Larger cores can be wrapped prior to winding them. For this I use Teflon pipe thread tape (two layers), which is available at most hardware stores.

Very large cores may be wrapped with 3M glass tape. This is good material for cores that are used in high-power circuits and as balun transformers.

Fortunately, powdered-iron cores are tumbled and have smooth edges. Also most of them are painted to provide a color code that indicates the core characteristics.

CORE NOMENCLATURE

The Amidon and Micrometals Corp. toroid cores have assigned numbers that tell us the core size and permeability. For example, a T50-2 toroid has a 0.5 inch OD (T indicates toroid and 50 is the diameter). In a like manner, a T200-2 core is 2 inches in diameter and is made of No 2 material (red).

A typical ferrite core has, for example, a number such as FT25-43. FT indicates "Ferrite Toroid". The 25 tells us that it has a 0.25 inch OD and

that is has a 43 class permeability.

CHECKING THE INDUCTANCE AND RELATIVE Q

Few amateurs have access to a laboratory-grade Q meter, which is required to accurately measure unloaded Q and inductance. A grid-dip meter can be used to explore these parameters.

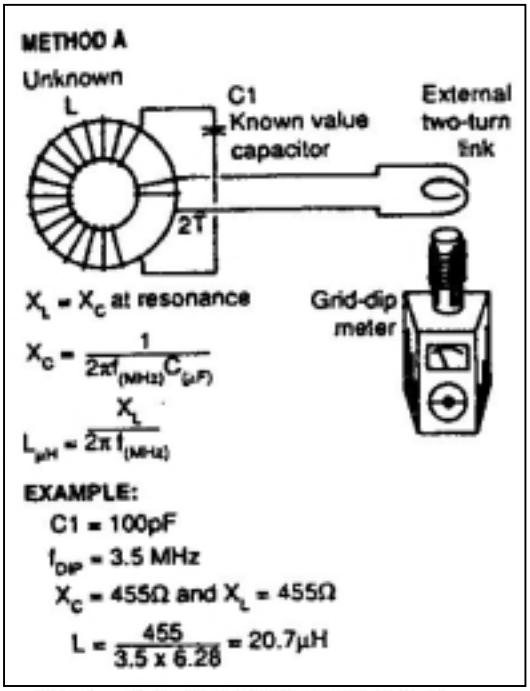
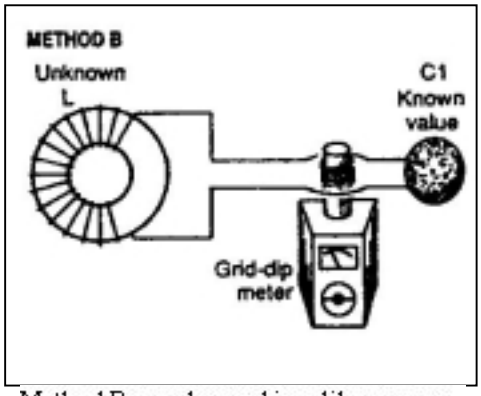


FIG. 1 – Two methods for determining the inductance of a toroid coil. A pair of two-turn links and a known value capacitor are used at A. The dipper coil is placed near or into the external link, and the frequency is varied to obtain a dip in the reading. Couple the grid-dipper to the coil as lightly as possible to obtain a shallow dip. The relative Q is indicated by the coupling needed to obtain a dip. The farther the meter probe (coil) is from the sampling link, the higher the Q.

Fig. 1 shows pictorially a method I use for learning the toroid inductance and relative Q. The grid-dip meter is coupled loosely to a link that is wound through the completed toroid. A second small link is connected to the first one, to permit sampling the circuit with the meter. A known value capacitor is then connected across the toroid winding.

Resonance occurs when the capacitive reactance (xc) equals the inductive reactance(xl). Therefore, we can determine the xc and know the xl. Once we know the xl we can determine the inductance by standard equations.

You should be aware that link coupling to a toroid will shift the effective inductance slightly, but this is not a problem in most amateur work.



Method B may be used in a like manner. The leads on C1 are left long enough to permit inserting the grid-dip probe to obtain coupling.

An alternative sampling method is to connect the capacitor across the winding (no links are used) and insert the dip-meter coil into the gap between the capacitor leads and the toroid. Normally this provides sufficient coupling to obtain a dip reading. The inductance is not shifted with this technique.

The foregoing methods are essential because of the self-shielding property of a toroid. That is, placing the dipper probe near the coil will not allow enough magnetic coupling to obtain a dip.

FINAL WORD

I have attempted to point out the major considerations when working with toroids. Certainly, a comprehensive discussion of these topics would require a book length treatise. The major consideration for you is that you select the right core for the job and that it be wound correctly.

REFERENCES

1. Amidon Associates, Inc.
2. Doug's Desk W1FB Ω

OSCAR ECHO SUCCESFULLY LAUNCHED

OSCAR Echo has been successfully launched and is undergoing tests before the satellite will be released for general operation. OSCAR Echo was the subject discussed on last Sunday's INTECNET which was jointly presented by the SARL and SA AMSAT. The SARL congratulates AMSAT North America on their achievement.

Later news released by AMSAT NA is that during the last pass on 30 June the TX power was turned up to 3,1 W to assure a good downlink while continuing to load software. Unfortunately, the power could not be reset to a lower level before the pass ended. The BCR responded as expected and eventually turned off the transmitter. The transmitter was left off for the remainder of the night to allow the batteries to fully recharge. During the 02 July morning passes over the US East Coast the transmitter was turned on to gather telemetry and evaluate the situation.

And now some more news from the ARRL newsletter:Jim White, WD0E, of the AO-Echo project team reports that an initial analysis of Echo's telemetry indicates everything is looking good.

Earth stations should not attempt to transmit on the satellite's uplink until checkout and commissioning are complete and AO-Echo has been made available for general use. White says that won't happen for at least one week. AMSAT will release bulletins when the satellite becomes available.

A telemetry decoding program, TLMEcho, is available for those who would like to view and report data from Echo. It may be downloaded from the "Echo Satellite User Software and Documentation page." The telemetry listening frequency is 435,150 MHz. AMSAT-NA requests that anyone recording Echo telemetry to send the CSV files to Mike Kingery, KE4AZN; his email address is ke4azn@amsat.org. A telemetry database has been established and will be tested over the next few days. When testing is complete it will be made available to directly upload telemetry files and query all data.

AO-Echo's sun-synchronous orbit is some 800 km above Earth. Among other capabilities, the 10-inch-square microsat--equipped with a transmitter capable of up to 7 W output--will allow voice communication using handheld FM transceivers. Echo will feature V/U, L/S and HF/U operational configurations, with V/S, L/U and HF/S also possible. FM voice and various digital modes--including PSK31 on a 10-meter SSB uplink--also will be available. Ω

The Early Years of
WADLEY'S RECEIVER ERA
(Courtesy of David Larsen)

The Wadley receiver was invented "to meet a clearly defined need". At the time, the early fifties, there existed no effective "frequency synthesizer" and no tuneable receiver with a frequency stability anywhere approaching that of a crystal oscillator with the exception of a "multi crystal" receiver, the Collins 51J (USA).

Doctor Wadley made two prototype models in the Telecommunications Research Laboratories (TRL) of the South African Council for Scientific and Industrial Research.

The first photograph is of the first of these two prototypes. In the 1950s I built the 7th prototype Wadley receiver for the Superior Manufacturing and Development Company (SMD). This receiver is shown the second photograph.

Like its predecessors, the receiver used valves *but*, unlike its predecessors, it was the first prototype of a commercial version of Dr. Wadley's receivers.

A few years later Geoff Meakes built the first RACAL prototype receiver in the UK – this receiver became known as the RA17 and was based on the 7th SMD prototype as shown in the photograph.

Ken Clayton and I built the first all transistor Wadley receiver in late 1950s as an amateur radio project.

Dr.Trevor Wadley built the first Barlow Wadley prototype in the mid 1960s whilst he was with RACAL-SMD in Pretoria. The final prototypes were completed at the Barlow Manufacturing Company in New Germany a few years later.

It is interesting to note that, in the early 1960s, the Barlow Group purchased Horace Dainty's Superior Manufacturing and Development Company in Pinetown and moved it to New Germany where it became known as the Barlow Manufacturing Company (BMC). The CEO of BMC was Barry Cooke, a founder member and senior director, of the SMD Manufacturing Company. Ω

MINUTES OF THE MONTHLY MEETING OF THE PORT ELIZABETH AMATEUR RADIO SOCIETY HELD AT THE St HUGH'S CHURCH HALL, NEWTON PARK, PORT ELIZABETH ON 17 JUNE 2004

Welcome:
Rory ZS2BL welcomed all who had made the effort to attend.

Silent Key:
A brief silence was held in memory of Raphy Schauder ZS2SP, SK

Present and Apologies :
As noted in the attendance register.

Acceptance of Previous Meetings Minutes :
Proposed : ZS2ABZ Seconded ZS2RT.

Matters Arising:
Nil

Correspondence:
In: Renewal notices, newsletters from other clubs
Out: None

Finance:
Savings A/C R3 198
Investment A/C R36 208
Almost 100 out of 140 members have renewed their memberships.
The Chairman reminded the meeting that subs will increase from next year.

Social: The Chairman outlined an address made by Viv ZS2VM to the committee, where Viv encouraged the committee to organise regular participatory events. The first event decided upon has been a DF Hunt, and it is planned to hold these on a regular basis. The date and time has yet to be decided. Colin ZS2AO suggested a prize at the AGM for the best DF Hunter over the year. Lionel ZS2DD mentioned that the Society has a trophy for DF Hunts. General opinion was in favour of the event taking place on a Saturday afternoon, to end at a tea venue.

Special Events:

Kid's Day station was run by Bill ZS2ABZ. The station made about 8 HF contacts and numerous 2m contacts. Lynne ZS2MM in particular helped with the operating, and a few other members dropped by. There was a shortage of kids, and only around 8 kids visited the station. The Chairman expressed thanks to Bill ZS2ABZ for his efforts.

VW Algoa Rally: A meeting has been held, and was attended by Dick ZS2RS. The Rally will take place on 16-17 July. A list has been put out for volunteers. Coordination will be handled by Chris ZS2AAW. An announcement regarding the date of the July General meeting will be made via the bulletins.

General:

- Graham ZR2GIB advised that the Bible Society needed help with a water point for their Fun Run on the Saturday morning; We would be able to put up signage and advertising. It was generally felt that it was too short notice to take on.
- Viv ZS2VM has a friend (SWL) being affected by noise, and is looking for help in tracking down the interference.
- Ewalt ZS2EHB needs to be replaced as the Intechnet relay station – the organisers have a problem linking to a prepaid phone. Anyone able to help is requested to get in touch with Ewalt.

The meeting then closed, and Bill ZS2ABZ as usual provided the refreshments.

(Some of these items are from SARL bulletins and ZS4BS Dennis Green's HF Newsletter)

HAMS IN THE PARK

We have been invited to set up a ham station alongside the MG Club, at the St Georges Art In The Park for first Sunday in Sept. Thereafter, PEARS have been invited to join them for a braai at the club in Conyngham Rd.

We will be able to check out the venue, and discuss the possibility of this becoming our new home. Full details can be had from Barry, ZS2H.

OLD COMMUNICATION RADIOS

Paul Galpin, ZR6ACV, is interested in collecting and restoring old military and communications radios, especially sets with valves! Contact numbers: 041-3721779 or 082-7412703

(PS: the prefix 041 is correct. he has relocated to div 2)

SARL MEMBERSHIP FEES DUE

Invoices for the annual membership fees of the SARL have already been sent out by normal as well as by email. The latter was done in order to save on the very high cost of land mail, but on the other hand the recipients can easily forget it.

An appeal is made to all members to pay as soon as possible. The easiest and safest methods are by means of credit cards, electronic transfer or direct deposit into the SARL bank account. The SARL bank account details are: Standard Bank Killarney, Branch Code 00 72 05, Account number 001 682 059.

Please fax a copy of the deposit slip to the SARL office at 011 675 2793 in case of a direct deposit.

SUPPORT SARL's IARU MEMBERSHIP FUND

The SA Amateur Radio Development Trust again appeals to amateurs and clubs in their effort to raise funds to pay for South Africa's membership of the International Amateur Radio Union. Some R12 000 is required. R2 770 was carried over from last year.

Donations may be transferred electronically or paid into the SA Amateur Radio Development Trust account at ABSA, account number 560 142 722, branch code 335-645.

Please indicate IARU donation and fax the deposit slip to 012 991 5651 or mail the details with address information to PO Box 90438, Garsfontein 0041.

SA AMSAT HOLDS AMSATCON2004 IN DURBAN

SA AMSAT will hold an Amsat conference on Saturday 24 July 2004. Registration for the one day conference will be R50 for SA AMSAT and SARL members. The fee for students is R35 and for non-members R100.

SARL LAUNCHES RADIO TECHNOLOGY IN ACTION

The South African Radio League will be launching its Radio Technology in Action programme on August 21 with a huge Hamfest at the National Amateur Radio Centre in Gauteng.

Making the announcement, SARL President Graham Hartlett ZS6GJH said that the aim of the programme is:

- To explain Amateur Radio as a broad spectrum activity; to kindle new interest,

and for Shortwave Listeners and Electronic Hobbyists to focus on the fact that Amateur Radio can offer so much more.

- To create awareness of Amateur Radio as an educational past time for the young and an ideal activity for retired people
- To create awareness of the value of Amateur Radio as an educational tool and as a driver of developing a technology culture amongst the youth
- To create awareness of Amateur Radio in the class room as a great motivator for young people to choose a career in electronics and communication
- To grow the membership of the SARL

Graham said that after the Hamfest, the Radio Technology in Action programme will feature regular lectures on developments in Amateur Radio and allied technologies.

Expanding on the 21 August Hamfest he said that the lecture programme will be presented in three streams focusing on technology, amateur radio in action and amateur radio in education.

The technology slot focuses on digital, satellite and weak signal communication. The aim of the Amateur radio in Action stream is to show DXing, Contesting and general operating activity. The third stream will be a workshop on taking amateur radio to the youth of South Africa.

Besides the lecture programme there will be displays, demonstrations, on the air activity and a flea market.

"We have already received some interesting synopsis for the technology stream, President of the SARL, Graham Harlett, ZS6GJH, said. We look forward to receiving suggestions for the Amateur Radio in action stream."

One of the highlights in the technology stream is a paper by Andrew Roos entitled " Digital Voice for Amateur HF Communication" covering the history, technology and the current state of the art of digital HF Communication.

SARL HISTORY RESEARCHED

Tjerk Lammers, ZS6P, Awards Manager of the SARL, is researching the early history of the League and needs information on the founding of the League, the hibernation during the war years and its resurrection.

If you have any literature or can provide leads, Tjerk would be pleased to hear from you. Contact him via email to zs6p@iafrica.com, or (012) 809-0006 at home or (012) 379-4251 at work.

GREETINGS

says Saney ZR1S – The Voice in the Wilderness. Thought you might like this little item for QSX if you have the space for something as frivolous as this!

A for 'orses	N for lade
B for motton	O for the garden wall
C for th 'ighlanders	P for reflection
D for rential	Q for fish
E for brick	R for moment
F for vescence	S for instance
G for the 3:15	T for two
H for retirement	U for nerve
I for Novello	V for la France
J for oranges	W for Quits
K for tea-room	X for breakfast
L for leather	Y for U
M for Emma	Z for breeze

Some of these are not obvious but then it was an English song, during WWII, i.e. E for brick – 'eave a brick, J for orange – Jaffa orange, K for tea-room – kaf or <café> tea-room, R for moment – 'alf a mo, etc.

My source is: various old hams and the Cambridge Encyclopedia of English. There are also some alternatives to some letters, like R for <Arthur> and the knights of the Round Table, I for an eye, and O for there, among them.

AWARDS

Can you help? Dennis Green, ZS4BS, came across the following South African awards, but only the names, no other information. Does anybody know about these awards?

6x6 Award
6 In 6 Award

W-38-Z Award
WWT Award
Worked All Branches QRP
Bartolomeu Dias Diploma
WSCB Worked South Coast Branch Award
Highveld Branch SARL Award

The last two would probably have stopped in 1996 when branches ceased to exist and clubs took over. The Bartolomeu Dias Diploma was possibly a one of a kind with the celebrations of the gentleman visiting our shores many, many years ago.

THANKS TO *RADIO ACCESSORIES*

Following discussions between Radio Accessories and Data Modes and the SARL, an agreement has been reached that, if a radio amateur makes a minimum purchase of R6 000 in one transaction, Radio Accessories and Data Modems will pay that radio amateur's membership fee for this year.

All the information is available on the SARL web site at www.sarl.org.za. We thank Sam Ford for this initiative to help increase SARL membership.

CONGRATULATIONS TO LOUIS DE BRUIN ZS5LP

The SA Amateur Radio Development Trust congratulates Louis de Bruin ZS5LP for his winning design of an audio mixer and controller.

The Trust announced the competition for the design and a prototype earlier this year for a unit to facilitate SARL on the air programmes such as the President's net. The prize money is R2000 plus R3000 to build a prototype unit.

7100–7200 MHz BAND

As from 1 January 2005, WRC-03 allocated the band 7100 – 7200 kHz to the Amateur Service in Regions 1 and 3 on a co-primary basis with broadcasting. After 29 March 2009, 7100 – 7200 kHz will be allocated to the Amateur Service on an exclusive basis throughout the world, except in some Region 1 and Region 3 countries.

The FCC said it doesn't think it needs to update its Part 97 Amateur Service rules until administrations in Regions 1 and 3 implement changes to allow amateurs to transmit in the 7100 – 7200 kHz segment.

Amateurs in South Africa must NOT use this segment of the band until we are authorized to do so by ICASA!

MARKET REEF

Members of the World Wide Young Contesters (WWYC) plan to activate this reef as OJ0YC between 23 and 26 September. The team of operators include Mike SM3WMV, Thomas OZ1AA, Colin KU5B and Pat OH6GDX at the moment.

The DXpedition's goal is to be a multiplier in the Scandinavian Activity Contest (SSB), and to be on the air as a serious competing station too. They will also work a bit of RTTY during the contest the same weekend, but the main focus will be on the SAC SSB.

Apart from HF, OH6GDX will mainly be focusing on working 2 meters (maybe also 70 cm). Activity on 2m will be at least on the FSK441a, CW, SSB, FM modes. Mike promised to work some 6m QSOs too.

The OJ0YC team now has a Web site at: http://oj0yc.m3php.net/

QSL via OH6GDX: Patrik Willfor, Langviksgatan 24 B13, FI - 65100 Vasa, Finland.

FIRST DONATIONS FOR THE 2004 IARU FUND RECEIVED

The South African Amateur Radio Development Trust has received the first donation for the 2004 IARU membership fund raising campaign.

The Trust has undertaken to raise funds to continue the SARL's membership of the International organisation. Thanks go to Robin Seal, ZS5MRS, and Marten du Preez, ZS6ZY, for their contributions.

Donors should direct their contribution to the IARU fund to the SA Amateur Radio Development Trust at P O Box 90438, Garsfontein 0042. The bank account number is 560 142 722 ABSA Menlyn. The branch code is 335-645.

Condolences: Our condolences go to the family and friends of Raphey Schauder, ZS2SP, who passed away on 14 June at the age of 90 years. He was active on the air until his passing. Raphey held an Ou Toppie award from the Club, which we believe was the first one that we issued.

To those celebrating special days ***(18.7 to 21.8)*** *we say*

Have a Happy Day...

... on your birthdays

July

19 Bill Browne ZS2BY
19 Arthur Baynes ZR2ARB
20 Vic Olivier ZS2SZ
20 Sally Jacobs, XYL of Donald ZS2BW
22 Beavan Gwilt ZS2RL
29 Des Pettit ZS2ABU

August

1 Clive Swanepoel
2 Anita Human, XYL of Jacques ZR2XTC
4 Brenda Whitehead, XYL of Allan ZS2R
5 Ednna Swanepoel, XYL of Clive
6 Julia Atteridge, XYL of Bill ZS2V
7 Emmie Venter, XYL of Martin ZS6AZV
7 Dawn Hislop, XYL of Derek ZR2DJH
8 Johan van Zyl ZS2Z
10 Hermanus Nell ZR2NH
15 Serge Smetryns ZR2SJE
15 Annamarie Barnard, XYL of the late Attie ZS2Q
17 Jan van Ree ZS2JW
18 Al Akers ZS2U
18 Ellen du Plessis, XYL of Chris ZS2BST
18 Maggie Moore, XYL of Ian ZR2IJ
19 Maureen von Rahden ZS6AVD
21 Martie Borello, XYL of Richard ZR2RB

... on your anniversaries

July

28 Libby & Mike Hanslow ZS1RMS

August

1 Ginny ZS2GIN and Pat Pullinger ZS2PJP
18 Margaret ZS2HM and Jim France ZS2JF
20 Ria and Paul de Vos ZS2ABY

Thanks – Nico Oelofse has donated an amount of R50 towards Club finances. Many thanks, Nico!

Moving – Mel and Beavan Gwilt ZS2RL are moving to a house in Aldersgate in the next few weeks.

Your Society's Committee

Chairman, Awards.....	Rory Norton ZS2BL	585-9330	rory@commco.co.za
Vice Chair, ...	Chris Scarr ZS2AAW	368-1344	cvscarr@intekom.co.za
Secretary, Internet Website	Barry Murrell ZR2DX	083 717 9210	zr2dx@mnet.co.za
Treasurer; Assets Control.....	Clive Fife ZS2RT	367-3203	cfife@absamail.co.za
Repeaters, packet,.....	Chris Scarr ZS2AAW	368-1344	cvscarr@intekom.co.za
Social, Refreshments,.....	Bill Hodges ZS2ABZ	581-2580	whodges@absamail.co.za
Special Events	Ewalt Bouwer ZS2EHB	933-3482	ewalt.b@freemail.absa.co.za
QSX printing and info.....	Ashley Goosen ZR2AG	372-2052	ashleygoosen@xsinet.co.za
QSX Editor (ex com).....	Garth Laaks ZS2HB	368-1101	glaaks@iafrica.com
QSX distribution (ex com)....	Trevor Scarr ZS2AE	367-1746	t&j.scarr@intekom.co.za
Technical Classes (ex com)...	Al Akers ZS2U	360-2983	makers@firestone.co.za

PEARS' VHF/UHF & Other Services

REPEATERS

Town VHF .....# 145,050/650
Town UHF .....# 431,050/438,650
Cockscomb 145,000/600
Colesberg ..... * 431,075/438,675
Cradock ..... * 145,050/650
Grahamstown ..... * 145,150/750
Knysna .....* 145,075/675
Lady's Slipper.....* 145,100/700
Noupoort.....* 431,150/438,750
Uitenhage..... # 145,075/675

* These form the PEARS long-range 2-metre repeater system, also linked to which are East London 145,775 MHz, George 145,700, Danabaai 145,600, Stilbaai 145,750, Butterworth 145,725, King Williams Town 145,625 and Umtata (438,725 duplex). It is further extendable to Cape Town via the WCRWG system. # These can also be linked as required.

OTHER SERVICES

Packet Bulletin Board (ZSØNTP) 144,625
Packet Rose Switch ZSØGHT-3,046101 (144,675 in/out) or 046102 (UHF out to BBS)..... 144,675
2m Beacon (ZS2VHF CW ID, FSK) (horizontally polarized, 160W ERP,) 144,415
6m Beacon (ZS2SIX CW ID) (horizontally polarized, 25W ERP) 50,005
6m Simplex Link with Lady's Slipper 2m Repeater (vertically polarized) 51,400

Sunday Bulletins

PEARS bulletins are transmitted on Sundays immediately after the SARL English transmission, i.e. at about 08:45, on 7098 kHz as well as the 2 metre linked network that provides coverage from East London to George as well as Cradock and environs. PEARS' 7098 or 3640 kHz transceive facilities are also remotely linked as needed. In addition, the SARL's 40m operations on 7082 or 7066 kHz or Hamnet's 7070 kHz can be remotely patched to the 2m network, in receive-only mode or with full transceive capability for interactive events.

Date	'repare and Read on 2m Repeater Link
11 Jul	ZS2AAW
18	ZS2RT
25	ZS2ABZ
1 Aug	ZR2DX
8	ZS2BL
15	ZS2EHB

DIARY DATES

JULY

15 **PEARS MONTHLY MEETING** & **VW RALLY INFORMATION**
24 July: AMSATCON2004, Durban
26 Deadline: Radio ZS articles

AUGUST

5 Wrinkly Rave

*** We like being *your* Society ***