Operations Guide

Version 1.7

Affiliated Club

Operations Guide

Amateur Radio Euless
1102 West Euless Blvd.
Euless, TX 76040
442.900+ 110.9
info@w5eul.com
www.w5eul.com

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Dallas County RACES Cloud Cowboy 2013

National Weather Service office of Fort Worth

Fort Worth RACES

DFW Area Ham Radio Interoperability Group

The City of Euless Texas

John Galvin, N5TIM

Dan O'Connor, KE7HLR

Phillip Bailey, WY3Q

American Radio Relay League

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The Amateur Radio Euless Operations Guide is an orientation and reference guide for members of the Euless Amateur Radio Club. This guide includes information about club operations, club equipment, emergency operations, and other reference material.

The purpose of this guide is to provide the basic information needed to be a contributing member of the club. It contains information on club meetings, activities, basic operations of the club radio equipment, and reference material aiding the club member in preparing to serve the City of Euless during emergency operations.

This guide also contains detailed information on frequency plans that aid in mutual aid communications with other local and county amateur radio organizations. We encourage you to use this information to prepare yourself and your radio equipment to serve during emergency events.

To download a copy of this guide, please visit the Amateur Radio Euless website at www.w5eul.com. The guide is available in the Manuals section of the site.

Your comments are welcome at info@w5eul.com.

CONTENTS

AMATEUR RADIO EULESS

Who We Are

Amateur Radio Euless is an association of members who have a common interest in the avocation of Amateur Radio. Our members have diverse interests. You will find among our ranks those who enjoy building their own radios and those who enjoy contacting other amateurs around the world, those who perform community service, and those who simply enjoy the chance to meet new people over the air. Amateur Radio is a worldwide service that can be an enriching, educational, lifelong activity. The club is affiliated with the American Radio Relay League (ARRL).

What We Do

Our club holds monthly meetings on the second Wednesday of each month in the Euless Police Department's Emergency Operations Center (EOC) These meetings are an opportunity for us to learn about the latest developments in Amateur Radio, plan and organize club events, and to share information. We have an informative presentation at each meeting on a wide variety of topics related to Amateur Radio communications.

Amateur Radio is a licensed radio service. To earn a license requires passing examinations regulated by the Federal Communications Commission. The club is not just for people who are already licensed. The members and officers of Amateur Radio Euless are excited to share our enjoyable and interesting avocation with anyone who is curious about Amateur Radio and communications. We are also interested in helping people earn their own Amateur Radio license.

The relationship of the ARE Radio club to the EOC is a volunteer effort. The EOC operates during emergencies where one agency (fire or police, for example) is not able to handle the disaster alone, and it is a place where city planners and heads of police, fire, and other agencies get together in one location to deal with it. Amateur Radio Operators from the club have a location in the EOC to handle emergency communications should the standard systems go down, and to provide backup communication services when needed.

The R.A.C.E.S. members of the club also provide trained communications personnel (amateur radio operators) to assist the National Weather Service, and other similar community agencies, in providing communications support for sporting events and a variety of public service events. During disaster events ARE and RACES radio operators assist local, county, and state public service organizations by providing vital additional emergency communications capacity.

Supported Agencies

City of Euless Office of Emergency Management
Euless Community Emergency Response Team (CERT)
Northeast Tarrant and Denton County Child Abduction Response Team (NETDC-CART)
National Weather Service
Fort Worth R.A.C.E.S
North Texas Amateur Radio Emergency Service - NTXARES

Club Meetings

Amateur Radio Euless meets monthly on the 2nd Wednesday of each month. The meeting time is 19:00 at the Euless Police Department EOC located at 1102 W. Euless Blvd., Euless, TX 76040 (On the Northwest corner of Hwy 10 and Industrial Blvd.) Club meetings are open to any person who is interested in amateur radio. For more information about the club, please send an e-mail to info@w5eul.com.

Club Repeater

Amateur Radio Euless has a UHF repeater on 442.900 MHz RX frequency and 447.900 MHZ TX frequency with a 110.9 PL tone. It is a Kenwood repeater with a Pacific Research controller. The repeater has emergency power in the form of a generator and battery.

Club Station

Amateur Radio Euless has a club station located at the Euless Police Department. The station includes an Icom 706 MKII HF radio and a Yaesu 7800 VHF/UHF radio. The club HF antenna is a High Sierra screwdriver antenna along with a Comet tri-band UHF/VHF antenna. The club also has two Go Kits that include a Yaesu 897-D HF/VHF/UHF radio, Yaesu 8800 VHF/UHF radio, Little Tar Heel II screwdriver antenna, Rigrunner, MFJ 4245V power supply, MFJ-1725B mag mount dual band antenna, Ameritron SDC-102 Screwdriver Antenna Controller, and all appropriate user guides and documentation.

Weekly Net

Each week Amateur Radio Euless has a weekly check-in net located on the Euless Club Repeater. The weekly net is each Tuesday at 20:30 Central Time and is open to any amateur radio operator. The net is also on EchoLink, just search for W5EUL-R. The net includes ham news, club officer comments, tech talk, swap meet, other announcements from stations that checked in to the net, and then general conversations.

Club Yahoo Group

Amateur Radio Euless has established a Yahoo group to facilitate communication to the club and other interested parties. The group is the primary notification for all club socials and used as a reminder for club events. This group is restricted to members only.

- Use this URL to access the Yahoo group page. http://groups.yahoo.com/neo/groups/eulessarc/info
- If you do not have a Yahoo account, you will have to create one. Follow this link with further help on how to setup a Yahoo account and to join the group http://www.wikihow.com/Join-a-Yahoo!-Group
- Request to join the group. The group administrator has to approve all membership requests.

Radio License Testing

Amateur Radio Euless offers amateur radio license testing to anyone who wants to get there license or to upgrade their ticket. Testing will be generally given after the monthly club meeting. For more information on license testing and to schedule a test, please send an e-mail to testing@w5eul.com.

Training

The club members offer training on a variety of subjects throughout the year.

Fort Worth RACES

Fort Worth RACES has a monthly training and check-in net on the 1st Monday of each month at 19:30 on the 146.940 repeater. During this net, only RACES members are allowed to check-in, however any one is free to listen. Throughout the year, Fort Worth RACES supports many public service events. These events allow operators to practice their skills, test their equipment, and participate in a controlled net.

www.fortworthraces.org

National Weather Service

National Weather Service conducts several Skywarn spotter training sessions per year. This training is required to participate in all RACES nets.

https://www.weather.gov/fwd/skywarnsch?sptrsch

FEMA Training

FEMA offers independent study courses related to Emergency response at the local and national level.
The IS-100.b and IS-700.a are the minimum required classes to participate in RACES.
It is recommend that you also take IS-200.b and IS-800.b.

www.training.fema.gov/IS/CRSLIST.aspx?all=true

ARRL

The ARRL offers training courses in a variety of formats. Courses are offered online, others are offered on CD and some are offered in classrooms in the local community. Courses include: Licensing, Emergency Communications, Public Service, ARES® .

www.ARRL.org//courses-training

Affiliated Clubs

Bedford Amateur Radio	K5BED	www.bedfordarc.org	442.825 110.9
North Richland Hills	K5NRH	www.nrharc.org	145.370 110.9
Northeast Tarrant Amateur Radio Club	N5EOC	www.netarc.us	145.400 110.9
Hurst Amateur Radio	W5HRC	www.w5hrc.org	147.100 110.9
Irving Amateur Radio	WA5CKF	www.irvingarc.org	146.720 110.9

Echo Link

What is EchoLink?

- EchoLink uses VoIP (Voice Over Internet Protocol) to allow licensed Amateur Radio Operators to communicate with other Amateurs via the Internet.
- It is primarily a Windows based application and is offered free of charge at http://www.echolink.org.
- There is also a new EchoLinux and EchoMac available.
- Now available is an iPhone and Android app that can be used to connect to operators around the world while you are on the go.
- It was developed by Jonathan Taylor (K1RFD) in 2002.
- The system allows reliable worldwide connections to be made between radio amateurs, greatly enhancing Amateur Radio's communications capabilities. In essence it is the same as other VoIP applications (such as Skype), but with the unique addition of the ability to link to an amateur radio station's transceiver.
- Before using the system it is necessary for a prospective user's call sign to be validated. The EchoLink system requires that each new user provide positive proof of license and identity before his or her call sign is added to the list of validated users.

Rules

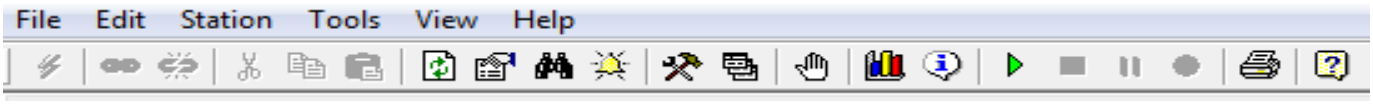
- Keep in mind that all the rules you have to comply with on the radio also apply to EchoLink.
- You must ID your station at least every 10 minutes and then at the end of your QSO.
- You must operate within your license class.

How to install EchoLink

- To download the software, visit www.echolink.org, then click on “Download” on the left.
- Follow the directions to install the software.
- Once the software is installed you will have to visit www.echolink.org/validation to validate your license. Follow the directions on how to validate.

How to use EchoLink

- Open the EchoLink Program
- On the top under the Menu Bar you will see several icons click on the Binoculars
- Type the call sign of the station you are wanting to connect. Double click the stations call sign to begin QSO.



- Use the space bar as your PTT button. Press space bar and release to TX and then press again and release to RX.

For more detailed information and directions on how to install and use EchoLink visit http://w5eul.com/docs/EchoLink.pdf.

Winlink

W5EUL@winlink.org

Winlink is the ability to use amateur radio to send packet mail to other stations when the internet is not available. This allows for the passing of critical information without tying up air time and providing accuracy.
This address is not a point of contact for the club. It will be used for training purposes or when we are activated.

How to use Winlink to receive a message.

1. Open the Winlink program
2. Go to “Files” menu
3. Then click on RMS Express Setup
4. Make sure your call sign and grid square are correct then click “Update”
5. Next to Open Session: Select “Packet WL2K” from the dropdown menu
6. Then click Open Session. This will open up a new window
7. Click “Setup” menu
8. Choose your TNC, Serial Port, and baud rate then click “Update”
9. Click on Channel Selection. Choose the station from the list and tune your radio to that frequency.
10. Click on “Start” This will go and check to see if you have any messages waiting.
11. Close the Packet Winlink 2000 Session window.
12. Click on “Inbox” and you will see your messages in there. Once they have been read the messages will be moved to “Read Items”

How to use Winlink to receive a message.

1. Open the Winlink program
2. Go to “Files” menu
3. Then RMS Express Setup
4. Make sure your call sign and grid square are correct then click “Update”
5. Click on “Message”
6. Then click on “New Message”
7. In the “To” box, place the address of the person who you need to send the message to.
8. Then click on “Post to Outbox”
9. Then follow steps 5 – 12 on “How to use Winlink to receive a message above”.

For more detailed information and directions on how to install and use Winlink visit
http://w5eul.com/docs/WinLink.pdf.

BY-LAWS
AMATEUR RADIO EULESS
A Texas Non-profit Corporation

Adopted December 12, 2018

ARTICLE 1 – NAME AND OFFICE

1.01 The name of this nonprofit organization shall be AMATEUR RADIO EULESS, (ARE).

1.02 Principle Office
The principle office of Amateur Radio Euless shall be located at 1102 W. Euless Blvd. City of Euless, County of Tarrant, State of Texas 76040. The organization may have such other branches or sub offices as the Executive Board may determine or as the affairs of this organization may require.

ARTICLE 2 – PURPOSE AND MISSION

ARE is an organization with the following missions / purpose:

2.01 Mission
To work in cooperation with the Euless Police Department, Euless Office of Emergency Management and Tarrant County Radio Amateur Civil Emergency Service (RACES), to promote the growth and favorable public image of Amateur Radio, to advise and expand the Amateur Radio Community.

2.02 Purpose
The purpose for which this non-profit Organization was formed, is to bring together Licensed Amateur Radio Operators to improve relations between emergency management, first responders and the civilian community in all phases of communication activities, and to further the goals and objectives of the Euless Police and Fire Department. To assist with communications during activation of the Community Emergency Response Team (CERT) and or RACES.
This organization is organized exclusively for charitable, religious, educational, or scientific purposes within the meaning of section 501(c)3 of the Internal Revenue Code.
No part of the net earnings of the organization shall inure to the benefit of, or be distributed to its members, trustees, officers, or other private persons, except that the organization shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of these purposes.

ARTICLE 3 – MEMBERSHIP

3.01 Membership shall be comprised of voting and non-voting members, as defined in ARTICLE 4 and ARTICLE 5.

3.02 Membership in the organization shall be restricted to individuals who have interest in the objectives of the organization.

3.03 Membership will be allowed to any licensed Amateur Radio operator or others upon the recommendation of any member and approved by a majority of the voting members.

3.04 Termination of Membership
Membership may be terminated for just cause after a hearing before the Executive Board, and a majority vote by the Board. Just cause is defined as any violation of the ARE Bylaws. Upon recommendation of the Euless Police Department, the President may terminate membership immediately without the vote of the Board.

3.05 Resignation of Membership
Any member may resign by filing a written resignation with the Secretary.

3.06 Release and Hold Harmless
Each member by completing their membership application, agrees to indemnify, release and hold harmless ARE, it's elected or appointed officials, the Executive Board, officers, agents or members of ARE for any results of any action taken on their own initiative. No substantial part of the activities of the

organization shall be carrying on of propaganda, or otherwise attempting to influence legislation, and the organization shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of or in opposition to any candidate for public office. Notwithstanding any other provision of these Bylaws, the organization shall not carry on any other activities not permitted to be carried on (a) by an organization exempt from Federal income tax under section 501(c)3 of the Internal Revenue Code, or corresponding section of any future Federal tax code or (b) by an organization, contributions to which are deductible under section 170(c)2 of the Internal Revenue Code, or corresponding section of any future Federal tax code.

3.07 Non Discrimination.
ARE declares and affirms its special responsibility, and that of its members, to promote the full participation of persons in all of its and their activities and in the full range of human endeavor without regard to race, color, sex, disability, affectional or sexual orientation, age, or national origin and without requiring adherence to any particular interpretation of religion or to any particular religious belief or creed.

ARTICLE 4 – FEES AND DUES

4.01 Dues are to be determined by ARE's Executive Board and approved by the membership and can include immediate family in household and is payable upon membership acceptance.

ARTICLE 5 – VOTING

5.01 Voting privileges are restricted to paid members who hold a valid Amateur Radio operator license and are in good standing.

5.02 Members in Good Standing
In order for voting members to be in good standing they must:
have their dues paid for the current year
no criminal charges pending

5.03 Voting Rights
Each Voting Member shall be entitled to one vote on each matter submitted to a vote of the members. Member must be present to vote and in good standing. Honorary or Guest Members will not have voting rights.

5.04 Method of Voting
Voting may be conducted at the discretion of the executive board by affirmation of oral vote, show of hands, or written ballot as deemed appropriate.

5.05 Reinstatement
A former member who has resigned may apply for reinstatement by submitting a written request with the Secretary. The Executive Board, by majority vote, may reinstate such former member.

5.06 Transfer of Membership
Membership in this organization is not transferable or assignable.

5.07 Appeals
Any member who wishes to appeal a decision of the Executive Board may do so before the general membership by submitting a written request to the Secretary. Such appeals shall be presented to the Voting Members at the next general meeting. Appeals will be decided by a majority vote of the members present.
Any former member may appeal their revoked membership to the general membership by submitting a written request to the Secretary. This request will be submitted at the next regularly scheduled general meeting. After discussion before the Voting Members, such matter shall be resolved by majority vote of Voting Members present.

5.08 Property
Upon the resignation or termination of any member, all property belonging to ARE or the Euless Police Department, including name badge, shall be returned.

ARTICLE 6 – ELECTION OF OFFICERS / BOARD OF DIRECTORS

6.01 ARE will elect from the membership the following officers / Board of Directors: PRESIDENT/CEO, VICE PRESIDENT, SECRETARY, and TREASURER. The Executive Board shall manage all affairs of ARE. The Board of Directors also referred to as the Executive Board shall manage all affairs of ARE.

6.02 There will be an annual election of officers in November of each year at the general meeting or as required due to any vacancy that arises.

6.03 The President shall appoint a nominating committee of three or more Voting Members. This committee shall prepare a recommended slate of officers from Voting Members willing to serve, and present the slate to the members no later than the general October meeting. Additional nominations may be made from the floor no later than the general October meeting. Advance notice of elections shall be given by e-mail before the October meeting

6.04 Term of office is one year with a maximum of 2 consecutive terms in the same office.

ARTICLE 7 – DUTIES OF ELECTED OFFICERS

7.01 PRESIDENT/CEO– The President/CEO shall preside over all meetings, in the event of a vacancy or absence in this office, the Vice President shall act as the President.

7.02 VICE PRESIDENT – The Vice President, in the absence of the President, shall preside over all meetings and perform such duties as usually pertain to the office of President

7.03 SECRETARY – The Secretary shall keep a written record of all meetings and furnish to the membership a copy of these minutes. Other duties may be assigned by the President.

7.04 TREASURER – The Treasurer will hold all monies collected by ARE, furnish a written record to the membership and maintain the membership roster. The Treasurer will pay any debts approved by vote of the membership. It is intended that any ARE money collected shall be deposited as defined by section 9.02 of these By-Laws.

7.05 The officers of ARE shall include a president and secretary and may include one or more vice president, a treasurer, and other officers and assistant officers as considered necessary. Any two or more offices, other than the office of president and secretary, may be held by the same person.

7.06 Authority and Parliamentarian
Executive Officers shall have all such authority as is not statute with regard to these bylaws. At the request of the Executive Board a Parliamentarian may be elected /appointed. The Parliamentarian shall advise the President, other officers, committee members and Voting Members on matters of parliamentary procedures. The parliamentarian's role during a meeting is purely an advisory and consultative one and to ensure that Robert's Rules of Order are adhered to. The Parliamentarian will be appointed by the President and has no voting rights except those afforded a Voting Members and shall attend the Executive Board Meetings.

ARTICLE 8 – COMMITTEES

8.01 Committees
Each newly elected President shall reappoint or appoint new committee members to each of the current standing committees, with the approval of the Executive Board. These appointments shall take place at the general meeting in February.
The President shall be an ex-officio (non-voting) member of each committee. Each committee Chairperson shall report to the Executive Board and attend the Executive Board meetings, or report to a designated person from the Executive Board. Each committee shall make no binding policy or agreements without approval of the Executive Board.

8.02 Terms of Committees
Each committee will continue from date of appointment for a term specified by the President or until the end of the Presidents term.

8.03 Chairman

One member of each committee shall be appointed chairman by the President. The chairman shall govern all meetings of the committee.

8.04 Vacancies

Vacancies in the membership of any committee may be filled by appointment by the President.

8.05 Quorum

Unless otherwise provided in the appointment of a committee, a majority of the whole committee shall constitute a quorum and any action decided by a majority of the quorum, shall be the decision of the committee.

8.06 Committee Rules

Each committee may adopt rules for its own operation consistent with these bylaws.

ARTICLE 9 - CHECKS, DEPOSITS AND FUNDS

9.01 Checks and Drafts

All checks, drafts, or orders for payment of money, notes, or other evidences of indebtedness issued in excess of $250 in the name of this organization shall be signed by two of the following officers: Treasurer, President, Vice President or Secretary. Any check issued to a board member shall not be signed by that board member.

9.02 Deposits

All funds of this Organization shall be deposited promptly to the credit of this organization in such banks, trust companies, or other depositories as the Executive Board may select.

9.03 Donations

The Executive Board may accept, on behalf of this organization, any contribution or gift deemed appropriate and useful.

ARTICLE 10 - BOOKS AND RECORDS

10.01 Books and Records

This Organization shall keep correct and complete books and records of accounts and shall also keep minutes of the general meetings and Executive Board meetings. A record giving names and addresses of all members entitled to vote shall be kept at the registered or principal office of this Organization. All books and records of this Organization may be inspected by the Voting Members upon written request to the President. Such request shall be honored on or before 15 business days for examination by the member who made the request.

10.02 Annual Review

The financial records of the organization shall be audited by a committee of 3 voting members, none of which may be the current executive board, appointed by the President at the January general meeting. The audit committee shall present its report to the executive board no later than the March general meeting. Outside review of the financial records by a CPA may be conducted at the recommendation of the audit committee or the executive board.

ARTICLE 11 - FISCAL YEAR

11.01 Fiscal Year

The fiscal year of this Organization shall begin on the first day of January and end on the last day of December in each year.

ARTICLE 12 – DUES

12.01 Annual Dues

The Executive Board determines, with approval of two-thirds of a quorum of Voting Members present at a general meeting, the amount of annual dues payable to this Organization by Voting Members.

12.02 Payment of Dues
Voting Member dues are due and payable by the first general meeting in January each year.

12.03 Default and Termination of Membership
When any member shall be in default in the payment of dues for a period of two months from the beginning of the annual year or such period for which such dues become payable, their membership may be considered for termination by the Executive Board. A former member, currently in good standing with both the Organization and the Euless Police Department, who has not paid their dues by the time specified shall be reinstated upon payment of current dues.

ARTICLE 13 – MEETINGS

13.01 Regularly scheduled business meetings will be held the second Wednesday of each month at a location designated by the ARE Executive Board at 7:00 p.m (1900 hours).

13.02 Monthly business of the organization shall be conducted by a majority of the membership present.

13.03 Special meetings of the members may be called by the President or acting President. Members shall be notified verbally or by email no less than 48 hours in advance of a special meeting. Notice shall include purpose of meeting.

13.04 The presence of not less than 20 percent of the Voting Member in good standing shall constitute a quorum and shall be necessary to conduct the business of this Organization when a vote is required. The Parliamentarian is responsible for determining the amount of members for a Quorum

ARTICLE 14 – DISCIPLINE

14.01 In the unlikely event that a member acts in a manner contrary to the purpose of the organization, as defined in Article 2 of these bylaws, Amateur Radio Euless may take whatever disciplinary steps it deems appropriate, up to and including expulsion of such member, provided such action has been approved by a two-thirds majority of members present and authorized to vote, by sealed ballot, at that meeting.

14.02 Upon recommendation of the Euless Police Department, any member shall be immediately suspended and may be removed from membership by a majority vote, by sealed ballot, at the next scheduled meeting of the members.

ARTICLE 15 – AMENDMENTS

15.01 These bylaws may be altered, amended or repealed. When there is a need for the bylaws to be altered, amended, or repealed, a Bylaw Committee shall be appointed by the President to make the suggested changes. The Bylaw Committee will then present the proposed changes to the Organization Officers before presenting the proposed changes to the General Membership at the next general meeting. New bylaws may be adopted by a two-thirds majority of the Voting Members present at the general meeting during which the proposed changes are presented. At least two (2) weeks' notice, in writing shall be given to all Voting Members of an intention to alter, amend or repeal these bylaws.

ARTICLE 16 – DUTIES OF LICENSE/REPEATER TRUSTEE

16.01 The office of License Trustee and Repeater Trustee shall be held by the same person.

16.02 The office of LICENSE TRUSTEE shall run concurrent with the license for a period of ten (10) years and shall be considered automatically renewable. This office can only be replaced by his/her resignation or removal.

16.03 LICENSE TRUSTEE – The License Trustee will maintain and keep current the FCC issued Amateur Radio Euless license bearing the call letters, W5EUL. He may name others to assist in monitoring the usage of any Organization radio station.

16.04 The Repeater Trustee is directly responsible for all aspects of the repeater's operation.

16.05 The Trustee is expected to apply for and maintain coordination of the organization repeater (s) with the

TEXAS VHF FM SOCIETY in Austin, Texas.

16.06 The Trustee must maintain a current address and phone number with the VHF FM SOCIETY Zone Coordinator(s) at all times and notifies the Zone Coordinator(s) of any change in repeater status.

16.07 Any request to VHF FM SOCIETY for modification of the repeater parameters must be accompanied by written authorization from the Amateur Radio Euless Executives.

16.08 The repeater Trustee is responsible to assure any required repairs are performed on the repeater(s) and the repaired equipment meets the technical standards of the VHF FM SOCIETY.

ARTICLE 17 - DISSOLUTION

17.01 Dissolution

Upon the dissolution of the organization, assets shall be distributed for one or more exempt purpose within the meaning of section 501(c)3 of the Internal Revenue Code, or corresponding section of any future Federal tax code, or shall be distributed to the federal government, or to a state or local government, for public purpose. Any such assets not so disposed of shall be disposed exclusively for such purposes or to such organization or organizations which are organized exclusively for 501(c)3 purposes.

Voted on and approved by the membership of AMATEUR RADIO EULESS (ARE) on December 12, 2018

James Knighton
President

Peter Jones
Vice President

Chris Shanahan
Secretary / Treasurer

UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

AMATEUR RADIO LICENSE

W5EUL

ATTN: CHRIS D SHANAHAN
AMATEUR RADIO EULESS
PO BOX 281
EULESS, TX 76039

FCC Registration Number (FRN): 0016983082

Special Conditions / Endorsements
NONE

Grant Date	Effective Date	Print Date	Expiration Date
07-19-2017	07-19-2017	07-19-2017	10-16-2027

File Number	Operator Privileges	Station Privileges
0007858583		CLUB

THIS LICENSE IS NOT TRANSFERABLE

(Licensee's Signature)

FCC 660 - May 2007

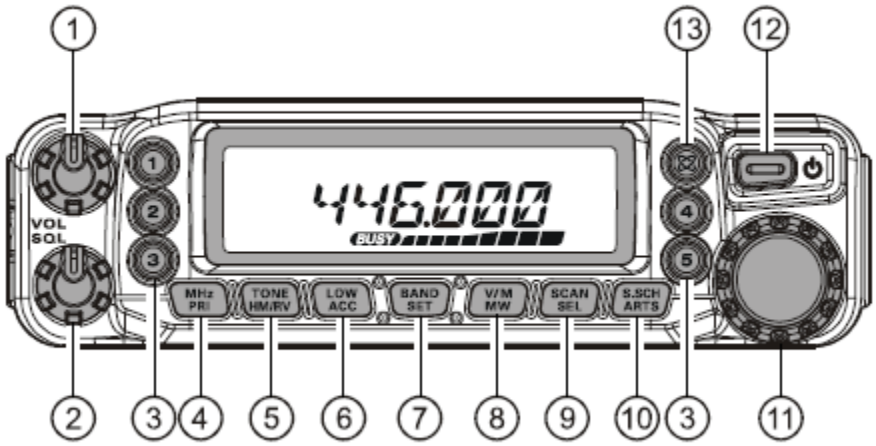
Cut Along This

ARE CLUB EQUIPMENT

This section will describe basic operation of the club station and go-box equipment. Please see the appropriate operating manual for details on advanced operations. A copy of each manual can be found at the club station and in the binder included in each Go-box.

Yaesu FT-7800R VHF/UHF

The FT-7800R is a ruggedly-built, high quality Dual Band FM transceiver providing 50 Watts of power output on the 144 MHz Amateur band and 40 Watts on the 430 MHz Amateur band.



Front Panel Controls & Switches

1. **VOL** Knob
   This control adjusts the volume level of the receiver's audio Clockwise rotation increases the audio setting.
2. **SQL** Knob
   This control sets the threshold level at which received signals (or noise) will open the squelch. It should be advanced clockwise just to the point where the noise is silenced, so as to provide the best sensitivity to weak signals.
3. Hyper Memory Buttons ([1] ~ [5])
   Press and hold one of these buttons for 2 seconds to store the current total configuration of the radio into a special "Hyper" memory bank. Press the appropriate button momentarily to recall the desired "Hyper" memory.
4. **[**MHz (PRI)] Key
   Press this key momentarily to allow tuning in 1-MHz steps on the VFO frequency while operating on the VFO mode. In the Memory mode, press this key momentarily to allow tuning in 10 channel steps on the memory channels. Press and hold this key for 1/2 second to activate the Priority Channel Scanning (Dual Watch feature).
5. **[**Tone (HM/RV)] Key
   Press this key momentarily to change the Tone Squelch mode: ENC (CTCSS Encoder), ENC.DEC (CTCSS Tone Squelch), or DCS (DCS) operation. Press and hold this key for 1/2 second to reverse the transmit and receive frequencies during split-frequency (i.e. "Repeater") operation.

6. **[LOW(ACC)]** Key
   Press this key momentarily to select the transmitter power output level ("LOW," "MID2," "MID1," or "HIGH"). Press and hold this key for 1/2 second to recall the Weather Broadcast Channels.

7. **[BAND(SET)]** Key
   While operating on the VFO mode, press this key momentarily to toggle the operating band as follows: 144 MHz □ 250 MHz □ 350 MHz □ 430 MHz □ 850 MHz □ 144 MHz ..... In the Memory mode, press this key momentarily to activate the "Memory Tune" function. Press and hold this key for 1/2 second to enter the Set ("Menu") mode.

8. **[V/M(MW)]** Key
   Press this key momentarily to switch the frequency control among the VFO, Memory System, and Home channel. Press and hold this key for 1/2 second to transfer the VFO contents into a Memory register.

9. **[SCAN(SEL)]** Key
   Press this key momentarily to activate the Scanner. Press and hold in this key for 1/2 second to select the scan mode.

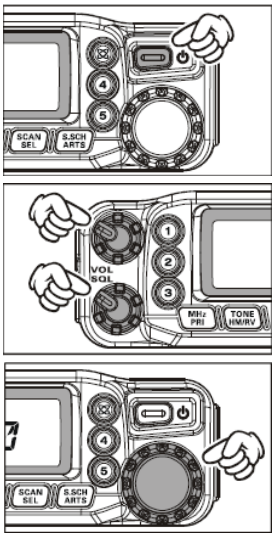
10. **[S.SCH(ARTS)]** Keys
    Press this key momentarily to activate the Smart Search feature. Press and hold this key for 1/2 second to activate the ARTS feature.

11 **DIAL** knob
   This 20-position detented rotary switch is the tuning dial for the transceiver. It is used for most tuning, memory selection, and function setting tasks on the transceiver.

12 **PWR** Switch
   Press and hold this switch for 1/2/ second to toggle the transceiver's power on and off.

13 **Internet** Key
   Press this key momentarily to activate the Internet Connection Feature. Press and hold this key for 1/2 second to indicate access number of the Internet Connection Feature.

Basic Operation



1. Turning the Transceiver On and Off
   Press and hold the **PWR** knob for 1/2 second.

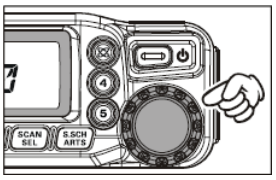
2. Adjusting the Audio Volume Level
   Rotate the **VOL** knob clockwise to adjust the receiver volume.

3. Adjusting the Squelch Setting
   Rotate the **SQL** knob clockwise slightly past the point where background noise is muted.

4. Selecting a transmitting channel
   The ARE Club radios are preprogrammed with all the necessary frequency channels needed for operations.
   Press the **V/M(MW)** key momentarily to enter the Memory Mode.
   Rotate the **DIAL** knob to select the desired channel.
   See the appendix for a complete list of programmed channels.

Frequency Navigation

1. Tuning Dial
   Rotating the **DIAL** knob allows tuning in the pre-programmed steps established for the VFO frequency. Clock-wise Rotation of the **DIAL** knob caused the FT-7800R to be tuned toward a higher frequency, while counter-clockwise rotation will lower the operating frequency.

   Press the [**MHz(PRI)**] key momentarily, then rotate the **DIAL** knob to change the frequency steps to 1 MHz per step. This feature is extremely useful for making rapid frequency excursion over the wide tuning range of the FT-7800R.

2. Direct Keypad Frequency Entry
   The keypad of the microphone may be used for direct entry of the operating frequency.

   To enter a frequency from the microphone keypad, press the numbered digits in the proper sequence. There is no "Decimal Point" key on the keypad.

Repeater Operations

The FT-7800R has been configured at the factory for the US repeater shifts. The 144 MHz shift will be 600 kHz and the 70 cm shift will be 5 MHz. Depending on the part of the band in which you are operating, the repeater shift may be either downward (-) or upward (+), and one of these icons will appear at the top of the LCD when repeater shifts have been enabled.

CTCSS Operation

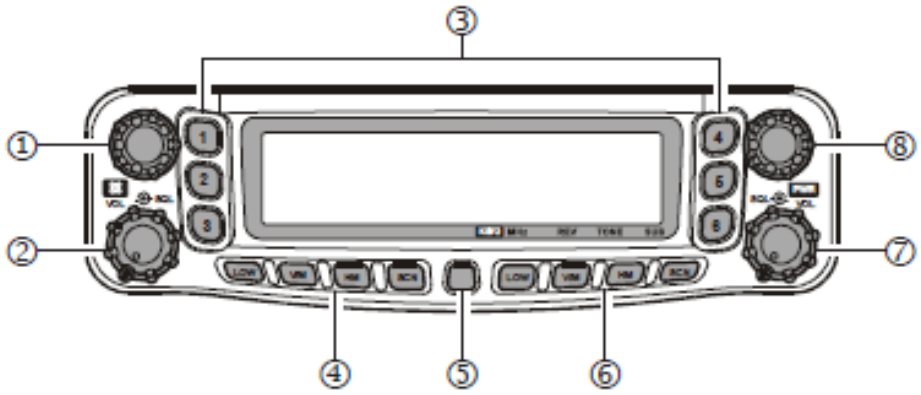
Many repeater systems require that a very-low-frequency audio tone be superimposed on your FM carrier in order to activate the repeater. This helps prevent false activation of the repeater by spurious signals from other transmitters. This tone system, called the "CTCSS" (Continuous Tone Coded Squelch System), in included in the FT-7800R.

1. Press the [**TONE(REV)**] key several times, so the "***ENC DEC***" appears on the display.
2. Press and hold the [**BAND(SET)**] key for 1/2 second to enter the Set mode, then rotate the DIAL knob to select Menu #44 (TN FRQ). This Menu selection allows setting the CTCSS tone frequency for use.
3. Press the [**BAND(SET)**] key momentarily to enable adjustment of the CTCSS frequency
4. Rotate the **DIAL** knob until the display indicates the Tone Frequency you need to use.
5. When you have made your selection, press the [**BAND(SET)**] key momentarily to save the new setting, then press and hold the [**BAND(SET)**] for 1/2 second to exit to normal operation.

CTCSS TONE FREQUENCY (Hz)					
67.0	69.3	71.9	74.4	77.0	79.7
82.5	85.4	88.5	91.5	94.8	97.4
100.0	103.5	107.2	110.9	114.8	118.8
123.0	127.3	131.8	136.5	141.3	146.2
151.4	156.7	159.8	162.2	165.5	167.9
171.3	173.8	177.3	179.9	183.5	186.2
189.9	192.8	196.6	199.5	203.5	206.5
210.7	218.1	225.7	229.1	233.6	241.8
250.3	254.1	–	–	–	–

Yaesu FT-8800R VHF/UHF

The FT-8800R is a ruggedly-built, high quality Dual Band FM transceiver providing 50 Watts of power output on the 144 MHz Amateur band and 35 Watts on the 430 MHz band. It features full duplex operation with independent *"Left"* and *"Right"* side controls.



Front Panel Controls & Switches

1. "Left" **DIAL** Knob
   This 20-poisition detented rotary switch is the tuning dial for the *"left"* band. Press this knob momentarily to switch the "Main band" to the *"left"* band.
2. "Left" **VOL** **SQL** Knob
   The inner **VOL** (Volume) control adjusts the speaker audio level from the *"left"* receiver. Clockwise rotation increases the audio level.
   The outer **SQL** (Squelch) control is used to silence background noise on the *"left"* receiver. It should be advanced clockwise just to the point where the nose is silenced.
3. Hyper Memory Buttons **[1] - [6]**
   Press and hold one of these buttons for 2 seconds to store the current total configuration of the radio into a special "Hyper" memory bank. Press the appropriate button *momentarily* to recall the desired "Hyper" memory.
4. "Left" Side Keys
   LOW Key
   Press this key momentarily to select the transmitter power output level of the *"left"* band (LOW, MID2, MID1, HIGH)

   V/M Key
   Press this key momentarily to switch the frequency control for the *"left"* band between the VFO and memory systems.

   HM Key
   Press this key momentarily to recall a favorite "Home" frequency memory.

   SCN Key
   Press this key momentarily to activate the Scanner on the *"left"* band.
5. **SET** Key
   Press this key momentarily to enter the Set ("Menu") mode.

6. "Right" Side Keys
   LOW Key
   Press this key momentarily to select the transmitter power output level of the *"Right"* band (LOW, MID2, MID1, HIGH)

   V/M Key
   Press this key momentarily to switch the frequency control for the *"Right"* band between the VFO and memory systems.

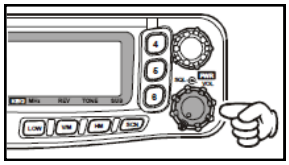
   HM Key
   Press this key momentarily to recall a favorite "Home" frequency memory.

   SCN Key
   Press this key momentarily to activate the Scanner on the "Right" band.

7. "Right" **VOL** **SQL** Knob
   The inner **VOL** (Volume) control adjusts the speaker audio level from the *"Right"* receiver. Clockwise rotation increases the audio level.
   The outer **SQL** (Squelch) control is used to silence background noise on the *"Right"* receiver. It should be advanced clockwise just to the point where the nose is silenced.

8. "Right" **DIAL** Knob
   This 20-poisition detented rotary switch is the tuning dial for the *"Right"* band. Press this knob momentarily to switch the "Main band" to the *"Right"* band.

Basic Operation



1. Turning the Transceiver On and Off
   Press and hold the *"right"* **VOL** knob for 2 seconds.

2. Adjusting the Audio Volume Level
   The audio volume level is set independently for the *"left"* and *"right"* sides of the transceiver. The *"left"* **VOL** knob provides adjustment for the *"left"* side while the *"right"* **VOL** knob provides adjustment for the *"right"* side.

3. Adjusting the Squelch Setting
   The squelch is set independently for the *"left"* and *"right"* sides of the transceiver. The *"left"* **SQL** knob provides adjustment for the *"left"* side while the *"right"* **SQL** knob provides adjustment for the *"right"* side.

4. Selecting the Operating Band
   The *"Main"* band frequency on which transmission is possible will be indicated by the MAIN icon. To establish the *"Main"* band, simply press the DIAL knob for the *"left"* or *"right"* side momentarily. You will observe the MAIN icon lighting up alternate sides of the display as you switch *"Main"* bands from the *"left"* side to the *"right"* side.

5. Selecting a Transmitting Channel.
   The ARE Club radios are pre-programmed with all the necessary frequency channels needed for operations.
   Press the **V/M** key momentarily to enter the Memory Mode.
   Rotate the **DIAL** knob to select the desired channel.
   See the appendix for a complete list of programmed channels.

Frequency Navigation

1. Tuning Dial
   Rotating the **DIAL** knob allows tuning in the pre-programmed steps established for the VFO frequency. Clockwise rotation of the **DIAL** knob causes the FT-8800R to be tuned toward a higher frequency, while counter-clockwise rotation will lower the operating frequency.

   On the "*Main*" band frequency, press the **DIAL** knob momentarily, then rotate the **DIAL** knob, to change the "*Main*" band frequency steps to 1 MHz per step. This feature is extremely useful for making rapid frequency excursion over the wide tuning range of the FT-8800R.

2. Direct Keypad Frequency Entry
   The keypad of the microphone may be used for direct entry of the "*Main*" band operating frequency.

   To enter a frequency from the microphone keypad, just press the numbered digits in the proper sequence.

Repeater Operations

The FT-8800R has been configured at the factory for the US repeater shifts. The 144 MHz shift will be 600 kHz and the 70 cm shift will be 5 MHz. Depending on the part of the band in which you are operating, the repeater shift may be either downward (-) or upward (+), and one of these icons will appear at the top of the LCD when repeater shifts have been enabled.

CTCSS Operation

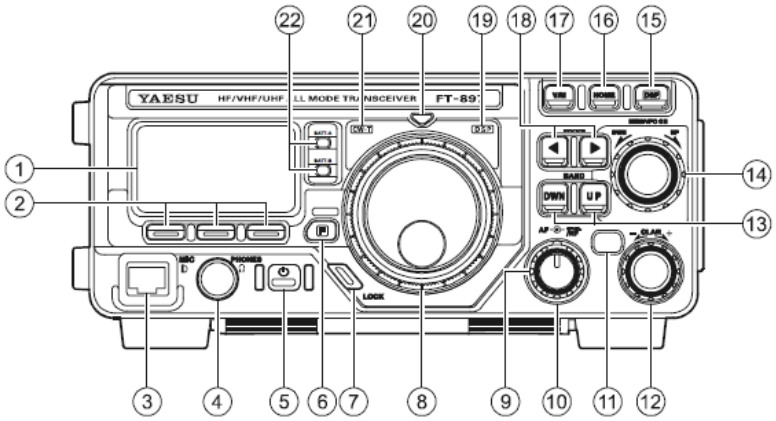
Many repeater systems require that a very-low-frequency audio tone be superimposed on your FM carrier in order to activate the repeater. This helps prevent false activation of the repeater by spurious signals from other transmitters. This tone system, called the "CTCSS" (Continuous Tone Coded Squelch System), is included in the FT-8800R.

1. Press the [**SET**] key momentarily to enter the Set mode.
2. Rotate the "*Main*" band **DIAL** knob to select Menu #41 (**TONE M**).
3. Press the "*Main*" band **DIAL** knob momentarily, then rotate the "*Main*" band **DIAL** knob so that "**ENC.DEC**" appears on the display; this activates the CTCSS Encoder, which allow repeater access.
4. When you have made your selection of the CTCSS tone mode, press the "*Main*" band **DIAL** knob momentarily, then rotate the "*Main"* band **DIAL** knob one click counter-clockwise to select Menu #40 (**TONE F**).
5. Press the "*Main"* band **DIAL** knob momentarily to enable adjustment of the CTCSS Frequency.
6. Rotate the "*Main"* band **DIAL** knob until the **display** indicates the Tone Frequency you need.
7. When you have made your selection, press and hold the "*Main*" band **DIAL** knob for 1/2 second to save the new setting and exit to normal operation.

CTCSS TONE FREQUENCY (Hz)					
67.0	69.3	71.9	74.4	77.0	79.7
82.5	85.4	88.5	91.5	94.8	97.4
100.0	103.5	107.2	110.9	114.8	118.8
123.0	127.3	131.8	136.5	141.3	146.2
151.4	156.7	159.8	162.2	165.5	167.9
171.3	173.8	177.3	179.9	183.5	186.2
189.9	192.8	196.6	199.5	203.5	206.5
210.7	218.1	225.7	229.1	233.6	241.8
250.3	254.1	–	–	–	–

Yaesu FT-897D HF/VHF/UHF

The FT-897D is multiband, multimode portable transceiver for the amateur radio MF/HF/VHF/UHF bands. Providing coverage of the 160-10 meter bands (including the 60m band) plus the 6m, 2m, and 70cm bands, the FT-897D includes operation on the SSB, CW, AM, FM, and digital modes.



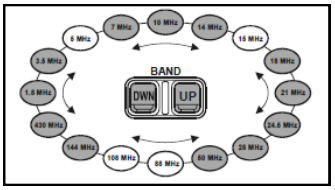
Front Panel Controls & Switches

1. LCD Display
   The LCD display indicates the operating frequency and other aspects of transceiver operation.
2. **FUNC** Keys
   These three keys select many of the most important operating features of the transceiver. When you press the [**F**] key, then rotate the **MEM/VFO CH** knob, the current function of that key will appear above each of the [**A**], [**B**], and [**C**] keys.
3. **MIC** Jack
   Connect the supplied Hand Microphone to this jack.
4. **PHONES** Jack
   This 1/4-inch 3-contact jack accepts either monaural or stereo headphones.
5. **POWER** Switch
   Press and hold the **POWER** switch for one second to turn to the transceiver on or off.
6. **[F]** Key
   Press this key momentarily to enable the changing of the function of the Multi Function keys ([**A**], [**B**], and [**C**]) by the **MEM/VFO CH** knob.
7. **LOCK** Key
   Pressing this key locks the front panel keys to prevent accidental frequency change.
8. MAIN **DIAL**
   This is the main tuning dial for the transceiver.
9. **AF** Knob
   The (inner) **VOL** knob adjusts the receiver audio volume lever.

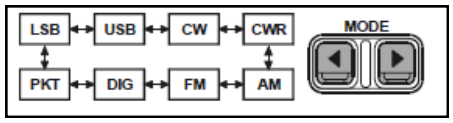
10. **SQL/RF** Knob
    Adjusts the gain of the receiver's RF and IF stages. It can be changed to Squelch control via menu selections.
11. **CLAR/IF SHIFT** Key
    Pressing this key activates the Receiver Clarifier feature.
12. **CLAR** Knob
    This knob tunes the clarifier offset frequency.
13. **BAND(DWN)/BAND(UP)** Key
    Pressing either of these keys momentarily will cause the frequency to be moved up or down by one frequency band.
14. **MEM/VFO CH** Knob
    This detented rotary switch is used for VFO frequency tuning, memory selection, and function selection for the ([**A**], [**B**], and [**C**] keys of the transceiver.
15. **DSP** Button
    Pressing this button momentarily provides instant access to the Multi Function Row "p" (MFp), which contains the command key for the receiver's Digital Signal Processing system.
16. **HOME** Key
    Pressing this key momentarily recalls a favorite "Home" frequency memory.
17. **V/M** Key
    Pressing this key switches frequency control between VFO and Memory Systems.
18. **Mode** Keys
    Pressing either of these keys momentarily will change the operating mode.
19. **DSP** Indicator
    This indicator glows green when the DSP feature is activated.
20. **TRANSMIT/BUSY** Indicator
    This indicator glows green when the squelch opens and turns red during transmission.

Basic Operation

1. Turning the Transceiver On and Off
   Press and hold the **POWER** for one second.
2. Adjusting the Audio Volume Level
   Rotate the **AF** knob clockwise to adjust the receiver volume.
3. Changing the frequency band.
   Press the **BAND(DWN)** or **BAND(UP)** key to move to the next lower or higher operating band.

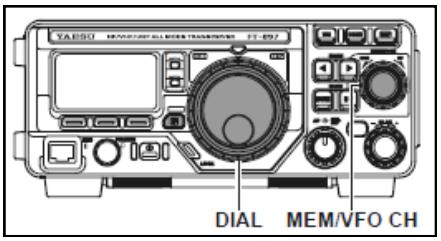


4. Changing the MODE
   Press the **MODE** ◀ or **MODE** ▶ key to move among the eight setting for operating modes.



5. Selecting a Transmitting Channel.
   The ARE Club radios are pre-programmed with all the necessary frequency channels needed for operations.

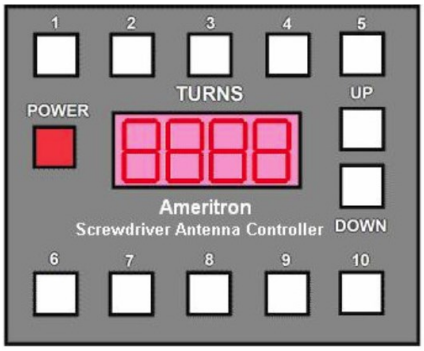
   - In the **SSB/CW/DIG** modes, rotate the Dial knob to set the frequency
   - In the **AM/FM.PKT** modes, rotate the **MEM/VFO CH** knob to set the frequency.



See the appendix for a complete list of programmed channels.

Ameritron SDC-102 Screwdriver Antenna Controller

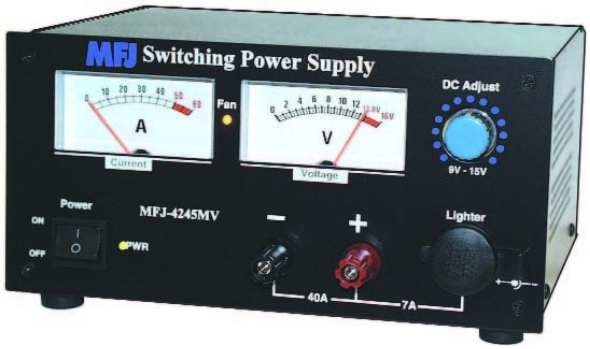
The SDC-102 Screwdriver Controller provides manual operation for tuning screwdriver antennas. In addition, tuned positions can be saved in one of the 10 presets so it can be recalled later. A 4-digit counter is used to display the current antenna position. This position is indicated by number of turns from the "parked" or 0 (zero) turns position. The number of turns from the 0 position determines the frequency to which the antenna is tuned.



Function	Activate By:	Description
Up	Press / Hold Up button	Move antenna up until desired antenna location in turns is shown
Down	Press / Hold Down button	Move antenna down until desired antenna location in turns is shown
Reset	Hold Down button while powering up unit	Clears all memory positions
Auto Park	Depress Up and Down simultaneously for 2 seconds	Bottoms antenna and zeros the counter
Current Mode	Press Button 2 while powering up unit	Displays Motor Current when moving antenna
Setup Menu	Press Button 6 while powering up unit	Allows setting the trip current and relay delay.
Store antenna position	Press and hold button 1 – 10 as desired until display reads done	Stores current antenna position as shown by number of turns in display
Recall stored position	Momentarily press button 1 – 10 as desired	Antenna position returns to the number of turns stored in that button position.

MFJ-4245MV Power Supply

The Mighty-lite deluxe switching power supply is designed to supply up to 45 amps maximum current or 40 amps continuous current at 13.8 Vdc.



The loads can be connected to either the 5-way binding posts to the cigarette lighter socket or the quick connectors on the back. Note that any devices that require more than 7 amps must use the 5-way binding post outputs. The cigarette lighter socket output has a maximum outputs of 7 amps. The quick connector output has a maximum output of 7 amps.

Operation

The DC adjustment control on the front panel is used to set the DC output voltage from 9 to 16 volts DC. For most HF and VHF radios, set the output to 13.8 Vdc.

Meter Indicators

The current meter indicates the total current being drawn by the accessories connected to the power supply.

The voltage meter indicates the voltage set for the output connectors.

Protection

The unit will automatically shut off if over 45 amps of current is drawn from the outputs. To reset, turn the unit off and wait 20 seconds, then turn the unit back on.

Portable Go Box

The club maintains 2 portable stations or “Go Boxes”. These are designed to be transported and setup at any remote site.

The boxes include the following equipment:

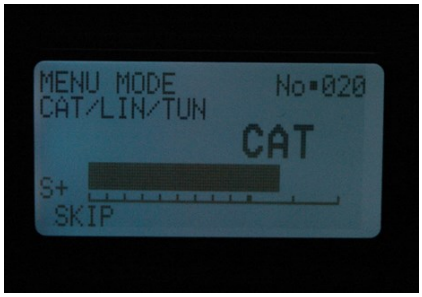
- Yaesu FT-8800R VHF/UHF Transceiver
- Yaesu FT-897D HF/VHF/UHF Transceiver
- Ameritron SDC-102 Screwdriver Antenna Controller
- MFJ-4245MV Power Supply
- Rig Runner
- Little Tarheel II Screwdriver Antenna with Tripod
- Mag-mount VHF/UHF Antenna
- 25’ Coax
- Extension Cord
- User Manuals / Nifty Manual
- Euless Operations Guide
- Copy of Club License
- Setup Guide
- Flashlight
- Pen, Pencil, Paper

Portable Go-Box Setup Procedure

1. Set up the box in a dry protected area if possible.
2. Remove the front and back lids.
3. Install the magmount antenna on the top of the box and connect it to the FT-8800R transceiver.
4. Setup the Tarheel antenna and tripod away from the primary operating location.
5. Connect the coax to the antenna and to the HF/50 MHz antenna jack on the back of the FT-897D.
6. Connect the antenna controller to the antenna with the control line.
7. Connect the controller power to the Rig Runner in the back of the box.
8. Connect the microphones to each transceiver.
9. Connect the power supply to a power source.
10. Turn on the power supply.
11. Turn on the FT-8800R.
12. Turn on the FT-897D.
13. Tune the Tarheel antenna.

Tarheel II Antenna Tuning Guide

1. Select desired frequency.
2. Push [F] key once momentarily.
3. Rotate MEM / VFO CH knob until Mfi is displayed left of the scale at the bottom of the display.
4. Push B button until SWR is displayed above B button (2). Scale is now a SWR meter.
5. Press and hold [F] key for 2 seconds. Menu mode and menu number are now displayed at top of display.
6. Rotate MEM / VFO CH knob until Menu No. 75 is displayed.
7. Rotate Main Dial until 5 is displayed. Transmitter is now set to 5 watts.
8. Push and hold [F] until display changes.
9. Change mode to AM by pressing a mode button until AM is displayed.
10. Transmit continuous carrier by pushing and holding mike key.
11. Watch scale at display bottom for SWR reading.
12. Use the Ameritron SDC-102 controller to move antenna up or down from approximate frequency turns.
13. Change number of turns until SWR is lowest (as far left as possible) and HSWR is not displayed.
14. Stop transmitting by releasing mike key.
15. Press and hold [F] key for 2 seconds. Menu mode and menu number now displayed at top of display.
16. Rotate MEM / VFO CH knob until Menu No. 75 is displayed.
17. Rotate Main Dial until 100 is displayed. Transmitter is now set to 100 watts.
18. Push and hold [F] until display changes.
19. Antenna is now tuned to displayed frequency.



EMERGENCY OPERATIONS

Preparedness

Being prepared for an emergency involves learning as much as you can and making plans to act. Continue to educate yourself by keeping up with current training at the appropriate levels. Each club member should be prepared to activate and participate in emergency events within their own abilities and/or willingness.

The City of Euless has published a Citizens Preparedness Guide with additional information. The guide is available at www.w5eul.com/docs/prepared.pdf

Euless Police Department Emergency Operations Center

The Emergency Operations Center (EOC) has been established to provide a centralized location for the city department heads to meet and coordinate activities during an emergency event. During these activations, access is restricted to authorized personnel.

Fort Worth RACES

Radio Amateur Civil Emergency Service (RACES) is a volunteer organization of licensed amateur radio operators who provide communications to affiliated government agencies during emergencies. The Federal Communications Commission (FCC) regulates RACES under Title 47 Code of Federal Regulations (CFR), Part 97, subparts F and was originally sponsored by the Federal Emergency Management Agency (FEMA). FEMA has turned over administration of RACES to the individual states and local jurisdictions. The City of Fort Worth manages the RACES program for Tarrant County. The RACES Liaison officer is a funded position of the Fort Worth Office of Emergency Management.

Amateur Radio Emergency Service (ARES) is a group of FCC-licensed amateur radio operators who volunteer their services and equipment to public or private agencies during emergencies. ARES operates under the auspices of the American Radio Relay League (ARRL), a national, not-for-profit organization, which is now a recognized affiliate program with the Department of Homeland Security's Citizen Corps initiative. ARES is also a member of the National Voluntary Organizations Active in Disasters (NVOAD). In the North Texas ARRL Section, the Section Emergency Coordinator appoints Emergency Coordinators (EC) on a county wide basis. The EC for Tarrant County is traditionally the same as the RACES Liaison officer.

These two groups working in concert provide various emergency communications functions using volunteer radio amateur operators as a service to the citizens of Tarrant County.

<u>The mission of Fort Worth RACES:</u>

1. Provide Skywarn trained, amateur radio operators, (spotters), when activated by the National Weather Service. These spotters will obtain and disseminate severe weather observations, warnings and other "ground truths" to the National Weather Service, Emergency Management, and other served agencies, using designated amateur radio communications nets on a county wide basis.

2. Provide trained and vetted amateur radio operators to provide communications and support functions when requested by the Fort Worth Office of Emergency Management in support of any mission

<u>The mission of Fort Worth ARES:</u>

1. To serve as a key coordinating point for amateur radio operators in Tarrant county who want to volunteer their equipment, knowledge, experience, and other resources in an emergency or public service event.

Goals of Fort Worth RACES and ARES®

1. To establish close cooperative relationships with relevant organizations and agencies within Tarrant and adjoining counties.
2. To be recognized as the "go-to" group for community organizations needing communication support for events and activities of general benefit to the community. These “Public Service” events are used as training and skills improvement exercises in times of non-emergency.
3. To be recognized by emergency services agencies and the amateur community alike as a model of competence and professionalism in operations.
4. Foster the development of skills and capabilities that will keep the organization and its members abreast of new technologies to help support the communication needs of served agencies.
5. To use the resources of the group members and their involvement in community activities to foster awareness of the need for preparedness in the community at large.
6. Develop continuing and ongoing education in order to exercise member’s equipment and capabilities year-round.
7. Insure that expectations of the members and leaders are clearly understood and that basic levels of skills and performance required in emergency conditions of different types will be available.
8. Emphasize professionalism and “Esprit de corps” in every interaction with the general public and served agencies.
9. Recruit new members in order to maintain and expand the necessary capabilities for both organizations.

1 *noun:* A spirit of solidarity; a sense of pride, devotion, and honor among the members of a group.

ARE Club Activation

Euless Office of Emergency Management can activate for disasters within the city limits of Euless as needed. The Euless EOC will use the City of Euless mass communications system to alert ARE members for an activation.

Activation for severe weather will be requested by the National Weather Service office in Fort Worth.

Communications Equipment

Each club member should maintain a Basic Communications Go-Kit for use during an activation. See the appendix for a recommended Go-Kit inventory list.

Fort Worth RACES has adopted the EmComm standardized frequency list published by the DFW Area Ham Radio Interoperability Group. This template insures members have the basic set of frequencies to support emergency communications. For more details go to www.dfwhrig.org. ARE has adopted this template as our standard all club radios. We recommend that you program your radios to this standard.

Programming files for several brands of radios are available on the club website at www.w5eul.com.

For details, see the Frequency Plan section in the appendix of this guide.

Euless Community Emergency Response Team

CERT is an initiative of the Police and Fire Departments to ensure that our community is informed and prepared in the event of a disaster. CERT teams are invaluable to a community and will improve the City of Euless' community emergency preparedness. CERT members assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help. They also support emergency response agencies by taking active roles in emergency preparedness projects in their community.

The CERT Program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations.

ARE works closely with the Euless CERT teams by providing communications support. ARE club members should have at least one FRS radio for use during CERT operations.

For details of FRS Radio channel assignments, please see the Frequency Plan section in the appendix of this guide.

RACES Skywarn Spotter Net

During severe weather events, the National Weather Service may request an activation of Fort Worth RACES Skywarn spotter net. This is a directed net open to RACES members only. The mission of this net is to provide "Ground Truth" reporting on the current weather conditions.

RACES Frequency List

(All repeaters use 110.9 Hz PL® tone. During RACES Nets you will hear Dit-Dah-Dit "R" as courtesy beep)

Primary Repeater	146.940 Mhz**
Backup Repeater	146.760 Mhz
Southeast	147.140 Mhz
Southwest	146.680 Mhz
Northeast	147.100 Mhz
Northwest	145.110 Mhz
Primary UHF	444.100 Mhz
Wide Area UHF	442.400 Mhz

** Monitored by NWS, RACES members should monitor and report on this repeater for all Weather Activations

Reporting Criteria

- Winds greater than 50 MPH
- Hail larger than 3/4 inch in diameter. (Penny)
- Wall clouds / Tornados / Wind Caused Damage
- Flooding impacting homes or making streets and highways impassable
- Conditions which impact life and safety of the public

Standard Reporting Format

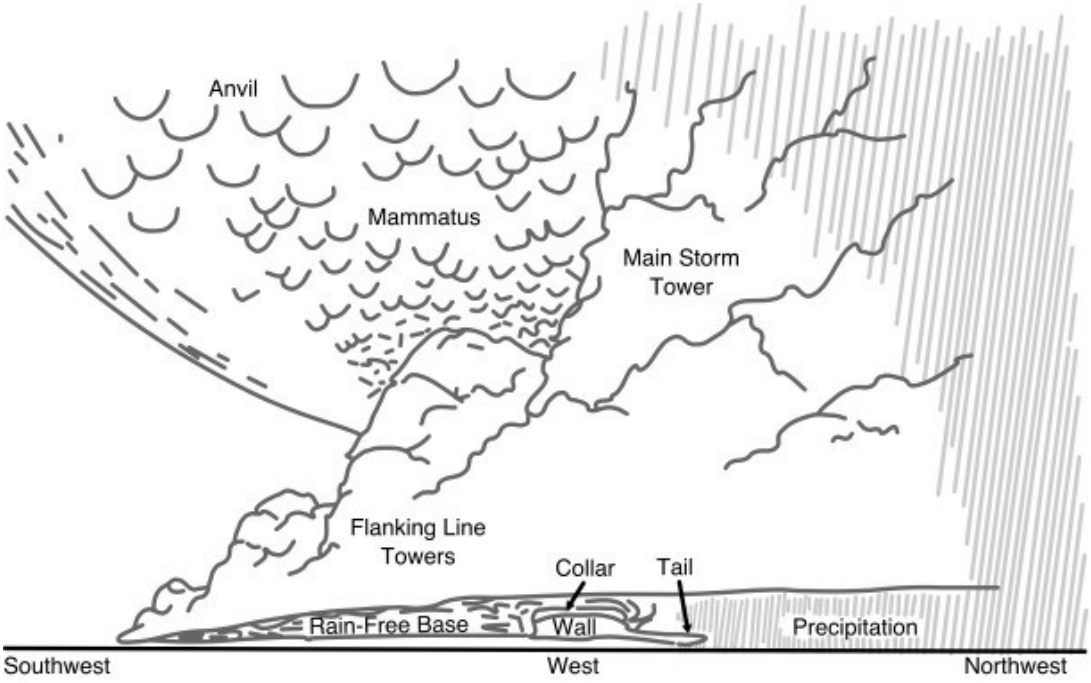
- Who are you? (Your Call/Tactical Call)
- Where are you? (Major Mapsco® Grid or Major Cross Streets)
- Wind Direction and Speed ? (Each time you report)
- What size of hail and intensity ?
- Any other important information?
- Your full amateur call sign

Hail Size Reporting

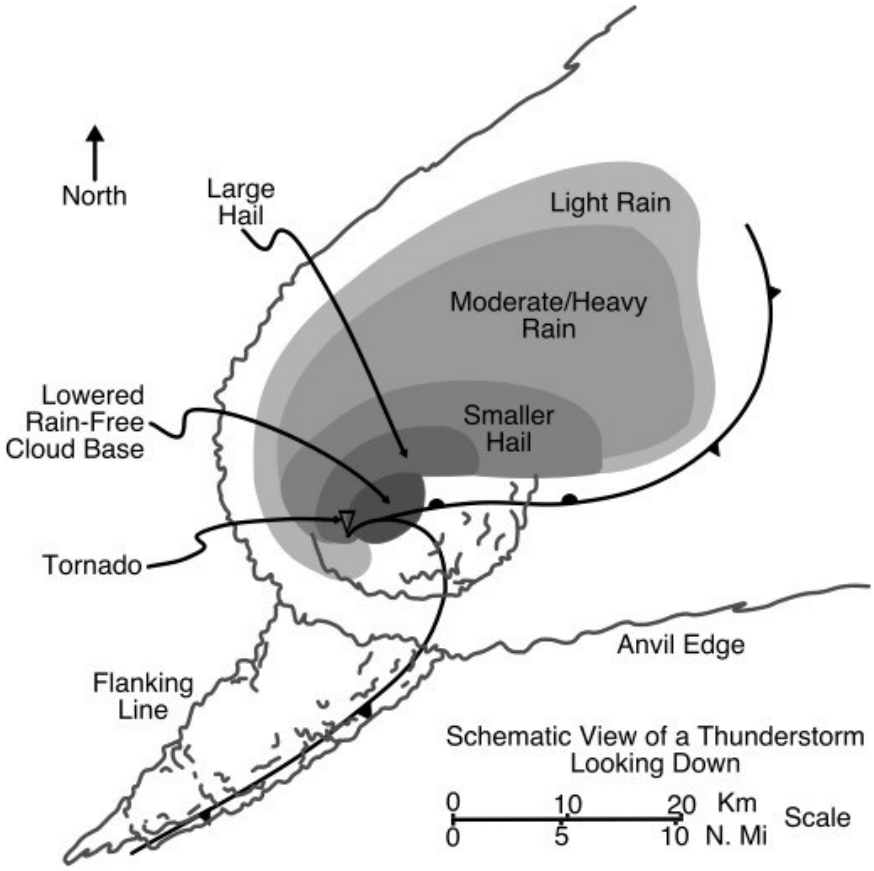
- Penny .75 Inch
- Nickel 7/8 Inch
- Quarter 1 Inch
- Half Dollar 1.25 Inch
- Golf Ball 1.75 Inch
- Tennis Ball 2.5 Inch
- Baseball 3.5 Inch
- Softball 4.5 Inch

Estimating Wind Speeds (Beaufort Wind Scale)

Wind Speed Estimation (MPH)	Description
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
55 - 63 **	Damage to chimneys and TV antennas; pushes over shallow rooted trees
50 - 58 **	Small branches or limbs broken (less than 2" diameter)
58 - 70 **	Large limbs knocked down, the size of an adult's wrist; power lines knocked down; a few house shingles torn off.
70 - 80 **	A few small trees or shrubs can be uprooted; Very large branches broken off, Barns may sustain considerable damage.
> than 80 **	Trees may be uprooted or snapped, power poles snapped or knocked over; Large vehicles can be blown off the road. Roofs blown off homes.



Schematic View of a Tornadic Thunderstorm
Side View Looking West



Tornado Safety Tips

If a Warning is issued or if threatening weather approaches:

- In a home or building, move to a pre-designated shelter, such as a basement.
- If an underground shelter is not available, move to an interior room or hallway on the lowest floor and get under sturdy piece of furniture.
- Stay away from windows.
- Get out of automobiles.
- Do not try to outrun a tornado in your car; instead, leave it immediately.
- Do not use bridges or overpasses for shelter from tornadoes.
- Mobile homes, even if tied down, offer little protection from tornadoes and should be abandoned.
- Occasionally, tornadoes develop so rapidly that advanced warning is not possible. Remain alert for signs of an approaching tornado.
- Flying debris from tornadoes causes most deaths and injuries.

Flash Flood Safety

When a "Flash Flood Warning" is issued for your area, or the moment you realize that a flash flood is imminent, act quickly to save yourself. You may have only seconds!

- Get out of area subject to flooding. These include dips, low spots, canyons, washes and the like.
- Avoid already flooded and high velocity flow areas. Do not attempt to cross flowing streams.
- If driving, be aware that the road bed may not be intact under flood waters. Turn around and go another way.
- NEVER drive through flooded roadways!
- If the vehicle stalls, leave it immediately and seek higher ground safely if you can. Rapidly rising water may engulf the vehicle and its occupants and sweep them away. Remember, it's better to be wet than dead!
- Be especially cautious at night when it is harder to recognize flood dangers.
- Do not camp or park your vehicle along streams and washes, particularly during threatening conditions.

Severe Thunderstorm and Lightning Safety

Severe thunderstorms are dangerous environments:

- If you can hear thunder, you are close enough to the storm to be struck by lightning. Go to safe shelter immediately!
- Move to a sturdy building and stay away from windows. Do not take shelter in small sheds, under isolated trees, or in convertible automobiles.
- If sturdy shelter is not available, get inside a hard top automobile and keep windows up. Beware, though, since vehicles offer poor protection from downburst winds and only fair protection from hail.
- Get out of boats and away from water. Unplug appliances not necessary for obtaining weather information. Avoid using the telephone or any electrical appliances. Use landline phones ONLY in an emergency.

If caught outdoors and no shelter is nearby:

- Find a low spot away from trees, fences, and poles. Make sure the place you pick is not subject to flooding.
- If you are in the woods, take shelter under the shorter trees.
- If you feel your skin tingle, or your hair stand on end. Squat low to the ground on the balls of your feet. Make yourself the smallest target possible, and minimize contact with the ground.
- If you are boating or swimming, get to land and find shelter immediately!

Spotter Glossary

Anvil – The flat, spreading top of a cumulonimbus cloud. Often shaped like an anvil.

Beaver('s) Tail – An inflow band with a relatively broad, flat appearance suggestive of a beaver's tail. It is attached to a supercell's updraft and is oriented roughly east to west.

BLMRS -- The BLMRS card is RACES' equivalent to the NIMS Resource Status Card. It is used at staging to record incoming communicator contact information, resource capability, and to log assignment activity. The card provides the staging manager a tool to manage available and assigned resources, their status, and location.

Clear Slot – A local region of clearing skies or reduced cloud cover indicating an intrusion of drier air. Often seen on the west or southwest side of a wall cloud and believed to be a visual indication of a rear flank downdraft.

Cumuliform – Has the appearance of a cumulus cloud, a solid and lumpy or cauliflower-like appearance. Cumuliform towers are often associated with strong updrafts.

Downburst – A strong downdraft resulting in an outward burst of damaging winds on or near the ground. Sometimes referred to as "straight-line winds." Downbursts can produce damage similar to a strong tornado.

Downdraft – A small-scale column of air that rapidly sinks toward the ground. Usually accompanied by precipitation as in a shower or thunderstorm.

Elevated Reporting Criteria – Net Control Stations will call for elevated reporting criteria for significant reports such as rotating lowerings, rotating funnels, flashes of light at ground level not associated with lightning, tornados or other immediate threats to life or property. When Elevated Reporting Criteria is in effect on a SKYWARN Net, stations with only Minimum or Modified Reporting Criteria should hold their reports.

Flanking Line – A line of cumulus or towering cumulus clouds connected to and extending outward from the most active part of a supercell. Normally extends to the southwest of the main storm tower.

Flash Flooding -- A rapid and extreme flow of high water into a normally dry area or a rapid water level rise in a stream or creek above a predetermined flood level, beginning within six hours of the causative event (e.g., intense rainfall, dam failure, ice jam). However, the actual time threshold may vary in different parts of the country. Ongoing flooding can intensify to flash flooding in cases where intense rainfall results in a rapid surge of rising flood waters.

Funnel Cloud – A condensation funnel extending from the base of a towering cumulus or cumulonimbus. Associated with a rotating column of air that is not in contact with the ground.

Glaciated – Having the appearance of a cirrus cloud. Thin in fibrous in appearance. Glaciated clouds are associated with the tops of thunderstorms, especially those with weaker updrafts.

Gust Front – The leading edge of gusty surface winds from thunderstorm downdrafts. Sometimes associated with a shelf or roll cloud.

High Precipitation (HP) Supercell – A supercell with a large amount of visible precipitation encircling the mesocyclone. HP supercells can be difficult to observe visually, as the precipitation often obscures the updraft related cloud features.

Inflow Bands – Bands of low clouds, arranged parallel to the low-level winds and moving into or toward a thunderstorm. They may indicate the strength of the inflow of moist air into the storm, and hence, its potential severity.

Landspout – A tornado that does not arise from organized storm-scale rotation and, therefore, is not associated with a wall cloud or a mesocyclone. Low Precipitation (LP) Supercell – A supercell with little visible precipitation falling from it. LP supercells often have flared-out updraft towers with striations, thus, they are easy to recognize visually. However, they can be difficult to detect on radar.

Mammatus Clouds – Rounded, smooth, sack-like protrusions hanging from the underside of a thunderstorm anvil. Mammatus clouds often accompany severe thunderstorms, but do not produce severe weather.

Mesocyclone – A storm-scale region of rotation, typically around two to six miles in diameter and often found in the right rear flank of a supercell, or on the front flank of an HP storm.

Minimum Reporting Criteria – The standard criteria required for reporting weather events on a DFW Area RACES SKYWARN Net. Defined as being equal to or greater than any of the following: Ffash flooding, wind greater than fifty miles per hour (50 MPH), or hail one inch (1") or larger. Events that do not meet these Minimum Reporting Criteria should not be reported on a SKYWARN Net. Net Control Stations may institute Modified or Elevated Reporting Criteria at the request of served agencies or in order to control or further limit Net traffic.

Modified Reporting Criteria – Net Control Stations will call for modified reporting criteria at the request of a served agency such as the National Weather Service. Modified Reporting Criteria may be, but not limited to, events such as wind or flooding reports with more specificity than implied in Minimum Reporting Criteria. When Modified Reporting Criteria is in effect on a SKYWARN Net stations with Minimum Reporting Criteria may continue to submit their reports.

Multiple-vortex Tornado – A tornado in which two or more condensation funnels or debris clouds are present, often rotating about a common center or about each other.

Overshooting Top – A dome-like protrusion above a thunderstorm anvil, representing a very strong updraft and hence a higher potential for severe weather with that storm.

Power Flash – A blue-green flash caused by the arcing of electric power lines. They are often a visual indication of damaging winds.

Rain Foot – A horizontal building near the surface in a precipitation shaft, forming a foot-shaped prominence. A rain foot is a visual indication of a wet microburst.

Rain-free Base – A dark, horizontal cloud base with no visible precipitation beneath it. The rain-free base typically marks the location of the thunderstorm updraft.

Rear Flank Downdraft – A region of sinking dry air on the back side of, and wrapping around a mesocyclone. The RFD is often visible as a clear slot wrapping around the wall cloud.

Roll Cloud – A low, horizontal tube-shaped cloud associated with a thunderstorm gust front.

Scud – Small, ragged, low cloud fragments that are unattached to a larger cloud base and often seen with and behind thunderstorm gust fronts. Scud clouds generally are associated with cool moist air, such as thunderstorm outflow.

Severe Thunderstorm – A thunderstorm which produces tornadoes, hail 0.75 inches or more in diameter, or winds of 50 knots (58 MPH) or more. Structural wind damage may imply the occurrence of a severe thunderstorm.

Shelf Cloud – A low, horizontal wedge-shaped arcus cloud, associated with a thunderstorm gust front. The shelf cloud is attached to the base of the parent cloud above it.

Squall Line – A solid, or nearly solid line or band of active thunderstorms.

Striations – Groves or channels in cloud formations, arranged parallel to the flow of air and therefore depicting the airflow relative to the parent cloud. Striations often reveal the presence of rotation, as in the barber pole or "corkscrew" effect often observed with a rotating updraft.

Supercell – A thunderstorm with a persistent rotating updraft. Supercells are rare, but are responsible for a remarkably high percentage of severe weather events, especially tornadoes, extremely large hail, and damaging straight-line winds.

Tail Cloud – A horizontal, tail-shaped cloud (not a funnel cloud) at low levels extending from the precipitation region of a supercell toward the wall cloud.

Tornado – A violently rotating column of air in contact with the ground and extending from the base of a thunderstorm.

Tower Cumulus – A large cumulus cloud with great vertical development, usually with a cumuliform or cauliflower-like appearance, but lacking the characteristic anvil of a cumulonimbus.

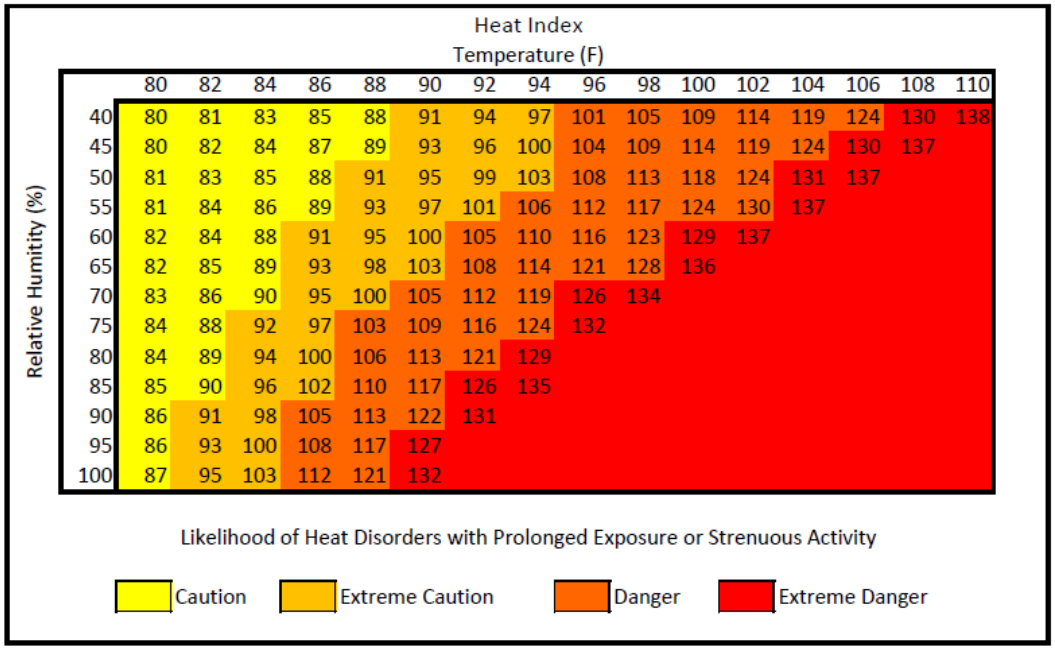
Updraft – A small-scale column of rising air.

Virga – Precipitation which falls from a cloud base but evaporates before reaching the ground. Virga often has a streaky or stringy appearance as it hangs down from the cloud base.

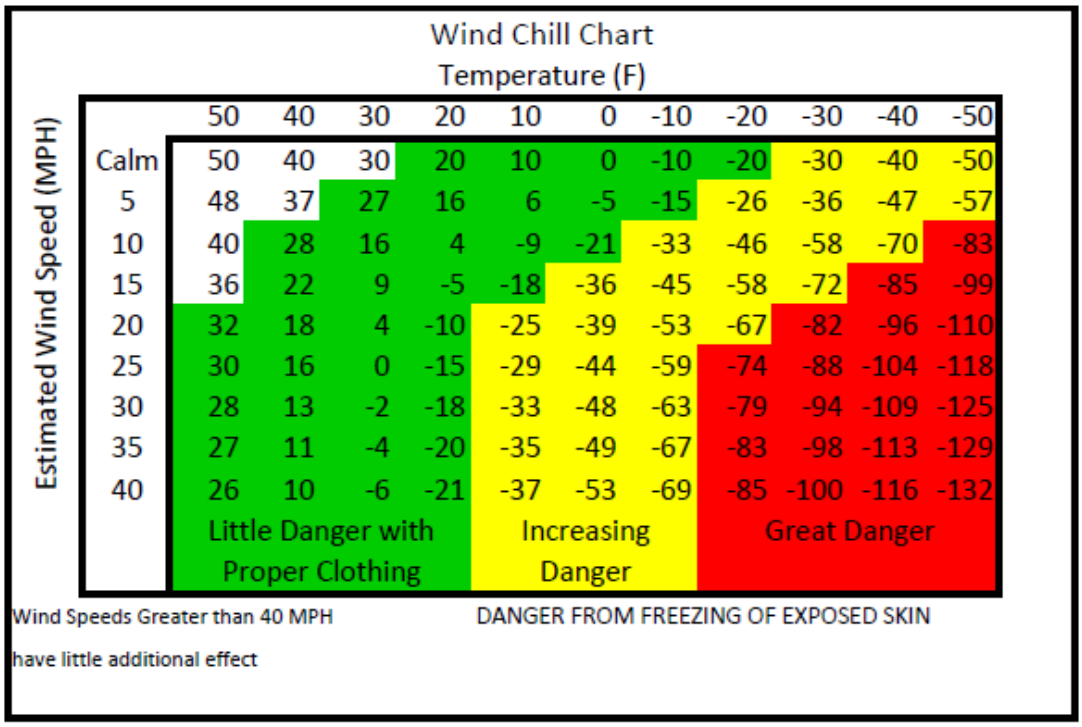
Wall Cloud – A rotating, localized, persistent, often abrupt lowering from a rain-free base. Wall clouds can range from a fraction of a mile in diameter, up to nearly five miles in diameter and are normally found on the south or southwest side of the thunderstorm.

Heat Index Chart

- Hot – Heat stroke, heat cramps or heat exhaustion possible with prolonged exposure or physical activity.
- Very Hot – Heat cramps or heat exhaustion likely and heat stroke possible with prolonged exposure and physical activity.
- Extremely Hot – Heat stroke likely with continued exposure.



Wind Chill Index



APPENDIX

Frequency Plans

Euless CERT Team FRS Radio Assignments

Please note that FRS radios should be set to Privacy Code 21

Channel #	Frequency	Assignment
1	462.5625	Neighborhood Watch to Responders
2	462.5875	CERT Team Leaders to Command
3	462.6125	CERT Planning Section
4	462.6375	CERT Logistics Section
5	462.6625	CERT Admin Section
6	462.6875	CERT Team Leader to Public Safety
7	462.7125	Safety Officer
8	467.5625	CERT OPS inter-Team Primary Channel
9	467.5875	RED Team
10	467.6125	GREEN Team
11	467.6375	WHITE Team
12	467.6625	ORANGE Team
13	467.6875	BLUE Team
14	467.7125	BROWN Team

Privacy Codes CTCSS Tones in Hz

FRS 1	67.0	FRS 14	107.2	FRS 27	167.9
FRS 2	71.9	FRS 15	110.9	FRS 28	173.8
FRS 3	74.4	FRS 16	114.8	FRS 29	179.9
FRS 4	77.0	FRS 17	118.8	FRS 30	186.2
FRS 5	79.7	FRS 18	123.0	FRS 31	192.8
FRS 6	82.5	FRS 19	127.3	FRS 32	203.5
FRS 7	85.4	FRS 20	131.9	FRS 33	210.7
FRS 8	88.5	FRS 21	136.5	FRS 34	218.1
FRS 9	91.5	FRS 22	141.3	FRS 35	225.7
FRS 10	94.8	FRS 23	146.2	FRS 36	223.6
FRS 11	97.4	FRS 24	151.4	FRS 37	241.8
FRS 12	100.0	FRS 25	156.7	FRS 38	250.3
FRS 13	103.5	FRS 26	162.2		

Tarrant County Standard Emcomm template

Location	Name	Frequency	Tone	Comments	Location	Name	Frequency	Tone	Comments
1	FTW PRI	146.94	110.9	RACES PRIM	38	TA6760	146.76	110.9	
2	FTW BU	146.76	110.9	RACES BACK	39	WS6780	146.78	131.8	DECATU
3	FTW SW	146.68	110.9	RACES SW	40	HU6780	146.78	114.8	Hunt-V
4	FTW SE	147.14	110.9	RACES NE	41	DA6880	146.88	110.9	Dal-Pri
5	FTW NE	147.1	110.9	RACES SE	42	DN6920	146.92	110.9	Den-Pri
6	FTW NW	145.11	110.9	RACES NW	43	TA6940	146.94	110.9	Ftworth
7	FTW UHF	444.1	110.9	RACES UHF	44	DA6960	146.96	110.9	Dal-Sec
8	FTW WIDE	442.4	110.9	CedarHill	45	KF6980	146.98	88.5	
9	FTW ALT1	146.84	110.9	RACES ALT 1	46	WS6980	146.98	192.8	BOYD
10	FTW ALT2	147.28	110.9	RACES ALT 2	47	GS7000	147	100	Gray-Pri
11	FTW TMS	444.1	100.0	RACES TMS	48	DA7040	147.04	136.5	Mesquite
12	FTW VAN1	444.1	103.5	OLD VAN	49	PR7040	147.04	110.9	
13	FTW VAN2	444.1	118.8	NEW VAN	50	TA7100	147.1	110.9	
14	REDCROS	147.42	146.2	Red Cross	51	DA7120	147.12	100	Rich
15	EOCBU	443.875	110.9	EOCBU	52	TA7140	147.14	110.9	E-TARRA
16	2M Call	146.52	N/A	VHF Call	53	CI7180	147.18	107.2	PARK VHF
17	70 Call	446.00	N/A	UHF Call	54	GS7220	147.22	100	COLLINSV
18	Euless	442.9	110.9	UHF Repeater	55	GS7280	147.28	107.2	Gray-Sec
19	EUL SV	146.55	N/A	VHF Simplex	75	DN7380	147.38	110.9	LAARK
20	EUL SU	446.66	N/A	UHF Simplex	76	DN1325	441.325	88.5	Denton
21	TA5110	145.11	110.9	NW-TARRA	77	RW1525	441.525	141.3	Rock-U
22	DN5170	145.17	110.9	Den-Sec	78	DA1925	441.925	110.9	W5EBQ
23	DA5190	145.19	110.9	KA5CTN	79	DA2400	442.4	110.9	CedarHil
24	DA5210	145.21	110.9	MARS	80	DA2625	442.625	110.9	Mesquite
25	DA5310	145.31	110.9	Mesquite	81	DA2650	442.65	110.9	Carrollt
26	CI5350	145.35	100	N5GI	82	DA2700	442.7	110.9	GARLAND
27	EL541E	145.41	110.9		83	CO2775	442.775	100	GAINESVI
28	FN5470	145.47	88.5	Fannin	84	DA2800	442.8	110.9	UTD
29	CK5490	145.49	85.4		85	CI3200	443.2	100	MERA UHF
30	JN5490	145.49	88.5		86	PR3250	443.25	110.9	
31	HU5490	145.49	167.9	COMMERCE	87	DN3525	443.525	118.8	Denton
32	DA6640	146.64	118.8	K5AHT	88	DA4025	444.025	110.9	WX5O
33	DA6660	146.66	110.9	Garland	89	DN4050	444.05	110.9	DENTON
34	TA6680	146.68	110.9	SW-TARRA	90	DA4075	444.075	110.9	CARROLLT
35	DA6700	146.7	110.9	W5EBQ	91	TA4100	444.1	110.9	
36	DA6720	146.72	110.9	Irving	92	CI4250	444.25	79.7	PARK UHF
37	CI6740	146.74	110.9	MARC	93	GS4750	444.75	100	Grayson UHF

Location	Name	Frequency	Tone	Comments	Location	Name	Frequency	Tone	Comments
100	CI45125	444.5125	123	Celina	121	WIN910	144.91		WIN910
101	145.46	145.46		145.46	123	WIN930	144.93		WIN930
102	145.6	145.6		145.6	124	WIN950	144.95		WIN950
103	145.7	145.7		145.7	125	WIN970	144.97		WIN970
104	146.4	146.4		146.4	126	WIN990	144.99		WIN990
105	146.48	146.48		146.48	127	WIN010	145.01		WIN010
106	146.5	146.5		146.5	128	WIN030	145.03		WIN030
107	146.52	146.52		146.52	129	WIN050	145.05		WIN050
108	146.54	146.54		146.54	130	WIN070	145.07		WIN070
109	146.56	146.56		146.56	131	WIN090	145.09		WIN090
110	146.58	146.58		146.58	132	APRS-SEC	144.34		APRS-SEC
111	147.42	147.42		147.42	133	APRS-PRI	144.39		APRS-PRI
112	147.44	147.44		147.44	134	444.6	444.6		444.6
113	147.51	147.51		147.51	135	445	445		445
114	147.52	147.52		147.52	136	445.5	445.5		445.5
115	147.55	147.55		147.55	137	446.1	446.1		446.1
116	147.56	147.56		147.56	138	446.5	446.5		446.5
120	147.58	147.58		147.58	139	447	447		447

ARES® HF Net Frequencies

North Texas Section ARES®

- 3860 KHz LSB for evening and night operations
- 7277.5 KHz LSB for morning and day operations

Texas ARES®

- 3872 KHz LSB for evening and night operations
- 7285 KHz LSB for morning and day operations

COMMUNICATIONS RESOURCE AVAILABILITY WORKSHEET ICS 217A					Frequency Band **VOICE VHF/UHF**			Description **Amateur Radio Euless**	
HRIG	**Channel Configuration**	**Channel Name**	**Eligible Users/ Assignments**	**RX Freq N or W**	**RX Tone/ NAC**	**TX Freq N or W**	**Tx Tone/ NAC**	**Mode A, D. or M**	**Remarks**
1	VHF REPEATER	FTW PRI	EARC/ARES/ RACES	146.9400 W	N/A	146.3400 W	110.9	A	TACTICAL NET
2	VHF REPEATER	FTW BU	EARC/ARES/ RACES	146.7600 W	N/A	146.1600 W	110.9	A	TACTICAL NET
3	VHF REPEATER	FTW SW	EARC/ARES/ RACES	146.6800 W	N/A	146.0800 W	110.9	A	TACTICAL NET
4	VHF REPEATER	FTW SE	EARC/ARES/ RACES	147.1400 W	N/A	147.7400 W	110.9	A	TACTICAL NET
5	VHF REPEATER	FTW NE	EARC/ARES/ RACES	147.1000 W	N/A	147.7000 W	110.9	A	TACTICAL NET
6	VHF REPEATER	FTW NW	EARC/ARES/ RACES	145.1100 W	N/A	144.5100 W	110.9	A	TACTICAL NET
7	UHF REPEATER	FTW UHF	EARC/ARES/ RACES	444.1000 W	N/A	449.1000 W	110.9	A	TACTICAL NET
8	UHF REPEATER	FTW WIDE	EARC/ARES/ RACES	442.4000 W	N/A	447.4000 W	110.9	A	TACTICAL NET
9	VHF REPEATER	FTW ALT1	RACES ALT 1	146.8400 W	N/A	146.2400 W	110.09	A	TACTICAL NET
10	VHF REPEATER	FTW ALT2	RACES ALT 2	147.280 W	N/A	147.880 W	110.9	A	TACTICAL NET
11	VHR REPEATER	FTW TMS	RACES TMS	444.100	N/A	449.100	100.0	A	TACTICAL NET
12	UHF REPEATER	FTW VAN1	EARC/ARES/ RACES	444.1000 W	103.5	449.1000 W	103.5	A	TACTICAL NET
13	UHF Repeater	FTW VAN2	EARC/ARES/ RACES	444.1000 W	118.8	449.1000 W	118.8	A	TACTICAL Net
14	VHF SIMPLEX	REDCROS	EARC/ARES/ RACES	147.420 W	N/A	147.420 W	146.2	A	TACTICAL SIMPLEX
15	UHF REpeater	EOCBU	EARC/ARES/ RACES	443.875	110.9	448.875 W	110.9	A	TACTICAL NET
18	UHF REPEATER	EUELSS	EARC/ARES/ RACES	442.9000 W	N/A	447.9000 W	110.9	A	TACTICAL NET
19	VHF SIMPLEX	EUL SIMV	EARC/ARES/ RACES	146.5500 W	N/A	146.5500 W	N/A	A	TACTICAL SIMPLEX
20	UHF SIMPLEX	EUL SIMU	EARC/ARES/ RACES	446.5500 W	N/A	446.5500 W	N/A	A	TACTICAL SIMPLEX

ARES® HF Net Frequencies

North Texas Section ARES®

- 3860 KHz LSB for evening and night operations
- 7277.5 KHz LSB for morning and day operations

Texas ARES®

- 3872 KHz LSB for evening and night operations
- 7285 KHz LSB for morning and day operations
- 7290 KHz LSB for Health and Welfare traffic

NOAA Frequencies

Channel	Frequency
1	162.4
2	162.425
3	162.45
4	162.475
5	162.5
6	162.525
7	162.55

National Simplex Frequencies

- 2m VHF 146.52
- 70cm UHF 446.00

Citizens Band

Channel	Frequency	Channel	Frequency
1	26.965	21	27.215
2	26.975	22	27.225
3	26.985	23	27.255
4	27.005	24	27.235
5	27.015	25	28.245
6	27.025	26	27.265
7	27.035	27	27.275
8	27.055	28	27.285
9	27.065	29	27.295
10	27.075	30	27.305
11	27.085	31	27.315
12	27.105	32	27.325
13	27.115	33	27.335
14	27.125	34	27.345
15	27.135	35	27.355
16	27.155	36	27.365
17	27.165	37	27.375
18	27.175	38	27.385
19	27.185	39	27.395
20	27.205	40	27.405

Club Net Script

Good Evening. This is the EULESS Amateur Radio Club's Tuesday Night Net.

My name is: _____ and my call is: _____ I will serve as Net Control tonight.

**** Before we begin, is there any Emergency or Priority Traffic needing this Frequency, if so PLEASE come now.**

**** hold 15 seconds.**

**** Hearing none, if there is any Emergency or Priority Traffic during the net please call in with BREAK BREAK and your CALL SIGN and net control will respond.**

**** Hold 10 seconds.**

This will be a directed net, so please use your full call sign for recognition by net control. Also please notify net control if you need to leave the net early.

This net is called the every Tuesday at 8 p.m. CST on the W5EUL repeater located in Euless, Texas. This net in place for Amateur radio operators to exchange knowledge; train with their radios for emergencies, and to strengthen the Fellowship of the Euless Amateur Radio Club. All licensed amateur radio operators are cordially invited to join us.

Tonight our net will cover:

- Ham News
- Club Officer Comments
- Tech Talk
- Swap Meet
- Bulletins and announcements for the net

This is: (Your call sign) _____ Euless Amateur radio net in progress.

We will shortly accept Check-ins to this net PLEASE check-in SLOWY in groups of Three with your call sign, name and location.

** Do we have any Mobile Check-ins?

** Are there any Stations on EchoLink?

**Any other stations please check in now.

** General welcome and ask social questions to operators that checked in.

This is: (Your call sign) _____ Euless Amateur radio net in progress.

- Ham News (Net Control provide news or asks check-ins)
- Club Officer Comments (call Club officers who checked-in)

This is: (Your call sign) _____ Euless Amateur radio net in progress.

- Tech Talk (open to check-ins for help)
- Swap Meet (open to check-ins)
- Any Bulletins or Announcements for the net?

** This is the final call for check-ins from any additional stations not yet

Acknowledged by net control or for any re-checks.

Please come now.

** General welcome and ask social questions to stations

This is: (Your call sign) _____ Euless Amateur radio net in progress.

The EULESS Amateur Radio Club meets at the Euless EOC on the second Wednesday of each month at 7 p.m. Euless Amateur Radio Club members are encouraged and invited to be Net Control of this net in the future. Inquiries for more information regarding ham radio licensing, testing, volunteering for Net Control and the Euless Amateur Radio Club in general may contact us at this e-mail address:

INFO@W5EUL.COM.

India November Foxtrot Oscar @ Whisky 5 Echo Uniform Lima dot Charlie Oscar Mike

We invite you to join the net again. We hold this net every Tuesday at 8:00 PM local time.

We had a total of ____ check-ins.

** Do we need any fill-ins?

** answer any fill-ins

Thanks goes out to all who checked in, and made the net possible.

This session of the Euless Amateur Radio Club net is now secure and the repeater is now returned to regular amateur use.

This is: (your call sign) ____ closing the net at <TIME>. All clear

Phonetic Alphabet

Phonetic Alphabet								
ITU					Police/Fire			
A	ALPHA	N	NOVEMBER		A	ADAM	N	NORA
B	BRAVO	O	OSCAR		B	BOY	O	OCEAN
C	CHARLIE	P	PAPA		C	CHARLES	P	PAUL
D	DELTA	Q	QUEBEC		D	DAVID	Q	QUEEN
E	ECHO	R	ROMEO		E	EDWARD	R	ROBERT
F	FOXTROT	S	SIERRA		F	FRANK	S	SAM
G	GOLF	T	TANGO		G	GEORGE	T	TOM
H	HOTEL	U	UNIFORM		H	HENRY	U	UNION
I	INDIA	V	VICTOR		I	IDA	V	VICTOR
J	JULIET	W	WHISKEY		J	JOHN	W	WILLIAM
K	KILO	X	XRAY		K	KING	X	XRAY
L	LIMA	Y	YANKEE		L	LINCOLN	Y	YOUNG
M	MIKE	Z	ZULU		M	MARY	Z	ZEBRA

H.A.N.D.

To assist in emergency situations the following reporting format has been developed that follows the letters of the word HAND.

H – Have – What type of emergency do you Have? Is it a fire, accident with injury, medical emergency?

A – At – You are At location? An address or distance and direction from the nearest major intersection.

N – Need – What assistance do you Need? Fire and Rescue, Police Officer, or Ambulance?

D – Details – What Details will help responders?

Details are those things that responders need to know before arriving on the scene. For instance: if there is a fire, a fuel or chemical spill; if there are fumes; multiple victims, or other hazards for which they need to prepare? Is there a Hazardous Material Placard on a vehicle involved in an accident. The numbers tell the responders the nature of the material involved. Do not approach vehicles that display Hazardous Material Placards. If the placard cannot be seen from your location, do not approach the vehicle and stay up wind if possible. Inform NCS or the emergency dispatcher if called in via auto-patch or cell phone that there is a Hazardous Material Placard.

Net Do's and Don'ts

- Clear, Concise, Accurate and Timely Communications
- Remember to be brief and give Net Control or emergency dispatchers and responders an opportunity to ask vital questions.
- Silence is Golden.

What to do	Why we do
Listen, Listen, Listen Think about what you will say before you transmit	To ensure your transmission does not interfere with another communication To be aware of current Net condition and minimum reporting requirements To communicate effectively Minimum use of air time for report
Making the call Say the call sign or tactical call sign of the station you are calling Followed by "this is" or "from" The call sign or tactical call sign of the calling station	Use of a standard procedure To understood reliably on the first call To be clear
Communicate Speak clearly and with moderate speed Use plain English, no codes Repeat critical items for confirmation	To be understood To be fast To avoid confusion For accuracy
Use phonetics Initial call to NCS Station identification on long exchanges For names or words that are not easily understood	To be clear To be accurate To be fast Following standard procedure
Emergency Traffic Use the pro-word "Break Break" for life threatening emergencies or to enter a Net with Elevated Reporting Criteria Do not use "Break Break" for non-life threatening situations or for non-Elevated Reporting Criteria weather reports Be prepared to call 911 if possible and/or necessary	To convey emergency status of a life threatening situation For silencing the Net and quickest response Following a standard procedure

Basic Communications Go-Kit

A Go-Kit is a pre-staged collection of equipment and personal gear that you will need to perform your duties as an Emergency Communicator in the event of an activation. Your Go-Kit should be tailored to your needs, equipment, expected assignments, and expected length of assignments.

The Basic Communications Go-Kit should have everything you need for a short duration communications assignment. You should be able to use this kit mobile or on foot. This kit could be used for volunteer public service events.

A 24-hour kit should provide additional items needed for an overnight assignment.

A 72-hour kit should provide additional items needed for an extended assignment of up to three days.

Basic Communications Go-Kit

- RACES ID Card
- 2m/70c Handheld Radio
- FRS Radio
- High Gain Antenna
- HT Speaker/Microphone,
- HT Earphone
- Extra Batteries for HT
- HT Power Cable
- HT Antenna Adapter
- HT Quick Reference Guide
- Flashlight w/extra batteries
- Pens/Pencils
- Small Notebook
- Personal First Aid Kit
- Personal Items as required (i.e. prescription medicine , eyewear care)
- Snacks
- Water

Anderson Powerpoles

The Anderson Powerpole® housings conform to the ARES and RACES standard and are designated 15, 30, and 45 amps. The rating of the connectors is by the wire gauge that the connector pins accept, and not the rating of the pins themselves. The most commonly used Powerpole® is the 30 amp. Even though a 30 amp connector is rated for 12-14 gauge wire they will accept 10 gauge wire. Smaller wire may be used by doubling over the wire.

HOUSING INSTRUCTIONS

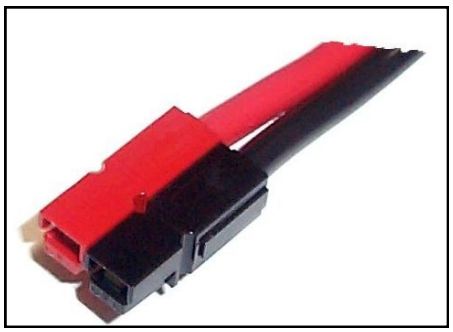
Assemble the Red and Black plastic housings together. When looking at the connector side of the Powerpoles® (not the wire side), the Red connector should be on your left, and the Black to your right as shown in the picture below. for ARES /RACES standard orientation. The metal spring inside the housing should be on the bottom. It is easier to put the connector housings together before putting the connector pins in, especially when using heavy paired wire.

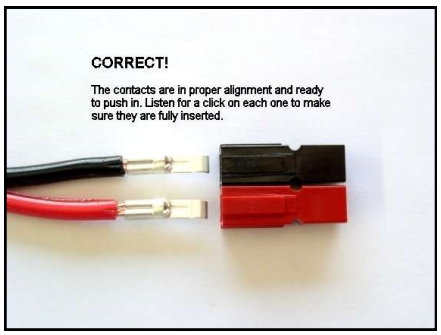
The plastic housings are held together with dovetail joints. Always slide these joints together! They will be damaged if you try to snap them together or apart. They ONLY slide together in one direction. And, before soldering or crimping the contacts on to heavy paired wire, orient the contacts so that they are both facing the correct direction so that they go in the housings without twisting the wire.

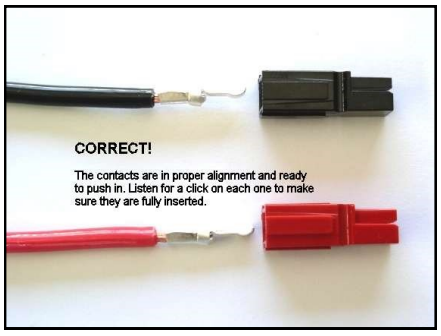
CONTACT ALIGNMENT

The contacts go in the housings in only one way. Insert the contacts with their sharp edge down against the flat spring that is in the housing. They should slide in and click. When they are inserted fully, you should notice that the contact and its wire "floats" slightly inside it's housing. Tug slightly on the assembled connector to make sure the contacts are locked in place. If you have trouble getting the contact to lock in to the housing, you may have crimped the contact wider than its original size or deformed it some other way. When crimping the contact pins, use a crimp that contains the wire completely inside the pin and does not spread the connector apart. A good crimp is one where the dimensions of the crimped portion are no more than an uncrimped pin. If the crimp is flattened out you, will not be able to easily push the pin in to the body. If you bend the contact blade in relation to the crimp area, you should straighten it before putting it in to the body.

If you are soldering the contact pins instead of crimping them, be careful not to use too much solder. Keep the solder inside, where the wire goes. If a blob of solder gets on the outside of the connector body, you may have trouble putting the contact into the housing. If you get solder on the contact surface area, you will not make a good contact.







Resource Typing

A Resource Guide for ARES, RACES, EmComm or Public Service Communication activities

Amateur Radio Resource Typing enables amateur radio communicators, emergency managers, staging managers, EmComm Leaders, and event coordinators to identify, request, and receive consistent, standardized and coordinated amateur radio resources needed during an emergency, disaster, or event. It identifies, categorizes, and labels communication functions amateur radio operators typically perform at events and incidents for easy reference. By using these Communications Resource Functions presented here, mutual aid resources are easier to request and supply. Also event or incident assignments can be quickly made by staging managers or event coordinators.

This Guide is an aid in creating a resource standard for all Amateur Radio mutual aid and EmComm groups.

Basic Communications Resource Functions[1]

Common Items for all Communications Resource Functions (CRF)

- Copy of amateur radio license, badge/ID, and photo drivers license
- Writing material; pen, pencil, writing pad, and message forms
- Transceiver operating instructions or summary guide
- Portable power source meeting equipment needs for a minimum of 12 hours of typical operation (Medium to Long Assignments may require additional power sources)
- Vehicle power port and clip lead power adapters, equipment fuses, and power cords
- All equipment ARES/RACES standardized (Powerpole™, PL-259, 1/8” speaker plug)
- Mission suitable personal support gear (Refer to local group standard kit lists; adjust for duration)
- Duct tape, miscellaneous adapters and comfort items (food, water, optional chair, and table)

◊ A Type I CRF includes recommended items | A Type II CRF is without recommended items ◊

Communications Resource Function S - (Shadow | VHF/UHF)

CRF-S identifies the function and basic amateur radio equipment for operation of a “foot mobile” station while shadowing an event or incident official.

- Hand-held, 2 Meter (2M/70Cm Recommended) FM synthesized transceiver with programmable CTCSS, 2.5 watts minimum output
- Earphone or Headset attachment (VOX disabled)
- Adapter cable/bracket or magnetic mount antenna for temporary vehicle duty with shadow

Communications Resource Function B - (Base | VHF/UHF)

CRF-B identifies the function and basic amateur radio equipment for portable operation as Base, Rest Stop, Shelter, Net Control, etc. or fixed location station.

- 2 Meter (2M/70Cm Recommended) Transceiver with programmable CTCSS, 25 watts minimum output (HT+amplifier combination is a viable alternative)
- Gain antenna (dual band recommended) with mast and support, 25' minimum coax cable with PL259 connectors, PL258 coupler (Additional 25’ or longer RG8X or better coax cable recommended)
- External speaker with 1/8" phone plug and/or earphones or headset attachment with VOX disabled

Communications Resource Function M - (Mobile | VHF/UHF)

CRF-M identifies the function and basic amateur radio equipment for mobile operation as a station in a moving vehicle such as a car, truck, van, aircraft, boat or bus.

- 2 Meter (2M/70Cm Recommended) Transceiver with programmable CTCSS, 25 watts minimum output (HT+amplifier combination is a viable alternative)
- Gain antenna (dual band recommended) with magnetic base with 15' of coax cable with PL259 connector
- External speaker with 1/8" phone plug and/or earphones or headset attachment with VOX disabled

Communications Resource Function H - (Long-Range Communications | HF) [2]

CRF-H identifies the function and basic amateur radio equipment for portable or mobile operation of a station for long and intermediate range communications. General Class or higher License required.

- Sub Functions: Hp, Field Portable; Hm, Mobile (suitable for in vehicle use)
- All modes HF SSB DC Transceiver with auto-tuner, 100 Watts output minimum
- HF Antenna(s), mast and support accessories, 50’ coax cable with PL259 connectors. (Additional 50’ – 100’ RG8X or better coax cable recommended) PL258 coupler with each coax cable. Common bands are 20, 40, 60, 80 & 160 meters. 40M, 60M & 80M preferred for EmComm support. NVIS capability recommended for tactical situations
- Earphones and/or headset, miscellaneous coax, and power adapters

Communications Resource Function DA - (Data - APRS Operations | VHF/UHF)

CRF-DA identifies the function and basic amateur radio equipment for operation as an Automatic Positioning/Packet Reporting System providing the event or incident official(s) with a "view" of resource positions in real time along with short messaging capability.

- CRF-B resource equipment
- Terminal Node Controller (TNC) with necessary cables, accessories, and documentation
- Computer (laptop or other) suitable for portable operations and running mission applicable amateur radio software – (Printer, printing supplies and AC adapter recommended)
- Software: APRS with digipeating capability

Communications Resource Function DT - (Data – Resource Tracking| VHF/UHF)

CRF-DT identifies amateur radio equipment used for tracking of a mobile asset or other resource as requested by event or incident officials for display with CRF-DA equipment.

- Self-contained pre-packaged portable equipment unit containing transceiver, antenna, Global Positioning Satellite (GPS) unit, APRS tracking encoder, power unit, and necessary external cabling

Communications Resource Function DM - (Tactical Data Messaging | VHF/UHF)

CRF-DM identifies the function and basic amateur radio equipment for operation as a “last mile” data messaging system providing event or incident officials with traceable messaging and/or "radio Email" capability.

Sub Functions: DMw, Winlink capable, DMp packet capable

- CRF-B resource equipment

- Terminal Node Controller (TNC) with necessary cables, accessories, and documentation
- Computer (laptop or other) suitable for portable operations and running mission applicable amateur radio software – (Printer, printing supplies and AC adapter recommended)
- Software: Paclink, Airmail, compatible email and user group's standard Packet program(s)

Communications Resource Function DH - (Long-Range Data Messaging | HF) [2]

CRF-DH identifies the function and basic amateur radio equipment for portable operation as a long range data messaging system providing event or incident officials with traceable messaging and/or "radio Email" capability. Sub functions: DHw, Winlink capable, DHr, Winlink Routing (Unique hub/routing function) 5

- CRF-Hp resource equipment (General Class License or higher required for operation)
- Pactor I, II and/or III capable modem (Pactor III recommended) | WINMOR a viable alternative
- Computer (laptop or other) with monitor suitable for portable operations capable of running mission applicable amateur radio software – (Printer, printing supplies, and AC adapter recommended)
- Software: Airmail, Paclink, RMS Packet, RMS Relay, RMS Express, Email, user group's specialty modes
- Sound Card Interface and accessories required to support software based communications modes
- CRF-DM resource equipment & Pactor III modem required for Sub Function DHr
- Note: If WINMOR is used to facilitate CRF-DHw, a sound card interface is required.

Communications Resource Function DN - (Data Networking | UHF)

CRF-DN identifies basic equipment for a field deployable 802.nna resource providing a wireless node(s) in support of event or incident communications. Equipment should be capable of operating on +12vDC.

- Self contained "802.11 repeater" unit functioning as a Bridge/Router/Access Point including antenna
- Minimum of 50' Cat 5 cable and POE interface
- Wired/wireless access point unit.
- Associated networking support equipment (Mast, aiming device, CAT5 cable, jumpers, etc.)

Communications Resource Function AV - (Amateur TV | UHF)

CRF-AV - Portable amateur television (ATV) equipment for transmitting and receiving video information (TBD)

CRF Assignment Durations

- Short – Up to 12 hour duration (Shifts)
- Medium – 12 to 72 hour duration (Shifts)
- Long – 72 hour or greater duration (Typically an away assignment)

Notes:

1. To request only a CRF operator, use Communications Resource Operator (CRO) with appropriate designation
2. For MARS operations, equipment/capabilities must meet unit's operational requirements
3. For permanently installed CRF equipment, the modifier "/F" for fixed is added to CRF (i.e., CRF-M/F)
4. D-Star digital transceivers when requested in a CRF shall have the modifier "/D*" added to CRF
5. Special VHF data to/from HF data hubbing function requiring Pactor III

This guide details radio equipment and does not include general personal support gear or 24/72 hour kit items.

GLOSSARY

ACC - Accessory

AM - Amplitude Modulation

Amplifier - A device used to increase the output power of a device.

AMSAT - Amateur Satellite

Anderson Power Pole -Used by many emergency radio operators to connect 12 volts DC to their radios.

Antenna Tuner - Device used to match an antenna to the output impedance of a transmitter.

APRS - Automatic Position Reporting System. In conjunction with a GPS and TNC to provide position reporting.

ARES - Amateur Radio Emergency Service. ARES is a public-service organization of the ARRL.

ARRL - The American Radio Relay League. The National Association for Amateur Radio in the United States.

Balun - A simple transformer used to change an unbalanced input to a balanced output.

Band - A range of frequencies.

Bandwidth - Frequency needed for a particular type of emission.

Bank - Memory Bank

BNC (Bayonet Neill-Concelman) A type of antenna connector.

Call sign - Sequence of letter and numbers used to identify amateur radio operators.

Carrier - An unmodulated transmitted signal.

Contesting - Working as many stations as you can over a specific amount of time.

CQ - Radio communications term used to call others

CTCSS - (Continuous Tone Coded Squelch System) Adds a continuous sub-audible low frequency tone to the transmitted carrier. Receivers set on the same low frequency tone can decode the signal to hear the audio.

CW - Carrier Wave

Data Communications - Transfer of data between two or more locations.

DC - (Direct Current)

DC Ground - a connection point directly to chassis or better ground to prevent build-up of hazardous DC voltages.

DCS - (Digital Coded Squelch) A method of silencing radios until a specific string of tones are received to open the audio stage. An alternate to CTCSS.

Digital Communications - Information sent digitally, which may be decoded as voice, data, and/or video.

Dipole - A half wave antenna, with a bi-directional radiation pattern.

DSP - (Digital Signal Processor) Used to improve the signal to noise ratio for clearer and more legible communications.

DTMF - (Dual Tone Multi-Frequency) Used to transmit/receive numeric information such as phone number, PIN, remote radio control commands, etc.

Dummy Load - A non radiating 50 ohm load connected to the transmitter to replace the antenna for testing purposes.

Duplex - An operation mode in which the transmit and receive frequencies are different.

Duplexer - A device which divides transmit and receive signals.

Duty Cycle - The ratios of transmit to receive time.

Feed point - Where the coaxial cable or ladder line joins the active antenna.

FM - Frequency Modulation

Ground Plane - A type of Omni-directional antenna.

Ground Wave - Electrical wave directly travelling from the transmitter.

Grounding - Electrical connection to the earth.

Ham - A licensed radio operator who enjoys the hobby and service of radio communications.

HF - (High Frequency) 3-30 MHz range signals.

Inverter - An electrical device that converts direct current, DC, to alternating current, AC.

LF - (Low Frequency) 30-300 kHz range signals.

MARS - Military Affiliate Radio Service

Memory Bank - A set of memory channels organized into a group.

MF - (Medium Frequency) 300 kHz to 3 MHz range signals.

MIC - (Microphone)

Mobile - In a vehicle or other type of station, not fixed to a specific location.

Modulation - Method of adding information to a radio frequency carrier.

NVIS - Near Vertical Incidence Skywave. A method of lowering a dipole or an angled vertical to enhance a high elevation of signal radiation and reception.

Offset Frequency - Frequency difference between transmits and receives.

Power Supply - usually converts 110 Volts AC to 12 Volts DC.

PSK31 - A type of radio-teletype using Phase Shift Keying with a very narrow bandwidth as an efficient way of communicating.

PTT - Push to Talk

QRP - Low poser operation, usually 1 watt or less.

Repeater - Radio systems, which receive an incoming signal and re-transmits it for extended communications area.

RF (Radio Frequency)

RF Ground - Connection of amateur radio equipment to earth ground to eliminate hazards from RF exposure.

RTTY (Radio Teletype)

RX (Receive)

SAR (Search and Rescue)

Scan - Continually sweeping frequencies looking for signals

Skywarn - Trained volunteer storm spotters for the National Weather Service.

SMA - (Sub-Miniature A connector) Type of antenna connector used in VHF/UHF handheld radios.

SQL - (Squelch) A function for muting audio output fore set conditions.

SSB - (Single Side Band)

SWR - (Standing Wave Ratio) Measurement of forward vs. reflected power output during transmit.

TNC - Terminal Node Controller. Modem for data communication.

Towers - Antenna support Structures

TSQL - (Tone Squelch) Squelch function using sub audible tones.

TX (Transmit)

UHF - (Ultra High Frequency) 300mhz - 3Ghz range signals.

UHF Connector - Sometimes called a PL-259 plug, for coaxial cable, on VHF.

USB - Upper Side band.

UTC - (Universal Time Coordinated) An astronomical time based on the Greenwich meridian (zero degrees longitude).

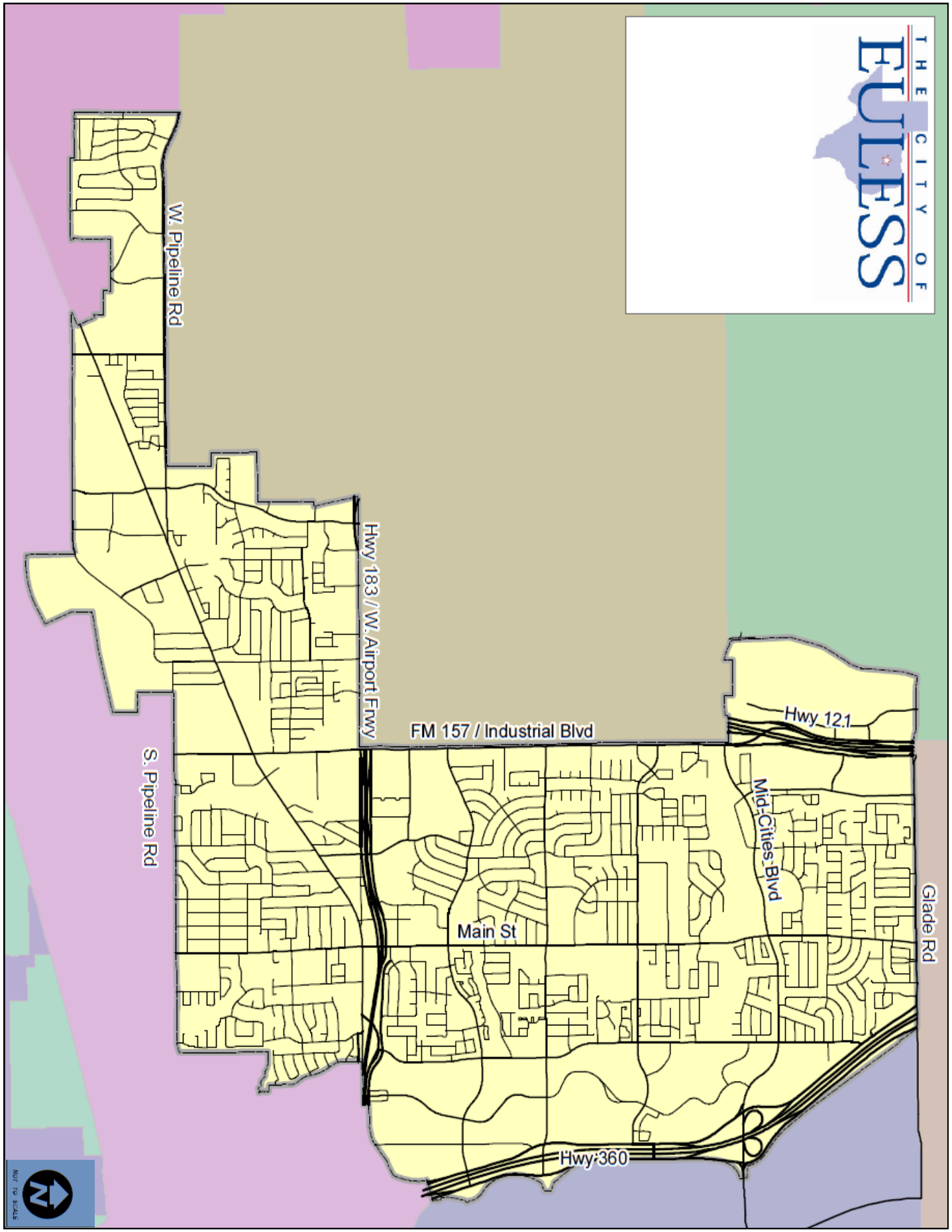
VHF - (Very High Frequency) 30-300 MHz range signals.

VOX - (Voice Operated Transmission) A function that automatically switches the transmitter to transmit when you talk into the microphone.

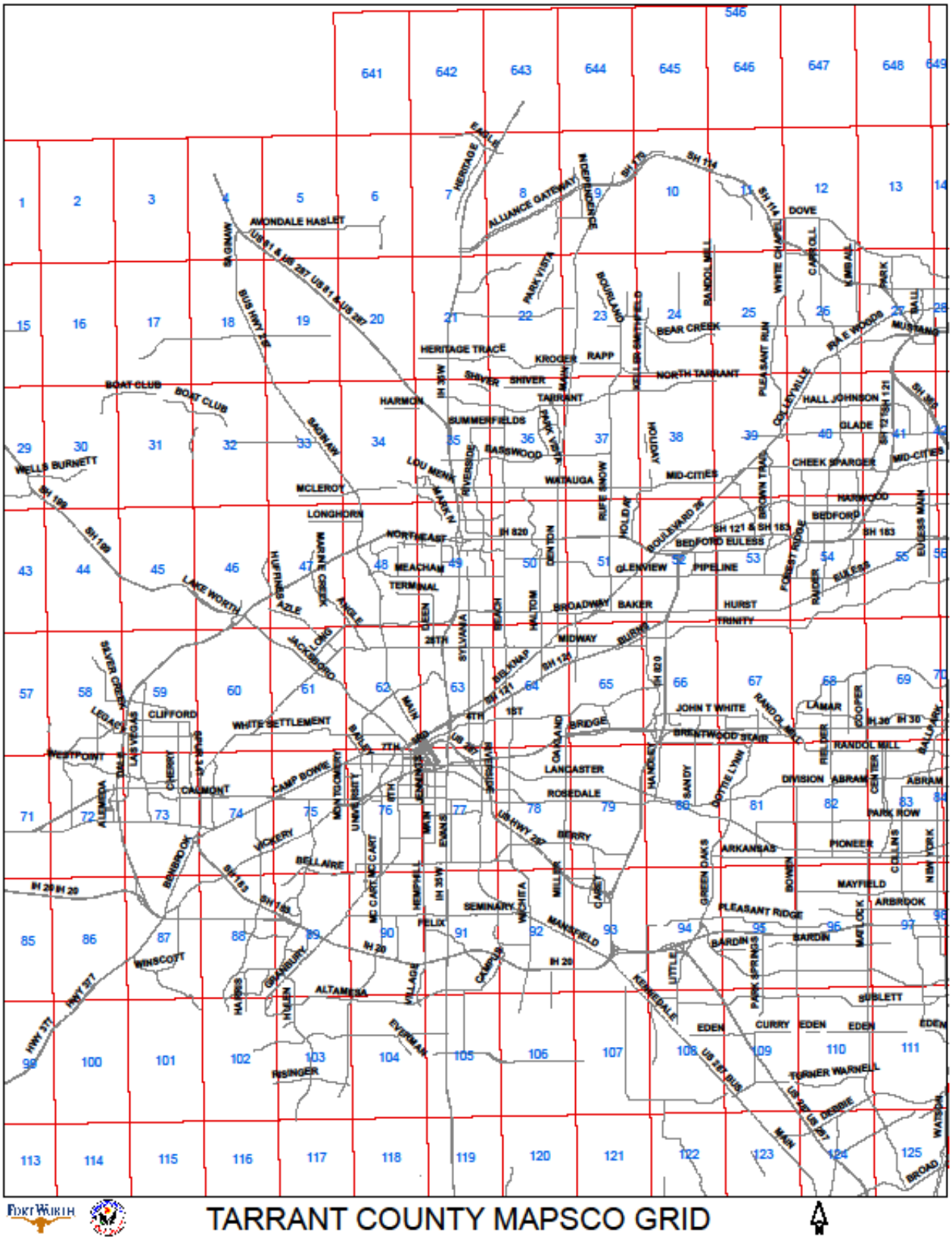
Weather Alert - NOAA broadcast station transmitting alert signals.

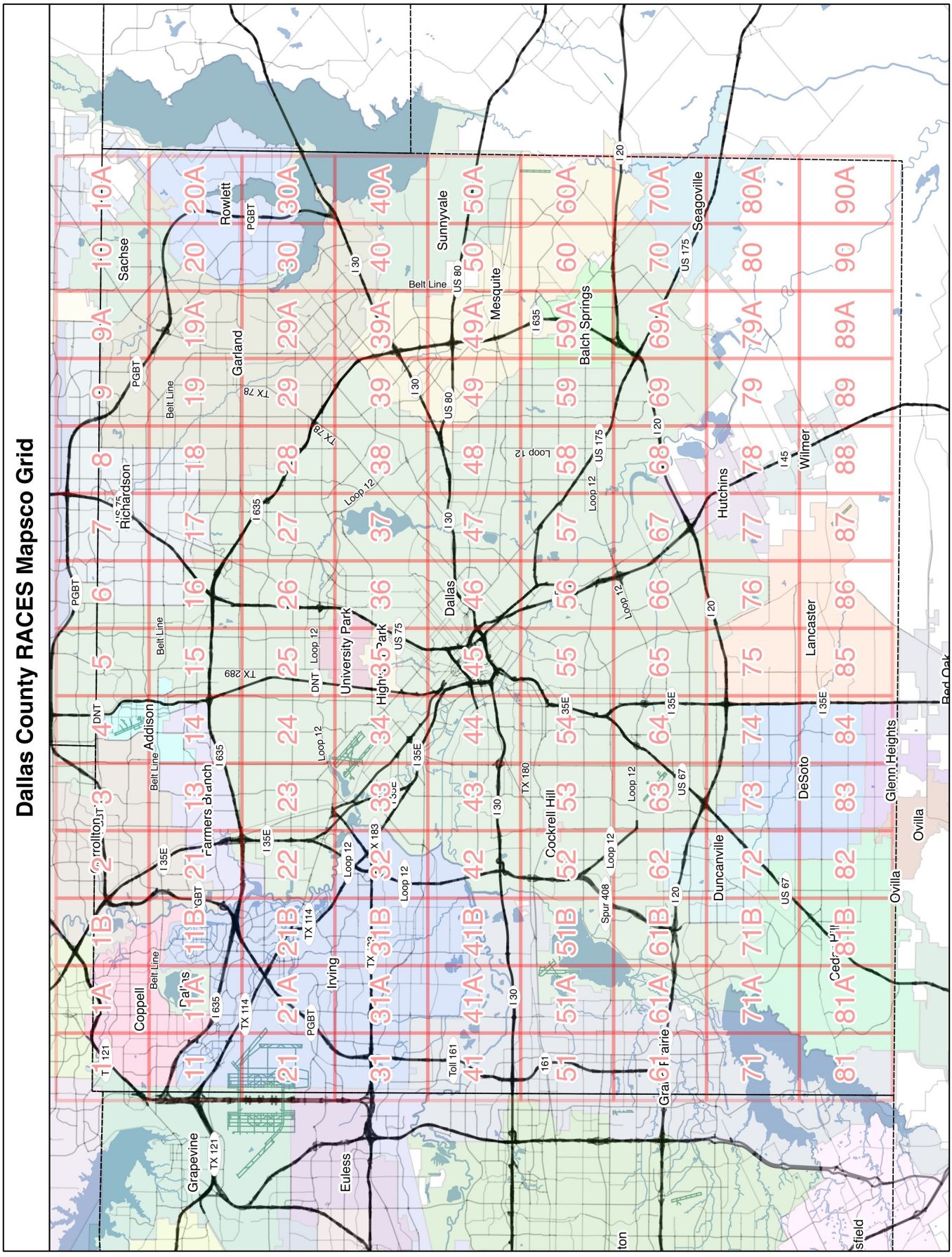
Yagi - Directional antenna.

MAPS

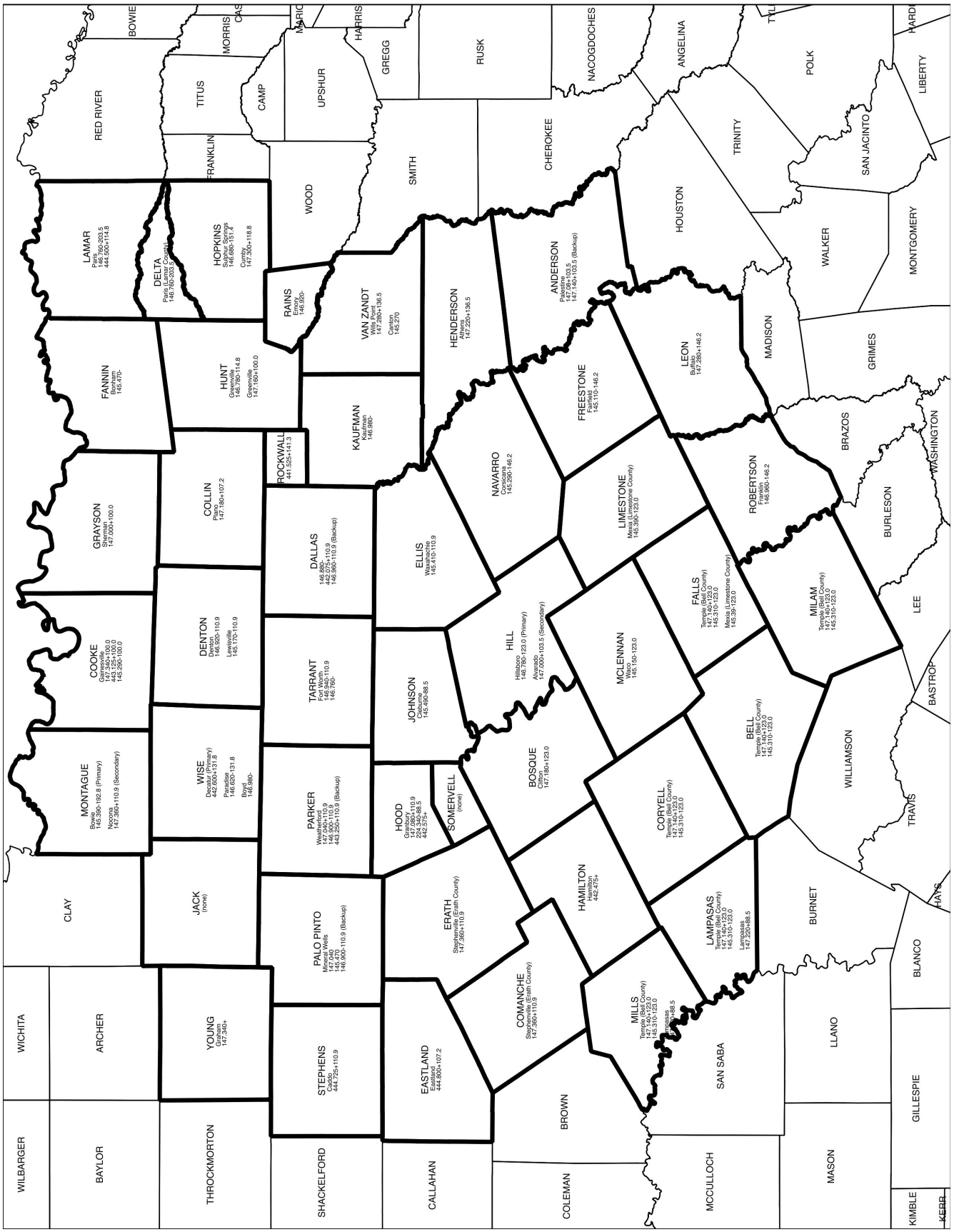

THE CITY OF
EULESS
W. Pipeline Rd
Hwy 183 / W. Airport Frwy
FM 157 / Industrial Blvd
Hwy 121
S. Pipeline Rd
Mid-Cities Blvd
Glade Rd
Main St
Hwy 360
NOT TO SCALE

Tarrant County Mapsco Grids

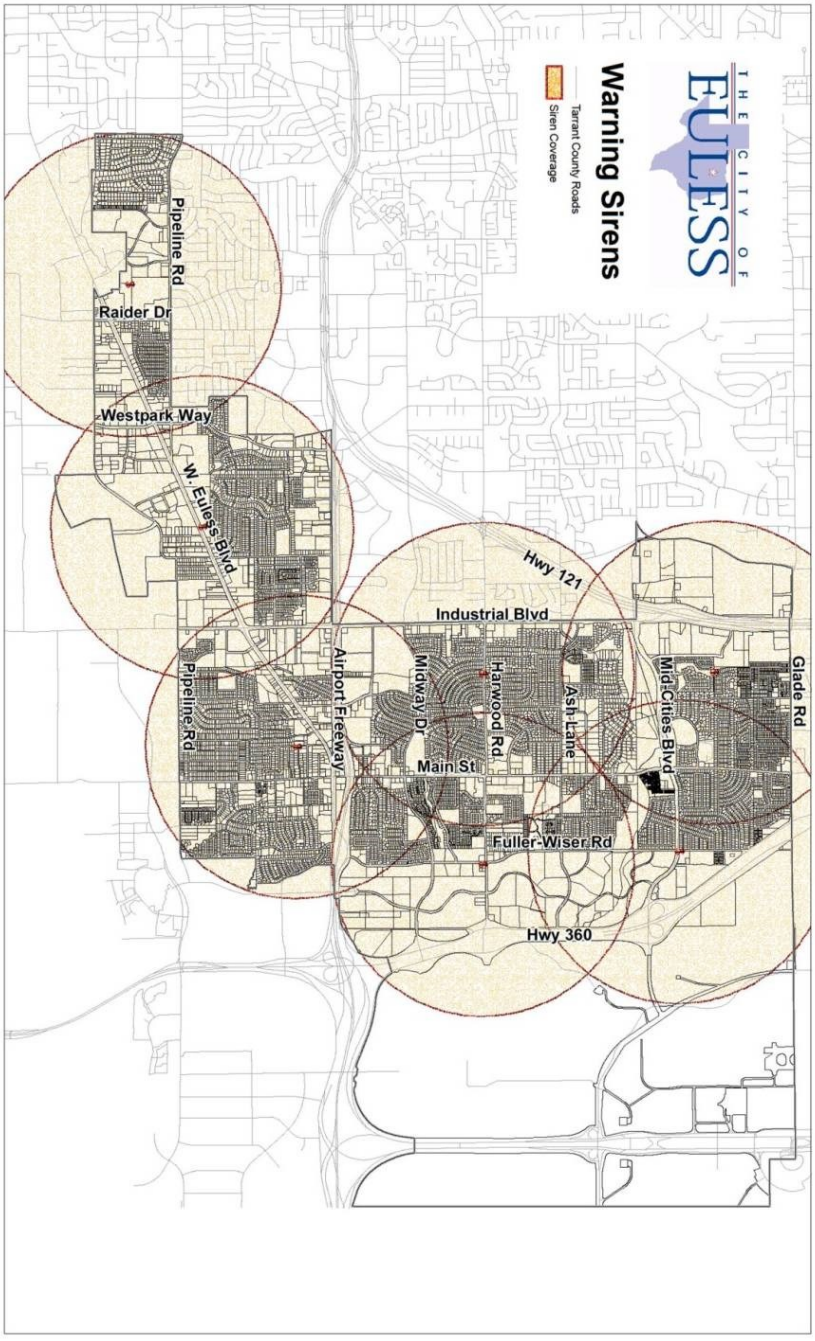



Dallas County RACES Mapsco Grid

North Texas Counties SKYWARN Frequencies



City of Euless Warning Sirens



1. Priest Lane and Tallow Dr. (South of Canterbury)
   32.873915 N -97.093606 W

2. Mid-Cities Blvd and Fuller-Wiser Rd.
   32.872628 N -97.073543 W

3. Harwood Road between N Ector and Donley
   32.851417 N -97.094657 W

4. Harwood Road and Fuller-Wiser Rd.
   32.851160 N -97.072856 W

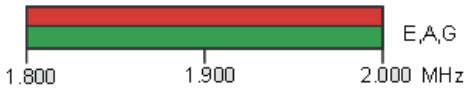
5. Martha St. and Arnett (South of hwy 10 and West of Main
   32.833951 N -97.086096 W

6. West Euless Blvd. and Debra Dr.
   32.825078 N -97.111373 W

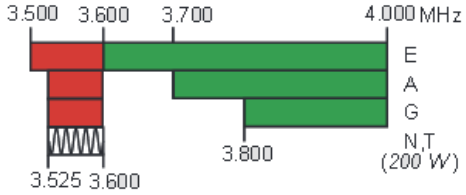
7. West Euless Blvd. and Raider Dr. (In the Villa Bella Apartment Homes)
   32.817762N -97.137745W

160 Meters (1.8 MHz)

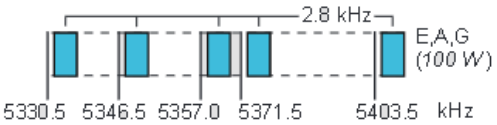
Avoid interference to radiolocation operations from 1.900 to 2.000 MHz



80 Meters (3.5 MHz)

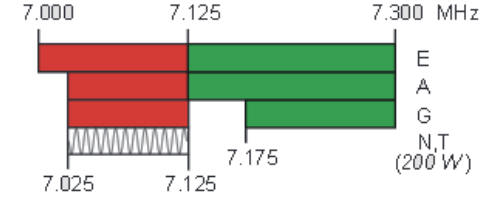


60 Meters (5.3 MHz)



General, Advanced, and Amateur Extra licensees may operate on these five channels on a secondary basis with a maximum effective radiated output of 100 W PEP. Permitted operating modes include upper sideband voice (USB), CW, RTTY, PSK31 and other digital modes such as PACTOR III as defined by the FCC Report and Order of November 18, 2011. USB is limited to 2.8 kHz centered on 5332, 5348, 5358.5, 5373 and 5405 kHz. CW and digital emissions must be centered 1.5 kHz above the channel frequencies indicated above. Only one signal at a time is permitted on any channel.

40 Meters (7 MHz)

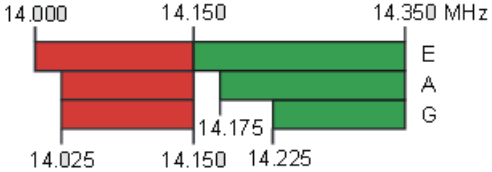


Phone and Image modes are permitted between 7.075 and 7.100 MHz for FCC licensed stations in ITU Regions 1 and 3 and by FCC licensed stations in ITU Region 2 West of 130 degrees West longitude or South of 20 degrees North latitude. See Sections 97.305(c) and 97.307(f)(11).
Novice and Technician licensees outside ITU Region 2 may use CW only between 7.025 and 7.075 MHz and between 7.100 and 7.125 MHz. 7.200 to 7.300 MHz is not available outside ITU Region 2. See Section 97.301(e). These exemptions do not apply to stations in the continental US.

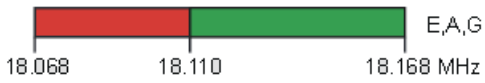
30 Meters (10.1 MHz)

Avoid interference to fixed services outside the US.

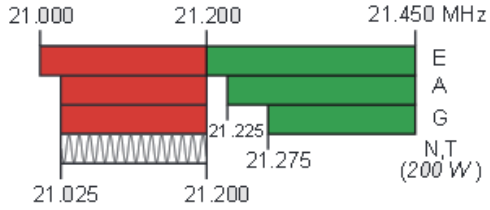
20 Meters (14 MHz)



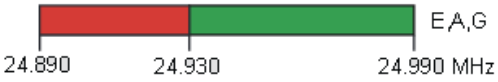
17 Meters (18 MHz)



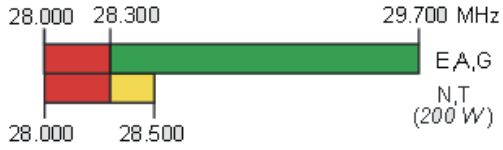
15 Meters (21 MHz)



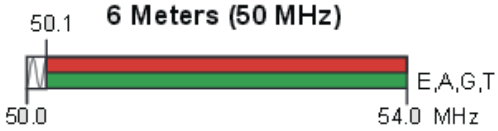
12 Meters (24 MHz)



10 Meters (28 MHz)

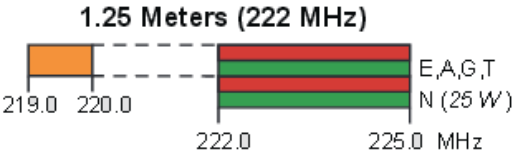


6 Meters (50 MHz)



2 Meters (144 MHz)

1.25 Meters (222 MHz)

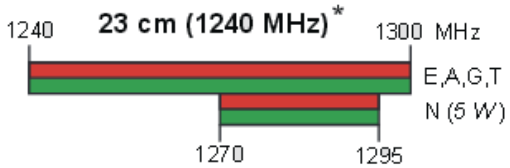


*Geographical and power restrictions may apply to all bands above 420 MHz. See *The ARRL Operating Manual* for information about your area.

70 cm (420 MHz)*

33 cm (902 MHz)*

23 cm (1240 MHz)*



Note:

CW operation is permitted throughout all amateur bands.

= RTTY and Data

= phone and image

= CW only

= SSB phone

= USB phone, CW, RTTY and data

= Fixed digital message forwarding systems only

E = Extra
A = Advanced
G = General
T = Technician
N = Novice

Band plan is from ARRL.org
Effective March 5, 2012

REVISIONS

Date	Version	Description	Changed By
1/10/2014	1.0	Initial Publication	James Knighton
1/28/2014	1.1	Update to Tarrant County EmComm Template Page 42	James Knighton
3/13/2014	1.2	Removed phone number on back page	Chris Shanahan
4/9/2014	1.3	Added frequency on page 42 #15 Changes maps on page 63 and 64	Chris Shanahan
4/27/2014	1.4	Add ARRL Band Plan page 66	Chris Shanahan
10/8/2014	1.5	Add Activation Plan Update Comm Resource Worksheet	James Knighton
4/9/2015	1.6	New frequencies added to page 44	Chris Shanahan
8/11/2018	1.6	Change frequency # 2 on page 44	Chris Shanahan
5/8/2020	1.7	Changed the Club by Laws page 8	Chris Shanahan
5/8/2020	1.7	Updated the Club Call Sign License page 15	Chris Shanahan
5/8/2014	1.7	Updated Tarrant County RACES to Fort Worth RACES several pages	Chris Shanahan

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