



Fannin County Amateur Radio Club



President- Keith Mumaw KI5VNL Vice-President- Sharon McEachern- KK5SM Secretary-Sarah Richardson- KI5PZF

Treasurer- James Hunt- KI5DQ Trustee- Dr.Mike Durbin - K5MJD

August 2024 K5FRC TREASURER'S

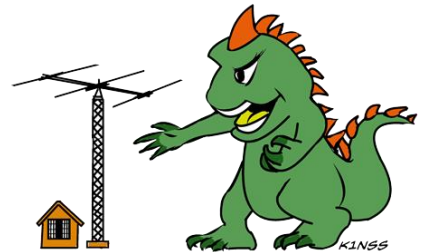


Currently, the club has a balance of \$3065.74 in its checking account and a balance of \$225.31 in its savings account. Since our last club meeting, the club has had the following deposits and expenditures: No deposits \$0.00. The club has had 2 expenditures since last month's meeting, annual USPS rental \$72.00 and Technician study books (10) \$162.10.

73's,
James
KI5DQ



SIMPLY NEED A BIGGER MAN CAVE



K5FRC REPEATERS

145.470 (100Hz tone; -600Khz offset)
C4FM or Analog; IRLP 3602;
ECHOLINK 143903

Tuesday Night Net 8:00 PM
442.525 (100HZ TONE; +5.0 Mhz offset)
C4FM or Analog;

443.750 (100Hz tone; +5.0Mhz offset)
C4FM or Analog;

FCARC meets every third Saturday at
9:00 AM at the Bois D'Arc Creek
Cowboy Church

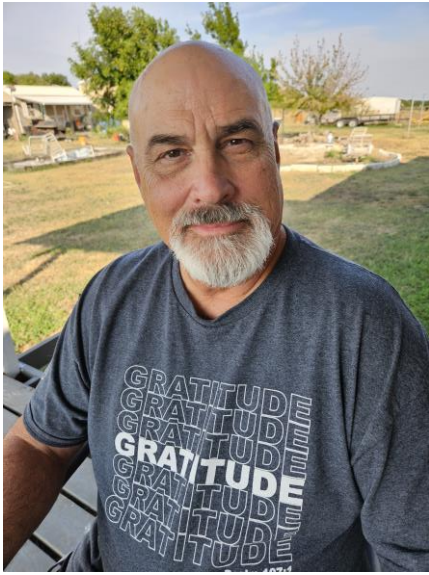
ZOOM sessions are held every Tuesday
at 7:00 PM CST before the net on the
145.470 Mhz repeater. Website:

www.k5frc.org

Facebook: www.facebook.com/K5FRC/

Mark, KF5KUW is the administrator.

Website: www.k5frc.org



PRESIDENTS REPORT

It's hard to believe that it has been 30-days since I saw everyone at the "Summer Field Day" in June and now it's August. You see, when you're laid up in bed and aren't allowed to go outside, you get to have endless hours on the internet and watching "B" rated "Disaster" movies on ROKU and other channels. Several of these movies showed ham radio operators being called upon to help out after the event took place and that made me think about our role in "Emergency Management."

There are several members of the club who step into a different role other than "Sky Warn" storm watches, and that role is one of assisting in an "actual emergency," whether local, state, or national incident.

My time on the internet produced some interesting statistics concerning "Amateur Radio Operators" that I felt worthy sharing. According to an article I found on: <https://www.quora.com/How-many-Ham-Radio-operators-are-in-the-US-and-why-are-they-important>; in 2018 the FCC (Federal Communications Commission) which licenses amateur radio station operators there are about 750000 US amateur radio operators. Today, six years later, that number could be over well over 800,000 or more.

This is a relatively large number of potential volunteers to compliment Emergency Management activities in our communities across the nation, and here are a few of the comments I found:

- The FCC says one of the reasons for our existence is to provide advances in the state of the art in radio communications.
- Amateur radio operators provide local and long-distance communications during emergencies and natural disasters. During the 9/11 WTC attack all cell phone communications were down as well as some emergency radio capability because so many antennas were located atop the WTC. Amateurs helped fill the gap.
- US amateurs still support our nation's military through MARS (Military Auxiliary Radio System).
- Amateur radio has been and continues to be a popular entry point for young people into the world of STEM.
- Amateur radio allows citizens from any country in the world which permits amateur radio to communicate with any other country, a valuable opportunity to keep the world up to date.
- And unbelievably, there are still areas of our country without cell service or the internet. Alaska has standard amateur radio calling frequencies for communication "in the wild."

And even though it's not a reason for its importance but a reason for its existence: It is fun, challenging, social, and at times significant. What more could one want from a hobby? But sometimes a hobby can demand a level of expertise not required by other endeavors and our hobby is one of those.

So, I started thinking about my past training and how long it's been since I "updated" things and I found out that it has been too long. A visit to the FEMA website secured an update of IS-200.C: Basic Incident Command System for Initial Response ICS-200; IS-700.B: An Introduction to the National Incident Management System; IS-800.D: National Response Framework, An Introduction; and for fun I took the IS-29.A: Public Information Officer Awareness course. A quick visit to the ARRL site secured a Basic EmComm certificate along with an Intermediate EmComm certificate.

So why did I do all of this, other than the fact that it's free, because I want to be of value to our community and our club should we suffer a natural disaster in Fannin County. I'm not an electronics wizard by any means, but I do experience dealing with emergencies and anything I can do to strengthen that can only help in the long run.

The framework of job, whether paid or voluntary, is to have a basic understanding of management techniques; the expectations of all involved and the complete and total understanding of the "Chain of Command." The first two courses I took were an update of the ones I took in 2009, and although not much changed, enough had to warrant a re-examination of what was previously learned. The additional course gave me some added knowledge to keep me out of trouble.

Think about how our communities could be served if all 800,000 or so licensed radio operators would take the time to learn a few new skills for when a disaster strikes. I sincerely hope the members of FCARC give thought to the "potential" we have within our radios and within us.

I hope to see all of you at our August meeting and look forward to the opportunities that lay in front of us.

Till, 73
Keith Mumaw
2024 FCARC President



VICE PRESIDENTS REPORT
AUGUST 2024 VP REPORT
SHARON MCEACHERN-KK5SM

HISTORY OF HAM RADIO

I hope everyone has found a way to beat the August heat!!! We have several events coming up in the next few months, and I look forward to working them all with you. This month's article is part 1 of 3. You know I love history and I found a timeline of historical events that are Ham-related. I do hope you enjoy the timeline!!

1894-1899--Marconi conducts his wireless experiments in Europe and sends a message across the English Channel. First article on building a wireless set appears.

1901-Marconi sends a wireless signal across the Atlantic.

1900-1908--Thousands of Americans experiment with wireless. Few at this time are interested in it as a hobby only.

1904-J.A. Fleming develops the 2 element (Diode) vacuum tube.

1906-Lee deForest develops the 3 element (Triode) vacuum tube. R.A. Fessenden uses the Alexanderson Alternator to make the first voice & music transmissions.

1908-A possible beginning of amateur radio. Prior to this time, interest in wireless had primarily been either as an experimenter or as an entrepreneur. By 1908, definite hobby interests exist among users.

1909-The first radio clubs are formed. Spark and the longwaves (300-6000 meters) are king. **1912**-The Titanic disaster points out the need for Wireless Regulation. The Radio Act of 1912 is passed, which limits "private stations" (i.e. amateurs) to 200 meters, a "useless" frequency. The number of "private stations" drops from an estimated 10,000 to 1200.

1913-Edwin Armstrong develops the regenerative receiver and also discovers that the "Audion" (Triode) can oscillate. CW is born.

1914-The ARRL is organized by H.P. Maxim to help relay messages, given the limited range on 200 meters at that time. (25 miles).

1914-1917--The number of amateurs increases from 1200 to over 6000. The ARRL has an effective traffic handling network set up. David Sarnoff, (future head of RCA) proposes a "Radio Music Box" receiver. deForest (and some amateurs) make experimental broadcasts. The ARRL starts a little magazine, called "QST".

1917-The US enters WWI. All amateurs are ordered to dismantle their transmitters and receivers. With no radio operations, and 4000 hams in uniform, QST ceases publication.

1918-Major Armstrong develops the superheterodyne receiver while serving in France. C.W. is used by the military during the war.

1919-Secretary of the Navy Josephus Daniels tries to get the Navy a total monopoly on all wireless communications. The ARRL's "blue card" appeal saves the concept of private radio operations. Amateurs get back on the air in November, 1919.

1919-Woodrow Wilson becomes the first President to speak over radio when he broadcasts a speech to American Troops in Europe.

1919-1920--King Spark's last stand, with the success of CW in the war & the availability of tubes, Spark was doomed. Some amateurs experiment with broadcasting, including 8XK (KDKA). The number of hams = 5719.

1920-"Amateur Police Radio" becomes popular. Amateurs operated as an intersystem police communications service to relay broadcasts of crimes and stolen vehicles.

1921-The National Amateur Wireless Association becomes active. It's main success is the broadcast of the Dempsey-Carpenter fight. Many amateurs helped in this broadcast, from acting as relay stations to setting up receivers and loudspeakers in public places.

1921-1922--The Transatlantic tests are a success. Amateurs discover that frequencies below 200 meters (above 1500 kc) work even better. Amateur Broadcasting ("Citizen Radio") is popular with up to 1200 amateurs, but is prohibited in 1922 with the first broadcast regulations issued. **1923**-The amateur census is at 14,000. Shortwave development continues. The MacMillian Arctic Expedition is the first to carry two way radio; an amateur 200 meter station. Over the next 10 years, dozens of Arctic and Antarctic expeditions, including those of Commander Byrd, used amateur radio as their primary communications.

1924-Amateurs get new bands at 80, 40, 20, and 5 meters. Spark prohibited on the new bands. Broadcast band expanded. The ARRL adopted Esperanto as the international auxiliary language **1925**-The International Amateur Radio Union (IARU) formed. Amateurs finally are successful in working around the world on shortwave.

1926-Crystal control of transmitters developed. A Federal Court declared the Radio Act of 1912 to be unenforceable in regards to broadcasting & the shortwaves. The "Summer of Anarchy" commences in the broadcast world, but amateurs stay within their bands. **1927**-The Radio Act of **1927** creates the Federal Radio Commission. The word "amateur" is used for the first time in a Federal Statute. The International Radiotelegraph Conference is held in Washington. 70 Nations send representatives. Amateurs, represented by the ARRL & the IARU, fight overwhelming odds, keep 160, 80, 40, 20 & 5 meters, gain 10 meters, but lose 37.5% of our overall frequencies. International callsign prefixes are assigned.

1929-1936--Despite the Depression, Amateur Radio enjoys it's greatest growth-- from 16,829 to 46,850. Low cost components make it possible to build a quality station for \$50. VHF phone operation becomes popular with the superregenerative receiver (developed by Armstrong) and the modulated oscillator. Phone operation begins to appear on some HF bands. But C.W. & crystal control are still number 1.

1932-The Madrid Conference. No changes to Amateur Radio.

1933-1934--The Communications Act of 1934 creates the Federal Communications Commission. Amateur Licenses are reorganized into Class A, Class B, and Class C. Major Edwin Armstrong develops wideband FM.

1936-H.P. Maxim, founder of the ARRL & it's first President, dies.

1938-The Cairo Conference. Amateurs lose the exclusive use of 40 meters, now shared with Broadcasters. The FCC gives us 2 new "UHF" bands, 2 1/2 meters (112 Mc) and 1 1/4 meters (224 Mc).

1939- 1940--We are joined in the "UHF" range by two new users--the first FM Broadcast Band (42-50 Mc) featuring stations such as W1XPW, W2XMN, and W2XOY; and the first Television Broadcast Band, above 60 Mc, with stations such as W2XBS.

1940- 1941--With the war raging in Europe, our ability to have international QSO's is severely limited. When the US enters the War, all amateur activity is suspended

1942-1945--Except for WERS (the War Emergency Radio Service) on 2 1/2 meters, no amateur operations take place. New "UHF" tubes and circuits are developed as a result of the war. 1945-A major battle develops over postwar frequency allocations. The ARRL (amateurs), Major Armstrong (FM Broadcasting), and Brigadier General David Sarnoff (RCA/NBC Television), all fight over the low end of the VHF spectrum between 44-108 Mc. At one point, the FCC submits 3 Alternatives--#1 gives us a 7 meter band (44-48 Mc), #2 our 5 meter band (56-60 Mc), and #3 a 6 meter band (50-54 Mc). Alternative #3 wins and our 6 meter band is located between TV Ch 1 (44-50 Mc) and Ch 2 (54-60 Mc). FM is moved (over Armstrong's objections) from 42-50 to 88-108 Mc. The FCC moves our 2 1/2 meter band to 144-148 Mc (over the ARRL's objections) because they want it to be next to government & military allocations. On November 15, 1945, amateurs are allowed back on the air--but just on 10 & 2 meters only.

1945-CQ magazine is first published.

PART 2 COMING IN NEXT MONTHS NEWSLETTER



DUNCAN BERRY
KG5NDO



SARAH RICHARDSON
KI5PZF

SECRETARY REPORT

Fannin County Amateur Radio Club
Regular Meeting @ Bois D'Arc Creek Cowboy Church

Fannin County Amateur Radio Club
Meeting Minutes, July 20, 2024, at the Bois d'Arc Creek Cowboy Church.
Recorded by Duncan Berry, KG5NDO

Sharon McEachern, KK5SM called the meeting to order at 9:00 AM and Bob Yakel, KG5KKE lead the opening prayer and pledge of allegiance.

Officer Reports

President's Report

-Club president, Keith Mumaw, KI5VNL, was not present. His report was published on the club web page and emailed with last month's meeting minutes. There were no questions for or discussion of the president's report.

Vice-President's Report

-Sharon McEachern, KK5SM, asked for any comments on her report which was also published on the club web page and by email. With no further discussion, Sharon asked that club members bring up concern before our next meeting by directly contacting a club officer.

Treasurer's Report

-James Hunt, KI5DQ, reported that the club checking account had a balance of \$3299.34 and a savings account balance of \$225.31. The report can also be found on the club web page. Mark Hetherington, KF5KUW, made a motion to accept the club treasurer's report and the motion was seconded by Ralph Borgardt, KI5LVS. The treasurer's report was unanimously approved.

Secretary's Report

-The club secretary Sarah Richardson, Ki5PZF is away for July and August. Duncan Berry, KG5NDO volunteered to take the meeting minutes for July and August. Sarah's minutes for last month's meeting are published on the club web page and were emailed to club members. Mark Hetherington, KF5KUW, made a motion to accept the club treasurer's report and the motion was seconded by Mike Durbin, K5MJD. The secretary's report was unanimously approved.

Trustee's Report

-Club trustee Mike Durbin, K5MJD, reported that the repeaters are in good shape and gave a brief outline of the repeater class at his QTH. The class will begin with all interested participants present and then continue with three students at a time. The class participants will learn how to operate a repeater by assembling and programming a new repeater. The class will include instruction on how to maintain our current repeaters.

Old Business

-Recap of 2024 Summer Field Day by Mike Durbin, K5MJD: This year's summer field day was one of the most productive the club has hosted. The results were accepted by the ARRL with the final results pending. The club made over 300 contacts during the event. Mike Durbin Presented Sharon McEachern, KK5SM, with a certificate for making the most contacts during the event. Michael Jeter, KG5OGC, pointed out only one county official visited the event: Cody Shook. We can possibly make the same invitation at our next event in September and hopefully have a better response.

-Duncan Berry, KG5NDO brought up who is the net control operator for the next two weeks. He volunteered to cover net control in July, but needed a substitute for July 23rd. James Hunt, KI5DQ volunteered to take the net control on 7/23 and Duncan will be net control for 7/30. Duncan called for members who have not been a net control operator to step up and try it. Keith Mumaw will be net control for August unless there are other club members who want to be net control.

-Sharon McEachern brought up the status of grants and the newly formed grant committee. Duncan Berry, KG5NDO reported that a grant application was in process but he needed input to finish the project. This is a ARRL Foundation Club Grant Application 2024. The current grant project involves acquiring a marine radar. Mike Durbin, K5MJD, suggested that we acquire a marine weather radar system to "see" below the 30,000 foot limit of the NWS radar. The issue is where to locate the radar so there is equitable access to the unit. If the unit was located at the Fannin County Sheriff's Office, there would be limited access to the unit AND there is a question of whether or not the sheriff's office will permit the installation of the unit. Mike Durbin suggested that we install the radar unit on the club's white trailer. This would make the unit portable and self-contained. The suggestion will enable the grant proposal to move forward because the specifics of the project fit the criteria for getting the grant.

-With regards to what I need from the club (Duncan, KG5NDO) - A regular Zoom meeting or in-person meeting will be productive. I need more ideas and a commitment from a few members to partner in this project. I will have a proposed meeting schedule prepared for the next club meeting. I also need other club members who already have connections with local schools to help out. The

current grant application period closes July, 26th 2024. (After note: The grant application has been submitted to the ARRL Foundation.)

New Business

- The repeater class will meet at Dr. Durbin's QTH immediately after the club meeting.
- Prayers for Mike Lindsey, KD5UNY, who is in room 213 at Bonham TMC. He will be there until next week and would appreciate a call or visitors.
- Michael Jeter, KG5OGC expressed concern over coverage for polling sites in Fannin County for the November elections. We will have to reach out to the new county clerk to make sure that they are aware of the resource. We can also remind staff members in the county clerk's office.

Review of the upcoming calendar of events

- Next Club meeting is August 17th, 2024 at the Bois d'Arc Creek Cowboy Church.
- The September meeting is September 21st, 2024 which coincides with our participation at the Sam Rayburn House's Farming Heritage Days. Sharon McEachern, suggested that we meet at the Sam Rayburn House before the event begins. The event is scheduled from 10 AM to 2 PM which means we can set up and get a meeting in before the event. Bob Yakel, KG5KKE, suggested that we set up the club trailer and host a POTA event like we did last year. Duncan Berry, KG5NDO, will make the contact with Margo McCutcheon to make the arrangements. We will also advertise this event.
- Bonham Bike Rally: October 5th, 2024. The club will participate as we did last year but there will be some changes. Mark Hetherington, KF5KUW, outlined the changes. First, the route has been changed to eliminate the dangerous route 78 section. The rest stops will be provided and staffed by corporate sponsors. Mark will develop a new map and a sign up for each station. There will also be more SAG trucks. The event coordinators also would like video feed, like last year. We will have to schedule a date for a dry run like last year. Specifically to test our net coverage, equipment, and APRS coverage. Mark Hetherington will need a stand in for the Bike Rally coordinator's meeting on September 2nd and 3rd.
- October meeting: October 19th, 2024. Club meeting and Go-box event. Mike Durbin, K5MJD, suggested that we change the location from Coffee Mill Lake to the 897 Lake Bois d'Arc Boat Ramp. We will need to contact the Lake Operations Center to see if we need a permit. If we change the location this an opportunity to reach a larger audience.
- Tuesday November 5th, Election Day. -Possible emergency communications participation.
- November 16, 2024: Club meeting at Bois d'Arc Creek Cowboy Church. Officer nominations for next year will be accepted. Please contact Janes Hunt, KI5DQ.
- November 23, 2024: Spirit of Giving at the First Presbyterian Church in Bonham. The club will be providing hot dogs and drinks. The food will either be provided by a corporate sponsor or by the club.
- December 21st, 2024: Club meeting, annual Christmas party, and club elections. This event may have to be relocated. We are tentatively scheduling the event to take place at the Windom Feed Sack. If the Windom Feed Sack is still open and had not been sold, the location will not change.

Activity Zone

Mark Hetherington, KF5KUW gave a presentation about RACES.

Adjournment

Brenda Jeter, Kg5OMG, made a motion to adjourn, Chris "Fuzzy" Vaughn, W5FZY, seconded the motion.



NOW MY USUAL FUN/INFO STUFF
"I AM COMPLETELY OPERATIONAL AND ALL MY CIRCUITS ARE
OPERATING NORMALLY"

THINK
YOU ARE

TRUSTEE'S REPORT **de K5MJD**

REPEATER ACTIVE? CHECK OUT THE
FOLLOWING!!

Repeaters are found mainly in the VHF 6-meter (50–54 MHz), 2-meter (144–148 MHz), 1.25-meter band (1 1/4 meters) (220–225 MHz) and the UHF 70 centimeter (420–450 MHz) bands, but can be used on almost any frequency pair above 28 MHz.

Each state has one or more coordinating orgs and the band plan associated with each band.

Texas VHF-FM Society Band Plans

6 Meter Band Plan

50.000 - 50.100 CW (50.06 - 50.08 Beacon sub-band)

50.100 - 50.300 Weak Signal SSB (50.125, 50.200 Calling Freqs.)

50.300 - 50.600 Mixed Modes (50.400 AM Calling Freq.)

50.600 - 50.780 Packet and other data modes

50.800 - 51.000 Model Radio Control Channels - 20 KHz steps - (DO NOT OPERATE HERE)

51.010 - 51.100 Pacific DX Window - Weak Signal SSB / CW

51.100 - 51.530 Simplex

51.550 - 52.390 Repeater Inputs - 20 KHz spacing odd 10 KHz

52.410 - 52.530 Simplex - 52.525 National Calling Freq.

52.550 - 52.990 Repeater Inputs - 20 KHz spacing odd 10 KHz (See Note 2)

52.550 - 53.390 Repeater Outputs - 20 KHz spacing odd 10 KHz (See Note 2)

53.410 - 53.530 Simplex

53.530 BeaconNet APRS

53.550 - 53.990 Repeater Outputs - 20 KHz spacing odd 10 KHz

Note 1. All Repeater input to output spacing is 1.000 MHz. Low input - High output

Note 2. Input / Output channels coordinated on case by case basis in this section.

Note 3. Old RC Channels 53.1 to 53.8 on 100 KHz channels protected until Dec. 31, 2001

148 MHz Band Plan

144.000 - 144.100

CW

144.100 - 144.275

Weak Signal SSB (144.200 Calling Freq.)

144.275 - 144.300

Propagation Beacons

144.300 - 144.500

Satellite Sub-Band

144.390

Automatic Position Reporting System

144.500 - 144.900

Repeater Inputs - paired with 145.10-145.50 Outputs

<u>144.900 - 145.100</u>	<u>Packet</u>
<u>145.100 - 145.500</u>	<u>Repeater Outputs - 20 KHz spacing odd 10 KHz (-)</u>
<u>145.500 - 145.800</u>	<u>Simplex and Experimental</u>
<u>145.800 - 146.000</u>	<u>Satellite Sub-Band</u>
<u>146.020 - 146.400</u>	<u>Repeater Inputs - paired with 146.62-147.00 Outputs</u>
<u>146.400 - 146.600</u>	<u>Simplex (146.520 Natl. Calling Freq.)</u>
<u>146.620 - 147.000</u>	<u>Repeater Outputs - 20 KHz spacing even 10 KHz (-)</u>
<u>147.000 - 147.380</u>	<u>Repeater Outputs - 20 KHz spacing even 10 KHz (+)</u>
<u>147.400 - 147.600</u>	<u>Simplex</u>
<u>147.600 - 147.980</u>	<u>Repeater Inputs - paired with 147.00-147.38 Outputs</u>

Note 1. All Repeater input to output spacing is 600 KHz.

Note 2. The 145.25 Tx, 144.65 Rx repeater pair is a limited range, shared, non-protected channel and requires CTCSS or equivalent on the input and output

Last Revised (August 6, 2011) Last Updated (January 15, 2012)

219 to 220 and 222 to 225 MHz Band Plan

<u>219.000 - 220.000</u>	<u>Secondary Point to Point fixed digital message forwarding see FCC rules Part 97.303(e) for details</u>
<u>222.000 - 222.150</u>	<u>Weak Signal Modes</u>
<u>222.100</u>	<u>SSB/CW Calling Freq.</u>
<u>222.180 - 223.380</u>	<u>Repeater Inputs</u>
<u>223.400 - 223.500</u>	<u>Simplex</u>
<u>223.500</u>	<u>National Calling Freq.</u>
<u>223.520 - 223.640</u>	<u>Packet</u>
<u>223.660 - 223.760</u>	<u>Links and Control Freq.</u>
<u>223.780 - 224.980</u>	<u>Repeater Outputs</u>

Note: All Repeater input to output spacing is 1.600 MHz. Low input - High output.

Last Updated (June 03, 2007)

440 to 450 MHz Band Plan

<u>440.000 - 440.500</u>	<u>Digital Wide Band Output (50 or 100 KHz wide)</u>
<u>440.525 - 440.725</u>	<u>Digital Narrow Band Output</u>
<u>440.750 - 440.975</u>	<u>Cross Band Repeat - Fixed</u>
<u>441.000</u>	<u>Narrow Band Packet</u>
<u>441.025 - 441.075</u>	<u>Simplex NBFM Voice</u>
<u>441.100 - 441.175</u>	<u>Simplex NB Digital</u>
<u>441.200 - 441.275</u>	<u>Control Channels (Ph. II) (12.5 KHz spacing)</u>
<u>441.300 - 441.375</u>	<u>Backyard Repeater Output (see Note 2)</u>
<u>441.400 - 441.475</u>	<u>Control Channels (Ph. I) (12.5 KHz spacing)</u>
<u>441.500 - 441.975</u>	<u>Low Pwr NBFM Repeater Output (100 W., 100 ft.)</u>
<u>442.000 - 444.975</u>	<u>NBFM Repeater Output</u>
<u>445.000</u>	<u>NASA Select NBFM Audio</u>
<u>445.000 - 445.500</u>	<u>Digital Wide Band Input (50 or 100 KHz wide)</u>

<u>445.525 - 445.725</u>	<u>Digital Narrow Band Input</u>
<u>445.750 - 445.975</u>	<u>Cross Band Repeat - Mobile</u>
<u>446.000</u>	<u>National Simplex NBFM Voice</u>
<u>446.025 - 446.075</u>	<u>Simplex NBFM Voice</u>
<u>446.100 - 446.175</u>	<u>Simplex NB Digital</u>
<u>446.200 - 446.275</u>	<u>One-Way Links (Ph. II) (split site repeaters)</u>
<u>446.300 - 446.375</u>	<u>Backyard Repeater Input (see Note 2)</u>
<u>446.400 - 446.475</u>	<u>One-Way Links (Ph. I) (split site repeaters)</u>
<u>446.500 - 446.975</u>	<u>Low Pwr NBFM Repeater Input</u>
<u>447.000 - 449.975</u>	<u>NBFM Repeater Input</u>

Note 1: All NBFM operations are 25 KHz spacing unless otherwise noted. Note 2: Backyard repeaters are limited range, shared, non-protected channels and require CTCSS or equivalent on input and output.

Last Updated (June 3, 2007)

900 MHz Band Plan

<u>902.0 - 903.0</u>	<u>Weak Signal work</u>
<u>903.0 - 903.2</u>	<u>NBFM Simplex for use with Japanese 'CB' rigs</u>
<u>903.2 - 904.0</u>	<u>Narrow Band links and control simplex. 25 kHz channel spacing</u>
<u>904.0 - 905.0</u>	<u>Narrow Band links and control duplex pairs, paired with 916.0 - 917.0 25 kHz channel spacing</u>
<u>905.0 - 908.0</u>	<u>Repeater Outputs on 25 kHz channels. 905.0 905.1 reserved for non-FM repeaters (ACSB or linear translator) Paired with 917.0 - 920.0</u>
<u>908.0 - 909.0</u>	<u>Wide band modes (packet, WBFM, etc.) simplex channels (spacing to be determined)</u>
<u>909.0 - 910.0</u>	<u>Wide band modes duplex channels (spacing to be determined) Paired with 921.0 - 922.0</u>
<u>910.0 - 916.0</u>	<u>ATV channel 1</u>
<u>916.0 - 917.0</u>	<u>Narrow Band duplex link and control (paired with 904.0 - 905.0)</u>
<u>917.0 - 920.0</u>	<u>Repeater Inputs (paired with 905.0 - 908.0)</u>
<u>920.0 - 921.0</u>	<u>Wide band modes simplex channels (spacing to be determined)</u>
<u>921.0 - 922.0</u>	<u>Wide band duplex (paired with 909.0 - 910.0)</u>
<u>922.0 - 928.0</u>	<u>ATV Channel 2</u>

Last Updated (September 06, 2008)

1200 MHz Band Plan

The Texas VHF-FM Society Frequency Coordination committee and invited guests gathered at the University of Texas at Arlington on Saturday, 25 September 1993.

Merle Taylor WB5EPI, Buddy Brown WD5DBB, Paul Gilbert KE5ZW, Chuck Adams WB5WRR, Paul Baumgardner KB5BFJ, Jerrel Jones W5TUU, Steve Jones WB5SGN, Louis Bancook WB5UUT, Dave Davis WB5WIA, Ray Wangler W5EDZ, Herb Crosby WD5EFC, Bruce Vitallero KJ5AY, Bill Moore N5ZPR, and Walt Wiederhold W5OGZ were in attendance.

They met to discuss various coordination issues ranging from implementing the new UHF band plan, discussing the renewal process, a proposed statewide repeater directory and changes for 1.2 Ghz.

Special thanks to Dave Davis WB5WIA for hosting the meeting at the UTA Engineering building.

The following is the recommendation from the committee:

<u>1240-1260</u>	<u>remains ATV activity</u>
<u>1260-1270</u>	<u>remains Satellite activity</u>
<u>1270-1275</u>	<u>repeater inputs</u>
<u>1276-1282</u>	<u>remains ATV activity</u>
<u>1282-1290</u>	<u>wide band modes</u>
<u>1290-1295</u>	<u>FM narrow band repeaters and simplex activity</u>
<u>1295-1300</u>	<u>wide band weak signal activity</u>

The repeater portion is broken into the following:

<u>24</u>	<u>low power "backyard repeater" channels</u>
<u>169</u>	<u>high power channels</u>
<u>12</u>	<u>simplex channels</u>
<u>1291.00</u>	<u>Statewide Low Power NB FM experimental pair (low power, CTCSS, less than 100' antenna height)</u>
<u>1295.00</u>	<u>Statewide Space Shuttle Rebroadcast channel</u>

The following is the specific 1240-1300 band plan:

<u>1240.00</u>	<u>atv channel 1 band edge</u>
<u>1241.25</u>	<u>atv channel 1 video carrier</u>
<u>1246.00</u>	<u>atv channel 1 band edge/channel 4 band edge</u>
<u>FM ATV band edge</u>	
<u>1247.25</u>	<u>atv channel 4 video carrier</u>
<u>1252.00</u>	<u>atv channel 2 band edge/channel 4 band edge</u>
<u>FM ATV video carrier</u>	
<u>1253.25</u>	<u>atv channel 2 video carrier</u>
<u>1258.00</u>	<u>atv channel 2 band edge/FM ATV band edge</u>
<u>1258.00 - 1259.99</u>	<u>open</u>
<u>1260.00</u>	<u>satellite band edge</u>
<u>1270.00</u>	<u>satellite band edge</u>
<u>1270.00 - 1270.08</u>	<u>NB FM simplex (5 pairs i.e. 1270.00, .02, .04, etc.)</u>
<u>1270.10 - 1274.48</u>	<u>NB FM repeater inputs (every 20 khz i.e. 1270.10,.12, .14, .16, etc.)</u>
<u>1274.50</u>	<u>NB FM simplex channel</u>
<u>1274.52 - 1274.98</u>	<u>NB FM repeater inputs (every 20 khz i.e. 1274.52,.54, .56, etc.)</u>
<u>1275.00 - 1275.99</u>	<u>open**</u>

<u>1276.00</u>	<u>atv channel 3 band edge</u>
<u>1277.25</u>	<u>atv</u>
<u>1282.00</u>	<u>atv channel 3 band edge</u>
<u>1282.02 - 1289.98</u>	<u>WB modes**</u>
<u>1290.00 - 1290.08</u>	<u>NB FM simplex (5 pairs at 20 khz spacing,i.e. 1290.00, .02, .04, etc.)</u>
<u>1291.10 - 1290.98</u>	<u>NB FM Repeater Outputs (45 pairs at 20 khz spacing) i.e. 1291.10, .12, .14, .16, etc.)</u>
<u>1291.00</u>	<u>NB FM Experimental Repeater pair</u>
<u>1291.02 - 1291.48</u>	<u>Low Power NB FM Repeater Pairs (24 pairs at 20 khz)</u>
<u>1291.50 - 1294.48</u>	<u>NB FM Repeater Outputs (100 pairs at 20 khz)</u>
<u>1294.50</u>	<u>National NB FM Simplex</u>
<u>1294.52 - 1294.98</u>	<u>NB FM Repeater Outputs (24 channels at 20 khz)</u>
<u>1295.00</u>	<u>space shuttle audio channel</u>
<u>1295.01 - 1295.98</u>	<u>open (guard band for weak signal)</u>
<u>1296.00</u>	<u>CW calling (nationwide)</u>
<u>1296.10</u>	<u>SSB calling (nationwide)</u>
<u>1297.00</u>	<u>wide band weak signal lower edge</u>
<u>1299.99</u>	<u>wide band weak signal upper edge</u>

We are still considering other needs, such as packet, duplex packet and other modes which may require shuffling other allocations. This is a first attempt to initiate discussion among the various 1.2 Ghz users.

Nov 6, 1993

Portable Repeaters (as reprinted from Fall 2007 Newsletter vol 41 no. 5 page 11)

The zone coordinators have had several requests over the past few months for portable repeaters. The committee has agreed upon the following policy for requests for portable "emergency" repeaters:

1. The trustees should utilize UHF pairs of TX/RX 441.300/446.300, 441.325/446.325, 441.350/446.350, 441.375/446.375. These backyard pairs are available on a "first come, first serve basis" and will not be published in the repeater directory.

2. 12.5 kHz and 10 kHz spacing is also allowed for portable repeaters from 441.300 to 441.375 but must be coordinated in cooperation with the local zone coordinator.

3. There is no geographical spacing requirement for co-channel systems

4. The users must accept co-channel interference

5. The repeater must have PL on the input and output

6. The antenna height should be 100 ft AGL or less and output no greater than 100W ERP

73s for now -- de K5MJD