

The Ground-Wire

The Official News Letter of the Tyler Amateur Radio Club



Tyler Amateur Radio Club

<https://www.tylerarc.org/>



From the Rose Capital of the United States

April 2021

Volume 2021-04

SHORTWAVE LISTENING – PART 2 THE SHORTWAVE RADIO BANDS

by KG5LWD

This article is a continuation of last month's GroundWire newsletter on shortwave listening. If you remember from the last newsletter, there was an introduction to shortwave listening pertaining to its origin, what is shortwave listening, what has happened to shortwave listening over the years, and what prompted the change in shortwave listening since it all began in the early 20th century. Additionally, the various steps to begin shortwave listening were described to get the reader started in the hobby.

In this issue of the GroundWire Newsletter, the basics of shortwave listening will be delved into to get the reader started listening to broadcast from around the world. Information will be provided on where to look in the various radio bands to find stations whose broadcast materials may be of interest.

SHORTWAVE RADIO BANDS

What is the best time to listen to shortwave broadcasts and what will you hear? Well, that's a good question since there are all sorts of broadcasts taking place throughout the entire day in different languages and topics.

Perhaps the best time to listen to shortwave stations is during the hours of darkness and provide good opportunity for DXing. The reason for these hours is due to the improved atmospheric conditions that allow for better propagation of radio waves on the lower frequencies (bands), less static noise that is created by thunderstorms and because shortwave stations like to target these hours for listening since audiences are at home tuned in with their shortwave radios. In other words, when the listener is at home.

As a general rule of thumb, radio bands with frequencies of 13,000 kHz are heard better at night, while those frequencies above 13,000 kHz are better received during the day time hours.

And during the sunrise and sunset times of the day, signal reception from long distances can be pretty good, if not excellent.

However, during the summer months, the bands are pretty good into the early evening hours, but can be degraded due to the summer static as well as the those bands heard at nighttime.

Then there are the 120 to 40 meter bands which are susceptible to static created by thunderstorms. This is particularly true during the summer months. A good receiver can pick up this static from hundreds of miles away and make listening pleasure difficult at times. It's best to check local and regional weather conditions before attempting to listen on these bands to avoid these issues.

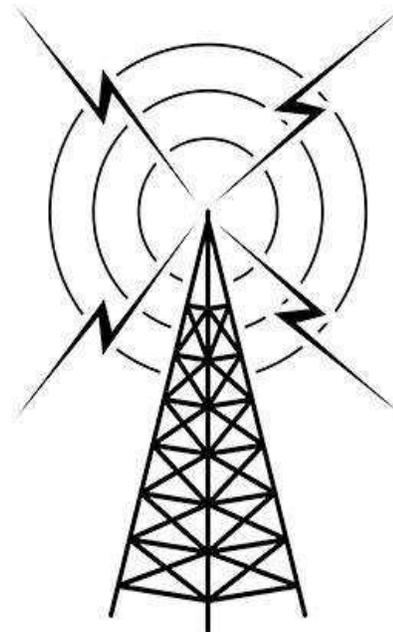


TABLE OF SHORTWAVE BANDS

Meter Band	Frequency (kHz)	Reception Times
120	2300-2500	Infrequent reception
90	3200-3400	Winter nights
75	3900-4000	Winter nights (Also Amateur Radio)
60	4750-5060	Tropical stations, winter nights
49	5900-6200	Best at night
41	7100-7350	Best at night (Also Amateur Radio)
31	9400-10000	Best at night, some day
25	11600-12160	Best at night, some day
22	13570-13870	Best day, some night
19	15100-15800	Best day, some night
16	17500-17900	Best day, some night
15	18900-19020	Best day
13	21450-21750	Best day
11	25600-26100	Best day

DAYTIME SHORTWAVE RECEPTION

Generally, listening to shortwave radio is not at its best during the daylight hours from two hours after sunrise until approximately two hours before sunset. The reason for this is that shortwave broadcasters are not transmitting their signal to North America since they think most listeners are either not home or are working.

Shortwave signals are better received on the eastern side of the US than on the western side of the country.

SHORTWAVE DAYTIME BANDS CHARACTERISTICS

13 meters – Listening results can vary. Signal reception can be very good around sunrise and sunset.

16,19 and 22 meters - For daytime listening, 19 meters is considered the best overall daytime band. 19 meters is good at nights during the summer months but expect summer static to occur from time to time. Listening conditions might fall into the very good category around sunrise and sunset. Sometimes good at night in the summer. 16 & 22 meter band listening conditions similar to the 19 meter band.

SHORTWAVE EVENING/NIGHT RECEPTION

Nighttime is the best time to listen to shortwave radio since broadcasters are pointing their signals to the North American continent. The band conditions can be very good around the sunset and sunrise hours, as well.

NIGHTTIME BAND CHARACTERISTICS

The 25 and 31 meter band have similar characteristics. Both are good during the nighttime hours and very good at sunrise and about an hour before sunset.

41 & 49 meters - These bands are good at night in the eastern part of the US and will vary as one goes farther west in the nation. However for best listening, 49 meters is probably the best band. - The 41 meter band is very close to the 40 meter amateur radio band where they sometimes have interference from shortwave broadcasters during the early and nighttime hours.

If you remember from your studies for ham radio licenses, radio signals will vary in strength depending on the time of day, the activity of the sun and earth's ionosphere. Some of the bands are better during the day time, while others better at night. It's best to start listening during the sunrise and sunset periods of the day. You'll have to experiment to see what works best for you at your QTH.

USING YOUR SHORTWAVE RADIO

Shortwave listening is a very popular hobby for people around the world. At one time, it use to be a very popular activity here in the US. But, interest in the hobby has waned over the years. Shortwave listening allowed people to connect with others on the opposite side of the world. In essence, it was really the first form of the Internet. Using your shortwave radio has a learning curve similar to the one you experienced learning to use a computer.

HOW TO LISTEN TO SHORTWAVE RADIO

In our experience as amateur radio operators, we have all learned that radio signals can travel far distances. This is particularly true for the nighttime. And we can tune into and listen to other radio operators from all around the world. Some of these operators may even be friends. In shortwave listening, the same principles apply to radio signals from broadcasters in other nations.

SO, HOW DO YOU USE YOUR SHORTWAVE RADIO?

As with any hobby and to be come good at shortwave listening, it takes time and practice.

Envision yourself as a gold miner during the gold rush days of the old west. You sit on a river bank panning for gold hoping to find that big nugget. You don't always find that nugget and you continue to pan. The same thing can be said for shortwave listening. You must keep searching the airwaves for that good to great frequency that will allow you to connect with others around the world. That's the gold nugget being searched for on the airwaves. And as you pan for those cherish frequencies, you will discover and learn more about the history of radio.

Use those techniques you developed listening for a signal on your ham radio transceiver, and switch over to those bands located in between the AM and FM broadcast frequencies and start listening to other folks in

far away lands by using a shortwave radio. Heck, even your transceiver may have that capability and you don't even need to buy one to listen in.

The Texas Museum of Broadcasting and Communications

by – KG5LWD



Have you ever done something that brought back memories or been to a place you may think you have once visited in a previous life? Yogi Berra once said something about this as being “deja vu all over again.” This is the case when I first walked in the door of the Texas Museum of Broadcasting and Communications. I saw a picture that I had not seen for many years since a child. It was a test screen shot of Howdy Doody and immediately I was taken back in time to when I first heard:

Buffalo Bob: Say kids, what time is it?
Kids: It's Howdy Doody Time!

It's Howdy Doody Time.
It's Howdy Doody Time.
Bob Smith and Howdy do
Say “Howdy Do” to you.
Let's give a rousing cheer,
Cause Howdy Doody's here.
It's time to start the show,
So kids, let's go!

Some of you may remember that song as a child in the infancy of television; where things were viewed in black and white. This is what the museum is all about, taking us back in time to revisit those things still familiar to us like: rabbit ears on the TV or we sat patiently next to the radio listening to our favorite radio program. We literally watched the radio back then and our imaginations could run wild.



Recording Control Room

R, X or the other letters of the alphabet soup describing the appropriateness of the program because they were not needed.

Ah, those were the days I remember well and brought back so many fond memories when TV was clean, wholesome and decent. There was something for every member of the family to view and we didn't have G, PG,

This museum really my interest in going back in time, to see the history of radio and TV and how technology has progressed in time to what we now have today. And amateur radio falls into all of this since we, as Hams, have been at the forefront of making radio communications better and still keep things clean, for the most part.



TV Studio Setup

Over five years ago, Chuck Conrad, the owner of the museum undertook a huge project to educate people about broadcasting and communications. For much of his life, Chuck collected radios, TVs, cameras, microphones and a plethora of other broadcast related equipment. All this stuff was beginning to take over his life if he didn't do something with it.

So, he did what any ingenious individual would do with things that he loved to collect. He wanted to show them off in a museum and provide an insight to our past that some would never realize existed if it were not for the museum. Consequently, he took over a building that was once a car dealership. Since September 2016, the museum has been open for folks to come visit on Fridays and Saturdays from 10 AM to 5 PM. And Chuck will open it up at other times with appointments.

In this museum one will find several dozen TV cameras used in television over the decades. One will find the 40th color TV made by RCA and used at NBC in New York. There's also a TV camera from KRLD in Dallas that captured on live TV the assassination of President Kennedy's killer, Lee Harvey Oswald, by then night club owner Jack Ruby. Also, one will also find a TV camera from ABC's American Bandstand.

TV cameras are not the only things on display at the museum. There are antique radios and televisions that have been put on display by one of Chuck Conrad's friends and partner, Warren Willard. It's these vintage pieces of electronics that display true works of art because of the wood cabinetry or plastics used in their construction. You'll see nothing like them in electronic products made today.



TV Cameras

One will also find an old telephone booth, telephone switch board and old rotary telephones; pieces of equipment that young people nowadays do not know what they are or how they were used. These are things that predated the Internet by several decades, yet are the ancestors of what we use today to communicate with other people next door or around the world. And finally, there is the Dumont Telecruiser. This vehicle is one of the first portable TV studios to exist and was manned by a crew of six

people. Conrad spent many years restoring this vehicle to its pristine condition and it is truly piece of art work due to the skills of artists who restore cars and truck in the East Texas area.



Dumont Telecruiser

If you have not toured the museum, it is definitely worth your time and effort to pay it a visit. You won't find another museum like it west of the Mississippi River. And the other museum east of the river does not compare to the quality of displays as to what is housed in this facility.

For more information, visit <http://www.txmbc.org/> . The Texas Museum of Broadcasting and Communication, 416 East Main Street, Kilgore, TX. Admission: Adults \$6, Seniors, Military, Students & First Responders \$5, Kids 3-11 \$3, Under 3 free.

Freedom Link

<http://www.freedom-link.org/>

For list of area repeaters, click on link above.



Freedom Link is a group of amateur radio operators offering expanded communications during inclement weather coordinating with National Weather Service SKYWARN for advanced weather notification to our communities. This service is provided for use to amateur radio operators of the Four States Area: NE Texas, SW Arkansas, NW Louisiana and SE Oklahoma. Our repeater system currently consists of nine full time connected repeaters, 145.170 - 100 Hz at Caddo Lake in Karnack, TX, 145.310 - 100 Hz in Atlanta, Texas, 145.390 - 100 Hz Barkman Creek in Texarkana, 146.640 - 136.5 Hz in Longview, TX, 146.840 - 100 Hz in Marietta, TX, 147.045 + 107.2 Hz in Nashville, AR, 444.425 + 100 Hz in Texarkana, TX, 147.360 + 100 Hz and 443.200 +100 at Karnack. Coming Soon 147.110 in Sulphur Springs and 147.760 in Shreveport, LA.

The goal of Freedom Link is to SAVE LIVES by providing advanced weather warning for hazardous conditions and expanded communication range for area amateur radio operators. In addition to weather warning, the system is open to all licensed amateurs to use for expanded area radio communications during non-threatening weather.

Freedom Link Repeaters

Freq.	CTCSS	Offset	Call Sign	Location
145.11	100	-600 KHz	WX5FL	Sulphur Springs, TX
145.17	100	-600 KHz	WX5FL	Karnack, TX [Pickin's Hill-Caddo Lake]
145.31	100	-600 KHz	WX5FL	Atlanta, TX [Springdale]
145.37	136.5	-600 KHz	W5WVH	Tyler, TX
145.39	100	-600 KHz	WX5FL	Texarkana, TX [Barkman Creek]
145.45	136.5	-600 KHz	WX5FL	Kilgore, TX Avinger, TX [Lake O' The Pines Water Plant Tower]
145.47	136.5	-600 KHz	WX5FL	
146.64	136.5	-600 KHz	K5LET	Longview, TX [East Mountain]
146.76	186.2	-600 KHz	N5SHV	Shreveport, LA [Downtown]
146.84	100	-600 KHz	WX5FL	Marietta, TX [Cussetta Mountain]
146.9	100	-600 KHz	WX5FL	Huffines / Mcleod, TX
147.045	107.2	+600 KHz	KC5TSZ	Nashville, AR [Yates Tower]
147.1	136.5	+600 KHz	WX5FL	Quitman, TX
147.36	151.4	+600 KHz	WX5FL	Pittsburg, TX [Midway]
443.2	100	+5 MHz	WX5FL	Karnack, TX [Pickens Hill-Caddo Lake]
444.425	100	+5 MHz	WX5FL	Texarkana, TX [Barkman Creek]

This is a 100% RF Connected Full Time Linked Repeater System .

Tyler ARC Officers

Joe Lisbony	WB5SDV	President
Patrick Brown	AK5TX	Vice President
Josh Kaufman	KE5FGC	Secretary/Treasurer
Larry Childress	KI5HUP	Member At Large
Jack Malone	AF5JM	Member At Large
Wayne Hoskins	WM5Q	Repeater Trustee

REGIONAL CLUBS

Click on underscored URL to visit site.

Longview <https://www.letarc.org/>

Nacogdoches <http://w5nac.com/>

Athens <http://www.athensarc.org/>

Cedar Creek <https://k5ccl.wordpress.com/>

Marshall <http://marclub.net/>

Minden <http://www.n5rd.org/>

Shreveport (ARCOS) <http://www.qsl.net/nwlar/arcos.htm>

Shreveport (SARA) <http://www.k5sar.com/>

Rusk County (Henderson) <http://www.ruskcountyarc.com/>

Four States (Texarkana) <http://www.4444sarc.org/>

Palestine-Anderson County <http://www.pacarc.org/>

Navarro, Freestone, Limestone and Leon County

<http://www.nflarc.com/>

Panola County (no website)

LeTourneau University – LUARC (no website)

The Rare Ones Of New Orleans

Do a little rag chewing with a group of really nice fellows living in and around the Big Easy on 40 Meters – 7.275 MHz (+/- 5 kHz) – Most Evenings About 1930-2130 CST. The actual operating frequency for the evening will be posted on NetLogger. **Many times also on 7.260 MHz, so check there too.**

<https://therareonesofneworleans.loga.us/>.

Download Netlogger
www.netlogger.org

NetLogger Setup Instructions

The “Rare Ones” of New Orleans utilize NetLogger during their Round Table QSO’s. For your convenience, I have included the following directions to get you started.

- Using your Web Browser, go to www.netlogger.org
- Select Download
- Select your version based on your Computer Operating System
- Enter your Call-sign and Email Address
- Click “Download”
- Once the NetLogger program is downloaded, install it on your computer.

Open NetLogger

Click on the blue “Select Net” button and look for the Net you want on the drop-down box, and select it.\

Use the “View Monitors” and the “Aim Window” buttons to view and communicate with others using NetLogger.

Additional program information is available from the “Help” utility within the program by selecting “Help” from the top menu.

“The “Rare Ones” of New Orleans was resurrected on February 22, 2017 after much deliberation and thought by nine (9) amateur radio operators in the Greater New Orleans Area. The purpose of the group is to promote the amateur radio HF Communications, the City of New Orleans, and the Audubon Zoo.

The original “Rare Ones” of New Orleans was established in 1965. The



current “Rare Ones” are the third generation of this fine group, and are excited to promote our wonderful City’s unique culture, history and fine traditions. To learn about the History of the “Rare Ones” please click on the following link:

[History of the “Rare Ones”](#)

The “Rare Ones” of New Orleans also promotes the

Audubon Nature Institute. To show our appreciation for the Zoo, each member of the “Rare Ones” has adopted an animal figure to represent a personal connection with the Audubon Zoo. Of course, if you’ve been to the Zoo, they all asked for you! Well, the “Rare Ones” all ask for you to check in with us on the air waves!

One of the goals in resurrecting the “Rare Ones” of New Orleans is to provide a place where displaced New Orleanians could “pull up a chair” and chat with someone back home. Sharing childhood stories and memories with our displaced friends and family brings a great satisfaction to the “Rare Ones”.

The “Rare Ones” of New Orleans love to tell the story of the City of New Orleans to new comers as well as displaced former New Orleanians. By all means, don’t be a stranger and come by for a spicy taste of New Orleans!”

This is a group of amateur radio operators offering expanded communications during inclement weather coordinating with NWS Skywarn for advanced weather notification to our communities. This service is provided for use to amateur radio operators of the Four States Area: NE Texas, SW Arkansas, NW Louisiana and SE Oklahoma.

<http://www.freedom-link.org/>

Testing – Get Upgraded

License Exams

Amateur Radio License examination sessions are typically held each second Sunday, at 2:00pm at the Red Cross center on Rieck Road in Tyler. The exam cost is \$14 – Cash only. Exams are open to anyone who wishes to take one, you do not have to be a club member. SEE IMPORTANT INFORMATION BELOW IN RED PRINT.

The exams are administered by the Tyler VE team. This is not a sponsored activity of the Tyler ARC. [Contact us](#) for further information. if you are studying to upgrade or for your first license and are struggling with part of the theory, contact us for support to get you past the hurdle.

W5YI test sessions are going again. They are still taking place at the Red Cross Building on the second Sunday of each month. The big change is that Red Cross will not allow walk in testing. The person taking the test must get in contact with Butch Adair and provide a phone number where they can be reached on Saturday the day before the test session. Butch prefers the contact to be by email to Butch@tyler.net On that day he will ask individuals desiring to take an exam a group of questions. The individual must provide the correct answers on Saturday to be able to enter the building on Sunday for the test. They are also required to wear a mask. NO EXCEPTIONS!!!

Tyler ARC MEETING

The Tyler ARC Meeting will conduct its April meeting via Zoom and at the **SHILOH CHURCH OF CHRIST**. Both the meeting at the church and Zoom Meeting will take place on April 15, 2021 at 7:00 PM. Zoom Link <https://us02web.zoom.us/j/81169912370>

Nets

TARC Two Meter: Monday night, 8:00 PM

K5TYR 146.960 MHz Repeater (136.5 Hz CTCSS tone, -600k offset)

K5TYR 147.000 MHz Repeater, 136.5 Hz CTCSS tone, -600k offset

K5TYR 444.400 MHz Repeater, 136.5 Hz CTCSS tone, +5M offset

Smith County Ten Meter: Sunday night, 8:00 PM, 28.365 MHz (+/- 5 kHz as needed.)

ETECS Two Meter: last Monday of month, 7:00 PM, W5ETX Repeater System

Two Meter Texas D-Star: Tuesday night, 8:00 PM, 147.120 Repeater and Reflector 4B. Statewide.

NCTC (North Central Texas Connection) Net – Thursdays evenings at 8:30PM on ETECS Repeater System:

Unless otherwise specified, the input PL tone is 136.5 Hz

Name	Output/Input	Location	Description
210	145.21 / 144.46	Tyler (EM22ii51)	ETECS primary repeater; used for nets & tactical operations; Note non-standard 750 kHz offset; Echo-link available as W5ETX-R
24	147.24 / 147.84	Red Springs (EM22jm39)	General purpose repeater
92	146.92 / 146.32	Rusk	General purpose repeater
62	146.62 / 146.02	Edom (EM22fi69)	General purpose repeater
04	147.04 / 147.64	Henderson (EM22od48)	General purpose repeater
33	145.33 / 144.73	City of Hideaway (EM22gl56)	General purpose repeater; Linked to K5TYR 147 repeater for Skywam
38	147.38 / 147.98	Gilmer (EM22ns59)	General purpose repeater
442	442.85 / 447.85	Athens (EM22be80)	General purpose repeater
443	443.25 / 447.25	Wills Point (EM22aq67)	General purpose repeater
14	147.14 / 147.74	Palestine	General purpose repeater; ID is W5DLC; Owned by PACARC; PL Tone 103.5

Useful Links

Radio Tools and Utilities for amateur radio operators

<http://www.dxzone.com/catalog/Software/Utilities/>

eham.net – Product Reviews

<http://www.eham.net/reviews/products/41>

Android Apps – Tools

<https://play.google.com/store/search?q=ham%20radio%20tools&c=apps>

ARRL

<http://www.arrl.org/>

Articles – Submission

T Tyler ARC members and other amateur radio operators not affiliated with the club are invited to submit articles for publication in **The GroundWire** dealing with amateur radio projects they have completed. This would also include any research being done in regards to amateur radio. Also, if there are any product reviews on amateur radio equipment such as HT radios, transceivers, power amps, test equipment, and antennas, they will be welcomed as well.

Articles submitted may be edited for content, grammar and length. It is requested articles be submitted by the 20th of each month. If an article is submitted after the 20th day of the month, it will be considered for publication for the current newsletter. Otherwise, it will be the following month it will be published.

**ALL THAT IS REQUESTED IS TO KEEP THINGS CIVIL,
CLEAN AND AVOID CONTROVERSIAL TOPICS.**

Submit articles to: KG5LWD@yahoo.com

TYLER ARC CALENDAR

APRIL 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4 Smith County Ten Meter Net 8:00pm – 9:00pm	5 Two Meter Net 8:00pm – 9:00pm	6 Two Meter Texas D-Star: Tuesday night, 8:00 PM, 147.120 Repeater and Reflector 4B. Statewide	7 Texas DMR Net 7:30pm on Texas Digital Talk Group 3148	8 Tech Net 146.96 repeater 7:00pm – 8:00pm. NCTC Net 8:30PM	9	10
11 Smith County Ten Meter Net 8:00pm – 9:00pm W5YI Exam Ses- sion -See instruc- tions on Page 4	12 Two Meter Net 8:00pm – 9:00pm	13 Two Meter Texas D-Star: Tuesday night, 8:00 PM, 147.120 Repeater and Reflector 4B. Statewide	14 Texas DMR Net 7:30pm on Texas Digital Talk Group 3148	15 Tyler ARC Meeting at Shilo Church of Christ and via Zoom both begin at 7:00PM Here is a link to the correct Zoom link https:// us02web.zoom.us/j/ 81169912370 NCTC Net 8:30PM	16	17
18 Smith County Ten Meter Net 8:00pm – 9:00pm	19 Two Meter Net 8:00pm – 9:00pm	20 Two Meter Texas D-Star: Tuesday night, 8:00 PM, 147.120 Repeater and Reflector 4B. Statewide	21 Texas DMR Net 7:30pm on Texas Digital Talk Group 3148	22 NCTC Net 8:30PM	23	24 Ham 'n' Eggs this month at Happy's 2202 E 5 th Street 7:30AM
25 Smith County Ten Meter Net 8:00pm – 9:00pm	26 ETECS Training Net: 7:00 PM, W5ETX Re- peater System Two Meter Net 8:00pm – 9:00pm	27 Two Meter Texas D-Star: Tuesday night, 8:00 PM, 147.120 Repeater and Re- flector 4B. Statewide	28 Texas DMR Net 7:30pm on Texas Digital Talk Group 3148	29 NCTC Net 8:30PM	30	

MEMBERSHIP APPLICATION / RENEWAL FOR THE TYLER AMATEUR RADIO CLUB, INC.

I hereby apply for membership / renewal in the Tyler Amateur Radio Club. Single full membership: \$25.00, additional family members \$12.50 each. Single associate membership: \$25.00, additional family members \$12.50 each. Please print or type all information clearly. Dues are prorated by quarter for new members starting with June 1st. (June-Aug \$25.00, Sept-Nov \$20.00, Dec- Feb \$15.00, Mar-May \$7.50)

See club by-laws for definition of club membership.

Mail to:
Tyler Amateur Radio Club, Inc.
P.O. Box 6393
Tyler, Texas 75711

Name _____ Call Sign _____ DOB _____
Address _____
City _____ Zip _____ Class of License (if licensed) _____
Home Phone _____ E-Mail Address _____
Work Phone _____ Cell Phone _____

Additional Family Member (s):

Name _____ Call Sign _____ DOB _____
E-Mail address _____ Class of License (if licensed) _____
Work Phone _____ Cell Phone _____

Name _____ Call Sign _____ DOB _____
E-Mail address _____ Class of License (if licensed) _____
Work Phone _____ Cell Phone _____

Name _____ Call Sign _____ DOB _____
E-Mail address _____ Class of License (if licensed) _____
Work Phone _____ Cell Phone _____

Member of ARRL? Yes ___ No ___

Check what areas of amateur radio you are interested in:

VHF/UHF ___ HF ___ Packet ___ Satellite ___ SSTV ___ CW ___
Emergency Communications _____ Other _____

Do you currently receive the GroundWire newsletter via e-mail? Yes ___ No ___

If not, would you like to be added to the mailing list?

Yes ___ No ___ Please star (*) any information that you do not want published in the club directory distributed to club members.