

**EMERGENCY  
COMMUNICATIONS  
&  
CLUB INFORMATION  
HANDBOOK**

May 2, 2010

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# **IN CASE OF EMERGENCY (Overview)**

## **When the Repeater is Down**

Should the repeater ever go down, do not use the input frequency. 146.700 MHz is the recommended simplex frequency for BARS club members to use at this time.

<b>Simplex Frequencies</b>		
Frequency (MHz)	Band	Description
146.520	2 Meters	Simplex, National
147.420*	2 Meters	Simplex, National, American Red Cross
145.675	2 Meters	Simplex, Louisville Area
145.500	2 Meters	Simplex, Valley Station/PRP Area
446.000	70 Centimeters	Simplex, National
445.000	70 Centimeters	Simplex, Statewide Packet Radio Backbone
223.500	1.25 Meters	Simplex, National
52.525	6 Meters	Simplex, National
29.600	10 Meters	Simplex, National
1294.500	23 Centimeters	Simplex, National

\* PL 100.0 Hz Transmit

## **ARES<sup>®</sup> Emergency Response Plan**

During the activation of an Emergency Response Team, you will be notified by phone and/or a general announcement will be made over the 146.700 repeater. The Emergency Courtesy Tone will also be activated. If the repeater is down, use 146.700 simplex. When other simplex frequencies are needed, for privacy we will use channel numbers to indicate the frequency. These are given in the Bullitt Emergency Response Plan.

## **RACES**

The Bullitt County Disaster and Emergency Services (BC DES) RACES organization meets on a frequency of 146.700 MHz with a transmitter offset of -600 kHz. The Bullitt County Emergency Coordinator (EC) is Don Conrad, N4CCJ. Contact Don with any question concerning RACES or Bullitt County at 502 957-2558.

## **SKYWARN<sup>®</sup> Emergency Net**

During a SKYWARN<sup>®</sup> Emergency Net, check in only if asked to do so by the Net Control Station. The Net Control Station will be using the callsign WX4NWS.

# BARS Repeater Guidelines and Information

Welcome to the Bullitt Amateur Radio Society. With your membership, you are entitled to the rights and privileges of the special functions of the BARS repeater, callsign KY4KY. 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 BARS. 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

The BARS 2-meter repeater uses a Motorola MITREK receiver with Smart Squelch & Audio. The transmitter is a commercial Kenwood TK-730 45 Watt VHF transceiver and transmits at 25 watts. The 146.700 MHz repeater is coordinated for 100 watts ERP. The repeater controller is a Computer Automation Technology CAT-300DX with a UHF Hamtronics receiver for the RF control link. The power supply is a 50 Amp Astron. The backup generator, a 50 kW diesel, automatically goes online with the loss of commercial power. The duplexers are a set of 4 six-inch diameter cans by WACOM.

Our antenna is located on a tower visible from I-65 at the 121 mile marker in Grid Square EM78db at Latitude 38.0636° (38° 3' 49" N), Longitude -85.7311° (85° 43' 52" W). The top of the antenna is 1110 feet above sea level and is mounted on the south side of the tower to reduce interference from the 146.700 MHz repeater in Indianapolis, IN. This mounting gives a heart-shaped radiation pattern with the major radiation lobe to the South and a deep null to the North.

There is a back up repeater (Kendecom) and 100 watt amplifier (Henry) in the cabinet in case the main repeater goes off the air.

Additionally, our 70 cm band repeater transmits at 443.700 MHz with a positive receive offset of 5 MHz at 447.700 MHz. No PL tone is used on this repeater.

## Radio Setup

Set your radio to 146.700 MHz with a negative offset of 600 kHz. Therefore, the input frequency is 146.100 and the output frequency is 146.700. Set your squelch to just above the hissing sound. Set your transceiver for an input and output PL tone of 79.7 Hz. Always operate on the lowest power setting possible to make a good contact. For the best audio quality, talk across your microphone, not directly into it. You must have an Amateur Radio license to operate on the 2-meter band.

Note: An input and output subtone (PL tone, CTCSS or Encode/Decode) of 79.7 Hz is required to alleviate interference from stations contacting Indianapolis (also on 146.700 MHz). This was incorporated September 11, 2005. Without the Encode tone, you will not be able to access the repeater.

## Making a Contact

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 and saying, "Clear".

According to FCC 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.

# **BARS Repeater Guidelines and Information**

## **Courtesy Tone**

The BARS repeater has a courtesy tone, which transmits after unkeying 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 that may need to use the repeater.

## **Timeout**

The BARS repeater is 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 who are portable, mobile or too far away to communicate otherwise. A complete list of these frequencies can be found in the ARRL 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 10-4. Stay familiar with the International Telecommunication Union Phonetics as suggested by the FCC, especially when checking into nets or during emergency traffic situations. In all situations, give your call slowly and clearly for easy identification.

As with FCC Regulations, inappropriate language is not permitted. On the BARS repeater, 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 a FCC 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, advise a board member and/or fill out an official observer report (available from any control op).

## **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.

## **Access Codes**

The repeater has many other access codes and functions such as a signal strength read out, repeat dialing for the autopatch and an extend time for emergency autopatch calls. There is a separate document for these codes. Discussion of these codes should not take place on the air nor should they be given to anyone who is not a BARS member. This separate document also lists the names, calls signs and phone numbers for the Repeater Control Operators, BARS Board Members and Club Officers. Should you have any problems, questions, etc. regarding repeater use or abuse, contact one of those listed.

# BARS Repeater Guidelines and Information

## When the Repeater is Down

Should the repeater ever go down, do not use the input frequency. 146.700 MHz is the recommended simplex frequency for BARS club members to use at this time.

## BARS Repeater Policies

1. Emergency autopatch takes priority over other uses of the repeater.
2. Always identify (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 loss of privileges.
3. Business rules have been relaxed by the FCC, but you still cannot conduct activities on amateur radio that are a normal part of your job, or any activity in which you have a pecuniary interest. This means that you can call your doctor to cancel an appointment, but you cannot call your office to get messages. If in doubt DON'T DO IT.
4. Music is NOT tolerated on amateur radio, except retransmission of NASA audio during shuttle flights. If you call a company having music on their phones while you are on hold, you must end the call immediately. Remember, as an amateur radio operator, you are responsible for the repeater, not the company you called.
5. No discussions of repeater codes should take place on the air. If you have a question about how things work, call a control operator on the phone.
6. The repeater is never turned off except for maintenance and deliberate interference. If it seems dead, it may be in touch-tone access mode. This mode is used when noise or deliberate interference occurs.

## BARS Repeater Autopatch

The BARS repeater is equipped with an autopatch. An autopatch is a device that allows hams to make telephone calls through the repeater. You must have a touch-tone keypad on your FM transceiver to access the autopatch. You also must have a signal strength of at least S3 to be able to use the autopatch. As of March 2001, the club voted to open the autopatch to all amateur radio operators.

You can have a phone number assigned as an autodial number. Contact one of the board members to do this. There are also autodial numbers assigned for certain emergency numbers, such as the Jefferson County Police, Bullitt County Dispatch, etc. As part of your membership, you will receive a listing of these numbers. You will also receive a Roster listing all members, their addresses, phone numbers and autodial numbers. If you not received this information, please let us know.

Before making an autopatch call, make sure the frequency is not in use. Then give your call sign and say, "accessing the autopatch."

With the microphone keyed, press \* (star) to bring up the autopatch and then the phone number or autodial number of the person you want to call. This has to be a continuous dialing sequence. Then unkey the microphone and wait for the caller to answer. Inform the caller that you are on the radio. In this instance, the caller must also adhere to FCC regulations. You may want to forewarn individuals of these regulations prior to calling them. Once the phone call is over, with your microphone keyed, press # (pound) to take the autopatch down. The repeater will ask you to identify. Give your call sign to clear.

The autopatch also has a time limit on the length of the call. Keep it brief. There are some special guidelines for autopatch calls:

1. Autopatching involving the business affairs of any party must not be conducted at any time. (The FCC considers nonprofit and noncommercial organizations businesses and forbids the use of Amateur Radio to facilitate their day-to-day operation in any way.) The content of a patch call should be such that it's clear to any listener that business communications are not involved. Particular caution must be observed in calling any business telephone. Calls to place an order for a commercial product must not be made, nor may any calls be made to one's office to receive or to leave business messages. Calls made in the interests of highway safety, however, such as for the removal of injured persons from the scene of an accident or for the removal of a disabled vehicle from a hazardous location, are permitted.
2. Autopatches should not be made solely to avoid telephone toll charges. Autopatches should never be made when normal telephone service could be just as easily used.
3. Autopatches must be terminated immediately in the event of any illegality or impropriety. Remember, your ultimate concern is for the proper use of the repeater not the person or business you have called.
4. If you have any doubt as to the legality or advisability of a patch, don't make it.
5. FCC regulations forbid the transmission of music on any frequency. Do not make any phone calls in which an answering machine or call while on hold would play music. Be aware of this fact during any transmission. Remember to turn down any device playing music before transmitting. This rule is superseded by an emergency situation.

## **BARS Repeater Guidelines and Information**

6. When using the autopatch to report an emergency, be prepared to provide details with an exact location. The agency does not need to know your name or call sign. Begin by telling them you are a ham radio operator; give your location and then the details of the emergency. They especially need to know what types of emergency vehicles need to be dispatched to the scene.

7. If, while using the autopatch, you are placed on hold, identify every 10 to 15 seconds and advise you are on hold. This will prevent someone who just tuned to this frequency from transmitting inadvertently.

### **BARS Repeater Echolink**

The BARS repeater is equipped with Echolink, operated and maintained by Buddy Sohl, KC4WQ.

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 records your transmission then sends it to the remote station. 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 double 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 useable 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 command, 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 BARS system start with ## (pound - pound) with no space between the next key. ##D is the valid command to disconnect. ##C is used to connect. List of commands.

### **BARS Repeater APRS**

The BARS repeater is identified with the Automatic Position Reporting System (APRS). Among other things, this system is used to report the location of amateur radio stations. This position is reported through APRS. Digipeaters using amateur radio.

The location of KY4KY can be seen on the Internet at <http://www.findu.com/cgi-bin/find.cgi?call=KY4KY-3> or <http://aprs.fi/?call=ky4ky>.



## Emergency Operations

During the activation of an Emergency Response Team, you will be notified by phone and/or a general announcement will be made over the 146.700 repeater. The Emergency Courtesy Tone will also be activated.

If the repeater is down, use 146.700 simplex. When other simplex frequencies are needed, for privacy we will use channel numbers to indicate the frequency. These are given in the Bullitt Emergency Response Plan.

Channel 1 - 145.500    Channel 2 - 145.550    Channel 3 - 145.600

If asked to do so, check in with the Net Control Station and notify him/her of your availability to respond, your location, and any equipment you have available (if needed). Monitor the operation as continuously as possible.

Respond only at the direction of the Net Control Station. Do not attempt to enter an emergency situation without specific directions of where and when to appear. If you enter without authorization, you will not be signed in or considered part of the Emergency Response Team.

To be covered by insurance through DES, you must sign in at the DES office before assisting with the emergency or check in with the Net Control Station. Always check out with DES or the Net Control Station before leaving the emergency scene.

ARES<sup>®</sup> members are responsible for their own safety and should take no action that places them in personal jeopardy. In a questionable situation, pull back and report your situation to the Net Control Station.

When calling to be recognized by Net Control, it is not necessary to give the NCS callsign. In a directed net, all stations communicate only with Net Control unless directed to do so otherwise. Therefore, transmitting only your callsign or your "tactical" callsign (i.e. Team 1) means that you are requesting to be recognized by the NCS. If you have traffic, giving your tactical callsign plus the word "traffic" is sufficient to make your needs known. If you traffic carries an emergency precedence, give your tactical callsign followed by the words "emergency traffic."

When relaying information to the NCS, relay information exactly as given. Do not add or delete. Our purpose is only to communicate the information requested to be relayed. Speak slowly and clearly, giving time for the message to be written.

Prowords, or procedural words, help speed communications and often are able to express complex ideas in a single word. They must be used correctly to be effective.

- Over is used to indicate the end of a transmission and is an invitation for the receiving station to reply.
- Out indicates the end of a transmission and the end of the conversation or series of transmissions. No reply is expected.
- Roger means that a message has been received and understood in its entirety. It does not mean "yes" or signify agreement.
- Affirmative and Negative denote yes and no. They are appropriate because they are distinctive sounding words and their meaning is clear, especially under marginal conditions.
- Q signals are not to be used.

When participating in Damage Assessment, you must be trained or be paired with someone that has been trained.

## SKYWARN<sup>®</sup> Emergency Net

When called by the National Weather Service in Louisville, Bullitt ARES<sup>®</sup> operators go to the National Weather Service to set up a Net Control Station to gather emergency weather information to pass on to the meteorologists at hand. The Net Control Station will be using the callsign WX4NWS.

When the SKYWARN<sup>®</sup> Emergency Net is in operation, contact the Net Control Station only if you have emergency weather conditions to report. Do not check into the SKYWARN<sup>®</sup> Emergency Net with non-emergency traffic, to report non-threatening weather (i.e. to report light rain, moderate winds) or requesting a weather report for your area. Also, do not check in to relay weather information from local broadcast stations or the Weather Channel.

# **ARES<sup>®</sup> Emergency Response Plan**

Report weather conditions only of which you are trained and knowledgeable to report. Sending in misinformation to the National Weather Service is detrimental to our purpose. For more information on severe weather spotting, please review the SKYWARN<sup>®</sup> Net Handbook.

## **Emergency Response Drill**

During a planned drill, arrive at the EOC or other designated area on time, sign in and follow the directions carefully. You will be assigned to a team and remain with that team throughout the drill.

Follow the directions of the Net Control Station. The Net Control Station throughout the drill will use one call sign. When checking in, use your tactical callsign (such as Team 3), then your callsign to clear.

Return to EOC to sign out before leaving the area.

Please report any changes in classification, address and/or phone number, equipment owned or any other pertinent information to your Emergency or Assistant Emergency Coordinator. The Bullitt County Emergency Coordinator (EC) is Don Conrad, N4CCJ. You can contact Don with any question concerning ARES<sup>®</sup> or Bullitt County at 502 957-2558. Your assistance is greatly appreciated!

# Radio Amateur Civil Emergency Services (RACES)



## Purpose

The Radio Amateur Civil Emergency Service (RACES) group is a Federal Communications Commission sanctioned organization affiliated with local civil-defense organizations consisting of Amateur Radio operators in order to provide communications during times of civil emergency or disaster. Operators will provide central communication needs in connection with safety of human life and immediate protection of property when normal communications are not available.

The Bullitt County Disaster and Emergency Services (BC DES) RACES organization meets on a frequency of 146.700 MHz with a transmitter offset of -600 kHz. The Bullitt County Emergency Coordinator (EC) is Don Conrad, N4CCJ. You can contact Don with any question concerning RACES or Bullitt County at 502 957-2558.

## Rules for Operating on RACES

### Repeater Membership

Persons desiring to join BC DES RACES must meet the following requirements:

- No fee required.
- Must have equipment to operate on assigned frequencies.
- Must be at least 18 years of age.
- Must hold a valid FCC Amateur Radio Technician class license or higher.
- Must be a resident of Bullitt County or employed by a local government agency within Bullitt County (exceptions can be made by the RACES Executive Committee together with BC DES on an individual basis).
- Must make a formal written application to BC DES Radio Services and fill out the proper forms.

### Duties and Responsibilities of Members

- Each member will check into a BC DES RACES net at least three times each month.
- Each member will try to check into the RACES net during periods of severe weather or natural disaster.
- Each member will try to check into the RACES net during drills and exercises being held by BC DES.
- Each member will try to make themselves available to participate in drills and exercises held by BC DES whenever possible.
- All members will maintain their own equipment for RACES use, including emergency backup power where possible.
- An Executive Committee administers the RACES organization by the Radio Officer with the approval of the BC DES Director. The members of this Executive Committee will consist of DES Radio Officer, Training and Public Relations Officer, Digital Communications Officer, Net Control Officer, Data Processing Officer, and Technical Maintenance Officer.
- All members will strictly adhere to all FCC rules.
- Any questions or problems that cannot be satisfactorily addressed by the Radio Officer may be submitted to the Volunteer Coordinator of BC DES.

# Radio Amateur Civil Emergency Services (RACES)

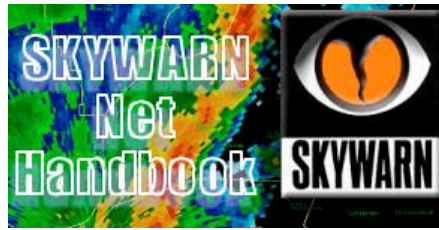
## RACES Operational Levels

### Level 1: Watch

- The Net Control Station will activate the net in Level 1 status and accept check-ins from member operators.
- Member operators will check into the net for accountability.
- All stations will maintain informal stand-by status.
- All stations will advise the NCS of their availability to participate in the event of a Level 2 upgrade from the Emergency Operations Center (EOC).

### Level 2: Warning

- The NCS will activate the net in Level 2 status and accept check-ins from member operators.
- Member operators will check into the net for accountability.
- Member operators report to the EOC (DES) on the order from the Radio Officer.
- Message Priorities:
  - Emergency injury situations.
  - Emergency damage reports.
  - Extreme and/or immediate weather situations.
  - Severe weather observations will be relayed to the National Weather Service on the 146.700 repeater.
- Members will be prepared to react to requests from the EOC for communications tasks.
- No informal traffic!
- If a member operator must secure before the emergency is over, the operator shall request permission to do so from the NCS.



## General Emergency Response

### Definition of Terms

<p>SKYWARN<sup>®</sup> Net</p>	<p>The association of individuals and organizations (Amateur Radio operators, Disaster and Emergency Services (DES), ARES<sup>®</sup> and RACES, law enforcement agencies and others) in active communication via radio, telephone and other methods of passing information and intelligence at the request of the National Weather Service (NWS) for the purpose of receiving and disseminating information about severe weather and damage in the control area of the local office of the National Weather Service.</p>
<p>Amateur Radio Emergency Service<sup>®</sup> (ARES<sup>®</sup>)</p>	<p>The Kentucky 6th District ARES<sup>®</sup> has been designated as the organization to organize and operate SKYWARN<sup>®</sup> Nets for the Louisville area National Weather Service. The Kentucky 6th District is composed of Jefferson County and six surrounding counties in the Commonwealth and corresponds to the DES 6th District in Emergency Plans. However, due to the large area comprising the area of responsibility of the Louisville office of the National Weather Service, the SKYWARN<sup>®</sup> Net handles information from all parts of Kentucky and Indiana.</p>
<p>Net Control Station (NCS)</p>	<p>The Net Control Station is the station in charge of information gathering and dissemination at the Louisville office of the National Weather Service. The Net Control Station is the station that calls the SKYWARN<sup>®</sup> Net into emergency session. It may be any Amateur Radio operator associated with ARES<sup>®</sup> who has had training in the types of information needed to be provided by the National Weather Service or who has had experience in previous net operations.</p>
<p>Liaison Stations</p>	<p>Liaison stations are those radio operators providing information between the National Weather Service and local organizations concerned with the current status of severe weather or other emergency conditions.</p>

### Repeater Information

The main frequency to be used is the 146.700 repeater. This repeater is located about 20 miles south of Louisville, Kentucky at about 1,200 feet in Brooks, Kentucky.

If you have a club in your area, you might want to activate a Weather Net on your repeater then have a liaison station relay your information to the National Weather Service via the 146.700 repeater and also take information back to your repeater.

### SKYWARN<sup>®</sup> Net Operations

Net activation occurs at the request of personnel at the Louisville office of the National Weather Service. Stations listed with information about severe weather as it forms and moves into the control area of the local National Weather Service. As soon as the radio operator arrives, he/she is to get current information from the personnel at the National Weather Service and then, at his/her discretion, activate the SKYWARN<sup>®</sup> Net either in emergency session or informal session. He/she will also call additional operators as needed.

Informal net session occurs when conditions are favorable for possible severe weather to develop. At that time, the Net Control Station will take check-ins regarding your location and availability to observe and report weather conditions.

# SKYWARN® Net Handbook

Emergency net session occurs when severe weather is forecasted to move into the areas covered by the Louisville office of the National Weather Service. At that time, the Net Control Station will call the net into Emergency session and coordinate information flow between the National Weather Service and the Amateur Radio community. To avoid confusion, operators assuming the role of the Net Control Station shall use only the call sign of the WX4NWS while on the premises. The net shall remain in session until such time that all information has been passed regarding severe weather and resulting damage and/or the storm system has passed into control of the Jackson office or other next-closest office of the National Weather Service. Request advice of the lead meteorologist before closing the station.

## Reporting Procedures

Since storm cells behave somewhat predictably, information detailing the following items needs to be provided: hail, high wind, heavy rain, heavy electrical activity, funnel clouds and tornadoes. Information is also needed indicating the storm's increasing or decreasing intensity. Increasing intensity can be defined as hail of larger size than previously reported, wind speed higher than previously reported, rain heavier than previously reported, electrical activity greater than previously reported, storms taking longer to pass through a given area than previously reported.

Report Briefly:

1. What you have seen: wall cloud, funnel cloud, tornado, heavy rain, hail. (Note: There is a difference between a tornado and a funnel cloud. A tornado is a funnel cloud on the ground.)
2. Where you saw it: direction and distance from a known location (e.g. 3 miles south of Elizabethtown).
3. When you saw it: specifically in time.
4. Who saw it: the amateur radio operator, law enforcement agency, citizen, etc.
5. What it was doing: describe the storm's direction and speed of travel, size and intensity.
6. Identify yourself and location. Try to get confirmation from other agencies in your area.
7. Keep calm. Remember that there may be scanner radio owners listening.

## Do and Do Not

### ✓ Do...

- ✓ check into the net by giving your callsign and location and indicate you are standing by.
- ✓ inform net control if you must check out or change location. Net control must know who is available.
- ✓ give short reports when called on by net control. Report:
  1. Wind speed (see the chart)
  2. Rain intensity (visibility) and duration (particularly rain amount in excess of one inch per hour).
  3. Hail size (if any) and intensity (sparse, heavy, damaging).
  4. Lightning
  5. Damage resulting from the passing of the storm.

### ✗ Do not...

- ✗ report or rebroadcast radio or TV announcements. The National Weather Service originated the broadcasts that the commercial stations are transmitting.
- ✗ report conditions at your location unless they are severe or more severe than previously reported (indicating increased storm intensity).
- ✗ make long transmissions.
- ✗ go to the weather service office unless you have been called on to do so.
- ✗ terminate operation without net control knowing you have ended operation. If severe weather has put your station off the air, that in itself is an indication that the storm is severe.

# SKYWARN<sup>®</sup> Net Handbook

Wind in MPH	Specifications for use on land
1 - 3	Direction of wind shown by smoke drift, but not by wind vanes.
4 - 7	Wind felt on face; leaves rustle; ordinary vane moved by wind.
8 - 12	Leaves and small twigs in constant motion; wind extends light flag.
13 - 18	Raises dust and loose paper; small branches are moved.
19 - 24	Small trees in leaf begin to sway; crested wavelets form on inland water.
25 - 31	Large branches in motion; whistling heard in telephone wires.
32 - 38	Whole trees in motion; inconvenience felt walking against the wind.
39 - 46	Breaks twigs off trees; wind generally impedes progress.
47 - 54	Slight structural damage occurs.
-----	<b>Severe begins at 58 mph.</b>
55 - 63	Damage to chimneys and TV antennas; pushes over shallow rooted trees.
64 - 75	Rarely experienced; structural damage becomes possible.
Above 75	Very rarely experienced; see Fujita scale descriptions.

Wind speed estimation taken from the Beaufort Scale.

HAIL - Use the following guide when reporting hail:

Pea	1/4	Golf Ball	1-3/4
Dime	1/2	Egg	2
Penny	3/4	Tennis Ball	2-1/2
Nickel	7/8"	Baseball	2-3/4
Quarter	1	TeaCup	3
Half Dollar	1-1/4	Grapefruit	4
Ping Pong Ball	1-1/2	Softball	4-1/2

Source: NWS, Louisville, KY

Reports also need to include intensity: sparse, heavy or damaging (breaking windows, etc.).

RAIN - Since the intensity of rain over a specified length of time may cause flash flooding, this type of information is of importance to the NWS. If you do not have a rain gauge, you can make your own rain gauge by placing a coffee can in an open area and measure actual rainfall with a ruler. Intensity is also an indication of increasingly severe weather so be able to relay information about decreasing visibility due to rainfall (1/2 mile, 1/4 mile, etc. visibility).

LIGHTNING - Severe thunderstorms usually have very frequent and sometimes nearly continuous lightning. However, some non-severe thunderstorms also contain frequent and vivid electrical displays, while some severe storms are accompanied by little lightning. So use electrical activity as a tool to help interpret the increasing intensity of a storm... not as the single indicator of severity.

## Message Format

Below is a sample message showing the format to be used to transmit information to the NWS regarding severe weather. Please note the order of information and use that order when reporting. All underlined material should be replaced with your information.

This is WX4ME located in Hillview, Kentucky. I report penny-sized hail, 50 MPH winds, heavy rain in Hillview, Kentucky at 2018 Zulu. Direction of travel of this storm is northeast. Confirmation of this weather report is made by WX4ME. This is WX4ME standing by.

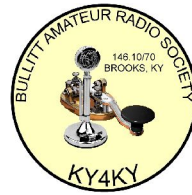
Note: Reports can be from other sources and should be so noted. Confirmation, if readily available, should be included. Try to get the exact time of observation and direction of travel of the storm system if reported by other sources.

## NOAA Weather

For your best opportunity to remain alert to severe weather, keep NOAA Weather Alert Radio on at all times. In Louisville, NOAA Weather can be found on a frequency of 162.475 MHz.

# BARS

## Member Information



### BARS Meetings

Regular monthly meetings are at Becknell Hall, also known as the Pioneer Village City Hall, located at 4700 Summitt Drive in Zoneton, KY (Coordinates: N 38° 4' 0.4722"; W 85° 40' 14.25"). We meet the third Friday of each month at 7:00 PM, except when special events are scheduled, such as our annual picnic and Christmas party. These events and times will be posted and take the place of our regular meetings.

Directions: From the Gene Snyder (I-265), take Preston Highway (Hwy 61) south to Bullitt County. Follow Preston to the traffic light before the 84 Lumber. There is a sign indicating the Pioneer Village City Hall to the right. Turn right, this is Summitt Drive. Follow Summitt until you see U-Stuff-It Storage on the left. Becknell Hall is immediately on your left, just after the storage facility.

For additional directions ask anyone on the club repeater at 146.700 MHz.

### Membership Information

Our membership period is from January 1 through December 31. Dues are as follows:

FULL MEMBERSHIP	
Over 62 Years Old	\$15 per year*
Handicapped per FCC Rules	\$15 per year*
All Others	\$25 per year**
Under Age 18 Years Old	No Cost
Additional Family Members	\$5 per year (not pro-rated)

\* Pro-rated: \$11 May 1-Jul 15; \$7 Jul 16-Oct 15; \$3.50 Oct 16-Dec 31

\*\* Pro-rated: \$18 May 1-Jul 15; \$12 Jul 16-Oct 15; \$6 Oct 16-Dec 31

An associate (non-voting) membership is available to unlicensed individuals for \$5 per year, not pro-rated. Full membership requires applicant to hold an amateur radio license.

### Contact Information

Bullitt Amateur Radio Society - KY4KY  
P.O. Box 580  
Shepherdsville, KY 40165-9998

### Club Website - [KY4KY.com](http://KY4KY.com)

The club website is available to anyone interested in Amateur Radio and is an informational tool for club members to stay informed of BARS news and activities. Members are encouraged to visit and browse the website and to join the [KY4KY.com](http://KY4KY.com) Email List and BARS Forum. We also have a group on Facebook.