



# AWA Newsletter

Issue 39

March 2009

## Antique Wireless Association of Southern Africa

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## Reflections:

It's amazing, is it not, we are nearly three months into the new year already. My, how time goes by so quickly without us even getting an opportunity to really do so many of those things we have planned to do.

I know that I for one, have made so many plans about things I wanted to do last year, and have not achieved half of them.

For instance, my tower, which I had promised myself would be up by the end of December 2008, is still lying flat on the ground next to a 2m deep hole, ready to be put in place and hoisted in to position. Yet, time eludes me and I never seem to get around to organising the labour to get the job done.

My Collins 75A-4 receiver is waiting to be pulled open to see why it won't receive on AM. I wrote in to the Collins reflector asking advice on what the problem could be and received more than a few suggestions on where and what to check, yet I don't have the time to get it from my shack on to the workbench.

Well I'm certainly not going to get myself all depressed about the situation, because there are still so many things that do go right and do get done in the time that we have available. The best of all is I still have time to play Amateur Radio, which is what really counts.

The AM, CW and SSB nets are the highlights of my week and just to be

able to get out in to the shack and work all the stations we do, makes up for a lot of other short comings.

Even with the tower on the ground, I still have a multi-band wire antenna in the air which enables me to work many stations in many countries with the present band conditions prevailing. With the 75A-4 not receiving AM, I still have a receiver quite capable of receiving AM signals, so all is not lost.

I have a lot to be thankful for in the world of Amateur Radio, with some awesome friends out there willing to spend time chatting with me. I just hope you are one of them?

CU on freq.

Best 73

De Andy ZS6ADY

### AWA Committee:

- \* President—Rad ZS6RAD
- \* Technical—Don ZS5DR
- \* Net Controller—Willem ZS6ALL
- \* Newsletter/PRO—Andy ZS6ADY

## CW Activity Day

Well here are the results and some figures from the CW activity day held on the 7th and 8th of February.

The highest score came from Pierre, ZS6BB with 60 points. Pierre scored a total of 30 contacts on 40m and 80m, at 1 point each but doubled it by operating QRP. Next was Pieter ZS3AOR with 18 points and then Jan ZS4JAN with 17 points.

There were a total of 28 participants with the majority of contacts taking place on 40m

Charles ZS1CF was nominated by a few as having the best CW during the activity.

Congratulations Pierre and all those who took the time to take part in the activity day. Here's to next year and a lot more activity.

## CW Net:

The highlight of this month has to be the CW Activity Day on the 7th to the 8th of February. Held over a 24 hour period, the activity ran from mid-day on the Saturday to mid-day on the Sunday.

The great thing about it was hearing all the various stations that took the time to come up and do some CW. All of the stations that I heard were running a reasonable speed (even I could read them all ) and there was some pretty good CW happening out there.

Charles ZS1CF was nominated by at least 3 stations for having the best fist, so well done to Charles. The highest score was from Pierre ZS6BB who had 30 contacts, but also was the only QRP station out there and so earned himself double points. Pierre persisted with his QRP although on

several occasions wanted to go back to 100w after battling with the Div 1 stations.

All the messages received after the activity were positive, both emails with the logs sent in and on the SARL Forum. Everyone thanked us for a great event, but really the thanks should go to those who took part in it and made it a success.

Adrian ZS1TTZ, sent a picture of the straight key he used for the contest. He also says he is a paddle boy, but decided to use this key. After the first two QSO's he felt like his hand was going to fall off. He also says the key was manufactured locally and wonders if any of the old timers might know any more about these keys ?

And so it was that the day drew to a close and everyone who took part seems to have enjoyed themselves. I ran my station under



Adrian ZS1TTZ Straight Key

ZS0AWA, making 10 contacts in total, but enjoyed listening to so many of the other stations taking part.

Well done guys. We look forward to hearing many more on the next one.

73

De ZS0AWA/CW .....-

## SSB activity:

I have decide I'm not even going to talk about propagation any more as I never get it right. One thing I have noticed though is there are still many people on the bands, undeterred by band conditions, making contacts out there.

Willem has become obsessed these days with getting call signs from all the area's and so far he seems to be getting it right. "Going National" is what Willem calls it and for the past few weeks we have had call in's from all Divisions. Well all of the local ones any way. It would be really great to get a ZS8 call logged, but I don't think there's much

chance of that happening.

So with regular use, we are averaging around 20 calls on a Saturday morning between 40m and 80m which certainly keeps us busy for a while.

This of course just strengthens the whole idea that the AWA has become more than just the flash in the pan that so many thought it would be. There is a genuine interest out there for antique rigs and a real interest to restore them.

At least every month there are one or two more people joining ranks with us, asking for a copy of this newsletter to be mailed to

them either by e-mail or snail mail. At present, our membership is over 100 strong. I dread the day when everyone decides to call in on the SSB net.



KW Viceroy MkIII

## AM:

Some welcome new voices heard on the AM net this month were Munro ZS5IN and Garnett ZS5ZT. Of course conditions weren't the best, but they were both running good 5/9 signals in to Div 6.

The storms certainly haven't abated at all here in Div 6, in fact they have become worse, with a lot of flooding going on in certain area's. Yet we have kept ourselves busy with our AM stations putting out signals whenever we can.

Don and I were chatting the other day

about AM and AM power output etc, so you can expect an article soon on AM once Don has managed to do some tests and get some data together. It may lead to some interesting points and hopefully an improved understanding about AM. Lets face it, there are not that many purely AM operators around any more and somewhere along the line I believe we may have lost a bit of the info that was needed to operate an AM station effectively. It's quite easy to operate at 1Kw on AM and be heard across the

country, but it's something else to operate at 25w or 30w and still be heard across the country. Looking forward to that one.



A B17 Bomber Radio Operators Corner

# Air-line Radio

## Equipment for Operation on Long Routes

A GOOD idea of the radio equipment of a large modern air-liner is given by the accompanying photograph, which shows the gear installed in one of the Tudor IV aircraft of British South American Airways.

J. A. McGillivray, radio superintendent of B.S.A.A., makes some interesting comparisons between the present gear and that installed in the earlier Tudor I. That aircraft carried, for main communications, two American

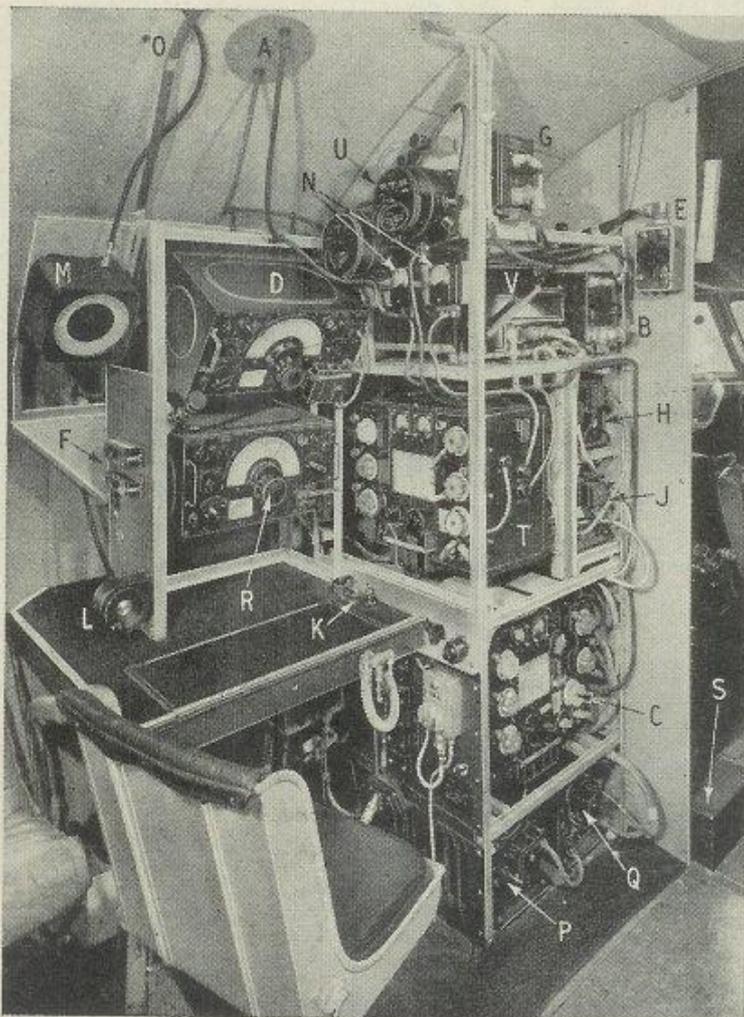
Bendix 100-watt sets with crystal control of 8 channels per set. Though crystal control is in itself an advantage, the 16 channels provided by the two sets are insufficient for all the requirements of B.S.A.A.'s long route, which extends to Santiago, Chile. Consequently, the R.A.F.-type TR1154/1155 40-watt equipment has been chosen. This gear, with its master oscillator control, has the disadvantages of low power and a tendency towards frequency drift, which have to be overcome by operating skill. The advantages are a large saving of weight plus standardization: the TR1154/1155 is widely used in B.S.A.A. aircraft.

For short-range work, the two American SCR274 sets with three receivers, as fitted in the Tudor I, have been replaced by a second TR1154/1155, again with a saving in weight, but also with the sacrifice of the simplicity of crystal control. Avoidance of duplication in equipment is another gain.

The D.F. installation, comprising a manually operated loop working with the R1155 receiver, plus a Marconator set providing direct readings of true bearings. Mr. McGillivray points out that automatic direction finders suitable for aircraft use are expected to be available soon in this country, and it is hoped before long to replace the manual gear by automatic.

A.S.V. radar equipment was installed in the earlier aircraft, but this has been replaced by Rebecca-Eureka equipment, for which the appropriate ground beacons have been installed by B.S.A.A. along its routes. This substitution makes a small saving in weight.

The radio altimeter and blind approach gear are as originally planned. Unfortunately, the failure—as yet—to attain standardization of ground equipment makes it necessary to carry receiving equipment for both the Standard Beam Approach and the I.L.S. system.



Radio installation on one of the latest Tudor IV aircraft of British South American Airways. A, aerial leads-in; B, approach beam receiver (108-111 Mc/s); C, short-range transmitter; D, D.F. receiver; E, inter-communication box; F, fuses; G, glide-path receiver (332-335 Mc/s); H, H.T. generator; J, L.T. generator; K, morse key; L, loop control; M, Marconator; N, aerial ammeters; O, loop lead-in; P, L.T. generator; Q, H.T. generator; R, main communication receiver; S, standard beam approach receiver (33-40 Mc/s); T, main communication transmitter; V, V.H.F. transmitter-receiver.

## "Boat Anchor" Paints

by

Glen E. Zook, K9STH  
(copyright 2007 by author)

Every so often I get repeat requests for the formulas of the paints that I use on boat anchor cabinets. Here are the formulas from Sherwin-Williams of the cabinet colours that I have had matched to date. Note that these are for 1 quart unless otherwise noted. Also, all but 2 of these I now have in acrylic (which dries MUCH harder than normal enamel) and all are water-based except for the Johnson maroon which also has an oil base formula. The 2 that I have not yet acquired in acrylic are for latex enamel but acrylic is available and your local Sherwin-Williams store (and any other paint store that has paint mixing capabilities) can provide acrylic paint using the same color formulation.

I always prime the cabinet before painting and what I use is the "el cheapo" primer from WalMart which costs 97 cents for a 10 ounce spray can. It is ColorPlace Gray Primer #20010.

For a medium "crinkle" I overspray the primer with Rustoleum "Stone Creations". This comes in several colors but I have found that the gray color seems to work best. You have to hold the can between 14 inches and 18 inches away from the surface and spray in very short "bursts" while moving the can slightly. It takes a little bit of practice (try spraying on a piece of cardboard) to "get the hang of it".

A paint that generally furnishes a light wrinkle is Krylon 3370 Jet Black. However, you need to apply heat to get it to really wrinkle correctly and then it may not work correctly every time. Therefore, I usually use the Stone Creations paint.

After the "crinkle" or "wrinkle" paint has dried you then need to overspray with the correct color.

Now the paints that I am giving the formulas for require some type of spray paint rig (unless your paint store is one of the relatively few that can load spray cans). There are all sorts of possible solutions ranging from simple arrays that consist of a can that may be pressurized using a bicycle pump all the way to compressors and "real" paint guns. I use a compressor and paint gun but for occasional use those cans that can be pressurized do work (they are available from Harbor Freight and many paint stores).

The formulas:

### **Collins:**

St. James Gray (used on the "A" Line equipment):

Colorant oz 32 64 128

B1 Black 2 - - -

Y3 Deep Gold - 13 - -

Acrylic: Ultra Deep Base 6403-25981

**S-Line Cabinet** (formula is for 1 gallon but store can reduce this for 1 quart):

Colorant oz 32 64 128

B1 Black 4 - - -

Y3 Deep Gold - 62 - -N1 Raw Umber 2 6 - -

Acrylic: Extra White B20 W 51 6403-36442

### **S-Line Trim Ring:**

BAC Colorant oz 32 64 128

N1 Raw Umber - 17 - -

G2 New Green - 1 - -

B1 Black - 2 1 -

Y1 Yellow - 1 - -

Acrylic: Extra White B20 W 51 6403-36434

**Hallicrafters**

Cabinet gray (HT-37, etc.):  
BAC Colorant oz 32 64 128  
B1 Black - 21 - 1  
N1 Raw Umber - 21 - -  
Y3 Deep Gold - 5 - 1  
W1 White - 12 - -  
Latex Enamel: Deep Base 6405-13974  
(available in acrylic, store can use proper base)

**Heath**

Apache Green  
Colorant oz 32 64 128  
B1 Black - 32 - -  
G2 New Green - 16 - -  
Y1 Yellow - 12 - -  
L1 Blue - 12 - -  
W1 White - 8 - -  
Acrylic: Ultra Deep Base 6403-25981

**SB-Line Cabinet** (this is one of the 5 different colors that Heath used and is, in my opinion, the best looking of the 5):

Colorant oz 32 64 128  
B1 Black - 7 1 1  
L1 Blue 6 1 - -  
N1 Raw Umber - 62 - -  
Y3 Deep Gold - - 1 1  
Acrylic: Extra White B20 W 51 6403-36434  
DX Cabinet (DX-20, DX-35, DX-40, DX-100):  
Colorant oz 32 64 128  
B1 Black - 24 - -  
N1 Raw Umber - 40 - -  
R3 Magenta - 3 - -  
Latex Enamel: Deep Base 6405-13974  
(available in acrylic, store can use proper base)

**Johnson:**

Maroon (Ranger, Valiant, Pacemaker, etc.):  
BAC Colorant oz 32 64 128  
B1 Black - 22 - -  
R3 Magenta - 6 - -  
R4 New Red - 8 - -  
Acrylic: Ultradeep Base 6403-25981  
Oil: Ultradeep Base 6403-25775

**National**

Cabinet gray (i.e. NC-2-40DT):  
Colorant oz 32 64 128  
B1 Black - 41 1 -  
R2 Maroon - - - 1  
Y3 Deep Gold - 6 - -  
W1 White - 18 - -  
R4 New Red - - 1 1  
Acrylic: Ultradeep Base 6403-25981  
"Off the Shelf" or "standard formula paints for those who do not want to get their paints specially mixed.

**Collins KWM-1:**

Standard formula paint ASA 61 Gray. This is a "standard" industry formula and should be available at just about any paint store. ASA 61 is an "exact" color match to the KWM-1.

S-Line cabinets (not trim ring). Real close (but not a cigar) "off the shelf" is Rustoleum 1982 Winter Gray.

**RME**

Cabinets from the late 1930s to the 1950s. Really close "off the shelf" is Krylon 1608 Smoke Gray. I do not have any other paint "matched" at the present time. The formulas are presented for those who are wanting to repaint their equipment the original color.

Most of the radio manufacturers did NOT prime their cabinets before painting. I do NOT recommend painting over the original paint because this will often cause the original paint to "flake off". You need to completely strip the original paint (sanding where necessary) and then prime the cabinet. Then paint it with the desired color.

## Don's Technical Tip

### Article 3. Live Rigs

Have you ever powered up your favourite Rig only to find that when you touch it or connect the antenna it gives you a bit of a shock or it just trips the mains as you turn on or plug in.

There are a few possibilities which cause this but the most common are filter capacitors leaking to ground. In some cases just connecting a ground wire to the rig sorts it out but this can also cause the mains to trip and if this happens then you have to go looking.

Unplug the rig from the supply and with the power switch still in the on position take you Multimeter and check the resistance between the chassis and the live and neutral wires. If you get a reading then it is more than likely one of the filter caps on the input supply that has gone resistive. Try cutting these caps out of circuit and with a bit of luck you will find the offending capacitor. REMEMBER only do these tests when the rig has been disconnected from the mains or supply.

You may also have a faulty mains transformer and this could be the precursor to a melt down. If the rig works let it run for a while then turn the power off and check to see how warm the transformer is. If it is too hot to touch then you more than likely need to replace the transformer or have it rewound.



### Original Barlow Wadley

When Cliff ZS6BOX and I visited the South African Institute for Electrical Engineers up in observatory, one of the interesting items on display was this original Barlow Wadley receiver, which was hand made and the forerunner to the production models that came out later.

Of course one can see the resemblance to the production model, just a pity it was not open to see the inside of the radio.

If you have a Barlow Wadley and are looking for more information on it and the many others that are out there, you can go to the website :

<http://www.barlowwadley.it>

and sign up as a member of the site or just read all about this interesting little receiver.

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### Mission Statement

Our aim is to facilitate, generate and maintain an interest in the location, acquisition, repair and use of yester-days radio transmitters and receivers. To encourage all like minded amateurs to do the same thus ensuring the maintenance and preservation of our amateur heritage.

Membership of this group is free and by association.

## Notices:

### KWM2-A Raffle:

This fine rig is still up for grabs and we have decided to do the draw at the Open Day in April at the Rand Airport. Donations for this draw are R50 and should you want a chance to own this 100% valve rig made by Collins, then you need to send your money, either wrapped in a plain piece of paper via snail mail, address at top of this page, (this works well and I have never lost any money yet, but do wrap it in a plain piece of A4 paper) or deposit it to my Savings account using the reference area for your "call sign" and "KWM" :

Andy Cairns  
Standard Bank Benoni  
Branch code 01 30 42 40  
Savings Account  
Acc #: 225334119



We will acknowledge receipt of all donations either by email or snail mail.

### Looking for a Home:

The HRO Receiver with speaker cabinet and power supply donated by Om Barrie ZS6AJY is still looking for a good home. Anyone interested in acquiring this fine old piece of history for refurbishment, can contact any of the committee and make an offer. The rig is in Benoni at the QTH of Andy ZS6ADY.

### Net Days And Times:

AM—Wednesday night 19:00 (QRN Permitting); Friday afternoons from 16:00 (QRN Permitting) 80m—3615  
Saturday mornings from 05:30 80m—3615  
SSB—Saturday mornings 08:30 40m—7070  
CW—Saturday afternoon 14:00 40m—7020