

DDRC Ink

The Official Journal of the Darling Downs Radio Club Incorporated

NOTICES

Next months meetings:

Held at Toowoomba City
Library Meeting Rooms

Management Committee
10th September, 2018

Technical/Social meeting
24th September, 2018:

Office Bearers

President:
David Erdmann VK4DAV

Vice-President:
Klaus Merrets VK4HCC

Secretary:
Sheryl Erdmann SWL

Treasurer:
Kevin Crandell VK4VKX

Contact the club

All contact should be made
to the Secretary of the DDRCi
via email:
secretary@ddrci.org.au
Or by phoning the Secretary
on 07 46961045.

From the Editor's Desk

An exciting month this has been. A new committee was appointed and they have been working tirelessly to bring a new perspective to the club.

Enquiries have been made to the Toowoomba City Council regarding a place for the club to have a stall at the Carnival of Flowers, alas it was too late for us this year. However progress is being made to have a stall next year.

Jamboree of the air is coming up in October, we have secured the Oakey scout hall and scouts to assist with all participants in communicating with their counterparts in other parts of the world and other states. This will assist all those wishing to obtain their communication badges. At this stage, the scout master will try to organise the guides to come as well, she will also be talking to other scout leaders if they wish to attend. All in all it looks that its going to be a very good week end, any members wishing to invest some time toward a great day, your assistance would be greatly appreciated.

The club is seeking to gain a greater community presence with focus on fund raising and community awareness to the clubs activities in order to become a proud ambassador to the hobby of radio communication and electronics.

Another month has passed and we are still waiting for the rain to come, although we had a taste of it with about 5 mm in Cambooya, hope you all had your taste of rain with more than 5 mm. still waiting for the green to show up for the chooks to eat. In the mean time they are creating havoc with the gardens.

Waiting to communicate with
the Space Station.



FOR THE LADIES

As this hobby is mainly male oriented, what about the ladies (yl, xyl) that put up with our radio adventures. Well as I have a lady in my life, I would like to organise a get together only for the ladies, where you can all relax and chit chat about anything that you would find interesting, please send me an email to start compiling numbers and possible venues where all the ladies (with or without licenses) can get together over a cuppa for an afternoon.

I know that we all have other commitments to fulfil, I feel that this would be an opportunity for the ladies to meet new like minded people and establish new friendships.

The radio club is seeking to be more diversified with male and female input. As one member suggested that he would send a recipe from his partner to add to the newsletter, haven't received it yet, Merv.



For those members that are ill or recovering from illness, we wish all of you a speedy recovery and best wishes from the club members.

Kevin (VK4VKX) hope that you are getting better after your sudden encounter with the pavement, hoping that those stitches are not giving you any trouble. However by the time you read this document, your stitches should be gone. All the best from all at the club.



For those members that have a birthday this month the management committee and members, wish you a very happy birthday. Have a wonderful day in the company of your family and friends, don't eat too much cake and always ask for assistance to blow the candles out before the fire brigade arrives.

**2 Metre Net
Every Sunday**

Remember to join us on Sunday mornings at 10 am for the Darling Downs Radio Club 2 metre net, Join our net controller Kevin VK4VKX for a chat and to have a good rag chew.

**80 Metre Net
Every Saturday**

Or if you prefer HF, then join the conversation of 80 meters hosted by Theo VK4ESK, I am sure that you will be able to ask questions and get several responses by a group of very knowledgeable amateurs, after all, this is what amateur radio is all about.

**Scrub Turkey Net
2 metres
Thursdays**

Another well attended net is on Thursday nights commencing at 7:30 pm on the Mt Kynoch repeater 147.050 +ve offset and 91.5Hz tone, this is the Scrub Turkey Net hosted by Merv VK4EM, you might hear a lot talk regarding SSTV and satellite issues.

Social/Technical Meeting

This month Social/Technical meeting was well attended. Bob VK4ZOW gave us a look into the effects of propagation as well as a very interesting video of the earth's tilting and wobble, and the effect the sun has on the earth's climate change.

Bob (VK4ZOW) has kindly donated folders with a number of articles from the Brisbane VHF group. These folders are kept with the secretary Sheryl (SWL) and can be accessed by anyone on application.

Bob VK4ZOW has so generously donated them towards our future library.

DDRCi Future Library



Saturday 11th of August, the club had its By-monthly luncheon, it was well attended with 13 members and their partners. A most relaxing lunch, with lots of good food, laughter and conversation on a range of topics. A good time was had by all, looking forward to see everyone there again on 13th October, 2018 and hearing all your adventures and travel stories.

Satellite Group News and Activities

This month has seen a good amount of SSTV action. The Space Station had been sending a number of pictures which have been captured by several members of this club.



VK4LV's new satellite antenna, I hope that it works as good as it looks. All we need now is some pictures from the satellites to include in this newsletter. What about it Rod?

If you would like more information on the satellites we communicate with and future ones, these two websites will give you a ton of information, thank you Merv for providing this.

<https://www.amsat.org/fm-satellite-frequency-summary/>

<http://radioaficion.com/news/amsat-fm-satellite-frequency-summary/>



August 15 ISS astronauts will launch the satellites SiriusSat-1 and SiriusSat-2 into a free flight.

- The start of EVA 2018-08-15T15:58Z.
- SriousSats deployment from T+00:10:00 to T+00:18:00.
- CubeSats will start to transmit in 15 mins after RBF is removed.
- So, according to plan they will start beaoning about 2018-08-15T16:23Z every 30 secs.

Please, send any information on the received signal from satellites (saw the spectrum, heard the modulation, decoded the beacons) to siriussat@sputnix.ru

To be more interesting - the first three who received the package from the satellites and informed us about this in any way, including automatic sending of the message by our decoder, will receive prizes - the book on the space theme!

Have a successful reception!



"The first Filipino-made cube satellite (CubeSat) has been launched into orbit Friday 17/8/18 afternoon. Maya-1 was launched from the Japanese experiment module called "Kibo" on the International Space Station at 5:45 p.m. The 10-cubic-centimeter satellite, which looks slightly bigger than a fist and weighs only a kilogram, is one of the products of the Department of Science and Technology's Philippine Microsatellite (PHL-Microsat) program." It was turned over to the Japan Aerospace Exploration Agency (JAXA) on May 15 before it was launched to the ISS on June 29. Maya-1 carries two cameras — a wide-angle and a narrow-angle lens — to capture images and minimum resolution videos for research purposes. It also has a Global Positioning System (GPS) commercial off-the-shelf chip, as well as a magnetometer for measuring the magnetic field in space. Two other CubeSats from Malaysia and Bhutan were simultaneously launched yesterday. Meanwhile, another Philippine microsatellite named DIWA-TA-2 is slated to be launched this year.



Vintage/Collectible audio generator for sale, anyone interested please contact Louise at louise-ken@bigpond.com> Make an offer.





If you have anything to **buy, sell, or swap** why not put it in the newsletter so that others can see what you are selling and maybe buy it from you. Send me the details with pictures and I will include it in the next edition of the newsletter.



I am doing a renovation of my bedroom. I have had this Samsung box air conditioner in one of the walls for 20 years. Used it about 10 times. It's good as gold. A little noisy @ 52dBA. It is cool only and rated at 1.8Kw. Will easily cool a typical bedroom. The exterior of it has been under cover all its life and the cabinet was treated with Tectyl 506 to control corrosion at time of installation. There will be black sealant marking around the cabinet where it was sealed against weather penetration into the room. I wouldn't call it pretty but it is very sound. There is an external galvanised holding bracket that goes with the unit tough enough to hold up an elephant. There is a nice timber dress surround for the interior presentation. The surround is currently just painted with clear.

The unit will need a 10amp power cable and plug installed prior to use.

I am donating it to anyone who wants it for free. There may be a possibility that it could be taken to Toowoomba if someone was making the trip from Brisbane.

Anyone who is interested should contact me by regular mail sent to PO Box 1190, Sunnybank Hills Q4109. Published email addresses get scammed and so I am not providing it for this purpose.

From Mike VK4HS

Projects page

A \$1.00 Noise Reducing Speaker

Kill the crackle on the cheap.

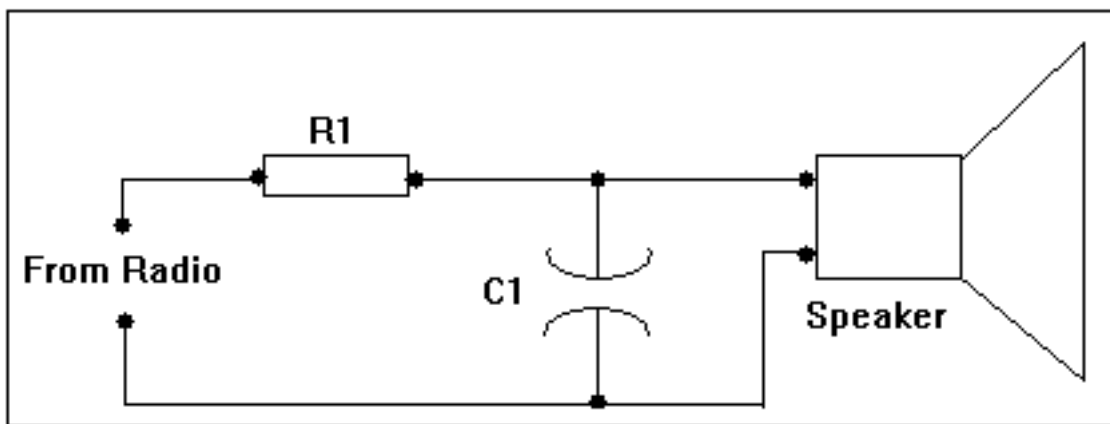
Author, L.D. Blake, VE3VDC

Many a good QSO has been wrecked by that high pitched crackling noise that is common on weak signals. Sometimes it comes in louder than the voice and makes it impossible for you to hear your partner. It's called "Bacon Frying" or "Spike Noise" and it's the enemy of every ham.

Spike noise is a high frequency pulse that rides on top of the voice on weak signals. It is usually the highest pitched sound coming from your speaker and sometimes it's the loudest. Traditionally this has been handled by add on filtering systems using either analog or digital signal processing methods. Only high end (i.e. expensive) rigs have had these devices built in. Whether analog or digital, many low end and mobile radios don't include them.

Fear not! There is a perfectly workable solution to the problem using nothing more than a couple of cheap parts...

The circuit, pictured below, is a simple low pass filter that can be added to any speaker and uses only a pair of 50 cent parts.



Despite the unusual electronic symbol, C1 is a common non-polarized electrolytic capacitor used mostly in speaker crossover networks. It has to be non-polarized because the speaker is working on alternating current. You cannot use a polarized electrolytic capacitor here because under reverse voltage it acts like a short and would cause considerable distortion.

The resistor, R1, is also a common part you can get at any electronics supply house. There is some volume loss due to the resistor being in series with one of the speaker leads but it is barely noticeable and given the benefits, it's a good trade off.

Human speech doesn't require full fidelity audio. Most voice energy is concentrated in the range of 400 to 3000 hz. Most of the really annoying noise is in the range of 2500 to 10,000 hz. Since these two ranges don't overlap very much we can effectively reduce the audible noise on a signal using a low pass filter to remove the portion of the audio spectrum above 3,000hz. This effectively takes off the noise and leaves the voice alone.

The combination of series resistor and shunt capacitor forms our low pass filter. At low frequencies the capacitor appears as an open circuit and all the audio goes to the speaker. At higher frequencies it acts as a short across the speaker, causing this energy to be dissipated across the resistor where we don't hear it.

Values For Minimal Effect		
Speaker	R1	C1
4 ohms	5 ohms	10 uf
8 ohms	10 ohms	4.7 uf
16 ohms	15 ohms	2.2 uf

The part values for noise cancelling with minimal impact on voice quality are on the right. The resistor should be 2 watts or better. The capacitor should be a non-polarized electrolytic type rated for at least 16 volts.

There is no harm in experimenting with different capacitor values to get a tonality you like. Increasing the capacitor's value will increase the noise reduction but will also make voices sound more bassy. Go too far and everything will sound muffled. To avoid excessive losses you should always match the resistor with the impedance of your speaker.

Construction

Adding this to your station speakers is easy:

Take the back off of the speaker you are going to modify.

Unsolder one wire from the speaker connection point. It doesn't matter which wire.

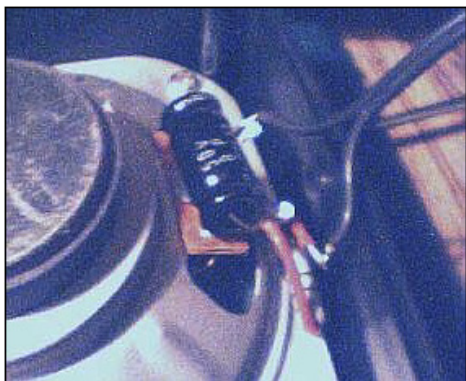
Now solder the capacitor to the speaker's two connections, one wire on each.

Solder one end of the resistor to the speaker connection where you took off the wire.

Then solder the wire you took off the speaker to the other end of the resistor.

Tuck the parts down out of the way, making sure they don't touch the speaker itself as this would cause a buzzing sound at louder volumes.

The finished project should look something like the picture below:



Finally, reassemble the speaker.

Conclusions

Ok, a \$1.00 circuit isn't going to replace a \$100.00 DSP unit but it can bring about considerable relief from that nasty crackling noise and it might save you a couple of headaches when trying to work that rare signal.

The Darling Downs Radio Club Incorporated appreciates the support of the following businesses

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