

Communications Support Overview, McMurdo Station

OP-M-576

Revision 0

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Posting Date 7/19/05

*Active Divisions/Departments
McMurdo Communications Operations (Mac Ops)*

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Purpose

This document provides an introduction to the Communications support capabilities at McMurdo Station.

Scope/Applicability

This document is a general reference only. For detailed information about Communications Operators' duties, refer to *OP-M-576a: Communications Operator Guide, McMurdo Station*

Terms and Definitions

Call Sign

An abbreviated term or phrase used in radio communication to address an organization or individual – for example: “Mac Ops” is the call sign for the McMurdo Station Operations Center.

Flight Tracking

System of charting the progress of an aircraft mission by recording periodic aircrew location reports and the time they were received.

Grantee

An individual conducting scientific investigation under a grant from the National Science Foundation

HF

High Frequency – 3 to 30 MHz

MHz

Abbreviation for Megahertz – an indicator of radio frequency. 1 MHz equals one million cycles-per-second

Iridium

Department of Defense satellite network used for telephone and some data communications when geosynchronous satellite service is unavailable.

IT

Information Technology the division responsible for computer and communications systems

Mac Ops

Radio call sign for the Operations Center at McMurdo Station

MHz

Megahertz – a measure of cyclic frequency. 1 MHz equals one million cycles per second.

Radio Phone Patch

System for relaying an incoming radio message to a remote party via telephone

USAP

The United States Antarctic Program - Umbrella agency under which all United States sponsored Antarctic research is conducted.

VHF

Very High Frequency - 30 to 300 MHz.

Responsibilities

Communications Operator

The Communications Operator utilizes radio, satellite, and other communications equipment to support communications needs for USAP participants (including grantees and support personnel) by tracking field party activity, responding to distress calls, and keeping accurate documentation of events.

Station Communications Supervisor

The Station Communications Supervisor oversees the operations and personnel of Communications Operations activities at McMurdo Station and assists the Communications Operations Supervisor with long term goals and initiatives.

IT Systems Supervisor

The IT Systems Supervisor manages policies, procedures and long range planning initiatives for McMurdo Station.

Discussion

McMurdo Station hosts several communications systems, including local and off-continent telephone, radio-telephone, HF and VHF radio, and satellite communications. Communications *Operators* report through the McMurdo Area Directorate and are responsible for using the various systems to provide operational support for field personnel. Technical support for these systems is provided by Communications *Technicians* (IT/Communications division). During the austral summer, McMurdo Communications Operations, known by call sign *Mac Ops*, provides the following support 24 hours a day, seven days a week:

Daily Tasking

- Provide HF and VHF radio communications support.
- Monitor HF propagation conditions and communications quality.
- Process Iridium calls for field camps, South Pole Station, and aircraft.
- Provide HF and VHF radio phone-patch capabilities.
- Maintain work center documentation, including logs and reports.
- Ensure the secure storage and back up of communications records.
- Provide flight-tracking support for fixed-wing and helicopter operations.
- Coordinate Search-and-Rescue and emergency communications.
- Monitor daily status of field camp movement.
- Track field parties traveling within the McMurdo Station area.
- Pass weather, flight, and safety information, as needed.

For a complete description of Communications Operators' duties, refer to RPSC document *OP-M-576a: Communications Operations Guide, McMurdo Station.*

References

USAP Communications Plan

Records

| Record Identification, Format, & Owner | Active Location Storage, Protection, & Retrieval | Facility Storage, Protection & Retrieval | Retention Time (Active and/or Facilities Storage) | Ultimate Disposition |
|--|--|--|---|--|
| Mac Log, Active File: Electronic, Facilities File: CDROM IT System Services Supervisor | Mac Ops, No special protection, Retrieved by Comms Operator | Denver HQ, Retrieved by IT System Services Supervisor | Active – end of season Facilities - 3 years | Active – Erase Facilities Destroy |
| Mac Notes, Active File: Electronic, Facilities File: CDROM IT System Services Supervisor | Mac Ops, No special protection, Retrieved by Comms Operator | Denver HQ, Retrieved by IT System Services Supervisor | Active – end of season Facilities - 3 years | Active – Erase Facilities Destroy |
| McMurdo Regional Travel Log, Hard Copy, IT System Services Supervisor | Mac Ops, No special protection, Retrieved by Comms Operator | N/A | Active - 1 year | Destroy |
| Daily Aircraft Events Worksheet, | Mac Ops, No special protection, | N/A | End of Season | Destroy |

| | | | | |
|--|--|-----|---------------|---------|
| Hard Copy, IT System Services Supervisor | Retrieved by Comms Operator | | | |
| Message/Conference Request Log, Hard Copy, IT System Services Supervisor | Mac Ops, No special protection, Retrieved by Comms Operator | N/A | End of Season | Destroy |
| Field Party Status Board, Grease board, IT System Services Supervisor | Mac Ops, No special protection, Retrieved by Comms Operator | N/A | Updated Daily | Erase |
| Daily Field Camp Report, Electronic, IT System Services Supervisor | Mac Ops, No special protection, Retrieved by Comms Operator | N/A | End of Season | Erase |
| Vehicle-Supported Camp Muster, Electronic, IT System Services Supervisor | Mac Ops, No special protection, Retrieved by Comms Operator | N/A | End of Season | Erase |
| TEAC Media Disks, Electronic, IT System Services Supervisor | Mac Ops, No special protection, Retrieved by Comms Operator | N/A | 1 week | Erase |
| Pre-Field Comms Briefing Forms, Hard Copy, IT System Services Supervisor | Mac Ops, No special protection, Retrieved by Comms Operator | N/A | End of Season | Destroy |
| SARMC Mission Log, Hard Copy, IT System Services Supervisor | Mac Ops, No special protection, Retrieved by Comms Operator | N/A | End of Season | Destroy |

| | | | | |
|--|--|-----|-------|---------|
| Camp Change Slips, Hard Copy, IT System Services Supervisor | Mac Ops, No special protection, Retrieved by Comms Operator | N/A | 1 Day | Destroy |
|--|--|-----|-------|---------|

Attachments, Appendices

OP-M-576a Communications Operations Guide, McMurdo Station

General Assistants Standard Operating Procedure

Responsibility: Labor Foreman, McMurdo Station Operations

General Assistant (GA) duties include all types of manual labor support, performed at various work sites on station and in the field. This document provides general information concerning work hours, work center, duties, labor requests, and vehicular operating procedures for the Labor pool.

Work Hours

Routine work hours are 7:30am to 5:30pm, Monday through Saturday. Extra hours and/or night shifts will be assigned as needed for special projects (comp time may be provided on a case by case basis at the discretion of the Supervisor). A one-hour lunch break occurs between 11am and 1pm, to be determined by the assigned job site supervisor or daily tasking priorities determined by the Labor Foreman. Two 15-minute breaks are provided daily, at 10am and 3pm. Warm-up, hydration or restroom breaks may occur as necessary, according to weather and other working conditions.

Work Center Information

Building 191-North Annex is the point of contact and daily meeting place for the labor pool. A supply of shovels, ice chippers and basic hand tools are stored there along with safety gear such as dust masks, hearing protection, coveralls, hard hats and hand warmers. Additional safety equipment is available upon request at the materials warehouse in building 176. A generic email account for the labor pool, to be used for community comments or labor requests, can be set up through Information Systems.

A pager will be assigned to the Labor Foreman, who should carry it at all times. The number is available from the Firehouse, as is paging assistance.

The availability of the labor pool will be announced to the community once the crew has arrived on station and has completed (or has been scheduled for) appropriate safety and job-specific training. Requests may be made via phone, pager or e-mail. Departments requiring labor support should attempt to schedule the work in advance (a minimum of 24 hours notice is advised), although every effort is made to accommodate last minute requests or emergencies. The Labor Foreman schedules work assignments in the order the requests are received, and according to task priority or degree of urgency. Tasking may be rescheduled due to a change in the availability of staff, tools, equipment, or the occurrence of inclement weather. If no incoming requests are received, the Labor Foreman will contact various work center supervisors to offer assistance, or organize clean up efforts or other general station support activities for the benefit of the community.

Duties

In addition to work center requests, responsibilities include clearing snow and ice, in and around loading docks, walkways, utility pipes, entrances to residence halls, food service and medical facilities, and all public buildings and work centers on station, as time and manpower allows. These areas should be regularly maintained, as weather dictates, to help prevent ice and other potential safety hazards from accumulating.

Station clean up is an ongoing task. Trash often accumulates in and around ditches, utility pipes, buildings, stairwells, parked vehicles and other structures when the snow melts, or the wind blows. All areas of the Station should be inspected regularly and debris collected, separated, and disposed of as it is exposed.

General Assistants will occasionally be requested as support personnel for deep field camps. Assignments may be made according to demonstrated winter camping or outdoor survival skills and/or comfort and skill level of the Labor Pool members. Based on the assignment, location or timing, arrangements may be made for specific Field Safety or skills training to occur before departing to the field. Additional clothing or gear may be supplied depending on intended tasking and available sleeping accommodations. Upon arrival, the GA will be expected to adhere to the work schedule

and rules of the camp, and will report to the on-site job supervisor and/or the Camp Manager for performance expectations and job assignments.

Vehicles

A vehicle suitable for transporting GAs and necessary tools to and from job sites will be assigned to the labor pool. A safety inspection should be performed daily, and fluids checked before the vehicle is started. Proper check out procedures and radio protocol should be understood before operating any vehicle. Consideration should be given to the fact that with advance notice, public transportation is available for many areas around station. Narrow-tired vehicles are not allowed on the snow road to Williams Field, although they can negotiate the ice road to the runway. Breakdowns and maintenance issues or questions should be directed to the VMF.

Anyone operating a vehicle on station must have a current Antarctic Drivers License. These are currently issued by SEH following a brief training. A valid stateside driver's license must be presented, and certain peculiarities of the Antarctic fleet will be addressed before the license is granted. Those individuals who must operate forklifts should be trained and licensed by Fleet Operations. Requests for vehicle support (such as dump trucks), or for forklift operations, heavy snow removal or the placement of fines on slippery roads and walkways should be directed to the Fleet Operations office. A minimum of 24 hours advance notice is preferred.

