

Communications Training and Operations Plan
Texas Wing, Civil Air Patrol
10 January 2008

Training

General

Due to the large geographical area of Texas Wing, communications training responsibilities have been delegated to the Group level and below. Any member that holds an advanced Radio Operator Authorization may be designated by the appropriate Group Communications Officer or TXWG Communications Staff officer to conduct communications training class. All Communications training will be in accordance with the current CAP Regulation 100-1 and the Texas Wing Supplement to CAPR 100-1.

Self Study

All people wanting to be involved with communications should have and read the most current CAPR 100-1, CAPR 100-3 and the most current Texas Wing Supplement to CAPR 100-1.

Instruction

Instruction on the Basic Communications User Test (BCUT or Basic ROA) will use the material available from the Texas Wing Communication Director or the equivalent from a Group Communications Officer, or designated communications instructor. Currently this material is in the form of a Power Point presentation that originated from National HQ CAP and has been modified to meet the specific training goals of TXWG. Group Communications Officers are authorized to modify it further to meet their local needs.

Instruction on the Advanced Communications User Test (ACUT or Advanced ROA), Communications Technician Rating, Communications Senior Rating, and Communications Master Rating will use, as a minimum, the following documents:

CAPR 100-1 Communications
CAPR 100-3 Radiotelephone Procedures
Texas Wing Supplement to CAPR 100-1

Emphasis by instruction and example should be made on the following:

Formal traffic procedures, including preparing message headings and passing traffic.
Safety in the home station.
Safety in the field station and safety in field situations.
Fixed and Mobile antennas.
NTIA requirements and NTIA compliant equipment.

Communications Practice

While textbook instruction may enable the candidate to pass the required test, it is practice and the good judgment that only comes with practice that make a good communicator. Trainees may operate under the supervision of an authorized operator. Participation by trainees and communicators in HF and VHF nets is strongly encouraged. Such participation builds confidence in the operator and builds the operator's skills and judgment. Utilization of a training session during the Texas HF net is strongly encouraged, as it will acquaint the trainee with the difficulties and frustrations that can be expected during adverse weather or atmospheric conditions.

Permits

ROA Basic (or BCUT)

The Basic Communications User Test (BCUT) or Radio Operator Authorization (ROA) Basic is normally a 2-hour presentation followed by completion of the current TXCOMM 100-3A form. This form is signed by the presenter and then goes to the Group Communications Officer who will generate the ROA card. Instructors may forward a list of the students, their CAPID and unit charter number in the place of the TXCOMM 100-3A

ROA Advanced (or ACUT)

The unit testing officer or unit Communications Officer gives the Advanced Communications User Test CAPF 119.

Specific Equipment Training

Power point presentations that can be used for individual or group presentations have been developed for the following radios:

Johnson Stealth mobile and fixed

Johnson portable (handheld)

Icom Inter Squad Radio (ISR)

Other types will follow.

These presentations should be used for individuals to familiarize themselves with the types of equipment found in their own unit, or with equipment they expect to use out side the unit.

These presentations are available at <http://www.txwgcap.org/comm/comm.htm>

TXWG Communications School

A one weeklong Communications school is to be held in conjunction with the TXWG Cadet Summer Encampment. See the Wing Schedule for dates. This school will concentrate on Emergency Services communications training.

OPERATIONS

General Concept of Operations

With the introduction of the Inter Squad Radio, TXWG will conduct operations based on a building block type concept.

Short Range Operations: The ISR radio will be used for Ground teams, UDF teams, flight line operations, vehicle convoys, ICP staff intercom and other short-range operations. ISR radios have 14 channels and 38 tones, so channel and tone setting must be coordinated before hand. ISR should be used in place of VHF FM handheld in most applications, freeing VHF FM for

medium range operational use. ISR will typically be used for distances of up to 1 mile. ISR is not used airborne. Standard CAP procedure and call signs will be used. Appropriate tactical signs may be used.

Medium Range and Airborne Operations: VHF FM ground, mobile and airmobile radio will be typically used for distances of over one mile and up to 50 to 100 miles, and for most airborne use. VHF FM handheld (portable) radios or mobile radios should be used for ground to air contact by ground teams and UDF teams. ICP's will stay in contact with aircraft and ground teams by using VHF FM base and mobile radios. Fixed and airborne repeaters will extend the range of VHF FM radio beyond line of sight. VHF FM V1 will be used as the primary mission operations frequency unless there is a specific reason to use another channel. For Wing wide or large area SAREX or actual missions, airborne repeaters should use the alternate frequency pair and allow local repeaters to operate without additional traffic on the primary frequency. Aircraft frequency radios on 122.9 MHz and 123.1 MHz AM will be used to communicate with CAP Aircraft that does not have VHF FM radio available. 123.1 MHz is available for communications with non-CAP aircraft in a joint mission. ICP and Staging areas will conduct "ops normal" checks with airborne aircraft every 30 minutes.

Long Range Operations: High Frequency (HF) radio will be used for long range (50 plus miles). Most CAP HF radios in TXWG are currently fixed installations. These radios will be used for communications between ICP's, Staging Areas and Headquarters stations. Frequency WB and WBS should be used as the primary nighttime frequency, and WC and WD should be used for daytime operations.

This concept of operations calls for a large number of ISR radios, a smaller but significant number of ground and mobile FM radios, and a far smaller number of HF radios to be used to tie together operations both locally and state wide.

Station Authorizations and Staffing Responsibilities

In accordance with CAPR 100-1, the Wing Communications Officer is responsible to the Wing Commander for all communications activities, events, etc., within the Wing. This specifically includes the authorizing of radio operators and radio stations.

Call Signs

The Wing Director of Communications in accordance with the Texas Wing Supplement has authorized the Group Communications Officers to assign call signs within their Groups. Call signs may be applied for using TXCOMM 100-1. Certain call signs will be assigned by memorandum and no application is required.

Station Identification

All stations must identify using the full tactical call sign when testing, when calling another station, and at the beginning of any contact with another station. Further identification is not required except at 10-minute intervals during long contacts. The use of the entire tactical call sign is the only legal call sign authorized. Abbreviating a call sign by the use of only the digits is not legal and is not authorized.

Frequency Designators

All CAP frequencies have been assigned a "Frequency Designator" consisting of two or three letters and numbers. These designators are to be used to refer to a specific frequency or frequency/tone in place of using the actual frequency. Therefore frequency designators may be used on the air, or on the Internet, or in public documents. When on the air do not make reference to your current frequency by its designator, as that "gives away" what the designator means. Frequency designator lists are "For Official Use Only" and not to be published in the open on the internet or distributed without proper markings and controls.

Communications Officers

Each Group, each Squadron, and each Flight will have a communications officer whose responsibilities include the training of radio operators, the processing of applications for radio operators and station authorizations, the monitoring of communications activities under the officer's responsibility, the maintaining of an accurate list of radio operators in the officer's unit, and other duties specified in CAPR 100-1 and the Texas Wing Supplement to CAPR 100-1.

Radio Nets

Radio nets are organized to provide an operational communications capability and a training capability to Region/Wing personnel and all subordinate unit personnel. The scheduled nets provide an excellent opportunity for disseminating information regarding training activities and operations activities by the Wing, the Group, or a unit.

Net schedules are listed in the Texas Wing Supplement to CAPR 100-1.

Texas Wing currently holds a High Frequency net on the SWR secondary channel WBS at 0000Z or 1900 CST.

This frequency will be "given up" at some time in the future and a new net schedule and frequency will be established.

The Texas Wing Director of Communications may authorize additional nets as needed.

Threat level response

The CAP Communications response to the National Threat levels is governed by National HQ "CAP Alerting System Communications Action" document found at

https://ntc.cap.af.mil/comm/downloads/comm_alert_actions.pdf.

All CAP communicators should familiarize themselves with this document.

TXWG specific response to threat levels will be:

Threat level Yellow: Conduct once a week checks on the regular scheduled HF net.

Threat Level Orange: Conduct daily checks during the regular scheduled HF net.

Threat Level Red: Establish Communications Command Posts to control Wing HF net. TXWG stations will check in with this Command Post at designated times. Each Group will have a representative station check in every 6 hours. Command Post will check in with Region Net. VHF nets will be conducted where appropriate.

ALE Transition

CAP has entered into a multiyear transition period to the use of Automatic Link Establishment (ALE) high frequency networks. National HQ is already operating a functioning ALE net, and each region will eventually go to this technology as equipment replacement allows. When the plan is fully realized there will be a national net and 8 region ALE nets. To meet this plan CAP has acquired a new group of HF frequencies. These channels will be used as conventional channels until the ALE plan is implemented. See attachment 2 for a list of the current SWR and National frequencies. A standard channel plan for programming of the Micom 2 radios has not yet been approved.

Narrowband Transition

CAP will transition to narrowband VHF channels when frequencies become available. This is a nation wide transition that affects all of CAP, and all users of the Military Land Mobile Band. As other users of the band will also be moving channels, there may be times that CAP users will find themselves on channels with other DOD users that are also moving in or out of a channel. Tact and understanding may be required.

All CAP repeaters are being replaced or up graded, and the repeater channels will also change. All CAP VHF FM radios will be reprogrammed or retired.

EF Johnson fixed, mobile and portables radios: to be reprogrammed.

Tait 2020 and portable radios: reprogrammed and remain in service as secondary equipment

Neutec mobiles: to be retired and disposed of.

Vertex mobiles: converted to liaison radios. Not authorized for narrowband.

Reprogramming will be done in two stages, the first stage will add the new narrowband channels and retain the old wideband channels, and the 2nd phase will eliminate the old wideband channels from the programming. Reprogramming will be scheduled during major wing activities, but will also be done at the group level as possible.

Reprogramming of member owned radios will be the responsibility of the owner. The new channel frequencies will be For Official Use Only and will not be disclosed routinely. Members with personal owned equipment will need to coordinate with their respective Group Communications Officer to obtain the frequencies and instructions on control of the information.

Standard Operating Procedures for use during Missions and Training Missions.

TXWG conducts actual missions and training missions that vary in geographical area and number of assets used. This includes the following types of missions:

Single asset: one aircraft or one ground team with an IC and no staff

Single mission base: Multiple aircraft and ground teams, IC and mission staff all working from a single base.

Distributed SAR (DSAR): One mission base with a full staff and multiple staging areas each with a limited number of assets

Wide Area Command (WAX). One over all command post, multiple mission bases with staff.

As these mission bases get larger and more complex so the mission communication plan gets more complex.

Single asset missions: all communications on telephone or VHF FM radio as required. If aircraft cannot talk to a CAP VHF station on the ground that either is the IC or in touch with the IC, then they will maintain contact with the FAA air traffic system. IC may need a fax and internet connection.

Single mission base: One or more VHF FM radios as required, HF is needed. ISR radios will be used for staff, ground teams, etc... Fax and internet connection will be needed.

DSAR: Staging area will have VHF-FM radio to stay in contact with their aircraft and ground teams, FAX, and internet and HF if possible. HF will be used to provide contact with the Mission Base. At least one ES qualified personnel will remain at the staging area while an aircraft or ground team is on a sortie.

DSAR Mission base will have one or more VHF-FM, HF, FAX and internet. ISR may be used for staff intercom. The mission CUL will operate from the mission base, and will establish HF nets and determine frequencies to be used. It may be necessary to “checker board” VHF-FM frequencies in use by the staging areas so they do not interfere with each other. The CUL will also coordinate the use of airborne repeaters which may be used to allow distant staging areas to report to the mission base. The mission base may function as the HF Net Control Station (NCS), and will designate an Alternate NCS.

WAX: the WAX CUL will establish frequency use and net schedules. HF will be used from the mission bases to the WAX command post. The WAX may function as the HF Net Control Station (NCS), and will designate an Alternate NCS.

Call signs for all mission types:

Aircraft will use standard CAPFlight call signs. These may be used in the format “CAPFlight forty-two thirty” instead of reading off each digit. Sortie numbers will not be used by themselves as a call sign, however “CAPFlight forty-two twenty-one, sortie one four” type format is acceptable.

HF stations will use assigned Texas Cap call signs or geographically based ICS call signs, such as Spinks staging area, Hooks mission base, etc...HF stations should check into the net by contacting the NCS, and should also check out when closing the station. HF stations should monitor continually if possible. The NCS should perform a roll call each hour to determine the quality of the channel, and change to a different channel if needed to improve communications. All HF stations should stand by for relays.

Ground Teams may use vehicle call signs or Ground team sortie numbers, such as “Ground team three”, or “Ground Team Bravo”. Under a WAX system, care should be used that sortie numbers are not duplicated between different mission bases.

Required reports:

Staging areas (or mission bases under a WAX) will maintain contact with aircraft and ground teams that originate from their staging area or base, and with any other CAP assets that contact them for relays. Ops Normal checks will be made every 30 minutes. If an aircraft is more than 10 minutes over due, this will be reported to the Mission Base, and to the WAX command post if applicable.

A radio check must be conducted prior to the aircraft or ground team departing, however this does not need to be reported to Mission Base. No communications, no Sortie.

Staging areas are to pass aircraft and ground team "report" information to Mission Base as soon as possible. These reports are the following 4 pieces of information:

- A. Off Ground or Depart Base time
- B. In grid time (If there is no "grid" assignment, then the time when the assets arrives at the objective)
- C. out of Grid time (Do not use the phrase Return to base, this should be reserved to be used as a directive from the Mission base or Staging area, and is not to be used in place of "Out of Grid")
- D. On Ground time, or Back to Base time for a ground team. Please do not use the phrase "wheels down" on the radio. Use of the word "Down" in relation to an aircraft report is open to being misunderstood and causing serious concern.

Primary means of passing this information is by HF radio. If that does not work, the staging area is responsible for calling the mission base and passing the report. This information is NOT too held until the sortie is finished, but should be past to the Mission base as soon as possible.

Airborne Repeaters:

. VHF Airborne repeaters, if used, will be on the primary frequency Channel designator PA, (Ground radios zone 2, channel 4, aircraft radios Channel 120) or the secondary frequency, PB, (ground radios, Zone 2, channel 6, on the aircraft radios, Channel 152). The airborne repeater is to be used for Staging Areas to contact Mission Base, or for aircraft that are out of contact with their staging area to make reports. By flying the highbird above central Texas, the airborne repeater can be used to cover the area of Dallas Fort Worth, San Antonio and Houston, a circle of about 300 miles in diameter.

SPINS: The communications SPIN for each mission should include:

Net Control and Alternate Net Control call signs.

Net starting times for HF nets.

Frequency assignments using frequency designators never use actual frequencies.
Telephone and FAX numbers for mission base or WAX command post.

All radio operations for Wing wide missions will be conducted in Zulu time. During standard time add 6 hours; during daylight savings time add 5 hours. Example: 7AM CDT is 1200Z.

This Plan replaces the 10 January 2007 plan.

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