Arecibo Observatory Reflector Dish Damaged When Cable Snaps

An auxiliary cable that helps to support a metal platform above the Arecibo Observatory radio telescope's reflector dish in Puerto Rico snapped in the early morning hours of August 10, causing a 100-foot gash in the reflector dish. Operations at the world-famous observatory, which is managed by the University of Central Florida (UCF), have been halted until repairs can be made. When the 3-inch cable fell, it also damaged about a half-dozen panels in the Gregorian dome above the dish and twisted the platform used to access the dome. The cause of the cable break is not yet clear.

"We have a team of experts assessing the situation," Observatory Director Francisco Cordova said. "Our focus is assuring the safety of our staff, protecting the facilities and equipment, and restoring the facility to full operations as soon as possible, so it can continue to assist scientists around the world."

UCF manages the National Science Foundation (NSF) facility under a cooperative agreement with Universidad Ana G. Méndez and Yang Enterprises Inc. Home to one of the most powerful telescopes on the planet, the facility is used by scientists around the world to conduct research in the areas of atmospheric sciences, planetary sciences, radio astronomy, and radar astronomy. Arecibo is also home to a team that runs the Planetary Radar Project supported by NASA's Near-Earth Object Observations Program in NASA's Planetary Defense Coordination Office, through a grant awarded to UCF.

The facility has endured many hurricanes, tropical storms, and earthquakes since it was built 50 years ago. Repairs from Hurricane Maria in 2017 are ongoing. Through it all, the facility has continued to contribute to significant breakthroughs in space research in the area of gravitational waves, asteroid characterization, planetary exploration, and more.

The largest single-dish radio telescope in the world for decades, Arecibo was bumped into second place in 2016 by the Five-hundred-meter Aperture Spherical Telescope (FAST) in China.

The Arecibo Observatory Radio Club operates KP4AO at the site, mostly on special occasions. -- Thanks to UCF and other sources

Send the Editor news articles, picture of your station or antenna if you would like to see it featured in upcoming newsletters. When sending pictures, please include picture name and a short description for each picture to kb0rwi@arrl.net. Thanks for helping beautify the newsletter.
## Links for Kansas Hams!

<table>
<thead>
<tr>
<th>Link Description</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARRL Main Page</td>
<td><a href="http://www.arrl.org">http://www.arrl.org</a></td>
</tr>
<tr>
<td>ARRL KS Section News Page</td>
<td><a href="http://www.arrl.org/Groups/view/kansas">http://www.arrl.org/Groups/view/kansas</a></td>
</tr>
<tr>
<td>ARRL Midwest Director's Newsletter</td>
<td><a href="http://www.arrlmidwest.org/newsletter/newsletter.pdf">http://www.arrlmidwest.org/newsletter/newsletter.pdf</a></td>
</tr>
<tr>
<td>Kansas Section Pages and KAR's</td>
<td><a href="https://ksarrl.org">https://ksarrl.org</a></td>
</tr>
<tr>
<td>Mo-Kan Regional Council of ARC Orgs</td>
<td><a href="https://mokancouncil.org/">https://mokancouncil.org/</a></td>
</tr>
<tr>
<td>Associated Radio</td>
<td><a href="https://www.associatedradio.com/home.php">https://www.associatedradio.com/home.php</a></td>
</tr>
<tr>
<td>Kansas QSO Party</td>
<td><a href="https://ksqsoparty.org/">https://ksqsoparty.org/</a></td>
</tr>
<tr>
<td>Enser Museum</td>
<td><a href="http://www.ensorparkandmuseum.org">http://www.ensorparkandmuseum.org</a></td>
</tr>
<tr>
<td>K-Link Repeater Network</td>
<td><a href="http://ks0lnk.net">http://ks0lnk.net</a></td>
</tr>
</tbody>
</table>

Links to all known Kansas Clubs can be found at the bottom of [https://ksarrl.org](https://ksarrl.org)

If you change your Clubs web address, please contact Kent at [kb0rwi@arrl.net](mailto:kb0rwi@arrl.net)

---

## Net Reports provided by Richard, KØRCJ

<table>
<thead>
<tr>
<th>Club Name</th>
<th>Sessions</th>
<th>QNI</th>
<th>QTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wichita Amateur Radio Club (WARC)</td>
<td>4</td>
<td>129</td>
<td>0</td>
</tr>
<tr>
<td>WARC DMR Nets</td>
<td>4</td>
<td>34</td>
<td>0</td>
</tr>
<tr>
<td>Great Salt Plains ARC (GSPARC)</td>
<td>4</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>KS SSB Nets</td>
<td>31</td>
<td>658</td>
<td>43</td>
</tr>
<tr>
<td>Kansas QSO Party</td>
<td>31</td>
<td>56</td>
<td>0</td>
</tr>
<tr>
<td>KS Phone Nets</td>
<td>22</td>
<td>295</td>
<td>19</td>
</tr>
<tr>
<td>Reno County KS ARA (RCKARA)</td>
<td>3</td>
<td>35</td>
<td>0</td>
</tr>
<tr>
<td>Visually Inconvenienced Hams</td>
<td>4</td>
<td>86</td>
<td>0</td>
</tr>
</tbody>
</table>

---

## Supporting Our Veterans - Honorably Discharged

**S*M*A*R*T - Special Military Active Retired Travel Club**

**KCONDG** Sherwin  
*or SARG; EX-K102 1960 to l987*

*or TOP, 1SG; Army USAR, Retired 1951 to 1987 --- final discharge 1994*

God Bless those who have served this great country AMERICA  
Proud Military Veteran

SEEING THE COUNTRY WE DEFEND  
SHERWIN & DOROTHY STIELOW
Western Kansas 160m Net. Tuesdays at 9:00PM Central Time

The Western Kansas 160m net is held every Tuesday evening at 9pm central time on 1.960 LSB. All general class and above stations are welcomed to join in.

Silent Keys

As a service to fellow hams across the state, I urge all individuals and Clubs to send me Silent Key notices. Please include a link to an obituary. I watch Larry’s List for announcements of hams from Kansas. If you are not on Larry’s List, I will forward the notice to him. He in turn notifies the ARRL. As Larry cannot include pictures, I do my best to find images so that a face can be put with the name and call. Thank you!

Judge Duane K. Brown, W2EZ

The Honorable Judge, Duane K. Brown, 65, went home to be with the Lord Wednesday, July 15th, 2020. Beloved, esteemed and a great friend, Duane will be deeply missed by all those who knew and loved him.

Duane K. Brown graced the world with his larger-than-life presence on August 13th, 1954 to parents, Jack and Vivian (Appleby) Brown of Lexington, MO; both of whom preceded him in death. He passed away on Wednesday, July 15th, 2020 in his home in Wichita, KS. He is survived by his wife, Dawna Olvera; step-sons, Ryan (Laura) Nolen and Jared (Hillary) Nolen; step-daughters, Nicole (Jason) Burdette; Marcia Olvera; Casi (Seth) Yager; Angie (Don) Scott; Aspen Olvera and 21 grandchildren. Memorial Service will be held at 10:30 am, Friday, July 24, at Bridgeport Missionary Baptist Church, 6161 S. Meridian. Please send memorials to: Bridgeport Missionary Baptist Church.

Judge Duane K Brown, Meridian. Please send memorials to: Bridgeport Missionary Baptist Church.

Gary R. Drussel, KØBAJ

Gary R. Drussel, 78, died Friday, July 17, 2020 in Garden City. He was born September 14, 1941 in Dodge City, Kansas to O.W. ‘Ob’ and Lorena Drussel. Gary’s childhood was spent in Cimarron, Kansas where he graduated in 1959. During high school he became a ham radio operator and enjoyed a lifetime of making friends around the world.

He graduated (then) Fort Hays Kansas State College, where he obtained a Bachelor of Science in Business in 1965 and was a member of the Alpha Kappa Lambda fraternity. While in college, he met Patty Patterson, the woman with whom he would share his life. Patty and Gary were married in 1965 and moved to Wichita where Gary began work for the Boeing Company. In 1970, he accepted a position as V.P. of Sales for Tradewind Industries and the family moved to Liberal, Kansas. In 1977
Gary R. Drussel, KØBAJ

they relocated to Garden City, Kansas so Gary could assume leadership of the family farm, allowing his father to retire. In 1979, Gary and Patty opened Drussel Seed and Supply, Inc., a full-service seed business processing, cleaning and treating registered and certified seed, and growing wheat for seed and many other seeds crops. Their children were involved in the business from the beginning with Colby and his wife Terrie carrying on aspects of the business after Gary and Patty’s retirement.

Gary was a past president of the Kansas Seed Dealers Industry Association, a member of the Farm Bureau board, the Sandhills Amateur Radio Club, a lifetime member of Lee Richardson Zoo. He worshipped at the First United Methodist Church of Port Isabel, Texas, and Garden City, Kansas. A lover of wheels, wings, and keels, Gary was adventurous and enjoyed sailing, making several blue water voyages. He loved flying his own airplanes and sharing that with his family and friends. A lifelong resident of the state of Kansas, Gary was also happy spending his last 25 winters at a home in Port Isabel, Texas, where he was always up for some fishing. When COPD limited his physical capacity, his joy came from family and the Ham radio community and his Saturday morning breakfasts with the Ham radio club.

Gary is survived by his wife Patty, his daughter Terry Drussel (partner Cody Beebe) and her son Oliver Bennett of Bellingham, Washington, and his son Colby Drussel (wife Terrie) of Garden City and their daughters Mallorie Gonzales, McKinsey Glavin (husband Jacob), Morgan Klassen (husband Jake) and family, and Mariah Drussel, as well as their sons Bryce Drussel, Devin Gonzales (wife Addy) and family, Tyson Drussel (wife Shannon) and family, and Nicholas Miller (wife Rachel). Gary is survived by his sister Jo Ann Howse, resident of Tulsa, Oklahoma near her son Darin Howse (wife Kandice) and family, and her daughter Kara Howse and son Nick.

Memorials may be made to the Sandhills Amateur Radio Club and the Lee Richardson Zoo in care of Garnand Funeral Home.


Remember that KSQP 2020 is the LAST weekend in August, August 29-30. We won’t be sharing band-width with Ohio and Hawaii like we usually do, so let’s fill the airwaves with Kansas stations! Judging by other state QSO parties, activity is way up, so it’s a great year to get on and have some fun.

Don’t forget to add Kansas Rookie to your entry if you’re a first time KSQP participant. If you assisted a club operation in the past but have never turned in your own log, you would still be considered a Kansas Rookie and would be eligible for the award. Check for late updates at https://ksqsparty.org

The web site continues to be active with people registering home stations, continuing to fill in well covered counties and some usually not covered both days. A very useful page to use during the event is the spotting network at http://cwfun.org/funspots/ksqp/. Enjoy the party and stay safe!

KSQP Publicity
Kent Stutzman, KBØRWI
To radio amateurs, Scarborough Reef or the Spratly Islands are DX locations, occasionally activated to provide needy DXers with "a new one." The Spratlys are #53 on the Club Log DXCC Most-Wanted List, but Scarborough Reef -- a much more difficult piece of real estate to access -- is #4. These South China Sea Islands are once again in the news, as the US has begun putting heat on China by rejecting nearly all of its significant land claims in the region. Secretary of State Mike Pompeo this week said that the US now regards virtually all Chinese maritime claims outside of its internationally recognized waters to be illegitimate.
"The world will not allow Beijing to treat the South China Sea as its maritime empire," Pompeo said. "America stands with our Southeast Asian allies and partners in protecting their sovereign rights to offshore resources, consistent with their rights and obligations under international law. We stand with the international community in defense of freedom of the seas and respect for sovereignty and reject any push to impose 'might makes right' in the South China Sea or the wider region."

A 2016 ruling from an international tribunal discounted China’s claims with respect to Scarborough Reef -- also known as Scarborough Shoal -- and the Spratlys, but it did not rule on the matter of sovereignty. In addition to China’s claim, Malaysia, Taiwan, Vietnam, and the Philippines have asserted ownership of the Spratlys. Scarborough Reef is claimed by China, the Philippines, and Taiwan. The Permanent Court of Arbitration in The Hague ruled in favor of the Philippines in a dispute with China over Scarborough Reef. The tribunal said that although navigators and fishermen from China and other states have historically made use of South China Sea Islands, there was no evidence that China had historically exercised exclusive control over the waters or resources. The tribunal said China had violated the Philippines’ sovereign rights and had caused "severe harm to the coral reef environment" by building artificial islands and an air strip.

In 2015, a Chinese naval vessel "harassed a Philippine Air Force patrol flight in the Spratlys," one news account reported, by firing an illumination round. The incident postponed a Philippine Navy flight that was to evacuate an ailing participant of the then-just-ended DX0P DXpedition. The Chinese Navy has also warned off private aircraft. DX0P was issued by the Philippines. Last week, China complained about the US conducting joint exercises with two US aircraft carrier groups in the region.

A May 2007 DXpedition to Scarborough Reef used the call sign BS7H, granted by China. DXpedition team members operated from wooden platforms mounted atop each of the reef’s four rocks that were exposed during high tide. The ARRL Board of Directors voted in 1996 to add Scarborough Reef to the ARRL DXCC List.

---

Attic Fan Dipole by Jim Cessna, ACØKN

I managed to create a unique "HUB" for a Fan Dipole -- Solderless connections using wing-nuts, flat aluminum stock, and a cutting board. The 1/2 wave antenna wires are stapled to attic trusses over the house and garage rafters over the garage. All the screws on each side are shorted together with aluminum flat stock on the back of the cutting board.

I was on Ham Nation episode 460 discussing this antenna. Bob Heil had my cutting board design "drafted", by Bob's friend, for an engineering view. (Click images to see original 6MP image)

Enjoy!
Jim Cessna - AC0KN

Watch Ham Nation Episode 460
https://www.twit.tv/shows/ham-nation/episodes/460
https://www.youtube.com/watch?v=ZBiS_Q59NPk

Bob Vallio, W6RGG, was one of the operators on the 2007 BS7H Scarborough Reef DXpedition.
Questions about the build for Jim?

Jim Cessna

AMES – Amateur Radio Emergency Service

Complete list of ECs and a printable State ARES map https://ksarrl.org/ares/


AMATEUR RADIO EMERGENCY SERVICE
MONTHLY EC REPORTS

◆ Zone 4A – Brian KCØBS

JULY MONTHLY ARES REPORT TO DEC & SEC
Total of ACTIVE ARES members: 150 +0
Local Net Name: Johnson County ARES
Emergency Coordinator = Brian Short KC0BS  913-638-7373
Alternate Emergency Coordinator, Recruiting = Jim Andera K0NK  913-884-6613
Assistant Emergency Coordinators:
Herb Fiddick - ECS Liaison
George McCarville WB0CNK - Training, Drills
Matt May KC4WCG - IDs, MECC
Bill Gery KA2FNK - Recruiting, Technology
Darren Martin N0MZW - Net Manager
Brad Kelsey KU0FAN – Membership
Jesse Gonzalez KE0ECS – CERT
Chuck Simpson KC0NUG - Rapid Response
Jim Andera K0NK - KCHEART

NTS liaison is maintained with the KS SSB Net:
Jim Andera K0NK                            Terry Reim WA0DTH
George McCarville WB0CNK              Jim Cordill K10BK
Debbie Britain AB0UY                      Rich Britain N0ENO

Net Sessions: 45
QNI: 326
QTC: 0
4 nets - 2 Meter Voice
5 nets - 440 Voice
5 net - 440 Fusion Digital
4 nets - 2 Meter SATERN Voice
5 nets – CW
4 nets - 6 Meter
4 nets - 2 Meter Voice Simplex
5 nets - APRS Packet
5 nets - 1.25 Meter
4 nets - SATERN 80 meter SSB

Report prepared by:
Darren Martin N0MZW
Johnson County Kansas

◆ Zone 1B – Kevin KSØEGL ◆

Zone 1B - July 2020
Net Sessions:  4
QNI: 46
QTC: 0
Members: 17
Total Person hours: 6:54

◆ Zone 6A, E & G – Rod KØEQH ◆

Kansas Zones 6A, E & G ARES Net report June 2020
Total nets.....4
The past several months the Sand Hills ARC has held it's monthly meetings -virtually- on the air. We have had good attendance, BUT, we really miss the 'show and tell' segment of the meetings. Have a lot of presentations to see when we can meet in person again.

Rod
K0EQH

---

Tech Classes Move Online
By Dan Romanchik, KB6NU

I’ve been teaching ham classes for more than a dozen years now. My specialty has been the one-day Tech class. In this type of class, you review all of the questions in the question pool with the students over the course of six to eight hours, and then immediately give them the test before they can forget anything.

I would hold these classes three or four times a year and regularly have 20 – 30 students in each class. The pandemic, of course, has put the kibosh on these classes. The last one I taught was in January.

Frankly, I was wondering if I’d ever teach one again. A little over a month ago, however, I was approached by a fellow in Portland, Oregon about teaching an online class for some folks that he’d corralled there. After giving it some thought, I said yes.

So, now, in place of face-to-face classes, I’m teaching online Tech classes. There are plusses and minuses to this approach One negative is that I miss the face-to-face interaction with the students. On the plus side, teaching online allows me to offer classes more frequently. My first was in June. Last week, I completed the second class, and in August, I will teach a third class.

I have had to make some changes to the format. Making people sit in front of a computer for six hours or more seemed like cruel and unusual punishment. So, instead of a one-day class, the online class consists of four, two-hour sessions, spanning two weeks:

- Session 1
  - Electrical Principles
  - Electronic Components and Circuit Diagrams
- Session 2
  - Radio Wave Characteristics
  - Antennas and Feed Lines
- Session 3
This seems to be working out pretty well. I'm using Zoom, and most people have been able to attend without too much hassle. To simulate the whiteboard that I use extensively in the face-to-face class, I'm using the Autodesk Sketchbook program (https://www.sketchbook.com/) and sharing my screen with the Zoom meeting attendees. To write on the "whiteboard," I'm using a Gaomon M10K2018 drawing tablet. Sketchbook allows me to build up a document in layers, and the result is kind of a hybrid PowerPoint presentation and whiteboard. I can make layers appear when I start discussing a particular topic and then write over them. For example, when I go over the questions that use Ohm's Law to calculate current in a circuit, I display the later with "E = I x R" and on a second layer, show how to calculate the answers to the questions.

To take the test, students have to sign up for an online test session. Fortunately, several VE groups are offering online, remote testing. To sign up for one of these sessions, all students have to do is go to https://hamstudy.org/sessions. For the first two classes, the W5YI VEC scheduled a special test session.

I foresee teaching these classes monthly until the demand wanes. The next class will start on Monday, August 3. To register for the class, go to https://www.kb6nu.com/product/next-online-tech-class/. To find out when these classes will take place in the future, potential students can sign up for my mailing list by going to https://landing.mailerlite.com/webforms/landing/m6l6t4.

Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog (KB6NU.Com), the "No Nonsense" amateur radio license study guides (KB6NU.Com/study-guides/), and often appears on the ICQPodcast (icqpodcast.com). When he's not teaching ham radio classes, he likes to operate CW on the HF bands, go for long walks around Ann Arbor, MI, and volunteer for Rotary Club service projects.
Postscript: More SWAN Stories

Going through my tube inventory, I found THREE (3) 6GK6 tubes, so popped one into the driver socket and powered her up. This particular tube draws about 750 ma filament current so when the draw shown on the Variac’s AC ammeter increased about ¾ amp, I knew it was working. Proof came about 25 seconds later when sound came out of the speaker, and the receiver could be peaked. I then tried the PTT function, and IT WORKED! Proper activation of the T/R relay followed, so my guess was on the money, as removing the extra current draw on the 12 vac filament circuit, brought the filament voltage up to 6.4 vac on each tube which is very acceptable.

The SWANs and many other “early” transceivers had a “Carrier Balance” pot on the front or rear of the rig; SWAN put theirs on the front panel. As such, IF you wanted to preserve your final tubes, you Unbalanced this control, which generated a bit of carrier… just enough to tune the radio, peaked everything up, then REZEROED the carr-bal control and you were good to go – so… inserting about 10w of carrier, I had a small amount of output from the radio, so that confirmed operation of the transmitter portion. NOW, to figure out the “ringing” when RF gain is turned up – I’m fairly sure it’s the 2.7 kHz wide - 5.5 mHz filter that’s gone awry…. But that’s for another day.

The one in use now, is using the SAME... Astatic D-104 mic, Calrad SWR meter, short piece of RG-8 (to meter), (2) 90 degree PL connectors, AND Hallicrafters R-46 speaker. I also still have the home-brewed L-Network wire tuner, but it’s not in use.

dit dit - - Tom – WØEAJ