

1 Chapter 1615

2 Communications

3

4 Radio Communications

5 Radio communications provide for the flow of tactical information needed for
6 the command/control of personnel and resources.

7

8 Policy

9 Agency specific policies for radio communications may be found in:

10 Department of Interior, Department Manual, Radio Communications Handbook
11 (377 DM).

12 USDA Forest Service Handbook (FSH 6609.14 chapters 10-40 and Forest

13 Service Manual (FSM) 6600 Systems Management Chapter 6640 -

14 Telecommunications.

15

16 Radio Contracts

17 Contracts specifying the requirements for radios have been let and may be found
18 for the:

19 ~~DOI - Department of Interior Project 25 Digital Radio contract at~~

20 ~~<http://www.blm.gov/natacq/IDIQ/index.html>~~

21 ~~FS - USDA Forest Service National Radio Contract at~~

22 ~~<http://www.fs.fed.us/business/2002%20awards/index.html>~~

23 ~~<http://www.fs.fed.us/business/2002%20awards/>~~

24 ~~BLM - Currently the Thales Raecal P25 handheld, the EF Johnson 5100 P25~~
25 ~~handheld, and the Relm/Bendix King DPHX handheld have been approved for~~
26 ~~fire use by the BLM. Approved radios have software version requirements and~~
27 ~~hardware upgrades that must be completed prior to use on fire assignments.~~

28 ~~BLM - Fire equipment will be tested through a collaborative effort between the~~
29 ~~National Interagency Fire Center and the DOI Technical Support Center in~~
30 ~~Denver to verify that the radios will withstand the rugged work environments~~
31 ~~specific to fire operations and that the radios have operational features and~~
32 ~~programmability options to meet fires needs.~~

33 ~~FS/FWS/NPS - The Thales Raecal, EF Johnson 5100, Motorola XTS5000,~~

34 ~~Relm/Bendix King DPH, and Datron Guardian handhelds have all been~~
35 ~~approved for fire use by the National Interagency Incident Communications~~
36 ~~Division (NIICD).~~

37

38 For information on software and hardware requirements and approved radios,
39 contact the ~~NWTSU~~~~National Radio Communications Division (NRCD)~~ at (208)
40 ~~672-7880 ext. 103387-5830.~~

41

42 Dispatch Recording Devices

43 BLM - Recording devices will be used by ~~each~~-BLM dispatch ~~office/offices~~ or
44 ~~any~~ interagency office dispatching BLM resources. ~~The purpose is to record~~
45 ~~radio communications during emergency operations. This will ensure that in the~~

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~~▲ event of an accident, investigators will be provided with an accurate record of events during reviews of those incidents.~~

Radio Frequency Management

FM frequency assignments for normal operations or initial attack ground operations are made on a permanent basis and are requested through the state office ISO frequency manager to the Washington Office frequency manager.

The NIFC Communications Duty Officer (CDO) coordinates and assigns incident frequencies at the national level. They will also assign Communications Coordinators (COMC) when necessary to support a specific Geographic Area(s). See the National Mobilization Guide for additional information.

Mutual-aid agreements for frequency sharing can be made at the local level.

A mutual-aid frequency sharing agreement is valid only in the specific locale it originates in. These agreements do not authorize the use of a shared frequency in any other area. NIFC national fire frequencies are not to be used for these agreements.

Do not use a frequency unless authorized to do so by communications personnel at the local, state, regional or national level.

Initial attack AM air operations frequencies will be assigned by the NIFC CDO and FM air operations frequencies will be facilitated/assigned by the NIFC CDO. These assignments will be on an interagency basis and coordinated with the GACCs.

On Type 1 or 2 incidents, the Communications Unit Leader (COML) will request, assign, and report ~~to the NIFC CDO/COMC~~, all frequencies used on the incident to the NIFC CDO/COMC. This would include the request and assignment of aircraft frequencies. The ICS-205 and ICS-220 are always a part of the Incident Action Plan (IAP) and distributed at every operational period briefing.

The COML will contact the NIFC CDO, or the COMC if assigned, for additional FM and AM frequencies. Requests for aviation frequencies will be placed through established ordering channels through NICC and will be filled by the NIFC CDO or COMC. COML's will ensure that the host agency Aviation Dispatcher and the NIFC CDO or COMC has the current ICS-220 for their incident.

~~Radios being used in wildland firefighting operations must be able to function in both wideband (25.0 Khz) mode and narrowband (12.5 Khz) mode. Remove radios from the system that cannot be programmed to operate in the narrowband mode.~~

~~When incident management teams are pre-positioned in a geographic area, consideration will be given to pre-positioning a communication system for immediate deployment by the team(s) when assigned to an incident. Pre-positioning will be based on equipment availability and/or priorities established by NMAC at NIFC.~~

1 ~~When prepositioned in a field unit or geographical area, consideration will be~~
2 ~~given to also repositioning a radio kit for immediate use by the team when~~
3 ~~assigned.~~

4 Frequencies for Type 1 and Type 2 incidents are assigned through the National
5 Interagency Incident Communications Division (NIICD) located at NIFC. The
6 CDO is responsible for this function.

7 During severe situations and/or when there are significant numbers of large
8 incidents, additional frequencies can be assigned. These are temporary
9 assignments, and are requested by the NIFC CDO from the Washington Office
10 (Spectrum) managers and given by the CDO to the incident. This applies to
11 frequencies for command, ground tactical, and aviation operations.

12 Additional frequencies are provided in the following circumstances:

13 The NIICD national frequencies are all committed within a specific geographic
14 area.

15 The requests continue for frequencies to support new incidents within a specific
16 complex.

17 The fire danger rating is extreme and the potential for additional new incidents
18 is high.

19

20 Pre-assigned National Frequencies

21 National Air Guard - 168.625 MHz - A National Interagency Air Guard
22 frequency for government aircraft will be used for emergency aviation
23 communications. Continuous monitoring of this frequency in narrowband mode
24 is mandatory by agency dispatch centers. Transmitters on this frequency must be
25 equipped with an encoder on 110.9 Hz. 168.625 is restricted to the following
26 use:

27 Air-to-air emergency contact and coordination.
28 Ground-to-air emergency contact.
29 Initial call, recall, and re-direction of aircraft when no other contact frequency is
30 available.

31

32 National Flight Following - 168.650 MHz

33 The National Interagency Air Net frequency is used for flight following of
34 official aircraft. The intent is not to use this frequency for incident operations.
35 All dispatch centers/offices will monitor the national flight following frequency
36 at all times. 168.650 is restricted to the following use:

37 Flight following, dispatch, and/or re-direction of aircraft.
38 Air-to-ground and ground-to-air administrative traffic.
39 Not authorized for ground-to-ground traffic.

40

41 National Interagency Air Tactics - 166.675 MHz, 167.950 MHz, 169.150 MHz,
42 169.200 MHz, 170.000 MHz

43 Frequencies used to support air-to-air or ground-to-air communications on
44 incidents west of the 95th meridian. These frequencies shall be used for air-to-
45 air and ground-to-air communications only.

1 Exception: Pacific Southwest Geographic Area: 166.675 MHz, 169.150 MHz,
2 and 169.200 MHz will be used for air-to-air only; 170.000 MHz will be used for
3 ground-to-air only.

4 Interagency geographic area coordination centers assign these frequencies.

5 Assignment must be coordinated through the NIFC CDO.

6 Transmitter power output of radios installed in aircraft operating on these
7 frequencies shall be limited to 10 watts.

8

9 Base stations and repeaters are prohibited on these frequencies.

10

11 National Interagency Airtanker Initial Call - 123.975 MHz

12 The national interagency frequency assigned to all airtanker bases for their
13 exclusive use. No other use outside of airtanker bases is authorized.

14

15 National Government All-Call Frequencies - 163.100 MHz and 168.350 MHz

16 For use anywhere, any-time. They are good choices as travel frequencies for
17 strike teams moving between assignments. They are available for ground
18 tactical frequencies during initial attack or incident operations. They are not to
19 be used for air-to-ground operations.

20 NOTE: When you are traveling between incidents, be sure to monitor for
21 incident radio traffic in the area before using these frequencies.

22

23 Incident Radio Support

24 All NIRS cache communications equipment shall be returned to NIICD at NIFC
25 immediately after the incident is turned over to the jurisdictional agency.

26

27 No cache communication equipment shall be moved from one incident to
28 another without being first returned to NIFC for refurbishment. However,
29 equipment unused and red-sealed may be moved, if approval is given by the
30 NIFC CDO or COMC.

31

32 Military Communications on an Incident

33 Military units assigned to an incident already have radios. Each battalion is
34 assigned 80 handheld radios. Sixteen of these radios are used by military crew
35 liaisons. Intercrew communications within a military unit is provided by the
36 military on its radios using its frequencies. All frequency assignments at the
37 incident will be made by the COML in accordance with the ICS-205.

38 Some active military and guard units have aviation VHF-FM radios compatible
39 with civilian systems. Other units are adapting their aircraft for the civilian
40 radios and can be easily outfitted prior to dispatch to an incident. A limited
41 number of wiring harnesses are available at NIFC for those military aircraft that
42 do not have civilian VHF-FM capability. The wiring harnesses and radios will
43 be resource ordered by the incident. The resource order will include a request
44 for trained personnel from NIICD to perform the installation of the equipment.
45 Equipment will not be sent without trained and qualified personnel to install it.

| **1615-4**

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1
2 Cellular Communications/Satellite Phone Communication
3 Cellular/satellite telephones will not be used to communicate tactical operations
4 unless they are the only means possible. Cellular/satellite telephones are not to
5 be used for flight following in lieu of normal flight-following protocols.

6
7 Phone communication can be used for logistical purposes.

8
9 **Effective Radio Use**

10 ~~If personnel do not follow basic guidelines and use the system properly, the best~~
11 ~~system, even with full coverage, will not meet the requirements of the situation~~
12 ~~or incident.~~

13 ~~All emergency communications equipment should be kept away from sources of~~
14 ~~possible interference. Existing radio communications sites are the best example~~
15 ~~of where not to place this equipment.~~

16 ~~Keep the antenna as high as possible and in a vertical position.~~

17 ~~Canting or tilting the radio 45 degrees lowers the effective transmitting power~~
18 ~~by half, so that a two-watt radio performs as a one-watt radio. Use of a chest~~
19 ~~harness reduces the effectiveness of the radio since most harnesses hold the~~
20 ~~radio at a 45-degree angle. A decrease in transmitting and receiving capability~~
21 ~~also occurs due to shielding from your body.~~

22 ~~Frequencies are a finite resource. There are a limited number available for~~
23 ~~initial attack and/or incident communications. Care must be taken as to how and~~
24 ~~where they are assigned to minimize the possibility of interference.~~

25 ~~The more channels that are scanned, the busier the radio receiver becomes. In~~
26 ~~the case of inexperienced radio users, the communication system will appear to~~
27 ~~be overloaded because the radio is never quiet.~~

28 ~~Use clear text language; use of codes potentially confuses interagency~~
29 ~~communications.~~

30 ~~Assistance with radio operations, troubleshooting and deficiency reports can be~~
31 ~~found at <http://radios.nife.gov/>.~~

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