

**BY ORDER OF THE COMMANDER
AIR MOBILITY COMMAND**

**AIR MOBILITY COMMAND
INSTRUCTION 33-102**



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Communications and Information

***HFGCS DISTRIBUTED OPERATIONS
AND SUPPORT***

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Section 1

1. Background The High Frequency Global Communications System (HFGCS) consists of 13 worldwide, high powered, high frequency stations. All 13 stations are remotely controlled by the Andrews Network Control Station (ANCS) and the Grand Forks Network Control Station (GFNCS). The HFGCS missions are to operate and maintain HF Mystic Star C2 networks, disseminate Emergency Action Messages (EAM), provide air to ground phone patches, and

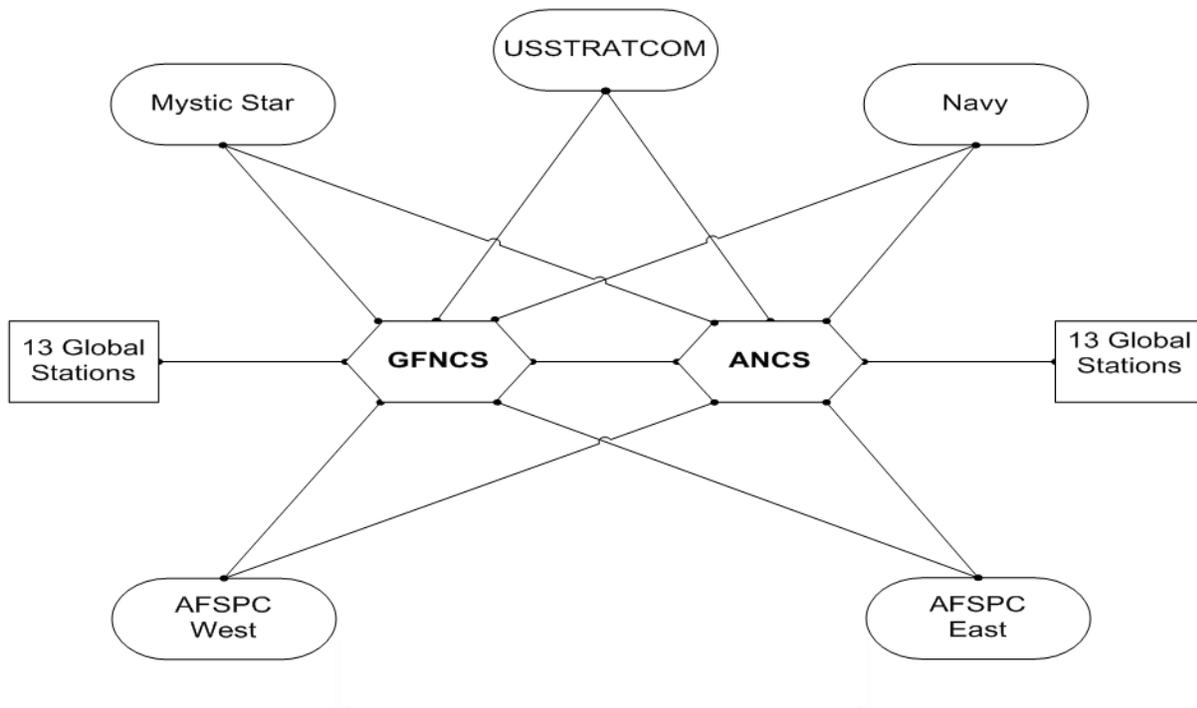
ensure timely and accurate broadcasts of reconnaissance and aircraft advisories for the President, Joint Chiefs of Staff, Combatant and Major Commands, allies, and other non-DoD users. Air Force Space Command (AFSPC) is the Lead Command and Cyber Support Squadron (CYSS) is the requirements lead and system manager for the HFGCS weapons system. The 89 CS operates and maintains ANCS at Joint Base Andrews, MD and the 319 CS operates and maintains GFNCS at Grand Forks AFB, ND.

1.1. The concept of a second NCS was developed in response to the events of 11 September 2001. These events highlighted the need to eliminate a single point of failure and provide robust HFGCS Command and Control (C2) operations for Senior Leader Communications. During a major crisis it is vital that key C2 systems are available to provide leadership options and flexibility to significantly increase the probability of mission success. HFGCS is a key C2 system and needs to be available at all times. Standing up the GFNCS eliminates or mitigates the risks of connectivity problems and survivability of HFGCS C2 operations.

Section 2

2. HFGCS Distributed Operations Roles and Responsibilities As defined in CJCS VOL VII(S) Emergency Action Message Dissemination, DISA Circular 310-70-79 and AFMAN 33-591(S); required deviations will be documented with an interim change, a re-write, or other formal administrative methods. Figure 2.1 shows a simplified diagram of distributed operations.

Figure 1. HFGCS Distributed Operations.



2.1. Normal Operations: The MNCS will maintain Operational Control (OPCON) of the HFGCS Network. The shift of authorizations on UMDs to balance manning between both NCS's is scheduled to occur 1 Jul 2013. Beginning 1 Feb 2013 GFNCS will operate 2 global stations 24/7/365 and ANCS will operate 11 global stations 24/7/365. The current goal for

balancing the NCS manning is to have GFNCS operate 6 global stations 24/7/365 and ANCS operate 7 global stations 24/7/365. See figure 2.2 for current OPCON organizational structure. To allow an orderly draw down of station coverage at the ANCS under normal conditions, the GFNCS will take an additional station NLT 120 days after the arrival of every fifth inbound. See figure 2.3. for future OPCON organizational structure. Until the target end strengths are met, the following coverage requirements listed may differ.

2.1.1. The MNCS will give operational tasking to meet HFGCS and other HF authorized users (USSTRATCOM, USEUCOM, AFISRA, AFSPC, etc.) mission requirements. The MNCS will provide day- to-day operational guidance to ensure HFGCS missions are met and reported. This generally focuses on coordinating traffic and balancing the workload between the NCSs. During normal operations the Operations Manager of the MNCS will assign tasks and provide oversight and control over the complete HFGCS network administration/control. The MNCS will compile and distribute reports of the complete HFGCS network status as defined in DISAC 310-70-79 and AFMAN 33-591(S).

2.1.2. The GFNCS reporting procedures will focus on stations operated by GFNCS and will be in the same format that ANCS uses. This will ensure GFNCS can take on all associated reporting when it assumes control of the complete HFGCS network.

2.1.3. The NCS's maintenance personnel are required to be postured to maintain the HFGCS network 24/7/365. This includes outage reporting, status reporting, higher headquarters up channeling requirements, and other NCS tasks.

2.1.4. The NCS coordinators will balance the operational workload between the two NCS's based on available resources. The global stations and MNCS responsibilities will be assigned to each NCS by the 15th of each month for the following month.

2.1.5. ANCS and GFNCS will develop checklists procedures and have them accessible by both NCS. These checklists will cover all the required activities that are needed when OPCON transfers and NCS evacuation procedures.

2.2. Contingency operations: The transfer of MNCS of the HFGCS network may include planned and unplanned events. Operationally GFNCS and ANCS will work together. The physical station connections will ensure each NCS covers at least two stations per region (Americas, European, and Pacific) to meet minimum mission requirements should a NCS fail. The Any Console Any Station capability will allow distributed operational control of the traffic between the 2 NCS stations. In the contingency mode of operation any NCS is capable of accepting the complete HFGCS network. The priority is time sensitive C2 and then other radio operations traffic in accordance with CJCS VOL VII(S), DISAC 310-70-79, AFMAN 33-591(S) and other applicable guidance.

2.2.1. If the ANCS is unavailable to maintain MNCS and operate their assigned global stations:

2.2.1.1. All available ANCS operators will report to alternate duty locations.

2.2.1.2. Based on the type and potential length of the contingency the GFNCS and ANCS squadron leadership will work with HQ AMC to address the situation. HQ AMC can activate one or more HFGCS UTCs to support the operational NCS.

2.2.1.3. GFNCS will become MNCS and take operational control of all 13 global stations and perform MNCS duties.

2.2.1.4. GFNCS operations and maintenance will provide 24/7 coverage until ANCS is available to return to normal operations.

2.2.2. If GFNCS is unavailable to maintain and operate their assigned global stations:

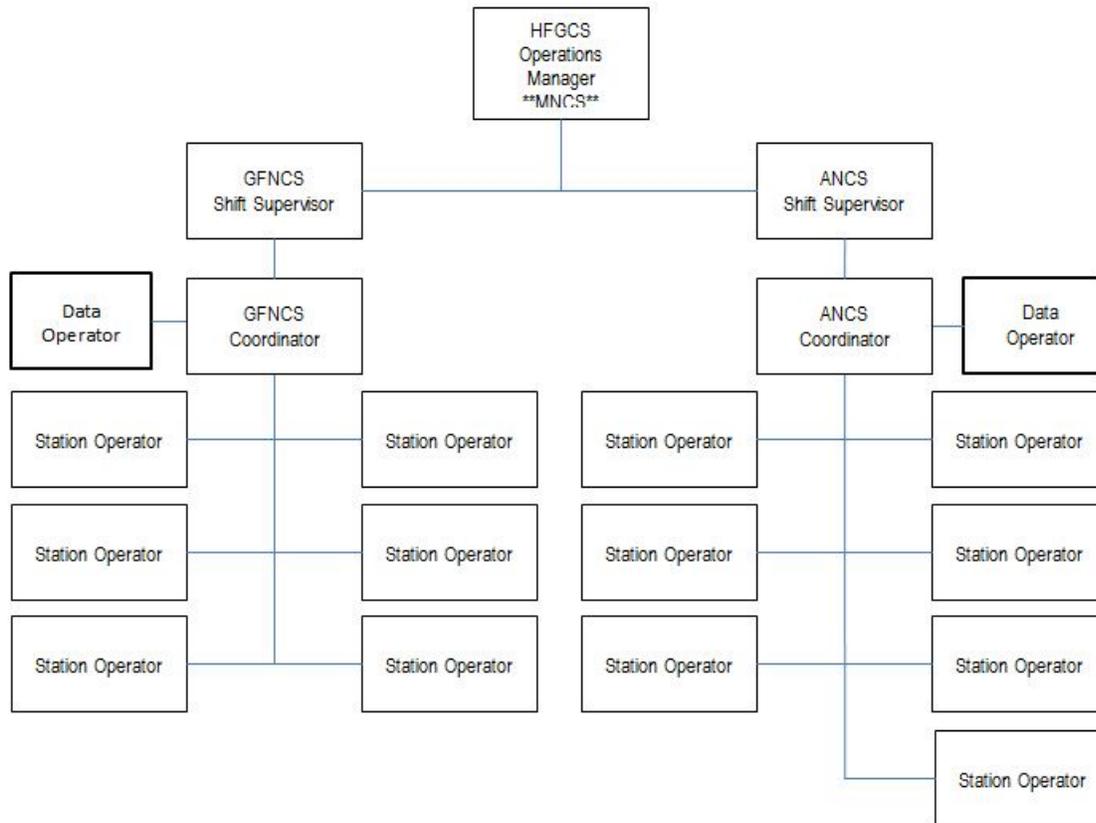
2.2.2.1. All available GFNCS operators will report to alternate duty locations.

2.2.2.2. Based on the type and potential length of the contingency the GFNCS and ANCS squadron leadership will work with HQ AMC to address the situation. HQ AMC can activate one or more HFGCS UTCs to support the operational NCS.

2.2.2.3. ANCS will become MNCS and take operational control of all 13 global stations.

2.2.2.4. ANCS operations and maintenance will provide 24/7 coverage until GFNCS is available to return to normal operations.

Figure 3. HFGCS Operational Structure (OPCON – Normal Operations, Future Status)



Section 3

3. Processes and Procedures

3.1. The ANCS is currently the MNCS for the Global HF System and the GFNCS is the other NCS in a normal non-stressed condition. Upon achieving the 6/7 split MNCS duties will be shared between the ANCS and GFNCS, switching every two weeks. The MNCS is the approval authority within the Global system for station outages. The two NCS's will control and operate all 13 Global stations 24/7/365.

3.2. The MNCS will:

3.2.1. Monitor alert status of all stations, take action to clear all alert failures, schedule tests of alert functions (includes STRAT Daily) and keep USSTRATCOM informed of degraded conditions caused by alert outages.

3.2.2. Notify USSTRATCOM Command Center of any outages within the network that impair any Global station's ability to support mission requirements.

3.2.3. Keep the other NCS advised of outages that affect operational capability of the Global System regardless of stations they are monitoring.

3.2.4. Ensure procedures in CJCS VOL VII(S), DISAC-70-79, AFMAN 33-591(S), and applicable ACP's are followed by all stations within the network.

3.2.5. Perform all alerts/seizures for the entire Global System. IE: Emergency Action Messages and Aircraft Advisories. Within two minutes of disseminating a message, contact the other NCS to confirm successful alert and transmission on all designated frequencies.

3.2.6. Perform Emergency Action Message queue management, in coordination with USSTRATCOM, within the Global System.

3.2.7. Be the approval authority for all scheduled system outages (ASI's, PMI's, etc.).

3.2.8. Conduct status reporting IAW the AMC Operating Instruction for outage procedures (SITREP's, NOTAM's, etc.).

3.3. The other NCS will:

3.3.1. Monitor alert status of respective stations and take aggressive action to clear all alert failures. Keep the MNCS informed of any condition(s) resulting in a station outage or a condition that affect an operational mission. Ensure procedures in CJCS VOL VII(S), DISAC-70-79, AFMAN 33-591(S) and applicable ACP's are followed by all stations within the network.

Section 4

4. MNCS Transfer

4.1. The station assuming MNCS responsibilities will notify the USSTRATCOM Command Center via LL at DSN: 271-1806 and advise them to relay queue management instructions to their station.

4.2. The new MNCS will disseminate a SITREP within 15 minutes of MNCS transfer.

4.3. MNCS change notification will be accomplished and executed over the most convenient median available to the NCS. Notifying the other NCS of the MNCS change in clear text. Initials from both NCS's will be relayed and be recorded in the MSL.

4.4. The losing NCS will contact the gaining NCS and pass current and any pertinent HFGCS status (i.e.: current traffic, open traffic, station status, etc...)

4.5. Scheduled: MNCS responsibilities will be shared on a bi-weekly basis according to the following:

4.5.1. Goal for GFNCS is to assume MNCS responsibilities 2 weeks at a time alternating with the ANCS. This will not be possible until the HFGCS Operator positions are balanced between ANCS and GFNCS. After the HFGCS Operator positions are balanced then this will be a requirement.

4.5.2. ANCS will assume MNCS responsibilities during the alternating 2 weeks.

4.5.3. This allows both NCS's personnel to remain proficient in controlling the Global system network in the event that either experiences an unscheduled outage.

4.5.4. The NCS assuming MNCS will follow the procedures directed in para. 3.2 and 3.3 of this instruction.

Note 1: ANCS will not transfer MNCS responsibilities during an assessment until GFNCS is scripted in the assessment.

Note 2: Andrews will remain on standby status with the capability to immediately resume all responsibilities if directed by the Operations Manager.

4.6. Unscheduled: The following conditions may dictate transfer of MNCS:

4.6.1. Per direction of Operations Manager/Shift Supervisor if one NCS is in a HAZCON or in a degraded state.

4.6.1.1. Within 5 minutes of transferring MNCS responsibilities: notify squadron leadership, HQ AMC and HFGCS System Manager via the quickest means possible

4.6.1.2. Within 15 minutes a SITREP will be distributed.

4.6.2. The NCS without MNCS responsibilities may be required to assume these responsibilities on a no-notice basis as mission requirements dictate.

4.6.3. During contingency or surge operations the MNCS will take efforts to maximize station coverage utilizing all resources under their OPCON. Some of those steps may consist of assigning stations to a NCS alternate facility using DSN remote access, going to wartime minimum manpower work schedule (12 hour shifts, 6 on/1 off) for short durations, or similar measures. This ensures best effort station coverage and will be followed up with either a restoration or UTC activation decision.

DOUGLAS J. MELLARS, COLONEL, USAF
Chief of Operations/ Directorate of
Communications

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 33-360, *Publications and Forms Management*, 25 September 2013

AFMAN 33-363, *Management of Record*, 01 March 2008

Prescribed Forms

None

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

ACP—Allied Communications Publication

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFSPC—Air Force Space Command

AFISRA—Air Force Intelligence Surveillance Reconnaissance Agency

AMC—Air Mobility Command

ANCS—Andrews Network Control Station (Joint base Andrews, MD)

CJCS—Chairman Joint Chiefs of Staff

C2—Command and Control

DISA—Defense Information Systems Agency

EAM—Emergency Action Message

GFNCS—Grand Forks Network Control Station (Grand Forks AFB, ND)

HAZCON—Hazardous Condition

HF—High Frequency

HFGCS—High Frequency Global Communications System

HQ—Headquarters

IAW—In Accordance With

MNCS—Master Net Control Station

MSL—Master Station Log

NCS—Network Control Station

NOTAM—Notice to Airmen

OPCON—Operational Control

SITREP—Situation Report

UMD—Unit Manning Document

USEUCOM—United States European Command

USSTRATCOM—United States Strategic Command

UTC—Unit Tasking Code