



Oregon Wing 2014 Communications Plan

Table of Contents

Section 1 – Plan Requirements	3
Section 2 – Operations and Training Plan	3
Section 3 – Emergency Communications Plan	6
Attachment 1 - Communications Alert Level Action Guide	9
Attachment 2 – Weekly Net Script	12
Attachment 3 – Oregon Wing Net Check-in Log	14
ORWG Communications Plan Annex A – separate document	

Section 1 – Plan Requirements

General

In accordance with CAPR 100-1 all Region and Wings within the Regions are to develop and publish communications plans in support of the missions of Civil Air Patrol within their jurisdictions. This document is the communications plan for Oregon Wing.

Plan Requirements (Reference CAPR 100-1 paragraph 2-2)

This national communications plan describes the national structure of the CAP Communications system and serves as a guide for subordinate unit communications plans. The most recent version of this plan is the basis for the annual wing and region communications plans. Further, the Pacific Coast Region plan provides additional guidance for the wings in Pacific Region.

This plan addresses the overall structure of the CAP Communications Network, duties and expectations of operators, and wing, region and national alerting and operational procedures. The goals of this plan are to:

1. Clarify the roles of tactical communications and Command and Control communications (C²) as needed to meet validated 21st Century requirements
2. Revitalize the CAP communications system at all levels in order to provide a framework for the delivery of record traffic to support operational missions

This plan does not describe the communications system as it exists at the time of the plan's release. Some sections can be implemented immediately whereas some will require time and training to implement. National Headquarters will set benchmarks for the effective dates of various components of the plan.

Section 2 – Operations and Training Plan

Plan Objectives

This plan has two objectives. The first objective is to define the communications methodology used to support the National, Region and ORWG's Command and Staff personnel.

The second objective is to define the ORWG HF Radio Network used for training and emergency traffic.

Day – Day Operations Support

Due to the geographical dispersion of the ORWG Staff, ORWG supplements traditional CAP radio communications with conventional / commercial means of communications such as cell phones, land line telephone, and e-mail. Staff meetings are conducted in person and, simultaneously via GoToMeeting teleconference call on the first Saturday each month.

All radio equipment used in support of CAP mission must be NTIA compliant. Compliance of specific radio manufacturers and models can be found on the NTC website:

(<https://comm.capnhq.gov/comm/equipment/equipment.cfm>)

Oregon Wing, Civil Air Patrol 2014 Communications Plan

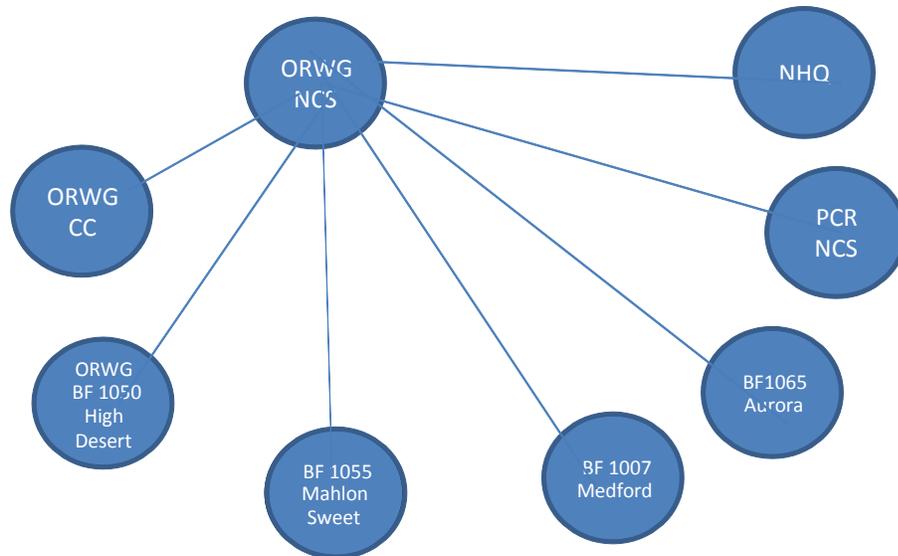


Figure 1 - ORWG HF Radio Network

The ORWG HF Radio Network has been established to provide radio operator training and to provide an alternate / backup route for command, control and operational message traffic within Oregon Wing. HF-ALE capable stations in standby and available for traffic and not otherwise actively involved in a net or other traffic, will be set to ALE scan mode on Net 8, ready to accept an ALE call from another station.

Network Composition and Structure

The network is composed of a Net Control Station (NCS) and alternate Net Control Stations (ANCS).

Subordinate Unit Requirements / Responsibilities

Each of the subordinate units is to assign a primary HF station to check into the ORWG HF radio network. Each unit communications officer is to forward the following contact information for their station to the ORWG Director of Communications.

- Name and Rank
- Address
- Telephone Numbers
- E-Mail address
- Call sign
- Station Latitude and Longitude
- Type of antenna in use
- Make and model of the antenna coupler/tuner (if any)
- Effective radiated power
- Whether the radio is corporate or privately owned

Net Schedule

Oregon Wing's Weekly HF-Net will be performed each Tuesday, starting at 1930 Pacific time and ending promptly at 2000 Pacific Time. The Primary HF Channel to be used is PCC (CH107) and the secondary is PCD (CH108). No other channels are to be used unless directed by a net control station from a higher HQ or by direction of the Oregon Wing Director of Communications.

Oregon HF Net Operations will be conducted on a weekly basis between the 1930 and 2000 hours Pacific time. In addition, units and individual stations are encouraged participate in the Pacific

Oregon Wing, Civil Air Patrol 2014 Communications Plan

Region and other Wing's HF Nets, particularly the CAWG net which has replaced the Pacific Region HF-Net. The CAWG net is conducted nightly starting at 2000 Pacific time.

Oregon Wing's Weekly VHF-Net will be performed each Tuesday, following the HF net starting at 2000 Pacific time and ending promptly at 2030 Pacific Time. Geographic repeater coverage requires that three VHF nets are needed to provide a VHF net in which every unit may every participate. Table 1 provides information on these three nets and the units assigned to each. Units and their members are not restricted and may check in to any net. The ORWG NCS will establish and publish a schedule of net control stations in order to provide ample opportunities net control station training for radio operators.

Table 1 - VHF Net Channel Assignments

Area	Repeater	Units
Southern Oregon	R30	<ul style="list-style-type: none"> OR007 - Medford Composite Sqdn OR016 - Klamath Falls Composite Sqdn OR037 - Grants Pass Composite Sqdn
Eastern Oregon	R24	<ul style="list-style-type: none"> OR050 - High Desert Composite Sqdn
Northwestern Oregon	R20/R44*	<ul style="list-style-type: none"> OR034 - Washington County Composite Sqdn OR042 - Salem Composite Sqdn OR055 - Mahlon Sweet Composite Sqdn OR065 - Aurora Cadet Sqdn OR073 - Columbia Composite Sqdn OR085 - Metropolitan Senior Squadron OR099 - McMinnville Composite Sqdn OR114 - Northwest Coastal Flight

- Stations in the Portland Metro area should monitor R20 and respond on R44 by turning off CTCSS on R44.

Station Logs CAPF-110 and HF-Net "Check in Report" will be kept by each participating unit or individual station. Logs and reports are to be emailed to the NCS within 7 days, following the net for each week. Paper copies are maintained by the individual station.

Each Unit listed below will be assigned as an Alternate Control Station and will conduct HF Net operations one week in each month as outlined below.

Call-SIGN	UNIT	Week of the Month
Beaver-Fox 1050	High Desert Squadron	1st week
Beaver-Fox 1055	Mahlon-Sweet Squadron	2nd week
Beaver-Fox 1065	Aurora Composite Squadron	3rd week
Beaver-Fox 1007	Medford Composite Squadron	4th week
Beaver-Fox 1055	Mahlon-Sweet Squadron	5th week

Both formal and informal traffic as defined in CAPR 100-1 can be passed on this net. CAPF 105 is to be used by station operators to document formal traffic. Oregon Wing staff wishing to provide traffic for the net should either check into the HF net, a VHF net, or send their message (CAPF 105) to the Net Control Station at ORWG-NCS@orwg.cap.gov. Please review CAPR 100-1 for instructions on completing the CAPF 105. Stations may use the General Message Form ICS 213

Oregon Wing, Civil Air Patrol 2014 Communications Plan

(FEMA/USFS standard .dot); this form can also be obtained through the following website, http://www.fs.fed.us/fire/planning/nist/ics_forms.htm.

Wing Wide Deployable Equipment / Systems

Oregon Wing is in the progress of identifying radio equipment that can be assembled into transportable packages to provide support to units throughout the wing for planned and emergency expansion of operations. This would include support to special events (unit activities, cadet encampments, SAREXs) and unplanned events such as a major disaster response for an earthquake, tsunami or volcanic eruption.

HF-ALE Radio System and Documentation

Oregon Wing stations equipped with fixed base HF-ALE radios will, to the extent practical, keep their HF-ALE base station radios in continuous operation scanning Net-8. As this will be, for the fast majority of time, unattended operation, station operators will make notations in their station log whenever they check the status of these unattended operating radios. Quarterly, at the beginning of each calendar year quarter (January, April, July and October), station operators will scan and email their logs for the prior calendar year quarter to the NCS operator for retention and audit. Submittals should be completed within 30 days of the end of each quarter. Annually, during the annual physical inventory period, the logs will be reviewed by the Director of Communications.

Section 3 – Emergency Communications Plan

General

Wing command and control communications under emergency circumstances will be conducted using conventional/commercial networks and systems, if available. Under these circumstances the Oregon Wing Command and Control Communications (C²) Network can be activated to act as a backup to conventional communications system and as a primary system in areas where the commercial networks have failed.

Figure 2 and Figure 3 depict typical network configurations. Other configurations are also possible depending on the specifics of the situation and the level of impact affecting ORWG.

Oregon Wing, Civil Air Patrol 2014 Communications Plan

Command and Control Communications (C2)

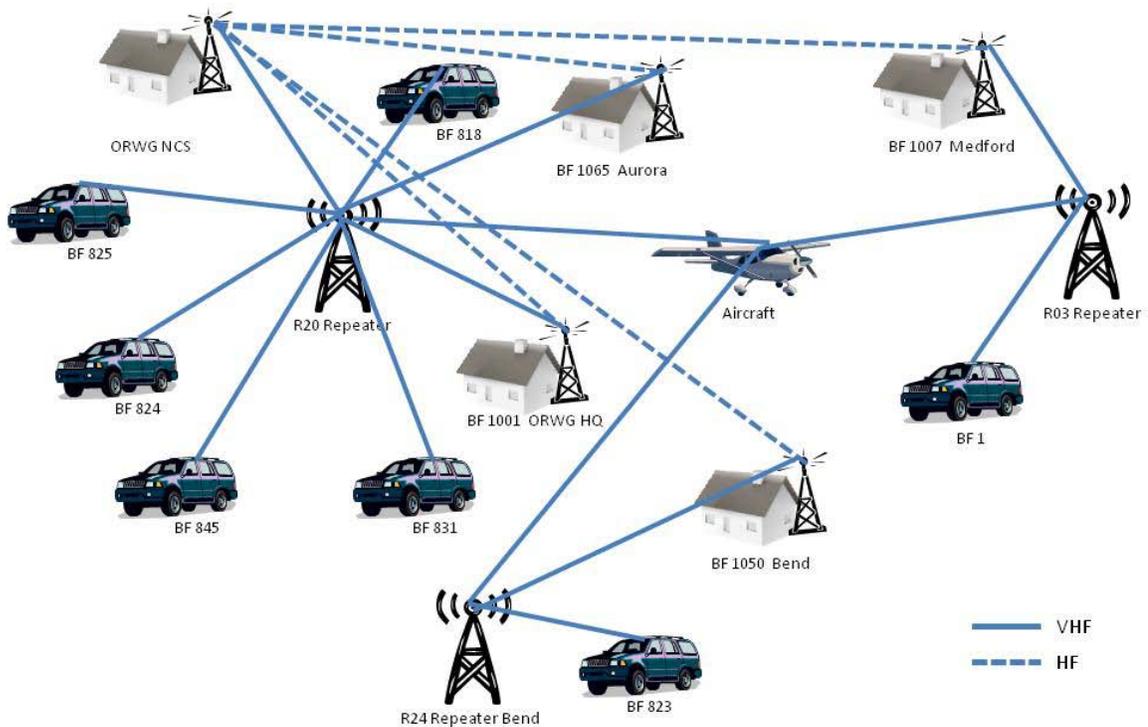


Figure 2 - ORWG Emergency Communications Network – Normal Operations

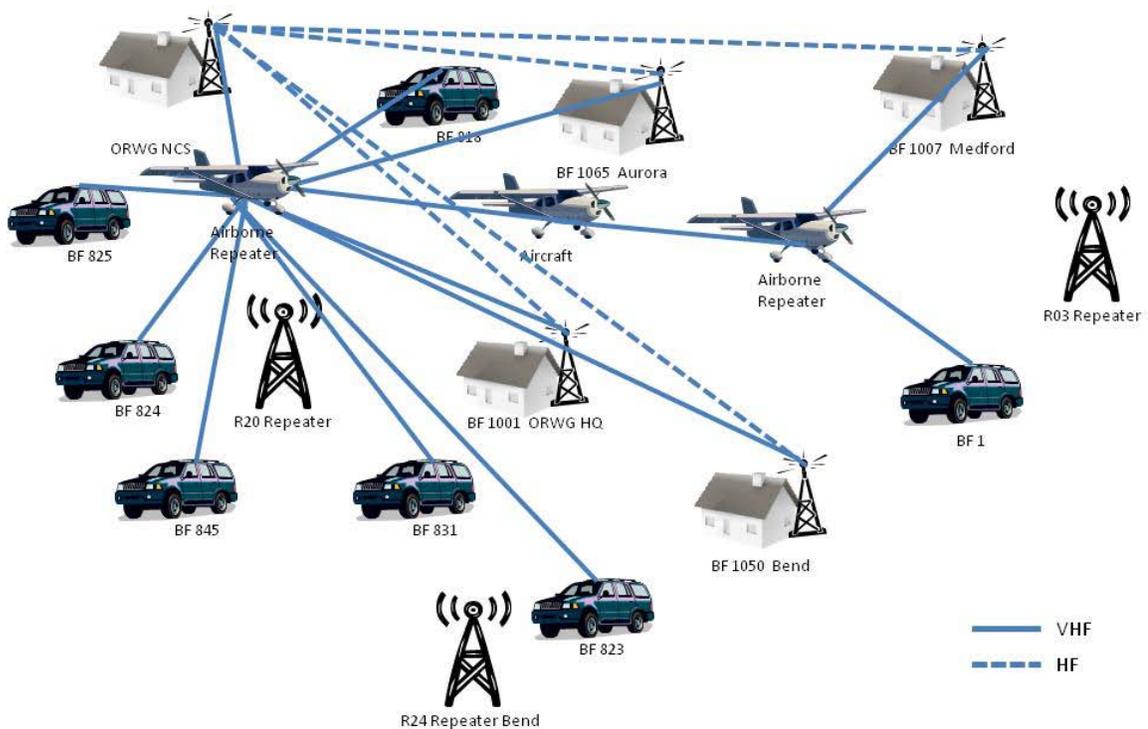


Figure 3 - ORWG Emergency Communications Network – Impacted Operations

Oregon Wing, Civil Air Patrol 2014 Communications Plan

Purpose

The ORWG "C²" Network's primary purpose is to provide communications in support of the command structure of Oregon Wing CAP and connect to both the Pacific Region and National Headquarters. This system can provide bi-directional communications from the National Operations Center (NOC), Pacific Region stations and key locations around Oregon Wing. Ultimately, it will be expanded to provide radio communications to all Oregon Wing units and the Oregon Wing Commander.

ORWG C2 Concept of Operations (CONOPS)

Five (5) Oregon Wing squadrons currently maintain active communications centers at their unit headquarters. Mahlon Sweet (Eugene) shares the ORWG communications center located at Wing Headquarters. These locations are equipped with both VHF (EF Johnson 5300 series) and HF (Micom 2 or 3F) radios and can access at least one VHF repeater. Each station also has access to the internet to round out its communications capability.

The ORWG/DC, at the request of the Oregon Wing Commander or his authorized representative, can activate the "C²" network. The network will initially have the same structure as depicted in Figure 1 - ORWG HF Radio Network with the ORWG NCS or ANCS directing the net. The ORWG/DC, PCR/DC or National HQ. will determine the Communications Alert Level, see Attachment 1. ORWG message handling stations will maintain monitoring the PCR ALE NET 8.

Net Activation and Sustained Operations

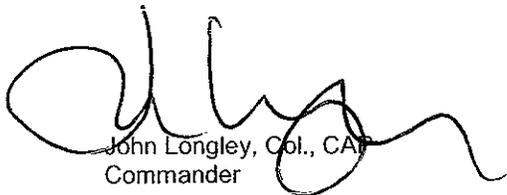
If an incident warrants the activation of the ORWG net, the ORWG/DC or alternate will contact the affected unit communications officers to initiate operations. The ORWG NCS or ANCS will maintain operations of the "C²" net and will call the roll and initiate an opening message at that time.

All message traffic on the C² net (with the exception of network service and maintenance messages, which are informal by nature) will be formal traffic and will use CAPF 105. Each formal message will be assigned a message number by the originating station and will be tracked. All stations will report to the ORWG NCS upon message delivery with the time and date delivered. Only Zulu time will be used for processing message traffic.

All network members are to remain on frequency until excused by the ORWG NCS. If a station desires to leave the net for any reason, they must notify the ORWG NCS and provide an estimated time of return to the net for their station. When a station has to leave the net for an extended time period an alternate station will be appointed by the ORWG NCS to take over the message processing responsibilities of that station. When the ORWG NCS station has to leave the network for service reasons, they will insure an alternate net control station can take over control of the C² net.

C² Network Closing Procedure

The C² network will remain in operation until the Oregon Wing Commander gives the authorization to close network operations. At this time the ORWG NCS station will review all message traffic to insure delivery of all priority message traffic. Once this has been successfully completed, the ORWG NCS will send out a closing message and secure the network.


John Longley, Col., CAP
Commander

Attachment 1 - Communications Alert Level Action Guide

The CAP Communications System provides a continuity of operations capability when commercial infrastructure is unavailable, overstressed, or threatened, including allowing incident management and commanders, at each echelon, the ability to communicate with superior and subordinate commanders.

In order to accomplish this purpose, the Communications System uses a scalable structure, in keeping with ICS/NIMS principals. The goal is that when operational missions start small, but unexpectedly grow in size, Communications procedures and network design will accommodate the growth smoothly and with minimum disruption of mission accomplishment.

Mission Communications has two primary functions – 1) Tactical and 2) Command and Control (C²). Each function is addressed in each alert level. CAP uses three alert levels, each with a distinctive mission communication structure and key actions. Communications managers determine the proper alert level dynamically based on mission environment.

Alert Level 3: Normal Status. Communications systems are ready for operational missions with an easily-manageable Ops Tempo. The systems may be at a standby status but must be ready to activate on short notice at this level. Includes small missions that can be satisfied without significant changes to the day-to-day status of the Comm system.

- Key Actions:
 - o Confidence checks of communications systems are conducted at least weekly at Alert Level 3. See CAPR 100-1, Para 1-7g.
 - o At least three Net 9 (NTN) stations are on duty and will be checked multiple times a day for Automatic Message Display (AMD) messages.
 - o At least one ALE station in each wing and region is on duty and is checked at least daily for AMD messages IAW CAPR 100-1, Para 7-4 b(2). Stations which cannot be checked daily do not satisfy this requirement and are turned off so they do not answer ALE calls automatically.
 - o Conventional voice nets meet as scheduled for training, confidence checks, and relay of traffic.

Communications System Structure:

- Tactical
 - o Conducted on ISR, VHF & Region ALE net
 - o ICP and Forward Operating Bases sound on ALE
 - o Mobile teams do not sound (unless functioning as a fixed asset)
 - o Any station may initiate a Bi-directional Sound prior to establishing an ALE link
 - o Micom 2b stations may also use SELCAL, if available, to interoperate with ALE stations
 - o VHF and conventional HF stations operate Directed Net (IAW CAPR 100-3)
- C2
 - o Commercial infrastructure is generally available and may be used on actual missions for C2 (ICP to the NOC, etc.)
 - When commercial infrastructure is not available traffic may be delivered to any station that can relay it to its destination, including via VHF, HF or HF-ALE. Relaying stations will use any means available to deliver the traffic.
 - Wings should train without using commercial infrastructure
 - o ALE operation by ICPs uses the region ALE suite, however may use Net 9 to relay urgent C2 traffic if needed
 - ICP sounds on region ALE suite
 - Any station may initiate a Bi-directional Sound, if needed, prior to establishing an ALE link

Oregon Wing, Civil Air Patrol 2014 Communications Plan

- HF C2 and Training Nets operate as scheduled
- NCN stations may support mission operations, if available, but are not specially activated

Alert Level 2: Intermediate Status. Communications systems are required to function at an elevated Ops Tempo. Additional Comm resources are activated as needed to support the scale of the mission. The mission may include a large number of operational teams, bases, or camps; and/or a stressed communications environment. Communications systems must be very responsive at this level. Some deployment or relocation of Comm resources may be necessary. In addition to activation by competent authority, operators should self-activate to this alert level any time they have reason to believe communications support may be needed.

- **Key Actions:**

- Confidence checks of communications systems are conducted at least once daily at Alert Level 2.
- Advise the NOC of your alert status
- The ICP requests support from other ALE stations within the region. These stations will attend their station (be within hearing range) on the region ALE suite to assist.
- Additional Net 9 (NTN) station operators are alerted via the NOC and/or the NTN Manager or Comm Team to stand by to assist.
- Conventional HF voice nets are established, as needed.

- **Communications System Structure:**

- Tactical
 - Conducted on ISR, VHF & Region ALE net
 - ICP and Forward Operating Bases (if any) sound on ALE
 - Mobile teams do not sound (unless functioning as a fixed asset)
 - Any station may initiate a Bi-directional Sound prior to establishing an ALE link
 - Tactical ALE stations may temporarily switch to Net 9 and request relay, if unable to pass the traffic to any station on the region ALE suite
 - Micom 2b stations may use SELCAL, if available, to interoperate with ALE stations
 - VHF and conventional HF stations operate Directed Net (IAW CAPR 100-3)
- C2
 - Commercial infrastructure may be unavailable but may be used on actual missions for C2 (ICP to the NOC, etc.)
 - When commercial infrastructure is not available traffic may be delivered to any station that can relay it to its destination including via VHF, HF, or HF-ALE. Relaying stations will use any means available to deliver the traffic.
 - Wings should train without using commercial infrastructure
 - Multiple Comm systems are in service and ready to relay C2 traffic
 - ICP may require multiple HF-ALE radios (or additional radios located within VHF range) to satisfy both Tactical and C2 communications requirements
 - ALE: ICP or Area Command communicates with the NOC/AVS on Net 9 directly or via NTN station relay
 - If an Area Command is in operation, ICPs communicate with an in-region Area Command on the region ALE Net. If more than one region is involved, the Area Command operates on Net 9.
 - Area Command and the ICPs sound when in service
 - Conventional HF: Mission and contingency nets may operate on channels appropriate to the scope of the mission and ops tempo including region HF channels and National Reserve Channels

Oregon Wing, Civil Air Patrol 2014 Communications Plan

Alert Level 1: Major Mission Status. Communications systems are required to function at their maximum Ops Tempo. CAP is engaged in, or anticipating, a large operational mission requiring maximum support from the communications system. All available communications resources are activated as needed to support the scale of the mission. Communications systems must be at maximum readiness at this level. Deployment or relocation of resources is likely.

- **Key Action(s):**
 - Confidence checks of communications systems will be conducted at least once every six hours at Alert Level 1
 - Advise the NOC of your alert status
 - Net 9 (NTN) is fully activated. 24-hour operation by some stations may be required. All on-duty operators are standing by to accept and relay traffic.
 - All activated wing and region ALE operators attend their stations (within hearing range) and stand by on their region ALE suite to assist.
 - Conventional HF voice nets are established, as needed.
- **Communications System Structure:**
 - Tactical
 - Conducted on ISR, VHF & Region ALE net
 - ICP and Forward Operating Bases (if any) sound on ALE
 - Mobile teams do not sound (unless functioning as a fixed asset)
 - Any station may initiate a Bi-directional Sound prior to establishing an ALE link
 - Tactical ALE stations may temporarily switch to Net 9 and request relay, if unable to pass traffic to any station on the region ALE suite
 - Micom 2b stations may use SELCAL, if available, to interoperate with ALE stations
 - VHF and conventional HF stations operate Directed Net (IAW CAPR 100-3)
 - C2
 - Commercial infrastructure, if available, may be used on actual missions for C2 (ICP to the NOC, etc.)
 - When commercial infrastructure is not available traffic may be delivered to any station that can relay it to its destination including via VHF, HF, or HF-ALE. Relaying stations will use any means available to deliver the traffic.
 - Wings should train without using commercial infrastructure
 - All available Comm systems are in service and ready to relay C2 traffic
 - Area Command and ICPs require multiple HF-ALE radios (or additional radios located within VHF range) to satisfy both tactical and C2 communications requirements
 - ALE: ICP or Area Command communicates with the NOC/AVS on Net 9 directly or via NTN station relay
 - If an Area Command is in operation, ICPs communicate with an in-region Area Command on the region ALE Net. If more than one region is involved the Area Command operates on Net 9.
 - Area Command and the ICPs sound when in service
 - Conventional HF: Mission and contingency nets may operate on channels appropriate to the scope of the mission and ops tempo including region HF channels and National Reserve Channels.

Attachment 2 – Weekly Net Script

(Instructions: Do not speak italics. Only use the applicable choice in from the choices in the parentheses. Fill out a net log and return it to NCS before the next running of the net.)

(Start one minute before opening)

ATTENTION ALL STATIONS, THIS IS BF _____, PLEASE STAND BY FOR THE OREGON WING (VHF/HF) NET.

(Net Opening)

BEAVERFOX, THIS IS – Beaverfox <ID> – OPENING A DIRECTED NET – ROLL CALL FOLLOWS, LIST YOUR TRAFFIC IN ORDER OF PRECEDENCE.

THIS STATION (IS/IS NOT) HOLDING ANY TRAFFIC FOR THE NET.

ROLL CALL FOLLOWS:

(NCS will provide a current list of stations. Call all stations in order, only call stations BF 1 through BF 9, primary Wing staff positions.)

(After roll is called)

ARE THERE ANY OTHER OREGON WING STAFF STATIONS WISHING TO CHECK IN ON _____
(channel/repeater)

(Following are a complete list of active squadrons. It is recommended that the operator cross off stations that are unreachable.)

UNIT ROLL CALL FOLLOWS:

- Aurora Cadet
- Columbia Composite
- Grants Pass Composite
- High Desert Composite
- Klamath Falls Composite
- Mahlon Sweet Composite
- McMinville Composite
- Medford Composite
- Metropolitan Senior
- NW Coastal Flight
- Salem Composite
- Washington County Composite

Oregon Wing, Civil Air Patrol 2014 Communications Plan

(After Unit roll is called)

ARE THERE ANY LATE OR MISSED OREGON WING STATIONS THAT NEED TO CHECK IN?

ARE THERE ANY PACIFIC REGION STATIONS NEEDING TO CHECK IN AT THIS TIME?

(For HF Nets only)

ANY STATIONS OUTSIDE OF THE PACIFIC REGION THAT NEED TO CHECK IN?

(If any stations are holding traffic, it should be passed now, in order of precedence followed by the order in which they checked in. Have copies of CAPF105 handy. Be sure to ask if stations need fills.)

(After traffic has been passed)

ARE THERE ANY OTHER STATIONS WANTING TO CHECK IN AT THIS TIME?

(Net Closing)

THIS IS BEAVERFOX____, (ALTERNATE) NET CONTROL STATION, SECURING THE OREGON WING (VHF/HF) NET AT ____Z, THANKING ALL STATIONS FOR CHECKING IN AND GRANTING ALL STATIONS PERMISSION TO SECURE. THIS STATION WILL CONTINUE MONITORING UNTIL ____Z. THIS CHANNEL IS NOW RELEASED FOR GENERAL USE. BEAVERFOX ____ OUT.

