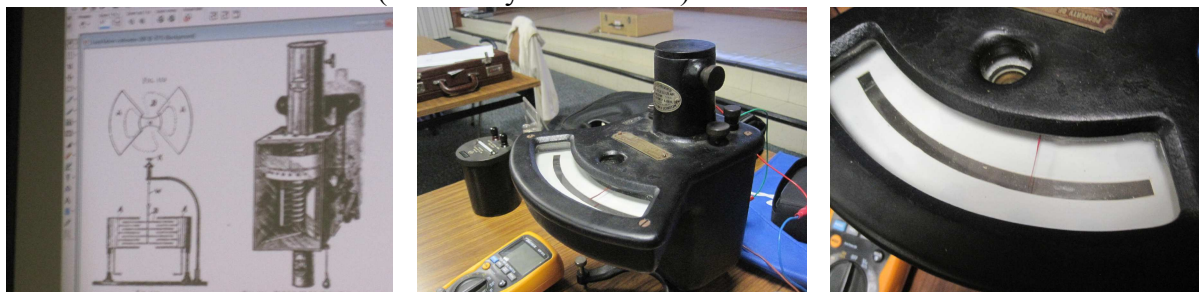


## ADELAIDE HILLS AMATEUR RADIO SOCIETY NOTES JULY 2014

By Christine Taylor VK5CTY

The July meeting was our annual Show and Tell night. This is always a good night because of the variety of items members have made during the year. This evening started with a pair of very old instruments that Lyle VK5LW had been associated with at the ETSA (Electricity Trust of SA) Museum.



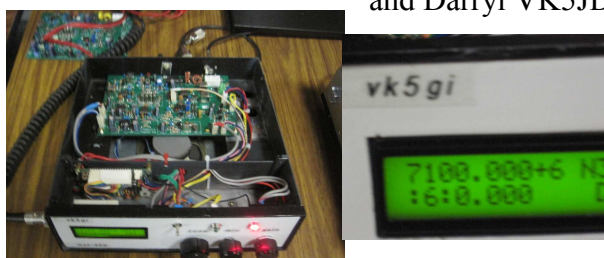
(The set of pictures show a diagram of the meter, the physical meter and a reading on the mirror scale)

Lyle had the task of replacing a broken gold thread. This thread, as thin as a human hair supported a pair of quite robust metal plates in a multi-cellular voltmeter designed by Lord Kelvin. It is an electrostatic meter. When a voltage is applied to the plates (Which are not unlike the plates in a tuning capacitor) it causes a deflection in the gold wire, which is reflected by a mirror onto a scale. As there are no moving parts and no friction. This voltmeter is very accurate.

Lyle also showed us a standard cell such as those used for accurate comparison adjustments to such common devices as the electricity meter in our houses. These must be maintained to a certain level of accuracy for legal reasons.



Lyle was followed by Barry VK5VCM with his 80 metre transceiver and Darryl VK5JDS with the filters he has made for 80 to 6 metres.



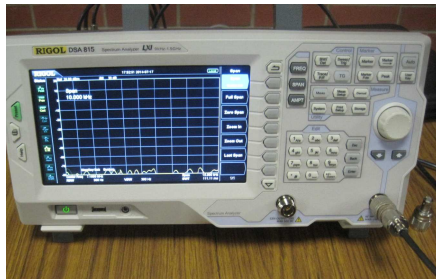
Then we had Norm VK5GI with two beautifully made kit units, one for 40 metre, and one for 80 metre, QRP operation.



Next was Paul VL5JD who showed and explained his electronic logging system the like of which we are all going to have to understand, and use, if we are to enter for future contests. Time has made it necessary to embrace new technologies whether we want to or not. He also showed off a 3.4 GHz transceiver fitted into a standard red tool box. This makes it very portable indeed.

As usual Steve, VK5AIM had some very simple but useful aerials he had made for National Park operations. Basically he had a full wave 80 metre aerial in a jam jar with three lengths of grey speaker wire coiled up. Within the centre was a piece of thin plastic with appropriate slots to keep the coils separated. He had made a 1:1 balun in a PL259 plug that can be mounted in the centre of the dipole. This was also small enough to go in the jam jar. To measure the lengths of the wire, he had bought a standard wheel-on-a-stick (hodometer) from the local hardware store.

(The photo shows the measuring device and the jar with the complete antenna for portable operation)



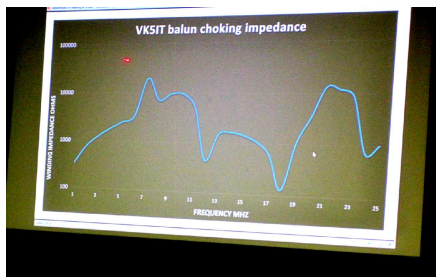
Mark VK5AVQ had been to Gibbstech recently and brought along, for us to see, the spectrum analyzer he had bought there. It showed as being a very nice unit (See photo). If you haven't been to a Gibbstech convention, it is well worth the trip across the border.

Jim VK5JT brought along his new aerial analyzer that can be used down to 2 metres. It is not yet ready for publication or sale but watch this space.

Eric VK5HFE gave us a talk on quartz crystals and some of the ways to determine the piezo-electric characteristics. Most of us have used quartz crystals from time to time without understanding completely how or why they work. This was an interesting talk.



George VK5IT lives in a very noisy area where he has experienced problems. One of the ways he has solved these problems is by using a choke in the antenna circuit. This is a monster choke! Heavy duty coax is wound on a large diameter plastic pipe. It may



look clumsy but it has worked. He had some CRO plots of the signal on 1.8MHz without the choke and with the choke. The difference shown is most remarkable.



The last item was a tiny field strength meter for 475kHz, by VK5TV and illustrated in the photo..



Meetings are on third Thursday of the month at the Blackwood Community Centre on Main Road Blackwood and start at 7.30. Everyone is welcome. Meetings and classes are also run on Saturday mornings at the AHARS Shack at Blackwood, behind

Hungry Jacks. Contact Roy VK5FROY for information about these mornings. You may need to bring tools to the technical classes.