NATIONAL HEADQUARTERS CIVIL AIR PATROL

CAP REGULATION 100-3

3 NOVEMBER 2006

Communications – Electronics

RADIOTELEPHONE OPERATIONS

This regulation establishes radiotelephone procedures for operations within the CAP radio communications system. **Note: This regulation is revised in its entirety.**

SUMMARY OF CHANGES.
Changes regulation number from CAPR 100-1 Volume III to CAPR 100-3. Changes title from Radiotelephone Procedures to Radiotelephone Operations. Updates procedures source guidance from Allied Communications Publication (ACP) 125(f) September 2001. Updates call sign usage requirements from Air Force Instructions (AFI) 33-217, 8 October 2002. Restricts the use of functional designators. Updates procedures for conducting nets. Prescribes the use of abbreviated procedures.

CHAPTER 1 − COMMUNICATIONS ENVIRONMENT

1-1. Mission Statement:

a. The primary purpose of CAP Communications and Information Systems (CIS) is to serve the commander as a fundamental link in the process of command and control. In this role, CIS allows the commander to exert personal influence by exercising command and control (C2) of a larger force and a more widely dispersed area than would otherwise be possible.

b. The secondary purpose of CAP communications is to provide a mechanism to expeditiously transfer information between individuals and groups of individuals. Therefore a robust CIS infrastructure is essential to provide communications in support of operations, intelligence, logistics, administration, as well as command and control.

c. CAP communications must use all available forms of communications and information technology in order to accomplish its mission, while understanding the merits and disadvantages of each.

1-2. Scope. The aim of this regulation is to prescribe the voice procedure for use by all elements of Civil Air Patrol internal voice nets. Its purpose is to provide a standardized way of passing speech and data traffic as securely as possible consistent with accuracy, speed and the needs of command and control, while remaining compliant with the intent of the ICS/NIMS program.

a. Voice procedure is necessary because:

(1) Speech on a voice net in/during the performance of any mission must be clear, concise and unambiguous.

(2) Discipline is needed to ensure that transmissions do not overlap. If two people transmit at one time, the potential result is chaos.

(3) Missions requiring communication among air and ground teams from multiple wings or regions require a national standard of communication procedures. Use of locally generated procedures and terminology is unacceptable in missions encompassing communicators from multiple wings.

b. Adherence to the procedure prescribed in this regulation is mandatory on all Civil Air Patrol internal voice nets. Departure from, or variations in these procedures is prohibited. Such action can invalidate security precautions, reduce accuracy and speed, compromise safety, and create confusion. If a procedure is not provided for a specific situation, common sense and training experience should be used as a guide. Standard procedure must never be replaced by individually preferred methods, or the latter used as an excuse for lack of procedural expertise.

c. The rules for voice procedures are frequently reviewed and changed as necessary. Suggestions for change are welcome and should be forwarded to the National Technology Center for review and possible future incorporation.

1-3. Implementation of Procedures. When operating within the various nets conducted by the Civil Air Patrol, operators should understand the use and necessity of "full" voice procedures versus "abbreviated" procedures. If conditions are good, particularly with VHF-FM nets, it is often feasible to reduce the rigor of procedures in use to both ease the burden on operators and to expedite the flow of information. When conditions deteriorate or when the content of relayed information requires, "full" procedures must be used and understood by all stations. For this reason, it is imperative that all operators be familiar with these "full" procedures for the level of nets they participate in, and that managers and trainers work to ensure that these procedures are known and practiced. When a station makes errors or has procedural shortcomings, it is usually more efficient to NOT attempt to correct this station, but rather to work "off the air" to correct these shortcomings. Unless the station is actually disruptive to the net, it is much better not to interrupt it for the purpose of issuing corrections.

   a.   Abbreviated Procedures.   This regulation contains a number of areas where abbreviated procedures may be used.   Abbreviated procedures are appropriate to use under satisfactory communication conditions, light operator loads and when their use does not compromise the mission.   However, there are certain elements of CAP communications procedures that must not be omitted or modified under any circumstances:

   (1) Call signs. Properly issued Air Force Voice Call Signs (AFVCS, commonly called "Tactical call signs") or Functional designators must be used in accordance with the rules established in CAPR 100-1 and paragraph 1-8 and 1-9 below. All communications must clearly state the station call sign or designator at some point in a series of transmissions, normally at the beginning. Note that paragraph 1-9 f. prescribes the minimum required station identification using the AFVCS.

   (2) Calling Procedure. All initial calls will use the procedure [Called party Callsign] THIS IS [Calling party call sign] – example: "Charter Oak Four THIS IS Charter Oak Five One, Over". Once communications are established, the call signs and/or the proword THIS IS may be omitted as appropriate.

   (3) Phonetic Alphabet. CAP uses the International Civil Aviation Organization (ICAO) Phonetic Alphabet exclusively. If liaison communications are conducted with an agency that does not use the ICAO phonetic alphabet, operators may use the other agency's system as required for accurate communications and for one time liaison communication only.

   (4) Numbers should be transmitted using the CAP standard as presented in paragraph 2-3, either "Full" or abbreviated, noting that call signs, grid/latitude/longitude references, Date-Time-Groups in formal messages and authentication must be transmitted using "Full" digit-by-digit pronunciation, with the exception of CAPFlight call signs noted in paragraph 1-8.

   (5) Prowords. Proper use of prowords significantly enhances accuracy and clarity of communications when all operators understand their use. While it is permissible under satisfactory communication conditions to omit certain prowords, care must be taken not to substitute other words or phrases in their place. Since proper proword use requires practice, operators are encouraged to fully utilize them when possible.

   (a) Prowords that may be omitted (but not substituted) are:

"OVER" under circumstances where "end of transmission" is clear to all operators.

"THIS IS" after initial call and when omission would not cause confusion.

"THIS IS A FREE NET" when every operator on frequency understands the situation.

"WAIT" and "WAIT OUT" when unnecessary and if dealing with untrained operators.

(b) All other prowords should be used where appropriate, including liaison nets. Since CAP Authorized prowords are "plain speech," they will be understood by operators from other agencies, however, CAP operators should be aware that these other agencies might have their own prowords (or might not use consistent prowords at all).

(6) Net Procedures. This Regulation does not require any fixed level of "formality" for nets beyond the initial call, however Net Control Stations (NCS) and managers should be prepared to establish and maintain an appropriate level of formality for nets when conditions and/or taskings require it.

b. Formal Messages. There are times when the use of formal messages is important to reliability of communications. When communicating the following between the Incident Command Post (ICP) and other bases such as advanced or staging bases, formal messages should be used in place of informal communications.

(1) Receiving or giving work assignments.

(2) Requests for support or additional resources.

(3) Reporting progress of assigned tasks.

(4) Whenever record communication is desirable.

1-4. Communications Conditions:

a. A non-stressed environment is one in which all of the infrastructure is available and is the environment CAP operates in most of the time. A stressed environment is one in which some or all of the infrastructure is unavailable, damaged or destroyed, and could be the result of storms, floods or terrorist activity.

b. There are seven variables that affect the conditions of a communications link:

(1) Type of Station. Fixed, mobile or portable.

(2) Type of Information. Voice, data or video.

(3) Path Length. Line of Sight (LOS), Near Line of Sight (NLOS) and Long Distance (LD). Sometimes referred to as short, medium or long range. NLOS and LD capabilities are sometimes referred to as "over the horizon."

(4) Scope. Point to Point (P-P) or Point to multi-point (P-MP).

(5)   **Target.** Broadcast (one-way) or two-way communications.

(6)   **Availability.** Describes whether a system is available in both a stressed and a non-stressed communications environment and the probability that it may be unavailable in a stressed environment.

(7)   **Security.** Security is actually the protective response as appropriate for the sensitivity or classification of the information being passed. Links may be unsecured, private (meaning a low level of security) or secure. There are varying levels of security on communications links. The maximum security anticipated for CAP links falls into the category of Sensitive But Unclassified (SBU) communications which require a moderate level of security.

1-5. Communications Resources. All communications resources or solutions are evaluated in the seven categories listed above. Below is an analysis of the tools presently or potentially used by CAP to satisfy communications requirements.

a.   **VHF/AM.** Air band VHF/AM radio. Common equipment on nearly all civil aircraft. Limited availability on the ground due to regulatory boundaries reserving this band for air traffic control and air-to-air use. Voice only. Range limited to LOS but this can be lengthy depending on altitude. Supports P-P and P-MP as well as one- and two-way communications. Available in both stressed and non-stressed situations.   Use is normally restricted to coordination with other agencies. Non-secure.

b.   **VHF/FM.** Traditional Land Mobile Radio (LMR) VHF/FM. Available in all station classes (fixed, mobile and portable).   Supports voice and some data modes. LOS and NLOS capability. Range can be extended by repeaters. Supports P-P and P-MP as well as one- and two-way communications. Available in both stressed and non-stressed situations however range-expanding repeaters may be subject to loss in some stressed situations. Susceptible to outside intercept but can be secured. Most CAP VHF/FM radios are now encryption capable.

c.   **Family Radio Service (FRS).** This equipment is technically governed by FCC regulation Part 95, and all FRS equipment utilized by CAP must be certified to comply with the FCC regulations. FRS radios are authorized for all CAP units and activities EXCEPT for communications directly supporting Emergency Services (actual missions and training) and any other activity directly involving emergency/disaster response, medical communications, or command and control communications. It is permissible to utilize FRS radios to monitor for or call to search subjects who are thought to possess these radios.

d.   **Intra Squad Radio (ISR).** Similar to the FCC low power FRS but operating on DOD frequencies and available only to DOD agencies. CAP is authorized to use this service. Low power portable station class only. Supports only voice communications. Limited to short-range LOS applications. Supports P-P and P-MP as well as one- and two-way communications. Available in stressed and non-stressed situations. Non-secure but not considered very vulnerable to intercept because of the short range of the units and the obscure frequencies on which they operate.

  e.   **High Frequency (HF).**   High Frequency Single Side Band (SSB) voice and data. Available in fixed and mobile station classes. Supports voice and some data. LOS, NLOS and Long Distance (LD) capability. Of particular use for LD applications. Supports P-P, P-MP, one- and two-way communications. Transportable HF e-mail systems can be very useful, especially when operating in a stressed environment where other systems with higher bandwidth capability are not available. However, the lower data rates provided by HF e-mail systems will take a much longer time to transfer large file attachments than conventional e-mail systems. Available in stressed and non-stressed situations. Susceptible to intercept. Can be secured, with external encryption device. Requires additional training beyond other communications mediums and can be susceptible to fading depending on ionosphere conditions. New generation Automatic Link Establishment (ALE) equipment significantly reduces additional training requirements and increases reliability to nearly 100%.

  f.   **Cellular Phone.** Public common carrier services, including the new push-to-talk (PTT) systems. Available in all station classes. Supports voice, data and some video applications. LOS, NLOS and LD capability using commercial infrastructure. Normally limited to P-P and two-way communications. Does not usually support P-MP or one-way communications (with the exception of voice mail). Only the PTT services cover point to multi-point communications. Relies on commercial infrastructure typically centered on metropolitan markets and along major highways. More mature systems may reach into suburban neighborhoods but few are available in rural areas. Frequently unavailable in stressed communications environments because infrastructure is subject to user-saturation and physical loss or damage. Several federal agency studies and numerous field experiences have found cellular to be a very poor choice for emergency communications in a stressed environment. Not generally susceptible to intercept but it is possible. Can be secured but most applications are not. Because this is commercial system, usage costs are incurred when used.

  g.   **Other Private or Government Radio Systems.** A radio system installed or maintained as either a commercial enterprise or government system. Normally encountered in a liaison scenario, these systems can offer significant capability to CAP. It should be noted, however, that since CAP does not control these systems or have priority within them, CAP cannot depend upon their availability for internal communications needs in a stressed environment. In general terms, CAP should design its systems so that primary channels do not rely on systems, frequencies or infrastructure outside of CAP control. Liaison use of such systems requires formal planning ahead of time. A Memorandum of Understanding (MOU), Letter of Agreement (LOA), Operations Plan (OPlan) or some other formal agreement should be secured with each potential partner agency.

  h.   **Public Switched Telephone Network (PSTN).** Wired system falls into the fixed station class with the limited exception of short-range local extensions via low power radio. Supports voice, data, and some video applications. LOS, NLOS and LD capability using commercial infrastructure. Normally limited to P-P and two-way communications. Does not usually support P-MP or one-way communications (with the exception of voice mail). May be unavailable in stressed communications environments because infrastructure is subject to user-saturation and physical loss or damage. Wired connections are not generally susceptible to easy intercept but it is possible. Can be secured using STU-III or next generation STE phones. Because this is commercial system, usage costs may be incurred when used for LD.

   i.   Internet. Common carrier computer network. Normally used in the fixed station class but some mobile and portable applications are becoming available. Primarily supports data but can be adapted to support both voice and video. LOS, NLOS and LD capability using commercial infrastructure. Supports P-P and P-MP as well as one- and two-way communications. Dependent on local public infrastructure and therefore may not be available in a stressed communications environment. Wired connections are not generally susceptible to easy intercept but it is possible. Wireless network connections are much easier to intercept but can be secured.

   j.   Satellite Phone. Common carrier system most frequently using Low Earth Orbit (LEO) and some limited Geo-synchronous Earth Orbit (GEO) satellite infrastructure. Normally connected to PSTN and/or Internet except for some dedicated applications such as DOD TacSat. Supports fixed mobile and portable requirements in voice, data, and some video applications. LOS, NLOS and LD capability using satellite infrastructure however because of infrastructure charges imposed by carrier it is normally used only for LD applications. Normally limited to P-P two-way communications. Interconnect with PSTN or Internet may be unavailable in stressed communications environments as infrastructure is subject to user-saturation and physical loss or damage. However, satellite phone to satellite phone will usually be available regardless of stressed communications on the ground unless user-saturated. Plans exist in the federal government to seize all commercial satellite systems in time of national emergency. Unless CAP use is pre-coordinated and approved, satellite systems could be lost in a stressed communications environment. Not generally susceptible to intercept but it is possible. Can be secured but most commercial applications are not. As an example, DOD contract with Iridium includes secure phones. Because satellite phones are a commercial system, usage costs are incurred when used.

   k.   General Mobile Radio Service (GMRS), Multiple Use Radio Service (MURS) and others. With the exception of FRS and Part 15 unlicensed devices, CAP is not authorized to use FCC governed or licensed services, except in an authorized liaison role. This specifically includes GMRS, MURS and Business Itinerant ("color dot") services.   It is permissible to monitor these services for search subjects who may possess this equipment.

1-6. Urgency Signals. There are three urgency signals. They are internationally recognized and require immediate handling commensurate with their importance. They are:

   a.   MAYDAY. This is the international distress signal and indicates that a station is threatened by grave and imminent danger to life and property, and requires immediate assistance. In radiotelephone (voice), the word "MAYDAY" is transmitted three times. After the distress signal is sent, all traffic in progress, with the exception of FLASH precedence traffic, will cease and all stations will monitor. Any station in a position to render assistance will do so and all other stations will continue to monitor until the situation is rectified and the frequency is released for normal use.

   b.   PAN-PAN ("pahn-pahn"). This is the international urgency signal and indicates the calling station has a very urgent message concerning the safety of a ship, aircraft, or other vehicle and/or the safety of a person or persons. In radiotelephone (voice), the phrase "PAN-PAN" is transmitted three times. It is normally considered to be Immediate precedence traffic. All traffic of lower precedence will cease. All stations will monitor and any station that can render assistance will do so. All stations will continue to monitor until the situation is rectified and the frequency is released for normal usage.

c. **SECURITE ("see-kur-ih-tay").** This is the international safety signal and indicates that a station is going to transmit a message concerning the safety of navigation or send important meteorological warnings that will, or can, affect ships, aircraft, or persons. It is normally considered to be Priority precedence traffic and is spoken three times. All traffic of a lower precedence will cease. All stations will monitor and any station that can render assistance will do so. All stations will continue to monitor until the situation is rectified and the frequency is released for normal usage.

1-7. Operational Security. Operational Security is the term applied to all aspects of security associated with an activity, mission or program. In order for this Security to be properly applied and used, it is necessary to identify all of the pieces of information that need to be protected, and, if necessary, the extent to which they should be protected. Within CAP, some items that may commonly need to be secured are:

> Personal information (addresses, phone numbers, etc.) - for both CAP members and others
> Mission status - due to the potential interest by the news media
> Identification of personnel
> Communications information including frequencies and location of facilities
> The relationship between the designators and frequencies
> Official phone numbers (mission base, etc,)
> Other agency participation

This is a condensed list, and other items should be included as required. Once these items are identified, steps must be taken to ensure that this information is not improperly released. Communications Security addresses what steps can be taken within the Communications program to achieve this. Within the Communications system, there are a number of steps that can be used to secure information, including steps required to prevent unauthorized stations from entering our nets. All personnel who may operate a radio will be trained in the general concepts of Communications Security and properly briefed on the immediate requirements of the mission they are participating. All personnel will be aware of alternate means of communication that can be used in the event sensitive information must be sent.

a. **Codes and Ciphers.** Locally designed codes or adaptation of official codes, however well intentioned, will not deceive a cryptanalyst; only officially authorized codes are to be used. It has become a practice within CAP to assign "code words" to various mission events, in the belief that doing so will conceal these events from an undesired listener. This practice is seldom effective, violates the principles of the Incident Command System and is therefore not authorized.

b. **P25 and other Digital Modulation Techniques.** P25 digital modulation and other forms of digital modulation are NOT to be used in lieu of encryption or to be regarded as any form of security for CAP communications.

c. **Encryption Techniques.** There are many different types and levels of encryption technology available today, and some CAP equipment may be equipped to operate using this technology. CAP stations are not authorized to utilize encryption unless authorized in advance for a specific mission or activity by the National Technology Center. If a unit has a requirement for routine use of encryption, it will communicate that need to the NTC prior to such use.

1-8. CAPFlight Call sign Usage. Because the CAP-assigned aircraft call sign "CAPFlight XXXX" is considered an "Air Carrier" call sign by the FAA, it may, if conditions permit, be transmitted using the FAA-prescribed "Group Form" as described below. Only the "CAPFlight" call sign may be transmitted in this way, and flight crews should be prepared to use digit-by-digit pronunciation when required by conditions.

      Group Form: "Group form" is the pronunciation of a series of numbers as the whole number, or pairs of numbers they represent rather than pronouncing each separate digit. Note that "zero" is pronounced "ze-ro", not "oh" and that 4-digit numbers are always pronounced as two pairs. Examples:

        "CAPFlight forty-two twenty seven"
        "CAPFlight two thirty two"
        "CAPFlight seventeen zero six"
        "CAPFlight nine eleven"
        "CAPFlight ninety-nine zero one"

1-9. Functional Designator Usage. Functional designators are utilized by the ICS system to enhance interoperability on joint missions and differ from Air Force Voice Call Signs (AFVCS) in that they are intended to openly state the identity and function of a station.
Because CAP may be utilized in a multi-agency ICS mission, CAP operators need to be familiar with and practice the use of functional designators; however, it needs to be recognized that many CAP missions, including Homeland Security missions, Air Force and Joint Service support missions and Federal Agency support missions may have OpSec considerations that preclude the use of functional designators. It is essential, therefore, that CAP train and utilize both systems as appropriate to maintain proficiency. Functional designators must NOT be used as a substitute for a properly managed AFVCS call sign program. They are authorized for use on appropriate missions either training or actual, or an organized CAP activity such as an encampment, FTX or conference. .

      a.   Functional designators may only be used when the operator is signed in to a mission or formal CAP activity and as assigned by the Comm Unit Leader or Communications Officer IAW with this regulation as implemented by the wing Director of Communications.   Routine day-to-day use of functional designators in place of AFVCS call signs is prohibited.

      b.   Functional designators should reflect the nationally-standardized ICS/CAP positions or job functions that are represented, or geographic locations, or both. Examples of valid functional designators are "Air Ops" "Ground Ops" "Flight Line" "Admin" "Transport four" "Ground Team Six" "Jackson Base" "Camp Six" "Highbird", etc. Geographic prefixes are used ONLY with airborne relay stations or bases and other stationary facilities. A one or two-digit numerical suffix is optional and may be used with any functional designator if needed.

      c.   By definition functional designators make clear the function of the station using the call sign. Call signs (other than the assigned AFVCS) which cloak the function of the station are NOT functional designators and are not allowed under this provision of the rules. Random words or phonetic alphabet letters are not functional designators. Vanity words such as "Eagle" "Ranger" or "PJ" do not qualify as functional designators and could only be used if assigned by the Air Force as a Voice Call Sign.

d.   CAP aircraft are not authorized to use functional designators on CAP frequencies with the single exception of the designator "Highbird" (and appropriate geographical prefixes and/or numerical suffixes as necessary) which may be used solely to refer to the airborne relay function. Transmissions not pertaining to the airborne relay function must use the normally-assigned CAPFlight call sign.

e.   Because functional designators are not AF-assigned call signs, it is essential that the identification requirements of the NTIA be met even when using them. Base and other fixed stations must identify with their assigned AFVCS at the beginning and end of each operational period and at least once each hour. Mobile and portable stations need not state their AFVCS on frequencies used to communicate with a base, however, they must identify using their AFVCS using the same rules as for a base station if they are using a frequency without communicating to a base.

1-10. Radio Net Operations. Any time two or more CAP radio stations communicate with each other, it is considered to be a "Net." When that communication is not part of a mission tasked by AFRCC, the Air Force, state and local agencies, or other CAP activity with a duly assigned Communications Unit Leader (CUL), the Wing Director of Communications, unit Communication Officer or appropriate Net Control Station (NCS) maintains control over the frequency/net. On operational missions, the Incident Commander serves as NCS until such time as a CUL is named, who then assumes control of the net or nets. The type of net and method of operation is determined from consideration of operational factors involved.

a.   Free Net. In this type of net, the net control station (NCS) authorizes member stations to transmit traffic to other stations in the net without obtaining prior permission from the NCS. Roll Calls are not conducted on a free net. Free net operation does not relieve the NCS or other controlling entity of the responsibility for maintaining circuit discipline.

b.   Directed Net. In this type of net, stations obtain permission from the NCS prior to communicating with other stations in the net. Permission is not required for the transmission of FLASH messages, which shall be sent direct. In a directed net, traffic may also be sent in accordance with predetermined schedules.

c.   A net is deemed to be a free net unless otherwise ordered. When it is required to change a free net to a directed net, or vice versa, one of the prowords THIS IS A FREE NET or THIS IS A DIRECTED NET may be used by the NCS.

1-11.   Tactical Net. A Tactical Net is established whenever a requirement exists to coordinate and control the actions of deployed units in a mobile or portable environment. A tactical net may utilize either Free or Directed Net procedures.   The primary purpose of these nets is the interchange of mission-essential information between deployed units and a Mission Base. These nets are generally controlled from a central Mission Base or similar facility; although other base facilities may be established as required by the mission, including mobile or portable bases such as airborne relay aircraft. Communications between deployed mobile units and the base(s) is directed by the primary NCS, although the primary NCS may delegate authority to sub-bases with respect to communications within their specific areas. Tactical nets are usually established as a result of a mission tasking, which may be actual or for training. In a Tactical net, only the base stations will maintain a log, although deployed units may need to be able to record

information as it is relayed to them. Sub-nets: In a tactical situation the mission base may use a repeater as its primary net but have various subnets established on different frequencies to facilitate the activities involved. Example: Using ISR radios for a flight line net or using a separate VHF channel for transportation at a conference.

1-12.   Command and Control Nets:

   a.   Command and Control (C2). Nets are established for the purpose of conveying messages and information between different locations and levels of CAP Command. These nets can function within the mission environment, or outside of it, i.e., daily or weekly training nets. C2 nets may follow either Free or Directed net procedures. All stations participating in a message net will normally maintain a log of their activity.

   b.   Sub-net Operations (Remote Check-in). In a command and control situation it is necessary to move the traffic as quickly as possible. Use of VHF to forward traffic to or from lower echelons is required, however the station which handles the coordination between the two nets will not check in stations from one net to the other.

1-13.   Liaison Nets. Anytime CAP is involved with other agencies, CAP may be invited to participate on their frequencies or a previously signed agreement may allow them on CAP frequencies. Call signs and procedures will be as established by prior arrangement or as mutually agreed upon prior to initiating communications, however steps should be taken to minimize changes to CAP procedures on CAP frequencies.

1-14. Precedence Designators. The precedence assigned to a formal message is the responsibility of the originator of the message. The originator must weigh subject matter and the time factor involved when deciding on a precedence. By assigning precedence, the originator tells handling operators in what order the message will be handled and denotes the urgency of the information to the addressee(s). Dual Precedence: If a message has both action and information addresses, it may be either single or dual precedence. A single precedence indicates that the message is of the same urgency to all addressees. If the message is more urgent to one addressee than another, it will be so indicated by the assignment of two precedences. The higher precedence represents the action addressee(s) and the lower precedence represents the information addressee(s). The higher precedence is always assigned ahead of the lower precedence in the heading. No message may be assigned more than two precedences. The precedence designators, in order of importance, are:

   a.   FLASH (Z). This precedence is reserved for initial enemy contact messages or operational combat messages of extreme urgency. Brevity is mandatory. FLASH messages are to be handled as fast as humanly possible, ahead of all other messages, with in-station handling time not to exceed 10 minutes. Messages of lower precedence are interrupted on all circuits involved until the handling of FLASH messages is completed. Your station may be in the vicinity of a terrorist attack and able to pass a message about the attack for officials

   b.   IMMEDIATE (O).   This precedence is reserved for messages relating to situations gravely affecting the security of the nation. It requires immediate delivery. Examples include reports of widespread civil disturbance, reports or warning of grave natural disaster, and requests for or directions concerning search and rescue operations. Immediate messages are processed, transmitted, and delivered in the order received and ahead of all messages of lower precedence. They are to be handled as quickly as possible, with in-station handling time not to exceed 60 minutes. Messages of lower precedence will be interrupted on all circuits involved until the handling of the IMMEDIATE message is completed.

   c.   PRIORITY (P).   This precedence is reserved for traffic requiring expeditious action by the addressee or for conducting operations in progress when ROUTINE precedence will not suffice. PRIORITY precedence messages are processed, transmitted, and delivered in the order received and ahead of all messages of ROUTINE precedence. Examples include requests for supplies or equipment during the conduct of an operation, time-critical items requiring quick response, and situation reports. They are to be handled as quickly as possible, with in-station handling time not to exceed 6 hours.

   d.   ROUTINE (R).   This precedence is used for all types of message traffic justifying transmission by rapid means, but not of sufficient urgency to require higher precedence. ROUTINE precedence messages are delivered in the order received and after all messages of higher precedence.   ROUTINE is the most used precedence designator in CAP messages. Examples include any message that requires the documentation of its transmission and/or delivery; messages concerning normal operations, programs, or projects; and periodic or consolidated reports. They should be handled as soon as traffic flow allows, but no later than the beginning of the next duty day.

1-15.   Radio Logging:

   a.   Radio logs are to be maintained by the Net Control Station on all Directed radio nets, nets in support of actual or training missions, any net where CAP Regulations require maintenance of records, and on any net where formal traffic is passed.

   b.   Software based logs may be maintained provided they can be stored in a form where the information can be easily retrieved and a backup exists. Software logs should allow for the use of designators in place of frequencies.

   c.   The radio log will contain a complete and continuous record of all transmitted and received messages, and information concerning the radio net. If kept by hand, the log will be written legibly in ink, in the operator's own hand. Logs should include all relevant details and timings of the following:

   (1)   All transmitted and received informal messages and voice conversations in full or, where this is impractical, the gist of a message in sufficient detail to provide adequate reference information.

   (2)   A record of formal messages written separately on a message form.

   (3)   The opening and closing of the radio stations on the net.

(4)   Changes in operating frequency and interference reports, indicated by frequency designator and not actual frequency.   Placing of actual frequency information on log forms makes these documents FOUO and significantly increases the difficulty of handling and storage.

(5)   Sufficient reference data to identify all other calls or procedural messages transmitted or received on the net.

(6)   Reports of stations with whom contact is difficult or suspect, amplified with any corrective action taken.

(7)   Unusual occurrences such as procedural or security violations, or suspected deception or jamming. Entries will include the reporting action taken.

(8)   Handover and takeover by the radio station operators. The receiving operator is to record his or her rank, name and signature to the effect that the transfer has been completed satisfactorily. Unless other arrangements exist, this signature is also to confirm that a complete check of any classified material has been made

d.   Good log keeping is an essential part of the efficient operation of a radio station, particularly at a net control station where the operator is responsible for other stations on the net.

e.   Radio logs are to be held in safekeeping in accordance with national/command instructions.

f.   CAPF-110, *Air/Ground or Point to Point Log*, is the current paper CAP logging form. When using this form, use only frequency designators in place of actual frequencies

g.   Voice recorders are specialized equipment which can be connected to the communications equipment and can record both the incoming and out going transmissions. While these devices can be expensive, they do save time and ensure complete accuracy of the logging. Data must be stored the same as for the written log and there will be a provision to extract the data if need for mission records. If these records contain sensitive or personal information, they must be handled using the same procedures used for FOUO material.

CHAPTER 2 – COMMUNICATIONS PROCEDURES

2-1. Radio Telephone Procedures. Voice procedure is designed to provide the fastest and most accurate method of speech transmission. All messages should be preplanned, brief and straightforward. Ideally, messages should be written down: even brief notes reduce the risk of error. Messages should be constructed clearly and logically in order not to confuse the recipient.

    a. Plain Language Usage. CAP voice procedures, including the use of authorized prowords, are considered "plain speech" and are compliant with the ICS/NIMS guidelines for radio procedures. Use of brevity codes such as "10-codes" and others must be avoided, even if other agencies in liaison nets use them. The correct use of clear, concise speech on the radio is essential if transmissions are to be successfully received and understood at the first attempt.

    b. Use of Audio Equipment. In many situations, particularly in noisy or difficult conditions, the use of headsets fitted with noise canceling microphones is preferable to loudspeakers: headsets will aid concentration and the audibility of the incoming signal. Noise canceling microphones are designed to cancel out surrounding noise, such as engine noise. The microphone should be as close to the mouth as possible.

    c. Method of Speech. The key words to remember are Rhythm, Speed, Volume and Pitch (RSVP).

        (1) Rhythm. Use short sentences divided into sensible phrases which maintain a natural rhythm; they should not be spoken word by word. Where pauses occur, the microphone switch should be released to minimize transmission time and permit stations to break in when necessary.

        (2) Speed. Speak slightly slower than for normal conversation. Where a message is to be written down by the recipients, or in difficult conditions, extra time should be allowed to compensate for the receiving station experiencing the worst conditions. Speed of transmission is easily adjusted by increasing or decreasing the length of pauses between phrases, as opposed to altering the gaps between words; the latter will create an unnatural, halted style of speech, which is difficult to understand.

        (3) Volume. The volume should be as for normal conversation. Shouting causes distortion.

        (4) Pitch. The voice should be pitched slightly higher than for normal conversation to improve clarity.

2-2. Aids to Accuracy:

    a. Pronunciation of Letters. To help identify spoken letters of the alphabet, a standard phonetic word alphabet is used. Each letter of the alphabet is represented by a uniquely pronounced word to enable consistent and accurate pronunciation. For example, BRAVO is the phonetic equivalent of the letter B and DELTA equates to the letter D.

b.   Phonetic Alphabet. The following alphabet table shows the phonetic word equivalent of each Letter as it is written and then as it is spoken. The underlined portion of the spoken words indicates the syllables that require emphasis.

THE ICAO PHONETIC ALPHABET						
Letter	Word	Pronunciation		Letter	Word	Pronunciation
A	ALPHA	*AL-FAH*		N	NOVEMBER	*NO-VEM-BER*
B	BRAVO	*BRAH-VOH*		O	OSCAR	*OSS-CAH*
C	CHARLIE	*CHAR-LEE*		P	PAPA	*PAH-PAH*
D	DELTA	*DELL-TAH*		Q	QUEBEC	*KEH-BECK*
E	ECHO	*ECK-OH*		R	ROMEO	*ROW-ME-OH*
F	FOXTROT	*FOX-TROT*		S	SIERRA	*SEE-AIR-RAH*
G	GOLF	*GOLF*		T	TANGO	*TANG-GO*
H	HOTEL	*HOH-TELL*		U	UNIFORM	*YOU-NEE-FORM*
I	INDIA	*IN-DEE-AH*		V	VICTOR	*VIK-TAH*
J	JULIET	*JEW-LEE-ETT*		W	WHISKEY	*WISS-KEY*
K	KILO	*KEY-LOH*		X	XRAY	*ECKS-RAY*
L	LIMA	*LEE-MAH*		Y	YANKEE	*YANG-KEY*
M	MIKE	*MIKE*		Z	ZULU	*ZOO-LOO*

2-3. Rules for Figures:

a.   When radio conditions are satisfactory and confusion will not arise, figures in the text of a message may be spoken as in normal speech. During difficult conditions, or when extra care is necessary to avoid misunderstanding, figures are sent digit-by-digit preceded by the proword FIGURES. This proword warns that figures follow immediately, to help distinguish them from other similarly pronounced words.

Examples:

Satisfactory conditions		**Difficult conditions**
23	Twenty three	FIGURES too thu-ree
50	Fifty	FIGURES fife ze-ro
146	One hundred and forty six	FIGURES wun fow-er six
200	Two hundred	FIGURES too ze-ro ze-ro
1009	One thousand and nine	FIGURES wun ze-ro ze-ro nin-er
1630 hours	Sixteen thirty hours	FIGURES wun six thu-ree ze-ro hours
2800	Two thousand eight hundred	FIGURES too ait ze-ro ze-ro
12000	Twelve thousand	FIGURES wun too ze-ro ze-ro ze-ro

The proword FIGURES is not used in the following situations. Digit by digit pronunciation is required.

(1)   Call signs. (Note exception for CAPFlight call signs in paragraph 1-8)

(2)   Grid/Latitude/Longitude references.

(3)   Authentication. (Authentication is a system used for confirming the validity of a radio station or message)

(4)   Formal message date time groups (DTGs).

   b.   Pronunciation of Figures. Whenever figures are spoken in single digits over radio they are pronounced as shown in the following table. The underlined portions of the spoken words indicates the letter or syllables requiring emphasis.

Numeral	Pronunciation		Numeral	Pronunciation
0	ZE-RO		5	FIFE
1	WUN		6	SIX
2	TOO		7	SEV-EN
3	THU-REE		8	AIT
4	FOW-ER		9	NIN-ER

2-4. Punctuation. Punctuation is not to be used unless it is necessary to the sense of a message, and should rarely be required in radio messages where the originator makes his or her own transmission. Punctuation can occur more often in written informal or formal messages. When the use of punctuation is essential, it will be written and spoken as follows:

Punctuation	Spoken as	Symbol or Abbreviation
Full stop/period	Full stop .	PD
Comma	Comma ,	CMM
Slant/Oblique	Slant	/
Hyphen	Hyphen	-
Left-hand bracket	Brackets on	(Paren
Right-hand bracket	Brackets off	) Unparen
Colon	Colon	: CLND
Semi-colon	Semi-colon	; SMCLN
Question Mark	Question mark	? Ques
Decimal point	Day-See-Mal	. Point

2-5. Rules for Mixed Groups. The rules for sending mixed letter/figure groups incorporate the same principles that apply to sending letters and figures separately. The same information may be sent in two different ways depending on the circumstances.

   Example 1. Satisfactory conditions:

Mixed group	spoken as
ACP 125	ACP one twenty-five

   Example 2. Difficult conditions:

Mixed group	spoken as
ACP 125	I SPELL ALFA CHARLIE PAPA FIGURES one two five

2-6. Corrections. When a transmitting operator makes an error, the proword CORRECTION will be transmitted followed by the last word, group, proword, or phrase correctly transmitted. Transmission then continues.

2-7. Aids to Brevity:

   a. Abbreviations. Although originally designed to save time in writing, abbreviations will often save time in speech. Many abbreviations are so commonly used in normal speech they are more familiar than their original unabbreviated form. The use of such abbreviations in radio transmissions is to be encouraged provided that they are quicker and easier to use than the full word and they are sufficiently well known to avoid any confusion and subsequent confirmatory transmissions. Where an abbreviation has more than one meaning, the intended meaning must be obvious to the addressee from its context or frequent usage. Whether abbreviations are spoken as such, spelled phonetically or expanded to their unabbreviated form, will depend on prevailing radio conditions and the circumstances in which they are used. The following common sense rules will be applied to take account of conditions:

       (1) Satisfactory Conditions. To ensure that the advantage of brevity which abbreviations provide is not lost, they will be spoken as in normal speech.

       Examples:
       RV as RV   instead of "I spell Romeo Victor"
       DR as DR   instead of "I spell Delta Romeo"
       ETA as ETA   instead of "I spell Echo Tango Alfa"

       (2) Difficult Conditions. In conditions which require amplification of common abbreviations normally spoken as such, it is usually quicker and easier to use the full word than to waste time and effort in spelling.

       Examples:
       "Disaster Recovery" is better than "I spell Delta Romeo"
       "Incident Commander" is better than "I spell India Charlie"

   b. Abbreviations will only be spelled phonetically when it is both quicker and easier to do so, or the spelling will be more readily received and understood than the full word or phrase. Examples where spelling is more appropriate than the full words are:

       "I spell November Bravo Charlie" instead of "Nuclear Biological and Chemical"
       "I spell Papa Oscar Lima" instead of "Petroleum, Oil and Lubricants"
       "I spell Uniform Tango Mike" instead of "Universal Transverse Mercator"

   c. Where necessary the sender of a message may, on behalf of the drafter, expand common abbreviations during difficult conditions or when a transmission can be simplified. Where any doubt exists as to the drafter's intentions, abbreviations will never be expanded but spelled phonetically leaving the addressee to interpret the meaning. The abbreviation DF can mean "Defensive Fire" or "Direction Finding." If the intended meaning is not obvious then DF will be spelled phonetically.

d. Procedure Words (Prowords). To keep voice transmissions as brief and clear as possible standard prowords are used in place of whole sentences. Prowords are easily pronounced and recognized words or phrases used to convey a specific predetermined meaning, for example:

Proword	Meaning
ROGER	I have received your last transmission satisfactorily
OUT	This is the end of my transmission to you and no answer is required or expected

Several Prowords may be omitted under conditions where it is appropriate. Prowords that may be omitted (but <u>not</u> substituted) are:

"OVER" Under circumstances where "end of transmission" is clear to all operators.

"THIS IS" after initial call and when omission would not cause confusion.

"THIS IS A FREE NET" When every operator on frequency understands the situation.

"WAIT" and "WAIT OUT" When unnecessary and if dealing with untrained operators.

All other prowords should be used where appropriate, including liaison nets. Since CAP Authorized prowords are "plain speech". They will be understood by operators with other agencies, however, CAP operators should be aware that these other agencies may not use the same prowords (or use consistent prowords at all).

A full list of prowords is given in attachment 1.

2-8. Exercise Communications:

a. Exercise Messages. Messages sent relating to training exercises, command post exercises, tactical exercises and maneuvers conducted in the interest of training and readiness are exercise messages but are prepared and handled in the same way as normal traffic.

b. Identification of Exercise Messages:

(1) Exercise messages are identified by the word "EXERCISE" followed by the exercise identification, which shall consist of a name or designation assigned by proper authority. EXAMPLE: EXERCISE ARDENT SENTRY 06

(2) The officer conducting the exercise shall include appropriate instructions for identifying exercise messages in the directive for the conduct of the exercise in order to preclude alarming non-participants. Normally these instructions will require that the exercise identification, preceded by the word "EXERCISE" be used at the beginning of the text.

c. Real or Non-exercise Traffic. In training, there is a need to differentiate between exercise play and events, that require action outside the context of the exercise. Conventionally this is known as "real" activity. Messages associated with real activity are just as exploitable as any other and care must be taken to ensure that security is not unduly prejudiced by the urgency of such situations. In order to highlight the differences between real and other messages, the proword NO PLAY is used. Its meaning is defined in the list of prowords in attachment 1.

2-9. Radio Checks, Signal Strength and Readability:

    a.   A station is understood to have good signal strength and readability unless otherwise notified. Strength of signals and readability will not be exchanged unless one station cannot clearly hear another station.

    b.   A station that wishes to inform another of its signal strength and readability will do so by means of a short and concise report of actual reception such as, WEAK BUT READABLE, LOUD BUT DISTORTED, WEAK WITH INTERFERENCE, etc. Reports such as "five by five," "four by four," "Lima Charlie," etc., will not be used to indicate strength and quality of reception. In addition, other words and phrases can be added to communicate an unusual reception condition – example: "picket fencing" or "multipath distortion" – but care should be taken to use the prescribed words for signal reports.

    c.   The prowords listed below are for use when initiating and answering queries concerning signal strength and readability:

        (1)   **General:**

RADIO CHECK: What is my signal strength and readability; how do you hear me?

ROGER: I have received your last transmission satisfactorily. The omission of comment on signal strength and readability is understood to mean that reception is loud and clear. If reception is other than loud and clear, it must be described with the prowords for (2) and (3) below.

NOTHING HEARD: To be used when no reply is received from a called station during full procedures. When using abbreviated procedures the calling station will give their call sign and OUT.

        (2)   **Report of Signal Strength:**

LOUD: Your signal is very strong.

GOOD: Your signal strength is good.

WEAK: Your signal strength is weak.

VERY WEAK: Your signal strength is very weak.

FADING: At times your signal strength fades to such an extent that reception cannot be relied upon.

        (3)   **Report of Readability:**

CLEAR: The quality of your transmission is excellent.

READABLE: The quality of your transmission is satisfactory.

UNREADABLE: The quality of your transmission is so bad that I cannot understand you.

DISTORTED: Having trouble reading you due to interference.

WITH INTERFERENCE: Having trouble reading you due to interference.

INTERMITTENT: Having trouble reading you because your signal is intermittent.

    d. Example:

Charter Oak 34 desires a radio check with Charter Oak and transmits:
Charter Oak – THIS IS Charter Oak 34 — RADIO CHECK – OVER
All stations of the collective call hear Charter Oak 34 loud and clear except Charter Oak 26 and
    Charter Oak 38. The replies of each station, in order, are:
THIS IS – Charter Oak 13 – ROGER – OVER
THIS IS – Charter Oak 26 – READABLE – OVER
THIS IS – Charter Oak 38 – WEAK WITH INTERFERENCE – OVER
THIS IS – Charter Oak 69 – ROGER – OVER
THIS IS – Charter Oak 78 – ROGER – OVER
THIS IS – Charter Oak 95 – ROGER – OVER
Charter Oak 34 indicates its reception of each of the called stations was loud and clear except for
    Charter Oak 26, which was distorted, and Charter Oak 38, which was not heard, by replying:
THIS IS – Charter Oak 34 – ROGER – Charter Oak 26 DISTORTED – Charter Oak 38 –
    NOTHING HEARD – OVER
In the event Charter Oak 34 hears all stations loud and clear, the reply would have been:
THIS IS – Charter Oak 34 – ROGER – OUT

2-10. Maintaining Records. All formal messages will be recorded. CAP radio stations must keep a file of all messages handled for a minimum of 30 days. After 30 days, the recorded copy may be destroyed unless otherwise instructed by CAP National Headquarters, the National Technology Center, or by the respective Region or Wing Headquarters..

    a. Message File. A simple message file consists of three manila folders or backed up computer "folders", labeled "RECEIVED," "SENT," and "TO BE SENT."

    b. Station Log. A separate log, CAPF 110 *Air/Ground or Point to Point Log,* or other appropriate form for CAP operations (if required) must be retained for a minimum period of 30 days, unless otherwise instructed by CAP National Headquarters, the National Technology Center, or by the respective Region or Wing Headquarters.

2-11. Prohibited Operating Practices. The following prohibited operating practices apply to operation of all CAP stations:

    a. Identifying operators by name over the air.

    b. Violation of radio silence.

    c. Personal conversation of any type.

d.   Use of given names or nicknames in place of authorized call signs.

e.   Excessive tuning and testing.

f.   Profane, indecent, or obscene language.

g.   Use of excessive transmitter power output.

h.   Interruption of scheduled net activities in progress.

i.   Transmitting in a directed net without permission of the Net Control Station (NCS).

j.   Leaving a directed net without the permission of the NCS, except in emergency situations or equipment failure. See paragraph 2-17 for proper procedure.

2-12.   Net Procedures. In accordance with ACP 125(F), the use of procedures as prescribed herein shall be followed when opening a Directed Net for the first time or when reopening a net. Proper control by the net control station (NCS) and adherence to operating rules by all stations within the net enable the net to begin and maintain an exchange of traffic with minimum delay.

Example:
At a designated time or when ready to establish the net, Patriot 4 transmits:

PATRIOT, THIS IS – Patriot Four – OPENING A DIRECTED NET – ROLL CALL FOLLOWS, LIST YOUR TRAFFIC IN ORDER OF PRECEDENCE.

Here the collective call sign PATRIOT indicates whose net it is, then the call sign of the station acting as the net control station. Do not identify the organization, state/location or mode of operation.

Once the net has been established, it will normally function using abbreviated procedures as follows. The NCS may, however, order the net to revert to full procedures as dictated by the prevailing conditions.

a.   Abbreviated Procedure. The proword THIS IS will normally be omitted from all calls.

Example:
Peace Garden Nine Two – One IMMEDIATE and one ROUTINE for you – OVER
Diamond Flight Six – OVER
Free State Eight One – ROUTINE for Charter Oak Nine Two – OVER
Blue Mound Six Nine – PRIORITY for Aspen Gold Nine Five – OVER
Yosemite Seven Eight -- OVER
Aspen Gold Nine Five – OVER

b.   Full Procedure. With full procedure, the use of prowords that were previously optional becomes mandatory. If, when establishing the net, the NCS judges that conditions are such that the use of abbreviated procedure will cause unnecessary repetitions, the NCS orders the use of full procedure.

Example:
Once the net has been established, the NCS transmits:
Charter Oak   – THIS IS – Charter Oak 4 – USE FULL PROCEDURE – OVER

Each subordinate station then answers in the order called with their full call sign, indicating traffic on hand:

THIS IS – Peace Garden Nine Two – One IMMEDIATE and one ROUTINE for you – OVER
THIS IS – Diamond Flight Six – No Traffic – OVER
THIS IS – Free State Eight One – ROUTINE for Charter Oak Nine Two – OVER
THIS IS – Blue Mound Six Nine – PRIORITY for Aspen Gold Nine Five – OVER
THIS IS – Yosemite Seven Eight – No Traffic – OVER
THIS IS – Aspen Gold Nine Five – No Traffic – OVER

Patriot Four then informs the stations that their transmissions have been heard and commences to clear traffic in order of precedence:

THIS IS – Patriot Four – ROGER – Peace Garden Nine Two – Send your
IMMEDIATE – OVER

After Peace Garden Nine Two completes its IMMEDIATE to Patriot Four, the NCS orders the station with the next highest precedence message to transmit its message:

Blue Mound Six Nine – THIS IS – Patriot Four – Send your PRIORITY – OVER

2-13. Break-in Procedure.   A station having a message of higher precedence than the transmission in progress may break in by saying the precedence three times and thus suspend that transmission in the following circumstances:

   a.   **FLASH.** Break in at once and transmit the message (b and c below).

   b.   **IMMEDIATE.** May break in at once and pass the message. A preliminary call may be made before transmitting the message, if necessary. On a directed net, approval to transmit the message must be obtained.

   c.   **PRIORITY.** As for IMMEDIATE except that only long ROUTINE messages will be interrupted. Note: Break-in procedure will not normally be employed during the transmission

2-14. Traffic (Command and Control) Net.   Command and control nets will usually be directed nets and require a roll call. This roll call will be used to establish which stations are available to handle traffic and will record only one check in per station. Stations, which check in prior to the opening of the net or after the close, will not be counted since they were not available to handle traffic. If the net is changed to a FREE NET the NCS will acknowledge check-ins but will not solicit them.

2-15.   Tactical Net. Tactical nets can be either FREE or DIRECTED. If DIRECTED the NCS may conduct a roll call on a regular schedule to verify the assets available. Only one call sign per station is to check in to ensure a correct count of available stations. During either type of tactical net, stations not on the mission or activity may check in and out of the net and also pass traffic. The NCS will accommodate these stations the same as those active on the mission/activity with priority being given to mission traffic.

2-16.   Calling:

  a.   Full or Formal Call. The full or formal call starts with the call sign of the station being called, followed by the prowords "THIS IS," and then the call sign of the station and the proword "OVER." (Example "SANDLAPPER FOUR THREE THIS IS MOCKINGBIRD ONE ONE, OVER.")

  b.   Abbreviated Call. When replying to a call, it is not necessary to use the callsign of the station initiating the contact. Example: "Wildwood Four this is Wildwood Four Three, over." "Wildwood Four, over." For brevity when conditions are good, particularly on large nets, stations may omit the proword THIS IS when calling or receipting for a transmission.

    (1)   When two stations are in continuous communication with each other on a net not shared by a third station, the call may be omitted entirely after the initial call, provided no confusion would result. This provision may apply to any two stations within the same net, which are in continuous communications with each other. However, in either of the foregoing instances, the requirement for periodic identification as set forth in appropriate national regulations must be adhered to, as far as possible.

    (2)   An aeronautical station may acknowledge by transmitting the identification of the aircraft.

  c.   Collective Call. Those who act as net control or alternate net control stations normally use the collective call. The collective call assists the NCS in calling groups of stations and the proword "OVER." (Example - "JEFFERSON, THIS IS JEFFERSON TWO TWO... OVER.")

  d.   Multiple Call. The multiple call is employed when a calling station has subject matter to bring to the attention of more than one station. (Example -"SANDLAPPER FOUR THREE, MOCKINGBIRD ONE ONE, WILDWOOD FOUR FIVE, THIS IS JEFFERSON TWO TWO, OVER.")

  e.   Nothing Heard. After a station is called twice with no response, the station calling ends the call with, "NOTHING HEARD, THIS IS _____ OUT." This tells other stations monitoring that the channel or frequency is no longer in use. The calling station will refrain from calling the same station for at least 5 minutes after clearing from the first call.

2-17.   Closing Down:

  a.   Once having checked in, no station is to close down without prior permission from the NCS. In the event the situation on frequency has deteriorated and the requesting station cannot contact the NCS or be relayed, then the operator may close station since they are unable to participate in the net.

b.   The NCS orders the net or subordinate stations to close down. He or she may do this by means of the proword CLOSE DOWN. Do not list the number of stations participating or acknowledge that another net follows.

> **Example A: Closing the net down.**
>   Blue Mesa 4 orders the close down of the net using the proword CLOSE DOWN:
>   THIS IS – Blue Mesa 4 –CLOSE DOWN now – OUT

> **Example B: Requesting and closing down a station**
>   Mockingbird 4 – THIS IS – High Plains 6 – request CLOSE DOWN – OVER
>   If permission is granted, the NCS replies:
>   THIS IS Mockingbird 4 ROGER – OVER
>   High Plains 6 acknowledges:
>   High Plains 6 – CLOSE DOWN NOW – OUT

2-18.   Passing/Delivering Message Traffic. The primary reason for any CAP voice net is the passing of message traffic. There are two kinds of message traffic, formal (written) and informal (conversation or verbal). Whether formal or informal, whether it is real or for training purposes, message handling is the reason for the net structure, discipline, and operation. The entire system is dependent on one factor that may or may not take place over the radio waves. Once received, each message must be delivered to all addressees. A message that is not delivered fails the mission and responsibility of the CAP communications system. Every caution must be taken and effort must be made to ensure that messages are delivered in a timely and efficient manner. Attachment 2 is a checklist for sending message traffic. The originator of a message should be prudent and economical in the choice of words that will convey the intended meaning. Commonly used conjunctions, prepositions and articles such as "and," "but," "for," "in," "on," "the," "that," etc., should be eliminated unless essential to the meaning of the message.

2-19.   Formal Messages. A CAPF 105, *CAP Radio Message Form*, is divided into three main parts: the message heading, the message text, and the message ending.

a.   The Message Heading/Preamble. The radio operator, based on information furnished by the originator usually affixes the heading to the message. It can be compared to the information written on the envelope of a letter. This normally would be the return address in the upper left corner, showing who wrote the letter (the originator, or "FROM" line); to whom it is going in the middle of the envelope (the addressee or "TO" line); its urgency (special delivery, priority, 3rd class, etc.) (the "PRECEDENCE"); and the time it was sent (the postmark) ("DATE-TIME GROUP" or DTG). One difference is the message number. This is not required, but may be used during missions or other busy times to reduce confusion. When a message number is not used, the message Precedence and DTG is used for reference to a particular message, as in, "Reference your Priority 312105Z MAR 06." When used, the message number is above the "FROM" line and before the precedence. The order of the message heading or preamble is:

> **(1)   Message Number.** (When used).

> **(2)   Precedence.** See paragraph 1-13.

(3) Date-Time-Group. The Date-Time-Group (DTG) is made up of the day of the month, the time in Universal Coordinated Time (UTC) or Zulu (Z), the calendar month, and the last two digits of the year. For example, if you are in Central Standard Time (CST) at 1100 hours on 3 January 2006, the DTG would be "031700Z JAN 06." The "03" is the day of the month. At 1100 hours in the CST, the time difference is 6 hours (see Time Conversion Chart at Attachment 3) and is written "1700Z." Then it is followed by the three letter abbreviation of the month and the last two digits of the year, "JAN 06." It is said, "TIME 031700 ZULU January 06." NOTE: If the time is 2000 hours local time with a conversion of +6 to UTC, the time is 0200Z on the next day. This requires that the day of the DTG also be the next day (2000 hours on 3 January 06 makes a DTG of "040200Z JAN 06").

(4) Originator. (From).

(5) Addressee(s). (Action required).

(6) INFO. (Non-action addressee(s)).

(7) Subject. (Subject/reference of the message).

b.   Break or BT. The separation of the heading and the message text is marked with the proword BREAK. "BT" is the written shorthand used in record communications.

c.   Message Text. The text contains the information that the originator desires to convey to the addressee(s). The text is separated from the heading and the ending by the proword BREAK. BREAK is not considered to be included in the message. It simply serves as a separation word and immediately precedes and follows the text. Since the "FROM" line contains the originator of the message, there is no need for a signature line in the text of the message so signatures (name, grade, and/or office/duty assignment) are not used. At the end of text, BREAK or BT is used to denote the end of the text.

d.   Operator's Notes. These notes may consist of such things as prowords MORE TO FOLLOW or other pertinent comments concerning the message, and last, the proword OVER.. If a second message is to immediately follow (limit two, in succession, both of which may be "ROGERed" or acknowledged simultaneously), then, "Message to follow." OVER would still be the appropriate end of the first message. The proword OVER is always the last word transmitted by the sending station when a reply is expected. The receiving station will acknowledge receipt or obtain needed fills before acknowledging receipt with the proword ROGER.

e.   The Receiving Station:

(1) In the event "fills" or "repeats" are required, the message must NOT be acknowledged, until the receiving station is positive that is has copied what was transmitted, 100%.

(2) "Fills" or "repeats" will be requested from the transmitting station, via the use of the appropriate prowords.

(3) Only AFTER the receiving station believes it has a "carbon copy" of the transmitted message, will it acknowledge receipt of that message or messages, by the directed-use of the proword "ROGER."

f.   Referencing Message(s). Because there are many messages transmitted by active stations, a referencing system must be used. If used, messages are first identified by their message number and precedence. The reference would be the sending station's call sign and message number. For example, "Reference your message number 147." Without a message number, the reference is the message precedence and the time (Date-Time-Group). For example, "Reference your ROUTINE message of 210327Z MAY 06."

g.   Service Message. A service message is one between communications personnel and pertaining to any phase of traffic handling, communications facilities, or circuit conditions. They generally concern messages originated at, destined for, or re-filed by, the station originating the service message, and will normally be assigned a precedence equal to that of the message to which they refer. In the event that a previously transmitted and acknowledged message has to be corrected, it may only be done through the use of a subsequently prepared and separately numbered formal message. It must include:

(1) The exact same addressee(s) in the FROM and TO lines as in the original message.

(2) Following a blank line space, the words "SERVICE MESSAGE" should be on a separate line before the beginning of the text.

(3) The first lines of text should fully reference the concerned message. (Precedence and DTG.)

(4) The rest of the text covers the correction(s).

(5) The message is transmitted to the same receiving stations, as the original.

2-20.   ICS Message Traffic:

a.   General Message ICS FORM 213-OS may be used when working with other agencies using ICS protocol for tactical messages.

(1)   Purpose. The General Message is used by:

(a) Incident personnel to record incoming messages which cannot be orally transmitted to the intended recipients;

(b) Command Post and other incident personnel to transmit messages to the Incident Communications Center for transmission via radio or telephone to the addressee;

(c) Incident personnel to send any message or notification to incident personnel which requires a hard-copy delivery and

(d) Incident personnel to place resource orders.

(2) 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.

(3) 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 No./Title	Instruction
1. Incident Name	Enter the name assigned to the incident.
2. Date and Time of Message	Enter the date and time of message origination.
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 receiving the message to reply to the message.
8. Signature/Position	Enter name and position of person replying to this message.
9. Date/Time of reply	Enter date (month, day, year) and time of reply (24-hour clock).

2-21. Traffic Handling. All stations operating on the various nets have a responsibility to pass any traffic received to the appropriate addressee. If unable to pass the traffic for any reason, the station must contact the sending station and advise the situation.

2-22. Designated Traffic Stations. Wings will designate a specific station or stations to handle traffic from the HF net to the VHF and from VHF to HF which will ensure continuity of the traffic handling process.

ATTACHMENT 1 – PROWORDS

Proword	Explanation
AFFIRMATIVE	You are correct, OR, what you have transmitted is correct. Yes.
ALL AFTER	The portion of the message to which I have reference is that portion which follows _____
ALL BEFORE	The portion of the message to which I have reference is that portion which precedes _____.
ANSWER AFTER	The station called is to answer after call sign when answering.
ASSUME CONTROL	You will assume control of this net until further notice.
BREAK	I hereby indicate the separation of the text from all other portions of this message.
CLOSE DOWN	Stations are to close down when indicated. Acknowledgements are required
CORRECT	You are correct. That is correct.
CORRECTION	An error has been made in this transmission. Transmission will continue with the last word correctly transmitted.
DISREGARD THIS TRANSMISSION, OUT	This transmission is in error. Disregard it. (This proword will not be used to cancel a message that has been transmitted and receipted for by the receiving station.)
DO NOT ANSWER	Stations called are not to answer this call, receipt for this message or otherwise transmit in connection with this transmission. The proword OUT will end the transmission
DO NOT TRANSMIT, OUT	Stations called will not answer this call, receipt for this message, or otherwise transmit regarding this transmission. (When this proword is used, the transmission will always end with the proword "*OUT*".)
EXEMPT	The addressees immediately following are exempted from the collective call. The addressees following are exempt from receiving this message.
FIGURES	A group of one or more characters, the first of which is a numeral, follows.
FLASH	This message has a precedence of FLASH.
FROM	The originator of the message immediately follows.
GROUPS	The test of this message contains _____ groups or words. (Normally not used in CAP originated messages)
IMMEDIATE	This message has a precedence of IMMEDIATE.
INFO	The addressees immediately following are addressed for information only. No action is required of them.
INITIAL(S)	A group of one or more letters, the first of which is a letter, follows.
I READ BACK	The following is in response to your request to read back.
I SAY AGAIN	I am repeating the transmission, or the portion you need repeated.
I SPELL	I will spell the next word phonetically.
I VERIFY	That which follows has been verified per your request (to be used only as a reply to a VERIFY request).
MESSAGE	A message that requires recording is about to follow. (transmitted immediately after the call). It is intended for use on tactical nets.
MORE TO FOLLOW	I have more messages, traffic, or information for you.
NEGATIVE	Not received. No.
NO PLAY	During Exercises the words No Play are used to distinguish real activity from the exercise activity.
NOTHING HEARD	To be used when no reply is received from a call.
NUMBER	This station message number, in numerals, follows
OUT	This is the end of my transmission to you and no answer or reply is required or expected.
OVER	This is the end of my transmission to you and an answer is required or expected.
PRIORITY	This message has a precedence of PRIORITY.
READ BACK	Repeat this transmission back to me exactly as received.
RELAY (TO)	Transmit this message to all addressees immediately following this proword.
RELAY THROUGH	Relay your message through _____.

ATTACHMENT 1 – PROWORDS (CONTINUED)

ROUTINE	This message has a precedence of ROUTINE.
SAY AGAIN	Repeat the portions of your last transmission I am indicating.
SEND YOUR	I am ready to receive your message, report, etc. (Used only in reply on a tactical net.)
SPEAK SLOWER	Your transmission is too fast. Reduce speed.
THIS IS	This transmission is from the station whose call sign immediately follows.
THIS IS A DIRECTED NET	Used by the Net Control Station (NCS) to establish the type of net being operated as a directed net.
THIS IS A FREE NET	Used by the Net Control Station (NCS) to establish the type of net being operated as a free net. Check ins are accepted but are not solicited
THROUGH ME	Relay your message through me.
TIME	The figures that follow are the Date/Time Group (DTG) of this message.
TO	The addressee(s) who are to take action, and to whom this message is to be delivered are as follows.
UNKNOWN STATION	The identity of the station I am trying to contact is unknown (used in place of that station's call sign).
USE ABBREVIATED PROCEDURE	As conditions are normal, all stations are to use abbreviated procedure until further notice.
USE FULL PROCEDURE	As conditions are not normal all stations are to use full procedures
VERIFY	Verify entire message (or portion indicated) with the originator and send the verified version (used by receiving station).
WAIT	I must pause for a few seconds. Standby. Do not transmit. Wait for me to continue with my transmission (the proword OUT is not used).
WAIT OUT	I must pause for more than a few seconds. This contact is terminated until I call you again. The net can continue.
WILCO	I have received, and understood, and will comply. (Note: Since the meaning of the proword ROGER is included; the two prowords are not used together.)
WORD AFTER	The word to which I have reference is that which follows _____.
WORD BEFORE	The word to which I have reference is that which precedes _____.
WRONG	Your last transmission was incorrect. The correct version is _____.

ATTACHMENT 2 – MESSAGE PASSING CHECKLIST

Message element in CAP messages will be ordered as follows:

1. The call sign(s) of the station(s) called

2. The proword *THIS IS*

3. The call sign of the sending station (your call sign)

4. The proword *MESSAGE*

5. The proword *NUMBER*, followed by (a) numeral(s), assigned by the originator, indicating the serial number or message number of the message, if used.

6. The precedence (PRIORITY, ROUTINE, etc.).

7. The proword *TIME* followed by the six digit DTG, the proword *ZULU*, the month (three letter abbreviation) and the last two digits of the year (ddhhmmZ MMM YY)

8. The proword *FROM* and the originator's information (office symbol, address, telephone number, etc.).

9. The proword *TO* [action addressee] and the recipient's information (office symbol, address, telephone number, etc.).

10. The proword *INFO* [non-action addressee(s)]and the recipient's information (this element is optional)

11. The proword *GROUPS* (if applicable) with numeral(s) indicating the number of groups in the text of the message (may be used if needed)

12. The proword *BREAK/BT* (to notify the receiving station that this is the end of the heading and the text follows)

13. The text of the message

14. The proword *BREAK/BT* (to notify the receiving station that the text is complete)

15. Any operator notes

16. The proword *OVER*

ATTACHMENT 3 – TIME CONVERSION CHART

UTC (ZULU)	EASTERN STANDARD	CENTRAL STANDARD	MOUNTAIN STANDARD	PACIFIC STANDARD
0000Z	1900	1800	1700	1600
0100Z	2000	1900	1800	1700
0200Z	2100	2000	1900	1800
0300Z	2200	2100	2000	1900
0400Z	2300	2200	2100	2000
0500Z	0000	2300	2200	2100
0600Z	0100	0000	2300	2200
0700Z	0200	0100	0000	2300
0800Z	0300	0200	0100	0000
0900Z	0400	0300	0200	0100
1000Z	0500	0400	0300	0200
1100Z	0600	0500	0400	0300
1200Z	0700	0600	0500	0400
1300Z	0800	0700	0600	0500
1400Z	0900	0800	0700	0600
1500Z	1000	0900	0800	0700
1600Z	1100	1000	0900	0800
1700Z	1200	1100	1000	0900
1800Z	1300	1200	1100	1000
1900Z	1400	1300	1200	1100
2000Z	1500	1400	1300	1200
2100Z	1600	1500	1400	1300
2200Z	1700	1600	1500	1400
2300Z	1800	1700	1600	1500

**For Daylight Savings Time, subtract one hour from UTC
(example 0600 CST = 1200Z, 0600 CDT = 1100Z)**