

***Welcome
To The Broken Arrow
Amateur Radio Clubs***



W5DRZ Repeater Systems

With your membership, you are entitled to the rights and privileges of the special functions of the BAARC repeaters, Call Sign W5DRZ. With these rights and privileges comes a responsibility just as with your Amateur Radio License. We ask that you follow good Amateur Radio practice and use these guidelines as an aid to your enjoyment of this repeater. We hope these guidelines are helpful to you and you enjoy your membership with BAARC. You do need to be aware that any serious misuse of repeater privileges could jeopardize your membership. We are here to assist you in any way we can, just give one of us a call.

Repeater Information

BAARC has two state-of-the-art repeaters, 146.910 MHz and 145.450 MHz designated [Yaesu Fusion DR-1 FM/C4 FM Digital repeater](#). On UHF we have the [444.000](#) MHz with Echolink and on 443.600 with D-Star Capabilities.(Technical Details Go Here)

Analog FM users please ID in accordance with [F.C.C. Rules Part 97](#) - that is ID once every 10 minutes and at the end of your conversation (Part 97.119 Station Identification). The F.C.C. no longer requires mobile, portable, etc. after your ID. Digital users - your radio and the repeater will automatically ID for you. However, it is still a good habit to ID just as you would on FM. For the best audio transmission quality on either mode we always recommend you talk across your microphone, not directly into it.

Radio Setup

Program your 2 meter radio to 146.910 MHz with a negative offset of 600 kHz and a CTCSS transmit tone of 88.5 Hz. Program your 70 cm radio to 443.600 MHz with a positive offset of 5 MHz. If you do not want to hear the occasional noise of the digital signals you should also turn on your receive tone squelch. Digital users will not have (nor need) a CTCSS or DCS setting on digital modes, but should follow the above procedure when programming your radio for the FM mode.

Making A Contact

Amateur Radio is, and has been since its inception, self policing. We have always prided ourselves on understanding and complying with 'the rules'. But what are those rules? FCC Part 97 is where you look to find the majority of rules that apply to our service. If you don't have a copy or have been several years (maybe decades) since you perused them, check out this link: ARRL.org/part-97-amateur-radio. The ARRL maintains this page and updates changes as they occur.

Before initiating a contact, always listen to see if the frequency is in use. If you need to make a contact quickly simply ask, "Is the frequency in use?" and give your call sign. If no one responds, continue on. If you are calling a particular station, give their call sign once or twice and then your call sign.

You may repeat again if no response. If still no response, end your transmission by giving your call sign.

According to F.C.C. Regulations, you must always identify yourself when transmitting on any frequency; otherwise you made an illegal transmission. **Simply keying the microphone to see if you can hit the repeater with no identification is an illegal transmission.** You are not required to identify the call sign of any other station during a conversation, only your

own. When you are testing, you also must identify. Simply give your call and say "Testing". When you have finished testing, give your call and say "Clear". If you have no one in particular to contact and would just like to announce you are available for conversation, simply give your call sign (of course, after first checking to make sure the frequency is not already in use as in the instructions above). If there is a conversation already in progress and you want to join, simply give your call between transmissions. Courteous operators will acknowledge you right away and turn the frequency over to you for you to join. It is preferred not to use the word break to join a conversation, because it is confusing with the words break break, which indicates an emergency. All stations should relinquish the frequency immediately for any station with emergency traffic.

If there is a conversation already in progress and you want to make a short call, follow the instructions as above then ask politely to make a quick call. If you make contact, ask your party if they can move to another frequency. Make your call, then thank everyone for the interruption. Courtesy is always the key to good Amateur Radio practice.

Digital/Analog Operations

Since we are using the digital/analog machines, there is a slight delay in the audio pickup on the analog side (regular FM). Remember to pause about 1 second after keying the mike to ensure that all your audio gets passed through the repeater. This will prevent partial calls and missed first words. Remember, slow down just a bit.

Courtesy Tone

The BAARC repeaters have a courtesy tone, which transmits after you have unkeyed the microphone. This lets you know you have "hit the repeater" (though not necessarily that you are understandable). It is also there as a reminder to pause between transmissions to allow someone else to call either to join your conversation or to make an emergency call. That's one reason why it is called a courtesy tone - to be courteous to others who may need to use the repeater.

Timeout

The BAARC repeaters are set with a timeout function at approximately three minutes. If you make a transmission beyond this time limit, the repeater will timeout and temporarily shut down. Keep each transmission as short as possible to avoid timing out the repeater. This is another function of the courtesy tone; if you hear the tone, the timer has reset.

Doubling

When two operators are trying to talk at once on the repeater, the resulting noise is known as a double. If you're in a conversation including several people, you can avoid this by passing to another ham by giving their name or call at the end of your transmission. This type of group conversation is called a round table.

When Not to Use the Repeater

It is good practice not to use the repeater for conversations that can take place simplex. Simplex simply means talking directly with someone on a single frequency. Repeaters use two frequencies. There are many simplex frequencies from which to choose. This frees the repeater for those portable, mobile or too far away to communicate otherwise. A complete list of these frequencies can be found in the ARRL Repeater Directory.

Some are also listed (in red text) in our [Local Area Repeater Directory](#).

Talking on the Repeater

Use plain English when on the repeater. The amateur phone bands are not the frequencies for using QTH, QSY or 10 Codes. Stay familiar with the [International Telecommunication Union Phonetics](#) as suggested by the F.C.C., especially when checking into nets or during emergency traffic situations. In all situations, give your call slowly and clearly for easy identification. By the way, 73 is old CW shorthand for best regards and is acceptable jargon.

Please note.....there is no "s" on the end, so 73 is the correct usage. "For ID" when stating your callsign is superfluous and hence not necessary. Please just state your callsign. We realize these are little petty annoyances but correct use will make you stand out as a more "seasoned" and experienced operator. As with F.C.C. Regulations, inappropriate language is not permitted. On the B.A.R.R.C. repeaters, we expect everyone to carry on wholesome, friendly conversations. We have a good reputation that we wish to maintain. If you hear someone not following these guidelines or violating an F.C.C. Regulation, don't assume they are intentionally doing so. Everyone can make mistakes. You may offer them the benefit of your knowledge at that time in a helpful, friendly manner. It is neither helpful nor courteous to berate anyone over the air. If there is further concern, notify a club officer.

Demonstrating the Repeater

If you feel the need to demonstrate amateur radio to a non-ham or just show off some of the repeater capabilities, preface your transmission with demonstration. This will let others know what you are doing and may even generate a contact or two to assist in your demonstration.

SKYWARN® Emergency Net Operations

The WA5LVT and W5IAS repeaters are used for the [SKYWARN® Emergency Nets](#) when severe weather is forecasted to move into the areas covered by the Tulsa office of the National Weather Service. During operations the Net Control Station will use the callsign WX5NWS.

When the Repeater is Down

Should the repeater ever go down, do not use the input frequency. 146.560 MHz is the recommended simplex frequency for BAARC club members to use at this time.

1. Emergency communications takes priority over all other uses of the repeater.
2. Always identify with your complete call sign before using any of the repeater functions and at the end of any series of transmissions. Failure to do so could result in the loss of privileges.
3. Business rules for amateur radio have been relaxed by the F.C.C., but "communications in which the station licensee or control operator has a pecuniary {monetary/financial} interest, including communications on behalf of an employer" is prohibited. If in doubt DON'T DO IT.
4. Music is prohibited on amateur radio. If there is a radio, television or other device that might play music in the background be sure to mute the device before using the repeater.
5. Repeater code discussions should not take place on the air.
6. The repeater is never turned off except for maintenance and deliberate interference.

The BAARC repeater on 444.000 MHz is equipped with EchoLink, operated and maintained by the clubs Trustee, Earl/WB5UUW.

The use of EchoLink adds some additional requirements to using the system when EchoLink is connected to other stations.

1. There is an additional delay after you release your microphone button before the remote station is able to reply. EchoLink digitizes your transmission then sends the voice input V.O.I.P. (Voice Over Internet Protocol).

While your transmission is constantly being sent, there is a delay before the remote station starts to hear the first and last few words. This can be up to 10 seconds.

BE PATIENT. You will hear an additional single courtesy tone when it is okay to transmit again. Make sure you have also heard the repeater courtesy tone. If you don't wait, you will time out the system.

2. Talking louder or close to your mike will reduce the quality of your signal to the remote station. Back off your mike and DON'T SHOUT.

3. Additional common courtesy is required to make this feature usable for everyone. Unless it is an emergency, don't be in a big hurry to break into a conversation. Listen first and make sure the conversation has ended before transmitting.

4. If you connect to a remote station from your radio using the touch tone pad, be sure that you send the disconnect command when finished unless another local station wants to continue with the remote ham. Before you send the disconnect, ask if there is anyone else who would like to continue. The last one making the contact should issue a disconnect command.

5. All EchoLink commands on the BAARC system start with ## (pound - pound) with no space between the next key. ##D is the valid command to disconnect. ##C is used to connect.

Please refer to the [EchoLink Information](#) web page or download the [Repeater ALLSTAR and Echolink Commands](#) PDF document.

For additional information about the Broken Arrow Amateur Radio Club, email [BAARC President, Officers or Directors](#).

Send questions or comments about W5DRZ repeater to one of the club officers.

Here is a sample of how you may join or start a conversation on the BAARC Repeater System.

For the BAARC repeaters 146.910 or 444.000

Break into a QSO with your call sign. Once recognized

"It's great to hear you on our . The *Broken Arrow Amateur Radio Club* is hosting the *National Weather Service Severe Storms Seminar*" " at our meeting March 5th in the Community Center, 1500 S. Main." "Please join us for this informative presentation and join the club if you're not already a member. 73"