

Newsletter
of the
West Rand Branch
of the
South African Radio League

Nuusbrief
van
Tak Wesrand
van die
Suid-Afrikaanse Radioliga



AUGUSTUS 1991 AUGUST

WEST RAND BRANCH COMMITTEE 1991/2

			HOME	WORK
CHAIRMAN	Philip Conradie	ZS6CON	763-4673	773-3827
VICE CHAIR	Wally Sime	ZR6ARX	672-7958	886-7438
SECRETARY	Gill Dorfling	ZS1234	764-6052	763-6161
TREASURER	Des Dorfling	ZR6DED	764-6052	783-4480
TRAINING	Garth Blain	ZS6BXT	672-6161	339-5311
TECHNICAL	Johan v Vuuren	ZS6JVV	955-2788	760-3018
				X 226
TECHNICAL	John Murdoch	ZS6MUR	760-1426	714-5338
CLUBHOUSE	Keith Liddle	ZS6AGF	766-3293	638-2592
LIBRARY	Chris Botham	ZR6AVA	673-2726	376-2310
CW/CONTESTS	John Forbes	ZS6AOP	673-1642	493-2900
PUBLICATIONS	Alan Franzsen	ZS6BIK	786-8995	638-2808
CONTESTS	Clive Carr	ZS6CLC	763-4692	
PRO/CIV DEF	Sarel Rossouw	ZS6APO	768-2091	332-8183
HAMNET	Wally Sime	ZR6ARX	as above	
CATERING	Dave Lloyd	ZS6ACC	763-5128	407-4684

BULLETINS

Sunday / Sondag 11:30 SAST
 145.625 MHz FM 7.066 MHz SSB 51.625 MHz FM

Heruitsaai / Rebroadcast
 Woensdag / Wednesday 19:30 SAST
 145.625 MHz

Monthly Meeting / Maandvergadering

Tweede Maandag van die maand om 19:30 SAST

Second Monday of the month at 19:30 SAST

KLUBHUIS / CLUBHOUSE

Stand 2447 - 2449 Erf Krotonstraat
 WELTEVREDENPARK EXT/UITBR 12

WEST RAND BRANCH - SARL
 P.O.BOX 562
 ROODEPOORT
 1725

TAK WESRAND - SARL
 POSBUS 562
 ROODEPOORT
 1725

GENERAL BRANCH NEWS

August was a busy month with many activities at the Clubhouse as well as on the air. The Branch participated in both the HF phone contest as well as the HF CW contest. John ZS6JON and Roy ZS6QU should finish near the top, and with all the support from other members, the West Rand should do well as regards branch participation.

The CW interest group continues to flourish with regular workshops and on the air sessions. Roy ZS6QU, John ZS6AOP and Alan ZS6BIK have been appointed as morse code examiners/moderators and conducted the first test during August. Theuns ZR6MJR now also sports the call ZU1AAS, and he made history by being the first South African amateur to hold both a ZR and a ZU licence. Roy's CW sessions continue most evening at 19:00 on 3523 kHz and are well supported. So far he has had over 20 stations calling in from as far afield as Cape Town and Harare.

Tydens die laaste komiteevergadering het Dave ZS6ACC ingewillig om weereens behulpsaam te wees met die organiseering van verversings. Ons dank aan Dave vir sy moite en opoffering. Chris Botham ZR6AVA sal gedurende September of vroeg in Oktober begin met tegniese werkwinkels vir amateurs wie belangstel in elektroniese konstruksie werk. Skakel gerus vir Chris vir verdere besonderhede.

Daar word beplan om op Woensdag 9 Oktober 'n spesiale stasie op te rig by burgelikebeskerming in Krugersdorp. Hierdie stasie sal deelneem in 'n wêreldwye burg-b dag.

Kyk gerus uit vir die Tak bulletin op 6 meter op 51,625 Mhz op Sondaar. Hierdie herlei word behartig deur Will ZR6WX.

Ons gas spreker vir die September vergadering is Tasso Karantonis van die Hartebeeshoek Satellietstasie. Hy sal gesels oor RF en satelliet/ruimte kommunikasie.

ACTIVITIES

SEPTEMBER

- 1 SPRING - FAMILY - QRP OUTING
- 7 and 8 th HF FIELD DAY
- 21 and 22 VHF/UHF COMPETITION
- 27 RIE until OCTOBER 6th.

OCTOBER

- 9 BURG-B STASIE
- 19 + 20 JOTA

Remember the regular CW workshops ever Tuesday at 19:00 for novices and every Saturday at 14:00 for both novices and advanced operators. The homebrew/grp meetings on the third Monday of each month are open to all who would like to learn about the technical side of amateur radio, it is open to all ie. members or non-members. Also listen out on 3523 kHz most evenings at 19:00 for ZS6QU (Roy) sending 15 WPM CW on behalf of ZS6WR.

SOUTH AFRICAN RADIO LEAGUE: WEST RAND BRANCH

1991 MAGALIESBERG STEAM/CYCLE RACE

As with past years this event has come and gone. On behalf of the organisers we would like to thank all the members who participated so ably and gave up their time on Sunday morning 11 August.

The feedback received from Roodepoort Civil Protection albeit on an informal basis indicates that there is little ground for complaint insofar as the Amateur Radio side is concerned. However Sarel and Wally will be attending the de-briefing to be held on Wednesday 28 August and will advise participants what transpired.

From an initial perspective I have compiled the following list of successes and hope that you all share them. I must stress that these are my own thoughts and have not aired them with either of the above fellow organisers!!

- The radio discipline on all the frequencies was good
- All frequencies worked well especially the repeater which we could not have done without.
- Communications with the Civil Protection Control Room proved to be a boon.
- Generally the event went smoothly largely thanks to Oom Jan ZS6BAA and Peter ZS6ZM for doing the "RF Recce" during the week preceeding the race
- Clive and Nick ZS6CLC and ZR6NIC respectively did a sterling job of work as the sweep car. Simeone ZS6SIM whilst being "unemployed" (thank heavens!!) was likewise a tower of strength on whom we could rely upon should we have had call for an ambulance.
- Frans ZS4FH wearing his "4x4 hat" and operating their control station interacted very successfully with us. Like Simeone, had an emergency arisen we could have called upon them for assistance with little effort.

Enough of the self-praise!! Now for the bad news.

- The control station at Magaliesberg probably suffered the worst. Faulty co-ax cable and being a touch late up on frequency were the only major things to go wrong we could find.
- Jim ZS6BAL and Cliff ZS6BJU had great difficulty in being allowed in the finish area. This won't happen again so please accept our apologies for the inconvenience. (although at the time hardly an inconvenience rather a disaster !!)
- We needed an operator for each radio/frequency at the control. As a result not all the calls on the various rigs were answered in time.
- Marshalling points seemed to be insufficient especially in the Orient/Maloney's Eye area. This we will resolve with the Lions next year.

A few members have been mentioned by name above and in the thought that the rest of you were not going to be singled out you're mistaken!! I hope that this list is complete, if not apologies. Without all of you this event would not have been possible: Sarel ZS6APO, Keith ZS6AGF, Phillip ZS6CON, Jeff ZS6AUG, Keith ZR6PRO, Chris ZR6AVA, Errol ZS6KED, Johann ZS6JVV, "Lappies" ZR6AVJ, Alan ZS6BIK, Des ZR6DED, Gill, Andre ZS6AWW, Dave ZS6ACC (and their families) John ZS6KY, Steve ZS6YJ, John ZS6AOP, Dave ZR6AOC, Craig ZR6REV, Tony ZS6BJQ, Jon ZS6JON, Peter ZR6AUP (and their family) Theuns ZR6MJR, Henk ZR6AFD and finally Tony, Rex and the family Turton.

Andre and Rina must have a special thanks for the after race party the effects of which were still being felt on Monday afternoon!! For the record the red gas cylinder which I thought had been misplaced after the event turned up- guess where. In the heater where it belongs !! I'm not sure which is redder, the gas bottle or my face !!

That's it until the next year, once again thank you to all of you who participated and here's hoping that many more join us in 1992.

73 Cedar ZS6JQ and unbeknown to them Wally ZR6ARX and Sarel ZS6APO.

MORSE CODE - THE HOLY COW

An article by ZS5ABU reproduced from ERB Carrier - March 1991

Proficient Morse Code operating is a satisfying skill; steady growth of CW interest groups proves this. There was a time when morse ability was about the only requirement for the issue of an Amateur Station license. Now however, the RAE is the prime qualification. Why then is CW still required ? Somewhat akin to a bow and arrow test for a firearm license.

Arguments supporting CW as a license requirement can only be valid relative to the views of other interest groups such as EME, AMSAT, PACKET, SSTV, etc. Who could claim, with some justification in this hi-tech age, that their particular skills should also be license requirements. What chaos !! What is the view of authority. Probably ambivalent Morse Code has always been a license requirement and is now a comfortable tradition but doubtless, deregulation would follow at the request of the Amateur Radio Organizations.

It seems then, that the REAL reason for Morse Code retention is to make Amateur Radio exclusive and therefore in conflict with the often expressed desire to actively promote the hobby. There are other reasonable ways of controlling entry to Amateur Ranks. For instance, a range of Probationary or provisional licences, defined by callsign prefix, either for fixed periods or for upgrade by examination and each with appropriate power or frequency limitations, should do the trick.

Let us then slaughter the Holy Cow and consign Morse Code to where it belongs - in the hands of the CW interest groups, where it will thrive and grow. Remember...The spear, along with the bows and arrows, released from military duty, now have the status as Olympic Sports.

Dear Alan,

I would like to make the following comments regarding ZS5ABU's article reproduced from ERB carrier of March 1991.

- 1) Yes I agree with him, proficient morse code operating is a satisfying skill.
- 2) With regard to his second paragraph he fails to make the observation that CW is a licence requirement for operating on the H.F. Bands. In this regard I would mention that the experts in H.F. Communications who are generally good Morse operators concur that CW is still the most efficient method of communication under difficult band conditions. Obviously under poor conditions the ability to operate CW in a life/death situation would be vital.
- 3) I suggest that ZS5ABU has not really thought the matter through because he also fails to mention that the ZR licence (where CW is not a criteria) caters for operators who could well not be interested in H.F. Communications, but allows operation on most of the Modes he mentions.

I personally consider it in the interest of efficient HF Communication (which is what amateur radio is mainly about) that CW proficiency remain mandatory requirement for a H.F. Licence.

I mention for what it is worth that CW operation on the H.F Bands far exceeds any other Mode of operation except perhaps on occasions such as a Sunday when SSB is prevalent on 7 Mhz.

I propose (tongue in cheek) now that we have our own examiners to take the load that CW proficiency be a requirement of H.F. (ZS) renewal annually - That will have some ZS - shouting Holy Cow !!!

73's Roy ZS6QU

A SIMPLE INDUCTANCE METER - H.T.Stanley - ZS6AZJ

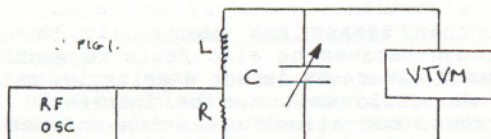
Every experimenter has had the experience of winding coils for some special circuit, only to find that the inductance is wrong, and that turns have to be added or removed. This can be an awkward task once the coil has been mounted.

It seemed like a good idea to build a simple inductance meter, particularly one which would measure within the range of 0.5 to 20 microhenries.

On page 294 of the Radio and Electronic Laboratory Handbook, by M.G.Scroggie, will be found outlines of three classes of RF measurement methods for inductance. I chose outline (a) the "Direct-reading Q-meter", since I had used this in the rough bench-testing of inductances.

This is the diagram :-

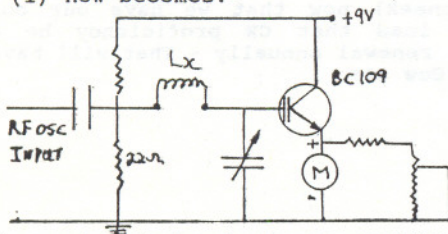
(1)



With this circuit the voltage across the coil at resonance can be measured, and if the level of RF injection is known, then the magnification or Q can be calculated.

The main reason for the meter however, is inductance measurement, but a comparison of the meter "kick" with various inductances soon shows which have the highest Q.

Diagram (1) now becomes:-



$M = 100 \mu A @ 1 k\Omega$

$L_x = \text{UNKNOWN}$

All that remains is to design an oscillator to feed into the measuring unit.

The obvious choice was a FET Hartley circuit which has been well tested in various QRP projects. Two frequencies would be needed for the two inductance ranges. They would be changed by means of a simple toggle switch.

The variable capacitor C used in the project had a range of 14 to 310 pF. This gave two ranges of 0.2 to 3.0

3.0	"	- 1.0 and 2.0 in series
4.0	"	
5.0	"	- 1.0 and 4.0 in series
6.0	"	- 2.0 and 4.0 in series
7.0	"	- 1.0, 2.0, and 4.0 in series

These can also be used to fill in the calibration gaps in the high inductance scale. Many other combinations are possible. For instance, if one connects the 1,2,3, and 4 microhenry inductors in parallel, we get $0.66 + 4 = 0.57$ microhenries.

$$0.66 \times 4$$

Briefly then, to sum up:-

- i) The two inductance scales can be calibrated with say 5 commercial midget inductances (1,2,4,5 and 10 microhenries.
- ii) The crossover point of the two scales is at about 3 microhenries. The 1, and 2 microhenry inductors in series can be used to define this point. Connect them to the terminals.
- iii) Switch to the high inductance scale (low frequency scale which has the 280 pF fixed cap in parallel with trimmer). Set C to fully closed (maximum capacity) and adjust trimmer for upward "kick" on meter.
- iv) Switch to low inductance scale, set C to fully open, and adjust the other trimmer (high frequency) for upward kick on meter.

The two scales now have a common 3 microhenry overlap point. The rest of both scales can now be calibrated using combinations of the inductors previously mentioned.

A LATER CIRCUIT SIMPLIFICATION.

The more experimentally minded may like to try the simpler version as in Fig 5.

73 es good luck

Hayden Stanley.

PARTS LIST :

RESISTORS

2 x 100 k
1 x 100Ω
1 x 15 k
1 x 560Ω
1 x 1k
2 x 270Ω
1 x 33Ω
1 x 1K PCB Preset
1 x 10k Pot

CAPS

2 X 50 pF min trim
1 X 280 pF cer
1 X 100 pF cer
1 X 10 pF cer
2 X 0.05 μF
1 X 0.005 μF
1 X 0.01 μF

SEMICONDUCTORS

1 X BF 256 A
3 X BC 109

L1 = see text
S1 = SPDT min
M1 = text
C(var) = text
S2 = PTM
B1 = PM9

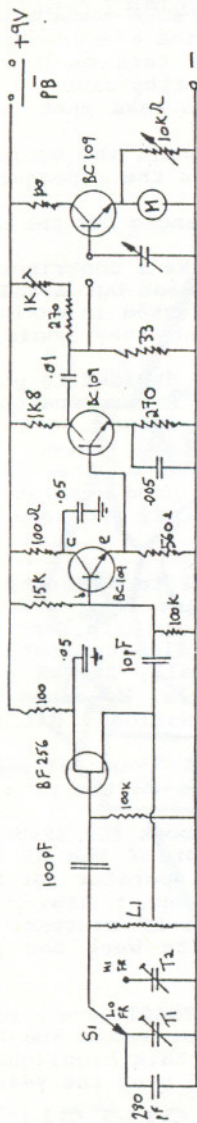


FIG. 4.

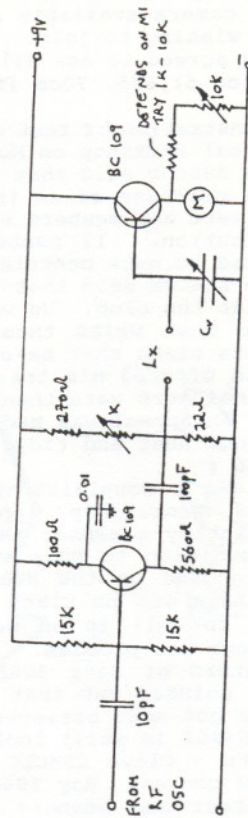


FIG. 5.

SOUTH AFRICAN RADIO LEAGUE : WEST RAND BRANCH

MINUTES OF THE BRANCH MEETING HELD ON 12 AUGUST 1991

Present as per the register - 46 members 5 visitors and 7 apologies. The minutes of the previous meeting were read by Gill ZS6-1526.

Wally ZR6ARX reported back on the Steam Cycle event and mentioned that it was regrettable that some members were late in reporting in. It was agreed that the event went off successfully. Wally ZR6ARX gave a short talk on Hamnet. Philip appealed to members to join this worthy cause. There was a camera available at the club to take photo's of those wishing to join.

It was agreed to ask Will ZR6WX to retransmit the bulletin on 6m on 51,625. 70cm is not a problem as the repeater is on.

A demonstration of test equipment was arranged for the next technical workshop on Monday 19 August.

Philip ZS6CON said that the club would make a contribution to the purchase of an international callbook but asked if there were any members who would be interested in making a contribution. 12 members indicated that they would be prepared to make contributions.

Philip ZS6CON said that the committee had decided to plant trees at the club. He would speak to the Parks Department and we must write them a letter. Dave ZR6AOC said the concrete slabs that he offered were still available.

Oom Jan offered his trailer for collections of the slabs. The pensioners were thanked for all their hard work at the club. An appeal was made for everyone to try and keep the clubhouse neat and tidy.

GENERAL :

There was a complaint that Hamnet took 3 to 6 months to process membership applications. There was also a complaint by a member that he had wanted to help, and was in a position to help with the Oceanos disaster but had been ignored on the Hamnet frequency. Wally ZR6ARX said that there was no place left between calls. He asked the member to call in on Wednesday on the National Net and point out his problem.

The return of Dave ZS6ACC behind the bar was welcomed. Philip pointed out that Dave's return was on the proviso that he got more assistance from members.

John ZS6AOP is still looking for the log book for ZS6WR. Contests - Clive ZS6CLC was the organiser of the HF and also CW contest. Roy ZS6QU was to be the operator for the CW contest and members were asked to support him. John ZS6JON was thanked for his effort in the HF contest. He achieved 291 points but the final results were not yet available.

TOPIC OF THE EVENING :

After a short break for refreshments, Ted ZS6BT gave a very interesting talk on the history of amateur radio and his personal involvement in this field. The talk highlighted the great progress which has been achieved over the years.

NOTE: Minutes abridged by Ed. in order to fit into Anode.