



K5PRK Newsletter



Social Media

K5PRK.Net [Facebook](#) [IO Group](#)

Officers

President:

Sean Kelly, W5SPK

Vice President:

Tim Johnson, K5TCJ

Secretary:

Johnnie Young, KG5CQO

Treasurer:

Ross Watson AF5QK

Activities Director:

Tony Campbell, W5ADC

Communications Director:

Kipton Moravec, AE5IB

Webmaster

John Hatch, KF5BSS

Public Relations:

Brian Trant, KF5VFM

Newsletter Editor:

Neil Gould, NE5IL

Monday Aug 16, 2021 - 7:00 pm

Mobile Antenna Maintenance – Sean Kelly W5SPK

Join the Zoom Meeting ONLY

THE IN PERSON MEETING SCHEDULED FOR AUGUST 16 AT THE SPRING CREEK FUMC IN PLANO IS CANCELED. ONLY THE ZOOM MEETING WILL TAKE PLACE.

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RWK/PHAB-17 Post Flight Review and videos

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Short Takes – several items you may have missed

SWR – an Introduction

ARRL News and Info

Area Nets

Ham Radio References

Secretary Minutes and Notes

Future Club Meeting Programs:

Sept 20, 2021 Zoom & TBD	<u>Katherine Forson, KT5KMF</u> presentation: Hiram Percy Maxim Award	ARRL
Oct 20, 2021 Zoom & TBD	Mobile Antenna Installations	Robert Evans – WW9W

The **PARK Breakfast Group** is meeting at **Poor Richards Cafe** on Park & Ave. K in Plano, Texas. We will meet at 7:00 A.M. each Saturday.

From the Board...

The PARK BOARD is monitoring the resurgence in the COVID-19 in the Metroplex. Given the demographics of our organization, health and safety remain of the utmost concern. Having said that and after an emergency meeting of the Board earlier this evening, please make note of the following announcement.

THE IN PERSON MEETING SCHEDULED FOR 16 AUGUST 2021 AT THE SPRING CREEK FUMC IN PLANO IS CANCELED. ONLY THE ZOOM MEETING WILL TAKE PLACE. THE ZOOM MEETING WILL START AT ITS USUAL TIME 7:00PM / 1900 HRS on 16 AUGUST 2021. PLEASE PLAN TO ATTEND VIA THIS MEDIUM.

Thank you for your time and attention.

73,

Sean - W5SPK

President, Plano Amateur Radio Klub

Welcome New Members:

June: Richard Jennings – N5PMU

Blacklands Triathlon

The Blacklands Triathlon is on again this year. The event is Monday September 6th and will be held at the Oakpoint Center in Plano. The event will start at 5:00 am with all operators in place no later than 6:15 am. The event will conclude at about 10:30 am. Please contact tony@w5adc.com to sign up.

PHAB-18

Our next balloon launch is scheduled for October 8th so please make your calendars and sign up to fly your payloads. More details will follow soon. The best place for information is the PARKBallon Groups.io. You can sign up at PARKBalloon+subscribe@K5PRK.groups.io

Elections

Election of the **President, Treasurer, Activities Director and Newsletter Editor** shall be held in **October** at the regular meeting on **odd numbered years**.

Section 1 – The **president** shall preside at all meeting of this club, and conduct the same according to the rules adopted. He shall enforce due observance of this Constitution and By-Laws, decide all questions of order, sign as an official of the club only those documents that are adopted by the club, and perform all other customary duties pertaining to the office of president.

Section 4 – The **treasurer** shall receive and receipt for all monies paid to this club; he shall keep an accurate account of all monies received and expended, and shall maintain a double entry bookkeeping system according to accepted accounting practices. He shall pay no bills without proper authorization (by the club or its Board of Directors). At the end of each quarter, he shall submit an itemized statement of disbursements and receipts. He shall at the expiration of his term turn over everything in his possession belonging to the club to his successor. A petty cash fund may be established in accordance with the By-Laws.

Section 5 – The **activities director** shall organize club member activities, plan and recommend contests for operating benefit, and advance club interest and activity approved by the club. He shall encourage members in reporting activities to the club bulletin. He shall endeavor to make the reputation of the club and amateur radio activities in the community as outstanding as possible. Term limits do not apply to this office.

Section 6 – The **newsletter** editor shall be responsible for publishing and distributing the official club organ – “The Parking Ticket.” He is required to abide by any by-laws governing publication of the Newsletter. Term limits do not apply to this office.

President, treasurer, and activities director are NOT seeking re-election or are term limited. If you are interested in supporting PARK by becoming an officer contact [Sean](#) or [Johnnie](#).

[ARRL North Texas August 2021 Newsletter](#)

Greetings fellow North Texas Amateur Radio OPS!

I am very proud to announce that

Katherine Forson, KT5KMF has won the [Hiram Percy Maxim Award](#).

The Hiram Percy Maxim Award is the premier honor for a radio amateur and ARRL member younger than twenty-one, whose accomplishments and contributions are of the most exemplary nature within the framework of amateur radio activities.

While Katherine is no stranger to winning awards...

During a three-way telephone call between her family, John Robert Stratton N5AUS our ARRL West Gulf Division Director and our ARRL Section Manager, announcing the news to the Forson family, Katherine's dad Rob Forson K5WFR stated "she was speechless and that was a first".

Katherine will be presented her plaque and a \$1500 check from the ARRL at the Plano Amateur Radio Klub (PARK) meeting on the 20th of September at 8 PM. The presentation will be conducted by The ARRL West Gulf Director and your ARRL NTX Section manager.

Our ARRL West Gulf Director John Robert Stratton, N5AUS also stated that the ARRL board of directors most difficult decision was not in choosing Miss Forson for this award, but in what they were able to list in her citation of the award as her list of accomplishments were too lengthy to include all of them within the citation.

Congratulations Katherine!

Katherine is the first ever ARRL North Texas Amateur to ever win this prestigious award. I hope that this inspires many more young amateur radio operators to become more active and an integral part of their community and join our ARRL Section Management Team.

73,

Steve
KG5VKS

ARRL North Texas Section
Section Manager: Steven Lott Smith, KG5VK
kg5vk@arrl.org

The PARK board will continue to monitor the Covid situation and decide the best location for the presentation of this award. We are very proud to have Katherine as a PARK member and have watched her excel for many years. Look for details through the several social media channels.

Katherine visited the PARK Field Day site as part of her ARRL position as the Youth representative.



RWK/PHAB-17 Post Flight Review

Today's flight was a great success. Thanks to everybody that joined us at the launch site, and special thanks to everybody that stuck around for the chase. If you were able to receive anything from the balloon (DMR, crossband, APRS, or SSTV), I'd appreciate reports on how it sounded from your QTH.



We launched from Aubrey Middle School at approximately 9:05AM, the balloon ascended at ~1200ft/min, and burst at an altitude of 90,984ft. The payload string had a textbook landing in a field just outside of Krum. The crew that hiked in to get the payloads had about a mile walk to pick them up. Fortunately the property owner was kind enough to give them a lift back to the front gate (and nobody got shot!).

Video of burst: <https://www.youtube.com/watch?v=tKpugH5oKY0> (recorded on the Insta360 ONE R)

Most of the payloads worked very well. The W5ADC-11 tracker was heard by stations as far north as Kansas and as far south as Austin. The DMR single frequency repeater was the star of the flight, with the longest

recorded QSO being with a station down in Missouri City (SW Houston). The crossband repeater, when functioning properly, was hopping with activity from all over as well. I have received quite a few SSTV reports. The KE5GDB-11 LoRa tracker ("PiBalloon5") worked exactly as expected.

Like always, there were a few hiccups along the way. The launch site was a little windier than expected, which caused the payloads to drag on the ground a little bit before taking flight. Unfortunately the K5RWK-11 tracker and 6m parrot repeater were in a box that got left behind due to the payload drag and some down range obstructions. Once the balloon was in flight, the crossband repeater had some problems with interference from other sources. It also seemed to freeze at high altitudes, which was somewhat disappointing. It definitely woke back up on the descent and was repeating very well under about 30kft. The KE5GDB-11 LoRa tracker was only received by the receiver at my house (in Richardson). The truck receiver was having problems and wasn't able to gate packets, hence why it only worked when the payloads were several thousand feet above ground.

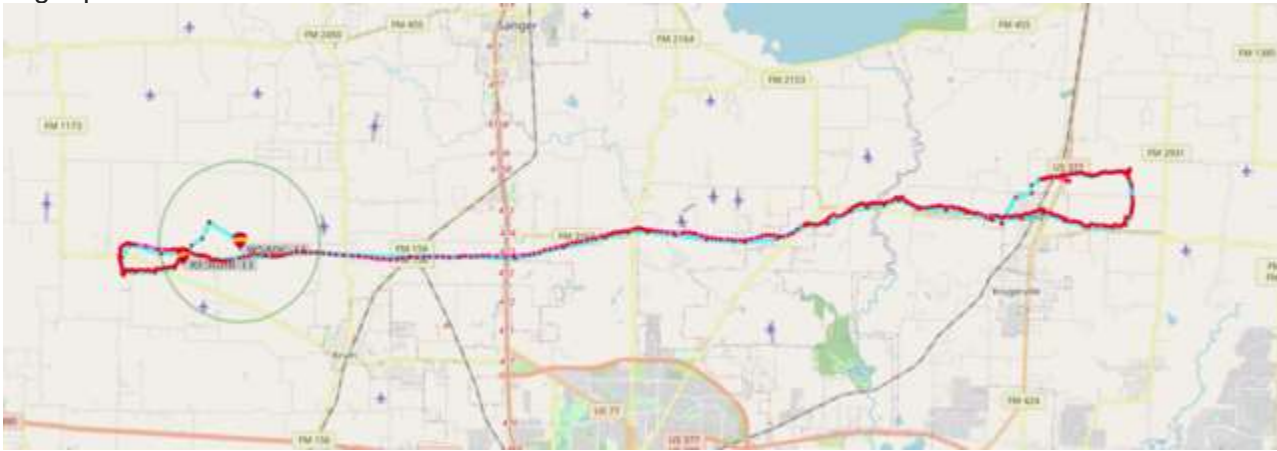
Notes for the next launch:

- * Launch away from down range obstructions
- * Clean the lenses on the Insta360 camera a little better / reduce other visual obstructions (mounting hardware & charging cable)
- * Choose a different crossband repeater RX frequency and maybe use a PL tone to avoid interference from the DMR repeater (some small filters too?)
- * When chasing, send a single scout down the road to determine viability (who's a pro at u-turning now?)
- * Fix the portable LoRa receiver

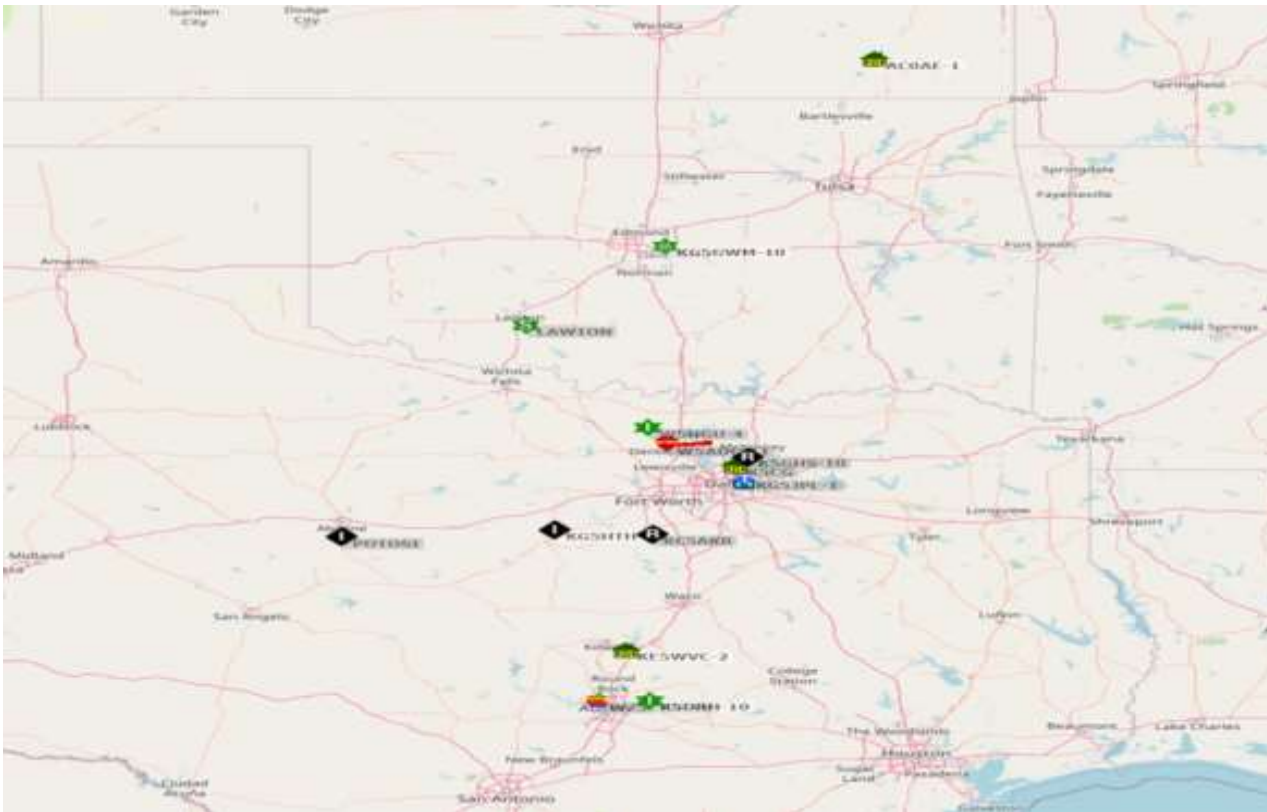
I'll follow up with a few more videos when I really figure out how to drive this Insta360 software. Be on the lookout for some video from Jason KC5HWB as well.

The PHAB-18 launch is tentatively scheduled for October 2nd. Save the date!

Flight path:



APRS stations that heard W5ADC-11:



73 de KE5GDB
Andrew Koenig

VIDEO OF THE 7/24 LAUNCH - EXCELLENT

<https://youtu.be/Mi-d0ZQhw10>

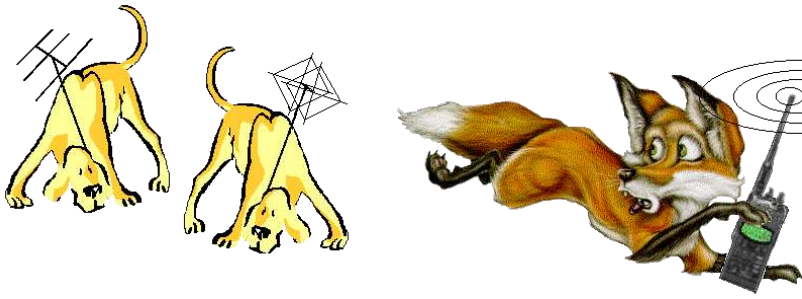
Jason Johnston

KC5HWC, Ham Radio 2.0

817-601-7228

jason@hamradio2.com

www.HamRadio2.com



Plano area Fox Hunts

Wheatley has a website! -

<https://sites.google.com/view/wheatley-website/home>. Be sure to check

out Wheatley's new website for up to the minute successful hunter reports, as well as more information on the Fox.

PARK sponsors Wheatley about once a month to be 'lost' in the Plano City limits.

Winners of the \$25 HRO gift certificate:

June:

Richard and Patti Jennings, N5PMU



This is a follow up to the excellent presentation last month by Frank Krizan.

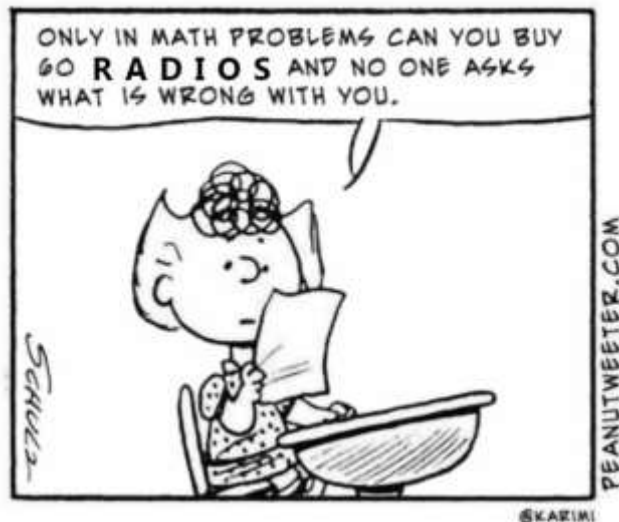
ARRL Now Provides Free RF Exposure Calculator

The FCC has adopted guidelines and procedures for evaluating environmental effects of RF emissions. The new guidelines incorporate two tiers of exposure limits based on whether exposure occurs in an occupational or "controlled" situation, or whether the general population is exposed or exposure is in an "uncontrolled" situation.

Under the new FCC rules, some amateurs need to perform routine station evaluations to ensure that their stations comply with the RF exposure rules. This can be as simple as running an online calculator to determine the minimum safe distance between any part of your antenna and areas where people might be exposed to RF energy from your station. Although amateurs can make measurements of their stations, evaluations can also be done by calculation.

To make this easy for amateurs, ARRL now provides an RF exposure calculator on its [RF Exposure page](#). To use the calculator, enter your transmit peak-envelope power (PEP) and operating mode, and answer the questions about the maximum amount of time you might be transmitting. The calculator will give you the minimum distance people must be from your antenna and human exposure.

You can print the results and keep them in your station records. There is no requirement to send your results to the FCC..



That was what happened to me! – NE5IL



PARK Repeaters

The Plano Amateur Radio Klub operates five repeaters, which are located in Allen, Texas about 180 feet above ground level. All licensed amateur operators are welcome to join us on the air. All repeaters are open.

**147.180 MHz +
(PL 107.2)
K5PRK VHF
Voice Repeater**

**444.250 MHz +
(PL 79.7)
K5PRK UHF
Voice Repeater**

**441.575 MHz +
DStar UHF
Digital Voice Port B**

**1295.000 MHz – 20.000
DStar 23cm
Digital Voice Port B**

**1255.000 MHz
DStar 23cm Digital Data**

**Broadcastify
[K5PRK 444.250](#)
[K5PRK 147.18](#)**

Note: If you notice problems with any of the club's repeaters, please contact communications@k5prk.net via email with a detailed description of what the issue is. If we don't know that a repeater is down, we can't fix it.

Short Takes

The VE testing session usually held before the PARK Meeting is temporally suspended because of following social distancing procedures. If you are interested in testing at another site, please contact Daryl Morgeson, AF5QJ at AF5QJ@arri.net

The Richardson Wireless Klub is currently offering remote [online] VE testing via Zoom and HamStudy.org. Both upgrades and testing for technicians are being offered. Sessions are generally Tuesday evenings, but can vary. In most cases licenses are posted in 1-2 days. Details and a link to sign up can be found on their website at www.k5rwk.org/ham-testing/



Our third and next QSO Today Virtual Ham Expo is scheduled Live from **August 14-15, 2021** and then on-demand for 30 days. We promise a flawless, great learning experience for those seeking to improve their knowledge and to be exposed to new ideas, equipment, and practical techniques – all done in a highly engaging format on the vFairs platform that we used in our first August 2020 Expo. No need to travel - participate from your home or office! Information can be found at <https://www.qsotodayhamexpo.com>.

Registration begins on July 1st, 2021. **Full registration Early Bird Tickets** are just \$10 and then \$12.50 "at the door". **Full registration** includes access to the entire Expo including presentations and the 30 day on-demand period. **Free registration** includes access to exhibitors, prizes, general lounge and lobbies. If you were registered to the March Expo, then you already have a free registration to the August Expo.

For more information and Expo Updates, go to <https://www.qsotodayhamexpo.com>. **Make sure to put the dates (August 14-15, 2021) on your calendar!**

Mines on the Air (MOTA) Promoted as an Activity Similar to Summits on the Air (SOTA)

Many hams enjoy getting out of the house to operate, engaging in such activities as Summits on the Air (SOTA), Parks on the Air (POTA), or Islands on The Air (IOTA). Now it's time to try Mines on the Air ([MOTA](#)) -- but banish any thoughts of underground operating. The spark plug for this activity is John "JohnnyF" Fuller, WJ0NF, in Colorado.

FT8 DX

Some don't think the digital mode FT8 and similar modes are not real contacts. All I know is that with my 100 watt rig and a trapped vertical mounted to my fence post I have worked the following in the past week during mediocre solar conditions.

Sardinia, Azores, Bosnia, Slovenia, Panama, Belgium, Canada and many US states

While not chatty QSOs, this gets me engaged and on the air much more than if I were to fight with the amplifiers on side band or the high speed CWers. Depending on the rig it takes some work to get it set up but there are plenty of YouTube videos for any configuration. Give it a try.

**Neil
NE5IL**

SWR By Ed Lawrence, WA5SWD (former PARK member)

Amateurs often speak of “Standing Wave Ratio”, SWR for short, when talking about an antenna. They may state the useful antenna bandwidth as being between two frequency limits, lower than 2:1 SWR. In the simplest terms, SWR means the “badness” of whatever is the load in question, usually (but not always) an antenna. SWR is always referred to a specific load resistance, such as 50 ohms as we usually use 50 ohm line.

1:1 is perfect and theoretically unobtainable, but we can get close.

1.1:1 is almost perfect, thus it has low “badness”.

1.5:1 is good enough for almost every purpose, and is low to medium “badness”.

2:1 is getting into the questionable zone. The “badness” value is getting high enough to cause problems in some cases.

3:1 is the generally accepted limit for “badness”. 3:1 SWR will cause problems in many cases. WHAT DOES

A BAD SWR DO TO MY RADIO?

Assuming you are using a modern solid state transceiver, not much. For the older rigs with tubes as finals, maybe nothing. If you can tune up the output stage correctly, no real effect! If the SWR is less than 1.5:1, the effects are minimal. If the SWR is greater than 3:1, then your solid state transmitter may reduce the power out to keep from blowing your finals. See the manual that came with your transmitter. Generally, the amount of receiver sensitivity reduction will not be an issue. Your transmitter output signal will suffer as much as a 50% loss with a 3:1 SWR due to the mismatch. This is about one S unit.

HOW DO SWR METERS WORK, AND WHAT KIND OF ERRORS DO THEY CAUSE?

SWR Meters measure the forward power TO the load and the reflected power FROM the load. Most meters, while useful, fall far short of laboratory standards. Basically, the RF is sampled by a dual directional coupler. One port of the coupler has an output proportional to the forward RF, the other, the reflected RF.

Each of these is rectified to make a DC voltage that represents the FORWARD and REFLECTED signal. The meter face is calibrated to show the SWR after you have set the FORWARD power to full scale.

If you open up one of the inexpensive CB SWR bridges you will see few parts. They are made to produce an indication of SWR and a profit for the manufacturer. Most are still useful through 2 meters but not generally 440 MHz.

Errors are induced if the impedance of the pickup line does not match the transmission line it is inserted into. If the pickup line is shorter than 1/8 wavelength these errors are generally small.

The directional coupler (pickup) has a quality called directivity. This is a measure of how well it separates out the forward and reflected signals. The higher the directivity, measured in dB, the more nearly perfect the coupler is. That inexpensive CB SWR bridge has poor directivity. The effects of low directivity cause low precision of the SWR measurement. As Amateur Radio Operators we can accept this imprecision since we still get a useful indication of SWR.

The last major error comes from the diode detectors in the SWR meter. Diodes take a small voltage just to turn on. This tends to subtract a bit off the bottom of each of the FORWARD and REFLECTED meter indications. This makes the SWR appear better than it really is. The moral of this story is to make your final SWR measurements at the highest power output you have available if you want the truest indication.

WHERE SHOULD I PUT THE SWR BRIDGE IN THE TRANSMISSION LINE?

While operating your station, where you can read it! The proper length of the feedline is the minimum length to reach from the rig to the antenna. If you are testing an antenna, put the SWR Meter as close to the antenna as possible.

You will hear stories about “Magic” line lengths you should use, such as integer multiples of a half wavelength, or that you can match the antenna by trimming the feedline length. This, to be polite, is hogwash.

SWR, on a lossless line, does not vary along the line. It is a measure of how well the antenna matches the feedline, nothing else. Effects that make this appear NOT to be true can be attributed to a poor SWR meter OR RF on the outside of the coax where it is not supposed to be.

Your main use of an SWR Meter is to show you that the antenna is still functioning properly. The exact value is not critical. If the SWR suddenly goes high, you have a problem that you must fix.

Now I can just hear the mumbling from some of the old-timers. Demonstrations, either mathematical or practical, of how this long lossy line can be either open or shorted and still show 1:1. Question: How efficient is your station with that lossy line? You will not use it in the real world, and that is the point. Next question: Have you ever seen this happen in the real world? I haven't.

HOW DOES LINE LOSS AFFECT THE SWR INDICATION?

It lowers it, making the load look better. Well, as far as the transmitter is concerned, it IS better! You lose both transmitted and received signal strength so you really want low loss line and a well matched antenna, but lossy line DOES tend to protect your transmitters finals.

THE BOTTOM LINE

Use the lowest loss feedline you can afford. Tune your antenna to the lowest SWR with the antenna in its operating position with the best SWR meter you can buy or borrow. Use an SWR Meter at your operating location to monitor the health of your antenna system.

Go learn more about how SWR is calculated. Any ARRL Handbook for The Radio Amateur will do. While there you should also gain a good understanding of Reflection Coefficient. It is a more useful concept.

After you have learned to think in terms of Reflection Coefficient you will be ready to start learning about Smith Charts. They are a truly neat tool and expand your ability to match electronic antennas and amplifiers. They look like a web spun by an artistic spider but they allow a person to graphically solve complex impedance problems with a compass and a ruler!

ARRL News

ARRL magazines

QST - ARRL's Monthly Membership Journal - www.arrl.org/qst

On the Air - NEW! Beginner to intermediate level help and advice - www.arrl.org/On-the-Air-Magazine

QEX - The Forum for Communications Experimenters - www.arrl.org/QEX

NCJ - National Contest Journal - www.arrl.org/NCJ

ARRL Podcasts Schedule

The latest episode of the On the Air podcast (Episode 20) features a discussion with Oliver Dully, K6OLI, who describes how amateurs use the Winlink network for various public service applications. He also discusses the equipment and software necessary to access Winlink.

The latest edition of Eclectic Tech (Episode 40) describes how NASA is using rockets to study Very Low Frequencies. It also discusses a new Universal Serial Bus standard that allows higher voltages and currents. Topping things off will be a chat with Dr. Dan Fay, KG5VBY, about *QMesh*, an innovative way to send digital voice communications using inexpensive LoRa transceivers.

The *On the Air* and *Eclectic Tech* podcasts are sponsored by Icom. Both podcasts are available on iTunes (iOS) and Stitcher (Android) as well as on Blubrry --

[On the Air](#) | [Eclectic Tech](#).

ARRL Learning Network's new speaker forum/seminars <http://www.arrl.org/arrl-learning-network>



Introduction to DMR and Digital Voice -- Tim Deagan, KJ8U / Thursday, September 9, 2021 at 3:30 PM EDT (1930 UTC)

An introductory overview of digital voice (DV) technologies for ham radio. This presentation will focus on DMR with notes on System Fusion, D-STAR, and more. Included will be a description of DV architecture and components, and the interesting opportunities and challenges that DV presents.

[2020-2021 ARRL Contest Dates PDF](#)

Local and Some HF Area Nets

MARC Nets

Sunday 8:00 PM – General Information Net – we ask participants about their week in ham radio and their thoughts on a question of interest to the ham community.

W5MRC Repeater, (146.740 MHz, offset -0.600 MHz, tone 110.9)

Monday 8:30 PM – Simplex net – see how far your VHF radio can go without a repeater

Along with general discussion. 146.540 MHz Since this is simplex, no offset or tone are required.

1st and 3rd Mondays 8:00 PM - The MARC Ladies Net – All radio amateurs are welcome.

W5MRC repeater (146.740 MHz, offset -0.600 MHz, tone 110.9)

Collin County ARES Nets

Collin County Amateur Radio Emergency Service conducts two training nets each month. You do not need to be an ARES member to participate, all radio amateurs are welcome.

1st Sunday 9:00 PM - Collin County ARES -

K5PRK repeater, 1(47.180 MHz, offset +0.600 MHz, tone 107.2 Hz)

3rd Sunday 9:00 PM – Collin County ARES -

W5MRC repeater, (146.740 MHz, offset -0.600 MHz, tone 110.9 Hz)

SARA (Sachse Amateur Radio Association) Nets Wednesdays 8:00 PM – Ham Radio in Sachse – Weekly “On-The-Air” Information Net called “Ham Radio in Sachse”.

W5SRA Repeater (440.350MHz, PL Tone 110.9, Offset +5MHz)

You can see more about our club repeater here: <https://www.sachseradio.org/repeater>

2nd and 4th Sundays 9:00 PM - Sachse Public Service Net –

ARES, RACES & Other Public Service Emergency Responders (like local CERT groups) Training.

W5SRA Repeater Repeater (440.350MHz, PL Tone 110.9, Offset +5MHz)

LARC Nets

Tuesday 8:00 PM – Open Net - The Lucas Amateur Radio Club holds an informal net open to all Amateur Radio operators.

K5LFD Repeater (442.2125 MHz, offset +5.0 MHz, tone 91.5)

Wednesday 8:00 PM – Simplex Net – An informal repeaterless net on 146.54 MHz to gauge the effectiveness of our VHF capabilities.

GARC Nets

Thursday 8:00 PM – Info net – The Garland Amateur Radio Club holds an informal net open to all amateur radio operators. The net begins with check in and general announcements, followed by general discussion.

K5QHD Repeater (146.66 MHz, PL Tone 110.9 Hz, Offset -0.600 MHz)

North Texas Hospital Net

North Texas Hospital radio club weekly nets check in with area hospitals. Friday mornings (time TBD 8:30 am or 9 am). Jimmy Dominguez is NCS. 442.400/146.700. Regular splits PL tones 110.9/110.9. All are welcome to check in from your QTH as individual.

Attention; The North Central Texas Healthcare ARC net begins at 0830 Friday and moves to 146.700, the past Fridays the 146.700 repeater has been down, with uncertainty when the 146.700 repeater will be back online, the North Texas Central Healthcare ARC will only have the 442.400 portion of the net.

HF Nets

[Search for 100s of nets.](#)
[On-Air Net Scraper](#)

Daily Net 11:00 AM – 9:00 PM – The Maritime Mobile Service Network – Any licensed ham (General Class or higher) can check in. This net is focused on assisting those who are maritime mobile and over the years, several distress calls have been handled by this net. 14.300

Sunday 2:00 PM – Amateur Radio Satellite Net - Open net for licensed amateur satellite discussion and updates 14.282

Daily Net – OMISS – Focused on awards, particularly Worked All State (1:30 PM frequency 14.290) (8:00 PM frequency 7.185)

Many more nets are listed here <http://ac6v.com.htm>

Overland Bound

Weekly Net Every Friday night at 7:30 PM Central Time – A net for people who like to explore and take part in overland camping – hosted on the USA Grits-N-Gravy Conference Server (USA-GNG) Echolink Node: 591550 <http://www.usagritsngravy.net>

Daily 60 Meter Net 12:30 PM –

Test your 60 Meter capability on Channel 1 5332.0 MHz (5330.5 MHz window freq).

If you want to list your favorite net please send as much information as you can to newsletter@k5prk.net

What is Amateur Radio (Ham Radio?) from ARRL

(Thanks Johnnie Young)

Amateur radio is a multifaceted hobby that includes people around the world. There are about 740,000 ham radio operators in the US. The FCC has allocated [30 different frequency bands](#) from 135 KHz to greater than 275 GHz to amateur radio operators. These frequency bands are used for many different aspects of the hobby.

Some videos describing Amateur Radio:

<https://youtu.be/ysOq6ywTSzU>

<https://youtu.be/rs0i0h4OyMo>

https://youtu.be/5Z9136_Nhh4 - Classic Walter Cronkite video

Licensing:

There are [3 levels of ham radio licensing](#) in the US, Technician, General and Extra. Each level requires passing a multiple choice exam. The questions used for these exams are all [published on the web](#).

Study Aids:

Students can study for their license exam(s) in several different ways.

- Take a class
- Study training books. These are two of the most popular
 - [ARRL Technician Study Guide](#)
 - [Gordon West 2018 to 2022 Technician Class](#)
- View video classes
 - https://youtu.be/RGluTpM7_K8
 - https://www.youtube.com/watch?v=N6aFXH_SQUo&list=PL07A7D1C9D7BF7F48
- Take practice Exams
 - <https://www.eham.net/exams>

Taking the Exam:

Exams are offered by many clubs [around the metroplex](#). The Sachse club gives exams 9:00 [each 2nd Saturday at the Wylie Masonic Lodge](#).

Other Ham Radio Related Links:

Sachse Radio Club: <http://www.sachseradio.org/>

Largest/Oldest Ham Radio Org: <http://www.arrl.org/home>

Local Ham Radio Outlet Store <https://www.hamradio.com/locations.cfm?storeid=20>

Finding a nearby Club: <http://www.arrl.org/find-a-club>

Ham Radio Mesh Network: <https://www.arednmesh.org/aredn-advantage>

Amateur Radio Satellites: <https://www.amsat.org/>

Ham Radio Repeaters: <https://www.repeaterbook.com/>

Other videos:

HAM Radios: Quick and Easy Way to Get Into HAM Radio Hobby: <https://youtu.be/t0sMDRLGB3Q>

HAM Radio Basics- HAM 101: <https://youtu.be/Ow1hxClR5J8>

Numerous Dave Casler Videos: <https://www.youtube.com/channel/UCaBtYooQdmNzq63eID8RaLQ>

SPACE STATION CREW USES HAM RADIO TO CALL EARTH <https://youtu.be/H73EYCYSZF8>

Listen to episodes of ARRL Audio News on your iOS or Android podcast app, or online at <https://blubrry.com/arrlaudionews/>

Various Ham Radio Activities:

- Local/Regional communications
- World wide communications using Digital network linked repeaters
- World wide radio to radio communications
- [Contests](#) – Making as many contacts as possible
- Fox hunts – Finding a hidden transmitter
- Amateur Radio Satellite
- Supporting local events
 - Races (marathons, bike races, etc.)
 - Plano balloon festival
 - Parades
 - 4th of July events
- Extending RC aircraft video and telemetry
- Amateur Radio Emergency Data network (Network when the grid goes down.)
- Winlink – Email via ham radio
- Skywarn – Storm spotters (Most storm spotters report via ham radio.)
- Amateur Radio Emergency Services (ARES)
- Radio Amateur Civil Emergency Services (RACES)
- Antenna design/building
- CW (Morse code) communications
- DXpeditions – Location in an remote area (usually islands) for a short period of time and making as many contacts as possible.
- Summit On the Air – Transmitting from mountain summits
- JOTA - Jamboree-on-the-Air – Boy Scouts
- RF experimentation. Many [Maker groups](#)
- [High altitude balloon experiment](#).

PLANO AMATEUR RADIO KLUB Application for Membership

Annual KLUB Membership (Individual)..... \$30.00/Year _____
Annual KLUB Family Membership..... \$40.00/Year _____
Student Membership (18 and Under)..... \$ 5.00/Year _____

For The Treasurer Only

Total Amount Paid (Circle One: Cash or Check # _____) \$ _____

Name: _____ Call Sign: _____

Address: _____ Apt: _____

City: _____ State: _____ ZIP: _____

Home Phone: _____ Work Phone: _____

Email Address: _____

Occupation: _____ Birthday: _____

The PARK Roster is given to KLUB Members Only. Please circle any information that you do not want published.

License Class: _____ Expiration Date: _____

Previous Call(s): _____ First Licensed: _____

Call Sign(s) of Other Family Members: _____

ARRL Member ? _____ ARES Member ? _____

Other Hobbies and Interests: _____

Reason(s) You wish to join PARK: _____

The Plano Amateur Radio Klub (PARK) is an organization which thrives on the support and participation of ALL KLUB Members. Volunteers are needed regularly for the support of KLUB activities, manning technical projects, staffing organizational or social committees and providing communications for public service events.

Are you willing to stand for election to a PARK Office and/or Director Position? Yes ____ No ____

Will you agree to support PARK, to keep it strong and thriving? Yes ____ No ____

Signature _____

Date _____

PARK Secretary Only:

Date of Application: _____

Date Voted In: _____

P.A.R.K., P.O. Box 860435, Plano, TX 75086-0435 or email
secretary@k5prk.net



Plano Amateur Radio Klub General Meeting Minutes July 19, 2021

Start time: 7:05 pm
Location: Via Zoom
Facilitator: Sean Kelly – W5SPK -- President

Members 24
Guest 4

Pledge led by Sean Kelly – W5SPK

President Sean Kelly -- W5SPK

Agenda:

- Officers Reports
- Old Business – from the floor

- New Business – August General Meeting in person

- Tonight's Presentation –

 - Field Day 2021 with Mike Tharp – KG5TJF

 - RF Exposure Evaluation with Frank Krizan – KR5N

- Q & A Session

- Close

- Officers Reports

 - President Sean Kelly -- W5SPK

 - Vice-President Tim Johnson -- K5TCJ

 - Secretary Johnnie Young – KG5CQO

 - Treasurer Ross Watson -- AF5QK

 - Communications Director Kip Moravc -- AE5IB

 - Newsletter Editor Neil Gould -- NE5IL

 - Webmaster John Hatch -- KF5BSS

 - Public Relations Brian Trent -- KF5VFM

 - Activities Director Tony Campbell -- W5ADC

 - Field Day Coordinator Mike Tharp -- KG5TJF

President Sean Kelly – W5SPK

Summer is in full bloom. Now is a good time for maintenance before we get into our next 'short season' for severe weather and winter fun.

Presentation next month based on neglect, a perfect storm and recovery just in time for 13 Colonies Special Event.

A gentle reminder – October is right around the corner which means elections are rapidly approaching. To paraphrase President Kennedy, "Ask not what PARK can do for you. Ask what you



Plano Amateur Radio Klub General Meeting Minutes July 19, 2021

can do for PARK”

Open positions;

President

Treasurer

Activities Director

Vice-President's Report Tim Johnson – K5TCJ

Programs

June 19, 2021

Final Results for Field Day 2021

Mike Tharp – KG5TJF

De-mystifying the RF Exposure Evaluation for Ham Stations

Frank Krizan – KR5N

Aug 16, 2021

Mobile Antenna Maintenance is Important

Sean Kelly – W5SPK

September 20, 2021

Mobile Antenna Installations

Robert Evans – WW9W

PARK Recurring Activities

Shack Highlights and Tours – sponsored by Anthony Bourkas, KB3DVS—
every Thursday Night @ 2000 – Volunteers welcome – please step-up
and be counted

PARK Breakfast Group – Saturdays @ 0700

Poor Richard's Café – Plano, Texas

'No Name' Riser Breakfast – Saturdays @ 0900

Recommend following SOCIAL DISTANCING PROTOCOL

August Meeting Schedule

August 2, 2021 – Board Meeting

August 16, 2021 – General Membership Meeting

September Meeting Schedule

September 6, 2021 – Board Meeting

September 20, 2021 – General Membership Meeting

October Meeting Schedule

October 4, 2020 – Board Meeting

October 18, 2021 – General Membership Meeting

Tonight's Presentation



Plano Amateur Radio Klub General Meeting Minutes July 19, 2021



PARK JULY MEETING ABSTRACT: “Demystifying the RF Exposure Evaluation for Ham Stations” given by Frank Krizan, KR5N, of Plano. Frank’s program will focus on the need to ‘keep things simple”, while ensuring that everyone adheres to the intent of FCC policy. Many hams are wondering why this sudden move to forcing us to perform long, complicated calculations and measurements to ensure safety. It turns out the need to understand RF safety has been with us for the entire history of amateur radio and with FCC implications for almost 3 decades. Frank will review a bit of the history regarding RF exposure concerns, how radio frequency energy affects the human body, our responsibilities as good citizens and how to approach most situations in a simplified, straight-forward manner. If you’ve gotten bogged down in the complexities of some of the manuals which show difficult to understand equations and graphs, you’ll be happy to know there’s a much easier way to approach the subject.

BIO Frank Krizan, KR5N, grew up in Brenham, Texas (the home of Blue Bell Ice Cream). He was fascinated by radio from an early age. Frank got his Novice license (WN5ABU) in 1961 and year later became WA5ABU. He’s a graduate of the University of Texas (at Austin) and went to work at Collins Radio company in Richardson after a stint in the Navy. He enjoys all aspects of amateur radio and considers himself a Ham Generalist. Frank and His wife, Nancy K5NCK, moved to Plano a couple of years back. A son and daughter (and grand-kids), also, live nearby. He is currently the President of the Collins Amateur Radio Club of Richardson.

Secretary’s Report Johnnie Young – KG5CQO

secretary@K5prk.net

General Meeting Minutes for June are in the newsletter and have been uploaded to PARK IO groups and are on the web site.
Any questions about the minutes?

Questions?
None

Treasurer’s Report Ross Watson – AF5QK

Not in attendance

Report given by Johnnie Young – KG5CQO

Balance, expenditures, and deposits were given with new ending balance.

Communications Director Kip Moravc -- AE5IB

Nothing to report at this time.

Newsletter Editor Neil Gould – NE5IL



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Hope everyone got the newsletter
The newsletter is available through all the links.
It contains the minutes
Discussion of the high-altitude balloon launch
Need more contributions for the newsletter
Newsletter is good, due to the content members send in
Send items to newsletter@K5prk.net
If you see anything that needs to change, please send an e-mail.

Webmaster John Hatch – KF5BSS

Web site is K5prk.net
If need a log-in send an e-mail to webmaster@K5prk.net
Sign up for the website, newsletter and groups io which has forums and discussions about the high-altitude balloon launch
Any problems send an e-mail through K5prk.groups.io/g/main

Public Relations – Brian Trant – KF5VFM

Not in attendance
Nothing to report

Activities Director Tony Campbell—W5ADC

Balloon PHAB 17 launch with the Richardson Club
Will probably launch from Princeton
More info as time gets closer – Saturday, July 24th

New Business;

Will start meeting in-person in August
Will meet at the usual place, First Methodist Church of Plano,
3160 East Spring Creek Pkwy, Plano for 7:00 pm

Old Business;

None

Tonight's Presentation



Plano Amateur Radio Klub General Meeting Minutes July 19, 2021

Field Day

Mike Tharp, KG5TJF, went over the results from field day. The Klub had just under 1,000 points. There were many helpers for setting up the antenna and for taking them down. The Klub also had a number of operators throughout the day. A big thank you to all that were able to help and an extra big THANK YOU to Mike for coordinating this year's field day.

De-mystifying the RF Exposure Evaluation for Ham Stations

Frank Krizan, KR5N, explained RF exposure and what it can do to the human body. He went through the evaluation process so members could understand not only what was needed but why it was needed. He reminded everyone that knowing the safe distances has always been part of the regulations. He included charts as he demonstrated how to determine the appropriate distance needed to be safe. He ended by offering anyone help when they work on their own stations. Thanks to Frank, many of us have a better understanding of this process.

New Members:

July new members;

Welcome to...

David Cappello – KG5EIU

Michael Welch – K5MTW

Short bio to follow

Monthly Fox Hunt – Katherine Forson, KT5KMF

Introduced Logan McWaters -- KI5NON who will now take care of Wheatley

The fox will be in Plano this weekend so go try to find Wheatley.

Motion to adjourn;

Tim Johnson – K5TCJ

2nd of the motion

Richard Seitz – KG5HCJ

Adjourned – 9:00 PM

Thank you for attending
Stay healthy! Stay safe!