

The Smokehouse

Where Country Hams Hang Out

November 2019



President, Larry Brumett, KN4IV

Vice President, Clayton Francis, KC4RGE

Sec/Treas, Herb Hess, KJ4CMG

MCARC Meeting October 15th, 2019.

The meeting came to order in the basement of the City Hall Building located in Glasgow, KY.

KC4RGE made a motion, seconded by N9FXU, to dispense with the reading of the minutes. Motion passed.

KD4SS gave the financial report. He reported \$xxxx.xx in the checking and the savings remains unchanged at \$xxxx.xx. N9FXU made a motion, seconded by W4RRK, to accept the financial report. Motion passed.

Committee Reports:

Repeater Committee: Need to get a tower climber back to finish the tower work.

K4AUU gave the contact information for a climber that VEI uses. Discussion ensued and it was agreed to remove the diplexer from the Hwy 63 site, run another new feedline for the UHF antenna and install a new VHF antenna. For the tower on the roof of the City Hall Building, it was suggested to give KY4BC a call and see if he is available on October 26th, 2019 to climb the tower. W4RRK has been maintaining the Bonnieville repeater.

Hamfest Committee: No report.

Field Day/Special Event Committee: No report.

Webpage Committee: No Report.

Old Business: KCARC

Vette City Hamfest was a good success and well attended.

The Turkey Trot is scheduled for October 27th, 2019. We will man stations along the route to assist in monitoring for any issues. The race will start at 3pm. We will meet in the club room after the race to enjoy a nice potluck chili supper.

New Business: K8RPG brought up trying to have more informational topics at the club meetings.

No further business to come before the group. KC4RGE made a motion, seconded by N9FXU to adjourn. Motion passed and the meeting was adjourned at 7:45 PM.

There were 10 members present at the meeting.

ARRL to Launch New On the Air Magazine

ARRL is launching a new magazine, On the Air, in January 2020. To be published on a bimonthly basis, On the Air will offer new and beginner-to-intermediate-level radio amateurs a fresh approach to exploring radio communication. Each issue will include advice and insights on topics from the variety of Amateur Radio interests and activities: radio technology, operating, equipment, project building, and emergency communication. The goal of this new magazine is to be a vital resource in helping new and newer radio amateurs get active and involved in radio communications.

“On the Air responds to the brand new and not-so-brand-new radio amateur seeking ideas and answers,” said QST Managing Editor Becky Schoenfeld, W1BXV.

Schoenfeld is part of the ARRL staff team that developed the new magazine. The planning included an extensive national-level study of new Amateur Radio licensees,

identifying their motivations for getting licensed and their experiences of getting started. A focus group responded positively to a trial sample edition of the magazine.

“Too many new licensees never take the next step,” says Schoenfeld. “We’re excited to introduce a new Amateur Radio magazine for this audience, aimed at getting them active, getting them involved, and getting them on the air.”

The first issue of On the Air will be published in January 2020 (January/February issue) and will be introduced as a new ARRL membership benefit. Effective November 1, when eligible US radio amateurs join ARRL or renew their memberships, they will be prompted to select the print magazine of their choice — On the Air or QST. Current members receiving the print edition of QST, upon renewal, may choose to continue receiving the monthly print edition of QST or the print edition of the bimonthly On the Air.

All ARRL members, including international members, will be able to access digital editions of both QST and On the Air. Members who already access QST on the web or from the mobile app will be able to access QST and On the Air starting in January.

<http://www.arrl.org/news/arrl-to-launch-new-on-the-air-magazine-in-january>

Raspberry Pi for Ham Radio

An article by Karl-Heinz Krawczyk DL1GKK describes how to install amateur radio software on the Raspberry Pi to provide the popular data modes, SSTV, satellite tracking, SDR, rig control and logbook

The English language article is available on the site of Indonesia's national amateur radio society ORARI.

Karl-Heinz says "I am a big friend of the small Raspberry Pi which and use this gladly for amateur radio. With version 4 it is fast enough to fulfill all tasks.

There are many ways and many software to make the Pi fit for Ham Radio.

Below is the installation how I use it. My choice of programs has the advantage that they are compatible with each other."

Read the article at <https://orari.or.id/index.php/2019/09/02/setupraspberrypi-for-hamradio/>

The superheterodyne radio

The superhet or superheterodyne radio has been in use for over a hundred years and it is still one of the most popular formats for a receiver.

Invented during the First World War, after the cessation of hostilities it took some years for it to gain acceptance because valves (tubes) were very expensive and it used a large number of them. However when costs of valves and valve radios fell along with the increase in the number of broadcast stations requiring more selectivity and gain, the idea of the superhet soon took off.

The basic concept is relatively simple. Using a variable frequency

oscillator, the incoming signal is converted down to a fixed frequency intermediate amplifier and filter. Using a fixed frequency IF makes filtering and amplification far easier and more effective.

The basic concept has not changed, but since the early days it has continued to be developed and even today most radios used for amateur radio make use of the technology. Double and even triple conversion radios are used, and techniques like frequency synthesis and software defined radio technology can now be used alongside the superhet techniques. <https://www.electronicsnotes.com/articles/radio/superheterodynereceiver/basics.php>

What's in a Watt?

We need more power. I'm giving her all she's got, Captain! She cannot take anymore.

I'm sure your Scottish ancestors are rolling in their graves right now, but in our community of radio amateurs we have a tendency to advocate the use of more power. More

power fixes all problems and hides all sins.

Another way to look at that is to think of the station with more power as an alligator, all mouth, no ears.

Before you dismiss this as another advocacy for QRP or low power, let me point out that more power creates more interference, more potential for harm, more electricity consumption, more wear and tear and more cost.

Previously I've spoken extensively about QRP communications, making contact with 5 Watt or less, but let's have a look at how much less.

I've shared with you that I managed to contact a station on the other side of the planet with only 5 Watts, Perth to Cuba and for me that was proof positive that all this was possible, even feasible.

We're doing much better than that.

One measurement is to calculate how many kilometers per Watt you achieved. My example of 5 Watt between Perth and Cuba is the equivalent of 3592 km per Watt. The

maximum distance to the opposite side of our globe is about 20,000 km and my contact did nearly 18,000 km.

If you think that's amazing, I should warn you, my contact was special, for me, but as low power contacts go, it's not that amazing.

The first solid state radio contact made across the Atlantic ocean managed over 76,000 km per Watt. That was on 18 September 1956. You'll find the radio on display at the ARRL Laboratory, together with the bug and station log showing the contact between Chelmsford, Massachusetts and Copenhagen, Denmark between Gus W1OGU and Bo OZ7BO, on a radio made of two germanium transistors and built by Gus W1OGU, Al W1OSF and Dick W1UBC, who built the diminutive gadget on a lark to see if they could Work All Continents with it.

If you can copy the 40 microwatt CW beacon run by the North American QRP CW Club, you too can join in the fun. The current record stands at just under 22 million km per Watt when Bill W4ZV managed

to copy the code word OMAHA from the N2XE beacon from New London, North Carolina.

Just to be clear, we're talking about a signal that travelled the equivalent of 22 million km using 1 Watt of power.

If you think that was amazing, Pioneer 10 managed to achieve 1.3 billion, that's 1.3 thousand million km per Watt in 2003. Mind you, that record was achieved with a slightly bulky antenna, the Deep Space Network.

Are you ready for more?

The current record stands at just under double the Pioneer 10 record, just under 2.6 billion km per Watt. That was achieved by Dick KL7YU and Bill W7BVV who made contacts between Alaska and Oregon in December 1969 and January 1970. A distance of 2655 km using one micro Watt.

Yes, you can throw a Kilowatt at the problem, or you can take your time, do some work and have some fun with low power.

Tri-bander and G5RV Now In Place

After several months (years) the antenna system is in place and almost ready for operation.

Thanks to the antenna crew (KY4BC, KD4SS, N9FXU, W4RRK and KN4IV) the tri-bander and G5RV was installed on the roof of the city building on Saturday November 2nd. A few more connections of feedline and rotor cable and all should be ready for operation. Special thanks to Tracy KY4BC for doing the climbing.

December is Youngsters on the Air (YOTA) Month

The IARU Region 1 Youth Working Group has announced that its December [YOTA](#) Month take place again this year.

“We would like to invite you to take part with a call sign with ‘YOTA’ in the suffix,” the YOTA announcement said. “The idea for this is to show Amateur Radio to young people and to encourage youngsters to be active on the amateur bands.”

YOTA said December YOTA Month offers an opportunity to demonstrate ham radio to the world and to invite newcomers.

Participants earn certificates by working the various YOTA-suffix stations on the air throughout December. Not a contest, the event is aimed at getting as many youngsters on air from as many countries as possible. The event will take place from 0000 UTC on December 1 until 2359 UTC on December 31. — *Thanks to YOTA*