Operating Reference

Operating Reference

The letters ARL are inserted in the preamble in the check and in the text before spelled out numbers, which represent texts from this list. Note that some ARL texts include insertion of numerals and text. Example: NR 1 R W1AW ARL 5 NEWINGTON CONN. DEC 25 DONALD R. SMITH **AA** 164 EAST SIXTH AVE **AA** NORTH RIVER CITY MO **AA** PHONE 73-3968 **BT** ARL FIFTY ARL SIXTY ONE BT DIANA **AR**. For additional information about traffic handling, consult The ARRL Operating Manual, published by ARRL, or the NTS Methods and Practices Guidelines.

Group One—For Possible "Relief Emergency" Use	
Number	**Meaning**
One	Everyone safe here. Please don't worry.
Two	Coming home as soon as possible.
Three	Am in ____ hospital. Receiving excellent care and recovering fine.
Four	Only slight property damage here. Do not be concerned about disaster reports.
Five	Am moving to new location. Send no further mail or communication. Will inform you of new address when relocated.
Six	Will contact you as soon as possible.
Seven	Please reply by Amateur Radio through the amateur delivering this message. This is a free public service.
Eight	Need additional ____ mobile or portable equipment for immediate emergency use.
Nine	Additional ____ radio operators needed to assist with emergency at this location.
Ten	Please contact ____. Advise to standby and provide further emergency information, instructions or assistance.
Eleven	Establish Amateur Radio emergency communications with ____ on ____ MHz.
Twelve	Anxious to hear from you. No word in some time. Please contact me as soon as possible.
Thirteen	Medical emergency situation exits here.
Fourteen	Situation here becoming critical. Losses and damage from ____ increasing.
Fifteen	Please advise your condition and what help is needed.
Sixteen	Property damage very severe in this area.
Seventeen	REACT communications services also available. Establish REACT communication with ____ on channel ____.
Eighteen	Please contact me as soon as possible at ____.
Nineteen	Request health and welfare report on ____. (State name, address and telephone number.)
Twenty	Temporarily stranded. Will need some assistance. Please contact me at ____.
Twenty One	Search and Rescue assistance is needed by local authorities here. Advise availability.
Twenty Two	Need accurate information on the extent and type of conditions now existing at your location. Please furnish this information and reply without delay.
Twenty Three	Report at once the accessibility and best way to reach your location.
Twenty Four	Evacuation of residents from this area urgently needed. Advise plans for help.
Twenty Five	Furnish as soon as possible the weather conditions at your location.
Twenty Six	Help and care for evacuation of sick and injured from this location needed at once. Emergency & priority messages originating from official sources must carry the signature of the originating official.

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Group Two—Routine Messages	
Forty Six	Greetings on your birthday and best wishes for many more to come.
Forty Seven	Reference your message number ____ to ____ delivered on ____ at ____ UTC.
Fifty	Greetings by Amateur Radio.
Fifty One	Greetings by Amateur Radio. This message is sent as a free public service by ham radio operators at ____. Am having a wonderful time.
Fifty Two	Really enjoyed being with you. Looking forward to getting together again.
Fifty Three	Received your ____. It's appreciated; many thanks.
Fifty Four	Many thanks for your good wishes.
Fifty Five	Good news is always welcome. Very delighted to hear about yours.
Fifty Six	Congratulations on your ____, a most worthy and deserved achievement.
Fifty Seven	Wish we could be together.
Fifty Eight	Have a wonderful time. Let us know when you return.
Fifty Nine	Congratulations on the new arrival. Hope mother and child are well.
* Sixty	Wishing you the best of everything on ____.
Sixty One	Wishing you a very Merry Christmas and a Happy New Year.
* Sixty Two	Greetings and best wishes to you for a pleasant ____ holiday season.
Sixty Three	Victory or defeat, our best wishes are with you. Hope you win.
Sixty Four	Arrived safely at ____.
Sixty Five	Arriving ____ on ____. Please arrange to meet me there.
Sixty Six	DX QSLs are on hand for you at the ____ QSL Bureau. Send ____ self addressed envelopes.
Sixty Seven	Your message number ____ undeliverable because of ____. Please advise.
Sixty Eight	Sorry to hear you are ill. Best wishes for a speedy recovery.
Sixty Nine	Welcome to the ____. We are glad to have you with us and hope you will enjoy the fun and fellowship of the organization.
*** Can be used for all holidays.**	

ARRL Recommended Precedence's	
Please observe the following ARRL provisions for PRECEDENCE'S in connection with written message traffic. These provisions are designed to increase the efficiency of our service both in normal times and in emergency.	
Precedence	**Meaning**
EMERGENCY	Any message having life and death urgency to any person or group of persons, which is transmitted by Amateur Radio in the absence of regular commercial facilities. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to relief of stricken populace in emergency areas. During normal times, it will be *very* rare. On CW/RTTY, this designation will *always* be spelled out. When in doubt, do not use it.
PRIORITY	Use abbreviation P on CW/RTTY. This classification is for a) important messages having a specific time limit, b) official messages not covered in the emergency category, c) press dispatches and emergency-related traffic not of the *utmost* urgency d) notice of death or injury in a disaster area, personal or official.
WELFARE	This classification, abbreviated as W on CW/RTTY, refers to either an inquiry as to the health and welfare of an individual in the disaster area or an advisory from the disaster area that indicates all is well. Welfare traffic is handled only after all emergency and priority traffic is cleared. The Red Cross equivalent to an incoming Welfare message is DWI (Disaster Welfare Inquiry).
ROUTINE	Most traffic in normal times will bear this designation. In disaster situations, traffic labeled Routine (R on CW/RTTY) should be handled last, or not at all when circuits are busy with higher precedence traffic. Note: The precedence always follows the message number. For example, a message number may be 207R on CW and "Two Zero Seven Routine" on phone.

Handling Instructions (Optional)	
Designation	**Meaning**
HXA	(Followed by number) Collect landline delivery authorized by addressee within ____ miles. (If no number, authorization is unlimited.)
HXB	(Followed by number) Cancel message if not delivered within ____ hours of filing time; service originating station.
HXC	Report date and time of delivery (TOD) to originating station.
HXD	Report to originating station the identity of station from which received, plus date and time. Report identity of station to which relayed, plus date and time, or if delivered report date, time and method of delivery
HXE	Delivering station get reply from addresses, originate message back.
HXF	(Followed by number) Hold delivery until ____ (date).
HXG	Delivery by mail or landline toll call not required. If toll or other expense involved, cancel message and service originating station.
For further information on traffic handling, consult the Public Service Communications Manual or the ARRL Operating Manual, both published by ARRL.	

Every formal radiogram message originated and handled should contain the following component parts in the order given.	
I. Preamble	• Number (begin with 1 each month or year) • Precedence (R, W, P or EMERGENCY) • Handling Instructions (optional, see text) • Station of Origin (first amateur handler) • Check (number of words/groups in text only) • Place of Origin (not necessarily location of station of origin.) • Time Filed (optional with originating station) • Date (must agree with date of time filed)
II. Address	as complete as possible, include zip code and telephone number
III. Text	limit to 25 words or less, if possible
IV. Signature	

- **CW:** The prosign **$\overline{\text{AA}}$** separates the parts of the address. **$\overline{\text{BT}}$** separates the address from the text and the text from the signature. **$\overline{\text{AR}}$** marks end of message; this is followed by B if there is another message to follow, by N if this is the only or last message. It is customary to copy the preamble, parts of the address, text and signature on separate lines.
- **RTTY:** Same as CW procedure above, except (1) use extra space between parts of address, instead of **$\overline{\text{AA}}$** ; (2) omit CW procedure sign **$\overline{\text{BT}}$** to separate text from address and signature, using line spaces instead; (3) add a CFM line under the signature, consisting of all names, numerals and unusual works in the message in the order transmitted.
- **PACKET/AMTOR BBS:** Same format as shown in the CW message example above, except that the **$\overline{\text{AA}}$** and **$\overline{\text{AR}}$** prosigns may be omitted. Most amtor and packet BBS software in use today allows formal message traffic to be sent with the "ST" command. Always avoid the use of spectrum-wasting multiple line feeds and indentations.
- **PHONE:** Use *prowords* instead of prosigns, but it is not necessary to name each part of the message as you send it. For example, the above message would be sent on phone as follows: "Number one routine HX Golf W1AW eight Newington Connecticut one eight three zero zulu july one Donald Smith Figures one six four East Sixth Avenue North River City Missouri zero zero seven eight nine Telephone seven three three four nine six eight Break Happy birthday X-ray see you soon X-ray love Break Diana End of Message Over. "End of Message" is followed by "More" if there is another message to follow, "No More" if it is the only or last message. Speak clearly using VOX (or pause frequently on push-to-talk) so that the receiving station can get fills. Spell phonetically all difficult or unusual words--do not spell out common words. Do not use cw abbreviations or Q-signals in phone traffic handling.

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ARRL QN Signals For CW Net Use	
Q Sign	**Meaning**
QNA*	Answer in prearranged order.
QNB*	Act as relay Between ____ and ____
QNC	All net stations Copy. I have a message for all net stations.
QND*	Net is Directed (controlled by net control station).
QNE*	Entire net stand by.
QNF	Net is Free (not controlled).
QNG	Take over as net control station.
QNH	Your net frequency is High.
QNI	Net stations report In.*. I am reporting into the net. (Follow with a list or traffic or QRU).
QNJ	Can you copy me? Can you copy ____?
QNK*	Transmit message for ____ to ____
QNL	Your net frequency is Low.
QNM*	You are QRMing the net. Stand by.
QNN	Net control station is ____. What station has net control?
QNO	Station is leaving the net.
QNP	Unable to copy you. Unable to copy ____
QNQ*	Move frequency to ____ and wait for ____ to finish handling traffic. Then send him traffic for ____
QNR	Answer ____ and Receive traffic.
QNS*	Following Stations are in the net. *(Follow with list.) Request list of stations in the net.
QNT	I request permission to leave the net for ____ minutes.
QNU*	The net has traffic for you. Stand by.
QNV*	Establish contact with ____ on this frequency. If successful, move to ____ and send him traffic for ___
QNW	How do I route messages for ____?
QNX	You are excused from the net.* Request to be excused from the net.
QNY*	Shift to another frequency (or to ____ kHz) to clear traffic with ____
QNZ	Zero beat your signal with mine.

- * For use only by the Net Control Station.
- **Notes on Use of QN Signals:** The QN signals listed above are special ARRL signals for use in amateur CW nets only. They are not for use in casual amateur conversation. Other meanings that may be used in other services do not apply. Do not use QN signals on phone nets. Say it with words. QN signals need not be followed by a question mark, even though the meaning may be interrogatory.

International Q Signals A Q signal followed by a '?' asks a question. A Q signal without the '?' answers the question affirmatively, unless otherwise indicated.		
Q Sign	**Question**	**Answer**
QRA	What is the name of your station?	The name of my station is …
QRG	What's my exact frequency?	Your frequency is ... kc.
QRH	Does my frequency vary?	Your frequency varies.
QRI	How is my tone? (1-3)	The tone of your transmission is ... 1. Good. 2. Variable. 3. Bad.
QRJ	Are you receiving me badly? Are my signals weak?	I cannot receive you. Your signals are too weak.
QRK	What is my signal intelligibility? (1-5)	The legibility of your signals is ... (1 to 5).
QRL	Are you busy?	I am busy (or busy with....). Please do not interfere.
QRM	Is my transmission being interfered with? Are you being interfered with?	I am being interfered with.
QRN	Are you troubled by static?	I am troubled by static.
QRO	Shall I increase transmitter power?	Increase power.
QRP	Shall I decrease transmitter power?	Decrease power.
QRQ	Shall I send faster?	Send faster ... (words per min.).
QRRR		Official ARRL "land SOS." A distress call for

		emergency use only.
QRS	Shall I send slower?	Transmit more slowly ... (w.p.m.).
QRT	Shall I stop sending?	Stop transmission.
QRU	Have you anything for me? (Answer in negative)	I have nothing for you.
QRV	Are you ready?	I am ready.
QRW	Shall I tell ____ you're calling him?	Please advise ... that I am calling him on ... kc.
QRX	When will you call again?	I will call you again at ... hours (on ... kc.).
QRZ	Who is calling me?	You are being called by ...
QSA	What is my signal strength? (1-5)	The strength of your signals is ... (1 to 5).
QSB	Are my signals fading?	The strength of your signals varies.
QSD	Is my keying defective?	Your keying is incorrect; your signals are bad.
QSG	Shall I send ____ messages at a time?	Transmit ... telegrams (or one telegram) at a time.
QSK	Can you work break-in?	I can hear you between my signals. Continue: I shall interrupt you if necessary.
QSL	Can you acknowledge receipt?	I am acknowledging receipt.
QSM	Shall I repeat the last message sent?	Repeat the last telegram you sent me.
QSO	Can you communicate with ____ direct?	I can communicate with ... direct (or through...).
QSP	Will you relay to ____?	I will relay to ... free of charge.
QST *		General call preceding a message address to all amateurs and ARRL Members. This is in effect "CQ ARRL".
QSV	Shall I send a series of V's?	Send a series of VVV.
QSW	Will you send on this frequency (or ...kHz)(with emissions of class.....)?	I am going to send on this frequency (or ...kHz) (with emissions of class .....).
QSX	Will you listen for ____ on ____?	I am listening for ... on ... kcs.
QSY	Shall I change frequency?	Change to ... kc. without changing type of wave.
QSZ	Shall I send each word/group more than once? (Answer, send twice or ____)	Send each word or group twice.
QTA	Shall I cancel number ____?	Cancel number ... as if it had not been sent.
QTB	Do you agree with my word count? (Answer negative)	I do not agree with your word count; I shall repeat the first letter of each word and the first figure of each number.
QTC	How many messages have you to send?	I have ... telegrams for you or for....
QTH	What is your location?	My position (location) is....
QTR	What is your time?	The exact time is....
QTV	Shall I stand guard for you ____?	
QTX	Will you keep your station open for further communication with me?	
QUA	Have you news of ____?	
QUM	Is the distress traffic ended?	The distress traffic is ended.

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ITU Phonetic Alphabet					
Word list adopted by the International Telecommunications Union					
Item	**Pronunciation**	**Item**	**Pronunciation**	**Item**	**Pronunciation**
A	AL-fah	**M**	MIKE	**Y**	YANG-kee
B	BRAH-voh	**N**	no-VEM-bur	**Z**	ZOO-loo
C	CHAR-lee	**O**	OSS-kur	**1**	WUN
D	DELL-ta	**P**	pah-PAH	**2**	TOO
E	ECK-oh	**Q**	kay-BECK	**3**	TREE
F	FOKS-trot	**R**	ROH-me-oh	**4**	FOW-er
G	GOLF	**S**	see-AIR-ah	**5**	Fife
H	hoh-TELL	**T**	TANG-go	**6**	SICKS
I	IN-dee-ah	**U**	YOU-nee-form	**7**	SEV-en
J	JEW-lee-ett	**V**	VIK-tor	**8**	AIT
K	KEY-loh	**W**	WISS-kee	**9**	NIN-er
L	LEE-mah	**X**	ECKS-ray	**0**	ZEE-roh

The R-S-T System					
Readability		**Signal Strength**		**Tone**	
1	Unreadable	**1**	Faint signals, barely perceptible.	**1**	Sixty cycle AC or less, very rough and broad.
2	Barely readable, occasional words distinguishable.	**2**	Very weak signals.	**2**	Very rough AC, very harsh and broad.
3	Readable with considerable difficulty.	**3**	Weak signals.	**3**	Rough AC tone, rectified but not filtered.
4	Readable with practically no difficulty.	**4**	Fair signals.	**4**	Rough note, some trace of filtering.
5	Perfectly readable.	**5**	Fairly good signals.	**5**	Filtered rectified AC but strongly ripple-modulated.
		6	Good signals.	**6**	Filtered tone, definite trace of ripple modulation.
		7	Moderately strong signals.	**7**	Near pure tone, trace of ripple modulation.
		8	Strong signals.	**8**	Near perfect tone, slight trace of modulation.
		9	Extremely strong signals.	**9**	Perfect tone, no trace of ripple or modulation of any kind.
If the signal has the characteristic steadiness of crystal control, add the letter ‘X’ to the RST report to indicate this. If there is a chirp, add the letter ‘C’ to the RST report to indicate this. If there is a click, add the letter ‘K’ to the RST report to indicate this. The above reporting system is used on both CW and voice, leaving out the “tone” report on voice.					

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Time Conversion Chart							
UTC	**EDT/AST**	**CDT/EST**	**MDT/CST**	**PDT/MST**	**PST**	**Alaska**	**Hawaii-Aleutian**
0000*	2000	1900	1800	1700	1600	1500	1400
0100	2100	2000	1900	1800	1700	1600	1500
0200	2200	2100	2000	1900	1800	1700	1600
0300	2300	2200	2100	2000	1900	1800	1700
0400	0000*	2300	2200	2100	2000	1900	1800
0500	0100	0000*	2300	2200	2100	2000	1900
0600	0200	0100	0000*	2300	2200	2100	2000
0700	0300	0200	0100	0000*	2300	2200	2100
0800	0400	0300	0200	0100	0000*	2300	2200
0900	0500	0400	0300	0200	0100	0000*	2300
1000	0600	0500	0400	0300	0200	0100	0000*
1100	0700	0600	0500	0400	0300	0200	0100
1200	0800	0700	0600	0500	0400	0300	0200
1300	0900	0800	0700	0600	0500	0400	0300
1400	1000	0900	0800	0700	0600	0500	0400
1500	1100	1000	0900	0800	0700	0600	0500
1600	1200	1100	1000	0900	0800	0700	0600
1700	1300	1200	1100	1000	0900	0800	0700
1800	1400	1300	1200	1100	1000	0900	0800
1900	1500	1400	1300	1200	1100	1000	0900
2000	1600	1500	1400	1300	1200	1100	1000
2100	1700	1600	1500	1400	1300	1200	1100
2200	1800	1700	1600	1500	1400	1300	1200
2300	1900	1800	1700	1600	1500	1400	1300
2400*	2000	1900	1800	1700	1600	1500	1400

* 0000 and 2400 are interchangeable. (2400 is associated with the date of the day ending, 0000 with the day just starting.) Universal Coordinated Time (UTC) is the time at the zero or reference meridian. Time changes one hour with each change of 15 degrees in longitude. The five time zones in the US proper and Canada roughly follow these lines.

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Greenwich Mean Time (GMT/ Universal Time Coordinate (UTC) Time Zones		
Time Zone	**Zone Description**	**Relative UTC**
Y IDLW	Yankee International Date Line West • Baker Island (0° 13 N, 176° 31 W), Howland Island (0° 48 N, 176° 38 W) (Earhart Light)	UTC-12
X NT SST	X-ray Nome Time (USA) Samoa Standard Time • American Samoa (Pago Pago), Jarvis Island (0° 22 S, 160° 03 W) (Millersville), Kingman Reef (6° 24 N, 162° 24 W), Midway Islands (28° 13 N, 177° 22 W), Niue (Alofi), Palmyra Atoll (5° 52 N, 162° 06 W), Samoa (Apia)	UTC-11
W HST THAT	Whiskey Hawaiian Standard Time (USA) Tahiti Time • Cook Islands (Rarotonga- Avarua), French Polynesia (Tahiti Papeete, Tuamotu Archipelago, Tubuai Islands), Johnston Atoll (16° 45 N, 169° 31 W), Tokelau, New Zealand (Fakaofo, Nukunonu, Atafu), United States (Hawaii-Honolulu, Aleutian Islands Of Alaska- Adak)	UTC-10
MART	Marquesas Time • French Polynesia (Marquesas Islands)	UTC-0930
V AKST YST	Victor Alaska Standard Time (USA) Yukon Standard Time • French Polynesia (Gambier Islands), United States (Alaska- Anchorage, Fairbanks, Nome, Unalaska)	UTC-09
U PST	Uniform Pacific Standard Time (USA) • Canada (British Columbia- Vancouver, Yukon- Whitehorse), Mexico (Baja California Norte- Tijuana, Ensenada, Mexicali), Pitcairn (Adamstown), United States (California- Los Angeles, San Francisco, San Diego, Nevada- Las Vegas, Oregon- Portland, Washington- Seattle, Tacoma, Idaho- Northern)	UTC-08
T MST	Tango Mountain Standard Time (USA) • Canada (Alberta- Edmonton, Calgary, Northwest Territories- Yellowknife), Mexico (Baja California Sur- La Paz, Chihuahua- Ciudad Juarez, Nayarit- Tepic, Sinaloa- Mazatlan), United States (Arizona- Navajo, Colorado- Denver, Idaho- Southern- Boise, Montana- Helena, Nebraska- Western-Scottsbluff, New Mexico-Albuquerque, North Dakota-Western, Oregon- Malheur County, South Dakota- Western- Rapid City, Utah- Salt Lake City, Wyoming- Cheyenne), United States (Arizona- Phoenix, Tucson)	UTC-07
S CST MEX	Sierra Central Standard Time (USA) Mexico Time • Belize (Belmopan), Canada (Manitoba- Winnipeg), Canada (Saskatchewan- Regina), Easter Island, Chile (Rapa Nui- Hanga Roa), Costa Rica (San Jose), Galapagos Islands, Ecuador, El Salvador (El Salvador), Guatemala (Guatemala), Honduras (Tegucigalpa), Mexico (Mexico City, Acapulco, Monterrey, Veracruz, Guadalajara, Cancun), Nicaragua (Managua), United States (Alabama- Birmingham, Arkansas- Little Rock, Illinois- Chicago, Indiana (Northwest And Southwest), Iowa- Cedar Rapids, Kansas- Wichita, Kentucky (Western), Louisiana- New Orleans, Minnesota- Minneapolis/St. Paul, Mississippi- Jackson, Missouri- St. Louis, Nebraska (Eastern)- Omaha, North Dakota- Bismarck, Oklahoma- Oklahoma City, South Dakota (Eastern)- Sioux Falls, Tennessee (Middle And Western)- Memphis, Nashville, Texas- Houston, Fort Worth, Dallas, Corpus Christi, Austin, Wisconsin- Green Bay, Madison, Milwaukee)	UTC-06
R	Romeo	UTC-05

EST COT	Eastern Standard Time (USA) Colombia Time • Bahamas (Nassau), Brazil (Acre-Rio Branco), Canada (Quebec- Montreal, Quebec, Ontario- Ottawa, Toronto, Nunavut- Iqaluit), Cayman Islands (Georgetown), Colombia (Bogota), Cuba (Havana), Ecuador (Quito, Guayaquil), Haiti (Port-Au-Prince), Jamaica (Kingston), Navassa Island (18° 25 N, 75° 02 W), Panama (Panama, Colon), Peru (Lima), Turks And Caicos Islands (Grand Turk), United States (New York- New York, District Of Columbia- Washington D.C., Florida- Miami, Massachusetts- Boston, Georgia- Atlanta, Michigan- Detroit), Connecticut- Hartford, Delaware- Dover, Indiana (Most Of State)- Indianapolis, Kentucky (Eastern And Central)- Lexington-Fayette, Maine- Augusta, Maryland- Baltimore, New Hampshire- Concord, New Jersey- Newark, Weehawken, Jersey City, North Carolina- Raleigh, Ohio- Columbus, Pennsylvania- Philadelphia, Rhode Island- Newport, South Carolina- Columbia, Tennessee (Eastern)- Knoxville, Vermont- Montpelier, Virginia- Virginia Beach, West Virginia- Charleston)	
VET	Venezuela Time • Venezuela (Caracas)	UTC-04:30
Q AST BOT	Quebec Atlantic Standard Time Bolivia Time • Anguilla (The Valley), Antigua And Barbuda (Saint John's), Aruba (Oranjestad), Barbados (Bridgetown), Bermuda (Hamilton), Bolivia (La Paz), Brazil (Manaus), Canada (New Brunswick- Saint John, Nova Scotia- Halifax, Prince Edward Island- Charlottetown), Chile (Santiago), Dominica (Roseau), Dominican Republic (Santo Domingo), Falkland Islands (Islas Malvinas- Stanley), Greenland (Thule=Qaanaaq), Grenada (Saint George's), Guadeloupe (Basse-Terre), Guyana (Georgetown), Martinique (Fort-De-France), Montserrat (Brades Estate, Plymouth), Netherlands Antilles (Curacao- Willemstad), Paraguay (Asuncion), Puerto Rico (San Juan), Saint Kitts And Nevis (Basseterre), Saint Lucia (Castries), Saint Vincent And The Grenadines (Kingstown), Trinidad And Tobago (Port Of Spain), Virgin Islands (U.S.- Charlotte Amalie), British Virgin Islands (Road Town), Antarctica (O'higgins Station - Chile), (Palmer Station - USA)	UTC-04
NFT NST	Newfoundland Time • Canada (Newfoundland- St. John's)	UTC-0330
P BST ART	Papa Eastern Brazil Standard Time Argentina Time • Argentina (Buenos Aires), Brazil (Rio De Janeiro, Sao Paulo, Brasilia, Recife, Maceio, Salvador, Fortaleza), French Guiana (Cayenne), Greenland (Nuuk=Godthab), Saint Pierre And Miquelon (Saint-Pierre), Suriname (Paramaribo), Uruguay (Montevideo)	UTC-03
O VTZ FDT	Oscar Greenland Eastern Standard Time Fernando de Noronha Standard Time (Brazil) • Brazil (Fernando De Noronha), South Georgia And South Sandwich Islands(Grytviken)	UTC-02
N AT CVT	November Azores Time Cape Verde Time • Cape Verde (Praia), Greenland (East- Scoresbysund, Ittoqqortoormiit), Portugal (Azores- Horta, Praia Da Vitoria, Ponta Delgada)	UTC-01
Z GMT UTC WET	Zulu Greenwich Mean Time Coordinated Universal Time Western Europe Time • Burkina Faso (Ouagadougou), Canary Islands, Spain , Cote D'ivoire (Yamoussoukro, Abidjan), Faroe Islands (Torshavn), The Gambia (Banjul), Ghana (Accra), Guinea (Conakry, Bissau), Iceland (Reykjavik), Ireland (Dublin), Liberia (Monrovia), Mali (Bamako), Mauritania (Nouakchott), Morocco (Rabat, Casablanca), Portugal	UTC

	(Lisbon), Saint Helena (Jamestown), Sao Tome And Principe (Sao Tome), Senegal (Dakar), Sierra Leone (Freetown), Togo (Lome), United Kingdom (London), Western Sahara, Laayoune (El Aaiun)	
A CET MET	Alpha Central Europe Time Middle European Time • Albania (Tirana), Andorra (Andorra La Vella), Algeria (Algiers), Angola (Luanda), Austria (Vienna), Belgium (Brussels), Benin (Porto-Novo), Bosnia-Herzegovina (Sarajevo), Cameroon (Yaounde), Central African Republic (Bangui), Chad (N'djamena), Congo, Republic Of The (Brazzaville), Congo, Democratic Republic Of The (Kinshasa), Croatia (Zagreb), Czech Republic (Prague), Denmark (Copenhagen), Equatorial Guinea (Malabo), Macedonia (Skopje), France (Paris), Gabon (Libreville), Germany (Berlin), Gibraltar (Gibraltar), Hungary (Budapest), Italy (Rome), Liechtenstein (Vaduz), Luxembourg (Luxembourg), Malta (Valletta), Monaco (Monaco), Namibia (Windhoek), Netherlands (Amsterdam), Niger (Niamey), Nigeria (Abuja, Lagos), Norway (Oslo), Poland (Warsaw), San Marino (San Marino), Serbia And Montenegro (Belgrade), Slovakia (Bratislava), Slovenia (Ljubljana), Spain (Madrid), Svalbard (Spitzbergen) And Jan Mayen (Longyearbyen), Sweden (Stockholm), Switzerland (Bern, Zurich), Tunisia (Tunis), Vatican (Vatican City)	UTC+01
B EET R1T	Bravo Eastern Europe Time Kaliningrad Time (Russia) • Belarus (Minsk), Botswana (Gaborone), Bulgaria (Sofia), Burundi (Bujumbura), Congo, Democratic Republic Of The (Lubumbashi), Cyprus (Nicosia, Kyrenia), Egypt (Cairo), Estonia (Tallinn), Finland (Helsinki), Gaza Strip (Gaza), Greece (Athens), Israel (Jerusalem, Tel Aviv), Jordan (Amman), Latvia (Riga), Lebanon (Beirut), Lesotho (Maseru), Libya (Tripoli), Lithuania (Vilnius), Malawi (Lilongwe), Moldova (Chisinau), Mozambique (Maputo), Romania (Bucharest), Russia (Zone 1- Kaliningrad), Rwanda (Kigali), South Africa (South Africa / Pretoria, Johannesburg, Cape Town), Swaziland (Mbabane), Syria (Damascus), Turkey (Ankara, Istanbul), Ukraine (Kiev), West Bank (Bethlehem), Zambia (Lusaka), Zimbabwe (Harare)	UTC+02
C MSK BT	Charlie Moscow Time (Russia) Baghdad Time • Bahrain (Al Manamah), Comoros (Moroni), Djibouti (Djibouti), Ethiopia (Addis Ababa), Eritrea (Asmera), Iraq (Baghdad), Kenya (Nairobi), Kuwait (Kuwait), Madagascar (Antananarivo), Mayotte (Mamoutzou), Qatar (Doha), Russia (Zone 2- Moscow, St. Petersburg, Arkhangelsk, Belgorod, Bryansk, Vladikavkaz, Vladimir, Vologda, Volgograd, Grozny, Ivanovo, Yoshkar Ola, Kaluga, Kostroma, Krasnodar, Kursk, Kazan', Lipetsk, Maykop, Makhachkala, Murmansk Nal'chik, Novgorod, Nizhnii Novgorod, Orel, Petrozavodsk, Penza, Pskov, Rostov Na Donu, Ryazan', Saratov, Saransk, Smolensk, Stavropol', Syktyvkar, Sochi, Tambov, Tver', Tula, Cherkessk, Cheboksary), Saudi Arabia (Riyadh), Somalia (Mogadishu), Sudan (Khartoum), Tanzania (Dar Es Salaam, Zanzibar), Uganda (Kampala), Yemen (Sanaa, Aden)	UTC+03
D USZ3 GST	Delta Volga Time (Russia) Gulf Standard Time • Armenia (Yerevan), Azerbaijan (Baku), Georgia (Tbilisi), Mauritius (Port Louis), Oman (Muscat), Reunion (Saint-Denis), Russia (Zone 3-Samara, Izhevsk), Seychelles (Mahe-Victoria), United Arab Emirates (Abu Dhabi, Dubai)	UTC+04
AFT	Afghanistan Time • Armenia (Yerevan), Azerbaijan (Baku), Georgia (Tbilisi), Mauritius (Port Louis), Oman (Muscat), Reunion (Saint-Denis), Russia (Zone 3-Samara, Izhevsk), Seychelles (Mahe-Victoria), United Arab Emirates (Abu Dhabi, Dubai)	UTC+0430
E USZ4 PKT	Echo Yekaterinburg Time (Russia) Pakistan Time • Kazakhstan (Western-Aqtau), Maldives (Male), Pakistan (Islamabad, Karachi), Russia (Zone 4- Ekaterinburg, Perm, Orenburg, Ufa, Chelyabinsk, Kurgan, Tyumen, Salekhard,	UTC+05

	Khanty-Mansiysk), Tajikistan (Dushanbe), Turkmenistan (Ashkhabat), Uzbekistan (Tashkent)	
IST	Indian Standard Time • India (New Delhi, Calcutta), Sri Lanka (Colombo)	UTC+0530
NPT	Nepal Time • Nepal (Katmandu)	UTC+0545
F USZ5 BDT	Foxtrot Novosibirsk Time (Russia) Bangladesh Time • Bangladesh (Dacca), Bhutan (Thimphu), British Indian Ocean Territory (Chagos- Diego Garcia), Kazakhstan (Eastern- Almaty, Astana, Karaganda), Kyrgyzstan (Bishkek), Russia (Zone 5- Novosibirsk, Omsk, Tomsk, Barnaul, Gorno-Altaysk)	UTC+06
G USZ6 JT	Golf Krasnoyarsk Time (Russia) Java Time • Cambodia (Phnom Penh), Christmas Island, Australia (The Settlement), Indonesia (Western Indonesia/Java, Sumatra- Jakarta), Laos (Vientiane), Russia (Zone 6- Krasnoyarsk, Kemerovo, Abakan, Dudinka, Kyzyl, Tura), Thailand (Bangkok, Phuket), Vietnam (Ho Chi Minh (Saigon), Hanoi)	UTC+07
H USZ7 CCT	Hotel Irkutsk Time (Russia) China Coast Time • Australia (Western Australia - Perth), Brunei Darussalam (Bandar Seri Begawan), China (Beijing, Shanghai), Hong Kong (China), Indonesia (Central- Bali, Borneo, Celebes/Ujung Pandang), Macau (Macao), Malaysia (Kuala Lumpur), Mongolia (Ulaanbaatar), Philippines (Manila), Russia (Zone 7- Irkutsk, Ulan-Ude, Bratsk, Ust'-Ordynsky), Singapore (Singapore), Taiwan (Taipei)	UTC+08
WCT (unofficial time zone)	Central West Time (Australia) Western Central Standard Time (Australia) • Eucla, Caiguna, Madura, Mundrabilla (Western Australia) and Border Village (South Australia)	UTC+08:45
I USZ8 JST	India Yakutsk Time (Russia) Japan Standard Time • East Timor (Dili), Indonesia (Eastern- Irian Jaya And The Moluccas / Jayapura), Japan (Tokyo), Korea, North (Pyongyang), Korea, Republic Of (Seoul), Palau (Koror), Russia (Zone 8- Chita, Yakutsk, Bladoveschensk, Aginskoe, Udachnyi, Mirnyi, Oymiakon, Baley, Krasnokamensk, Khapcheranga)	UTC+09
ACST CAST CST	Australian Central Standard Time • Australia (Northern Territory- Darwin, New South Wales- Broken Hill, South Australia- Adelaide)	UTC+0930
K USZ9 GST	Kilo Vladivostok Time (Russia) Guam Standard Time • Australia (Capital Territory- Canberra, New South Wales- Sydney, Victoria- Melbourne, Tasmania- Hobart, Queensland- Brisbane), Guam (Hagatna) (Agana), Micronesia, Federated States Of (Yap, Chuuk/Truk), Northern Mariana Islands (Saipan), Papua New Guinea (Port Moresby), Russia (Zone 9- Vladivostok, Khabarovsk, Yuzhno-Sakhalinsk, Birobidzhan)	UTC+10
LHST	Lord Howe Standard Time (Australia) • Australia (Lord Howe Island)	UTC+1030
L UZ10 SBT	Lima Magadan Time (Russia) Solomon Islands Time • Micronesia, Federated States Of (Ponape- Palikir, Kolonia, Kosrea-Lelu), New Caledonia (Noumea), Russia (Zone 10- Magadan, Kolyma), Solomon Islands (Honiara, Guadalcanal), Vanuatu (Port-Vila)	UTC+11
NFT	Norfolk Time (Australia) • Norfolk Island, Australia (Kingston)	UTC+1130

M UZ11 NZST	Mike Kamchatka Time (Russia) New Zealand Standard Time • Fiji (Suva), Kiribati (Gilbert Islands- Tarawa), Marshall Islands (Majuro), Nauru (Makwa), New Zealand (Wellington), Russia (Zone 11- Petropavlovsk-Kamchatskiy, Anadyr, Pevek, Provideniya, Palana, Cherskiy, Egvekinot, Kamchatka, Chukotka), Tuvalu (Funafuti), Wake Island (19° 17 N, 166° 36 E), Wallis And Futuna (Mata-Utu), Antarctica (Amundsen-Scott (South Pole) Station, Mcmurdo Station - USA, Scott Station - N.Z.)	UTC+12
CHAST	Chatham Standard Time (New Zealand) • Chatham Islands, New Zealand	UTC+1245
PHOT	Phoenix Islands Time (Kiribati) • Kiribati (Phoenix Islands- Enderbury), Tonga (Nuku'alofa)	UTC+13
LINT	Line Islands Time (Kiribati) • Kiribati (Christmas Islands- Line Islands- Kiritimati)	UTC+14

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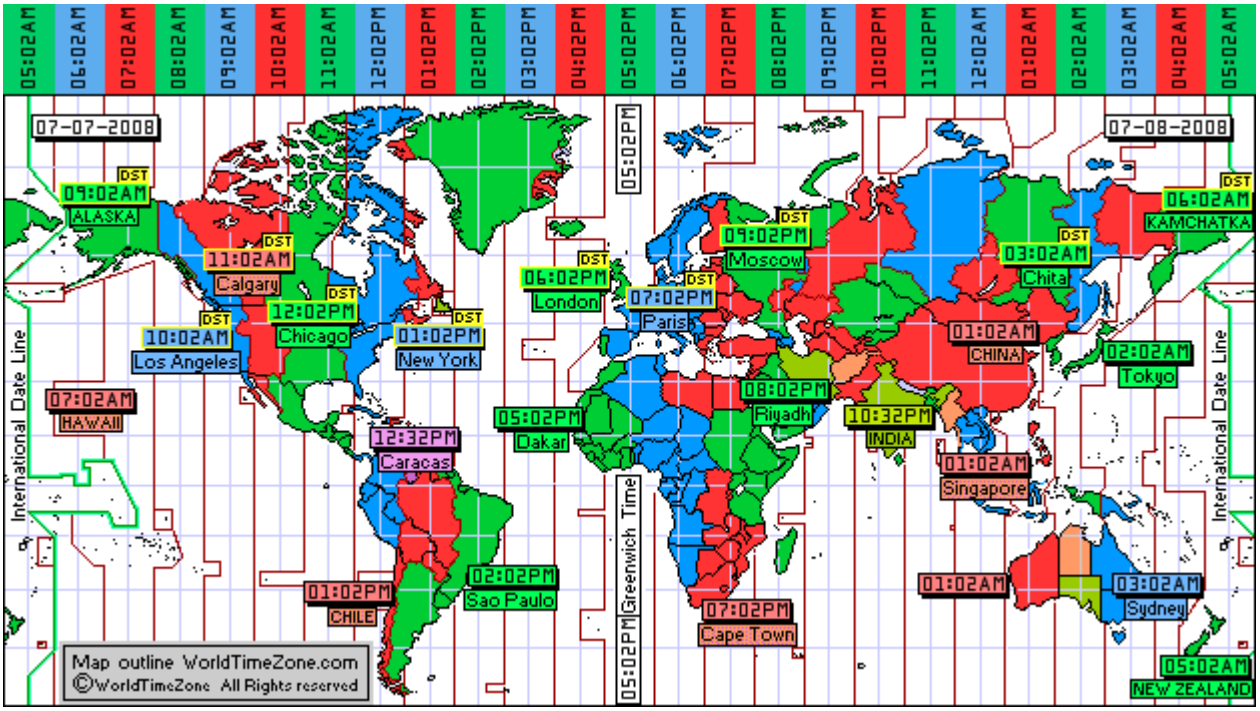
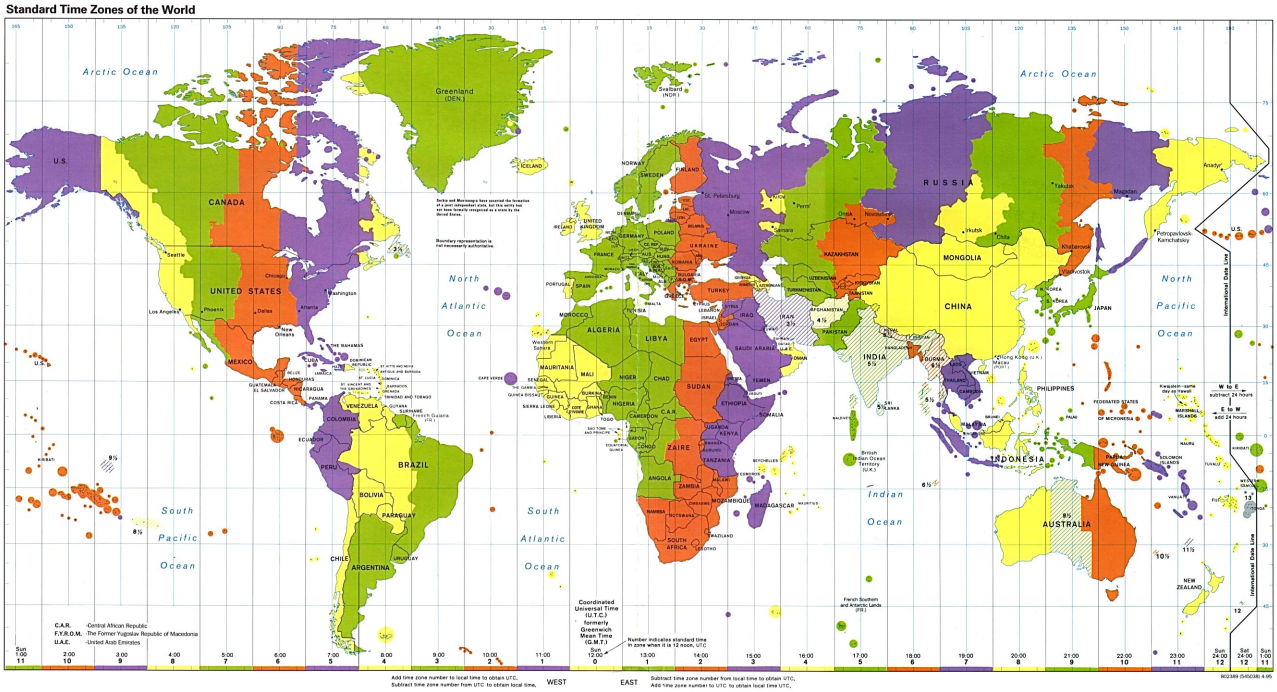
Operating Reference
World Time Zone Map:



http://www.worldtimezone.com/



http://www.travel.com.hk/region/timezone.htm

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NPSTC Standard Channel Nomenclature for the Public Safety Interoperability Channels (LINK)

Standardized Naming Format

Each FCC-designated Interoperability Channel in the Public Safety Radio Services (47CFR Part 90) will have a unique name developed according to a standardized format. Tables 1 and 2 show the FCC designated Interoperability Channels and the related Channel Name. This format consists of a maximum of eight characters, as follows:

Btype##M

"B" Spectrum Band

The Spectrum Band designator is a unique single alpha or numeric character to designate the public safety spectrum segment the channel is found within:

1. **V** VHF High Band (150.8 – 162.0 MHz).
2. **U** UHF Band (450 – 470 MHz).
3. **7** 700 MHz Public Safety Band. As the spectrum for voice communications use in this band is currently further divided into two individual blocks, for interoperability channel numbering purposes these blocks are identified as follows:
   - **"A" Block:** Television Channels 63 and 68
   - **"B" Block:** Television Channels 64 and 69
4. **8** 800 MHz NPSPAC band **after the rebanding process** (806 – 809 / 851 – 854 MHz).

"type" Channel Use Designator

The Channel Use Designator is an alphanumeric three- or four-place tag to signify the primary purpose of operations on the channel. In some cases, the Channel Use has been specified in FCC Rules or related Orders.

1. **CALL** Channel is dedicated nationwide for the express purpose of Interoperability calling only.
2. **DATA** Channel is reserved nationwide for the express purpose of Data transmission only.
3. **FIRE** Primarily used for interagency incident communications by Fire licensees.
4. **GTAC** Primarily used for interagency incident communications between Public Safety eligible entities and eligible non-governmental organizations.
5. **LAW** Primarily used for interagency incident communications by Police licensees.
6. **MED** Primarily used for interagency incident communications by Emergency Medical Service licensees.
7. **MOB** Primarily used for on-scene interagency incident communications by any Public Safety eligible, using vehicular repeaters (FCC Station Class MO3).
8. **TAC** Primarily used for interagency communications by any Public Safety eligible.

"##" Unique Channel Identifier

The Unique Channel Identifier is a numeric one- or two-place tag to uniquely identify the specific channel. Channel Identifiers are grouped by band segment as follows:

A. **1-9** VHF Low Band (30-50 MHz) [No leading zero used]
B. **10-39** VHF High band (150.8 – 162 MHz)
C. **40-49** UHF band (450 – 470 MHz)
D. **50-69** 700 MHz "A" block (TV 63/68)
E. **70-89** 700 MHz "B" block (TV 64/69)
F. **90-99** 800 MHz "NPSPAC" band (806-809/851-854 MHz) [Post-rebanding]

Notes:

1. Starting in VHF High Band, Channel Identifiers are grouped by Channel Use type, with Channel Identifiers ending in "0" reserved for Interoperability Calling use.
2. Channels Identifiers specified for Emergency Medical Services (MED) in this document are numbered to avoid conflict with the FCC's UHF medical channel naming methodology specified in 47CFR90.20(d)(65) and 47CFR90.20(d)(66)(i).
3. Channel Identifiers not specified in Tables 1 and 2 are reserved for future use.

"M" Modifier

The Modifier character is a single alphanumeric tag to identify a modification to the default operation type on the channel / channel pair:

1. **D** Direct or "Talk around" use [Simplex operations on the output channel of a pair normally designated for half-duplex or mobile relay operations.

Standardized Tone Squelch or Network Access Codes

The use of a common Continuous Tone Controlled Squelch System (CTCSS) tone of 156.7 Hz for transmit and receive on national Interoperability Channels was originally specified in the NPSPAC proceedings (Docket 87-112). In many areas, the 800 MHz Planning Regions allowed the use of an additional (secondary) access tone for in-

cabinet repeat operations, as long as the 156.7 Hz tone was monitored by a live dispatcher or always repeated upon receipt. 156.7 Hz is always transmitted by repeaters.
In the development process of the *Standard Channel Nomenclature for the Public Safety Interoperability Channels*, the NCC Interoperability Committee's Working Group recommended that 156.7 Hz CTCSS transmit and receive be used for all analog voice operations on all interoperability channels in all bands.
For Project-25 (P-25) voice operations, the NCC Working Group initially recommended the 156.7 Hz equivalent Network Access Code (NAC) of $61F. This recommendation was changed in 2001 to use the default ("carrier squelch equivalent") NAC of $293.

Analog Operations:

The use of **CTCSS Tone 156.7 Hz** has been adopted for all analog operations on Interoperability Channels:

1. All (fixed and subscriber) analog transmitters **will** encode 156.7 Hz.
2. Subscriber receivers should be set for carrier squelch operations unless conditions in the area require the use of tone protection to mitigate adjacent channel interference, or interference from intermodulation products. In those cases, receivers will decode 156.7 Hz.
3. Subject to the approval of applicable Statewide Communications Interoperability Plans and/or FCC-approved regional plans, mobile relay stations that are part of a local, regional, or statewide interoperability network may be equipped with a second receive CTCSS tone to provide local ("in cabinet") relay operation, provided:
   - The relay transmitter continues to transmit the common CTCSS tone of 156.7 Hz so that all users within range of the station are aware the station is in use;
   - The relay will accept the common CTCSS tone of 156.7 Hz and present the audio accompanying the 156.7 Hz-encoded transmission for automatic in-cabinet repeat or to a live operator at the appropriate controlling dispatch facility; and
   - The operational configuration of the Mobile Relay Station is published in applicable interoperability resource tracking documents (such as the appropriate Tactical Interoperability Communications Plan, Statewide Communications Interoperability Plan, and/or FCC-approved Regional Plan) and databases (CAPRAD, CASM, and NIIX).

Digital Operations:

The use of Network Access Code (NAC) $293 has been adopted for all digital operations on Interoperability Channels:

1. Subject to the approval of applicable Statewide Communications Interoperability Plans and/or FCC-approved Regional Plans, Mobile Relay stations that are part of a Local, Regional, or Statewide interoperability network may be equipped with a second receive NAC to provide local ("in cabinet") relay operation, provided:
   - The relay transmitter continues to transmit the Common NAC of $293 so that all users within range of the station are aware the station is in use;
   - The relay will accept the Common NAC of $293 and present the audio accompanying the $293-encoded transmission for automatic in-cabinet repeat or to a live operator at the appropriate controlling dispatch facility; and;
   - The operational configuration of the Mobile Relay Station is published in applicable interoperability resource tracking documents (such as the appropriate Tactical Interoperability Communications Plan, Statewide Communications Interoperability Plan, and/or FCC-approved Regional Plan) and databases (CAPRAD, CASM, and NIIX).

Morse Code						
Meaning	Code	Meaning	Code	Meaning	Symbol	Code
Letters		Numbers		Punctuation		
A	. _	1	. _ _ _ _	Acute	`	
B	_ . . .	2	. . _ _ _	Ampersand (wait)	&	. _ . . .
C	_ . _ .	3	. . . _ _	Apostrophe	‘	. _ _ _ _ .
D	_ . .	4	. . . . _	Asterisk or Star Sign	*	
E	.	5	. . . . .	At Sign or Commat	@	. _ _ . _ .
F	. . _ .	6	_	Brace	{ }	
G	_ _ .	7	_ _ . . .	Bracket	[ ]	
H	. . . .	8	_ _ _ . .	Caret	^	
I	. .	9	_ _ _ _ .	Colon	:	_ _ _ . . .
J	. _ _ _	0	_ _ _ _ _	Comma	,	_ _ . . _ _
K	_ . _			Dollar Sign	$	. . . _ . . _
L	. _ . .			Double Dash	=	_ . . . _
M	_ _			Exclamation Mark	!	_ . _ . _ _
N	_ .			Forward Slash	\	
O	_ _ _			Greater Than	>	
P	. _ _ .			Hyphen or Minus	-	_ . . . . _
Q	_ _ . _			Less Than	<	
R	. _ . .			Multiplication Sign	*	_ . . _
S	. . .			Number or Pound Sign	#	
T	_			Parentheses	( )	_ . _ _ . _
U	. . _			Percentage Sign	%	
V	. . . _			Period or Full Stop	.	. _ . _ . _
W	. _ _			Pipe or Vertical Bar	|	
X	_ . . _			Plus Sign	+	. _ . _ .
Y	_ . _ _			Question Mark	?	. . _ _ . .
Z	_ _ . .			Quotation Mark	“	. _ . . _ .
				Repetition (ii ii)		. . . .
				Semicolon	;	_ . _ . _ .
				Separator		. _ . . _
				Slash or Fraction Bar	/	_ . . _ .
				Tilde	~	
				Underscore	_	. . _ _ . _
Note: Items listed in **RED** mean that there is currently no corresponding Morse Code.						

Prosigns and Abbreviations		
Prosign	Code	Meaning
	_ . _	Invitation to transmit
$\overline{\text{AA}}$		(Separation between parts of address or signature.).
$\overline{\text{AR}}$	. _ . _ .	End of message. Often written +
$\overline{\text{AS}}$		Stand by; wait. Respond with C (yes). AS2 means wait 2 minutes
$\overline{\text{BK}}$		Break; break me; break-in (interrupt transmission on cw. Quick check on phone).
$\overline{\text{BT}}$	_ . . . _	Separation (break) between address and text; between text and signature.
$\overline{\text{CL}}$	_ . _ . . _ . .	Clear (I am closing my station, going off the air)
$\overline{\text{HH}}$		(Error in sending. Transmission continues with last word correctly sent.)
$\overline{\text{IMI}}$		Repeat; I say again. (Difficult or unusual words or groups.)
K		Go ahead; over; reply expected. (Invitation to transmit .)
KN	_ . _ _ .	Over (invitation to a specific station to transmit)
$\overline{\text{SK}}$	. . . _ . _	End of contact, Out (proword)
SOS	. . . _ _ _ . . .	International Distress
	. _ . . _	Warning

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Prosigns and Abbreviations		
Prosign	**Code**	**Meaning**
161		Best regards & Love and kisses
73		Best regards
88		Love and kisses
AA		All after (used after question mark to request a repetition, used to get fills)
AB		An before (similarly, used to get fills).
ABT		About
ADEE		Addressee (name of person to whom message addressed).
ADR		Address (second part of message).
ADR		Address
AGN		Again
ANT		Antenna
ARL		(Used with "check," indicates use of ARRL numbered message in text).
ARND		Around
ARRL		American Radio Relay League
Attention	_ . _ . _	Attention
B		More (another message to follow).
B4		Before
BCI		Broadcast interference
BCNU		Be seeing you
BN		All between
BTR		Better
BUG		Semiautomatic mechanical key
C		Correct; yes.
CBA		Callbook address
CFM		Confirm. (Check me on this).
CFM		Confirm
CK		Check.
CLG		Calling
CQ		Calling any station
CQD		Original International Distress Call
CS		Callsign
CTL		Control
CUD		Could
CUL		See you later
CUZ		Because
CW		Continuous wave (i.e., radiotelegraph)
CX		Conditions
DE		From; this is (preceding identification).
DN		Down
DR		Dear
DSW		Goodbye (Russian: до свидания [*Do svidanya*])
DX		Distance (sometimes refers to long distance contact), foreign countries
EMRG		Emergency
ENUF		Enough
Error	. . . . .	Error
ES		And
FB		Fine business (Analogous to "OK")
FCC		Federal Communications Commission
FER		For
FM		From
FREQ		Frequency
FWD		Forward
GA		Good afternoon or Go ahead (depending on context)
GE		Good evening
GG		Going
GL		Good luck

GM		Good morning
GN		Good night
GND		Ground (ground potential)
GUD		Good
GX		Ground
HI		Humor intended
HR		Here, hear
HV		Have
HW		How
HX		(Handling instructions. Optional part of preamble.) Initial(s). Single letter(s) to follow.
II		I say again
IMP		Impedance
LID		Poor operator
MILS		Milliamperes
MNI		Many
MSG		Message
N		No, Negative, incorrect; no more. (No more messages to follow.)
N/A		Read back. (Repeat as received.)
NIL		Nothing
NR		Number. (Message follows.)
NR		Number
NW		Now
NX		Noise; noisy
OB		Old boy
OC		Old chap
OK	. _ .	Received
OM		Old man (any male amateur radio operator is an OM)
OO		Official observer
OOTC		Old Old timers club
OP		Operator
OT		Old timer
OTC		Old timers club
PBL		Preamble (first part of message)
PSE		Please
PWR		Power
PX		Prefix
QCWA		Quarter Century Wireless Association
R		Roger, decimal point, received as transmitted or decimal point (depending on context).
RCVR		Receiver (radio)
RFI		Radio Frequency Interference
RIG		Radio apparatus
RPRT		Report
RPT		Repeat or report (depending on context)
RST		Signal report format (Readability-Signal Strength-Tone)
RTTY		Radioteletype
RX		Receiver
SAE		Self-addressed envelope
SASE		Self-addressed, stamped envelope
SED		Said
SEZ		Says
SFR		So far (proword)
SIG		Signal, Signed; signature (last part of message.)
SIGS		Signals
SKED		Schedule
SMS		Short message service
SN		Soon
SNR		Signal-to-noise ratio
SRI		Sorry

SSB		Single sideband
STN		Station
T		Zero
TEMP		Temperature
TFC		Traffic
TKS		Thanks
TMW		Tomorrow
TNX		Thanks
TT		That
TU		Thank you.
TVI		Television interference
TX		Transmit, transmitter
TXT		Text
U		You
UR		Your or You're (depending on context)
URS		Yours
VE	. . . _ .	Understood
VX		Voice; phone
VY		Very
W		Watts
WA		Word after (used to get fills.)
WB		Word before (used to get fills.)
WC		Wilco
WDS		Words
WID		With
WKD		Worked
WKG		Working
WL		Will
WTC		Whats the craic? (Irish Language: [*Conas atá tú?*])
WUD		Would
WX		Weather
XCVR		Transceiver
XMTR		Transmitter
XYL		Wife
YF		Wife
YL		Young lady (used for any female)
ZX		Zero beat

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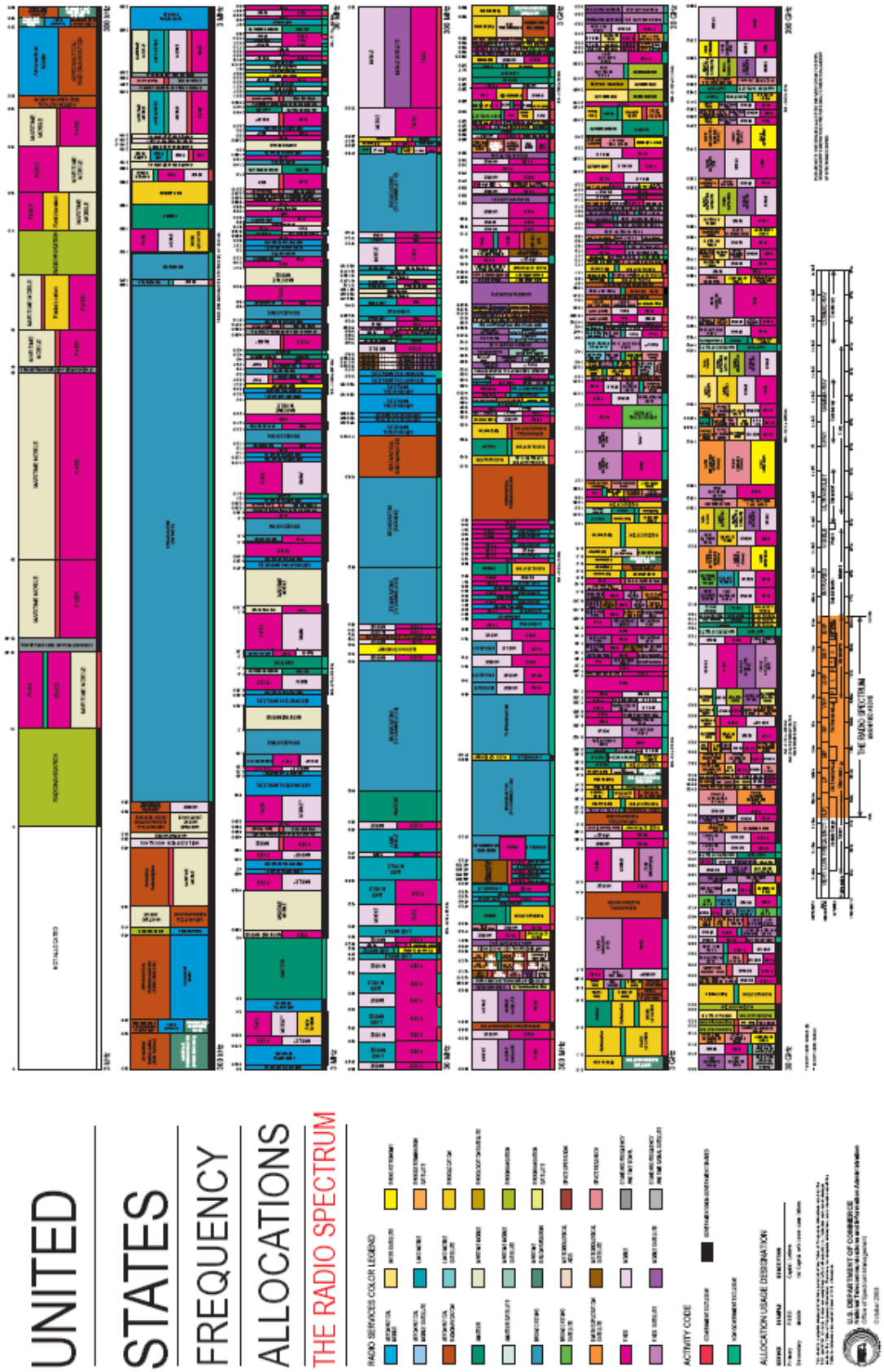
United States Frequency Allocation Chart:



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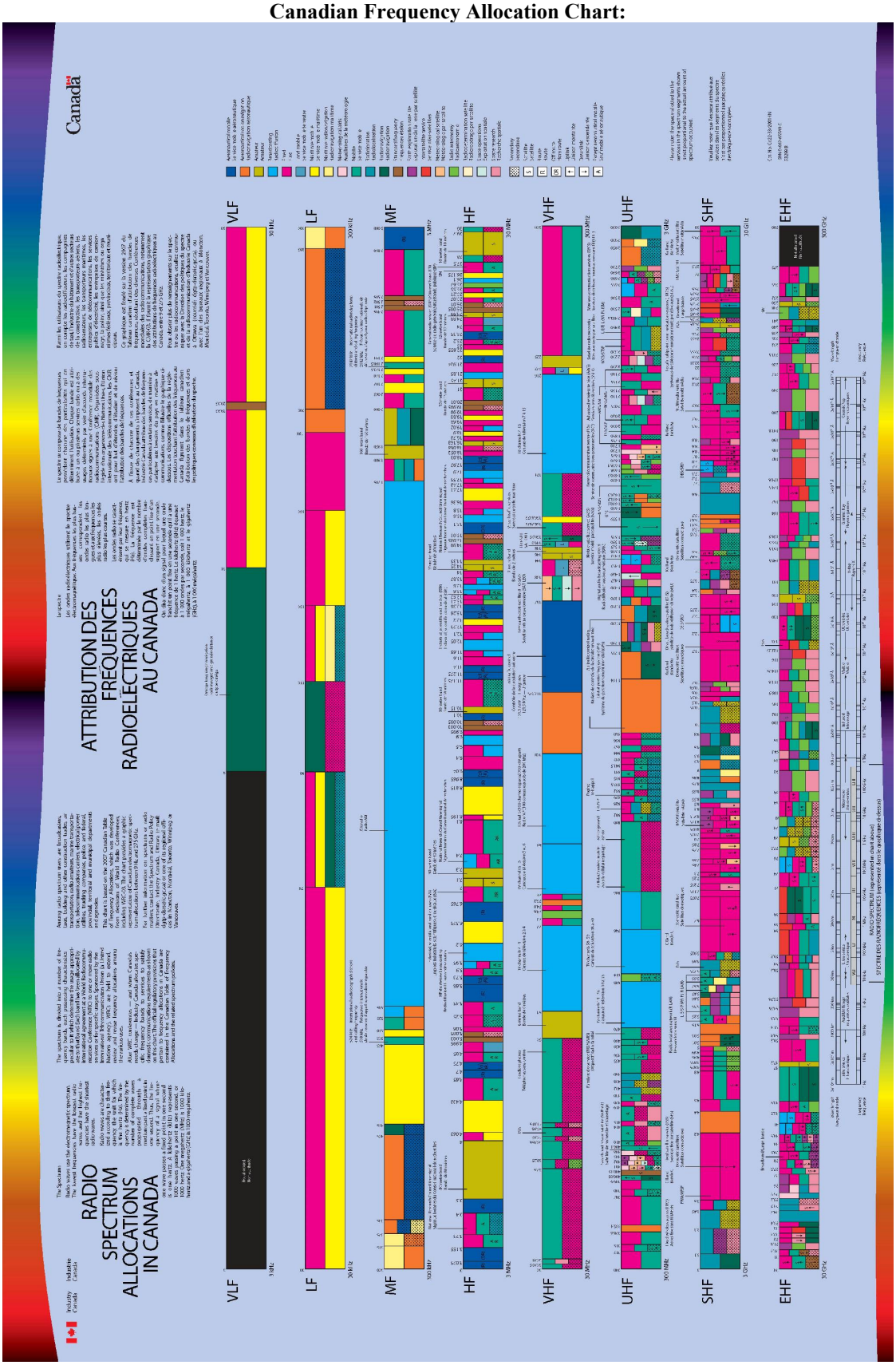

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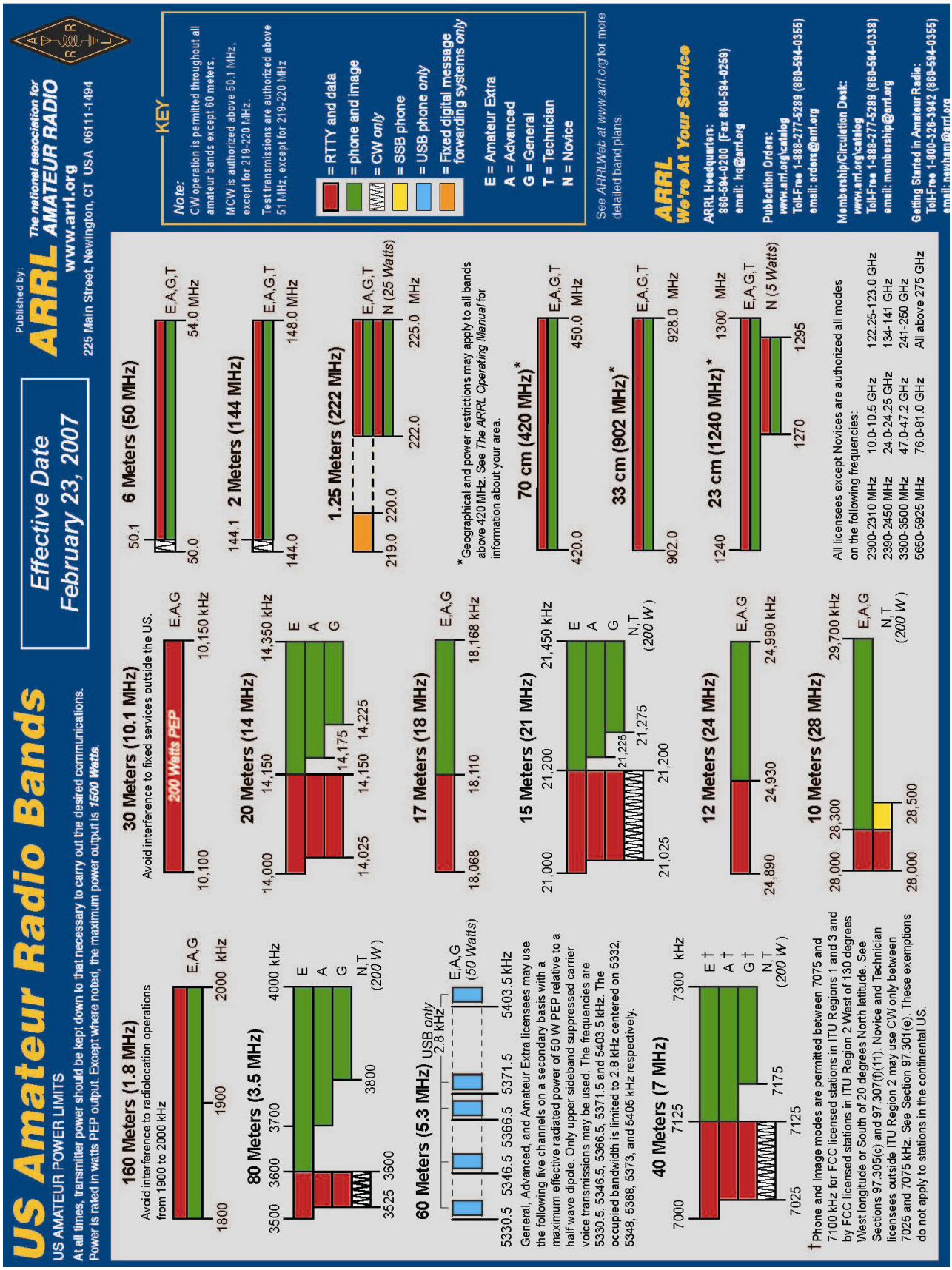

http://www.arrl.org/FandES/field/regulations/bands.html

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Canadian Amateur Radio Bands:

Canadian Amateur Radio Bands (LINK)		
Frequency Band (MHz)	**Bandwidth**	**Qualifications**
1.8 - 2.0	6 kHz	B and 5, B/H, B&A
3.5 - 4.0	6 kHz	B and 5, B/H, B&A
7.0 - 7.3	6 kHz	B and 5, B/H, B&A
10.1 - 10.15	1 kHz	B and 5, B/H, B&A
14.0 - 14.350	6 kHz	B and 5, B/H, B&A
18.068 - 18.168	6 kHz	B and 5, B/H, B&A
21.0 - 21.450	6 kHz	B and 5, B/H, B&A
24.890 - 24.990	6 kHz	B and 5, B/H, B&A
28.0 - 29.7	20 kHz	B and 5, B/H, B&A
50.0 - 54.0	30 kHz	B
144.0 - 148.0	30 kHz	B
222.0 - 225.0	100 kHz	B
430.0** - 450.0	12 MHz	B
902.0** - 928.0	12 MHz	B
1240.0** - 1300.0	Not Specified	B
2300.0** - 2450.0	Not Specified	B
3300.0** - 3500.0	Not Specified	B
5650.0** - 5925.0	Not Specified	B
10000.0** - 10500.0	Not Specified	B
24000.0** - 24050.0	Not Specified	B
24050.00** - 24250.0	Not Specified	B
47000.0 – 47200.0	Not Specified	B
76000.0** - 77500.0	Not Specified	B
77500.0 – 78000.0	Not Specified	B
78000.0** - 81000.0	Not Specified	B
122250.0** - 123000.0	Not Specified	B
134000.0 – 136000.0	Not Specified	B
136000.0** - 141000.0	Not Specified	B
241000.0** - 248000.0	Not Specified	B
248000.0 – 250000.0	Not Specified	B

Notes:

- "B" means an Amateur Operators Certificate with Basic Qualification
- "B/H" means Basic with honors (score of 80% or above)
- "5" means an Amateur Operators Certificate with Morse code (5 w.p.m.) Qualification
- "A" means an Advanced Amateur Operators Certificate
- Radio Amateurs are secondary users in the bands marked with asterisks **, and may not cause interference to primary users.

http://www.rac.ca/regulatory/allband.htm

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Incident Command System (ICS) Principals:

Standardization:

- **Common Terminology:** Using common terminology helps to define organizational functions, incident facilities, resource descriptions, and position titles.

Command:

- **Establishment and Transfer of Command:** The command function must be clearly established from the beginning of an incident. When command is transferred, the process must include a briefing that captures all essential information for continuing safe and effective operations.
- **Chain of Command and Unity of Command:** Chain of command refers to the orderly line of authority within the ranks of the incident management organization. Unity of command means that every individual has a designated supervisor to whom he or she reports at the scene of the incident. These principles clarify reporting relationships and eliminate the confusion caused by multiple, conflicting directives. Incident managers at all levels must be able to control the actions of all personnel under their supervision.
- **Unified Command:** In incidents involving multiple jurisdictions, a single jurisdiction with multiagency involvement, or multiple jurisdictions with multiagency involvement, Unified Command allows agencies with different legal, geographic, and functional authorities and responsibilities to work together effectively without affecting individual agency authority, responsibility, or accountability.

Planning/Organizational Structure:

- **Management by Objectives:** Includes establishing overarching objectives; developing strategies based on incident objectives; developing and issuing assignments, plans, procedures, and protocols; establishing specific, measurable objectives for various incident management functional activities and directing efforts to attain them, in support of defined strategies; and documenting results to measure performance and facilitate corrective action.
- **Modular Organization:** The Incident Command organizational structure develops in a modular fashion that is based on the size and complexity of the incident, as well as the specifics of the hazard environment created by the incident.
- **Incident Action Planning:** Incident Action Plans (IAPs) provide a coherent means of communicating the overall incident objectives in the context of both operational and support activities.
- **Manageable Span of Control:** Span of control is key to effective and efficient incident management. Within ICS, the span of control of any individual with incident management supervisory responsibility should range from three to seven subordinates.

Facilities and Resources:

- **Incident Locations and Facilities:** Various types of operational support facilities are established in the vicinity of an incident to accomplish a variety of purposes. Typical designated facilities include Incident Command Posts, Bases, Camps, Staging Areas, Mass Casualty Triage Areas, and others as required.
- **Comprehensive Resource Management:** Maintaining an accurate and up-to-date picture of resource utilization is a critical component of incident management. Resources are defined as personnel, teams, equipment, supplies, and facilities available or potentially available for assignment or allocation in support of incident management and emergency response activities.

Communications/Information Management

- **Integrated Communications:** Incident communications are facilitated through the development and use of a common communications plan and interoperable communications processes and architectures.
- **Information and Intelligence Management:** The incident management organization must establish a process for gathering, analyzing, sharing, and managing incident-related information and intelligence.

Professionalism:

- **Accountability:** Effective accountability at all jurisdictional levels and within individual functional areas during incident
    - **Check-In:** All responders, regardless of agency affiliation, must report in to receive an assignment in accordance with the procedures established by the Incident Commander.
    - **Incident Action Plan:** Response operations must be directed and coordinated as outlined in the IAP.
    - **Unity of Command:** Each individual involved in incident operations will be assigned to only one supervisor.
    - **Personal Responsibility:** All responders are expected to use good judgment and be accountable for their actions.
    - **Span of Control:** Supervisors must be able to adequately supervise and control their subordinates, as well as communicate with and manage all resources under their supervision.

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- **Resource Tracking:** Supervisors must record and report resource status changes as they occur.

- **Dispatch/Deployment:** Personnel and equipment should respond only when requested or when dispatched by an appropriate authority.

At each level within the ICS organization, individuals with primary responsibility positions have distinct titles. Titles provide a common standard for all users. For example, if one agency uses the title Branch Chief, another Branch Manager, etc., this lack of consistency can cause confusion at the incident.

The use of distinct titles for ICS positions allows for filling ICS positions with the most qualified individuals rather than by seniority. Standardized position titles are useful when requesting qualified personnel. For example, in deploying personnel, it is important to know if the positions needed are Unit Leaders, clerks, etc.

Listed below are the standard ICS titles:

Organizational Level	Title	Support Position
Incident Command	Incident Commander	Deputy
Command Staff	Officer	Assistant
General Staff (Section)	Chief	Deputy
Branch	Director	Deputy
Division/Group	Supervisor	N/A
Unit	Leader	Manager
Strike Team/Task Force	Leader	Single Resource Boss
Technical Specialists		

Incident Command System (ICS) Staffing:

Incident Commander (IC): The Incident Commander is technically not a part of either the General or Command Staff. The Incident Commander is responsible for overall incident management, including:

- Ensuring clear authority and knowledge of agency policy.
- Ensuring incident safety.
- Establishing an Incident Command Post.
- Obtaining a briefing from the prior Incident Commander and/or assessing the situation.
- Establishing immediate priorities.
- Determining incident objectives and strategy(ies) to be followed.
- Establishing the level of organization needed, and continuously monitoring the operation and effectiveness of that organization.
- Managing planning meetings as required.
- Approving and implementing the Incident Action Plan.
- Coordinating the activities of the Command and General Staff.
- Approving requests for additional resources or for the release of resources.
- Approving the use of participants, volunteers, and auxiliary personnel.
- Authorizing the release of information to the news media.
- Ordering demobilization of the incident when appropriate.
- Ensuring incident after-action reports are complete.
- Authorizing information release to the media.

Command Staff: The Command Staff consists of the Public Information Officer, Safety Officer, and Liaison Officer, in addition to various others, as required and assigned by the Incident Commander.. They report directly to the Incident Commander. The Command Staff is assigned to carry out staff functions needed to support the Incident Commander. Command Staff positions are established to assign responsibility for key activities not specifically identified in the General Staff functional elements.

Position	Responsibilities
Public Information Officer	• Determine, according to direction from the IC, any limits on information release. • Develop accurate, accessible, and timely information for use in press/media briefings. • Obtain IC's approval of news releases. • Conduct periodic media briefings. • Arrange for tours and other interviews or briefings that may be required. • Monitor and forward media information that may be useful to incident planning.

	• Maintain current information, summaries, and/or displays on the incident. • Make information about the incident available to incident personnel. • Participate in the planning meeting.
Safety Officer	• Identify and mitigate hazardous situations. • Ensure safety messages and briefings are made. • Exercise emergency authority to stop and prevent unsafe acts. • Review the Incident Action Plan for safety implications. • Assign assistants qualified to evaluate special hazards. • Initiate preliminary investigation of accidents within the incident area. • Review and approve the Medical Plan. • Participate in planning meetings.
Liaison Officer	• Act as a point of contact for agency representatives. • Maintain a list of assisting and cooperating agencies and agency representatives. • Assist in setting up and coordinating interagency contacts. • Monitor incident operations to identify current or potential inter-organizational problems. • Participate in planning meetings, providing current resource status, including limitations and capabilities of agency resources. • Provide agency-specific demobilization information and requirements.
Assistants	In the context of large or complex incidents, Command Staff members may need one or more assistants to help manage their workloads. Each Command Staff member is responsible for organizing his or her assistants for maximum efficiency.
Additional Command Staff	Additional Command Staff positions may also be necessary depending on the nature and location(s) of the incident, and/or specific requirements established by the Incident Commander. For example, a Legal Counsel may be assigned directly to the Command Staff to advise the Incident Commander on legal matters, such as emergency proclamations, legality of evacuation orders, and legal rights and restrictions pertaining to media access. Similarly, a Medical Advisor may be designated and assigned directly to the Command Staff to provide advice and recommendations to the Incident Commander in the context of incidents involving medical and mental health services, mass casualty, acute care, vector control, epidemiology, and/or mass prophylaxis considerations, particularly in the response to a bioterrorism event.
Agency Representatives	An Agency Representative is an individual assigned to an incident from an assisting or cooperating agency. The Agency Representative must be given authority to make decisions on matters affecting that agency's participation at the incident. Agency Representatives report to the Liaison Officer or to the Incident Commander in the absence of a Liaison Officer. Major responsibilities of the Agency Representative are to: • Ensure that all of their agency resources have completed check-in at the incident. • Obtain briefing from the Liaison Officer or Incident Commander. • Inform their agency personnel on the incident that the Agency Representative position has been filled. • Attend planning meetings as required. • Provide input to the planning process on the use of agency resources unless resource technical specialists are assigned from the agency. • Cooperate fully with the Incident Commander and the Command and General Staff on the agency's involvement at the incident. • Oversee the well-being and safety of agency personnel assigned to the incident. • Advise the Liaison Officer of any special agency needs, requirements, or agency restrictions. • Report to agency dispatch or headquarters on a prearranged schedule. • Ensure that all agency personnel and equipment are properly accounted for and released prior to departure. • Ensure that all required agency forms, reports, and documents are complete prior to departure. • Have a debriefing session with the Liaison Officer or Incident Commander prior to departure.
General Staff: The General Staff represents and is responsible for the functional aspects of the incident command structure. The General Staff typically consists of the Operations, Planning, Logistics, and Finance/Administration Sections. General guidelines related to General Staff positions include the following:	

- Only one person will be designated to lead each General Staff position.
- General Staff positions may be filled by qualified persons from any agency or jurisdiction.
- Members of the General Staff report directly to the Incident Commander. If a General Staff position is not activated, the Incident Commander will have responsibility for that functional activity.
- Deputy positions may be established for each of the General Staff positions. Deputies are individuals fully qualified to fill the primary position. Deputies can be designated from other jurisdictions or agencies, as appropriate. This is a good way to bring about greater interagency coordination.
- General Staff members may exchange information with any person within the organization. Direction takes place through the chain of command. This is an important concept in ICS.
- General Staff positions should not be combined. For example, to establish a "Planning and Logistics Section," it is better to initially create the two separate functions, and if necessary for a short time place one person in charge of both. That way, the transfer of responsibility can be made easier.

Position	Responsibilities
Operations Section Chief	The Operations Section Chief is responsible for managing all tactical operations at an incident. The Incident Action Plan (IAP) provides the necessary guidance. The need to expand the Operations Section is generally dictated by the number of tactical resources involved and is influenced by span of control considerations. Major responsibilities of the Operations Section Chief are to: • Assure safety of tactical operations. • Manage tactical operations. • Develop the operations portion of the IAP. • Supervise execution of operations portions of the IAP. • Request additional resources to support tactical operations. • Approve release of resources from active operational assignments. • Make or approve expedient changes to the IAP. • Maintain close contact with IC, subordinate Operations personnel, and other agencies involved in the incident.
Planning Section Chief	The Planning Section Chief is responsible for providing planning services for the incident. Under the direction of the Planning Section Chief, the Planning Section collects situation and resources status information, evaluates it, and processes the information for use in developing action plans. Dissemination of information can be in the form of the IAP, in formal briefings, or through map and status board displays. Major responsibilities of the Planning Section Chief are to: • Collect and manage all incident-relevant operational data. • Supervise preparation of the IAP. • Provide input to the IC and Operations in preparing the IAP. • Incorporate Traffic, Medical, and Communications Plans and other supporting materials into the IAP. • Conduct and facilitate planning meetings. • Reassign personnel within the ICS organization. • Compile and display incident status information. • Establish information requirements and reporting schedules for units (e.g., Resources, Situation Units). • Determine need for specialized resources. • Assemble and disassemble Task Forces and Strike Teams not assigned to Operations. • Establish specialized data collection systems as necessary (e.g., weather). • Assemble information on alternative strategies. • Provide periodic predictions on incident potential. • Report significant changes in incident status. • Oversee preparation of the Demobilization Plan.
Logistics Section Chief	The Logistics Section Chief provides all incident support needs with the exception of logistics support to air operations. The Logistics Section is responsible for providing: • Facilities. • Transportation. • Communications. • Supplies. • Equipment maintenance and fueling. • Food services (for responders). • Medical services (for responders).

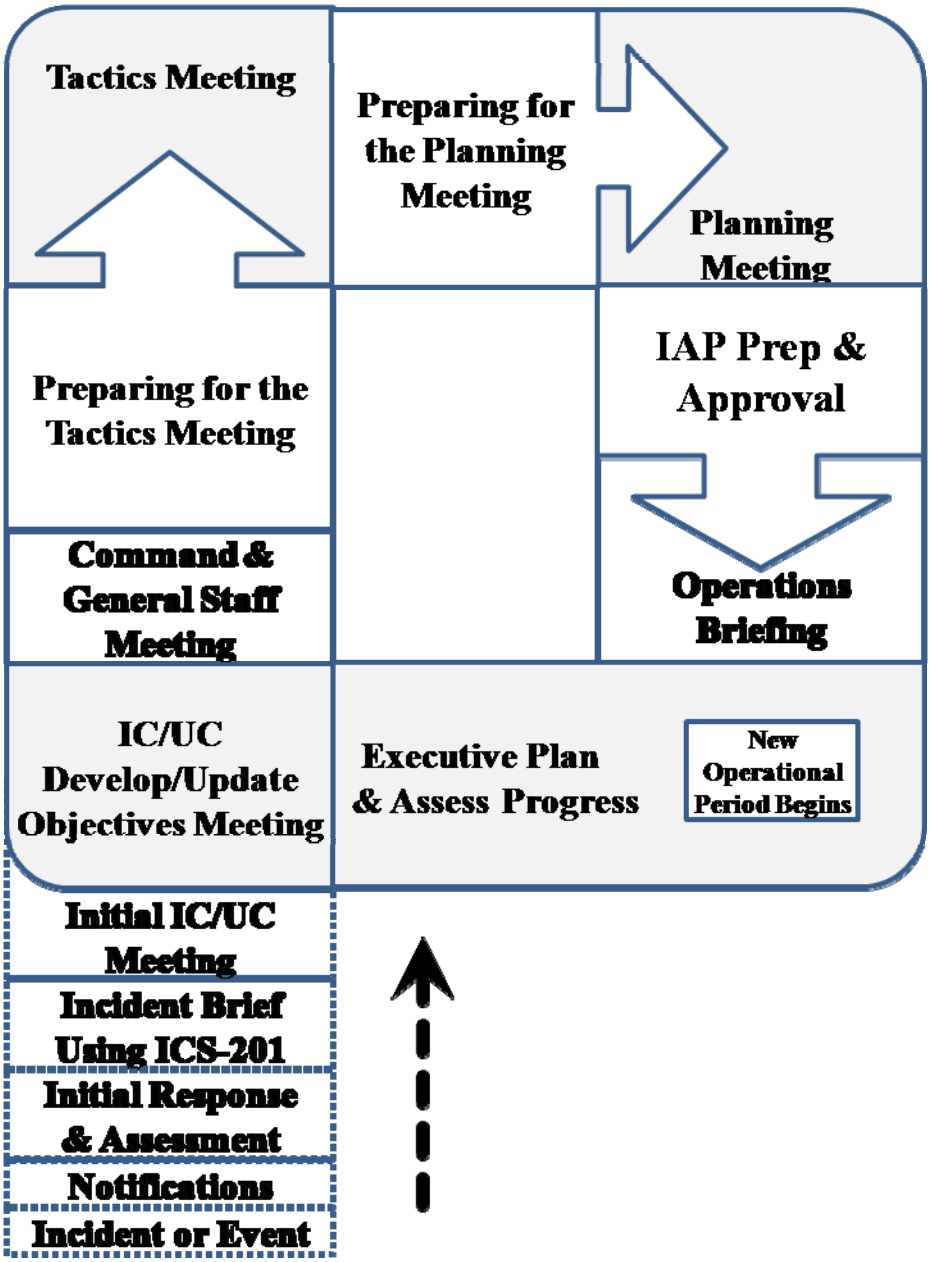
	• All off-incident resources. Major responsibilities of the Logistics Section Chief are to: • Provide all facilities, transportation, communications, supplies, equipment maintenance and fueling, food and medical services for incident personnel, and all off-incident resources. • Manage all incident logistics. • Provide logistical input to the IAP. • Brief Logistics Staff as needed. • Identify anticipated and known incident service and support requirements. • Request additional resources as needed. • Ensure and oversee the development of the Communications, Medical, and Traffic Plans as required. • Oversee demobilization of the Logistics Section and associated resources.
Finance & Administration Section Chief	The Finance/Administration Section Chief is responsible for managing all financial aspects of an incident. Not all incidents will require a Finance/Administration Section. Only when the involved agencies have a specific need for finance services will the Section be activated. Major responsibilities of the Finance/Administration Section Chief are to: • Manage all financial aspects of an incident. • Provide financial and cost analysis information as requested. • Ensure compensation and claims functions are being addressed relative to the incident. • Gather pertinent information from briefings with responsible agencies. • Develop an operating plan for the Finance/Administration Section and fill Section supply and support needs. • Determine the need to set up and operate an incident commissary. • Meet with assisting and cooperating agency representatives as needed. • Maintain daily contact with agency(s) headquarters on finance matters. • Ensure that personnel time records are completed accurately and transmitted to home agencies. • Ensure that all obligation documents initiated at the incident are properly prepared and completed. • Brief agency administrative personnel on all incident-related financial issues needing attention or follow-up. • Provide input to the IAP.
Intelligence & Investigations Function	**The collection, analysis, and sharing of incident-related intelligence are important elements of ICS.** • Typically, operational information and situational intelligence are management functions located in the Planning Section, with a focus on three incident intelligence areas: situation status, resource status, and anticipated incident status or escalation (e.g., weather forecasts, location of supplies, etc.). • This information and intelligence is utilized for incident management decision-making. In addition, Technical Specialists may be utilized in the Planning Section to provide specific information that may support tactical decisions on an incident. **Incident management organizations must also establish a system for the collection, analysis, and sharing, as possible, of information developed during intelligence/investigations efforts.** • Some incidents require the utilization of intelligence and investigative information to support the process. Intelligence and investigative information is defined as information that either leads to the detection, prevention, apprehension, and prosecution of criminal activities (or the individuals(s) involved), including terrorist incidents, or information that leads to determination of the cause of a given incident (regardless of the source) such as public health events or fires with unknown origins. **ICS allows for organizational flexibility, so the Intelligence/Investigations Function can be embedded in several different places within the organizational structure:** • Within the Planning Section. This is the traditional placement for this function and is appropriate for incidents with little or no investigative information requirements, nor a significant amount of specialized information. • As a Separate General Staff Section. This option may be appropriate when there is an intelligence/investigative component to the incident or when multiple investigative agencies are part of the investigative process and/or there is a need for classified intelligence.

	• Within the Operations Section. This option may be appropriate for incidents that require a high degree of linkage and coordination between the investigative information and the operational tactics that are being employed. • Within the Command Staff. This option may be appropriate for incidents with little need for tactical information or classified intelligence and where supporting Agency Representatives are providing the real-time information to the Command Element. **The mission of the Intelligence/Investigations Function is to ensure that all investigative and intelligence operations, functions, and activities within the incident response are properly managed, coordinated, and directed in order to:** • Prevent/deter additional activity, incidents, and/or attacks. • Collect, process, analyze, and appropriately disseminate intelligence information. • Conduct a thorough and comprehensive investigation. • Identify, process, collect, create a chain of custody for, safeguard, examine/analyze, and store all situational intelligence and/or probative evidence. **The Intelligence/Investigations Function has responsibilities that cross all departments' interests involved during an incident, but there are functions that remain specific to law enforcement response and/or mission areas.** Two examples of these are expeditious identification and apprehension of all perpetrators, and successful prosecution of all defendants. Regardless of how the Intelligence/Investigations Function is organized, a close liaison will be maintained and information will be transmitted to Command, Operations, and Planning. However, classified information requiring a security clearance, sensitive information, or specific investigative tactics that would compromise the investigation will be shared only with those who have the appropriate security clearance and need to know.
Section:	The organization level having functional responsibility for primary segments of incident management (Operations, Planning, Logistics, Finance/Administration). The Section level is organizationally between Branch and Incident Commander.
Branch:	That organizational level having functional, geographical, or jurisdictional responsibility for major parts of the incident operations. The Branch level is organizationally between Section and Division/Group in the Operations Section, and between Section and Units in the Logistics Section. Branches are identified by the use of Roman Numerals, by function, or by jurisdictional name.
Division:	That organizational level having responsibility for operations within a defined geographic area. The Division level is organizationally between the Strike Team and the Branch.
Group:	Groups are established to divide the incident into functional areas of operation. Groups are located between Branches (when activated) and Resources in the Operations Section.
Unit:	That organization element having functional responsibility for a specific incident planning, logistics, or finance/administration activity.
Task Force:	A group of resources with common communications and a leader that may be pre-established and sent to an incident, or formed at an incident.
Strike Team:	Specified combinations of the same kind and type of resources, with common communications and a leader.
Single Resource:	An individual piece of equipment and its personnel complement, or an established crew or team of individuals with an identified work supervisor that can be used on an incident.
Technical Specialists	knowledge and expertise. Technical Specialists may function within the Planning Section, or be assigned wherever their services are required. While each incident dictates the need for Technical Specialists, some examples of the more commonly used specialists are: • Environmental Impact Specialists. • Fire Behavior Specialists. • Flood Control Specialists. • Fuels and Flammable Specialists. • Hazardous Substance Specialists. • Meteorologists. • Structural Engineers. • Training Specialists. • Water Use Specialists. Additional advisory positions may also be necessary depending on the nature and location(s) of the incident, and/or specific requirements established by the Incident Commander. For example, a Legal

	Counsel may be assigned directly to the Command Staff to advise the Incident Commander on legal matters, such as emergency proclamations, legality of evacuation orders, and legal rights and restrictions pertaining to media access. Similarly, a Medical Advisor may be designated and assigned directly to the Command Staff to provide advice and recommendations to the Incident Commander in the context of incidents involving medical and mental health services, mass casualty, acute care, vector control, epidemiology, and/or mass prophylaxis considerations, particularly in the response to a bioterrorism event. These positions may also be considered Technical Specialists.

Incident Command System Incident Facilities:	
Various types of operational support facilities are established in the vicinity of an incident to accomplish a variety of purposes. Typical designated facilities include Incident Command Posts, Bases, Camps, Staging Areas, Mass Casualty Triage Areas, and others as required.	
Facility	**Symbol**
Incident Command Post (ICP): The field location at which the primary tactical-level, on-scene incident command functions are performed. The ICP may be collocated with the incident base or other incident facilities and is normally identified by a green rotating or flashing light.	
Base: The location at which primary Logistics functions for an incident are coordinated and administered. There is only one Base per incident. (Incident name or other designator will be added to the term Base.) The Incident Command Post may be collocated with the Base.	
Staging Area: Location established where resources can be placed while awaiting a tactical assignment.	
Camp: A geographical site, within the general incident area, separate from the Incident Base, equipped and staffed to provide sleeping, food, water, and sanitary services to incident personnel.	
Helibase: A location from which helicopter-centered air operations are conducted. Helibases are generally used on a more long-term basis and include such services as fueling and maintenance.	
Helispots: A more temporary location at the incident, where helicopters can safely land and take off. Multiple Helispots may be used and are denoted by H-# where the # represents the Helispot number.	

Operating Reference
Incident Command System (ICS) Planning Process:



- The Planning "P" is a guide to the process and steps involved in planning for an incident. The leg of the "P" describes the initial response period: Once the incident/event begins, the steps are Notifications, Initial Response & Assessment, Incident Briefing Using ICS 201, and Initial Incident Command (IC)/Unified Command (UC) Meeting.
- At the top of the leg of the "P" is the beginning of the first operational planning period cycle. In this circular sequence, the steps are IC/UC Develop/Update Objectives Meeting, Command and General Staff Meeting, Preparing for the Tactics Meeting, Tactics Meeting, Preparing for the Planning Meeting, Planning Meeting, IAP Prep & Approval, and Operations Briefing.
- At this point a new operational period begins. The next step is Execute Plan & Assess Progress, after which the cycle begins again.

Initial Response

- Planning begins with a thorough size-up that provides information needed to make initial management decisions.

- The ICS Form 201 provides Command Staff with information about the incident situation and the resources allocated to the incident. This form serves as a permanent record of the initial response to the incident and can be used for transfer of command.

The Start of Each Planning Cycle

- **IC/UC Objectives Meeting:** The Incident Command/Unified Command establish incident objectives that cover the entire course of the incident. For complex incidents, it may take more than one operational period to accomplish the incident objectives.
- The cyclical planning process is designed to take the overall incident objectives and break them down into tactical assignments for each operational period. It is important that this initial overall approach to establishing incident objectives establish the course of the incident, rather than having incident objectives only address a single operational period.

Command and General Staff Meeting:

- The Incident Command/Unified Command may meet with the Command and General Staff to gather input or to provide immediate direction that cannot wait until the planning process is completed. This meeting occurs as needed and should be as brief as possible.

Preparing for and Conducting the Tactics Meeting

- The purpose of the Tactics Meeting is to review the tactics developed by the Operations Section Chief. This includes the following:
    - Determine how the selected strategy will be accomplished in order to achieve the incident objectives.
    - Assign resources to implement the tactics.
    - Identify methods for monitoring tactics and resources to determine if adjustments are required (e.g., different tactics, different resources, or new strategy).
- The Operations Section Chief, Safety Officer, Logistics Section Chief, and Resources Unit Leader attend the Tactics Meeting. The Operations Section Chief leads the Tactics Meeting.
- The ICS Forms 215, Operational Planning Worksheet, and 215A, Incident Safety Analysis, are used to document the Tactics Meeting.
- Resource assignments will be made for each of the specific work tasks. Resource assignments will consist of the kind, type, and numbers of resources available and needed to achieve the tactical operations desired for the operational period. If the required tactical resources will not be available, then an adjustment should be made to the tactical assignments being planned for the Operational Period. It is very important that tactical resource availability and other needed support be determined prior to spending a great deal of time working on strategies and tactical operations that realistically cannot be achieved.

Preparing for the Planning Meeting

- Following the Tactics Meeting, preparations are made for the Planning Meeting, to include the following actions coordinated by the Planning Section:
    - Review the ICS Form 215 developed in the Tactics Meeting.
    - Review the ICS Form 215A, Incident Safety Analysis (prepared by the Safety Officer), based on the information in the ICS Form 215.
    - Assess current operations effectiveness and resource efficiency.
    - Gather information to support incident management decisions.

Planning Meeting:

- The Planning Meeting provides the opportunity for the Command and General Staff to review and validate the operational plan as proposed by the Operations Section Chief. Attendance is required for all Command and General Staff. Additional incident personnel may attend at the request of the Planning Section Chief or the Incident Commander. The Planning Section Chief conducts the Planning Meeting following a fixed agenda.
- The Operations Section Chief delineates the amount and type of resources he or she will need to accomplish the plan. The Planning Section's "Resources Unit" will have to work with the Logistics Section to accommodate.
- At the conclusion of the meeting, the Planning Section Staff will indicate when all elements of the plan and support documents are required to be submitted so the plan can be collated, duplicated, and made ready for the Operational Period Briefing.

IAP Preparation and Approval

- The next step in the Incident Action Planning Process is plan preparation and approval. The written plan is comprised of a series of standard forms and supporting documents that convey the Incident Commander's intent and the Operations Section direction for the accomplishment of the plan for that Operational Period.
- For simple incidents of short duration, the Incident Action Plan (IAP) will be developed by the Incident Commander and communicated to subordinates in a verbal briefing. The planning associated with this level of complexity does not demand the formal planning meeting process as highlighted above.
- Certain conditions result in the need for the Incident Commander to engage a more formal process. A written IAP should be considered whenever:
    - Two or more jurisdictions are involved in the response.
    - The incident continues into the next Operational Period.
    - A number of ICS organizational elements are activated (typically when General Staff Sections are staffed).
    - It is required by agency policy.
    - A Hazmat incident is involved (required).

Operations Period Briefing:

- The Operations Period Briefing may be referred to as the Operational Briefing or the Shift Briefing. This briefing is conducted at the beginning of each Operational Period and presents the Incident Action Plan to supervisors of tactical resources.
- Following the Operations Period Briefing supervisors will meet with their assigned resources for a detailed briefing on their respective assignments.

Execute Plan and Assess Progress:

- The Operations Section directs the implementation of the plan. The supervisory personnel within the Operations Section are responsible for implementation of the plan for the specific Operational Period.
- The plan is evaluated at various stages in its development and implementation. The Operations Section Chief may make the appropriate adjustments during the Operational Period to ensure that the objectives are met and effectiveness is assured.

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Incident Command System (ICS) Incident Types:

Incidents may be typed in order to make decisions about resource requirements. Incident types are based on the following five levels of complexity. (Source: U.S. Fire Administration)

Type Level	Type Description
Type 5	• The incident can be handled with one or two single resources with up to six personnel. • Command and General Staff positions (other than the Incident Commander) are not activated. • No written Incident Action Plan (IAP) is required. • The incident is contained within the first operational period and often within an hour to a few hours after resources arrive on scene. • Examples include a vehicle fire, an injured person, or a police traffic stop.
Type 4	• Command staff and general staff functions are activated only if needed. • Several resources are required to mitigate the incident. • The incident is usually limited to one operational period in the control phase. • The agency administrator may have briefings, and ensure the complexity analysis and delegation of authority are updated. • No written Incident Action Plan (IAP) is required but a documented operational briefing will be completed for all incoming resources. • The role of the agency administrator includes operational plans including objectives and priorities.
Type 3	• When capabilities exceed initial attack, the appropriate ICS positions should be added to match the complexity of the incident. • Some or all of the Command and General Staff positions may be activated, as well as Division/Group Supervisor and/or Unit Leader level positions. • A Type 3 Incident Management Team (IMT) or incident command organization manages initial action incidents with a significant number of resources, an extended attack incident until containment/control is achieved, or an expanding incident until transition to a Type 1 or 2 team. • The incident may extend into multiple operational periods. • A written IAP may be required for each operational period.
Type 2	• This type of incident extends beyond the capabilities for local control and is expected to go into multiple operational periods. A Type 2 incident may require the response of resources out of area, including regional and/or national resources, to effectively manage the operations, command, and general staffing. • Most or all of the Command and General Staff positions are filled. • A written IAP is required for each operational period. • Many of the functional units are needed and staffed. • Operations personnel normally do not exceed 200 per operational period and total incident personnel do not exceed 500 (guidelines only). • The agency administrator is responsible for the incident complexity analysis, agency administrator briefings, and the written delegation of authority.
Type 1	• This type of incident is the most complex, requiring national resources to safely and effectively manage and operate. • All Command and General Staff positions are activated. • Operations personnel often exceed 500 per operational period and total personnel will usually exceed 1,000. • Branches need to be established. • The agency administrator will have briefings, and ensure that the complexity analysis and delegation of authority are updated. • Use of resource advisors at the incident base is recommended. • There is a high impact on the local jurisdiction, requiring additional staff for office administrative and support functions.

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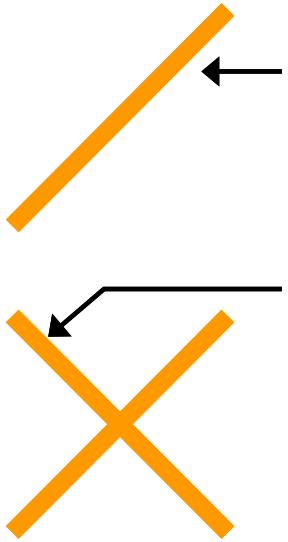
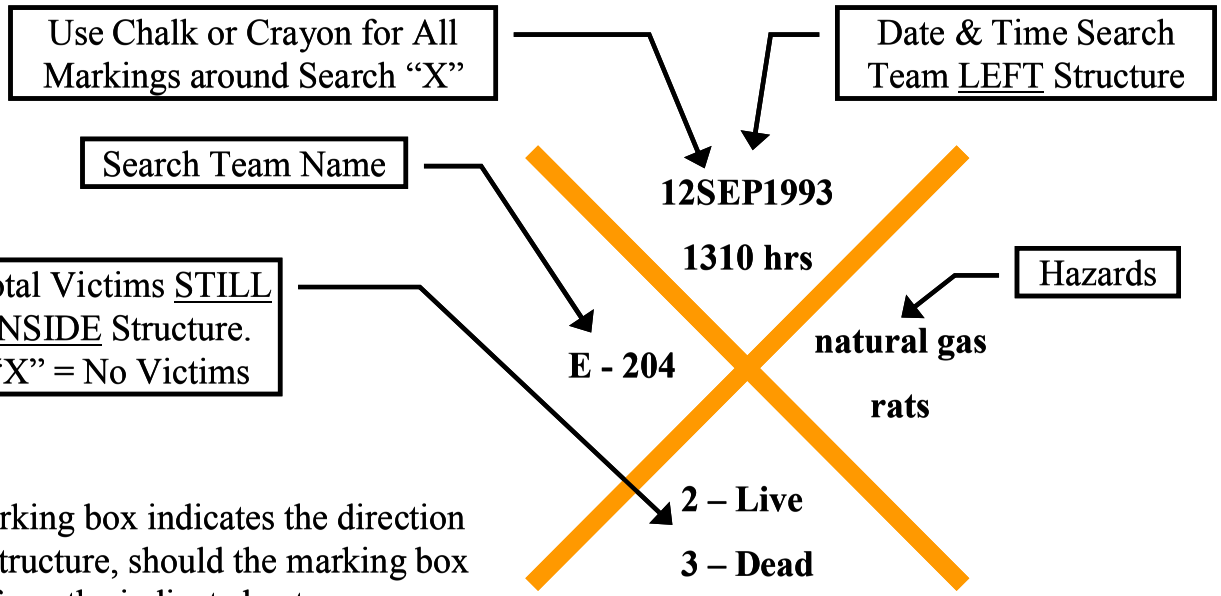
Main Entrance Structure/Hazards Search Marking

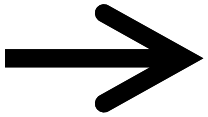


Make this mark with Orange Spray Paint when you enter a structure or room (single slash- lower left towards upper right)

Make this mark with Orange Spray Paint when you exit a structure or room (second slash- upper left towards lower right, identify victim[s] & hazards)

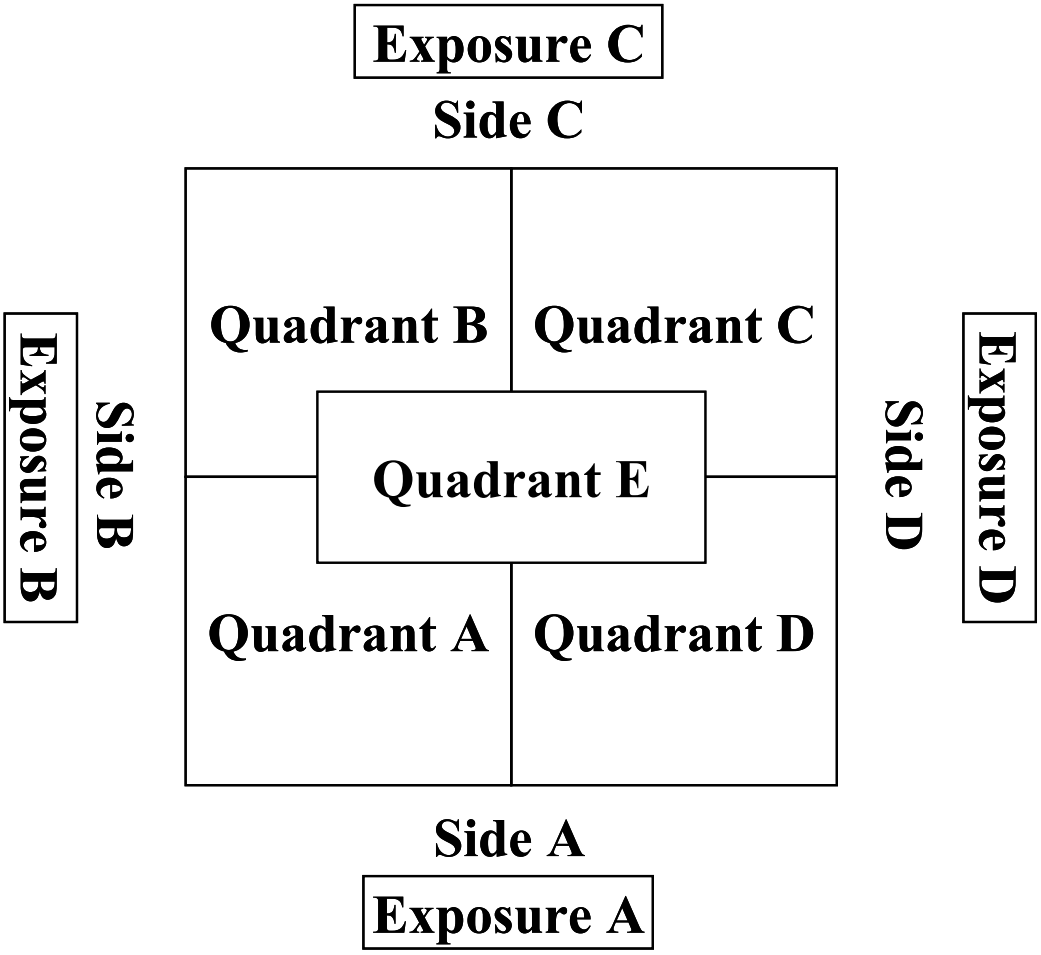
The Structure/Hazards Marking System shall be used to identify structures in a specific area and any hazards found within or near the structure. Make a large (2'x 2') square box with orange spray paint on the outside of the main entrance to the structure. Put the date, time, hazardous material conditions, and team or company identifier outside the box on the right hand side. This information should be made with crayon or chalk. The Search Marking System shall be employed during and after the search of a structure for potential victims.





Arrow located next to a marking box indicates the direction to a safe entrance into the structure, should the marking box need to be made remotely from the indicated entrance.

Incident Division Designations



The above designators shall be used to denote the sides, exposures, and interior quadrants of structures. Side "A" is the front (street address) side of the building. Interior quadrants shall be designated as shown, with "E" used to denote the center core of a building when applicable. This system may also be used to denote geographical areas of an incident.

Multi-Story Designation System

Mezzanine Division 4/5	**Division 5**
	Division 4
	Division 3
	Division 2
	Division 1
	Division P1 (Parking Level 1)
	Division P2 (Parking Level 2)

When operating in a multi-story structure, it may be necessary to designate geographical locations by floor. This system of geographical designation uses the floor number, as shown above to designate Divisions. Divisions shall be numbered in accordance with the convention already established within the building. For example: Floors designated as Floor 1 = "Division 1"; Parking level or P level 1 = "Division P1"; or Mezzanine level 4/5 = "Mezzanine Division 4/5."

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Operating Reference

Operating Guidelines:

The primary responsibility of the radio operator is to pass accurate and timely information from the sender to the receiver and follow through with an accurate and timely response to the sender if needed.

Calls and messages on the radio are known as "traffic." Groupings of radios designed to handle certain types of "traffic" are called "nets." Several nets may be operating on the incident:

- **Tactical Net:** This net is used by the crews, engines, etc. This net cannot be monitored by the Incident Command Post (ICP), as it is line-of-sight only. Usually a different frequency is assigned to each division. If someone requests this frequency, locate the ICS Form 205 (Incident Radio Communications Plan) and relay the frequency for the specific division requested.
- **Command/Operations Net:** This is the primary incident radio net. Most of the operational traffic is on this net, usually through a repeater, to operations, overhead or the incident base. An example of this would be instructions from the operations section to the field/base or traffic from one division to another concerning personnel movements, fire behavior, etc.
- **Logistics Net: L**ogistics net traffic would be checking with the supply unit to see if items have arrived, tracking locations of vehicles and drivers in the ground support unit, calling the food unit for meal hours, etc.
- **Camp Net:** It is used because most units are back at the camp.
- **Air-to-Ground Net:** This is used almost exclusively by the Helibase to communicate with aircraft associated with the incident. This is not monitored by the ICP. If someone requests this frequency, locate the ICS Form 205 (Incident Radio Communications Plan) and relay the frequency.
- **Air-to-Air Net:** This net is used strictly between aircraft. The ICP cannot monitor this frequency. If someone requests this frequency, locate the ICS Form 205 (Incident Radio Communications Plan) and relay the frequency.

The station/radio running the 'Net' is called 'Net Control'.

If there is an emergency on the radio net, say: "All Units, There is a Medical Emergency, Please Clear This Frequency". Repeat as necessary.

The best radio in the world is of little use if messages are misunderstood or can not be heard because of improper use.

- Official Use Only: Agency radios are used only for official business. Many private citizens have scanners capable of monitoring our frequencies. Cooperating agencies and organizations monitor our frequencies for informational purposes.
- When making contact/calling a station for the first time, use the following procedure. We will use the following message as an example:

  Station callsign you are calling: **Shelter**
  Your callsign station: **A1AA**
  Message: Please advise the count of hot lunch meals you require at your location.
  Spoken examples are in **Bold**.
- Press and hold the Push-To-Talk (PTT) button on the side of the radio.
- Speak clearly at your normal volume and rate (try to maintain a steady rhythm, speed, volume and pitch) and say "(callsign of station you are calling), Good (Morning/Afternoon/Evening), this is (your callsign), Over." **Shelter, Good Morning, This is A1AA, over.**
- Wait for their response.
- Say the word "Over" to let the other station know you are finished talking. **Shelter, A1AA, go ahead, over.**
- If you have to step away from the radio (to deliver a message, go to the bathroom, etc.), let Net Control know. **Net Control, A1AA, Over** (wait for Net Control to respond). **Net Control, A1AA, away from the radio for** (however many minutes you think you will need) **minutes, over.** There is no hard and fast rule so don't panic if you say 5 minutes and you come back 10 minutes later. The key is to let Net Control know you are away from the radio so they or someone else does not try to contact you. Wait for Net Control to acknowledge your request before stepping away.
- When you return to the radio, let Net Control know you are back at the radio. **Net Control, A1AA, over** (wait for Net Control to respond). **Net Control, A1AA, back at radio, over**. Wait for Net Control to acknowledge you are back at the radio.
- If you need to have the message repeated in its entirety, say "Say again" **Shelter, A1AA, say again, over**.
- If you need to have part of a message repeated, say "Say again after (last word you clearly heard)". **Shelter, A1AA, say again after LUNCH, over** (referring to the message example above).
- If you need to have part of a message repeated, say "**Say again from** (last word you clearly heard) **to** (the next work you clearly heard). **Shelter, A1AA, say again from COUNT to REQUIRE, over.**

- If the other person is talking to fast, say "**Say again slower**". **Shelter, A1AA, say again slower, over**
- If the other person is talking to slow, say "**Say again faster**". **Shelter, A1AA, say again faster, over**. It is very rare that you will need someone to talk faster.
- If the other person is talking too quietly, say "**Say again louder**". **Shelter, A1AA, say again louder, over**.
- If you are leaving the air (going home/shift change), say "**Clear on frequency**". **Net Control, A1AA, over** (wait for Net Control to respond). **Net Control, A1AA, clear on frequency, over**. Wait for acknowledgement from Net Control clearing you to leave the channel/frequency. Do not just get up and leave.
- Do not change channels/frequencies unless instructed to do so. If you are instructed to change channels/frequencies, note who told you, what channel/frequency you were instructed to change to, who you are to contact on the new channel/frequency and the current date and time. Inform Net Control about channel/frequency change and say "**Request frequency change**". **Net Control, A1AA, over** (wait for Net Control to respond). **Net Control, A1AA, request frequency change to channel (#) to contact (other station callsign), over**. Wait for Net Control to acknowledge your channel/frequency change.
- Once you are done with the channel/frequency change, return to the original channel/frequency and let Net Control know you have returned. **Net Control, A1AA, over** (wait for Net Control to respond). **Net Control, A1AA, back on channel/frequency, over**. Wait for Net Control to acknowledge your return to the channel/frequency.
- If a station is calling and Net Control cannot hear them, say "**Relay**". **Net Control, A1AA, over** (wait for Net Control to respond). **Net Control, A1AA, relay, over**. This informs Net Control that you can hear the station calling and are able to relay their message/traffic. Wait for Net Control to acknowledge your offer to relay (Net Control may or may not want you to act as a relay so don't take offense if Net Control does not take you up on your offer).
- If you could not hear who called you, ask them to identify themselves. For example, "**Station calling, this is (your call sign), please identify yourself, over**" or "**Station calling, this is (your call sign), please repeat, over**". **Station calling, this is A1AA, please identify yourself, over** or **Station calling, this is A1AA, please repeat, over**.
- Net Control is the person/callsign who is running the net. A 'net' is an organizational way to manage callers on a channel/frequency.

Message Handling:

- Never take for granted that a message has been received. The receiver should verify receipt of the message. Usually they will say "COPY" to tell you they heard the message. Do not acknowledge a transmission unless you are sure that you have it correct and understand it. If the terminology used in the system is unfamiliar to you, learn the terminology (all messages should be in 'Clear Text' or plain English). **Shelter, A1AA, copy, over**
- Caution should be exercised in attempting to explain or amplify a message given to you to transmit. If the person receiving the message indicates doubt as to the meaning of a message, repeat the message verbatim. If the person is still unable to understand the meaning of the message, refer the message to the originator for clarification. Use your best qualities of dialect and enunciation. Pronounce words clearly and somewhat slowly: a rate of about 60 words per minute is proper. Always use **CLEAR TEXT** (no codes, just plain English) when talking on the radio. It is your job to not only answer the radio, but to document all messages into and sent out through the radio by you on your shift. This is especially important because follow-up may be needed later by someone else. Your radio log is the official documentation of what happened. If there is a medical claim or other follow-up action, the log becomes a critical document.
- Message Priorities: Radio traffic becomes heavy at times and it may be necessary to set priorities on the messages to be sent. Please observe the following provisions for precedence's in connection with written message traffic. These provisions are designed to increase the efficiency of radio communications service both in normal times and in emergencies. Priorities have been established in this order:
    - **EMERGENCY:** Any message having life and death urgency to any person or group of persons, which is transmitted by you in the absence of regular commercial facilities. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to relief of stricken populace in emergency areas. During normal times, it will be very rare. When in doubt, do not use it.
    - **PRIORITY:** This classification is for a) important messages having a specific time limit b) official messages not covered in the emergency category c) press dispatches and emergency-related traffic not of the utmost urgency d) notice of death or injury in a disaster area, personal or official.
    - **WELFARE:** This classification refers to either an inquiry as to the health and welfare of an individual in the disaster area or an advisory from the disaster area that indicates all is well. Welfare traffic is handled only after all emergency and priority traffic is cleared. The Red Cross equivalent to an incoming Welfare message is DWI (Disaster Welfare Inquiry).

  - **ROUTINE:** Most traffic in normal times will bear this designation. In disaster situations, traffic labeled Routine should be handled last, or not at all when circuits are busy with higher precedence traffic.

- Plan Your Message: Make your message straight to the point by planning it. Know what you are going to say before you push the microphone button. Do not wait until you start transmitting and then do your thinking out loud, on the radio.
- Profanity: By planning your message you are also less apt to use profanity. Profanity is not allowed and is a violation under Federal Communications Commission (FCC) rules.
- Report Facts: Your messages should contain only facts, not opinions, unless your opinion is asked for.
- Brevity: Your messages should be to the point, factual, and brief. Avoid the use of unnecessary words.
- Clarity: You need to speak clearly, and at a constant speed to avoid misunderstandings. Speaking clearly is essential.
- Normal Conversation: Talk into the microphone at your normal conversation level and speed. If you speak too loudly or too fast, your voice and the message may be distorted.
- Unnecessary Noise: All sounds and noises cannot be avoided. When possible move away from excessive noise and post notices that advise personnel coming in to remain as quiet as possible.
- If you have a long message, break transmission (stop transmitting/release the Push-To-Talk button) every 30 seconds or so and wait before continuing. This allows time for the receiver to write down the message and creates a break on the frequency in case emergency traffic has to break in. Try to keep messages short and concise to avoid tying up the radio channel for too long. **Shelter, A1AA, 10 reducer's inch and a half to one inch, break**. (Pause) Then start up again **Shelter, A1AA, 100 feet of inch and a half hose, etc**. The receiver should reply with "COPY" after each break to let you know they have heard the message sent.
- If your message has numbers in it, when you get to that part of the message say "Numbers" **Shelter, A1AA, Numbers,** (say your numbers).
- If your message contains mixed (letters and numbers), when you get to that part of the message say "Mixed Group" **Shelter, A1AA, Mixed Group,** (say the part of the message containing the mixed letter and number group).
- To return from either of the above to regular text, say "Letters" **Shelter, A1AA, Letters** and continue with your message.
- If your message contains long or complicated words, say "I spell" **Shelter, A1AA, I spell.** Use the phonetic alphabet located in this manual.
- If you have a list of supplies, send it using a fax machine rather than using the radio. This ensures accuracy, provides a copy and does not tie up the radio channels.
- Do not change a single word in a formal relay message: Record and transmit it "as is". If the message seems unclear, clarify with the originator of the message.
- Do not acknowledge a message if you are unsure of its contents or meaning: Do not pass on unclear information.
- VHF/UHF (Very High Frequency/Ultra High Frequency) communications is half-duplex. This means that communications is in one direction at a time (you talk while the other person listens, then they talk while you listen). Your telephone is full duplex (which means you can both talk and listen at the same time).

Things to NEVER do:

- Do not talk to the media. If you are entering or leaving your Assignment/COOP/AWL (Continuity of Operations/Alternate Work Location) site and anyone (probably from the media) approaches you and wants to talk to you about what is going on there, tell them you are not authorized to discuss anything with them and they need to contact the Public Information Officer (PIO).
- **DO NOT EVER SAY ANYTHING THAT CAN IDENTIFY YOU OR THIS AS GOVERNMENT (Local/State/Federal) OR ARES! ALWAYS USE CALL SIGNS.**
- If there is an injury or fatality, **DO NOT EVER ANNOUNCE THE PERSON(S) NAME OVER THE AIR!** This is a direct violation of Health Insurance Portability and Accountability Act (HIPAA) rules. There might be someone listening on a scanner (the news media often does this). Along with this, do not use your name or anyone else's name over the air for the same reasons. Always use your call sign.
- Profanity is not allowed and is a violation under Federal Communications Commission (FCC) rules.

Interacting with the media

You do not interact with the media under any circumstances! If you are approached by anyone wishing to talk to you about what is going on with an event, you tell them that you are not authorized to speak with them and they need to contact the Public Information Officer (PIO)!

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Operating Reference

Transition with Replacement Personnel:

Brief your replacement on major events from the concluding operational period, unusual situations or conditions, and information required by the Communications Leader. The relief operator should arrive 30 minutes before their shift is supposed to start. This gives them time to be briefed and to familiarize them selves with the working environment. Provide written notes about items that need follow-up during the upcoming operational period. Include the following information:

- Operations Status:
  - Current activities
  - Messages awaiting reply
  - Messages not delivered
  - Orders not filled
  - Site statuses, including new sites opening or closing
- Equipment Status:
  - Equipment being demobilized
  - Frequency change(s)
  - Incoming order(s)
  - Phone number change(s)
  - Shift changes/rotations
- Any unusual communications situations:
  - Arrival of new resources
  - Operational period change(s)
  - Recent or on-going medical emergency(s)
- Advise as too any personnel that have medical conditions requiring emergency medication (Nitroglycerine, allergy Epi Pen, Bee Sting kit, Pace Makers, etc.) and where the medicine is located.

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Transfer of Command

The process of moving the responsibility for incident command from one Incident Commander to another is called "transfer of command." It should be recognized that transition of command on an expanding incident is to be expected. It does not reflect on the competency of the current Incident Commander.

There are five important steps in effectively assuming command of an incident in progress.

Step 1: The incoming Incident Commander should, if possible, personally perform an assessment of the incident situation with the existing Incident Commander.

Step 2: The incoming Incident Commander must be adequately briefed. This briefing must be by the current Incident Commander, and take place face-to-face if possible. The briefing must cover the following:

1. ☐ **Incident History (what has happened):**
   - ☐ ICS-201 Incident Briefing
   - ☐ ICS-202 Incident Objectives List
   - ☐ ICS-230 Daily Meeting Schedule
   - ☐ ICS-231 Meeting Summary

2. ☐ **Priorities and Objectives:**
   - ☐ ICS-202 Incident Objectives List
   - ☐ ICS-208HM Site Safety and Control Plan
   - ☐ ICS-221 Demobilization Plan
   - ☐ ICS-230 Daily Meeting Schedule
   - ☐ ICS-231 Meeting Summary
   - ☐ ICS Executive Summary
   - ☐ ICS General Plan
   - ☐ OSHA Abatement Plan Incident Management Team Checklist

3. ☐ **Current Plan:**
   - ☐ ICS-202 Incident Objectives List
   - ☐ ICS-208HM Site Safety and Control Plan
   - ☐ ICS-209 Incident Status Summary
   - ☐ ICS-220 Air Operations Summary
   - ☐ ICS-221 Demobilization Plan
   - ☐ ICS Executive Summary
   - ☐ ICS General Plan
   - ☐ OSHA Abatement Plan Incident Management Team Checklist

4. ☐ **Resource Assignments:**
   - ☐ ICS-203 Organization Assignment List
   - ☐ ICS-204 Assignment List
   - ☐ ICS-204A Assignment List Attachment
   - ☐ ICS-210 Status Change Card
   - ☐ ICS-211E Equipment Check-in List
   - ☐ ICS-211P Personnel Check-in List
   - ☐ ICS-214 Unit Log
   - ☐ ICS-218 Support Vehicle Inventory
   - ☐ ICS-219-2 Card Stock-Green (Crew)
   - ☐ ICS-219-4 Card Stock-Blue (Helicopter)
   - ☐ ICS-219-6 Card Stock-Orange (Aircraft)
   - ☐ ICS-219-7 Card Stock-Yellow (Dozer)
   - ☐ ICS-220 Air Operations Summary
   - ☐ Point of Distribution (POD) Daily Equipment Inventory Report
   - ☐ Point of Distribution (POD) Daily Supply Report

5. ☐ **Incident Organization:**
   - ☐ ICS-203 Organization Assignment List
   - ☐ ICS-207 Organizational Chart

6. ☐ **Resources Ordered/Needed:**
   - ☐ ICS-210 Status Change Card
   - ☐ ICS-211E Equipment Check-in List
   - ☐ ICS-211P Personnel Check-in List
   - ☐ ICS-214 Unit Log
   - ☐ ICS-215 Operational Planning Worksheet
   - ☐ ICS-308 Resource Order Form
   - ☐ Point of Distribution (POD) Daily Equipment Inventory Report
   - ☐ Point of Distribution (POD) Daily Supply Report

7. ☐ **Facilities Established:**
   - ☐ ICS-208HM Site Safety and Control Plan
   - ☐ ICS-210 Status Change Card
   - ☐ ICS-221 Demobilization Plan
   - ☐ Point of Distribution (POD) Site Setup Checklist

8. ☐ **Status of Communications:**
   - ☐ ICS-205 Incident Radio Communications Plan
   - ☐ ICS-205A Communications List
   - ☐ ICS-216 Radio Requirements Worksheet
   - ☐ ICS-217 Radio Frequency Assignment Worksheet

9. ☐ **Any Constraints or Limitations:**
   - ☐ ICS-208HM Site Safety and Control Plan
   - ☐ ICS-215A Incident Action Plan Safety Analysis
   - ☐ ICS-232A Area Contingency Plan (ACP) or Geographic Response Plan (GRP) Site Index
   - ☐ OSHA Abatement Plan Incident Management Team Checklist
   - ☐ Point of Distribution (POD) Daily Site Hazard Assessment Form

10. ☐ **Incident Potential:**
    - ☐ ICS-208HM Site Safety and Control Plan
    - ☐ ICS-215A Incident Action Plan Safety Analysis
    - ☐ ICS-232 Resources at Risk Summary
    - ☐ ICS-232A Area Contingency Plan (ACP) or Geographic Response Plan (GRP) Site Index
    - ☐ OSHA Abatement Plan Incident Management Team Checklist

11. ☐ **Delegation of Authority:**
    - ☐ ICS-207 Organizational Chart

12. ☐ **Advise of any personnel that have medical conditions requiring emergency medication (Nitroglycerine, allergies, Epi-Pen, Bee Sting kit, Pace Makers, medications, etc.):**
    - ☐ ICS-211P Personnel Check-in List
    - ☐ ICS-214A Individual Log

The ICS Form 201 is especially designed to assist in incident briefings. It should be used whenever possible because it provides a written record of the incident as of the time prepared. The ICS Form 201 contains:

- Incident objectives
- A place for a sketch map

- Summary of current actions
- Organizational framework
- Resources summary

Step 3: After the incident briefing, the incoming Incident Commander should determine an appropriate time for transfer of command. Ideally, this should not be done at the same time that the rest of the Incident Command is changing shifts. This allows the new Incident Command to continue working with the previous command staff.

Step 4: At the appropriate time, notice of a change in incident command should be made to:

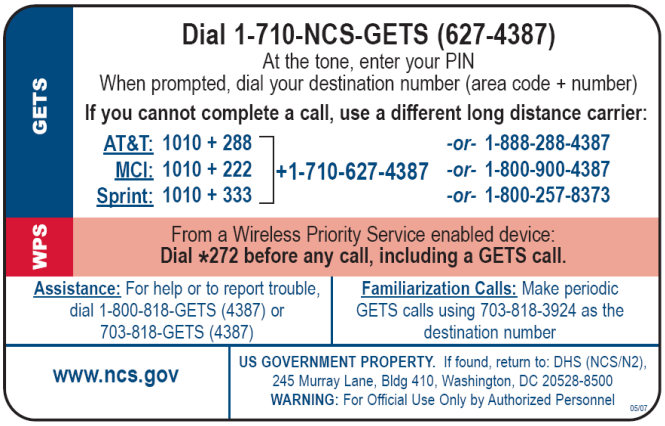
☐ Agency headquarters (through dispatch).
☐ General Staff members (if designated).
☐ Command Staff members (if designated).
☐ All incident personnel.

Step 5: The incoming Incident Commander may give the previous Incident Commander another assignment on the incident. There are several advantages of this:

☐ The initial Incident Commander retains first-hand knowledge at the incident site.
☐ This strategy allows the initial Incident Commander to observe the progress of the incident and to gain experience.

Home

Government Emergency Telecommunications Service (GETS)



Primary Calling Method:	Alternate Calling Method:
1. Get an outside line	1. Get an outside line
2. Listen for dial tone	2. Listen for dial tone
3. Dial 1-710-NCS-GETS	3. Dial: 1010 + 288 for AT&T, 1010 + 222 for MCI or 1010 + 333 for Sprint
4. Listen for the tone†	4. Dial 1-710-NCS-GETS
5. Enter your 12-digit PIN*	5. Listen for the tone†
6. Listen for the prompt	6. Enter your 12-digit PIN*
7. Enter the ten-digit destination number**	7. Listen for the prompt
8. If call fails, try Alternate Calling Method	8. Enter the ten-digit destination number**

† If you miss the tone or do not enter a PIN promptly, your call may be directed to a GETS operator. Please provide your 12-digit PIN and a destination number and they will complete the call.
* If an incorrect PIN was entered, listen for a voice prompt to reenter your PIN.
** For international calls, dial 011 + country code + city code (if required) + local phone number. International calls are allowed more than ten digits.
*** If both methods fail, calls can be attempted using the following toll-free numbers:

AT&T 1-888-288-4387 **MCI 1-800-900-4387** **Sprint 1-800-257-8373**

- Not all GETS priority enhancements are available using these numbers and in extreme congestion, these numbers may not work.
- GETS calls cannot be made to toll free 800, 888, 877, 866, 855 destination numbers.
- GETS User Assistance: Telephone: 1-(703)-818 GETS (4387) Toll-Free: 1-(800)-818-GETS (4387)
- Report a lost or stolen GETS card as soon as possible by calling User Assistance.

From a Payphone	From a Rotary Phone
1. Listen for dial tone	1. Listen for dial tone
2. Dial 1-710-NCS-GETS	2. Dial: 1010 + 222 for MCI or 1010 + 333 for Sprint
3. Listen for the tone†	3. Dial 1-710-NCS-GETS
4. Enter your 12-digit PIN*	4. Wait for the GETS operator
5. Listen for the prompt	5. Give your 12-digit PIN* and ten-digit destination number**
6. Enter the ten-digit destination number**	

† If you miss the tone or do not enter a PIN promptly, your call may be directed to a GETS operator. Please provide your 12-digit PIN and a destination number and they will complete the call.
* If an incorrect PIN was entered, listen for a voice prompt to reenter your PIN.
** For international calls dial 011 + country code + city code (if required) + local phone number. International calls are allowed more than ten digits.
*** If both methods fail, calls can be attempted using the following toll-free numbers:

AT&T 1-888-288-4387 **MCI 1-800-900-4387** **Sprint 1-800-257-8373**

From a Military Base in the USA	From an Overseas US Military Base
1. Get an outside line	1. Dial the base operator

2. Listen for dial tone	2. Request access to a US operator
3. Dial 1-710-NCS-GETS	3. Request a commercial line
4. Listen for the tone†	4. Listen for dial tone
5. Enter your 12-digit PIN*	5. Dial 1-710-NCS-GETS
6. Listen for the prompt	6. Listen for the tone†
7. Enter the ten-digit destination number**	7. Enter your 12-digit PIN*
8. If call fails, try Alternate Calling Method	8. Listen for the prompt
	9. Enter the ten-digit destination number**

† If you miss the tone or do not enter a PIN promptly, your call may be directed to a GETS operator. Please provide your 12-digit PIN and a destination number and they will complete the call.
* If an incorrect PIN was entered, listen for a voice prompt to reenter your PIN.
** For international calls dial 011 + country code + city code (if required) + local phone number. International calls are allowed more than ten digits.

From a Cell Phone, In-Flight or PCS Phone	**From a Secure Phone (STU-III or STE in STU-III Mode) ##**
1. Dial 710-NCS-GETS for a GETS call # Dial *272-710-NCSGETS if you subscribe to Wireless Priority Service (WPS) for a WPS call.	1. Dial 710-NCS-GETS
2. Press the SEND key	2. Listen for the tone†
3. Listen for the tone†	3. Enter your 12-digit PIN*
4. Enter your 12-digit PIN*	4. Listen for the prompt
5. Listen for the prompt	5. Enter the ten-digit destination number**
6. Enter the ten-digit destination number**	6. If making a secure voice mode call, go to secure mode after the destination answers
7. GETS access may not be available in all locations. There will be airtime charges for GETS calls	

† If you miss the tone or do not enter a PIN promptly, your call may be directed to a GETS operator. Please provide your 12-digit PIN and a destination number and they will complete the call.
* If an incorrect PIN was entered, listen for a voice prompt to re-enter your PIN
** For international calls dial 011 + country code + city code (if required) + local phone number. International calls are allowed more than ten digits.
# Cellular carriers may require a 1 before 710-NCSGETS
These calls may require a 1 prefix before 710-NCSGETS. Secure GETS calls cannot be made from STEs in the FNBDT mode.

From a Globalstar Satellite Phone	**From an Inmarsat/Iridium Phone**
1. Follow normal procedure to acquire satellite signal	1. Follow normal procedure to acquire satellite signal
2. Dial 1-710-NCS-GETS	2. For Inmarsat (depending on model): a) Dial 00-1-710-NCS-GETS or 011-1-710-NCS-GETS b) Press SEND (if required) For Iridium: a) Dial 00-1-710-NCS-GETS b) Press SEND
3. Press the SEND key	**Then for all:**
4. Listen for the tone†	3. Listen for the tone†
5. Enter your 12-digit PIN*	4. Enter your 12-digit PIN*
6. Listen for the prompt	5. Listen for the prompt
7. Enter the ten-digit destination number**	6. Enter the ten-digit destination number**

† If you miss the tone or do not enter a PIN promptly, your call may be directed to a GETS operator. Please provide your 12-digit PIN and a destination number and they will complete the call.
* If an incorrect PIN was entered, listen for a voice prompt to reenter your PIN.
** For international calls dial 011 + country code + city code (if required) + local phone number. International calls are allowed more than ten digits.

From an FTS Phone Line	**From a DSN Phone Line**
1. Access FTS	1. Access DSN

2. Dial 1-710-NCS-GETS	2. Dial 1-710-NCS-GETS
3. Listen for the tone†	3. Listen for the tone†
4. Enter your 12-digit PIN*	4. Enter your 12-digit PIN*
5. Listen for the prompt	5. Listen for the prompt
6. Enter the ten-digit destination number**	6. Enter the ten-digit destination number**
† If you miss the tone or do not enter a PIN promptly, your call may be directed to a GETS operator. Please provide your 12-digit PIN and a destination number and they will complete the call. * If an incorrect PIN was entered, listen for a voice prompt to reenter your PIN. ** For international calls dial 011 + country code + city code (if required) + local phone number. International calls are allowed more than ten digits.	
From Another Country using DTS	**From Another Country using Direct Dialing (Any Touch-Tone Phone)**
1. Dial the Post PBX access code to reach the DTS International Voice Gateway	1. Listen for dial tone
2. Listen for dial tone	2. Dial country code for US
3. Dial 96 [the DTS PSN access code]	3. Dial 1-710-NCS-GETS
4. Dial 1-710-NCS-GETS	4. Listen for the tone†
5. Listen for the tone†	5. Enter your 12-digit PIN*
6. Enter your 12-digit PIN*	6. Listen for the prompt
7. Listen for the prompt	7. Enter the ten-digit destination number**
8. Enter the ten-digit destination number**	
† If you miss the tone or do not enter a PIN promptly, your call may be directed to a GETS operator. Please provide your 12-digit PIN and a destination number and they will complete the call. * If an incorrect PIN was entered, listen for a voice prompt to reenter your PIN. ** For international calls dial 011 + country code + city code (if required) + local phone number. International calls are allowed more than ten digits.	
From Another Country using AT&T Direct (From Any Phone)	**From Another Country using MCI WorldPhone (From Any Touch-Tone Phone)**
1. Get an outside line	1. Get an outside line
2. Listen for dial tone	2. Listen for dial tone
3. Dial the AT&T Direct access number	3. Dial the MCI World-Phone access number
4. Wait for an operator††	4. Wait for an operator††
5. Tell the operator, “This is a Government Emergency Telecommunications Service(GETS) call, the number is 710-627-4387”	5. Tell the operator, “This is a Government Emergency Telecommunications Service(GETS) call, the number is 710-627-4387”
6. Listen for the tone†	6. Provide operator with GETS PIN and ten-digit destination 7. number**
7. Enter your 12-digit	
8. Enter the ten-digit destination number**	
† If you miss the tone or do not enter a PIN promptly, your call may be directed to a GETS operator. Please provide your 12-digit PIN and a destination number and they will complete the call. †† Do not respond to automated prompts; wait for the operator * If an incorrect PIN was entered, listen for a voice prompt to reenter your PIN. ** For international calls dial 011 + country code + city code (if required) + local phone number. International calls are allowed more than ten digits. Entire call, international and domestic, will be billed to your GETS PIN.	

Home

Telecommunications Service Priority (TSP)

A TSP service user is any individual or organization supported by a telecommunications service for which a TSP assignment has been requested or assigned. NS/EP telecommunications services within the Federal, State, local, or foreign governments, as well as private industry, are eligible for TSP. Federal users do not require a sponsor, but generally have a centralized Point of Contact (POC) that routinely interacts with the Office of Priority Telecommunications (OPT). Non-Federal users (e.g., State, local, foreign governments) require a sponsor.

- New TSP User
- Established TSP User

Guidance for specific types of organizations that commonly request TSP appears in the following links (all documents are in the Microsoft Word format):

- **First Responders**
  First Responders FAQs
  First Responders Enrollment Guide
- **Health Care**
  Health Care FAQs
  Health Care Enrollment Guide
- **Public Safety Answering Points (PSAP)**
  PSAP FAQs
  PSAP Enrollment Guide
- **Public Utilities Commission (PUC)**
  PUC FAQs
  PUC Enrollment Guide

TSP Sponsors and Invocation Official

All non-Federal users who request a TSP provisioning and/or restoration assignment are required to have a Federal sponsor. A sponsor can be any Federal agency with which a non-Federal user may be affiliated (as specified in Executive Order (EO) 12656, "Assignment of Emergency Preparedness Responsibilities," dated November 18, 1988). Additionally, all users who need an NS/EP provisioning assignment are required to contact their invocation official. An invocation official is a designated individual who has the authority to request an accelerated provisioning for an NS/EP telecommunications service. This chapter outlines the responsibilities of Federal sponsors and invocation officials.

- Federal Sponsors
- Invocation Official

Wireless Priority Service (WPS)

When to Use WPS

- When a cell phone user is unable to complete a call in two attempts using normal dialing during periods of network congestion, they should re-attempt their call using Wireless Priority Service. WPS calls can be made to other cell phones, landlines, and satellite phones.
- The WPS feature must be subscribed on the calling cellular phone to make a WPS call. However, the called number does not need to have WPS or GETS. WPS should not be used when calling 911.

How to Make a WPS Call

- Confirm WPS subscribed cell phone is in range of radio signal (one or more “bars” on display screen)
- Enter *272 and the Destination Number and push SEND key (example: *272 703 818 4387 and SEND)
- Network will route call to the Destination Number. It may take 60+ seconds to complete the call during heavy congestion and there may be intervals of ringing and/or silence; this is normal. On most cell phones the screen will display *272 and the Destination Number. Some cell phones may display call status messages such as call queued and/or provide audible tones indicating the call has been queued
- If first attempt does not complete end the call and retry by pressing send key to auto redial; or add *272 prefix to emergency numbers stored in cell phone memory for quick re-dialing. Some cell phones automatically retry calls that do not complete on the first attempt – the screen message will indicate if the phone is retrying the call

- These instructions are in the document "Using GETS and WPS During an Emergency" that can be downloaded and printed from the *Documents* section.

When to Make a WPS + GETS Call

- Network congestion is likely to vary among carriers and locations. Some users may be able to make normal cell calls while others will need to use WPS. Network congestion can change over short time intervals and distances. WPS users should continue to retry WPS calls after a short wait or change in location if they have difficulty completing WPS calls.
- However, when WPS calls to the same destination number do not complete (typically resulting in a fast busy, all circuits busy or similar announcement, or 60+ seconds of silence), users should retry their call using WPS + GETS - see How to make a WPS + GETS Call below. This sends the call directly to one of three GETS carriers, providing multiple alternate routes for the call to complete.
- When WPS calls are not completing because the called number is busy and there is no forwarding feature to voice mail or alternate number, the user will usually hear a standard busy signal and the display screen will show that the called number is busy or in-use. In this instance, the user should continue to retry the call alternately using normal dialing and WPS.

How to Make a WPS + GETS Call

- Confirm radio signal and view PIN and GETS access number on your GETS Card.
- Enter *272 710 627 4387 (710 NCS GETS) and push SEND key.
- The call will be routed to one of the three GETS carriers. It may take 60+ seconds to connect to a GETS carrier during heavy network congestion.
- Listen for the tone, then enter the twelve digit PIN on front of GETS Card (do not enter # after last digit).
- Listen for voice prompt: "Please enter your Destination Number now".
- Enter the Destination Number (omit the 1 before the Area Code).
- You will hear an announcement "You are using GETS, AT&T/MCI/Sprint". Network will route your call to the Destination Number - may take 60+ seconds after the announcement to connect to Destination Number during heavy network congestion .
    - If WPS + GETS calls do not complete, use the toll free numbers on back of GETS Card instead of 710 627 4387 to retry the call, beginning with Step 2 above. This provides additional routes for the call to complete.
        - **AT&T: *272-888-288-4387**
        - **MCI: *272-800-900-4387**
        - **Sprint: *272-800-257-8373**
- Note that the 1010 numbers on the back of the GETS card cannot be used with cell phones

Answering Incoming Calls

- Answering an incoming WPS (or GETS) call to a cell phone during times of network congestion is the same as answering any other incoming call; simply answer when the phone rings. There are no special indications that an incoming call is a WPS or GETS call.

Understanding How WPS Works

Some WPS Users find it useful to understand how WPS works:

- When the WPS subscriber pushes the send key after entering *272 plus the Destination Number, the call is given priority for the next available radio connection between the user's cell phone and the service provider's network equipment. If a radio connection is not immediately, available WPS calls are placed in queue for the next available connection. When a radio connection becomes available the call is automatically connected to the network equipment. WPS calls can queue for up to 30 seconds to access an originating radio connection.
- Once a radio connection is established, the service provider's network equipment gives the call priority marking and routes it to the called number location. If there is network congestion along the available routes to the called location, WPS calls may be re-routed or placed in queue until a route becomes available. WPS calls can be queued one or more times as they are routed from the originating location to the destination location.

- When a route to the destination location becomes available the WPS call, along with its priority marking, is sent to the network equipment associated with the called number:
    - If the call is to a landline, it receives priority treatment for connection to the Destination Number's local telephone line. If the line is available, the caller will hear ringing; if it is busy, the caller will hear a normal busy signal or it may forward to voice mail or an alternate line. Note that WPS calls do not interrupt existing calls.
    - If the call is to a cell phone served by a WPS capable carrier, the call will have priority for the next available radio connection to the called cell phone. Only the calling cell phone needs to have the WPS feature, the called cell phone does not need to have WPS. If a radio connection is not immediately available, the call will queue for a radio connection. When a radio connection becomes available, the call will be automatically connected and the caller will hear ringing or be forwarded to voice mail if the call is not answered. WPS calls can queue for up to 30 seconds to access the terminating local radio connection. Be sure you regularly check your voice mail if you are expecting emergency calls during times of network congestion. If you have difficulty reaching voice mail, use WPS by dialing *272 and the voice mail access code for your service provider.
    - If the call is to a cell phone on a cellular network without WPS and there is no congestion the caller will hear ringing or be forwarded to voice mail if the call is not answered.
- If you are using your cell phone and receive a Call Waiting indication (tone and/or screen message), you will be able to answer the call waited call even if there is local radio congestion. This is because you already have a radio connection with your existing call. Be sure to accept the call waited call using the answer Call Waiting procedure for your model of cell phone. If you disconnect the existing call and then attempt to answer the call waited call, you will disconnect the radio connection and a new radio connection will have to be established. If you choose not to answer the call waited call it will forward to voice mail after several rings if you have voice mail.

Information for POCs and Telecommunications Support Personnel

- The purpose of this section is to provide GETS/WPS Points of Contact (POCs), Alternate POCs, and telecommunications support personnel with additional information for assisting their organization's WPS Users. This information should be kept readily available for use during an emergency or disaster when network congestion is likely to occur.
- The POC and Alternate (and other individuals designated by the organization) are responsible for making sure that each user's WPS feature is activated on their cell phone and that the user is familiar with how to use WPS. The user and the POC/Alternate POC are sent an email when the service provider activates WPS on the user's cell phone. The POC should contact the user to confirm that the user has made WPS test calls. If the user is unable to complete WPS test calls they should call the user assistance number, located on the back of the GETS card. That number is 1-800-818-4387 or 1-703-818-4387.
- Because it may be necessary to use GETS in conjunction with WPS, each WPS user should have a GETS card. The POC/Alternate POC should make sure WPS users have their GETS card with them at all times, and continue to make periodic test calls to assure familiarity with:
    - How to make WPS calls.
    - How to retry WPS calls using the send key and/or adding *272 to emergency numbers stored in cell phone memory for quick re-dialing.
    - When to make WPS + GETS calls.
    - How to make WPS + GETS calls.
    - How to accept call waited calls.
    - How to use WPS to access voice mail.

To assist in training users, the document *Using GETS and WPS During an Emergency*, can be downloaded and printed from the Documents section. It is formatted for two-sided printing on a single sheet. Copies should be provided to all WPS users and be placed in the Emergency Operations Center and other locations and vehicles where GETS and WPS are likely to be used. Space is provided for entering contact information for the organization's POC and Alternate POC.

POCs and Telecommunications Support staff should consider the following when implementing WPS in their organization:

- To make a WPS call the user's cell phone must be in range of a cellular radio signal. Damage to cellular radio facilities and extended power failures can affect the cellular radio signal. In the event of major damage to the cellular infrastructure, cellular carriers may deploy backup mobile radio transmission towers to provide service in affected areas. A major emergency or disaster could result in short term unavailability of cellular radio signals, but service providers may be able to restore service within a short period of time. Thus, WPS users should regularly check their cell phones during an extended emergency to determine if service is available. When service is restored, there may be limited capacity and it may be very difficult to complete cellular calls without WPS.
- Network congestion, when it occurs, will probably vary among carriers and locations. For this reason, emergency response organizations should consider obtaining cell service from several WPS capable service providers.
- It is important that your organization's landline emergency telephone lines will not be overloaded by non-essential calls. Make sure that telephone numbers for EOCs and other critical locations are appropriately disclosed. Also, check with telecommunications staff to make sure that emergency numbers are not bundled in large trunk groups where calls to non-essential extensions could busy out the entire trunk group. Likewise, make sure that key emergency personnel can get priority access to outside lines to make GETS calls when they cannot use their cell phones.
- Calls to toll free numbers (800, 888, etc) may be less likely to complete during periods of network congestion or when the network is impaired because calls to these number require additional processing. Most toll free numbers have an associated regular telephone number. It is recommended that these regular telephone numbers be provided to emergency personnel so they can dial the regular telephone number rather than the toll free number to increase the probability of call completion during an emergency.
- During an extended emergency commercial power may not be available for charging cell phone batteries. WPS users should have car chargers and a supply of extra batteries should be kept on hand.

Secure Phones

Sectera Secure Wireless Phone Brochure
Availability and Procurement for Secure GSM
Instructions for placing a secure WPS call with Sectera

Home

Message Forms

- If you need to take a message, use the FEMA ICS Form 213 General Message Form, or you can double click on the icons to open the embedded files in either Adobe Acrobat or Microsoft Word:

ICS Form 213 General Message Form

ICS Form 213 General Message Form

- If you need to take a Radiogram message, use the ARRL Radiogram Message Form, or you can double click on the icons to open the embedded files in either Adobe Acrobat or Microsoft Word:

Radiogram Message Form

Radiogram Message Form

- If you need to take an ARRL/ARES Disaster Welfare message, use the FSD-244 ARRL/ARES Disaster Welfare Message Form, or you can double click on the icons to open the embedded files in either Adobe Acrobat or Microsoft Word:

FSD-244 ARRL/ARES Disaster Welfare Message Form

FSD-244 ARRL/ARES Disaster Welfare Message Form

- If you need to take an American Red Cross Disaster Welfare message, use the ARC Form 2079-I - Health and Welfare Message Form, or you can double click on the icons to open the embedded files in either Adobe Acrobat or Microsoft Word:

ARC Form 2079-I - Health and Welfare Message Form

ARC Form 2079-I - Health and Welfare Message Form

- If you need to take a SHARES message, use the SHARES HF Radio Program Message Form 2, or you can double click on the icons to open the embedded files in either Adobe Acrobat or Microsoft Word:

SHARES HF Radio Program Message Form 2

SHARES HF Radio Program Message Form 2

- If you need to take a CERT message, use the CERT Message Form, or you can double click on the icons to open the embedded files in either Adobe Acrobat or Microsoft Word:

CERT Message Form

CERT Message Form

Home

ICS Form 213 General Message		
1. Incident Name:	**2. Date and Time of Message:**	**Message Number:**
3. TO:	**ICS Position:**	
4. FROM:	**ICS Position:**	
5. Subject:		
6. Message:		
7. Reply:		
8. Signature/Position (person replying):	**Date & Time of reply:**	

General Message (ICS FORM 213-OS)

Purpose: The General Message is used by:

- Incident personnel to record incoming messages which cannot be orally transmitted to the intended recipients; Command Post and other incident personnel to transmit messages to the Incident Communications Center for transmission via radio or telephone to the addressee;
- Incident personnel to send any message or notification to incident personnel which requires a hard-copy delivery; Incident personnel to place resource orders.

Preparation: This form is prepared by any incident personnel needing to transmit a hard-copy message. The recipient should send a timely reply to the originator, as necessary.

Distribution: Upon completion, the General Message may be hand-carried to the addressee or to the incident Communications Center for transmission. Originator retains a copy of the form. All completed original forms MUST be given to the Documentation Unit.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Date and Time of Message	Enter the date and time of message origination.
	Message Number	Enter a tracking number of the message for later reference.
3.	To	Enter name and ICS position of message recipient.
4.	From	Enter name and ICS position of message sender.
5.	Subject	Indicate the message subject.
6.	Message	Enter message.
7.	Reply	This section to be used by the unit/person who receives the message to reply to your message.
8.	Signature/Position	Enter name and position of person replying to this message.
	Date/Time of reply	Enter date (month, day & year) and time of reply (24-hour clock).

- Please be civil and do not put anything mean or degrading in the message as these message forms may become permanent files for the incident and may be subject to review later.

Number	Precedence	HX	Station of Origin	Check	Place of Origin	Time Filed	Date
	Emergency P W R	A B C D E F G					

To:

Name _____
Address _____
_____
City, State & ZIP _____
Telephone _____

This Radio Message was received at:

Amateur Station _____ Date _____
Name _____
Address _____
_____
City, State & ZIP _____

Message

REC'D	From	Date	Time	SENT	To	Date	Time

A licensed Amateur Radio Operator, whose address is shown above, handled this message free of charge. As such messages are handled solely for the pleasure of operating; a "Ham" Operator can accept no compensation. A return message may be filed with the "Ham" delivering this message to you. Further information on Amateur Radio may be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111.

The American Radio Relay League, Inc. is the National Membership Society of licensed radio amateurs and the publisher of QST Magazine. One if its functions are promotion of public service communication among Amateur Operators. To that end, The League has organized the National Traffic System (NTS) for daily nationwide message handling.

Number	Precedence	HX	Station of Origin	Check	Place of Origin	Time Filed	Date
	Emergency P W R	A B C D E F G					

To:

Name _____
Address _____
_____
City, State & ZIP _____
Telephone _____

This Radio Message was received at:

Amateur Station _____ Date _____
Name _____
Address _____
_____
City, State & ZIP _____

Message

REC'D	From	Date	Time	SENT	To	Date	Time

A licensed Amateur Radio Operator, whose address is shown above, handled this message free of charge. As such messages are handled solely for the pleasure of operating; a "Ham" Operator can accept no compensation. A return message may be filed with the "Ham" delivering this message to you. Further information on Amateur Radio may be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111.

The American Radio Relay League, Inc. is the National Membership Society of licensed radio amateurs and the publisher of QST Magazine. One if its functions are promotion of public service communication among Amateur Operators. To that end, The League has organized the National Traffic System (NTS) for daily nationwide message handling.

INSTRUCTIONS FOR FILLING OUT THE ARRL RADIOGRAM

Item Title	Instructions
Number	Message number, used for tracking purposes
Precedence	**EMERGENCY:** Any message having life and death urgency to any person or group of persons, which is transmitted by you in the absence of regular commercial facilities. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to relief of stricken populace in emergency areas. During normal times, it will be very rare. When in doubt, do not use it. **PRIORITY:** This classification is for a) important messages having a specific time limit b) official messages not covered in the emergency category c) press dispatches and emergency-related traffic not of the utmost urgency d) notice of death or injury in a disaster area, personal or official. **WELFARE:** This classification refers to either an inquiry as to the health and welfare of an individual in the disaster area or an advisory from the disaster area that indicates all is well. Welfare traffic is handled only after all emergency and priority traffic is cleared. The Red Cross equivalent to an incoming Welfare message is DWI (Disaster Welfare Inquiry). **ROUTINE:** Most traffic in normal times will bear this designation. In disaster situations, traffic labeled Routine should be handled last, or not at all when circuits are busy with higher precedence traffic.
HX	**HXA:** (Followed by number) Collect landline delivery authorized by addressee within _____ miles. (If no number, authorization is unlimited.) **HXB:** (Followed by number) Cancel message if not delivered within _____ hours of filing time; service originating station. **HXC:** Report date and time of delivery (TOD) to originating station. **HXD:** Report to originating station the identity of station from which received, plus date and time. Report identity of station to which relayed, plus date and time, or if delivered report date, time and method of delivery. **HXE:** Delivering station get reply from addresses, originate message back. **HXF:** (Followed by number) Hold delivery until _____ (date). **HXG:** Delivery by mail or landline toll call not required. If toll or other expense involved, cancel message and service originating station.
Station of Origin	Location of station sending message (first amateur handler).
Check	Total word count of actual message.
Place of Origin	Location of message origination (not necessarily location of station of origin).
Time Filed	Time the message was filed.
Date	Date message was filed.
To	Whom the message is for/going to.
This Radio Message was received at	Information of station receiving message.
Message	Contents of message (limit to 25 words or less, if possible). Be attentive if using ARL message numbers.
REC'D	Fill in the following information: From- Callsign of station sending message, Date- Date message received, Time- Time message received (24-hour clock)
SENT	Fill in the following information: To- Callsign of station receiving message, Date- Date message sent, Time- Time message sent (24-hour clock)

- Please be civil and do not put anything mean or degrading in the message as these message forms may become permanent files for the incident and may be subject to review later.

FSD-244 ARRL/ARES Disaster Welfare Message Form							
Number	**Precedence**	**HX**	**Station of Origin**	**Check**	**Place of Origin**	**Time Filed**	**Date**
	Emergency P W R	A B C D E F G					

To:
Name _____
Address _____
_____
City, State & ZIP _____
Telephone _____

Message Receipt or Delivery Information:
Operator _____ Station _____
Sent To _____
Delivered To _____
Date & Time _____

Circle not more than two standard texts from the list below

ARL ONE Everyone safe here. Please don't worry.
ARL TWO Coming home as soon as possible.
ARL THREE Am in _____ hospital. Receiving excellent care and recovering fine.
ARL FOUR Only slight property damage here. Do not be concerned about disaster reports.
ARL FIVE Am moving to new location. Send no further mail or communications. Will inform you of new address when relocated.
ARL SIX Will contact you as soon as possible.
ARL SIXTY-FOUR Arrived safely at _____.

Time	Date	Telephone	Signature	Name

FSD-244 ARRL/ARES Disaster Welfare Message Form							
Number	**Precedence**	**HX**	**Station of Origin**	**Check**	**Place of Origin**	**Time Filed**	**Date**
	Emergency P W R	A B C D E F G					

To:
Name _____
Address _____
_____
City, State & ZIP _____
Telephone _____

Message Receipt or Delivery Information:
Operator _____ Station _____
Sent To _____
Delivered To _____
Date & Time _____

Circle not more than two standard texts from the list below

ARL ONE Everyone safe here. Please don't worry.
ARL TWO Coming home as soon as possible.
ARL THREE Am in _____ hospital. Receiving excellent care and recovering fine.
ARL FOUR Only slight property damage here. Do not be concerned about disaster reports.
ARL FIVE Am moving to new location. Send no further mail or communications. Will inform you of new address when relocated.
ARL SIX Will contact you as soon as possible.
ARL SIXTY-FOUR Arrived safely at _____.

Time	Date	Telephone	Signature	Name

INSTRUCTIONS FOR FILLING OUT THE ARES DISASTER WELFARE MESSAGE FORM

Item Title	Instructions
Number	Message number, used for tracking purposes. Begin with 1 each month or year.
Precedence	**EMERGENCY:** Any message having life and death urgency to any person or group of persons, which is transmitted by you in the absence of regular commercial facilities. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to relief of stricken populace in emergency areas. During normal times, it will be very rare. When in doubt, do not use it. **PRIORITY:** This classification is for a) important messages having a specific time limit, b) official messages not covered in the emergency category, c) press dispatches and emergency-related traffic not of the utmost urgency, d) notice of death or injury in a disaster area, personal or official. **WELFARE:** This classification refers to either an inquiry as to the health and welfare of an individual in the disaster area or an advisory from the disaster area that indicates all is well. Welfare traffic is handled only after all emergency and priority traffic is cleared. The Red Cross equivalent to an incoming Welfare message is DWI (Disaster Welfare Inquiry). **ROUTINE:** Most traffic in normal times will bear this designation. In disaster situations, traffic labeled Routine should be handled last, or not at all when circuits are busy with higher precedence traffic.
HX	**HXA:** (Followed by number) Collect landline delivery authorized by addressee within ____ miles. (If no number, authorization is unlimited.) **HXB:** (Followed by number) Cancel message if not delivered within _____ hours of filing time; service originating station. **HXC:** Report date and time of delivery (TOD) to originating station. **HXD:** Report to originating station the identity of station from which received, plus date and time. Report identity of station to which relayed, plus date and time, or if delivered report date, time and method of delivery. **HXE:** Delivering station get reply from addresses, originate message back. **HXF:** (Followed by number) Hold delivery until _____ (date). **HXG:** Delivery by mail or landline toll call not required. If toll or other expense involved, cancel message and service originating station.
Station of Origin	Location of station sending message (first amateur handler).
Check	Total word count of actual message.
Place of Origin	Location of message origination (not necessarily location of station of origin).
Time Filed	Time the message was filed.
Date	Date message was filed.
To	Whom the message is for/going to.
Message Receipt or Delivery Information	Fill in information.
Circle not more that two standard texts from the list below	Circle not more than two standard texts from the list and fill in if needed.
Time/Date/Telephone/ Signature/Name	Fill in information for person making request.

Do you have an immediate family member you have been unable to contact because of the disaster?

The American Red Cross Disaster Welfare Information function can assist you. We will be happy to contact your relative and pass a brief message to them concerning your health and welfare following this disaster.

Please complete the information requested below, sign the form permitting us to contact your relative, and return it to the Red Cross worker with whom you are meeting.

Thank you and we look forward to reconnecting you with your family.

Client Information

Name		Date	
Pre-Disaster Address			
Post-Disaster Address			
Pre-Disaster Phone		Post-Disaster Phone	

Family Contact Information

Name		Relationship to You	
Address			
Phone		E-mail	

Your Short Message:	

Client Release to Contact Family

I authorize the American Red Cross to contact the designated family member to relay the above, informing them of my current health and welfare. I ☐ do/ ☐ do not grant permission for the above designated family member to notify other family members.

Signature of Client _____ **Date** _____

Printed Name of Client _____

Name of Red Cross Worker _____ **Function** _____

SHARES HF RADIO PROGRAM MESSAGE FORM 2

THIS IS

_____ (CALLED STATION CALLSIGN) _____ (CALLING STATION CALLSIGN)

TIME: _____ (ZULU)
DAY TIME MONTH

FROM: _____
NAME AGENCY CITY STATE TELEPHONE

TO: _____
NAME AGENCY CITY STATE TELEPHONE

MESSAGE CONTAINS ( ) PARAGRAPHS
MESSAGE FOLLOWS

PARA 1 **THIS IS A SHARES (EXERCISE) MESSAGE** _____

PARA 2 _____

END OF MESSAGE ☐ **OVER** ☐

OPERATOR NOTES

For Messages Received	For Messages Transmitted	Remarks
Time: _____ (Time Message Received)	Time: _____ (Time Message Transmitted)	
From: _____ (Callsign)	From: _____ (Callsign)	
Frequency: _____	Frequency: _____	
Name: _____ (Operator)	Name: _____ (Operator)	

SHARES HF RADIO PROGRAM MESSAGE FORM 2 (Message continued from front)

Instructions for filling out the SHARES Form 2

Item #	Item Title	Instructions
1.	CALLED STATION CALLSIGN	This is whom you are calling.
2.	CALLING STATION CALLSIGN	This is your callsign.
3.	TIME	Enter day, time and month (24-hour clock).
4.	FROM	Enter name, agency, city, state, telephone.
5.	TO	Enter name, agency, city, state, telephone.
6.	MESSAGE CONTAINS	Enter number of paragraphs in message.
7.	END OF MESSAGE OVER	Circle if this is the end of the message. Circle if message is continued on back of form.
8.	FOR MESSAGES RECEIVED	Enter time (24-hour clock), callsign of person receiving message, the channel or frequency message was received on and your name.
9.	FOR MESSAGES TRANSMITTED	Enter time (24-hour clock), callsign of person sending message, the channel or frequency message was received on and your name.
10.	REMARKS	Any remarks.

- Please be civil and do not put anything mean or degrading in the message as these message forms may become permanent files for the incident and may be subject to review later.

Community Emergency Response Team (CERT) Message Form	
To:	**Message Center Use Only** **Incident:** _____
From:	**Time:**_____ **Date:** _____
Time:	☐ **Incoming** ☐ **Outgoing**
Date:	
Message Text:	
Action Taken:	

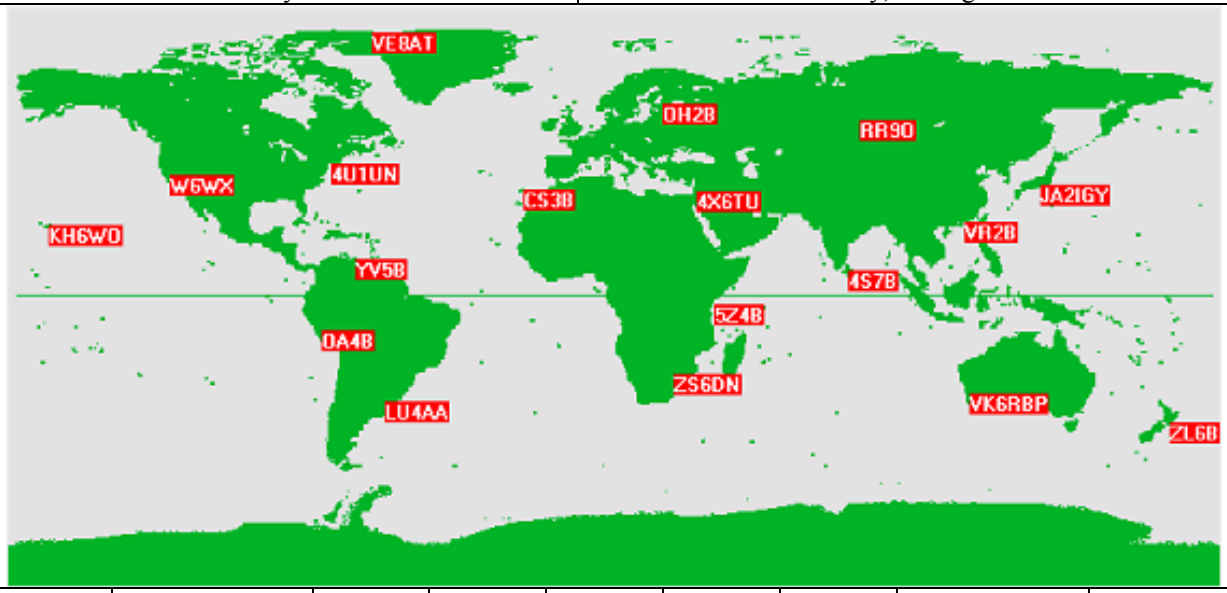
Use Clear Concise Plain Text www.cert-la.com 30 December 2008

Record incident assignments from Damage Assessment sheets. When incident is complete, enter end time and make a backslash for that incident on the Damage Assessment.

Please be civil and do not put anything mean or degrading in the message as these message forms may become permanent files for the incident and may be subject to review later.

NCDXF/IARU Beacon Transmission Schedule

Written by Xavier | Wednesday, 08 August 2007



Call	Location	14.100	18.110	21.150	24.930	28.200	Operator	Grid Square
4U1UN	United Nations	00:00	00:10	00:20	00:30	00:40	UNRC	FN3Øas
VE8AT	Canada	00:10	00:20	00:30	00:40	00:50	RAC/NARC	EQ79ax
W6WX	United States	00:20	00:30	00:40	00:50	01:00	NCDXF	CM97bd
KH6WO	Hawaii	00:30	00:40	00:50	01:00	01:10	KH6BYU	BL11ap
ZL6B	New Zealand	00:40	00:50	01:00	01:10	01:20	NZART	RE78tw
VK6RBP	Australia	00:50	01:00	01:10	01:20	01:30	WIA	OF87av
JA2IGY	Japan	01:00	01:10	01:20	01:30	01:40	JARL	PM84jk
RR9O	Russia	01:10	01:20	01:30	01:40	01:50	SRR	NO14kx
VR2B	Hong Kong	01:20	01:30	01:40	01:50	02:00	HARTS	OL72bg
4S7B	Sri Lanka	01:30	01:40	01:50	02:00	02:10	RSSL	NJ06cc
ZS6DN	South Africa	01:40	01:50	02:00	02:10	02:20	ZS6DN	KG44dc
5Z4B	Kenya	01:50	02:00	02:10	02:20	02:30	ARSK	KI88ks
4X6TU	Israel	02:00	02:10	02:20	02:30	02:40	IARC	KM72jb
OH2B	Finland	02:10	02:20	02:30	02:40	02:50	SRAL	KP2Ø
CS3B	Madeira	02:20	02:30	02:40	02:50	00:00	ARRM	IM12or
LU4AA	Argentina	02:30	02:40	02:50	00:00	00:10	RCA	GFØ5tj
OA4B	Peru	02:40	02:50	00:00	00:10	00:20	RCP	FH17mw
YV5B	Venezuela	02:50	00:00	00:10	00:20	00:30	RCV	FK6Ønj

All about Beacon Project at: http://www.ncdxf.org/beacons.html

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National Capital ARES® Council Frequencies (All frequencies are in MHz)				
Jurisdiction	**Primary Repeater**	**Secondary Repeater**	**Simplex**	**Packet**
Maryland	147.105+	146.730	3.920	144.390
Anne Arundel	146.805	147.105+		145.750
Calvert	146.985 PL156.7	147.195 PL156.7	146.580	
Charles	145.390 PL186.2	443.700		
DC	145.430	147.045	146.505	
Frederick	147.060			
Hagerstown	147.090			
Montgomery	146.955	145.450	146.460	145.750
Prince George	146.610	146.880 & 147.150 PL114.8	147.540	145.750
Skywarn	147.300			
Towson	147.030			145.730
ARC (Chapter-Chapter)			146.535	
ARC (On-Site)			147.420	
Baltimore Traffic Net	146.670			
Virginia	146.910- (Primary) 147.300+ (Alt/Liaison) 145.210 PL141.3 (Western Counties)		3.947 or 7.240 (Alt)	145.730 144.390
Alexandria	146.655- PL141.3	147.315+	146.490	
Arlington	445.150	449.325 PL151.4	445.959	
Fairfax	146.790-	146.910- & 224.100	146.415	
Falls Church	447.425 PL91.5	147.210	147.540	
Fauquier	147.165			
Loudoun	145.310+	443.225 PL103.5 (Portable) 147.330+ PL203.5 (Dulles Airport 15W)	147.480	
Prince William	146.970- PL100 (Manassas) 147.240+ (Woodbridge)	444.900+ (Woodbridge) 442.200+ PL100 (Manassas)	147.525 (Primary) 146.475 (Secondary) 445.925 (Tertiary)	145.730
Skywarn	147.300+			
MedComm			146.445	145.730
ARC (Chapter-Chapter)			146.535	
ARC (On-Site)			147.420	
Northern Virginia Traffic Net	147.300+			

- These tables represent the NCAC Coordinated frequencies for ARES ®/RACES nets in the Greater Metro Washington, DC area. In the event of a regional emergency in Maryland, logistics support will be requested on 146.910 (VA). In the event of a regional emergency in Virginia, logistical support will be requested on 147.105 (MD).
- Corrections and additions may be submitted by ECs and/or ROs to David Lane, KG4GIY (kg4giy@arrl.net). The most current frequency list can be found at http://www.ncacdc.com/. In the event of an emergency, tune your radio to the logistics frequency and check in as instructed.
- 144.390 MHz is the National APRS frequency. Set a CT tone of 100 Hz to “quiet” the radio and it will “beep” if there is a station within a mile or two of your position. Along with doing that, monitor 147.525 MHz and when the radio “beeps” from a nearby station, ask who is calling CQ.
- Alternate APRS frequencies: 144.990 MHz (Many Areas), 144.350 MHz (Western Washington State), 445.925 MHz (Proposed by Bob Bruninga, WB4APR).

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Prince William County ARES ®/RACES Frequencies (All frequencies are in MHz)				
Channel:	**Name:**	**Function:**	**Frequency:**	**Remarks:**
1	OVH2M	Operations & Logistics	146.970- or 147.240+	Logistics Net
2	WWI2M	Operations & Logistics	147.240+ or 146.970-	Operations Net
3	NVFM2M	Fairfax ARES	146.790-	Fairfax ARES Logistics/Operations Net
4	NVREGN	Northern Virginia Regional Operations and Coordination	146.910- (Primary) 147.300+ (Alt/Liaison) 145.210 PL141.3 (Western Counties)	Washington Metro Regional Logistics Net (VA)
5	SKYWARN	Skywarn	147.300+	Skywarn/District 2/NVTN Regional Repeater
6	MDREGN	Maryland Regional Operations and Coordination	147.105+ (Primary) 146.730 (Secondary)	Washington Metro Regional Logistics Net (MD)
7	MTVERN	Mount Vernon (Alexandria)	146.655- PL141.3	Mount Vernon/Alexandria
8	ALEX2M	Alexandria ARES	147.315+	Alexandria ARES
9	ARL2M	Arlington ARES	145.470-	Arlington ARES
10	FAQ2M	Fauquier ARES	147.470+ PL167.9	Fauquier ARES
11	LOU2M	Loudon ARES	145.310-	Loudon ARES
12	DULLES	Dulles Airport	147.330+ PL203.5	Dulles Airport 2M, 15W output MAX
21	OVH440	Command and Control (CnC), Operations and Logistics	442.200+	W4OVH 440 Repeater (Logistics/CnC)
22	WWI440	Command and Control (CnC), Operations and Logistics	444.900+	WWI 440 Repeater (Logistics/CnC)
23	FALLSC	Falls Church ARES	442.425- PL91.5	Falls Church ARES
24	NERA	NERA Main Repeater	442.725+ PL107.2	NERA Main Repeater, Linked System
25	NERA	NERA DC	449.975+ PL107.2	NERA DC Repeater, Linked System
26	KT4ER	NERA Bull Run Mountain	448.325- PL100. 0	NERA Bull Run Mountain repeater, Linked System
27	NERA	NEAR Bull Run Mountain	447.775- PL67.0	NERA Bull Run Mountain repeater, Linked System
31	VHF1	PWCARES VHF1	147.525	PWCARES VHF Channel 1
32	VHF2	PWCARES VHF2	146.475	PWCARES VHF Channel 2
33	MEDCOM	MedComm	146.445	MedComm Inter-hospital Communications
34	ARC-CHP	Red Cross Chapter-to-Chapter	146.535	American Red Cross Chapter-Chapter Communications
35	ARC-FLD	Red Cross Field Operations	147.420	American Red Cross Field/On-Site Communications
36	XBAND1	Cross Band	445.950 PL100.0	Combine with 147.525 (VFH1) on left band
37	XBAND2	Cross Band	446.050 PL100.0	Combine with 146.475 (VFH2) on left band
38	XBAND3	Cross Band	445.975 PL100.0	Combine with 146.970 (OVH2M) on left band
39	XBAND4	Cross Band	446.025 PL100.0	Combine with 147.240 (WWI2M) on left band
40	PACKET	Packet	145.730 @ 1200 baud	Packet
41	APRS	APRS	144.390	Optional CT 100.0, Monitor 147.525

Additional Frequencies				
Channel:	**Name:**	**Function:**	**Frequency:**	**Remarks:**
		ODEN VEN/A	3.947 or 7.240 (Alt)	VA State HF Emergency Net
		ODEN VEN/B	3.943 or 7.248 (Alt)	Overflow for ODEN/A. Can be used as (1) hospital and medical support net, (2) logistics net, (3) H&W traffic net, as required.
		ODEN VEN/C	3.5785 CW or 7.050 CW (Alt)	H&W CW Traffic Net
		ODEN VEN/D	3.5785 or 7.050 (Alt)	H&W digital traffic net; can also be used for logistics and/or medical support net. Primary mode is CHIP64 (USB & 1300 Hz offset). Alternate modes could include PSK31, MFSK16, and RTTY
VDEM Notes: • VEOC Amateur Radio: N4VEM • VHF Repeater (Tidewater to Richmond via Williamsburg Repeater) 146.760 MHz • VHF Repeater (West Central VA to VEOC via Lexington Repeater) 147.330 MHz • VHF Repeater (Central VA) 146.880 MHz PL 74.4 MHz • IRLP Emergency Network (Raleigh Reflector channel 9214)				
		OVH220	224.660-	W4OVH 220 Repeater (Logistics/CnC)
	Packet	Packet	145.030 at 1200 baud	W4OVH 2M Packet Node
		VDEN	145.730 at 1200 baud	Primary user frequency
		VDEN	441.050 at 9600 baud	UHF 'High speed' backbone
		VDEN	446.075 at 1200 baud	UHF 'Low speed' backbone
• Virginia Digital Emergency Net (VDEN) 145.730 addressed to N4VEM • For HF Winlink users address message to races@vdem.virginia.gov or veoc@vdem.virginia.gov				
		EOC Comms	445.925	EOC to Radio Room Communications

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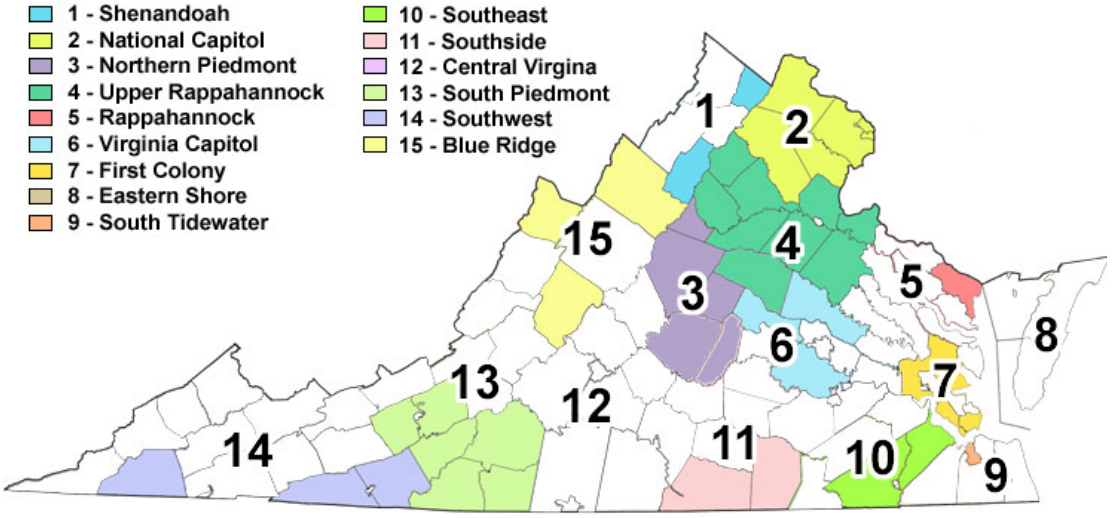
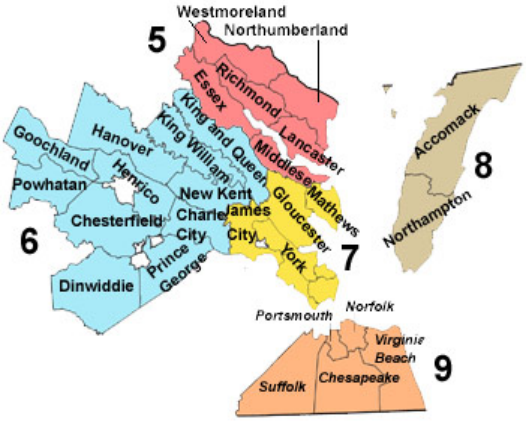
Virginia ARES Sections and Districts

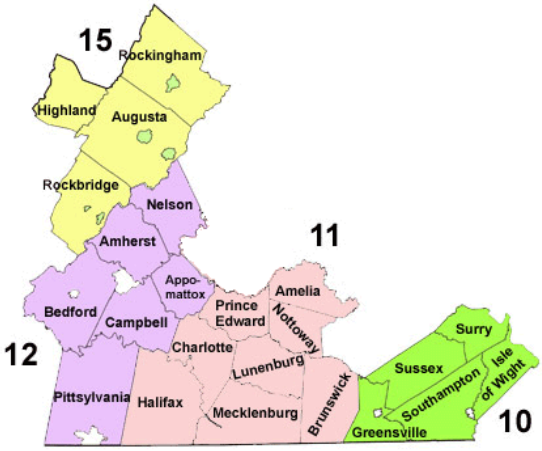


[Virginia ARES Emergency Districts](#)
[http://www.varaces.org/](#) [http://www.varaces.net/](#)

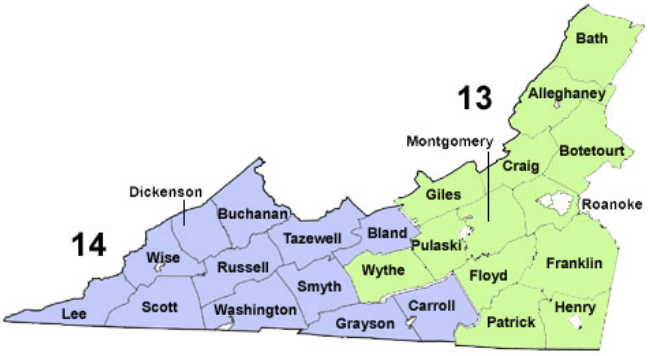
[Northern Virginia Districts](#)



[Eastern Area Districts](#)



[Central Area Districts](#)



[Western Districts](#)

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Virginia ARES Northern Area			
City/County	**Emergency Coordinator**	**Local Nets (if any)**	
District 1 (Shenandoah) Edward V. Krom, WD4KHP, DC			
Clarke	Mark Gribble, N3MG	Clarke County ARES Net/Sunday/2000/146.820 Repeater	
Frederick	Michael Orndorff, KF4YMJ		
Page	Ben Endicott, N4SFG	Page County ARES Net/Sunday/2000/146.670 PL 114.8 Repeater.	
Shenandoah	Larry Miller, KB6VAA		
District 2 (National Capital) Howard Cunningham, WD5DBC, DEC			
District 2 Wide Net		Sunday/2100/146.910 Repeater.	
Alexandria	Richard Bunn, N4ASX	Thursday/2000/147.315 Repeater	
Arlington	Gary Sessums, KC5QCN	Tuesdays except the 3rd Tuesday/1930/145.47 Repeater	
Fairfax	Jeffery Wilson, AI4IO (OES)	Wednesday/2015/146.79 Repeater	
Falls Church	Keith Christianson, KC1AD		
Fauquier	Chuck Kuhler, N4KBC		
Loudoun	Tom Dawson, WB3AKD		
MD / DC Liaison			
Prince William	David Lane, KG4GIY		
District 3 (Northern Piedmont) David Damon, K4DND, DEC			
District 3 Wide Net		Northern Piedmont Emergency Net/Thursday/2000/146.760 Repeater	
Albemarle	Bill Phillips, AD6JV		
Buckingham & Cumberland	Gordon Winn, WW4GW		
Fluvanna	Manny Rodriquez, K4MSR	Fluvanna County Emergency Net/Monday/2000/145.170 PL151.4	
Greene	Max "Vic" Vickery, N3DFS	Greene County Emergency Net/Tuesday/2000/146.760 PL151.4	
District 4 (Upper Rappahannock) Thomas Lauzon, KI4AFE, DEC			
District 4 Wide Net		Rappahannock Valley ARES Net/Thursday/2100/147.015 Repeater	
Caroline	Boyd Moore, KO4WK	CarCo Net /Thursday/1915/147.120 Repeater; moving to 3.933 ± MHz LSB at about 1935 hours, then a slow CW is held on 3.590 ± Mhz. The CW net script can be found here.	
Culpeper			
Fredericksburg	Tom Hitt, W4LLK		
King George	Steve Lynd, KD4KNR	Wednesday/2030/146.52 Simplex 147.120 Repeater at 2035	
Louisa			
Madison			
Orange	Richard Becker, W6LWG		
Rappahannock			
Spotsylvania	Tom Lauzon, KI4AFE		
Stafford	Curt "Bart" Bartholomew, N3GQ Mike Perryman, K5JMP (OES)	Thursday/2000/145.27 PL 79.7and 444.450 PL79.7 Repeaters. Runs concurrently with the Stafford Amateur Radio Association Net	
		WW4VA (Analog)	**WS4VA (D-Star Digital)**
		145.270 (-)	145.320(+) WS4V C (currently 147.375)
		147.375(+)	447.275(-) WS4VA B (offline)
		444.450(+)	1282.20(-) WS4VA A (D-Voice)
		145.55 Packet	1298.40 WS4VA A (D-Data)

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Virginia Section NTS Nets (All frequencies are in MHz)					
Time	**Day**	**Frequency**	**Net Name**	**Mode**	**Net Manager**
1800 EST	Daily	3.947	Virginia Sideband Net (VSBN)	LSB	K0IBS
1830 EST	1st & 3rd M	3.947	Old Dominion Emergency Net (ODEN)	LSB	K3EP
1900 EST	Daily	3.5785	Virginia Net Early (VNE)	CW	KV4AN
1915 EST	T, F	3.5785	Virginia Digital Net (VDN)	USB	W4TY
2200 EST	Daily	3.947	Virginia Late Net (VLN)	LSB	W4CAC
Other NTS Nets					
1345 EST	Daily	7.243	4th Region Net (4RN)	LSB	
1530 EST	Daily	7.243	4th Region Net (4RN)	LSB	
1930 EST	Daily	3.563	Maryland Slow Net (MSN)	CW	
1945 EST	Daily	3.567 or 7.051	4th Region Net (4RN)	CW	
2000 EST	Daily	3.571	Carolinas Slow Net (CSN)	CW	W4EAT
2130 EST	Daily	3.567	4th Region Net (4RN)	CW	
Virginia Section Wide-Area FM Nets					
1930 EST	Daily	147.300	Northern Virginia Traffic Net (NVTN)		W1CAR
2000 EST	S, T, Th	146.850	Southeastern Virginia Traffic Net (SVTN)		KI4GWC
2000 EST	F	146.850	Portsmouth Amateur Radio Emergency Services Net (PARES)		KI4GWC
2030 EST	M	147.255	Eastern Shore Emergency Services Net		K4BW
Additional Nets					
As Needed	As Needed	14.325	Hurricane Watch Net (Primary)		
As Needed	As Needed	3.950	Hurricane Watch Net (Secondary)		
As Needed	As Needed	Primary: EchoLink *WX-TALK* Conference server Node # 7203 & IRLP Reflector Node # 9219 Secondary: EchoLink Conference *VKEMCOMM* Node #:270177 & IRLP Reflector 9508 Tertiary: EchoLink *NEW-ENG* Conference Server Node #:9123 & IRLP Reflector 9123	VoIP Skywarn/Hurricane Net		
1500 EST	Daily	14.265	Salvation Army Team Emergency Radio Network "SATERN"		
0745	Daily	7.268	Waterway Net		
Wilderness Protocol					
The Wilderness protocol (see page 101, August 1995 QST) calls for hams in the wilderness to announce their presence on, and to monitor, the national calling frequencies for five minutes beginning at the top of the hour, every three hours from 7 AM to 7 PM while in the back country. A ham in a remote location may be able to relay emergency information through another wilderness ham that has better access to a repeater. National calling frequencies: 52.525, 146.52, 223.50, 446.00, 1294.50 MHz.					

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BEADWINDOW

"BEADWINDOW" is a simple, rapid procedure for use to police the security of insecure networks. It brings to the immediate attention of operators the fact that an Essential Element of Friendly Information (EEFI) has been disclosed on the circuit. Additionally the "BEADWINDOW" report serves to alert other operators on the net of the EEFI disclosure and thus acts as an educational aid, producing increased security awareness among operators and an overall improvement in the security of insecure CW communications. Use of BEADWINDOW in operations and exercises is not mandatory but its use is encouraged.

BEADWINDOW CODE WORDS

The BEADWINDOW procedure uses a code word (BEADWINDOW) and a number combination which is transmitted immediately to the station disclosing an EEFI. When a station on the net transmits information listed in an EEFI the net control operator (or any operator on the net in the event the net control operator fails to take action) transmits the OPSIG **ZNX** (ACP 131) followed by the number of the EEFI which has been disclosed. Example: If an operator discloses a ship's position the net control operator will call the offending station and transmit "ZNX 1 K". The only authorized reply to a BEADWINDOW report is the prosign R AR or voice “Roger, Out”.
Approved broad EEFI's for general use are listed below. An appropriate keyword or key phrase has been assigned to each EEFI for ease of training and rapid understanding of BEADWINDOW reports. Additional EEFI's for specific operations or exercises may be developed and broad EEFI's expanded by individual nations or by operational commanders and included in operations plans or orders. This may be accomplished by adding new EEFI categories (i.e. 8, 9, 10) or by expanding existing categories (e.g. 21-force composition, 22-force capabilities, 23-force limitations etc). The EEFI list should be posted in clear sight of the operator for rapid reference.
*Note: see ACP 124 for details of BEADWINDOW procedure and the use of EEFI numbers.

BEADWINDOW Essential Elements of Friendly Information (EEFIs)	
Key Number	**Key Word Definition**
1 – POSITION	Friendly or enemy position, movement or intended movement, position, course, speed, altitude or destination or any air, sea or ground element, unit or force.
2 – CAPABILITIES	Friendly or enemy capabilities or limitations. Force compositions or significant casualties to special equipment, weapons systems, sensors, units or personnel. Percentages of fuel or ammunition remaining.
3 – OPERATIONS	Friendly or enemy operation – intentions progress, or results. Operational or logistic intentions; mission participants flying programs; mission situation reports; results of friendly or enemy operations; assault objectives.
4 – Electronic Warfare (EW)	Friendly or enemy EW/EMCON – intentions, progress, or results. Intention to employ ECM; results of friendly or enemy ECM; objectives TF ECM; results of friendly or enemy ECCM; results of ESM; present or intended EMCON policy; equipment affected by EMCON policy.
5 – PERSONNEL	Friendly or enemy key personnel. Movement or identity of friendly or enemy officers, visitors, commanders; movement of key maintenance personnel indicating equipment limitations.
6 – COMSEC	Friendly or enemy COMSEC breaches. Linkage of codes or codewords with plain language; compromise of changing frequencies or linkage with line number/circuit designators; linkage of changing call signs with previous call signs or units; compromise of encrypted/classified call signs; incorrect authentication procedure.
7 – WRONG CIRCUIT	Inappropriate transmission. Information requested, transmitted or about to be transmitted which should not be passed on the subject circuit because it either requires greater security protection or it is not appropriate to the purpose for which the circuit is provided.
8 – SPARE	For assignment as required.
9 - SPARE	For assignment as required.
10 – SPARE	For assignment as required.

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APRS Primary and Secondary Icons Table (LINK#1) (LINK#2) (LINK#3)								
Primary Symbol Table (/)					Secondary Symbol Table (\)			
Symbol	**GPSxyz**	**Index**	**Description**	**Icon**	**GPSxyz**	**Index**	**Description**	**Icon**
!	BB	0	Police, Sheriff		OB	0	Emergency	
“	BC	1	No Symbol		OC	1	No Symbol	
#	BD	2	DIGI (White Center)		OD	2	Numbered Digipeater	
$	BE	3	Phone		OE	3	Bank (ATM)	
%	BF	4	DX Cluster		OF	4	No Symbol	
&	BG	5	HF Gateway		OG	5	Numbered Diamond	
‘	BH	6	Aircraft (Small)		OH	6	Crash Site	
(	BI	7	Mobile Satellite Station		OI	7	Cloudy	
)	BJ	8	Wheel Chair		OJ	8	MEO	
*	BK	9	Snowmobile		OK	9	Snow	
+	BL	10	Red Cross		OL	10	Church	
,	BM	11	Boy Scout		OM	11	Girl Scout	
-	BN	12	House (VHF)		ON	12	House (HF)	
.	BO	13	X		OO	13	Unknown Position	
/	BP	14	Dot		OP	14	Destination	
0	P0	15	Numbered Circle		A0	15	Numbered Circle	
1	P1	16	Numbered Circle		A1	16	No Symbol	
2	P2	17	Numbered Circle		A2	17	No Symbol	
3	P3	18	Numbered Circle		A3	18	No Symbol	
4	P4	19	Numbered Circle		A4	19	No Symbol	
5	P5	20	Numbered Circle		A5	20	No Symbol	
6	P6	21	Numbered Circle		A6	21	No Symbol	
7	P7	22	Numbered Circle		A7	22	No Symbol	
8	P8	23	Numbered Circle		A8	23	No Symbol	
9	P9	24	Numbered Circle		A9	24	Petrol (Gas Station)	

:	MR	25	Fire		NR	25	Hail	
;	MS	26	Campground		ND	26	Park	
<	MT	27	Motorcycle		NT	27	Gale F1	
=	MU	28	Railroad Engine		NU	28	No Symbol	
>	MV	29	Car		NV	29	Numbered Car	
?	MW	30	File Server		NW	30	Information Kiosk	
@	MX	31	Future Hurricane Predict		NX	31	Hurricane/Tropical Storm	
A	PA	32	Aid Station		AA	32	Numbered Box	
B	PB	33	BBS		AB	33	Blowing Snow	
C	PC	34	Canoe		AC	34	Coast Guard	
D	PD	35	No symbol		AD	35	Drizzle	
E	PE	36	Eyeball		AE	36	Smoke	
F	PF	37	Tractor		AF	37	Freezing Rain	
G	PG	38	Grid Square (6 digits)		AG	38	Snow Shower	
H	PH	39	Hotel		AH	39	Haze	
I	PI	40	TCP/IP		AI	40	Rain Shower	
J	PJ	41	No Symbol		AJ	41	Lighting	
K	PK	42	School		AK	42	Kenwood	
L	PL	43	User Log-On		AL	43	Lighthouse	
M	PM	44	Mac APRS		AM	44	No Symbol	
N	PN	45	NTS Station		AN	45	Navigation Buoy	
O	PO	46	Balloon		AO	46	Rocket	
P	PP	47	Police		AP	47	Parking	
Q	PQ	48	TBD		AQ	48	Quake	
R	PR	49	Recreational Vehicle		AR	49	Restaurant	
S	PS	50	Shuttle		AS	50	Satellite/PacSat	
T	PT	51	SSTV		AT	51	Thunderstorm	
U	PU	52	Bus		AU	52	Sunny	

V	PV	53	ATV		AV	53	VORTAC Navigation Aid	
W	PW	54	National Weather Service Site		AW	54	Numbered National Weather Service Site	
X	PX	55	Helicopter		AX	55	Pharmacy (Rx)	
Y	PY	56	Yacht (Ship)		AY	56	No Symbol	
Z	PZ	57	Win APRS		AZ	57	No Symbol	
[	HS	58	Jogger		DS	58	Wall Cloud	
\	HT	59	Triangle (DF)		DT	59	No Symbol	
]	HU	60	PBBS		DU	60	No Symbol	
^	HV	61	Aircraft (Large)		DV	61	Numbered Aircraft	
_	HW	62	Weather Station (Blue)		DW	62	Numbered Weather Station Site	
`	HX	63	Dish Antenna		DX	63	Rain	
a	LA	64	Ambulance		SA	64	Numbered Diamond	
b	LB	65	Bike		SB	65	Blowing Dust	
c	LC	66	ICP		SC	66	Numbered Civil Defense/RACES	
d	LD	67	Fire Department		SD	67	DX Spot	
e	LE	68	Equestrian (Horse)		SE	68	Sleet	
f	LF	69	Fire Truck		SF	69	Funnel Cloud	
g	LG	70	Glider		SG	70	Gale Flags	
h	LH	71	Hospital		SH	71	HAM Store	
i	LI	72	IOTA (Islands On The Air)		SI	72	Numbered Black Box	
j	LJ	73	Jeep		SJ	73	Work Zone	
k	LK	74	Truck		SK	74	SUV	
l	LL	75	Laptop		SL	75	Area Locations	
m	LM	76	Mic-E Repeater		SM	76	Mile Post (3 digit display)	
n	LN	77	Node		SN	77	Numbered Triangle	
o	LO	78	EOC		SO	78	Circle (Small)	
p	LP	79	Rover (Dog)		SP	79	Partly Cloudy	
q	LQ	80	Grid Square		SQ	80	No Symbol	

r	LR	81	Antenna		SR	81	Restrooms	
s	LS	82	Power Boat (Ship)		SS	82	Numbered Ship	
t	LT	83	Truck Stop		ST	83	Tornado	
u	LU	84	Truck (18 Wheeler)		SU	84	Numbered Truck	
v	LV	85	Van		SV	85	Numbered Van	
w	LW	86	Water Station		SW	86	Flooding	
x	LX	87	xAPRS (Unix)		SX	87	No Symbol	
y	LY	88	Yagi		SY	88	SkyWARN	
z	LZ	89	Shelter		SZ	89	Numbered Shelter	
}	J1	90	No Symbol		Q1	90	Fog	
|	J2	91	TNC Stream Switch		Q2	91	TNC Stream Switch	
{	J3	92	No Symbol		Q3	92	No Symbol	
~	J4	93	TNC Stream Switch		Q4	93	TNC Stream Switch	
		94	No Symbol			94	No Symbol	
		95	Version			95	Version	

[APRS.fi]
[APRS-IS.net]
[APRSWORLD.net]
[EMERGENCY Beacons Heard]
[FINDU.com]
[JFINDU.net]
[OpenAPRS]
[UI-View]
[WB4APR]
[Xastir]

[Home]

APRS Packet Nodes (LINK) (All frequencies are in MHz)					
Callsign	**Alias**	**Frequency**	**City**	**Coordinates**	**Features**
KB2CEV		144.390	Chantilly, MD	38°54′58″N 77°30′39″W	
N3UJJ		144.390	Edgewater, MD	38°54′34″N 76°31′07″W	Digi/iGate
K4FDS-5	Mill Mtn.	144.390	Roanoke, VA	37°15′1″N 79°55′59″W	1200 baud
KD4BNQ-3		144.390	Dismal Peak, VA	37°14′51″N 80°51′20″W	1200 baud
KW4FM-3	Sand Mtn.	144.390	Wytheville, VA	36°54′17″N 81°4′4″W	1200 baud
WA1ZMS-1	Apple Orchard Mtn.	144.390	Glasgow, VA	37°31′0″N 79°30′21″W	1200 baud
KC8SDN-5		144.390	Richwood, WV	38°6′35″N 80°35′27″W	1200 baud
KC8TYK-9		144.390	Belington, WV	39°1′19″N 80°1′33″W	1200 baud
KE8NK-3		144.390	Pennsboro, WV	39°17′50″N 80°58′34″W	1200 baud
KN0BY		144.390	Charleston, WV	38°21′14″N 81°37′34″W	I-Gate via TCPIP
KN0BY-1		144.390	Huntington, WV	38°25′22″N 82°25′28″W	I-Gate via TCPIP
W8GK-5		144.390	Charleston, WV	38°21′2″N 81°36′19″W	1200 baud
WC8EC-7		144.390	Mineralwells, WV	39°14′33″N 81°27′19″W	1200 baud

- 144.390 MHz is the National APRS frequency. Set a CT tone of 100 Hz to "quiet" the radio and it will "beep" if there is a station within a mile or two of your position.
- Along with doing that, monitor 147.525 MHz and when the radio "beeps" from a nearby station, ask who is calling CQ.
- Alternate APRS frequencies: 144.990 MHz (Many Areas), 144.350 MHz (Western Washington State), 445.925 MHz (Proposed by Bob Bruninga, WB4APR).

APRS Standard Callsign SSIDs (LINK#1) (LINK#2) (LINK#3)	
SSID Number	**Type of Station**
No SSID or -0	Home, or fixed base operation
-1	Digipeater, Home Station running a WIDEn-N Digi, Wx Digi
-2	Digipeater and other home stations
-3	Digipeater and other home stations
-4	HF to VHF Gateway
-5	IGate (Not home station)
-6	Operations via Satellite
-7	Hand-held Transceiver (Kenwood D7)
-8	Boats, sailboats and ships (Maritime)
-9	Mobile (Land)
-10	Operation via DIGI and Internet Only
-11	APRS Touch-tone users (occasional Balloons)
-12	Portable Units, such as Laptops, Camp Sites, etc.
-13	Not Used
-14	Trackers
-15	HF Operation

- To assist in identifying stations functionalities/capabilities designated callsign SSIDs are used in APRS**.** Use the correct SSID for your stations functionality/capability.
- In TNC Only mobile systems running a GPS sending raw NMEA strings, the SSID is used to establish the Vehicle symbol. These are not very common although you will see a few mobile stations with odd SSIDs. Read the APRS spec for more info.

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ATV Repeaters (LINK) (All frequencies are in MHz)				
Callsign	**City**	**State**	**2M**	**70cm**
WB3DZO/R	Baltimore	MD	147.030 +	
KB4CVN/R	Lynchburg	VA		420.050 +

D-STAR Repeaters (LINK) (All frequencies are in MHz)						
Callsign	**City**	**State**	**2M**	**70cm**	**23cm DV**	**23cm DD**
AK4EG	Burlington	NC	145.3200 -0.600	444.8875 +	1284.4000 -20	1299.4000
KI4WXS	Charlotte	NC		443.8625 +	1284.0000 -12	1253.0000
KA4YMY	Charlotte	NC	145.1400 -0.600			
KB4HG	Durham	NC		442.5375 +		
W4GSO	Greensboro	NC		442.8625 +		
K4ITL	Raleigh	NC	145.2600 -0.600	442.2125 +		
W3OI	Allentown	PA	147.1650 + 0.600	445.0250 -	1291.0000 - 20	
W4IHS	Bucktown	PA				1297.8000
K3PDR	Philadelphia	PA		447.6250 -		
W3EXW	Pittsburgh	PA		444.3500 +		
W3EOC	Pocopson	PA	146.4900 + 1.000	445.0750 -	1255.5000 + 12	1299.4000
W4HFH	Alexandria	VA	145.3800 – 0.600	442.0600 +	1284.6000 - 12	1253.600
N4USI	Haymarket	VA	145.4500 – 0.600	442.4125 +		
W4FJ	Richmond	VA	147.2550 + 0.600			
WW4EMC	Spotsylvania	VA	145.2400 - 0.600	448.4600 -	1282.4000 - 12	1254.000
WS4VA	Stafford	VA	145.3200 – 0.600	447.2750 -	1282.2000 - 12	1298.400
NV4FM	Tysons Corner	VA	145.3400 – 0.600	448.0350 -	1282.8000 - 12	1254.200
W4BBR	Virginia Beach	VA	145.3500 -0.600	441.9000 +	1284.6000 - 12	
WD4HRO	Woodbridge	VA			1293.0000 - 20	1254.000
2M (Usually "C" Node)		70cm (Usually "B" Node) +/- 5.000			23cm Voice (Usually "A" Node) +/- 12.000 or +/- 20.000	

Home

Echolink Nodes (LINK) or www.echolink.org (All frequencies are in MHz)

#2206 NV4AA-L
Round Hill, VA
146.505 PL107.2

DTMF Codes	
#	disconnect
08	linkstatus

#4111 K1CV-L
Garrisonville, VA
147.555 PL123.0

#37200 N4DSL-R
Harrisonburg, VA
443.150 PL131.8

DTMF Codes	
#*nnnn	connect
#B	disconnect
#A	linkstatus
#08	playinfo

#49660 WB4SUB-L
Portsmouth, VA
146.415 (no PL)

DTMF Codes	
#	disconnect
08	linkstatus
*.)	playinfo

#52555 N4NW-R
Stafford, VA
145.375+ PL79.7

DTMF Codes	
n/a	uplink
n/a	downlink
C	connect
#	disconnect
B	linkstatus
*	playinfo

#53005 KG4LUL-L
Lynchburg, VA
146.430 PL123.0

#57604 KC4SUE-L
Martinsville, VA
147.285+ PL107.2

#69078 W4CLJ-R
Dale City, VA
444.950 PL123.0

DTMF Codes	
#	disconnect
*0	playinfo

#77982 NA5B-L
Springfield, VA
145.650 (no PL)

DTMF Codes	
D	disconnect
08	linkstatus

#91801 AE4XI-L
Virginia Beach, VA
145.530 (no PL)

#93516 KG4YJB-L
Petersburg, VA
444.275+ PL103.5

DTMF Codes	
#	connect
#73	disconnect
#08	linkstatus
#*	playinfo

#175627 KI4EKI-L
Annandale, Va
146.430 446.430 PL141.3

DTMF Codes	
#nnnnn	connect
##	disconnect
A	linkstatus
08	playinfo

#126596 K4IJ-R
Roanoke, VA
444.175+ PL103.5

DTMF Codes	
*	connect
#	disconnect
08	linkstatus
411	playinfo

#132278 W4MT-R
Newport News, VA
442.900+ PL100.0

DTMF Codes	
A	connect
A	linkstatus
A	playinfo

#146895 WB3T-R
Wytheville, VA
146.895- PL103.5

#236460 KI4BWJ-L
Petersburg2, VA
147.530 PL74.4

DTMF Codes	
#	disconnect
08	linkstatus
*	playinfo

#237304 W4GEO-L
Chesapeake, VA
147.570 (no PL)

#281806 KD4CMK-L
Richmond, VA
147.255+ PL100.0

DTMF Codes	
#	disconnect
08	linkstatus

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IRLP Nodes (LINK) (All frequencies are in MHz)							
Callsign	**City**	**State**	**6M**	**2M**	**1.25M**	**70cm**	**33cm**
			Node #	**Node #**	**Node #**	**Node #**	**Node #**
WA3KOK	Washington	DC				449.975 – PL107.2	
						#4000	
WA3KOK	Clarksville	MD		144.440 PL107.2 (1B)		448.725 – PL107.2	
				#4173		#4542	
WA3KOK	Ashton	MD					927.725 – 25k PL156.7 (5A)
							#4088
N3HVC	Gaithersburg	MD		146.465 PL103.5			
				#4537			
N3HF	Silver Spring	MD				443.450 – PL156.7	
						#4712	
K3OCM	Elkton	MD		146.555 PL156.7			
				#4083			
N1SZ	Olney	MD					927.650 PL100.0
							#4765
K3BAY	Pasadena	MD		145.540 PL 107.2			
				#4974			
AJ3U	Hollywood	MD		145.350 – PL146.2			
				#4879			
WA0OJS	Manchester	MD		146.895 – PL107.2			
				#7070			
N3HF	Manassas	VA				446.000 PL156.7	
						#4291	
K4DCA	Reagan National Airport (DCA)	VA				444.750 + PL203.5	
						#4232	
K4QJZ	Front Royal	VA	51.940 – PL141.3				
			#4331				
K4DND	Charlottesville	VA		145.450 – PL151.4			
				#4703			
KC4VDZ	Richmond	VA				442.300 + PL114.8	
						#5770	
W4RAT	Richmond	VA		146.880 – PL74.4		442.550 + PL74.4	
				#4424		#4995	
KE4EUE	Chesterfield	VA		145.390 – PL131.8			

				#4860			
KE4SCS	Petersburg	VA		146.985 – PL127.3			
				#4769			
KG4YJB	Petersburg	VA		146.595 PL97.4			
				#4055			
KB4ZIN	Williamsburg	VA		147.105 + PL0.0			
				#4943			
K4TJS	Yorktown	VA		145.580 PL88.5			
				#4358			
KA4VXR	Hampton	VA		147.225 + PL136.5			
				#4183			
WA1ZMS	Lynchburg	VA			224.180 – PL100.0		
					#5330		
KG4ZXK	Portsmouth	VA		145.600 DCS053			
				#4865			
AB8E	Elkins	WV				442.100 + PL162.2	
						#4737	
K8NR	Buckhannon	WV				446.150 PL103.5	
						#4472	
KD8BMI	Morgantown	WV		146.595 PL103.5			
				#4163			
N8UEV	Morgantown	WV			223.600 PL103.5		
					#4357		
AA8CC	Buckhannon	WV		146.925 –			
				#8550			

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IRLP Repeaters (LINK) (All frequencies are in MHz)							
Callsign	**City**	**State**	**6M**	**2M**	**1.25M**	**70cm**	**Notes**
			Node	**Node**	**Node**	**Node**	
N3HF/R	Silver Spring	MD				443.450 + PL156.7	
						#4712	
KE4EUE	Chesterfield	VA		145.390 -			
				#486			
N4NRO	Front Royal	VA				442.735 + PL107.2	
						#23020	
KE4SCS	Petersburg	VA		146.985 – PL127.3			
				#4769			
WB8YST	Beckley	WV	53.590 – PL107.2			444.525 + PL110.9	Echolink #60297 WIRES #1189
			#4873			#4873	
WB8YST	Charleston	WV	53.630 – PL107.2	145.430 – PL107.2	224.360 – PL107.2	444.350 + PL107.2	Echolink #60297 WIRES #1189
			#4873	#4873	#4873	#4873	
KD8JCS	Elkins	WV				442.100 + PL162.2	
						#4737	
WB8YST	Richwood	WV	53.710 – PL107.2		223.860 – PL107.2		Echolink #60297 WIRES #1189
			#4873		#4873		

Packet (All frequencies are in MHz)								
Node	**Club**	**City**	**State**	**2M**	**1.25M**	**70cm**	**23cm**	**23cm DD**
OVH	W4OVH	Manassas	VA	145.730	223.540	440.925		
		Anne Arundel	MD	145.750				
KV3B-1 & KV3B-2	MARC	Montgomery	MD	145.750				
		Prince George	MD	145.750				
National APRS				144.390				

- 144.390 MHz is the National APRS frequency. Set a CT tone of 100 Hz to "quiet" the radio and it will "beep" if there is a station within a mile or two of your position.
- Along with doing that, monitor 147.525 MHz and when the radio "beeps" from a nearby station, ask who is calling CQ.
- Alternate APRS frequencies: 144.990 MHz (Many Areas), 144.350 MHz (Western Washington State), 445.925 MHz (Proposed by Bob Bruninga, WB4APR).

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WIRES-II ID List (LINK)					
ID Number	**Call Sign**	**City**	**State**	**Country**	**Room**
#1520D	N3LHD	Davidsonville	MD	USA	-
#1525D	N3LHD/2	Davidsonville	MD	USA	-
#1451D	KB3IIE	Upper Marlboro	MD	USA	-
#1437D	KG4CWD	Asheville	NC	USA	-
#1543D	KE4WHJ	Castle Hayne	NC	USA	-
#1302D	KI4CWL	Bowling Green	VA	USA	-
#1297D	WS4W-1	Danville	VA	USA	-
#1444D	N4JOG	Fairfax	VA	USA	-
#1407D	W3CZ	Fairfax Station	VA	USA	-
#1298D	WS4W-2	Ridgeway	VA	USA	-
#1411D	K4FDS	Roanoke	VA	USA	-
#1259D	KE4IAP	Woodbridge	VA	USA	-
#1329D	KF4SCN	Woodbridge	VA	USA	-
#1189D	KC8NDZ	Charleston	WV	USA	#0111D
#1121D	K8VE	Philippi	WV	USA	-

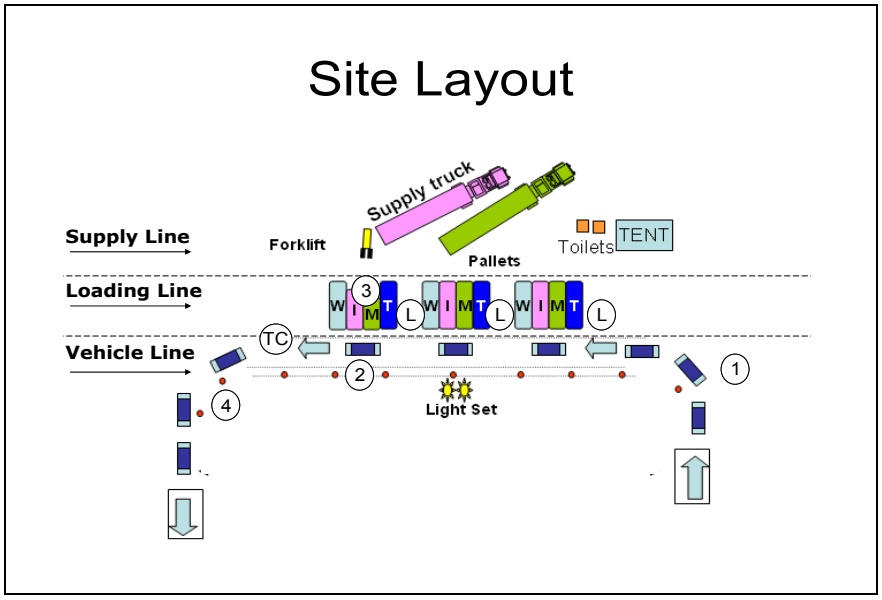
Home

Points of Distribution (PODs)

Developing your site Layout

When developing your site layout, there are several considerations to keep in mind:

- What type of POD? Vehicle, pedestrian or mass transit? There are different set up requirements for each.
- Are there entrance and exit concerns? Is there more than one entry/exit point?
- What is the traffic flow around the site? Will residents have to cross a busy street? Will having a POD at this location halt the surrounding traffic and cause a traffic jam? Will this site impede emergency response vehicles?
- Are there turns within the site or at the entry/exit points that require extra maneuvering? Can large semi trucks get in and out without assistance?
- Prior to setting up and activating a POD, make sure there are no hazards threatening the site or staff. Is the POD in a location that may flood? Is there debris on the site that could injure someone? Consider new hazards the disaster has created. Is there a structure that could fall on the POD? Is there a fire burning nearby that could affect the site?

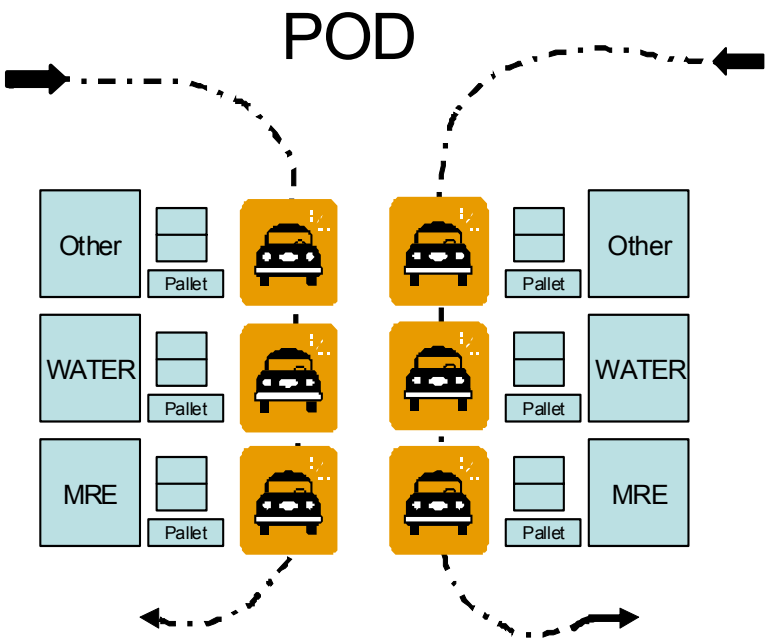


A POD is divided into three areas:

- The **SUPPLY LINE** is where supply trucks, usually tractor-trailers, have room to unload. This area also includes staff care facilities including restroom facilities and rest tent. Having an informational bulletin board in the rest tent is a good way to keep your staff updated.
- The **LOADING LINE** is where supplies are kept waiting on stacked pallets to be distributed to the public. This is also where loaders wait while vehicles are moving through the Vehicle Line.
- The **VEHICLE LINE** is where the public drives through to get supplies. Entry into the vehicle line occurs only when all vehicles have come to a complete stop and the Traffic Controller has instructed the staff to "LOAD".

PODs provide the same quantity of supplies to each vehicle. In the site layout diagram, the POD is providing water (**W**), ice (**I**), shelf stable meals (**M**), and tarps (**T**).
When setting up your POD, there is a minimum space for each area:

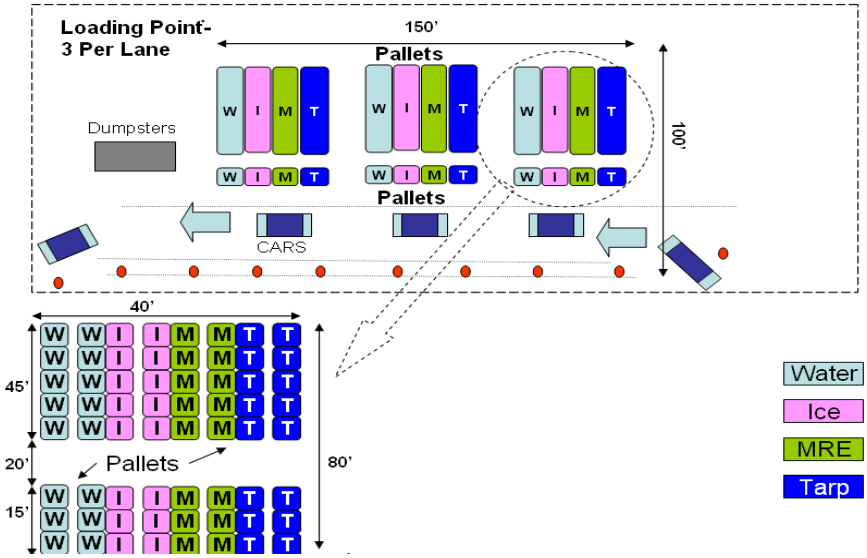
- Vehicle Line – 20 feet wide
- Loading Point – 80 feet by 40 feet each
- Supply Line – 50 feet wide



Traffic cones are used to guide customers through the POD site. The standards for placing traffic cones are different for pedestrian and vehicle PODs.

- **For vehicles,** cones should create a lane that is 12 feet wide. It is recommended that cones not be placed more than 20 feet apart.
- **For pedestrians,** cones should create a lane that is 5 feet wide. Cones should not be placed more than 10 feet apart.
- **Signage** for a POD is the same for vehicles and pedestrians.
    - **POD Ahead** – this sign provides directions to inbound customers in locating the entrance to the POD. There can be multiple signs placed away from the POD to give the estimated distance to the POD.
    - **Enter** – this sign directs customers to enter at the correct point of the vehicle lane.
    - **Loading Point** – each loading point should be marked so that customers know to stop for materials to be loaded.
    - **Exit/Do Not Enter** – this marks the vehicle lane exit. It is also important to clearly mark the opposite side of the sign with "DO NOT ENTER".
        - There are **other signs** you can use at a POD.
            - "This site staffed by…"
            - One Way
            - Turn Here
- A proper layout of the loading points can ensure a smooth and efficient flow of goods through the POD. Each loading point should be 80 feet by 40 feet. These dimensions are a guide to be adjusted according to the size and quantity of commodities being distributed. In the Loading Points visual, Water (W), Ice (I), MREs (M) and Tarps (T) are being distributed. If the POD is only providing water and food, the loading point could be smaller.
- Pallets of commodities must be separated at each loading point. This allows for a more efficient loading and resupply of materials. By mixing pallets of commodities, loaders have to spend additional time sorting.

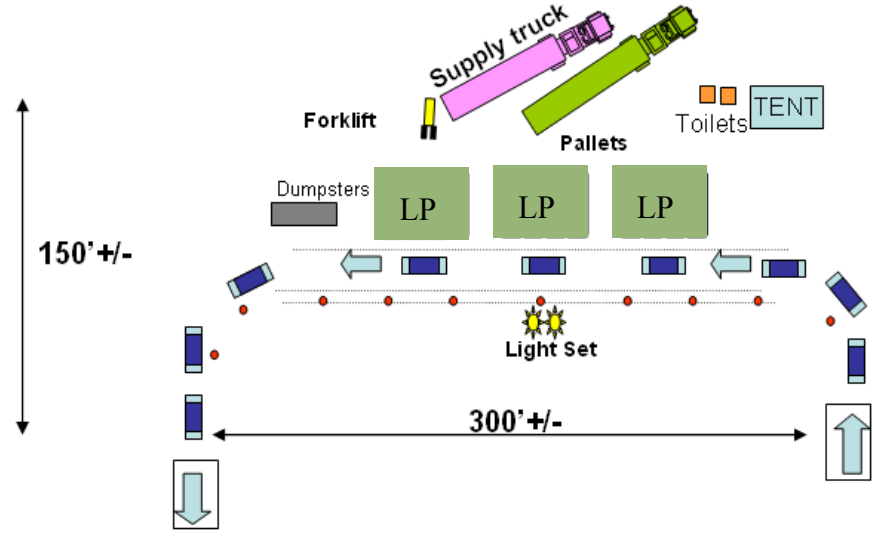
Loading Points



The United States Army Corps of Engineers has developed a typing standard for PODS. These types are Tier II resource typing definitions and, although accepted throughout most of the nation, are not yet nationally recognized.

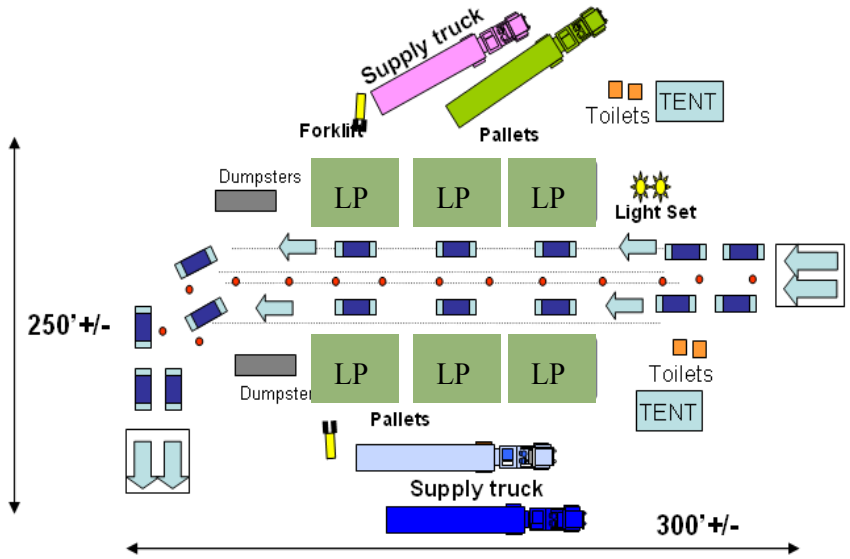
- The smallest of the PODs is a Type III. A Type III POD serves 5,000 people a day based on one vehicle representing a household of 3 people. A Type III POD is 150 feet by 300 feet and requires a staff of 19 per day and 4 per night.
- A Type III POD has three loading points and only one vehicle lane.

POD Type III Layout



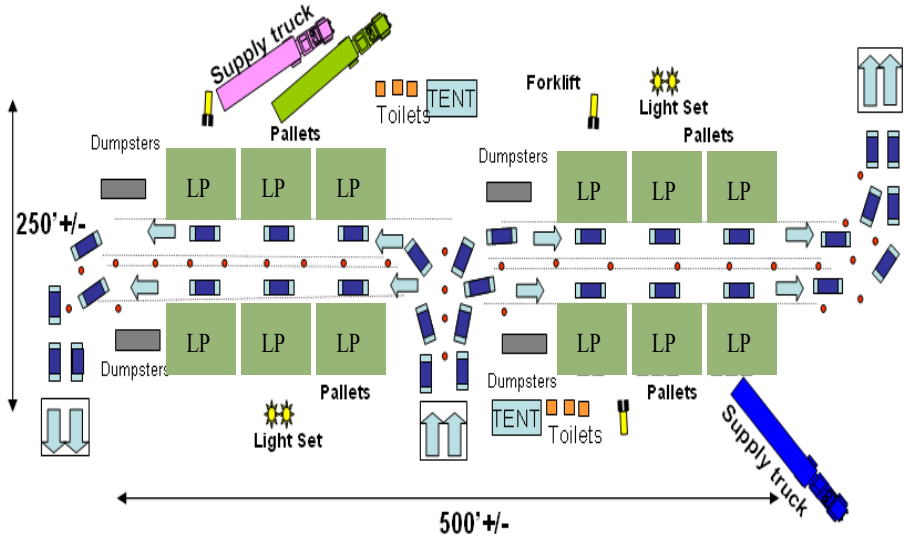
- A Type II POD is 250 feet by 300 feet and requires a staff of 34 per day and 6 per night. Type II POD has six loading points and two vehicle lanes.
- A Type II POD is twice the size of a Type III and serves 10,000 people a day based on one vehicle representing a household of 3 people.

POD Type II Layout



- The largest of the PODs is a Type I. A Type I POD serves 20,000 people a day based on one vehicle representing a household of 3 people. A Type I POD is 250 feet by 500 feet and requires a staff of 78 per day and 10 per night. Type I PODs are only used in large metropolitan areas.
- A Type I POD has twelve loading points and four vehicle lanes.

POD Type I Layout



- At each POD location, it is best to have POD kit(s) on site to support the initial setup of the POD. Each POD kit is designed for a Type III POD. If a Type II POD is established at that site, the site should have two kits. A Type I POD would need four kits. The POD kit has supplies for the site and individual staff positions.

POD Kit

- One (1) 96 gallon trash can, wheeled (for storage of the kit)
- Sixteen (16) pairs of leather work gloves
- Four (4) rolls of duct tape
- Nineteen (19) battery-powered (D-cell) flashlights
- Nineteen (19) reflective safety vests
- One (1) First Aid Kit
- Twelve (12) 36", reflective traffic cones
- Sixteen (16) safety hard hats
- Thirty (30) orange or red glow sticks
- Thirty six (36) D-cell, batteries
- Eight (8) medium back support belts or vests
- Eight (8) large back support belts or vests
- One (1) 5 lb. fire extinguisher
    - In addition to the resources available in the POD Kit, the site will need at a minimum: a dumpster, portable restroom, break area, and light set. These will provide support for the staff and allow safer working condition

PODs are generally open to the public for 12 hours a day. This reduces the amount of time the POD is open in low-light conditions.

The POD Manager will determine breaks for staff including meal breaks. Due to the physical nature of the work, it is recommended that staff get a ten-minute break every hour and a twenty-minute meal break. Ideally, food will be provided by LEMA at least twice a day (noon and midnight). However, if the situation does not allow delivery of hot food, POD staff is permitted to utilize the shelf-stable meals and water on site for meal breaks.

POD is divided into three areas:

1. The Supply Line
2. The Loading Line
3. The Vehicle Line

POD Operation:

1. A vehicle enters the POD.
2. The Traffic Controller (TC) stands at the front of the vehicle line where all vehicles in the lane can see him/her.
3. When the front vehicle is adjacent to the front loading station, the Traffic Controller signals the vehicle to stop. Each vehicle behind the 1st vehicle stops as well.
4. Once all vehicles come to a stop, the Traffic Controller blows one long whistle blast and says, with a projected voice, "LOAD". "LOAD" is echoed by the loaders.
5. The Loaders (**L**) then loads a set amount of supplies from the pallets into the trunk of the vehicle.
6. Once the Loaders complete loading supplies into the vehicle, they step back to the loading line and speak with a projected voice "CLEAR"
7. When the Traffic Controller hears "CLEAR", s/he visually verifies that all staff and loaders have cleared the vehicle line and, using hand signals, instructs the vehicles to depart the POD and blows a long whistle blast.
8. The next set of vehicles enters the vehicle lane and the process repeats.

The media may wish to visit your POD site. This must be coordinated with your Public Information Officer (PIO). All questions from the media must be directed to that PIO.

POD Forms

- If you need to take a message, use the POD Daily Equipment Inventory Report, or you can double click on the icons to open the embedded files in either Adobe Acrobat or Microsoft Word:

 Adobe Acrobat Document **POD Daily Equipment Inventory Report**	 Microsoft Word Document **POD Daily Equipment Inventory Report**

- If you need to take a message, use the POD Daily Site Hazard Assessment Form, or you can double click on the icons to open the embedded files in either Adobe Acrobat or Microsoft Word:

 Adobe Acrobat Document **POD Daily Site Hazard Assessment Form**	 Microsoft Word Document **POD Daily Site Hazard Assessment Form**

- If you need to take a message, use the POD Site Setup Checklist, or you can double click on the icons to open the embedded files in either Adobe Acrobat or Microsoft Word:

 Adobe Acrobat Document **POD Site Setup Checklist**	 Microsoft Word Document **POD Site Setup Checklist**

- If you need to take a message, use the POD Daily Supply Report, or you can double click on the icons to open the embedded files in either Adobe Acrobat or Microsoft Word:

 Adobe Acrobat Document **POD Daily Supply Report**	 Microsoft Word Document **POD Daily Supply Report**

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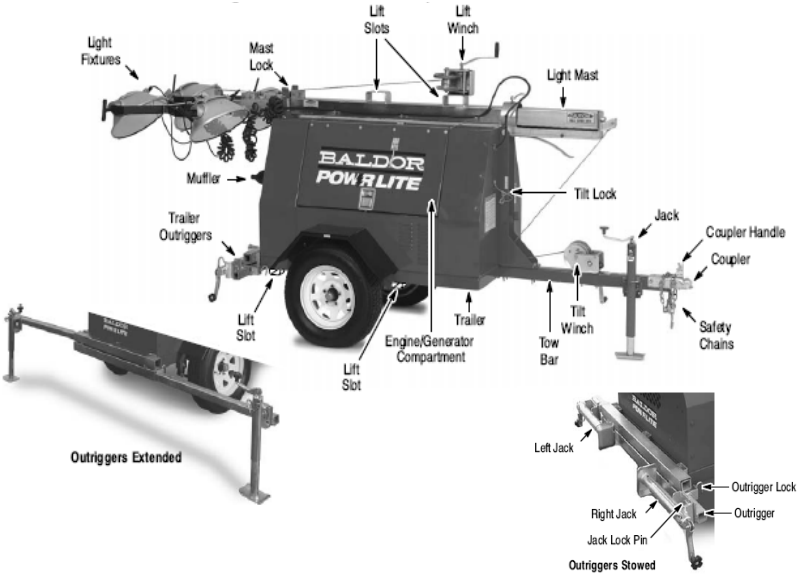
Light Tower



A light tower is used to provide portable lighting and power to the POD site. There are six major systems on a light tower:

- Trailer
- Engine/Generator
- Trailer Stabilization System
- Light Mast
- Light Fixtures
- Electrical System

To set up the light tower:

1. Locate a suitable, level location. Ensure there are no overhead wires or obstructions.
2. Apply and check the parking brake (if equipped).
3. Disconnect the safety chains and trailer light connector from the tow vehicle.
4. Pull the pin on the Front Jack and rotate the jack 90 degrees to the vertical position.
5. Move the Coupler Handle to the vertical position to release the ball hitch.
6. Use the jack to raise the trailer Coupler from the ball hitch of the tow vehicle.
7. Move the tow vehicle away from the light tower.
8. Pull the Outrigger Lock for the right jack and fully extend the right outrigger. Lock the outrigger into position using the Outrigger Lock.
9. Pull the Jack Lock Pin for the right jack and rotate the jack to the vertical position. Lock the jack in its vertical position using the Jack Lock Pin.
10. Follow steps 8 and 9 for the left outrigger and jack.
11. Adjust the three jacks to level the trailer.
12. With the Light Mast in its stowed position, install or reposition the light fixtures to the desired placement when the tower is raised.
13. Pull the Mask Lock pin so the mast is no longer secured in the stowed position.
14. Pull the Tilt Lock pin so it is not in the way when the mast is raised.
15. Use the Tilt Winch to raise the mast to the vertical position.
16. Secure the mast in the vertical position by inserting and locking the Tilt Lock pin.
17. Use the Lift Winch to raise the mast to the desired height.
18. To rotate the lights, loosen the Mast Rotation Lock, rotate the mast, and tighten the Mast Rotation Lock.
19. Start the generator with the lights off.
20. Once the generator is running at operating speed, turn on each light, one at a time.

To stow the light tower, follow the same instructions in reverse.

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